



Request for City Council Action

Title:	Request for Liquor License Series #9 for Kendra Holcomb / Fred's Liquor Store		
Meeting Date:	April 27, 2016	Agenda Item Number:	
Agenda Section:	<input type="checkbox"/> Consent <input type="checkbox"/> Public Hearings <input type="checkbox"/> Old Business <input checked="" type="checkbox"/> New Business <input type="checkbox"/> Other	Action:	<input checked="" type="checkbox"/> Motion <input type="checkbox"/> Resolution <input type="checkbox"/> Ordinance
Originating Department:	City Clerk's Office	Supporting Documents:	None
Prepared By:	Kim L. Larson	Presented By:	Mayor Diak
Reviewed By:		Approved By:	
Proposed Action:	Approve the Arizona Department of Liquor Licenses and Control Application for a Series 9 (Liquor Store) Liquor License with Sampling Privileges for Kendra Holcomb / Whiskey Waters LLC dba Fred's Liquor Store		

BACKGROUND:

The City Clerk's Office received an Arizona Department of Liquor Licenses and Control Application for a Series 9 (Liquor Store) Liquor License, and a Sampling Privileges Form for Kendra Holcomb / Whiskey Waters LLC dba Fred's Liquor Store. As required by Arizona Revised Statutes, the Public Hearing was held during an earlier portion of this meeting.

The Arizona Department of Liquor Licenses and Control will be notified of the action taken and will make the final determination.

ATTACHMENTS:

None

SUGGESTED MOTION(S):

I move to approve the Arizona Department of Liquor Licenses and Control Application for a Series 9 (Liquor Store) Liquor License with Sampling Privileges for Kendra Holcomb / Whiskey Waters LLC dba Fred's Liquor Store.



Request for City Council Action

Title:	Intergovernmental Agreement NPS and City of Page		
Meeting Date:	April 27, 2016	Agenda Item Number:	
Agenda Section:	<input type="checkbox"/> Consent <input type="checkbox"/> Public Hearings <input checked="" type="checkbox"/> Old Business <input type="checkbox"/> New Business <input type="checkbox"/> Other	Action:	<input checked="" type="checkbox"/> Motion <input type="checkbox"/> Resolution <input type="checkbox"/> Ordinance
Originating Department:	Administration	Supporting Documents:	IGA
Prepared By:	City Manager	Presented By:	City Manager
Reviewed By:	City Manager	Approved By:	City Manager
Proposed Action:	Motion to authorize the Mayor to execute the Intergovernmental Agreement between National Park Service and City of Page to collaborate to develop an RFP for a mutually agreeable design plan for the Horseshoe Bend area.		

BACKGROUND: At the March 23, City Council Meeting, the City Council considered a request from National Park Service Glen Canyon Recreation Area Superintendent, Billy Shott to:

- 1) *Collaborate to find a park/landscape design group which through contract could develop a top shelf design plan for the Horseshoe Bend area.*
- 2) *Form an agreement and implementation/development team. The agreement need not represent a long term or binding obligation. Rather, it will commit our organizations to identifying roles, responsibilities, and individuals who will represent the City and NPS in determining contract scope and specifications with the design group while managing the project collaboratively.*
- 3) *Implement improvements at Horseshoe Bend through each organization's means. Using the resources available to each of us to complete the project to the agreed design can take place at a pace which is advantageous to each organization.*

At that meeting, the City Council authorized the City Manager to work with National Park Service staff to develop an Intergovernmental Agreement for the project and an RFP for design services for future City Council consideration.

STAFF RECOMMENDATION: Motion to authorize the Mayor to execute the Intergovernmental Agreement between National Park Service and City of Page to collaborate to develop an RFP for a mutually agreeable design plan for the Horseshoe Bend area.

INTERGOVERNMENTAL AGREEMENT

Between
National Park Service
Glen Canyon National Recreation Area
and
City of Page

This Intergovernmental Agreement, dated as of April 18, 2016 (the "Agreement"), by and between the National Park Service, Glen Canyon National Recreation Area, PO Box 1507, Page, Arizona ("NPS"), and the City of Page, a municipal corporation, PO Box 1180, Page, Arizona ("City").

RECITALS

- A. NPS and the City wish to collaborate to explore potential improvements to the Horseshoe Bend Trail area including the identification of potential improvements to the design of parking, trails, safety and other facilities.
- B. The City is authorized to enter into Intergovernmental Agreements pursuant to A.R.S. 11-952.
- C. NPS is authorized to enter into Intergovernmental Agreements pursuant to 16 U.S.C. 1J.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Agreement, the parties agree as follows:

1. Mutual Obligations.

NPS and the City agree to cooperate and communicate in a timely manner in a collaborative effort to meet the purposes of this Agreement. More specifically, the parties will:

- A. Collaborate to find a park/landscape design group which could develop a mutually agreeable *design plan for the Horseshoe Bend area*. The design plan could include:
 - i. A comprehensive scope, including the parking lot, trail features and route, viewing features, and infrastructure;
 - ii. A design plan that is detailed and specific enough that it could be turned over to a construction entity to be built to specification over time; and
 - iii. Options for future development.
- B. Discuss possible implementation timelines.

2. Financial Obligations.

No payment will be made to either party by the other as a result of this Agreement. Each party is responsible for the costs of its participation. During the term of this Agreement, should it become necessary for one party to purchase from or make payment or reimbursement to the other party, such arrangements will be covered in a separate cooperative agreement. Nothing in this Agreement shall be construed so as to require either party to expend any funds pursuant to the Agreement.

3. Effective Date and Termination.

This Agreement shall become effective upon execution and shall continue until terminated. Either party may terminate this Agreement upon 30 days written notice to the other party.

4. Third Party Beneficiary Rights.

The parties do not intend to create in any other individual or entity the status of third party beneficiary, and this Agreement must not be construed so as to create such status. The rights, duties and obligations contained in this Agreement will operate only between the parties to this Agreement, and will benefit only the parties to this Agreement. The provisions of this Agreement are intended only to assist the parties in determining and performing their obligations under this Agreement. The parties to this Agreement intend and expressly agree that only parties signatory to this Agreement will have any legal or equitable right to seek to enforce this Agreement, to seek any remedy arising out of a party's performance or failure to perform any term or condition of this Agreement, or to bring an action for the breach of this Agreement.

5. Conflict of Interest.

The parties agree that this Agreement may be cancelled for conflict of interest in accordance with Section 38-511 of the Arizona Revised Statutes.

6. Notices.

Unless otherwise specified herein, any notice or other communication required or permitted to be given under this Agreement shall be in writing and sent to the address given below for the party to be notified or to such other address, notice of which is given in compliance with this section:

If to the City:	If to NPS:
City Manager City of Page 697 Vista Avenue Page, Arizona 86040	Superintendent Glen Canyon National Recreation Area P.O. Box 1507 Page, Arizona 86040

7. Authority to Contract.

Each party represents and warrants that it has full power and authority to enter into this Agreement, to perform its obligations under this Agreement, and has taken all required acts or actions necessary to authorize the execution and performance of the Agreement.

8. Integration; Modification.

Each of the parties acknowledges and agrees that it has not relied upon any statements, representations, agreements or warranties except as expressed herein, and that this Agreement constitutes that parties' entire agreement with respect to the matters addressed herein. All prior or contemporaneous agreements and understandings, oral or written, with respect to such matters are hereby superseded and merged in this Agreement. This Agreement may be modified or amended only by written agreement executed by authorized representatives of both parties.

9. Severability.

In the event that a court of competent jurisdiction shall hold any part or provision of the Agreement void or of no effect, the remaining provisions of this Agreement shall remain in full force and effect, to the extent that the continued enforcement of such remaining terms shall continue to reflect substantially the intent of the parties hereto.

10. Governing Law.

This Agreement shall be construed under the laws of the State of Arizona and shall incorporate by reference all laws governing intergovernmental agreements and mandatory contract provisions of state or federal agencies required by statute or executive order. All statutes and regulations referenced in this Agreement are incorporated herein as if fully stated in their entirety in the Agreement. Each party agrees to comply with and be responsible for the provisions, the statutes, and the regulations set out in this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the day and year first above written.

City of Page

**National Park Service
Glen Canyon National Recreation Area**

By: Bill Diak, Mayor

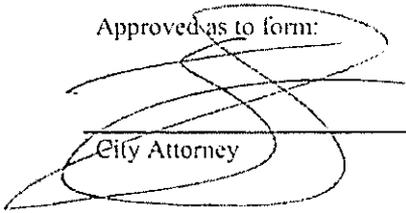
By: Billy Shott, Acting Superintendent

Attest:

City Clerk

Approved as to form:

City Attorney

A large, stylized handwritten signature in black ink, written over the line for the City Attorney. The signature is highly cursive and loops around the text.



Request for City Council Action

Title:	Intergovernmental Agreement with Coconino County		
Meeting Date:	April 27, 2016	Agenda Item Number:	
Agenda Section:	<input type="checkbox"/> Consent <input type="checkbox"/> Public Hearings <input type="checkbox"/> Old Business <input checked="" type="checkbox"/> New Business <input type="checkbox"/> Other	Action:	<input checked="" type="checkbox"/> Motion <input type="checkbox"/> Resolution <input type="checkbox"/> Ordinance
Originating Department:	Administration	Supporting Documents:	IGA
Prepared By:	City Manager	Presented By:	City Manager
Reviewed By:	City Manager	Approved By:	City Manager
Proposed Action:	Motion to authorize the Mayor to execute the Intergovernmental Agreement with Coconino County.		

BACKGROUND: As you are aware, the City’s Magistrate Court and the County’s Justice Court share a courtroom and administrative area in the co-owned facility located at 547 Vista Avenue.

The occupied space of the premises has become overcrowded and lacks important security measures and the unoccupied areas of the premises require remodeling before they can be used to alleviate overcrowding and provide additional court security.

The original scope of a comprehensive remodeling project was determined in a collaborative process facilitated by contractor FM Solutions; however due to budgetary issues and project delays caused by the recession, the original remodeling project was re-scoped into two phases. Staff is recommending moving forward with Phase I as outlined below:

- Minimize demolition/new construction to accommodate immediate need;
- Provide staff restrooms, and a hearing/multipurpose room;
- Remodel current restroom (new fixtures/finishes);
- Provide access to bathrooms for all courts staff via exterior or secure hallway accessible from lobby.
- Provide rooftop package unit to provide cooling to Hearing/Multipurpose room, corridor and restrooms.
- Replace existing HVAC unit with 5-ton unit (in accordance with full plan).

The project also provides immediate security and use improvements while advancing improvements that would be used by the City if we complete Phase II in the future.

Staff believes it is in the best interests of the citizens of the City of Page and of Coconino County to remodel and improve the municipal and justice court facility and for each governmental entity to share in the allocation of costs and space as set forth in this IGA. If approved, the project is expected to begin within 8 weeks.

BUDGET IMPACT: The Phase I project costs are estimated to be \$237,977. The City shall pay \$100,000 toward the total cost of the Phase I project, plus their portion of any overage cost as detailed in Section VII.A.(1)(b).; and the County shall pay \$137,977 of the Phase I project cost, plus their portion of any overage cost as detailed in Section VII.A.(2)(b).

STAFF RECOMMENDATION: Motion to authorize the Mayor to execute the Intergovernmental Agreement with Coconino County.

This Intergovernmental Agreement, amends sections of the Intergovernmental Agreement Regarding Coconino County Addition to Justice Court (hereinafter the "IGA") and is made this _____ day of _____, 2016 pursuant to A.R.S. 11-952 as a joint exercise of powers,

BETWEEN

CITY OF PAGE, a municipal corporation, with offices at City Hall, P.O. Box 1180, Page, Arizona 86040 (hereinafter the "City");

AND

COCONINO COUNTY, a political subdivision of the State of Arizona, with offices at 219 East Cherry Avenue, Flagstaff, AZ 86001 (hereinafter the "County")

WHEREAS:

- A. The City's Magistrate Court (hereinafter "City Court") and the County's Justice Court (hereinafter "Justice Court") share a courtroom and an administrative area in the mutually owned *Public Safety Building* at 547 Vista Avenue, Page, Arizona (hereinafter "Premises") as governed by the INTERGOVERNMENTAL AGREEMENT REGARDING COCONINO COUNTY ADDITION TO JUSTICE COURT, dated June 7, 1999, and attached hereto as Exhibit 'A';
- B. The occupied space of the Premises has become overcrowded and lacks important security measures and the unoccupied areas of the Premises require remodeling before they can be used to alleviate overcrowding and provide additional court security;
- C. The scope of a comprehensive remodeling project was determined in a collaborative process facilitated by contractor FM Solutions and detailed in documents attached hereto as Exhibit 'B-1' and in a cost estimate attached hereto as Exhibit 'B-2' where the unoccupied former police department space, owned by the City of Page, would be remodeled into space for the City Magistrate Court and other improvements would be completed in other parts of the building;
- D. Due to budgetary issues and project delays caused by the recession, the original remodeling project was re-scoped by *FM Solutions* into a smaller, security-based version (hereinafter known as 'Phase I') overlaid within the City-owned former police department space which would eventually become the City Magistrate Court in the full project. Phase I was designed to move small portions of the full project forward including remodel of a multipurpose room which would become a courtroom in the full project and finish of a set of staff restrooms, in the full project to be used exclusively by City court staff, without spending additional funds on things that would require remodeling in the second phase of the full project. Phase I provides immediate security and use improvements while advancing improvements

that would be used by the City for the Court space. The subsequent completion of the originally scoped full project will hereinafter be called 'Phase II' ;

- E. It is in the best interests of the citizens of the City of Page and of Coconino County to remodel and improve the municipal and justice court facility and for each governmental entity to share in the allocation of costs and space as set forth in this IGA;

NOW THEREFORE, in consideration of their reciprocal promises herein, the City and the County agree as follows:

I. Purpose:

The purpose of this IGA is to outline the obligations of the City and County to remodel the premises and reallocate costs and space between the City and County in a Phase I project and, at mutual agreement, proceed to a Phase II project. This document memorializes the space planning process and the scoping of both phases of the remodeling project which will reallocate space and responsibility within the Premises. This document also amends the Intergovernmental Agreement Regarding Coconino County Addition to Justice Court dated June 7, 1999 (Exhibit 'A') with the terms and conditions outlined below.

II. Phasing and Commencement of Project:

The Parties agree to proceed with remodeling and re-allocating space in two (2) phases: Phase I and Phase II.

Phase I floorplan for the project is attached herein as Exhibit 'C', with project details, assumptions and project budget attached herein as Exhibit 'D'. The Phase I project shall commence within ninety (90) days of approval of this IGA by both governing bodies.

Phase II of the project, defined as the balance of the full project not previously completed in Phase I, shall commence on a date mutually agreeable to both parties.

III. Use of the Phase I Project Space and the Unconditioned Jail Space:

The Parties mutually agree that the Phase I project space as shown in the floorplan in Exhibit 'D' shall remain under the ownership of the City. The Phase I project costs are estimated to be \$237,977.

The City shall pay \$100,000 toward the total cost of the Phase I project, plus their portion of any overage cost as detailed in Section VII.A.(1)(b).

The County shall pay \$137,977 of the Phase I project cost, plus their portion of any overage cost as detailed in Section VII.A.(2)(b). This payment allocation shall entitle the County to full, equal and cooperative use of the Phase I project space during the term of this IGA.

Payment of this additional portion of the Phase I project costs shall also entitle the County to full use of the unconditioned Jail space of the Premises for county storage purposes.

IV. Ownership Percentages and Percentage Allocation of Operations and Maintenance Costs:

The ownership percentages of each party as established in the INTERGOVERNMENTAL AGREEMENT REGARDING COCONINO COUNTY ADDITION TO JUSTICE COURT, dated June 7, 1999, and attached hereto as Exhibit 'A' shall not be amended by this IGA.

Upon completion of Phase I of the project, the Parties agree that the monthly operations and maintenance cost percentages allocation shall be revised to reflect the following percentages as outlined in Exhibit 'E,' attached hereto, for the use and cost of operating the legacy areas of the Premises, as well as the Phase I project area, which had previously fallen solely under the City's ownership and operations space percentage:

1. City of Page: 54%
2. Coconino County: 46%

Upon completion of Phase II of the project, the Parties agree that ownership percentages and the monthly operations and maintenance cost percentages allocation shall again be revised to reflect actual percentages at the completion of Phase II.

V. Scope of Phase I Project:

The Parties agree that the scope of the Phase I project will include the following improvements to the City's owned space, previously used for the City of Page Police Department administrative offices, as illustrated in the attached floorplan (Exhibit 'C'): one staff men's multi-fixture restroom, one staff women's multi-fixture restroom, access hallways, one multi-purpose room for secured court hearings, video-conferencing and other general uses, and one roof-mounted HVAC unit to heat and cool the Phase I space only.

VI. Project Responsibilities:

For purposes of accomplishing the remodeling project which is the subject of this IGA, the Parties agree that Project Responsibilities shall be allocated as follows:

A. Project Executive Committee Members shall consist of the City Manager or her designee for the City of Page, and the County Manager or her designee for Coconino County. Project Executive Committee Members shall be responsible for approval of change orders of 5% and over.

B. Project Management shall be done by the Coconino County Facilities Management staff, as Project Manager. The Project Manager shall be responsible

for project budget administration, purchasing, contract administration, pay requests, change order approval up to 5% and weekly project updates.

C. Site Management shall be done by Cliff Linker, City of Page Department of Public Works, or his designee. The Site Manager shall be responsible for the on-site management of construction, special inspections, vendors, occupants, and weekly site reports. Decisions substantively affecting the project shall be made in consultation with the designated Project Manager.

D. Progress Reports: Site reports developed by the Site Manager will be completed and forwarded to the Project Manager by 5 p.m. every working Thursday during project construction. The Project Manager will use said site reports and additional project information to develop a weekly project update distributed to the Project Executive Committee each working Monday by 5 p.m.

VII. Project Costs, Cost Allocation, Additional Items of Agreement:

A. Total Project Cost Estimate: Project Cost Estimates are based upon estimates developed by FM Solutions in 2011 during the recession. The Phase I project cost estimate is \$237,977. See detailed project budget for Phase I attached herein as Exhibit 'D'. The City shall pay \$100,000 and the County shall pay \$137,977. For purposes of determining the payment allocation of costs over or under the estimated cost, the proportions shall be fifty (50) percent for the City and fifty (50) percent for the County (ex. A total project cost overage is \$20,000. Each Party would be responsible for 50% or \$10,000.) The Parties agree to provide project funding in the manner detailed below:

(1) City of Page:

- (a) The City of Page shall pay Coconino County \$100,000 toward the cost of the project. This amount will be deposited by the County in the capital budget for Phase I of the Project and expended as *required for the project*.
- (b) Should the actual project cost be less than estimated, the City's portion shall be reduced proportionately, as explained in Section VII (A). The County shall return the remainder City funds to the City at completion of the Phase I project.
- (c) Should the actual Phase I cost be more than estimated, the City may directly pay fifty (50) percent of the overage amount to the County or the City may borrow and the County shall loan the cost overage. The City shall repay the County their portion of the overage in three equal payments, each due on July 1 of the three years subsequent to the completion of the Phase I project.

(2) Coconino County:

- (a) The County shall deposit \$137,977 in the Phase I project capital budget. The funds shall be expended as required for the project.

- (b) Should the actual project cost be less than estimated, the County shall refund their proportionate share, as explained in Section VII (A), to the county budget.
- (c) Should the actual Phase I cost be more than estimated, the County shall pay fifty (50) percent of that total project cost overage amount to the project capital budget.

B. Credit to County at Commencement of Phase II: As stated in Section III, the ownership of the Phase I project area will remain solely under the ownership of the City. Plans for Phase II include improvement of the Phase I space into the City Magistrate Court and the improvements completed in Phase I will reduce scope and the City's cost for Phase II. The Phase I improvements; of which \$118,988.50 will be paid by the County, will reduce the City's Phase II costs by \$230,335. Therefore, if the Phase II project commences before Phase I is fully depreciated, the County will be due a refund of Phase I project costs from the City.

The Phase I project improvement costs shall be depreciated over a ten-year period. The "Phase I Ten-Year Depreciation Table" is attached hereto as Exhibit 'F.' Should the Phase II project commence prior to the full depreciation of Phase I, the County shall receive an improvement refund equal to the amount shown under "Beginning of Year Adjusted Base" in the line indicating the age of the Phase I improvements. For example, if Phase II commences in Year 4 of the Phase I improvements, the County will be credited and the City shall additionally pay \$77,342.53 toward the County's portion of Phase II project costs.

Should Phase II of the project commence in Year 11 or after, the County shall have received full value of its payment and receive no refund.

VIII. Delivery in Execution:

The parties hereto agree to execute, acknowledge and deliver such other documents and instruments as may be reasonably necessary or appropriate to carry out the full intent and purpose of this Agreement.

IX. Execution in Counterparts:

For the convenience of the parties, this Agreement may be executed in one or more counterparts, each of which may be executed by one or more of the parties hereto, with the same force and effect as though all parties executing such counterparts had executed but one instrument.

X. Insurance:

Both parties shall obtain and maintain insurance naming the other party, its officers, agents, commissions and employees as an additional insured as follows:

1. Commercial General Liability with a Combined Single Limit of \$1,000,000 per Occurrence and \$1,000,000 annual aggregate.
2. Workers Compensation with a waiver of subrogation endorsement.
3. *Property/building insurance* under its blanket insurance programs. The County shall pay to the City upon demand its prorata share of such insurance based on its percentage of occupancy of floor space as set forth in Exhibit C to this Amended IGA.

XI. Term:

The term of this Amended IGA shall commence upon final approval by the governing bodies of both parties and shall continue until and unless terminated by mutual agreement of the parties pursuant to Section XII.

XII. Termination:

This IGA may be terminated by mutual written agreement of the parties. Upon termination, the City shall compensate the County for twenty-three point nine (23.9) percent, the County's ownership percentage, of the then value of the building and its improvements, or in a manner that is mutually agreeable to both parties. Following repayment by the City to the County as mutually agreed, all building improvements shall become the property of the City and the County shall vacate the premises. The City shall assume full responsibility the premises. The City shall assume full responsibility for operation and maintenance for the entire premises when the County vacates the premises.

XIII. Nondiscrimination:

During the performance of this agreement, the participants agree to abide by the terms of Arizona Executive Order and all other applicable nondiscrimination laws and regulations.

XIV. Original terms not amended:

All other terms of the original IGA dated June 7, 1999 not otherwise amended by this Amended IGA shall remain in force and effect. In case of a conflict between the two documents, the terms of this Amended IGA shall control.

XV. Notice:

A notice given in connection with this IGA shall be given in writing and shall be delivered by hand or certified mail-return receipt to:

City of Page
City Manager
PO Box 1180
Page, AZ, 86040

Coconino County
County Manager
219 E Cherry Avenue
Flagstaff, AZ 86001

XVI. Dispute Resolution:

- A. Breach of Agreement. Either party may provide the other with written notice of any breach of this IGA. The breaching party shall be allowed thirty (30) days to remedy the breach before the parties take steps to terminate the IGA
- B. Mediation. If a dispute arises out of or relates to this IGA, the parties shall first attempt in good faith to resolve the dispute through mediation. Unless the parties agree otherwise, the mediator(s) will be selected from panels of mediators trained under the Coconino County Alternative Dispute Resolution Program of the Coconino County Superior Court. Each party agrees to bear its own costs in mediation. The parties will not be obligated to mediate if an indispensable party is unwilling to join the mediation.
- C. Arbitration. If the dispute cannot be resolved through mediation, the parties shall submit the matter to non-binding arbitration pursuant to A.R.S. 12-1518 and in accordance with the Uniform Arbitration Act as amended. Each party shall share equally in the costs of arbitration, and shall bear its own costs and attorney fees.
- D. Nothing in this agreement is intended to constitute a waiver of the parties' right to initiate legal action if the dispute is not resolved through mediation, or arbitration, or if a party seeks provisional relief under the Arizona Rule of Civil Procedure. Each party shall bear its own costs and attorney fees in the event of litigation.

XVII. Entire Agreement/Amendment:

This IGA together with its attached Exhibits, contains the complete understanding and agreement of the parties with respect to all matters referred to herein, and all prior representations, negotiations, and understandings are superseded hereby and merged into this IGA. No party shall be liable or bound to any other person in any manner by any agreement, warranty, representation, or guarantee, except as specifically set forth in this agreement. This IGA may not be changed or modified except by written amendment approved by the parties governing bodies.

XVIII. Severability:

If any term or provision of this IGA, is determined to be invalid, such invalid term or provision shall not affect or impair the remainder of this IGA, but such remainder shall continue in full force and effect to the same extent as though the invalid term or provision were not contained herein.

XIX. Time:

Time is of essence in this IGA.

XX. Governing Law:

This IGA and the rights and obligations of the parties shall be governed by the laws of Arizona.

XXI. Compliance with Immigration Laws:

As required by A.R.S. 41-4401, each party warrants that it complies with all federal immigration laws and regulations, that it shall verify through the E-Verify program the employment eligibility of each employee who provides services or labor in Arizona for wages or other remuneration, and that it shall require its subcontractors and their subcontractors to provide the same warranties to the other party.

IN WITNESS WHEREOF, the governing bodies of the City and County have adopted this Amended IGA by resolution and executed this Agreement as of this day and year, the _____ of _____ 2016.

CITY OF PAGE

COCONINO COUNTY

By _____
Bill Diak
Mayor

By _____
Art Babbott
Chairman of the Board

ATTEST:

ATTEST:

By _____
City Clerk

By _____
Clerk of the Board

Approved As To Form:

Approved As To Form:

By _____
City Attorney

By _____
Deputy County Attorney

Exhibit A – 1999 IGA

INTERGOVERNMENTAL AGREEMENT REGARDING
COCONINO COUNTY ADDITION TO JUSTICE COURT

This INTERGOVERNMENTAL AGREEMENT (hereinafter the "IGA") is made this 7th day of June, 1999.

BETWEEN

CITY OF PAGE, a municipal corporation, with offices at City Hall, P. O. Box 1180, Page, Arizona 86040 (hereinafter the "City").

AND

COCONINO COUNTY, a political subdivision of the State of Arizona, with offices at 219 East Cherry Avenue, Flagstaff, Arizona 86001 (hereinafter the "County").

WHEREAS:

- A. The City's Magistrate Court (hereinafter "City Court") and the County's Justice Court (hereinafter "Justice Court") share a courtroom and an administrative area in the Public Safety Building at 547 Vista Avenue, Page, Arizona (hereinafter the "Premises");
- B. The City owns the real property upon which the Premises are erected;
- C. The County wishes to erect an addition adjacent to the Premises at the sole expense of the County for the sole use of Justice Court, consisting of approximately 250 square feet of interior space and approximately 240 square feet of uncovered exterior patio as set forth in Exhibit A (hereinafter the "Addition");
- D. The City is willing to allow the County to construct that Addition;
- E. The City and the County agree how the shared areas in the Premises are to be allocated (a diagram of the Premises delineating the area to be used by City Court; the area to be used by Justice Court and the shared use areas is attached hereto as Exhibit B); and
- F. The City and the County wish to jointly exercise their powers pursuant to A.R.S. §11-952; and

- G. The City and County acknowledge the Premises were jointly constructed by the City and County with grant funds that covered fifty percent (50%) of the cost, with the City and County each matching twenty-five percent (25%) of the additional construction costs, with the City providing the real property.

THEREFORE, in consideration of their reciprocal promises herein, the City and the County agree as follows:

1. The City and the County agree that the Premises are to be used as set forth in Exhibit B.
2. The City agrees that the County may construct an addition adjacent to the Premises as indicated on Exhibit A for such use as the County may in its sole discretion determine; the City further agrees that the Addition may be connected to the utilities in the Premises.
3. The County agrees to be solely responsible for the construction of the Addition adjacent to the Premises for use by Justice Court and all costs associated therewith. The County agrees to commence construction on or before December 31, 1999 and to proceed in good faith to complete construction as soon as reasonably possible.
4. Utilities and Maintenance Costs
 - A. The City and County agree that the County will pay twenty-three and nine tenths percent (23.9%) of the cost of utilities for the Premises and the Addition, which percentage represents the prorata percentage of the square footage of the entire building the County shall occupy.
 - B. The City and County agree that the County will pay twenty-three and nine tenths percent (23.9%) of the maintenance and janitorial costs for City personnel and supplies utilized for the Premises and Addition, which percentage represents the prorata percentage of the square footage of the entire building the County shall occupy.
 - C. The parties will renegotiate their respective obligations for utility costs and maintenance and janitorial costs in the event there is a substantive change in occupancy by either party.
5. Any notice to be given by City or County shall be given in writing and delivered in person to City or County, or forwarded by certified or registered mail, postage prepaid, at the address indicated in the heading hereof, unless the party giving any such notice has been

notified, in writing, of a change of address. Any such notice shall be effective three (3) days after postmarked, if mailed, or upon receipt, if delivered.

6. This IGA contains the complete understanding and agreement of the parties hereto with respect to all matters referred to herein, and all prior representations, negotiations and understandings are superseded hereby and merged into this IGA. No party shall be liable or bound to any other person hereto in any manner by any agreement, warranty, representation or guarantee, except as specifically set forth herein or in any instrument executed pursuant hereto. It may not be changed or modified except by an instrument in writing signed by a duly authorized representative of each party.
7. In the event any party hereto shall employ legal counsel or bring an action at law or other proceeding against any other party to enforce any of the terms, covenants or conditions hereof, the party prevailing in any such action or other proceeding shall be paid all reasonable attorneys' fees by the other party, as determined by the court and not the jury, and in the event any judgment is secured by such prevailing party, all such attorneys' fees shall be included in such judgment.
8. If any term or provision of this IGA is determined to be invalid, such invalid term or provision shall not affect or impair the remainder of this IGA, but such remainder shall continue in full force and effect to the same extent as though the invalid term or provision were not contained herein.
9. Time is of the essence of this IGA. Except as herein otherwise provided, this IGA and all of the terms and provisions hereof shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto.
10. This Agreement and the rights of the parties hereto shall be governed and construed in accordance with the laws of the State of Arizona.
11. The County shall obtain and maintain, on behalf of the City at its sole expense, insurance against the following risks:
 - a. Commercial General Liability - Combined Single Limit of \$1,000,000 per Occurrence and \$1,000,000 Annual Aggregate.

The County's Commercial General Liability Policy shall name the City, its officers, agents, commissions and employees as Additional Insureds.

The County's insurance shall be primary and non-contributing

with any other coverage available to the City, et al.

b. Workers Compensation and Employers Liability -

For Statutory Limits

For the limits of \$100,000 per accident; \$100,000 disease each employee; \$500,000 disease policy limit

Waiver of Subrogation Endorsement shall be provided.

c. The City shall provide the building insurance coverages under its blanket property insurance programs. The County shall pay to the City, upon demand, its prorata share of such insurance based on its percent of occupancy of floor space of the building.

All insurance companies shall be A.M. Best rated A-VI or better.

12. Indemnification:

A. The City shall at all times indemnify, keep indemnified, defend and save harmless the County and/or any of its agents, officials and employees from any and all claims, demands, suits, actions, proceedings, loss, costs and/or damages of every kind and description including any attorney's fees and/or litigation expenses which may be brought or made against or incurred by the County on account of loss of or damage to any property or for injuries to or death of any person, caused by, arising out of, or contributed to, in whole or in part, by reason of any alleged act, omission, professional error, fault, mistake, or negligence of the City, its employees, agents, representatives, or subcontractors, their employees, agents, or representatives in connection with or incidental to this Agreement or arising out of Worker's Compensation claims, Unemployment Compensation claims, or Unemployment Disability Compensation claims of employees of the City and/or its subcontractors or claims under similar such laws or obligations. The City's obligations under this paragraph shall not extend to any liability caused by the sole negligence of the County or its employees.

B. The County shall at all times indemnify, keep indemnified, defend and save harmless the City and/or its agents, officials and employees from any and all claims, demands, suits, actions, proceedings, loss, costs and/or damages of every kind and description including any attorney's fees and/or litigation expenses which may be brought or made against or incurred by the City on account of loss of or damage to any property or for injuries to or death of any person, caused by, arising out of, or contributed to, in whole or in part, by reason of any alleged act,

omission, professional error, fault, mistake, or negligence of the County, its employees, agents, representatives, or subcontractors, their employees, agents, or representatives in connection with or incidental to this Agreement or arising out of Worker's Compensation claims, Unemployment Compensation claims, or Unemployment Disability Compensation claims of employees of the County and/or its subcontractors or claims under similar such laws or obligations. The County's obligations under this paragraph shall not extend to any liability caused by the sole negligence of the City or its employees.

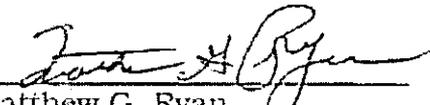
- 13. Term: The County shall continue to occupy the twenty-three and nine tenths percent (23.9%) of the Premises and Addition for forty-eight (48) months from the date of this Agreement, with automatic one (1) year renewals unless there is a change in occupancy by either party. Written Notice of any proposed changes in occupancy will be provided to the other party as provided in paragraph 5.
- 14. Termination. This Agreement may be terminated by written agreement of the City and County. Disposition of the Premises and Addition shall be determined at that time.

IN WITNESS WHEREOF, the parties hereto have executed this IGA as of the date first hereinbefore indicated:

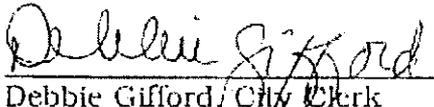
CITY OF PAGE

By: 
Michael Woods, Mayor

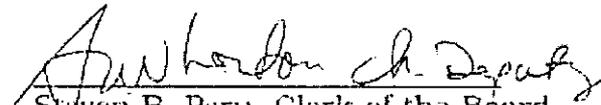
COCONINO COUNTY

By: 
Matthew G. Ryan
Chairman, Board of Supervisors

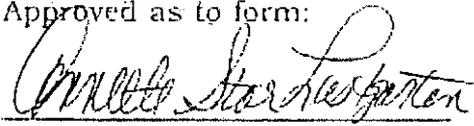
ATTEST:


Debbie Gifford, City Clerk

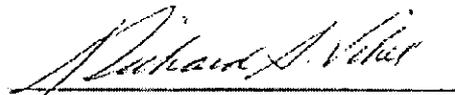
ATTEST:


Steven B. Peru, Clerk of the Board

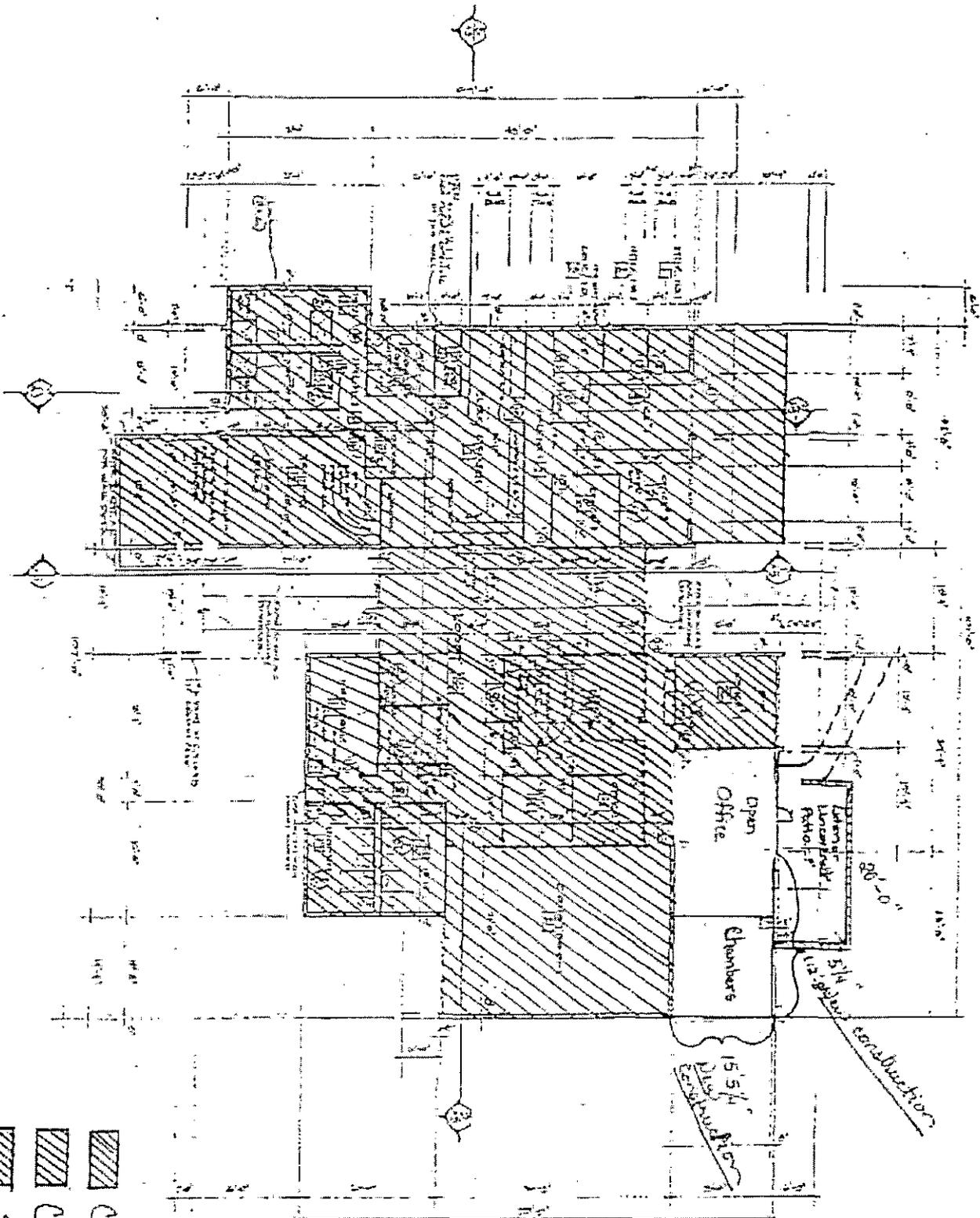
Approved as to form:


Special Assistant City Attorney
Mangum, Wall, Stoops & Warden

Approved as to form:


Deputy County Attorney

FLOOR PLAN



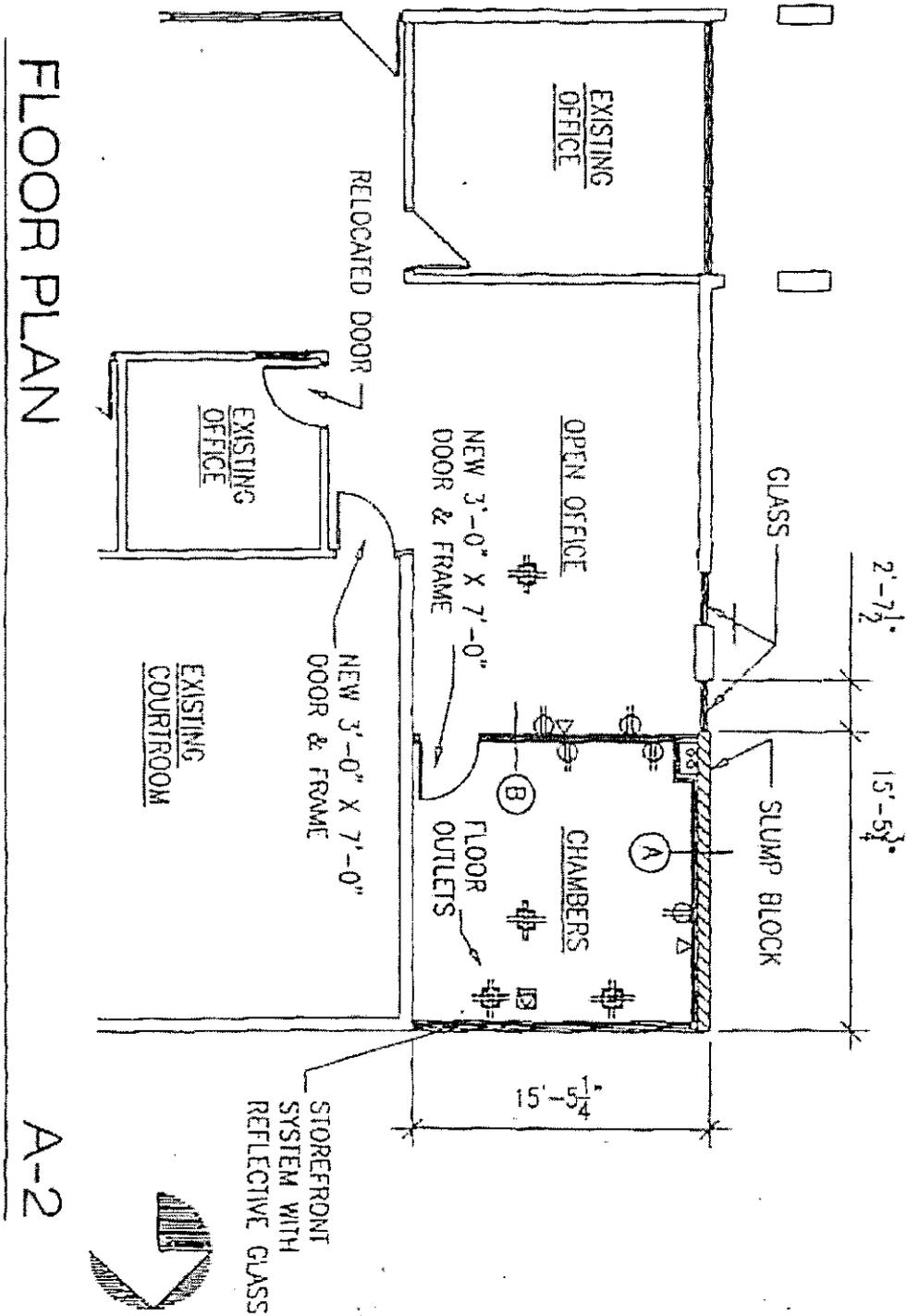
-  Cosumino Co. Justice Ct.
-  City of Page
-  Shared Space

Exterior Uncovered Ratio:
 $20' - 0'' \times 12' - 8''$
 Addition:
 $15' - 5 \frac{1}{4}'' \times 15' - 5 \frac{1}{4}''$

EXISTING SLUMP BLOCK

NORTH ELEVATION

A-5



FLOOR PLAN

A-2

EXISTING
3/5/99
AWP

ROOF & OVERFLOW DRAIN
STEEL LINTEL-DOUBLE ANGLE
6 X 3-1/2 X 5/16 (LIV)

CRICKET
4 X 12 LEDGER W/ 2-3/4" ANCHOR BOLTS @ 48" O.C.

209
203

Exhibit B– 2009 Bridging Documents

BRIDGING DOCUMENTS FOR:

**RENOVATION AND REMODEL COURTS BUILDING
COCONINO COUNTY AND CITY OF PAGE
547 VISTA AVE., PAGE, ARIZONA**

DATE: November 17, 2009

BRIDGING DOCUMENTS FOR:

**RENOVATION AND REMODEL COURTS BUILDING
COCONINO COUNTY AND CITY OF PAGE
547 VISTA AVE., PAGE, ARIZONA**

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>
1	Specific Conditions
2	Technical Outline Specifications
3	Cost Breakdown Form

SECTION 1

SPECIFIC CONDITIONS

Overview

1.1 The Coconino County Justice Court and the City of Page Magistrate Court is located in an existing one-story building located at 547 Vista Avenue (Page, AZ). The total building area is approximately 8,570 square feet. Existing court functions currently occupy 3,913 gross square feet (gsf) within the building, and the remaining 4,657 gsf is unused. This Specific Conditions Section, the Technical Outline Specifications, and the Drawings will be referred to as Bridging Documents, and these are intended to define project cost, quality, and quantities for decision-making regarding the project scope and content. The Bridging Documents are based on previous scoping and space plan exercises developed by FMS in conjunction with Coconino County and the City of Page for renovation and remodel work. In order to optimize functionality and customer service, the court functions will be expanded into the unused parts of the building. Interior finishes will be upgraded to create a consistent overall appearance for the improved environment. A back-up 911 facility will be added to serve the City of Page, and additional storage will also be provided.

1.2 Demolition and new construction will be phased so that existing business functions are able to continue uninterrupted. Phase One work shall begin in the unoccupied portion of the building. Once completed, the courts' staff and functions will move into the completed area, and Phase Two will complete the remainder of the building renovations. Site work and exterior building improvements may be completed in either or both phases.

Project Breakout

- 2.1 This project shall be broken down in the following categories as shown in the "Cost Breakdown Form".
- 2.2.1 Site Work as identified on drawings A1.0, E1.0, and FP1(See Appendix Exhibit 1)
- 2.2.2 Phase One Building Work related to the City of Page Court (See Appendix Exhibit 1)
- 2.2.3 Phase One Building related to the City of Page 911(See Appendix Exhibit 1)
- 2.2.4 Phase Two Building related to the County Court (See Appendix Exhibit 1)
- 2.2.5 Phase Two Common Use Costs (See Appendix Exhibit 1)

Scope of Work to be Priced:

3.1 The Contractor/Vendor will schedule all work to be done on a non-interfering basis with the building operation as far as is practical. The identified phasing noted on the drawings shall be used. The Lobby serving both courts needs to be completed in a manner that allows for ongoing occupancy.

Job Site Conditions (After Award of Contract If Applicable)

- 4.1 Contractor/Vendor shall take all precautions necessary to control noise, chemical spills and dust during its performance of the Work. Noise transmission to areas adjacent to the Job Site shall not exceed 60 dB during normal work hours. Contractor/Vendor shall not permit its employees to use radio equipment while on the premises.
- 4.2 Contractor/Vendor shall take all precautions necessary to protect all elements of the Work and Apparatus from damage due to wind, rain, dust, frost, freezing temperatures or other weather conditions.
- 4.3 In the course of performing the Work, Contractor/Vendor shall provide and maintain all barricades, lights and other protective devices necessary for the safety of occupants, workmen, equipment, the public, the Work, the Apparatus and other property as required by applicable laws, regulations and ordinances.
- 4.4 Contractor shall provide ongoing dust protection throughout the construction process to prevent dust migration throughout occupied areas.
- 4.5 Contractor shall provide ongoing site communication to the DR to avoid surprises to occupants.

Facility Hours of Operation

- 5.1 The facility's operating hours are as follows:
 - Monday through Friday: 7 am to 6 pm
 - Saturday: Closed
 - Sunday: Closed

Back-Up Plans

6.1 The Contractor/Vendor shall have enough equipment and employees to accommodate a backup plan. Unanticipated equipment or resource unavailability shall not be grounds for time extensions and / or delays.

Additional Contractor/Vendor Requirements

- 7.1 The Contractor/Vendor shall provide proof of insurance prior to any work being performed on the premises.
- 7.2 The Contractor/Vendor shall provide emergency contact phone numbers for after-hours unanticipated conditions of all trades to the DR.

Existing Building Description:

1.6.1 The existing building was constructed in two parts. The west side of the building was built in 1978, and it consists of 8" slump block exterior bearing walls and wood roof joists, with built-up roofing over plywood sheathing. The interior partitions are gypsum board and wood framing. The east portion of the building was built the following year, in 1979, to serve as a jail facility. Its primary structure consists of 3" metal decking on 8" CMU bearing walls.

Detailed Scope of Work:

1.7.1 The Detailed Scope of Work shall supplement the Bridging Document drawings and identify specific areas of work and recommendations that should be considered for inclusion in the Scope of Work.

Site

1.8.1 Provide scope as identified on drawings A1.0, E1.0, and FP1. Based on information provided by the City of Page Public Works, it is assumed the existing 4" sewer line is in functioning condition and no repair work is needed. Corrective action should be taken to divert water away from existing building entrances at the northeast corner of the building. Refer to the site plan for improvements.

- o Re-locate existing landscape sprinkler heads and aim away from building elements.
- o Sidewalk: 4" concrete over 4" ABC.
- o Replace existing north hose bib with a locking hose bib.
- o Provide electrical work as identified on drawing E1.0

Fire Protection

1.8.2 Provide Fire Protection work as identified on drawing FP1

- o The building will require a new 6" fire line from Vista Avenue to the new fire riser located at the most southern end of the building in the old jail portion. This fire line will also supply a new fire hydrant at approximately 60 feet from the fire riser. The actual location of the new fire hydrant will be provided by the City of Page Fire Marshal. The supply to the building will be adjusted accordingly. There will be a new 6" backflow device installed in the supply to the building.
- o A new fire flow test will be required to determine the actual available water supply. This fire flow test will be used to verify the required fire flow per the International Fire Code (I.F.C.) Table B105.1 for a 9,000 sq. ft., building of type III-A construction. The required fire flow is 1,500 G.P.M. (gallons per minute) for duration of two (2) hours. This fire flow data is also used to hydraulic calculate the automatic fire sprinkler system per the requirements of N.F.P.A.-13 and the City of Page Fire Department. The flow data will be reduced by 10% as required for the calculations.

Exterior Lighting

1.8.3 Provide new exterior security, egress and pathway lighting around the building as shown on the electrical site plan and new lighting plan.

PHASE 1- Phase One Building Work related to the City of Page Courts**Demolition (EAST)**

1.9.1 Reference the demolition drawings for walls to be demolished. Refer to Structural drawings for required lintels and support for removal of existing masonry bearing walls.

- o Demolish all existing steel plate and grating walls and doors.
- o Demolish existing floor finishes, wall finishes, ceilings and soffits.
- o Where existing utilities are present, utilities are to be demolished back to the source and capped, unless noted otherwise.

Magistrate Support Office Area (EAST)

1.9.2 The office area will be limited to approximately 1,007 sf of unused space within the existing building, adjacent to the Jail area. Existing interior partitions and finishes shall be demolished per the demolition plan. Refer to the architectural for improvements. New work shall also include the following:

- o Install new carpet tile and rubber base.
- o Paint all interior walls.
- o Install lay-in acoustical ceiling grid and panels.
- o Provide new laminate counters and work surfaces at existing transaction window.
- o 2 new workstations.
- o Provide transaction window at wall adjacent to courtroom.
- o 1 Supervisor's office. Provide wood door, knock-down aluminum frame, and hardware. Provide interior fixed window (9'-0" w x 4'-0" h).
- o 1 Judge's office. Provide wood door, knock-down aluminum frame, and hardware. Frame shall have a 20-inch wide tempered glass sidelite, full height of frame.

Magistrate Courtroom (EAST)

1.9.3 This area will support the City of Page 911 service and will function as a back-up to the existing operations. Refer to floor plans.

- o Provide and install new carpet tile and rubber base.
- o Paint all walls.
- o Install lay-in acoustical ceiling grid and panels.
- o Clean, re-seal, and secure exterior windows.
- o Furr out interior masonry walls flush with new wall surfaces.
- o Public Entrance - Provide one pair wood doors with wood frame and hardware. Each door shall have a 2'-0" x 3'-0" view window.
- o Provide rough-in for security and communications equipment.

Restrooms (EAST)

1.9.4 Accessible restrooms will serve Magistrate Court and City of Page staff. Refer to floor plans.

- o Provide and install new linoleum sheet flooring and cove base.
- o Provide and install frp to 4'-0" a.f.f. at walls.
- o Paint walls above wainscot.
- o Restroom Entrances - Provide wood door, knock-down aluminum door frame and hardware.

Break Room (EAST)

- 1.9.5 Accessible to and serves Magistrate Court and City of Page staff. Refer to floor plans.
- o Provide and install new linoleum tile flooring and rubber wall base.
 - o Paint all walls.
 - o Install lay-in acoustical ceiling grid and tiles.
 - o Provide one refrigerator with ice maker.
 - o Provide built-in millwork with upper and lower storage cabinets.
 - o Break Room Entry - Provide wood door, knock-down aluminum door frame, and hardware. Frame shall have a 20-inch wide tempered glass sidelite, full height of frame.

Storage/Utility Areas in Existing Jail

- 1.9.6 Accessible to and serves Magistrate Court and City of Page staff. Refer to floor plans.
- o Paint existing CMU walls.
 - o Provide room for 911 equipment and Magistrate Courts IT. Paint existing door and frame. Supply rough-in for future card reader.
 - o Provide steel bar door, and steel frame, and hardware at Holding Cell.
 - o Install new VCT flooring and rubber base in the following area: Corridors, and Holding Cell vestibule.
 - o Install lay-in acoustical ceiling grid and tiles, unless noted otherwise.

PHASE ONE - Phase One Building related to the City of Page 911

Demolition (EAST)

- 1.10.1 Reference the demolition drawings for walls to be demolished. Refer to Structural drawings for required lintels and support for removal of existing masonry bearing walls.
- o Demolish all existing steel plate and grating walls and doors.
 - o Demolish existing floor finishes, wall finishes, ceilings and soffits.
 - o Where existing utilities are present, utilities are to be demolished back to the source and capped, unless noted otherwise.

Back-up 911 Facility

1.10.2 This area will support the City of Page 911 service and will function as a back-up to the existing operations. It is assumed that design requirements will meet NFPA requirements for emergency operations facilities.

- o Provide and install new carpet tile and rubber base in open office area.
- o Paint all walls.
- o Install lay-in acoustical ceiling grid and tiles.
- o Provide one single-fixture restroom.
- o HVAC - This area shall be provided with a dedicated HVAC system in compliance with NFPA 1221, A means of manually closing all outside air intake ducts shall be provided with the controls being located in the 911 Control or Dispatch area per NFPA 1221. See attached HVAC plan for additional details.
- o Power - This area shall be provided with power that is served from utility power, an uninterrupted power system and a propane emergency generator. The UPS and generator shall be provided with annunciator systems that report to a monitored location. A stored emergency power supply system shall be provided in accordance with NFPA 1221. Surge arresters and transient voltage surge suppression shall be provided at the service entrance and the panels serving radio and the 911 equipment. The transient voltage surge suppression system shall be capable of provide 300 KA of protection, shall be capable of stopping multiple events, have the capability to send an alarm when it has been incapacitated and have the ability for the protection modules to be replaced. All power circuits serving radio equipment and the 911 equipment shall be fed from an isolated ground panel and be provided with isolated ground receptacles.
- o Emergency Power Systems - The emergency generator shall be provided with a propane system capable of supplying fuel for the full load of the generator with a minimum run time of 24 hours in accordance with NFPA 1221. An uninterruptable power supply (UPS) shall be provided to serve the 911 area and equipment rooms. The UPS shall be served by solid electrolyte batteries sized for the maximum load of the UPS for a 15 minute duration. The UPS shall be capable of sensing and transferring from utility source to battery with zero second delay in accordance with Type "O" SPESS back-up requirements in NFPA 111.
- o Lighting - See attached lighting plan for work in this area. All lighting in the 911 area shall be on the emergency generator and shall also be provided with battery back-up in accordance with NFPA 1221.
- o Lightning Protection - The building shall be provided with a Franklin style lightning protection system that shall be installed and certified as a UL Master Labeled system.
- o Fire Protection - See fire protection descriptions at the end of narrative for work required in this area.

Radio Equipment Room

- 1.10.2 Accessible to and serves Back-up 911 Facility. Refer to floor plans.
- o Provide a radio frequency (RF) shielding on existing walls: 20ga. Copper panels secured to existing walls full height to the underside of the roof deck.
 - o Paint existing door and frame. Supply rough-in for future card reader.

1.10.3 HVAC - This area shall be provided with a dedicated HVAC system in compliance with NFPA 1221, A means of manually closing all outside air intake ducts shall be provided with the controls being located in the 911 Control or Dispatch area per NFPA 1221. See attached HVAC plan for additional details.

1.10.4 Power - This area shall be provided with power that is served from utility power, an uninterrupted power system and a propane emergency generator. The UPS and generator shall be provided with annunciator systems that report to a monitored location. A stored emergency power supply system shall be

provided in accordance with NFPA 1221. Surge arresters and transient voltage surge suppression shall be provided at the service entrance and the panels serving radio and the 911 equipment. The transient voltage surge suppression system shall be capable of provide 300 KA of protection, shall be capable of stopping multiple events, have the capability to send an alarm when it has been incapacitated and have the ability for the protection modules to be replaced. All power circuits serving radio equipment and the 911 equipment shall be fed from an isolated ground panel and be provided with isolated ground receptacles.

1.10.5 Emergency Power Systems - The emergency generator shall be provided with a propane system capable of supplying fuel for the full load of the generator with a minimum run time of 24 hours in accordance with NFPA 1221. An uninterruptable power supply (UPS) shall be provided to serve the 911 area and equipment rooms. The UPS shall be served by solid electrolyte batteries sized for the maximum load of the UPS for a 15 minute duration. The UPS shall be capable of sensing and transferring from utility source to battery with zero second delay in accordance with Type "O" SPSSS back-up requirements in NFPA 111.

1.10.6 Fire Protection - The pre-action fire sprinkler system with double interlock shall be deleted and a wet-sprinkler system shall be installed in the 911 Dispatch area.

PHASE 2 - Phase Two Building related to the County Court Demolition (WEST)

1.11.1 Reference demolition drawings for walls to be demolished.

- o Demolish all existing ceiling grid and tiles.
- o Demolish existing restroom plumbing fixtures and restroom finishes.

Existing Justice Courtroom (WEST):

1.11.2 Scope will be limited to new finishes, seating, and rough-in for AV and security equipment. The courtroom is approximately 784 square feet. Refer to floor plans.

- o Install new carpet tile and rubber base throughout.
- o Paint all interior walls.
- o Install lay-in acoustical ceiling grid and tiles.
- o Touch up and re-finish existing doors and frames as needed. Replace door hardware.
- o Touch up and re-finish existing built-in furniture as needed.
- o New loose seating to be purchased.
- o HVAC - The existing HVAC units are to be replaced and ductwork rebalanced to provide adequate outside air and cooling based on occupant loads. See HVAC plan for new layouts.
- o Power - Add conduit and rough-in for video cameras and audio systems as shown on the new power plan. Existing receptacles are to remain.
- o Lighting - Provide new light fixtures per the lighting plan.
- o Fire Protection - See fire protection descriptions at the end of narrative for work required in this area.

Justice Court Support Office Area (WEST):

1.11.3 The office area will be limited to the current office area, encompassing 1,068 square feet. Exterior walls shall remain as-is. Refer to floor plans. New construction shall also include the following:

- o Install new carpet tile and rubber base.
- o Paint all walls.
- o Install lay-in acoustical ceiling grid and tiles.
- o 2 new workstations
- o Provide new laminate countertops and work surfaces at existing transaction window.
- o Replace door hardware for each existing office. Touch up and re-finish existing doors and frames as needed.
- o Suite Entry - Provide exterior hollow metal door, hollow metal frame, and hardware.

Justice Court Break Room (WEST):

1.11.4 Accessible to and serves Justice Court staff. Refer to floor plans.

- o Install new linoleum flooring and rubber wall base.
- o Paint all walls.
- o Install lay-in acoustical ceiling grid and tiles.
- o Provide one single-basin sink.
- o Provide one refrigerator with ice maker.
- o Provide millwork with plastic laminate upper and lower cabinets and laminate countertop.
- o Break Room Entry - Provide one door, door frame and hardware. Frame shall have a 20-inch wide tempered glass sidelite, full height of frame.

Judge's Restroom (WEST):

1.11.5 Accessible to and serves Justice Court staff. Refer to floor plans.

- 2 Install new linoleum sheet flooring and cove base.
- 3 Provide and install frp to 4'-0" a.f.f. at walls.
- 4 Paint walls above wainscot.
- 5 Provide gypsum board ceiling.

PHASE TWO - Common Use Costs

Public Restroom (WEST):

1.12.1 Accessible restrooms will serve Justice Court staff and public visitors.

- 6 Provide and install new porcelain tile flooring and wall base.
- 7 Provide and install new wall tile to 4'-0" a.f.f. at walls behind and adjacent to plumbing fixtures.
- 8 Paint all walls without tile.
- 9 Provide gypsum board ceiling.

Main Lobby and Common Areas:

1.12.2 Work in Main Lobby area shall be complete during nights and weekends only. Space shall remain fully

functional and in use during normal business hours. Restrict public access to areas under construction.

- o Construct 195 sf conference room. Exterior wall to be insulated glazing in an aluminum frame system to underside of existing soffit. Refer to structural drawings for new footing requirements. Conference Room Entry - Provide wood door, knock-down aluminum frame and hardware. Frame shall have a 20-inch wide tempered glass sidelite, full height of frame. Install carpet tile flooring and base.
- o Demolish existing entry door and portion of exterior wall. Extend lobby as indicated on plan. Refer to structural drawings for new footing requirements. Provide new automatic sliding door and hardware.

10 Demolish existing floor finish and install new porcelain tile flooring and tile cove base in main lobby.

11 Provide new carpet tile and base in existing arraignment rooms. Replace existing door hardware.

12 Paint all walls.

13 Install lay-in acoustical ceiling grid and tiles.

- o Provide new interior signage.

Building Exterior:

1.12.3 Patch, repair and re-stucco per specification the entire building.

- o Paint all exterior stucco.

MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL:

1.13.1 The following scope of work shall be provided per individual identified category:

- o Site Work as identified on drawings A1.0, E1.0, and FP1(See Appendix Exhibit 1)
- o Phase One Building Work related to the City of Page Courts (See Appendix Exhibit 1)
- o Phase One Building related to the City of Page 911(See Appendix Exhibit 1)
- o Phase Two Building related to the County Courts (See Appendix Exhibit 1)
- o Common Use Costs (See Appendix Exhibit 1)

Mechanical (HVAC)

1.13.2 The existing HVAC units and ductwork will be replaced and upgraded with new more efficient equipment and equipment capable of providing the amount of outside air required by the current mechanical code. New rooftop package units will be placed in generally the same locations as the existing units. New distribution ductwork and diffusers will be provided to match the new zoning requirements and ceilings. See HVAC plans for quantities and specifications of equipment and general ductwork layouts

Plumbing

1.13.3 The plumbing scope consists of a combination of reworking existing restrooms for ADA compliance and adding new restrooms and break areas as listed above. All existing plumbing fixtures will be replaced with new as indicated on the plumbing plans. All piping shall be new per the technical outline specifications except where noted on the plumbing plans as existing to be reused.

General Fire Protection (Sprinklers)

1.13.4 This site is located at the southwest corner of Vista Avenue and North Lake Powell Boulevard in Page, Arizona. The building is occupied by the City of Page and flanked by two buildings occupied by the city. The existing 9,000 square foot building has no fire sprinkler system install. There is an existing fire hydrant at the drive on Vista Avenue and one to the northeast on Lake Powell Boulevard. These fire hydrants provide minimal coverage for all three existing buildings.

1.13.5 A new wet pipe, hydraulically calculated, automatic fire sprinkler system shall be installed throughout the existing building with the exception of the 911 Back-up Dispatch and the 911 / I.T. Equipment Room. These areas and any "raised floors" in those rooms will be equipped with a double-interlocked Pre-Action system. No gaseous fire suppression system will be installed in this scope of work in the two rooms mentioned above.

1.13.6 Automatic sprinkler system(s) will be designed to comply with the following codes and standards:

- o 2006 International Fire Code with City of Page amendments
- o 2008 Edition of NFPA-13, Standard for the Installation of Sprinkler Systems
- o 2007 Edition of NFPA-24, Installation of Private Fire Protection Mains
- o 2007 Edition of NFPA-72, National Fire Alarm Code
- o 2009 Edition of NFPA-75, Standard for Protection of I.T. Equipment
- o 2007 Edition of NFPA-1221, Standard for Installation, Maintenance, and Use of Emergency Services Communications Systems

1.13.7 All equipment and system components shall be new and approved for fire protection use.

1.13.8 Sprinkler system design considerations shall be as follows:

- o Office occupancies: Wet system spaced to a maximum of 225 sq. ft. per sprinkler, utilizing quick response sprinklers installed according to the manufacturer's data sheets. The system shall be designed to provide a density of .10 gpm over the most remote 1500 sq. ft.
- o Storage Areas: Wet system spaced to a maximum of 130 sq. ft. per sprinkler. The system shall provide 0.20 gpm per sq. ft. per 1500 sq. ft. of remote area
- o The new fire riser location will be provided with an exterior door labeled "FIRE RISER ROOM". There will be a manifold riser with one wet riser and one Pre-Action riser. There shall be 3 foot clearance for the riser equipment. A two-way, 2 1/2" by 4" fire department connection with check valve and ball drip will be required. A horn / strobe will be used in lieu of a bell at the fire riser location. A fire riser room without an exterior door maybe used with the location pre-approved by the fire marshal.
- o The Pre-Action system for the 911 areas shall be a double-interlock, electric - pneumatic with a riser mounted compressor. Smoke detectors shall be installed (by the fire alarm

sub-contractor) and wired to the Pre-Action panel provided and installed by the fire sprinkler sub-contractor.

1.13.9 Sprinkler system monitoring and alarms:

- o All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels, water flow switches on all sprinkler systems shall be electrically supervised.
- o Alarm, supervisory and trouble signals shall be distinctly different and automatically transmittable to an approved central station; remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the builder's official shall sound an audible signal at a constantly attended location.
- o Exceptions:
 - o Underground key or hub valves in roadway boxes are not required to be monitored.
 - o Exterior backflow prevention device control valves to be chained opened.

1.13.10 Approved audible devices shall be connected to every sprinkler system. Such sprinkler water-flow alarm devices shall be activated by the water-flow equivalent to one sprinkler of the smallest orifice size installed on the system. Alarm devices shall be provided on the exterior of the building in an approved location

Sprinkler Types:

- o Standard response, 286 degrees F sprinklers will be installed in electrical transformer rooms and electrical switchgear rooms.
- o Quick response 1/2" orifice sprinklers will be installed in all ceiling areas. Semi-recessed white polyester coated sprinklers to be used in finished ceiling areas or as per architect direction.
- o Standard coverage upright 212 degree F temperature, 1/2" orifice sprinklers will be installed in exposed areas or as per architect direction.
- o Fire sprinkler piping may be painted per architect direction. Fire sprinklers heads may not.

Electrical

Service Entrance and Distribution

1.13.11 See attached one-line diagrams for work required to the service entrance section and building distribution system.

Fire Alarm

1.13.13 The existing fire alarm system shall be removed and replaced. The new fire alarm system shall consist of a Class "A" addressable fire alarm system which shall provide monitoring and notification.

Building Grounding

1.13.14 The existing building grounding system shall be brought into compliance with the National Electric Code, including the radio antenna on the exterior of the building. See one-line diagram for grounding work to be performed.

Interior Lighting

1.13.15 See individual area descriptions above and attached lighting plan for new lighting fixture layouts and fixture specifications.

Interior Power

1.13.16 See individual area descriptions above and attached power plan for outlet layouts and locations.

SECTION 2

TECHNICAL OUTLINE SPECIFICATIONS

Substructure: *Elements below grade and in contact with the ground.*

Foundations:

Formwork:

Any standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.

Reinforcement:

Standard Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420).
Fabrication of Reinforcement: Comply with ACI SP-66.

Concrete Materials:

Cement: ASTM C 150, Type I - Normal.
Normal Weight Aggregates: ASTM C 33.
Fly Ash: ASTM C 618, Class C or F.
Water: Clean and not detrimental to concrete.

Concrete:

Normal Weight Concrete: Proportions in compliance with ACI 211.1 recommendations.
Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.

- Strength at 28 Days: Minimum 3000 psi (20.7 MPa).
- Allowable Slump: 4-inches (100 mm).
- Maximum Water-Cementitious Material Ratio: 0.35.

Place concrete in accordance with ACI 304R. Place and finish concrete for floor slabs in accordance with ACI 302.1R. Do not interrupt successive placement; do not permit cold joints to occur.

Curing: Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury. Normal Concrete: Maintain protection for not less than 7 days. High Early Strength Concrete: Maintain protection for not less than 4 days.

Shell: *The superstructure, exterior enclosure, and the roofing.*

Superstructure:

Roof:

No changes.

Exterior Enclosure:

Exterior Walls:

PORTLAND CEMENT PLASTER (STUCCO):

Three-coat application, mixed, proportioned, and installed in accordance with ASTM C-842 and ASTM C 926. Install over masonry or on metal lath over studs. Finish Texture: Sprayed.

Materials: ASTM C 150 Type II Portland cement; Hydrated lime shall conform to ASTM C-207, Type S; ASTM C 926 aggregate; clean, potable water. Bonding Agent: ASTM C 631.

Moisture Control: Prevent the accumulation of water into or behind the plaster, either by condensation or leakage into the wall construction, in the design and detailing of the wall assembly.

Provide corrosion resistant flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, and at the base of the wall.

Wall system design to eliminate vapor condensation within the wall assembly. All finished plastering work shall be performed in a highly skilled manner with surfaces true and accurate.

Provide a barrier over framed construction consisting of a minimum of two-layers asphalt felt meeting ASTM D-226, Type 1, Grade D or building code-approved alternate.

Protect sills of rough openings with ice and water shield type membranes. Where casing bead is used back-to-back at expansion joints back joints with barrier membrane.

Keep plaster a minimum of 6 to 8-inches above grade in framed construction.

Provide 3/4-inch expansion joints at the following locations:

- Where building movement is anticipated.
- At dissimilar substrates.
- At floor lines in wood framed constructions.
- Where the stucco meets dissimilar materials.

Provide control joints at the following locations:

- To limit cracking in the system at a maximum area of 144 square feet (13.4 square meters).
- Length to width ratio should not be more than 2.5:1.
- Off the corners of window/door heads or jamb.
- At dissimilar substrates.

Increase joint requirements where thicker stucco or special structural conditions exist.

Provide appropriate sealant at stucco terminations using a sealant designed for cement/stucco use.

Solid Substrates:

- Provide surface plane tolerance not to exceed 1/4-inch in 10 feet (3 mm in 1m).
- Concrete—prevent the use of form oil, curing compounds or other bond breakers that inhibit bond to the surface or provide for their removal.
- Concrete Masonry—provide open texture concrete masonry units with flush joints.
- Brick – soft to medium fired, porous to provide acceptable bond for stucco.

Preparation

Evenly dampen interior and exterior wall surfaces exhibiting high suction to provide proper suction prior to plastering. Allow sufficient time for surface suction to equalize. Clean surfaces receiving bond plaster of all dust, loose particles, and other foreign matter. Remove laitance and efflorescence by washing and then rinse with clean water. Completely remove any grease or oil. Apply bonding agent over all concrete surfaces indicated to receive plaster, by brush, spray or roller in strict accordance with manufacturer's printed instructions, covering the surface completely. Apply plaster when bonding agent is dry to touch or within a one month period from application. Concrete surface shall have sufficient roughness to provide a proper bond. If surfaces are not rough, hack or bush-hammer, or apply suitable bonding agent in accordance with the manufacturer's instructions. Existing plaster surfaces shall be cleaned of loose or damaged materials to allow for proper repair of finishes. Patch and repair lath as required.

Curing

Cure and protect plaster from too rapid or too slow drying because of weather or lack of air circulation. All wall surfaces shall be moistened to avoid excessive suction of moisture from plaster into the masonry wall. Scratch and Brown coats shall each be moisture cured by fog spray or a similar approved method that keeps the plaster continuously moist for 48 hours, allowing slow drying, after which the finish coat is applied. Finish coat shall receive a minimum of four (4) applications of fog spray during curing. The first spray shall be applied approximately 8 hours after completion of the finishing operation. Subsequent sprayings shall take place at about 8 to 12 hour intervals. The time between fog spray applications shall be varied, as required, to compensate for prevailing conditions of wetness and dryness and to insure plaster remains moist for minimum of 48 hours.

Exterior Openings:

Roofing:

Roof Coverings:

Roofing shall be patched and repaired as required for new construction per the manufacturer's written instructions and details to maintain the existing warranty.

Roof Openings:

Roof Hatches:

Single leaf, factory-assembled, mounted on dual-wall, insulated curb suitable to roof deck and roofing membrane.

Material: Steel, galvanized or galvalnealed.

Thickness: 18 gage.

Curb Height From Top of Deck: 12 inches.

Finish: Manufacturer's standard.

Operation: Manual operation from inside and outside. Spring- or hydraulic-assistance with force sufficient to open despite 10 psf snow or wind load. Positively lock in the wide-open position. Hold lid closed when subjected to up to 30-psf wind uplift pressure. Automatically lock lid when manually closed.

Size: 30 x 54 inches.

Interiors: *Interior construction, stairs, finishes, and fixtures, except fixtures associated with services and specialized equipment.*

Interior Construction:

Custom Cabinets and Casework:

Standards: Comply with requirements of AWI/AWMAC Quality Standards Illustrated for Premium Grade.

Construction Style: Flush overlay.

Decorative Plastic Laminate: NEMA LD 3; colors and patterns as scheduled.

Solid Plastic Surfacing: ANSI Z124.3; colors and patterns as scheduled.

Cabinet Hardware: BHMA A156.9.

Finish: Except as otherwise indicated, satin bronze or satin stainless steel.

Countertops:

Standards: Comply with requirements of AWI/AWMAC Quality Standards Illustrated Quality Standards for Premium Grade.

Plastic Laminate: NEMA LD 3, Grade GP-50; color and pattern as indicated.

Firestopping:

Seal spaces around pipes, conduits, and ducts that penetrate fire rated walls, partitions, and floors using assemblies having equal or greater fire rating as the element being penetrated when tested in accordance with ASTM E 814. Use any material that is UL listed for the specific construction, type of penetration, and fire rating. Install in strict accordance with manufacturer's instructions and conditions of listing.

JOINT SEALERS

Seal the following joints with joint sealer:

- Expansion and control joints in exterior walls, copings, parapets.
- Joints between door and window frames and adjacent materials, in exterior walls only.

- Control joints in interior partitions, including portion above ceilings.
- Expansion and control joints in solid exterior soffits.
- *Control joints in interior ceilings and soffits.*
- Control joints in ceramic tile flooring.
- Open joints in concrete paving.

Exterior Joint Sealers:

For All Locations, Unless Otherwise Indicated: Polyurethane nonsag gunnable elastomeric sealant, complying with ASTM C 920, Class 25, single- or multi-component, Uses NT, M, and A. Color: To match adjoining materials.

Concrete Paving: Polyurethane, pourable, elastomeric sealant, complying with ASTM C 920, Class 25, single- or multi-component, Uses T and M. Color: Concrete gray.

Interior Sealers:

For Joints Exposed to View: Acrylic latex, water-based, single part, paintable sealant; white.

Joints in Floors: Polyurethane, pourable, elastomeric sealant, complying with ASTM C 920, Class 25, single- or multi-component, Use T and M.

In Wet Areas, Including Kitchens, Baths, and Locker Rooms: Silicone gunnable nonsag sealant, complying with ASTM C 920, Class 25, Uses NT, M, and A, with mildew-cide.

Partitions:

MASONRY PARTITIONS

Masonry Mortar: Use site- or ready-mixed mortar. Ready-Mixed: ASTM C 1142 with portland or masonry cement. Site-Mixed: ASTM C 270, with portland or masonry cement, proportion specifications.

Mortar Mix: Type S with gray cement with water repellent.

Masonry Grout: Use ready-mixed grout conforming to ASTM C 94/C 94M.

Reinforced Masonry: 3,000 psi (21 MPa) strength at 28 days; 8-10 inches (200-250 mm) slump; coarse or fine grout.

Steel Wire for Masonry Joint Reinforcement: Galvanized steel, complying with ASTM A 951/A 951M.

Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420) deformed billet steel bars, unfinished.

METAL SUPPORT ASSEMBLIES

Non-Loadbearing Wall Framing: Members formed from ASTM C 645 galvanized steel sheet. Sizes and gages of members as necessary to comply with ASTM C 754 at spacing indicated for maximum deflection of $L/240$ at 5 psf. Fasteners: ASTM C 1002 self-drilling, self-tapping screws. Installation of Studs for Screw Application of Gypsum Panels: Comply with ASTM C 754.

Ceiling Suspension System: Grid Suspension System: Manufactured, interlocking system formed from ASTM C 645 steel, designed for screw application of gypsum panels. Install in accordance with manufacturer's instructions. Level to 1/1200.

Metal Framing: Members formed from ASTM C 645 galvanized steel sheet. Carrying Channels: Cold-rolled steel channels complying with ASTM C 754. Ceiling Hangers: Comply with ASTM C 754.

Installation of Framing for Screw Application of Gypsum Panels: Comply with ASTM C 754; level to 1/1200.

Bracing: Same material as framing, gage as required for function.

Wire Ties: Carbon steel wire, galvanized per ASTM A 641/A 641M, regular coating.

Type 1 Wall - Framing shall extend from floor slab to underside of ceiling grid. 1 layer of 5/8" Type 'X' gypsum board each side of framing. Brace top of wall to structure above with stud kickers at 4'-0" on center, alternate directions.

Type 2 Wall - Framing shall extend from floor slab to underside of ceiling grid. 2 layers of 5/8" Type 'X' gypsum board each side of framing. Brace top of wall to structure above with stud kickers at 4'-0" on center, alternate directions.

Type 3 Wall - Framing shall extend from floor slab to 6" above ceiling grid. 1 layer of 5/8" Type 'X' gypsum board each side of framing. Brace top of wall to structure above with stud kickers at 4'-0" on center, alternate directions.

Type 4 Wall - Framing shall extend from floor slab to 6" above ceiling grid. 2 layers of 5/8" Type 'X' gypsum board each side of framing. Brace top of wall to structure above with stud kickers at 4'-0" on center, alternate directions.

Type 5 Wall - Framing shall extend from floor slab to underside of structural deck. 1 layer of 5/8" Type 'X' gypsum board each side of framing, full height. Top of wall to be connected to deck with a deflection track.

Type 6 Wall - Framing shall extend from floor slab to underside of structural deck. 2 layers of 5/8" Type 'X' gypsum board each side of framing, full height. Top of wall to be connected to deck with a deflection track.

Type 7 Wall - Furring shall extend from floor slab to 6" above ceiling grid. 1 layer of 5/8" Type 'X' gypsum board on the exposed side. Brace top of wall to structure at 4'-0" on center, maximum.

Type 8 Wall - 7'-0" maximum height low wall. Stud framing (3 5/8" studs unless noted otherwise) with 16 gage top and bottom tracks with #10 screw at each side of each stud and 0.145-inch diameter shot pins at 2'-0" on center. Provide back-to-back double studs at each end of wall and at 4'-0" on center maximum; connect studs with (2) #10 screws at 1'-0" on center. Install a 4" x 4" x 0'-3" long 12-gage clip angle at each double stud, connect to double studs with (4) #10 screws to studs and (4) 0.145-inch diameter shot pins into slab. Install 5/8" Type 'X' gypsum board on sides of exposed framing and pre-manufactured extruded aluminum trim on top and wall ends. Trim shall be taped to gypsum board for concealed finish.

Type 9 Wall - One-hour rated shaft wall. Framing shall extend from floor slab to underside of structural deck. 1 layer of 5/8" Type 'X' gypsum board exposed side of framing and 1" gypsum shaftliner board on concealed side, both sides full height. Top of wall to be connected to deck with a deflection track and UL listed joint assembly matching wall rating.

Type 10 Wall - Two-hour rated shaft wall. Framing shall extend from floor slab to underside of structural deck. 2 layers of 5/8" Type 'X' gypsum board exposed side of framing and 1" gypsum shaftliner board on concealed side, both sides full height. Top of wall to be connected to deck with a deflection track and UL listed joint assembly matching wall rating.

Interior Openings:

WOOD DOORS AND FRAMES

Wood-Veneered Flush Wood Doors: Grade: AWI/AWMAC (QSI) Premium Grade. Construction: Fire Doors Rated Over 20 Minutes: FD-5. 20-Minute Rated Doors: PC-5. Interior Doors: PC-5. Veneer: Match existing.

Frame trim and stain shall match existing.

Hardware Reinforcement in Particleboard Cores: Provide solid blocking for closers.

Finish: Factory-applied stain and sealer to match existing doors.

Warranty on Solid Core Interior Doors: Lifetime.

ENTRANCES AND STOREFRONTS

Metal-Framed Storefront: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, panels, and doors, complete with glazing, glazing seals, flashings, and anchors. Frame Members: Tubular, with internal drainage gutters and weeps. Glazing: insulated. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes. Gaskets and Setting Blocks: EPDM, ASTM C 864; or silicone rubber, ASTM C 1115.

All-Glass Entrances and Storefronts: Automatic Swinging Entrance Doors: Glazed aluminum, factory-assembled. Configuration: Single swinging out. Actuators: Complying with ANSI/BHMA A156.10; motion detectors, unless otherwise indicated. Locks: Exit device. Finish: Anodized, natural. Hardware Finish: Match doors.

HARDWARE

General Requirements: Provide for each category of hardware, the products indicated. Alternate manufacturers must be pre-approved by the owner and the architect. Doors shall be prepared for hardware installation by the contractor. All finishes shall be US26D unless specified otherwise.

Hinges shall be fully mortised, ball bearing with non-removable pin (NRP) at locking doors. Provide three (3) hinges (per leaf) on standard size doors and four (4) hinges (per leaf) on oversized doors. Oversized doors exceed 3'0" in width and 7'0" in height. Size hinges per manufacturer's recommendations.

Manufacturer: Stanley or Hager. Interior doors: Stanley FBB-179 or Hager BB1279 (standard Weight Ball Bearing). Exterior doors: Stanley FBB-168 or Hager BB1168/1199 (heavy Weight Ball Bearings)

Flush Bolts and Door Coordinators: Automatic - Metal Doors: Ives FB30 Series. Automatic - Wood Doors: Ives FB40 Series. Self-latching - Metal Doors: Ives FB50 Series. Self-latching - Wood Doors: Ives FB60 Series.

Door Coordinator: Ives.

Lock Sets and Latch Sets:

Manufacturer - Sargent "10 line" with "LL" lever trim design and standard curved lip box strike. Backset to be 2 3/4" unless otherwise noted. All locks shall be equipped with construction cores. Provide permanent cores to owner for keying into existing key system. All hardware shall match the existing installed hardware. Contractor is to prepare door to receive the hardware listed.

Provide keys as follows

- 2 Control keys
- 5 Construction keys
- 3 Change keys per lock

All doors to use Sargent door hardware.

- Storage Room 28-60-10G04 LL
- Entrance/Office 28-60-10G05 LL
- Passage Latch 28-60-10U15 LL
- Classroom/Conference: 28-60-10G37 LL (Use for card reader doors)

Wall/Floor Stop: Interior wall: Hager 232W, forged aluminum with concealed screw into blocking. Interior floor: Hager 243F, 1/2 dome type, 1 5/8" overall height, solid cast. Exterior floor: Hager 258F, forged brass with keeper.

Silencers: Provide molded rubber silencers for frames that do not have weather stripping or smoke gaskets. Install in frame jamb (latch side) for all single doors and in frame head for all double doors. Provide 3 (per jamb) or 2 (per head) on standard size doors and 4 (per jamb) or 3 (per head) on oversized doors. Manufacturer: Hager 307D

Closers: All closers shall have cast iron body with aluminum finish and equipped with three operational valves. All closers sized by the installing contractor. Parallel arm application preferred. Provide thru-bolts on all wood doors for mounting. Manufacturer: LCN 4041 Series, outside trim as needed.

Hold-Open: Manufacturer: Ives, model 52 x 5 inches.

Threshold: Manufacturer: Pemko, Reese, or National Guard, 1/4-inch high saddle threshold.

"Storefront" Glass/Alum. Door: Two pair pivot hinges top and bottom. Standard horizontal push/pull bar. Closer. Other hardware as listed in hardware schedule.

Dead Lock: Manufacturer: Adams-Rite, Series MS1850S X thumb turn 4066. Furnish backset to center of stile.

Exit Devices: Exit devices shall be rim type with lever and cylinder for outside operation and listed with UL under life safety section. All exit devices to be ADA compliant. Manufacturer: Sargent, series compatible with application location. Contractor shall submit proposed series type for approval prior to ordering.

Weather strip: Manufacturers: National Guard 700N, Reese 755, Hager 290S 881SN or Pemko 290S.

Astragal: Manufacturer: Pemko 355CV

Door sweeps: Manufacturer: National Guard 200NA or Pemko 315CN

Automatic Door Bottom: Manufacturer: Pemko 40301 Surface Mounted

GLAZING

Use glass types as follows:

- Exterior Windows and Storefront: Insulating glass; gasket glazed with supplementary sealant.
- Exterior Doors and Sidelights: Fully tempered insulating glass; gasket glazed.
- Fire-Rated Doors and Windows: Ceramic glass; wet glazing method.
- Interior Doors and Sidelights: Fully tempered single glass; dry glazed.

Insulating Glass: Sealed insulating glass units, with glass to elastomer seal; with independent certification showing compliance with ASTM E 2190. Outer Pane: 6 mm fully-tempered float glass; tinted. Inner Pane: 6 mm annealed float glass; untinted. Low-E Coating: Colorless, on No.2 surface. Seal: Polyurethane. Warranty: 5 years, no fogging due to seal failure.

Float Glass: ASTM C 1036, Quality Q3; heat strengthened and fully tempered also complying with ASTM C 1048.

Safety Glazing: 6 mm fully tempered float glass complying with ASTM C 1048.

Exterior Glazing Sealant: Silicone, acid-curing, complying with ASTM C 920, Class 25, Grade NS, Uses NT, A and G; install in accordance with ASTM C 1193 and GANA's FGMA Sealant Manual.

Interior Glazing Sealant: Clear silicone.

Interior Finishes:

GYPSUM BOARD

Gypsum Board: ASTM C 1396/C 1396M. Gypsum Wallboard: Core: Type X - special fire-resistant. Backing: Paper-backed. Thickness: 5/8 inch. Edge Configuration: beveled.

Gypsum Ceiling Board: Incombustible, non-sag core; 5/8 inch thick; tapered edge.

Gypsum Shaftliner Board: Core: Type X - fire-resistant. Thickness: 1 inch. Edge Configuration: square.

Glass Mat Water-Resistant Gypsum Backing Panel: ASTM C 1178/C 1178M. Core: Type X (water-resistant and special fire-resistant). Thickness: 5/8 inch. Edge Configuration: Square.

Gypsum Board Accessories: Corner Beads and Trim: Galvanized steel. Finishing System: ASTM C 475/C 475M; ready-mixed vinyl-based joint compound; finish in accordance with ASTM C 840, Level 4. Screws: ASTM C 1002.

TILE

Installations:

Interior Concrete Floors: Thinset Epoxy Mortar and Grout Installation: TCA F131. Mortar and Grout: Epoxy type. Tile: Unglazed ceramic mosaic tile.

Interior Walls: Organic Adhesive Installation: TCA W223. Adhesive: Organic type; Type I for wet areas and Type II for dry areas. Tile: Unglazed ceramic mosaic tile. Grout: Epoxy type grout; color as scheduled.

Tile: Ceramic Mosaic Tile: Color, finish, and size as scheduled. ANSI A137.1; moisture absorption 0.5 percent or less. Trim Units: Matching bead, cove, and surface bullnose shapes in sizes to coordinate with field tile.

Bond Coat: Where epoxy type bond coat is required, comply with ANSI A118.3.

Adhesive: Where organic type is indicated, comply with ANSI A136.1.

Grout: Where epoxy type is indicated, comply with ANSI A118.3.

Accessories: Special Sealant: Chemical-resistant type compatible with chemical-resistant mortar and grout.

CEILINGS

Grid-Supported Acoustical Ceilings: Acoustical Products: Characteristics measured in conformance with classification system of ASTM E 1264. Suspension Systems: Comply with ASTM C 635. Panels and grid as scheduled. Installation: Suspension System: Comply with ASTM C 636/C 636M, and manufacturer's instructions.

Acoustical Units: Install in accordance with manufacturer's instructions.

FLOORING

Resilient Tile Flooring: Lenoleum Tile: ASTM F 2034; color and size as scheduled.

Resilient Base: Base: Provide rubber, top set coved design; height of 4 in; satin finish; 4'-0" lengths; color as scheduled. Accessories: Premolded external corners, internal corners, and end stops.

Carpet Tile: Color and style as scheduled. Installation: Comply with CRI 104; install in pattern indicated on schedule.

PAINTS AND COATINGS

Materials: Provide fillers, undercoats, primer, and finish coats from Dunn Edwards. All surfaces shall be prepared as required by the manufacturer. Quality Level: Provide manufacturer's best quality paint of each of the types specified, in containers that are fully labeled with manufacturer's complete product identification.

Interior Opaque Coating Systems:

- Concrete and Brick Masonry: Semigloss Alkyd Enamel Finish: Primer: One coat alkali-resistant acrylic latex interior primer. Finish: Two coats semigloss alkyd interior enamel.
- Gypsum Wallboard: Eggshell Acrylic Enamel Finish: Primer: One coat latex interior primer. Finish: Two coats low luster or eggshell latex interior enamel.
- Ferrous Metal: Eggshell Acrylic Enamel Finish: Primer: One coat rust-inhibitive alkyd or epoxy metal

primer. Finish: Two coats low luster or eggshell latex interior enamel.

- Zinc-Coated Metal: Eggshell Acrylic Enamel Finish: Primer: One coat galvanized metal primer. Finish: Two coats low luster or eggshell latex interior enamel.

FINISH SCHEDULE

Wall Finishes: Gypsum board shall be finished to a level 3 finish with a light orange peel spray-applied texture.

Material finishes and color selections shall be from manufacturer's standard line, unless scheduled otherwise.

Other:

Interior Fixtures:

Window Treatments:

Accessory Fixtures:

TOILET COMPARTMENTS:

Mounting: Floor-mounted headrail-braced.

Metal Doors, Panels, and Pilasters: Baked enamel on steel; pressure bonded to sound deadening core, mitered and welded corners ground smooth. Steel Sheet for Baked Enamel Finish: ASTM A 653/A653M, with G90/Z275 zinc coating. Panels: Minimum 20 gage faces; minimum 1 in thick. Doors: Minimum 20 gage faces; minimum 1 in thick. Pilasters: Minimum 18 gage faces; minimum 1-1/4 in thick. Internal Reinforcement: Minimum 12 gage. Colors: As selected from manufacturer's standards.

Accessories: Pilaster Shoes: Formed from chromed steel with polished finish.

Head Rails: Hollow anodized aluminum tube; manufacturer's standard size; anti-grip configuration; cast socket wall brackets.

Panel Brackets: Polished chrome-plated cast metal; manufacturer's standard configurations.

Attachments, Screws, and Bolts: Stainless steel, tamper-resistant.

Hardware: Polished chrome-plated cast metal.

- Pivot hinges; gravity type, adjustable, nylon bearings; minimum two per door.
- Thumb turn door latch with exterior emergency access feature.
- Door strike and keeper with rubber bumper.
- Coat hook with rubber bumper; one per compartment.
- Door pull for outswinging doors.

FIRE PROTECTION SPECIALTIES

Fire Extinguishers: Rating of 3-A:30-B:C.

Cabinets: Enameled steel frame and door, with enameled steel cabinet. Style: Flush mounted with overlapping trim with solid door, no lock, labeled in red.

TOILET ACCESSORIES

General Requirements: Stainless steel with satin finish unless otherwise indicated. Bobrick is listed as a standard, alternate manufacturer's may be used if prior approved by PVNGS. Accessories shall be economy grade with satin stainless steel finish. Install in accordance with ADA and ANSI A117.1 requirements. Types and Sizes Required: As follows. Cabinet-Type Accessories: Stainless steel with satin finish, formed sheet metal construction, with seamed edges and continuous hinged doors; flush recessed type. Sheet Metal Shelves: Seamed edges; support brackets. Dispensers: Pin- or tumbler cam locks keyed alike or access concealed under counter. Fasteners: Concealed or countersunk and tamperproof; of same material.

Accessories:

- Paper Towel Dispenser: Provided and installed by Owner.
- Waste Receptacle: Model Number B-3644, Install one in each restroom, install two in restroom with four or more lavatories,
- Feminine Napkin Dispenser: Model Number B-2800x2. Install one in each Women's Restroom.
- Toilet Paper Dispenser and Seat Cover: Provided and installed by Owner.
- Paraphernalia Shelf: Model Number B-295 x 18". Install one at each accessible stall.
- Napkin Disposal: Model Number B-254. Install one at each toilet in each Women's Restrooms.
- Mirror: Model Number B-290 2436. Install above each lavatory.
- Soap Dispenser: Provided and installed by Owner.
- Grab Bars: Install at each accessible toilet as follows:
 - 36" Grab Bar: Model number B-6806 x 36". Install behind accessible toilet.
 - 42" Grab Bar: Model number B-6806 x 42". Install on wall at the side of accessible toilet.
 - 18" Vertical Grab Bar: Model number B-6806 x 18". Install on wall at the side of accessible toilet, above the horizontal grab bar.
- Mop and Broom Holder: Model Number B-223 x 36". Install on wall above mop sink.

AUDIO-VISUAL EQUIPMENT

All Audio-Visual Equipment shall be furnished by Owner.

FURNISHINGS

Horizontal Louver Blinds: Aluminum 1 inch wide louvers; manual wand tilt action; cord-raised and -lowered with locking at fully open and fully closed only. Sizes: To fit inside window frames and trim.

SYSTEMS FURNITURE

Systems furniture shall be provided and installed by Owner outside of the construction contract. Contractor shall coordinate electrical rough-in with Project Manager.

Services: *Mechanized, artificial, automatic, and unattended means of supply, distribution, transport, removal, disposal, protection, control, and communication.*

Plumbing:

PLUMBING FIXTURES AND TRIM

See attached drawings for the Plumbing Fixture Schedule

WATER PIPING

All piping shall conform to the requirements of the ANSI Safety Code and be free from all defects and be properly identified.

Above ground: Type "L" hard drawn copper tubing conforming to ASTM B 88-72.

Below Ground: (Installed in concrete or under concrete) Type "K" soft drawn copper tubing, conforming to ASTM B 88-72. Spiral wrap piping below grade or floors on grade with 3 layers of 20 Mil polyethylene tape with ½ overlap. Install no piping joints below floor.

Fittings: Wrought copper, conforming to ASTM B16.2. Use 95-5 silver solder, for all joints.

Identification: Color code piping with size and manufacturer's trade mark, conforming to the following schedule:

- Type "K" copper - Green
- Type "M" copper - Red
- Type "L" copper - Blue

Piping above ceilings shall be suspended from structure as high as possible, unless otherwise noted.

SOIL, WASTE, ROOF DRAIN, AND VENT PIPING

Cast Iron: No-hub cast iron, CISPI 301-72T specification for all soil, waste and vent piping 2 inches and larger with standard weight fittings. Use stainless steel no-hub cast iron couplings throughout the project.

Galvanized Iron: Schedule 40 standard weight conforming to ASTM A72-68, for all vent piping 1-1/2" and smaller. Use wrought iron screwed fittings to match pipe. Make all screwed joints with Teflon tape.

VALVES AND UNIONS

Size of shut-off valves, control valves, balancing cocks, unions etc., shall be full line size.

Gate Valve: Milwaukee #F-148 bronze rising stem, solid-wedge 125 PSI SWP for domestic water system.

Check Valve: Milwaukee #509, 125 PSI, bronze body, solder joint, horizontal swing check, for domestic water service.

Ball Valve: Milwaukee #BA-250, brass body, solder joint balancing valve.

Unions:

- Pipe 2" and Under: 150 psig malleable iron threaded ground joint unions for ferrous pipe or 150 psig bronze unions with solder joints for copper pipe.
- Pipe over 2": 150 psig forged steel or bronze slip on flanges with 1/16" thick preformed neoprene gaskets.
- Provide a union between valves and connections to each fixture, device, or piece of equipment for disconnecting of piping.

PIPE HANGERS AND SUPPORTS

Pipe hangers shall be Michigan #400 for steel piping; #402 for gas and copper piping.

Support piping 3/4" and less at 6'-0" O/C; 1-1/4" and smaller 8'-0" O/C; and piping 1-1/2" and larger 10'-0" O/C. Waste piping shall be supported at 5'-0" O/C.

Provide 3/8" diameter threaded rod properly braced for seismic restraint per local requirements.

PIPE INSULATION

All cold water, hot water and hot water return piping shall have 1 inch thick fiberglass insulation with ASJ jacket, having a thermal conductivity (K-factor) of 0.24 at 75 degrees mean temperature.

The maximum fire hazard classifications of the insulation system shall not have more than a flame spread of 25, and a fuel contributed rating of 50, and a smoke developed rating of 50, when tested in accordance with U.L. requirements. Pipe covering shall bear the U.L. label.

Insulate all fittings, valve bodies, etc. with single or multiple layers of insulation with prefabricated fittings with P.V.C. jackets. Seal all raw edges watertight.

CLEAN OUTS

Clean outs shall be the same size as the largest downstream pipe it is serving. No plastic clean outs will be accepted. Plugs shall be bronze. Covers shall be stainless steel.

DRAINS

Provide cast iron body drains with lacquer finish and no-hub outlet. Where installed in surfaces having waterproofing membrane, provide drains with non-puncturing flashing clamp device and anchoring flange. Drains to be equipped with trap primers.

FIXTURE AND TRIM

The Plumbing Contractor shall supply all stops, traps, escutcheons, connections, etc., as necessary to complete the installation of each fixture, whether such items are listed or not. Use polished chrome plated brass faucets with removable trim, body and handles. Flush valves shall be polished chrome plated brass diaphragm type with integral vacuum breakers, and screw driver stops. Provide fixture stops or valves ahead of all equipment or fixtures.

Escutcheon Plates: When uncovered exposed pipes pass through floors, finished walls or finished ceilings provide chromium plated escutcheon plates. Escutcheon plates will also be required at piping below cabinets.

Traps: Each fixture and piece of equipment requiring direct connection to the drainage system shall be equipped with a trap. Use polished chrome plated; fully adjustable 17-gage cast brass P-traps with bottom cleanout plug. Each trap shall be placed as near the fixture as possible. Traps installed on cast iron soil pipe below grade or

floor shall be cast iron.

Fixture Backing: Provide backing for wall hung fixtures other than for those with carriers.

Trap Primers: Shall be installed on cold water supply at nearest fixture and run to trap seal being protected. Trap primers shall be installed in plumbing chase or in mechanical room behind fixture, and shall not be exposed in toilet rooms. All floor drains in toilet rooms shall be protected by trap primers.

FLOW CONTROL DEVICE

All plumbing fixtures shall be provided with water saving flow control devices to meet all Federal, State, and local water conservation laws.

SHOCK ABSORBERS

Provide J.R. Smith Hydrotrol series 5000 sized and installed per manufacturer's recommendations. Shock absorbers shall be installed at all isolated fixtures and each battery of both hot and cold piping containing any solenoid valve, or quick opening valve. Provide steel access doors with alan-keyed lock for all shock absorbers installed.

PIPE INSTALLATION

Install piping to best suit field conditions, coordinate layout of piping with ductwork and offset piping as required to clear new ductwork and equipment.

Run pipe parallel to building elements and conceal all piping and ducts in walls, floors, ceilings, chases, unless otherwise specifically noted.

Vent piping penetrating the roof structure shall be rigidly anchored with angle iron framework below the roof, bolted to roof structure.

All soil and waste piping 3" and smaller shall slope a minimum of 1/4-inch per foot; piping 4" and larger shall slope a minimum of 1/8-inch per foot.

Where water and waste pipe below grade cross, install per applicable Standards. If water and waste piping is laid in the same trench, Contractor shall install on different levels per the Local Plumbing Code.

Provide sleeves at all penetrations of masonry walls or floors and pack watertight with approved packing.

PIPING SEALANT

All piping passing through walls, floors, and ceilings that are fire rated must be adequately sealed. The Contractor has the responsibility of reviewing the Architectural Drawings and determining the location of all fire rated walls, partitions, ceilings, and floors and to provide the following sealants at penetrations listed here-in.

STERILIZATION

Sterilize the entire water distribution system thoroughly with a solution containing not less than 50 parts per million of available chlorine. For chlorinating materials use sodium hypochlorite solution conforming to Federal Spec. 0-8-441, grade D, and introduce into the system by use of a cock at a slow, even, continuous rate. Allow the sterilizing solution to remain in the system for a period of 8 hours, during which time all valves and faucets shall be opened and closed several times. After sterilization, flush the solution from the system with clean water until the residual chlorine content is not greater than 0.2 parts per million. Plate count shall indicate count less than 100 bacteria per CC. Provide copy of water test report to Architect.

TESTING

Fill domestic water system with water and pressurize to 125 PSI and maintain for four (4) hours with no pressure drop.

Fill waste and soil system with water to highest point of the system and maintain pressure for four (4) hours with no drop in water level.

HVAC:

Items of equipment used for the same purpose shall be of the same manufacturer.

Systems shall be complete and operable. Any accessories required for the operation of the system shall be included as though specifically indicated to be provided. Such accessories would include filters, condensate drains, relief valves, service valves, thermostats, vibration insulators, balancing valves etc. Motor starters for prewired equipment (and other protection and control devices) are also included in this specification.

Specific reference to a manufacturer's product is only to establish type, quality, and performance required. Listing of alternate equipment manufacturers shall not be construed as an unconditional approval of the products of those manufacturers. Alternate equipment, if utilized, shall meet or exceed specified capacities.

All equipment shall be U.L. Listed.

APPROVED MANUFACTURERS

The following manufacturers are approved for use:

- Rooftop Package Heat Pumps: Trane, Carrier, York, Lennox.
- Split System Heat Pumps: Trane, Carrier, York, Lennox.
- Evaporative Coolers: United Metal Products, Mastercool.
- Exhaust Fans: Greenheck, Cook, Penn, Acme.
- Fan Powered Terminal Units: Price, Titus, Trane.
- Controls: Staafa.
- VAV Terminal Units: Price, Titus, Trane.
- Split System Air Conditioning Units: Trane, Carrier, York, Lennox.
- Rooftop Package Air Conditioning Units: Trane, Carrier, York, Lennox, Aaon.
- Grilles, Registers, and Diffusers: Titus, Krueger.

TEMPERATURE CONTROLS AND WIRING

Wiring 120 volts and above is included under the electrical division of the specifications. Wiring below 120 volts and all integral starters, controls, relays and other devices are included under the mechanical division. All equipment, devices, and wiring shall conform to the National Electrical Code. All controls shall be furnished and properly identified with instructions for proper connections. Responsibility for proper connections and operation

is included under the Mechanical Contractor's responsibility.

Mechanical Contractor to supply and install supply air temperature sensors for each air handling device or package unit. Controls manufacturer shall match the facility's existing system.

Room thermostat shall incorporate:

- Automatic switching from heating to cooling.
- Preferential rate control to minimize overshoot and deviation from set point.
- Set-up for four separate temperatures per day.
- Instant override of set point for continuous or timed period from one hour to three hours.
- Short cycle protection.
- Programming based on weekdays, Saturday and Sunday.
- Switch selection features including imperial or metric display, 12 or 24-hour clock, keyboard disable, remote sensor, fan on-auto.

Room thermostat display shall include:

- Time of day.
- Actual room temperature.
- Programmed temperature.
- Programmed time.
- Duration of timed override.
- Day of week.
- System model indication: Heating, cooling, auto, off, fan auto, fan on. Stage (heating or cooling) operation.

DUCTWORK

All ductwork and plenums shall be galvanized sheet metal. Fabricate and install all ductwork in strict conformance with the latest SMACNA manual and IMC (2006) for low-pressure duct construction standards (2-inch Static Pressure and below).

Each duct system shall be complete with all required ductwork fittings, turning vanes, and splitter dampers supports. Provide extractors at all right angle takeoffs and tees.

Ductwork shall be galvanized, prime-grade, lock-forming quality steel (LFQ) having a galvanized coating of 1-3/4 ounces to total for both sides of one square of a sheet.

Crossbreak all sides of all ducts. Ductwork shall have no objectionable noise, and Contractor shall provide any additional stiffeners required.

All longitudinal seams shall be Pittsburgh lock seam, hammered flat, with all transverse joints taped with 8 oz. canvas and sealed airtight.

Provide double thickness, factory fabricated galvanized sheet steel turning vanes with airfoil contour in all right angle elbow, bullhead tees, and elbows with radius less the 1-1/2 times the width of the duct.

All round duct branch takeoffs shall be provided with spin-in type fittings with air scoop balancing damper.

All ducts shall be substantially supported with hangers to the structure or otherwise depending on location conditions, placing supports not over 8 feet apart along the length of the duct. Hangers shall conform to all SMACNA and IMC (2006) requirements.

Flexible round ducts to outlets shall be UL 181, Class 1, with a maximum length of 8-feet long. Provide rigid takeoff's from main duct (length as required) to accommodate maximum flex length.

GENERAL INSULATION

General: All insulation, material, covering, adhesive, vapor-barriers and tapes shall conform to NFPA 90a, with a flame spread classification not to exceed 25 and a smoke development rating not to exceed 30.

ACOUSTICAL INSULATION

All supply and return sheet metal ducts, 15-feet from the unit minimum, to be lined with 1-inch acoustical liner, minimum 1-1/2 pounds. Neoprene or heavy density coated fiberglass duct liner suitable for velocities up to 4,000 FPM complying with NFPA 90A.

Applications: Coated duct liner shall be cut to assure overlapped and compressed longitudinal corner joint. Apply liner with coated surface facing the air stream and adhered with 100% coverage fire retardant adhesive. Coat all exposed leading edges and transverse joints with fire retardant adhesive. The liner shall be additionally secured with mechanical fasteners which shall compress the duct liner sufficiently to hold it firmly in place per SMACNA and IMC (2006) standards.

Installation for velocities to 2,000 FPM: Fasteners shall start within 3" of the upstream transverse edges of the liner and 3" from the longitudinal joints and shall be spaced at a maximum of 12-inches on center around the perimeter of the duct, except that they may be a maximum of 12-inches from a corner break. Elsewhere, they shall be maximum of 18-inches on center except that they shall be placed not more than 6-feet from a longitudinal joint and 12-inches from a corner break. Coat all exposed joints and edges of transverse joints with a fire retardant adhesive.

THERMAL INSULATION (DUCT WRAP)

All rectangular ducts and round ducts shall be insulated with 3/4-inch thick 0.75-pound density fiberglass blanket with FRK (foil-reinforced kraft) vapor barrier facing. Insulation shall have a conductivity not to exceed 0.27 BTU per inch per square foot per degree Fahrenheit per hour at 75 degrees Fahrenheit mean temperature.

Insulation shall be wrapped tightly on the ductwork with all circumferential joints butted and longitudinal joints overlapped a minimum of 2-inches. Adhere insulation to metal on the bottom of rectangular ductwork over 24-inches wide with 4-inch strip of insulation bonding adhesive, Benjamin Foster 85-15, or equal and additionally secure insulation with mechanical fastener at not more than 18-inches on center. On all joints, the 2-inch flange of the facing or the 2-inch overlap shall be secured using 9/16-inch flare-door staples applied 6-inches on center and taped with minimum 6-inches wide foil reinforced kraft tape. All pin penetrations or punctures in facing shall also prevent slipping.

Exhaust ducts shall not be insulated.

COMBINATION FIRE AND SMOKE DAMPERS

Fabricate in accordance with NFPA 90A, UL 555, UL 555S, and as indicated.

Provide factory fabricated dynamic fire damper with sleeve, and collar, and frame for each damper.

Multiple Blade Dampers: Fabricate with 16-gage galvanized steel frame and blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, stainless steel jamb sealed, 1/8 x 1/2-inch plated steel concealed linkage, stainless steel closure spring, blade stops, and lock, and 1/2-inch actuator shaft.

Operators: UL Listed and labeled spring return electric type suitable for 120 volts, single phase, 60 Hz. Provide end switches to indicate damper position. Locate damper operator on interior exterior of duct and link to damper operating shaft. Stand-alone dampers to be provided with integral smoke detector control.

Normally Closed Smoke Responsive Fire Dampers: Curtain type, opening by gravity upon actuation of electro thermal link, flexible stainless steel blade edge seals to provide constant sealing pressure.

Normally Open Smoke Responsive Fire Dampers: Curtain type, closing upon actuation of electro thermal link, flexible stainless steel blade edge seals to provide constant sealing pressure, stainless steel springs with locking devices to ensure positive closure for units mounted horizontally.

Electro Thermal Link: Fusible link melting at 165 degrees F (74 degrees C); 120 volts, single phase, 60 Hz; UL Listed and labeled.

Interlock combination fire-smoke damper operator with duct smoke detector or zone smoke detector. Coordinate electrical connection with Electrical Contractor.

FIRE DAMPERS

Provide dynamic fire dampers, fabricate in accordance with NFPA 90A and UL 555, and as indicated.

Ceiling Dampers: Galvanized steel, 22-gage frame and 16-gage flap, two layers 0.125-inch ceramic fiber on top side, and one layer on bottom side for round flaps, with locking clip.

Horizontal Dampers: Galvanized steel, 22-gage frame, stainless steel closure spring, and lightweight, heat retardant non-asbestos fabric blanket.

Curtain Type Dampers: Galvanized steel with interlocking blades. Provide stainless steel closure springs and latches for horizontal installations closure under airflow conditions. Configure with blades out of air stream acceptable for 1.0-inch (250 Pa) pressure class ducts up to 12-inches in height.

Multiple Blade Dampers: 16-gage galvanized steel frame and blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, 1/8 x 1/2-inch plated steel concealed linkage, stainless steel closure spring, blade stops, and lock.

Fusible Links: UL 33, separate at 160/212 degrees F (71/100 degrees C) with adjustable link straps for combination fire/balancing dampers.

SMOKE DAMPERS

Fabricate in accordance with NFPA 90A and UL 555S, and as indicated.

Dampers: UL Class 1 curtain or multiple blade type fire dampers, normally open automatically operated by 120-volt electric actuator.

Electro Thermal Link: Fusible link melting at 165 degrees F (74 degrees C); 120 volts, single phase, 60 Hz; UL Listed and labeled.

Interlock smoke damper operator with duct smoke detector or zone smoke detector. Coordinate electrical connection with Electrical Contractor.

GRILLES, REGISTERS AND DIFFUSERS

Furnish and install all grilles, registers, ceiling diffusers and door grilles where indicated. They shall be of size and model called for on the drawings.

All grilles, registers, and ceiling diffusers must be set flush and true to wall or ceiling to prevent air leakage around edges. All units shall be provided with neoprene gasketing around the inside of the frame.

All units shall be factory finished, of color selected by the Architect, or as otherwise indicated.

Paint all ductwork, turning vanes, insulation, etc., that is visible through grilles, registers, or ceiling diffusers flat black.

CONDENSATE DRAIN PIPING MATERIAL

Copper tubing – ASTM B88, Type M, hard drawn.

Fitting: AMME B16.18, cast bronze, of ASME B16.22, wrought copper and bronze.

Joints: ASTM B52, Grad 95TA.

FINAL TESTS

Before acceptance and final payment, it shall be demonstrated that all apparatuses are functioning properly and efficiently. The Contractor shall make a thorough test of each supply, return and exhaust systems to assure that each diffuser and register has the proper quantity of air in accordance with AABC standards.

A written report of test results shall be submitted to Architect.

All control dampers including fire and fire/smoke shall be tested as part of final air balance.

Fire Protection:

Fire Sprinkler:

A wet pipe hydraulically calculated system to be installed throughout the building.

Automatic sprinkler system will be designed to comply with the latest Edition of NFPA 13, installation of sprinkler systems.

All equipment and system components shall be new and approved for fire protection use.

Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor.

Sprinkler system design considerations shall be as follows:

- Office Areas: Wet system spaced to a maximum of 130 sq. ft. per sprinkler. The system shall be designed

to provide 0.20 gpm per sq. ft. for the most remote 1500 sq. ft. area with a 500-gpm hose allowance.

- Storage Areas: Wet system spaced to a maximum of 130 square feet per sprinkler. The system shall provide 0.20-gpm per sq. ft. per 150 square feet of remote area.
- Automatic sprinkler system zones shall be designed per floor.
- The maximum area per floor or system supplied by any one riser shall be 52,000 square feet per light or ordinary hazard.
- All sprinklers located for elevator hoist ways and elevator equipment rooms will be controlled independently from the corresponding floor system by use of a control valve monitored by the fire alarm system.

Automatic sprinkler system shall be fed by a combined wet standpipe system.

Sprinkler system monitoring and alarms:

- All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels, water flow switches on all sprinkler systems shall be electrically supervised.
- Alarm, supervisory, and trouble signals shall be distinctly different and automatically transmittable to an approved central station; remote supervising station, or proprietary supervising station as defined in NFPA 72 or, when approved by the builder's official shall sound an audible signal at a constantly attended location.
- Exceptions:
 - Underground key or hub valves in roadway boxes are not required to be monitored.
 - Backflow prevention device control valves to be chained opened.
- Approved audible devices shall be connected to every sprinkler system. Such sprinkler water-flow alarm devices shall be activated by the water-flow equivalent to one sprinkler of the smallest orifice size installed on the system. Alarm devices shall be provided on the exterior of the building in an approved location.

Sprinkler Types:

- Standard response, 286 degrees F sprinklers will be installed in electrical transformer rooms and electrical switchgear rooms.
- Quick response standard temperature 1/2-inch orifice sprinklers will be installed in all remaining areas. Semi-recessed chrome sprinklers to be used in finished ceiling areas.
- Office Areas – Semi-recessed heads.

Fire Alarm:

The fire alarm system will be supervised, addressable, Class A system using a Temporal Code 3 notification sound pattern. The fire alarm control panel in each building will have a dialer and two dedicated telephone lines to automatically call the monitoring company in case of an alarm. Horn/strobes will be required in each public space. Each floor will be equipped with a remote power supply in the telephone room to power the horn/strobes on that floor. Sprinkler line flow valves will be monitored to signal an alarm on water flow.

Electrical:

CONDUIT

Minimum Sizes:

- Above slab: 1/2-inch unless otherwise noted.
- Below slab: 3/4-inch unless otherwise noted.
- Site underground: 1-inch unless otherwise noted.

Underground locations:

- Underground or under slab-on-grade: Use plastic coated rigid steel conduit or Schedule 40 nonmetallic conduit.
- All vertical underground elbows shall be plastic coated rigid steel conduit.
- Indoor wet and damp locations: Use rigid steel conduit or electrical metallic tubing.

Indoor dry locations:

- Concealed: Use rigid steel conduit, electrical metallic tubing, or type MC cable.
- Exposed (Unfinished Areas): Use rigid steel to 8-feet above flush floor or to first junction box. Electrical metallic tubing may be used beyond these limits.
- Outdoor Locations above grade: Use rigid steel or electrical metallic tubing.
- Conduits shall not be installed in floor slabs.
- Exposed conduit floor penetrations from slabs on grade shall be plastic coated or wrapped (10-mil tape with 1/2-lap) galvanized rigid steel or intermediate metal conduit.
- Concealed floor penetrations from slabs on grade in a finished wall or chase may be Schedule 40 non-metallic conduit. Extend nonmetallic conduit to nearest junction box.
- Rigid steel conduit wrapped with 10-mil PVC tape 1/2-lapped is acceptable in lieu of plastic coated.
- Intermediate metal conduit is acceptable in lieu of rigid steel conduit.
- A green equipment-grounding conductor shall be run inside all raceways.
- Liquid tight flexible conduit used outdoors shall be U.L. listed for sunlight resistance.

Rigid Steel, Intermediate Metal Conduit, and Electrical Metallic Tubing approved manufacturers:

- Allied Tube and Conduit
- AFC
- Hubbell Inc.

PVC coating for rigid steel conduit approved manufacturers:

- Occidental Coating

- P.C.D.
- Robroy Industries

Flexible metal conduit and liquid tight flexible metal conduit approved manufacturers:

- Acme International
- Electri-Flex Co.
- Hubbell Inc.

Nonmetallic conduit approved manufacturers:

- Carlon
- RACO
- Can-Tex

Support conduit using coated steel or malleable iron straps, lay in adjustable hangers, clevis hangers, and split hangers.

Fasten conduit supports to building structure and surfaces.

Do not support conduit with building wire, tie wire or perforated pipe straps. Remove wire used for temporary supports.

Do not attach conduit larger than 3/4-inch to ceiling support wires. Do not attach more than one conduit to any one support wire.

Arrange conduit to maintain headroom and present neat appearance.

Route conduit parallel and perpendicular to walls.

Route conduit under slab from point-to-point.

Maintain 3-inch clearance between conduit and surfaces with temperatures exceeding 104 degrees F.

Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.

Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations.

Install no more than equivalent of four 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams.

Avoid moisture traps; provide junction box with drain-fitting at low points in conduit system.

Provide suitable fittings to accommodate expansion and deflection where conduit crosses seismic, control or expansion joints.

Provide 100-pound test pull string in each empty conduit except sleeves and nipples.

Terminate all conduits with an insulated throat fitting or bushing.

SURFACE METAL RACEWAY

Manufacturers

- Wiremold Co.
- Hoffman Engineering Co.

Sheet metal channel with fitted cover, suitable for use as surface metal raceway.

MULTIOUTLET ASSEMBLY

Manufacturers

- Wiremold Co.

Receptacles: 20-amp single-spaced 24-inches on center.

Receptacle Color: Black.

Channel and Fittings Finish: Buff enamel.

WIREWAY

Manufacturers

- Circle AW
- Hoffman Engineering Inc.
- Square D

Provide NEMA 1, General Purpose or NEMA 3R, Rain tight as required.

BUILDING WIRE AND CABLE

Manufacturers

- Okonite
- General Cable
- Southwire
- American Insulated Wire

Building wire: Single conductor, 600-volt, XHHW or THHN/THWN insulated copper wire.

Metal clad cable: Interlocked steel jacket with 90-degree C., 600-volt, copper wire.

Use conductor no smaller than 10 AWG for power and lighting circuits.

Use conductor no smaller than 16 AWG for control circuits.

Metalclad (MC) cable shall be only be used for light fixture or work station power pole whips in concealed, indoor, dry locations only.

Use 8 AWG conductors for 20-ampere, 120-volt branch circuits longer than 100-feet.

Use 8 AWG conductors for 20-ampere, 277-volt *branch circuits longer than 200-feet*.

Only where necessary, use suitable wire pulling lubricant for building wire 4 AWG and larger.

Support cables above accessible ceiling. Do not rest cable on ceiling panels.

Neatly train and lace wiring inside boxes, equipment, and panel boards.

Verify continuity of each branch circuit conductor.

Verify condition of feeder insulation No. 6 and larger with a 1000-volt megger. Record all readings of all phase conductors.

BOXES

Luminaries and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2-inch male fixture studs where required.

Cast Boxes: Cast aluminum with gasketed cover.

Floor Boxes: Fully adjustable.

In-Ground Cast Metal Box: Galvanized cast iron Type 6, flanged with neoprene gasket and flush, nonskid cover with stainless steel screws. Provide with "ELECTRIC" cover legend.

Install electrical boxes to maintain headroom and to present neat mechanical appearance.

Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6-inches from ceiling access panel or from removable recessed luminaire.

Do not install flush mounting boxes back-to-back in walls; provide minimum 6-inch separation. Provide minimum 24-inches separation in acoustic rated walls.

Boxes may be fastened to ceiling support wires only with an approved standoff device maintaining a minimum of 6-inches from the bottom of the box to the top of the T-bar.

Support boxes independently of conduit, except cast boxes that are connected to two rigid metal conduits both supported within 12-inches of box.

Use cast outlet box in exterior locations exposed to the weather and wet locations.

Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.

Adjust floor boxes flush with finish flooring material.

Install box or device ring to within 1/8-inch of finished wall surface.

Provide stud-to-stud support for boxes in non-masonry walls.

DEVICES

Manufacturers

- Hubbell
- Leviton
- Pass and Seymour

Wall switches: 120-277-volt, 20-amp general-use snap switch with white toggle handle.

- Standard Receptacles: White plastic, type 5-20.
- GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter and test switch.
- Isolated Ground Receptacle: Hubbell #IG5262 or equal.

Wall plates

- Decorative Cover Plate: White smooth plastic.
- Surface Mounted Device Cover Plate: Galvanized steel.
- Weather Proof Cover Plate (Continuous use): Gasketed, top hinged, full plug protection equal to "TAYMAC".
- Weatherproof Cover Plate (Non-continuous use): Gasketed cast metal with hinged gasketed device cover.

Cords & Caps

Cord shall be Type SJO multi-conductor flexible cord with equipment grounding conductor, suitable for use in damp locations and for connected load of equipment.

Wall dimmers

- Lutron
- Hunt
- Leviton

Device Body: White plastic with slider control, preset button and on/off function.

Install devices plumb and level.

Install switches with OFF position down.

Install decorative plates on switch, receptacle, and blank outlets in finished areas.

Use jumbo size plates for outlets installed in masonry walls.

Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

Test each receptacle device for proper polarity.

Test each GFCI receptacle device for proper operation.

ENCLOSURES AND CABINETS

Enclosure construction: NEMA Type 1 or 3R galvanized steel with hinged cover as required by application.

Provide interior panel of 3/4-inch fire-retardant treated plywood for mounting terminal blocks and electrical components.

Recessed back boxes may be galvanized steel.

Provide metal barriers to separate compartments containing control wiring operating at less than 50-volts from power wiring.

Telephone Termination Backboards

Description: 3/4-inch fire retardant treated plywood.

Install termination backboards and/or cabinets plumb, and attach securely to building wall at each corner. Install cabinet trim plumb.

GROUNDING AND BONDING

Rod electrode

- Blackburn
- Carolina Galvanized
- Knight Metalcraft

Description: Copper clad steel 3/4-inch x 10-feet.

Plate electrode

Description: 1/4" x 18" x 18" (minimum) copper plate.

Mechanical connectors

- M - Z Gedney Co.
- Thomas and Betts Corp.
- Kearney - National

Material: Bronze.

Exothermic connections

- Cadweld
- Thermoweld

Wire

#4 and Smaller: Solid copper.

#3 and Larger: Stranded copper.

Provide code size bond conductor in all raceways.

Provide certified test report indicating overall resistance to ground.

Structural steel bond attachment shall be by exothermic weld.

IDENTIFICATION

Nameplates shall be engraved three-layer laminated plastic.

Colors: White letters on black background for general identification; white letters on red background for warning or safety applications.

Locations:

- Each electrical distribution and control equipment enclosure (black).
- Communication cabinets (black).
- Equipment disconnect switches (black).
- Locating concealed building ground connections (red).
- Electrical equipment room (red).

Letter Size:

- Use 1/8-inch letters for identifying individual equipment, loads, or circuit numbers.
- Use 1/4-inch letters for identifying grouped equipment and loads.
- Use 3/8-inch letters for major heading on warning type nameplates.

Electrical Equipment Room:

For each Electrical Equipment Room, mount on the outside of each door secured with rivets at 6'-6" to top of sign.

Sign shall be red with white letters.

Sign shall read as follows:

1st Line 3/4-inch Letters: "ELECTRICAL EQUIPMENT ROOM"

2nd Line 1/2-inch Letters: "DO NOT STORE MATERIALS"

3rd Line 1/4-inch Letters: "Per UFC, NEC, and Local Ordinance"

Wire and Conduit Markers:

- W.H. Brady Company
- Ideal Industries
- Panduit Corporation

Wire Markers

- Description: Tape wire markers.
- Locations: Each conductor at panel board terminations, pull boxes, and each load connection.
- Legend:
 - Power and Lighting Circuits: Branch circuit or feeder number.
 - Control Circuits: Control wire number.

Conduit Markers

- Location: Furnish markers for each Fire Alarm System conduit longer than 6 feet.
- Spacing: 20-feet on center.
- Color: Red.
- Legend: Fire Alarm System.

Provide panel and circuit number(s) for all circuits contained within each junction or pull box. Use only black "Magic Marker"; no other color is acceptable.

All special system junction or pull box covers shall indicate name system, such as: "TEL", "DATA", "FIRE ALARM", "SECURITY", etc.

Paint all fire alarm system junction or pull boxes and covers red.

Identify fire alarm raceway red every 20 feet using conduit markers or red powered code conduit.

Install nameplate and label parallel to equipment lines.

Secure nameplate to equipment front using tamperproof screws or rivets.

UTILITY SERVICE ENTRANCE AND DISTRIBUTION PANEL BOARDS

Manufacturers

- Siemens
- Square D
- Challenger
- General Electric

Description: Dead front distribution switchboard rated for use as Service Entrance Equipment and accessible from front only. Bus bars shall be fully insulated copper with standard spacing for uninsulated bus. Provide an insulated ground bus extending the length of the switchboard.

Molded Case Circuit Breakers: NEMA AB 1, bolt-on type thermal magnetic circuit breakers with common trip handle for all poles. Provide stationary mounting. Provide ground fault sensing. Breakers larger than 600-amperes shall be 100% rated. Minimum Integrated Short Circuit Rating (MISCR): The MISCR shall be part of a listed series rated combination with other overcurrent protective devices. Otherwise, the minimum integrated short circuit rating shall be 10,000 A.I.C. symmetrical for 240 V.A.C. panel boards and 14,000 A.I.C. symmetrical for 480 V.A.C. panel boards.

Fusible Switch Assemblies: Quick make/quick break load interrupter switch with externally operable handle. Provide interlock to prevent opening front cover with switch in ON position. Handle lockable in OFF position.

Fusible Switch Assemblies rated 800-Amperes and Larger shall be bolted pressure contact switches.

Enclosure: NEMA 1 or 3R as required. Align sections at front and rear. Nominal switchboard height shall be 90 inches. Provide manufacturer's standard finish.

Install switchboard level and plumb.

Touch up scratched or marred surfaces to match original finish.

ENCLOSED SWITCHES

Manufacturers

- Siemens
- Square D
- Challenger
- General Electric

Fusible Switch Assemblies: Load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse clips shall accommodate Class R or Class J fuses as indicated on drawings.

Non-fusible Switch Assemblies: Load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position.

Enclosures: NEMA 1 or 3R as required.

PANELBOARDS

Manufacturers

- Siemens
- Square D
- Challenger
- General Electric

Panel board Bus: Copper. Provide copper ground bus in each panel board. Provide isolated copper ground bus where indicated.

The main circuit breaker in panel boards, larger than 600-amperes shall be rated at 100%.

Minimum Integrated Short Circuit Rating (MISCR): The MISCR shall be part of a listed series rated combination with other overcurrent protective devices. Otherwise, the minimum integrated short circuit rating shall be 10,000-A.I.C. symmetrical for 240-V.A.C. panel boards and 14,000-A.I.C. symmetrical for 480-V.A.C. panel boards.

Molded Case Circuit Breakers: Bolt-on type thermal magnetic circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where required by the NEC. Do not use tandem or piggyback circuit breakers.

Enclosure: NEMA Type 1 or Type 3R as required.

Cabinet Front: Flush or surface as indicated on drawings with concealed trim clamps, concealed hinge, and flush lock all keyed alike. Cabinet front shall be "Door-In-Door" style. Finish in manufacturer's standard gray enamel.

Breaker Space Identification: Permanent factory supplied numbering affixed to dead front panel. Adhesive numbering on breaker or dead front panel shall not be used.

Panel boards shall be mounted on unistrut frame and stand off the wall a minimum on 2-inches to allow the passage of water behind the panel board in the event of a water leak from the roof or ceiling.

Provide a 6" x 6" surface metal raceway above and below each panel board and routed all circuits through the surface metal raceway.

Install panel boards plumb. Install recessed panel boards flush with wall finishes.

Height: 6-feet to top of panel board, install panel boards taller than 6 ft with bottom no less than 4-inches above floor.

Provide filler plates for unused spaces in panel boards.

Provide typed circuit directory for each branch circuit panel board.

Provide spare conduits out of each panel board to the surface metal raceway and from the surface metal raceway to an accessible location above ceiling. Provide five (5) empty 1-inch. Identify each as SPARE.

The Contractor shall measure steady state load currents on each phase of each panel board. Rearrange circuits in the panel board to balance the phase loads to within 20 percent of each other. Maintain proper phasing for multi-wire branch circuits. Provide corrected, typed schedules as necessary.

ENCLOSED MOTOR CONTROLLERS

Manufacturers

- Siemens
- Square D
- Challenger
- General Electric

Manual Controllers

Fractional Horsepower Motor Starting Switch with Thermal Overloads: NEMA ICS 2, AC general-purpose Class A manually operated full-voltage controller for fractional horsepower induction motors with red pilot light and toggle operator.

Fractional Horsepower Motor Starting Switch without Thermal Overloads: AC general-purpose Class A manually operated, full-voltage controller for fractional horsepower induction motors with green pilot light and toggle operator.

Enclosure: Type 1 or 3R as required by application.

Height: 5-feet to operating handle.

Install fuses in fusible switches.

Select and install overload heater elements in motor controllers to match installed motor characteristics.

Automatic Controllers

Magnetic Motor Controllers: AC general-purpose Class A magnetic controller for induction motors rated in horsepower.

Coil operating voltage: 120-volts.

Overload Relay: Melting alloy.

Enclosure: Type 1 or 3R as required by application.

All Enclosed Motor Controllers shall be provided with the following options and features:

- Auxiliary Contacts: One (1) field convertible contact in addition to seal-in contact.
- Cover Mounted Pilot Devices: NEMA ICS 2, standard duty type.
- Pushbuttons: Unguarded type.
- Indicating Lights: LED or neon type.
- Selector Switches: Rotary type (Hand-off-auto).
- Control Power Transformers: 120-volt secondary, 50-vA minimum, in each motor starter. Provide fused secondary, and bond unfused leg of secondary to enclosure.

Combination Starters

Non-fusible Switch Assemblies: NEMA KS 1, enclosed knife switch with externally operable handle.

Fusible Switch Assemblies: NEMA KS 1, enclosed knife switch with externally operable handle. Fuse clips: Designed to accommodate Class R fuses.

Height: 5-feet to operating handle.

Install fuses in fusible switches.

Select and install overload heater elements in motor controllers to match installed motor characteristics.

SPARE FUSE CABINET

Wall-mounted sheet metal cabinet, suitably sized to store spare fuses and fuse pullers specified.

Doors: Hinged, with hasp for Owner's padlock.

Finish: Manufacturer's standard gray enamel.

LIGHTING FIXTURES

See attached light fixture schedule for light fixture.

Install ballasts, and specified accessories at factory. Fixtures may be pre-lamped and flexible conduit whip installed at factory at contractor's option.

Poles shall be capable of withstanding winds of 100-miles per hour minimum.

Install suspended luminaires and exit signs using pendants supported from swivel hangers. Provide pendant length required to suspend luminaire at indicated height. Chain suspension may be used in mechanical rooms.

Support luminaires larger than 2 x 4 foot size independent of ceiling framing.

Install surface mounted luminaires and exit signs plumb and adjust to align with building lines and with each other. Secure to prohibit movement.

Fasten surface mounted luminaires to ceiling T-bar using suitable clips where fixtures are installed in exposed ceiling grid.

Install recessed luminaires to permit removal from below.

Install clips to secure recessed grid-supported luminaires in place.

Install specified lamps in each luminaire.

Provide seismic supports and restraints as required by all local and state requirements.

Re-lamp luminaires utilized during construction at Substantial Completion.

Clean photometric control surfaces.

Clean finishes and touch up damage.

Provide minimum of 24 consecutive hours of luminaire operation. Replace defective lamps at conclusion of demonstration period.

Examine excavation and concrete foundation for lighting poles.

Install poles plumb. Provide double nuts to adjust plumb. Grout around each base.

Install bolt covers.

ANCHORS AND FASTENERS

Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.

Do not drill or cut structural members.

Install surface-mounted cabinets and panel boards with minimum of four anchors.

Use sheet metal channel to bridge studs above and below cabinets and panel boards recessed in hollow partitions.

Height: 5-feet to operating handle.

Install fuses in fusible switches.

Select and install overload heater elements in motor controllers to match installed motor characteristics.

GENERATOR SET

Ratings

See drawings for generator ratings and size.

Performance

Voltage regulation shall be plus or minus 0.5 percent for any constant load between no load and rated load for both parallel and non-parallel applications. Random voltage variation with any steady load from no load to full load shall not exceed plus or minus 0.5 percent.

Frequency regulation shall be isochronous from steady state no load to steady state rated load. Random frequency variation with any steady load from no load to full load shall not exceed plus or minus 0.25%.

The diesel engine-generator set shall be capable of single step load pick up of 100% nameplate kW and power factor, less applicable derating factors, with the engine-generator set at operating temperature.

Motor starting capability shall be a minimum of 60 kVA. (The generator set shall be capable of sustaining a minimum of 90% of rated no load voltage with the specified kVA load at near zero power factor applied to the generator set.)

The alternator shall produce a clean AC voltage waveform, with not more than 5% total harmonic distortion at full linear load, when measured from line to neutral, and with not more than 3% in any single harmonic. Telephone influence factor shall be less than 40.

Construction

The engine-generator set shall be mounted on a heavy-duty steel base to maintain alignment between components. The base shall incorporate a battery tray with old-down clamps within the rails.

All switches, lamps, and meters in the control system shall be oil-tight and dust-tight, and the enclosure door shall be gasketed. There shall be no exposed points in the control (with the door open) that operate in excess of 50 volts.

Connections

The generator set load connections shall be composed of silver or tin plated copper bus bars, drilled to accept mechanical or compression terminations of the number and type as shown on the drawings. Sufficient lug space shall be provided for use with cables of the number and size as shown on the drawings.

Power connections to auxiliary devices shall be made at the devices, with required protection located at a wall-mounted common distribution panel.

Generator set control interfaces to other system components shall be made on a common, permanently labeled terminal block assembly.

Engine and Engine Equipment

The engine shall be diesel, 4 cycle, radiator and fan cooled. Minimum displacement and number of cylinders shall be determined by Manufacturer to provide the required power to meet the requirements of this project. The

horsepower rating of the engine at its minimum tolerance level shall be sufficient to drive the alternator and all connected accessories.

The electronic governor system shall provide automatic isochronous frequency regulation. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions. The control system shall actively control the fuel rate and excitation as appropriate to the state of the generator set. Fuel rate shall be regulated as a function of starting, accelerating to start disconnect speed, accelerating to rated speed, and operating in various isochronous or parallel states.

Skid-mounted radiator and cooling system rated for full load operation in 122 degrees F (50 degrees C) ambient as measured at the generator air inlet, based on 0.5-inch water external static head. Radiator shall be sized based on a core temperature which is 20F higher than the rated operation temperature, or prototype tested to verify cooling performance of the engine/radiator/fan operation in a controlled environment. Radiator shall be provided with a duct adapter flange. The cooling system shall be filled with a 50/50-ethylene glycol/water mixture by the equipment manufacturer. Rotating parts shall be guarded against accidental contact.

Electric starter(s) capable of three complete cranking cycles without overheating.

Positive displacement, mechanical, full pressure, lubrication oil pump.

Full flow lubrication oil filters with replaceable spin-on canister elements and dipstick oil level indicator.

An engine driven, mechanical, positive displacement fuel pump. Fuel filter with replaceable spin-on canister element. Fuel cooler, suitable for operation of the generator set at full rated load in the ambient temperature specified shall be provided if required for operation due to the design of the engine and the installation.

Replaceable dry element air cleaner with restriction indicator.

Flexible supply and return fuel lines.

Engine mounted battery charging alternator, 40-ampere minimum and solid-state voltage regulator.

Coolant heater

Engine mounted, thermostatically controlled, coolant heater(s) for each engine. Heater voltage shall be as shown on the project drawings. The coolant heater shall be UL499 listed and labeled.

The coolant heater shall be installed on the engine with silicone hose connections. Steel tubing shall be used for connections into the engine coolant system wherever the length of pipe run exceeds 12-inches. The coolant heater installation shall be specifically designed to provide proper venting of the system. The coolant heaters shall be installed using quick disconnect couplers to isolate the heater for replacement of the heater element. The quick disconnect/automatic sealing couplers shall allow the heater element to be replaced without draining the engine cooling system or significant coolant loss.

The coolant heater shall be provided with a 24VDC thermostat, installed at the engine thermostat housing. An AC power connection box shall be provided for a single AC power connection to the coolant heater system.

The coolant heater(s) shall be sized as recommended by the engine manufacturer to warm the engine to a minimum of 100F (40C) in a 40F ambient, in compliance with NFPA110 requirements, or the temperature required for starting and load pickup requirements of this specification.

Provide vibration isolators, spring/pad type, quantity as recommended by the generator set manufacturer. Isolators shall include seismic restraints if required by site location.

Starting and Control Batteries shall be calcium/lead antimony type, 24 volt DC, sized as recommended by the engine manufacturer, complete with battery cables and connectors.

Provide critical exhaust silencer(s) for each engine of size and type as recommended by the generator set manufacturer and approved by the engine manufacturer. The mufflers shall be critical grade. Exhaust system shall be installed according to the engine manufacturer's recommendations and applicable codes and standards.

A UL listed/CSA certified 10-amp voltage regulated battery charger shall be provided for each engine-generator set. The charger shall be located [in the automatic transfer switch] [in a wall cabinet]. Input AC voltage and DC output voltage shall be as required. Chargers shall be equipped with float, taper and equalize charge settings. Operational monitors shall provide visual output along with individual form C contacts rated at 4 amps, 120 VAC, 30VDC for remote indication of:

- Loss of AC power - red light
- Low battery voltage - red light
- High battery voltage - red light
- Power ON - green light (no relay contact)

Charger shall include an Analog DC voltmeter and ammeter, 12 hour equalize charge timer, and AC and DC fuses.

UL Listed Propane Tank shall be furnished by plumbing contractor or local propane vendor.

The following alarms shall be available:

- Low Fuel (red) - Latching fault, indicates pump failure or operating float switch failure, Closes N/O dry contacts.
- Low Fuel Shutdown (red) - Latching fault, indicates near empty tank, closes N/O contacts which may be used to shutdown generator set to avoid air in the injection system.
- Spare (red) - with N/O and N/C dry contacts

Contacts for the noted conditions shall be provided, and rated not less than 2 amps at 30VDC and 0.5 amps at 120VAC.

AC GENERATOR (IN 911 SCOPE ONLY)

The AC generator shall be; synchronous, four pole, 2/3 pitch, revolving field, drip-proof construction, single pre-lubricated sealed bearing, air cooled by a direct drive centrifugal blower fan, and directly connected to the engine with flexible drive disc. All insulation system components shall meet NEMA MG1 temperature limits for Class H insulation system. Actual temperature rise measured by resistance method at full load shall not exceed 125 degrees Centigrade.

The generator shall be capable of delivering rated output (kVA) at rated frequency and power factor, at any voltage not more than 5 percent above or below rated voltage.

A permanent magnet generator (PMG) shall be included to provide a reliable source of excitation power for optimum motor starting and short circuit performance. The PMG and controls shall be capable of sustaining and regulating current supplied to a single phase or three phase fault at approximately 300% of rated current for not more than 10 seconds.

The subtransient reactance of the alternator shall not exceed 12 percent, based on the standby rating of the generator set.

Generator Set Control

The generator set shall be provided with a microprocessor-based control system that is designed to provide automatic starting, monitoring, and control functions for the generator set. The control system shall also be designed to allow local monitoring and control of the generator set, and remote monitoring and control as described in this specification.

The control shall be mounted on the generator set. The control shall be vibration isolated and prototype tested to verify the durability of all components in the system under the vibration conditions encountered.

The generator set mounted control shall include the following features and functions:

Control Switches

Mode Select Switch. The mode select switch shall initiate the following control modes. When in the RUN or Manual position the generator set shall start, and accelerate to rated speed and voltage as directed by the operator. In the OFF position the generator set shall immediately stop, bypassing all time delays. In the AUTO position, the generator set shall be ready to accept a signal from a remote device to start and accelerate to rated speed and voltage.

EMERGENCY STOP switch: Switch shall be Red "mushroom-head" push-button. Depressing the emergency stop switch shall cause the generator set to immediately shut down, and be locked out from automatic restarting.

RESET switch: The RESET switch shall be used to clear a fault and allow restarting the generator set after it has shut down for any fault condition.

PANEL LAMP switch: Depressing the panel lamp switch shall cause the entire panel to be lighted with DC control power. The panel lamps shall automatically be switched off 10 minutes after the switch is depressed, or after the switch is depressed a second time.

Generator Set AC Output Metering

The generator set shall be provided with a metering set including the following features and functions:

- Analog voltmeter, ammeter, frequency meter, and kilowatt (KW) meter.
- Voltmeter and ammeter shall display all three phases. Ammeter and KW meter scales shall be color coded in the following fashion: readings from 0 to 90% of generator set standby rating: green; readings from 90 to 100% of standby rating: amber; readings in excess of 100%: red.
- Both analog and digital metering is required. The analog and digital metering equipment shall be driven by a single microprocessor, to provide consistent readings and performance.

Generator Set Alarm and Status Display

The generator set shall be provided with alarm and status indicating lamps to indicate non-automatic generator status, and existing warning and shutdown conditions. The lamps shall be high-intensity LED type. The lamp condition shall be clearly apparent under bright room lighting conditions. The generator set control shall indicate the existence of the following alarm and shutdown conditions on an alphanumeric digital display panel:

- Low oil pressure (alarm)
- Low oil pressure (shutdown)
- Oil pressure sender failure (alarm)
- Low coolant temperature (alarm)
- High coolant temperature (alarm)
- High coolant temperature (shutdown)
- Engine temperature sender failure (alarm)
- Low coolant level (alarm or shutdown-selectable)
- Fail to crank (shutdown)
- Fail to start/overcrank (shutdown)
- Over speed (shutdown)
- Low DC voltage (alarm)
- High DC voltage (alarm)
- Weak battery (alarm)
- Low-fuel day-tank (alarm)
- High AC voltage (shutdown)
- Low AC voltage (shutdown)
- Under frequency (shutdown)
- Over current (warning)
- Over current (shutdown)
- Short circuit (shutdown)
- Ground fault (alarm) (optional, unless required by code or specified)
- Over load (alarm)
- Emergency stop (shutdown)

Provisions shall be made for indication of four customer-specified alarm or shutdown conditions. Labeling of the customer-specified alarm or shutdown conditions shall be of the same type and quality as the above-specified conditions. The non-automatic indicating lamp shall be red, and shall flash to indicate that the generator set is not able to automatically respond to a command to start from a remote location.

Engine Status Monitoring

The following information shall be available from a digital status panel on the generator set control:

- Engine oil pressure (psi or kPA)
- Engine coolant temperature (degrees F or C)
- Engine oil temperature (degrees F or C)
- Engine speed (rpm)
- Number of hours of operation (hours)
- Number of start attempts
- Battery voltage (DC volts)

The control system shall also incorporate a data logging and display provision to allow logging of the last 10 warning or shutdown indications on the generator set, as well as total time of operation at various loads, as a percent of the standby rating of the generator set.

Engine Control Functions

The control system provided shall include a cycle cranking system, which allows for user selected crank time, rest time, and # of cycles. Initial settings shall be for three cranking periods of 15-seconds each, with 15-second rest period between cranking periods.

The control system shall include an idle mode control, which allows the engine to run in idle mode in the RUN position only. In this mode, the alternator excitation system shall be disabled.

The control system shall include an engine governor control, which functions to provide steady state frequency regulation as noted elsewhere in this specification. The governor control shall include adjustments for gain, damping, and a ramping function to control engine speed and limit exhaust smoke while the unit is starting. The governor control shall be suitable for use in paralleling applications without component changes

The control system shall include time delay start (adjustable 0-300 seconds) and time delay stop (adjustable 0-600 seconds) functions.

The control system shall include sender failure monitoring logic for speed sensing, oil pressure, and engine temperature which is capable of discriminating between failed sender or wiring components, and an actual failure conditions.

Alternator Control Functions

The generator set shall include an automatic digital voltage regulation system that is matched and prototype tested by the engine manufacturer with the governing system provided. It shall be immune from mis-operation due to load-induced voltage waveform distortion and provide a pulse width modulated output to the alternator exciter. The voltage regulation system shall be equipped with three-phase RMS sensing and shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. The system shall include a torque-matching characteristic, which shall reduce output voltage in proportion to frequency below a threshold of [58-59] HZ. The voltage regulator shall include adjustments for gain, damping, and frequency roll-off. Adjustments shall be broad range, and made via digital raise-lower switches, with an alphanumeric LED readout to indicate setting level. Rotary potentiometers for system adjustments are not acceptable. Controls shall be provided to monitor the output current of the generator set and initiate an alarm (over current warning) when load current exceeds 110% of the rated current of the generator set on any phase for more than 60 seconds. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (over current shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70 article 445.

Controls shall be provided to individually monitor all three phases of the output current for short circuit conditions. The control/protection system shall monitor the current level and voltage. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (short circuit shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70, Article 445.

Controls shall be provided to monitor the KW load on the generator set, and initiate an alarm condition (over load) when total load on the generator set exceeds the generator set rating for in excess of 5 seconds. Controls shall include a load shed control, to operate a set of dry contacts (for use in shedding customer load devices) when the generator set is overloaded.

An AC over/under voltage monitoring system that responds only to true RMS voltage conditions shall be provided. The system shall initiate shutdown of the generator set when alternator output voltage exceeds 110% of the operator-set voltage level for more than 10 seconds, or with no intentional delay when voltage exceeds 130%. Under voltage shutdown shall occur when the output voltage of the alternator is less than 85% for more than 10 seconds.

A battery monitoring system shall be provided which initiates alarms when the DC control and starting voltage is less than 25VDC or more than 32 VDC. During engine cranking (starter engaged), the low voltage limit shall be disabled, and if DC voltage drops to less than 14.4 volts for more than two seconds a "weak battery" alarm shall be initiated.

When required by National Electrical Code or indicated on project drawings, the control System shall include a ground fault-monitoring relay. The relay shall be adjustable from 3.8-1200 amps, and include adjustable time delay of 0-10.0 seconds. The relay shall be for indication only and not trip or shut down the generator set. Note bonding and grounding requirements for the generator set, and provide relay that will function correctly in system as installed.

Provide and install a 20-light LED type remote alarm annunciator with horn, located as shown on the drawings or in a location that can be conveniently monitored by facility personnel. The remote annunciator shall provide all the audible and visual alarms called for by NFPA Standard 110 for level 1 systems; and in addition shall provide indications for high battery voltage, low battery voltage, loss of normal power to the charger. Spare lamps shall be provided to allow future addition of other alarm and status functions to the annunciator. Provisions for

labeling of the annunciator in a fashion consistent with the specified functions shall be provided. Alarm silence and lamp test switch(es) shall be provided. LED lamps shall be replaceable, and indicating lamp color shall be capable of changes needed for specific application requirements. Alarm horn shall be switchable for all annunciation points. Alarm horn (when switched on) shall sound for first fault, and all subsequent faults, regardless of whether first fault has been cleared, in compliance with NFPA110 3-5.6.2.

The generator set shall be provided with a mounted main line circuit breaker, sized to carry the rated output current of the generator set on a continuous basis. The circuit breaker shall incorporate an electronic trip unit that operates to protect the alternator under all overcurrent conditions, or a thermal-magnetic trip with other overcurrent protection devices that positively protect the alternator under overcurrent conditions. The supplier shall submit time overcurrent characteristic curves and thermal damage curve for the alternator, demonstrating the effectiveness of the protection provided.

Outdoor Weather-Protection Enclosure

Generator set housing shall be provided factory-assembled to generator set base and radiator cowling. Housing shall provide ample airflow for generator set operation at rated load in the ambient conditions previously specified. The housing shall have hinged side-access doors and rear control door. All doors shall be lockable. All sheet metal shall be primed for corrosion protection and finish painted with the manufacturers standard color using a two step electro-coating paint process, or equal meeting the performance requirements specified below. All surfaces of all metal parts shall be primed and painted.

The painting process shall result in a coating which meets the following requirements:

- Primer thickness, 0.5-2.0 mils. Topcoat thickness, 0.8 to 1.2-mils.
- Gloss, per ASTM D523-89, 80% plus or minus 5%. Gloss retention after one year shall exceed 50%.
- Crosshatch adhesion, per ASTM D3359-93, 4B-5B.
- Impact resistance, per ASTM D2794-93, 120-160 inch-pounds.
- Salt Spray, per ASTM B117-90, 1000+ hours.
- Humidity, per ASTM D2247-92, 1000+ hours.
- Water Soak, per ASTM D2247-92, 1000+ hours.

Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the painted surface when removed for normal installation or service work.

Outdoor Weather-Protective Sound Attenuating Housing

The generator set shall be provided with a sound-attenuated housing which allows the generator set to operate at full rated load in the ambient conditions previously specified. The enclosure shall reduce the sound level of the generator set while operating at full rated load to a maximum of 85 dBA at any location 7-meters from the generator set in a free field environment. Housing configuration and materials used may be of any suitable design which meets application needs, except that acoustical materials used shall be oil and water resistant. No foam materials shall be used unless they can be demonstrated to have the same durability and life as fiberglass.

The enclosure shall include hinged doors for access to both sides of the engine and alternator, and the control equipment. Key-locking and padlockable door latches shall be provided for all doors. Door hinges shall be stainless steel.

The enclosure shall be provided with an exhaust silencer which is mounted inside of the enclosure, and allows the generator set package to meet specified sound level requirements. Silencer and exhaust shall include a raincap and rainshield.

All sheet metal shall be primed for corrosion protection and finish painted with the manufacturer's standard color. All surfaces of all metal parts shall be primed and painted.

Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the painted surface when removed for normal installation or service work.

LIGHTNING PROTECTION SYSTEM (IN 911 SCOPE ONLY)

ANSI/NFPA 780; Class UL 96A; Master Labeled system protecting the facility, consisting of air terminals on roofs, roof-mounted mechanical equipment, bonding of structure and other metal objects; grounding electrodes; and interconnecting conductors.

LIGHT FIXTURES

Lights fixtures and occupancy sensors are APS Corporate Standards and shall not be substituted without written permission from APS.

See attached schedule for occupancy sensor manufacturer and model numbers.

Install ballasts, and specified accessories at factory. Fixtures may be pre-lamped and flexible conduit whip installed at factory at contractor's option.

Poles shall be capable of withstanding winds of 100-miles per hour minimum.

Install suspended luminaires and exit signs using pendants supported from swivel hangers. Provide pendant length required to suspend luminaire at indicated height. Chain suspension may be used in mechanical rooms.

Support luminaires larger than 2 x 4 foot size independent of ceiling framing.

Install surface mounted luminaires and exit signs plumb and adjust to align with building lines and with each other. Secure to prohibit movement.

Fasten surface mounted luminaires to ceiling T-bar using suitable clips where fixtures are installed in exposed ceiling grid.

Install recessed luminaires to permit removal from below.

Install clips to secure recessed grid-supported luminaires in place.

Install specified lamps in each luminaire.

Provide seismic supports and restraints as required by all local and state requirements.

Relamp luminaires utilized during construction at Substantial Completion.

Clean photometric control surfaces.

Clean finishes and touch up damage.

Provide minimum of 24 consecutive hours of luminaire operation. Replace defective lamps at conclusion of demonstration period.

Examine excavation and concrete foundation for lighting poles.

Install poles plumb. Provide double nuts to adjust plumb. Grout around each base.

Install bolt covers.

ANCHORS AND FASTENERS

Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.

Do not drill or cut structural members.

Install surface-mounted cabinets and panel boards with minimum of four anchors.

Use sheet metal channel to bridge studs above and below cabinets and panel boards recessed in hollow partitions.

Height: 5-feet to operating handle.

Install fuses in fusible switches.

Select and install overload heater elements in motor controllers to match installed motor characteristics.

Telecommunications:

Furnished and installed by APS/PVNGS Corporate IS.

Equipment and Furnishings: *Fixed and movable elements operated or used by occupants in the functioning of the project.*

AUDIO-VISUAL EQUIPMENT

All Audio-Visual Equipment shall be furnished by Owner.

Horizontal Louver Blinds: Aluminum 1 inch (25 mm) wide louvers; manual wand tilt action; cord-raised and -lowered with locking at fully open and fully closed only.

Sizes: To fit inside window frames and trim.

Systems Furniture: Systems furniture shall be provided and installed by Owner outside of the construction contract. Contractor shall coordinate electrical rough-in with Project Manager.

Demolition: *Removal of unneeded and undesirable existing elements.*

GENERAL PROCEDURES AND PROJECT CONDITIONS

Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public. Obtain required permits. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures. Provide, erect, and maintain temporary barriers and security devices. Use physical barriers to prevent access to areas that could be hazardous to workers or the public. Conduct operations to minimize effects on and interference with adjacent structures and occupants. Do not close or obstruct roadways or sidewalks without permit. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

Do not begin removal until receipt of notification to proceed from Owner.

Protect existing structures and other elements that are not to be removed. Provide bracing and shoring. Prevent movement or settlement of adjacent structures. Stop work immediately if adjacent structures appear to be in danger.

Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

Perform demolition in a manner that maximizes salvage and recycling of materials. Dismantle existing construction and separate materials. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

EXISTING UTILITIES

Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

Protect existing utilities to remain from damage.

Do not disrupt public utilities without permit from authority having jurisdiction.

Do not close, shut off, or disrupt existing life safety systems that are in use without prior written notification to Owner.

Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without prior written notification to Owner.

Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

SELECTIVE DEMOLITION FOR ALTERATIONS

Verify that construction and utility arrangements are as shown. Report discrepancies to Architect before disturbing existing installation. Beginning of demolition work constitutes acceptance of existing conditions.

Separate areas in which demolition is being conducted from other areas that are still occupied. Provide, erect, and maintain temporary dustproof partitions.

Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.

Remove existing work as indicated and as required to accomplish new work.

Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service. Verify that abandoned services serve only abandoned facilities before removal. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

Protect existing work to remain. Prevent movement of structure; provide shoring and bracing if necessary. Perform cutting to accomplish removals neatly and as specified for cutting new work. Repair adjacent construction and finishes damaged during removal work. Patch as specified for patching new work.

DEBRIS AND WASTE REMOVAL

Remove debris, junk, and trash from site. Leave site in clean and safe condition, ready for subsequent work. Clean up spillage and wind-blown debris from public and private lands, including adjacent properties.

Sitework: *Modifications to the site, site improvements, and utilities.*

SITE PREPARATION

Perform all preparation of the site necessary to accomplish the construction.

Comply with Federal, State, and local regulations regarding demolition, excavation, fire prevention, erosion control, and safety.

Protect benchmarks and survey control points.

Verify locations of existing utilities prior to beginning any earthwork or construction.

Protect existing utilities to remain; relocate as indicated on Drawings.

See Drawings for additional requirements.

BASES, BALLASTS, PAVEMENTS, AND APPURTENANCES

Concrete Pavement:

Standards: Comply with ACI 301.

Subbase: ASTM D 2940; mixture of gravel, crushed stone, and sand; minimum 90 percent passing 1.5 in (38 mm) sieve and maximum 12 percent passing No. 200 (0.075 mm) sieve; thickness as indicated.

Asphalt Pavement Materials: Thicknesses as indicated on the drawings. Materials shall comply with MAG specifications.

Concrete: As specified in Substructure, Foundations.

SECTION 3
FORM OF PROPOSAL

SECTION	TITLE
1.1	Pricing
1.2	Primary/Secondary Contact
Appendix	

SECTION 3

COST BREAKDOWN FORM

Project: Coconino County and City of Page Courts Building

1.1 Pricing

1.1.1 All Pricing shall include all direct labor and supervision necessary to complete the items in a manner that meets or exceeds the customer's satisfaction. It shall also include the labor payroll costs, overhead such as unemployment taxes, general liability insurance, rent, utilities, phones, supplies, administrative salaries, F.I.C.A. sick and vacations, etc. disposal fees tool allowance, equipment, materials, profit and all other costs used on the job. All pricing shall be based upon the above note Specific Condition, Technical Outline Specifications and drawings noted below.

1.1.2 All pricing shall be presented in 2009 dollars.

1.1.3 Provide Lump Sum Pricing for the following:

1.1.3.1 Site Work as defined in drawings A1.0, E1.0, and FP1:

SITWORK	Subtotal \$ _____
DEMO	Subtotal \$ _____
SUBSTRUCTURE	Subtotal \$ _____
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$ _____
MISC. COSTS	Subtotal \$ _____
TOTAL	\$ _____

1.1.3.2 Phase One Building Work related to the City of Page Courts:

DEMO	Subtotal \$ _____
SUBSTRUCTURE	Subtotal \$ _____
SHELL	Subtotal \$ _____
INTERIORS	Subtotal \$ _____
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$ _____
IT	Subtotal \$ _____
MISC. COSTS	Subtotal \$ _____
TOTAL	\$ _____

1.1.3.3 Phase One Building related to the City of Page 911:

DEMO	Subtotal \$ _____
SUBSTRUCTURE	Subtotal \$ _____
SHELL	Subtotal \$ _____
INTERIORS	Subtotal \$ _____
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$ _____
IT	Subtotal \$ _____
MISC. COSTS	Subtotal \$ _____
TOTAL	\$ _____

1.1.3.4 Phase Two Building related to the County Courts:

DEMO	Subtotal \$ _____
SUBSTRUCTURE	Subtotal \$ _____
SHELL	Subtotal \$ _____
INTERIORS	Subtotal \$ _____
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$ _____
IT	Subtotal \$ _____
MISC. COSTS	Subtotal \$ _____
TOTAL	\$ _____

1.1.3.5 Common Use Costs:

DEMO	Subtotal \$ _____
SUBSTRUCTURE	Subtotal \$ _____
SHELL	Subtotal \$ _____
INTERIORS	Subtotal \$ _____
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$ _____
IT	Subtotal \$ _____
MISC. COSTS	Subtotal \$ _____
TOTAL	\$ _____

1.2 Primary/Secondary Contact

1.2.1 In the event there are any technical questions related to this project, contact the following people:

Curtis Slife
cslife@fmsolutions.net
602-763-0050

Connie Jiang
cjiang@fmsolutions.net
602-393-9292

APPENDIX

DRAWINGS

Exhibit 1	Floor Plan that visually shows categories that price should be broken down into
A1.0	Site Plan
A2.0	Demolition Plan
A3.0	Floor Plan
A4.0	Reflected Ceiling Plan
SSK1	Structural Framing Plan
SSK2	Structural Details
EO.1	Symbols and General Notes
E1.0	Electrical Site Plan
E2.0	Electrical Demolition Plan
E3.0	Electrical Floor Plan
E4.0	Electrical Lighting Plan
E5.0	Electrical One Line Diagram
M1.0	Mechanical Floor Plan
M2.0	Demo Plumbing Plan Waste and Vent Piping
P1.1	Demo Plumbing Plan Waste and Vent Piping
P1.2	Demo Plumbing Plan Water Piping
P2.1	Plumbing Plan Waste and Vent Piping
P2.2	Plumbing Plan Water Piping
P3.1	Plumbing Schedules
P3.2	Plumbing Diagrams
P3.3	Plumbing Details
FP1.0	Fire Protection Plan

April 22, 2010

fmsolutions.net

Drake Kiewit
 Construction Program Manager
 Coconino County

Project: Renovation and Remodel Courts Building
 CocOnino County and City of Page
 FMS Job Number 09205.002

p 602.265.7900
 f 602.265.9477

RE: Bridging Document Cost Estimate

Dear Drake,

Attached is the cost breakdown supplied by Lake Powell Construction (LPC). There were a few items that we're clarified in the email from Jim Arnold of LPC.

1. No fees were included for permitting or plan review.
2. The IT costs are included in the "Services" line item from the electrical number.
3. No contingency was added to these numbers from LPC.

A five to ten percent contingency would be prudent on a project of this size, to address any unforeseen conditions exposed during the construction.

The total cost from LPC is \$1,164,516. The following is a breakdown per square foot for each of the requested break out areas:

Site Work	\$113,897	/ (Total Bldg SF) 8,924 =	\$ 12.76 /SF
Page Courts	\$409,026	/ 3,974 =	\$102.93 /SF
Page 911	\$217,930	/ 668 =	\$326.24 /SF
County Courts	\$226,461	/ 2,351 =	\$ 96.33 /SF
Common Area	\$197,202	/ 1,931 =	\$102.12 /SF

This breakdown represents a reasonable square foot cost for the work involved. The Page 911 cost is substantially higher than the other costs, but appropriately reflects the additional building services requested (UPS, Generator, and Lightning Protection) and the small area.

If you have any questions, please feel free to call me at 602-320-5323.

FM Solutions, Inc.



R. Brian McClure, RA, CSI, CDT
 Associate

CC: Curtis Slife - FMS

COLOR LEGEND

-  CITY OF PAGE COURTS
-  CITY OF PAGE 911
-  COUNTY COURTS
-  COMMON USE

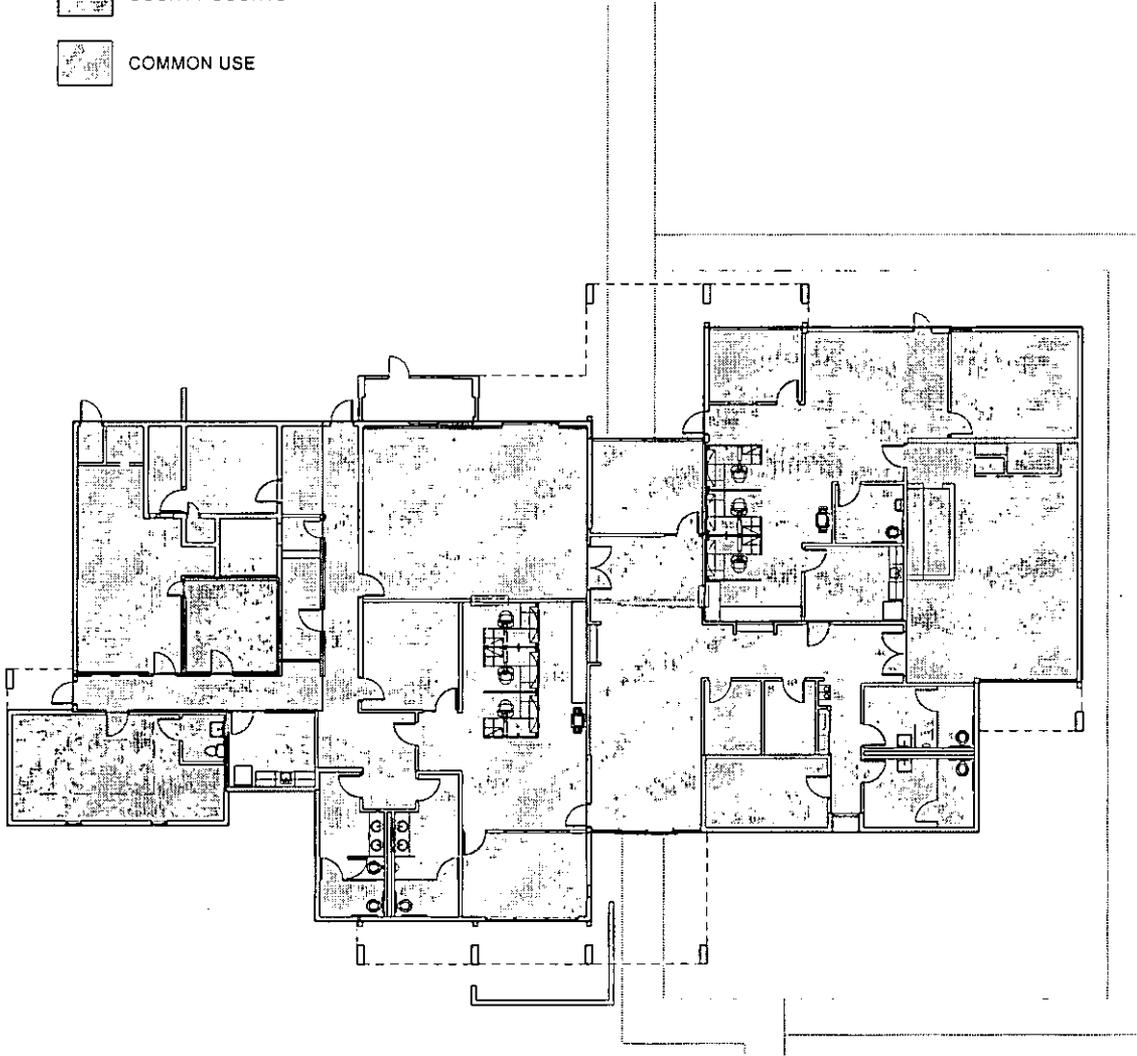


Exhibit Floor Plan

SCALE: 1" = 20'-0"

SECTION 3

COST BREAKDOWN FORM

Project: Coconino County and City of Page Courts Building

1.1 Pricing

1.1.1 All Pricing shall include all direct labor and supervision necessary to complete the items in a manner that meets or exceeds the customer's satisfaction. It shall also include the labor payroll costs, overhead such as unemployment taxes, general liability insurance, rent, utilities, phones, supplies, administrative salaries, F.I.C.A. sick and vacations, etc. disposal fees tool allowance, equipment, materials, profit and all other costs used on the job. All pricing shall be based upon the above note Specific Condition, Technical Outline Specifications and drawings noted below.

1.1.2 All pricing shall be presented in 2009 dollars.

1.1.3 Provide Lump Sum Pricing for the following:

1.1.3.1 Site Work as defined in drawings A1.0, E1.0, and FP1:

SITWORK	Subtotal \$	20,317
DEMO	Subtotal \$	3,050
SUBSTRUCTURE	Subtotal \$	N/A
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$	80,060
MISC. COSTS	Subtotal \$	10,470
TOTAL	\$	<u>113,897</u>

1.1.3.2 Phase One Building Work related to the City of Page Courts:

DEMO	Subtotal \$	37,927
SUBSTRUCTURE	Subtotal \$	7,808
SHELL	Subtotal \$	35,282
INTERIORS	Subtotal \$	88,405
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$	214,156
IT	Subtotal \$	N/A
MISC. COSTS	Subtotal \$	25,448
TOTAL	\$	<u>409,026</u>

1.1.3.3 Phase One Building related to the City of Page 911:

DEMO	Subtotal \$	6,636
SUBSTRUCTURE	Subtotal \$	5,246
SHELL	Subtotal \$	6,780
INTERIORS	Subtotal \$	14,230
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$	169,892
IT	Subtotal \$	N/A
MISC. COSTS	Subtotal \$	15,146
TOTAL	\$	<u>217,930</u>

1.1.3.4 Phase Two Building related to the County Courts:

DEMO	Subtotal \$	14,785
SUBSTRUCTURE	Subtotal \$	7,198
SHELL	Subtotal \$	15,660
INTERIORS	Subtotal \$	65,514
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$	107,229
IT	Subtotal \$	N/A
MISC. COSTS	Subtotal \$	16,075
TOTAL	\$	<u>226,461</u>

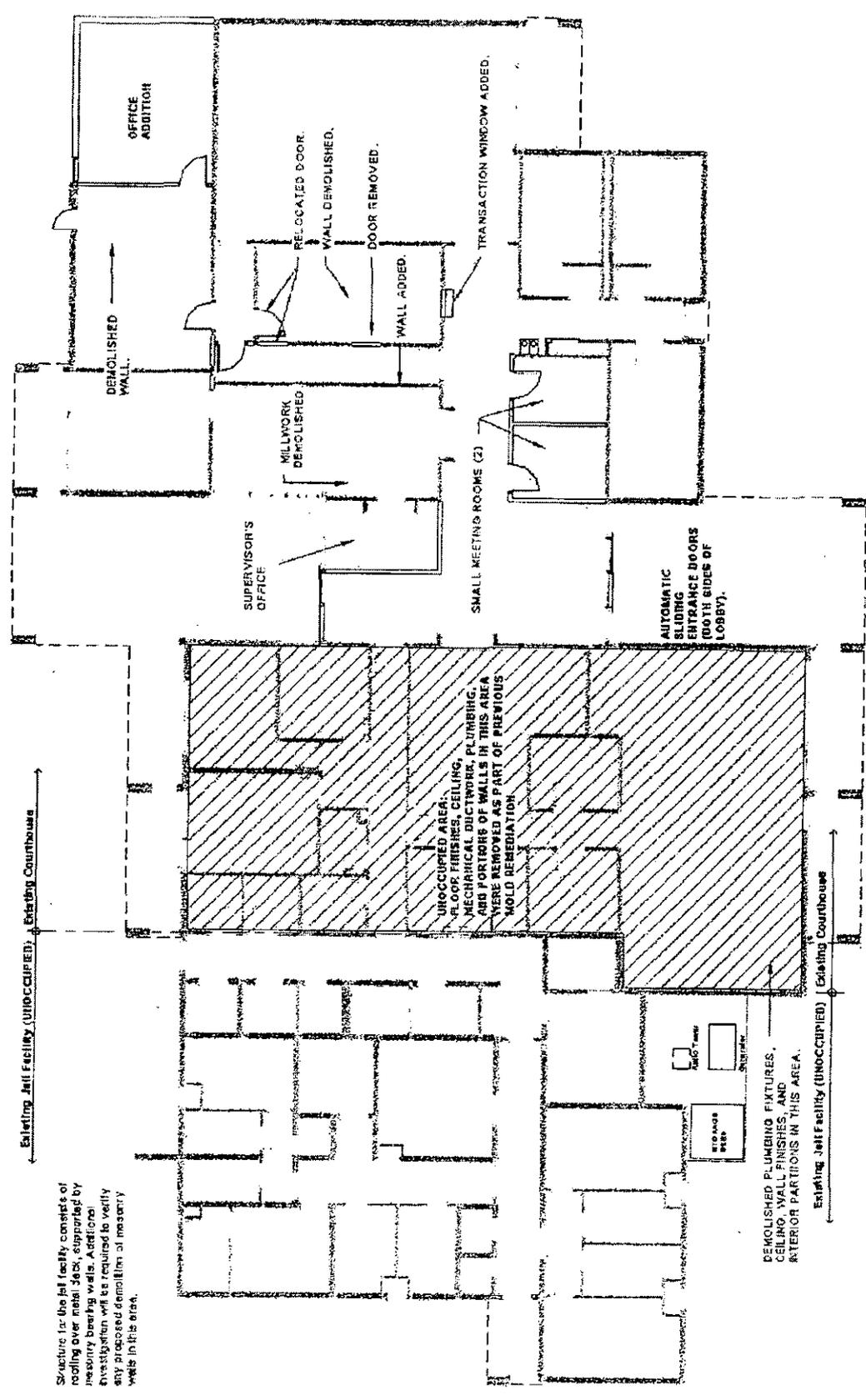
1.1.3.5 Common Use Costs:

DEMO	Subtotal \$	16,670
SUBSTRUCTURE	Subtotal \$	13,847
SHELL	Subtotal \$	31,095
INTERIORS	Subtotal \$	41,746
SERVICES (INCLUDE PLUMBING, HVAC, FIRE PROTECTION, ELECTRICAL)	Subtotal \$	78,444
IT	Subtotal \$	N/A
MISC. COSTS	Subtotal \$	15,400
TOTAL	\$	<u>197,202</u>

Exhibit C – PHASE 1 FLOORPLANS

EXISTING CONDITIONS

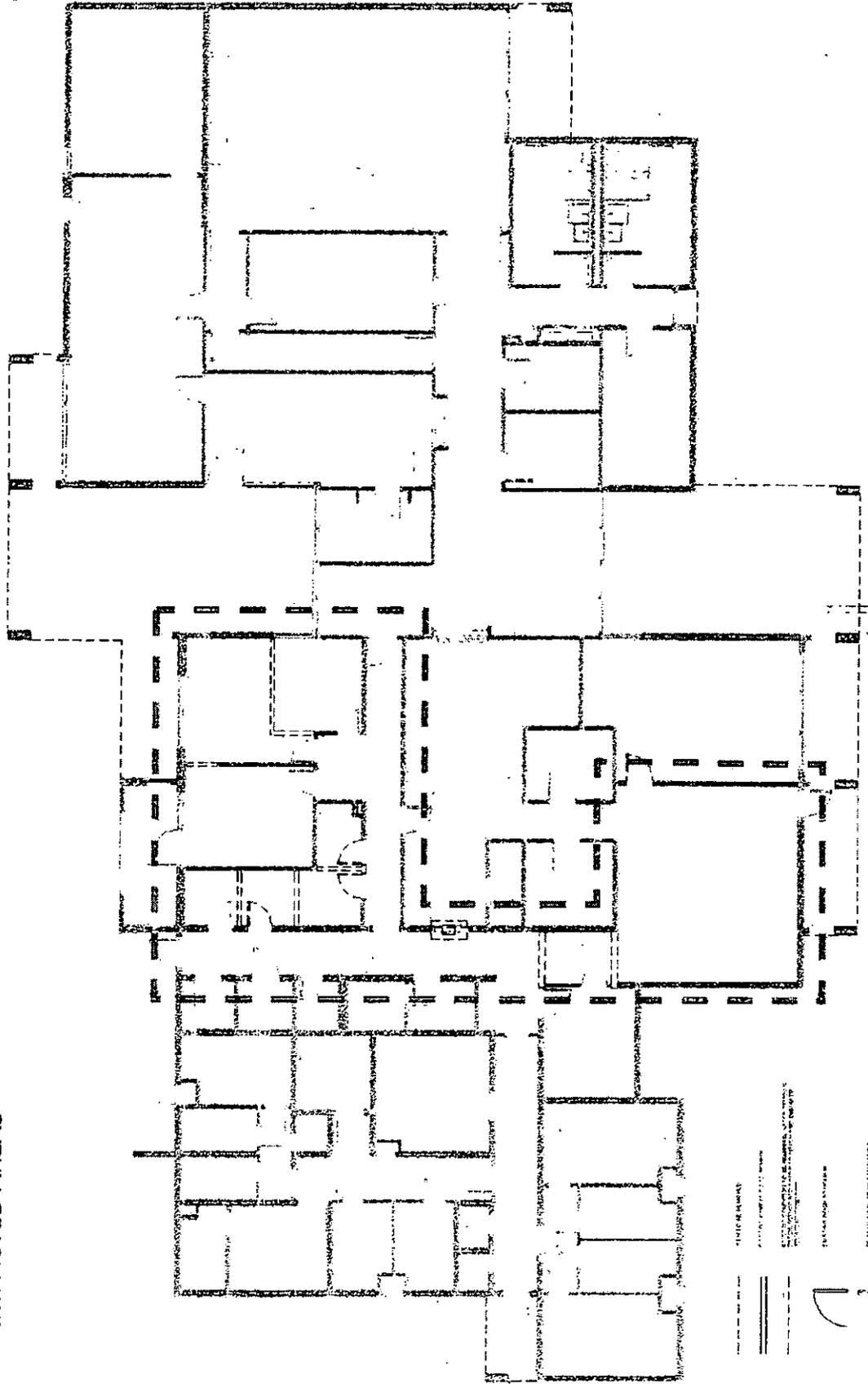
AS-BUILT MAY 2009



Structure for the jail facility consists of roofing over metal deck, supported by masonry bearing walls. Additional investigation will be required to verify any proposed demolition of masonry walls in this area.

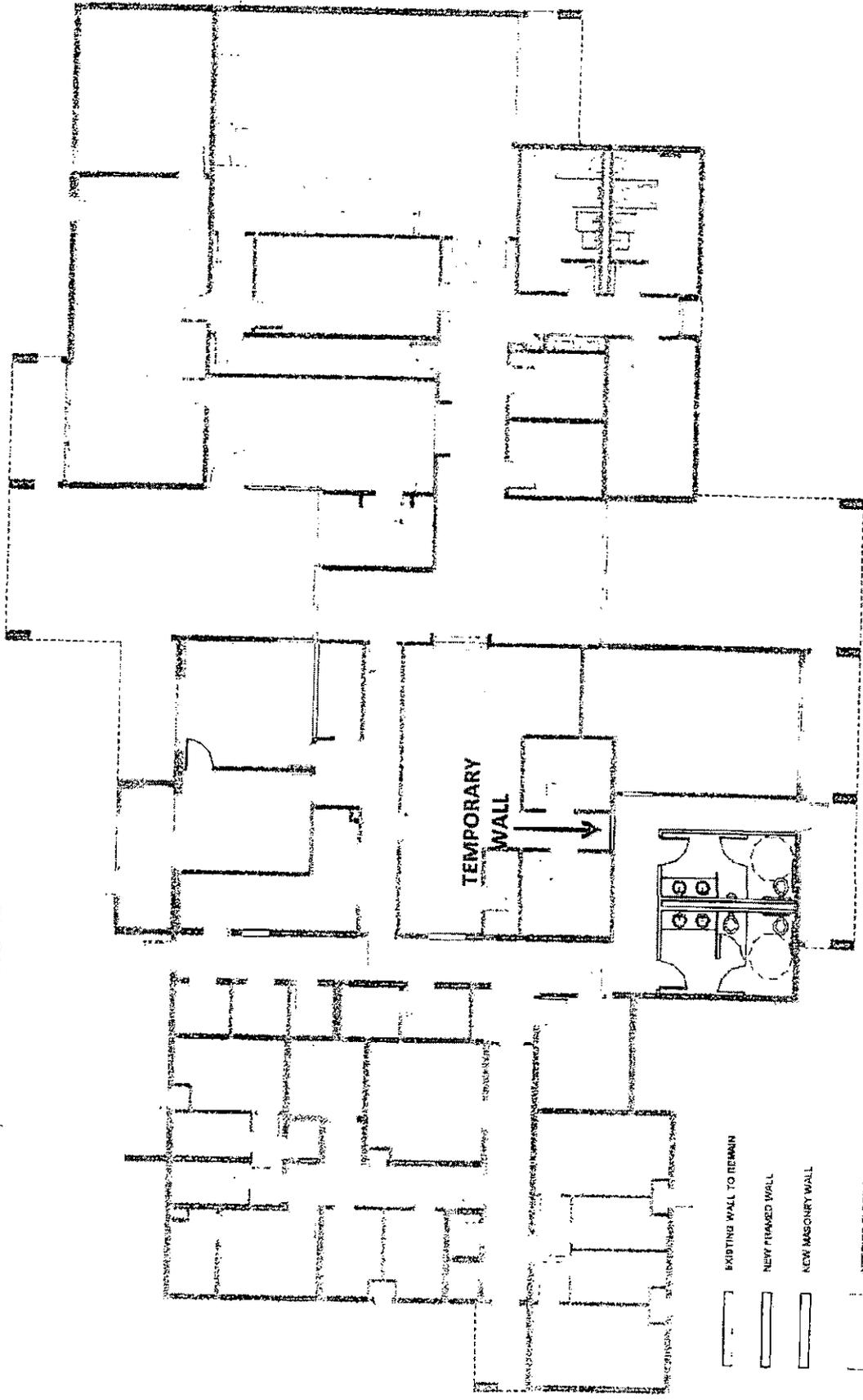
PHASE 1 DEMO PLAN

IMPACTED AREAS



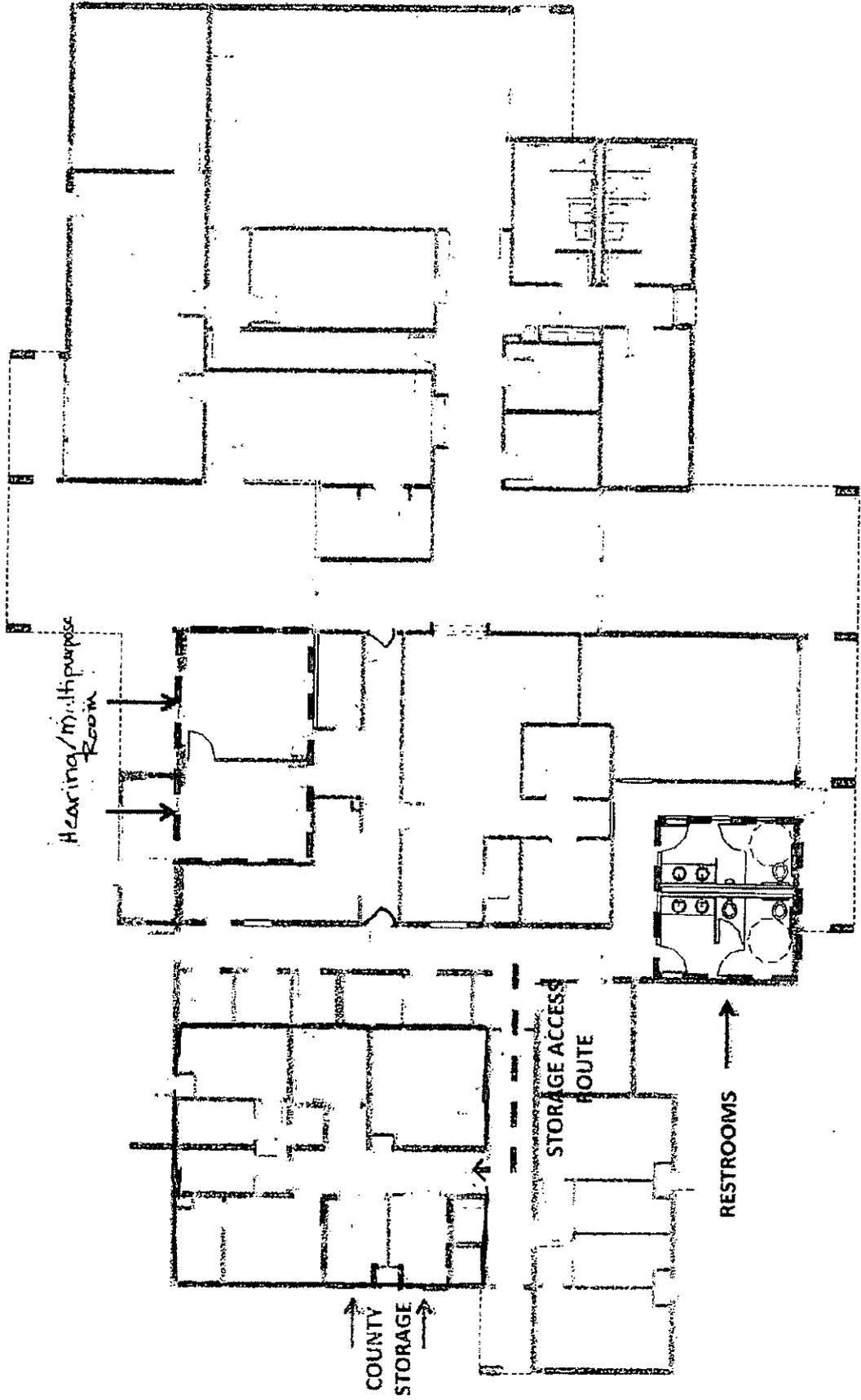
PHASE 1 NEW CONSTRUCTION

PROPOSED SPACE MODIFICATIONS



PHASE 1 NEW CONSTRUCTION

FUNCTIONS PROVIDED



PHASE 1 NEW CONSTRUCTION

FUNCTIONS PROVIDED

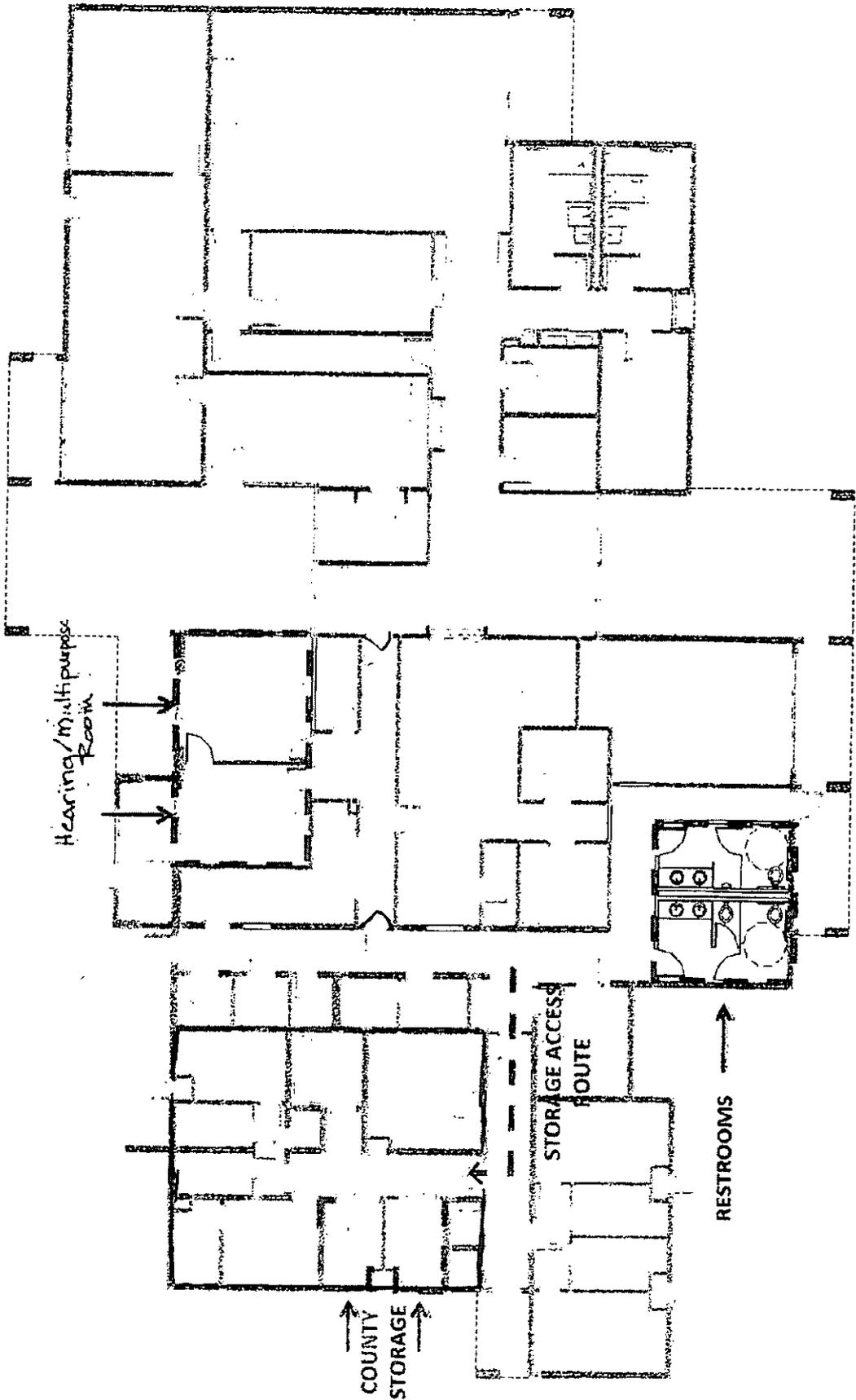


Exhibit E— MONTHLY
OPERATIONS AND
MAINTENANCE COST
PERCENTAGE

EXHIBIT E
Monthly Operations and Maintenance Cost Percentage

Total Building Square Footages									
Total Building									9114
Total Courts (including commons)				8335					
		Justice Court				2453			
		Magistrate Court				2544			
		Commons				3338			
Total City of Page (non-courts)								585	
Total Building Commons (All Users)								194	

Court Space Square Footage Allocation									
Justice Court	2453	49%							
Magistrate Court	2544	51%							
Courts Specific Total	4997								
Courts Common Area	3338								
Justice Commons Allocation (49%)		1636							
Magistrate Commons Allocation (51%)		1702							
Total Justice Court (Including Court Commons)		4089	49%						
Total Magistrate Court (Including Court Commons)		4246	51%						

Total Building Square Footage Allocation									
City of Page									
Magistrate Court	4246								
City of Page (non-courts)	585								
Total City of Page	4831	54%							
Cocoonino County Justice Court	4089	46%							
Building Commons	194								
Total City of Page (Including Building Commons)		4936	54%						
Total Cocoonino County (Including Building Commons)		4178	46%						

Exhibit F— DEPRECIATION

Phase I Ten-Year Depreciation Table

Cost of improvements	\$	118,988.50
Life expectancy of Improvements		10 Years
Salvage Value of Improvements		0

Straight Line Depreciation

Year	Depreciation per year	Accumulated depreciation	Credit to the County, if PHASE II Begins
1	\$ 5,949.43	\$ 5,949.43	\$ 113,039.08
2	\$ 11,898.85	\$ 17,848.28	\$ 101,140.23
3	\$ 11,898.85	\$ 29,747.13	\$ 89,241.38
4	\$ 11,898.85	\$ 41,645.98	\$ 77,342.53
5	\$ 11,898.85	\$ 53,544.83	\$ 65,443.68
6	\$ 11,898.85	\$ 65,443.68	\$ 53,544.83
7	\$ 11,898.85	\$ 77,342.53	\$ 41,645.98
8	\$ 11,898.85	\$ 89,241.38	\$ 29,747.13
9	\$ 11,898.85	\$ 101,140.23	\$ 17,848.28
10	\$ 11,898.85	\$ 113,039.08	\$ 5,949.42
11	\$ 5,949.42	\$ 118,988.50	\$ -

TOTAL \$ 118,988.50

PAGE UTILITY ENTERPRISES

COUNCIL COMMUNICATION

MEETING DATE: April 27, 2016

DATE: April 13, 2016
TO: Honorable Mayor Bill Diak & Page City Council
FROM: Bryan Hill P.E., General Manager
SUBJECT: Award the Successful Bidder of #16-02-W Bureau Block Waterline Replacement

SUMMARY/RECOMMENDATIONS:

Page Utility Enterprises staff advertised for qualified contractors to bid on the Bureau Block Waterline Replacement project. The project's scope is to install a new water laterals under Vista Avenue and North Navajo to tie into the existing mains along those streets. There will also be a short section of main installed on Bureau Street and a short section of main installed between and behind the old Page Electric buildings. There will be a total of 19 new service laterals and 2 new fire hydrants. This project will eliminate the old cast iron pipe which is serving the businesses between Vista Avenue, Poplar Street, North Navajo Dr., and 7th Avenue.

This project will be funded with remaining cash in FY 15/16 Water Budget line item 51-000-3720; Capital Replacements – Waterline Replacement.

The bids were due on April 4, 2016 at 4:00 p.m. There were three companies attending the mandatory pre-bid meeting of which two of them submitted bids. The low bid was submitted by Construction & Mining Services, Inc., from Cedar City, UT. The tabulated bids are listed below:

COMPANY	BASE BID
Construction & Mining Services, Inc. (CMSI) Cedar City, UT	\$196,615.00
Navopache Equipment Services, Show Low, AZ	\$328,578.00

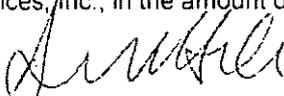
CMSI has successfully completed several cable replacement projects for the Electrical Utility, performed the most recent waterline replacement for the Water Utility, and has consistently demonstrated solid construction practices.

During the regularly scheduled monthly PUE Board meeting conducted on April 12, 2016, the Board reviewed staff's summary and recommendation. The Board voted unanimously to recommend that Page City Council award the above-mentioned Bid to Construction & Mining Services, Inc., in the amount of \$196,615.00.

ATTACHMENTS: Project Map

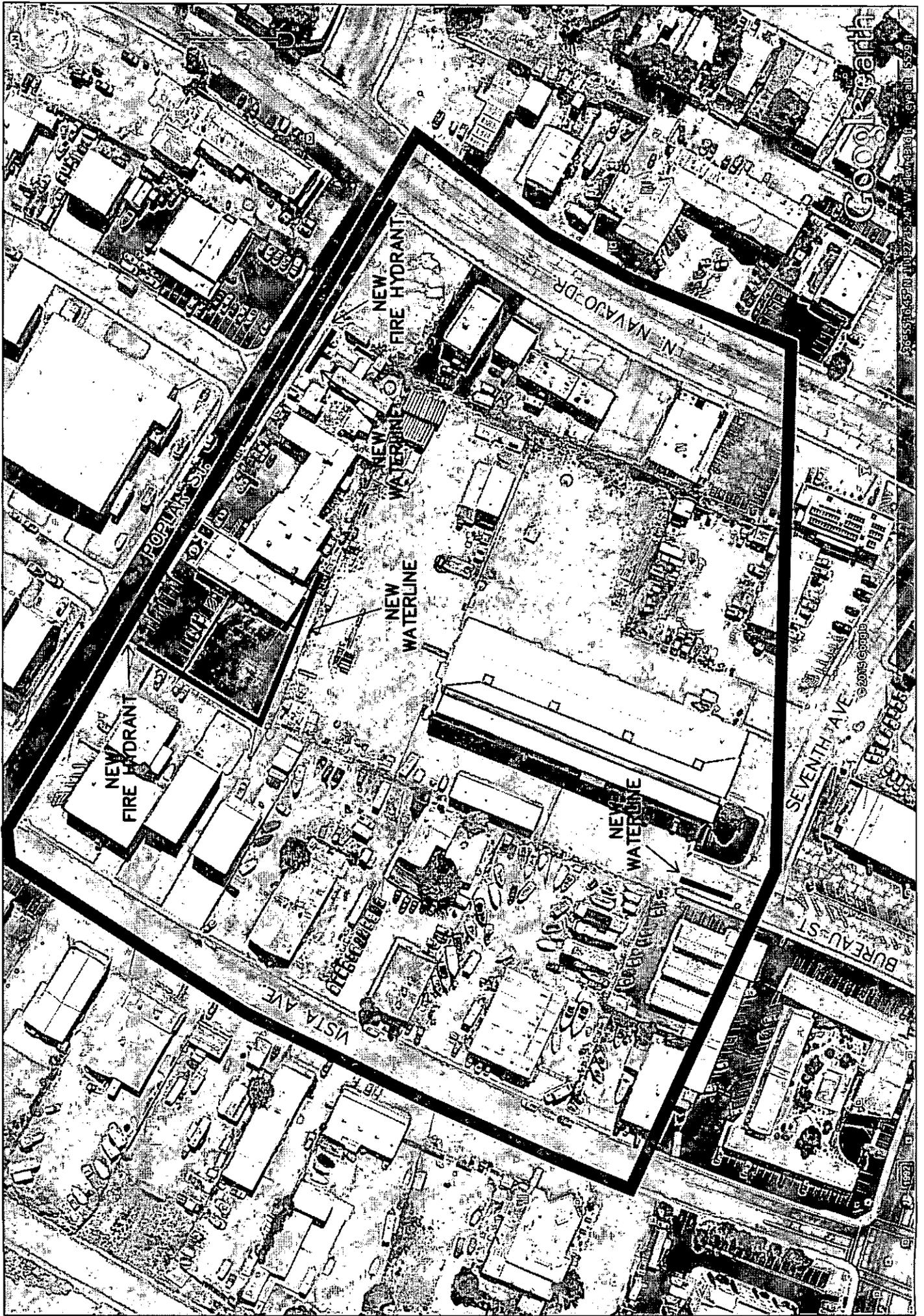
SUGGESTED MOTIONS:

I move to award Bid #16-01-W Bureau Block Waterline Replacement to Construction & Mining Services, Inc., in the amount of \$196,615.00.



Bryan Hill, P.E., General Manager

BUREAU BLOCK WATERLINE REPLACEMENT





Request for City Council Action

Title:	Appointment of Zoning Code Task Force		
Meeting Date:	April 27, 2016	Agenda Item Number:	
Agenda Section:	<input type="checkbox"/> Consent <input type="checkbox"/> Public Hearings <input type="checkbox"/> Old Business <input type="checkbox"/> New Business <input checked="" type="checkbox"/> Other-Departments	Action:	<input checked="" type="checkbox"/> Motion <input type="checkbox"/> Resolution <input type="checkbox"/> Ordinance
Originating Department:	Community Development	Supporting Documents:	None
Prepared By:	Community Development Director	Presented By:	Community Development Director
Reviewed By:	City Manager	Approved By:	City Manager
Proposed Action:	Motion to Appoint _____ to Serve on the Zoning Code Task Force		

BACKGROUND:

In March, the City Council authorized Staff to enter into a professional services agreement with Michael Baker and Associate to update the City of Page Zoning and Zoning Map. As part of the Zoning Code update process, staff is recommending that a Zoning Code Task for be appointed to carry out the primary work of review and discussion of proposed language and the digital zoning map.

The Task force should be comprised of up seven to nine individuals that represent the viewpoint of various elements of the community as they will be in a strong position to offer constructive ideas during drafting of the new code. The task force should provide a level of knowledge and discussion not available from people who may only experience parts of the process. Members should serve as supporters of the ordinance through adoption and application of the ordinance.

Over the past few months Staff has reached out to the public in various ways to solicit members for the Zoning Code Task Force. This outreach has resulted in a list of 8 individuals that have expressed a desire to serve on the board, as follows:

- Levi Tappan, City Council
- Korey Seylor, City Council
- LeRoy Wicklund, Planning and Zoning Commission
- Rob Peterson, Planning and Zoning Commission
- Jim Arnold, Lake Powell Construction-At Large
- Ron Macdonald-At Large
- Nancy Walter-At Large
- Bruce Muraida-At Large

ADVISORY BOARD RECOMMENDATION:

At their March meeting, the Planning and Zoning Commission voted to recommend that LeRoy Wicklund and Rob Peterson represent the Planning and Zoning Commission on the Zoning Code Task Force.

STAFF RECOMMENDATION:

Repeat the following motion for each individual to be appointed:

I move to appoint _____ to serve on the Zoning Code Task Force.