Brazos River Authority

August 8, 2023

Addendum No. 1
Audio Visual Integration Equipment and Installation at Central Office
RFP No. 23-04-1284

It is the responsibility of the Respondent to assure and guarantee by acknowledging the receipt of this Addendum in the Proposal that the Respondent has received the Addendum in its entirety, and that the Respondent accepts all conditions contained herein.

QUESTIONS AND ANSWERS

Q1: Can you list any additional conference solutions you may want to use with the solution? (Zoom, Webex, BlueJeans, etc), and what does that experience look like as a Teams focused shop?

A1: Occasionally we accommodate external entities by utilizing their preferred conference solution such as Zoom or Webex for which they initiate scheduling the meeting and sending invitations via email.

Q2: If you do need additional integrations, Will you use the plugins from the Teams app or prefer a much more native experience?

A2: On the occasions that we need to use conference solutions outside of Teams, we generally can use the web to access such. If an update or installation is needed, our technicians do that.

Q3: With some components and being reused is possible, can we get the model numbers of the TVs, Touchscreens, and Projector if those are owned as well as any current microphone and audio interfaces, and interface methods. This reasonably sounds like a custom Crestron setup; some components will be worth keeping. Additionally, we have partners that offer additional discounts for trade in /trade up. Is that a possibility for any of the solution components? If full rip and replace do you have organizational standards or a desired display? We only use Commercial monitors if no preference and these are designed for 24x7 operations and include no apps typical of a consumer product.

A3: Commercial monitors are fine. We do not have a desired display. We have a Panasonic projector (PT-R2670) All of our displays are owned, and we have a mix of Vizio, Sony, Sharp, and Dell displays. Most of them are not commercial/RS232. We are agreeable to trade-ins/trade-ups. The Dell blackboards we have are likely end-of-life as they are 5+ years old.

Q4: Are the Executive Board Room and the Training Room the only rooms which would have “blackboard’ experience? (blackboard = presenting content behind instructor to both local and remote users. Vs. the traditional boardroom type meeting? You one side, the other party on the other, and any sharing would be from where the presenter is sharing out.

A4: Yes.

Q5: Do you have any desire for focus track in the cameras? Does the audience need to be a visual element in the broadcasts?

A5: No, we do not desire to have focus track for the cameras and the audience does not need to be a visual element in the broadcasts.

Q6: We desire to use 0 digital zoom in any broadcast and instead desire true optical zoom allowing for a significantly better experience. Additionally, 4K is currently the gold standard, however there are 8K options which come at a steep upgrade price, but are also future proof?

A6: 0 digital zoom or 4K are fine.

Q7: Where all do you broadcast too, and what is your streaming service? Does this have any dedicated bandwidth or do you stream/pray, downscale, or ???

A7: We use a VBrick encoder, XSplit and stream from YouTube. All of the audiovisual equipment in the Board/Brazos Room and Main Conference/Bosque Room are on a separate vlan utilizing our existing network bandwidth of 1 Gbps.

Q8: Can you share the information about the recording solution, audio recorders, and are the Lutron devices required to integrate, or are you ok with leaving those as is?

A8: For audio-only recording, we have two Tascam recorders (one at the operators' desk and one in the rack in the closet for redundancy) that record audio on CF cards. Minimally, we are required to record audio of all board meetings. We would like to have the same ability to adjust lights and drapes that we have integrated now. Lights can be adjusted to 25%, 50%, 75%, 100%, or OFF.

Q9: How much control does the meeting AV engineer require? Are you camera switching, running on a delay for curse word mitigation, require any on air overlays, etc… is there a control surface used for this? If so, what is it, and do you use any additional 3rd party software that you intend to keep such as OSB, or some other broadcast software?

A9: We need to be able to mute/unmute each microphone individually or all at once. No camera switching, delay for mitigation, etc.. We have 3 views: content, speaker/lectern, view of the board of directors (21). During executive session and breaks, we need the ability to overlay a message to indicate such. We do have a control monitor at the lectern and at the operators' desk. Additionally, we can use the Crestron app via iPad to access room controls. We are not committed to keeping the vbrick encoder nor continuing to use XSplit.

Q10: What purpose does the cable boxes and apple tv serve? Is this for internal meetings only?

A10: Yes, the cable boxes are for internal meetings or employees to use in the Board/Brazos room and the break room. The apple tv was used to display images when it was originally installed; however, it is no longer needed.

Q11: Would the Brazos River Authority be opposed to us performing an environmental sound assessment after the walkthrough, It would take 15-20 minutes and require only running a series of tone patterns from various points in the room. We would want to do this if selected at each location prior to finalizing any agreements so as not to over/undersell the solution and remove all guesswork as to quality expectations and guarantee proper equipment placement.

A11: No opposition to this.

Q12: With microphones and presenter headsets, sound staging, etc… does BRA have any preferred microphone systems, and does their need to be any spare " on hand" backups, if so what percentage of the original proposed solution should be available? Generally we would use the existing microphones if suitable and those handheld Sure SM58s are fairly decent, but way too flat tonally and are easy to feedback due to the cardioid patterns, what style use would be acceptable? In Hand, over the ear, over the head, lapel, or even completely environmental mic arrays which could eliminate the mic systems almost entirely.

A12: Aside from the table microphones, in-hand or lapel style microphones are preferred. Shure was the reputable brand when implemented, but we defer to the vendor/integrator for the best solution.

Q13: What meeting room licensing will you be wanting to apply to these rooms?

A13: Teams and any other licensing included in the proposed solution.

Q14: Do any of these rooms have tuned lighting meant for broadcast or is it standard LED? If LED, is it flicker free or do we need to accommodate that?

A14: No.

Q15: Can you briefly describe what you like about the current solutions, what if any features beside ease of use you would desire to see in another solution, and any other information we can use to ensure that we are doing our diligence towards your desired result?

A15: Our current solution was designed to work with Polycom as that was our video conferencing solution then. We need Teams integration in our new solution. We like having the confidence monitor at the front lectern in the Board/Brazos room. We liked having the room scheduling panels with indicator lights outside the conference rooms when it worked. We need reliable click-share/byod options in each conference room. We did occasionally have issues with guests installing plug-ins for the previous click-share device we used.

Q16: If selected, would you be open to a final review and negotiation, because we will be bidding with max everything possible which will likely cost more, and by allowing us (if chosen), to come in and do a proper sweep of the cabling, the room acoustics and lighting, etc.. We will be able to sell you a proper solution with verifiable quality measures and accommodate for any issues that would negatively impact your experience. We too desire simple, but we also have to put our name on it and therefor require it to be correct, even if it means selling a few less mics and speakers. We can offer a max not to exceed guarantee if open to the idea.

A16: We'll be reviewing all of the proposals with the criteria advertised. Once a vendor is selected, the negotiation may begin. If chosen, then yes, the vendor will be allowed to come in and do a proper sweep of the cabling, room acoustics, lighting, etc.. We desire a system that is simple to use and highly reliable. We could do a not to exceed guarantee with the chosen vendor.

Q17: Most AV vendors will be unwilling to allow Source Code access, however most will allow API scripting. Would that be acceptable?

A17: API scripting would potentially be acceptable depending on the application and technology being used.

Q18: Some AV equipment doesn't play nice with certain vendors. Can you share the network infrastructure in place and any implementations? A Make/Model + firmware of a typical switch, the firewall manufacturer in play, and what your bandwidth resources are to determine the impact the solution to be proposed will have?

A18: We have a 1Gbps connection, Fortinet firewalls, ruckus and netgear switches, wireless connectivity throughout the building for guests and employees.

Q19: Along with the in human training, would you be open to the training material being in a recorded video format and loaded to a LMS which your audience can use to both review, refresh, and "certify"? We have had great success doing this for others as it allows both your stakeholders and us to know who has achieved a level of competency on the solutions? You are welcome to host the LMS we would provide, and we have no issues maintaining it through our agreement, and signing over the content if we are allowed to produce the material in the rooms they are meant to serve.

A19: We have our own LMS and would be open to training material in recorded video mode which we could make available via our LMS.

Q20: If there are any existing holes, damage to millwork/furniture which is a result of the existing installation, who is responsible for that repair if it cannot be hidden? Any cut in, controllers if abandoned, can they be left to avoid requiring patching? If no, who is responsible for the repair?

A20: The BRA is financially responsible for anything existing such as holes or damage to furniture. If the chosen vendor cannot remove parts of the existing installation without requiring patching, we would request it be brought to our attention and the BRA would be financially responsible for the repair.

Q21: It says nothing about UPS devices for battery backup. Will you provide surge arrestors, power conditioners if using backup power, provide UPS devices and if no and these are required, do you have an organizational policy or standard run time assuming full tilt operational load and do they need remote IP access for out of band management?

A21: We will provide a UPS.

Q22: Are there any telephony integrations? PBX, Telephone Hybrids, etc.. If so what are the solutions? How many callers, and what controls do you need?

A22: We have a VoIP system and use Microsoft calling plans.

Q23: We will be recommending additional displays to avoid "broken neck" viewing, do you have onsite facilities which would be able to install power in required locations or would we be responsible for power, if us, must we pull permits? Same for ethernet cabling, and any AV speakers? Additionally, if you have a vendor you prefer for electrical and/or low voltage installation, we can provide locations.

A23: The BRA would install power in the required locations. The vendor would be responsible for all else such as ethernet and AV speakers.

Q24: With no ADA compliance requirements stated, are we to assume that you will be relying on the capabilities of Teams? This allows for live transcriptions & Speech to text for deaf/hard of hearing, colorblind support & meeting audio for the blind, and additional functions for differently abled. Are there any specific ADA Compliance requirements for signing, or other non-verbal access requirements not covered by Teams and do you have any formal policy posted for accessibility options/access or is that beyond this scope and covered by another internal policy?

A24: No formal policy is in place.

Q25: We will want to drop any cables down the wall vs tie wrapping them on the wall. Are you under contract for low voltage infrastructure? Or do you have a list of required/approved vendors, or may we bring our own?

A25: No, you may use your own.

Q26: From the images it appears that none of the existing cables are labeled on either end, is there an existing "as built"? Or do we need to trace anything existing?

A26: Trace anything existing.

Q27: If furniture is needed to house any part of this, will BRA be purchasing or will we, if us, what brand/series do you standardize, and can we use your supplier should it be required to keep with design standards and maintain uniformity. It appears in a few spots that there is furniture to hide cabling or house equipment.

A27: If furniture is needed to house AV equipment, we will expect the chosen vendor to include it in their proposal. We do not have a standard brand/series; however, we would like to approve whatever is selected prior to being purchased to ensure that it'll serve any additional needs in the room.

Q28: Have you experienced any issues with the displays mounted on the walls in the path of opening doors? Do you have stops in the floor? You have 2 of them.

A28: No, we have stops where we need them.

Q29: What is your budget for this project?

A29: Funding is appropriated for contract payment; however, the project budget is not fully established in advance of receipt of proposals. Cost is 25% of the overall score. 75% of a proposal's score relates to understanding of the project, methodology, management plan for the project, experience, and qualifications (RFP General Instructions, Article 14).

Q30: In regard to this statement on page 7 of the RFP "The proposed solution must allow for live streaming and recording of video and audio content as well as the ability to send audio and video to additional conference rooms in the event suggested maximum capacity of the room is exceeded." Our question is in regard to the "the ability to send audio and video to additional conference rooms in the event suggested maximum capacity of the room is exceeded." Part of that statement and is in 2 parts.

a. Our assumption is this refers to overflow of both Teams/Virtual meetings as well as on site meetings that would not require Teams or other conferencing; is this assumption correct?
b. Do you want to overflow from any conference room or just the Larger ones, i.e. Boardroom, Main Conference Room and Training Room?

i. Usage case to clarify question; would you ever see an event where you start a meeting in the small/Huddle rooms (Exec Conference Room or Clear Fork) and use other rooms as overflow?

A30: Yes, regarding assumption a. To answer question b, yes we will potentially have an event in a smaller room and use other rooms for overflow. We need to solution to support that use case.

Q31: Could we get the model #'s of the Dell interactive displays?

A31: Dell C8618QT

Q32: Many of the rooms had multiple TVs located on several different walls. My question is … For each room:

i. How many TVs for each room?
ii. Do you prefer Touch Screen?
iii. What Diagonal Size do you prefer?

A32: We are leaving the quantity, type, and size up to the vendors to make their best recommendations.

Q33: The main conference room has microphones for each speaker. In the other conference rooms:

a. Which rooms do you prefer to have a microphone on the conference tables?

A33: It is the Board/Brazos room that has a microphone for each speaker. As for the other conference rooms, we will need to potentially stream audio/video from them as well conduct video /audio conferencing meetings via Teams mostly, so we will need ample microphone coverage to achieve that. We prefer not to have additional hardware on the table but are expecting vendors provide us with their best recommendation regarding ceiling vs. Table microphones.

Q34: For the Brazos Room E-18:
If we propose a ceiling microphone array system for this room, is it ok to have the mute control on the touch panel?

Keep in mind that the users on the table will not have the ability to mute/unmute the mics. Or do you prefer wireless tables mics with individuals mute/unmute control?

A34: Room mics would need to have the ability to be muted with the touch panel. Also, we do prefer wireless table mics with ability for individuals to mute/unmute themselves.

Q35: As you know there is Video-over-IP Bandwidth Requirements. Can you guaranty your current infrastructure meets the distance and bandwidth required to support the implementation of the new AV technology system?

A35: Yes.

Q36: Page 5, 1. General – Payment for the contract is subject to funds already appropriated and identified. What is the budgeted amount?

A36: Funding is appropriated for contract payment; however, the project budget is not fully established in advance of receipt of proposals. Cost is 25% of the overall score. 75% of a proposal's score relates to understanding of the project, methodology, management plan for the project, experience, and qualifications (RFP General Instructions, Article 14).

Q37: Pricing Tables page 16 and 17 need updates to capture pricing required for:

a. Page 8, 5. Base Proposal – Minimum one year support.
b. See Page 8, 3.L & page 13, Term of Agreement – provide an initial One Year ON-CALL A/V support after upgrade is completed.
c. subsequent years 1-4 of service maintenance
d. Page 9, 7. Performance, Payment, and Warranty Bonds
e. Page 16, 17, Cost Proposal Form – What is the difference for line item 1 and #2?

A37: Consideration will be given to appropriately adjust the Cost Proposal form to reflect required pricing. All updates will be issued as Addenda.

Q38: Regarding Brazos Executive Boardroom:

a. Would you like (3) wireless handheld mics and (3) lavaliers to be used simultaneously, or would you like to be able to swap the handhelds and lavaliers to use (3) at a time total.

b. The RFP notes a presenter confidence monitor as well as a podium confidence monitor. Can you share where you anticipate the presenter confidence monitor to be located in the room?

c. The RFP requests "2 Program Speakers". Are these located at the tech table in the rear of the room?

A38:

A. All at one time.
B. The presenter conference monitor will be the podium confidence monitor.
C. The program speakers are in the ceiling.

Q39: For Bosque Main Conference Room, Clear Fork Back Conference Room, Leon Training Room, and Executive Conference rooms:

The RFP requests a new touchscreen monitor, but on the site visit it was mentioned that you may not want new touchscreen monitors, and you may not even want to integrate your existing touchscreen monitors. Can you provide clarification on how we should quote this aspect?

A39: Our existing touchscreen monitors are very old (verifying exact age and model). We would like to have the touchscreen/blackboard functionality in the training room primarily. If the proposed solution is intuitive to use for users and not cost-prohibitive, we may want to integrate the same technology in other conference rooms as part of this project or later.

Q40: Regarding Clear Fork Conference Room:
Please clarify if you would like to have a ceiling microphone. The RFP requests it, but on the site visit it was noted that it is unused and not necessary.

A40: It doesn't need to be a ceiling microphone.

Q41: ALL ROOMS: Should each room system operate independently OR should all room systems be centrally racked in IT Closet off of the Main Boardroom?

A41: We would like each room system to be operated independently so that we have the flexibility to stream and conference from each room and the advantage of more efficient troubleshooting. With that being stated, we would like to be able to control everything from one our offices (not in a conference room).

Q42: ALL ROOMS: Please confirm audio and video recording are to be utilized in ALL rooms aside from Lounge/Overflow?

A42: This is correct. Every room except the Break/Lounge room.

Q43: ALL ROOMS: Are there existing architectural drawings available for review?

A43: See attached schematics. These are from the most recent major AV project (2013). They have not been updated to reflect all changes that have occurred since.

Q44: ALL ROOMS: Please confirm a GC, EC or LV contractor be engaged for this project by the BRA team?

A44: No, there will not be a GC, EC, nor a LV contractor engaged by the BRA team. Our expectation is that the proposal includes the expertise necessary to complete the project. *SEE ATTACHMENTS at the end of this Addendum for diagrams.*

Q45: ALL ROOMS: What is the intended project timeline and when must this project be completed by for the Brazos River Authority team?

A45: As soon as possible given our Board Meeting schedule, availability of new equipment, and resources. The Board/Brazos and Main/Bosque rooms will need to be functional for board meetings, either with the existing technology we are using or with the new solution.

Q46: ALL ROOMS: Does this need to be a phased installation to keep a minimum number of rooms up and running at any given time?

A46: Depending on how much time is needed per room, a phased installation would be desired but not necessary. We conduct Board Meeting in the Boardroom once every two months. Please keep this in mind.

Q47: ALL ROOMS: What software is the preferred scheduling/occupancy system software?

A47: We use Microsoft Outlook to schedule meetings for “meeting rooms” We do not have a preference of software for the scheduling/occupancy system so long as it works with Outlook.

Q48: ALL ROOMS: Crestron Fusion was mentioned during the meeting, must Creston be used for the scheduling system?

A48: No.

Q49: ALL ROOMS: Is there a control system preference?

A49: No.

Q50: ALL ROOMS: Is there A GUI that must be replicated?

A50: No.

Q51: EXECUTIVE BOARDROOM: What will most video content be? Detailed drawings, PPT, video, etc?

A51: Mostly PPT and Video.

Q52: EXECUTIVE BOARDROOM: What type of audio recording format is preferred?

A52: Any industry standard is fine.

Q53: EXECUTIVE BOARDROOM: Is Lutron light/shade integration required for room refresh?

A53: Yes, we have the integration now and would like to maintain it.

Q54: EXECUTIVE BOARDROOM: Will all meetings be manned by a dedicated AV/IT resource OR will there be self-serve meetings requiring active meeting participants to run a meeting?

A54: Self-serve would be the goal for all meetings except live streaming events.

Q55: EXECUTIVE BOARDROOM: Should auto-tracking camera functionality be included/explored for an elevated user-experience?

A55: Auto-tracking cameras can be used but must have the capability of being turned off.

Q56: EXECUTIVE BOARDROOM: Are general ceiling microphones requested for meetings not needing individualized microphones?

A56: This is up to the vendor to make the best professional suggestion in their proposal. We must have the individual microphones for board meetings but a general microphone(s) for the room can be added if there is control (mute/volume control/disable).

Q57: EXECUTIVE BOARDROOM: Should ceiling speakers be replaced?

A57: This is also up to the vendor. If a proposal suggests utilizing existing speakers, we expect there is a valid explanation for such.

Q58: LOUNGE/OVERFLOW: Should Lounge/Overflow be fit out with control and individual room functionality OR should it only act as an overflow space for the Boardroom?

a. This is a good location to allow for Cable TV and/or digital signage.

A58: We would like to be able to easily share content to the video screen in the future if needed. Currently overflow and cable tv is needed.

Q59: LOUNGE/OVERFLOW: Should ceiling audio be updated in this space?

A59: The speakers in this area are for the intercom system. They do not need to be updated.

Q60: LOUNGE/OVERFLOW: Will this space ever be utilized for Town Hall type functions, needing microphone audio and presentation capabilities?

A60: Just content/video presentations in the future.

Q61: MAIN CONFERENCE ROOM (BOSQUE): What will the majority of the content be? Detailed drawings, PPT, video, etc.?

A61: That room is used mostly for video conferencing with content and in-person meetings. PowerPoints mostly.

Q62: MAIN CONFERENCE ROOM (BOSQUE): What type of audio recording format is preferred?

A62: Any industry standard is fine.

Q63: TRAINING ROOM (LEON): Will the video sources be routed from a matrix (in any input to any output) or will it be a distribution where every display will receive the same input?

A63: A Matrix solution is desired.

Sincerely,

Allison Sheeler

Allison Sheeler, CTCD
Purchasing Agent

ATTACHMENTS IN RESPONSE TO QUESTION #44

Q44: ALL ROOMS: Please confirm a GC, EC or LV contractor be engaged for this project by the BRA team?

A44: No, there will not be a GC, EC, nor a LV contractor engaged by the BRA team. Our expectation is that the proposal includes the expertise necessary to complete the project.

Figure 1: As-Built Diagrams (There are 4 diagrams: *Figures 1a through 1d*)
Figure 2: Boardroom - Audio Diagram
Figure 3: Boardroom - Control Diagram
Figure 4: Boardroom - Video Diagram
Figure 5: Boardroom - Rack Diagram
Figure 6: Bosque Diagram

Figure 1a

OFE WALL MOUNTED RACK

Receiver
Ant. I/PA
Ant. I/PB
AF Balanced O/P
AF Unbalanced O/P
Power I/P
AUDIO TECHNICA\ATW-R310

PODIUM
OFE

Shure
MX412C

From HDX Codec

From DM16x16 - O/P 9 - Program Audio 1 (Main)

From DM16x16 - O/P 10 - Program Audio 2 (Overflow)

UNDER FRONT TABLE

SHURE\MX405
MX400DP Base
EX-LOGIC PORT 13

2-in, 2-out Expander
Audio Input 1
Audio Input 2
Audio Output 1
Audio Output 2
Ethernet PoE+
Biamp
EX-IO

PoE Injector
PoE
LAN
Phihong
PoE36U-1AT-R

24 port network switch with AVB
Uplink 1
Uplink 2
Uplink 3
Uplink 4
Power I/P
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
Port 11
Port 12
Port 13
Port 14
Port 15
Port 16
Port 17
Port 18
Port 19
Port 20
Port 21
Port 22
Port 23
Port 24
Netgear
GS724T-AVB-

Expander
Slot 1
Slot 2
Slot 3
EIC-4
Mic/Line I/P 1
Mic/Line I/P 2
Mic/Line I/P 3
Mic/Line I/P 4
Ethernet
MAINS I/P
Biamp
EX-MOD

To customer POTS line

Server Frame
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Line I/P 1
Line I/P 2
Line I/P 3
Line I/P 4
SEC-4
Line O/P 1
Line O/P 2
Line O/P 3
Line O/P 4
SOC-4
Telephone Line 1
Telephone Line 2
STC-2
Logic I/O 1
Logic I/O 2
Logic I/O 3
Logic I/O 4
Logic I/O +5V
Primary
Secondary
Serial 1
Serial 2
MAINS I/P
Biamp
SERVER I/O

UNDER FRONT TABLE

Logic Interface
Control Input 1 ... 16
Control Output 1 ... 16
LAN
Biamp
EX-LOGIC

LAND MICS
1-12 ON
LOGIC I/O
1-12

LEDs (OUTPUT)

BUTTONS (INPUT)

8 Channel Amplifier
I/P 1 ... I/P 8
O/P 1 ... O/P 8
Data Ch 1&2
Data Ch 3&4
Data Ch 5&6
Data Ch 7&8
MAINS I/P
QSC
CX108V

Tap all @ 7.5w

Amplifier
Balanced I/P
Line I/P
Line O/P
Speaker O/P 70V
Speaker O/P 100V
MAINS I/P
Atlas Soundolier
PA1001G

2 Channel Amplifier
I/P 1
I/P 2
O/P 1
O/P 2
MAINS I/P
Crown
CT-410

Portable Transmitter
I/P

Gentner OFE Asst Listen

Line Level
Distribution Amp
Line I/P
Line O/P 1
Line O/P 2
Line O/P 3
24V DC I/P
RDL\ST-DA3

Video Codec
Video I/P 1 HDCI
Video I/P 2 HDCI
Video I/P 3 S-Video
Video I/P 4 DVI
Mic I/P 1
Mic I/P 1
Analog Phone I/P
Audio I/P 1 Left
Audio I/P 1 Right
Audio I/P 3 Left
Audio I/P 3 Right
Audio I/P 4
RS-232
LAN
LAN
ISDN
USB
MAINS I/P
Video O/P 1 DVI
Video O/P 2 DVI
Video O/P 3 S-Video
Audio O/P Left 1
Audio O/P Right 1
Audio O/P Left 3
Audio O/P Right 3
Polycom
HDX 8002

Encoder
Line
LAN
MAINS I/P
VBrick
H.264 Encoder

Plug-In PSU
24VDC
MAINS I/P
Radio Design Labs
PS-24E

Twister Pair Sender
Line I/P
TP
Power I/P
Radio Design Labs
AF-TPS1A

Line Level Receiver
I/P
Loop O/P
Line I/P
Power I/P
Radio Design Labs
TX-TPR1A

To Overflow TV

TO OFE
OPERATOR
STATION
RECORDER

Stereo Audio Recorder
Mic/Line I/P Left
Mic/Line I/P Right
Line I/P Left
Line I/P Right
Balanced Line I/P Left (Euro)
Balanced Line I/P Right (Euro)
Digital I/P
LAN
RS-232C
Parallel
USB
MAINS I/P
Balanced Line O/P Left
Balanced Line O/P Right
Line O/P Left
Line O/P Right
Balanced Line O/P Left (Euro)
Balanced Line O/P Right (Euro)
Digital O/P
Headphones O/P
Marantz
PMD560

Front

House Left

Center
JBL\26DT

House Right
JBL\26DT

Rear

JBL\26DT

JBL\26DT

JBL\26DT

JBL\26DT

JBL\26DT

JBL\26DT

JBL
M28
House Left Pgm

JBL
M28
House Right Pgm

Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title: **Board Room - Audio**

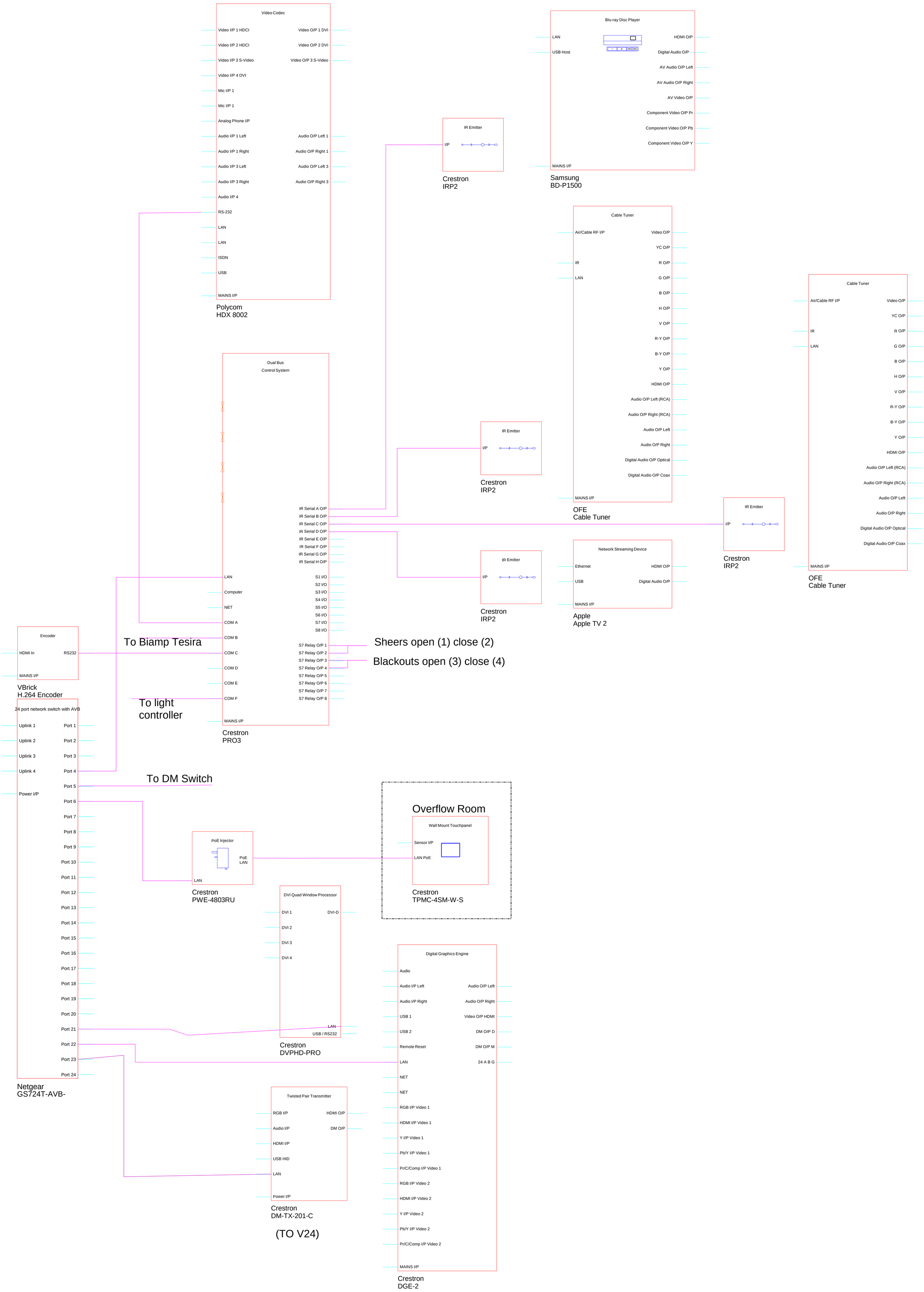
Drawn By:	Scale:	Date:
TBrooks	NTS	9/18/2013

Issued For: Brazos River Authority

Drawing No: Audio | Rev: 1.1

Data Projections
4616 W Howard Ln Suite 140
Austin, TX
78728

Figure 1b



Rev	Date	Notes

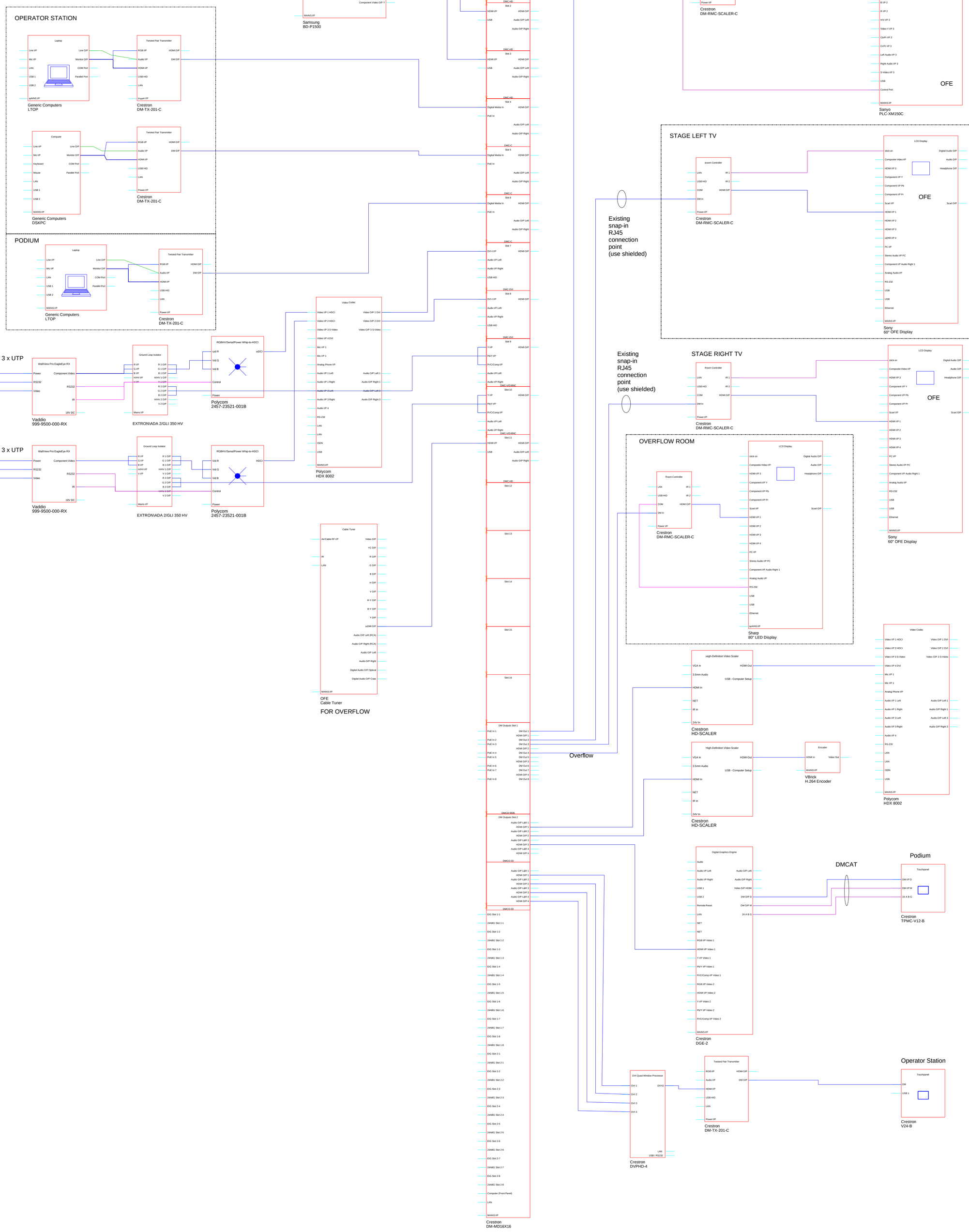
Rev	Date	Notes

Symbols Used

Client:		
Title: **Board Room - Control**		
Drawn By: TBrooks	Scale: NTS	Date: 9/18/2013
Issued For:	Brazos River Authority	
Drawing No: Control	Rev:	1.1

Data Projections
4616 W Howard Ln Suite 140
Austin, TX
78728

Figure 1c



Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title: **Board Room - Video**

Drawn By:	Scale:	Date:
TBrooks	NTS	9/18/2013

Issued For: Brazos River Authority

Drawing No: Video | Rev: 1.1

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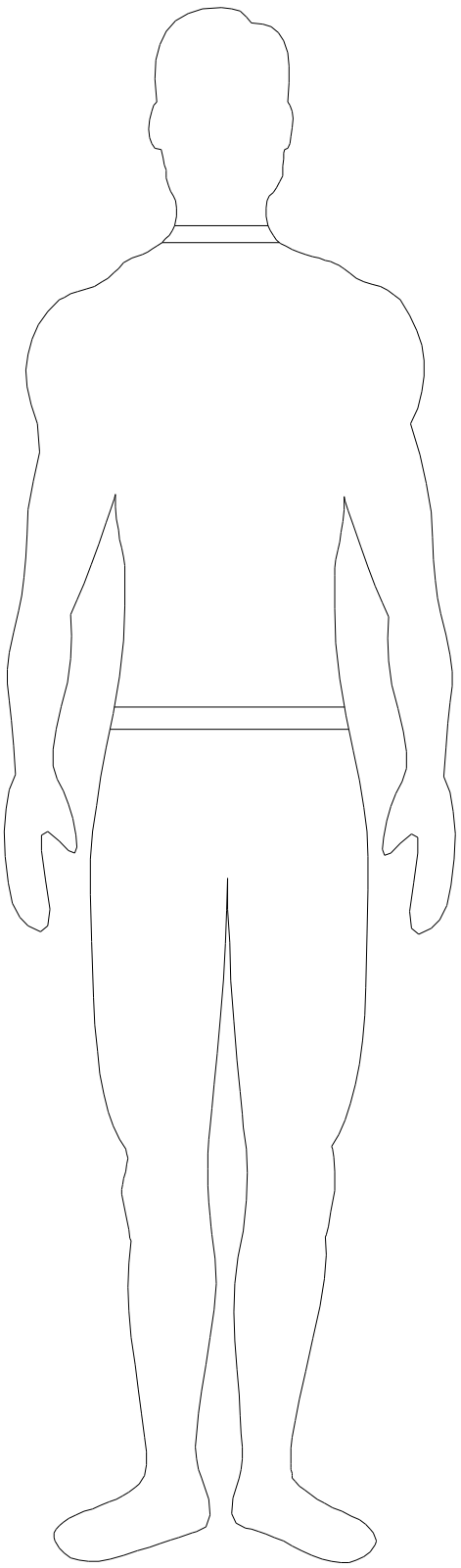
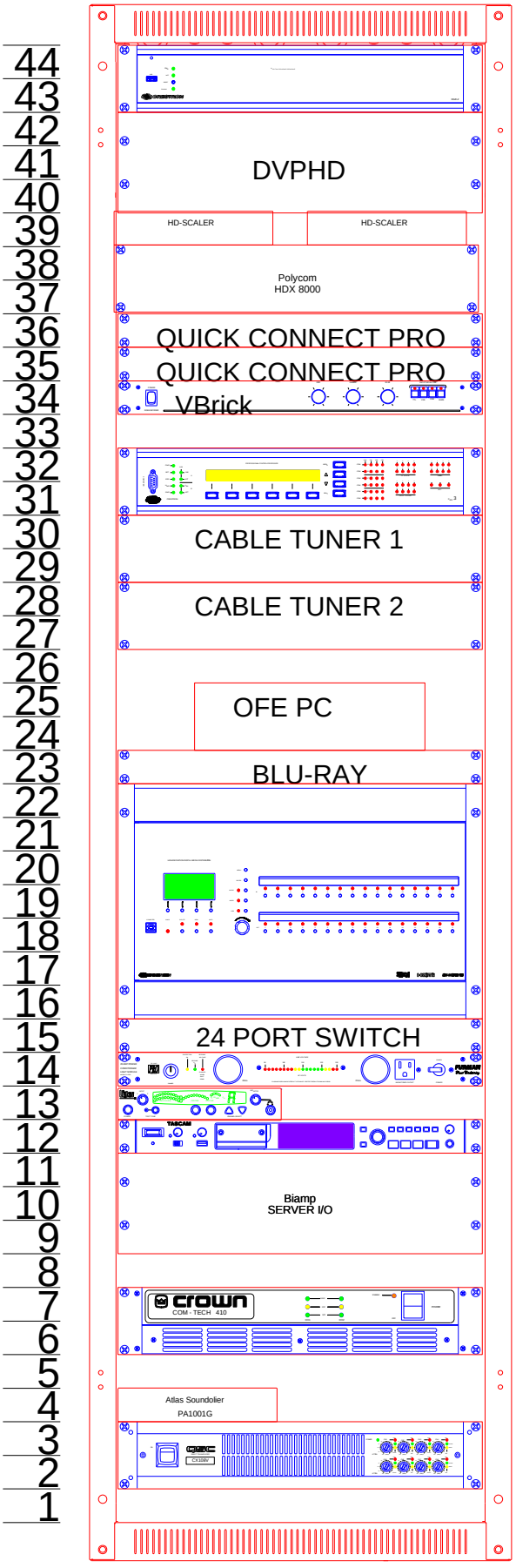
78728

Figure 1d





Middle Atlantic Products
ERK-4425

Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Brazos Boardroom Rack

TBrooks	NTS	9/16/2013
	B-Rack	1.0

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Figure 2

OFE WALL MOUNTED RACK

Receiver — Ant. I/PA, Ant. I/PB, AF Balanced O/P, AF Unbalanced O/P, Power I/P — AUDIO TECHNICA\ATW-R310

Receiver — Ant. I/PA, Ant. I/PB, AF Balanced O/P, AF Unbalanced O/P, Power I/P — AUDIO TECHNICA\ATW-R310

Receiver — Ant. I/PA, Ant. I/PB, AF Balanced O/P, AF Unbalanced O/P, Power I/P — AUDIO TECHNICA\ATW-R310

Receiver — Ant. I/PA, Ant. I/PB, AF Balanced O/P, AF Unbalanced O/P, Power I/P — AUDIO TECHNICA\ATW-R310

Receiver — Ant. I/PA, Ant. I/PB, AF Balanced O/P, AF Unbalanced O/P, Power I/P — AUDIO TECHNICA\ATW-R310

Shure MX412C

PODIUM OFE

From HDX Codec

From DM16x16 - O/P 9 - Program Audio 1 (Main)

From DM16x16 - O/P 10 - Program Audio 2 (Overflow)

Server Frame

Slot 1: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 2: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 3: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 4: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 5: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 6: Line I/P 1, Line I/P 2, Line I/P 3, Line I/P 4, SEC-4
Slot 7: Slot 8: Line O/P 1, Line O/P 2, Line O/P 3, Line O/P 4, SOC-4
Slot 9: Line O/P 1, Line O/P 2, Line O/P 3, Line O/P 4, SOC-4
Slot 10: Line O/P 1, Line O/P 2, Line O/P 3, Line O/P 4, SOC-4
Slot 11: Line O/P 1, Line O/P 2, Line O/P 3, Line O/P 4, SOC-4
Slot 12: Telephone Line 1, Telephone Line 2, STC-2, Logic I/O 1, Logic I/O 2, Logic I/O 3, Logic I/O 4, Logic I/O +5V, Primary, Secondary, Serial 1, Serial 2, MAINS I/P

Biamp SERVER I/O

UNDER FRONT TABLE

SHURE\MX405 MX400DP Base — EX-LOGIC PORT 13

2-in, 2-out Expander — Audio Input 1, Audio Input 2, Audio Output 1, Audio Output 2, Ethernet PoE+

Biamp EX-IO

PoE Injector — PoE, PoE LAN, LAN

Phihong PoE36U-1AT-R

24 port network switch with AVB — Uplink 1–4, Power I/P, Port 1–24

Netgear GS724T-AVB-

Expander
Slot 1: Mic/Line I/P 1–4, EIC-4
Slot 2: Mic/Line I/P 1–4, EIC-4
Slot 3: Mic/Line I/P 1–4, EIC-4
Ethernet, MAINS I/P

SHURE\MX405 MX400DP Base (×16)

Biamp EX-MOD

To customer POTS line

UNDER FRONT TABLE

Logic Interface — Control Input 1–16, Control Output 1–16, LAN

LAND MICS 1-12 ON LOGIC I/O 1-12

Biamp EX-LOGIC

LEDs (OUTPUT)

Logic Interface — Control Input 1–16, Control Output 1–16, LAN

Biamp EX-LOGIC

BUTTONS (INPUT)

8 Channel Amplifier — I/P 1–8, O/P 1–8, Data Ch 1&2, Data Ch 3&4, Data Ch 5&6, Data Ch 7&8, MAINS I/P

QSC CX108V

Front

House Left

Center

House Right

Tap all @ 7.5w

Rear

JBL\26DT (×6)

Amplifier — Balanced I/P, Line I/P, Line O/P, Speaker O/P 70V, Speaker O/P 100V, MAINS I/P

Atlas Soundolier PA1001G

2 Channel Amplifier — I/P 1, I/P 2, O/P 1, O/P 2, MAINS I/P

Crown CT-410

JBL M28 (×2)

House Left Pgm

House Right Pgm

Portable Transmitter — I/P

Gentner OFE Asst Listen

Line Level Distribution Amp — Line I/P, Line O/P 1–3, 24V DC I/P

RDL\ST-DA3

TO OFE OPERATOR STATION RECORDER

Stereo Audio Recorder — Mic/Line I/P Left, Mic/Line I/P Right, Line I/P Left, Line I/P Right, Balanced Line I/P Left (Euro), Balanced Line I/P Right (Euro), Digital I/P, LAN, RS-232C, Parallel, USB, MAINS I/P; Balanced Line O/P Left, Balanced Line O/P Right, Line O/P Left, Line O/P Right, Balanced Line O/P Left (Euro), Balanced Line O/P Right (Euro), Digital O/P, Headphones O/P

Marantz PMD560

Video Codec — Video I/P 1 HDCI, Video I/P 2 HDCI, Video I/P 3 S-Video, Video I/P 4 DVI, Mic I/P 1, Mic I/P 1, Analog Phone I/P, Audio I/P 1 Left, Audio I/P 1 Right, Audio I/P 3 Left, Audio I/P 3 Right, Audio I/P 4, RS-232, LAN, LAN, ISDN, USB, MAINS I/P; Video O/P 1 DVI, Video O/P 2 DVI, Video O/P 3 S-Video, Audio O/P Left 1, Audio O/P Right 1, Audio O/P Left 3, Audio O/P Right 3

Polycom HDX 8002

Encoder — Line, LAN, MAINS I/P

VBrick H.264 Encoder

Plug-In PSU — 24VDC, MAINS I/P

Radio Design Labs PS-24E

Twister Pair Sender — Line I/P, TP, TP, Power I/P

Radio Design Labs AF-TPS1A

To Overflow TV

Line Level Receiver — I/P, Loop O/P, Line I/P, Power I/P

Radio Design Labs TX-TPR1A

Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title: **Board Room - Audio**

Drawn By:	Scale:	Date:
TBrooks	NTS	9/18/2013

Issued For: Brazos River Authority

Drawing No: Audio — Rev: 1.1

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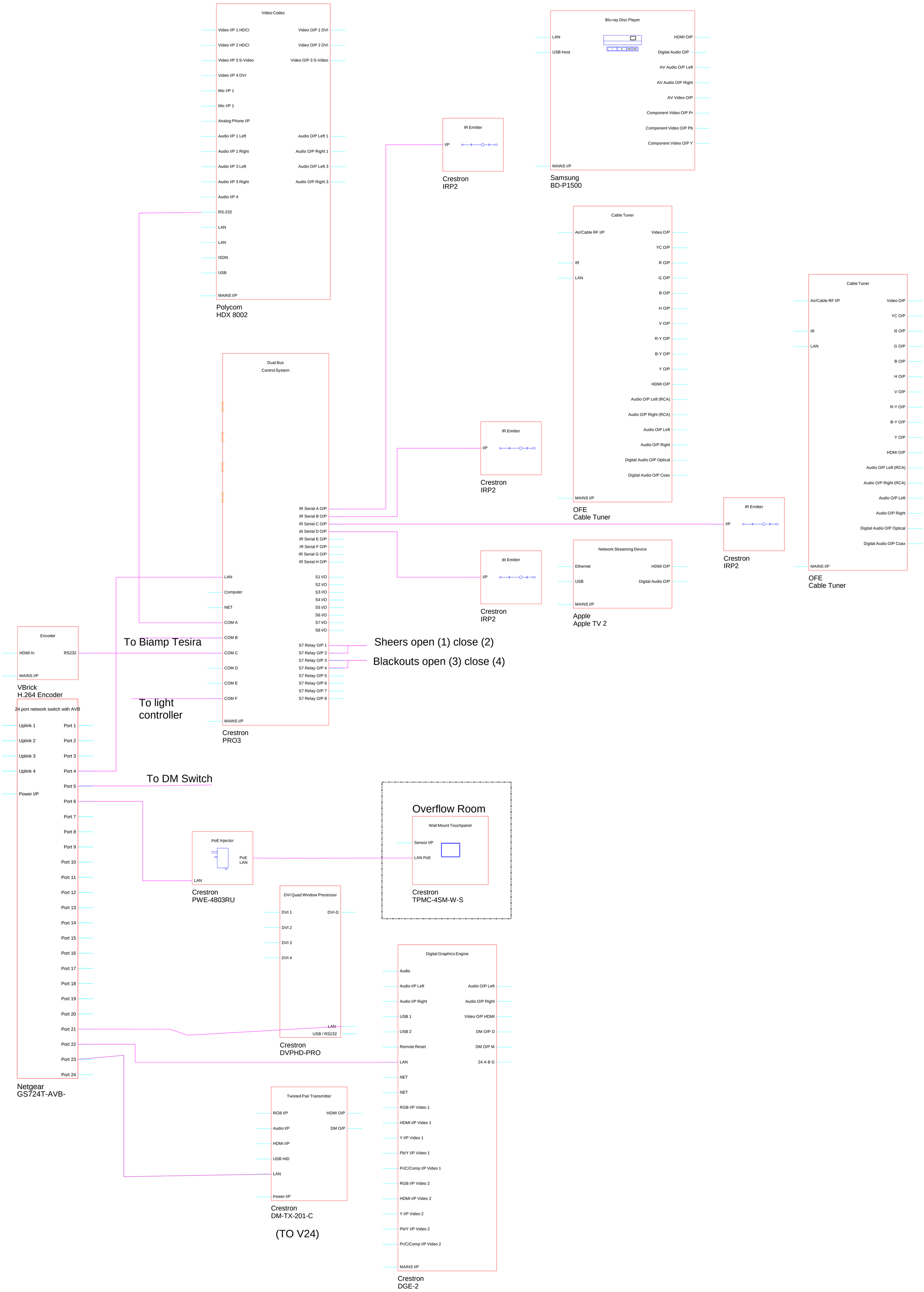
Figure 3



Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title: **Board Room - Control**

Drawn By:	Scale:	Date:
TBrooks	NTS	9/18/2013

Issued For: Brazos River Authority

Drawing No: Control | Rev: 1.1

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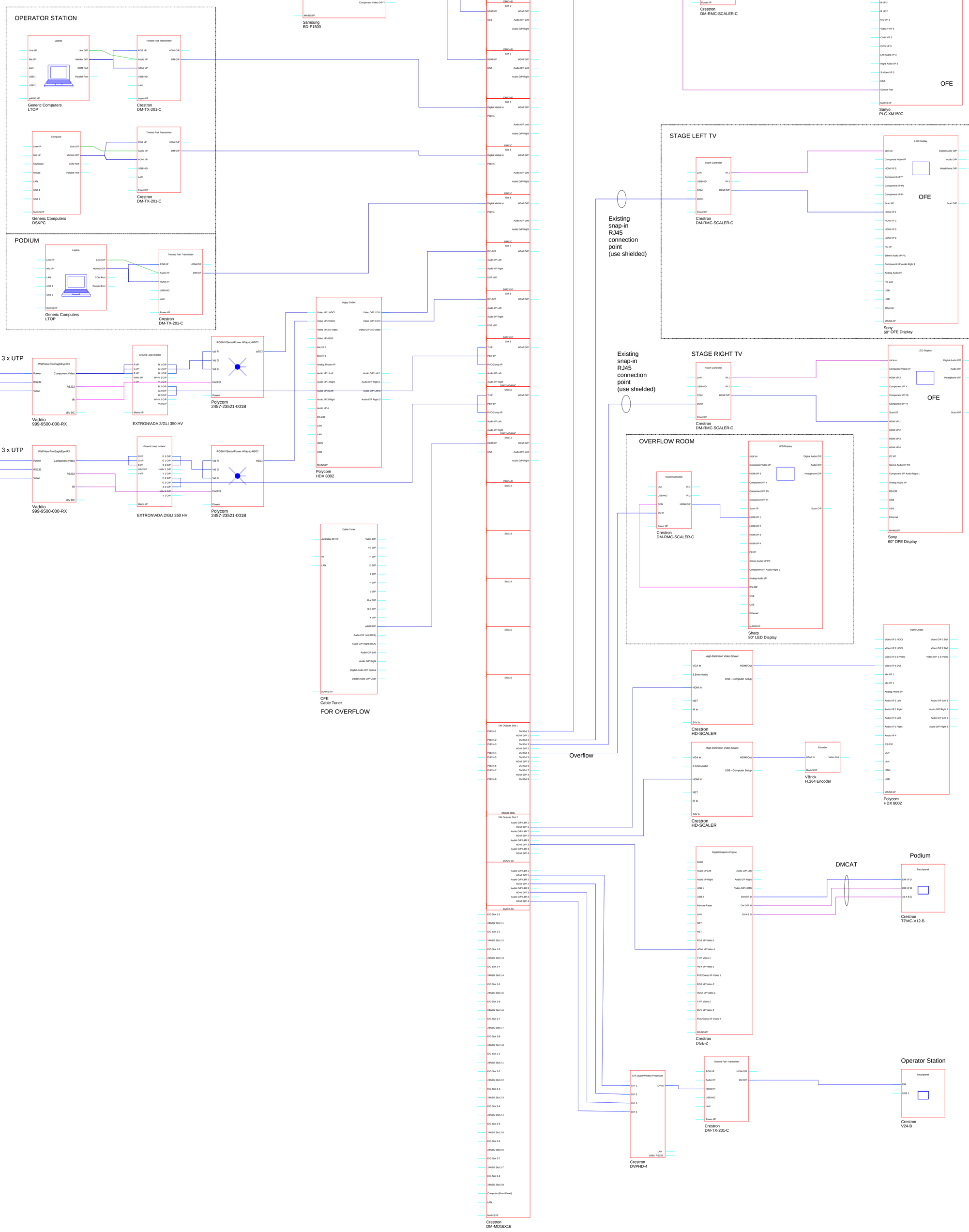
Figure 4



Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title: **Board Room - Video**

Drawn By:	Scale:	Date:
TBrooks	NTS	9/18/2013

Issued For: Brazos River Authority

Drawing No: Video | Rev: 1.1

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Austin, TX
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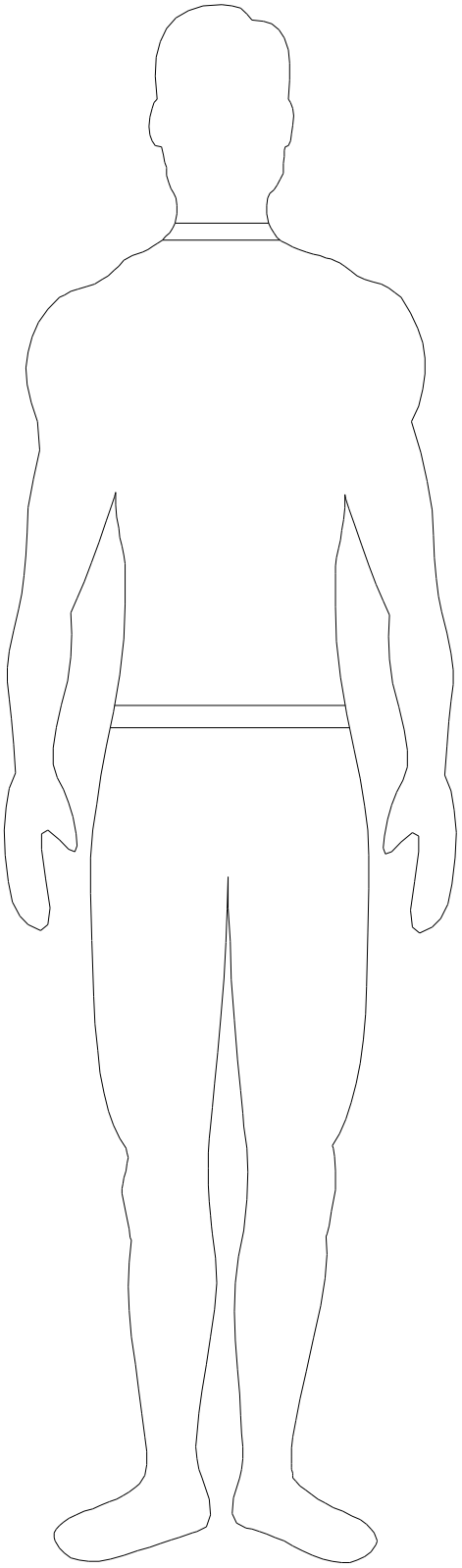
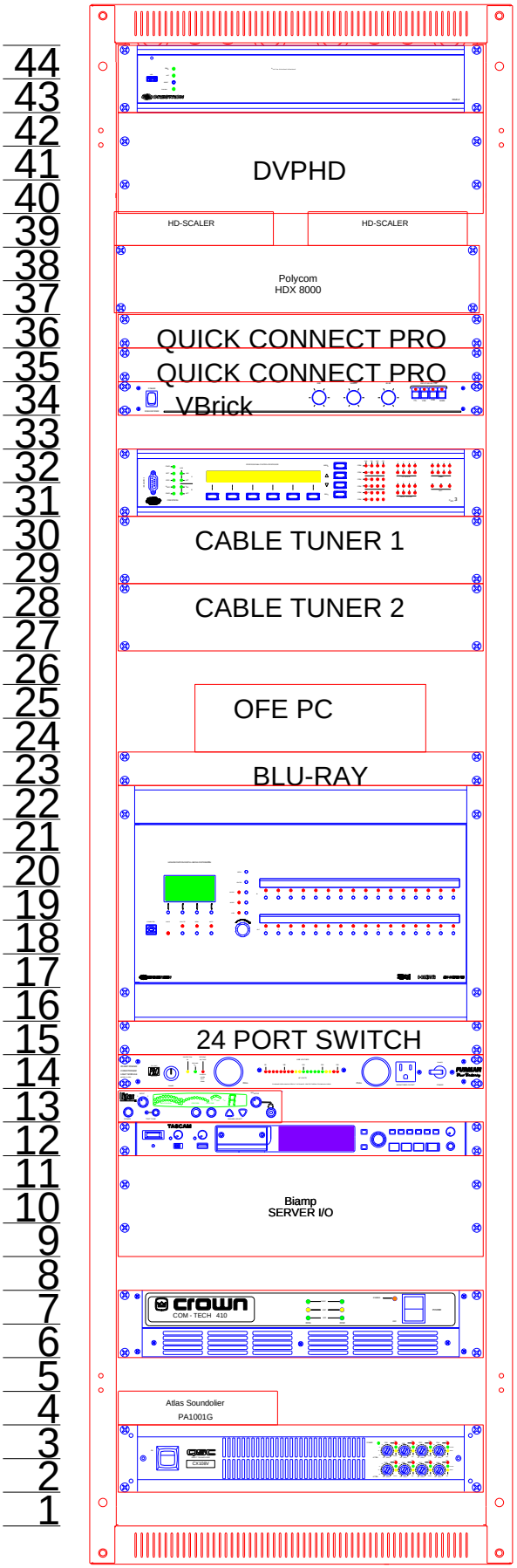
Figure 5





Middle Atlantic Products
ERK-4425

Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Brazos Boardroom Rack

Drawn By: TBrooks	Scale: NTS	Date: 9/16/2013
Board# Rev		
Drawing No: B-Rack	Rev: 1.0	

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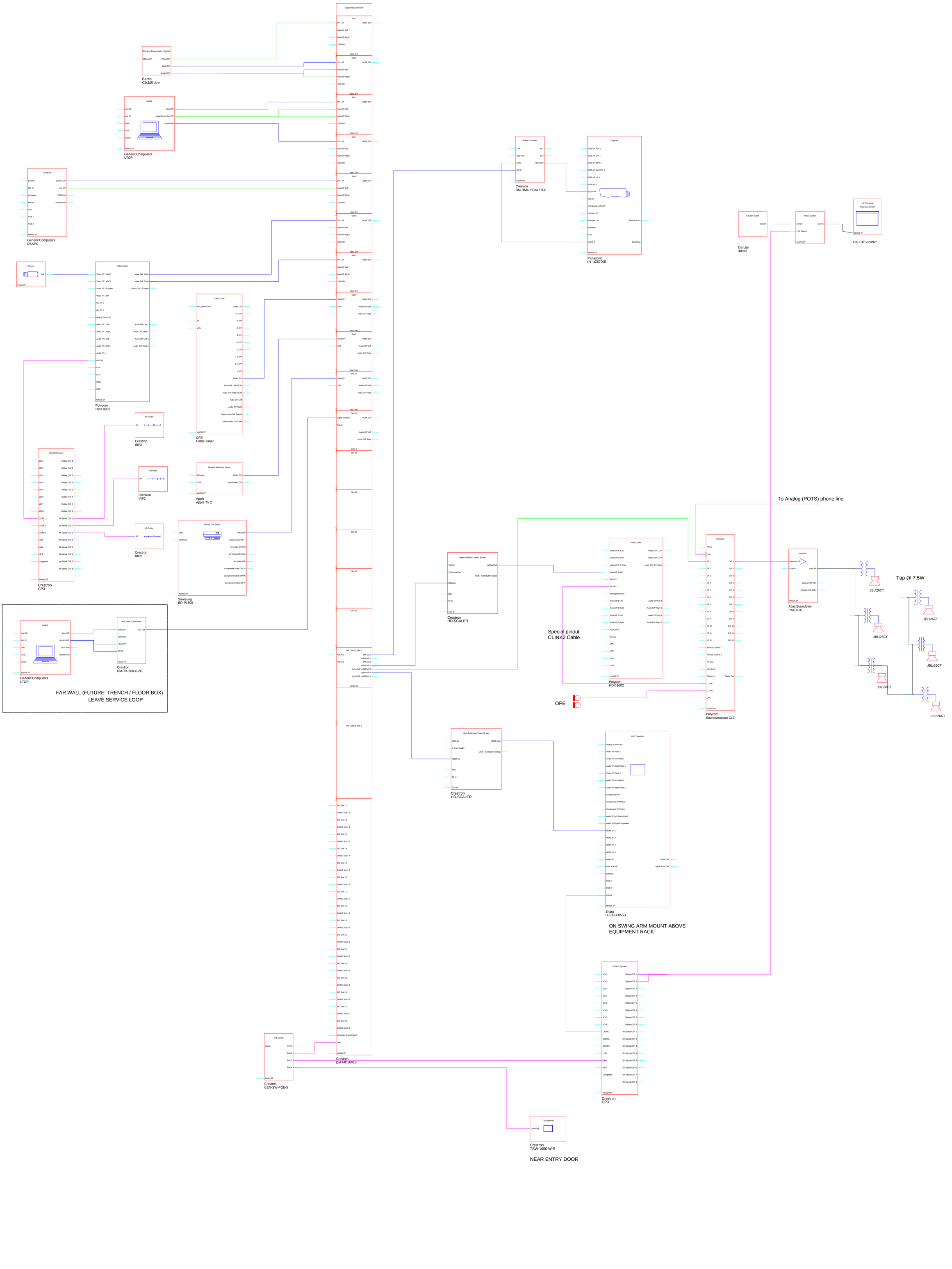
Figure 6



Rev	Date	Notes

Rev	Date	Notes

Symbols Used

Client:

Title:
Bosque Conference Room

Drawn By:	Scale:	Date:
TBrooks	NTS	3/5/2014
Issued For:	Brazos River Authority	
Drawing No:	Bosque-AVC	Rev: 1.2 Final

Data Projections
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