Carroll Public Library and City Hall

Feasibility Study Appendices

December 12, 2016

Table of Contents

Appendix 1

Programming Forms

Programming Forms

Following are the comments from the staff of the Carroll Public Library and City Hall taken during macro-programming meetings. The blue text denotes items discussed during these meetings and the green denotes items added later via email.

Carroll Public Library and City Hall

Architectural Programming Questions – City Hall

General:

- Are there accessibility directives that are above and beyond ADA?
  - None (elevator not ADA compliant)
- What is the projected growth of City Hall?
  - Budget to hire one additional staff in Public Works department (GIS).
  - Workstation needed – adjacent to Carey.

Functional Relationships:

- Describe your team's current workspace, ie, private office, workstation, clustered workstations…
  - Mix of open cubicles clustered @ front desk and closed offices.
  - Storage centrally located
  - Closed office have glass fronts and offer views to the corridor or front desk area.
  - Current staff levels are 11 full time/3 part-time/floaters and growth for one additional full time staff noted above.
- Should any of the specific tasks/activity be integrated or compartmentalized?
  - Storage can be either depending on new configuration. Not necessary to be compartmentalized by department.
  - Room/space provided for billing could be integrated into new work/mail and supply room.
  - HR records and personal files to be stored in accessible location (ie, not in someone's office)
- Hours of operation – any unique hours we need to be aware of that would impact your location within building.
  - 8-5 (730-430 Building Department) Some special hours during Council Meetings
- What 3 adjacencies are most important to the production efficiency within your department? Please describe your working relationship with these groups?

  - Front desk monitored by 2 individuals (Kelly and Karen) but also visible by others in same department – need additional flexible workstation for floating employees (ie: water meter).
  - Building Department close access to rear door (they are in and out on site etc… during the day)
  - Centralized Storage,
  - Perry and Greg to remain in shared office for ease of coordination/communications.
  - Conference room needed next to Council Chambers for closed sessions.
- Should groups be organized centrally or decentralized?
  - Keep departments together (Public Works, Finance, and Building Departments).
  - Central front desk – Finance Department.
- What is your primary means of communication within your team and within the company? ie: daily stand-up meetings, email etc?
  - Impromptu Face to face communication as needed – the office is small.
- What are unique components or spaces that exist within your work group? ie: high density filing, data/server rooms, 24/7 communication shared spaces, secure storage, dedicated conference space, coat closet etc?
  - Fire proof storage for records – secure but accessible to the public
  - Plan storage - flat files, roll storage and hangers.
- Are there shared spaces? What are the pros/cons?
  - Share Council Chamber space with Library, there have been scheduling conflicts.
  - Shared mailing services with the Library and Police, works well but can be accommodated with the change.
  - Share tornado shelter (in the basement) with Police and Library.
  - There are no required shared service desired.
- What interactions, if spontaneous could be beneficial between departments if they occurred more often?
  - Office is small, interactions occur often.
  - Team enjoyed impromptu coffee "meetings" first thing in the break room.
- What obstacles currently exist in your work environment? ie: privacy, visibility, access etc?
  - No natural light,
  - Need conference room (12-16 people) currently use space in office and council chambers for larger meetings
  - additional storage space needed including area for shredding papers
  - managing the front desk – large space with no full time staff
  - technology and layout in Council Chambers – needs update
  - drop box/mail box needed,
  - doorbell chime at front desk
  -

Technology:

- What developments in technology have impacted your work process?
  - Moving some files to be electronic.
- How can the work environment continue to accommodate these trends?
  - Add large format scanner.

- Centralized work room.

- What are your team's current filing needs? Are these needs expanding or reducing due to technology in the future?
  - Some are expanding since files need to be kept indefinitely.
  - Reduced storage due to technology advances may be slow to materialize and in many cases the hard copies are still needed so space requirements will not be reduced.
  - In general all departments need more storage and better organization/access to stored material.

Facility:

- What interior work environment have you seen or heard about that would best serve as a model for your new workplace and why?
  - Natural light!
  - Use of technology in Council Chambers – iPad/projector screen/microphones/ space for recorder and media.

- Where is your favorite place to work (coffee shop, comfortable seating, near windows, outside, etc.) and why?

- What works well within your current facility that you feel should be emulated in the new building?
  - Back door for the building department staff to easily come and go as needed.
  - Convenient to have police station next door when records need to be pulled.

- Are there any considerations regarding security that impact your team/department directly? If yes, please explain.
  - Smaller front desk area with implied security – no need for full height glass just more separation from the customers.

- How many visitors a day, on average, does your team interact with? Are these customers, contractors, clients, vendors, off site team members, etc.? What type of environment could accommodate this interaction?
  - Unknown the number of public that utilize the office on a daily basis, typically 3-4 people waiting at most, sometimes more for a small meeting.
  - The public come for three main reasons 1.) Pay their utilities 2.) Building Department and Permits and 3.) Public Works.
  - Existing lobby is oversized for the amount of visitors received.

- Understand goal of communication and patterns - How can the new interior environment better accommodate conferencing/collaboration needs?

  - On average, how many conferences do you participate in weekly?
  - What is the average size of the meetings? Where are they held?
  - How long, on average, are these meetings?
  - Is technology necessary for these meetings? If yes, please describe.

Additional notes/comments:

- Parking can become an issue with other activities happening either at the courthouse or library.
- Request for sit-to-stand desks particularly for the front desk area – desire to be eye level with customers.
- Separation at the front desk – implied security
- Storage/work room
- File storage for front of house – easily accessible.

Carroll Public Library and City Hall

Architectural Programming Questions - Carroll Public Library

Name:
Department:

General:

- From the prior study – is there anything that was not addressed? Are there any changes over the past two years to address moving forward? The library has increased their programs extensively, often having wait lists for participants. I forwarded the program that Kim Bolan & Associates did for us this past year. She gave us new collection targets and designed a temporary solution to the space problems. However, the board of trustees are hesitant to make many of these changes because they don't want voters to think we solved our space problems when in fact they are just temporary fixes to alleviate much larger problems.
- Are there accessibility directives that are above and beyond ADA? Increase door widths to 36" with automatic operators (elevator not ADA compliant). Can't hold programs upstairs because wheelchair accessibility is limited in the elevator. Police restrooms are the only ADA compliant restrooms in the building. Dead end shelving and tall shelving is not ADA friendly.

Functional Relationships:

- Describe your team's current workspace, ie, private office, workstation, clustered workstations....ie: current staffing levels, volunteers etc...?
  - Kiosk area with 4 workstations at the counter and 2 workstations stacked. Typically 4-5 people or more work or move around in this area answering questions, filing, sorting and managing programs etc... interrupted continually.
  - Current Staff include 4 Full-time, 1 Library Director, 2 Part-time, 4 Part-time High School Staff year round, 1 part-time intern in the summer (new), and 4-5 volunteer individuals helping with summer reading programs (Foster Grandparents program).
  - Library Director has a private office shared with storage for the Library.
  - Back storage room also serves as the Children's librarian's program prep space.
  - No space for staff to work during their protected time away from the circulation desk. They need several dedicated work stations with computers to do program planning, promotion, and cataloging.
  - Work Room has no space to "work" for staff. It's the server room (noisy), coffee service prep space, DVD cleaning machine space, storage, paper cutter, and supply room (in cabinets). Staff can't see patrons when using these spaces.

- Describe your team's daily tasks and estimate percentage of time spent on each task, ie: data entry, conference calls, one on one meetings, training, circulation – RFID, AHM...etc.
  - During the summer 4 high school pages work exclusively in circulation (100%) – the volume increases during the summer. All 4 work 2 hour shifts every day M-F and every other Saturday in the summer. During the school year they work 2-3 days per week for 2 hour shifts and every other Saturday.

  - Much full time staff time is spent answering questions from patrons.
  - Circulation services performed by full time staff include checking in/out (40% all staff), looking up items for patrons (10% all staff), assisting with computer questions (5% all staff), releasing print jobs(1% all staff), accepting fees and fines (1% all staff), ordering material(10% - Judy, Lynette & Brandie), interlibrary loan(10% - Donna), cataloging (20% - Judy & Lynette), processing material (10% Judy), program planning and managing programs (40% Brandie & Diane), administration (50% - Brandie).

- Should any of the specific tasks/activity be integrated or compartmentalized
  - Dedicated mail and work room (with windows) – isolated from open area of the Library proper.
  - Areas for staff to have focused work time with computer work stations without interruptions from patrons. (Currently the circulation computers are also the work machines for staff to do all of their other work)
  - RFID and self check kiosks would really help bring staff out from behind the desk to help patrons and give them more protected time.
  - Book drop closer to staff work space.

- Hours of operation – any unique hours we need to be aware of that would impact your location within building. 9-7 M-Th. 9-6 F 9-2 Sat. – SUMMER. 9-8 M-F 9-5 Sat. – WINTER (Note that we close at 8:00 p.m. during the school year, not 7:00 pm)

- What 3 adjacencies are most important to the production efficiency within your department? Please describe your working relationship with these groups?
  - Book Drop, Cataloging and ordering all in one area, could be combined with mail/work room.
  - Children's program area within or near the children's books/computers. Maker space close to meeting rooms/area.
  - Teen library close to Maker space or digital media lab.

- Should groups be organized centrally or decentralized?
  - Separate program area/meeting rooms from Library.
  - Centrally locate circulation.
  - "Front desk" can be decentralized and more similar to Cedar Rapids Public Library – increase interactions with patrons.
  - Move public computers away from where small children and families walk through for story time. We get complaints about teens playing video games that are inappropriate for small children to view.
  - Quiet spaces should be separate from main circulation or program areas.

- What is your primary means of communication within your team?
  - Talk directly to one another, programs and agendas are through email. Space is small so there is constant interaction (and apologies!)
  - Project white board in work room using the post-it note system (very low tech and analog but effective) to track current projects by team member.

- What are unique components or spaces that exist within your work group? i.e.: high density filing, data/server rooms, secure storage, dedicated conference space, etc.?
  - Circulation space for sorting, handling and shelving books, small rooms for micro phish and audio files.
  - Free coffee service for patrons beside checkout desk.
  - Wish list spaces: high density filing, data/server room, break room with table & chairs

- Staff restrooms are very nice.

- Are there shared spaces? What are the pros/cons?
  - Share Council Chamber space with City Hall, there have been scheduling conflicts.
  - Shared mailing services with the City Hall and Police, works well but can be accommodated with the change.
  - Share tornado shelter with Police and City Hall – no access afterhours.
  - Mayor's conference room is used as our board room and for programs.
  - Lobby space is frequently used for library programs. We've had our summer reading program sticker and rewards station out there all summer to save space in the library.
  - Shared restrooms with city hall and police in the lobby area.

- What interactions, if spontaneous could be beneficial between departments if they occurred more often? Interactions with patrons in the Library, not at the desk.

- What obstacles currently exist in your work environment?
  - Lack of space, no area for meetings or groups – currently held in seating area in between the stacks. Patrons have to move to accommodate the program.
  - Circulation area is cramped with staff working on top of one another – hinders interaction with patrons and also workers' productivity.
  - No natural light – Library feels like a cave.
  - Dead end corridors in the stacks – not desirable and cumbersome with individuals in wheelchairs.
  - Children space is small with limited opportunity of other types of learning – play.
  - No designated work/mail area – noise is distracting to patrons and library staff.
  - No space – maker space- for those types of programs (knitting etc….).
  - Need for a quiet study space.
  - No storage or high density shelving for library material, supplies, or book sale.

Technology:

- What developments in technology have impacted your work process? i.e.: RFID etc.?
  - explored self-check-in but it did not work well with barcode scanners and current ILS
  - public computer workstations have to be clustered around the pillars because that's the only power available – under carpet wiring would be nice to pull computers away from one central place
  - wish list technology includes self-check kiosks, RFID, flat panel OPACS on endcaps, technology in meeting rooms for screen sharing and video conferencing, projection equipment in a large meeting room for bigger presentations and programs.

- How can the work environment continue to accommodate these trends?
  - Ability to be more flexible.
  - Pulling check in/out to self check stations to free up staff time for programs.
  - Electrical wiring under the carpet to pull electricity up to seating.

- What are your team's current filing needs? Are these needs expanding or reducing due to technology in the future?
  - DVD filing to prevent theft out of the cases – this need is probably reducing because we'll hopefully have a good video streaming platform in the future but for now we are the movie store in Carroll!
  - High density shelving for print storage/weeding/Maker Kits or supplies/program supplies – this is probably expanding due to more programs being held in the library and the increase in checking out non-traditional material like story time kits, musical instruments, telescopes, etc.

Facility:

- What interior work environment have you seen or heard about that would best serve as a model for your new library and why?
  - Toured the Cedar Rapids Public Library – enjoyed the variety of spaces and the lobby – the ability to change spaces to accommodate programs.
  - Comment on shelving height and openness.
  - The CRPL encompasses larger open spaces and smaller cozy areas to accommodate many different types of uses.
  - Urbandale – open and airy feeling.
  - North Liberty expansion – shared space with library and Rec Center.
  - The office space of Blue Space Creative in Denison, Iowa. They have a very cool mid-century modern feel to their office space that seems very dedicated to creative expression and collaboration.
  - Book stores like Barnes & Noble really do display tables well. We need some various height table spaces in the popular library for book displays, mag boxes for periodicals, and face out shelving in the children's department for picture books and board books.
  - One of our staff just went to San Diego and she really liked the end cap in the young adult area which was chalkboard so teens could write messages. Write-on surfaces would be really cool even in meeting rooms. Glass walls throughout the library allowed people to see in but block out the noise. Also the fireplace was very comfortable and cozy.
  - A mini kitchenette in a large meeting room greatly improves the usability of the space in small communities.

- Where is your favorite place to work (coffee shop, comfortable seating, near windows, outside, etc.) and why?
  - Quiet spaces
  - Big surfaces to work on to spread things out
  - Coffee shop
  - Comfortable chairs
  - Natural light
  - Access to electrical for phone or tablet charging
  - Stand-up desk

- What works well within your current facility that you feel should be emulated in the new building?
  - Staff restrooms, even if they are small
  - Stand-up work stations
  - New Book shelving and bestsellers
  - Entryway display area for new material
  - Separate area for microfilm reader

- Are there any considerations regarding security that impact your team/department directly? If yes, please explain.
  - Most spaces in the current library are not within line of sight of the circulation desk.

- Traffic from police station coming into the library (sometimes they are very upset when they leave the police station)
- Unsecure bathrooms that are not in the library.
- Dead end stacks
- Nothing to stop items from being stolen – no security gates.

- How many visitors a day, on average, does your team interact with? Are these customers, contractors, clients, vendors, off site team members, etc? What type of environment could accommodate this interaction? Demographic? Are numbers currently tracked?
  - FY 15-16 Visitors Per Day = 265 (95% are active cardholders, probably less than 1% are vendors or visitors without active library cards using wi-fi or the library space to hang out)

  - A library space that is adaptable to change would be ideal. We have tracked usage over the course of a day and people would be amazed at the variety of different programs, community uses of the space, and traffic patterns that emerged. For example, in one day this summer, the library held Rookie storytime, a read-aloud program for adults, a community knitting group held its weekly program, lots of computer users were seen all day at the public computers, the poetry group met, and we held a concert that night. We keep saying we need to make a time-lapse video to use in our fundraising efforts. No wonder the carpet needs to be cleaned every 6 months!

- Are there community outreach programs/programs within the library? Are there any you would like to bring? ie: bookmobile, reading hour, training and learning sessions etc?
  - There are many different outreach programs – visiting daycares and pre-schools in Carroll and surrounding areas, delivering books to shut-ins and participating in Parent events to encourage reading. Head start programs at the library, evening events for the community. Partner with the recreation center. Poetry club, reading house, knitting club etc...
  - ILL books for other book clubs in the community
  - Other groups that come in the library include homeschool/tutored students and New Hope resident groups.
  - We'd like to get a bookmobile bicycle to take small collections out in the community and to apartments where there are lots of low-income kids that can't get to the library.
  - We'd also like to start an informal community education group that encourages adult literacy tutoring and/or lifelong learning in Carroll but don't have a big enough space.
  - Computer/tech classes for all ages.
  - Maker events and after school club
  - Spanish language collection and resources.

- Understand goal of communication and patterns – How can the new interior environment better accommodate conferencing/collaboration needs?
  These all happen in the council chambers upstairs or the Mayor's conference room upstairs.

  - On average, how many conferences do you participate in weekly? 2-3 Meetings
  - What is the average size of the meetings? 5-10 people
  - How long, on average, are these meetings? 1-2 hours
  - Is technology necessary for these meetings? If yes, please describe. Yes, sometimes we'd like to show the board new additions to the website or attend a webinar and we have no space in the library for multimedia presentations and no tech upstairs in the city spaces either.

Additional notes/comments:

- Parking can become an issue with other activities happening.
- Is it desirable to have a standalone Library – community vision? I have received a lot of comments about this. Many people in the community would like to see a stand-alone library.
- Maker space - flexible with ample storage for programs
- RFID cost/benefit But if it will significantly improve work flow and free up staff to do 21st Century Library activities, it would definitely be a benefit.
- Self-check out
- Self-pick-up for books on hold
- Drive thru book drop
- Need for tutor space or test proctoring space.

Programs Administered by the Carroll Public Library – OPN Visioning Process

August 18, 2016

Children's Programming

Rookie Storytime (Birth to 5) – Held weekly on Wednesdays at 5:30 p.m. & Thursdays at 9:30 a.m. (We get lots of kids and adults at these storytimes. They are held in the reading room and the children's librarian has to rearrange furniture twice a week for this program. We get lots of complaints from patrons looking for a quiet space when story time is happening.

Diane's Read-Aloud – Held weekly on Thursdays at 9:15 before storytime starts – this is very well attended by residents of New Hope (adults with disabilities). We get a lot of complaints about noise with this group too but they always have caregivers with them and really enjoy the program so we'd hate to see it discontinued.

Ivan the Reading Dog – New last year was a partnership with a local man and his service dog, Ivan. They come in twice per month on the 2nd and 4th Tuesdays at 5:00 p.m. to help reluctant readers interact with Ivan to improve their read-aloud skills. This program has been held in the lobby when the library is busy.

Summer Movie Mondays – Held at 1:00 p.m. in the Council Chambers (discontinued because of accessibility issues with people in wheelchairs not being able to get upstairs)

Summer Reading Shows – Our main program events for children are our summer shows held on Tuesdays in the months of June and July. We get jugglers, magicians, musicians, and Dan Wardell's reading road trip to come every year. We have huge crowds for these shows with over 500 children and caregivers combined attending the shows at 9:30 and 11:00 a.m. We used to have these at the library but Dick Collison called the fire marshal in 2014 because there were too many people in the building, so we have begun alternating the elementary school gyms every other year. In 2015, the shows were held at Kuemper's Holy Spirit gym and in 2016, they were held at Adams Elementary. Our daycares can walk to both locations. However, we would love to bring those programs back in-house to make it easier for caregivers to check out books and see the show in one visit. Our summer circulation numbers have gone down both years because the shows were held off-site.

Special Children's Programs – Several events are held during the year for children that are scheduled on Saturdays, after school or early out days including NASA After School Program (held Fall 2015), STEM Club (starting Fall 2016 with a grant from the Governor's STEM Advisory), StoryWalk at Swan Lake State Park (Saturday), 1,000 Books Before Kindergarten kickoff (held in January 2016), etc. These are typically at the library but occasionally are held off-site.

Teen Programs

Teen Read Week & Teen Tech Week - We don't have a teen section in the library (just shelving) and teens don't come in very often to hang out unless they are using the computers. We started celebrating Teen Read Week and Teen Tech Week last year and host programs during those weeks for them. Our programs have typically involved passive programming since we do not currently have a teen librarian. However, I am working with a part time staff person to assist me with teen programming this year and

eventually would like to give her more hours to make her the official teen librarian. We will start holding more teen programs once we obtain extra hours for this part time position.

CarrollCon – A one day mini-comic convention held offsite for the past 2 years. This has been a challenge. At the Rec Center in 2015, we had 300 visitors. This year we only had 75 visitors in Graham Park at the band shell. We are discontinuing this program because the off-site program is too much work for the small crowds we've gotten. We would love to resurrect this project with an expanded space.

Adult Programs

Stress Relief Adult Coloring – Weekly on Mondays at 2:00 p.m. This is a great passive program that we will continue this year. Participants don't make too much noise unless a group from New Hope comes to the program.

Crafty Library Ladies – Held Weekly on Tuesday mornings at 10:00 a.m. & Wednesday evenings at 6:30 p.m. (we get the most complaints about noise because of this group – they hold their meetings in the reading room and get loud sometimes – but they are a great group and we don't want to see them stop using the library)

Artist Trading Cards with Kelsey – This program was new as of last year. One of our staff works part time at Artworks Studio and she hosts a once per month art program in the library reading room for free on the 2nd Friday at 10:00 a.m.

Poetry Enthusiasts – Held weekly on Tuesday nights at 5:00 p.m. – led by an older gentleman but we ILL books for them like our other book clubs – they meet in the reading room as well.

Brown Bag Book Club – Held once per month on the first Thursday at 12:10 p.m. in the reading room. Books are pre-selected and interlibrary loaned for participants. Members can bring their lunch.

Evening Book Club – Held once per month on the third Tuesday evening at 6:30 p.m. in the reading room. Books are pre-selected and interlibrary loaned for participants.

Read em & Eat Book Club – Held once per month on the last Thursday at 6:00 p.m., this new book club features guest chefs and speakers as well as samples of food and cookbook recommendations. We are currently revamping this program because of low attendance numbers and will start holding them at local restaurants once per month over the noon hour. We will purchase appetizers but attendees have to pick up their own bill for anything else.

Adult Computer Classes – These have been discontinued because we don't have a computer lab that is dedicated to helping patrons learn how to use computers. We tried having them upstairs in the Mayor's conference room but the internet connection for the city is so bad up there that no one could connect.

Walk-In Tech Help Friday – Our solution to not being able to give computer classes is our open walk-in tech help program on Friday mornings from 9:00 to 11:00 a.m. We do get a handful of patrons that will come in at that time to get help downloading apps, fixing tablet or phone problems and learning how to use their personal laptops. We have extra staff scheduled on Friday mornings to specifically help people with technology questions.

Literacy Tutoring – I was approached by DMAAC about helping some students with adult literacy that needed extra help that perhaps didn't qualify for the ABE or HiSet programs or that needed more one-on-one help if they were enrolled in those programs. I have tutored 2 students since last year and have gotten requests for more but I don't have time to take on any more students. We need to create a volunteer program to match students with tutors. This is a definite need in the community and one that could be alleviated with a better library space with meeting rooms where students and tutors could meet without interruption and with much more privacy.

Nanowrimo & Author Events – Author events are sprinkled throughout the year when we hear word that an author is willing to visit. We started celebrating Nanowrimo last year and were a Come Write In space. We have registered again this year and will begin in October with a local author event and writing workshops. Last year we had one wrimo finish her 50,000 word novel in 30 days. We recently hosted bestselling authors Robin Oliviera in October 2015 and Heather Gudenkauf in July 2016. This year we hope to release our new digital platform Biblioboard at Indie Author Day to kick off Nanowrimo with author signings and workshops.

Tiny Library Concerts – We have hosted two concerts in the city hall lobby this year featuring two local artists in the style of NPR's tiny desk concerts. These have been held in the evening. This year we'd like to hold these in conjunction with another event.

Everybody on the Same Page – This program is our county collaboration with other libraries in Carroll County. Everybody on the Same Page is a county-wide One Book reading initiative to get as many residents as possible reading one good book. We just completed our first year reading the book Orphan Train by Christina Baker Kline and had a great response to the events planned in conjunction with the two month reading challenge. All member libraries hosted 4 programs ranging from theatrical performances and concerts to viewing the IPTV documentary on Orphan Trains and hosting the producer of the show. These events took place in the library and off-site at the train depot and the Rec Center.

Outreach

September School Visits for Library Card Signup Month – Director visits English classes at the middle school English classes and freshman high school English classes once per year in September to talk about the digital branch at www.carroll-library.org. All kids in these classes get a Carroll library card with instructions on how to utilize library databases and resources online.

May School Visits for Summer Reading Program - Children's librarian, Diane Tracy, visits with all of the elementary classes at both schools in May to help advertise the summer reading program.

Daycare Storytime – Diane also visits all of the local daycares in Carroll as well as Breda's daycare program. She takes books from the collection to swap out and reads stories at these visits to the kids.

Romp & Read – In partnership with the Carroll Rec Center **–** Diane goes to the Rec Center on Monday mornings to read stories to kids in a toddler gym setting.

Dr. Whoot Mascot – Our new library mascot, Dr. Whoot takes flight every few weeks and visits area daycares, walks in the annual Band Day parade, attend a storytime, or race against other mascots at the

Carroll Merchants ballgames in the summer. (We won this year against the DMAAC bear and the Carroll tiger!)

Friends of the Library Events

Annual Book Sale – First week in November – held in the reading room and super crowded!
Chamber Coffee during National Library Week
Special Fundraisers – Murder Mystery Night, Canvas Painting Night (usually held after hours)

Appendix 2

Community Feedback

Community Feedback

Following are the comments from the participants of the visioning session that were used to create the wordles, comments from the staff of the Carroll Public Library and City Hall after the initial concept review, and comments and letters received from the public at large.

When I brag about Carroll, I tell people Carroll is...

Clean

Safe

A great place to raise a family

Progressive

First class

Progressive

Friendly

Easy to live in and has amenities we need

Supportive community

Welcoming

A forward community

A great place to live

Community that cares about its youth

Promoting individuals to grow

The crown jewel of west-central Iowa

Community

Low crime rate

Crime free

Full of people who care about you

Large community orchestra

Always improving

Forward-looking

Can-do attitude

Prosperous

In ten years, Carroll will be...

The same, some progress

Western Iowa's hub of commerce

Continuing to look for opportunities to grow & prosper

Stagnant unless much-needed updates are done

Similar but probably a little larger

A lot like it is now, hopefully some improvements to infrastructure

The "go-to" place

Continue to grow and be a forward community

Growing

Larger

Have new businesses

Just about the same

Same size but more younger individuals with innovated ideas and forward thinking minds

The retail center of west-central Iowa

Thriving

Slightly larger

More entertainment options

Hopefully a thriving town with a variety of ages of families

Improved

Either stagnant or continuing to progress...Carroll needs to grow

More ethnically diverse

I choose to live in Carroll because...

Family

People care about each other

Filled with people who work hard to ensure Carroll will continue to thrive and offer opportunities for all ages

My business

Has what we need

Opportunity for my family

It's home

Community

I went broke in the city

It's nice

The community allows my family to grow nearly risk-free with tons of support

Good job

Good schools

Location in relation to Omaha/Des Moines

What it offers

Large enough to offer the facilities I desire but small enough to avoid city problems

My wife's job

Safe city

A great place to work and raise a family

Clean

Safe

Strong leadership

Progressive

Own business

What three words describe the City of Carroll's city hall and services today?

Efficient

Friendly

Businesslike

Frugal

Inaccessible

Dated

Great staff

Outdated

Crowded

Dark

Okay

Adequate

Close-minded

Stodgy, old building

Effective

Stark

Cold

Uninviting

Avoidance

Scary

Small

Old

Limited

Dated

Welcoming

Satisfactory

Gets things done

Functional

Essential

Pleasant

Out-dated

Dingy

Good people brought down by old-school environment

Traditional

Good intentioned

Dated, marginal architecture

Cumbersome

Routine

Functional

Capable

Adaptive

Ugly

Lack of function

Great people

Accessible

Organized

Professional

Considerate

Thorough

Outdated

Cramped

Closed-space

Professional

What three words that describe city hall in the future?

More technology

More self-service

Accessible

Welcoming

Modern

The same

Space to move/work

Technology

Unknown

Council meetings

More online services

Central hub

Inviting

Invigorating

Open

Friendly

Positive

Progressive

Moving to the bank building

Essential

Functional

Exceptional service

Progress

Innovation

Optimism

Efficient

High tech

On-site or more remotely dealing with city hall

Friendly

Internet-based

Fair-minded

Cohesive

Green

Service-centered

Courteous personnel

Competent

More automated

Online

Staff

What three words define success for the new city hall?

New vision

Fresh space

Forward-thinking

Efficient

Accessible

Works for staff

Technology

Ambiance

Welcoming

Technology

Bright/airy

Spacious/room for future growth

Open

Satisfaction

Participatory

Involved

Family-friendly

Inviting

Teamwork

Move to the bank building

Planning

Open-mindedness

Uplifting

Progress

User-friendly

Lasting, beautiful architecture

Citizens appreciate

Helpful

Balanced budget

Accommodating

Organized

Spacious

Cooperation

Progressive

For-sighted

Modern

Price

The highest priority for the new Carroll Public Library...

Space

Children's area

Meeting room

Welcoming

Better children's space

Heightened features without losing a welcoming, comfortable feeling

Multi-use spaces that can change with the changing role of the library

High-tech Apple store feeling (Cedar Rapids goal mentioned)

Technology

Light

Space that can change with its community and last into the future

Community connection

Space for more programs

Space to expand programs

Educate and inform citizens (current and future citizens)

Children's space

Expand

More space

Large space to encourage interactions amongst the citizens in the unique opportunities a library can offer

Multipurpose space

Increasing children's space

Meet needs and desires of citizens

Flexible for future needs

Advanced technology

A need for everyone to come

Meeting the needs of current and future citizens

Additional space

Multi-functional space

Allows for more than one activity at a time

Adequate space for growth

Modern environment

The library will exceed the community's expectations by...

Showing the community what it has been missing

Becoming a learning space that appeals to all ages

Offering technology

Becoming a library of the future

A place where everyone wants to go

Engaging every citizen's need/use of a library

Unique experience

Change the perception of what a library is

Meets majority of citizens' needs

Providing a community service of programs

Showing the flexibility of the new age library

Allowing people of all ages to learn and grow

Expanding at its current location

Adding natural light

Actually expanding

Being a futuristic, open space with the ability to change and adapt as necessary

Beautiful

Inviting

Encouraging of self-betterment

Working together

Generating more use

Availability

Having a modern look with technology options

Accessible

Energy-efficient

Having space for all ages to meet and

learn

Open space building

Going beyond what the average person thinks that a library is — most older people think of libraries as book depositories

Becoming a highly used community center

This project will fail if…

We can't convince people that the dedicated space—(??)—; the library is the right choice — expanding at city hall or Community State Bank

The public is not on board with the vision

We remain just a warehouse for books

City council doesn't back it, can't translate the vision of a new building to citizens, or too expensive

Cost is not placed in the utmost importance; relevance — how will what we're doing effect and improve Carroll

There is not buy-in

We spend more time arguing about what we want for our community

Low voter turnout

Austerity thinkers strike fear in its citizens

We look for ways to fail instead of succeed

The library moves to the bank building

The public doesn't listen and keep and open mind

We don't keep a forward-thinking mindset on the library and allow nay-sayers to spew negativity about something they know little about…change

Opposition divides the community

Don't work together and support each other's ideas

Too expensive

Too small

If we plan in the short term and don't allow for the advances of the future

The community continues to fight and be selfish

The cost is perceived to be too high

We don't provide adequate space

It will fail a bond issues of it is too expensive

It has to go to a public referendum; council vote and Foundation fund raising make up the winning combination

9/20/16 Carroll Library/City Hall
Comments:

Concept B – City Hall @ existing building

- A lot of wasted space in shell space
- Concept 1 is better
- more ability to repurpose shell space to East

Concept A - City Hall @ Bank building

- Largely favor concept 4 – make restroom clear and potentially move into staff area.
    - Look for staff entry
- E lobby maybe okay
- East and West are better ADA options- but improve the East regardless?

Concept A - Library @ existing building

- Concept 3 – tech by circulation is good
- Concept 2 – East entry (not North) is good
- Concept 3 = like welcome entry, community programs down and quiet study rooms and stacks up.
- Community room on ground floor is good
- Tech close to children's is not great
- Concept 2/3 connections between levels is good as community draw, represent community.
-

Concept B – Library @ bank building

- Brandi didn't prefer two entries or two circulation desks.
- Split staff options not great
- The bank building location is less desirable than the existing building
- Parking is very important
- More condensed plan and pursuing parking is likely the preference.
- Keep building footprint within existing Bank site – all three concepts too large.

Library Board Minutes

October 3, 2016 Special Meeting – Draft

The Carroll Library Board of Trustees met in a special meeting at Region XII Council of Governments at 1009 E. Anthony Street in Carroll. Trustees present were: John Brockelsby, Carol Shields, Jacob Fiscus, Tom Louis, Sondra Rierson, Marilyn Setzler, Summer Parrott and Director Brandie Ledford. Trustees absent were Bill Polking and Pat Hartley.

Fiscus called the meeting to order at 7:31 p.m. It was moved by Brockelsby and seconded by Louis to approve the agenda. All voted aye.

New Business: A discussion was held about OPN Architects' initial concept review. A motion was made by Louis and seconded by Brockelsby to request from OPN a library concept to includes no additional footprint to the current library space, city administrative space, and second floor space. All voted aye.

It was moved by Louis and seconded by Parrott to adjourn. All voted aye. Meeting adjourned at 7:52. Next regular meeting will be October 17, 2016.

Jacob Fiscus – President

Marilyn Setzler – Recording Secretary

OPN Initial Concept Review
Staff & Director Feedback

1) It seems to us that staying in the current facility is the least costly to taxpayers. Many people have come into the library to review the initial concepts and have complained that we don't need an addition to the building. It comes down to the question of what we need, versus what taxpayers will fund. If at all possible, we would like to see a design that does not include adding to the square footage of this building except for maybe a new entrance. That would get us to the more conservative end of Himmel & Wilson's estimate for 17,000 square feet. We feel that the city council should have to make that decision about what the community needs versus what will actually pass a referendum or what the Foundation could raise to partially fund the project.

2) We would ask that the word café be taken out of the final concept. The feedback from the public has been negative about this aspect of service. They don't feel that we need a café and at our current staffing levels, we probably can't accommodate that new service. We love the idea of casual seating that would invite people to eat and drink in the library, but it will be a hard sell to the public to have an actual café, even if there was an incentive to increase revenue in our budget with that service. Is there a way to put the Book Nook in that space as a retail space that could also provide food? Instead of Café, it could be called Book Nook or Friends Bookstore?

3) Some staff believe that it would be an issue to have the circulation desk split into two service points. They worry that even with self-check stations, there would be times when it would be hard to maintain service at both. We love the concepts that have the desk centrally located.

4) We really like storage upstairs in options 2 and 3 and most of us really like non-fiction upstairs along with study spaces. It seems that it would be much quieter upstairs for people to study and work. We were less enthusiastic about the meeting room or program room upstairs because we feel it could become a barrier for some patrons if they have to come all the way downstairs to use the restrooms.

5) We would love to see a separate YA section for teens but one that small children don't have to walk through to get to the children's side.

6) We believe that line of sight is a big issue in all of the concepts. It seems that concepts 1 and 3 have better line of sight than option 2.

7) This is definitely not a deal breaker, but staff restrooms are so nice. If it's not possible to include them, we completely understand. Any updated restrooms will be a huge improvement!

8) Staff are ok with a north-facing entrance because the parking lots are all on that side. There have been no comments made to us about the side the entrance is on.

9) We like option 3 better as far as technology goes because young children don't have to walk through a computer area to get to children's programming. We've had complaints this year about young children seeing screens of adults and teens on the public computers.

10) Staff feel the flow is better on option number 3 but we know that OPN will design great spaces no matter what orientation the spaces are located.

11) On first glance, it looks like there is double the staff space but if you combine all of our existing storage and staff spaces, it's probably the same amount of space, just put together. We worry about the public thinking that all of the new addition with city hall would just be more staff space and questioning why we need that much. In actuality, it looks like it's the same amount of space, just located in a different spot.

12) Overall, staff like a combination of concepts 2 and 3 with no square foot addition to the east or upstairs but keeping the open to below feature of the upstairs in option 2. We like both types of entrances but prefer the staff areas centrally located like in concept 2. We prefer the technology area in concept 3 because children' don't have to walk through but staff are located right next to them. We like the meeting rooms downstairs and quiet study spaces upstairs or on the adult side. We like the amount of small and larger study spaces and rooms in concept 2 as well on the adult side. Those would be used like crazy.

RICHARD W. COLLISON DVM
2206 North Grant Road
Carroll, Iowa 51401

IA: 712-792-2267
AZ: 480-218-4992

E-mail: rwcollison@gmail.com

September 23, 2016

Mr. Joe Feldmann
OPN Architects
FAX ~~515-390-0724~~
515-309-0916

Dear Joe,

Again I thought you both did a good job and gave us a lot of information. But it was a bit difficult because the laser pointer was hard to see, as were the numbered legends. Just received from Randy the email version, and that helps a lot.

As anyone in your family will tell you, I have long been an outspoken advocate of a better library. However because of a basic difference with the 'bigger is better' concept of the Library Trustees, and my strong opinion that book libraries of the future will look a lot different, and thus space needs will be a lot different, we have yet to get on the same page. In fact the recent Des Moines article about your firm and the Cedar Rapids library is headlined, "Experiences, not Collections". And it's a well known fact that not only are some cities building bookless libraries, but many are converting the space formerly used for book shelves to computer and e-device facilities. The net result being that not more space is needed, but space for all the 21st Century digital devices is provided.

It appears that those in the library business see the writing on the wall, and so are moving more toward a community center/library concept. But that combination is far from compatible. Here in Carroll it's hard to study, relax, read, or focus on learning when ladies are visiting during their quilting sessions, 20 or 30 day care children are sitting on the floor coloring, or several folks are having a loud conversation or arguing about politics.

So what is the solution best for both library patrons and those seeking social interaction? Our group of concerned citizens (of which I am a volunteer spokesman), and other taxpaying residents believe that two separate and distinct facilities is by far the best solution. We believe that our current library with its five star location is very adequate for 21st Century conventional library needs. We also believe that the bank building , with its good location, would make a great Community Center, even without the property west of the alley. Pat Moehn told me they are for sale at $100,000 each!

The merits of two separate locations is obvious, but let's talk about the giant in the room and that's funding. Several years ago FEH spent a lot of time and taxpayer funds on an unrealistic library plan that 80% of the taxpayers rejected. Our group was a key part of that rejection.

Later BCDM did the same with a $1.78 million remodel plan of the existing facility with a attractive east entrance, lots of east and south windows, and all new mechanical, electrical, and plumbing fixtures. We believe that plan would have passed ,but it never got beyond the Library Trustees because they thought the space of the present facility was far too small.

We must learn from our past mistakes. It would seem that any major construction of new space will cost millions, and that's a problem. That leaves doing a major remodel of the present library and maybe adding the City Hall space. So add $2.5 million of remodeling cost, at least $350 sq.ft. of turn-key cost of any addition, and another $0.7 million to remodel the City Hall portion. That's a total estimate of $3.2 million dollars. Plus additional space cost. (Example: 5,000 sq.ft. of additional space is estimated to cost an additional $1.75 million dollars)

Now leave the library where it is but with a major remodel , NO ADDITIONAL SPACE COSTS, convert the bank building to a pure Community Center, and the total cost could be about $3.2 million dollars. Which is the better choice? And nobody is talking about how does all this affect the space needs, resident interaction with City Hall, or the working conditions and space needs of the 20 or so city employees that work in City Hall every day! A summary page of pros and cons follows: Note that the City has two multi-million dollar projects now on the drawing boards, so it would help the library vote if that half of the project could proceed now since it may be 2 years before the bank building is available.

In any event we believe that the advantages of less cost, usage, flexibility, and long range patron satisfaction far outweigh any other plan we can think of. Thus we ask that you and OPN give this two site proposal whatever consideration you deem proper, and most of all what is best and proper for Carroll for the next 50 years. In the meantime I will be talking to rational residents outside our group about their opinions, and seeking their feedback.

I am in Des Moines often, so I would be pleased to stop by soon for a visit, share the origin of my cost estimates and any other information with you, and discuss what the role of our group may be in this process so that there are no surprises.

Sincerely, and Best Wishes, and please share this FAX with Danielle,

Dick Collison

R. W. Collison

cc: Randy Krauel

A SUMMARY OF OUR POSITION ON CARROLL'S LIBRARY/COMMUNITY CENTER

We believe in a better library facility, and support up to a $2.5 million dollar remodeling budget. An a attractive and functional east main entrance, an expanded accessible children section, and adequate window placement in the east and south walls are all mandatory.

In an attempt to help with taxpayer approval, up to 50% ($1.25 million) of this expense should come from library advocates and the public at large.

We strongly believe that both the library and a community center each have their own location and specific purposes, since their basic services are not compatible. Plus the present location of the library and the bank building are adequate for each. With a book collection at about 45,000 volumes, similar to Iowa's peer group in same sized cities, and major meeting spaces in the community center, there is plenty of room for OPN to arrange all other necessary areas and uses as they feel proper.

We believe that OPN should exercise its own independent opinion as to the needs and arrangement of the library, and not the opinions of former librarians turned consultants.

Besides the obvious benefits of a two location plan it gives the taxpaying voter the option of approving the library plan, and if arranged properly may not meet the $700,000 expense level requiring a vote on the community center bank plan. Keep in mind that a recent Carroll survey disclosed that over 65% of respondents said they were very satisfied or satisfied with our library in its present condition. So don't ever take voter approval as a given!

Finally whatever is done will have perhaps a 50 year life, thus it needs to be done well with a pleasing exterior and an efficient interior, and at a reasonable cost!

Please be advised that only one or two of those present at your meeting have ever built anything. The same is true of most of the Library Trustees. Yet these are the same folks that were trying evaluate your different options. There was no concern expressed about costs, the impact on city employees working in city hall, or what will 60% of the taxpayers approve. It's a one-track approach that does not sell well with the general public. And if this trend continues it will be up to groups like ours and other like-minded residents to raise serious questions and objections about the entire process.

But the way to get things done is to join forces around a common goal that is best for Carroll, rather than any personal preferences, and finally get the project completed that we can all be proud of! In order for that to happen, perhaps the expertise of OPN will be needed to sort out all the options and come forth with strong suggestions as to what is best in function and cost.

Know that if the decision is left to the Trustees and a Council stacked with some members that were recruited and financed by library advocates, this whole exercise is going nowhere.

Any comments or suggestions, please give me a call.

Dick C

City of Carroll

112 E. 5th Street Carroll, Iowa 51401-2799 (712) 792-1000 FAX: (712) 792-0139

MEMO TO: File

FROM: Randall M. Krauel, Director of Public Works

DATE: September 27, 2016

SUBJECT: Library/City Hall Project
Initial Concept Comments
Pat Moehn

Pat Moehn stopped at City Hall today to verbally convey his comments on the Library/City Hall Initial Concepts. His comments were basically that there should be no additions to the current structures, Library and City Hall Location or Bank Location, under any Concept alternative.

RMK:ds

Randy Krauel

From: Ben and Summer Parrott [benandsummer@msn.com]
Sent: Wednesday, September 28, 2016 2:42 PM
To: Randy Krauel
Subject: Re: Library/City Hall Project - Initial Concept Presentation 09-20-16

Greetings Randy!

I have taken the time to review the Initial Concept information presented by OPN. While I find the designs for the library in its existing space to be beautiful, I was under the impression that the bank building was being gifted as a solution to having to create an addition on the existing library/city hall space. Is there a reason that we did not receive a plan that used only existing space for the library at it's current location? Is that something that can be provided by OPN for our review? While I dream of a large and glorious library and community space in Carroll, I believe that a compromise it what is in the best interest of the city at large, and that would involve utilizing the current library space without the cost of adding on.

Thank you,
Summer Parrott

From: Randy Krauel <rkrauel@cityofcarroll.com>
Sent: Wednesday, September 21, 2016 4:36 PM
To: Brandon J. Vonnahme (bvonnahme@ci.carroll.ia.us); Brandon Vonnahme (bjvonnahme@gmail.com); Carolyn M. Siemann (csiemann@ci.carroll.ia.us); Carolyn Siemann (carolynsiemann@gmail.com); Clay Haley (clayhaley@haleyequipmentinc.com); Clay T. Haley (chaley@ci.carroll.ia.us); Eric Jensen (ejensen@mcfarlandclinic.com); Eric P. Jensen (ejensen@ci.carroll.ia.us); Jerry Fleshner (jflesh@mchsi.com); Jerry H. Fleshner (jfleshner@ci.carroll.ia.us); Mike Kots (mikedkots@gmail.com); Mike Kots (mkots@ci.carroll.ia.us); Misty Boes (mboes@ci.carroll.ia.us); Misty Boes (mnmboes@msn.com); Carol Shields (cshields@feldmanncpa.com); Jacob Fiscus (jacob@sunderphoto.com); John Brockelsby (jwbrock@win-4-u.net); Marilyn Setzler (marilyns@win-4-u.net); Patricia Hartley (hartley.pr@gmail.com); Sondra Rierson (sondralrierson@gmail.com); Summer Parrott (benandsummer@msn.com); Tom Louis (tllouis@icloud.com); William Polking (wpolking@gmail.com); Brett Adams (1737adams@westianet.net); David Martin (ramrvad@centurylink.net); Doug Burns (d.burns@carrollspaper.com); Gina Badding (gina@nmcnlaw.com); Jean Warm (jeannie1556@gmail.com); Mitch Hiscocks (mhiscocks@carrollvetclinic.com)
Cc: Brad Burke; Brandie Ledford; Greg Schreck; Jack Wardell; Laura Schaefer; Randy Krauel
Subject: Library/City Hall Project - Initial Concept Presentation 09-20-16

Attached is a copy of the Library/City Hall Project Initial Concept Presentation prepared by OPN Architects and presented by them on September 20. Please review and, if you would like to submit comments, a comment period is planned through October 6. Please submit your comments to me by dropping them off at City Hall, by mail or by email. Following October 6, all comments received will be forwarded to OPN Architects.

The next scheduled meeting is for the Final Concept Review on Monday, October 17 at 6:15 PM in the City Hall Council Chambers. Joe Feldmann, OPN Architects, has advised that the Concepts will be reduced to two per building for that presentation. Cost estimates will be prepared following confirmation of the Final Concepts.

Randall M. Krauel
City of Carroll
112 E. 5th Street, Carroll, Iowa 51401
Phone: 712-792-1000 - Fax: 712-792-0139

Randy Krauel

From: Sondra Rierson [sondralrierson@gmail.com]
Sent: Thursday, September 29, 2016 2:09 PM
To: Randy Krauel
Subject: Re: Library/City Hall Project - Initial Concept Presentation 09-20-16

Hi Randy,
As a trustee, I like the #3 concept for the library in its current location. However I do not want to add on extra space. I don't feel that will have public support. I understand that the OPN group was trying to comply with Himmel and Wilson's recommended sq footage, but sometimes we just have to go with what we can get (compromise). I feel that if we keep the library in its current location and expand into the city office space, that will suffice. But I really liked the layout of #3 proposal.

The only other input I have is that I don't think parents will like the adult section on a different level from the children's section, better to have the meeting rooms on second floor. Again, this is kind of a compromise in my opinion As far as more specific details for the library I would defer to the library staff. And regarding city plans in the bank building, I defer to city staff.

Thank you very much.

Sincerely,
Sondra Rierson

On Wed, Sep 21, 2016 at 4:36 PM, Randy Krauel <rkrauel@cityofcarroll.com> wrote:

Attached is a copy of the Library/City Hall Project Initial Concept Presentation prepared by OPN Architects and presented by them on September 20. Please review and, if you would like to submit comments, a comment period is planned through October 6. Please submit your comments to me by dropping them off at City Hall, by mail or by email. Following October 6, all comments received will be forwarded to OPN Architects.

The next scheduled meeting is for the Final Concept Review on Monday, October 17 at 6:15 PM in the City Hall Council Chambers. Joe Feldmann, OPN Architects, has advised that the Concepts will be reduced to two per building for that presentation. Cost estimates will be prepared following confirmation of the Final Concepts.

Randall M. Krauel

City of Carroll

112 E. 5th Street, Carroll, Iowa 51401

Phone: 712-792-1000 - Fax: 712-792-0139

Dear Randy, September 28, 2016

We are in need of your thoughts and advice about the Library/City Hall/Community Center project. In looking at all the Concepts from OPN it seems that they mostly result in a 20,000 ft. library facility, are about half library and half community center, and have a mixed use look with no attractive main east entrance convenient to Court Street parking.

We have begun our canvass of taxpayers seeking their opinions. The responses are surprising, but for sure changes must be made. The folks we have talked to so far quickly become confused by all the proposed Concepts, and I have trouble keeping things straight as well. Thus I plan to suggest to Joe Feldmann and Danielle the following: But it must be their independent choice, and theirs alone!

OPTION 1: It would be helpful if Joe, Danielle, or anyone else at OPN would choose one concept of a combined library/community location and moves City Hall to the bank, that they consider best serves our needs, and stands a good chance of voter approval. Then compare that with a couple of other plans as discussed below.

OPTION 2: Do a major remodel of the library, (2 years ago BCDM estimated a cost of $1.78 million) leave its footprint as is, and add the entire second floor for library and City Council needs. Leave City Hall where it is, and convert the bank building into a community center.

OPTION 3: Do the same as option two, but move City Hall to the bank and the community center to the vacated City Hall space.

The advantages of Option 1 is that it eliminates the confusion of 10 different options and greatly reduces most of the design and costing work OPN needs to do.

The advantages of Option 2 is that there is no addition construction cost. It could be a very attractive facility, both inside and out, and it's more user friendly. Purchase of the bank's west lots is optional. But the main advantage of this and Option 3 is that it eliminates the mixing of non-compatible uses and enables each facility to focus on its specific role. Plus there is adequate room for all!

The advantages of Option 3 are again no construction costs (except the 2 west bank lots that should be bought and converted to parking). Plus with a gain of about 1,730 sq. ft. of space of the bank vs City Hall it may provide extra space sorely needed by the Public Works Department.

NOTE: A major remodel of the present library includes an impressive east entrance, adequate windows on the east and south exterior walls, all new mechanical, electric, and plumbing items along with a $300,000 allowance for furniture and tech equipment, and another $300,000 for professional services and contingency.

So Randy, if you can fit it in your busy schedule please give all this a little thought, and I'll check with you before October 6th. For general information be advised that the next two voter dates allowed are February 7th and April 4th, just in case anyone wants to do the library vote part as soon as possible.

cc: Joe Feldmann
FAX: 515-309-0725

Thanks for your help,

Dick Feldmann

RECEIVED
OCT - 3 2016
City of Carroll

BASIC OPTIONS FOR OUR LIBRARY/COMMUNITY CENTER PROJECT

OPTION 1:	**Remodel the existing library**	**$2,500,000**
	Add City Hall space and remodel	**700,000**
	Move City Hall to bank and remodel	**700,000**
	West lots, demolition, resurface	**250,000**
	Moving & miscellaneous costs	**60,000**
	TOTAL:	**$4,210,000**
OPTION 2:	**Remodel the existing library**	**$2,500,000**
	Remodel bank for community center	**700,000**
	West lots, demolition, some resurface	**250,000**
	TOTAL:	**$3,450,000**
OPTION 3:	**Remodel the existing library**	**$2,500,000**
	Remodel bank for City Hall	**900,000**
	Remodel City Hall for community center	**700,000**
	West lots, demolition, some resurface	**250,000**
	TOTAL:	**$4,350,000**

NOTE: All cost estimates are our best guess, and are based on a survey of the costs of similar projects done in the past several years. These costs have not been reviewed or approved by OPN.

Purchase of the west lots is required if City Hall is the bank occupant because of all the City Hall employees working there. It is somewhat optional if Option 2 is chosen, but still a purchase might be a good idea. Thus it's included in Option 2 costs.

In all cases these options keep the area of the library the same, but with a major remodel and the addition of the entire second floor of City Hall in cooperation with City Council needs. We strongly believe that 21st century libraries will be more and more driven by digital devices and less and less by huge book collections. Thus the need for larger library facilities is counter-productive.

Throughout the nation libraries are replacing book shelving space with more digital capabilities, and they sure are not expanding their footprint. Cities as close as Council Bluffs and Omaha have even built bookless libraries. Barnes & Noble has lost over $300 million dollars during the past five years and about $14 million in the first quarter of this year on a sales decline of 24%. Borders, Inc., the second largest book seller has gone bankrupt. And most of the younger generation carry smart phones that have more information than most Iowa libraries! Plus over 80% of Carroll households have internet access and over 60% of respondents to a Carroll survey say they are satisfied with the present library.

According to the most recent information our peer Iowa libraries in cities our size have about 45,000 books in their collections. We have around 70,000. That's a lot of wasted space that could be used for a better children's library. And speaking of wasted space, the second floor works for a meeting space. We need to base our library plans for the next 50 years on the future's facts, not past history!

cc: Joe Feldmann
FAX: 515-309-0725

Changes to City Hall Building Design – at Bank Building:

1. Use Concept 4 – two public entries as the main design, however, only use ONE public entrance (east). The west entrance will be staff only

2. Turn the two blue offices and storage area (along west well, has #8 in it), into one long big office to accommodate all of public works/building dept. and public works secretary.

3. Next to the council chambers, turn those two small bathroom areas into 1)office for CAAT6 and 2)small break room only.

4. Turn the upstairs break room into storage.

5. Push the blue office in between the two pink conference rooms back (north) next to the other corner blue office. Then move the pink office room back (north) to allow for a bigger "lobby" area right inside the front door....the end result will only have one conference room

6. Between the conference room and office to the north of it, a small room that can enclose the server computer and have a small safe in it is needed.

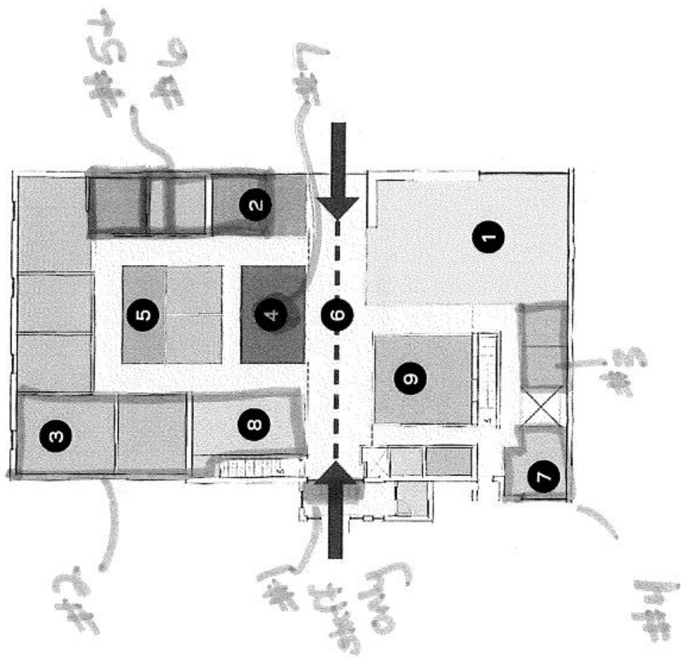
7. Open Office (front counter) – need to discuss secure options for entrance to back offices, i.e. make it curved or angled?

Karen Mentzer Kelly Skeckta

61

1 Council Chambers
2 Conference Room
3 Office
4 Open Office
5 Work Room
6 Lobby/Pre-Function
7 Break Room
8 Storage
9 Restroom/Janitor
10 Shell Space

* Basement not included



CITY HALL | Concept 4

Two public entries

Building: 7,980 gross square feet

Randy Krauel

From: Eric Jensen [ejensen@ci.carroll.ia.us]
Sent: Thursday, October 06, 2016 8:24 PM
To: Randy Krauel
Subject: Re: Library/City Hall Project - Initial Concept Presentation 09-20-16

Randy

I would like to add a comment with regards to the OPN project and initial presentation. I believe that the project itself should fit within the confines of the current building without any addition to the current site. I believe and as do many residents that a library greater than 15,000 square feet would NOT pass as a referendum. One of the notions that needs to be considered is Carroll currently has 8 other libraries within the community. This would include the 4 public schools, 3 within the Kuemper system and DMACC. When you consider all 8 and the current library there is adequate library square footage within the community already. Thank you for your time.

Eric P Jensen, DPM
Mayor, Carroll, IA

--- rkrauel@cityofcarroll.com wrote:

From: Randy Krauel <rkrauel@cityofcarroll.com>
To: "Brandon J. Vonnahme (bvonnahme@ci.carroll.ia.us)" <bvonnahme@ci.carroll.ia.us>, "Brandon Vonnahme (bjvonnahme@gmail.com)" <bjvonnahme@gmail.com>, "Carolyn M. Siemann (csiemann@ci.carroll.ia.us)" <csiemann@ci.carroll.ia.us>, "Carolyn Siemann (carolynsiemann@gmail.com)" <carolynsiemann@gmail.com>, "Clay Haley (clayhaley@haleyequipmentinc.com)" <clayhaley@haleyequipmentinc.com>, "Clay T. Haley (chaley@ci.carroll.ia.us)" <chaley@ci.carroll.ia.us>, "Eric Jensen (ejensen@mcfarlandclinic.com)" <ejensen@mcfarlandclinic.com>, "Eric P. Jensen (ejensen@ci.carroll.ia.us)" <ejensen@ci.carroll.ia.us>, "Jerry Fleshner (jflesh@mchsi.com)" <jflesh@mchsi.com>, "Jerry H. Fleshner (jfleshner@ci.carroll.ia.us)" <jfleshner@ci.carroll.ia.us>, "Mike Kots (mikedkots@gmail.com)" <mikedkots@gmail.com>, "Mike Kots (mkots@ci.carroll.ia.us)" <mkots@ci.carroll.ia.us>, "Misty Boes (mboes@ci.carroll.ia.us)" <mboes@ci.carroll.ia.us>, "Misty Boes (mnmboes@msn.com)" <mnmboes@msn.com>, "Carol Shields (cshields@feldmanncpa.com)" <cshields@feldmanncpa.com>, "Jacob Fiscus (jacob@sunderphoto.com)" <jacob@sunderphoto.com>, "John Brockelsby (jwbrock@win-4-u.net)" <jwbrock@win-4-u.net>, "Marilyn Setzler (marilyns@win-4-u.net)" <marilyns@win-4-u.net>, "Patricia Hartley (hartley.pr@gmail.com)" <hartley.pr@gmail.com>, "Sondra Rierson (sondralrierson@gmail.com)" <sondralrierson@gmail.com>, "Summer Parrott (benandsummer@msn.com)" <benandsummer@msn.com>, "Tom Louis (tllouis@icloud.com)" <tllouis@icloud.com>, "William Polking (wpolking@gmail.com)" <wpolking@gmail.com>, "Brett Adams (1737adams@westianet.net)" <1737adams@westianet.net>, "David Martin (ramrvad@centurylink.net)" <ramrvad@centurylink.net>, "Doug Burns (d.burns@carrollspaper.com)" <d.burns@carrollspaper.com>, "Gina Badding (gina@nmcnlaw.com)" <gina@nmcnlaw.com>, "Jean Warm (jeannie1556@gmail.com)" <jeannie1556@gmail.com>, "Mitch Hiscocks (mhiscocks@carrollvetclinic.com)" <mhiscocks@carrollvetclinic.com>
CC: Brad Burke <bburke@ci.carroll.ia.us>, Brandie Ledford <bledford@carroll-library.org>, Greg Schreck <g.schreck@ci.carroll.ia.us>, Jack Wardell <jwardell@cityofcarroll.com>, Laura Schaefer <LSchaefer@cityofcarroll.com>, Randy Krauel <rkrauel@cityofcarroll.com>
Subject: Library/City Hall Project - Initial Concept Presentation 09-20-16
Date: Wed, 21 Sep 2016 21:36:43 +0000

Attached is a copy of the Library/City Hall Project Initial Concept Presentation prepared by OPN Architects and presented by them on September 20. Please review and, if you would like to submit comments, a comment period is planned through October 6. Please submit your comments to me by dropping them off at City Hall, by mail or by email. Following October 6, all comments received will be forwarded to OPN Architects.

The next scheduled meeting is for the Final Concept Review on Monday, October 17 at 6:15 PM in the City Hall Council Chambers. Joe Feldmann, OPN Architects, has advised that the Concepts will be reduced to two per building for that presentation. Cost estimates will be prepared following confirmation of the Final Concepts.

Randall M. Krauel

City of Carroll

112 E. 5th Street, Carroll, Iowa 51401

Phone: 712-792-1000 - Fax: 712-792-0139

City of Carroll

112 E. 5th Street Carroll, Iowa 51401-2799 (712) 792-1000 FAX: (712) 792-0139

October 6, 2016

Mr. Joe Feldmann
OPN Architects, Inc.
100 Court Avenue, Suite 100
Des Moines, IA 50309

Re: Library/City Hall Project
Initial Concept Comments

Dear Joe:

I would like to offer the following brief comments on the Library/City Hall Initial Concepts.

1. General: The presentation title should include City Hall as well as Library.

2. City Hall, Library and City Hall Location: I personally favor City Hall Concept 1. My primary reason is that the Shell Space may better lend itself to future occupancy by rental.

3. City Hall, Bank Location: Due to limited parking on the east side of the building, additional public parking should be provided on the west side of the building. I think that will dictate two public entries. As a result of the amount and type of City employee traffic entering and leaving the building in the performance of their responsibilities, an additional staff entrance on the west is needed.

Thank you for the opportunity to comment. If you have any questions, please contact me.

Sincerely,

CITY OF CARROLL

Randall M. Krauel
Director of Public Works

RMK:ds

RICHARD W. COLLISON DVM
2206 North Grant Road
Carroll, Iowa 51401
E-mail: rwcollison@gmail.com

IA: 712-792-2267
AZ: 480-218-4992

Joe Feldmann
Danielle Hermann
OPN Architects
FAX 515-309-0725

October 5, 2016

Dear Folks,

Randy has asked for final comments about the library project be submitted by October 6th, thus the following from our group, 'Taxpayers for a Realistic Library Plan'. It's the same group that was active in the rejection of the prior Heider and Walmart library proposals. Again we asked for opinions from over fifty Carroll taxpayers, just as we did before, and the majority of their opinions represent our final position, as summarized below:

The footprint of both the library and bank stays as is. One exception is an addition of 1,000 sq.ft. or less if needed for an impressive east main library entrance.

A major remodel of the existing library space, including an expanded and accessible children' space. new AC and heating units, (repairs are no longer available for present units), and adequate windows in the east and south exterior walls. Maybe also add rest rooms.

Our sixteen peer Iowa libraries have a printed book collection average of 4 books per person. *Thus shelving for about 45,000 books is required, and it will be less as time goes on.*

Add the City Hall gross space of about 6,300 sq.ft. and the grossly under used second floor (about 2,700 sq. ft. of space with both large and smaller meeting rooms) for meeting spaces in cooperation with City Council needs.

Note: After showing those interviewed a floor plan of the entire City Hall with its 680 sq. ft. vault, storage, and rest rooms located in dead center of the total space, plus the east bearing wall with the elevator and 2nd floor stairway adjacent, over half think the additional City Hall space should keep its present north entrances as is, and concentrate all 'core' library functions in the present library space, (staff and check out facilities, books, all digital and computers, adult and young adult spaces and necessary small meeting or study spaces). In short quiet and study usage. Then use the City Hall space for the more 'social ' things. Ladies quilting, day care children coloring and talking, adult groups taking bridge or cooking lessons, card playing or folks gathered around talking or arguing politics, movies, or other events with smaller groups. In short uses where peace and quiet are not so important, and there is nothing that might easily disappear. Why is that important? In the past CDs and books had a way of finding new homes, and with check-out and supervision in the library section it would be almost impossible to monitor this space.

One of the first questions asked was how much is all this costing? After a lot of thought and review of costs of other projects, we used the number of $4.0 million dollars as a turn-key

number – around $2.0 million to remodel the present library, and $1.0 million to remodel the City Hall space, and another $1.0 million to remodel the bank building for City Hall use. This amount does not include the estimated possible $1.0 million dollars of extra expenses in removing the vault, opening up the bearing east wall of the City Hall, or relocating the elevator and stairway. Based on the reaction of most of the folks we were talking to, that amount would never fly! However when told that we have been advised that the Library Foundation said they will raise half of that amount ($2.0 million dollars) their attitudes become more positive. And most like the idea of split library and social activities.

Thus a maximum of a $2.0 million dollar total taxpayer expense might stand a good chance of approval. And it's with the assurances that the Foundation can match taxpayers costs of this library project up to a level of $2.0 million dollars each, and contingent upon that fact that they do so, our group endorses all of the issues discussed above.

One taxpayer concern that some brought up was that it looks like the library issue, which might serve 20% or so of City residents , is the tail wagging the dog with requiring a far more important City Hall facility to relocate. Another surprise is that most folks we talked to understand the tax benefits to the donors of the bank gift. But the biggest question we were asked is why does the library need as much annual taxpayer support as the Rec center with its 2,800 members (about $380,000 each) and the library has far, far fewer legitimate patrons? We had no good answers for these questions. But we doubt they are enough to change voter approval if an attractive design that includes voter concerns is forthcoming.

But one thing almost all agree upon, and that is either do it right both in appearance and function, and listen to all valid voter concerns, or don't do it at all!

So keep in mind that over 60% of respondents to a recent City survey said they were satisfied with the present library, and almost 20% said they were opposed to any change. That leaves the remaining 20% who could tip the scales either way. Approval of all the above is not a slam dunk, but if public concerns are factored in the design, OPN makes all final decisions – not any *local special interest groups* – and the fund raising goes well, we think it will pass.

One disclaimer. Our contacts seeking the opinions of Carroll taxpayers is not a scientific exercise. However we have a pretty good track record. We used the same approach when we reported the Heider library proposal would be rejected by 80% of the voters.The final vote was 78.5% NO. Again we reported that the WalMart proposal would be soundly defeated – it never got to a vote. We think we have a good feel for this proposal, but one never knows!

Sorry about the length of this FAX, but we wanted to be as specific as possible. The more you know, hopefully the easier your job will be, and the better the result for Carroll.

Any comments or questions, please give me a call. Good Luck!

R.W.Collison

cc: Randy Krauel

Appendix 3
Building Analysis

Building Analysis

Following is the report provided by Systems Works outlining the condition of the exterior envelope for both buildings. Also included are narratives provided by structural, mechanical, electrical, and plumbing consultants for both concepts.

Building Enclosure Review

Commercial Savings Bank

Carroll, Iowa

Prepared for:
Mr. Joe Feldmann

SystemWorks LLC
409 Fifth Street, West Des Moines, IA 50265
515.975.0575 (phone); 515.255.1155 (fax)

SystemWorks LLC
Commissioning Sustainable Buildings

Summary of Site Visit

Project: Commercial Savings Bank
Date of Review: 10/20/2016
Prepared By: Jeremy Carroll
Pictures taken by: Jeremy Carroll

1. Observation:
The vast majority of the exterior urethane sealant joints are compromised. Figure 5 through Figure 8 shows failed joints around the window systems. The sealant joints between the poured concreate and masonry system are failing as well, see Figure 9 and Figure 10. There is also spalling bricks at the base of the system in multiple location. SystemWorks was only able to locate masonry weeps along the south elevation. Figure 14 shows a failed joint at the plaster and masonry connection.

1.1 Recommendation:
SystemWorks recommends removing all existing exterior sealant and installing new sealant. The selected sealant manufacturer's installation instructions need to be implemented to ensure the desired warranty is achieved. SystemWorks recommends using a silicone sealant for all exterior joints. A 20-year warranty is achievable with select silicone manufacturers.

2. Observation:
An additional secondary sealant was added over the pressure plate gasket, see Figure 11, around windows on the north elevation. This appears to be a cost-effective attempt to repair a possible leak. There are also masonry endcaps missing at the base of the window system, see Figure 12. Other windows east and west elevation have gaskets that have shrank or were possibly installed incorrectly. The gaps in the gaskets will allow water into the glazing system and will likely cause further damage.

2.1 Recommendation:
To fully understand why the secondary sealant was added, SystemWorks recommends disassembling a window system that has the secondary sealant installed; a more in-depth review can be complete once the glazing system is dissembled. Also, consider adding new gaskets to all the other windows. New endcaps will need to be fabricated and installed in the masonry sill flashing.

3. Observation:
Most of the sealant joints around the plaster areas has failed, see Figure 14. There are locations where the sealant may have been removed or not installed, see Figure 15 and Figure 17. Figure 16 shows a large crack in the plaster on the west elevation. There are other areas that have smaller cracks.

3.1 Recommendation:
In addition to the recommendation outlined in 1.1, all cracks will need to be properly repaired prior to installing new sealant.

4. Observation:
There are multiple penetrations through the masonry system that need to be removed and permanently sealed, see Figure 18 through Figure 20.

4.1 Recommendation:
SystemWorks recommends permanently sealing all through wall penetrations and any abounded penetrations should be completely removed and properly repaired.

5. Observation:
No deficiencies were noted with the ballasted EPDM roof. The pipe boots, mechanical curbs, and associated flashing tapes that SystemWorks could review without removing large amounts of ballast appeared to be preforming well. A secondary sealant has been installed over multiple mortar joints along the west elevation of the clerestory and over large cracks of the masonry chimney.

5.1 Recommendation:
Any secondary sealant that has been installed over mortar joints should be removed and the mortar joints should be properly repaired.

Figure 1: East elevation.

Figure 2:North elevation.

Figure 3:West elevation.

Figure 4: South elevation.

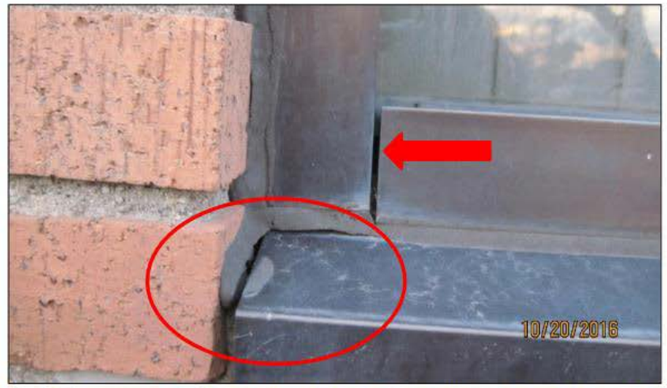


Figure 5: Failed window to masonry wall joint, area outlined in red. The snap on window cover is short of the vertical cover, area shown with red arrow.

Figure 6: Failed window to lintel joint, area outlined in red.

Figure 7: Additional failed window to masonry joint, area outlined in red

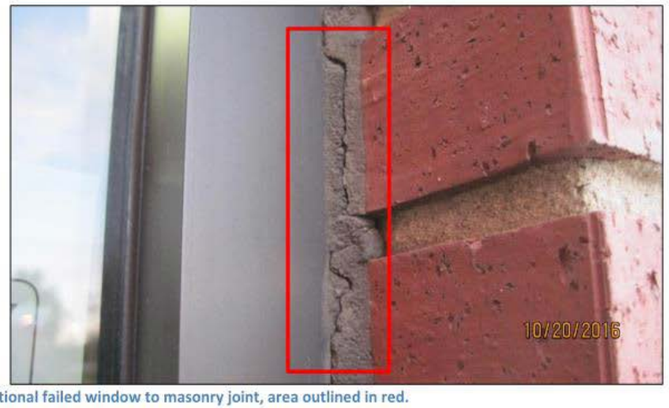


Figure 8: Additional failed window to masonry joint, area outlined in red.

Figure 9: There are multiple areas where the masonry bricks are spalling. The control joints between the masonry walls and concrete slabs has failed.

Figure 10: Additional image of spalling masonry bricks.

Figure 11: Some of the glazing unit's gasket connections, at the pressure plat, have been sealed with a secondary sealant.

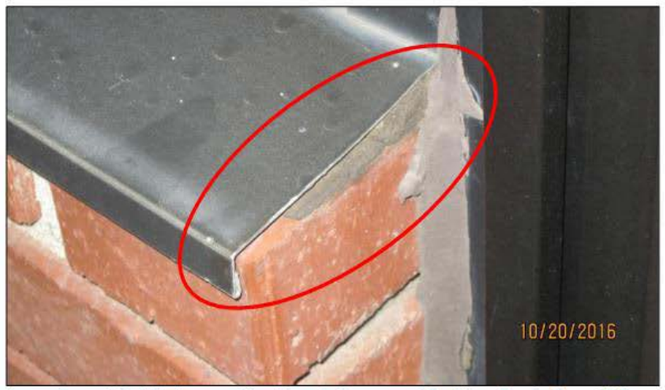


Figure 12: Masonry endcap not installed, area outlined in red. See area outlined in yellow in Figure 13 for properly installed endcap reference.

Figure 13: Failed masonry to door frame joint, area show with red arrow.

Figure 14: Failed plaster to masonry control joint, area outlined in red.

Figure 15: The sill at the base of plaster is not sealed at the masonry connection, area show with red arrow.

Figure 16: The plaster has a large crack on the west side of the entry along the east elevation.

Figure 17: The plaster in not sealed to the steel lintel, area outlined in red.

Figure 18: There is an open pipe that looks to be abounded next to the night drop box on the west elevation.

Figure 19: The electrical conduits on the north elevation are not completely sealed at the masonry connection.

Figure 20: The north side of the upper masonry wall has multiple mechanical penetrations that are not sealed.

Figure 21: Same elevation as Figure 20, additional penetration that is not completely sealed.

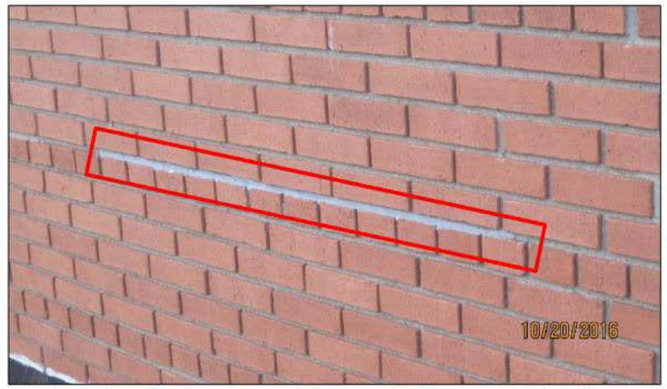


Figure 22: Same elevation as Figure 20, a secondary sealant has been added to mortar joints in multiple locations.

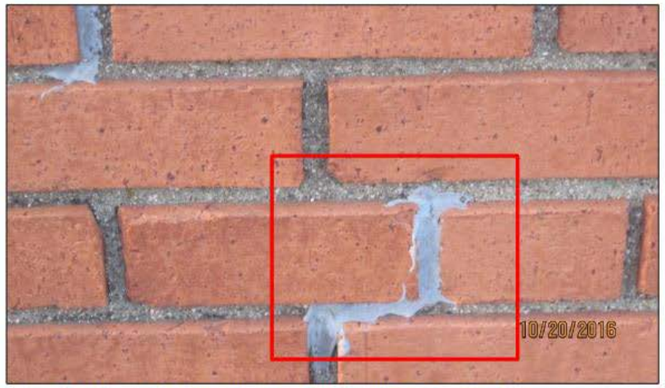


Figure 23: Same elevation as Figure 20, additional image of added sealant to a mortar joint.

Figure 24: Duct tape has been installed over a missing cap on one of the exhaust fans. Figure 25 shows a properly installed cap.

Figure 25: Reference for Figure 24.

Figure 26: The masonry chimney cap has multiple large cracks that have been repaired with a secondary sealant, one crack is outlined in red.

Figure 27: It appears one of the roof boots on the south flat roof has been repaired. This installed secondary sealant does not appear to be an EPDM product.

Building Enclosure Review

Bill Farner Government Building

Carroll, Iowa

Prepared for:

Mr. Joe Feldmann

SystemWorks LLC

409 Fifth Street, West Des Moines, IA 50265

515.975.0575 (phone); 515.255.1155 (fax)

SystemWorks LLC
Commissioning Sustainable Buildings

Summary of Site Visit

Project: Bill Farner Government Building
Date of Review: 10/20/2016

Prepared By: Jeremy Carroll
Pictures taken by: Jeremy Carroll

1. Observation:

Many of the exterior precast sealant joints are compromised. Figure 5 through Figure 8 shows failed precast joints. The sealant joints between the poured concreate and masonry system are failing as well, see Figure 9. No masonry weeps were identified at the base of the masonry wall during this site visit.

1.1 Recommendation:

SystemWorks recommends removing all existing exterior sealant and installing new sealant. The selected sealant manufacturer's installation instructions need to be implemented to ensure the desired warranty is achieved. SystemWorks recommends using a silicone sealant for all exterior joints. A 20-year warranty is achievable with select silicone manufacturers.

2. Observation:

Most of the sealant joints around the aluminum window and door systems do not appear to be compromised. Some areas are starting to show signs of deterioration and will likely start to fail soon. There is a large gap at the base of many of the windows between the window frame and sill flashing, see Figure 10 and Figure 11. These gaps will allow moisture to enter the system past the insulated glass section. Depending on the outdoor air temperature, this could cause condensation issues on the interior. The entry doors and associated hardware, along the north elevation, are showing signs of significate wear and tear, a few examples are: door closers are struggling to pull the doors completely shut, sweeps missing at the thresholds.

The soffit area along the north elevation appears to be vented, see Figure 12 and Figure 13.

2.1 Recommendation:

If the soffit is vented, a proper thermal break needs to be in place.

3. Observation:

Overall, the fully adhered EPDM roof system appeared to be in good shape. The pipe boots, mechanical curbs, and pitch panes appeared to be preforming well. One separated EPDM joint was noted, see Figure 15. There appears to be multiple penetrations through the EPDM membrane that are no longer in services, see Figure 16. Figure 21 shows a large steel stack with multiple PVC vent pipe penetrations. Theses penetrations are no longer permanently sealed (Figure 19) and the stack's cap in separating (Figure 20).

3.1 Recommendation:

SystemWorks recommends having a qualified roofing contractor inspect the entire roof and repair all deficiency. All unused penetrations should be removed and repaired per the EPDM manufacturer's installation instructions. SystemWorks would have the qualified roofing contractor installing new flashing around the PVC pipe penetrations. The stack's cap will need to be repaired prior to installing

4.1 General Recommendation:

SystemWorks recommends removing the sheet metal flashing (Figure 22) that is installed on top of the masonry wall. This system has multiple lap joints that will allow uncontrolled moisture to migrate into the masonry system.

The Efflorescent around the sill cock in Figure 23 should be reviewed further. The sill cock may be leaking.

It appears a more air tight seal is needed between the law enforcement garage and adjoining spaces, see Figure 24. The roof deck and exterior walls are likely insulated/sealed with similar materials.

SystemWorks recommends permanently sealing all through wall penetrations and any abounded penetrations should be completely removed and properly repaired.

Figure 1: East elevation.

Figure 2:North elevation.

Figure 3:West elevation.

Figure 4: South elevation.

Figure 5: Failed vertical precast joint, area outlined in red.

Figure 6: Additional image of a failed vertical precast joint, area shown with red arrow.

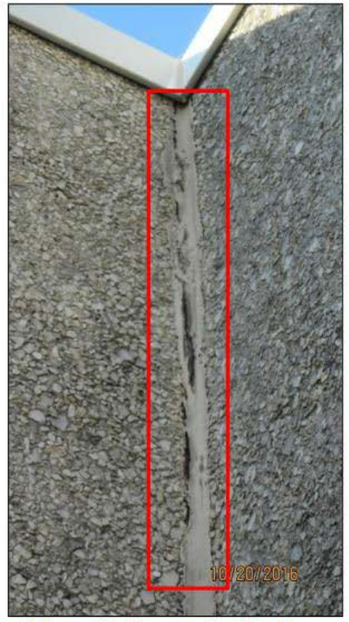


Figure 7: Additional image of a failed vertical precast joint, area outlined in red

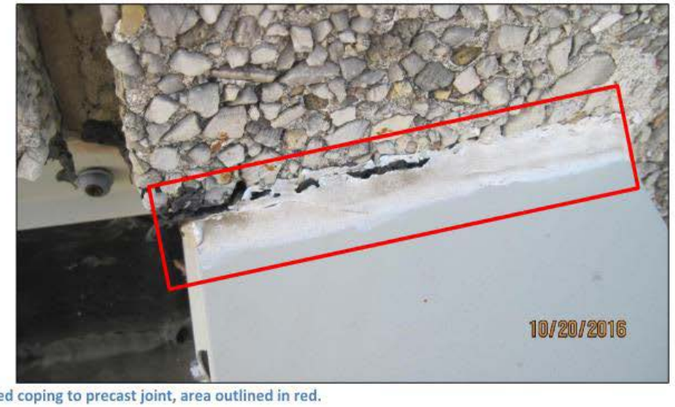


Figure 8: Failed coping to precast joint, area outlined in red.

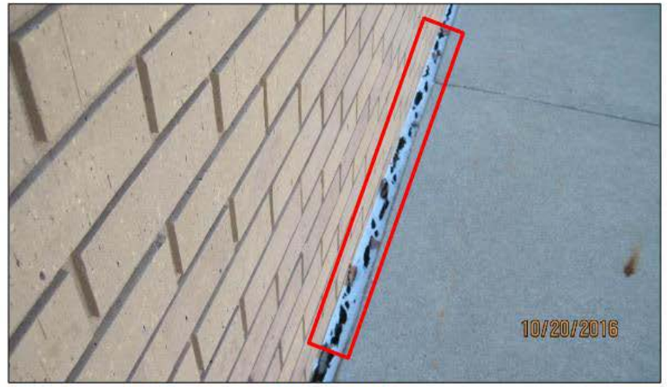


Figure 9: Failed poured concrete to masonry joint, area outlined in red.

Figure 10: There are large gaps between the bottom of the window frame and the sill, area shown with red arrow.

Figure 11: Additional image of the large gap between the window frame and sill flashing, area outlined in red.

Figure 12: The soffit along the north elevation appears to be vented.

Figure 13: This appears to be a soffit vent along the north elevation.

Figure 14: Missing soffit light on the north elevation.

Figure 15: South east elevation – the EPDM joint has separated and the base of the precast wall, area shown with red arrow.

Figure 16: It doesn't appear the outlined electrical conduit is being utilized.

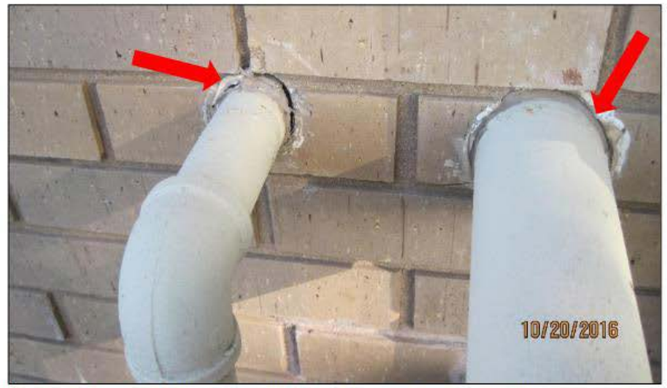


Figure 17: South elevation - two mechanical penetration are no longer permanently sealed.

Figure 18: South elevation - additional penetration that is no longer permanently sealed.

Figure 19: The PVC vent pipes are not permanently sealed, area shown with red arrows.

Figure 20: The cap on the large stack is separating, area outlined in red.

Figure 21: Larger image for Figure 19 and Figure 20.

Figure 22: Sheet metal flashing in installed on to top of the masonry wall around the majority of the building.

Figure 23: Efflorescence is present around a sill cock on the north elevation.

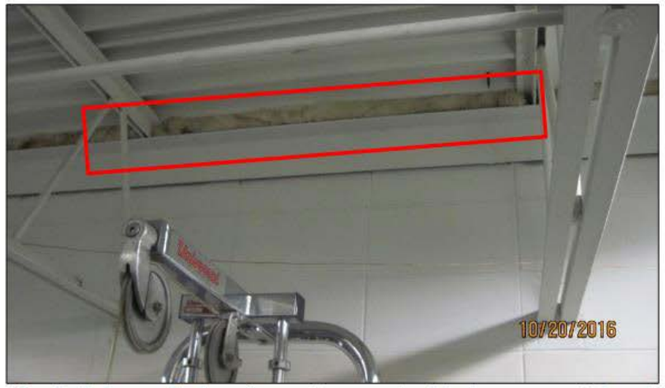


Figure 24: Image from inside the gym. The law enforcement garage and conjoined spaces appear to be sealed and insulated with fiberglass insulation.

Figure 25: The building in currently operating under a negative pressure of **-.0181** inches of water column.

Structural System Narrative

Concept A

- Concept A consists of renovating the existing library/city hall into a new library space and the existing bank site into a new city hall space.

Concept B

- Concept B consists of renovating the existing library/city hall into a new city hall space and the existing bank site into a new library space.

Structural Design Criteria

Codes

- Building Code: 2012 International Building Code
- Risk Category of the Building per IBC is Risk Category II

Design Loads

- Snow Load: Ground snow load of 30 psf. Snow drift per IBC 2012.

- Live Loads:
  - Assembly Areas (fixed seats) 60 PSF
  - Assembly Areas (moveable seats) 100 PSF
  - Office 50 PSF
  - Corridors 100 PSF
  - Stairs 100 PSF
  - Library Stack Rooms 150 PSF

- Wind Load: 120 MPH Exposure B

- Seismic: Site class D, to be verified in geotechnical report.

Primary Structural Systems

Concept A

Library Site

- The existing building consists of steel joists, steel beams, steel columns, precast floor panels, masonry walls, slab-on-grade, and concrete foundations.
- Demo new wall openings and install new beams, columns, and footings as required.
- Demo existing stair and replace with new framing.
- New elevator shaft and pit (underpin as required).
- New entry way steel joists, beams, columns, and footings.
- Second floor infills.
- Second floor stack room can have a live load up to 120 PSF per the existing drawings. If additional load is required, the floor will require strengthening or the span will need to be shorter.

Bank Site

- The existing building consists of concrete joists, beams, columns, and foundations. Two additions consist of steel joists, beams, columns, and concrete foundations.
- Demo new wall openings and install new beams, columns, and footings as required.
- Demo lid of existing vault and two walls.
- New elevator shaft and pit (underpin as required).

Concept B

Library Site

- The existing building consists of steel joists, steel beams, steel columns, precast floor panels, masonry walls, slab-on-grade, and concrete foundations.
- Demo new wall openings and install new beams, columns, and footings as required.

Bank Site

- The existing building consists of concrete joists, beams, columns, and foundations. Two additions consist of steel joists, beams, columns, and concrete foundations.
- Demo new wall openings and install new beams, columns, and footings as required.
- Demo lid of existing vault and two walls.
- New elevator shaft and pit (underpin as required).
- New 8,800 Sq. Ft. addition consisting of steel joists, beams, columns, and concrete footings.

Carroll Library and City Hall MEP Narrative (Concept A – Library)

Carroll, Iowa

Alvine No. 2016 5569
December 5, 2016

Alvine Engineering

▶ 400 East Court Avenue, Suite 130 Des Moines, Iowa 50309 ▶ 515.243.0569 ▶ www.alvine.com

Table of Contents

Mechanical

Overview

Mechanical systems are designed to provide adequate comfort levels in the common areas of the building. The fire protection system will be a sprinkler system throughout the building designed for light hazard. The service will enter the mechanical equipment room through the basement and will be provided with a fire department siamese connection and a post indicator valve near the southeast corner of the building.

The plumbing system will utilize domestic water supplied from the main in E 4th Street. Gas-fired water heaters will generate hot water. Hot and cold water will be distributed to the toilet rooms and sinks with a hot water recirculation.

The heating, ventilating, and air conditioning (HVAC) system will consist of packaged rooftop units with DX cooling providing 55° F air, gas heating, and fully modulating VAV reheat. The rooftop unit(s) will provide circulated air, makeup air, and ventilation to the basement, first floor, and second floor common areas. The HVAC system will be zoned to meet occupancy type and exposure resulting in no less than 10 zones.

The temperature control system will be a computer-based automation system connected to the building-wide energy management and computer system.

Design Criteria

The design of the mechanical system will conform with the following codes:

- 2012 Uniform and Iowa Administrative Plumbing Code
- 2012 International Mechanical Code
- NFPA-13
- NFPA-101
- 2012 International Energy Conservation Code

The design of the mechanical systems will conform with the following standards:

- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- National Fire Protection Association Pamphlets (NFPA)
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept A – Library)
December 5, 2016

Design Conditions

- Outside
  - Summer: 95°F, db, 78°F wb
  - Winter: -20°F, db
- Indoor
  - Summer: 75° ±3°, 50% RH
  - Winter: 70° ±3°, 20% RH

Outside Air Requirements

Outside air will be provided by the rooftop unit(s) for exhaust equal to or exceeding 10 cfm per person (ASHRAE STD 62-1999).

Site Utilities

Sanitary Sewer

The underground sanitary sewer 5 LF from the building exterior wall to the sewer in E 4th Street will be cast iron. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Storm Sewer

The underground storm line 5 LF from the building exterior wall to the sewer in E 4th Street will be 8″ PVC. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Domestic Water

A ductile iron with cement mortar lining, Type K copper domestic water line from the main in E 4th Street will be modified to 2-1/2″ if necessary to meet the new building load. A water meter approved by the local utility will be installed outside in a pit. A reduced-pressure backflow preventer will be installed after the meter.

Fire Service

A 6″copper pipe fire service line from main in E 4th Street will be installed to the building entrance. The pipe will be suitable for domestic water. A post indicator valve with alarmed tamper switch will be installed between the main and the building. A wall indicator valve may be used if acceptable to the AHJ and there is no space for a PIV. A double-check backflow preventer will be installed inside the building. A fire department connection will be installed in a location acceptable to the authority having jurisdiction, on the building exterior wall near the fire service entrance. Copper piping to the fire department connection will be pitched so water will drain to the french drain at fire department connection.

Gas Service

The gas service will be modified to meet the new load by the local utility. The Contractor will arrange for work in a timely manner and pay all fees. The utility will provide the appropriate service from the main in E 4th Street to the building, install the gas pressure regulator, relief valve, and meter.

Heating, Ventilating, and Air Conditioning Systems

Central Equipment

Heating

The building will be heated by means of gas-fired sequential boilers that heat water, which is distributed to terminal heating devices by means of a steel piping system and centrifugal circulation pumps. Hot water fin tube will be provided at locations with large envelope loads due to windows and/or doorways.

Existing air handling units (AHUs), connected piping, ductwork, and all appurtenances will be removed prior to renovation. The existing library space is the only exception. The existing AHU in the existing library space will remain. Connected ductwork will be capped at renovated walls and its piping will be modified to connect to new boiler system to provide heating only to the shell space.

Rooftop Units

The building will be heated by means of self-contained, gas-fired heating and electric air conditioning rooftop heating and air conditioning units connected to variable air volume boxes for each zone. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year. The control system consists of electronic controls to alternate the rooftop unit mode between heating and cooling to satisfy space conditions of all spaces. Code-required outside air will be provided.

Building (Space)

The space will be heated and cooled by means of a gas-fired electric air conditioning, self-contained heating and cooling rooftop unit controlled by a space thermostat. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year.

Tech and IT rooms will be provided with cooling only, split systems as required.

Exhaust Systems

Toilet rooms will be exhausted at the rate of 75 cfm per fixture.

Plumbing

Plumbing systems, including sanitary sewers, storm sewers, and domestic water systems will be provided in accordance with applicable plumbing codes.

Sanitary Waste and Vent Systems

Sanitary waste and vent system piping will be service-weight cast iron with gasketed joints underground and service-weight cast iron with no hub joints and fittings above ground. Existing below grade piping will be extended and modified for new plumbing connections. All above grade piping will be replaced with new.

Domestic Water Systems

Domestic water piping will be Type L copper with wrought copper fittings and non-lead solder. Underground piping will be Type K copper with no joints below ground. All domestic water piping will be insulated with fiberglass insulation and vapor barrier jacket.

Water entrance will include a water meter, approved by the local utility company, and a reduced pressure backflow preventer.

Domestic hot water will be stored at 140° F and heated by a gas-fired water heater. A mixing valve will regulate the water temperature to 110° F which will then be distributed throughout the building. A hot water circulating system, including circulating pump, will be provided to ensure hot water is available at all fixtures. The hot water recirculation pump will be controlled by a building energy management system (EMS).

Plumbing Fixtures

Plumbing fixtures will be commercial grade and will be designed to meet the Americans with Disabilities Act (ADA) where required.

Water closets will be wall-hung, elongated-bowl, flush-valve type with solid plastic seats. Flush valves will be infrared-sensing type. Water closets will be floor-set, tank-style, elongated-bowl with solid plastic seat.

Urinals will be wall-hung, siphon-jet, low-flow type with flush valve. Flush valves will be infrared-sensing type.

Lavatories will be vitreous china, wall-hung, with infrared-sensing faucets and concealed carriers.

Janitor sink will be floor-set terrazzo, with stainless steel caps and wall-hung faucets with wall brace.

Floor drains will be cast iron body with nickel-bronze grate for finished areas and cast iron grate for equipment and maintenance areas.

Storm Sewer System

Existing roof drains, overflow drains and downspouts will be existing to remain with new interior piping provided. New roof drains and downspout system will be provided in accordance with applicable plumbing codes. Overflow drainage system will spill-to-grade. Roof drains will have cast iron body with aluminum or cast iron dome.

All above grade piping will be replaced with new. Above-ground piping will be standard-weight, cast iron, with no-hub joints and fittings. Below-ground piping will be standard weight cast iron bell and spigot with gasketed joints.

Fire Protection

The fire service will enter the mechanical room in the basement in the southcentral portion of the building. A check valve will be provided. A main flow switch will indicate flow to the fire alarm system.

A wet sprinkler system will be provided. Each connection to the riser will be provided with a flow switch and an OS&Y monitored valve.

A standpipe system will be provided with fire department valves. A pressure gauge will be installed at the top of the standpipe to indicate a minimum of 65 psi.

A fire department siamese connection will be provided on the southeast corner of the building.

A fire pump with jockey pump will be provided if required by flow test.

Sprinkler heads will be provided for all areas.

Energy Management System (Temperature Controls)

The facility will be controlled by an electronic microprocessor-based direct digital control (DDC) system, which will be the primary control mechanism for all HVAC and lighting controls. All schedule and setpoint modifications will be readily accomplished through an on-site terminal or off-site by means of telephone modem and secondary terminal. Each zone or space will have individual control and will be addressable from the central operator station to assist in troubleshooting.

AHUs will be provided with economizer controls that will cool with outside air during mild times of the year, which is controlled by the DDC system. Heating and temperature setpoints will also be controlled by the DDC system. All AHUs will be controlled based on time schedules entered into the DDC system and modified as required for special activities and holidays.

All central cooling and heating equipment and pumps will be controlled and monitored by DDC system.

Actuators for valves and dampers will be electric.

Electrical

Overview

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

The design of the electrical systems will conform with the currently adopted editions of the following codes:

- 2014 National Electrical Code (NEC)
- 2012 International Energy Conservation Code (IECC)
- 2012 International Building Code (IBC)
- 2012 International Fire Code (IFC)
- 10th Edition IESNA Lighting Handbook
- Life Safety NFPA-101
- State and Local Codes

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

Basic Electrical Materials

Raceway systems will generally consist of metal boxes interconnected with electrical metallic tubing (EMT). Poly-vinyl chloride (PVC) 40 will be used for underground installations. Rigid galvanized steel (RGS) conduit or intermediate metal conduit (IMC) will be used for exposed exterior work where subject to damage. The minimum conduit size for power wiring will be 3/4″. The minimum conduit size for communication raceways will be 1″.

Conductors will be copper. Insulation will be THWN or XHHW rated for 90° C; however, design will be based on 75° C ratings. Four-wire feeders, where neutral is considered a current-carrying conductor, will have an additional 80% derating. A maximum of nine current-carrying conductors, using code-designated derating factors, will be installed in any raceway. All conductors, including neutrals and grounding conductors, will be color-coded.

Wiring devices will be specification-grade, 20-amp minimum, and color as selected. Device plates will be smooth-finish plastic to match the color of device. Back-to-back installation of devices will not be allowed.

Electrical Service

The building will be provided with electrical service from MidAmerican Energy. A utility-supplied, pad-mount transformer will be located on grade near the building. Service voltage will be 480Y/277-volt, 3-phase, 4-wire.

Utility company metering transformers will be located in a current transformer cabinet. The meter will be located on a meter pedestal. The electrical service conductors will run underground from the utility company transformer to the building main distribution switchboard.

The main switchboard will have a fusible bolted-pressure main switch with ground fault protection. A microprocessor-based Owner metering package will be provided for kWH, kW, kVAR, ampere, and voltage readouts.

Switchboard bussing will be aluminum braced for the available AIC. A fully rated horizontal bus will be provided for all sections. Branch overcurrent devices will be molded-case circuit breakers with full-feature electronic trip. All components will be fully rated for the available AIC.

The electric service serving the library will be separated from the existing electric service that serves the police station.

Grounding

The electrical power distribution system will be provided with a "single-point ground system." The ground bus at the main service equipment will be connected to the water service, a concrete-encased electrode, a ground rod, and building steel.

All transformers will have the neutral of the derived system bonded to building steel, the nearest metal water pipe, and the transformer case. An insulated ground conductor will run back to the supply equipment in same raceway as the phase conductors.

An insulated equipment grounding conductor will be installed with feeders and branch circuits. Metal raceways, boxes, equipment, receptacles, and light fixtures will be bonded to the equipment grounding system.

Power Distribution

Distribution panelboards or switchboards will be provided to serve mechanical equipment and other concentrated loads. Lighting panelboards will be provided as required to serve other building loads. HVAC equipment, elevators, and Owner equipment will be supplied with 480-volt, 3-phase power. 277-volt circuits will be used for lighting.

Distribution panels and switchboards will be circuit breaker type. Molded-case breakers will be used. Components will be fully rated to provide the required AIC. Bussing will be aluminum.

Lighting panels will be commercial-type with bolt-on circuit breakers. Bussing will be aluminum. Components will be fully rated to provide the required AIC. Each panel will have a hinged door with a master keyed flush tumbler latch. Lighting panel overcurrent protection will be limited to 400- amperes. A minimum of one, 20-amp, 120-volt circuit will be provided for each 150 square feet of building area for workstation power requirements.

Transformers will be provided to convert 480-volt power to 208Y/120 volts for receptacle and equipment needs. Transformers will be standard dry-type rated for 115°C rise. Windings will be aluminum. Transformers rated 45 kVA or smaller may be wall or floor-mounted. Transformers rated 75 kVA or greater will be floor-mounted. Transformers will be located to keep maximum feeder length from the transformer to the 120-volt panels from exceeding 200′ in order to keep the neutral to ground voltage differential at work stations within acceptable limits. Transformers will be sized to provide a minimum of 3 watts per square foot of building area.

Disconnect switches will be heavy-duty type. Exterior switches will be rain-tight. Disconnect switches for packaged HVAC equipment will be fusible.

HVAC equipment will be controlled by individual motor starters. Each magnetic motor starter will include a hand-off-auto (H-O-A) switch, auxiliary contacts, a control power transformer, and a motor running pilot light. Each starter will have minimum inrush rating of 140% of that for a standard motor to meet the NEC requirement for use with energy efficient motors. Loose starter will be combination-type with a fusible disconnect.

Surge protection devices will be provided at the main service entrance and at selected panels serving computers or sensitive equipment.

Wiring Methods

Service entrance conductors run underground and will be enclosed in PVC 40 raceways. Service raceways that run through building spaces will be concrete encased.

Feeders will consist of conductors installed in raceways. Conduit fill will not exceed 40% based on the dimensions of THW conductors (even though thinner diameter conductors are installed) to allow space for possible future addition of conductors or installation of larger conductors in a given raceway.

Cable trays will be provided for installation of communications cables. Cable trays will be steel wire basket type, generally 2″ deep with a 2″ x4″ mesh pattern and width as required. Trays will generally be trapeze-mounted outside of telecommunications rooms and wall-mounted or anchored to telecommunications racks within telecommunication rooms.

Workstation cubicles will be served by an 8-wire system consisting of four, 20-amp circuits (three hot wires with a shared #10 neutral and a completely separate circuit with its own hot, isolated ground and neutral conductor). A maximum of three workstations will be on a single circuit.

Lighting

General lighting for offices, corridors, and general purpose occupancies will consist of LED volumetric fixtures.

Luminaires in meeting rooms, training rooms, and conference rooms will be LED and shall be dimmable down to 10%.

Large open office areas will be provided with linear suspended LED direct/indirect luminaires.

Downlights for general-purpose use will be LED with a diffusing lens, matte diffuse reflector, and electronic driver.

Equipment room lights will be 4′ industrial fixtures with two T8 fluorescent lamps complete with a chain hanging assembly kit and wireguards.

Exit lights will be LED type with an integral battery. Egress lighting will be provided by selected fixtures with integral battery packs.

Exterior lighting will consist of LED fixtures. A combination of building and pole mounted fixtures will be used as required. Illumination levels will meet IES standards.

Where dimming is desired by the owner, luminaires will be LED and will be tested per IESNA applicable standards.

LED luminaires will have a 4000K color temperature and color rendering index of 80 or greater.

Lighting Controls

New lighting controls will be installed in all spaces to comply with the IECC, which indicates if 50% of the luminaires are modified/replaced the entire building must be brought up to current code.

Standalone lighting controls will be provided in all spaces except for hallways, stairways, lobbies, and public spaces where automatic controls would endanger occupants.

Large open areas, accessible to the public will be controlled by a distributed lighting control system and will include input from the building management system to provide a scheduled building sweep of interior lighting. A manual on/automatic off schedule will be provided. The distributed control system in public areas will be controlled on a scheduled time-of-day basis during occupied business hours. During non-occupied hours local motion sensors will control lighting in public spaces for after-hours occupants.

Motion sensors will be set for vacancy mode in regularly occupied spaces. Motion sensors in restrooms and storage rooms will be set for occupancy mode. Manual control will be provided in all spaces except where accessible to the public or in secure areas.

Spaces exposed to ample daylight will be provided with photo sensors to dim luminaires within daylight zones.

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept A – Library)
December 5, 2016

Voice and Data Communications Infrastructure

The facility will be provided with a complete voice and data and communications structured wiring system, including telecommunications spaces and pathways, equipment racks, telecommunications cables, termination hardware, cable management hardware, and telecommunications jacks.

Telecommunications room elevations and enlarged floor plans will be provided with the design effort. Electrical power, lighting, and cooling requirements will be closely coordinated with the electrical and mechanical design team.

A typical communication outlet will have two Category 6 jacks (one for voice and one for data), with 24 AWG copper unshielded, twisted-pair Category 6 cable installed from each outlet to the nearest telecommunications room. In addition, Category 6 connectivity will be provided to support Wi-Fi and digital signage throughout the building. Each wireless access point (WAP) location will be provided with two Category 6 jacks, and each digital signage location will be provided with one Category 6 jack. The horizontal cable will be distributed in conduit, cable tray, and J-hooks above the ceiling.

The telecommunications infrastructure will be designed in accordance with applicable national standards, such as ANSI TIA/EIA-568-B (premise wiring), ANSI TIA/EIA-569A (spaces and pathways), ANSI TIA/EIA 606A (administration), ANSI TIA/EIA 607 (grounding and bonding), BICSI Telecommunications Distribution Methods Manual, and Owner's standards.

Fire Alarm

The facility will be provided with an intelligent microprocessor-based, addressable fire alarm system complete with addressable control relays. The system will have sensitivity monitoring and adjustment of all smoke detectors.

Addressable manual stations will be provided at each exit from the building and no more than 200′ from any part of the building. Smoke detectors will be provided for elevator capture, HVAC system control, atrium exhaust systems, computer rooms, paths of egress, and other areas required by code.

Audible/visual evacuation signals will be visible in the evacuation path. Signals will be located no more than 10′ from exit doors and no more than 100′ on center in corridors. Signals will also be installed in classrooms, toilets, common-use areas, and rooms larger than 2000 square feet. An additional signal will be located on the exterior of the building.

Audible evacuation signals will be speakers with a pre-recorded voice evacuation message provided by the fire alarm system amplifier. Visual signals will be strobes meeting ADA requirements. Small rooms will be equipped with mini strobes. Signals will be combined audible/visual assemblies, unless otherwise indicated. A voice evacuation system will be provided for each assembly occupancy of 300 or more persons.

HVAC systems will be provided with duct detectors as required by code. Relays will be provided to shut down each (AHU) in response to an alarm generated by its associated detector. Smoke dampers will be wired to dedicated 120-volt circuits. Circuits will be controlled by the fire alarm panel so dampers close upon smoke detection at the serving AHU or in the space served.

Fire sprinkler systems will be monitored for flow and valve position.

A remote annunciator panel will be located at the building entrance. A full-size printer will be provided to record all system operations.

All fire alarm wiring will be installed in raceways.

Security and Surveillance

An electronic access control (EAC) system with card readers, electric locks, and door status monitoring will be installed at designated interior and exterior doors. Door status monitoring will be provided at all exterior doors.

EAC doors will be electrically controlled and capable of being scheduled as locked (no access), secured (authorized card access only) or unlocked (open to public).

The EAC headend equipment will be located within the telecommunication rooms.

IP security cameras will be located to provide facial recognition quality surveillance of the exterior doors. Interior public spaces will be provided with general surveillance coverage. The IP security camera cable and connectivity will be installed to match the data communications infrastructure. 1.3 megapixel IP cameras will be utilized as required to provide the desired quality of video.

A software-based video management system (VMS) will be provided for recording and viewing live/recorded video. The VMS will consist of a network video recorder (NVR) and viewing client PCs with flat panel displays located at security desks. One or more NVRs will be provided for the building. The NVRs will be sized to provide a minimum of 30 days of video retention. Space and power will be provided for the NVRs to be located within a 19″ equipment rack.

Carroll Library and City Hall MEP Narrative (Concept A – City Hall)

Carroll, Iowa

Alvine No. 2016 5569
December 5, 2016

Alvine Engineering

▶ 400 East Court Avenue, Suite 130 Des Moines, Iowa 50309 ▶ 515.243.0569 ▶ www.alvine.com

Table of Contents

Mechanical

Overview

Mechanical systems are designed to provide adequate comfort levels in the common areas of the building. The fire protection system will be a sprinkler system throughout the building designed for light hazard. The service will enter the mechanical equipment room through the basement and will be provided with a fire department siamese connection and a post indicator valve near the northwest corner of the building.

The plumbing system will utilize domestic water supplied from the main in N Adams Street. Gas-fired water heaters will generate hot water. Hot and cold water will be distributed to the toilet rooms and sinks with a hot water recirculation.

The heating, ventilating, and air conditioning (HVAC) system will consist of packaged rooftop units with DX cooling providing 55° F air, gas heating, and fully modulating variable air volume (VAV) reheat. The rooftop unit(s) will provide circulated air, makeup air, and ventilation to the basement and first floor common areas. The HVAC system will be zoned to meet occupancy type and exposure resulting in no less than 10 zones.

The temperature control system will be a computer-based automation system connected to the building-wide energy management and computer system.

Design Criteria

The design of the mechanical system will conform with the following codes:

- 2012 Uniform and Iowa Administrative Plumbing Code
- 2012 International Mechanical Code
- NFPA-13
- NFPA-101
- 2012 International Energy Conservation Code

The design of the mechanical systems will conform with the following standards:

- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- National Fire Protection Association Pamphlets (NFPA)
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept A – City Hall)
December 5, 2016

Design Conditions

- Outside
  - Summer: 95°F, db, 78°F wb
  - Winter: -20°F, db
- Indoor
  - Summer: 75° ±3°, 50% RH
  - Winter: 70° ±3°, 20% RH

Outside Air Requirements

Outside air will be provided by the rooftop unit(s) for exhaust equal to or exceeding 10 cfm per person (ASHRAE STD 62-1999).

Site Utilities

Sanitary Sewer

The underground sanitary sewer 5 LF from the building exterior wall to the sewer in N Adams Street will be cast iron. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Storm Sewer

The underground storm line 5 LF from the building exterior wall to the sewer in N Adams Street will be 8″ PVC. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Domestic Water

A ductile iron with cement mortar lining, Type K copper domestic water line from the main in N Adams Street will be modified to 2-1/2″ if necessary to meet the new building load. A water meter approved by the local utility will be installed outside in a pit. A reduced-pressure backflow preventer will be installed after the meter.

Fire Service

A 6″ copper pipe fire service line from main in N Adams Street will be installed to the building entrance. The pipe will be suitable for domestic water. A post indicator valve with alarmed tamper switch will be installed between the main and the building. A wall indicator valve may be used if acceptable to the AHJ and there is no space for a PIV. A double-check backflow preventer will be installed inside the building. A fire department connection will be installed in a location acceptable to the authority having jurisdiction, on the building

exterior wall near the fire service entrance. Copper piping to the fire department connection will be pitched so water will drain to the french drain at the fire department connection.

Gas Service

The gas service will be modified to meet the new load by the local utility. The Contractor will arrange for work in a timely manner and pay all fees. The utility will provide the appropriate service from the main in N Adams Street to the building, install the gas pressure regulator, relief valve, and meter.

Heating, Ventilating, and Air Conditioning Systems

Central Equipment

Heating

The building will be heated by means of gas-fired sequential boilers that heat water, which is distributed to terminal heating devices by means of a steel piping system and centrifugal circulation pumps. Hot water fin tubes will be provided at locations with large envelope loads due to windows and/or doorways.

Existing air handling units (AHUs), connected piping, ductwork, and all appurtenances will be removed prior to renovation.

Rooftop Units

The building will be heated by means of self-contained, gas-fired heating and electric air conditioning rooftop heating and air conditioning units connected to variable air volume boxes for each zone. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year. The control system consists of electronic controls to alternate the rooftop unit mode between heating and cooling to satisfy space conditions of all spaces. Code-required outside air will be provided.

Building (Space)

The space will be heated and cooled by means of a gas-fired electric air conditioning, self-contained heating and cooling rooftop unit controlled by a space thermostat. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year.

Tech and IT rooms will be provided with cooling-only split systems as required.

Exhaust Systems

Toilet rooms will be exhausted at the rate of 75 cfm per fixture.

Plumbing

Plumbing systems, including sanitary sewers, storm sewers, and domestic water systems will be provided in accordance with applicable plumbing codes.

Sanitary Waste and Vent Systems

Sanitary waste and vent system piping will be service-weight cast iron with gasketed joints underground and service-weight cast iron with no hub joints and fittings above ground. Existing below grade piping will be extended and modified for new plumbing connections. All above grade piping will be replaced with new.

Domestic Water Systems

Domestic water piping will be Type L copper with wrought copper fittings and non-lead solder. Underground piping will be Type K copper with no joints below ground. All domestic water piping will be insulated with fiberglass insulation and vapor barrier jacket.

Water entrance will include a water meter, approved by the local utility company, and a reduced pressure backflow preventer.

Domestic hot water will be stored at 140° F and heated by a gas-fired water heater. A mixing valve will regulate the water temperature to 110° F which will then be distributed throughout the building. A hot water circulating system, including circulating pump, will be provided to ensure hot water is available at all fixtures. The hot water recirculation pump will be controlled by a building energy management system (EMS).

Plumbing Fixtures

Plumbing fixtures will be commercial-grade and will be designed to meet the Americans with Disabilities Act (ADA) where required.

Water closets will be wall-hung, elongated-bowl, flush-valve type with solid plastic seats. Flush valves will be infrared-sensing type. Water closets will be floor-set, tank-style, elongated-bowl with solid plastic seat.

Urinals will be wall-hung, siphon-jet, low-flow type with flush valve. Flush valves will be infrared-sensing type.

Lavatories will be vitreous china and wall-hung with infrared-sensing faucets and concealed carriers.

Janitor sink will be floor-set terrazzo with stainless-steel caps and wall-hung faucets with wall brace.

Floor drains will be cast iron body with nickel-bronze grate for finished areas and cast iron grate for equipment and maintenance areas.

Storm Sewer System

Existing roof drains, overflow drains and downspouts will be existing to remain with new interior piping provided.

All above grade piping will be replaced with new. Above-ground piping will be standard-weight, cast iron, with no-hub joints and fittings. Below-ground piping will be standard-weight, cast-iron bell and spigot with gasketed joints.

Existing below grade piping will be extended and modified for new plumbing connections.

Fire Protection

The fire service will enter the mechanical room in the basement in the south-central portion of the building. A check valve will be provided. A main flow switch will indicate flow to the fire alarm system.

A wet sprinkler system will be provided. Each connection to the riser will be provided with a flow switch and an OS&Y monitored valve.

A standpipe system will be provided with fire department valves. A pressure gauge will be installed at the top of the standpipe to indicate a minimum of 65 psi.

A fire department siamese connection will be provided on the southeast corner of the building.

A fire pump with jockey pump will be provided if required by the flow test.

Sprinkler heads will be provided for all areas.

Energy Management System (Temperature Controls)

The facility will be controlled by an electronic, microprocessor-based, direct digital control (DDC) system, which will be the primary control mechanism for all HVAC and lighting controls. All schedule and setpoint modifications will be readily accomplished through an on-site terminal or off-site by means of telephone modem and secondary terminal. Each zone or space will have individual control and will be addressable from the central operator station to assist in troubleshooting.

AHUs will be provided with economizer controls that will cool with outside air during mild times of the year, which is controlled by the DDC system. Heating and temperature setpoints will also be controlled by the DDC system. All AHUs will be controlled based on time schedules entered into the DDC system and modified as required for special activities and holidays.

All central cooling and heating equipment and pumps will be controlled and monitored by DDC system.

Actuators for valves and dampers will be electric.

Electrical

Overview

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

The design of the electrical systems will conform with the currently adopted editions of the following codes:

- 2014 National Electrical Code (NEC)
- 2012 International Energy Conservation Code (IECC)
- 2012 International Building Code (IBC)
- 2012 International Fire Code (IFC)
- 10th Edition IESNA Lighting Handbook
- Life Safety NFPA-101
- State and Local Codes

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

Basic Electrical Materials

Raceway systems will generally consist of metal boxes interconnected with electrical metallic tubing (EMT). Poly-vinyl chloride (PVC) 40 will be used for underground installations. Rigid galvanized steel (RGS) conduit or intermediate metal conduit (IMC) will be used for exposed exterior work where subject to damage. The minimum conduit size for power wiring will be 3/4″. The minimum conduit size for communication raceways will be 1″.

Conductors will be copper. Insulation will be THWN or XHHW rated for 90° C; however, design will be based on 75° C ratings. Four-wire feeders, where neutral is considered a current-carrying conductor, will have an additional 80% derating. A maximum of nine current-carrying conductors, using code-designated derating factors, will be installed in any raceway. All conductors, including neutrals and grounding conductors, will be color-coded.

Wiring devices will be specification-grade, 20-amp minimum, and color as selected. Device plates will be smooth-finish plastic to match the color of device. Back-to-back installation of devices will not be allowed.

Electrical Service

The building will be provided with electrical service from MidAmerican Energy. A utility-supplied pad-mount transformer will be located on grade near the building. Service voltage will be 480Y/277-volt, 3-phase, 4-wire.

Utility company metering transformers will be located in a current transformer cabinet. The meter will be located on the exterior of the building. The electrical service conductors will run underground from the utility company transformer to the building main distribution panel.

The main distribution panel will have a molded-case, main-circuit breaker. A microprocessor-based Owner metering package will be provided for kWH, kW, kVAR, ampere, and voltage readouts.

The main distribution panel and branch circuit panelboard will be located on the lower level.

Grounding

The electrical power distribution system will be provided with a "single-point ground system." The ground bus at the main service equipment will be connected to the water service, a concrete-encased electrode, a ground rod, and building steel.

All transformers will have the neutral of the derived system bonded to building steel, the nearest metal water pipe, and the transformer case. An insulated ground conductor will run back to the supply equipment in same raceway as the phase conductors.

An insulated equipment grounding conductor will be installed with feeders and branch circuits. Metal raceways, boxes, equipment, receptacles, and light fixtures will be bonded to the equipment grounding system.

Power Distribution

Distribution panelboards or switchboards will be provided to serve mechanical equipment and other concentrated loads. Lighting panelboards will be provided as required to serve other building loads. HVAC equipment, elevators, and Owner equipment will be supplied with 480-volt, 3-phase power. 277-volt circuits will be used for lighting.

Distribution panels and switchboards will be circuit breaker type. Molded-case breakers will be used. Components will be fully rated to provide the required AIC. Bussing will be aluminum.

Lighting panels will be commercial-type with bolt-on circuit breakers. Bussing will be aluminum. Components will be fully rated to provide the required AIC. Each panel will have a hinged door with a master keyed flush tumbler latch. Lighting panel overcurrent protection will be limited to 400- amperes. A minimum of one, 20-amp, 120-volt circuit will be provided for each 150 square feet of building area for workstation power requirements.

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept A – City Hall)
December 5, 2016

Transformers will be provided to convert 480-volt power to 208Y/120 volts for receptacle and equipment needs. Transformers will be standard dry-type rated for 115°C rise. Windings will be aluminum. Transformers rated 45 kVA or smaller may be wall or floor-mounted. Transformers rated 75 kVA or greater will be floor-mounted. Transformers will be located to keep maximum feeder length from the transformer to the 120-volt panels from exceeding 200′ in order to keep the neutral to ground voltage differential at work stations within acceptable limits. Transformers will be sized to provide a minimum of 3 watts per square foot of building area.

Disconnect switches will be heavy-duty type. Exterior switches will be rain-tight. Disconnect switches for packaged HVAC equipment will be fusible.

HVAC equipment will be controlled by individual motor starters. Each magnetic motor starter will include a hand-off-auto (H-O-A) switch, auxiliary contacts, a control power transformer, and a motor running pilot light. Each starter will have minimum inrush rating of 140% of that for a standard motor to meet the NEC requirement for use with energy efficient motors. Loose starter will be combination-type with a fusible disconnect.

Surge protection devices will be provided at the main service entrance and at selected panels serving computers or sensitive equipment.

Wiring Methods

Service entrance conductors run underground and will be enclosed in PVC 40 raceways. Service raceways that run through building spaces will be concrete encased.

Feeders will consist of conductors installed in raceways. Conduit fill will not exceed 40% based on the dimensions of THW conductors (even though thinner diameter conductors are installed) to allow space for possible future addition of conductors or installation of larger conductors in a given raceway.

Cable trays will be provided for installation of communications cables. Cable trays will be steel wire basket type, generally 2″ deep with a 2″ x4″ mesh pattern and width as required. Trays will generally be trapeze-mounted outside of telecommunications rooms and wall-mounted or anchored to telecommunications racks within telecommunication rooms.

Workstation cubicles will be served by an 8-wire system consisting of four, 20-amp circuits (three hot wires with a shared #10 neutral and a completely separate circuit with its own hot, isolated ground and neutral conductor). A maximum of three workstations will be on a single circuit.

Lighting

General lighting for offices, corridors, and general purpose occupancies will consist of LED volumetric fixtures.

Luminaires in meeting rooms, training rooms, and conference rooms will be LED and shall be dimmable down to 10%.

Large open office areas will be provided with linear suspended LED direct/indirect luminaires.

Downlights for general-purpose use will be LED with a diffusing lens, matte diffuse reflector, and electronic driver.

Equipment room lights will be 4' industrial fixtures with two T8 fluorescent lamps complete with a chain hanging assembly kit and wireguards.

Exit lights will be LED type with an integral battery. Egress lighting will be provided by selected fixtures with integral battery packs.

Exterior lighting will consist of LED fixtures. A combination of building and pole mounted fixtures will be used as required. Illumination levels will meet IES standards.

Where dimming is desired by the owner, luminaires will be LED and will be tested per IESNA applicable standards.

LED luminaires will have a 4000K color temperature and color rendering index of 80 or greater.

New luminaires will be provided in throughout the first floor and the addition to comply with IECC. The existing luminaires in the lower level will be remain and be connected to new lighting circuit.

Lighting Controls

New lighting controls will be installed in all spaces to comply with the IECC, which indicates if 50% of the luminaires are modified/replaced the entire building must be brought up to current code.

Standalone lighting controls will be provided in all spaces except for hallways, stairways, lobbies, and public spaces where automatic controls would endanger occupants.

Large open areas, accessible to the public will be controlled by a distributed lighting control system and will include input from the building management system to provide a scheduled building sweep of interior lighting. A manual on/automatic off schedule will be provided. The distributed control system in public areas will be controlled on a scheduled time-of-day basis during occupied business hours. During non-occupied hours local motion sensors will control lighting in public spaces for after-hours occupants.

Motion sensors will be set for vacancy mode in regularly occupied spaces. Motion sensors in restrooms and storage rooms will be set for occupancy mode. Manual control will be provided in all spaces except where accessible to the public or in secure areas.

Spaces exposed to ample daylight will be provided with photo sensors to dim luminaires within daylight zones.

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept A – City Hall)
December 5, 2016

Voice and Data Communications Infrastructure

The facility will be provided with a complete voice and data and communications structured wiring system, including telecommunications spaces and pathways, equipment racks, telecommunications cables, termination hardware, cable management hardware, and telecommunications jacks.

Telecommunications room elevations and enlarged floor plans will be provided with the design effort. Electrical power, lighting, and cooling requirements will be closely coordinated with the electrical and mechanical design team.

A typical communications outlet will have two Category 6 jacks (one for voice and one for data) with 24 AWG copper unshielded, twisted-pair Category 6 cable installed from each outlet to the nearest telecommunication room. In addition, Category 6 connectivity will be provided to support Wi-Fi and digital signage throughout the building. Each wireless access point (WAP) location will be provided with two Category 6 jacks, and each digital signage location will be provided with one Category 6 jack. The horizontal cable will be distributed in conduit, cable tray, and J-hooks above the ceiling.

The telecommunications infrastructure will be designed in accordance with applicable national standards, such as ANSI TIA/EIA-568-B (premise wiring), ANSI TIA/EIA-569A (spaces and pathways), ANSI TIA/EIA 606A (administration), ANSI TIA/EIA 607 (grounding and bonding), BICSI Telecommunications Distribution Methods Manual, and Owner's standards.

The telecommunications room will be located on the lower level to serve the entire building.

Fire Alarm

The facility will be provided with an intelligent microprocessor-based, addressable fire alarm system complete with addressable control relays. The system will have sensitivity monitoring and adjustment of all smoke detectors.

Addressable manual stations will be provided at each exit from the building and no more than 200' from any part of the building. Smoke detectors will be provided for elevator capture, HVAC system control, atrium exhaust systems, computer rooms, paths of egress, and other areas required by code.

Audible/visual evacuation signals will be visible in the evacuation path. Signals will be located no more than 10' from exit doors and no more than 100' on center in corridors. Signals will also be installed in classrooms, toilets, common-use areas, and rooms larger than 2000 square feet. An additional signal will be located on the exterior of the building.

Audible evacuation signals will be speakers with a pre-recorded voice evacuation message provided by the fire alarm system amplifier. Visual signals will be strobes meeting ADA requirements. Small rooms will be equipped with mini strobes. Signals will be combined audible/visual assemblies, unless otherwise indicated. A voice evacuation system will be provided for each assembly occupancy of 300 or more persons.

HVAC systems will be provided with duct detectors as required by code. Relays will be provided to shut down each (AHU) in response to an alarm generated by its associated detector. Smoke dampers will be wired to dedicated 120-volt circuits. Circuits will be controlled by the fire alarm panel so dampers close upon smoke detection at the serving AHU or in the space served.

Fire sprinkler systems will be monitored for flow and valve position.

A remote annunciator panel will be located at the building entrance. A full-size printer will be provided to record all system operations.

All fire alarm wiring will be installed in raceways.

Security and Surveillance

An electronic access control (EAC) system with card readers, electric locks, and door status monitoring will be installed at designated interior and exterior doors. Door status monitoring will be provided at all exterior doors.

EAC doors will be electrically controlled and capable of being scheduled as locked (no access), secured (authorized card access only) or unlocked (open to public).

The EAC headend equipment will be located within the telecommunication rooms.

IP security cameras will be located to provide facial recognition quality surveillance of the exterior doors. Interior public spaces will be provided with general surveillance coverage. The IP security camera cable and connectivity will be installed to match the data communications infrastructure. 1.3 megapixel IP cameras will be utilized as required to provide the desired quality of video.

A software-based video management system (VMS) will be provided for recording and viewing live/recorded video. The VMS will consist of a network video recorder (NVR) and viewing client PCs with flat panel displays located at security desks. One or more NVRs will be provided for the building. The NVRs will be sized to provide a minimum of 30 days of video retention. Space and power will be provided for the NVRs to be located within a 19″ equipment rack.

NAA-JPJ/mdg

Carroll Library and City Hall MEP Narrative (Concept B – City Hall)

Carroll, Iowa

Alvine No. 2016 5569
December 5, 2016

Alvine Engineering

▶ 400 East Court Avenue, Suite 130 Des Moines, Iowa 50309 ▶ 515.243.0569 ▶ www.alvine.com

Table of Contents

Mechanical

Overview

Mechanical systems are designed to provide adequate comfort levels in the common areas of the building. The fire protection system will be a sprinkler system throughout the building designed for light hazard. The service will enter the mechanical equipment room through the basement and will be provided with a fire department siamese connection and a post indicator valve near the southeast corner of the building.

The plumbing system will utilize domestic water supplied from the main in E 4th Street. Gas-fired water heaters will generate hot water. Hot and cold water will be distributed to the toilet rooms and sinks with a hot water recirculation.

The heating, ventilating, and air conditioning (HVAC) system will consist of packaged rooftop units with DX cooling providing 55° F air, gas heating, and fully modulating VAV reheat. The rooftop unit(s) will provide circulated air, makeup air, and ventilation to the basement, first floor, and second floor common areas. The HVAC system will be zoned to meet occupancy type and exposure resulting in no less than 10 zones.

The temperature control system will be a computer-based automation system connected to the building-wide energy management and computer system.

Design Criteria

The design of the mechanical systems will conform with the following codes:

- 2012 Uniform and Iowa Administrative Plumbing Code
- 2012 International Mechanical Code
- NFPA-13
- NFPA-101
- 2012 International Energy Conservation Code

The design of the mechanical systems will conform with the following standards:

- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- National Fire Protection Association Pamphlets (NFPA)
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept B – City Hall)
December 5, 2016

Design Conditions

- Outside
  - Summer: 95°F, db, 78°F wb
  - Winter: -20°F, db
- Indoor
  - Summer: 75° ±3°, 50% RH
  - Winter: 70° ±3°, 20% RH

Outside Air Requirements

Outside air will be provided by the rooftop unit(s) for exhaust equal to or exceeding 10 cfm per person (ASHRAE STD 62-1999).

Site Utilities

Sanitary Sewer

The underground sanitary sewer 5 LF from the building exterior wall to the sewer in E 4th Street will be cast iron. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Storm Sewer

The underground storm line 5 LF from the building exterior wall to the sewer in E 4th St. will be 8″ PVC. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Domestic Water

A ductile iron with cement mortar lining, Type K copper domestic water line from the main in E 4th Street will be modified to 2-1/2″ if necessary to meet the new building load. A water meter approved by the local utility will be installed outside in a pit. A reduced-pressure backflow preventer will be installed after the meter.

Fire Service

A 6″ copper pipe fire service line from main in E 4th Street will be installed to the building entrance. The pipe will be suitable for domestic water. A post indicator valve with alarmed tamper switch will be installed between the main and the building. A wall indicator valve may be used if acceptable to the AHJ and there is no space for a PIV. A double-check backflow preventer will be installed inside the building. A fire department connection will be installed in a location acceptable to the authority having jurisdiction, on the building exterior wall near the fire service entrance. Copper piping to the fire department connection will be pitched so water will drain to the french drain at the fire department connection.

Gas Service

The gas service will be modified to meet the new load by the local utility. The Contractor will arrange for work in a timely manner and pay all fees. The utility will provide the appropriate service from the main in E 4th Street to the building, install the gas pressure regulator, relief valve, and meter.

Heating, Ventilating, and Air Conditioning Systems

Central Equipment

Heating

The building will be heated by means of gas-fired sequential boilers that heat water, which is distributed to terminal heating devices by means of a steel piping system and centrifugal circulation pumps. Hot water fin tube will be provided at locations with large envelope loads due to windows and/or doorways.

Existing air handling units (AHUs), connected piping, ductwork, and all appurtenances will be removed prior to renovation. The existing library space is the only exception. The existing AHU in the existing library space will remain. Connected ductwork will be capped at renovated walls, and its piping will be modified to connect to new boiler system to provide heating only to the shell space.

Rooftop Units

The building will be heated by means of self-contained, gas-fired heating and electric air conditioning rooftop heating and air conditioning units connected to variable air volume boxes for each zone. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year. The control system consists of electronic controls to alternate the rooftop unit mode between heating and cooling to satisfy space conditions of all spaces. Code-required outside air will be provided.

Building (Space)

The space will be heated and cooled by means of a gas-fired electric air conditioning, self-contained heating and cooling rooftop unit controlled by a space thermostat. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year.

Tech and IT rooms will be provided with cooling only, split systems as required.

Exhaust Systems

Toilet rooms will be exhausted at the rate of 75 cfm per fixture.

Plumbing

Plumbing systems, including sanitary sewers, storm sewers, and domestic water systems will be provided in accordance with applicable plumbing codes.

Sanitary Waste and Vent Systems

Sanitary waste and vent system piping will be service-weight cast iron with gasketed joints underground and service-weight cast iron with no hub joints and fittings above ground. Existing below grade piping will be extended and modified for new plumbing connections. All above grade piping will be replaced with new.

Domestic Water Systems

Domestic water piping will be Type L copper with wrought copper fittings and non-lead solder. Underground piping will be Type K copper with no joints below ground. All domestic water piping will be insulated with fiberglass insulation and vapor barrier jacket.

Water entrance will include a water meter, approved by the local utility company, and a reduced pressure backflow preventer.

Domestic hot water will be stored at 140° and heated by a gas-fired water heater. A mixing valve will regulate the water temperature to 110° which will then be distributed throughout the building. A hot water circulating system, including circulating pump, will be provided to ensure hot water is available at all fixtures. The hot water recirculation pump will be controlled by a building energy management system (EMS).

Plumbing Fixtures

Plumbing fixtures will be commercial-grade and will be designed to meet the Americans with Disabilities Act (ADA) where required.

Water closets will be wall-hung, elongated-bowl, flush-valve type with solid plastic seats. Flush valves will be infrared-sensing type. Water closets will be floor-set, tank-style, elongated-bowl with solid plastic seat.

Urinals will be wall-hung, siphon-jet, low-flow type with flush valve. Flush valves will be infrared-sensing type.

Lavatories will be vitreous china and wall-hung with infrared-sensing faucets and concealed carriers.

Janitor sink will be floor-set terrazzo with stainless-steel caps and wall-hung faucets with wall brace.

Floor drains will be cast iron body with nickel-bronze grate for finished areas and cast iron grate for equipment and maintenance areas.

Storm Sewer System

Existing roof drains, overflow drains and downspouts will be existing to remain with new interior piping provided.

All above grade piping will be replaced with new. Above-ground piping will be standard-weight, cast iron, with no-hub joints and fittings. Below-ground piping will be standard-weight, cast-iron bell and spigot with gasketed joints.

Fire Protection

The fire service will enter the mechanical room in the basement in the south-central portion of the building. A check valve will be provided. A main flow switch will indicate flow to the fire alarm system.

A wet sprinkler system will be provided. Each connection to the riser will be provided with a flow switch and an OS&Y monitored valve.

A standpipe system will be provided with fire department valves. A pressure gauge will be installed at the top of the standpipe to indicate a minimum of 65 psi.

A fire department siamese connection will be provided on the southeast corner of the building.

A fire pump with jockey pump will be provided if required by the flow test.

Sprinkler heads will be provided for all areas.

Energy Management System (Temperature Controls)

The facility will be controlled by an electronic microprocessor-based direct digital control (DDC) system, which will be the primary control mechanism for all HVAC and lighting controls. All schedule and setpoint modifications will be readily accomplished through an on-site terminal or off-site by means of telephone modem and secondary terminal. Each zone or space will have individual control and will be addressable from the central operator station to assist in troubleshooting.

AHUs will be provided with economizer controls that will cool with outside air during mild times of the year, which is controlled by the DDC system. Heating and temperature setpoints will also be controlled by the DDC system. All AHUs will be controlled based on time schedules entered into the DDC system and modified as required for special activities and holidays.

All central cooling and heating equipment and pumps will be controlled and monitored by DDC system.

Actuators for valves and dampers will be electric.

Electrical

Overview

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

The design of the electrical systems will conform with the currently adopted editions of the following codes:

- 2014 National Electrical Code (NEC)
- 2012 International Energy Conservation Code (IECC)
- 2012 International Building Code (IBC)
- 2012 International Fire Code (IFC)
- 10th Edition IESNA Lighting Handbook
- Life Safety NFPA-101
- State and Local Codes

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

Basic Electrical Materials

Raceway systems will generally consist of metal boxes interconnected with electrical metallic tubing (EMT). Poly-vinyl chloride (PVC) 40 will be used for underground installations. Rigid galvanized steel (RGS) conduit or intermediate metal conduit (IMC) will be used for exposed exterior work where subject to damage. The minimum conduit size for power wiring will be 3/4″. The minimum conduit size for communication raceways will be 1″.

Conductors will be copper. Insulation will be THWN or XHHW rated for 90° C; however, design will be based on 75° C ratings. Four-wire feeders, where neutral is considered a current-carrying conductor, will have an additional 80% derating. A maximum of nine current-carrying conductors, using code-designated derating factors, will be installed in any raceway. All conductors, including neutrals and grounding conductors, will be color-coded.

Wiring devices will be specification-grade, 20-amp minimum, and color as selected. Device plates will be smooth-finish plastic to match the color of device. Back-to-back installation of devices will not be allowed.

Electrical Service

The building will be provided with electrical service from MidAmerican Energy. A utility-supplied, pad-mount transformer will be located on grade near the building. Service voltage will be 480Y/277-volt, 3-phase, 4-wire.

Utility company metering transformers will be located in a current transformer cabinet. The meter will be located on a meter pedestal. The electrical service conductors will run underground from the utility company transformer to the building main distribution switchboard.

The main switchboard will have a fusible bolted-pressure main switch with ground fault protection. A microprocessor-based Owner metering package will be provided for kWH, kW, kVAR, ampere, and voltage readouts.

Switchboard bussing will be aluminum braced for the available AIC. A fully rated horizontal bus will be provided for all sections. Branch overcurrent devices will be molded-case circuit breakers with full-feature electronic trip. All components will be fully rated for the available AIC.

The electric service serving the library will be separated from the existing electric service that serves the police station.

Grounding

The electrical power distribution system will be provided with a "single-point ground system." The ground bus at the main service equipment will be connected to the water service, a concrete-encased electrode, a ground rod, and building steel.

All transformers will have the neutral of the derived system bonded to building steel, the nearest metal water pipe, and the transformer case. An insulated ground conductor will run back to the supply equipment in same raceway as the phase conductors.

An insulated equipment grounding conductor will be installed with feeders and branch circuits. Metal raceways, boxes, equipment, receptacles, and light fixtures will be bonded to the equipment grounding system.

Power Distribution

Distribution panelboards or switchboards will be provided to serve mechanical equipment and other concentrated loads. Lighting panelboards will be provided as required to serve other building loads. HVAC equipment, elevators, and Owner equipment will be supplied with 480-volt, 3-phase power. 277-volt circuits will be used for lighting.

Distribution panels and switchboards will be circuit breaker type. Molded-case breakers will be used. Components will be fully rated to provide the required AIC. Bussing will be aluminum.

Lighting panels will be commercial-type with bolt-on circuit breakers. Bussing will be aluminum. Components will be fully rated to provide the required AIC. Each panel will have a hinged door with a master keyed flush tumbler latch. Lighting panel overcurrent protection will be limited to 400- amperes. A minimum of one, 20-amp, 120-volt circuit will be provided for each 150 square feet of building area for workstation power requirements.

Transformers will be provided to convert 480-volt power to 208Y/120 volts for receptacle and equipment needs. Transformers will be standard dry-type rated for 115°C rise. Windings will be aluminum. Transformers rated 45 kVA or smaller may be wall or floor-mounted. Transformers rated 75 kVA or greater will be floor-mounted. Transformers will be located to keep maximum feeder length from the transformer to the 120-volt panels from exceeding 200′ in order to keep the neutral to ground voltage differential at work stations within acceptable limits. Transformers will be sized to provide a minimum of 3 watts per square foot of building area.

Disconnect switches will be heavy-duty type. Exterior switches will be rain-tight. Disconnect switches for packaged HVAC equipment will be fusible.

HVAC equipment will be controlled by individual motor starters. Each magnetic motor starter will include a hand-off-auto (H-O-A) switch, auxiliary contacts, a control power transformer, and a motor running pilot light. Each starter will have minimum inrush rating of 140% of that for a standard motor to meet the NEC requirement for use with energy efficient motors. Loose starter will be combination-type with a fusible disconnect.

Surge protection devices will be provided at the main service entrance and at selected panels serving computers or sensitive equipment.

Wiring Methods

Service entrance conductors run underground and will be enclosed in PVC 40 raceways. Service raceways that run through building spaces will be concrete encased.

Feeders will consist of conductors installed in raceways. Conduit fill will not exceed 40% based on the dimensions of THW conductors (even though thinner diameter conductors are installed) to allow space for possible future addition of conductors or installation of larger conductors in a given raceway.

Cable trays will be provided for installation of communications cables. Cable trays will be steel wire basket type, generally 2″ deep with a 2″ x4″ mesh pattern and width as required. Trays will generally be trapeze-mounted outside of telecommunications rooms and wall-mounted or anchored to telecommunications racks within telecommunication rooms.

Workstation cubicles will be served by an 8-wire system consisting of four, 20-amp circuits (three hot wires with a shared #10 neutral and a completely separate circuit with its own hot, isolated ground and neutral conductor). A maximum of three workstations will be on a single circuit.

Lighting

General lighting for offices, corridors, and general purpose occupancies will consist of LED volumetric fixtures.

Luminaires in meeting rooms, training rooms, and conference rooms will be LED and shall be dimmable down to 10%.

Large open office areas will be provided with linear suspended LED direct/indirect luminaires.

Downlights for general-purpose use will be LED with a diffusing lens, matte diffuse reflector, and electronic driver.

Equipment room lights will be 4′ industrial fixtures with two T8 fluorescent lamps complete with a chain hanging assembly kit and wireguards.

Exit lights will be LED type with an integral battery. Egress lighting will be provided by selected fixtures with integral battery packs.

Exterior lighting will consist of LED fixtures. A combination of building and pole mounted fixtures will be used as required. Illumination levels will meet IES standards.

Where dimming is desired by the owner, luminaires will be LED and will be tested per IESNA applicable standards.

LED luminaires will have a 4000K color temperature and color rendering index of 80 or greater.

Lighting Controls

New lighting controls will be installed in all spaces to comply with the IECC, which indicates if 50% of the luminaires are modified/replaced the entire building must be brought up to current code.

Standalone lighting controls will be provided in all spaces except for hallways, stairways, lobbies, and public spaces where automatic controls would endanger occupants.

Large open areas, accessible to the public will be controlled by a distributed lighting control system and will include input from the building management system to provide a scheduled building sweep of interior lighting. A manual on/automatic off schedule will be provided. The distributed control system in public areas will be controlled on a scheduled time-of-day basis during occupied business hours. During non-occupied hours local motion sensors will control lighting in public spaces for after-hours occupants.

Motion sensors will be set for vacancy mode in regularly occupied spaces. Motion sensors in restrooms and storage rooms will be set for occupancy mode. Manual control will be provided in all spaces except where accessible to the public or in secure areas.

Spaces exposed to ample daylight will be provided with photo sensors to dim luminaires within daylight zones.

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept B – City Hall)
December 5, 2016

Voice and Data Communications Infrastructure

The facility will be provided with a complete voice and data and communications structured wiring system, including telecommunications spaces and pathways, equipment racks, telecommunications cables, termination hardware, cable management hardware, and telecommunications jacks.

Telecommunications room elevations and enlarged floor plans will be provided with the design effort. Electrical power, lighting, and cooling requirements will be closely coordinated with the electrical and mechanical design team.

A typical communication outlet will have two Category 6 jacks (one for voice and one for data), with 24 AWG copper unshielded, twisted-pair Category 6 cable installed from each outlet to the nearest telecommunications room. In addition, Category 6 connectivity will be provided to support Wi-Fi and digital signage throughout the building. Each wireless access point (WAP) location will be provided with two Category 6 jacks, and each digital signage location will be provided with one Category 6 jack. The horizontal cable will be distributed in conduit, cable tray, and J-hooks above the ceiling.

The telecommunications infrastructure will be designed in accordance with applicable national standards, such as ANSI TIA/EIA-568-B (premise wiring), ANSI TIA/EIA-569A (spaces and pathways), ANSI TIA/EIA 606A (administration), ANSI TIA/EIA 607 (grounding and bonding), BICSI Telecommunications Distribution Methods Manual, and Owner's standards.

Fire Alarm

The facility will be provided with an intelligent microprocessor-based, addressable fire alarm system complete with addressable control relays. The system will have sensitivity monitoring and adjustment of all smoke detectors.

Addressable manual stations will be provided at each exit from the building and no more than 200′ from any part of the building. Smoke detectors will be provided for elevator capture, HVAC system control, atrium exhaust systems, computer rooms, paths of egress, and other areas required by code.

Audible/visual evacuation signals will be visible in the evacuation path. Signals will be located no more than 10′ from exit doors and no more than 100′ on center in corridors. Signals will also be installed in classrooms, toilets, common-use areas, and rooms larger than 2000 square feet. An additional signal will be located on the exterior of the building.

Audible evacuation signals will be speakers with a pre-recorded voice evacuation message provided by the fire alarm system amplifier. Visual signals will be strobes meeting ADA requirements. Small rooms will be equipped with mini strobes. Signals will be combined audible/visual assemblies, unless otherwise indicated. A voice evacuation system will be provided for each assembly occupancy of 300 or more persons.

HVAC systems will be provided with duct detectors as required by code. Relays will be provided to shut down each (AHU) in response to an alarm generated by its associated detector. Smoke dampers will be wired to dedicated 120-volt circuits. Circuits will be controlled by the fire alarm panel so dampers close upon smoke detection at the serving AHU or in the space served.

Fire sprinkler systems will be monitored for flow and valve position.

A remote annunciator panel will be located at the building entrance. A full-size printer will be provided to record all system operations.

All fire alarm wiring will be installed in raceways.

Security and Surveillance

An electronic access control (EAC) system with card readers, electric locks, and door status monitoring will be installed at designated interior and exterior doors. Door status monitoring will be provided at all exterior doors.

EAC doors will be electrically controlled and capable of being scheduled as locked (no access), secured (authorized card access only) or unlocked (open to public).

The EAC headend equipment will be located within the telecommunication rooms.

IP security cameras will be located to provide facial recognition quality surveillance of the exterior doors. Interior public spaces will be provided with general surveillance coverage. The IP security camera cable and connectivity will be installed to match the data communications infrastructure. 1.3 megapixel IP cameras will be utilized as required to provide the desired quality of video.

A software-based video management system (VMS) will be provided for recording and viewing live/recorded video. The VMS will consist of a network video recorder (NVR) and viewing client PCs with flat panel displays located at security desks. One or more NVRs will be provided for the building. The NVRs will be sized to provide a minimum of 30 days of video retention. Space and power will be provided for the NVRs to be located within a 19″ equipment rack.

Carroll Library and City Hall MEP Narrative (Concept B – Library)

Carroll, Iowa

Alvine No. 2016 5569
December 5, 2016

Alvine Engineering

▶ 400 East Court Avenue, Suite 130 Des Moines, Iowa 50309 ▶ 515.243.0569 ▶ www.alvine.com

Table of Contents

Mechanical

Overview

Mechanical systems are designed to provide adequate comfort levels in the common areas of the building. The fire protection system will be a sprinkler system throughout the building designed for light hazard. The service will enter the mechanical equipment room through the basement and will be provided with a fire department siamese connection and a post indicator valve near the northwest corner of the building.

The plumbing system will utilize domestic water supplied from the main in N Adams Street. Gas-fired water heaters will generate hot water. Hot and cold water will be distributed to the toilet rooms and sinks with a hot water recirculation.

The heating, ventilating, and air conditioning (HVAC) system will consist of packaged rooftop units with DX cooling providing 55° F air, gas heating, and fully modulating VAV reheat. The rooftop unit(s) will provide circulated air, makeup air, and ventilation to the basement and first floor common areas. The HVAC system will be zoned to meet occupancy type and exposure resulting in no less than 13 zones.

The temperature control system will be a computer-based automation system connected to the building-wide energy management and computer system.

Design Criteria

The design of the mechanical systems will conform with the following codes:

- 2012 Uniform and Iowa Administrative Plumbing Code
- 2012 International Mechanical Code
- NFPA-13
- NFPA-101
- 2012 International Energy Conservation Code

The design of the mechanical systems will conform with the following standards:

- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- National Fire Protection Association Pamphlets (NFPA)
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept B – Library)
December 5, 2016

Design Conditions

- Outside
  - Summer: 95°F, db, 78°F wb
  - Winter: -20°F, db
- Indoor
  - Summer: 75° ±3°, 50% RH
  - Winter: 70° ±3°, 20% RH

Outside Air Requirements

Outside air will be provided by the rooftop unit(s) for exhaust equal to or exceeding 10 cfm per person (ASHRAE STD 62-1999).

Site Utilities

Sanitary Sewer

The underground sanitary sewer 5 LF from the building exterior wall to the sewer in *N Adams St* will be cast iron. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Storm Sewer

The underground storm line 5 LF from the building exterior wall to the sewer in N Adams St. will be 8″ PVC. A double-grade cleanout will be provided within the cast iron portion, the first 5 LF. Grade cleanouts will be installed every 100 LF for lines 8″ and smaller. Manholes will be installed every 300 LF for lines 10″ and larger.

Domestic Water

A ductile iron with cement mortar lining, Type K copper domestic water line from the main in N Adams Street will be modified to 2-1/2″ if necessary to meet the new building load. A water meter approved by the local utility will be installed outside in a pit. A reduced-pressure backflow preventer will be installed after the meter.

Fire Service

A 6″ copper pipe fire service line from main in N Adams Street will be installed to the building entrance. The pipe will be suitable for domestic water. A post indicator valve with alarmed tamper switch will be installed between the main and the building. A wall indicator valve may be used if acceptable to the AHJ and there is no space for a PIV. A double-check backflow preventer will be installed inside the building. A fire department connection will be installed in a location acceptable to the authority having jurisdiction, on the building

exterior wall near the fire service entrance. Copper piping to the fire department connection will be pitched so water will drain to the french drain at the fire department connection.

Gas Service

The gas service will be modified to meet the new load by the local utility. The Contractor will arrange for work in a timely manner and pay all fees. The utility will provide the appropriate service from the main in N Adams Street to the building, install the gas pressure regulator, relief valve, and meter.

Heating Ventilating and Air Conditioning Systems

Central Equipment

Heating

The building will be heated by means of gas-fired sequential boilers that heat water, which is distributed to terminal heating devices by means of a steel piping system and centrifugal circulation pumps. Hot water fin tubes will be provided at locations with large envelope loads due to windows and/or doorways.

Existing air handling units (AHUs), connected piping, ductwork, and all appurtenances will be removed prior to renovation.

Rooftop Units

The building will be heated by means of self-contained, gas-fired heating and electric air conditioning rooftop heating and air conditioning units connected to variable air volume boxes for each zone. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year. The control system consists of electronic controls to alternate the rooftop unit mode between heating and cooling to satisfy space conditions of all spaces. Code-required outside air will be provided.

Building (Space)

The space will be heated and cooled by means of a gas-fired electric air conditioning, self-contained heating and cooling rooftop unit controlled by a space thermostat. The unit will be provided with an economizer cycle to cool with outside air during mild times of the year.

Tech and IT rooms will be provided with cooling-only split systems as required.

Exhaust Systems

Toilet rooms will be exhausted at the rate of 75 cfm per fixture.

Plumbing

Plumbing systems, including sanitary sewers, storm sewers, and domestic water systems will be provided in accordance with applicable plumbing codes.

Sanitary Waste and Vent Systems

Sanitary waste and vent system piping will be service-weight cast iron with gasketed joints underground and service-weight cast iron with no hub joints and fittings above ground. Existing below grade piping will be extended and modified for new plumbing connections. All above grade piping will be replaced with new.

Domestic Water Systems

Domestic water piping will be Type L copper with wrought copper fittings and non-lead solder. Underground piping will be Type K copper with no joints below ground. All domestic water piping will be insulated with fiberglass insulation and vapor barrier jacket.

Water entrance will include a water meter, approved by the local utility company, and a reduced pressure backflow preventer.

Domestic hot water will be stored at 140° F and heated by a gas-fired water heater. A mixing valve will regulate the water temperature to 110° F which will then be distributed throughout the building. A hot water circulating system, including circulating pump, will be provided to ensure hot water is available at all fixtures. The hot water recirculation pump will be controlled by a building energy management system (EMS).

Plumbing Fixtures

Plumbing fixtures will be commercial-grade and will be designed to meet the Americans with Disabilities Act (ADA) where required.

Water closets will be wall-hung, elongated-bowl, flush-valve type with solid plastic seats. Flush valves will be infrared-sensing type. Water closets will be floor-set, tank-style, elongated-bowl with solid plastic seat.

Urinals will be wall-hung, siphon-jet, low-flow type with flush valve. Flush valves will be infrared-sensing type.

Lavatories will be vitreous china and wall-hung with infrared-sensing faucets and concealed carriers.

Janitor sink will be floor-set terrazzo with stainless-steel caps and wall-hung faucets with wall brace.

Floor drains will be cast iron body with nickel-bronze grate for finished areas and cast iron grate for equipment and maintenance areas.

Storm Sewer System

Existing roof drains, overflow drains and downspouts will be existing to remain with new interior piping provided. New roof drains and downspout system will be provided in accordance with applicable plumbing codes. Overflow drainage system will spill-to-grade. Roof drains will have cast iron body with aluminum or cast iron dome.

All above grade piping will be replaced with new. Above-ground piping will be standard-weight, cast iron, with no-hub joints and fittings. Below-ground piping will be standard weight cast iron bell and spigot with gasketed joints.

Fire Protection

The fire service will enter the mechanical room in the basement in the south-central portion of the building. A check valve will be provided. A main flow switch will indicate flow to the fire alarm system.

A wet sprinkler system will be provided. Each connection to the riser will be provided with a flow switch and an OS&Y monitored valve.

A standpipe system will be provided with fire department valves. A pressure gauge will be installed at the top of the standpipe to indicate a minimum of 65 psi.

A fire department siamese connection will be provided on the southeast corner of the building.

A fire pump with jockey pump will be provided if required by the flow test.

Sprinkler heads will be provided for all areas.

Energy Management System (Temperature Controls)

The facility will be controlled by an electronic, microprocessor-based, direct digital control (DDC) system, which will be the primary control mechanism for all HVAC and lighting controls. All schedule and setpoint modifications will be readily accomplished through an on-site terminal or off-site by means of telephone modem and secondary terminal. Each zone or space will have individual control and will be addressable from the central operator station to assist in troubleshooting.

AHUs will be provided with economizer controls that will cool with outside air during mild times of the year, which is controlled by the DDC system. Heating and temperature setpoints will also be controlled by the DDC system. All AHUs will be controlled based on time schedules entered into the DDC system and modified as required for special activities and holidays.

All central cooling and heating equipment and pumps will be controlled and monitored by DDC system.

Actuators for valves and dampers will be electric.

Electrical

Overview

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

The design of the electrical systems will conform with the currently adopted editions of the following codes:

- 2014 National Electrical Code (NEC)
- 2012 International Energy Conservation Code (IECC)
- 2012 International Building Code (IBC)
- 2012 International Fire Code (IFC)
- 10th Edition IESNA Lighting Handbook
- Life Safety NFPA-101
- State and Local Codes

The electrical systems will be designed to provide adequate power, lighting, and communication systems for the occupancy and use of the facility.

Basic Electrical Materials

Raceway systems will generally consist of metal boxes interconnected with electrical metallic tubing (EMT). Poly-vinyl chloride (PVC) 40 will be used for underground installations. Rigid galvanized steel (RGS) conduit or intermediate metal conduit (IMC) will be used for exposed exterior work where subject to damage. The minimum conduit size for power wiring will be 3/4″. The minimum conduit size for communication raceways will be 1″.

Conductors will be copper. Insulation will be THWN or XHHW rated for 90° C; however, design will be based on 75° C ratings. Four-wire feeders, where neutral is considered a current-carrying conductor, will have an additional 80% derating. A maximum of nine current-carrying conductors, using code-designated derating factors, will be installed in any raceway. All conductors, including neutrals and grounding conductors, will be color-coded.

Wiring devices will be specification-grade, 20-amp minimum, and color as selected. Device plates will be smooth-finish plastic to match the color of device. Back-to-back installation of devices will not be allowed.

Electrical Service

The building will be provided with electrical service from MidAmerican Energy. A utility-supplied, pad-mount transformer will be located on grade near the building. Service voltage will be 480Y/277-volt, 3-phase, 4-wire.

Utility company metering transformers will be located in a current transformer cabinet. The meter will be located on the exterior of the building. The electrical service conductors will run underground from the utility company transformer to the building main distribution panel.

The main distribution panel will have a molded case main circuit breaker. A microprocessor-based Owner metering package will be provided for kWH, kW, kVAR, ampere, and voltage readouts.

The main distribution panel and branch circuit panelboard will be located on the lower level.

Grounding

The electrical power distribution system will be provided with a "single-point ground system." The ground bus at the main service equipment will be connected to the water service, a concrete-encased electrode, a ground rod, and building steel.

All transformers will have the neutral of the derived system bonded to building steel, the nearest metal water pipe, and the transformer case. An insulated ground conductor will run back to the supply equipment in same raceway as the phase conductors.

An insulated equipment grounding conductor will be installed with feeders and branch circuits. Metal raceways, boxes, equipment, receptacles, and light fixtures will be bonded to the equipment grounding system.

Power Distribution

Distribution panelboards or switchboards will be provided to serve mechanical equipment and other concentrated loads. Lighting panelboards will be provided as required to serve other building loads. HVAC equipment, elevators, and Owner equipment will be supplied with 480-volt, 3-phase power. 277-volt circuits will be used for lighting.

Distribution panels and switchboards will be circuit breaker type. Molded-case breakers will be used. Components will be fully rated to provide the required AIC. Bussing will be aluminum.

Lighting panels will be commercial-type with bolt-on circuit breakers. Bussing will be aluminum. Components will be fully rated to provide the required AIC. Each panel will have a hinged door with a master keyed flush tumbler latch. Lighting panel overcurrent protection will be limited to 400- amperes. A minimum of one, 20-amp, 120-volt circuit will be provided for each 150 square feet of building area for workstation power requirements.

Transformers will be provided to convert 480-volt power to 208Y/120 volts for receptacle and equipment needs. Transformers will be standard dry-type rated for 115°C rise. Windings will be aluminum. Transformers rated 45 kVA or smaller may be wall or floor-mounted. Transformers rated 75 kVA or greater will be floor-mounted. Transformers will be located to keep maximum feeder length from the transformer to the 120-volt panels from exceeding 200′ in order to keep the neutral to ground voltage differential at work stations within acceptable limits. Transformers will be sized to provide a minimum of 3 watts per square foot of building area.

Disconnect switches will be heavy-duty type. Exterior switches will be rain-tight. Disconnect switches for packaged HVAC equipment will be fusible.

HVAC equipment will be controlled by individual motor starters. Each magnetic motor starter will include a hand-off-auto (H-O-A) switch, auxiliary contacts, a control power transformer, and a motor running pilot light. Each starter will have minimum inrush rating of 140% of that for a standard motor to meet the NEC requirement for use with energy efficient motors. Loose starter will be combination-type with a fusible disconnect.

Surge protection devices will be provided at the main service entrance and at selected panels serving computers or sensitive equipment.

Wiring Methods

Service entrance conductors run underground and will be enclosed in PVC 40 raceways. Service raceways that run through building spaces will be concrete encased.

Feeders will consist of conductors installed in raceways. Conduit fill will not exceed 40% based on the dimensions of THW conductors (even though thinner diameter conductors are installed) to allow space for possible future addition of conductors or installation of larger conductors in a given raceway.

Cable trays will be provided for installation of communications cables. Cable trays will be steel wire basket type, generally 2″ deep with a 2″ x4″ mesh pattern and width as required. Trays will generally be trapeze-mounted outside of telecommunications rooms and wall-mounted or anchored to telecommunications racks within telecommunication rooms.

Workstation cubicles will be served by an 8-wire system consisting of four, 20-amp circuits (three hot wires with a shared #10 neutral and a completely separate circuit with its own hot, isolated ground and neutral conductor). A maximum of three workstations will be on a single circuit.

Lighting

General lighting for offices, corridors, and general purpose occupancies will consist of LED volumetric fixtures.

Luminaires in meeting rooms, training rooms, and conference rooms will be LED and shall be dimmable down to 10%.

Large open office areas will be provided with linear suspended LED direct/indirect luminaires.

Downlights for general-purpose use will be LED with a diffusing lens, matte diffuse reflector, and electronic driver.

Equipment room lights will be 4' industrial fixtures with two T8 fluorescent lamps complete with a chain hanging assembly kit and wireguards.

Exit lights will be LED type with an integral battery. Egress lighting will be provided by selected fixtures with integral battery packs.

Exterior lighting will consist of LED fixtures. A combination of building and pole mounted fixtures will be used as required. Illumination levels will meet IES standards.

Where dimming is desired by the owner, luminaires will be LED and will be tested per IESNA applicable standards.

LED luminaires will have a 4000K color temperature and color rendering index of 80 or greater.

New luminaires will be provided in throughout the first floor and the addition to comply with IECC. The existing luminaires in the lower level will be remain and be connected to new lighting circuit.

Lighting Controls

New lighting controls will be installed in all spaces to comply with the IECC, which indicates if 50% of the luminaires are modified/replaced the entire building must be brought up to current code.

Standalone lighting controls will be provided in all spaces except for hallways, stairways, lobbies, and public spaces where automatic controls would endanger occupants.

Large open areas, accessible to the public will be controlled by a distributed lighting control system and will include input from the building management system to provide a scheduled building sweep of interior lighting. A manual on/automatic off schedule will be provided. The distributed control system in public areas will be controlled on a scheduled time-of-day basis during occupied business hours. During non-occupied hours local motion sensors will control lighting in public spaces for after-hours occupants.

Motion sensors will be set for vacancy mode in regularly occupied spaces. Motion sensors in restrooms and storage rooms will be set for occupancy mode. Manual control will be provided in all spaces except where accessible to the public or in secure areas.

Spaces exposed to ample daylight will be provided with photo sensors to dim luminaires within daylight zones.

Alvine Engineering
Carroll Library and City Hall MEP Narrative (Concept B – Library)
December 5, 2016

Voice and Data Communications Infrastructure

The facility will be provided with a complete voice and data and communications structured wiring system, including telecommunications spaces and pathways, equipment racks, telecommunications cables, termination hardware, cable management hardware, and telecommunications jacks.

Telecommunications room elevations and enlarged floor plans will be provided with the design effort. Electrical power, lighting, and cooling requirements will be closely coordinated with the electrical and mechanical design team.

A typical communications outlet will have two Category 6 jacks (one for voice and one for data) with 24 AWG copper unshielded, twisted-pair Category 6 cable installed from each outlet to the nearest telecommunications room. In addition, Category 6 connectivity will be provided to support Wi-Fi and digital signage throughout the building. Each wireless access point (WAP) location will be provided with two Category 6 jacks, and each digital signage location will be provided with one Category 6 jack. The horizontal cable will be distributed in conduit, cable tray, and J-hooks above the ceiling.

The telecommunications infrastructure will be designed in accordance with applicable national standards, such as ANSI TIA/EIA-568-B (premise wiring), ANSI TIA/EIA-569A (spaces and pathways), ANSI TIA/EIA 606A (administration), ANSI TIA/EIA 607 (grounding and bonding), BICSI Telecommunications Distribution Methods Manual, and Owner's standards.

The telecommunications room will be located on the lower level to serve the entire building.

Fire Alarm

The facility will be provided with an intelligent microprocessor-based, addressable fire alarm system complete with addressable control relays. The system will have sensitivity monitoring and adjustment of all smoke detectors.

Addressable manual stations will be provided at each exit from the building and no more than 200' from any part of the building. Smoke detectors will be provided for elevator capture, HVAC system control, atrium exhaust systems, computer rooms, paths of egress, and other areas required by code.

Audible/visual evacuation signals will be visible in the evacuation path. Signals will be located no more than 10' from exit doors and no more than 100' on center in corridors. Signals will also be installed in classrooms, toilets, common-use areas, and rooms larger than 2000 square feet. An additional signal will be located on the exterior of the building.

Audible evacuation signals will be speakers with a pre-recorded voice evacuation message provided by the fire alarm system amplifier. Visual signals will be strobes meeting ADA requirements. Small rooms will be equipped with mini strobes. Signals will be combined audible/visual assemblies, unless otherwise indicated. A voice evacuation system will be provided for each assembly occupancy of 300 or more persons.

HVAC systems will be provided with duct detectors as required by code. Relays will be provided to shut down each (AHU) in response to an alarm generated by its associated detector. Smoke dampers will be wired to dedicated 120-volt circuits. Circuits will be controlled by the fire alarm panel so dampers close upon smoke detection at the serving AHU or in the space served.

Fire sprinkler systems will be monitored for flow and valve position.

A remote annunciator panel will be located at the building entrance. A full-size printer will be provided to record all system operations.

All fire alarm wiring will be installed in raceways.

Security and Surveillance

An electronic access control (EAC) system with card readers, electric locks, and door status monitoring will be installed at designated interior and exterior doors. Door status monitoring will be provided at all exterior doors.

EAC doors will be electrically controlled and capable of being scheduled as locked (no access), secured (authorized card access only) or unlocked (open to public).

The EAC headend equipment will be located within the telecommunication rooms.

IP security cameras will be located to provide facial recognition quality surveillance of the exterior doors. Interior public spaces will be provided with general surveillance coverage. The IP security camera cable and connectivity will be installed to match the data communications infrastructure. 1.3 megapixel IP cameras will be utilized as required to provide the desired quality of video.

A software-based video management system (VMS) will be provided for recording and viewing live/recorded video. The VMS will consist of a network video recorder (NVR) and viewing client PCs with flat panel displays located at security desks. One or more NVRs will be provided for the building. The NVRs will be sized to provide a minimum of 30 days of video retention. Space and power will be provided for the NVRs to be located within a 19″ equipment rack.

NAA-JPJ/mdg

Appendix 4

Drawings Provided for Cost Estimating

Drawings Provided for Cost Estimating

Following are the drawings and narratives provided for cost estimating. These include a landscaping narrative, demolition drawings and concept designs.

Carroll Public Library – Landscape Narrative

Concept A

(118 E 5th St. Site)

Modify existing building sign (remove City Hall information)
New entry point with special pavement type material – 700sq. ft.
(4) Landscape Forms, FGP Bench, Backed, 70" length, IPE wood.
Remove existing walk trees and shrubs
Install new walk from parking to main entry point.
Install (45) shade tolerant evergreen ground cover with (45) spring bulbs at new punched wall openings along new walk.
Install (24) shade tolerant 2-4' evergreen shrub mass at solid wall locations along new walk.
Install new mulch in planted areas – 550 sq.ft @ 3" depth

(627 N Adams St. Site)

Remove (2) large shrubs – one at the bottom of the stair and the other on the NE corner.
Trim/prune and mulch existing landscape
Patch and repair existing stairs, walk and ramp as needed.
Sod disturbed lawn areas.

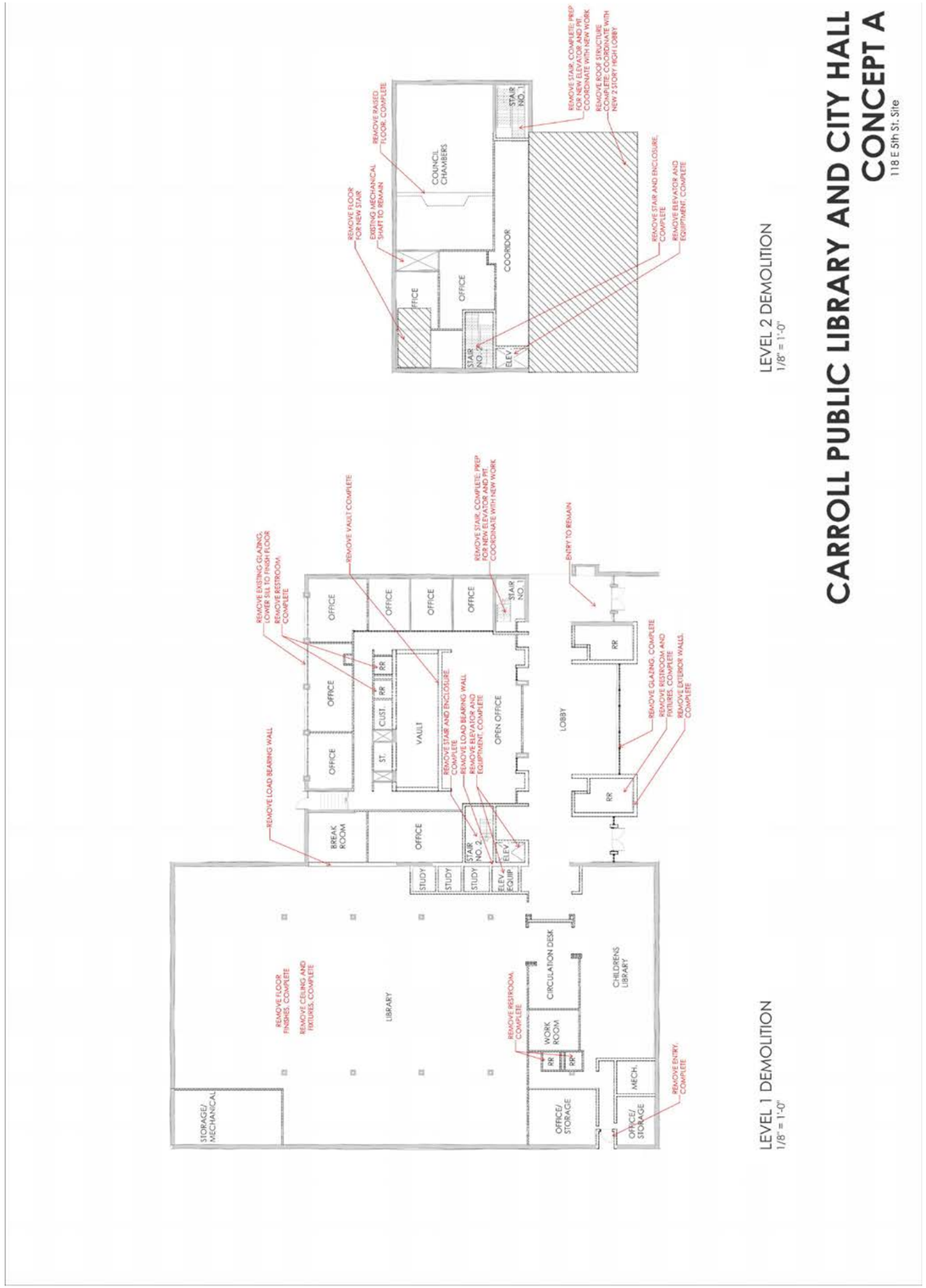
Option B

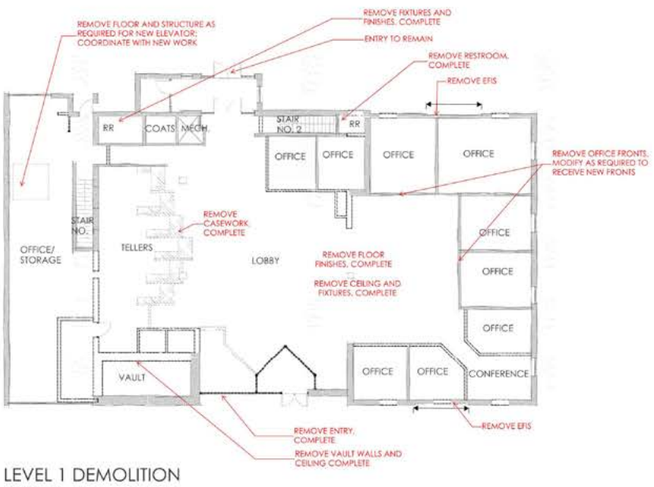
(118 E 5th St. Site)

Modify existing building sign (Remove Library information)
Remove (2) trees at north planting
Install (45) shade tolerant evergreen ground cover with (45) spring bulbs at new punched wall openings along existing walk.
Install (24) shade tolerant 2-4' evergreen shrub mass at solid wall locations along existing walk.
Sod disturbed lawn areas.

(627 N Adams St. Site)

New special pavement material at pronounced entry – 100 sq.ft.
New ramp sloping North
Remove large shrubs and landscaping North of building signage
Modify existing building signage
New landscaping on east façade – 800 perennials
Remove large shrubs and landscaping on North
New landscaping on North - Install shade tolerant evergreen ground cover with (800) spring bulbs at new punched openings along existing walk. Install (24) shade tolerant 2-4' evergreen shrub mass at solid wall locations along existing walk.





LEVEL 1 DEMOLITION
1/8" = 1'-0"

LOWER LEVEL DEMOLITION
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL
CONCEPT A

627 N Adams St. Site

LEVEL 1 NEW (LIBRARY)
1/8" = 1'-0"

FRONT ENTRY/LOBBY: 2 story structurally glazed system, ceiling open to structure above with an architectural acoustic deck (Epic Metals as basis), large pendant feature light(s), large format floor tile and tile wall base (price wood flooring and wall base as an alternate)

MONUMENTAL STAIR: Wood stairs, wood seating area, glass guard rail stainless or wood handrails

STAIR NO. 2: Wood stair, glass guard rail, stainless or wood handrails

PUBLIC RESTROOMS: Tile flooring, tile walls, stainless steel toilet partitions, acoustic ceiling tile/gypsum

COMMUNITY ROOM: Glass front with (2) wood doors, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

MAKER SPACE: Glass front with (1) wood door, polish existing concrete (alternate price for luxury vinyl tile), vinyl wall base, acoustic ceiling tile/gypsum

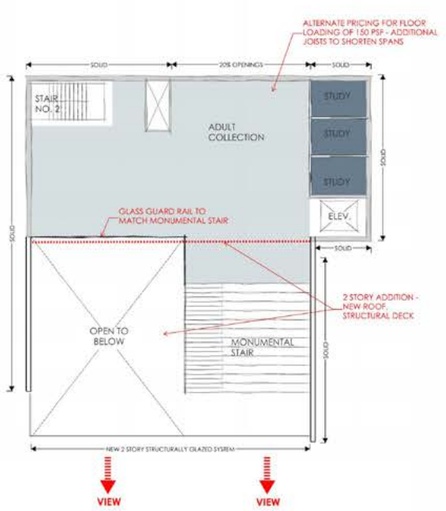
TYPICAL OFFICE, CONFERENCE ROOM, MEETING/STUDY ROOMS: Glass front with wood door, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

CIRCULATION AREAS (Children, Adult, Young Adult etc...) : Carpet, rubber base, acoustic ceiling tile/gypsum ceilings, open flexible area (no walls)

STAFF AREA: (2) single user restrooms with tile floor, tile wet wall and tile base. (2) offices with 3'-0" glass sidelight and wood door, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum. Open areas, work rooms will have carpet flooring, vinyl wall base, acoustic ceiling tile. BOH service areas polished concrete floor, vinyl wall base. HM doors and frames.

EXTERIOR SKIN: Punched opening rhythm at existing wall locations, lintel required.

ROOF: Alternate pricing for new EPDM type roof



LEVEL 2 NEW (LIBRARY)
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL
CONCEPT A

118 E 5th St. Site

FRONT ENTRY/LOBBY: large format floor tile and tile wall base (price wood flooring and wall base as an alternate)

COUNCIL CHAMBERS: glass wall and (2) wood doors, elevated platform for council table, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum, acoustic wall panels (2) walls.

PUBLIC RESTROOMS: Tile flooring, tile walls, stainless steel toilet partitions, acoustic ceiling tile/gypsum

STAFF RESTROOMS: Tile flooring, tile walls, stainless steel toilet partitions, acoustic ceiling tile/gypsum

TYPICAL OFFICE, CONFERENCE ROOM: 3'-0" glass sidelight and wood door, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

BREAK ROOM: 3'-0" glass sidelight and wood door, vinyl flooring, vinyl wall base, acoustic ceiling tile/gypsum

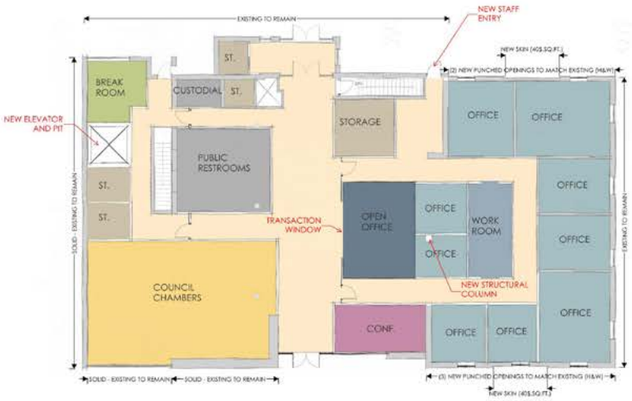
STORAGE: vinyl flooring, vinyl wall base, HM doors and frames, acoustic ceiling tile.

WORK ROOM: carpet flooring, vinyl wall base, acoustic ceiling tile

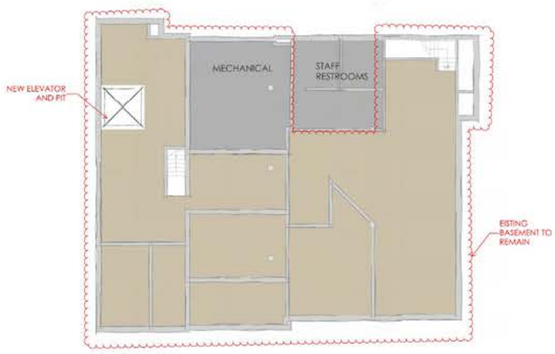
TRANSACTION WINDOW: two workstations with full height glass and pass through

EXTERIOR SKIN: Alternate pricing to replace all existing exterior glazing window systems with new storefront system.

ROOF: Alternate pricing for new EPDM type roof



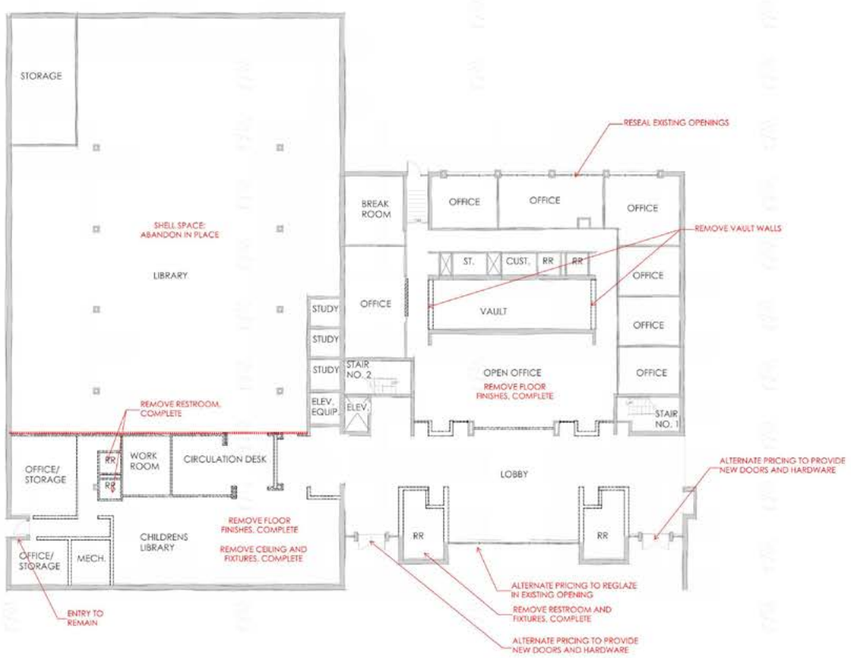
LEVEL 1 NEW (CITY HALL)
1/8" = 1'-0"



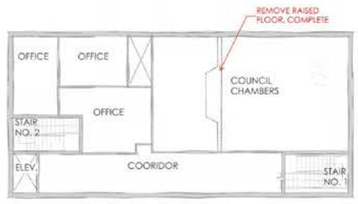
LOWER LEVEL NEW (CITY HALL)
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL CONCEPT A

627 N Adams St. Site



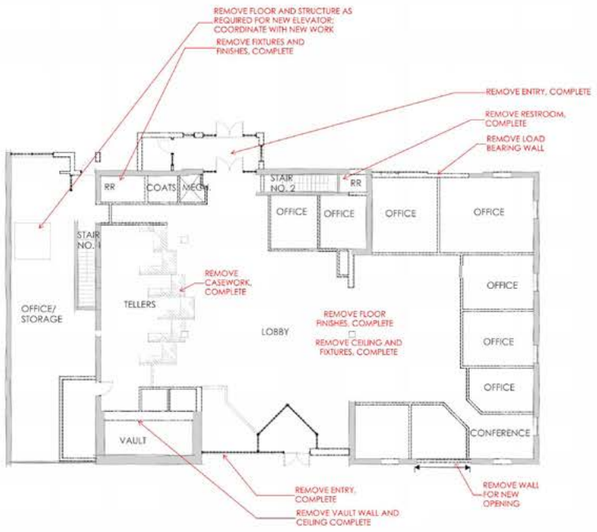
LEVEL 1 DEMOLITION



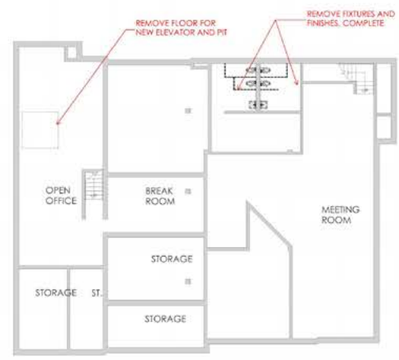
LEVEL 2 DEMOLITION

CARROLL PUBLIC LIBRARY AND CITY HALL CONCEPT B

118 E 5th St. Site



LEVEL 1 DEMOLITION
1/8" = 1'-0"



LOWER LEVEL DEMOLITION
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL
CONCEPT B
627 N Adams St. Site

LEVEL 1 NEW (CITY HALL)
1/8" = 1'-0"

FRONT ENTRY/LOBBY: alternate to re-glaze north entry, replace entry doors and new hardware

COUNCIL CHAMBERS: glass wall and (2) wood doors, elevated platform for council table, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum, acoustic wall panels (2) walls.

PUBLIC RESTROOMS: Tile flooring, tile walls, stainless steel toilet partitions, acoustic ceiling tile/gypsum

STAFF RESTROOMS: Existing to remain the same

NEW TYPICAL OFFICE, CONFERENCE ROOM: glass sidelight and wood door to match existing system (see images), carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

EXISTING TYPICAL OFFICE, CONFERENCE ROOM: new carpet flooring, vinyl wall base, acoustic ceiling tile in existing grid, paint

BREAK ROOM: new vinyl flooring, vinyl wall base, acoustic ceiling tile in existing grid, paint, replace casework and add additional counter space

NEW STORAGE: vinyl flooring, vinyl wall base, HM doors and frames, acoustic ceiling tile.

WORK ROOM: carpet flooring, vinyl wall base, acoustic ceiling tile

TRANSACTION WINDOW: two workstations with full height glass and pass through

EXTERIOR SKIN: Alternate pricing to replace all existing exterior glazing window systems with new storefront system.

ROOF: Alternate pricing for new EPDM type roof

STAIR NO. 1 & NO.2: Add handrail to meet current code, paint stair and walls

LEVEL 2 NEW (CITY HALL)
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL
CONCEPT B
118 E 5th St. Site

LEVEL 1 NEW (LIBRARY)
1/8" = 1'-0"

FRONT ENTRY/LOBBY: all glass storefront entry system, architectural acoustic wood plan ceiling, large format floor tile and tile wall base (price wood flooring and wall base as an alternate)

STAIRS - Existing to remain

PUBLIC RESTROOMS: Tile flooring, tile walls, stainless steel toilet partitions, acoustic ceiling tile/gypsum

COMMUNITY ROOM: Glass front with (2) wood doors, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

MAKER SPACE: Glass front with (1) wood door, polish existing concrete (alternate price for luxury vinyl tile), vinyl wall base, acoustic ceiling tile/gypsum

TYPICAL OFFICE, CONFERENCE ROOM, MEETING/STUDY ROOMS: Glass front with wood door, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum

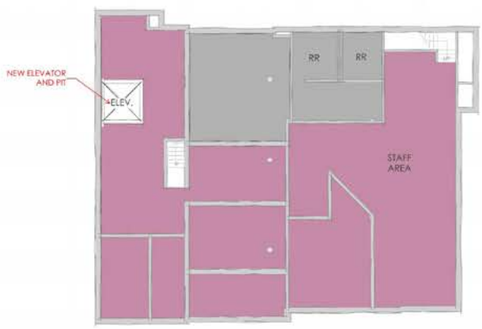
CIRCULATION AREAS (Children, Adult, Young Adult etc...) : Carpet, rubber base, acoustic ceiling tile/gypsum ceilings, open flexible area (no walls)

STAFF AREA: (2) single user restrooms with tile floor, tile wet wall and tile base located in existing basement restroom space, (2) offices with 3'-0" glass sidelight and wood door, carpet flooring, vinyl wall base, acoustic ceiling tile/gypsum. Open areas, work rooms will have carpet flooring, vinyl wall base, acoustic ceiling tile.

BASEMENT AREA: Utilize existing areas for new functions - paint and small allowance for small renovation/upgrade

EXTERIOR SKIN: see plan

ROOF: Alternate pricing for new EPDM type roof to tie new and old together.



LOWER LEVEL NEW (LIBRARY)
1/8" = 1'-0"

CARROLL PUBLIC LIBRARY AND CITY HALL
CONCEPT B

627 N Adams St. Site

Appendix 5

Detailed Estimate

Detailed Estimate

Following are the detailed cost estimates.

SUMMARY OF COST ESTIMATE prepared by STECKER-HARMSEN, INC. PAGE 1

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT **OPN ARCHITECTS** STATUS: **PRELIMINARY**

DESCRIPTION OF WORK	TOTAL	%TOTAL
LIBRARY/CITY HALL RENOVATION	3,051,488	54.0%
LIBRARY/CITY HALL ADDITIONS	837,098	14.8%
BANK BUILDING TO HOUSE CITY HALL - RENOVATIONS	1,762,089	31.2%
BANK BUILDING/CITY HALL ADDITIONS		
COST ESTIMATE TOTAL	**$5,650,675**	

ALTERNATES

1) REPLACE EXTG ROOFING W/NEW EPDM ROOFING @ BOTH BLDGS - ADD	$300,853
2) PROVIDE EXTERIOR BOOK DROP (NON-DRIVE THRU) - ADD	$2,000

PRINTED: 12/8/2016 2:04 PM

COST ESTIMATE prepared by STECKER-HARMSEN, INC. PAGE 2

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	**LIBRARY/CITY HALL RENOVATION**				
2					
3	**BUILDING DEMOLITION**				
4	LEVEL 1				
5	REMOVE EXTG CABINETRY, SPECIALTIES, FURNISHINGS	15419	SF	0.55	8500
6					
7	REMOVE EXTG INTERIOR DOORS & FRAMES	38	EA	227.39	8641
8					
9	REMOVE EXTG EXTERIOR DOORS & FRAMES - DOUBLE	1	EA	363.83	364
10	REMOVE EXTG NE ENTRY COMPLETE	1	LS	910.00	910
11					
12	REMOVE EXTG ALUMINUM CURTAINWALL	350	SF	5.51	1931
13					
14	REMOVE EXTG CEILINGS	15419	SF	1.10	17000
15	REMOVE EXTG FLOORING	15419	SF	0.83	12750
16					
17	REMOVE EXTG INTERIOR PARTITIONS				
18	- MASONRY	4478	SF	7.66	34309
19	- STEEL STUD/GYPBOARD	5821	SF	4.74	27595
20					
21	REMOVE EXTG LOAD BEARING MASONRY WALLS	717	SF	11.30	8102
22	- NEW LINTELS	60	LF	77.18	4610
23	- PATCH MASONRY	108	LF	55.13	5939
24					
25	REMOVE EXTG EXTERIOR MASONRY WALLS	895	SF	11.30	10113
26	- ARCHITECTURAL PRECAST PANELS	384	SF	5.84	2241
27					
28	REMOVE EXTG GLAZING UNITS - SOUTH SIDE	188	SF	5.51	1038
29	- LOWER SILL TO FINISH FLOOR	283	SF	13.12	3707
30					
31					
32	LEVEL 2				
33	REMOVE EXTG CABINETRY, SPECIALTIES, FURNISHINGS	2663	SF	0.55	1468
34	REMOVE EXTG INTERIOR DOORS & FRAMES	9	EA	227.39	2047
35					
36	REMOVE EXTG CEILINGS	2663	SF	1.10	2936
37	REMOVE EXTG FLOORING	2663	SF	0.83	2202
38					
39	REMOVE EXTG INTERIOR PARTITIONS				
40	- MASONRY	700	SF	7.66	5364
41	- STEEL STUDS/GYPBOARD	1121	SF	4.74	5316
42					
43	REMOVE EXTG ROOFING	1819	SF	3.31	6017
44	REMOVE EXTG ROOF STRUCTURE	1819	SF	5.84	10631
45					

PRINTED: 12/8/2016 2:04 PM

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
46	REMOVE EXTG EXTERIOR WALL - MASONRY/PRECAST	749	SF	11.30	8461
47	- NEW COLUMNS/LINTELS TO SUPPORT ROOF STRUCTURE	62	LF	153.19	9558
48					
49					
50	REMOVE EXTG STAIRS	40	RSRS	41.90	1676
51	REMOVE EXTG ELEVATOR & EQUIPMENT	1	LS	5513.00	5513
52	- REMOVE PIT & FILL-IN	80	SF	58.43	4675
53					
54	REMOVE FLOOR STRUCTURE @ 2ND LEVEL FOR NEW STAIR	139	SF	29.22	4060
55					
56	REMOVE RAISED FLOOR COMPLETE	373	SF	10.20	3808
57					
58					
59					
60	MISC. DEMOLITION	18083	SF	0.55	9968
61					
62	MECHANICAL DEMOLITION - BY MECHANICAL				
63	ELECTRICAL DEMOLITION - BY ELECTRICAL				
64					
65	REMOVE & DISPOSE OF DEBRIS	1	LS	27563.00	27563
66					
67	HAZARDOUS MATERIAL ABATEMENT BY OTHERS				
68					
69					
70					
71					
72					
73	**RENOVATION OF EXTG BUILDING**				
74	STRUCTURAL MODIFICATIONS				
75	NEW ELEVATOR				
76	- FILL-IN SECOND FLOOR STRUCTURE	50	SF	61.52	3046
77	- REMOVE SLAB-ON-GRADE FOR PIT	117	SF	11.69	1370
78	- ELEVATOR PIT - COMPLETE	1	LS	11025.00	11025
79	- UNDERPINNING - ALLOWANCE	1	LS	2205.00	2205
80	- FRONT SHAFT WALL	268	SF	22.05	5911
81					
82					
83	STAIR NO. 2	24	RSRS	321.93	7726
84	- FRAME NEW OPENING @ SECOND FLOOR	55	LF	64.61	3541
85					
86	EXTG STAIR NO. 1 & EXTG ELEVATOR				
87	- FILL-IN SECOND FLOOR SLABS	172	SF	32.81	5632
88					
89					
90					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
91	EXTERIOR WALLS				
92	NEW WINDOWS IN EXTG EXTERIOR WALLS				
93	- CUT NEW OPENINGS	962	SF	13.12	12618
94	- NEW LINTELS	277	LF	40.02	11071
95	- NEW WINDOWS	962	SF	66.15	63618
96	- NEW WINDOWS @ TEEN COLLECTION	483	SF	60.64	29261
97					
98	INSULATE EXTG EXTERIOR WALLS				
99	- REMOVE GYPBOARD	7531	SF	0.83	6228
100	- SPRAY INSULATION BETWEEN FURRING STRIPS	7531	SF	1.10	8303
101	- NEW GYPBOARD	7531	SF	3.31	24910
102					
103	FURNISH NEW FINISH MATERIAL @ PERIMETER OF BLDG	549	LF	55.13	30247
104					
105	INTERIOR FINISH-OUT				
106	LEVEL 1				
107	- MAKER SPACE	439	SF	44.10	19376
108	- STORAGE/BUFFET	252	SF	33.08	8324
109	- COMMUNITY/MULTI-PURPOSE ROOM	995	SF	44.10	43865
110	- CHILDREN'S COLLECTION	3361	SF	38.59	129686
111	- CHILDREN PROGRAM	498	SF	49.61	24692
112	- STAFF AREA W/RESTROOMS	2877	SF	55.13	158603
113	- CHILDREN'S CIRCULATION & TECHNOLOGY DESK	461	SF	33.08	15238
114	- CIRCULATION DESK	369	SF	110.25	40652
115	- STAIR NO. 2	153	SF	33.08	5069
116	- LOBBY	1301	SF	55.13	71707
117	- ADULT COLLECTION	1196	SF	33.08	39560
118	- STUDY ROOMS	547	SF	55.13	30147
119	- TEEN COLLECTION	958	SF	33.08	31686
120	- ELEVATOR	1	LS	82688.00	82688
121	- RESTROOMS	663	SF	77.18	51149
122	- TECHNOLOGY	415	SF	49.61	20600
123					
124	LEVEL 2				
125	- STAIR NO. 2	153	SF	33.08	5069
126	- ADULT COLLECTION	2296	SF	38.59	88581
127	- STUDY ROOMS	323	SF	55.13	17805
128					
129					
130	MECHANICAL WORK PER ALVINE & ASSOCIATES				
131	PLUMBING & HVAC DEMOLITION	17910	SF	0.56	9942
132	FIRE PROTECTION	17910	SF	2.61	46728
133	PLUMBING	17910	SF	5.73	102599
134	HVAC	17910	SF	23.44	419756
135					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
136	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
137	DISTRIBUTION FEEDERS	1	LS	30077.00	30077
138	DISTRIBUTION EQUIPMENT	1	LS	40383.00	40383
139	DEMOLITION	17910	SF	1.24	22135
140	MISC. POWER	17910	SF	4.56	81748
141	LIGHTING	17910	SF	4.92	88066
142	FIRE ALARM	17910	SF	1.61	28750
143	TELECOM/DATA	17910	SF	2.58	46156
144	ACCESS CONTROLS	1	LS	31283.00	31283
145					
146					
147					
148	ALL FURNISHINGS BY OWNER				
149	ALL EQUIPMENT BY OWNER				
150					
151					
152					
153					
154					
155	**LIBRARY/CITY HALL ADDITIONS**				
156					
157	EXTERIOR WORK				
158	REMOVE EXTG PAVING	1339	SF	2.21	2953
159					
160	PATCH PAVING	1	LS	2756.00	2756
161	LANDSCAPING	1	LS	2756.00	2756
162					
163	STRUCTURE				
164	NEW FRONT ENTRY/LOBBY				
165	- FOUNDATIONS	89	LF	82.41	7342
166	- 2 STORY STRUCTURAL FRAMING	2772	SF	28.38	78660
167	- ROOF DECKING - ACOUSTIC	2772	SF	6.36	17625
168	- SLAB-ON-GRADE	956	SF	4.66	4457
169	- SECOND LEVEL FLOOR SLAB	268	SF	35.50	9521
170					
171					
172	ENCLOSURE				
173	EXTERIOR WALLS				
174	- STEEL STUDS W/METAL PANELS	1339	SF	44.10	59068
175	- ALUMINUM/GLASS	2031	SF	77.18	156705
176	- ADD FOR ENTRY DOORS	2	EA	2756.25	5513
177	ROOFING	2772	SF	8.82	24448
178	ROOF EDGE	214	LF	42.07	9022
179					
180					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
181	INTERIOR FINISH-OUT				
182	MONUMENTAL STAIRS/SEATS				
183	- WOOD FRAMING	684	SF	47.30	32357
184	- FINISHED WOOD	684	SF	20.89	14293
185	- ADD FOR STAIRS - 8'	24	RSRS	299.88	7197
186	- FULL-HT RAILINGS	30	LF	287.26	8618
187	- STAIRS/SEATS - FINISH	684	SF	27.56	18856
188					
189	GUARDRAILING @ SECOND FLOOR - GLASS/SS/SWD	46	LF	254.13	11672
190					
191	LOWER LEVEL				
192	- LOBBY	951	SF	55.13	52425
193	- ENTRY VESTIBULE	158	SF	71.66	11357
194					
195					
196	MECHANICAL WORK PER ALVINE & ASSOCIATES				
197	FIRE PROTECTION - ADDITION	1200	SF	2.61	3131
198	PLUMBING - ADDITION	1200	SF	5.73	6874
199	HVAC - ADDITION	1200	SF	23.44	28124
200					
201	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
202	MISC. POWER - ADDITION	1200	SF	4.56	5477
203	LIGHTING - ADDITION	1200	SF	4.92	5901
204	FIRE ALARM - ADDITION	1200	SF	1.61	1926
205	TELECOM/DATA - ADDITION	1200	SF	2.58	3093
206					
207					
208	EXTERIOR WORK				
209	MODIFY EXTG SIGNAGE	1	LS	2756.00	2756
210					
211	SPECIAL PAVEMENT @ ENTRY	700	SF	16.54	11576
212	BENCHES - 70"	4	EA	3858.75	15435
213					
214	REMOVE EXTG TREES & SHRUBS	1	LS	1654.00	1654
215					
216	NEW SIDEWALK	1200	SF	5.51	6615
217					
218	SHADE TOLERANT EVERGREEN GROUND COVER	45	EA	33.08	1488
219	- SPRING BULBS	45	EA	22.05	992
220	SHADE TOLERANT EVERGREEN GROUND SHRUBS	24	EA	82.69	1985
221					
222	NEW MULCH - 3"	550	SF	2.21	1213
223					
224					
225					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
226	**BANK BUILDING TO HOUSE CITY HALL - RENOVATIONS**				
227					
228	**BUILDING DEMOLITION**				
229	LOWER LEVEL				
230	EXISTING RESTROOMS				
231	- REMOVE EXTG CEILINGS	228	SF	1.05	240
232	- REMOVE EXTG FIXTURES & ACCESSORIES	228	SF	2.10	479
233	- REMOVE EXTG FLOORING	228	SF	1.05	240
234	- REMOVE EXTG FINISHES	228	SF	2.10	479
235					
236	CUT & REMOVE EXTG SLAB FOR ELEVATOR PIT	81	SF	5.57	451
237	- EXCAVATE FOR PIT	12	CY	105.00	1259
238	- PATCH BACK SLAB	16	SF	9.54	155
239					
240					
241	LEVEL 1				
242	EXTERIOR				
243	- REMOVE ENTRY WINDOW WALL COMPLETE	241	SF	5.25	1267
244	- REMOVE EFIS	353	SF	2.26	797
245	- CUT & REMOVE EXT. WALLS FOR NEW WINDOWS/DOOR	150	SF	12.50	1880
246	- REMOVE EXTG STOOP	100	SF	21.00	2100
247					
248	REMOVE EXTG VAULT CEILING & WALLS				
249	- LID	207	SF	27.83	5762
250	- WALLS	300	SF	19.48	5853
251					
252	REMOVE EXTG INTERIOR VESTIBULE COMPLETE	266	SF	5.25	1395
253	REMOVE EXTG CASEWORK COMPLETE	296	SF	5.20	1537
254					
255	REMOVE EXTG INTERIOR PARTITIONS	3865	SF	4.52	17453
256	REMOVE EXTG CEILINGS	7541	SF	1.05	7918
257	REMOVE EXTG FLOORING	7541	SF	0.79	5939
258					
259	REMOVE EXTG RESTROOM FIXTURES & FINISHES COMPLETE	1	LS	1575.00	1575
260					
261	REMOVE EXTG FLOOR STRUCTURE FOR ELEVATOR SHAFT	64	SF	27.83	1781
262					
263					
264	MISC. DEMOLITION	7541	SF	0.53	3959
265					
266					
267	MECHANICAL DEMOLITION BY MECHANICAL				
268					
269	ELECTRICAL DEMOLITION BY ELECTRICAL				
270					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
271	REMOVE & DISPOSE OF DEBRIS	1	LS	10500.00	10500
272					
273	HAZARDOUS MATERIAL ABATEMENT BY OTHERS				
274					
275					
276					
277	**RENOVATION OF EXTG BUILDING**				
278	STRUCTURAL MODIFICATIONS				
279	ADD NEW COLUMN @ LEVEL 1	1	LS	819.00	819
280					
281	ELEVATOR - BASE SLAB	80	SF	8.57	685
282	- UNDERPINNING - ALLOWANCE	12	LF	105.00	1260
283	- PIT WALLS	38	SF	28.41	1072
284	- SHAFT WALLS	1056	SF	21.00	22180
285	- REFRAME LEVEL 1 FLOOR STRUCTURE	38	LF	61.53	2321
286					
287	LINTELS @ NEW EXTERIOR OPENINGS	24	LF	48.98	1171
288					
289	EXTERIOR WALLS				
290	- NEW WINDOWS - PUNCHED OPENINGS	122	SF	52.50	6430
291	- NEW STAFF ENTRY DOOR	1	EA	5250.00	5250
292	- NEW ENTRANCE CURTAINWALL	241	SF	63.00	15206
293	- ADD FOR DOORS	2	EA	2100.00	4200
294	NEW SKIN - ALLOWANCE	353	SF	42.00	14832
295					
296					
297	INTERIOR FINISH-OUT				
298	LOWER LEVEL				
299	- STAFF RESTROOMS	228	SF	52.50	11987
300	- FINISH AROUND ELEVATOR SHAFT	1	LS	5250.00	5250
301					
302	LEVEL 1				
303	- COUNCIL CHAMBERS	1118	SF	63.00	70430
304	- STORAGE	425	SF	31.50	13391
305	- BREAK ROOM	170	SF	52.50	8921
306	- ELEVATOR - COMPLETE	1	LS	78750.00	78750
307	- PUBLIC RESTROOMS	393	SF	73.50	28874
308	- CUSTODIAL	61	SF	31.50	1928
309	- OFFICES	1883	SF	42.00	79096
310	- WORK ROOM	203	SF	52.50	10648
311	- OPEN OFFICE	339	SF	36.75	12460
312	- CONFERENCE	214	SF	42.00	8992
313	- LOBBY	1171	SF	63.00	73804
314	- CORRIDORS	1006	SF	52.50	52820
315					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
316	MECHANICAL WORK PER ALVINE & ASSOCIATES				
317	PLUMBING & HVAC DEMOLITION	9877	SF	0.57	5630
318	FIRE PROTECTION	13377	SF	2.62	35074
319	PLUMBING - 1ST FLOOR	9877	SF	5.70	56299
320	HVAC - 1ST FLOOR	9877	SF	23.48	231951
321	PLUMBING - BASEMENT	3500	SF	5.24	18354
322	HVAC - BASEMENT	3500	SF	18.81	65835
323					
324					
325	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
326	DISTRIBUTION FEEDERS	1	LS	23655.00	23655
327	DISTRIBUTION EQUIPMENT	1	LS	32633.00	32633
328	DEMOLITION	9877	SF	1.25	12386
329	MISC. POWER - 1ST FLOOR	9877	SF	4.56	45039
330	MISC. POWER - BASEMENT	3500	SF	3.42	11970
331	LIGHTING - 1ST FLOOR	9877	SF	4.85	47854
332	LIGHTING - BASEMENT	3500	SF	3.71	12968
333	FIRE ALARM	13377	SF	1.60	21350
334	TELECOM/DATA - 1ST FLOOR	9877	SF	2.57	25335
335	TELECOM/DATA - BASEMENT	3500	SF	2.00	6983
336	ACCESS CONTROLS	1	LS	31350.00	31350
337	VIDEO BROADCASTING (A/V)	1	LS	39900.00	39900
338					
339					
340					
341	FURNISHINGS BY OWNER				
342	EQUIPMENT BY OWNER				
343					
344					
345					
346	EXTERIOR WORK				
347	REMOVE LARGE SHRUBS	2	EA	105.00	210
348					
349	TRIM/PRUNE & MULCH EXTG LANDSCAPING	1	LS	2625.00	2625
350					
351	PATCH & REPAIR EXTG STAIRS, WALKS & RAMP AS REQ'D	1	LS	2625.00	2625
352					
353	SOD DISTURBED LAWN AREAS	1	LS	2625.00	2625
354					
355					
356					
357					
358					
359					
360					

PROJECT: **CONCEPT A - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
361	**BANK BUILDING/CITY HALL ADDITIONS**				
362					
363	NOTHING REQUIRED				
364					
365					
366					
367					
368					
369					
370					
371					
372	**COST ESTIMATE SUBTOTAL**				4292130
373					
374	**ADD FOR GENERAL REQUIREMENTS**	6.00%			257,528
375					
376					4,549,658
377					
378	**CONTRACTOR'S MARKUP**	8.00%			363,973
379					
380					4,913,630
381					
382	**DESIGN CONTINGENCY**	15.00%			737,045
383					
384	**COST ESTIMATE TOTAL**				**$5,650,675**
385					

SUMMARY OF COST ESTIMATE prepared by STECKER-HARMSEN, INC. PAGE 1

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT **OPN ARCHITECTS** STATUS: **PRELIMINARY**

DESCRIPTION OF WORK	TOTAL	%TOTAL
LIBRARY/CITY HALL RENOVATION	1,729,427	30.7%
LIBRARY/CITY HALL ADDITIONS		
BANK BUILDING TO LIBRARY - RENOVATIONS	1,541,050	27.3%
BANK BUILDING/LIBRARY ADDITION	2,365,497	42.0%
COST ESTIMATE TOTAL	**$5,635,974**	

ALTERNATES

1) REPLACE EXTG ROOFING W/NEW EPDM ROOFING @ BOTH BLDGS - ADD	$315,566
2) PROVIDE EXTERIOR BOOK DROP (NON-DRIVE THRU) - ADD	$2,000

PRINTED: 12/8/2016 2:05 PM

COST ESTIMATE prepared by STECKER-HARMSEN, INC. PAGE 2

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1	**LIBRARY/CITY HALL RENOVATION**				
2					
3	**BUILDING DEMOLITION**				
4	LEVEL 1				
5	REMOVE EXTG CABINETRY, SPECIALTIES, FURNISHINGS	8688	SF	0.55	4790
6					
7	REMOVE EXTG INTERIOR DOORS & FRAMES	18	EA	227.39	4093
8					
9	REMOVE EXTG CEILINGS	8688	SF	1.10	9579
10	REMOVE EXTG FLOORING	8688	SF	0.83	7184
11					
12	REMOVE EXTG INTERIOR PARTITIONS				
13	- MASONRY	2588	SF	7.66	19830
14	- STEEL STUD/GYPBOARD	2441	SF	4.74	11574
15					
16					
17	LEVEL 2				
18	REMOVE RAISED FLOOR COMPLETE	388	SF	9.10	3531
19					
20	NO OTHER WORK INCLUDED				
21					
22	MISC. DEMOLITION	1	LS	3859.00	3859
23					
24	MECHANICAL DEMOLITION BY MECHANICAL				
25	ELECTRICAL DEMOLITION BY ELECTRICAL				
26					
27	REMOVE & DISPOSE OF DEBRIS	1	LS	11025.00	11025
28					
29	HAZARDOUS MATERIAL ABATEMENT BY OTHERS				
30					
31					
32					
33	**RENOVATION OF EXTG BUILDING**				
34	STRUCTURAL MODIFICATIONS				
35	NOTHING REQUIRED				
36					
37					
38	EXTERIOR WALLS				
39	RESEAL EXTG GLAZING UNITS - SOUTH SIDE	189	SF	11.03	2084
40					
41	INSULATE EXTG EXTERIOR WALLS				
42	- REMOVE GYPBOARD	8673	SF	0.83	7171
43	- SPRAY INSULATION BETWEEN FURRING STRIPS	8673	SF	1.10	9562
44	- NEW GYPBOARD	8673	SF	3.31	28686
45					

PRINTED: 12/8/2016 2:05 PM

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
46	FURNISH NEW FINISH MATERIAL @ PERIMETER OF BLDG	693	LF	55.13	38208
47					
48					
49	INTERIOR FINISH-OUT				
50	LEVEL 1				
51	- PUBLIC RESTROOMS	590	SF	77.18	45553
52	- COUNCIL CHAMBERS	1585	SF	66.15	104862
53	- CONFERENCE	348	SF	55.13	19195
54	- BREAK ROOM	218	SF	55.13	11993
55	- OFFICES	1667	SF	44.10	73506
56	- STORAGE	224	SF	33.08	7419
57	- WORKROOM	270	SF	55.13	14911
58	- RESTROOMS	52	SF	77.18	3985
59	- OPEN OFFICE	330	SF	55.13	18186
60	- LOBBY	1894	SF	66.15	125283
61	- CORRIDORS	991	SF	55.13	54645
62	- STAIRS - PAINTING	459	SF	11.03	5055
63	- ELEVATOR - NO WORK				
64	- SHEEL SPACE - NO WORK				
65					
66	LEVEL 2				
67	- STAIRS - NO WORK				
68	- CORRIDOR - NO WORK				
69	- STORAGE - NO WORK				
70					
71					
72					
73	MECHANICAL WORK PER ALVINE & ASSOCIATES				
74	PLUMBING & HVAC DEMOLITION	11167	SF	0.56	6199
75	FIRE PROTECTION	11267	SF	2.61	29396
76	PLUMBING	11267	SF	5.73	64544
77	HVAC	11267	SF	23.44	264064
78					
79					
80	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
81	DISTRIBUTION FEEDERS	1	LS	23822.00	23822
82	DISTRIBUTION EQUIPMENT	1	LS	32987.00	32987
83	DEMOLITION	8467	SF	1.24	10464
84	MISC. POWER	11267	SF	4.56	51427
85	LIGHTING	11267	SF	4.92	55402
86	FIRE ALARM	11267	SF	1.61	18086
87	TELECOM/DATA	11267	SF	2.58	29036
88	ACCESS CONTROLS	1	LS	31283.00	31283
89	VIDEO BROADCASTING (A/V)	1	LS	40517.00	40517
90					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
91	ALL FURNISHINGS BY OWNER				
92	ALL EQUIPMENT BY OWNER				
93					
94					
95	EXTERIOR WORK				
96	MODIFY EXTG BUILDING SIGN (REMOVE LIBRARY)	1	LS	2756.00	2756
97					
98	REMOVE TREES	2	EA	330.75	662
99					
100	SHADE TOLERANT EVERGREEN GROUND COVER	45	EA	33.08	1488
101	SPRING BULBS	45	EA	22.05	992
102					
103	SHADE TOLERANT EVERGREEN SHRUBS	24	EA	82.69	1985
104					
105	SOD DISTURBED LAWN AREAS	1	LS	2756.00	2756
106					
107					
108					
109					
110					
111	**LIBRARY/CITY HALL ADDITIONS**				
112					
113	NOTHING REQUIRED				
114					
115					
116					
117					
118					
119					
120					
121	**BANK BUILDING TO LIBRARY - RENOVATIONS**				
122					
123	**BUILDING DEMOLITION**				
124	LOWER LEVEL				
125	EXISTING RESTROOMS				
126	- REMOVE EXTG CEILINGS	228	SF	1.00	228
127	- REMOVE EXTG FIXTURES & ACCESSORIES	228	SF	2.00	457
128	- REMOVE EXTG FLOORING	228	SF	1.00	228
129	- REMOVE EXTG FINISHES	228	SF	2.00	457
130					
131	CUT & REMOVE EXTG SLAB FOR ELEVATOR PIT	81	SF	5.47	443
132	- EXCAVATE FOR PIT	12	CY	50.00	600
133	- PATCH BACK SLAB	16	SF	9.44	153
134					
135					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
136	LEVEL 1				
137	EXTERIOR				
138	- REMOVE ENTRY COMPLETE	563	SF	5.00	2815
139	- CUT & REMOVE EXTERIOR BEARING WALLS	1641	SF	10.66	17497
140	- REMOVE EXTG STOOPS	75	SF	5.00	375
141					
142	REMOVE EXTG VAULT				
143	- LID	207	SF	27.33	5658
144	- WALLS	204	SF	19.13	3901
145					
146	REMOVE EXTG INTERIOR VESTIBULE COMPLETE	266	SF	5.00	1328
147	REMOVE EXTG CASEWORK COMPLETE	296	SF	5.20	1537
148					
149	REMOVE EXTG INTERIOR PARTITIONS	5819	SF	4.47	25981
150	REMOVE EXTG CEILINGS	7541	SF	1.00	7541
151	REMOVE EXTG FLOORING	7541	SF	0.75	5656
152					
153	REMOVE EXTG RESTROOM FIXTURES & FINISHES COMPLETE	1	LS	1500.00	1500
154					
155	REMOVE EXTG FLOOR STRUCTURE FOR ELEVATOR SHAFT	64	SF	27.33	1749
156					
157					
158	MISC. DEMOLITION	7541	SF	0.50	3771
159					
160	MECHANICAL DEMOLITION BY MECHANICAL				
161					
162	ELECTRICAL DEMOLITION BY ELECTRICAL				
163					
164	REMOVE & DISPOSE OF DEBRIS	1	LS	10000.00	10000
165					
166	HAZARDOUS MATERIAL ABATEMENT BY OTHERS				
167					
168					
169					
170	STRUCTURAL MODIFICATIONS				
171	ADD NEW LOAD-BEARING WALL @ LEVEL 1	233	SF	35.00	8159
172					
173	ELEVATOR - BASE SLAB	80	SF	8.57	685
174	- UNDERPINNING ALLOWANCE	12	LF	200.00	2400
175	- PIT WALLS	38	SF	28.31	1068
176	- SHAFT WALLS	1056	SF	20.00	21124
177	- REFRAME LEVEL 1 FLOOR STRUCTURE	38	LF	82.27	3103
178					
179	BEAMS/COLUMNS @ EXTERIOR WALL @ NEW ADDITION	43	LF	77.88	3319
180					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
181	LINTELS @ NEW EXTERIOR OPENINGS	13	LF	48.48	609
182					
183					
184	ENCLOSURE IMPROVEMENTS				
185	INFILL EXTG OPENINGS	128	SF	30.00	3840
186	- NEW SKIN - ALLOWANCE	889	SF	40.00	35552
187	NEW ENTRY - GLASS STOREFRONT	454	SF	60.00	27260
188	- ADD FOR DOORS	2	EA	2500.00	5000
189	REGLAZE EXTG OPENING	275	SF	35.00	9639
190	NEW OPENING - ALUMINUM/GLASS	135	SF	50.00	6753
191	NEW SOLID SKIN - ALLOWANCE	760	SF	40.00	30417
192	ADD 20% CLERESTORY WINDOWS				
193	- DEMOLITION	186	SF	7.93	1478
194	- NEW WINDOWS	186	SF	55.00	10248
195					
196					
197					
198	INTERIOR FINISH-OUT				
199	LOWER LEVEL				
200	- STAFF RESTROOMS	228	SF	50.00	11417
201	- FINISH AROUND ELEVATOR SHAFT	1	LS	5000.00	5000
202					
203					
204	LEVEL 1				
205	- COMMUNITY/MULTI-PURPOSE ROOM	1118	SF	50.00	55901
206	- TECHNOLOGY	828	SF	60.00	49684
207	- MAKER SPACE	608	SF	40.00	24315
208	- STAFF AREA W/RESTROOMS	1255	SF	50.00	62743
209	- ELEVATOR - COMPLETE	1	LS	75000.00	75000
210	- STORAGE	220	SF	30.00	6596
211	- RESTROOMS	554	SF	70.00	38814
212	- CIRCULATION DESK	370	SF	100.00	36959
213	- STUDY ROOMS	600	SF	50.00	30000
214	- LOBBY	1764	SF	60.00	105818
215					
216					
217					
218					
219	MECHANICAL WORK PER ALVINE & ASSOCIATES				
220	FIRE PROTECTION - ADDITION	8800	SF	2.62	23074
221	PLUMBING - ADDITION	8800	SF	5.70	50160
222	HVAC - ADDITION	8800	SF	23.48	206659
223					
224					
225					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
226	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
227	MISC. POWER - ADDITION	8800	SF	4.56	40128
228	LIGHTING - ADDITION	8800	SF	4.85	42636
229	FIRE ALARM - ADDITION	8800	SF	1.60	14045
230	TELECOM/DATA - ADDITION	8800	SF	2.57	22572
231					
232					
233					
234					
235					
236	FURNISHINGS BY OWNER				
237	EQUIPMENT BY OWNER				
238					
239					
240	EXTERIOR WORK				
241	SPECIAL PAVEMENT @ ENTRY	100	SF	15.00	1500
242					
243	NEW RAMP SLOPING NORTH	500	SF	10.00	5000
244					
245					
246					
247					
248					
249					
250					
251	**BANK BUILDING/LIBRARY ADDITION**				
252					
253	EXTERIOR WORK				
254	REMOVE EXTG PAVING	9119	SF	1.50	13679
255					
256	PATCH PAVING	1	LS	1500.00	1500
257	LANDSCAPING	1	LS	2500.00	2500
258					
259	STRUCTURE				
260	NEW FOOTINGS W/EXCAVATION & BACKFILL	274	LF	48.56	13303
261	- FOUNDATION WALLS	1096	SF	23.85	26132
262	- FOOTINGS @ EXTG BLDG	117	LF	26.31	3088
263	- INTERIOR COLUMN FOOTING PADS	128	SF	20.99	2687
264					
265	STRUCTURAL STEEL SYSTEM	9119	SF	22.63	206368
266	- METAL ROOF DECKING	9119	SF	4.24	38636
267	SLAB-ON-GRADE	9119	SF	4.43	40435
268					
269					
270					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
271	ENCLOSURE				
272	STORE FRONT ALUMINUM SYSTEM	935	SF	60.00	56081
273	MASONRY CAVITY WALL SYSTEM	2871	SF	50.00	143569
274	ADD FOR PUNCHED OPENINGS - ALUMNIUM/GLASS	708	SF	55.00	38964
275					
276	SINGLE MEMBRANE ROOFING W/INSULATION	9119	SF	7.00	63835
277	- COPING W/BLOCKING	393	LF	38.57	15171
278					
279	EXTERIOR DOORS - SINGLE	2	EA	5000.00	10000
280					
281					
282	INTERIOR FINISH-OUT				
283	CHILDREN'S COLLECTION	3756	SF	40.00	150237
284	CHILDREN'S PROGRAM	441	SF	45.00	19857
285	STUDY ROOMS	836	SF	50.00	41824
286	ADULT COLLECTION	3030	SF	40.00	121205
287	TEEN COLLECTION	569	SF	40.00	22748
288	TECHNOLOGY	175	SF	60.00	10486
289	CIRCULATION DESK	174	SF	100.00	17361
290					
291					
292	MECHANICAL WORK PER ALVINE & ASSOCIATES				
293	PLUMBING & HVAC DEMOLITION	9870	SF	0.57	5626
294	FIRE PROTECTION	13370	SF	2.62	35056
295	PLUMBING - FIRST FLOOR	9870	SF	5.70	56259
296	HVAC - FIRST FLOOR	9870	SF	23.48	231787
297	PLUMBING - BASEMENT	3500	SF	5.24	18354
298	HVAC - BASEMENT	3500	SF	18.81	65835
299					
300					
301	ELECTRICAL WORK PER ALVINE & ASSOCIATES				
302	DISTRIBUTION FEEDERS	1	LS	29811.00	29811
303	DISTRIBUTION EQUIPMENT	1	LS	39957.00	39957
304	DEMOLITION	9870	SF	1.25	12377
305	MISC. POWER - 1ST FLOOR	9870	SF	4.56	45007
306	MISC. POWER - BASEMENT	3500	SF	3.42	11970
307	LIGHTING - 1ST FLOOR	9870	SF	4.85	47820
308	LIGHTING - BASEMENT	3500	SF	3.71	12968
309	FIRE ALARM	13370	SF	1.60	21339
310	TELECOM/DATA - 1ST FLOOR	9870	SF	2.57	25317
311	TELECOM/DATA - BASEMENT	3500	SF	2.00	6983
312	ACCESS CONTROLS	1	LS	31350.00	31350
313					
314					
315					

PROJECT: **CONCEPT B - CARROLL PUBLIC LIBRARY & CITY HALL** LOCATION: **CARROLL, IOWA**
OWNER: **CITY OF CARROLL, IOWA** DATE: **DECEMBER 8, 2016**
ARCHITECT: **OPN ARCHITECTS** STATUS: **PRELIMINARY**

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
316	EXTERIOR WORK				
317	REMOVE LARGE SHRUBS & LANDSCAPING @ SIGNAGE	1	LS	1500.00	1500
318					
319	MODIFY BUILDING SIGNAGE	1	LS	2500.00	2500
320					
321	NEW LANDSCAPING @ EAST SIDE				
322	- PERENNIALS	800	EA	20.00	16000
323					
324	REMOVE LARGE SHRUBS & LANDSCAPING ON NORTH SIDE	1	LS	1500.00	1500
325					
326	NEW LANDSCAPING ON NORTH				
327	- SHADE TOLERANT EVERGREEN GROUND COVER - BULBS	800	EA	20.00	16000
328	- SHADE TOLERANT EVERGREEN SHRUBS	24	EA	75.00	1800
329					
330					
331					
332					
333					
334					
335					
336					
337	**COST ESTIMATE SUBTOTAL**				4280963
338					
339	**ADD FOR GENERAL REQUIREMENTS**	6.00%			256,858
340					
341					4,537,821
342					
343	**CONTRACTOR'S MARKUP**	8.00%			363,026
344					
345					4,900,847
346					
347	**DESIGN CONTINGENCY**	15.00%			735,127
348					
349	**COST ESTIMATE TOTAL**				**$5,635,974**
350					

Alvine Engineering

Cost Opinion – Concept A

Carroll City Hall and Library Project
December 5, 2016

Concept A – City Hall			
Mechanical Summary			
ITEM	**MATERIAL**	**LABOR**	**TOTAL COST**
Subtotal	$169,300	$193,600	$362,900
Overhead, Profit, and Insurance	$23,702	$27,104	$50,806
Performance Bond	$2,316	$2,648	$4,964
Total Mechanical Cost	**$195,318**	**$223,352**	**$418,670**
Electrical Summary			
Subtotal	**$157,646**	**$115,530**	**$273,176**
Overhead, Profit, and Insurance	**$22,070**	**$16,174**	**$38,244**
Performance Bond	**$2,157**	**$1,580**	**$37,37**
Total Electrical Cost	**$181,873**	**$133,284**	**$315,157**
		Total Mechanical and Electrical Concept A – City Hall	**$733,827**
Concept A – Library			
Mechanical Summary			
ITEM	**MATERIAL**	**LABOR**	**TOTAL COST**
Subtotal (Renovation)	$236,600	$272,400	$509,000
Overhead, Profit, and Insurance	$33,124	$38,136	$71,260
Performance Bond	$3,237	$3,726	$6,963
Total (Renovation)	$272,961	$314,262	$587,223
Total (Addition)	$18,344	$20,651	$38,995
Total Mechanical Cost	**$291,304**	**$334,913**	**$626,218**
Electrical Summary			
Subtotal (Renovation)	$182,839	$138,692	$321,530
Overhead, Profit, and Insurance	$25,597	$19,417	$45,014
Performance Bond	$2,501	$1,897	$4,398
Total (Renovation)	$210,937	$160,006	$370,942
Total (Addition)	$9,761	$6,715	$16,476
Total Electrical Cost	**$220,698**	**$166,721**	**$387,418**
		Total Mechanical and Electrical Concept A – Library	**$1,013,636**

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/2/2016		
PROJECT Carroll City Hall - Concept A				BASIS FOR ESTIMATE		
LOCATION Carroll, IA				X CODE A (NO DESIGN COMPLETED) CODE B (PRELIMINARY DESIGN) CODE C (FINAL DESIGN) OTHER (SPECIFY)		
ENGINEER Sam Anderson, Jason Jones						
PROJECT NO. 20165569				ESTIMATOR SEA		CHECKED BY JPJ
ITEM	CONCEPT NO. UNITS	UNIT	MATERIAL UNIT RATE	MATERIAL TOTAL	LABOR UNIT RATE	LABOR TOTAL	TOTAL COST
PROJECT SUMMARY							
PLUMBING AND HVAC DEMOLITION	9,877	SF	$0.05	$500	$0.45	$4,500	$5,000
FIRE PROTECTION	13,377	SF	$0.95	$12,800	$1.35	$18,100	$30,900
PLUMBING - 1ST FLOOR	9,877	SF	$2.80	$27,700	$2.20	$21,800	$49,500
HVAC - FIRST FLOOR	9,877	SF	$9.40	$92,900	$11.20	$110,700	$203,600
PLUMBING - BASEMENT	3,500	SF	$2.60	$9,100	$2.00	$7,000	$16,100
HVAC - BASEMENT	3,500	SF	$7.50	$26,300	$9.00	$31,500	$57,800
Subtotal				$169,300		$193,600	$362,900
Sales Tax							
Mobilization							
Subtotal				$169,300		$193,600	$362,900
Overhead, Profit, and Insurance			14.0%	$23,702	14.0%	$27,104	$50,806
Multiplier			100.0%		100.0%		
Performance Bond			1.2%	$2,316		$2,648	$4,964
Total (Mechanical Contractor)				$195,318		$223,352	$418,670

Notes:
1. Demolition estimate does not include removal of asbestos.
2. Fire protection estimate assumes no fire pump.

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/5/2016			
PROJECT Carroll City Hall - Concept A				BASIS FOR ESTIMATE			
LOCATION Carroll, IA				X	CODE A (NO DESIGN COMPLETED)		
					CODE B (PRELIMINARY DESIGN)		
ENGINEER NAA					CODE C (FINAL DESIGN)		
					OTHER (SPECIFY)		
PROJECT NO. 20165569				ESTIMATOR NAA		CHECKED BY	
ITEM	QUANTITY		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
DISTRIBUTION FEEDERS	1	LS	$12,250	$12,250	$8,500	$8,500	$20,750
DISTRIBUTION EQUIPMENT	1	LS	$18,500	$18,500	$10,125	$10,125	$28,625
DEMOLITION	9,877	SF	$0.30	$2,963	$0.80	$7,902	$10,865
MISC POWER - 1ST FLOOR	9,877	SF	$2.00	$19,754	$2.00	$19,754	$39,508
MISC POWER - BASEMENT	3,500	SF	$1.00	$3,500	$2.00	$7,000	$10,500
LIGHTING - 1ST FLOOR	9,877	SF	$3.00	$29,631	$1.25	$12,346	$41,977
LIGHTING - BASEMENT	3,500	SF	$2.00	$7,000	$1.25	$4,375	$11,375
FIRE ALARM	13,377	SF	$0.80	$10,702	$0.60	$8,026	$18,728
TELECOM/DATA - 1ST FLOOR	9,877	SF	$1.25	$12,346	$1.00	$9,877	$22,223
TELECOM/DATA - BASEMENT	3,500	SF	$1.00	$3,500	$0.75	$2,625	$6,125
ACCESS CONTROLS	1	LS	$12,500	$12,500	$15,000	$15,000	$27,500
VIDEO BROADCASTING (A/V)	1	LS	$25,000	$25,000	$10,000	$10,000	$35,000
Subtotal				**$157,646**		**$115,530**	**$273,176**
Overhead, Profit, and Insurance			14.0%	**$22,070**	14.0%	**$16,174**	**$38,244**
Performance Bond			1.2%	**$2,157**		**$1,580**	**$3,737**
Total (Electrical Contractor)				**$181,873**		**$133,284**	**$315,157**

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/2/2016			
PROJECT Carroll Library - Concept A				BASIS FOR ESTIMATE			
LOCATION Carroll, IA				X	CODE A (NO DESIGN COMPLETED)		
					CODE B (PRELIMINARY DESIGN)		
ENGINEER Sam Anderson, Jason Jones					CODE C (FINAL DESIGN)		
					OTHER (SPECIFY)		
PROJECT NO. 20165569				ESTIMATOR SEA		CHECKED BY JPJ	
ITEM	CONCEPT		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
PLUMBING AND HVAC DEMOLITION	17,910	SF	$0.05	$900	$0.45	$8,100	$9,000
FIRE PROTECTION	17,910	SF	$0.95	$17,100	$1.35	$24,200	$41,300
PLUMBING	17,910	SF	$2.80	$50,200	$2.20	$39,500	$89,700
HVAC	17,910	SF	$9.40	$168,400	$11.20	$200,600	$369,000
FIRE PROTECTION - ADDITION	1,200	SF	$0.95	$1,200	$1.35	$1,700	$2,900
PLUMBING - ADDITION	1,200	SF	$2.80	$3,400	$2.20	$2,700	$6,100
HVAC - ADDITION	1,200	SF	$9.40	$11,300	$11.20	$13,500	$24,800
Subtotal				$252,500		$290,300	$542,800
Sales Tax							
Mobilization							
Subtotal				$252,500		$290,300	$542,800
Overhead, Profit, and Insurance			14.0%	$35,350	14.0%	$40,642	$75,992
Multiplier			100.0%		100.0%		
Performance Bond			1.2%	$3,454		$3,971	$7,426
Total (Mechanical Contractor)				$291,304		$334,913	$626,218

Notes:
1. Demolition estimate does not include removal of asbestos.
2. Fire protection estimate assumes no fire pump.

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/5/2016			
PROJECT Carroll Library - Concept A				BASIS FOR ESTIMATE			
LOCATION Carroll, IA				X	CODE A (NO DESIGN COMPLETED)		
					CODE B (PRELIMINARY DESIGN)		
ENGINEER NAA					CODE C (FINAL DESIGN)		
					OTHER (SPECIFY)		
PROJECT NO. 20165569				ESTIMATOR NAA		CHECKED BY	
ITEM	QUANTITY NO. UNITS	UNIT	MATERIAL UNIT RATE	MATERIAL TOTAL	LABOR UNIT RATE	LABOR TOTAL	TOTAL COST
PROJECT SUMMARY							
DISTRIBUTION FEEDERS	1	LS	$16,150	$16,150	$10,000	$10,000	$26,150
DISTRIBUTION EQUIPMENT	1	LS	$22,550	$22,550	$12,500	$12,500	$35,050
DEMOLITION	17,910	SF	$0.30	$5,373	$0.80	$14,328	$19,701
MISC POWER	17,910	SF	$2.00	$35,820	$2.00	$35,820	$71,640
LIGHTING	17,910	SF	$3.00	$53,730	$1.25	$22,388	$76,118
FIRE ALARM	17,910	SF	$0.80	$14,328	$0.60	$10,746	$25,074
TELECOMM/DATA	17,910	SF	$1.25	$22,388	$1.00	$17,910	$40,298
ACCESS CONTROLS	1	LS	$12,500.00	$12,500	$15,000.00	$15,000	$27,500
MISC POWER - ADDITION	1,200	SF	$2.00	$2,400	$2.00	$2,400	$4,800
LIGHTING - ADDITION	1,200	SF	$3.00	$3,600	$1.25	$1,500	$5,100
FIRE ALARM - ADDITION	1,200	SF	$0.80	$960	$0.60	$720	$1,680
TELECOMM/DATA - ADDITION	1,200	SF	$1.25	$1,500	$1.00	$1,200	$2,700
Subtotal				**$191,299**		**$144,512**	**$335,810**
Overhead, Profit, and Insurance			14.0%	**$26,782**	14.0%	**$20,232**	**$47,014**
Performance Bond			1.2%	**$2,617**		**$1,977**	**$4,594**
Total (Electrical Contractor)				**$220,698**		**$166,721**	**$387,418**

Alvine Engineering

Cost Opinion – Concept B

Carroll City Hall and Library Project
December 5, 2016

Concept B – City Hall

Mechanical Summary

ITEM	MATERIAL	LABOR	TOTAL COST
Subtotal (Renovation)	$112,100	$130,200	$242,300
Overhead, Profit, and Insurance	$15,694	$18,228	$33,922
Performance Bond	$1,534	$1,781	$3,315
Total (Renovation)	$129,328	$150,209	$279,537
Total (Addition)	$42,686	$47,762	$90,449
Total Mechanical Cost	**$172,014**	**$197,971**	**$369,985**

Electrical Summary

Subtotal (Renovation)	**$130,482**	**$91,464**	**$221,946**
Overhead, Profit, and Insurance	**$18,268**	**$12,805**	**$31,073**
Performance Bond	**$1,785**	**$1,251**	**$3,036**
Total (Renovation)	**$150,535**	**$105,520**	**$256,055**
Total (Addition)	**$22,773**	**$15,667**	**$38,440**
Total Electrical Cost	**$173,308**	**$121,187**	**$294,495**
		Total Mechanical and Electrical Concept B – City Hall	**$664,480**

Concept B – Library

Mechanical Summary

ITEM	MATERIAL	LABOR	TOTAL COST
Subtotal (Renovation	$169,200	$193,500	$362,700
Overhead, Profit, and Insurance	$23,688	$27,090	$50,778
Performance Bond	$2,315	$2,647	$4,962
Total (Renovation)	$195,203	$223,237	$418,440
Total (Addition)	$133,712	$149,863	$283,575
Total Mechanical Cost	**$328,914**	**$373,100**	**$702,014**

Electrical Summary

Subtotal (Renovation)	$140,545	$110,241	$250,785
Overhead, Profit, and Insurance	$19,676	$15,434	$35,110
Performance Bond	$1,923	$1,508	$3,431
Total (Renovation)	$162,144	$127,183	$289,326
Total (Addition)	$71,574	$49,239	$120,813
Total Electrical Cost	**$233,718**	**$176,422**	**$410,139**
		Total Mechanical and Electrical Concept B – Library	**$1,112,153**

The above Cost Opinion represents the opinion of Alvine Engineering of construction costs based on documentation developed to the level of detail indicated and should not be considered firm bid costs or a guaranteed maximum price. All costs provided are costs to Prime and do not include Prime Contractor overhead and profit. This statement does include subcontractor overhead and profit and, where applicable, sales tax on materials and performance bond. Design contingency, if noted, is included as determined appropriate for the level of design. Demolition estimate does not include removal of asbestos. Fire protection estimate assumes no fire pump.

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/2/2016			
PROJECT Carroll City Hall - Concept B				BASIS FOR ESTIMATE			
LOCATION Carroll, IA				X	CODE A (NO DESIGN COMPLETED)		
					CODE B (PRELIMINARY DESIGN)		
ENGINEER Sam Anderson, Jason Jones					CODE C (FINAL DESIGN)		
					OTHER (SPECIFY)		
PROJECT NO. 20165569				ESTIMATOR SEA		CHECKED BY JPJ	
ITEM	CONCEPT		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
PLUMBING AND HVAC DEMOLITION	11,267	SF	$0.05	$600	$0.45	$5,100	$5,700
FIRE PROTECTION	8,467	SF	$0.95	$8,100	$1.35	$11,500	$19,600
PLUMBING	8,467	SF	$2.80	$23,800	$2.20	$18,700	$42,500
HVAC	8,467	SF	$9.40	$79,600	$11.20	$94,900	$174,500
FIRE PROTECTION - ADDITION	2,800	SF	$0.95	$2,700	$1.35	$3,800	$6,500
PLUMBING - ADDITION	2,800	SF	$2.80	$7,900	$2.20	$6,200	$14,100
HVAC - ADDITION	2,800	SF	$9.40	$26,400	$11.20	$31,400	$57,800
Subtotal				$149,100		$171,600	$320,700
Sales Tax							
Mobilization							
Subtotal				$149,100		$171,600	$320,700
Overhead, Profit, and Insurance			14.0%	$20,874	14.0%	$24,024	$44,898
Multiplier			100.0%		100.0%		
Performance Bond			1.2%	$2,040		$2,347	$4,387
Total (Mechanical Contractor)				$172,014		$197,971	$369,985

Notes:
1. Demolition estimate does not include removal of asbestos.
2. Fire protection estimate assumes no fire pump.

ALVINE ENGINEERING **OPINION OF PROBABLE COST**				DATE PREPARED **12/5/2016**			
PROJECT **Carroll City Hall - Concept B**				BASIS FOR ESTIMATE			
LOCATION **Carroll, IA**				**X**	CODE A (NO DESIGN COMPLETED)		
					CODE B (PRELIMINARY DESIGN)		
ENGINEER **NAA**					CODE C (FINAL DESIGN)		
					OTHER (SPECIFY)		
PROJECT NO. **20165569**				ESTIMATOR NAA		CHECKED BY	
ITEM	QUANTITY		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
DISTRIBUTION FEEDERS	1	LS	$12,250	$12,250	$8,500	$8,500	$20,750
DISTRIBUTION EQUIPMENT	1	LS	$18,500	$18,500	$10,125	$10,125	$28,625
DEMOLITION	8,467	SF	$0.30	$2,540	$0.80	$6,774	$9,314
MISC POWER	8,467	SF	$2.00	$16,934	$2.00	$16,934	$33,868
LIGHTING	8,467	SF	$3.00	$25,401	$1.25	$10,584	$35,985
FIRE ALARM	8,467	SF	$0.80	$6,774	$0.60	$5,080	$11,854
TELECOM/DATA	8,467	SF	$1.25	$10,584	$1.00	$8,467	$19,051
ACCESS CONTROLS	1	LS	$12,500	$12,500	$15,000	$15,000	$27,500
VIDEO BROADCASTING (A/V)	1	LS	$25,000	$25,000	$10,000	$10,000	$35,000
MISC POWER - ADDITION	2,800	SF	$2.00	$5,600	$2.00	$5,600	$11,200
LIGHTING - ADDITION	2,800	SF	$3.00	$8,400	$1.25	$3,500	$11,900
FIRE ALARM - ADDITION	2,800	SF	$0.80	$2,240	$0.60	$1,680	$3,920
TELECOM/DATA - ADDITION	2,800	SF	$1.25	$3,500	$1.00	$2,800	$6,300
Subtotal				**$150,222**		**$105,044**	**$255,266**
Overhead, Profit, and Insurance			14.0%	**$21,031**	14.0%	**$14,706**	**$35,737**
Performance Bond			1.2%	**$2,055**		**$1,437**	**$3,492**
Total (Electrical Contractor)				**$173,308**		**$121,187**	**$294,495**

ALVINE ENGINEERING OPINION OF PROBABLE COST				DATE PREPARED 12/2/2016			
PROJECT Carroll Library - Concept B				BASIS FOR ESTIMATE			
LOCATION Carroll, IA				X CODE A (NO DESIGN COMPLETED) CODE B (PRELIMINARY DESIGN)			
ENGINEER Sam Anderson, Jason Jones				CODE C (FINAL DESIGN) OTHER (SPECIFY)			
PROJECT NO. 20165569				ESTIMATOR SEA		CHECKED BY JPJ	
ITEM	CONCEPT		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
PLUMBING AND HVAC DEMOLITION	9,870	SF	$0.05	$500	$0.45	$4,500	$5,000
FIRE PROTECTION	13,370	SF	$0.95	$12,800	$1.35	$18,100	$30,900
PLUMBING - FIRST FLOOR	9,870	SF	$2.80	$27,700	$2.20	$21,800	$49,500
HVAC - FIRST FLOOR	9,870	SF	$9.40	$92,800	$11.20	$110,600	$203,400
PLUMBING - BASEMENT	3,500	SF	$2.60	$9,100	$2.00	$7,000	$16,100
HVAC - BASEMENT	3,500	SF	$7.50	$26,300	$9.00	$31,500	$57,800
FIRE PROTECTION - ADDITION	8,800	SF	$0.95	$8,400	$1.35	$11,900	$20,300
PLUMBING - ADDITION	8,800	SF	$2.80	$24,700	$2.20	$19,400	$44,100
HVAC - ADDITION	8,800	SF	$9.40	$82,800	$11.20	$98,600	$181,400
Subtotal				$285,100		$323,400	$608,500
Sales Tax							
Mobilization							
Subtotal				$285,100		$323,400	$608,500
Overhead, Profit, and Insurance			14.0%	$39,914	14.0%	$45,276	$85,190
Multiplier			100.0%		100.0%		
Performance Bond			1.2%	$3,900		$4,424	$8,324
Total (Mechanical Contractor)				$328,914		$373,100	$702,014

Notes:
1. Demolition estimate does not include removal of asbestos.
2. Fire protection estimate assumes no fire pump.

ALVINE ENGINEERING **OPINION OF PROBABLE COST**				DATE PREPARED **12/5/2016**			
PROJECT **Carroll Library - Concept B**				BASIS FOR ESTIMATE			
LOCATION **Carroll, IA**				**X** CODE A (NO DESIGN COMPLETED) CODE B (PRELIMINARY DESIGN)			
ENGINEER **NAA**				CODE C (FINAL DESIGN) OTHER (SPECIFY)			
PROJECT NO. **20165569**				ESTIMATOR NAA		CHECKED BY	
ITEM	QUANTITY		MATERIAL		LABOR		TOTAL COST
	NO. UNITS	UNIT	UNIT RATE	TOTAL	UNIT RATE	TOTAL	
PROJECT SUMMARY							
DISTRIBUTION FEEDERS	1	LS	$16,150	$16,150	$10,000	$10,000	$26,150
DISTRIBUTION EQUIPMENT	1	LS	$22,550	$22,550	$12,500	$12,500	$35,050
DEMOLITION	9,870	SF	$0.30	$2,961	$0.80	$7,896	$10,857
MISC POWER - 1ST FLOOR	9,870	SF	$2.00	$19,740	$2.00	$19,740	$39,480
MISC POWER - BASEMENT	3,500	SF	$1.00	$3,500	$2.00	$7,000	$10,500
LIGHTING - 1ST FLOOR	9,870	SF	$3.00	$29,610	$1.25	$12,338	$41,948
LIGHTING - BASEMENT	3,500	SF	$2.00	$7,000	$1.25	$4,375	$11,375
FIRE ALARM	13,370	SF	$0.80	$10,696	$0.60	$8,022	$18,718
TELECOMM/DATA - 1ST FLOOR	9,870	SF	$1.25	$12,338	$1.00	$9,870	$22,208
TELECOMM/DATA - BASEMENT	3,500	SF	$1.00	$3,500	$0.75	$3,500	$7,000
ACCESS CONTROLS	1	LS	$12,500	$12,500	$15,000	$15,000	$27,500
MISC POWER - ADDITION	8,800	SF	$2.00	$17,600	$2.00	$17,600	$35,200
LIGHTING - ADDITION	8,800	SF	$3.00	$26,400	$1.25	$11,000	$37,400
FIRE ALARM - ADDITION	8,800	SF	$0.80	$7,040	$0.60	$5,280	$12,320
TELECOMM/DATA - ADDITION	8,800	SF	$1.25	$11,000	$1.00	$8,800	$19,800
Subtotal				**$202,585**		**$152,921**	**$355,505**
Overhead, Profit, and Insurance			14.0%	**$28,362**	14.0%	**$21,409**	**$49,771**
Performance Bond			1.2%	**$2,771**		**$2,092**	**$4,863**
Total (Electrical Contractor)				**$233,718**		**$176,422**	**$410,139**

OPN
ARCHITECTS