

CITY OF SAN BERNARDINO

San Bernardino, California



CONTRACT DOCUMENTS AND SPECIFICATIONS

FOR

ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY

Project No. 13476

September 22, 2022

PREPARED BY:

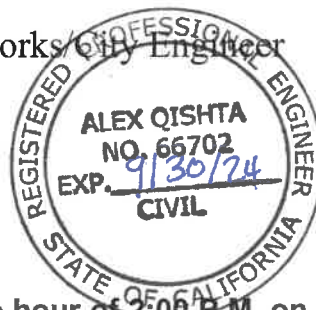
CARLOS MIRAMONTES

City of San Bernardino
Public Works Department
Engineering Division

PREPARED UNDER THE DIRECTION OF

Alex Qishta, P.E.
Deputy Director of Public Works/City Engineer
RCE No. 66702
Expiration: 9/30/2024


Signature



Bids will be received up to the hour of 2:00 P.M. on Thursday, October 27, 2022

NOTICE INVITING SEALED BIDS OR PROPOSALS

Pursuant to a Resolution of City Council of the City of San Bernardino, directing this notice, NOTICE IS HEREBY GIVEN that the City of San Bernardino will receive at the office of Public Works Department of the City of San Bernardino, located at **201 N 'E' Street, 2nd Floor, San Bernardino, California 92401** on or before the hour of **2:00 o'clock P.M. on the Thursday, October 27, 2022**, sealed bids or proposals for the Construction of:

Project No. 13476
ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY
AND HOWARD ROWE LIBRARY

in said City.

There will be non-mandatory Pre-Bid Meeting/Job Walk held for this project at 10 am on Monday, October 10, 2022, at 525 N Mt Vernon Ave, San Bernardino, CA 92411. All questions should be submitted to the Project Manager Carlos Miramontes at Miramontes_ca@sbcity.org on or before **Monday, October 17, 2022, at the end of closing business day at 5:30 pm.**

PREVAILING WAGE: Notice is hereby given that in accordance with the provisions of California Labor Code, Division 2, Part 7, Chapter 1, Articles 1 and 2, the Contractor is required to pay not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work. In that regard, the Director of the Department of Industrial Relations of the State of California is required to and has determined such general prevailing rates of per diem wages. Copies of such prevailing rates of per diem wages are on file in the office of the City Engineer, 201 North "D" Street, San Bernardino, California, and are available to any interested party on request. The City also shall cause a copy of such determinations to be posted at the job site.

Pursuant to Labor Code § 1775, the Contractor shall forfeit, as penalty to the City, not more than fifty dollars (\$50.00) for each laborer, workman, or mechanic employed for each calendar day or portion thereof, if such laborer, workman, or mechanic is paid less than the general prevailing rate of wages hereinbefore stipulated for any work done under the attached contract, by him or by any subcontractor under him, in violation of the provisions of said Labor Code.

In accordance with the provisions of § 1777.5 of the Labor Code, as amended, and in accordance with the regulations of the California Apprenticeship Council, properly indentured apprentices may be employed in the prosecution of the work.

Attention is directed to the provisions in §§ 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

SUBCONTRACTED WORK: The name, Contractor License Number and location of business of any subcontractor who will perform work exceeding 1/2 of 1% of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater, must be submitted with the bid. Any other information regarding the foregoing subcontractors that is required by City to be submitted may be submitted with the bid or may be submitted to City up to 24 hours after the

deadline established herein for receipt of bids. The additional information must be submitted by the bidder to the same address and in the same form applicable to the initial submission of bid.

INELIGIBLE SUBCONTRACTORS: The successful bidder shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Section 1999.1 or 1777.7 of the Labor Code.

YOU MUST SUBMIT with your proposal cash, cashier's check, certified check, or bidder's bond, payable to the City of San Bernardino in an amount equal to at least ten percent (10%) of the bid as a guarantee that the bidder will enter into the contract if the same is awarded to him, and in the event of failure to enter into such contract said cash, cashier's check, certified check, or bond shall become the property of the City of San Bernardino. If the City of San Bernardino awards the contract to the next lowest bidder, the amount of the lowest bidder's security shall be applied to the difference between the low bid and second lowest bid, and the surplus, if any, shall be returned to the lowest bidder.

The Contractor shall be required to post a bond in the amount of 100% of the contract price and a labor and material bond equal to 50% of the contract price. No proposal will be considered from a Contractor who is not licensed as a "A" & "B" License or "C5", "C8 -C10", "C15", "C33" & "C36" license contractor, at time of bid, or to whom a proposal form has not been issued by the City of San Bernardino.

The work is to be done in accordance with the plans and specifications on file in the Office of the City Engineer. Electronic Copies of the plans and specifications shall be available to be downloaded (copied) from the CITY's website at: www.ci.san-bernardino.ca.us /request for bids/public works.

The Contractor may, upon the Contractor's request and the Contractor's sole cost and expense, substitute authorized securities in lieu of moneys withheld (performance retention).

The successful bidder will be required to enter into a contract satisfactory to the City of San Bernardino. The City of San Bernardino reserves the right to reject any and all bids, or to waive any irregularities in the bids.

By: Genoveva Rocha, CMC,
City Clerk
City of San Bernardino

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NOTICE TO BIDDERS

If further information is needed regarding this work, please contact:

**Carlos Miramontes, E.I.T
Engineering Assistant II/ Project Manager
City of San Bernardino
Public Works Department, Engineering Division
201 North "E" Street
San Bernardino, CA 92401**

**Phone: 909-384-5019
FAX: 909-384-5190
E-MAIL: Miramontes_Ca@sbcity.org**

Monday - Thursday from 8:00 A.M. to 5:00 P.M.

All persons obtaining bid packets should immediately supply the Engineer with his or her facsimile telephone number in order that addenda and other information may be transmitted as rapidly as possible. **FAILURE TO PROVIDE SUCH A NUMBER MAY RESULT IN LATE NOTIFICATION.**

CONTRACTOR'S PROPOSAL

Company

Address

Telephone Number

State License Number

City of San Bernardino
201 North "E" Street
San Bernardino, California 92401

Ladies and Gentleman:

Pursuant to the Public Notice inviting bids or proposals, the undersigned declares that he has carefully examined the location of the proposed work, that he has examined plans, profiles, and specifications for **Project No. 13476, ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY**. And read the accompanying proposal requirement, and hereby proposes to furnish all materials and do all work required to complete the said work in accordance with said plans, profiles, specifications, and special provisions for the unit or **Lump Sum (LS)** price set forth in the Schedule of Work Items.

Unless otherwise specified by the Contractor, the listing of an Item No. of Work shall be conclusive evidence that the subcontractor proposed to perform the Item of Work and shall perform the entirety of the work for that Item No. of Work.

All persons or parties submitting a bid proposal on the project shall complete the following form setting forth the Item Number (as specified in the "Schedule of Work Items"), the name, location, and place of business of each subcontractor who will perform work or labor or

render services to the prime Contractor in or about the construction of the work of improvements, or a subcontractor licensed by the State of California, who, under subcontract to the prime Contractor, specially fabricates and installs a portion of the work or improvements according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent (1/2%) of the prime Contractor's total bid, or, if the bid is for the construction of streets or highways, including bridges, in excess of one-half of one percent (1/2%) of the prime Contractor's total bid or ten thousand dollars (\$10,000.00), whichever is greater.

It is noted that if a Contractor fails to specify a subcontract for any portion of the work to be performed under the Contract, he shall be deemed to have agreed to perform such portion himself, and he shall not be permitted to subcontract that portion of the work except by written consent of the awarding authority. The requirement of the submission of this list, the legal consequences for failure of the Contractor to do so, and other particular details concerning the same shall be as set forth in the "Subletting and Subcontracting Fair Practices Act", California Public Contract Code (§ 4100, *et seq.*) to which the bidder is hereby referred.

Item No. of Work	Name of Firm or Contractor	Location of Mill, Shop or Office	Sub-Contractor Classification	City of San Bernardino Business License No. *

* All Subcontractors are required to obtain a City of San Bernardino Business License before a Notice to Proceed may be issued.

The undersigned further agrees that in case of default in executing the required contract with necessary bonds within **ten (10) calendar days** after the notice of award of contract has been mailed, the proceeds of the check or bond accompanying his bid shall become the property of the City. If the City awards the contract to the next lowest bidder, the amount of the lowest bidder's security shall be applied by the City to the difference between the low bid and the second lowest bid, and the surplus, if any, shall be returned to the lowest bidder. The undersigned further agrees to complete the work within **Ninety (90) working days** from the execution of the first contract.

Contractor, and any subcontractors utilized, shall be licensed in accordance with the provisions of the Contractor's License Law, Chapter 9 of Division 3 of the State Business and Professions Code. Additionally, the Contractor must have at the time of bid opening for this project the following classification(s) of Contractor's license and experience:

Classification

The Contractor shall possess a "A" & "B" License or "C5", "C8 -C10", "C15", "C33" & "C36"
License Contractor

BIDDER'S INTIATED ACKNOWLEDGEMENT OF ADDENDUMS:

ADDENDUM NO.1 _____ **DATE:** _____

ADDENDUM NO.2 _____ **DATE:** _____

ADDENDUM NO.3 _____ **DATE:** _____

ADDENDUM NO.4 _____ **DATE:** _____

BIDDING FORM

**PROJECT NO. 13476 ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND
HOWARD ROWE LIBRARY
PROJECT NO. 13476**

Name of Bidder _____

The undersigned, having examined the proposed Contracts and having visited the site and examined the conditions affecting the work, hereby and agrees to furnish all labor, materials, equipment, and appliances, and perform operations necessary to complete the work as required by said proposed Contract Documents, excluding work of alternates for.

**ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE
LIBRARY**

BID SCHEDULE ADA RESTROOM RENOVATION- HOWARD ROWE LIBRARY BID SCHEDULE NO. 1					
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QTY	AMOUNT	SUBTOTAL
1	Mobilization/Demobilization	LS	1		
2	Demolition: Restrooms, Doors, Frames, Hardware, Unclassified and Dump Fees	LS	1		
3	Install Two New Restroom Doors (Single) Including Frame, Hardware, Exit Devise, Infill Framing & Drywall and Signage per Project Plans, Specifications, and Special Provisions	LS	1		
4	Misc. Architectural repairs to Existing Gypsum Board Restroom Walls & Ceiling System Including Insulation and Ceiling Panels per Project Plans, Specifications and Special Provisions	LS	1		
5	Floor Preparation, Subfloor Repair if needed and Installation of Tile for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		
6	New Installation of Ceiling & Wall Framing with Gypsum Board with Insulation, FRP Wall Paneling, Paint and Ceramic Wall & Floor Tile with Base for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QTY	AMOUNT	SUBTOTAL
7	New Restroom Upgrades to Finish and Install Plumbing Fixtures, Partitioning, Misc. Items, Counter Sink and Accessories per Project Plans, Specifications and Special Provisions	LS	1		
8	Modify, Furnish and Install Fire Sprinkler System, Fire Extinguisher, Electrical, Exhaust Fans, HVAC and Exit Signs for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		
9	New Restroom Upgrades to Finish and Install Electrical Fixtures, Outlet's, Conduit, Wiring, Misc. Items, and Accessories per Project Plans, Specifications and Special Provisions	LS	1		
TOTAL BID ITEMS (In Figures)					
TOTAL BID ITEMS (In Words)					

BID SCHEDULE
ADA RESTROOM RENOVATION- PAUL VILLASENOR LIBRARY
BID SCHEDULE NO. 2

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QTY	AMOUNT	SUBTOTAL
1	Mobilization/Demobilization	LS	1		
2	Demolition: Restrooms, Doors, Frames, Hardware, Unclassified and Dump Fees	LS	1		
3	Install Two New Restroom Doors (Single) Including Frame, Hardware, Exit Devise, Infill Framing & Drywall and Signage per Project Plans, Specifications, and Special Provisions	LS	1		
4	Misc. Architectural repairs to Existing Gypsum Board Restroom Walls & Ceiling System Including Insulation and Ceiling Panels per Project Plans, Specifications and Special Provisions	LS	1		
5	Floor Preparation, Subfloor Repair if needed and Installation of Tile for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		
6	New Installation of Ceiling & Wall Framing with Gypsum Board with Insulation, FRP Wall Paneling, Paint and Ceramic Wall & Floor Tile with Base for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		
7	New Restroom Upgrades to Finish and Install Plumbing Fixtures, Partitioning, Misc. Items, Counter Sink and Accessories per Project Plans, Specifications and Special Provisions	LS	1		
8	Modify, Furnish and Install Fire Sprinkler System, Fire Extinguisher, Electrical, Exhaust Fans, HVAC and Exit Signs for Proposed Restrooms per Project Plans, Specifications and Special Provisions	LS	1		
9	New Restroom Upgrades to Finish and Install Electrical Fixtures, Outlet's, Conduit, Wiring, Misc. Items, and Accessories per Project Plans, Specifications and Special Provisions	LS	1		
10	Remove and Dispose All Existing Wallpaper in the Community Room, Entrance Between Restrooms, Reception Area and Computer Lab Per Project Specifications and Special Provisions.	SF	3,000		
11	Clean, Repair Drywall, Primer & Paint Interior Walls in the Community Room, Entrance Between Restrooms, Reception Area and Computer Lab Per Project Specifications and Special Provisions.	SF	3,000		
12	Remove and Dispose All Existing Tile Located at the Entrance of Library and In Between Restrooms Per Project Specifications and Special Provisions.	SF	650		

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QTY	AMOUNT	SUBTOTAL
13	Clean, Prepare and Install New Tile Located near the Entrance of Library and In Between Restrooms Per Project Specifications and Special Provisions.	SF	650		
14	7 Large Bookshelves are to be Unfastened, Removed, Stored, and Put back in Place. As well as Refastened Per Project Specifications and Special Provisions.	LS	1		
15	6 Medium Bookshelves & 14 Study Tables are to be Removed, Stored, and Put back in Place After Installation of Carpet Tile Per Project Specifications and Special Provisions.	LS	1		
16	Remove, Dispose & Replace All Existing Base Molding Located in the Community Room, Entrance of Library, In Between Restrooms, Large Adult/Children Room, Librarian's office, Photo-Copy Room, Reception Area, Periodical Storage and Computer Lab Per Project Specifications and Special Provisions.	LF	800		
17	Remove and Dispose All Existing Carpet Located in the Community Room, Large Adult/Children Room, Librarian's office and Photo-Copy Room Per Project Specifications and Special Provisions.	SF	8,000		
18	Clean, Prepare and Install New Carpet Tile Located in the Community Room, Large Adult/Children Room, Librarian's office and Photo-Copy Room Per Project Specifications and Special Provisions.	SF	8,000		
19	Remove and Dispose All Existing Vinyl Located in the Reception Area, Periodical Storage and Computer Lab Per Project Specifications and Special Provisions.	SF	1,200		
20	Clean, Prepare and Install New Vinyl Tile Located in the Reception Area, Periodical Storage and Computer Lab Per Project Specifications and Special Provisions.	SF	1,200		
21	Remove, Dispose and Replace All Existing Bulletin Board Wall Panels (9' by 4') Located in the Entrance of Library and Computer Lab Per Project Specifications and Special Provisions.	EA	18		
22	Remove, Dispose and Replace All Existing Florescent Light Bulbs with LED Lights of Same Size Per Project Specifications and Special Provisions.	EA	60		
23	Remove, Dispose and Replace All Existing T-Bar Ceiling Tiles (4' by 2') Located in the Community Room Per Project Specifications and Special Provisions.	SF	2,000		
24	Remove, Dispose and Replace All Existing Electrical Outlets Per Project Specifications and Special Provisions.	EA	60		
25	Remove, Dispose and Replace All Existing Electrical Light Switches Per Project Specifications and Special Provisions.	EA	20		

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QTY	AMOUNT	SUBTOTAL
26	Patch, Prepare, Primer & Paint Exterior Walls & Columns of the Entire Building Per Project Specifications and Special Provisions.	SF	7,000		
27	Refurbish & Paint All Existing Wood Beams Located Outside of The Library Per Project Specifications and Special Provisions.	SF	2,500		
28	Sand Blast, Primer & Paint Wrought Iron Fence Segments Located Outside of The Library Per Project Specifications and Special Provisions.	SF	700		
29	Remove, Dispose and Replace All Existing Floor Tile & Concrete Subfloor Located Outside the Entrance of the Building With 4 Inch PCC Concrete Panels Per City of San Bernardino Standard 202; Project Specifications and Special Provisions.	SF	350		
TOTAL BID ITEMS (In Figures)					
TOTAL BID ITEMS (In Words)					

Contractor's License Number

Date of Expiration

(Seal – if Bid is by a Corporation)

Attest

DIR Number

Amount of Certified Check or Bid Bond

Date of Expiration

Name of Bonding Company

(This affidavit shall be executed by all bidders at the time of bid submittal.

Failure to execute the affidavit on this page will result in rejection of bid.)

NON-COLLUSION AFFIDAVIT

To the DEPARTMENT OF PUBLIC WORKS, CITY OF SAN BERNARDINO, STATE OF CALIFORNIA.

The undersigned in submitting a bid for performing the following work by contract, being duly sworn, deposes and says:

That he or she is of the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; communication, or conference with anyone to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract on anyone interested in the proposed contract; or take any action in restraint of free competitive bidding in connection with such contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Firm Name

Signature of Bidder

Printed Name and Title

Business Address

Place of Residence

Subscribed and sworn to (or affirmed) before me this ____ day of _____, 20__ the above proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Signed _____
Notary Public in and for the County of

_____, State of California.

My Commission expires on _____, _____
Year

DECLARATION OF ELIGIBILITY TO CONTRACT
[Labor Code Section 1777.1; Public Contract Code Section 6109]

The undersigned contractor certifies and declares that:

1. The undersigned contractor is aware of Sections 1771.1 and 1777.7 of the California Labor Code, which prohibit a contractor or subcontractor who has been found by the Labor Commissioner or the Director of Industrial Relations to be in violation of certain provisions of the Labor Code, from bidding on, or being awarded, or performing work as a subcontractor on a public works project for specified periods of time.

2. The undersigned contractor is not ineligible to bid on, be awarded or perform work as a subcontractor on a public works project by virtue of the foregoing provisions of Sections 1771.1 or 1777.7 of the California Labor Code or any other provision of law.

3. The undersigned contractor is aware of California Public Contract Code Section 6109, which states:

- (a) A public entity, as defined in Section 1100 [of the Public Contract Code], may not permit a contractor or subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to Section 1771.1 or 1777.7 of the Labor Code to bid on, be awarded, or perform work as a subcontractor on, a public works project. Every public works project shall contain a provision prohibiting a contractor from performing work on a public works project with a subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.
- (b) Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract, and any public money that may have been paid to a debarred subcontractor by a contractor on the project shall be returned to the awarding body. The contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the project.”

4. The undersigned contractor has investigated the eligibility of each and every subcontractor the undersigned contractor intends to use on this public works project, and determined that none of them is ineligible to perform work as a subcontractor on a public works project by virtue of the foregoing provisions of the Public Contract Code, Sections 1771.1 or 1777.7 of the Labor Code, or any other provision of law.

The undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this ____ day of _____, 20__, at _____, California.

(Place of execution)

Signature

Name (print or type)

Title

Name of company

CITY OF SAN BERNARDINO

NON-DEBARMENT CERTIFICATION

Instructions for Certification.

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why they cannot provide the certification set out below. The certification or explanation will be considered in connection with the City's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the City determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
4. The prospective primary participant shall provide immediate written notice to the City to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the City or agency entering into this transaction.
6. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals.

8. Nothing contained in the foregoing shall be construed to require establishment of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Expect for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower Tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies to the Federal Government, the City may terminate this transaction for cause or default.

10. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion.

COUNTY OF _____]

STATE OF _____]

_____ being first
(President or duly authorized Company official)

duly sworn deposes and says that he is _____

_____ of _____
(Official Capacity)

_____ with the intention of becoming
(Name of Company)

a primary participant on City of San Bernardino Construction and that he certifies to the best of his knowledge and belief that said company and its principals:

**PROJECT: ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY
AND HOWARD ROWE LIBRARY
PROJECT NO. 13476**

and that he certifies to the best of his knowledge and belief that said company and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property:

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification: and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Further affiant sayeth not.

(Signature)

(Print Name)

SUBSCRIBED AND SWORN to before me a notary public this _____

Day of _____, 20____

Notary Public

My commission expires: _____

**CONTRACT
AGREEMENT**

A G R E E M E N T

CITY OF SAN BERNARDINO

THIS AGREEMENT is made and concluded this _____ day of _____, 20____, between the
City of San Bernardino (owner and hereinafter "CITY"), and
_____ (hereinafter "CONTRACTOR").

1. For and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the CITY, and under the conditions expressed in the bond as deposited with the CITY, receipt of which is hereby acknowledged, the CONTRACTOR agrees with the CITY, at the CONTRACTOR's own proper cost and expense in the Special Provisions to be furnished by the CITY, to furnish all materials, tools and equipment and perform all the work necessary to complete in good workmanlike and substantial manner the

**ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND
HOWARD ROWE LIBRARY**
Project No. 13476

in strict conformity with Plans and Special Provisions Project No. 13476, and also in accordance with Standard Specifications for Public Works/Construction, latest edition in effect on the first day of the advertised "Notice Inviting Sealed Bids" for this project, on file in the Office of the City Engineer, Public Works Department, City of San Bernardino, which said Plans and Special Provisions and Standard Specifications are hereby especially referred to and by such reference made a part hereof.

2. The CONTRACTOR agrees to receive and accept the prices as set forth in the Bid Schedule as full compensation for furnishing all materials and doing all the work contemplated and embraced in this agreement; also for all loss or damage arising out of the nature of the work aforesaid or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work and the whole thereof, in the manner and according to the Plans and Special Provisions, and requirements of the Engineer under them.
3. The CONTRACTOR herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on the basis of race, color, national origin, religion, sex, marital status, or ancestry in the performance of this contract, nor shall the CONTRACTOR or any person claiming under or through him or her, establish or permit any such practice or practices of discrimination or segregation with reference to the selection of subcontractors, vendees, or employees in the performance of this contract. Failure by the CONTRACTOR to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as recipient deems appropriate.

AGREEMENT: ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY - Project No. 13476

- 4. CITY hereby promises and agrees with the said CONTRACTOR to employ, and does hereby employ the said CONTRACTOR to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions above set forth; and the same parties for themselves, their heirs, executors, administrators, and assigns, do hereby agree to the full performance of the covenants herein contained.

- 5. It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid of said CONTRACTOR, then this instrument shall control and nothing herein shall be considered as an acceptance of said terms of said bid conflicting herewith.

IN WITNESS WHEREOF, the parties of these presents have executed this contract in four (4) counterparts, each of which shall be deemed an original in the year and day first above mentioned.

CONTRACTOR

CITY OF SAN BERNARDINO

NAME OF FIRM:

BY:

ROBERT D. FIELD
City Manager

BY: _____

TITLE: _____

ATTEST:

MAILING ADDRESS:

GENOVEVA ROCHA, CMC
City Clerk

PHONE NO.: (____) _____

APPROVED AS TO FORM:

ATTEST:

Secretary

SONIA CARVALHO, City Attorney

NOTE: Secretary of the Owner should attest. If Contractor is a corporation, Secretary should attest.

PUBLIC WORKS BOND FORMS
PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the City of San Bernardino, a Charter City and municipal corporation, organized under the laws of the State of California, (hereinafter referred to as the "City") has awarded to _____, (hereinafter referred to as the "Contractor") an agreement for **Contract No.** _____, (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the City in the sum of _____ DOLLARS, (\$ _____), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one (1) year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officials, officers, employees, and authorized volunteers, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by the City in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by the City, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor

obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure Section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Permit the City to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the City, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporations require two (2) signatures; *one from each* of the following groups: A. Chairman of Board, President, or any Vice President; *AND* B. Secretary, Assistant Secretary, Treasurer, Assistant Treasurer, or Chief Financial Officer).

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

The rate of premium on this bond is _____ per thousand. The total amount of premium charges is \$ _____.

(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of Agent or Representative for service of process in California, if different from above)

(Telephone number of Surety and Agent or Representative for service of process in California)

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

DESCRIPTION OF ATTACHED DOCUMENT

- Individual
 Corporate Officer

Title(s)

- Partner(s) Limited
 General

- Attorney-In-Fact
 Trustee(s)
 Guardian/Conservator
 Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

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- Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of Attorney to local representatives of the bonding company must also be attached.

END OF PERFORMANCE BOND

PAYMENT BOND (LABOR AND MATERIALS)

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the City of San Bernardino, a Charter City and municipal corporation organized and operating under the laws of the State of California (hereinafter designated as the "City"), by action taken or a resolution passed _____, 20____, has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows: **Contract No.** _____ (the "Project"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City in the penal sum of _____ Dollars (\$_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Civil Code Section 9100, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Revenue and Taxation Code Section 18663, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 9100 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance,

addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or the City and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Civil Code Section 9100, and has not been paid the full amount of his claim.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract, including but not limited to, the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporations require two (2) signatures; *one from each* of the following groups: A. Chairman of Board, President, or any Vice President; *AND* B. Secretary, Assistant Secretary, Treasurer, Assistant Treasurer, or Chief Financial Officer).

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

Notary Acknowledgment

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STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

 Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

DESCRIPTION OF ATTACHED DOCUMENT

- Individual
- Corporate Officer

_____ Title(s)

_____ Title or Type of Document

- Partner(s)
 - Limited
 - General

_____ Number of Pages

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

_____ Date of Document

Signer is representing:
 Name Of Person(s) Or Entity(ies)

_____ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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 Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of-Attorney to local representatives of the bonding company must also be attached.

END OF PAYMENT BOND

GENERAL PROVISIONS
2021 GREEN BOOK, AS MODIFIED

**CITY OF SAN BERNARDINO
GENERAL PROVISIONS**

The Standard Specifications for the City of San Bernardino shall be the **STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2021 EDITION** (sometimes hereinafter referred to as the *Green Book*), written and promulgated by the Southern California Chapter, American Public Works Association, and Southern California Districts Associated General Contractors of California Joint Cooperative Committee, including all published amendments thereto except for the following amendments, deletions and modifications.

Any conflict arising between these modifications and the Standard Specifications for Public Works Construction shall be resolved by the Engineer, whose decision shall be final.

Modifications to the Standard Specifications for Public Works Construction.

The following amendments, additions and deletions shall be incorporated into the Green Book:

SECTION 1 – GENERAL

1-2 Terms and Definitions.

Agency - The City of San Bernardino

Board - The Mayor and City Council of the City of San Bernardino

Clerk or City Clerk – The City Clerk of the City of San Bernardino

Engineer or City Engineer - The City Engineer of the City of San Bernardino or his or her designee.

Laboratory - The official testing laboratory of the Agency or other laboratories designated, in writing, by the Engineer.

1-6 Bidding and Submission of the Bid

Subsection 1-6 of the *Green Book* hereby **amended**, as follows:

1-6.3 Availability of Plans and Specifications: Plans and specifications may be examined at the Office of the City Engineer. Copies of the plans and specifications are available at the Office of the City Engineer. Copies of the Notice to Bidders and proposal forms may be obtained from the City Engineer.

1-6.4 Approximate Estimate: The quantities given in the Notice to Bidders, proposal and contract forms are approximate only, being given as a basis for the comparison of bids, and the Agency does not, expressly or by implication, agree that the actual amount of work will correspond therewith. For work bid on a **Lump Sum (LS)** price basis, any estimate of quantities is provided for the convenience of

Bidders and for comparison of bids and is not guaranteed to be correct by the Agency.

1-6.5 Examination of Plans, Specifications and Site of the Work. The Bidder shall examine carefully the site of the work contemplated and the proposal, plans, specifications and contract forms therefor. It will be assumed that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished, and as to the requirements of these specifications, the plans and the contract.

1-6.6 Proposal Form: All proposals must be submitted on forms for that purpose furnished by the Agency. Letters of transmittal cannot be considered as part of the bid. All proposals shall give the prices proposed, both in writing and figures, and shall be signed by the Bidder, who must give his address. The Bidder shall fill out all blanks in the proposal form as therein required. In case of error, unit prices will govern over extensions and written words will govern over numerals, unless it can be established that an obviously incorrect entry has been made.

1-6.7 Rejection of Proposals Containing Alterations or Irregularities: Proposals may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, or irregularities of any kind. When proposals are signed by an agent, other than an officer or manager of a corporation or a member of a partnership, a power of attorney or written authorization must be on file with the Agency prior to opening bids or shall be submitted with the proposal; otherwise, the proposal will be rejected as irregular and unauthorized.

1-6.8 Proposal Guaranty: All bids shall be presented in a sealed envelope and shall be accompanied by "Proposal Guaranty" made payable to the Agency and for an amount equal to at least ten percent (10%) of the bid unless otherwise specified on the "Notice Inviting Sealed Bids or Proposals." Said guaranty shall be cash, an unconditional certified or cashier's check, a bank or postal money order or bid bond executed as surety by a corporation authorized to issue surety bonds in the State of California.

1-6.9 Withdrawal of Proposals: Any bid may be withdrawn at any time prior to, but not after, the hour fixed in the public notice for the opening of bids, provided that a request in writing executed by the Bidder or his duly authorized representative, for the withdrawal of such bid is filed with the Clerk. The withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid.

1-6.10 Disqualification of Bidders: More than one proposal from an individual, a firm or partnership, a Corporation or an association under the same or different names will not be considered. Reasonable grounds for believing that any bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. If there is reason for believing that collusion exists among the bidders, none of the participants in such collusion will be considered in this or future proposals. Proposals in which the prices are unbalanced may be rejected.

1-6.11 Competency of Bidders: Prior to the submission of bids, the Contractor shall be licensed in accordance with the provisions of Chapter 9 of Division III of the Business and Professional Code of the State of California and evidence of such license shall be presented to the Engineer on request. The Engineer may require the Bidder to present satisfactory evidence that he has sufficient experience and that he is fully prepared with the necessary capital, materials, machinery and skilled workmen to carry out the contract.

1-6.12 Material Guaranty: Before any contract is awarded, Bidders may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, together with samples, which samples may be subjected to the tests provided for in these specifications to determine their quality and fitness for the work.

1-6.13 Progress Schedule: The successful bidder shall submit a progress schedule showing thereon the time he proposes to occupy in prosecuting the various major divisions of the work and his proposed sequence of operations.

Subsection 1-7 Award and Execution of Contract: of the *Green Book* hereby is **amended** to read as follows:

1-7.2 Contract Bonds: of the *Green Book* dealing with the "Payment Bond" (Labor and Material Bond) hereby is **amended** as follows:

Payment bond shall be:

1. One hundred percent of the total amount payable by the terms of the contract when the total amount payable does not equal or exceed five million dollars (\$5,000,000).
2. Fifty percent of the total amount payable by the terms of the contract when the total amount payable is not less than five million dollars (\$5,000,000) and does not exceed ten million dollars (\$10,000,000).
3. Twenty-five percent of the total amount payable by the terms of the contract if the contract exceeds ten million dollars (\$10,000,000).

1-7.3 Consideration of Bids: Bids will be opened publicly by the City Engineer or a designated representative on the date and at the time set forth in the "Notice Inviting Sealed Bids or Proposals." The right is reserved by the Agency by action of the Board to reject any or all bids, to advertise for new proposals, to negotiate in the open market for a contract at a reasonable price, to purchase in the open market, or to have the work performed by Agency employees, or to abandon the work if, in the judgment of the Board, the best interest of the Agency will be promoted thereby.

1-7.4 Award of Contract: The award of the contract, if it be awarded, will be to the lowest responsible Bidder whose proposal complies with all the

requirements prescribed. The award, if made, will be made within forty-five (45) calendar days after the opening of the proposals.

All bids will be compared on the basis of the Agency's estimate of the quantities of work to be done.

1-7.5 Return of Proposal Guarantees: All proposal guarantees will be held by the Agency until the contract has been signed, after which they will be returned to the respective bidders whose proposals they accompany. If bids are rejected, the proposal guarantees will be returned after the date of the rejection.

1-7.6 Execution of Contract: The contract shall be signed by the successful Bidder and returned together with the contract bonds, within ten (10) calendar days after the Notice of Award of Contract has been mailed, unless otherwise specified by the Agency.

SECTION 2-SCOPE OF WORK-- [No Changes]

SECTION 3-CONTROL OF WORK

Subsection 3-5 Inspection: of the *Green Book* is hereby **amended**, as follows:

Add the following paragraphs at the end of Subsection:

The Contractor shall give the Engineer notice of the time when he or his subcontractors will start the various units of operations of the work. Notice shall be given at least forty-eight (48) hours in advance of starting or resumption time exclusive of Saturdays, Sundays or holidays, for the purpose of permitting the Engineer to make the necessary assignment of his representative or inspector on the work. Any work performed by the Contractor or his subcontractors in conflict with said notice shall be removed if so ordered by the Engineer or his representative or inspector on the work.

The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill the contract as prescribed. Defective work shall be made good, and unsuitable materials may be rejected, notwithstanding the fact that such defective work or unsuitable materials may have been previously overlooked by the Engineer and accepted or estimated for payment.

Any project undertaken by the Agency in cooperation with, or under the control or supervision of, another public or quasi-public entity shall be subject, at all times, to inspection by the participating entity.

Subsection 3-10 Surveying: of the *Green Book* is hereby **amended**, as follows:

A new **Subsection 3-10.2** is **added** to the *Green Book*:

3-10.2 Survey Service:

The Contractor shall provide construction survey and construction staking to establish grades per plans, furnish all labor, materials, equipment to complete the surveying task at no extra cost to the Agency.

All costs involved in construction survey shall be included in the various contract items of work and no additional compensation will be allowed therefore.

Subsection 3-12 Work Site Maintenance: of the *Green Book* is hereby **amended**, as follows:

3-12.6.3 Storm Water Pollution Prevention Plan (SWPPP). DELETE in its entirety and SUBSTITUTE the following:

Unless specifically prepared for the project and included in the Appendix, the Contractor shall be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for this project, which shall be submitted to the Engineer for review and approval at the Pre-Construction Conference. The Contractor's attention is directed to the California Department of Transportation (Caltrans) website at:

www.dot.ca.gov/hq/construc/stormwater/manuals.htm

The Caltrans website contains SWPPP templates and other important information that may be useful in the preparation of a SWPPP for public works projects. The Contractor shall ensure that the SWPPP prepared for this project complies with the requirements of General Permit No. CAS000002 and Regional Board Order No. R8-2010-0036, NPDES No. CAS 618036.

Additionally the Contractor shall guarantee that the SWPPP complies with the following measures from the Regulatory Permits and Environmental Commitment Measures:

- Projects shall not discharge substances in concentrations toxic to human, plant, animal, or aquatic life or that produce detrimental physiological responses.
- Projects shall not discharge waste classified as "hazardous" as defined in Title 22 CCR section 66261 and the California Water Code section 19179;
- No oil, petroleum products, or rubbish shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the United States.
- No equipment maintenance will be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter waters of the United States.

- Equipment refueling shall not occur within waters of the United States.
- Any oil or grease leaks shall be immediately cleaned up.
Upon approval of the SWPPP by the Engineer, the City shall submit a Notice of Intent (NOI) to the Regional Water Quality Control Board (RWQCB). Although this project is subject to Board Order 2009-0009-DWQ General Permit No. CAS000002, the Contractor does not need to file a Notice of Intent for coverage under the State Water Resources Control Board's General National Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Runoff Associated with Construction Activity (Statewide General Permit) provided the Notice of Intent is filed with the RWQCB, in accordance with Board Order No. R8-2010-0036, NPDES No. CAS 618036. The Contractor shall refer to and comply with all requirements of the NPDES Permit, available for review online at:

www.waterboards.ca.gov/rwqcb8/board_decisions/adopted_orders/orders/2010/10_036_SBC_MS4_Permit_01_29_10.pdf

The Contractor shall ensure that the SWPPP is developed and amended or revised by a Qualified SWPPP Developer (QSD). The Contractor shall ensure that Best Management Practices (BMPs) within the SWPPP are implemented by a Qualified SWPPP Practitioner (QSP). To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

The Contractor shall designate the QSD and QSP, as the case may be, as the individuals directly responsible for and implementing the SWPPP requirements and maintenance of the documentation contained therein, during the course of construction until the project has been accepted as complete by the City. The Contractor shall keep the SWPPP at the project site and make it available for review upon request of a representative of the RWQCB or the Engineer.

The Construction Superintendent shall prepare a Construction Schedule and BMP Sequencing Schedule for the project and include it into the SWPPP at the designated location.

Special Note: The Contractor shall ensure it has prepared, *in advance*, the required SWPPP for submittal at the Pre-Construction Conference. Failure to have prepared an adequate SWPPP for submittal at the Pre-Construction Conference will delay Contractor's start of work, however, the Notice to Proceed shall be issued and working days shall commence, regardless of construction work occurring due to the Contractor's delay in preparing and submitting an adequate SWPPP for the Engineer's approval. The Construction Superintendent shall prepare a Notice of Termination (NOT), included in the SWPPP, and submit

it to the RWQCB following acceptance of the work by the City, but prior to final payment.

Throughout the duration of the work, the Construction Superintendent shall ensure the following construction storm water monitoring actions are performed:

- Conduct site inspections before and after storm events.
- Conduct inspections of construction sites prior to anticipated storm events and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity, and evaluate whether control practices to reduce pollutant loadings identified in the SWPPP are adequate and properly implemented or whether additional control practices are needed. A record of the inspections must include the date of the inspection, the individual(s) who performed the inspection, and the observations.
- Any noncompliance or anticipated noncompliance shall be reported to the Engineer immediately, for reporting to the Regional Water Quality Control Board (RWQCB). The notifications shall identify the type(s) of noncompliance, describe the actions necessary to achieve compliance, and include a time schedule, subject to the modifications by the RWQCB, indicating when compliance will be achieved.

The Contractor shall maintain a copy of the General Storm Water Permit and the SWPPP at the construction site and shall make the General Storm Water Permit available to operating personnel and local, State, and Federal agencies' representatives during construction activities. Should the Contractor elect not to have a construction field office, the Engineer will, on request, reserve filing space within the facilities for City Inspection Personnel to assist in complying with this requirement. The Contractor shall allow authorized agents of the California Regional Water Quality Control Board (Regional Board), State Water Resources Control Board, U.S. Environmental Protection Agency, and local storm water management agencies, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter, at reasonable times, upon the construction site and the Contractor's facilities pertinent to the work.

2. Have access to and copy, at reasonable times, any records that must be kept as specified in the General Storm water Permit.
3. Inspect, at reasonable times, the construction site and related erosion and sediment control measures.
4. Sample or monitor, at reasonable times, for the purpose of ensuring compliance with the General Storm water Permit.
5. The Contractor shall grant Regional Water Board staff, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to enter the project site at reasonable times, to ensure compliance with the terms and conditions of the WQC and/or to determine the impacts the project may have on waters of the United States.

Prior to commencing work, the Contractor shall make such amendments to the SWPPP as are required to make it coincide with the Contractor's planned operations and submit the amendments to the Engineer for approval and file. The amendments shall include an Erosion Control Plan (ECP), described in Section "Construction Project Diversion and Control of Water", along with any plan for water pollution control measures. The amended and approved SWPPP shall be kept at the project field office.

The Contractor is notified that the SWPPP must be amended from time to time during construction to reflect actual construction practices and such amendments shall be submitted to the Engineer within five (5) working days of the Engineer's written request. If the Contractor plans to amend the SWPPP, due to field conditions or any other reason, he shall propose the necessary amendments to the Engineer for approval at least five (5) working days prior to implementation.

The SWPPP and amendments shall not be construed to be a waiver of the Contractor's obligation to review and understand the General Storm Water Permit before submitting a Bid. By submitting a Bid, the Contractor acknowledges satisfaction as to the requirements of the General Storm Water Permit.

Payment – Full compensation for compliance with the provisions of Subsection 3-12.6.3 "**Storm Water Pollution Prevention Plan (SWPPP)**," of the Standard Specifications, and as amended by these Special Provisions, shall be considered as included in the **Lump Sum (LS)** bid item price for "**Mobilization**," or will be paid for at the bid item price for "**Water Pollution Control**," (if indicated), which price shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved to establish, implement, monitor and maintain the BMP's required by the SWPPP, and no additional compensation shall be allowed therefore. The Contractor shall be responsible for payment of any administrative fines that may be imposed on the City due to the Contractor's failure to comply with the terms of the applicable permits

regulating Water Pollution Control. Administrative fines, if imposed, will be withheld from the Contractor's payments.

SECTION 4. CONTROL OF MATERIALS - [No Changes]

SECTION 5. LEGAL RELATIONS AND RESPONSIBILITIES

Subsections of Section 5 of the *Green Book* hereby is **amended** to read:

5-1 Laws and Regulations: The Contractor shall keep himself fully informed of all State and National laws and all municipal ordinances and regulations of the Agency which in any manner affect those engaged or employed in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

The Contractor shall at all times observe and comply with, and shall cause all his agents and employees to observe and comply with all such laws,

ordinances, regulations, orders and decrees; and shall protect and indemnify the Agency, the Board and the Engineer, and all of its and their officers and agents and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees. If any such discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any such law, ordinance, regulation, murder or decree, the Contractor shall forthwith report the same in writing to the Engineer.

5-3.2 Prevailing Wage: Notice is hereby given that in accordance with the provisions of California Labor Code, Part 7, Chapter 1, Articles 1 and 2, the Contractor is required to pay not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holidays and overtime work. In that regard, the Director of the Department of Industrial Relations of the State of California is required to and has determined such general prevailing rates of per diem wages. Copies of such prevailing rates of per diem wages are

on file in the office of the City Clerk or Secretary of the Agency issuing the contract, 201 North D Street, San Bernardino, California, and are available to any interested party on request. The Agency also shall cause a copy of such determinations to be posted at the job site.

The Contractor shall forfeit, as penalty to the Agency, not more than fifty dollars (\$50.00) for each laborer, worker or mechanic employed for each calendar day or portion thereof such laborer, worker or mechanic is paid

less than the general prevailing rate of wages hereinbefore stipulated for any work done under the attached contract, by him or by any subcontractor under him, in violation of the provisions of said Labor Code.

5-3.2.1 Taxes: The Agency is liable for the State Sales Tax and where the County of purchase has adopted the Uniform Sales Tax Law and a Town and/or County tax is collected by the State the Agency is liable for this tax also. Include this tax in the amount bid.

The Agency is exempt from the Federal Excise Tax and exception certificates will be furnished. In certain instances, the bidder and subcontractor may be liable for Federal Excise Tax. Bidder must determine whether Federal Excise Tax is chargeable to him and, if so, the amount of the tax should be included in the amount bid.

Any new or additional taxes levied after the adoption of these specifications that are payable by the Agency are not to be included in the price bid, but added thereto when invoiced.

5-3.2.2 Responsibility for Damage: The Agency, the Board and the Engineer shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof; or for any materials or equipment used in performing the work; or for injury or damage to person or persons, either workmen or the public; or for damage to adjoining property from any cause whatsoever during the progress of the work or at any time before final acceptance.

The Contractor shall be held responsible for any and all loss, accidents, injury or damage to persons or property which may be the result of this contract and for which the Agency might be held liable. He shall protect and indemnify the Agency and save it harmless in every way from all claims, suits, or acts of law for damage or injury to persons or property that may arise or be occasioned in any way because of this contract. The Board may retain so much of the money due the Contractor as shall be considered necessary, until disposition as been made of such suits or claims for damages as aforesaid.

5-3.2.3 Contractor's Responsibility for Work: Until the formal acceptance of the work by the Engineer, the Contractor shall have the charge and care thereof except as provided in § 7-2.2.5 and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any cause before final acceptance and shall bear the expense thereof, except such injuries or damages as occasioned by acts of war.

5-3.2.4 Correction for Errors, Recovery for Errors, Dishonesty or Collusion:

The Agency reserves the right to correct any error that may have been made in any estimate that has been paid. The Agency also reserves the right to claim and recover by process of law, any sums sufficient to correct any error or make good any deficiency in the work resulting from such error or from dishonesty or collusion between any of the parties or individuals having dealings pursuant to the construction of the work, regardless of when such error, dishonesty or collusion shall be discovered.

5-3.2.5 Rights in Materials and Salvage: Ownership of material incorporated in the work is vested in the name of the Agency. Any material delivered and paid for in part by the Agency or any material furnished by the Agency to be incorporated in the work, is or becomes the property of the Agency. Any salvageable materials or installations existing at the site of the work (such as manhole rings and covers, catch basin gratings, angle iron, pipe railings, valve boxes and lamp pole boxes, and other steel, cast iron or metallic materials) that are the property of the Agency if they are to be removed shall be delivered F.O.B. the storage yard designated by the Agency. The salvageable materials shall be cleaned of clinging concrete and debris and delivered to the storage yard in the same condition as it existed prior to removal, unless the Contractor is instructed otherwise by the Engineer.

5-3.4.1 Day's Work: Eight (8) hours of labor shall constitute a legal day's work for all workers employed in the execution of this contract and this Contractor and any subcontractor under him shall comply with and be governed by the laws of the

State of California having to do with working hours as set forth in Division 2, Part 7, Chapter 1, Article 3 of the Labor Code of the State of California as amended.

The Contractor shall forfeit, as a penalty to the Agency, twenty-five (\$25.00) for each laborer, worker or mechanic employed in the execution of the contract, by him or any subcontractor under him, upon any of the work hereinbefore mentioned, for each calendar day during which said laborer, worker or mechanic is required or permitted to labor more than eight (8) hours in violation of said Labor Code.

Contractor agrees to pay travel and subsistence pay to each worker needed to execute the work required by this contract as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Labor Code § 1773.8.

5-3.5 Apprentices: In accordance with the provisions of § 1777.5 of

the Labor Code as amended by Chapter 971, Statutes of 1939, and in accordance with the regulations of the California apprenticeship Council, properly indentured apprentices may be employed in the prosecution of the work.

Attention is directed to the provisions in §§ 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him.

Section 1777.5, as amended, requires the Contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases shall not be less than one to five except:

- a. When unemployment in the area of coverage by the joint apprenticeship committee has exceeded an average of fifteen percent (15%) in the ninety (90) days prior to the request for certificate, or
- b. When the number of apprentices in training in the area exceeds a ratio of one to five, or
- c. When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis statewide or locally, or
- d. When the Contractor provides evidence that he employs registered apprentices on all of his contracts on an annual average of not less than one apprentice to eight journeymen.

The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

The Contractor and subcontractor under him shall comply with the requirements of §§ 1777.5 and 1777.6 in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the director of Industrial Relations, *ex-officio* the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

Subsection 5-4 Insurance: of the *Green Book* is hereby **amended**, as follows:

5-4.2 General Liability Insurance: *Replace the second and third paragraphs with the following:*

The Contractor shall maintain coverage with the following minimum limits:

General Liability: \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate for bodily injury, personal injury, and property damage. Commercial General Liability Insurance or other form with a general aggregate limit shall apply separately to this project/location;

Products/Completed Operations: \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate;

Automobile Liability: \$1,000,000.00 per accident for bodily injury and property damage;

Employer's Liability: \$1,000,000.00 per accident for bodily injury or illness;

Course of Construction: Complete value of the project.

SECTION 6. PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

A new **Subsection 6-1.1.1** is **added** to the *Green Book*:

6-1.1.1 Working Hours: Working hours shall be limited to 7:00 a.m. and 5:00 p.m. unless otherwise authorized, in writing, by the Engineer.

Subsection 6-3.1 of the *Green Book* is **amended** by changing the term "working days" to "calendar days."

SECTION 7 MEASUREMENT AND PAYMENT

Subsection 7-4 Payment For Extra Work: of the *Green Book* is hereby **amended**, as follows:

7-4.3 Markup

7-4.3.1 Work by Contractor. The following percentages shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits:

1. Labor.....20%
2. Materials.....15%
3. Equipment Rental.....15%
4. Other Items and Expenditures...15%

To the sum of the costs and markups provided for in this subsection, 1% shall be added as compensation for bonding.

7-4.3.2 Work by Subcontractor. When all or part of the extra work is performed by a Subcontractor, the markup established in 7-4.3.1 shall be applied to the Subcontractor's actual cost of such work. A markup of 10 percent on the first \$5,000 of the subcontracted portion of the extra work and a markup of 5 percent on the work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor.

A new **Subsection 7-6 Construction Claims** hereby is **added** to the *Green Book* as follows:

7-6.1 Resolution of Construction Claims: Pursuant to the requirements of California Public Contract Code § 20104(c), set forth below is the procedure for resolution of construction claims by the contractor. This provision shall only apply to those claims specified in § 20104 of the California Public Contract Code:

§ 20104. Application of article; inclusion of article in plans and specifications.

- (a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000.00) or less which arise between a contractor and a local agency.
- (2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with § 10240) of Chapter 1 or Part 2.
- (b) (1) "Public work" has the same meaning as in §§ 3100 and 3106 of the Civil Code, except that "public work" does not include any work or improvement contracted for by the state or the Regents of the University of California.
- (2) "Claim" means a separate demand by the Contractor for (A) a time extension, (B) payment of money of damages arising from work done by or on behalf of the contractor pursuant to the contract for a public work and payment of which is not expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.
- (c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

§ 20104.2 Claims; Requirements; Tort Claims Excluded

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars (\$50,000.00), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars (\$50,000.00) and less than or equal to three hundred seventy-five thousand dollars (\$375,000.00), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information or requested documents, whichever is greater.

(d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the

local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim pursuant to Chapter 1 (commencing with § 900) and Chapter 2 (commencing with § 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with § 900) and Chapter 2 (commencing with § 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

§ 20104.4 Civil action procedures; mediation and arbitration; trial de novo; witnesses

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the fifteen (15) day period, any party may petition the court to appoint the mediator.

(b)(1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with § 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding § 11411.11 of that code.

The Civil Discovery Act of 1986 (Article 3 (commencing with § 2016) of Chapter 3 of Title 3 of Part 4 of the code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expense shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with § 1411.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witness to participate in the mediation or arbitration process.

§ 20104.6 Payment on undisputed portion of claim; interest on arbitration awards or judgments

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under § 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

SECTION 8- FACILITIES FOR AGENCY PERSONNEL [No Changes]

SPECIAL PROVISIONS

SPECIAL PROVISIONS

1.0 GENERAL

The Contractor shall furnish, in accordance with the plans and specifications, all labor, equipment, and materials required for all work as necessary for Project No. 13476: **ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY.**

1.1 Description of Work:

The work includes construction of the **ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY.** Including but not limited to removing & disposal of existing restrooms (all plumbing fixtures, partitioning, counter sink, and misc. items), doors, frames, hardware, flooring (tile, carpet & vinyl), electrical outlets/switches, lights; preparing the surface, repainting surfaces, furnishing and installing of new flooring and all related work all as specified on the plans and specifications.

The work to be done by the Contractor under these Specifications will consist of performing all operations necessary for the construction of all the improvements as shown on the referenced drawings at the location, in the positions, to the elevations and dimensions and conforming to the design shown on the Plans and in accordance with these Specifications.

The Contractor will furnish all transportation, materials, equipment, labor and supplies to complete the improvements, together with the appurtenant work necessary or incidental to complete, in a workmanlike manner, the improvements as contemplated and as intended by the Plans and Specifications.

1.2 Project Location:

- 108 E Marshall Blvd, San Bernardino, CA 92404.
- 525 N Mt Vernon Ave, San Bernardino, CA 92411.

1.3 Approved Materials:

Whenever the expression “or approved equal” is used, it shall be taken to mean the approval by the City Engineer of any substitution of material or material specified herein. All substitution requests shall state the reason for the request and the difference in price between the item specified and the requested substitution. All substitution requests shall be submitted to the City Engineer in writing five (5) working days prior to the bid opening. No requests for substitutions will be considered by telephone. The Contractor shall submit to the Engineer for review and approval six (6) copies of all shop drawings. The Contractor shall make any corrections to shop drawings required by the Engineer.

1.4 Pre-Bid Inquiries:

NO ORAL representations or interpretations will be made to any Bidder as to the meaning of the Special Provisions, Plans, or other Contract Documents. Written requests for an interpretation, or to identify a potential omission, discrepancy, or misunderstanding will be accepted if received by 5:00 p.m. of the 6th working day prior to the day of the proposed bid opening.

If there are any questions regarding this project, please contact:

City Engineer's Office
San Bernardino City Hall
201 North "E" Street, 2nd Floor
San Bernardino, CA 92401

SUBJECT:
**ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND
HOWARD ROWE LIBRARY PLANS & SPECIAL PROVISIONS NO. 13476**

Attention: Carlos Miramontes
Tel: (909) 384-5226; Fax: (909) 384-5190
E-mail: Miramontes_Ca@sbcity.org

2.0 UTILITY LOCATION

The following list of individuals or entities, which are known to have facilities in the area to be improved is merely for the Contractor's information and may or may not be complete or inclusive:

- City of San Bernardino (Engineering) (909) 384-5019
- Southern California Edison, Ben Murguia..... (909) 307-6788
- Southern California Gas Company, Devry Jennings..... (909) 335-7772
- San Bernardino Municipal Water Department, Engineering..... (909) 453-6175
- Verizon Communications, Control Desk..... (909) 784-6655
- AT&T, Rosemary Hamill (916) 799-4642
- Underground Service Alert..... (800) 227-2600
- California Department of Transportation..... (909) 383-6920
- San Bernardino Municipal Water Department, Sewer (909) 453-6175

2.1 Compensation for Damage or Relocation

In accordance with Section 4215 of the California Government Code, the Contractor shall be compensated for the cost of locating and repairing damage to main or trunk line utility facilities located on the job site, not due to the failure of the Contractor to exercise reasonable care; for costs of removing or relocating such utility facilities not indicated in the Contract Documents with reasonable accuracy; and for the operating costs for equipment on the project necessarily idled during

such work. Existing utilities have been carefully located and shown on the plans based on available records and surface features along with the aid of input from the utility companies and office records. However, the City assumes no responsibility for having completely and precisely shown all such existing utilities. The Contractor shall notify the several utility companies and agencies listed above before beginning excavation and shall coordinate his work with them.

The Contractor's attention is directed to the utility notification service provided by the Underground Service Alert (USA). USA member utilities will provide the Contractor with the location of their substructures in the construction area when the Contractor gives at least 48 hours' notice to the Underground Service Alert by calling 1-800-227-2600.

3.0 COMPLETION AND ACCEPTANCE

3.1 Guarantee of Work and Materials

The Contractor shall guarantee that all work performed by him under this contract fully meets the requirements thereof as to quality of workmanship and materials furnished. If any defects in materials or workmanship become evident within a period of one (1) year from the date of acceptance of the work by the City Council or designee, the Contractor shall, at his own expense, make any repair or replacement necessary to restore the work to full compliance with these Special Provisions, including repair of settled backfill and resurfacing.

Such repair and replacement shall be made promptly upon receipt of written notice from the City. If the Contractor fails to make such repair and replacement promptly, the City may cause the work to be done and the costs incurred thereby shall become the liability of the Contractor and his surety.

If, in the opinion of the Engineer, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the City or to prevent interruption of operations of the City, the City will attempt to give the notice required by this article.

If the Contractor cannot be contacted or does not comply with the Engineer's request for correction within a reasonable time as determined by the Engineer, the City may, notwithstanding the provisions of this article, proceed to make such correction and the costs of such correction shall be charged against the Contractor. Such action by the City will not relieve the Contractor of the guarantees provided in this article or elsewhere in the contract.

The foregoing obligations shall be secured by a surety bond in a form approved by the Engineer in an amount not less than ten percent (10%) of the final Contract price, and shall be delivered to the Engineer prior to final acceptance of the work.

Payment for fulfilling the requirements of this section shall be considered as included in the prices for the various Contract items of work and no additional compensation will be allowed

3.2 Liquidated Damages

Liquidated damages shall be in the amount of **One Thousand Dollars (\$1,000.00)** per working day in excess of the time allowed under this Contract for the completion of the work, as adjusted by Change Order.

In the event that construction does not commence within the specified time following the issuance of notice to proceed, liquidated damages in the amount of **One Thousand Dollars (\$1,000.00)** per working day shall be deducted from compensation due the Contractor.

The Contractor will not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the City or the owner of a utility to provide for removal or relocation of an existing or unknown facility.

4.0 TIME OF COMPLETION

The Contractor shall begin work within ten (10) working days after the date of the "Notice to Proceed," and shall diligently prosecute the same to completion by **Ninety (90)** working days after date in said Notice.

5.0 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK

Further to Section 6.1 of the Standard Specifications, the Contractor shall submit construction schedule(s) as specified below:

5.1 Initial Schedule

Within 48 hours after the Notice to Proceed has been given, and prior to the start of any work, the Contractor shall submit to the Engineer for approval three (3) copies of its proposed construction schedule in Critical Path Method format with sub schedules of related activity.

An electronic copy of the schedule shall also be submitted to the City for its use. If the Engineer notifies the Contractor that the schedule is unacceptable, the Contractor shall submit a revised schedule within five (5) working days thereafter.

Unless otherwise required, the construction schedule shall be in the form of bar charts with major activities of the project listed in chronological order showing the dates for beginning and completion of each activity. The Schedule shall also show Critical Path items.

The construction schedule shall also contain:

An economic component showing the cost of each activity, the

anticipated monthly earnings and a cash flow diagram.

A products availability schedule, which shall show the availability dates for Contractor furnished equipment affecting the progress of the work, indicate the required delivery dates for City furnished materials and equipment and indicate the required installation date for utility-furnished equipment.

5.2 Revised Schedules

After start of the work, the Contractor shall submit revised construction schedules every two weeks on a Monday thereafter until completion of the contract.

Said schedules shall clearly indicate “in detail” all work to be procured within the following two weeks.

The revised schedules should show any significant changes in activities since submission of the previous schedule with revised projections of progress and completion. It should also provide a narrative report of problem areas, anticipated delays and the impact on the schedule, corrective action recommended and its effect, and the effect of changes on schedules of other contractors involved with the work.

In the event that the revised schedules are not submitted in accordance with the above conditions, the City reserves the right to suspend all work until a revised schedule is submitted. The Contractor shall not be entitled to any claims or contract time adjustment associated with said work suspension.

5.3 Progress Meetings

Contractor shall also conduct bi-weekly construction progress meetings at the job site or at the owners’ construction office. Contractor shall prepare meeting notes and distribute them to the meeting attendees within 5 working days of the meeting date. The progress meeting shall be conducted to the level of detail necessary to address all issues and work elements that affect the construction schedule, impact to the public and project costs including potential claims and whatever work elements deemed necessary by the owner.

6.0 NOTIFICATION OF RESIDENTS AND BUSINESSES

NOT A PART OF THIS PROJECT

If the Contractor’s schedule is altered or other delays occur, which significantly affects the scheduled work. Then, it shall be at Contractor’s expense.

7.0 TRAFFIC CONTROL DURING CONSTRUCTION

1 THRU 26 – NOT A PART OF THIS PROJECT

8.0 "RECORD DRAWINGS"

The Contractor shall maintain, on the job site, a set of full-size reproducible contract drawings, or a set of full-size blueline or blackline prints INCORPORATING INFORMATION FROM THE SIGNED PLAN DRAWINGS. On these he shall mark all as-built conditions, locations, configurations, and other details, which may vary from the details represented on the original drawings. This master record of as-built conditions, including all revisions made necessary by addenda, change orders, and the like, shall be maintained up-to-date during the progress of work.

On a monthly basis, the Contractor shall submit progress record drawing(s) clearly delineating the improvements completed, for the purpose of review and processing progress payments. The City's ability to process the progress payments is contingent upon the timely submittals of the progress record drawing(s).

Upon completion of the work and prior to final acceptance, the complete set of contract drawings (size D, 24x36 in), marked up to show as-built conditions, including daily photos, installation manuals, concrete delivery tickets, etc. shall be delivered to the Engineer. These drawings shall be known as "Record Drawings."

Full compensation for compliance with the provisions specified and referred to hereinabove shall be considered as being fully included in the various contract bid items for the project, and no additional compensation will be allowed therefore.

9.0 PLANS AND STANDARD DRAWINGS

The standard drawings that apply to this contract and shall be considered as part of the plans included in these Special Provisions are listed in Appendixes.

10.0 ORDER OF WORK

As required by these specifications, the Contractor shall submit a detailed construction schedule to the Engineer for approval prior to the preconstruction meeting. This schedule should be prepared with the following items in mind:

Contractor shall maintain access to all businesses during construction. All excavations shall be backfilled, compacted and all damaged private improvements are to be restored immediately after installation of improvements in that area. If, in the opinion of the Engineer, the Contractor is not conforming to these requirements, the Engineer may order the job to be made safe and all other work halted until a meeting can be held to determine the reasons for noncompliance and to resolve the situation. Contractor is advised that gravel, cobbles and boulders will be encountered during excavation of the project. Contractor is responsible for the removal and proper disposal of all such material. Compensation for said removal shall be considered as included in various bid items.

Additional compensation will not be provided therefore.

10.1 Staged Construction

The Contractor shall plan and prosecute the construction to comply with the following phasing requirements:

- ORDER FOR CONSTRUCTION EQUIPMENT AND MATERIALS FOR THE SOCCER FIELD TURF SYSTEM, MOBILIZATION, ESTABLISHMENT OF SECURED STORAGE AREA FOR THE MATERIALS AND EQUIPMENT FOR CONSTRUCTION AND RELATED ITEMS, SECURING STAGED AREAS INCLUDING FENCING & LIGHTING, POSTING SIGNAGE, PROCESSING ENVIRONMENTAL APPLICATIONS TO MEET ANY BUT ALL REQUIRED ENVIRONMENTAL REQUIREMENTS IN ORDER TO BE IN COMPLIANCE FOR THE PROJECT, ETC.
- REMOVE EXISTING TURF SYSTEM AND SALVAGE TO CITY YARD OR HAUL OUT TO RECYCLING CENTER (SALVAGE VALUE TO CITY GENERAL FUND FOR CITY PARKS).
- INSTALL NEW SOCCER FIEL TURF SYSTEM, INSPECTIONS, TESTING, ADMINISTRATION/SUPPLY OF DRAWINGS, ETC.
- FINAL GENERAL HOUSEKEEPING, FINAL INSPECTION, COORDINATION & ADMINISTRATION, ETC.

10.2 Protection of Utilities

The Contractor's attention is directed to the Standard Specifications. The Contractor shall verify the existence and location of any underground utility pipes or structures that may be affected during the course of work. The Contractor will take due precautionary measures to protect the utilities shown and other utilities or structures not shown on the plans that might be discovered during the process of the job.

The Contractor shall determine the exact location of all utilities prior to beginning construction of the reclaimed water main, potable water, sanitary storm drain, electrical conduits/substructures, and other Contract Work which have potential conflicts with underground utilities. If conflicts are discovered, the Contractor shall notify the Engineer immediately. The cost of potholing shall be included in the various bid items, and no additional compensation will be paid.

The Contractor shall protect the existing water services and meters in place. Care shall be taken by the Contractor not to disturb the services or meters during excavation. Although there are no trees at the locations of the pads, any roots from

trees will need to follow tree root removal operations. Any Meter boxes affected shall be adjusted and raised to grade as necessary and shown on the plans.

Payment for protection of utilities and/or adjustment shall be considered to be included in other items of work and no additional compensation will be allowed.

In the event that a water service is damaged, the Contractor shall notify Water Operations and the Engineering Division immediately. The Contractor shall also arrange for the immediate repair of the water service by a licensed plumbing contractor, at no cost to the City. In certain circumstances, the Contractor may encounter water services that are entangled in roots. In these circumstances, it may be necessary to replace the water service. Qualified personnel shall make all such replacements. In order to receive compensation for this repair, the City Landscape Inspector shall be contacted prior to any further root removals.

10.3 Equipment and Material Storage

No storage of equipment or materials will be allowed on private property, unless written permission has been provided to City, or in street right-of-way.

10.4 Joining Existing Facilities

All construction of items in this contract shall join existing improvements with a smooth transition.

10.5 Protection of Work

The provisions that is for “Materials and Workmanship” of the *Standard Specifications* shall apply except as modified and supplemented below:

The Contractor shall provide sufficient barricades, delineators and ribbon at each location to adequately protect the new turf system from vandalism and unauthorized markings

Unauthorized markings (i.e. graffiti, footprints, bike tire marks, and scuff marks) in the new turf surface are not acceptable, and may be cause for rejection. All such areas rejected due to such cause shall be removed and replaced at the Contractor’s expense. All costs for protecting the new turf surface and any graffiti removal shall be considered as incidental to the cost of the work and no additional compensation will be allowed therefore.

10.6 Cooperation and Collateral Work

A minimum of forty-eight (48) hours prior to construction, the Contractor will expose all known utility crossings in order to provide for grade and alignment adjustments, if necessary.

The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The City, its workers, contractors and others shall have the right to operate within or adjacent to the Work site during the performance of such work. The Contractor shall include in its bid all costs involved as a result of coordinating its work with others.

The Contractor shall not be entitled to additional compensation or Contract Time extension from the City for damages resulting from such simultaneous, collateral and essential work. The Contractor shall redeploy its work force to other parts of the project site, if necessary to avoid or minimize such damage or delay. The Contractor shall take due precautions to protect all improvements placed by others in the vicinity of their operations.

10.7 Construction Water

The Contractor will furnish all water necessary for compactions, cleaning, flushing, dust control, etc. The Contractor shall comply with all the requirements of the City of San Bernardino Water Department.

The cost of delivering, furnishing, and applying all water will be considered as included in the various items of work, and no additional compensation will be allowed.

10.8 Parkway Trees:

The provisions of section 300-1 "Clearing and Grubbing" of the *Standard specifications* shall apply except as modified and supplemented below:

When tree roots are encountered, the roots shall be removed that are within the future locations of the Street or drainage improvements. The roots shall be removed to a depth of 8" below subgrade as directed by the Engineer. Limits of tree root removal shall extend to 6" outside of the street or storm drainage improvements. The roots shall be cut so that the remaining root ends have a neat, smooth surface. Contractor shall not backfill behind curb until the above mentioned root treatment has been inspected by inspector.

10.9 Safety

All construction will be performed in compliance with the standards as established by OSHA and in accordance with the appropriate State of California regulations. It will be the Contractor's responsibility to acquaint him and abide by these regulations during all phases of construction. The contractor will hold harmless and indemnify the City and its agents for any damages caused by failure to abide by said regulations.

10.10 Night, Sunday and Holiday Work

Unless otherwise specified in the Contract Special Provisions, no work shall be performed at night, Sunday, or the eleven (11) legal holidays to wit: New Year's Day,

Martin Luther King, Jr. Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Friday following Thanksgiving Day, Christmas Eve and Christmas Day, except work pertaining to the public safety or with the permission of the Engineer, and accordance with such regulations as he/she shall furnish in writing. Before performing any work at said times, except work pertaining to the public safety, the Contractor shall give written notice to the Engineer so that proper inspection may be provided. "Night" as used in this paragraph shall be deemed to include the hours from 7:00 P.M. to 6:00 A.M. of the next succeeding day.

11.0 ENGINEER'S ESTIMATE

The quantities of work to be done and materials to be furnished are approximate as shown on the plans and/or proposal and are given as a basis of comparison of bids only. The City does not expressly or by implication agree that the actual amount of work will correspond therewith.

12.0 FINAL CLEANUP

Prior to final acceptance, the Contractor shall restore the entire project site to a condition equal or better than the pre-construction condition as evidenced by film, notes, sketches and other construction records.

12.1 Cleaning and Dust Control

Clean up and dust control shall conform to the Standard Specifications. During execution of work, the Contractor shall clean the site, adjacent properties, and public access roads, and dispose of waste materials, debris, and rubbish to assure that all affected properties are maintained free from accumulations of water, materials and rubbish.

Contractor will provide for collection and for disposal of waste materials, spoils, debris, and rubbish.

Contractor will cover all loads of excavated material leaving the site or of material being imported, to prevent excessive dust from being created.

12.2 Protection and Restoration of Existing Improvements

The City anticipates and the Contractor shall, if necessary, repair all existing improvements, which are not designated for removal, which are damaged or removed as result of the Contractor's operations in accordance with the Standard Specifications. In particular, areas designated by the Contractor for haul routes shall be subject to a joint inspection by the City and Contractor prior to any work occurring in order to reveal any deficiencies of the existing improvements. All existing improvements subject to repair and/or replacement due to the Contractor's operations shall be repaired and/or replaced in accordance with the applicable jurisdictional Agency's requirements. Items subject to repair and/or replacement

include but are not limited to asphalt paving/base and subgrade sections, curbs and gutters, sidewalks, drives, culverts, utilities, landscaping turfs and hardscaping, etc.

13.0 PERMITS

The Contractor will be required to obtain a no-fee Building Permit from the City.

14.0 CONTRACT PAYMENTS

Payment will be made at the price for each item listed on the bidding form or as extra work as provided in the General Provisions.

Initial progress payment will not be made prior to approval by the Engineer of the Schedule of Values (breakdown of **Lump Sum (LS)** contract costs), the Construction Progress Schedule, and the Schedule of Submittals. No subsequent progress payment will be made until the Engineer receives the monthly revision of the Construction Progress Schedule and Progress Record Drawings.

15.1 Schedule of Values for Payments

The Contractor shall submit to the Engineer, within ten (10) working days after Notice to Proceed, three (3) copies of a Schedule of Values. The Schedule of Values shall consist of a detailed breakdown of the Contract **Lump Sum (LS)** or designated **Lump Sum (LS)** bid items.

The Schedule of Values shall include an allocation of the major work task items required to perform and complete the work. In the event that the "Schedule of Values" is not submitted in accordance with the Specifications contained herein, the Contractor shall not be permitted to commence with **Lump Sum (LS)** work items. The Contractor shall not be entitled to contract time adjustments.

The total of the Schedule of Values shall agree with the total or **Lump Sum (LS)** price bid. The price breakdown shall, as a minimum, show the cost of each item of the Construction Progress Schedule. Any additional breakdown of the Schedule of

Values, by quantities and prices of work and materials, considered necessary by the Engineer will be as determined by the Engineer. The price breakdown shall not be unbalanced, shall be subject to adjustment between the Engineer and the Contractor, and will be used as a basis for progress payments. Acceptance of the Schedule of Values by the Engineer shall not relieve the Contractor of the responsibility of performing all the work needed to complete the projects at the total or **Lump Sum (LS)** price bid.

15.2 Progress Payments

Determination by Engineer: The Engineer will make an approximate

measurement of all approved materials delivered to the job site and work performed by the Contractor through the last working day of each calendar month for the purpose of making a progress payment.

No payment will be made for the fabrication or production of materials off the job site, or for materials stored off the job site. The Engineer will classify the work according to items listed on the Bid Form and will estimate the approval is given and submitted to the City's Finance Division.

Additional Retention: In addition to the retention mentioned above, the whole or part of any payment of the estimated amount due the Contractor may be withheld as an additional retention if such course be deemed necessary to protect the City from loss due to the Contractor's failure to protect any of the following: (1) meet his/her obligations; (2) expedite the work; (3) correct rejected work; (4) settle damages as provided; or (5) produce substantial evidence that no claims will or have been filed, and/or if it has been determined that unpaid balance may be insufficient to complete the work.

Effect of Progress Payment: All materials and work covered by progress payments thereupon become the sole property of the City, but this provision shall not be construed as relieving the Contractor from sole responsibility for all materials and work upon which payments have been made or the restoration of any damaged work as a waiver of the City's right to require fulfillment of all terms of the Contract.

15.3 Final Payment and Release of Claims

Notice of Completion and final payment: A Notice of Completion will be prepared by the Engineer and recorded with the office of the County Registrar-Recorder, within ten (10) days after acceptance of the work by the City Council or designee.

Final payment will be made not sooner than thirty-five (35) calendar days following the date of recording of the Notice of Completion. Final payment shall include the remaining amount due the Contractor, less all prior payments and advances whatsoever to or for the account of the Contractor for supplies, materials, services, damages, or otherwise deductible under the terms of the Contract. All prior estimates and payments including those relating to extra work shall be subject to correction by this payment, which throughout this Contract is called "final payment."

CONSTRUCTION BID ITEMS

Project No. 13476 ADA RESTROOM RENOVATIONS AT PAUL VILLASENOR LIBRARY AND HOWARD ROWE LIBRARY

Each respective bid item and bid schedule as shown on the proposal form shall comply with all respective sections of the most current edition of Standard Specifications for Public Works Construction (Green Book), Technical Specifications, its supplements, and any other publications as specified. If there is a conflict between these inclusions and the Standard Specifications, these inclusions shall have precedence.

Contractor shall provide all construction surveying and staking at no extra cost. Compensation for construction surveying and staking shall be considered as included in various bid items. No additional compensations will be allowed.

BID ITEM 1: MOBILIZATION / DEMOBILIZATION

This bid item shall comply with the requirements of Section 7-3.4, "Mobilization/Demobilization", of the Standard Specifications.

- 1) Mobilization may include, but not be limited to, the following principal items:
- 2) Submittal and modification, as required, of the Construction Schedule.
- 3) Providing a Project Office (if needed)
- 4) Review of the Site.
- 5) Submittal of all required insurance certificates and bonds as required by these Specifications
- 6) Moving onto the site, including, but not limited to:
 - a. Equipment
 - b. Arranging for and erection of Contractor's work and storage areas.
- 7) Providing a minimum of one restroom facility for each twenty-five (25) workers occupying the site. Facilities may include existing functioning restrooms, or portable chemical facilities, or any combination thereof, and shall count as one for each urinal or one for each water closet (as required).
- 8) Posting all OSHA required notices and establishment of safety programs.
- 9) Posting of all Department of Labor notices.
- 10) Having the Contractor's superintendent at the job site full-time and responding 24 hours per day. Air and water quality protective measures, as necessary, and without limitation.
- 11) Demobilization of the Site.
- 12) Any other item as specified.
- 13) Contractor is responsible for removing, temporarily storing, and placing all furniture back to original locations. Also, contractor is responsible for repairing and/or replacing any furniture that gets damaged during construction. It is the contractor's responsibility to have site ready for construction.

The cost of bonds, insurance, move in and move out costs, preparation and submission of submittals, obtaining encroachment permits, and miscellaneous incidental costs, shall be

included in the Bid Item provided for mobilization and demobilization and incidental project costs as a **Lump Sum (LS)** item, for which 75 percent (75%) will be eligible for inclusion in the first progress payment, with the remaining 25 percent (25%) not eligible for inclusion until 100 percent (100%) of the work has been completed and if progress of the work is satisfactory. No work shall be started without prior approval of the submittals. Failure to comply with the preceding requirement will be sufficient ground for the Engineer to stop all work on the project until the requirements are met.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved is "**Mobilization/ Demobilization**" per project plans, specifications and special provisions; no additional compensation will be allowed.

BID ITEM 2: DEMOLITION: RESTROOMS, DOORS, FRAMES, HARDWARE, UNCLASSIFIED AND DUMP FEES

This bid Item shall consist of the removal of selected portions of building or structure at Rowe and Paul Villasenor Libraries according to the Specifications and Project plans per **Appendix 'B'**. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications. The contractor shall salvage of existing items to be reused. Prior to demolition, the contractor shall obtain verification from the utility owner(s) that the existing utilities, including electrical, wastewater, and/or water facilities, are not operational and are ready for demolition.

The contractor shall examine Drawing Plans No. 13476, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Unless otherwise stated on the Plans or Specifications, all material removed from the Work area shall become the property of the Contractor and shall be disposed of in a lawful manner. The Contractor shall conform to the following requirements:

- a. The Contractor shall not start any removal work unless it is prepared to perform reconstruction work within 24 hours of the time removals were begun, unless otherwise approved by the Engineer.
- b. All removals shall be hauled off the Work site no later than the calendar day following the day that the removal is performed.

After every workday, the contractor shall secure and close all entry doors and/or pathways, in which have been demolished or removed, at all times.

It shall be the responsibility of the contractor to pay for all dump fees.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in construction of this item per project plans, all specifications

(including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 3: INSTALL TWO NEW RESTROOM DOORS (SINGLE) INCLUDING FRAME, HARDWARE, EXIT DEVISE, INFILL FRAMING & DRYWALL AND SIGNAGE PER PROJECT PLANS, ALL SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of installing two new restroom doors (single) including frame, hardware, exit devise, infill framing & drywall and signage per project plans (**Appendix 'B'**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

The contractor shall examine Drawing Plans No. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in "**Install Two New Restroom Doors (Single) Including Frame, Hardware, Exit Devise, Infill Framing & Drywall And Signage Per Project Plans, All Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 4: MISC. ARCHITECTURAL REPAIRS TO EXISTING GYPSUM BOARD RESTROOM WALLS & CEILING SYSTEM INCLUDING INSULATION AND CEILING PANELS PER PROJECT PLANS, ALL SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of miscellaneous architectural repairs to existing gypsum board restroom walls & ceiling system including insulation and ceiling panels per project plans (**Appendix 'B'**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

The contractor shall examine Drawing Plans No. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings. All repairs shall be specified and overlooked by the Engineer. Any and all existing material that cannot be repaired must be included in the bid item for new installation.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Misc. Architectural Repairs To Existing Gypsum Board Restroom Walls & Ceiling System Including Insulation And Ceiling Panels Per Project Plans,**

All Specifications And Special Provisions” per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 5: FLOOR PREPARATION, SUBFLOOR REPAIR IF NEEDED AND INSTALLATION OF TILE FOR PROPOSED RESTROOMS PER PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of floor preparation, subfloor repair if needed and installation of tile for proposed restrooms per project plans (**Appendix ‘B’**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

The contractor shall examine Drawing Plans No. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in “**Floor Preparation, Subfloor Repair if needed and Installation of Tile for Proposed Restrooms per Project Plans, Specifications and Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 6: NEW INSTALLATION OF CEILING & WALL FRAMING WITH GYPSUM BOARD WITH INSULATION, FRP WALL PANELING, PAINT AND CERAMIC WALL & FLOOR TILE WITH BASE FOR PROPOSED RESTROOMS PER PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of new installation of ceiling & wall framing with gypsum board with insulation, FRP wall paneling, paint, and ceramic wall & floor tile with base for proposed restrooms per project plans (**Appendix ‘B’**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

The contractor shall examine Drawing Plans No. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in “**New Installation of Ceiling & Wall Framing with Gypsum Board with Insulation, FRP Wall Paneling, Paint and Ceramic Wall & Floor Tile with Base for Proposed Restrooms per Project Plans, Specifications and Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 7: NEW RESTROOM UPGRADES TO FINISH AND INSTALL PLUMBING FIXTURES, PARTITIONING, MISC. ITEMS, COUNTER SINK AND ACCESSORIES PER PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of new restroom upgrades to finish and install plumbing fixtures, partitioning, misc. Items, counter sink, and accessories per project plans (**Appendix 'B'**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

The contractor shall examine drawing plans no. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**New Restroom Upgrades To Furnish And Install Plumbing Fixtures, Partitioning, Misc. Items, Counter Sink And Accessories Per Project Plans, All Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 8: MODIFY, FURNISH AND INSTALL FIRE SPRINKLER SYSTEM, FIRE EXTINGUISHER, ELECTRICAL, EXHAUST FANS, HVAC AND EXIT SIGNS FOR PROPOSED RESTROOMS PER PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of modifying, furnishing, and installing fire sprinkler system, fire extinguisher, electrical, exhaust fans, HVAC and exit signs for proposed restrooms per project plans (**Appendix 'B'**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

The contractor shall examine drawing plans no. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Modify, Furnish and Install Fire Sprinkler System, Fire Extinguisher, Electrical, Exhaust Fans, HVAC and Exit Signs for Proposed Restrooms per Project Plans, Specifications and Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 9: NEW RESTROOM UPGRADES TO FINISH AND INSTALL ELECTRICAL FIXTURES, OUTLET'S, CONDUIT, WRING, MISC. ITEMS, AND ACCESSORIES PER PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of new restroom upgrades to finish and install electrical fixtures, outlet's, conduit, wring, misc. items, and accessories per project plans (**Appendix 'B'**), all specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

The contractor shall examine drawing plans no. 13476, all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**New Restroom Upgrades To Finish And Install Electrical Fixtures, Outlet's, Conduit, Wring, Misc. Items, And Accessories Per Project Plans, Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 10: REMOVE AND DISPOSE ALL EXISTING WALLPAPER IN THE COMMUNITY ROOM, ENTRANCE BETWEEN RESTROOMS, RECEPTION AREA AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal and disposal all existing wallpaper in the community room, entrance between restrooms, reception area and computer lab located at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Remove And Dispose All Existing Wallpaper In The Community Room, Entrance Between Restrooms, Reception Area And Computer Lab Per Project Specifications And Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 11: CLEAN, REPAIR DRYWALL, PRIMER & PAINT INTERIOR WALLS IN THE COMMUNITY ROOM, ENTRANCE BETWEEN RESTROOMS, RECEPTION AREA AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of cleaning, repairing drywall, priming & painting interior walls in the community room, entrance between restrooms, reception area and computer lab located at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

Interior Paint Specifications: Interior Enameled, Low-odor Acrylic Paint & Primer, Mildew Resistant, Semi-Gloss (TBD by Engineer), Stain Resistant and Washable.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Clean, Repair Drywall, Primer & Paint Interior Walls In The Community Room, Entrance Between Restrooms, Reception Area And Computer Lab Per Project Specifications And Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 12: REMOVE AND DISPOSE ALL EXISTING TILE LOCATED AT THE ENTRANCE OF LIBRARY AND IN BETWEEN RESTROOMS PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal and disposal all existing tile located near the entrance of library and in between restrooms at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Remove and Dispose All Existing Tile Located at the Entrance Of Library And In Between Restrooms Per Project Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 13: CLEAN, PREPARE AND INSTALL NEW TILE LOCATED NEAR THE ENTRANCE OF LIBRARY AND IN BETWEEN RESTROOMS PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of cleaning, preparing, and installing new tile located near the entrance of library and in between restrooms located at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new tile specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Clean, Prepare And Install New Tile Located Near The Entrance Of Library And In Between Restrooms Per Project Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 14: 7 LARGE BOOKSHELVES ARE TO BE UNFASTENED, REMOVED, STORED, AND PUT BACK IN PLACE. AS WELL AS REFASTENED PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of unfastening, removing, storing, and putting back in place. As well as refastening 7 large bookshelves located in Large Adult/Children Room at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**7 Large Bookshelves Are To Be Unfastened, Removed, Stored, And Put Back In Place. As Well As Refastened Per Project Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 15: 6 MEDIUM BOOKSHELVES & 14 STUDY TABLES ARE TO BE REMOVED, STORED, AND PUT BACK IN PLACE AFTER INSTALLATION OF CARPET TILE PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of removing, storing, and putting back 6 medium bookshelves & 14 study tables in place located in Large Adult/Children Room at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Payment for this bid item shall be paid per **Lump Sum (LS)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**6 Medium Bookshelves & 14 Study Tables Are To Be Removed, Stored, And Put Back In Place After Installation Of Carpet Tile Per Project Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 16: REMOVE, DISPOSE & REPLACE ALL EXISTING BASE MOLDING LOCATED IN THE COMMUNITY ROOM, ENTRANCE OF LIBRARY, IN BETWEEN RESTROOMS, LARGE ADULT/CHILDREN ROOM, LIBRARIAN'S OFFICE, PHOTO-COPY ROOM, RECEPTION AREA, PERIODICAL STORAGE AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing base molding located in the community room, entrance of library, in between restrooms, large adult/children room, librarian's office, photo-copy room, reception area, periodical storage and computer lab at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA

92411, according to the project specifications and special provisions. Refer to **Appendix D** for new base mold specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Linear Feet (LF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Remove, Dispose & Replace All Existing Base Molding Located In The Community Room, Entrance Of Library, In Between Restrooms, Large Adult/Children Room, Librarian's Office, Photo-Copy Room, Reception Area, Periodical Storage And Computer Lab Per Project Specifications And Special Provisions**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 17: REMOVE AND DISPOSE ALL EXISTING CARPET LOCATED IN THE COMMUNITY ROOM, LARGE ADULT/CHILDREN ROOM, LIBRARIAN'S OFFICE AND PHOTO-COPY ROOM PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal/disposal & replacement of all existing base molding located in the community room, entrance of library, in between restrooms, large adult/children room, librarian's office, photo-copy room, reception area, periodical storage and computer lab at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Remove And Dispose All Existing Carpet Located In The Community Room, Large Adult/Children Room, Librarian’s Office And Photo-Copy Room Per Project Specifications And Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 18: CLEAN, PREPARE AND INSTALL NEW CARPET TILE LOCATED IN THE COMMUNITY ROOM, LARGE ADULT/CHILDREN ROOM, LIBRARIAN’S OFFICE AND PHOTO-COPY ROOM PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of cleaning, preparing, and installing new carpet tile located in the community room, large adult/children room, librarian’s office and photo-copy room at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new tile specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Clean, Prepare and Install New Carpet Tile Located in the Community Room, Large Adult/Children Room, Librarian’s office and Photo-Copy Room Per Project Specifications and Special Provisions”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 19: REMOVE AND DISPOSE ALL EXISTING VINYL LOCATED IN THE RECEPTION AREA, PERIODICAL STORAGE AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal and disposal of all existing vinyl located in the reception area, periodical storage and computer lab at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special

provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Remove and Dispose All Existing Vinyl Located in the Reception Area, Periodical Storage and Computer Lab Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 20: CLEAN, PREPARE AND INSTALL NEW VINYL TILE LOCATED IN THE RECEPTION AREA, PERIODICAL STORAGE AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of cleaning, preparing, and installing new vinyl tile located in the reception area, periodical storage and computer lab at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new vinyl tile specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Clean, Prepare and Install New Vinyl Tile Located in the Reception Area, Periodical Storage and Computer Lab Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 21: REMOVE, DISPOSE AND REPLACE ALL EXISTING BULLETIN BOARD WALL PANELS (9' BY 4') LOCATED IN THE ENTRANCE OF LIBRARY AND COMPUTER LAB PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing bulletin board wall panels (9' by 4') located in the entrance of library and computer lab at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new bulletin board wall panels (9' by 4') specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Each (EA)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Remove, Dispose and Replace All Existing Bulletin Board Wall Panels (9' by 4') Located in the Entrance of Library and Computer Lab Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 22: REMOVE, DISPOSE AND REPLACE ALL EXISTING FLORESCENT LIGHT BULBS WITH LED LIGHTS OF SAME SIZE PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing florescent light bulbs with led lights of same size located throughout the building at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new LED lights specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Each (EA)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **"Remove, Dispose and Replace All Existing Florescent Light Bulbs with LED Lights of Same Size Per Project Specifications and Special Provisions."** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 23: REMOVE, DISPOSE AND REPLACE ALL EXISTING T-BAR CEILING TILES (4' BY 2') LOCATED IN THE COMMUNITY ROOM PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing T-bar ceiling tiles (4' by 2') located in the community room at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new ceiling tiles specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **"Remove, Dispose and Replace All Existing T-Bar Ceiling Tiles (4' by 2') Located in the Community Room Per Project Specifications and Special Provisions."** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 24: REMOVE, DISPOSE AND REPLACE ALL EXISTING ELECTRICAL OUTLETS PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing electrical outlets throughout the building at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new electrical outlets specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Each (EA)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Remove, Dispose and Replace All Existing Electrical Outlets Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 25: REMOVE, DISPOSE AND REPLACE ALL EXISTING ELECTRICAL LIGHT SWITCHES PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal & replacement of all existing electrical light switches throughout the building at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Refer to **Appendix D** for new electrical outlets specifications. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Each (EA)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Remove, Dispose and Replace All Existing Electrical Light Switches Per Project Specifications and Special Provisions.** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 26: PATCH, PREPARE, PRIMER & PAINT EXTERIOR WALLS & COLUMNS OF THE ENTIRE BUILDING PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of patching, preparing, priming & painting exterior walls and columns in the entire building located at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, “Safety”, of the Standard Specifications.

Exterior Paint Specifications: Exterior Acrylic-Based Latex, Durable (Weather-resistant and desert climate suitable), Low- or Zero-VOC (Volatile Organic Compound) Semi-Gloss, Light Hue to match current color (TBD by engineer) – Doors Brown, 15-Year Warranty.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in **“Patch, Prepare, Primer & Paint Exterior Walls & Columns Of The Entire Building Per Project Specifications And Special Provisions.”** per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 27: REFURBISH & PAINT ALL EXISTING WOOD BEAMS LOCATED OUTSIDE OF THE LIBRARY PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of refurbishing & painting all existing wood beams located outside of the library at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino,

CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Refurbish & Paint All Existing Wood Beams Located Outside of The Library Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 28: SAND BLAST, PRIMER & PAINT WROUGHT IRON FENCE SEGMENTS LOCATED OUTSIDE OF THE LIBRARY PER PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of sand blasting, priming & painting rod iron fence segments located outside of the library at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

Contractor may substitute with equally approved material which shall be pre-approved by the City Engineer upon material submittals.

The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work in "**Sand Blast, Primer & Paint Wrought Iron Fence Segments Located Outside of The Library Per Project Specifications and Special Provisions.**" per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

BID ITEM 29: REMOVE, DISPOSE AND REPLACE ALL EXISTING FLOOR TILE & CONCRETE SUBFLOOR LOCATED OUTSIDE THE ENTRANCE OF THE BUILDING WITH 4 INCH PCC CONCRETE PANELS PER CITY OF SAN BERNARDINO STANDARD 202; PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS

This bid item shall consist of the removal, disposal and replacement of all existing floor tile & concrete located outside the entrance of the building with 4 inch PCC concrete panels per City of San Bernardino Standard 202; at Paul Villasenor Library, 525 N Mt Vernon Ave, San Bernardino, CA 92411, according to the project specifications and special provisions. Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in Section 5-7, "Safety", of the Standard Specifications.

All removed materials shall become the property of the Contractor and shall be legally disposed of outside of the right-of-way in accordance with Section 300-2.2, "Unsuitable Materials", and Section 300-2.6, "Surplus Material", of the Standard Specifications.

It's the contractor's responsibility to dispose all items removed in accordance with this bid item.

This bid item shall comply with Section 201-1, "Portland Cement Concrete", and Section 303-5, "Concrete Curb, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps and Driveways", of the Standard Specifications, as shown on the Plans, CITY Standard Drawings, and as directed by the Engineer.

Portland cement concrete shall be Class 560-C-3250 or higher class, with a maximum slump of four (4) inches. Portland Cement Concrete sidewalk shall be constructed in accordance with the CITY's Standard Plan 202, per project Plan, and as directed by the Engineer. This work item includes Maintain ADA Access around Utility Obstructions.

Joints between new and existing concrete shall be given surface preparation as follows:

1. Joints made with the mass of existing concrete by cutting, chipping, or grinding shall be cleaned free of all loose deleterious material by thorough brooming and compressed air jetting.
2. Original surfaces or existing concrete shall be cleaned free of bitumens, grease, paint, and other deleterious materials and clean aggregate of at least 3/8-inch size shall be exposed by rock hammer abrasive blast cleaning or machine scarifying.

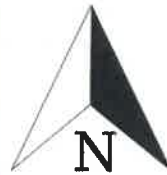
The contractor shall examine record drawings (**Appendix C**), all specifications, and special provisions, visit site, determine the extent of the work, the extent of work affected therein, and all conditions under which he is required to perform the various operations; locations can be found on record drawings.

Payment for this bid item shall be paid per **Square Feet (SF)** and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, incidentals, slot repairing, and backfilling for doing all work in "**Remove, Dispose and Replace All**

Existing Floor Tile & Concrete Subfloor Located Outside the Entrance of the Building With 4 Inch PCC Concrete Panels Per City of San Bernardino Standard 202; Project Specifications and Special Provisions.” per project plans, all specifications (including technical specifications) and special provisions; no additional compensation will be allowed.

APPENDICES

APPENDIX A



LOCATION MAP

108 E Marshall Blvd, San Bernardino, CA 92404.

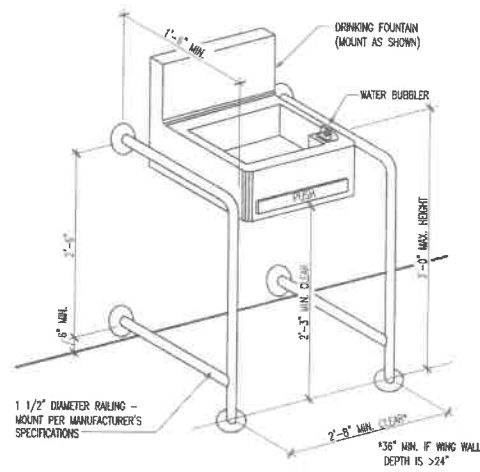


LOCATION MAP

525 N Mt Vernon Ave, San Bernardino, CA 92411.

APPENDIX B

PROJECT SIGNED PLANS



NON-ALCOVE TYPE
(REMODELS ONLY)

NOTES:

1. THE SPOUT SHALL PROVIDE A FLOW OF WATER A MINIMUM OF 4" HIGH.
2. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN SLBF.
3. DRINKING FOUNTAINS SHALL BE A MINIMUM OF 18" DEEP (FRONT TO BACK DIMENSION).

WARNING FOR THE VISION IMPAIRED AT A PROJECTED DRINKING FOUNTAIN CAN BE PROVIDED BY EITHER OF THE FOLLOWING MEANS (FOR REMODELS ONLY):

A: THE SURFACE OF THE FLOOR OR GROUND AT THE DRINKING FOUNTAIN CAN BE OF CONTRASTING COLOR WITH A TEXTURE THAT DIFFERS IN RESILIENCY WITH THE ADJACENT FINISHED FLOOR MATERIAL. IT MUST BE DETECTABLE BY A CANE. THE DIFFERING TEXTURE SHALL EXTEND FROM THE WALL TO ONE FOOT BEYOND THE FRONT EDGE OF THE DRINKING FOUNTAIN AND ONE FOOT BEYOND EACH SIDE OF THE FOUNTAIN.

OR

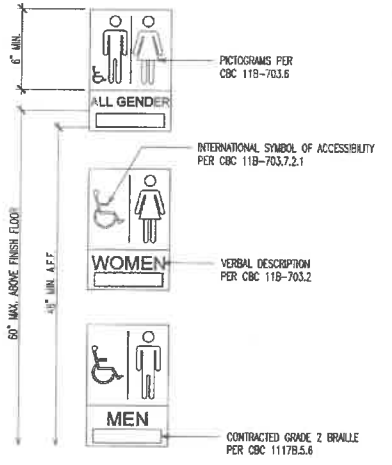
B: INSTALL WING WALLS ON EACH SIDE OF THE DRINKING FOUNTAIN. THESE SHALL PROJECT OUT FROM THE WALL A MINIMUM OF 18" (WING WALLS SHALL EXTEND AT LEAST 6" BEYOND THE FRONT EDGE OF THE FOUNTAIN). PROVIDE A 32" CLEAR SPACE BETWEEN THE WING WALLS.

SHEET: A-101 & A-103 SCALE: 1/2" = 1'-0" 4

DOORWAYS LEADING TO MEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE, 1/4" THICK WITH EDGES 12" LONG AND A VERTEX POINTING UPWARD.

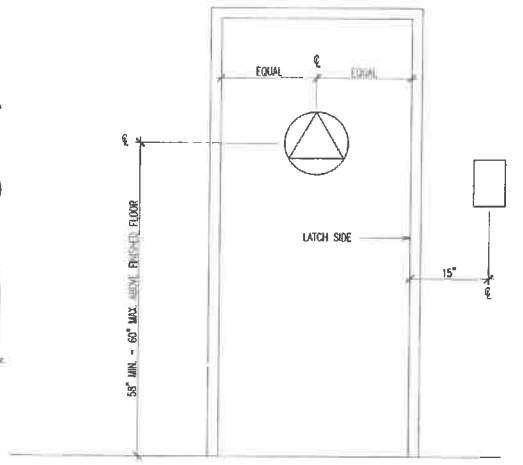
DOORWAYS LEADING TO WOMEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE, 1/4" THICK AND 12" IN DIAMETER.

DOORWAYS LEADING TO ALL GENDER SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 1/4" THICK AND 12" IN DIAMETER WITH A 1/4" TRIANGLE SUPERIMPOSED ON THE CIRCLE AND WITHIN THE 12" DIAMETER.



NOTES:

1. THE COLOR OF THE GEOMETRIC IDENTIFICATION SYMBOLS SHALL CONTRAST WITH THE COLOR OF THE DOOR OR SURFACE ON WHICH THEY ARE MOUNTED, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.
2. WHERE PERMANENT IDENTIFICATION SIGNS ARE PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR.
3. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING LOCATION SHALL BE DETERMINED SO THAT A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.
4. REFER TO CBC CHAPTER 119, DIVISION 7 FOR SPECIFIC REQUIREMENTS REGARDING PROPORTIONS FOR VISUAL AND RAISED CHARACTERS AND BRAILLE.
5. THE COLOR OF THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE COLOR OF THE CIRCLE SYMBOL, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND. THE COLOR OF THE CIRCLE SYMBOL SHALL CONTRAST WITH THE COLOR OF THE DOOR OR SURFACE ON WHICH THE COMBINED CIRCLE AND TRIANGLE SYMBOL IS MOUNTED, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.



SHEET: A-101 & A-103 SCALE: 3/4" = 1'-0" 3

NOTES

1. SHARP OR ABRASIVE SURFACES ARE NOT PERMITTED UNDER LAVATORIES.
2. FAUCET CONTROLS AND OPERATING MECHANISMS ARE REQUIRED TO BE OPERABLE W/ ONE HAND AND CANNOT REQUIRE GRASPING, PINCHING OR TWISTING OF THE WRIST.
3. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL NOT EXCEED 5 FT/LBS. SELF CLOSING VALVES ARE ALLOWED BUT SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.
4. GRAB BARS SHALL BE 1 1/4" TO 1 1/2" IN DIAMETER W/ 1 1/2" CLEARANCE FROM WALL.
5. GRAB BAR FASTENERS AND MOUNTING SUPPORTS SHALL BE ABLE TO WITHSTAND 250 FT/LBS. IN BENDING SHEAR AND TENSION.
6. CONTROLS FOR FLUSH VALVE SHALL BE MOUNTED ON THE WATER CLOSET W/ NO MORE THAN 44" ABOVE FINISH FLOOR.

IN OTHER THAN DWELLING UNITS, TOILET ROOM FLOORS SHALL HAVE A SMOOTH HARD, NONABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CONCRETE, CERAMIC TILE OR OTHER APPROVED MATERIAL WHICH EXTENDS UPWARD ONTO THE WALLS AT LEAST 5 INCHES. WALLS WITHIN WATER CLOSET COMPARTMENTS AND WALLS WITHIN 24 INCHES OF THE FRONT AND SIDES OF URINALS SHALL BE SIMILARLY FINISHED TO A HEIGHT OF 48 INCHES AND, EXCEPT FOR STRUCTURAL ELEMENTS, THE MATERIALS USED IN SUCH WALLS SHALL BE A TYPE WHICH IS NOT ADVERSELY AFFECTED BY MOISTURE.

GENERAL CONSIDERATIONS

ACCESSIBILITY STANDARDS

THE FOLLOWING STANDARDS FOR BARRIER FREE DESIGN SHALL BE INCORPORATED INTO THE PROJECT SITE AND BUILDING AS DESCRIBED BY THE 2018 CALIFORNIA BUILDING CODE (TITLE 24 & CALIFORNIA CODE OF REGULATION), AMERICANS WITH DISABILITIES ACT (ADA) WITH CABO/ANSI SECTIONS AND DIAGRAMS ARE PROVIDED FOR QUICK REFERENCE INTERPRETATION OF THESE CODES AND REGULATIONS AND INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

ENTRANCE SIGNAGE

FINISH AND CONTRAST

THE CHARACTERS SYMBOLS AND BACKGROUND OF SIGNS SHALL BE EGGSHELL MATTE OR OTHER NON GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

LOCATION OF SIGNAGE

TACTILE SIGNAGE SHALL BE LOCATED ALONGSIDE THE DOOR ON THE LATCH SIDE AND SHALL BE MOUNTED AT 60" ABOVE THE ADJACENT FINISHED FLOOR TO THE CENTERLINE OF THE SIGN. IN LOCATIONS HAVING DOUBLE DOORS, TACTILE SIGNS SHALL BE MOUNTED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF THE DOOR, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL.

TACTILE SIGNAGE

1. CHARACTER WIDTH TO HEIGHT RATIO BETWEEN 3:5 AND 1:1 WITH A 1:5 AND 1:10 STROKE WIDTH TO HEIGHT RATIO.
2. CONTRASTING COLORED CHARACTER AND SYMBOLS ON A MATTE FINISHED BACKGROUND.
3. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32 INCH MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTER ACCOMPANIED BY GRADE 2 BRAILLE.
4. RAISED SYMBOLS OR CHARACTERS SHALL BE A MINIMUM OF 5/8" HIGH.

PLUMBING NOTES

MAXIMUM FLUSH VOLUMES AND FLOW RATES: FAUCET - 2.2 GPM (SPRINK & LAVS), 1.8 GPM (WATER CLOSETS). FITTINGS MANUFACTURED ON OR AFTER MARCH 20, 1992 SHALL BE MARKED WITH THESE FLOW RATINGS AND CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.

FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL NOT EXCEED 5 POUNDS. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE. HAND-OPERATED METRIC FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.

ELECTRICAL NOTES

CONTROLS AND SWITCHES SHALL NOT BE LOCATED MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX, NOR LESS THAN 15 INCHES MEASURED BOTTOM OF THE OUTLET BOX, TO THE FINISH FLOOR LEVEL. CBC 11B-308.1.1.

ELECTRICAL RECEPTACLE OUTLETS (30 AMPS OR LESS) SHALL NOT BE LOCATED MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX, NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX, TO FINISH FLOOR LEVEL. CBC 11B-308.1.2.

WALKS AND SIDEWALKS

CONTINUOUS SURFACES

WALKS AND SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2 INCHES AND SHALL BE A MINIMUM OF 48 INCHES IN WIDTH. SURFACES SHALL BE SLIP RESISTANT AS FOLLOWS:

SLOPES OF 6 PERCENT AND GREATER SURFACES WITH A SLOPE OF 6 PERCENT GRADIENT SHALL BE SLIP RESISTANT.

SLOPES LESS THAN 6 PERCENT SURFACES WITH A SLOPE OF LESS THAN 6 PERCENT GRADIENT SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALT FINISH.

SURFACE CROSS SLOPES

SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4 INCH PER FOOT EXCEPT WHEN THE ENFORCING AGENCY FINDS THAT DUE TO LOCAL CONDITIONS IT CREATES AN UNREASONABLE HARDSHIP. THE CROSS SLOPE SHALL BE TO A MAXIMUM OF 1/2 INCH PER FOOT FOR DISTANCES NOT TO EXCEED 30 FEET.

GRATINGS

WALKS, SIDEWALKS AND PEDESTRIAN WAYS SHALL BE FREE FROM GRATINGS WHENEVER POSSIBLE. FOR GRATINGS LOCATED IN THE SURFACES OF THESE AREAS, GRID OPENINGS IN GRATINGS SHALL BE 1/2 INCHES IN THE DIRECTION OF TRAFFIC FLOW.

FIVE PERCENT GRADIENT

SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK SHALL BE 1 VERTICAL TO 20 HORIZONTAL (5% GRADIENT). IF WALK EXCEEDS THIS STANDARD IT SHALL COMPLY WITH PROVISIONS OF THE C.B.C., PEDESTRIAN RAMP.

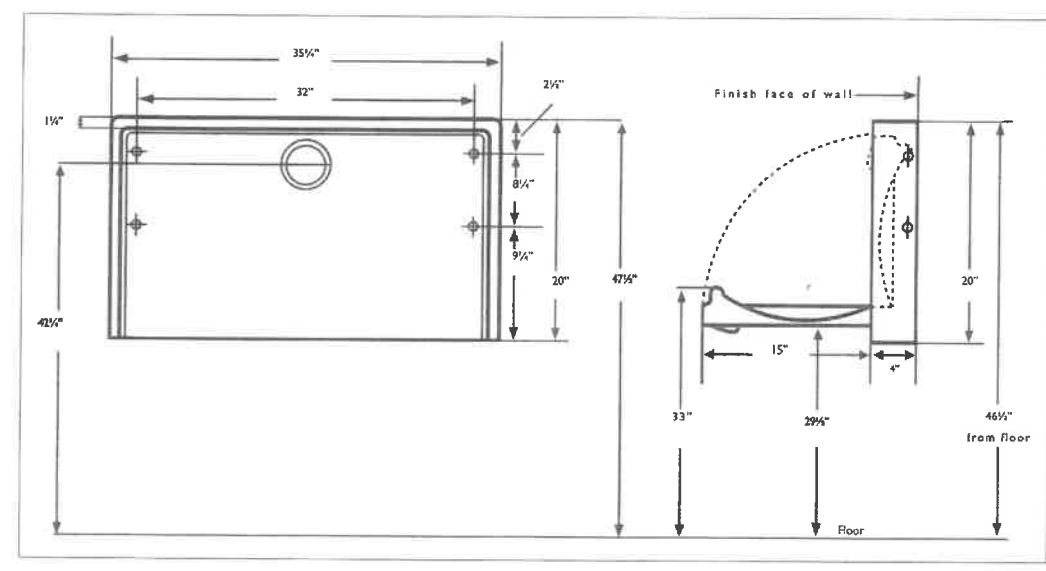
CHANGES IN LEVEL

ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2 INCH WHEN CHANGES IN LEVEL DO OCCUR LEVEL 2:1 EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4 INCH MAY BE VERTICAL.

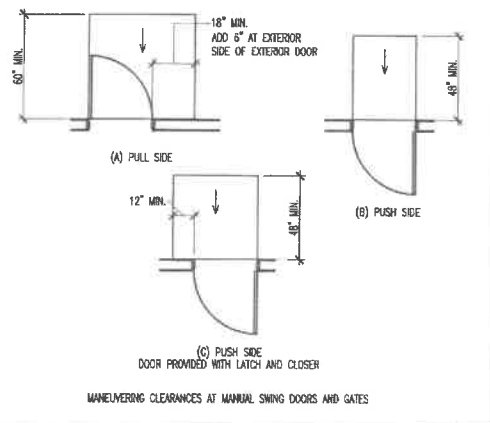
WALKS WITH CONTINUOUS GRADIENTS

ALL WALKS WITH CONTINUOUS GRADIENT SHALL HAVE LEVEL AREAS AT LEAST 5 FEET IN LENGTH AT INTERVALS OF AT LEAST EVERY 400 FEET.

SHEET: A-101 & A-201 SCALE: 1'-0" = 1'-0" 1



SHEET: A-103 & A-203 SCALE: 3/4" = 1'-0" 6



SHEET: A-101 & A-201 SCALE: 1" = 1'-0" 2

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525 N MT VERNON AVE
SAN BERNARDINO, CA 92411

MILLER
architectural
interiors
planning

1177 Idaho Street, Suite 200
Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
info@miller-ai-p.com

GARY W. MILLER
LICENSED ARCHITECT
NO. 47888
EXPIRES 3-30-23
STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED *9/22* 2018
Alex Qishta 2022

CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702

DRAWN BY:

CHECKED BY:

RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

ADA DETAILS

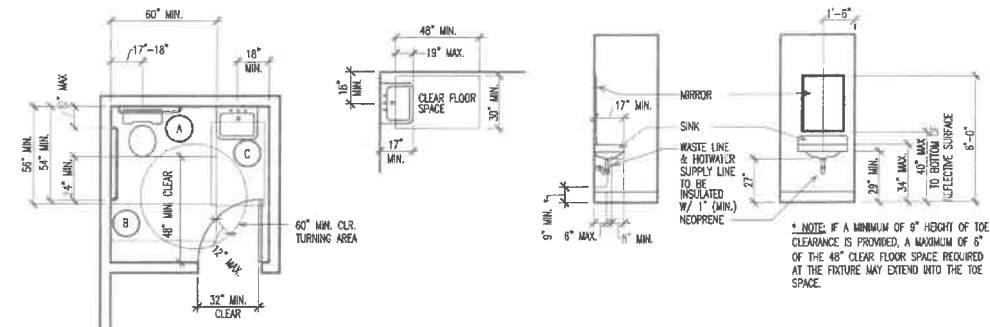
FOR
**ROWE LIBRARY AND
VILASENOR LIBRARY**

G-002

FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

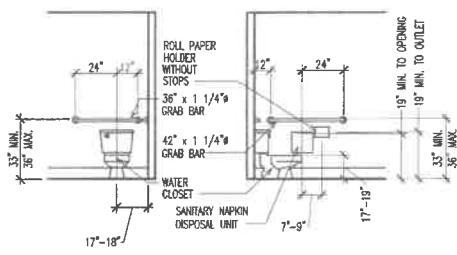
DRAWING NO. 13476

SHEET 2 OF 26 SHEETS



- (A) 60" x 56" CLEAR SPACE AT WATER CLOSET
- (B) 60" x 48" CLEAR SPACE IN FRONT OF WATER CLOSET
- (C) 48" x 30" CLEAR SPACE AT LAVATORY

* NOTE: DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OF CLEARANCE REQUIRED FOR ANY FIXTURE. EXC. 2: WHERE THE TOILET ROOM OR BATHING ROOM IS FOR INDIVIDUAL USE AND A CLEAR FLOOR SPACE COMPLYING WITH SECTION 11B-205.3 IS PROVIDED WITHIN THE ROOM, BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE.



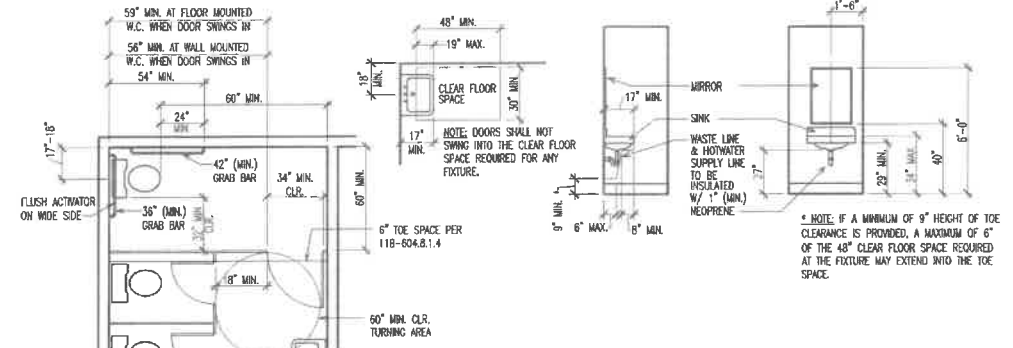
* NOTE: GRAB BAR DIMENSIONS ARE MEASURED FROM FINISH TO TOP OF GRAB BAR GRIPPING SURFACE

NOTE:
PLAN AND ELEVATIONS ARE GENERIC TO SHOW FIXTURE MOUNTING LOCATIONS ONLY. SEE PLANS FOR ACTUAL ROOM CONDITIONS.

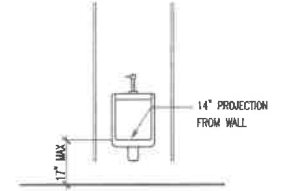
SHEET: A-101

SCALE: 3/4" = 1'-0"

2



NOTE:
PLAN AND ELEVATIONS ARE GENERIC TO SHOW FIXTURE MOUNTING LOCATIONS ONLY. SEE PLANS FOR ACTUAL ROOM CONDITIONS.



SCALE: 1/4" = 1'-0"

1

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MILLER
 architecture
 interiors
 planning
 1177 Idaho Street, Suite 200
 Redlands, CA 92374
 Phone: (909) 335-7400
 Fax: (909) 335-7299
 info@milleralp.com

REGISTERED ARCHITECT
 GARY W. MILLER
 No. 114635
 SEAL 3-30-23
 STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR.	DATE

BENCH MARK: G-002

APPROVED *Alex Gish* 9/22 2018
 2022
 CITY ENGINEER: ALEX GISHTA
 REGISTERED CIVIL ENGINEER NO. 66702
 DRAWN BY:
 CHECKED BY:
 RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS
ADA DETAILS
 FOR
ROWE LIBRARY AND VILLASENOR LIBRARY
 G-003
 FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

DRAWING NO. 13476
 SHEET 3 OF 26 SHEETS

NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

RESPONSE PARTY

CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL

301.4 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklist contained in this code. Voluntary green building measures are also included in the application checklist and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG] The provisions of individual sections of Chapter 3 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work. A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and alterations [A]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its nonplumbing plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 et seq. for definitions. Types of commercial real property affected, effective dates, circumstances necessitating replacement of nonplumbing plumbing fixtures, and duties and responsibilities for ensuring compliance.

301.3.2 Waste Diversion. The requirements of Section 5.403 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

SECTION 303 PHASED PROJECTS

303.1 PHASED PROJECTS. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply. Code measures not applicable to the building components and systems shall not apply.

303.1.1 Initial Tenant Improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the existing provisions in Section 301.3 non-residential additions and alterations.

ABBREVIATION DEFINITIONS:

HCD Department of Housing and Community Development
CBC California Building Standards Commission
DSA-SS Division of the State Architect, Structural Safety
OSHPD Office of Statewide Health Planning and Development
LR Low Rise
HR High Rise
AA Additions and Alterations
N New

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 SCOPE. The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference):

CUTOFF LUMINAIRE. Luminaire whose light distribution is such that the candlepower per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following:

- Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT PZEV) or CAFE rated (original equipment manufacturer only) regulated under Health and Safety Code section 43000 and CDR, Title 13, Sections 1961 and 1962.
- High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 8 CCR 1707.603 (as added on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motorcoach or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the non-profit work-related transportation of adults for the purpose of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 666

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT

5.106.1 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND. Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a locally enacted stormwater management plan and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMPs). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs.

- Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
 - Scheduling construction activity during dry weather, when possible.
 - Preservation of natural features, vegetation, soil, and buffers around surface waters.
 - Drainage swales or lined ditches to control stormwater flow.
 - Mulching or hydroseeding to stabilize disturbed soils.
 - Erosion control to protect slopes.
 - Protection of storm drain inlets (gravel bags or catch basin inserts).
 - Partner sediment control (perimeter silt fence, silt rolls).
 - Sediment trap or sediment basins to retain sediment on site.
 - Stabilized construction exits.
 - Wind erosion control.
 - Other soil loss BMPs acceptable to the enforcing agency.
- Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
 - Covering activities.
 - Material handling and waste management.
 - Building materials stockpile management.
 - Management of washout areas (concrete, paints, stucco, etc.).
 - Control of vehicle equipment fueling to contractor's staging area.
 - Vehicle and equipment cleaning performed off-site.
 - Spill prevention and control.
 - Other housekeeping BMPs acceptable to the enforcing agency.

RESPONSE PARTY

5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND. Comply with all locally enacted stormwater discharge regulations for projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development or sale.

Note: Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lahontan Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).

The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through structural controls, such as Low Impact Development (LID) practices, and conservation design measures. Stormwater volume that cannot be addressed using nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.

Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/construction/stormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 100, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitor's entrance, readily visible to passers-by, for 5% of new visitor reported vehicle parking spaces being added, with a minimum of one bicycle parking space.

Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

- Covered, lockable enclosure with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; or
- Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2.

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four bike-racks capacity space per new building.

5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

- Covered, lockable enclosure with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; or
- Lockable, permanently anchored bicycle lockers.

5.106.5.2 DESIGNATED PARKING FOR CLEAN AIR VEHICLES. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE 5.106.5.2 - PARKING

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
26-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 AND OVER	AT LEAST 6% OF TOTAL

5.106.5.2.1 - Parking stall marking. Paint, in the paint used for stall strip, the following characters such that the lower edge of the last word aligns with the end of the stall strip and is visible beneath a parked vehicle: CLEAN AIR / VAN POOL / EV

Note: Vehicles bearing Clean Air Vehicle stickers from approved HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3.1 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE) when EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a roadway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

- The type and location of the EVSE.
- A listed roadway capable of accommodating a 200/240-volt dedicated branch circuit.
- The roadway shall not be less than trade size 1".
- The roadway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and listed subpanel cabinet, box, enclosure or equivalent.
- The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 (roadway) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

- The type and location of the EVSE.
- The roadway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
- Plan design shall be based upon 40-ampere minimum branch circuits.
- Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated ampere.
- The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculations. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exception: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.

2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 AND OVER	6% of total*

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The roadway termination location shall be permanently and visibly marked as "EV CAPABLE".

5.106.5.3.5 [N] Future charging spaces quality as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

- The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code and
- Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
- Uplight and glare ratings as defined in California Energy Code (shown in Tables 5.106.8.1 and 5.106.8.2 in Chapter 8) and
- Acceptable BUG ratings not exceeding those shown in Table 5.106.8. [N] or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

- Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code.
- Emergency lighting.
- Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 8.
- Custom lighting fixtures as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.

Note: [N]

- See also California Building Code, Chapter 12, Section 1205.8 for college campus lighting requirements for parking facilities and walkways.
- Refer to Chapter 8 (Conformance Codes, Worksheets and Reference Material) for IES TM-15-11 Table A-1, California Energy Code Tables 130.2-A and 130.2-B.
- Refer to the California Building Code for requirements for additions and alterations.

TABLE 5.106.8.1 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS

ALLOWABLE RATING	LIGHTING ZONE LZ0	LIGHTING ZONE LZ1	LIGHTING ZONE LZ2	LIGHTING ZONE LZ3	LIGHTING ZONE LZ4
MAXIMUM ALLOWABLE BACKLIGHT RATING					
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	N/A	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	N/A	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING (U)	N/A	U0	U0	U0	U0
For area lighting	N/A	U0	U0	U0	U0
For all other outdoor lighting, including decorative luminaires	N/A	U1	U2	U3	U3
MAXIMUM ALLOWABLE GLARE RATING (G)	N/A				
Luminaire greater than 2 MH from property line	N/A	G1	G2	G3	G4
Luminaire front hemisphere is 1-2 MH from property line	N/A	G0	G1	G1	G2
Luminaire front hemisphere is 0.5-1 MH from property line	N/A	G0	G0	G1	G1
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the California Energy Code and Chapter 10 of the California Administrative Code.

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.

4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U-value limits for "all other outdoor lighting".

5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

5.106.10 GRADING AND DRAINAGE. Construction plans shall indicate how site grading or a drainage system will manage all surface water flow to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

- Swales.
- Water collection and disposal systems.
- French drains.
- Water retention gardens.
- Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

5.106.12 SHADE TREES [DSA-SS]. Shade Trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years.

Exceptions: The surface parking area covered by solar photovoltaic shade structures, or shade structures, with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculations.

5.106.12.2 Landscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.

Exceptions: Playfields for organized sport activity are not included in the total area calculation.

5.106.12.3. Hardscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years.

Exceptions: Walks, hardscape areas covered by solar photovoltaic shade structures, and hardscape areas covered by shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculation.

DIVISION 5.2 ENERGY EFFICIENCY SECTION 5.201 GENERAL

5.201.1 Scope [BSC-CG]. California Energy Code (CEC) [DSA-SS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference):

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAFA) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which are two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the finished exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

METERING FACILITY. A self-closing faucet that dispenses a specific volume of water for each activation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17522.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or irritating bodily wastes, and does not present a threat from contamination by unhealthy processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regarding landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developed installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatic/soil parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), (HCD) The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER (HCD) Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur (Water Code Section 13050 (a)). Simply put, recycled water is water treated to remove waste matter staining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 60,000 square feet. Separate submeters shall be installed as follows:

- For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (300 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
- Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
 - Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
 - Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
 - Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.2 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.2.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.2.2 Urinals.

5.303.2.2.1 Wall-mounted Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.

5.303.2.2.2 Floor-mounted Urinals. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.

5.303.2.3 Showerheads. [BSC-CG]

5.303.2.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.2.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

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APPROVED

9/22 2018
ALEX QISHTA
2022

CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 68702

DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

MARK

BENCH MARK:

BY

APPR

DATE

APPROVED

9/22 2018
ALEX QISHTA
2022

CITY ENGINEER: ALEX QISHTA
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DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

MARK

BENCH MARK:

BY

APPR

DATE

NO. 114635
MILLER
JULY 11, 2023
STATE OF CALIF.

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

CAL-GREEN INFO.
FOR ROWE LIBRARY AND VILLASENOR LIBRARY

G-004

DRAWING NO. 134710

SHEET 4 OF 26 SHEETS

FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

Y NA RESIDENTIAL PARTY
 YES NOT APPLICABLE RESPONSIBLE PARTY (AN ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR, ETC.)

3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 (rim space (inches) at 60 psi).

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 (rim space (inches) at 60 psi).

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

COMMERCIAL KITCHEN EQUIPMENT.

4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm per disposer in use (not actively grinding food waste) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

AS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California State Board of Plumbing Examiners, the provisions of Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply in addition to or as an alternative to the building.

BOARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 in the Plumbing Code and in Chapter 6 of this code.

5.304 OUTDOOR WATER USE

DOOR POTABLE WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MVELDO), whichever is more stringent.

Note: Model Water Efficient Landscape Ordinance (MVELDO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2. MVELDO and supporting documents, including a water budget calculator, are available at: <http://www.water.ca.gov/>.

DOOR POTABLE WATER USE IN LANDSCAPE AREAS. For public schools and community colleges, objects as described in Sections 5.304.0.1 and 5.304.0.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MVELDO) commencing with Section 490 of Chapter 2, Title 23, California Code of Regulations, except that the evapotranspiration adjustment factor (ETAF) with an additional water allowance for special landscape areas (SLA) of 0.35.

Note: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MVELDO.

6.4 Newly constructed landscapes. New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

6.2 Rehabilitated landscapes. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

SECTION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

5.401 GENERAL.

The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through reducing material waste, construction waste diversion, employment of recycled materials, and building commissioning or testing and adjusting.

5.402 DEFINITIONS.

The following terms are defined in Chapter 2 (and are included here for reference):

- regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust design quantities.

To proportion flows within the distribution system, including sub-mains, branches and terminals, design quantities.

COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process to ensure that building systems and components are planned, designed, installed, tested and maintained to meet the owner's project requirements.

WASTE. Food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food waste that is mixed in with food waste.

Procedure to determine quantitative performance of a system or equipment.

5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

WATER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by International Building Code 1402.2 (Weather Protection), manufacturer's installation instructions or local jurisdiction requirements.

MOISTURE CONTROL. Employ moisture control measures by the following methods.

5.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven prevent water intrusion into buildings as follows:

- 5.407.2.2.1 Exterior door protection.** Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:
- An installed awning at least 4 feet in depth.
 - The door is protected by a roof overhang at least 4 feet in depth.
 - The door is recessed at least 4 feet.
 - Other methods which provide equivalent protection.
- 5.407.2.2.2 Flashing.** Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

- Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
- Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
- Identifies diversion facilities where construction and demolition waste material collected will be taken.
- Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

- Excavated soil and land-clearing debris.
- Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
- Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1 through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

- Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
- Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 UNIVERSAL WASTE. (A) Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfill. A list of prohibited Universal Waste materials shall be included in the construction documents.

Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/Upload/CEAR_A_REGS_UWR_FinalText.pdf

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated vegetation any resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

- If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
- For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdafs.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a locally enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42549.82 (b)(2)(A) at sea, shall also be exempt from the organic waste portion of this section.

5.410.1.4 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the Public Resources Code. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. (B) New buildings 10,000 square feet and over. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel who are trained in projects of comparable size and complexity. For occupancies that are not regulated by OSHPD or for occupancies and L-occupancies that are not regulated by the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements.

Commissioning requirements shall include:

- Owner's or Owner representative's project requirements.
- Basic of design.
- Commissioning measures shown in the construction documents.
- Functional performance testing.
- Documentation and training.
- Commissioning report.

Exceptions:

- Unconditioned warehouses of any size.
- Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
- Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
- Open parking garages of any size, or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and/or air conditioning.

Informational Notes:

- IAS AC 478 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. IAS AC 478 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. IAS AC 478 does not certify individuals to conduct functional performance tests or to adjust and balance systems.
- Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the California Energy Code.

5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). (B) The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

- Environmental and sustainability goals.
- Building sustainability goals.
- Indoor environmental quality requirements.
- Project program, including facility functions and hours of operation, and need for after hours operation.
- Equipment and systems expectations.
- Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). (B) A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

- Renewable energy systems.
- Landscape irrigation systems.
- Water reuse system.

5.410.2.3 Commissioning plan. (B) Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:

- General project information.
- Commissioning goals.
- Systems to be commissioned. Plans to test systems and components shall include:
 - An explanation of the original design intent.
 - Equipment and systems to be tested, including the extent of tests.
 - Functions to be tested.
 - Conditions under which the test shall be performed.
 - Measurable criteria for acceptable performance.
- Commissioning team information.
- Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. (B) Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.8 Documentation and training. (B) A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. (B) Documentation of the operational aspects of the building shall be completed with the systems manual and delivered to the building owner or representative. The systems manual shall include the following:

- Site information, including facility description, history and current requirements.
- Site contact information.
- Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
- Major systems.
- Site equipment inventory and maintenance notes.
- A copy of verifications required by the enforcing agency or this code.
- Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. (B) A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:

- System/operation overview (what it is, what it does and with what other systems and/or equipment it interfaces).
- Review and demonstration of servicing/maintenance.
- Review of the information in the Systems Manual.
- Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. (B) A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.3 (Reserved)

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(3) for additional testing requirements of specific systems.

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

- Renewable energy systems.
- Landscape irrigation systems.
- Water reuse systems.

5.410.4.3 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing, Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of manufacturer's literature for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL.

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS.

5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference):

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from spectral data to which A-weighting adjustments have been made.

1 BTU/ HOUR. British thermal units per hour; also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour; a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32° Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panel, structural composite lumber, oriented strand board, glued laminated timber, lumber, prefabricated wood joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 63120.1(a).

Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10pm to 7 a.m.).

DECIBEL (dB). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, boats, lifts, transports, golf carts, skid-steer ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCS). One or more spaces intended for charging electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The relative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14; the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hydrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150; or (b) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150; and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g) (g/100g ROG).

PRODUCT-WEIGHTED MIR (PWMMR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMMR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

PSIG. Pounds per square inch, gauge.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 6,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressure greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 64508(a).

Note: Where specific regulations are cited from different agencies such as SCAGM, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES

5.503.1 FIREPLACES. Install only direct-vented sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

SECTION 5.504 POLLUTANT CONTROL

5.504.1 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for materials and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.1-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

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MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED:  9/22/2018
 2072

CITY ENGINEER: ALEX QISHA
 REGISTERED CIVIL ENGINEER NO. 66702

DRAWN BY:

CHECKED BY:

RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS

CAL-GREEN INFO.
 FOR ROWE LIBRARY AND VILASENOR LIBRARY

G-005

DRAWING NO. 13476

SHEET 5 OF 26 SHEETS

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GENERAL NOTES:

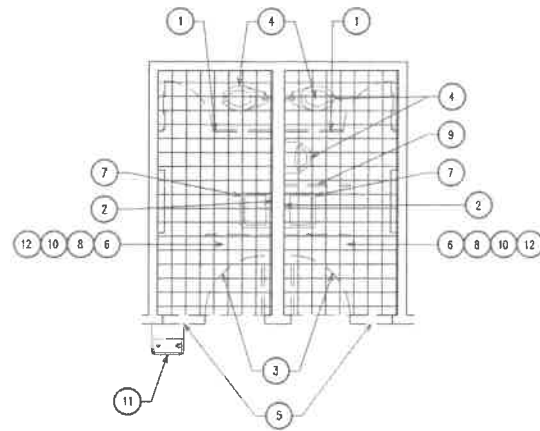
1. PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE OR EQUIPMENT SHALL BE REPAIRED OR REPLACED.
2. ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR.
3. EXCESS DOORS, HARDWARE, LIGHTING FIXTURES, ELECTRICAL FITTINGS, CARPETS AND OTHER SALVAGEABLE MATERIAL TO BE STORED OR DISPOSED OF AS DIRECTED BY THE BUILDING OWNER.
4. ANY PROJECTING OR SURFACE MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED AND CONCEALED BEHIND FINISHED SURFACES UNLESS OTHERWISE NOTED.
5. IN ALL AREAS WHERE DEMOLITION CAUSES UNLEVELNESS OR Voids IN THE FLOOR, PATCH AND LEVEL THE FLOOR WITH THE EXISTING SLAB AND/OR ADJACENT SURFACE PRIOR TO INSTALLATION OF FINISH FLOOR.
6. BRACE AND SUPPORT EXISTING WORK PRIOR TO AND DURING DEMOLITION AND NEW CONSTRUCTION UNTIL IT IS SAFE TO REMOVE SUCH BRACING AND SUPPORT.
7. REMOVE DAMAGED PLASTER AND DRYWALL BEADS AT EXISTING CORNERS WHERE NEW PARTITIONS ALIGN WITH EXISTING FINISH.
8. UPON COMPLETION OF THE DEMOLITION WORK, ENSURE ALL AREAS ARE LEFT IN BROOM CLEAN CONDITION.

KEY NOTES: (1)

1. REMOVE TOILET PARTITION
2. REMOVE MIRROR
3. REMOVE DOOR, DOOR FRAME AND HARDWARE
4. REMOVE PLUMBING FIXTURE
5. REMOVE PORTION OF WALL TO ACCOMMODATE NEW DOOR
6. REMOVE TILE FLOORING AND BASE
7. REMOVE SINK AND CAP WATER AND WASTE LINES
8. REMOVE ALL RESTROOM ACCESSORIES AND GRAB BARS
9. REMOVE URINAL PARTITION
10. REMOVE ALL WALL TILE AND BACKER BOARD
11. REMOVE DRINKING FOUNTAIN AND CAP WATER AND WASTE LINE
12. SAWCUT AND REMOVE CONCRETE SLAB AS NECESSARY TO ACCOMMODATE INSTALLATION OF NEW WASTE LINE CONFIGURATION. REFER TO PLUMBING PLANS.

LEGEND:

- EXISTING WALL TO REMAIN
- WALL TO BE REMOVED
- REMOVE DOOR, FRAME AND HARDWARE
- REMOVE ALL PLUMBING FIXTURES
- REMOVE CERAMIC TILE AND BASE. REMOVE ALL GROUT AND MASTIC RESIDUE AND CLEAN FLOOR SURFACE FOR INSTALLATION OF FLOORING.



DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

1

GENERAL NOTES:

1. SEE DETAIL 10/A-501 FOR TYPICAL ACCESSORY MOUNTING BLOCKING.
2. VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
3. ALL NEW WORK SHALL CONFORM TO BUILDING STANDARD, UNLESS NOTED OTHERWISE.
4. PREPARE ALL SURFACES AS REQUIRED TO RECEIVE NEW FINISH.
5. FINISH: PREPARE SUB-FLOOR AND LEAVE IN BROOM CLEAN CONDITION IN ORDER TO RECEIVE CARPET OR OTHER FLOORING. FLOOR SHALL BE LEVEL AND FREE OF DIPS, DIMPLES AND JOINTS THAT WOULD SHOW THROUGH FINISHED INSTALLATION.
6. REFER TO SHEET A-501 FOR TYPICAL FRAMING DETAILS.

KEY NOTES: (X)

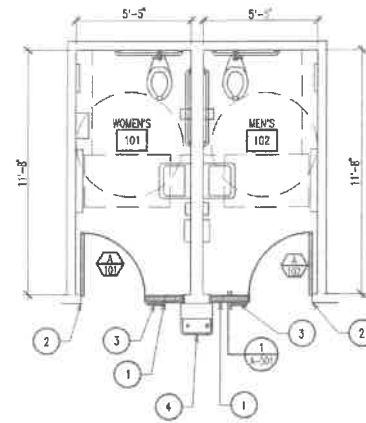
1. WALL INFILL FINISH NEW SURFACE TO MATCH ADJACENT SURFACE.
2. PATCH AND REPAIR WALL AFTER REMOVAL OF DOOR FRAME. FINISH NEW SURFACE TO MATCH ADJACENT SURFACE.
3. RESTROOM SIGNAGE, SEE DETAIL 5/G-302.
4. DRINKING FOUNTAIN/BOTTLE FILLER WITH METAL BAILING RETURNS. SEE DETAIL 4/G-002.

LEGEND:

- EXISTING WALL TO REMAIN
- NEW METAL STUD WALL

WALL SCHEDULE:

W-1 3 5/8" METAL STUDS AT 16" O.C. W/ FIBERGLASS BATT SOUND INSULATION (TYPICAL INTERIOR WALL UNLESS NOTED OTHERWISE)
5/8" TYPE "X" GYPSUM BOARD EACH SIDE. SEE DETAILS 1/A-501 FOR TYPICAL PARTITION SECTION



DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

2

INTERIOR NON-BEARING STEEL STUD WALL SCHEDULE

STUD MEMBER	STUD SIZE		GAUGE	STUD SPACING		TOP AND BOTTOM TRACK	
	DEPTH	WIDTH		12"	16"	MEMBER	GAUGE
				ALLOWABLE HEIGHT			
3625162-33	3 5/8"	1 5/8"	20	15'-0"	12'-6"	3621162-43	18
3625162-43	3 5/8"	1 5/8"	18	18'-2"	15'-5"	3621200-54	16
3625162-54	3 5/8"	1 5/8"	16	19'-5"	17'-7"	3621200-54	16
3625162-68	3 5/8"	1 5/8"	14	20'-9"	18'-10"	3621200-68	14
6005162-33	6"	1 5/8"	20	15'-0"	14'-6"	6001200-43	18
6005162-43	6"	1 5/8"	18	28'-4"	25'-10"	6001200-54	16
6005162-54	6"	1 5/8"	16	30'-4"	27'-8"	6001200-54	16
6005162-68	6"	1 5/8"	14	32'-8"	24'-8"	6001200-68	14

NOTE: WALL MUST BE FULLY SHEATHED (GYPSUM BOARD) BOTH SIDES OR BRIDGING IS REQUIRED. STUD DESIGN CONSIDERS 5psf INTERIOR WIND LOAD. ICC-ES REPORT ESR-3064 OR EQUAL.

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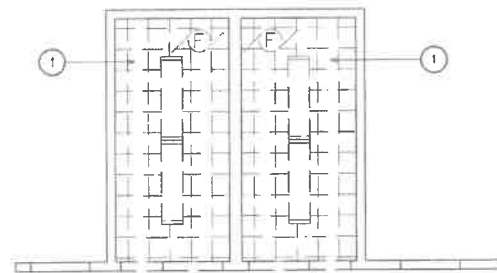
APPROVED: 9/22/2018
2022
CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
DEMOLITION PLAN
AND FLOOR PLAN
FOR
ROWE LIBRARY

A-101

DRAWING NO. 13476
SHEET 7 OF 26 SHEETS

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DEMOLITION REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

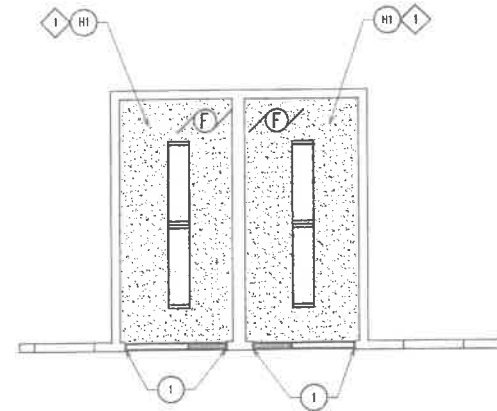
1. PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE OR EQUIPMENT SHALL BE REPAIRED OR REPLACED.
2. ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR.
3. EXCESS DOORS, HARDWARE, LIGHTING FIXTURES, ELECTRICAL FITTINGS, CARPETS AND OTHER SALVAGEABLE MATERIAL TO BE STORED OR DISPOSED OF AS DIRECTED BY THE BUILDING OWNER.
4. ANY PROJECTING OR SURFACE MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED AND CONCEALED BEHIND FINISHED SURFACES UNLESS OTHERWISE NOTED.
5. IN ALL AREAS WHERE DEMOLITION CAUSES UNLEVELNESS OR VOIDS IN THE FLOOR, PATCH AND LEVEL THE FLOOR WITH THE EXISTING SLAB AND/OR ADJACENT SURFACE PRIOR TO INSTALLATION OF FINISH FLOOR.
6. REMOVE DAMAGED PLASTER AND DRYWALL BEADS AND BEADS AT EXISTING CORNERS WHERE NEW PARTITIONS ALIGN WITH EXISTING FINISH.
7. UPON COMPLETION OF THE DEMOLITION WORK, ENSURE ALL AREAS ARE LEFT IN BROOM CLEAN CONDITION.

KEY NOTES: (X)

1. REMOVE GLOUED ON CEILING TILE AND ALL RESIDUAL MASTIC FROM CEILING SUBSTRATE

LEGEND:

- ++ ++ REMOVE CEILING TILES
- ++ ++ REMOVE 1x4 FIXTURE
- REMOVE 1x4 FIXTURE
- ⊘ REMOVE EXHAUST FAN



REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

1. VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
2. ALL NEW WORK SHALL CONFORM TO BUILDING STANDARD, UNLESS NOTED OTHERWISE.
3. PREPARE ALL SURFACES AS REQUIRED TO RECEIVE NEW FINISH.

KEY NOTES: (X)

1. PATCH AND REPAIR CEILING AFTER REMOVAL OF DOOR AND FRAMING AND FINISH TO MATCH ADJACENT SURFACE

LEGEND:

- GYPSUM BOARD - PAINTED
- SURFACE MOUNTED FIXTURE
- ⊘ EXHAUST FAN

CEILING FINISH LEGEND:

- ◇ GYPSUM BOARD - TEXTURED AND PAINTED

CEILING HEIGHT LEGEND:

- ⊘ 8'-0" (TYPICAL UNLESS NOTED OTHERWISE)

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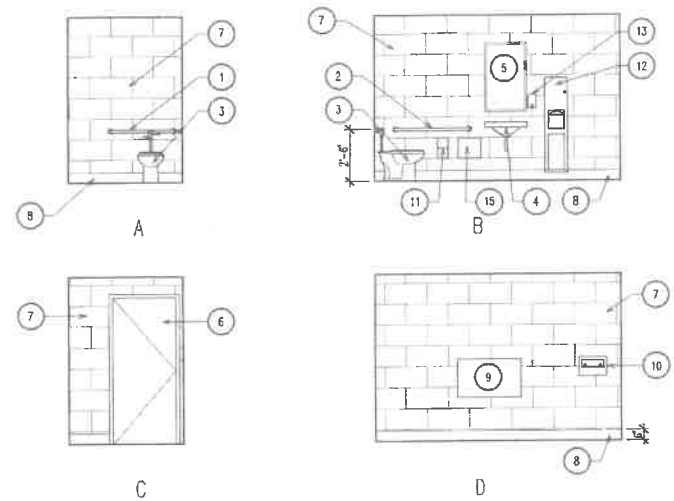
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Alex Qishta
CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 86702
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
**DEMOLITION CEILING PLAN
AND REFLECTED CEILING PLAN**
FOR
ROWE LIBRARY

A-102

DRAWING NO. 134710
SHEET 8 OF 26 SHEETS

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INTERIOR ELEVATIONS - WOMENS' RESTROOM

SCALE: 1/4" = 1'-0"

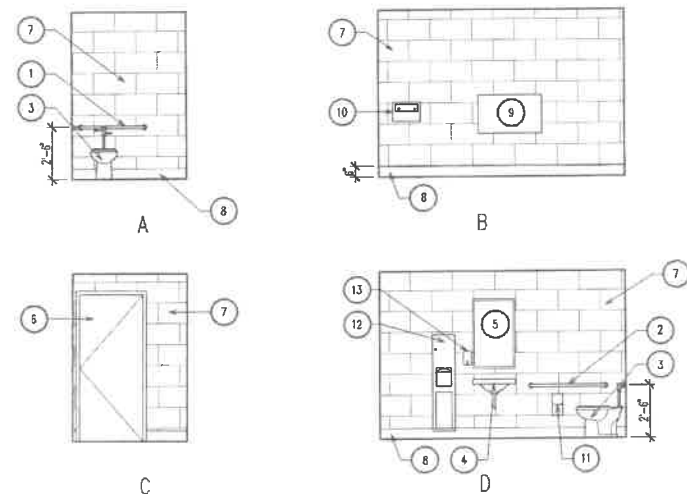
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GENERAL NOTES:

1. REFER TO SPECIFICATIONS FOR COLORS AND MATERIALS
2. REFER TO SHEET A-801 FOR FLOOR, BASE, WALL FINISHES
3. REFER TO DETAIL 2 SHEET G-003 FOR TYPICAL DIMENSIONS, NOTES AND MOUNTING HEIGHTS FOR ALL RESTROOMS.
4. COORDINATE BACKING FOR FUTURE WALL MOUNTED EQUIPMENT WITH OWNER.
5. PROVIDE BACKING FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 10/A-501

KEY NOTES: X

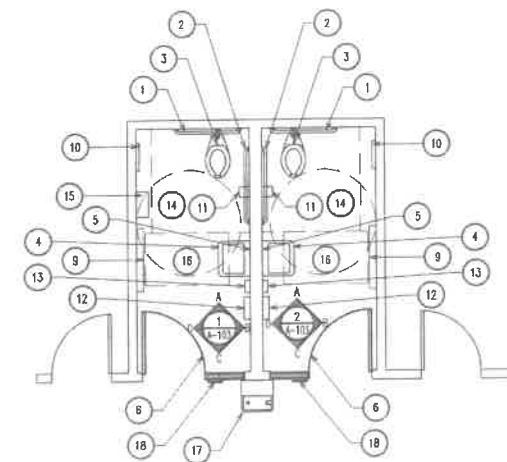
1. 36" GRAB BAR
2. 42" GRAB BAR
3. ADA ACCESSIBLE TOILET
4. ADA ACCESSIBLE SINK
5. MIRROR
6. DOOR
7. 12x24 CERAMIC TILE
8. CERAMIC TILE BASE
9. BABY CHANGING STATION. SEE DETAIL G/C-002
10. SURFACE MOUNTED TOILET SEAT COVER DISPENSER
11. SURFACE MOUNTED DOUBLE ROLL TOILET PAPER DISPENSER
12. SURFACE MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
13. SURFACE MOUNTED SOAP DISPENSER
14. 60" DIAMETER CLEAR TURNING AREA
15. SURFACE MOUNTED SANITARY NAPKIN DISPOSAL
16. 30x48 CLEAR SPACE
17. DRINKING FOUNTAIN/BOTTLE FILLER WITH METAL RAIL RETURNS. SEE DETAIL 4/G-002
18. SKRANGE. SEE DETAIL 4/G-002



INTERIOR ELEVATIONS - MENS' RESTROOM

SCALE: 1/4" = 1'-0"

2



ENLARGED PLAN - MEN'S RESTROOM, WOMEN'S RESTROOM

SCALE: 1/4" = 1'-0"

1

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MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED	9/22	2018
		2022
CITY ENGINEER:	ALEX QISHTA	
REGISTERED CIVIL ENGINEER NO.	66702	
DRAWN BY:		
CHECKED BY:		
RECOMMENDED BY:		

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
ENLARGED PLANS AND INTERIOR ELEVATIONS
FOR
ROWE LIBRARY

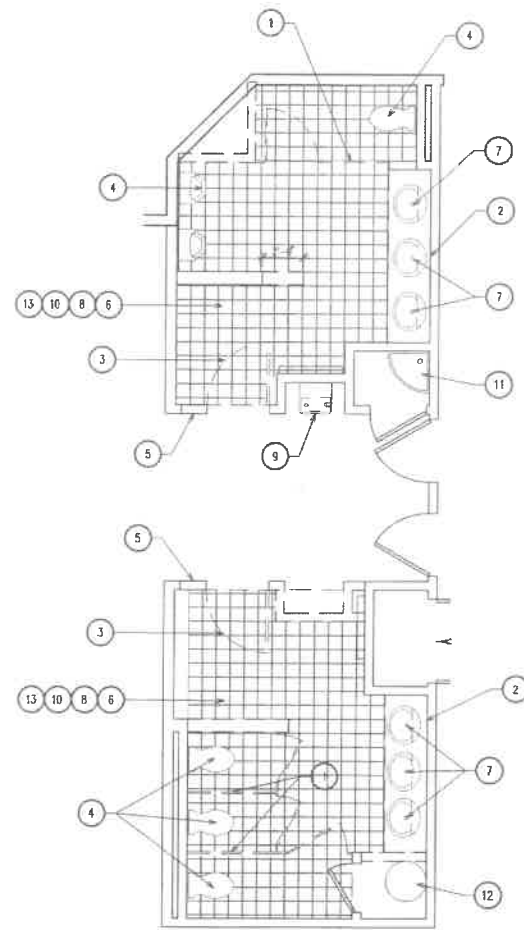
A-103

DRAWING NO.
13476
SHEET 9 OF 26 SHEETS
W.O. NO.

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W.O. NO.



DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

1

GENERAL NOTES:

- PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE OR EQUIPMENT SHALL BE REPAIRED OR REPLACED.
- ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR.
- EXCESS DOORS, HARDWARE, LIGHTING FIXTURES, ELECTRICAL FITTINGS, CARPETS AND OTHER SALVAGEABLE MATERIAL TO BE STORED OR DISPOSED OF AS DIRECTED BY THE BUILDING OWNER.
- ANY PROJECTING OR SURFACE MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED AND CONCEALED BEHIND FINISHED SURFACES UNLESS OTHERWISE NOTED.
- IN ALL AREAS WHERE DEMOLITION CAUSES UNEVENNESS OR Voids IN THE FLOOR, PATCH AND LEVEL THE FLOOR WITH THE EXISTING SLAB AND/OR ADJACENT SURFACE PRIOR TO INSTALLATION OF FINISH FLOOR.
- BRACE AND SUPPORT EXISTING WORK PRIOR TO AND DURING DEMOLITION AND NEW CONSTRUCTION UNTIL IT IS SAFE TO REMOVE SUCH BRACING AND SUPPORT.
- REMOVE DAMAGED PLASTER AND DRYWALL BEADS AND BEADS AT EXISTING CORNERS WHERE NEW PARTITIONS ALIGN WITH EXISTING FINISH.
- UPON COMPLETION OF THE DEMOLITION WORK, ENSURE ALL AREAS ARE LEFT IN BROOM CLEAN CONDITION.

KEY NOTES: (X)

- REMOVE TOILET PARTITION
- REMOVE MIRROR
- REMOVE DOOR, DOOR FRAME AND HARDWARE
- REMOVE PLUMBING FIXTURE
- REMOVE WALL TO ACCOMMODATE NEW DOOR
- REMOVE TILE FLOORING AND BASE
- REMOVE SINK AND CAP LINES
- REMOVE ALL RESTROOM ACCESSORIES AND GRAB BARS
- REMOVE DRINKING FOUNTAIN
- REMOVE ALL WALL TILE AND BACKER BOARD
- (E) WOP SINK
- (E) WATER HEATER
- SAWCUT AND REMOVE CONCRETE SLAB AS NECESSARY TO ACCOMMODATE INSTALLATION OF NEW WASTE LINE CONFIGURATION. REFER TO PLUMBING PLANS.

LEGEND:

- EXISTING WALL TO REMAIN
- WALL TO BE REMOVED
- REMOVE DOOR, FRAME AND HARDWARE
- REMOVE ALL PLUMBING FIXTURES
- REMOVE CERAMIC TILE AND BASE. REMOVE ALL GROUT AND MASTIC RESIDUE AND CLEAN FLOOR SURFACE FOR INSTALLATION OF FLOORING.

GENERAL NOTES:

- SEE DETAIL 10/A-501 FOR TYPICAL ACCESSORY MOUNTING BLOCKING.
- VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
- ALL NEW WORK SHALL CONFORM TO BUILDING STANDARD, UNLESS NOTED OTHERWISE.
- PREPARE ALL SURFACES AS REQUIRED TO RECEIVE NEW FINISH.
- FINISH: PREPARE SUB-FLOOR AND LEAVE IN BROOM CLEAN CONDITION IN ORDER TO RECEIVE CARPET OR OTHER FLOORING. FLOOR SHALL BE LEVEL AND FREE OF DIPS, DUMPLES AND JOINTS THAT WOULD SHOW THROUGH FINISHED INSTALLATION.
- REFER TO SHEET A-501 FOR TYPICAL FRAMING DETAILS.

KEY NOTES: (X)

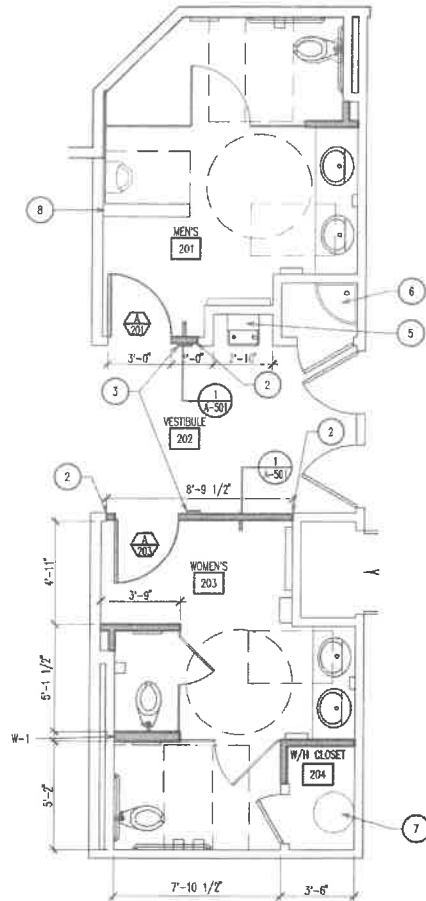
- WALL INFILL FINISH NEW SURFACE TO MATCH ADJACENT SURFACE.
- PATCH AND REPAIR WALL AFTER REMOVAL OF DOOR FRAME. FINISH NEW SURFACE TO MATCH ADJACENT SURFACE.
- RESTROOM SIGNAGE. SEE DETAIL 5/C-002
- PATCH AND REPAIR CARPET TILE WITH OWNER PROVIDED CARPET
- DRINKING FOUNTAIN/BOTTLE FILLER
- (E) WOP SINK
- (E) WATER HEATER
- (E) WALL TO REMAIN

LEGEND:

- EXISTING WALL TO REMAIN
- NEW METAL STUD WALL

WALL SCHEDULE:

- W-1 6" METAL STUDS AT 16" O.C. W/ FIBERGLASS BATT SOUND INSULATION 5/8" TYPE "X" GYPSUM BOARD EACH SIDE. SEE DETAILS 1/A-501 FOR TYPICAL PARTITION SECTION
- W-2 3 5/8" METAL STUDS AT 16" O.C. W/ FIBERGLASS BATT SOUND INSULATION (TYPICAL INTERIOR WALL UNLESS NOTED OTHERWISE) 5/8" TYPE "X" GYPSUM BOARD EACH SIDE. SEE DETAILS 1/A-501 FOR TYPICAL PARTITION SECTION



FLOOR PLAN
SCALE: 1/4" = 1'-0"

2

INTERIOR NON-BEARING STEEL STUD WALL SCHEDULE

STUD MEMBER	STUD SIZE		GAUGE	STUD SPACING		TOP AND BOTTOM TRACK	
	DEPTH	WIDTH		12"	16"	MEMBER	GAUGE
3625162-33	3 5/8"	1 5/8"	20	15'-0"	12'-6"	362162-43	18
3625162-43	3 5/8"	1 5/8"	18	18'-2"	16'-5"	3621200-54	16
3625162-54	3 5/8"	1 5/8"	16	19'-5"	17'-7"	3621200-54	16
3625162-68	3 5/8"	1 5/8"	14	20'-5"	18'-10"	3621200-88	14
6005162-33	6"	1 5/8"	20	16'-0"	14'-6"	6001200-43	16
6005162-43	6"	1 5/8"	18	28'-4"	25'-10"	6001200-54	16
6005162-54	6"	1 5/8"	16	30'-4"	27'-8"	6001200-54	16
6005162-68	6"	1 5/8"	14	32'-8"	24'-6"	6001200-68	14

NOTE: WALL MUST BE FULLY SHEATHED (GYPSUM BOARD) BOTH SIDES OR BRACING IS REQUIRED. STUD DESIGN CONSIDERS 5psf INTERIOR WIND LOAD. ICC-ES REPORT ESR-3064 OR EQUAL.

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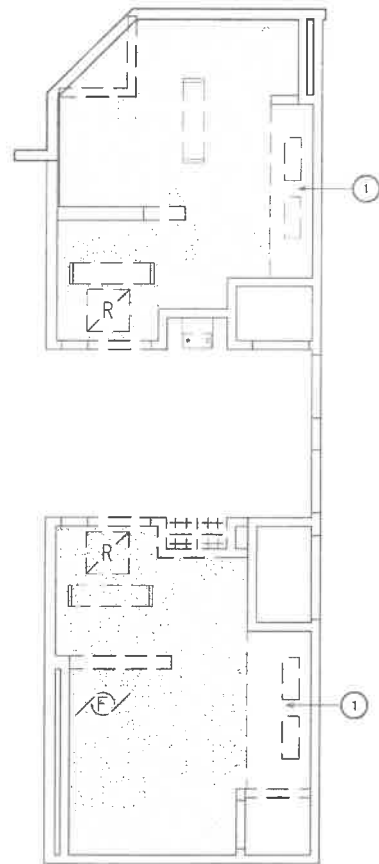
MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: 9/22/2019
2022
CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
DEMOLITION PLAN AND FLOOR PLAN
FOR
VILLASENOR LIBRARY

DRAWING NO. 13476
SHEET 10 OF 26 SHEETS
W.O. NO.



DEMOLITION CEILING PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

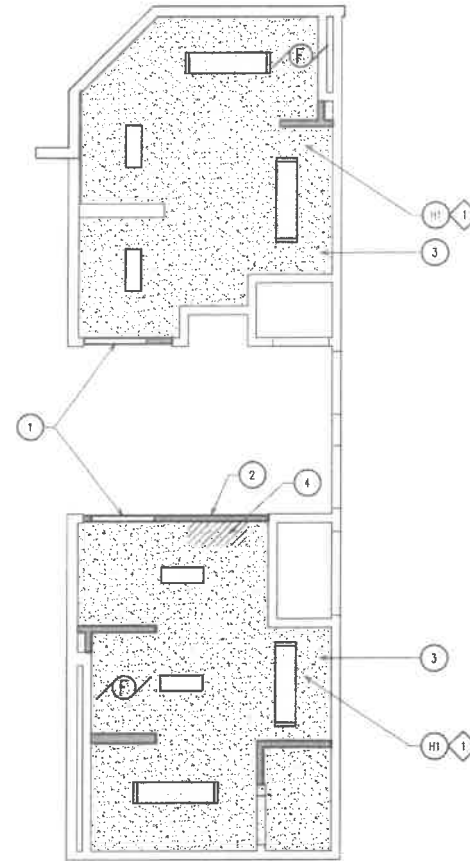
1. PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE OR EQUIPMENT SHALL BE REPAIRED OR REPLACED.
2. ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR.
3. EXCESS DOORS, HARDWARE, LIGHTING FIXTURES, ELECTRICAL FITTINGS, CARPETS AND OTHER SALVAGEABLE MATERIAL TO BE STORED OR DISPOSED OF AS DIRECTED BY THE BUILDING OWNER.
4. ANY PROJECTING OR SURFACE MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED AND CONCEALED BEHIND FINISHED SURFACES UNLESS OTHERWISE NOTED.
5. IN ALL AREAS WHERE DEMOLITION CAUSES UNEVENNESS OR VOIDS IN THE FLOOR, PATCH AND LEVEL THE FLOOR WITH THE EXISTING SLAB AND/OR ADJACENT SURFACE PRIOR TO INSTALLATION OF FINISH FLOOR.
6. BRACE AND SUPPORT EXISTING WORK PRIOR TO AND DURING DEMOLITION AND NEW CONSTRUCTION UNTIL IT IS SAFE TO REMOVE SUCH BRACING AND SUPPORT.
7. REMOVE DAMAGED PLASTER AND DRYWALL BEADS AND BEADS AT EXISTING CORNERS WHERE NEW PARTITIONS ALIGN WITH EXISTING FINISH.
8. UPON COMPLETION OF THE DEMOLITION WORK, ENSURE ALL AREAS ARE LEFT IN BROOM CLEAN CONDITION.

KEY NOTES: (1)

1. REMOVE LIGHTING SOFFIT

LEGEND:

- +++ ACUSTIC CEILING TILE TO BE REMOVED
- EXISTING GYPSUM BOARD
- REMOVE 1x4 FEATURE
- ⊘ REMOVE EXHAUST FAN
- ⊠ MECHANICAL REGISTERS TO BE REMOVED



REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

1. VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
2. ALL NEW WORK SHALL CONFORM TO BUILDING STANDARD, UNLESS NOTED OTHERWISE.
3. PREPARE ALL SURFACES AS REQUIRED TO RECEIVE NEW FINISH.

KEY NOTES: (4)

1. PATCH AND REPAIR WALL/CEILING ABOVE THE DOOR AFTER RELOCATION OF CAMERA/EXIT SIGN
2. PATCH AND REPAIR ACOUSTIC GRID AS NECESSARY TO ACCOMMODATE NEW VESTIBULE
3. PATCH AND REPAIR EXISTING GYPSUM BOARD TO MATCH ADJACENT SURFACE
4. PATCH AND REPAIR EXISTING GYPSUM BOARD SURFACE AFTER REMOVAL OF CEILING TILE TO MATCH ADJACENT CEILING SURFACE

LEGEND:

- (E) GYPSUM BOARD - PAINTED
- GYPSUM BOARD - PAINTED
- SURFACE MOUNTED FEATURE
- SURFACE MOUNTED FEATURE
- ⊘ EXHAUST FAN
- ⊠ MECHANICAL REGISTERS

CEILING FINISH LEGEND:

- ◇ GYPSUM BOARD - TEXTURED AND PAINTED

CEILING HEIGHT LEGEND:

- ⊘ 8'-0" (TYPICAL UNLESS NOTED OTHERWISE)

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MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: 9/23/2018
2022

CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 86702

DRAWN BY:

CHECKED BY:

RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

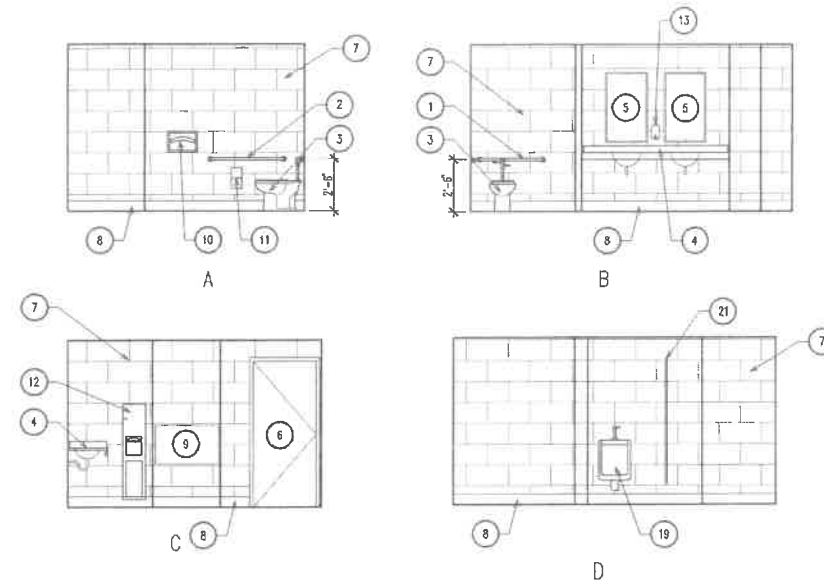
**DEMOLITION CEILING PLAN
AND REFLECTED CEILING PLAN**
FOR
VILLASEÑOR LIBRARY

A-202

DRAWING NO.
134716

SHEET 11 OF 26 SHEETS

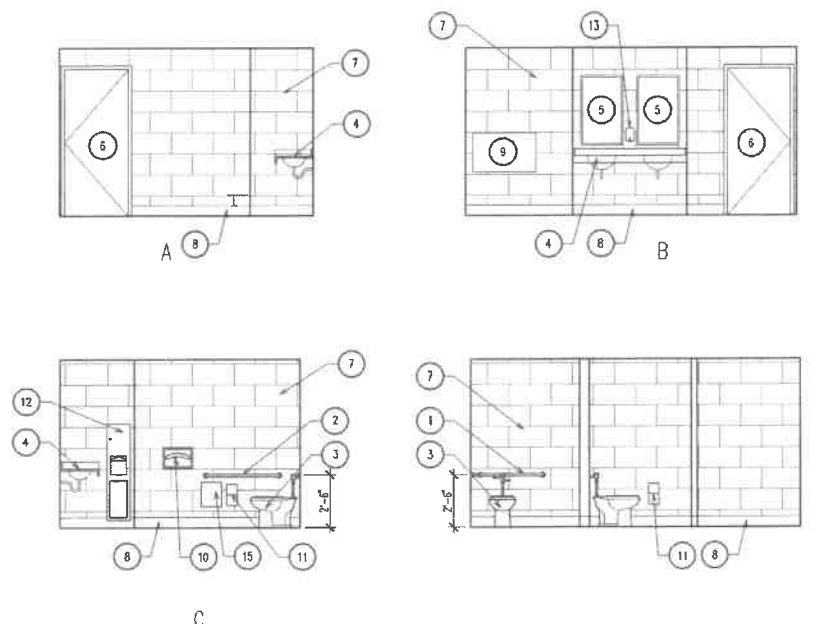
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INTERIOR ELEVATIONS - MENS' RESTROOM

SCALE: 1/4" = 1'-0"

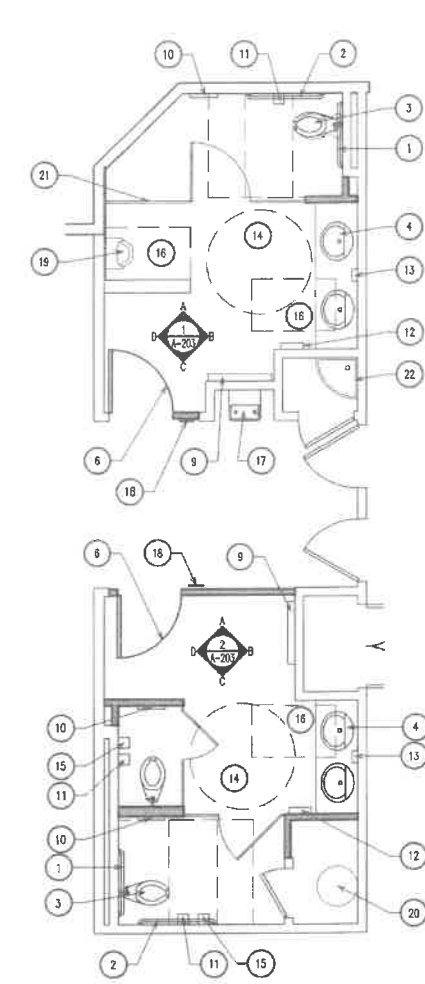
1



INTERIOR ELEVATIONS - WOMENS' RESTROOM

SCALE: 1/4" = 1'-0"

2



ENLARGED PLAN - MEN'S RESTROOM, WOMEN'S RESTROOM

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO SPECIFICATIONS FOR COLORS AND MATERIALS
2. REFER TO SHEET A-501 FOR FLOOR, BASE, WALL FINISHES
3. REFER TO DETAIL 4 SHEET G-002 FOR DIMENSIONS, NOTES AND MOUNTING HEIGHTS FOR ALL RESTROOMS.
4. COORDINATE BACKING FOR FUTURE WALL MOUNTED EQUIPMENT WITH OWNER.
5. PROVIDE BACKING FOR ALL WALL MOUNTED EQUIPMENT - SEE DETAIL 10/A-501

KEY NOTES: (1)

1. 36" GRAB BAR
2. 42" GRAB BAR
3. ADA ACCESSIBLE TOILET
4. COUNTER TOP AND SINK. SEE DETAIL 6/A-501
5. MIRROR
6. DOOR
7. 12x24 CERAMIC TILE
8. CERAMIC TILE BASE
9. BABY CHANGING STATION. SEE DETAIL 6/G-002
10. SURFACE MOUNTED TOILET SEAT COVER DISPENSER
11. SURFACE MOUNTED DOUBLE ROLL TOILET PAPER DISPENSER
12. SURFACE MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
13. SURFACE MOUNTED SOAP DISPENSER
14. 60" DIAMETER CLEAR TURNING AREA
15. SURFACE MOUNTED SANITARY NAPKIN DISPOSAL
16. 30x48 CLEAR SPACE
17. DRINKING FOUNTAIN/BOTTLE FILLER
18. SIGNAGE. SEE DETAIL 4/G-002
19. URINAL
20. (E) WATER HEATER. SEE PLUMBING PLANS FOR ADDITIONAL INFORMATION
21. TOILET PARTITION
22. (E) MOP SINK



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MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: 9/22/2018
 Alex Qishta
 CITY ENGINEER: ALEX QISHTA
 REGISTERED CIVIL ENGINEER NO. 56702
 DRAWN BY:
 CHECKED BY:
 RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS
ENLARGED PLANS AND INTERIOR ELEVATIONS
 FOR
VILASENOR LIBRARY
 A-203

DRAWING NO. 13476
 SHEET 12 OF 26 SHEETS
 W.O. NO.

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ROWE LIBRARY

FINISH SCHEDULE														
ROOM NUMBER	ROOM	FLOOR MATERIAL		WALLS				WAINSCOT				CEILING MATERIAL		REMARKS
		F1	B1	D C B		D C B		A	B	C	D	CEILING MATERIAL	CEILING HEIGHT	
				A	B	C	D							
101	WOMEN'S	F1	B1	W1	W1	W1	W1					C2	8'-0"	R1
102	MEN'S	F1	B1	W1	W1	W1	W1					C2	8'-0"	R1

FLOOR MATERIAL:

F1 12x12 CERAMIC TILE
F2 EXISTING

BASE MATERIAL:

B1 6" COVED CERAMIC TILE
B2 EXISTING

WALL MATERIAL:

W1 GYPSUM BOARD - TEXTURED AND PAINTED
W2 12x24 CERAMIC TILE OVER NEW WATER RESISTANT GYPSUM BOARD
W3 (E) GYPSUM BOARD - PAINTED

CEILING:

C1 GYPSUM BOARD - TEXTURED AND PAINTED
C2 (E) GYPSUM BOARD - PAINTED

REMARKS:

R1 SEE INTERIOR ELEVATIONS SHEET A-103 FOR WALL TILE LOCATION

GENERAL NOTES:

- INTERIOR FINISH MATERIALS SHALL COMPLY WITH 2010 CBC CHAPTER 12.
- WATER RESISTANT GYPSUM BOARD COMPLYING WITH 2010 CBC SECTION 2509 TO BE USED IN TOILET ROOMS.
- GYPSUM BOARD TO BE 5/8" TYPE "X" UNLESS NOTED OTHERWISE.

DOOR SCHEDULE

MARK	ROOM	DOOR				FRAME				FIRE RATING (L INCHES)	REMARKS			
		DOOR TYPE	P=PAIR S=SINGLE	SIZE	DOOR MATERIAL	DOOR FINISH	DETAILS							
							HEAD	JAMB 1	JAMB 2			SILL	FRAME FINISH	FRAME MATERIAL
A	101	A	-	S	S1	WD	P	4/A-501	5/A-501	5/A-501		P	M	R1,R2,R3,R4
B	102	A	-	S	S1	WD	P	4/A-501	5/A-501	5/A-501		P	M	R1,R2,R3,R4

DOOR:

MATERIAL:
WD SC WOOD
AL/GL ALUMINUM/GLASS
V VINYL
M METAL
E EXISTING

FINISH:
SCF STAIN AND CLEAR FINISH
P PAINTED
F FACTORY APPLIED FINISH
E EXISTING FINISH

SIZE:
S1 3'-0" x 7'-0" x 1 3/4"

REMARKS:

R1 CLOSER
R2 HANDCAP SIGN
R3 DOOR GRILLE
R4 METAL KICK PLATES
R5 PANIC DEVICE
R6 SMOKE GASKETS

FRAME:

MATERIAL:
AL ALUMINUM
AL/GL ALUMINUM/GLASS
HM HOLLOW METAL
M METAL
E EXISTING
PFS TIMELY PRE-FINISHED METAL TO MATCH EXISTING

FINISH:
P PAINTED
F FACTORY APPLIED FINISH
E EXISTING FINISH

GENERAL NOTES:

- EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
- GLASS AND GLAZING SHALL COMPLY WITH CBC CHAPTER 24.
- MAXIMUM EFFORT TO OPERATE DOORS:
EXTERIOR - 5.0 LBS
INTERIOR - 5.0 LBS
FIRE DOORS - 15.0 LBS
- VERIFY ALL DOOR FRAME THROAT SIZES WITH FINISHED WALL THICKNESS PRIOR TO ORDERING FRAMES.
- FIRE RATED DOORS AND FRAMES SHALL HAVE AN APPROVED LABEL.
- ALL HAND ACTIVATED DOOR OPERATING HARDWARE AT LATCHING OR LOCKING DOORS ON THE ACCESSIBLE PATH OF TRAVEL SHALL BE OPERABLE WITH SINGLE EFFORT LEVER TYPE HARDWARE, PANIC BARS, PUSH/PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE HARDWARE.



DOOR TYPES

SCALE: 1/4" = 1'-0"

VILLASENOR LIBRARY

FINISH SCHEDULE														
ROOM NUMBER	ROOM	FLOOR MATERIAL		WALLS				WAINSCOT				CEILING MATERIAL		REMARKS
		F1	B1	D C B		D C B		A	B	C	D	CEILING MATERIAL	CEILING HEIGHT	
				A	B	C	D							
201	MEN'S	F1	B1	W1	W1	W1	W1					C2	8'-0"	R1
202	VESTIBULE	F2	B2	W3	W3	W3	W3					C1	8'-0"	R1
203	WOMEN'S	F1	B1	W1	W1	W1	W1					C2	8'-0"	R1
204	W/H CLOSET	F2	B2	W3	W3	W3	W3					C2	8'-0"	R1

FLOOR MATERIAL:

F1 12x12 CERAMIC TILE
F2 EXISTING

BASE MATERIAL:

B1 6" COVED CERAMIC TILE
B2 EXISTING

WALL MATERIAL:

W1 GYPSUM BOARD - TEXTURED AND PAINTED
W2 12x24 CERAMIC TILE OVER NEW WATER RESISTANT GYPSUM BOARD
W3 (E) GYPSUM BOARD - PAINTED

CEILING:

C1 (E) ACOUSTIC CEILING TILE
C2 (E) GYPSUM BOARD - PAINTED

REMARKS:

R1 SEE INTERIOR ELEVATIONS SHEET A-203 FOR WALL TILE LOCATION

GENERAL NOTES:

- INTERIOR FINISH MATERIALS SHALL COMPLY WITH 2010 CBC CHAPTER 12.
- WATER RESISTANT GYPSUM BOARD COMPLYING WITH 2010 CBC SECTION 2509 TO BE USED IN TOILET ROOMS.
- GYPSUM BOARD TO BE 5/8" TYPE "X" UNLESS NOTED OTHERWISE.

DOOR SCHEDULE

MARK	ROOM	DOOR				FRAME				FIRE RATING (L INCHES)	REMARKS			
		DOOR TYPE	P=PAIR S=SINGLE	SIZE	DOOR MATERIAL	DOOR FINISH	DETAILS							
							HEAD	JAMB 1	JAMB 2			SILL	FRAME FINISH	FRAME MATERIAL
A	201	A	-	S	S1	WD	SCF	4/A-501	5/A-501	5/A-501		P	M	R1,R2,R4
B	203	A	-	S	S1	WD	SCF	4/A-501	5/A-501	5/A-501		P	M	R1,R2,R4

DOOR:

MATERIAL:
WD SC WOOD
AL/GL ALUMINUM/GLASS
V VINYL
M METAL
E EXISTING

FINISH:
SCF STAIN AND CLEAR FINISH TO MATCH EXISTING
P PAINTED
F FACTORY APPLIED FINISH
E EXISTING FINISH

SIZE:

S1 3'-0" x 7'-0" x 1 3/4"

REMARKS:

R1 CLOSER
R2 HANDCAP SIGN
R3 WEATHERSTRIP
R4 METAL KICK PLATES
R5 PANIC DEVICE
R6 SMOKE GASKETS

FRAME:

MATERIAL:
AL ALUMINUM
HM HOLLOW METAL
M METAL
E EXISTING
PFS TIMELY PRE-FINISHED METAL TO MATCH EXISTING

FINISH:
P PAINTED
F FACTORY APPLIED FINISH
E EXISTING FINISH

GENERAL NOTES:

- EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
- GLASS AND GLAZING SHALL COMPLY WITH CBC CHAPTER 24.
- MAXIMUM EFFORT TO OPERATE DOORS:
EXTERIOR - 5.0 LBS
INTERIOR - 5.0 LBS
FIRE DOORS - 15.0 LBS
- VERIFY ALL DOOR FRAME THROAT SIZES WITH FINISHED WALL THICKNESS PRIOR TO ORDERING FRAMES.
- FIRE RATED DOORS AND FRAMES SHALL HAVE AN APPROVED LABEL.
- ALL HAND ACTIVATED DOOR OPERATING HARDWARE AT LATCHING OR LOCKING DOORS ON THE ACCESSIBLE PATH OF TRAVEL SHALL BE OPERABLE WITH SINGLE EFFORT LEVER TYPE HARDWARE, PANIC BARS, PUSH/PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE HARDWARE.



DOOR TYPES

SCALE: 1/4" = 1'-0"

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CEASED ARCHITECT
GARY W. MILLER
No. 44638
Exp. 09-23
STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: 9/27/2022
ALEX GHSTA
CITY ENGINEER: ALEX GHSTA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
DOOR AND FINISH SCHEDULE
FOR ROWE LIBRARY AND VILLASENOR LIBRARY
A-601

DRAWING NO. 13A76
SHEET 14 OF 26 SHEETS
FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION, CITY OF LOS ANGELES ELECTRICAL CODE, AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
- ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT OUTER SPACE AND LOSS IN COMPLIANCE TO ALL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
- WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF MECHANICAL, PLUMBING AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
- CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
- LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
- DRAWINGS ARE DIAGNOSTIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR SWITCHES, BELL/STROBES, FIRE ALARM PULL STATIONS, RECEPTACLES ETC. WITH CABINETS, FURNITURE, EQUIPMENT ETC., TO AVOID CONFLICT.
- WHERE ELECTRIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HANG CEILING WITHIN REACH FROM ACCESS POINT.
- FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
- FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
- NOT MORE THAN THREE LIGHTING OR COMMENCEMENT OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT. PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
- PROVIDE PULL BOXES WHERE NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
- OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
- SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATION FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS, CONTROL TRANSFORMERS, POWER FOR CONTROL SYSTEM EP AND PE SWITCHES, TIME CLOCKS, VALVES, STAYS, RELAYS, DUCT SMOKE DETECTOR LOCATIONS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
- ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16") SHALL BE WEATHERPROOF TYPE, NEMA 3R.
- NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
- LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK-TO-BACK.
- WHERE MORE THAN ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE. PLATES WITH MORE THAN (3) LIGHT SWITCHES SHALL BE LABELED TO INDICATE THE LIGHT FIXTURES CONTROLLED.
- DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY.
- ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
- ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
- CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
- ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CTS, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:
 - 125A OR LESS : 60°C OR MORE;
 - MORE THAN 125A : 75°C OR MORE.
- CONDUCTORS SHALL HAVE UNDERWRITERS LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW:
 - BRANCH CIRCUITS - LIGHTING AND POWER.
 - FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.
 - #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHN/THWN FOR DRY LOCATION ONLY.
 - #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
 - #1 AWG AND LARGER, STRANDED TYPE XHHW.
- PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
- WIRING METHOD SHALL BE ENT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION UNLESS NOTED OTHERWISE.
- PROVIDE 110V OUTLET, CFL LIGHT & SWITCH FOR LIGHT @ FAU IN ATTIC, WHERE APPLICABLE.
- ALL ELECTRICAL DEVICES AND COVERPLATES SHALL BE STANDARD Ivory. ALL COVERPLATES SHALL MATCH IN APPEARANCE. REPLACE IF NEEDED.
- NEW SWITCHES/ELECTRICAL BOXES SHALL BE VERTICALLY AND HORIZONTALLY ALIGNED WHERE INSTALLED ADJACENT TO EXISTING ELECTRICAL SWITCHES/OUTLETS/FIXTURES, NO EXCEPTIONS.
- REFER TO ELECTRICAL DESIGN BUILD ENGINEERING FOR CIRCUITING OF ALL NEW ELECTRICAL OUTLETS.
- ALL OUTLETS WITHIN 6'-0" OF A WATER SOURCE SHALL BE GFI PROTECTED. CONTRACTOR TO COORDINATE LOCATIONS OF FLOOR DEVICES AND FIELD VERIFY ALL FLOOR BOX LOCATIONS PRIOR TO SNAICUT WITH TENANT.
- CONTRACTOR TO PROVIDE CUT SHEETS FOR FLOOR BOXES AND SPECIALTY DEVICES FOR RENEW AND APPROVAL.
- ALL CONDUIT FOR REQUIRED COMMUNICATION CABLES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- ALL CONDUITS AND SLEEVES SHALL HAVE PROPER EDGE PROTECTION IN FORM OF BRUSHINGS SUITABLE TO PROTECT CABLE FROM CUTTING AND CHAFING.
- CONTRACTOR SHALL REMOVE ALL ABANDONED EQUIPMENT, CONDUIT, AND CABLES.
- ALL CONDUIT FOR REQUIRED COMMUNICATION CABLES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- CONTRACTOR TO PROVIDE POWER TO ALL MECHANICAL EQUIPMENT.
- WHERE OUTLETS ARE SHOWN BACK TO BACK ON THE SAME WALL, CONTRACTOR SHALL STAGGER BOX LOCATIONS MANUALLY TO ACCOMMODATE EACH BOX.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH JURISDICTION RATED EDITION OF THE NATIONAL ELECTRIC CODE.

- CONTRACTOR TO PROVIDE NEW FIRE ALARM SYSTEM TO CONFORM TO 2013 CFC. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED CONDUIT AND BACK BOXES.
- CONTRACTOR TO INCLUDE IN BASE BID FOR ELECTRICAL CONTRACTOR TO CONNECT WHIPS FOR PANEL FURNITURE SYSTEMS.
- CONTRACTOR TO COORDINATE EXACT LOCATION OF ELECTRICAL, VOICE/DATA OUTLETS, AND TV/AV OUTLETS SERVING TENANT'S FURNITURE AND EQUIPMENT WITH TENANT.
- CONTRACTOR TO FIRE TAPE AND CALK ALL PENETRATIONS OF 1-HOUR RATED WALLS, (IF APPLICABLE)
- PROVIDE FIRE BRICKS AROUND ALL NEW ELECTRICAL OUTLET BOXES AND DATA RECEPTACLES IN NEWFIRE-RATED WALLS.
- FOR EACH UNCONTROLLED OUTLET, PROVIDE A CONTROLLED OUTLET WITHIN 6' IN THE FOLLOWING AREAS: PRIVATE AND OPEN OFFICES, RECEPTION LOBBY, CONFERENCE ROOM, KITCHENETTE IN OFFICE SPACES, AND COPY ROOMS. CONTROLLED RECEPTACLES SHALL BE AUTOMATICALLY SHUT OFF WITH THE LIGHTING.
- ELECTRICAL CONTRACTOR RESPONSIBLE FOR PROVIDING POWER AND FINAL CONNECTION TO SMOKE DETECTORS.
- FIRE ALARM SUBCONTRACTOR RESPONSIBLE FOR PROVIDING SMOKE DETECTORS AND CONNECTION OF SMOKE DETECTORS TO FIRE ALARM PANEL.
- ALL LIGHTING CONTROLS SHALL BE ACCEPTANCE TESTED BY A CERTIFIED ACCEPTANCE TECHNICIAN.
- CONTRACTOR TO SUBMIT TO THE ENFORCEMENT AGENCY UNDER SECTION 10-103(a) OF PART 1 FOR:
 - AUTOMATIC DAYLIGHT CONTROLS
 - LIGHTING CONTROLS
 - DEMAND RESPONSIVE CONTROLS

COLOR CODE FOR UNDERGROUND CONDUCTORS

120/240	1 PH	BLACK	RED	WHITE	WHITE
120/208	3 PH	BLACK	RED	BLUE	WHITE
120/240	3 PH	BLACK	ORANGE	BLUE	WHITE
277/480	3 PH	BROWN	ORANGE	YELLOW	GRAY

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	2'x4' LED LUMINAIRE. '1' INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE. TYPICAL. SUBSCRIPT A-2 REFERS TO PANEL AND CIRCUIT. SUBSCRIPT N/L REFERS TO NIGHT LIGHT.
	2'x4' RECESSED LED LUMINAIRE WITH 90 MIN. EMERGENCY BATTERY BACKUP
	SURFACE MOUNTED DOUBLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
	SURFACE MOUNTED SINGLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
	SWITCH, MOUNTED 48" A.F.F. TO TOP OF DEVICE. SUBSCRIPTS INDICATE THE FOLLOWING: M - MOTOR RATED 3 - THREE WAY 4 - FOUR WAY K - KEY OPERATED D - DIMMER SWITCH
	MOTION SENSOR SWITCH

LIGHTING SCHEDULE

TYPE	VOLTS	WATTAGE	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
(A)	120 V	25 W	LED	SURFACE MOUNTED	LOW PROFILE LED WRAPAROUND	LITHORA LIGHTING	BLMP4 30L ADP 6210 LP840 25W	PROVIDE 6'-0" MIN. DOWNHUNG CONTROLS SWITCHES, OCCUPANCY SENSORS WHERE SHOWN ON PLANS	

ABBREVIATIONS

A	AMPERE	MV	MEDIUM VOLTAGE
AF	AMPERE FRAME RATING	NC	NORMALLY CLOSED
AFT	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AC	AMPERE INTERRUPTING CAPACITY	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
AFG	ABOVE FINISHED GRADE	NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
AT	AMPERE TRIP RATING	NF	NON-FUSED
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
BKGD	BACKGROUND	N/L	NIGHT LIGHT
BLDG	BUILDING	NO	NUMBER, NORMALLY OPEN
BKR	BREAKER	NTS	NOT TO SCALE
C	CONDUIT	OC	ON CENTER
CB	CIRCUIT BREAKER	OD	OUTSIDE DIAMETER
CKT	CIRCUIT	P	POLE
CPSD	COMBINATION FIRE SMOKE DAMPER	PB	PULL BOX
CO	CONDUIT ONLY	PF	POWER FACTOR
CONC	CONCRETE	PNL	PANEL
CT	CURRENT TRANSFORMER	POC	POINT OF CONNECTION
CU	COPPER	PP	POWER POLE
CL	CENTERLINE	PWR	POWER
DISC	DISCONNECT	PVC	POLYVINYL CHLORIDE
DSBN	DISTRIBUTION SECTION	QUAD	QUADRUPLX
DN	DOWN	QTY	QUANTITY
DWG	DRAWING	REQD	REQUIRED
EA	EACH	REQMT	REQUIREMENT
EC	ELECTRICAL CONTRACTOR	RMS	RIGID GALVANIZED STEEL
EM	EMERGENCY	RM	ROOM
EXIST, (E)	EXISTING	SHT	SHEET
EXO	EXTERNAL OPERABLE DISCONNECT	SN	SOLID NEUTRAL SPECIFICATIONS
F	FUSE	SPOT	SINGLE POLE, DOUBLE THROW
FA	FIRE ALARM	SPST	SINGLE POLE, SINGLE THROW
FACP	FIRE ALARM CONTROL PANEL	SW	SWITCH
FF	FINISHED FLOOR	SWBD	SWITCHBOARD
FG	FINISHED GRADE	TC	TIME CLOCK
FLA	FULL LOAD CURRENT	TEL	TELEPHONE
FLUOR	FLOUORESCENT	TERM	TERMINAL
GEN	GENERATOR	TP	TEMPORARY POLE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
GFP	GROUND FAULT PROTECTION	UGPS	UNDERGROUND PULL SECTION
GND	GROUND	UL	UNDERWRITERS LABORATORY
HOA	HAND-OFF-AUTOMATIC	UPS	UNINTERRUPTIBLE POWER SUPPLY
HP	HORSE POWER	UN	UNLESS OTHERWISE NOTED
HV	HIGH VOLTAGE	V	VOLT, VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME	VA	VOLT-AMPERE
IG	ISOLATED/INSULATED GROUND	VFC	VARIABLE FREQUENCY CONTROLLER
INCAND	INCANDESCENT	VFD	VARIABLE FREQUENCY DRIVE
J-BOX	JUNCTION BOX	W	WATT
KCMIL	THOUSAND CIRCULAR MILS	WH	WATT-HOUR
KW	KILOWATT	WP	WEATHERPROOF
KVA	KILO VOLT	WT	WEATHERTIGHT
KVA	KILO VOLT-AMPERE	WN	WIREWAY
LDC	LOCAL DISTRIBUTION CABINET	XP	EXPLOSION PROOF
LDF	LOCAL DISTRIBUTION FRAME	Z	IMPEDANCE
LCL	LONG CONTINUOUS LOAD	4W	FOUR-WIRE
LTC	LIGHTING	3W	THREE-WIRE
LV	LOW VOLTAGE	SS	JUNCTION BOX (4 11/16" SQUARE X2 1/8" DEEP)
MFR	MANUFACTURER	'	DIAMETER, PHASE
MAX	MAXIMUM	#	NUMBER
MCC	MOTOR CONTROL CENTER	°C	DEGREE CELSIUS
MN	MINIMUM	(R)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
MH	MANHOLE / METAL HALIDE	(NL)	NEW LOCATION OF RELOCATED DEVICE
M/M	METER AND MAIN SECTION		
MULTI	MULTI-METER SECTION		

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	UTILITY COMPANY FULL SECTION LUGS		GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.		CONDUIT TURN DOWN
	CONDUIT TURN UP		CONDUIT STUBBED AND CAPPED
	RACEWAY CONCEALED IN WALLS OR ABOVE CEILING		CONDUIT CONCEALED IN OR UNDER FLOOR, COORDINATE WITH G.C.; OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
	EXISTING CONDUIT TO REMAIN		PULL-OUT WIRES AND ABANDON CONDUIT. CUT AND CAPPED FLUSH WITH WALL OR SLAB.
	EXISTING CONDUIT AND WIRE TO BE REMOVED		ELECTRICAL UTILITY PRIMARY
	ELECTRICAL UTILITY SECONDARY		TELEPHONE UTILITY
	TEMPORARY OVERHEAD CABLEING		EXISTING DEVICE TO REMAIN
	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE		REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
	NEW LOCATION OF RELOCATED DEVICE		HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A" (DOT INDICATES EQUIPMENT GROUNDING CONDUCTOR, CROSSMARKS INDICATE NUMBER OF HOT WIRES AND HALF CROSS MARK INDICATES NEUTRAL CONDUCTOR.)
	IN-LINE UTILITY COMPANY METER		UTILITY METER WITH CURRENT TRANSFORMERS (CT'S) METER
	SOLID STATE DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM		TRANSFORMER WITH SECONDARY GROUND
	ON-SITE GENERATOR SET		CONCRETE ELECTRICAL PULLBOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION.
	ELECTRICAL OUTLET CONTROLLER		LIGHTING CONTROLLER
	CEILING OCCUPANCY SENSOR PER TITLE 24 REQUIREMENTS		
	DETAIL REFERENCE		
	EQUIPMENT REFERENCE		
	GROUND WELL		
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT		
	TELEPHONE BACKBOARD 2'x4'x3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.		
	MOLDED CASE CIRCUIT BREAKER		
	SWITCH AND FUSE ASSEMBLY		

APPLICABLE CODES

2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)

NOTE TO CONTRACTOR

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

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planning
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Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
info@miller-elp.com



MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: *Alex Qishta* 2018-2022
CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY: LS/VM
CHECKED BY: VM
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
ELECTRICAL GENERAL NOTES
FOR
ROWE LIBRARY

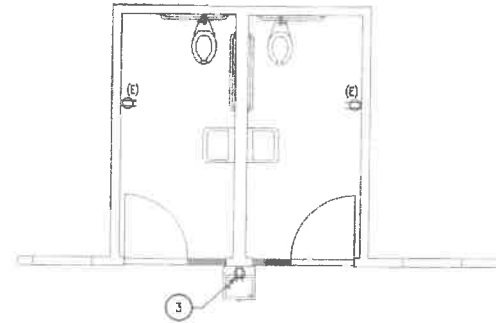
DRAWING NO. 13476
SHEET 15 OF 26 SHEETS
FOR CITY USE ONLY; FILE NO. C.I.P. NO. W.O. NO.

GENERAL NOTES:

1. VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
2. RECEPTACLE BOXES MOUNTED AT +48" HEIGHT SHALL BE MOUNTED SO THAT TOP OF RECEPTACLE BOX IS NO MORE THAN 4-6".

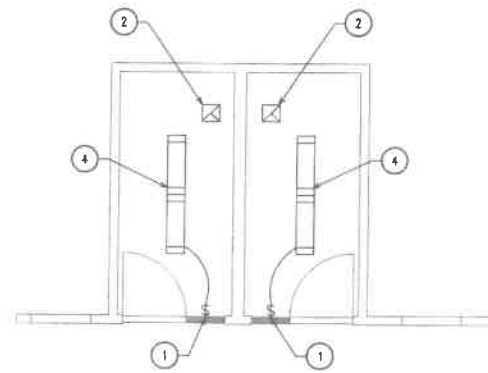
KEY NOTES: (x)

1. NEW LIGHT SWITCH PROVIDE NEW MOTION SENSOR LIGHT SWITCH.
2. REPLACED EXHAUST FAN. REFER TO MECHANICAL PLANS FOR SPECS. CONNECT EXHAUST FAN TO LIGHT SWITCH.
3. RELOCATED OUTLET FOR DRINKING FOUNTAIN. LOCATE OUTLET PER DRINKING FOUNTAIN MANUFACTURER SPECIFICATIONS.
4. NEW LIGHT. REFER TO FIXTURE SCHEDULE SHEET E101.



ELECTRICAL POWER PLAN

SCALE: 1/4" = 1'-0"



ELECTRICAL LIGHTING PLAN

SCALE: 1/4" = 1'-0"



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interiors
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MILLER

1177 Idaho Street, Suite 200
Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
Info@miller-arp.com



MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED	9/22	2018
	<i>Alex Qishta</i>	2022
CITY ENGINEER:	ALEX QISHTA	
REGISTERED CIVIL ENGINEER NO.	66702	
DRAWN BY:	LS/vm	
CHECKED BY:	vm	
RECOMMENDED BY:		

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
ELECTRICAL POWER & LIGHTING PLAN
FOR
ROWE LIBRARY

E-102

DRAWING NO.
13576
SHEET 16 OF
26 SHEETS
W.O. NO.

FOR CITY USE ONLY: FILE NO.

C.I.P. NO.

F. INDOOR LIGHTING FIXTURE SCHEDULE
 *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)(4) is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column OS.
 *Authority Having Jurisdiction may ask for Luminaires cut sheets to confirm wattage used for compliance per §130.0(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS
 This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)
 This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Control	OS	Field Inspector
Mandatory Demand Response §130.1(a)	Shut-off controls §130.1(c)	Pass Fail
Not Required <= 10,000 SF	Whole Building Auto Time Switch	<input type="checkbox"/> <input type="checkbox"/>

Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Secondary Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)(1)	Field Inspector
Restroom Zone	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No	Pass Fail
*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. EX: Conference 1: Primary/Daylighting: Exempt because less than 120 watts of general lighting, EXCEPTION 1 to §130.1(d)								13
Restroom Zone Exception 2 to section 130.1(b) Plan Sheet Showing Daylit Zones								<input type="checkbox"/> <input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
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C. COMPLIANCE RESULTS
 If any cell in this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)(1)	Allowed Lighting Power per §140.6(b) (Watts)				OS	Adjusted Lighting Power per §140.6(b) (Watts)		Compliance Results			
	Complete Building §140.6(a)(1)	Area Category §140.6(a)(2)	Area Category Additional §140.6(a)(3) (-)	Tailored §140.6(a)(4) (+)		Total Designed (Watts)	PAF Lighting Control Credit §140.6(a)(2) (-)				
Conditioned	99.4	0			99	2	68	0	68	OS must be >= OS §140.6	COMPLIES
Unconditioned											COMPLIES

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE
 This table includes all permanent designed lighting and all portable lighting in offices.
 Designed Wattage: Conditioned Spaces

Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per Luminaire ²	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)(1)	Design Watts	Field Inspector
A	LED 17w	No	No	17	Mfr. Spec	4	No	68	Pass Fail
Total Designed Watts: CONDITIONED SPACES								68	<input type="checkbox"/> <input type="checkbox"/>

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A. GENERAL INFORMATION

01 Project Location (City)	San Bernardino	04 Total Conditioned Floor Area (ft ²)	153
02 Climate Zone	10	05 Total Unconditioned Floor Area (ft ²)	0
03 Occupancy Types Within Project (Select all that apply):		06 # of Stories (Habitable Above Grade)	1

* Support Areas

B. PROJECT SCOPE
 This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b) for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
	Calculation Method	Area (ft ²)	Calculation Method	Area (ft ²)
My Project Consists of (check all that apply):				
<input type="checkbox"/> New Lighting System				
<input type="checkbox"/> New Lighting System - Parking Garage				
<input checked="" type="checkbox"/> Altered Lighting System	Area Category Method	153	Area Category Method	0
Total Area of Work (ft ²)		153		0

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Ryan Miranda
 Signature Date: 2022-02-15
 Company: A.D.E. Consulting
 Address: 1177 Idaho St. Suite 200A
 City/State/Zip: Redlands California 92374
 Phone: (909) 884-9484

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 2 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of the Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation provided to the building owner at occupancy.

Responsible Designer Name: Steve Murry
 Signature Date: 2022-02-15
 Company: SPM Architect & Associates
 Address: 1177 Idaho Street, Suite 200A
 City/State/Zip: Redlands California 92374
 Phone: (909) 307-0146

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
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Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
 This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS
 This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
 This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/btke242019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Form/Title: NRCC-LT-E - Must be submitted for all buildings
 Field Inspector:

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 There are no NRCA forms required for this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
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I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS
 Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column OS indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft ²)	Area (ft ²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment		
					Area Category	PAF	
Restroom Zone	Restrooms	0.65	153	99.4	No	No	
TOTALS:					153	99.4	See Tables I, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
 This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
 This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
 This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
 This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS
 This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
 This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
 This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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REGISTERED ARCHITECT
 GARY W. MILLER
 No. 114801
 Exp. 1-30-23
 STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

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APPROVED: 9/22 2018 2022
 CITY ENGINEER: ALEX QISHTA
 REGISTERED CIVIL ENGINEER NO. 86702
 DRAWN BY: LS/VM
 CHECKED BY: VM
 RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS
 ENERGY COMPLIANCE FORMS
 FOR ROWE LIBRARY
 DRAWING NO. 13A76
 SHEET 17 OF 26 SHEETS
 E-103
 FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION, CITY OF LOS ANGELES ELECTRICAL CODE, AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF MECHANICAL, PLUMBING AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
5. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
6. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOORS, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
7. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
8. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR SWITCHES, BELL/STROBES, FIRE ALARM PULL STATIONS, RECEPTACLES ETC. WITH CABINETS, FURNITURE, EQUIPMENT ETC., TO AVOID CONFLICT.
9. WHERE ELECTRIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
10. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
11. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
12. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT. PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
13. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH M.E.C. REQUIREMENTS.
14. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
15. SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATION FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS, CONTROL TRANSFORMERS, POWER FOR CONTROL SYSTEM EP AND PE SWITCHES, TIME CLOCKS, VALVES, STAIRS, RELAYS, DUCT SMOKE DETECTOR LOCATIONS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
16. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16") SHALL BE WEATHERPROOF TYPE, NEMA 3R.
17. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
18. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK-TO-BACK.
19. WHERE MORE THAN ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE. PLATES WITH MORE THAN (3) LIGHT SWITCHES SHALL BE LABELED TO INDICATE THE LIGHT FIXTURES CONTROLLED.
20. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY.
21. ALL ELECTRICAL POWER LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
22. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
23. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
24. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB'S, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:
 - a. 125A OR LESS : 60°C OR MORE;
 - b. MORE THAN 125A : 75°C OR MORE.
25. CONDUCTORS SHALL HAVE UNDERWRITERS LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW:
 1. BRANCH CIRCUITS - LIGHTING AND POWER.
 - a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THWN/THWN, THEN THHN FOR DRY LOCATION ONLY;
 - b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THWN/THWN;
 - c. #1 AWG AND LARGER, STRANDED TYPE XHHW.
 2. FEEDERS : TYPE THW OR THWN/THWN, OR XHHW.
26. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLAG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
27. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION UNLESS NOTED OTHERWISE.
28. PROVIDE 110V OUTLET, CFL LIGHT & SWITCH FOR LIGHT @ FAU IN ATTIC, WHERE APPLICABLE.
29. ALL ELECTRICAL DEVICES AND COVERPLATES SHALL BE STANDARD Ivory. ALL COVERPLATES SHALL MATCH IN APPEARANCE. REPLACE IF NEEDED.
30. NEW SWITCHES/ELECTRICAL BOXES SHALL BE VERTICALLY AND HORIZONTALLY ALIGNED WHERE INSTALLED ADJACENT TO EXISTING ELECTRICAL SWITCHES/OUTLETS/THERMOSTATS. NO EXCEPTIONS.
31. REFER TO ELECTRICAL DESIGN BUILD ENGINEERING FOR CIRCUITING OF ALL NEW ELECTRICAL OUTLETS.
32. ALL OUTLETS WITHIN 6"-0" OF A WATER SOURCE SHALL BE GFI PROTECTED. CONTRACTOR TO COORDINATE LOCATIONS OF FLOOR DEVICES AND FIELD VERIFY ALL FLOOR BOX LOCATIONS PRIOR TO SAYOUT WITH TENANT.
33. CONTRACTOR TO PROVIDE CUT SHEETS FOR FLOOR BOXES AND SPECIALTY DEVICES FOR REVIEW AND APPROVAL.
34. ALL CONDUIT FOR REQUIRED COMMUNICATION CABLES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
35. ALL CONDUITS AND SLEEVES SHALL HAVE PROPER EDGE PROTECTION IN FORM OF BUSINESS SUITABLE TO PROTECT CABLE FROM CUTTING AND GRABBING.
36. CONTRACTOR SHALL REMOVE ALL ABANDONED EQUIPMENT, CONDUIT, AND CABLEING.
37. ALL CONDUIT FOR REQUIRED COMMUNICATION CABLES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
38. CONTRACTOR TO PROVIDE POWER TO ALL MECHANICAL EQUIPMENT.
39. WHERE OUTLETS ARE SHOWN BACK TO BACK ON THE SAME WALL, CONTRACTOR SHALL STAGGER BOX LOCATIONS UNLESS TO ACCOMMODATE EACH BOX.
40. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH JURISDICTION RATIFIED EDITION OF THE NATIONAL ELECTRIC CODE.

ABBREVIATIONS

A	AMPERE	MV	MEDIUM VOLTAGE
AF	AMPERE FRAME RATING	NC	NORMALLY CLOSED
AFB	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AC	AMPERE INTERRUPTING CAPACITY	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
AFG	ABOVE FINISHED GRADE	NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
AT	AMPERE TRIP RATING	NF	NON-FUSED
AWG	AMERICAN WIRE GAUGE	N/C	NOT IN CONTRACT
BACK	BACKBOARD	N/L	NIGHT LIGHT
BLDG	BUILDING	NO	NUMBER, NORMALLY OPEN
BKR	BREAKER	NTS	NOT TO SCALE
C	CONDUIT	OC	ON CENTER
CB	CIRCUIT BREAKER	OD	OUTSIDE DIAMETER
CKT	CIRCUIT	P	POLE
CFSD	COMBINATION FIRE SMOKE DAMPER	PB	PULL BOX
CO	CONDUIT ONLY	PF	CURRENT FACTOR
CONC	CONCRETE	PVL	PANEL
CT	CURRENT TRANSFORMER	POC	POINT OF CONNECTION
CU	COPPER	PP	POWER POLE
℄	CENTERLINE	PWR	POWER
DISC	DISCONNECT	PVC	POLYVINYL CHLORIDE
DSBN	DISTRIBUTION SECTION	QUD	QUADRUPLEX
DN	DOWN	QTY	QUANTITY
DWG	DRAWING	REQD	REQUIRED
EA	EACH	REQMT	REQUIREMENT
EC	ELECTRICAL CONTRACTOR	RS	RIGID GALVANIZED STEEL
EM	EMERGENCY	RM	ROOM
EXIST, (E)	EXISTING	SHT	SHEET
EXO	EXTERNAL OPERABLE DISCONNECT	SN	SOLID NEUTRAL SPECIFICATIONS
F	FUSE	SPDT	SINGLE POLE, DOUBLE THROW
FA	FIRE ALARM	SPST	SINGLE POLE, SINGLE THROW
FACP	FIRE ALARM CONTROL PANEL	SW	SWITCH
FF	FINISHED FLOOR	SWBD	SWITCHBOARD
FG	FINISHED GRADE	TC	TIME CLOCK
FLA	FULL LOAD CURRENT	TEL	TELEPHONE
FLUOR	FLUORESCENT	TERM	TERMINAL
GEN	GENERATOR	TP	TEMPORARY POLE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TPP	TYPICAL
GFP	GROUND FAULT PROTECTION	UGPS	UNDERGROUND PULL SECTION
GND	GROUND	UL	UNDERWRITERS LABORATORY
HND	HAND-OFF-AUTOMATIC	UPS	UNINTERRUPTIBLE POWER SUPPLY UNLESS OTHERWISE NOTED
HP	HORSE POWER	V	VOLT, VOLTAGE
HV	HIGH VOLTAGE	VA	VOLT-AMPERE
IDF	INTERMEDIATE DISTRIBUTION FRAME	VFC	VARIABLE FREQUENCY CONTROLLER
IG	ISOLATED/INSULATED GROUND	VFD	VARIABLE FREQUENCY DRIVE
INCAND	INCANDESCENT	W	WATT
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES	WH	WATT-HOUR
J-BOX	JUNCTION BOX	WP	WEATHERPROOF
KCAL	THOUSAND CIRCULAR MILS	WT	WEATHERTIGHT
KW	KILOWATT	WW	WIREWAY
KV	KILO VOLT	XP	EXPLOSION PROOF
KVA	KILO VOLT-AMPERE	Z	IMPEDANCE
LDC	LOCAL DISTRIBUTION CABINET	4W	FOUR-WIRE
LDF	LOCAL DISTRIBUTION FRAME	3W	THREE-WIRE
LCL	LONG CONTINUOUS LOAD	SS	JUNCTION BOX (4 11/16" SQUARED X 2 1/8" DEEP)
LTG	LIGHTING	'	DIAMETER, PHASE NUMBER
LV	LOW VOLTAGE	°	DEGREE CELSIUS
MFR	MANUFACTURER	(R)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
MAX	MAXIMUM	(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
MCC	MOTOR CONTROL CENTER	(NL)	NEW LOCATION OF RELOCATED DEVICE
MH	MINIMUM		
M/H	HANDHOLE / METAL HALIDE		
M/M	METER AND MAIN SECTION		
MULTI	MULTI-METER SECTION		

COLOR CODE FOR UNDERGROUND CONDUCTORS

120/240 1 PH	BLACK	RED	WHITE		
120/208 3 PH	BLACK	RED	BLUE	WHITE	
120/240 3 PH	BLACK	ORANGE	BLUE	WHITE	
277/480 3 PH	BROWN	ORANGE	YELLOW	GRAY	

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	2 1/4" LED LUMINAIRE. "L" INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE, TYPICAL. SUBSCRIPT A-2 REFERS TO PANEL AND CIRCUIT. SUBSCRIPT N/L REFERS TO NIGHT LIGHT.
	2 1/4" RECESSED LED LUMINAIRE WITH 90 MIN EMERGENCY BATTERY BACKUP
	SURFACE MOUNTED DOUBLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
	SURFACE MOUNTED SINGLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
	SWITCH MOUNTED 48" A.F.F. TO TOP OF DEVICE. SUBSCRIPTS INDICATE THE FOLLOWING: M - MOTOR RATED 3 - THREE WAY 4 - FOUR WAY K - KEY OPERATED D - DIMMER SWITCH
	MOTION SENSOR SWITCH

LIGHTING SCHEDULE

TYPE	VOLTS	WATTAGE	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
(A)	120 V	17 W	LED	SURFACE MOUNTED	LOW PROFILE LED WRAPAROUND	LITHONIA LIGHTING	BLWP4 20L ADP G210 LP840	PROVIDE 1/2" THICK DRIBBING CONTROLS SWITCHES, OCCUPANCY SENSORS WHERE SHOWN ON PLANS	
(B)	120 V	25 W	LED	SURFACE MOUNTED	LOW PROFILE LED WRAPAROUND	LITHONIA LIGHTING	BLWP4 30L ADP G210 LP840	PROVIDE 1/2" THICK DRIBBING CONTROLS SWITCHES, OCCUPANCY SENSORS WHERE SHOWN ON PLANS	

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.		UTILITY COMPANY PULL SECTION LUGS
	DOUBLE DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.		GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED +15" A.F.F. TO .		GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.		CONDUIT TURN DOWN
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS, GFCI TYPE) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.		CONDUIT TURN UP
	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.		CONDUIT STUBBED AND CAPPED
	DUPLEX RECEPTACLE OUTLET ON DEDICATED CIRCUIT (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.		RACEWAY CONCEALED IN WALLS OR ABOVE CEILING
	250 VOLT RECEPTACLE OUTLET, NEMA 6-20R MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.		CONDUIT CONCEALED IN OR UNDER FLOOR, COORDINATE WITH G.C.; OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
	DUPLEX RECEPTACLE OUTLET, SINGLE SPLIT-CIRCUIT SWITCHED (20 AMPS, 125 VOLTS) MOUNTED +15" .		EXISTING CONDUIT AND WIRING TO REMAIN
	SURFACE MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) MOUNTED +15" .		PULL-OUT WIRES AND ABANDON CONDUIT. CUT AND CAPPED FLUSH WITH WALL OR SLAB.
	RECESSED CEILING MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE (20 AMPS, 125 VOLTS) ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE .		EXISTING CONDUIT AND WIRE TO BE REMOVED
	RECESSED WALL MOUNTED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 370- 6(a), 4" SQUARE DEEP, WITH PLASTER RING		ELECTRICAL UTILITY PRIMARY
	DUPLEX RECEPTACLE FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX, HINGED BRASS COVER (20 AMPS, 125 VOLTS) U.O.N.		ELECTRICAL UTILITY SECONDARY
	DOUBLE DUPLEX RECEPTACLE, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.		TELEPHONE UTILITY
	JUNCTION BOX, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.		TEMPORARY OVERHEAD CABLEING
	SPECIALTY OUTLET. VERIFY NEMA CONFIGURATION AS NOTED ON PLANS.		EXISTING DEVICE TO REMAIN
	BRANCH PANELBOARD, WALL MOUNTED, (SEE PLANS AND SCHEDULE. (RECESSED MOUNTED))		REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
	BRANCH PANELBOARD, WALL MOUNTED. (SEE PLANS AND SCHEDULE. (SURFACE MOUNTED))		NEW LOCATION OF RELOCATED DEVICE
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE. (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)		IN-LINE UTILITY COMPANY METER
	DISCONNECT SWITCH H.P. RATED 500 VOLTS. "F" INDICATES FUSE TYPE. FUSES PER APPROVED MANUFACTURERS SHOP DRAWINGS.		UTILITY METER WITH CURRENT TRANSFORMERS (CT'S) METER
	MAGNETIC MOTOR STARTER H.P. RATED (NUMBERS INDICATE NEMA SIZE)		SOLID STATE DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM
	MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTERLINE OF OUTLET OR EQUIPMENT		TRANSFORMER WITH SECONDARY GROUND
	DETAIL REFERENCE		ON-SITE GENERATOR SET
	EQUIPMENT REFERENCE		CONCRETE ELECTRICAL PULLBOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION
	GROUND WELL		ELECTRICAL OUTLET CONTROLLER
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT		LIGHTING CONTROLLER
	TELEPHONE BACKBOARD 2 1/4 X 4 1/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.		CEILING OCCUPANCY SENSOR PER TITLE 24 REQUIREMENTS
	MOLDED CASE CIRCUIT BREAKER		
	SWITCH AND FUSE ASSEMBLY		

APPLICABLE CODES

2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NEC WITH AMENDMENTS)

NOTE TO CONTRACTOR

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

Underground Service Alert



Call: TOLL FREE
1-800
422-4133

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MARK	REVISIONS	BY	APPR	DATE

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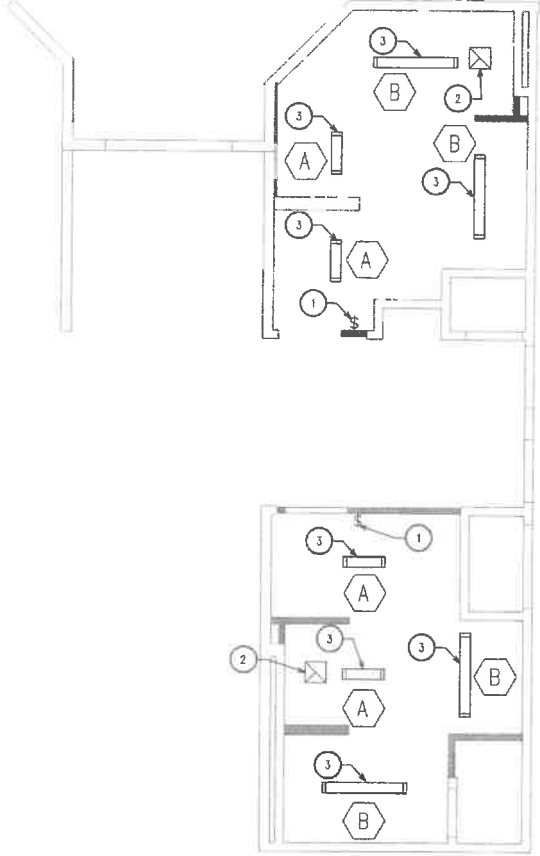
APPROVED	9/22	2018
	<i>Alex Qishta</i>	2022
CITY ENGINEER:	ALEX QISHTA	
REGISTERED CIVIL ENGINEER NO.	66702	
DRAWN BY:	LS/VM	
CHECKED BY:	VM	
RECOMMENDED BY:		

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
ELECTRICAL
GENERAL NOTES
FOR
VILASENOR LIBRARY

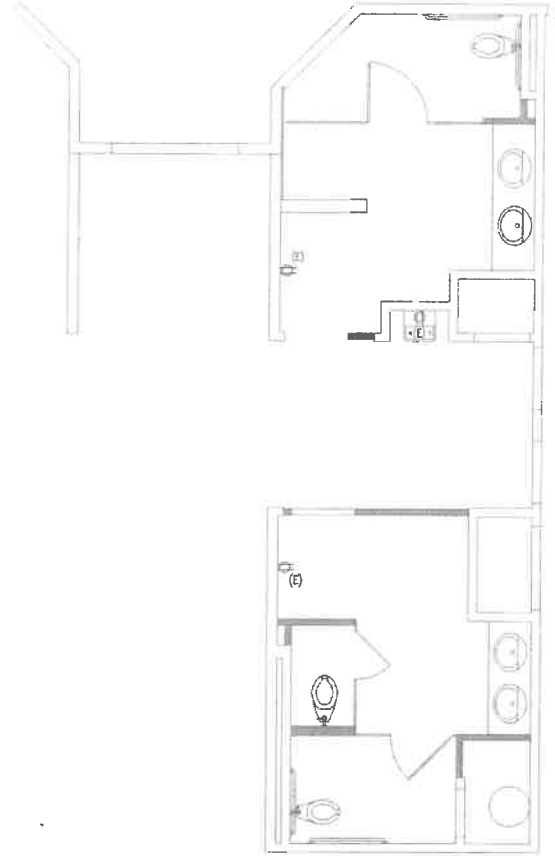
E-201

DRAWING NO.
13476
SHEET 18 OF
26 SHEETS

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ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"



ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES:

1. VERIFY EXISTING CONSTRUCTION WITHIN SCOPE OF WORK TO ENSURE CONFORMANCE WITH NOTED RATINGS AND LOCAL CODES. RETROFIT NONCONFORMING CONSTRUCTION AS REQUIRED.
2. RECEPTACLE BOXES MOUNTED AT 4'-0" HEIGHT SHALL BE MOUNTED SO THAT TOP OF RECEPTACLE BOX IS NO MORE THAN 4'-0".

KEY NOTES: (X)

1. NEW LIGHT SWITCH PROVIDE NEW MOTION SENSOR LIGHT SWITCH.
2. REPLACED EXHAUST FAN. REFER TO MECHANICAL PLANS FOR SPECS. CONNECT EXHAUST FAN TO LIGHT SWITCH.
3. NEW LIGHT. REFER TO FIXTURE SCHEDULE SHEET E201.

Underground Service Alert

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GARY W. MILLER
 No. 61463
 Exp. 3-30-23
 STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE
BENCH MARK:				

APPROVED *[Signature]* 2018
 2022
 CITY ENGINEER: ALEX QISHTA
 REGISTERED CIVIL ENGINEER NO. 68702
 DRAWN BY: LS/VM
 CHECKED BY: VM
 RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS
ELECTRICAL POWER & LIGHTING PLAN
 FOR
VILLASENOR LIBRARY

DRAWING NO. 13476
 SHEET 19 OF 26 SHEETS
 E-202
 FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

F. INDOOR LIGHTING FIXTURE SCHEDULE

B	LED 25w	No	No	25	Mfr. Spec	4	No	100		
Total Designed Watts: CONDITIONED SPACES										168

*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)(4) is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.
 *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS
 This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)
 This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls

01	02	03	04	05	06	07	08	09	10	11	12	Field Inspector
Mandatory Demand Response §130.12(a)	Shut-off controls §130.11(c)											Pass Fail
Not Required <= 10,000 ft²										Whole Building Auto Time Switch		Pass Fail

Area Level Controls

01	02	03	04	05	06	07	08	09	10	11	12	Field Inspector
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.11(a)	Multi-Level Controls §130.11(b)	Shut-Off Controls §130.11(c)	Occupancy Sensors §130.11(d)	Daylighting §130.11(e)	Secondary Daylighting §140.8(d)	Unreflected Systems §130.8(a)(1)				Pass Fail
Restroom Zone	Restrooms	Manual ON/OFF	Exempt*	Occupancy Sensor	N/A	N/A	No					Pass Fail

C. COMPLIANCE RESULTS
 If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)(1)	Allowed Lighting Power per §140.8(b) (Watts)				Adjusted Lighting Power per §140.8(a) (Watts)				Compliance Results				
	01	02	03	04	05	06	07	08					
Complete Building §140.6(a)(1)	Area Category §140.6(a)(2)	Area Additional §140.8(c)(2) (-)	Tailored §140.6(d)(1) (+)	Total Allowed (Watts)	Total Designed (Watts)	PAF Lighting Control Credits §140.8(a)(2) (-)	Total Adjusted (Watts) * Includes Adjustments	05 must be >= 06	168	168	0	168	COMPLIES
[See Table B]	[See Table F]	[See Table J]	[See Table K]	249.6	0	=	250	>=	168	0	=	168	COMPLIES
Unconditioned													COMPLIES

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE
 This table includes all permanent designed lighting and all portable lighting in offices.
 Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	11	12	Field Inspector
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change	Watts per luminaire²	How is Wattage determined	Total Number of Luminaires	Excluded per §140.8(a)(3)	Design Watts	Pass Fail	Pass Fail		Pass Fail
A	LED 17w	No	No	17	Mfr. Spec	4	No	68	Pass Fail	Pass Fail		Pass Fail

A. GENERAL INFORMATION

01 Project Location (city)	San Bernardino	04 Total Conditioned Floor Area (ft²)	384
02 Climate Zone	10	05 Total Unconditioned Floor Area (ft²)	0
03 Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1

B. PROJECT SCOPE
 This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.02(a) for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
*My Project Consists of (check all that apply):				
<input type="checkbox"/> New Lighting System				
<input type="checkbox"/> New Lighting System - Parking Garage				
<input checked="" type="checkbox"/> Altered Lighting System	Area Category Method	384	Area Category Method	0
Total Area of Work (ft²)		384		0

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Ryan Miranda
 Signature Date: 2022-02-15
 Address: 1177 Idaho St, Suite 200A
 City/State/Zip: Redlands California 92374
 Phone: (909) 884-9484

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the building owner provides to the building owner at occupancy.

Responsible Designer Name: Steve Murray
 Date Signed: 2022-02-15
 License: C-11170
 Phone: (909) 307-0146

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS
 This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
 This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
 This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
 This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS
 This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
 This section does not apply to this project.

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E.
 Additional Remarks: These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Form/Title	Field Inspector
	Pass Fail

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 There are no NRCA forms required for this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

01	02	03	04	05	06	07	08	09	10	11	12	Field Inspector
												Pass Fail

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
 EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.11(d)(2)
 Restroom Zone Exception 2 to Section 130.1(b)
 Plan Sheet Showing Daylit Zones

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS
 Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(a) or adjustments per §140.6(a) are being used.

Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment		
					Area Category	PAF	
Restroom Zone	Restrooms	0.65	384	249.6	No	No	
TOTALS:					384	249.6	See Tables J, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
 This section does not apply to this project.

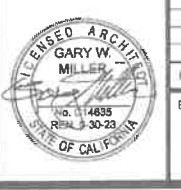
K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
 This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
 This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
 This section does not apply to this project.



PAUL VILASENOR BRANCH LIBRARY
 525 N MT VERNON AVE
 SAN BERNARDINO, CA 92411



MARK	REVISIONS	BY	APPR	DATE

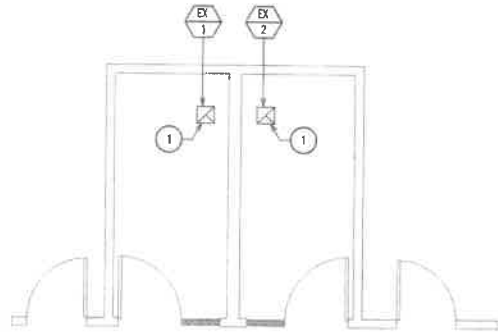
APPROVED: Alex Qishta
 CITY ENGINEER: ALEX QISHTA
 REGISTERED CIVIL ENGINEER NO. 66702
 DRAWN BY: LS/VM
 CHECKED BY: VM
 RECOMMENDED BY:

CITY OF SAN BERNARDINO
 DEPARTMENT OF PUBLIC WORKS
 ENERGY COMPLIANCE FORMS FOR VILASENOR LIBRARY
 E-203

DRAWING NO. 13476
 SHEET 20 OF 26 SHEETS
 W.O. NO.

GENERAL MECHANICAL NOTES

- PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED 3M FIRE BARRIER SEALANT ICC AND UL APPROVED PFR 713.3.
 - COPPER OR FERROUS PIPES OR CONDUITS MAY PENETRATE THE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRESTOPPED.
 - OPENINGS FOR STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED, PROVIDED OPENINGS DO NOT EXCEED AN AGGREGATE AREA OF MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.
 - WHERE WALLS ARE PENETRATED BY OTHER MATERIALS OR WHERE LARGER OPENINGS ARE REQUIRED THAN PERMITTED IN (B) ABOVE, THEY MUST BE QUALIFIED BY TESTS CONDUCTED IN ACCORDANCE WITH SECTION 703.
- CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL AND SUCH CONSTRUCTION OR WORK SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED. INSPECTIONS CAN BE REQUESTED BY CALLING THE INSPECTION LINE.
- HEATING, VENTILATION AND AIR-CONDITIONING SYSTEMS OF ALL STRUCTURES SHALL BE DESIGNED AND INSTALLED FOR EFFICIENT UTILIZATION OF ENERGY IN ACCORDANCE WITH THE CALIFORNIA ENERGY CODE.
- APPLIANCES, APPURTENANCES AND EQUIPMENT REQUIRED BY THE CMC SHALL BE LISTED AND LABELED FOR THE APPLICATION IN WHICH THEY ARE INSTALLED AND USED (CMC SECTIONS 301.2, 302.1, AND 303.1)
- LABELING SHALL BE IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN CMC 307.0.
- THE VENTILATION AIR DISTRIBUTION SYSTEM SHALL BE PROVIDED WITH MEANS TO ADJUST THE SYSTEM TO ACHIEVE AT LEAST THE MINIMUM VENTILATION AIRFLOW RATE AS REQUIRED BY THE CMC SECTION 403. VENTILATION SYSTEMS SHALL BE BALANCED BY AN APPROVED METHOD. SUCH BALANCING SHALL VERIFY THAT THE VENTILATION SYSTEM IS CAPABLE OF SUPPLYING AND EXHAUSTING THE AIRFLOW RATES REQUIRED BY CMC SECTIONS 403.2. SUCH AIR BALANCE REPORTS SHALL BE PROVIDED TO THE INSPECTOR AT TIME OF INSPECTION. AIR BALANCE REPORTS MAY BE REQUESTED BY THE INSPECTOR DURING ANNUAL INSPECTIONS TO ENSURE ONGOING COMPLIANCE WITH CITY REQUIREMENTS, AND WHEN ISSUES OR CONCERNS REGARDING ODORS ARE BROUGHT TO THE ATTENTION OF THE CITY.
- ALL MECHANICAL EQUIPMENT AND SYSTEMS INSTALLED AS PART OF PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2016 CMC AND THE 2016 CBC, 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE AND 2016 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
- PROVIDE 120 VOLT ELECTRICAL OUTLETS WITHIN 25' OF ALL ROOF MOUNTED AND OUTDOOR MECHANICAL EQUIPMENT. (CMC 309) ALL MECH EQUIP. (CMC 309)
- ALL DUCTWORK FOR HEATING AND COOLING SYSTEM OR EVAPORATE COOLING SYSTEM SHALL BE CONDUCTED THROUGH DUCT SYSTEMS CONSTRUCTED OF METAL AS SET FORTH IN SMACNA HVAC DUCT CONSTRUCTION STANDARD - METAL AND FLEXIBLE. FACTORY MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL COMPLY WITH THE 2016 CMC REFERENCED STANDARDS CHAPTER 17 (CMC 802.1).
- ALL DUCT SMOKE DETECTORS INSTALLED, AS PART OF THIS PROJECT SHALL BE SUPERVISED BY THE BUILDING FIRE DETECTION OR ALARM SYSTEM WHEN THE BUILDING IS EQUIPPED WITH SUCH SYSTEM. LOS ANGELES FIRE DEPARTMENT PREVENTION BUREAU PLAN CHECK APPROVAL AND PERMIT ARE REQUIRED FOR CONNECTION OF DUCT SMOKE DETECTORS TO THE FIRE DETECTION OR ALARM SYSTEM.
- THE REQUIRED SERVICE DISTANCE FROM THE MECHANICAL EQUIPMENT TO SCREENING, PARAPETS, WALLS AND OTHER EQUIPMENT SHALL BE A MINIMUM OF 30"x30" ON THE SERVICE SIDE OF THE EQUIPMENT, OR AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, IF THE INSTRUCTIONS REQUIRE A GREATER CLEARANCE. (CMC SECTION 304.1)
- EQUIPMENT AND APPLIANCES SHALL BE ACCESSIBLE FOR SERVICE, INSPECTION REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION. SUFFICIENT CLEARANCE SHALL BE MAINTAINED TO PERMIT CLEANING, REPLACEMENT OF FILTERS, BLOWERS, MOTOR CONTROLS AND LUBRICATION OF MOVING PARTS. 30" OF CLEARANCE IN DEPTH, WIDTH, AND HEIGHT SHALL BE PROVIDED TO SERVE THE APPLIANCE OR EQUIPMENT. (CMC 304.1)
- OUTSIDE AIR FOR HEATING OR COOLING SYSTEM SHALL NOT BE TAKEN FROM CLOSER THAN 10'-0" FROM AN APPLIANCE VENT OUTLET, VENT OPENING OF A PLUMBING SYSTEM, OR THE DISCHARGE OUTLET OF EXHAUST FAN, UNLESS THE OUTLET IS 3'-0" ABOVE THE OUTSIDE AIR INLET. (CMC 314.3)
- REFRIGERANT CONTAINING PORTIONS OF A SYSTEM THAT ARE FIELD ERECTED SHALL BE TESTED AND PROVED TIGHT TO THE AUTHORITY HAVING JURISDICTION AFTER COMPLETE INSTALLATION AND BEFORE OPERATION. THE HIGH LOW SIDES OF EACH SYSTEM SHALL BE TESTED AND PROVED TIGHT AT NOT LESS THAN THE LOWER OF THE PRESSURE IN CMC TABLE 1124.2 OR THE SETTING THE PRESSURE RELIEF DEVICE. (CMC 1124.2)
- ONE OF THE FOLLOWING METHODS IS REQUIRED TO COMPLY WITH MECH-3 VENTILATION REQUIREMENTS
 - AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB), PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL, (AABC, NATIONAL STANDARDS (1986)
 - OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR. (AIR BALANCING SHALL COMPLY TO CGSBC 5.410.1)
- ALL INSTALLED REFRIGERATION PIPING SHALL BE PHOSPHORIC ACID DEOXIDIZED SEAMLESS COPPER. PRESSURE-LIMITING DEVICES SHALL BE CONNECTED BETWEEN THE PRESSURE-IMPOSING ELEMENT AND THE STOP VALVE ON THE DISCHARGE SIDE PER 2016 CMC SECTION 1111.3.
- ALL FIRE AND SMOKE DAMPERS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND INSTALLATION INSTRUCTIONS. FIRE DAMPERS SHALL BE DYNAMIC TYPE. (CBC 716.3.1, 716.2)
- WHEN THE AUTOMATIC ACTIVATION OF A SMOKE DAMPER OCCURS, THE HVAC SYSTEMS SERVING SUCH DAMPERS SHALL IMMEDIATELY SHUTDOWN. (CMC 606.6)
- FIRE AND SMOKE DAMPER SHALL BE LISTED AND BEAR THE LABEL OF AN APPROVED TESTING AGENCY.
- FIRE DAMPERS SHALL COMPLY WITH THE REQUIREMENTS OF UL 555. ONLY FIRE DAMPERS LABELED FOR USE IN DYNAMIC SYSTEMS SHALL BE INSTALLED IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS DESIGNED TO OPERATE WITH FANS ON DURING A FIRE. SMOKE DAMPERS SHALL COMPLY WITH THE REQUIREMENTS OF UL 555S. COMBINATION FIRE AND SMOKE DAMPERS SHALL COMPLY WITH BOTH UL 555 AND UL 555S. CEILING RADIATION DAMPERS SHALL COMPLY WITH REQUIREMENTS OF UL 555C. (CBC 716.3.1)
- FIRE DAMPERS SHALL HAVE A MINIMUM DAMPER RATING OF 1.5 HOURS WHEN INSTALLED IN LESS THAN 3-HOUR FIRE-RESISTANCE RATED ASSEMBLIES. RATINGS FOR DAMPERS INSTALLED IN WALLS RATED AT 3 HOURS OR MORE SHALL HAVE MINIMUM FIRE RATING OF 3 HOURS. (CBC 716.3.2)
- FIRE AND SMOKE DAMPERS SHALL BE PROVIDED WITH APPROVED MEANS OF ACCESS, WHICH IS LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS OPENING SHALL NOT REDUCE THE FIRE RESISTANCE RATING OF THE ASSEMBLY. FIRE AND SMOKE DAMPER ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR HAVING LETTERS NOT LESS THAN 1/2 INCH HIGH READING "FIRE DAMPER" OR "FIRE/SMOKE DAMPER"(CBC 716.4)
- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5 FEET OF THE DAMPER WITH NO AIR INLETS OR OUTLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE THE LOCAL SMOKE DETECTOR REQUIRES A MINIMUM VELOCITY TO OPERATE.
- FUEL GAS APPLIANCES AND EQUIPMENT: THE APPROVAL AND INSTALLATION OF FUEL GAS DISTRIBUTION PIPING AND EQUIPMENT, FUEL GAS-FIRED APPLIANCES AND FUEL GAS-FIRED APPLIANCE VENTING SYSTEMS SHALL BE IN ACCORDANCE WITH THE CPC AND CMC.
- LISTED AND LABEL APPLIANCES, APPURTENANCES AND EQUIPMENT REGULATED BY THE CMC SHALL BE LISTED LABELED FROM THE APPLICATION IN WHICH THEY ARE INSTALLED AND USED (CMC SECTIONS 301.2, 302.1, AND 303.1).
- LABELING: LABELING SHALL BE IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN CMC 307.0.
- LABEL INFORMATION: A PERMANENT FACTORY-APPLIED NAMEPLATE SHALL BE AFFIXED TO APPLIANCES ON WHICH SHALL APPEAR IN LEGIBLE LETTERING, THE MANUFACTURER'S NAME OR TRADEMARK, THE MODEL NUMBER, SERIAL NUMBER AND THE SEAL OR MARK OF THE APPROVED AGENCY. A LABEL SHALL ALSO INCLUDE THE FOLLOWING: (CMC SECTION 307)
 - *FUEL-BURNING UNITS: HOURLY RATING IN BTU/H (W); TYPE OF FUEL APPROVED FOR USE WITH THE APPLIANCE; AND REQUIRED CLEARANCES.
- FUEL TYPES: FUEL-FIRED APPLIANCES SHALL BE DESIGNED FOR USE WITH THE TYPE OF FUEL TO WHICH THEY WILL BE CONNECTED AND THE ALTITUDE AT WHICH THEY ARE INSTALLED. APPLIANCES THAT COMPRISE PARTS OF THE BUILDING MECHANICAL SYSTEM SHALL NOT BE CONVERTED FOR THE USAGE OF A DIFFERENT FUEL, EXCEPT WHERE APPROVED AND CONVERTED IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTIONS. THE FUEL INPUT RATE SHALL NOT BE INCREASED OR DECREASED BEYOND THE LIMIT RATING FOR THE ALTITUDE AT WHICH THE APPLIANCE IS INSTALLED.



KEY NOTES:

- REMOVE EXISTING EXHAUST FAN & REPLACE W/ NEW PER SCHEDULE, THIS SHEET. RECONNECT EXISTING DUCT WORK TO EXHAUST FAN, VERIFY EXISTING DUCT SIZE MIN. 6".

MECHANICAL PLAN

SCALE: 1/4" = 1'-0"



EXHAUST FAN SCHEDULE							
I.D.	MFG./MDL	MECHANICAL			ELECTRICAL		REMARKS
		VOLUME	STATIC PRESS.	MOTOR	VOLT	PHASE	
EX 1	COOK GEMINI MODEL 144	124 CFM	.25	99W	120	1	RDA-6 ADAPTER, CUT & PATCH AS REQUIRED.
EX 2	COOK GEMINI MODEL 144	124 CFM	.25	99W	120	1	RDA-6 ADAPTER, CUT & PATCH AS REQUIRED.

GENERAL BUILDING REQUIREMENTS

- ALL CONSTRUCTION AND REMODELING WORK MUST BE PERFORMED BY CA LICENSED CLASS A OR CLASS B CONTRACTORS. ALL BUILDING TRADES WORK MUST BE PERFORMED BY A STATE OF CALIFORNIA LICENSED CONTRACTOR(S).
- BUILDING CODES AND STANDARDS ARE AS FOLLOWS:
2019 CALIFORNIA MECHANICAL CODE (CMC)

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	ABBREV.
	SUPPLY DUCT	S.
	RETURN AIR DUCT	R.
	EXHAUST AIR DUCT	E.
	CEILING DIFFUSER 1-2-3 OR 4 WAY THROW	C.D.
	CEILING REGISTER	C.R.
	ACCESS PANEL	A.P.
	FIRE DAMPER	F.D.
	THERMOSTAT	T.
	SENSOR	S.
	SMOKE DETECTOR	SD
	CO2 SENSOR	CO2
	GENERAL CONTRACTOR	G.C.
	POINT OF CONNECTION TO EXISTING	POC
	CUBIC FEET PER MINUTE	CFM

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MILLER
architecture
interiors
planning
1177 Idaho Street, Suite 200
Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
info@miller-aip.com

REGISTERED ARCHITECT
GARY W. MILLER
No. 01583887
Exp. 12-31-23
STATE OF CALIFORNIA

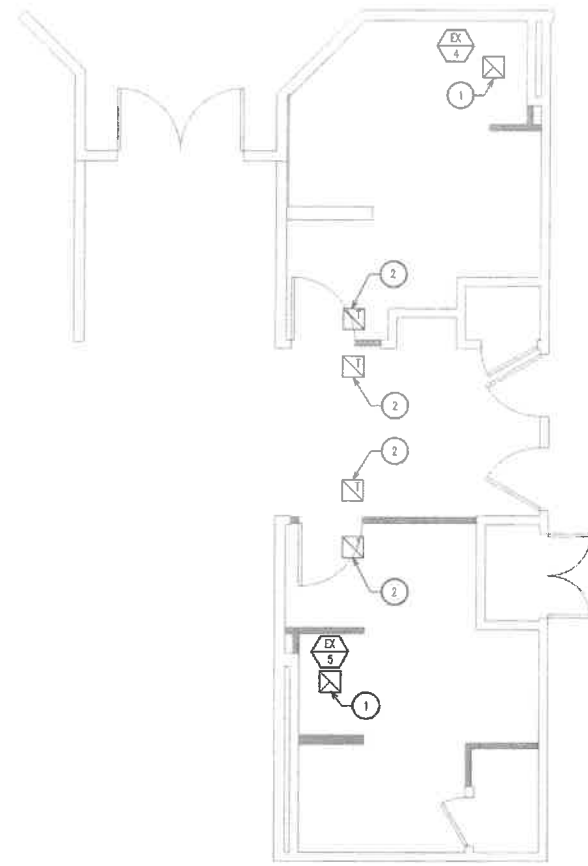
MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: 9/22 2019-2022
CITY ENGINEER: ALEX QISHA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY: LS/VM
CHECKED BY: VM
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
MECHANICAL PLAN
FOR
ROWE LIBRARY

DRAWING NO. 13476
SHEET 21 OF 26 SHEETS
W.O. NO.



MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



EXHAUST FAN SCHEDULE								
I.D.	MFG./MDL	VOLUME	MECHANICAL			ELECTRICAL		REMARKS
			STATIC PRESS.	MOTOR	VOLT	PHASE		
EX 4	COOK GEMINI 520	318 CFM	.315	170W	120	1	RDA-S ADAPTER, 6", 5.1 SONES	
EX 5	COOK GEMINI 520	318 CFM	.315	170W	120	1	RDA-S ADAPTER, 6", 5.1 SONES	

GENERAL MECHANICAL NOTES

- PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED 3M FIRE BARRIER SEALANT ICC AND UL APPROVED PER 713.3.
 - COPPER OR FERROUS PIPES OR CONDUITS MAY PENETRATE THE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRESTOPPED.
 - OPENINGS FOR STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED, PROVIDED OPENINGS DO NOT EXCEED AN AGGREGATE AREA OF MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITIONS. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.
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- CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL AND SUCH CONSTRUCTION OR WORK SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED. INSPECTIONS CAN BE REQUESTED BY CALLING THE INSPECTION LINE.
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- LABELING SHALL BE IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN CMC 307.0.
- THE VENTILATION AIR DISTRIBUTION SYSTEM SHALL BE PROVIDED WITH MEANS TO ADJUST THE SYSTEM TO ACHIEVE AT LEAST THE MINIMUM VENTILATION AIRFLOW RATE AS REQUIRED BY THE CMC SECTION 403. VENTILATION SYSTEMS SHALL BE BALANCED BY AN APPROVED METHOD. SUCH BALANCING SHALL VERIFY THAT THE VENTILATION SYSTEM IS CAPABLE OF SUPPLYING AND EXHAUSTING THE AIRFLOW RATES REQUIRED BY CMC SECTIONS 403.2. SUCH AIR BALANCE REPORTS SHALL BE PROVIDED TO THE INSPECTOR AT TIME OF INSPECTION. AIR BALANCE REPORTS MAY BE REQUESTED BY THE INSPECTOR DURING ANNUAL INSPECTIONS TO ENSURE ONGOING COMPLIANCE WITH CITY REQUIREMENTS, AND WHEN ISSUES OR CONCERNS REGARDING DOORS ARE BROUGHT TO THE ATTENTION OF THE CITY.
- ALL MECHANICAL EQUIPMENT AND SYSTEMS INSTALLED AS PART OF PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2016 CMC AND THE 2016 CBC, 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE AND 2016 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
- PROVIDE 120 VOLT ELECTRICAL OUTLETS WITHIN 25' OF ALL ROOF MOUNTED AND OUTDOOR MECHANICAL EQUIPMENT. (CMC 309) ALL MECH EQUIP. (CMC 309)
- ALL DUCTWORK FOR HEATING AND COOLING SYSTEM OR EVAPORATE COOLING SYSTEM SHALL BE CONDUCTED THROUGH DUCT SYSTEMS CONSTRUCTED OF METAL AS SET FORTH IN SMACNA HVAC DUCT CONSTRUCTION STANDARD - METAL AND FLEXIBLE. FACTORY MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL COMPLY WITH THE 2016 CMC REFERENCED STANDARDS CHAPTER 17 (CMC 602.1).
- ALL DUCT SMOKE DETECTORS INSTALLED, AS PART OF THIS PROJECT SHALL BE SUPERSEDED BY THE BUILDING FIRE DETECTION OR ALARM SYSTEM WHEN THE BUILDING IS EQUIPPED WITH SUCH SYSTEM. LOS ANGELES FIRE DEPARTMENT PREVENTION BUREAU PLAN CHECK APPROVAL AND PERMIT ARE REQUIRED FOR CONNECTION OF DUCT SMOKE DETECTORS TO THE FIRE DETECTION OR ALARM SYSTEM.
- THE REQUIRED SERVICE DISTANCE FROM THE MECHANICAL EQUIPMENT TO SCREENING, PARAPETS, WALLS AND OTHER EQUIPMENT SHALL BE A MINIMUM OF 30"x30" ON THE SERVICE SIDE OF THE EQUIPMENT, OR AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, IF THE INSTRUCTIONS REQUIRE A GREATER CLEARANCE. (CMC SECTION 304.1)
- EQUIPMENT AND APPLIANCES SHALL BE ACCESSIBLE FOR SERVICE, INSPECTION REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION. SUFFICIENT CLEARANCE SHALL BE MAINTAINED TO PERMIT CLEANING, REPLACEMENT OF FILTERS, BLOWERS, MOTOR CONTROLS AND LUBRICATION OF MOVING PARTS. 30" OF CLEARANCE IN DEPTH, WIDTH, AND HEIGHT SHALL BE PROVIDED TO SERVE THE APPLIANCE OR EQUIPMENT. (CMC 304.1)
- OUTSIDE AIR FOR HEATING OR COOLING SYSTEM SHALL NOT BE TAKEN FROM CLOSER THAN 10'-0" FROM AN APPLIANCE VENT OUTLET, VENT OPENING OF A PLUMBING SYSTEM, OR THE DISCHARGE OUTLET OF EXHAUST FAN, UNLESS THE OUTLET IS 3'-0" ABOVE THE OUTSIDE AIR INLET. (CMC 314.3)
- REFRIGERANT CONTAINING PORTIONS OF A SYSTEM THAT ARE FIELD ERECTED SHALL BE TESTED AND PROVED TIGHT TO THE AUTHORITY HAVING JURISDICTION AFTER COMPLETE INSTALLATION AND BEFORE OPERATION. THE HIGH LOW SIDES OF EACH SYSTEM SHALL BE TESTED AND PROVED TIGHT AT NOT LESS THAN THE LOWER OF THE PRESSURE IN CMC TABLE 1124.2 OR THE SETTING THE PRESSURE RELIEF DEVICE. (CMC 1124.2)

- ONE OF THE FOLLOWING METHODS IS REQUIRED TO COMPLY WITH MECH-3 VENTILATION REQUIREMENTS
 - AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB), PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL, (AABC, NATIONAL STANDARDS (1986)
 - OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED G-20 MECHANICAL CONTRACTOR. (AIR BALANCING SHALL COMPLY TO CGESC 5.410.1)
- ALL INSTALLED REFRIGERATION PIPING SHALL BE PHOSPHORIC ACID DEOXYDIZED SEAMLESS COPPER. PRESSURE-LIMITING DEVICES SHALL BE CONNECTED BETWEEN THE PRESSURE-IMPOSING ELEMENT AND THE STOP VALVE ON THE DISCHARGE SIDE PER 2016 CMC SECTION 1111.3.
- ALL FIRE AND SMOKE DAMPERS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING AND INSTALLATION INSTRUCTIONS. FIRE DAMPERS SHALL BE DYNAMIC TYPE. (CBC 716.3.1, 716.2)
- WHEN THE AUTOMATIC ACTIVATION OF A SMOKE DAMPER OCCURS, THE HVAC SYSTEMS SERVING SUCH DAMPERS SHALL IMMEDIATELY SHUTDOWN. (CMC 606.8)
- FIRE AND SMOKE DAMPER SHALL BE LISTED AND BEAR THE LABEL OF AN APPROVED TESTING AGENCY.
- FIRE DAMPERS SHALL COMPLY WITH THE REQUIREMENTS OF UL 555. ONLY FIRE DAMPERS LABELED FOR USE IN DYNAMIC SYSTEMS SHALL BE INSTALLED IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS DESIGNED TO OPERATE WITH FANS ON DURING A FIRE. SMOKE DAMPERS SHALL COMPLY WITH THE REQUIREMENTS OF UL 555S. COMBINATION FIRE AND SMOKE DAMPERS SHALL COMPLY WITH BOTH UL 555 AND UL 555S. CEILING RADIATION DAMPERS SHALL COMPLY WITH REQUIREMENTS OF UL 555C. (CBC 716.3.1)
- FIRE DAMPERS SHALL HAVE A MINIMUM DAMPER RATING OF 1.5 HOURS WHEN INSTALLED IN LESS THAN 3-HOUR FIRE-RESISTANCE RATED ASSEMBLIES. RATINGS FOR DAMPERS INSTALLED IN WALLS RATED AT 3 HOURS OR MORE SHALL HAVE MINIMUM FIRE RATING OF 3 HOURS. (CBC 716.3.2)
- FIRE AND SMOKE DAMPERS SHALL BE PROVIDED WITH APPROVED MEANS OF ACCESS, WHICH IS LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS OPENING SHALL NOT REDUCE THE FIRE RESISTANCE RATING OF THE ASSEMBLY. FIRE AND SMOKE DAMPER ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR HAVING LETTERS NOT LESS THAN 1/2 INCH HIGH READING "FIRE DAMPER" OR "FIRE/SMOKE DAMPER"(CBC 716.4)
- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5 FEET OF THE DAMPER WITH NO AIR INLETS OR OUTLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE LOCATION WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE THE LOCAL SMOKE DETECTOR REQUIRES A MINIMUM VELOCITY TO OPERATE.
- FUEL GAS APPLIANCES AND EQUIPMENT, THE APPROVAL AND INSTALLATION OF FUEL GAS DISTRIBUTION PIPING AND EQUIPMENT, FUEL GAS-FIRED APPLIANCES AND FUEL GAS-FIRED APPLIANCE VENTING SYSTEMS SHALL BE IN ACCORDANCE WITH THE CPC AND CMC.
- LISTED AND LABEL APPLIANCES, APPURTENANCES AND EQUIPMENT REGULATED BY THE CMC SHALL BE LISTED LABELED FOR THE APPLICATION IN WHICH THEY ARE INSTALLED AND USED (CMC SECTIONS 301.2, 302.1, AND 303.1).
- LABELING SHALL BE IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN CMC 307.0.
- LABEL INFORMATION. A PERMANENT FACTORY-APPLIED NAMEPLATE SHALL BE AFFIXED TO APPLIANCES ON WHICH SHALL APPEAR IN LEGIBLE LETTERING, THE MANUFACTURER'S NAME OR TRADEMARK, THE MODEL NUMBER, SERIAL NUMBER AND THE SEAL OR MARK OF THE APPROVED AGENCY. A LABEL SHALL ALSO INCLUDE THE FOLLOWING: (CMC SECTION 307)
 - FUEL-BURNING UNITS: HOURLY RATING IN BTU/H (W); TYPE OF FUEL APPROVED FOR USE WITH THE APPLIANCE; AND REQUIRED CLEARANCES.
- FUEL TYPES. FUEL-FIRED APPLIANCES SHALL BE DESIGNED FOR USE WITH THE TYPE OF FUEL TO WHICH THEY WILL BE CONNECTED AND THE ALTITUDE AT WHICH THEY ARE INSTALLED. APPLIANCES THAT COMPRISE PARTS OF THE BUILDING MECHANICAL SYSTEM SHALL NOT BE CONVERTED FOR THE USAGE OF A DIFFERENT FUEL, EXCEPT WHERE APPROVED AND CONVERTED IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTIONS. THE FUEL INPUT RATE SHALL NOT BE INCREASED OR DECREASED BEYOND THE LIMIT RATING FOR THE ALTITUDE AT WHICH THE APPLIANCE IS INSTALLED.

KEY NOTES: (X)

- REMOVE EXISTING EXHAUST FAN & REPLACE W/ NEW PER SCHEDULE, THIS SHEET. RECONNECT EXISTING DUCT WORK TO EXHAUST FAN, VERIFY EXISTING DUCT SIZE MIN. 6".
- EXISTING TRANSFER AIR GRILLS TO REMAIN.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	ABBREV.
	SUPPLY DUCT	S.
	RETURN AIR DUCT	R.
	EXHAUST AIR DUCT	E.
	CEILING DIFFUSER 1-2-3 OR 4 WAY THROW	C.D.
	CEILING REGISTER	C.R.
	ACCESS PANEL	A.P.
	FIRE DAMPER	F.D.
	THERMOSTAT	
	SENSOR	
	SMOKE DETECTOR	
	CO2 SENSOR	
	GENERAL CONTRACTOR	G.C.
	POINT OF CONNECTION TO EXISTING	POC
	CUBIC FEET PER MINUTE	CFM

GENERAL BUILDING REQUIREMENTS

- ALL CONSTRUCTION AND REMODELING WORK MUST BE PERFORMED BY CA LICENSED CLASS A OR CLASS B CONTRACTORS. ALL BUILDING TRADES WORK MUST BE PERFORMED BY A STATE OF CALIFORNIA LICENSED CONTRACTOR(S).
- BUILDING CODES AND STANDARDS ARE AS FOLLOWS:
2019 CALIFORNIA MECHANICAL CODE (CMC)

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SAN BERNARDINO, CA 92411

MILLER
architecture
interiors
planning
1177 Idaho Street, Suite 200
Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
info@miller-arp.com

LICENSED ARCHITECT
GARY W. MILLER
NO. 17483
EXPIRES 12-30-23
STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: *[Signature]* 2018
2022
CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702
DRAWN BY: LS/VM
CHECKED BY: VM
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
MECHANICAL PLAN
FOR
VILLASENOR LIBRARY
M-201

DRAWING NO.
13476
SHEET 22 OF 26 SHEETS
W.O. NO.

FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

HOT WATER PIPE INSULATION SCHEDULE

FLUID TEMP. RANGE (°F)	CONDUCTIVITY RANGE (BTU-IN./HR./SQ.FT.)	INSULATION MEAN RATING TEMP.	NOMINAL PIPE DIAMETER (IN.) REQUIRED INSULATION (IN.)				
			<1"	1" TO <1.5"	1.5" TO <4"	4" TO <8"	8" AND LARGER
SPACE HEATING, HOT WATER SYSTEMS (STEAM, STEAM CONDENSATE AND HOT WATER) AND SERVICE WATER HEATING SYSTEMS							
ABOVE 350	.32-.34	250	4.5	5.0	5.0	5.0	5.0
251-350	.29-.31	200	3.0	4.0	4.5	4.5	4.5
201-250	.27-.30	150	2.5	2.5	2.5	3.0	3.0
141-200	.25-.29	125	1.5	1.5	2.0	2.0	2.0
105-140	.24-.28	100	1.0	1.5	1.5	1.5	1.5

INSULATION SHALL BE PROVIDED ON ALL HOT WATER AND CIRCULATING PIPING AND THE FIRST 5 FEET ON THE COLD WATER FROM THE WATER HEATER.

INSTALL APPROVED TEMPERATURE MIXING VALVES AT PLUMBING FIXTURES THAT REQUIRE 110° F. WATER PER CPC AND CALIFORNIA ENERGY CODE.

ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE MODEL ENERGY CODE REQUIREMENTS AND LABELED.

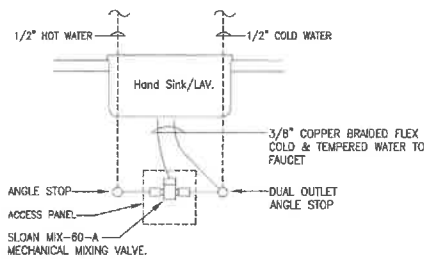
A CERTIFICATE OF INSTALLATION FORM FOR WATER HEATING SYSTEM PER 2013 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AFTER THE INSTALLATION OF WATER HEATER(S) AND HOT WATER DISTRIBUTION SYSTEM(S).

WITHIN 90 DAYS AFTER THE ENFORCEMENT AGENCY ISSUES A PERMANENT FINAL OCCUPANCY PERMIT, THE BUILDER SHALL PROVIDE RECORD DRAWINGS WITH COPIES OF THE COMPLETED, SIGNED, SUBMITTED COMPLIANCE DOCUMENTS; OPERATING AND MAINTENANCE INFORMATION FOR ALL APPLICABLE MATERIAL COMPONENTS, AND DEVICES INSTALLED TO THE BUILDING OWNER AT OCCUPANCY.

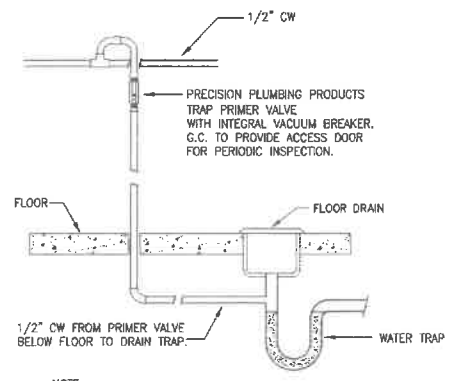
PLUMBING EQUIPMENT SCHEDULE

#	DESCRIPTION	W	V	CW	HW	REMARKS
LAV-1	LAVATORY	2"	2"	1/2"	1/2"	MODEL: LUCERNE Q3.012 OR APPROVED EQUAL DESCRIPTION: WALL HUNG, VITREOUS CHINA, WHITE, 4" O.C. FAUCET HOLE, W/ AMERICAN STANDARD INNSBROOK SELECTRONIC SENSOR FAUCET 6053
WC-1	WATER CLOSET ADA COMPLIANT	3"	2"	1"		MODEL: MADERA FLOWISE 3461.528 OR APPROVED EQUAL DESCRIPTION: 16-1/2" HEIGHT 1.28 GPF FLUSHMETER TOILET SYSTEM W/SELECTIONIC FLUSH VALVE, ELONGATED BOWL, VITREOUS CHINA, WHITE, W/SEAT COVER 5901.100 HEAVY DUTY, & SELECTIONIC FLUSH VALVE 6065.121
FD-1	FLOOR DRAIN	2"	2"	-	-	MODEL: ZURN E21 DESCRIPTION: 6" X 6" SQUARE STRAINER, WITH 1/2" TRAP PRIMER CONNECTION OR APPROVED EQUAL
WHA-1	WATER HAMMER ARRESTOR			VARIE	-	MODEL: ZURN Z1700 DESCRIPTION: SHOKTROL WATER HAMMER ARRESTOR, STAINLESS STEEL CONSTRUCTION, SIZED ACCORDING TO FIXTURE UNITS OR APPROVED EQUAL
DF-1	DRINKING FOUNTAIN	2"	2"	1/2"		MODEL: ELKAY LVR02WSK DESCRIPTION: RZ120 WANDAL-RESISTANT BOTTLE FILLING STATION & SINGLE COOLER DRINKING FOUNTAIN WITH FILTERED REFRIGERATED WATER, STAINLESS STEEL CONSTRUCTION.

- ### GENERAL PLUMBING NOTES
- All soil piping to be cast iron or ABS where local codes permit. Vent piping may be galvanized steel, cast iron, copper or ABS as local codes permit (verify). Soil and vent piping to slope a minimum of 1/4" per foot, unless noted otherwise. ABS not allowed in fire rated construction. Waste risers above slab serving floor(s) above to be cast iron.
 - Domestic site water piping to be schedule 80 PVC below ground, water and condensate piping above grade to be type 'L' hard copper wrought copper fittings. Solder and flux shall contain no lead. Solder and flux with containing lead shall not be used in potable water systems per Sec. 316.1.3, 2016 CPC.
 - All materials and equipment shall be new and unused unless specified on plans. Contractor to use only qualified labor and supervision for the installation of materials and equipment.
 - All work shall conform with the 2016 CPC and all local codes. No work shall be covered until it has been inspected, tested and approved by inspector.
 - Contractor shall make utility connections and provide permits per contract. Any additional fees and permits will be of extra cost.
 - Contractor shall verify size, depth, location and adequacy of all utilities including meter location and sewer inverts prior to start of work.
 - Contractor shall install cleanouts where indicated on plans and as required by local codes and authorities. Clean out to grade shall be in Brooks box or equal.
 - Coordinate work with all trades to avoid conflict and interferences.
 - Verify all rough-in heights and locations with general contractor and/or architect.
 - All pipes below ground shall be located away from bearing footings or as indicated on structural plans.
 - Install reduced pressure backflow preventer as indicated on plans or as required by local codes. Where street pressure exceeds 80 P.S.I. install approved pressure regulating valve with relief valve and strainer per code.
 - Contractor shall verify that equipment and fixtures will physically fit in the locations indicated.
 - All penetrations of fire rated assemblies shall be made with non-combustible material of an equal fire rating and shall be completely stopped. Refer to architectural plans to identify fire rated assemblies.
 - Contractor shall include (but not limited to) all piping, valves, fittings and fixture supports associated with each new fixture.
 - Each fixture shall have its own shut off valve(s). Valves to be located below or adjacent to the fixture it serves. General contractor to provide access panel when valves are within a wall or above the ceiling. All stub out heights and locations to be verified.
 - All gas piping to be schedule 40 black steel with threaded malleable fittings. Final connection to each gas appliance shall be with an approved flexible connection and shut off valve. When the gas connection to the appliance is within the appliance cabinet the connection shall have a rigid threaded nipple, length as required, extending from the connection through the cabinet. Flexible connection shall not enter the cabinet.
 - All valves, unions, etc., shall be the same size as the piping unless otherwise specified. Unions shall be installed after each screw type valve and prior to equipment connections. Install isolation unions at all connections between dissimilar metals.
 - All plumbing vents shall terminate not less than ten feet away from or at least 3 feet above any window of door opening, fresh air intake or less than 1 foot from a vertical surface.
 - Insulate all exposed drain piping below lavatories and sinks with "Armlflex."
 - Compressed air piping may be copper or galv. steel. Verify with general contractor or owner.
 - All pipes discharging to floor sinks shall have the minimum air gap as required by the current CPC and local codes.
 - Contractor shall be responsible for the entire scope of work as outlined per the contract. Final testing procedures and connections are to conform to the current codes.
 - Contractor shall provide owner with all required manuals for the proper maintenance and operation of equipment.
 - These plans are of schematic form and are drawn for maximum clarity. Changes may be necessary for convenience, obstructions, economics and efficiency.



MIXING VALVE MV-1



NOTE:
DO NOT DIRECT CONNECT PRIMER VALVE TO WATER LINE.
FIELD VERIFY TRAP PRIMER LOCATION, ACCESS PANEL BY G.C.

TRAP PRIMER DETAIL

- ### INDOOR WATER USE
- A. METERS
SEPARATE METERS OR METERING DEVICES SHALL BE INSTALLED FOR BUILDINGS IN EXCESS OF 50,000 SQUARE FEET FOR THE USES DESCRIBED IN 1, 2 AND 3 BELOW. (SEC. 5.303.1)
- FOR EACH INDIVIDUAL LEASED RENTED OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTED TO CONSUME MORE THAN 100 GALLON PER DAY.
 - FOR SPACES USED FOR LAUNDRY OR CLEANERS, RESTAURANT OR FOOD SERVICE, MEDICAL OR DENTAL OFFICE, LABORATORY, OR BEAUTY SALON OR BARBER SHOP PROJECTED TO CONSUME MORE THAN 100 GALLONS PER DAY.
 - FOR ANY BUILDING WITHIN A PROJECT OR SPACE WITHIN A BUILDING THAT IS PROJECTED TO CONSUME MORE THAN 100 GALLONS PER DAY.
- B. TWENTY PERCENT SAVINGS.
A SCHEDULE OF PLUMBING FIXTURES AND FIXTURE FITTINGS THAT WILL REDUCE THE OVERALL USE OF POTABLE WATER WITHIN THE BUILDINGS BY 20% SHALL BE PROVIDED. THE REDUCTION SHALL BE BASED ON THE MAXIMUM ALLOWABLE WATER USE PER PLUMBING FIXTURE AND FITTINGS AS REQUIRED BY THE CALIFORNIA BUILDING STANDARDS CODE. THE 20% REDUCTION IN POTABLE WATER USE SHALL BE DEMONSTRATED BY ONE OF THE FOLLOWING METHODS:
- EACH PLUMBING FIXTURE AND FITTING SHALL MEET THE 20% REDUCED FLOW RATE SPECIFIED IN TABLE 5.303.2.3, OR
 - A CALCULATION DEMONSTRATING A 20% REDUCTION IN THE BUILDING WATER USE BASELINE AS ESTABLISHED IN TABLE 5.303.2.2 SHALL BE PROVIDED. 5.303.2
- C. MULTIPLE SHOWER HEADS SERVING ONE SHOWER.
WHEN SINGLE SHOWER FIXTURES ARE SERVED BY MORE THAN ONE SHOWER HEAD, THE COMBINED FLOW RATE OF ALL THE SHOWER HEADS SHALL NOT EXCEED THE MAXIMUM FLOW RATES SPECIFIED IN THE 20% REDUCTION COLUMN CONTAINED IN TABLE 5.303.2.3 OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER HEAD TO BE IN OPERATION AT A TIME.
EXCEPTION: THE MAXIMUM FLOW RATE FOR SHOWER HEADS WHEN USING THE CALCULATION METHOD SPECIFIED IN THE 20% SAVING ITEM #2 ABOVE IS 2.5 GPM @ 80 PSI. 5.303.2.1.
- D. WASTE WATER REDUCTION.
EACH BUILDING SHALL REDUCE BY 20% WASTE WATER BY ONE OF THE FOLLOWING METHODS:
- THE INSTALLATION OF WATER CONSERVING FIXTURES (TOILETS, URINALS).
 - UTILIZING NON-POTABLE WATER SYSTEMS (CAPTURED RAINWATER, GRAYWATER) COMPLYING WITH THE CALIFORNIA PLUMBING CODE.
- E. PLUMBING FIXTURES AND FITTINGS.
PLUMBING FIXTURES (TOILETS, URINALS) AND FITTINGS (FAUCETS, SHOWER HEADS) SHALL MEET THE STANDARDS REFERENCED IN TABLE 5.303.8.

FIXTURE FLOW RATES

FIXTURE TYPE	BASELINE FLOW RATE	MAXIMUM FLOW RATE AT 20% REDUCTION
SHOWERHEADS	2.5 GPM @ 80 PSI	2 GPM @ 80 PSI
LAVATORY FAUCETS - NONRESIDENTIAL	0.5 GPM @ 60 PSI	0.4 GPM @ 60 PSI
KITCHEN FAUCETS	2.2 GPM @ 60 PSI	1.8 GPM @ 60 PSI
WASH FOUNTAINS	2.2 RIM SPACE (in)/20 GPM @ 60 PSI	1.8 RIM SPACE (in)/20 GPM @ 60 PSI
METERING FAUCETS	0.25 GALLONS/CYCLE	0.2 GALLONS/CYCLE
METERING FAUCETS FOR WASH FOUNTAINS	.25 RIM SPACE (in)/20 GPM @ 60 PSI	.20 RIM SPACE (in)/20 GPM @ 60 PSI
GRAVITY TANK TYPE WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
FLUSHMETER TANK WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
FLUSHMETER VALVE WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
ELECTROMECHANICAL HYDRAULIC WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
URINALS	1.0 GALLONS/FLUSH	0.5 GALLONS/FLUSH

MATERIAL SPECIFICATIONS

SERVICES	SCH 40 SCH 40S	CAST IRON NO-HUB	CALV. STEEL SCH 40	BLACK STEEL SCH 40	TYPE M COPPER	TYPE L COPPER	TYPE K COPPER	REMARKS
COLD WATER	ABOVE GROUND							
	BELOW GROUND							
HOT WATER	ABOVE GROUND							
	BELOW GROUND							
WASTE	ABOVE GROUND							
	BELOW GROUND							
VENT	ABOVE GROUND							
	BELOW GROUND							
INDIRECT WASTE	INDOOR							
	OUTDOOR							
NATURAL GAS	INDOOR							PAINTED WITH RUST INHIBITING PAINT
	OUTDOOR							
STORM DRAIN	ABOVE GROUND							
	BELOW GROUND							
CO2	ABOVE GROUND							SILVER BRAZED; NITROGEN PURGED
CO2 VENT	ABOVE GROUND							SILVER BRAZED; NITROGEN PURGED

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108 E MARSHALL BOULEVARD
SAN BERNARDINO, CA 92404

MILLER
architecture interiors planning

1177 Idaho Street, Suite 200
Redlands, CA 92374
Phone: (909) 335-7400
Fax: (909) 335-7299
Info@millier-arp.com

REGISTERED ARCHITECT
GARY W. MILLER
NO. 007897 BY
RENEWAL 3-30-23
STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED *Alex Oshita* 2018-2022
CITY ENGINEER: ALEX OSHITA
REGISTERED CIVIL ENGINEER NO. 58702
DRAWN BY: LS/VM
CHECKED BY: VM
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
PLUMBING GENERAL NOTES FOR ROWE LIBRARY
P-101

DRAWING NO. 13A.76
SHEET 23 OF 26 SHEETS
W.O. NO.

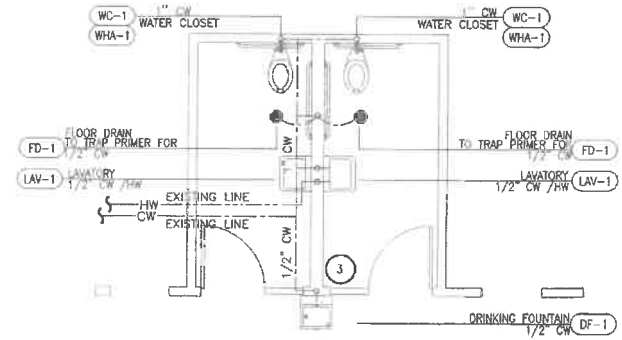
FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

GENERAL NOTES:

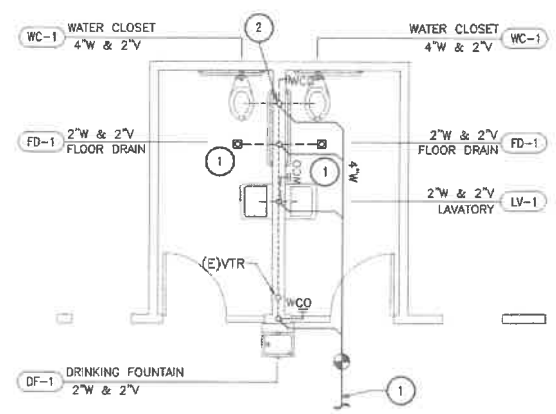
1. ALL PLUMBING WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CPC.
2. WATER CLOSETS SHALL BE WATER CONSERVING TYPES USING LESS THAN 1.28 GALLONS PER FLUSH. LAVATORY FAUCETS SHALL FLOW LESS THAN 0.50 GALLONS PER MINUTE.
3. PIPE SLEEVE THROUGH FOOTING SHALL BE PVC.
4. THE TRANSITION FROM BELOW GROUND POTABLE COLD WATER MATERIAL TO ABOVE GROUND POTABLE COLD WATER MATERIAL SHALL OCCUR ABOVE THE SLAB.
5. FIRE HAZARD RATING: INSULATION, JACKETS, FACINGS, ADHESIVES, CONTAINERS, AND ACCESSORIES SHALL BE ACCEPTABLE TO THE FIRE MARSHALL, AND SHALL NOT EXCEED THE FOLLOWING FIRE HAZARD CLASSIFICATIONS: FLAME-SPREAD: MAXIMUM 25, FUEL CONTRIBUTED: MAXIMUM 50, SMOKE DEVELOPED: MAXIMUM 50, RATED TO BE IN ACCORDANCE WITH UL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, NO. 753, OWENS CORNING FIBERGLASS PIPE INSULATION.
6. CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW PLUMBING LINE.
7. PLUMBING CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, LOCATIONS, AND PIPE SIZES OF COLD / HOT WATER LINES AND POINT OF CONNECTIONS.
8. PLUMBING CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, LOCATIONS, AND PIPE SIZES OF WASTE AND VENT LINES AND POINT OF CONNECTIONS.

KEY NOTES: (X)

1. CUT EXISTING SLAB FOR NEW WASTE LINES TO RE-CONNECT NEW PLUMBING FIXTURES TO EXISTING WASTE LINE.
2. CONNECT NEW VENT LINE TO EXISTING VENT LINE THRU ROOF. VERIFY EXISTING CONDITIONS AND LOCATION OF HOT WATER LINE.
3. CONNECT NEW COLD WATER LINE TO EXISTING COLD WATER LINE SYSTEM. VERIFY EXISTING CONDITIONS AND LOCATION OF COLD WATER LINE.



PLUMBING WATER SUPPLY
SCALE: 1/4" = 1'-0"



PLUMBING WASTE
SCALE: 1/4" = 1'-0"



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REGISTERED ARCHITECT
GARY W. MILLER
No. 134881 BY
MPLA 3-30-23
STATE OF CALIFORNIA

MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: *[Signature]* 9/22/2022
CITY ENGINEER: ALEX QISHIA
REGISTERED CIVIL ENGINEER NO. 68702
DRAWN BY: LS/VM
CHECKED BY: VM
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS
PLUMBING PLAN FOR ROWE LIBRARY

DRAWING NO. 13476
SHEET 24 OF 26 SHEETS
FOR CITY USE ONLY: FILE NO. C.I.P. NO. W.O. NO.

HOT WATER PIPE INSULATION SCHEDULE

FLUID TEMP. RANGE (°F)	CONDUCTIVITY RANGE (BTU-IN./HR./SQ.F/F)	INSULATION MEAN RATING TEMP.	NOMINAL PIPE DIAMETER (IN.) REQUIRED INSULATION (IN.)				
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ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE MODEL ENERGY CODE REQUIREMENTS AND LABELED.

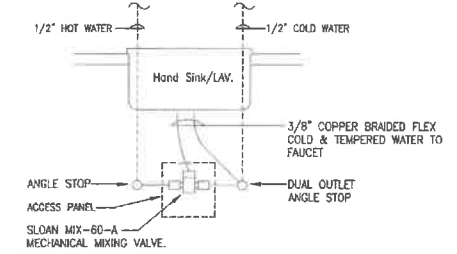
A CERTIFICATE OF INSTALLATION FORM FOR WATER HEATING SYSTEM PER 2013 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AFTER THE INSTALLATION OF WATER HEATER(S) AND HOT WATER DISTRIBUTION SYSTEM(S).

WITHIN 90 DAYS AFTER THE ENFORCEMENT AGENCY ISSUES A PERMANENT FINAL OCCUPANCY PERMIT, THE BUILDER SHALL PROVIDE RECORD DRAWINGS WITH COPIES OF THE COMPLETED, SIGNED, SUBMITTED COMPLIANCE DOCUMENTS, OPERATING AND MAINTENANCE INFORMATION FOR ALL APPLICABLE MATERIAL, COMPONENTS, AND DEVICES INSTALLED TO THE BUILDING OWNER AT OCCUPANCY.

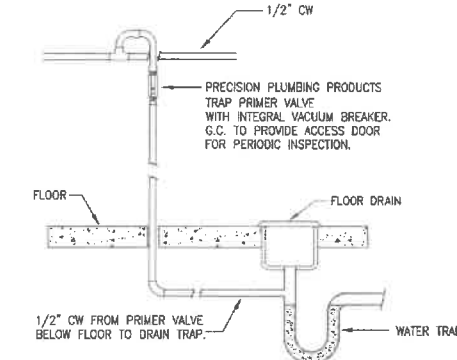
PLUMBING EQUIPMENT SCHEDULE

#	DESCRIPTION	W	V	CW	HW	REMARKS
LAV-1	LAVATORY	2"	2"	1/2"	1/2"	MODEL: RONDALINI D491.018 APPROVED EQUAL WALL HUNG, VITREOUS CHINA, WHITE, 4" O.C. FAUCET HOLE, W/ AMERICAN STANDARD INNSBROOK SELECTRONIC SENSOR FAUCET 6053
WC-1	WATER CLOSET ADA COMPLIANT	3"	2"	1"	-	MODEL: AFWALL MILLENNIUM FLOWSE 3351.101 OR APPROVED EQUAL DESCRIPTION: 16-1/2" HEIGHT 1.28 GPF FLUSHMETER TOILET SYSTEM W/SELECTRONIC FLUSH VALVE, ELONGATED BOWL, VITREOUS CHINA, WHITE, W/SEAT COVER 5901.100 HEAVY DUTY, & SELECTRONIC FLUSH VALVE 6065.121
WC-2	WATER CLOSET	3"	2"	1"	-	MODEL: MADERA FLOWSE 3451.528 OR APPROVED EQUAL DESCRIPTION: 15" HEIGHT 1.28 GPF FLUSHMETER TOILET SYSTEM W/SELECTRONIC FLUSH VALVE, ELONGATED BOWL, VITREOUS CHINA, WHITE, W/SEAT COVER 5901.100 HEAVY DUTY, & SELECTRONIC FLUSH VALVE 6065.121
UR-1	URINAL	2"	2"	1"	-	MODEL: AMERICAN STANDARD 6590.505 WASHBROOK FLOWSE HIGH EFFICIENCY URINAL SYSTEM WITH AMERICAN STANDARD 6063.051 SELECTRONIC FLUSH VALVE OR APPROVED EQUAL VITREOUS CHINA, 0.125 GPF
TP-1	TRAP PRIMER VALVE	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS PR-500 OR APPROVED EQUAL PRESSURE DROP ACTIVATED TRAP PRIMER
FD-1	FLOOR DRAIN	2"	2"	-	-	MODEL: ZURN E21 DESCRIPTION: 6" X 6" SQUARE STRAINER, WITH 1/2" TRAP PRIMER CONNECTION OR APPROVED EQUAL
WHA-1	WATER HAMMER ARRESTOR			VARIES	-	MODEL: ZURN Z1700 SHOKTROL WATER HAMMER ARRESTOR, STAINLESS STEEL CONSTRUCTION, SIZED ACCORDING TO FIXTURE UNITS OR APPROVED EQUAL.
DF-1	DRINKING FOUNTAIN	2"	2"	1/2"	-	MODEL: ELKAY LVRCBWSK e2H20 VANDAL-RESISTANT BOTTLE FILLING STATION & SINGLE COOLER DRINKING FOUNTAIN WITH FILTERED REFRIGERATED WATER, STAINLESS STEEL CONSTRUCTION.

- ### GENERAL PLUMBING NOTES
- All soil piping to be cast iron or ABS where local codes permit. Vent piping may be galvanized steel, cast iron, copper or ABS as local codes permit (verify). Soil and vent piping to slope a minimum of 1/4" per foot unless noted otherwise. ABS not allowed in fire rated construction. Waste risers above slab serving floor(s) above to be cast iron.
 - Domestic site water piping to be schedule 80 PVC below ground, water and condensate piping above grade to be type 'L' hard copper wrought copper fittings. Solder and flux shall contain no lead. Solder and flux with containing lead shall not be used in potable water systems per Sec. 316.1.3, 2016 CPC.
 - All materials and equipment shall be new and unused unless specified on plans. Contractor to use only qualified labor and supervision for the installation of materials and equipment.
 - All work shall conform with the 2015 CPC and all local codes. No work shall be covered until it has been inspected, tested and approved by inspector.
 - Contractor shall make utility connections and provide permits per contract. Any additional fees and permits will be at extra cost.
 - Contractor shall verify size, depth, location and adequacy of all utilities including meter location and sewer inverts prior to start of work.
 - Contractor shall install cleanouts where indicated on plans and as required by local codes and authorities. Clean out to grade shall be in Brooks box or equal.
 - Coordinate work with all trades to avoid conflict and interferences.
 - Verify all rough-in heights and locations with general contractor and/or architect.
 - All pipes below ground shall be located away from bearing footings or as indicated on structural plans.
 - Install reduced pressure backflow preventer as indicated on plans or as required by local codes. Where street pressure exceeds 80 P.S.I. install approved pressure regulating valve with relief valve and strainer per code.
 - Contractor shall verify that equipment and fixtures will physically fit in the locations indicated.
 - All penetrations of fire rated assemblies shall be made with non-combustible material of an equal fire rating and shall be completely stopped. Refer to architectural plans to identify fire rated assemblies.
 - Contractor shall include (but not limited to) all piping, valves, fittings and fixture supports associated with each new fixture.
 - Each fixture shall have its own shut off valve(s). Valves to be located below or adjacent to the fixture it serves. General contractor to provide access panel when valves are within a wall or above the ceiling. All stub out heights and locations to be verified.
 - All gas piping to be schedule 40 black steel with threaded malleable fittings. Final connection to each gas appliance shall be with an approved flexible connection and shut off valve. When the gas connection to the appliance is within the appliance cabinet the connection shall have a rigid threaded nipple, length as required, extending from the connection through the cabinet. Flexible connection shall not enter the cabinet.
 - All valves, unions, etc., shall be the same size as the piping unless otherwise specified. Unions shall be installed after each screw type valve and prior to equipment connections. Install isolation unions at all connections between dissimilar metals.
 - All plumbing vents shall terminate not less than ten feet away from or at least 3 feet above any window or door opening, fresh air intake not less than 1 foot from a verticle surface.
 - Insulate all exposed drain piping below lavatories and sinks with "Armaflex."
 - Compressed air piping may be copper or galv. steel. Verify with general contractor or owner.
 - All pipes discharging to floor sinks shall have the minimum air gap as required by the current CPC and local codes.
 - Contractor shall be responsible for the entire scope of work as outlined per the contract. Final testing procedures and connections are to conform to the current codes.
 - Contractor shall provide owner with all required manuals for the proper maintenance and operation of equipment.
 - These plans are of schematic form and are drawn for maximum clarity. Changes may be necessary for convenience, obstructions, economics and efficiency.



MIXING VALVE MV-1



NOTE:
DO NOT DIRECT CONNECT PRIMER VALVE TO WATER LINE.
FIELD VERIFY TRAP PRIMER LOCATION. ACCESS PANEL BY G.C.

TRAP PRIMER DETAIL

- ### INDOOR WATER USE
- A. METERS
SEPARATE METERS OR METERING DEVICES SHALL BE INSTALLED FOR BUILDINGS IN EXCESS OF 50,000 SQUARE FEET FOR THE USES DESCRIBED IN 1, 2 AND 3 BELOW. (SEC. 5.303.1)
- FOR EACH INDIVIDUAL LEASED RENTED OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTED TO CONSUME MORE THAN 100 GALLON PER DAY.
 - FOR SPACES USED FOR LAUNDRY OR CLEANERS, RESTAURANT OR FOOD SERVICE, MEDICAL OR DENTAL OFFICE, LABORATORY, OR BEAUTY SALON OR BARBER SHOP PROJECTED TO CONSUME MORE THAN 100 GALLONS PER DAY.
 - FOR ANY BUILDING WITHIN A PROJECT OR SPACE WITHIN A BUILDING THAT IS PROJECTED TO CONSUME MORE THAN 100 GALLONS PER DAY.
- B. TWENTY PERCENT SAVINGS.
A SCHEDULE OF PLUMBING FIXTURES AND FIXTURE FITTINGS THAT WILL REDUCE THE OVERALL USE OF POTABLE WATER WITHIN THE BUILDINGS BY 20% SHALL BE PROVIDED. THE REDUCTION SHALL BE BASED ON THE MAXIMUM ALLOWABLE WATER USE PER PLUMBING FIXTURE AND FITTINGS AS REQUIRED BY THE CALIFORNIA BUILDING STANDARDS CODE. THE 20% REDUCTION IN POTABLE WATER USE SHALL BE DEMONSTRATED BY ONE OF THE FOLLOWING METHODS:
- EACH PLUMBING FIXTURE AND FITTING SHALL MEET THE 20% REDUCED FLOW RATE SPECIFIED IN TABLE 5.303.2.3, OR
 - A CALCULATION DEMONSTRATING A 20% REDUCTION IN THE BUILDING WATER USE BASELINE AS ESTABLISHED IN TABLE 5.303.2.2 SHALL BE PROVIDED. 5.303.2
- C. MULTIPLE SHOWER HEADS SERVING ONE SHOWER.
WHEN SINGLE SHOWER FIXTURES ARE SERVED BY MORE THAN ONE SHOWER HEAD, THE COMBINED FLOW RATE OF ALL THE SHOWER HEADS SHALL NOT EXCEED THE MAXIMUM FLOW RATES SPECIFIED IN THE 20% REDUCTION COLUMN CONTAINED IN TABLE 5.303.2.3 OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER HEAD TO BE IN OPERATION AT A TIME.
EXCEPTION: THE MAXIMUM FLOW RATE FOR SHOWER HEADS WHEN USING THE CALCULATION METHOD SPECIFIED IN THE 20% SAVING ITEM #2 ABOVE IS 2.5 GPM @ 80 PSI. 5.303.2.1.
- D. WASTE WATER REDUCTION.
EACH BUILDING SHALL REDUCE BY 20% WASTE WATER BY ONE OF THE FOLLOWING METHODS:
- THE INSTALLATION OF WATER CONSERVING FIXTURES (TOILETS, URINALS).
 - UTILIZING NON-POTABLE WATER SYSTEMS (CAPTURED RAINWATER, GRAYWATER) COMPLYING WITH THE CALIFORNIA PLUMBING CODE.
- E. PLUMBING FIXTURES AND FITTINGS.
PLUMBING FIXTURES (TOILETS, URINALS) AND FITTINGS (FAUCETS, SHOWER HEADS) SHALL MEET THE STANDARDS REFERENCED IN TABLE 5.303.6.

FIXTURE FLOW RATES

FIXTURE TYPE	BASELINE FLOW RATE	MAXIMUM FLOW RATE AT 20% REDUCTION
SHOWER HEADS	2.5 GPM @ 80 PSI	2 GPM @ 80 PSI
LAVATORY FAUCETS - NONRESIDENTIAL	0.5 GPM @ 60 PSI	0.4 GPM @ 60 PSI
KITCHEN FAUCETS	2.2 GPM @ 60 PSI	1.8 GPM @ 60 PSI
WASH FOUNTAINS	2.2 RIM SPACE (in)/20 GPM @ 60 PSI	1.8 RIM SPACE (in)/20 GPM @ 60 PSI
METERING FAUCETS	0.25 GALLONS/CYCLE	0.2 GALLONS/CYCLE
METERING FAUCETS FOR WASH FOUNTAINS	.25 RIM SPACE (in)/20 GPM @ 60 PSI	.20 RIM SPACE (in)/20 GPM @ 60 PSI
GRAVITY TANK TYPE WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
FLUSHMETER TANK WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
FLUSHMETER VALVE WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
ELECTROMECHANICAL HYDRAULIC WATER CLOSETS	1.6 GALLONS/FLUSH	1.28 GALLONS/FLUSH
URINALS	1.0 GALLONS/FLUSH	0.5 GALLONS/FLUSH

MATERIAL SPECIFICATIONS

SERVICES	SCH 40 ABS DWV	CAST IRON NO-HUB	GALV. STEEL SCH 40	BLACK STEEL SCH 40	TYPE M COPPER	TYPE L COPPER	TYPE K COPPER	REMARKS
COLD WATER	ABOVE GROUND							
	BELOW GROUND							
HOT WATER	ABOVE GROUND							
	BELOW GROUND							
WASTE	ABOVE GROUND							
	BELOW GROUND							
VENT	ABOVE GROUND							
	BELOW GROUND							
INDIRECT WASTE	INDOOR							
	OUTDOOR							
NATURAL GAS	INDOOR							PAINTED WITH RUST INHIBITING PAINT
	OUTDOOR							
STORM DRAIN	ABOVE GROUND							
	BELOW GROUND							
CO2	ABOVE GROUND							SILVER BRAZED; NITROGEN PURGED
	BELOW GROUND							
CO2 VENT	ABOVE GROUND							SILVER BRAZED; NITROGEN PURGED
	BELOW GROUND							

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Fax: (909) 335-7299
Info@miller-aip.com



MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: *Alex Qishta* 9/22/2018
2022

CITY ENGINEER: ALEX QISHTA
REGISTERED CIVIL ENGINEER NO. 66702

DRAWN BY: LS/SP/VM

CHECKED BY: VM

RECOMMENDED BY:

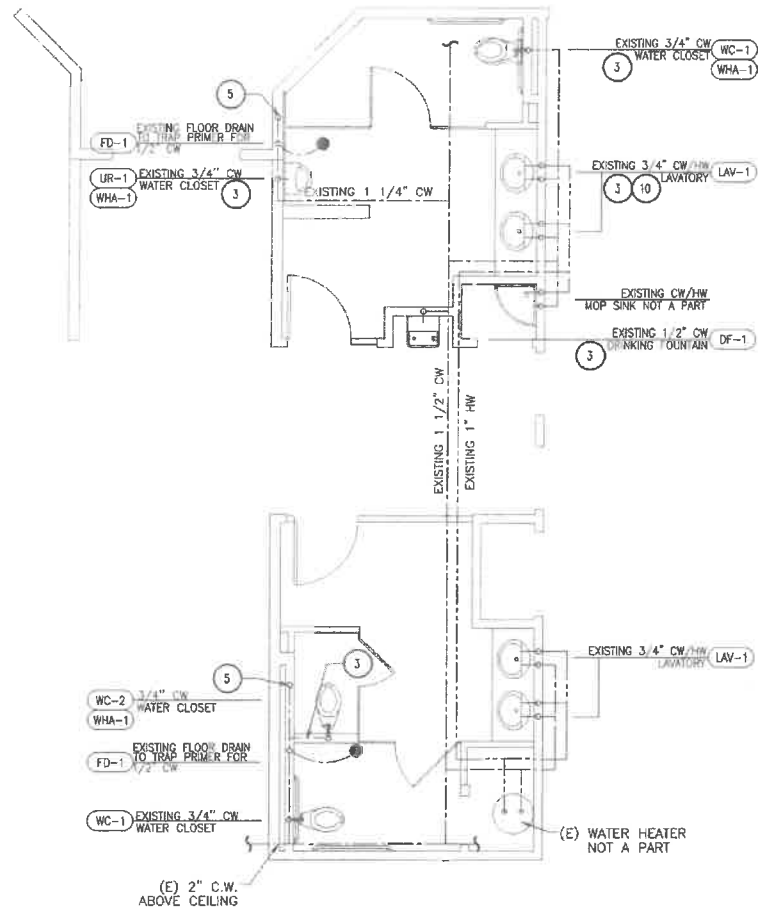
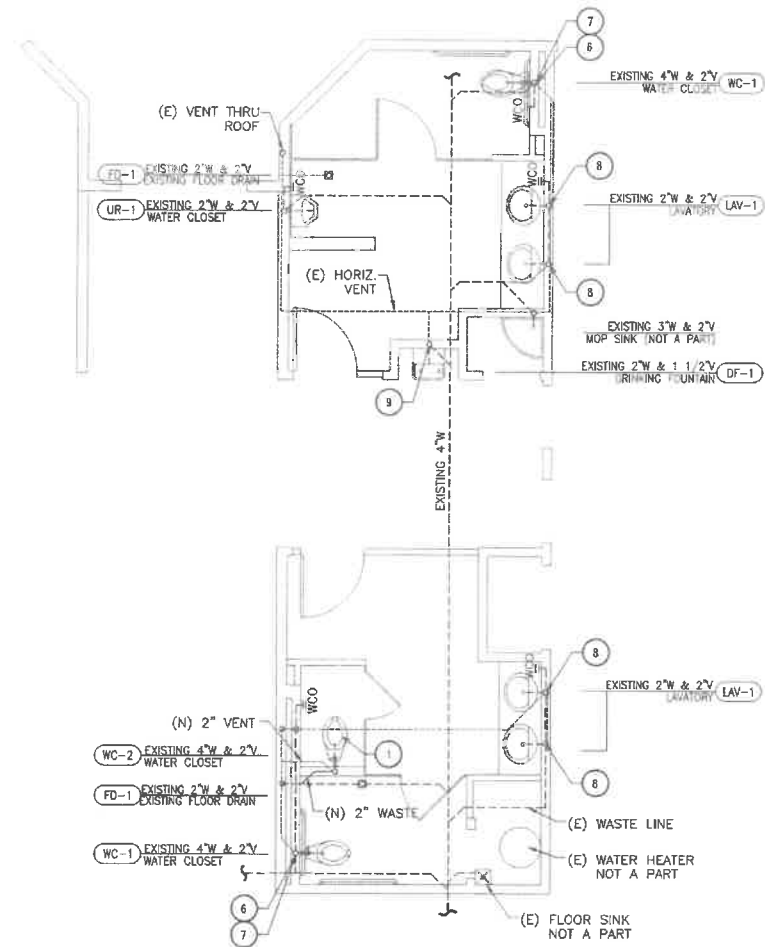
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PLUMBING GENERAL NOTES
FOR
ROWE LIBRARY

DRAWING NO. 13A76
SHEET 25 OF 26 SHEETS

P-201

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GENERAL NOTES:

1. ALL PLUMBING WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 UPC.
2. WATER CLOSETS SHALL BE WATER CONSERVING TYPES USING LESS THAN 1.60 GALLONS PER FLUSH. LAVATORY FAUCETS SHALL FLOW LESS THAN 0.50 GALLONS PER MINUTE.
3. PIPE SLEEVE THROUGH FOOTING SHALL BE PVC.
4. THE TRANSITION FROM BELOW GROUND POTABLE COLD WATER MATERIAL TO ABOVE GROUND POTABLE COLD WATER MATERIAL SHALL OCCUR ABOVE THE SLAB.
5. FIRE HAZARD RATING: INSULATION, JACKETS, FACINGS, ADHESIVES, COATINGS, AND ACCESSORIES SHALL BE ACCEPTABLE TO THE FIRE MARSHALL AND SHALL NOT EXCEED THE FOLLOWING FIRE HAZARD CLASSIFICATIONS: FLAME-SPREAD: MAXIMUM 25, FUEL CONTRIBUTED: MAXIMUM 50, SMOKE DEVELOPED: MAXIMUM 50. RATED TO BE IN ACCORDANCE WITH UL TEST METHOD FOR THE HAZARD CLASSIFICATION OF BUILDING MATERIALS, INC. PASS OVERS CORNING FIBERGLASS PIPE INSULATION.
6. CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW PLUMBING LINE.
7. PLUMBING CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, LOCATIONS, AND PIPE SIZES OF COLD / HOT WATER LINES AND POINT OF CONNECTIONS.
8. PLUMBING CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, LOCATIONS, AND PIPE SIZES OF WASTE AND VENT LINES AND POINT OF CONNECTIONS.

KEY NOTES: (X)

1. CUT EXISTING SLAB FOR NEW WASTE LINES TO RE-CONNECT NEW PLUMBING FIXTURES TO EXISTING WASTE LINE.
2. CONNECT NEW VENT LINE TO EXISTING VENT LINE THRU ROOF.
3. RECONFIGURE AND CONNECT NEW COLD WATER LINE TO EXISTING COLD WATER LINE SYSTEM. VERIFY EXISTING CONDITIONS AND LOCATION OF COLD WATER LINE.
4. CONNECT NEW VENT LINE TO EXISTING VENT LINE THRU ROOF. VERIFY EXISTING CONDITIONS AND LOCATION OF HOT WATER LINE.
5. CAP OFF EXISTING COLD WATER LINE. VERIFY EXISTING CONDITIONS AND LOCATION OF COLD WATER LINE.
6. EXISTING ACCESS PANEL TO REMAIN.
7. RELOCATE OR REPLACE EXISTING PLUMBING WASTE LINE IF NECESSARY FOR NEW WATER CLOSET.
8. RELOCATE OR REPLACE EXISTING PLUMBING WASTE LINE IF NECESSARY FOR NEW LAVATORY.
9. RELOCATE OR REPLACE EXISTING PLUMBING WASTE LINE IF NECESSARY FOR NEW DRINKING FOUNTAIN.
10. RECONFIGURE AND CONNECT NEW COLD WATER LINE TO EXISTING COLD WATER LINE SYSTEM. VERIFY EXISTING CONDITIONS AND LOCATION OF HOT WATER LINE.

PLUMBING WASTE

SCALE: 1/4" = 1'-0"



PLUMBING WATER SUPPLY

SCALE: 1/4" = 1'-0"



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info@miller-aip.com



MARK	REVISIONS	BY	APPR	DATE

BENCH MARK:

APPROVED: *Alex Oishta* 9/22/2022

CITY ENGINEER: ALEX OISHTA
REGISTERED CIVIL ENGINEER NO. 46702

DRAWN BY: LS/vm

CHECKED BY: VM

RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS

PLUMBING PLAN
FOR
VILASENOR LIBRARY

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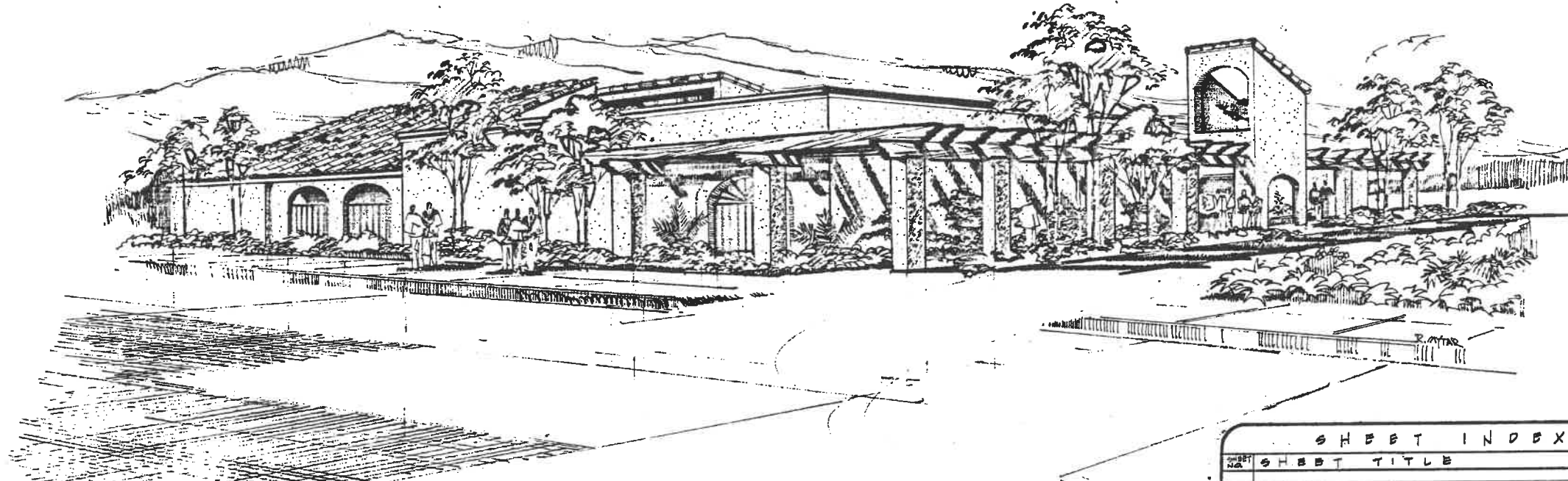
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SHEET 26 OF 26 SHEETS

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APPENDIX C

RECORD DRAWINGS



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WESTSIDE BRANCH

CENTRAL WEST CITY PROJECT

SAN BERNARDINO, CALIFORNIA

SHEET INDEX	
SHEET NO.	SHEET TITLE
T 1	TITLE SHEET / SHEET INDEX
A 1	FINISH SCHEDULES / PARTIAL PLOT PLAN / NOTES / LEGEND
A 2	FLOOR PLAN / REFLECTED CEILING PLAN / ROOF PLAN / NOTES / LEGENDS
A 3	EXTERIOR ELEVATIONS / SECTIONS
A 4	EXTERIOR DETAILS
A 5	INTERIOR DETAILS
A 6	ENLARGED PARTIAL FLOOR PLAN / INTERIOR ELEVATIONS
A 7	DOOR SCHEDULES / DOOR TYPES / WINDOW SCHEDULES / DOOR AND WINDOW DETAILS
A 8	DOOR AND WINDOW DETAILS
G 1	GENERAL NOTES / TYPICAL DETAILS
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G 3	FOUNDATION PLAN / SECTIONS / DETAILS
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P 1	PLUMBING FLOOR PLAN / EQUIPMENT SCHEDULES / SYMBOLS / ABBREVIATIONS / NOTES
P 2	PLUMBING FLOOR PLAN / DETAILS
M 1	MECHANICAL FLOOR PLAN / LEGEND / DETAILS
E 1	ONE LINE ELECTRICAL PLAN / SINGLE LINE DIAGRAM / GENERAL NOTES / SYMBOLS / FIXTURE SCHEDULE
E 2	POWER / SIGNAL PLAN / LIGHTING PLAN / ROOF PLAN / PANEL
L-1	LANDSCAPE
L-2	LANDSCAPE

APPROVED: *[Signature]*
 DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
 DRAWING NO. 5750
 DRAWN BY: J.M.
 CHECKED BY: J.M.
 RECOMMENDED

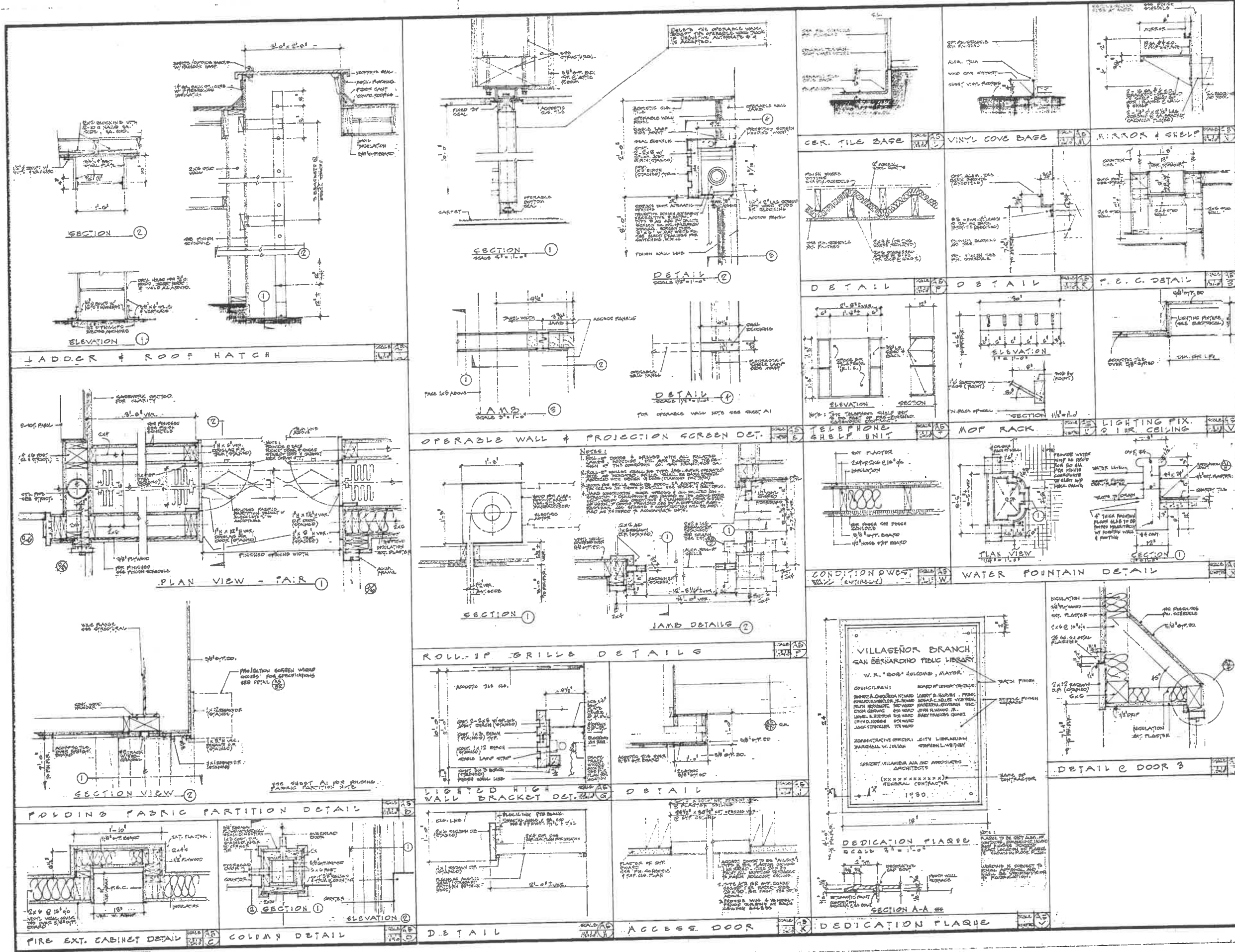
REVISIONS BY

GREGORY VILLANUEVA AIA & ASSOCIATES
 ARCHITECTURE
 3400 IRVINE AVE., SUITE 201
 NEWPORT BEACH, CALIFORNIA 92660
 (714) 841-1428

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SHEET TITLE: TITLE SHEET / SHEET INDEX

DATE: 1-7-80
 SCALE: NONE
 DRAWN: J.M.
 JOB NO: 8001
 SHEET: T 1
 OF: 1 SHEETS



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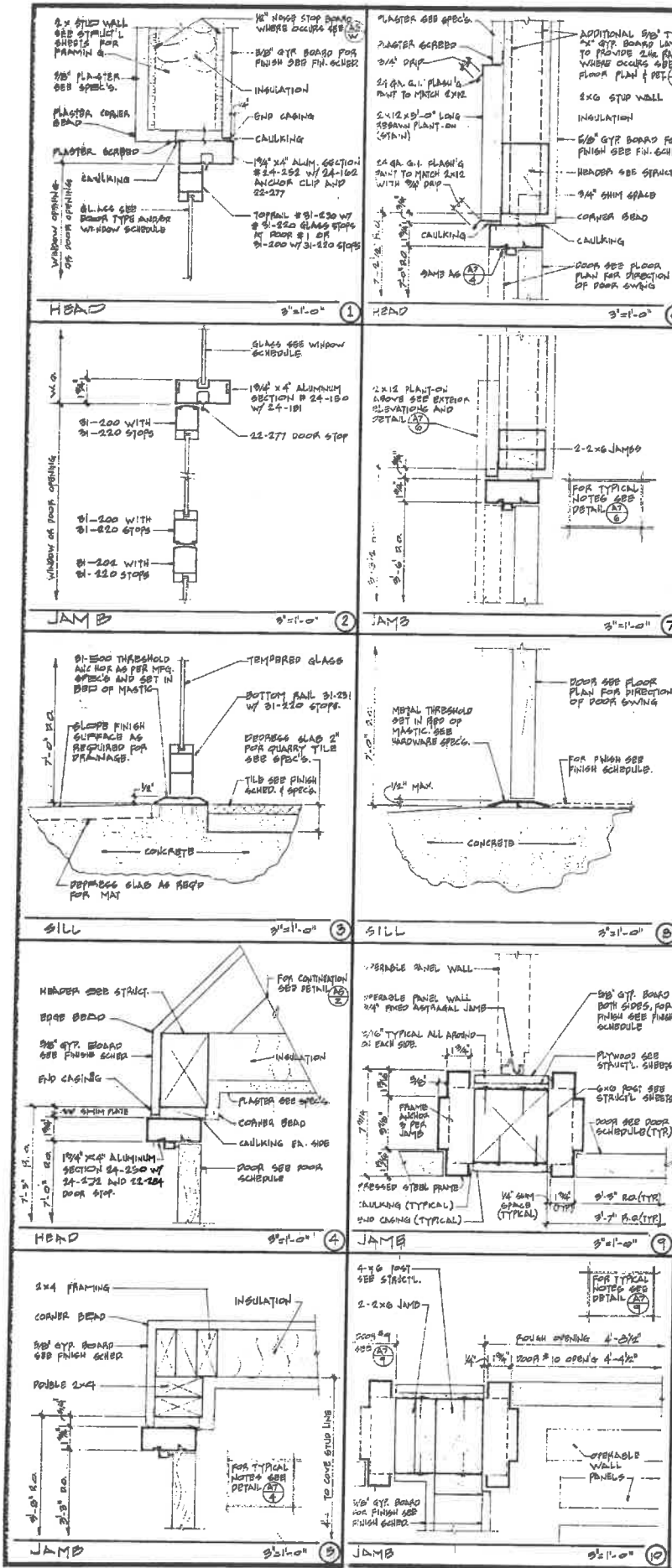
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SHEET TITLE: INTERIOR DETAILS

DATE: 1-7-80
 SCALE: AS SHOWN
 DRAWN: G.A.A.
 JOB NO: 8001
 SHEET: 5
 OF: 5 SHEETS

758-81

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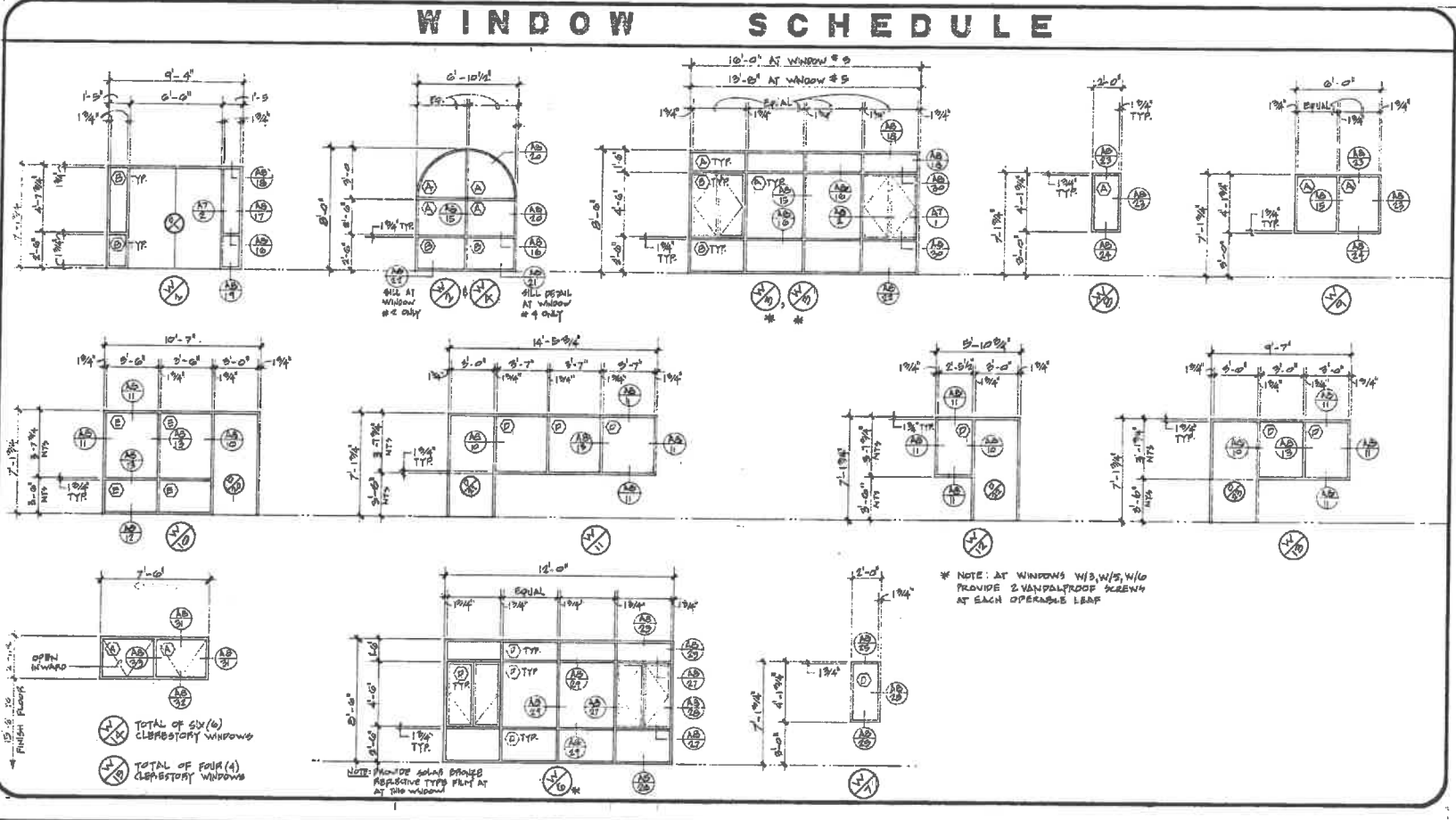
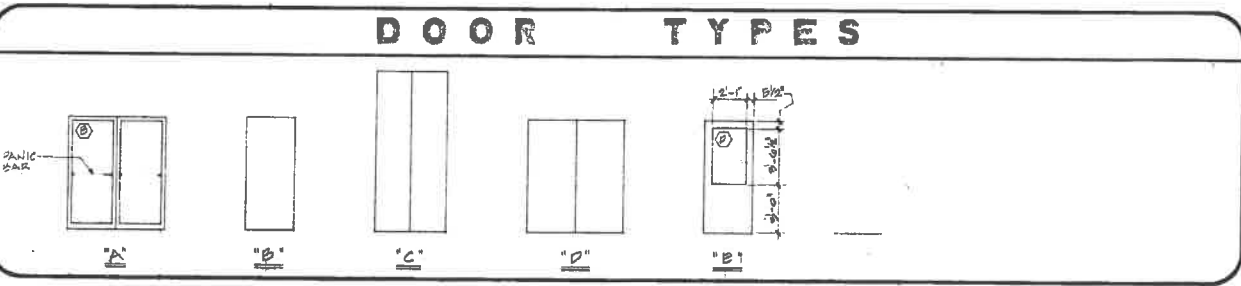


- DOOR AND WINDOW NOTES:**
- ALL WOOD DOORS ARE TO HAVE LAMINATED PLASTIC VENEER FACES.
 - SEE STRUCTURAL DRAWINGS FOR LINTELS.
 - NUMBERS SHOWN ON DETAILS FOR ALUMINUM SECTIONS ARE TAKEN FROM THE CATALOG "ARCADIA".
 - ALUMINUM FRAME SECTIONS, STOPS, TRIP, ETC. TO BE ANODIZED DARK BRONZE.
 - STANDARD ANCHORS, SCREWS, ETC., ARE TO BE SUPPLIED WITH ALUMINUM/METAL SECTIONS TO SUIT BUILDING CONSTRUCTION.
 - REINFORCE FRAMES AS REQUIRED FOR HARDWARE.
 - LOUVERS IN DOORS TO BE "AIRLITE" OR EQUAL AND SHALL BE INSTALLED WITH VANDALPROOF SCREWS.
 - ALL DOOR SWINGS SHOWN ON DETAILS SHALL BE CHECKED TO CONFORM WITH FLOOR PLANS.
 - WOOD DOOR FRAMES SHALL BE VERTICAL GRAIN DOUGLAS FIR SMOOTH SAWN. (SEE DOOR SCHEDULE WHERE OCCURS)
 - ALL EXIST DOORS SHALL COMPLY WITH UBC C. 901 & 901.6

- GLASS LEGEND**
- 1/4" GRAYLITE LOW TRANSMISSION GLASS - 14%.
 - 1/4" TEMPERED GRAYLITE LOW TRANSMISSION GLASS - 14%.
 - 1/4" CLEAR POLISHED PLATE GLASS.
 - 1/4" CLEAR POLISHED PLATE WIRE GLASS.
 - 1/4" TEMPERED CLEAR POLISHED PLATE GLASS.

DOOR SCHEDULE

ROOM NO.	LOCATION	ROOM NO.	DOOR OPENING	DOOR MATERIAL	DOOR TYPE	DOOR HGT.	DOOR WDG.	DOOR SWING	DOOR FINISH	DOOR LABEL	REMARKS
1-1	ENTRY	101	7'-0" x 7'-0"	ALUM.	A	7'-0"	7'-0"	R	ANODIZED	A7/B	
1-2	COMMUNITY ROOM #1	120	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	
1-3	CHANGING AREA	112	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	
1-4	WORK ROOM	105	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	
1-5	WOMEN TOILET	120	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-6	MEN TOILET	120	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-7	UNITOR ROOM	122	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-8	COMMUNITY ROOM #1	120	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-9	COMMUNITY ROOM #2	121	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-10	STORAGE	123	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-11	WATER HEATER ROOM	124	7'-0" x 7'-0"	WOOD	C	7'-0"	7'-0"	R	ANODIZED	C	
1-12	STORAGE	114	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-13	SERVING KITCHEN	115	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-14	SERVING KITCHEN	115	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-15	SERVING KITCHEN	115	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-16	STAFF TOILET	110	7'-0" x 7'-0"	WOOD	C	7'-0"	7'-0"	R	ANODIZED	C	
1-17	STAFF TOILET	110	7'-0" x 7'-0"	WOOD	C	7'-0"	7'-0"	R	ANODIZED	C	
1-18	STAFF TOILET	110	7'-0" x 7'-0"	WOOD	C	7'-0"	7'-0"	R	ANODIZED	C	
1-19	HALL	117	7'-0" x 7'-0"	WOOD	C	7'-0"	7'-0"	R	ANODIZED	C	
1-20	PHOTO COPY & TYPING	107	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-21	CONFERENCE	100	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-22	WORK ROOM	105	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-23	LIBRARIAN'S OFFICE	04	7'-0" x 7'-0"	STEEL	D	7'-0"	7'-0"	R	ANODIZED	D	
1-24	CIRCULATION COUNTER	103	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	
1-25	ENTRY LOBBY	101	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	
1-26	COMMUNITY ROOM #2	121	7'-0" x 7'-0"	ALUM.	B	7'-0"	7'-0"	R	ANODIZED	B	

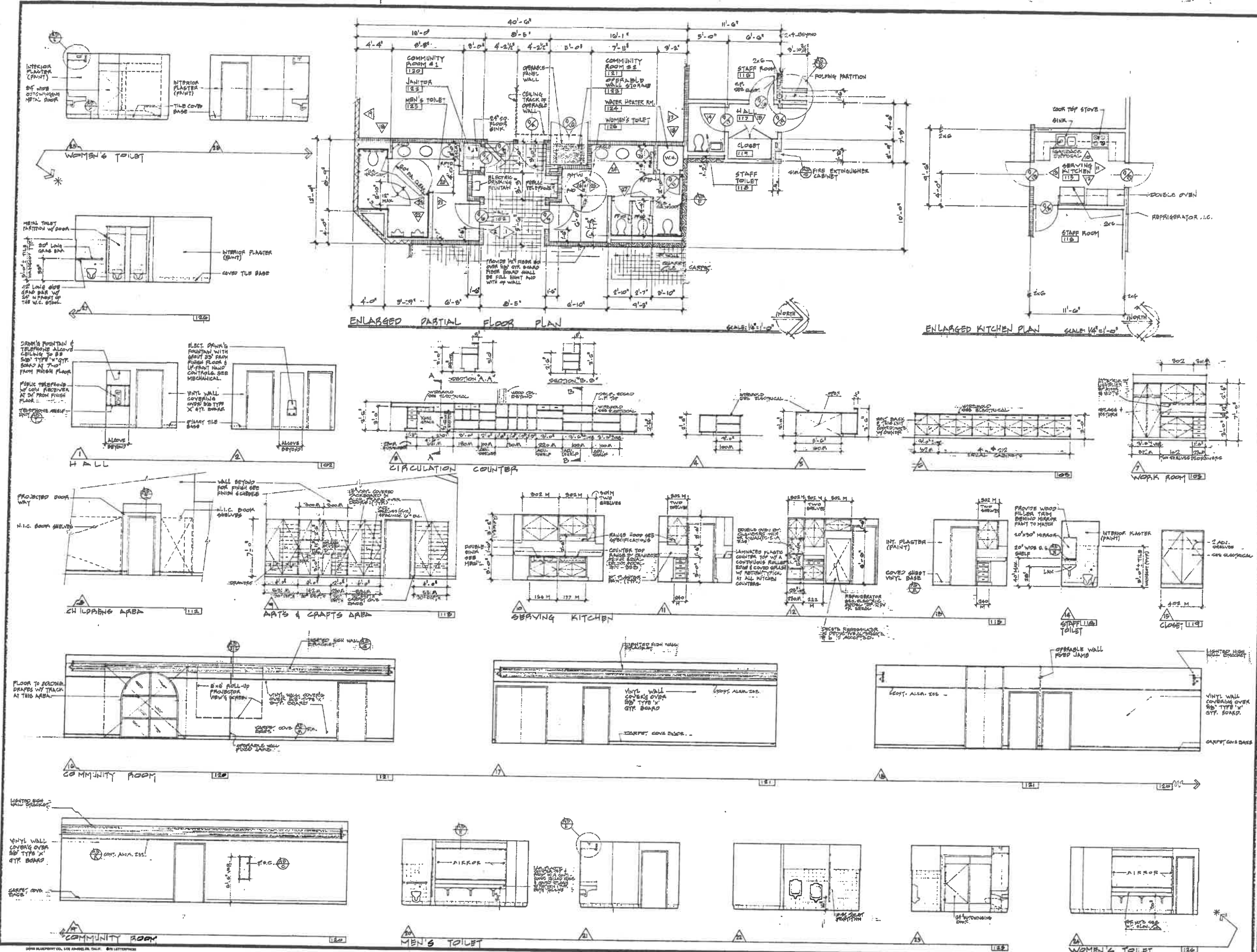


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WESTSIDE BRANCH
CENTRAL CITY WEST PROJECT

DATE: 1-7-80
SCALE: AS SHOWN
DRAWN: J.M.
JOB NO. 8001
SHEET: 17 OF 17



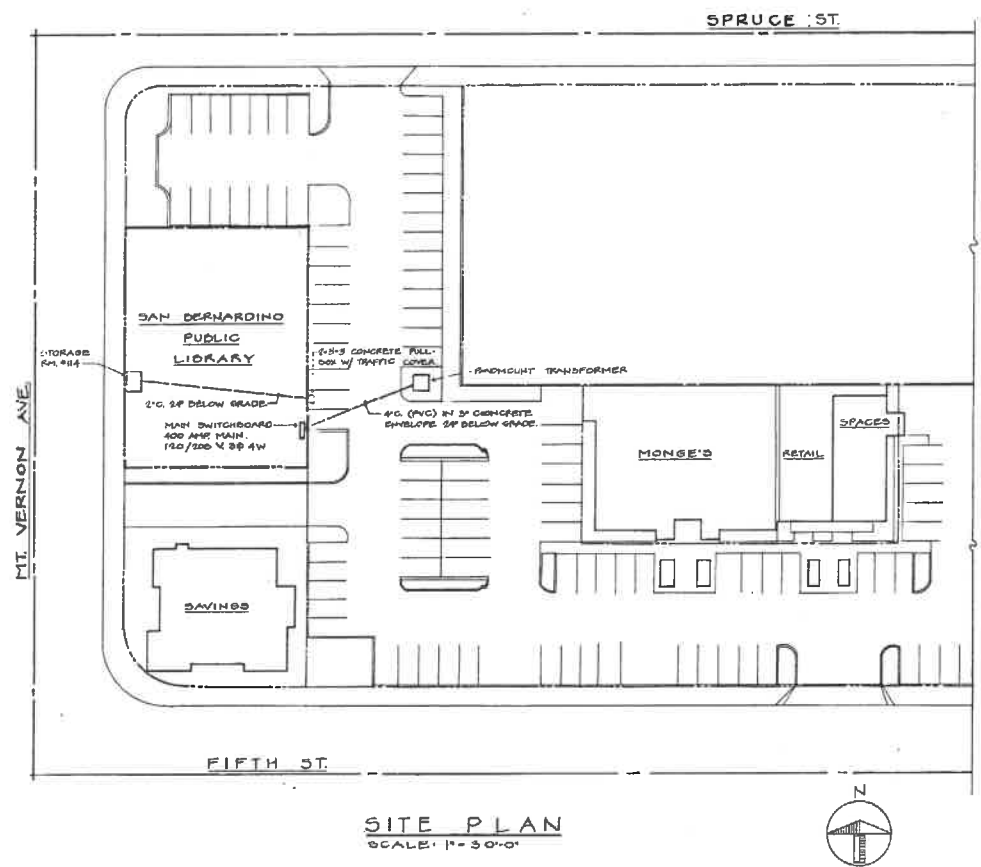
REVISIONS

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SHEET TITLE:
 ENLARGED PARTIAL FLOOR PLAN
 INTERIOR ELEVATIONS

DATE: 1-7-80
 SCALE: 1/4" = 1'-0"
 DRAWN: J.M.
 JOB NO: 2001
 SHEET: **A 6**



SITE PLAN
SCALE: 1" = 30'-0"

GENERAL NOTES

- MINIMUM WIRE SIZE FOR LINE VOLTAGE WIRING SHALL BE #12
- ALL CONDUIT SIZES SHALL CONFORM TO THE STATE OF CALIFORNIA, TITLE 24.
- SUBSCRIPTS a, b, c, ETC., AT SWITCH SYMBOLS ARE TO DISTINGUISH BETWEEN SWITCHES.
- 4'-6" INDICATES A MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTER OF EQUIPMENT OR OUTLET.
- ALL OUTLETS SHALL BE INSTALLED AT THE HEIGHTS INDICATED IN THE SYMBOLS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- REFER TO WIRING DIAGRAMS ON MECHANICAL DRAWINGS.
- ALL SYMBOLS SHOWN IN SYMBOL LIST ARE NOT NECESSARILY USED ON THIS PROJECT.
- EVERY OUTLET HEIGHT SHALL BE VERIFIED ON EACH WALL WITH THE ARCHITECTURAL DRAWINGS AND CABINET SHOP DRAWINGS TO INSURE THE PROPER HEIGHT AND LOCATION WITH RESPECT TO CABINETS, EQUIPMENT, CHALKBOARDS, TACKBOARDS, SHELVING, ETC.
- COORDINATE WITH THE OTHER TRADES, IN ADVANCE OF CONSTRUCTION, THE CEILING AREAS IN WHICH RECESSED LIGHTING FIXTURES OCCUR. THIS SHALL INCLUDE PLUMBING, HEATING AND VENTILATING, AIR CONDITIONING AND CABINETRY. IN THE EVENT OF ANY CONFLICT, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
- CONTRACTOR SHALL VERIFY EXACT ELECTRICAL SERVICE REQUIREMENTS WITH THE SOUTHERN CALIFORNIA EDISON COMPANY AND SHALL PROVIDE ALL REQUIRED LABOR AND MATERIAL FOR A COMPLETE AND COMPLETE NEW ELECTRICAL SERVICE TO THE SITE.
- CONTRACTOR SHALL VERIFY EXACT TELEPHONE SERVICE REQUIREMENTS WITH THE TELEPHONE COMPANY AND SHALL PROVIDE ALL REQUIRED LABOR AND MATERIAL FOR A NEW UNDERGROUND TELEPHONE SERVICE TO THE SITE.
- CONTRACTOR SHALL ARRANGE FOR INSPECTION OF POWER AND TELEPHONE SERVICE CONDUITS WITH RESPECTIVE UTILITIES PRIOR TO PLACING BACKFILL MATERIAL.
- BEFORE EXCAVATING ANY TRENCH 3'-0" OR MORE IN DEPTH, THE CONTRACTOR SHALL SUBMIT TO THE CITY'S STRUCTURAL ENGINEER FOR APPROVAL, A DETAILED DRAWING SHOWING THE DESIGN OF THE SHORING, BRACING, SLOPING, OR OTHER PROVISIONS TO BE MADE FOR THE PROTECTION OF WORKMEN FROM THE HAZARD OF MOVING GROUND. IF SUCH DESIGN VARIES FROM THE STANDARDS ESTABLISHED BY THE CONSTRUCTION SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, THE DRAWINGS SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER. NONE OF THE ABOVE-MENTIONED TRENCHING SHALL BE DONE BEFORE THE CONTRACTOR RECEIVES SIGNED APPROVAL FROM THE DISTRICT.
- GROUNDING ELECTRODES SHALL BE LOCATED IN PLANTING AREA WHERE INDICATED ON THE DRAWINGS, AND EACH ELECTRODE SHALL TERMINATE WITHIN A CONCRETE YARD BOX INSTALLED FLUSH WITH THE FINISH GRADE. YARD BOXES SHALL BE PRECAST REINFORCED CONCRETE AND SHALL BE APPROXIMATELY 12" WIDE, 18" LONG AND 12" DEEP (OUTSIDE DIMENSIONS), OR LARGER, IF NECESSARY TO OBTAIN THE REQUIRED CLEARANCE. COVERS FOR YARD BOXES SHALL BE EQUIPPED WITH SELF-CLOSING AND LOCKING, CHECKERED, CAST IRON LIDS HINGED TO A CAST IRON FRAME CAST INTO THE BOX. COVERS SHALL BE MARKED "ELECTRICAL". SEE SPECIFICATIONS.
- CONTRACTOR SHALL CONNECT ALL EQUIPMENT, INCLUDING N.I.C. EQUIPMENT.
- THE ANCHORAGE FOR ELECTRICAL EQUIPMENT INCLUDING PENDANT MODEL LIGHT FIXTURES SHALL MEET ALL THE REQUIREMENTS OF TABLE T 21 - 233.
- EQUAL FLUORESCENT FIXTURES AS MANUFACTURED BY GLOBE, PRUDEN AS, OR ACME WILL BE ACCEPTED.

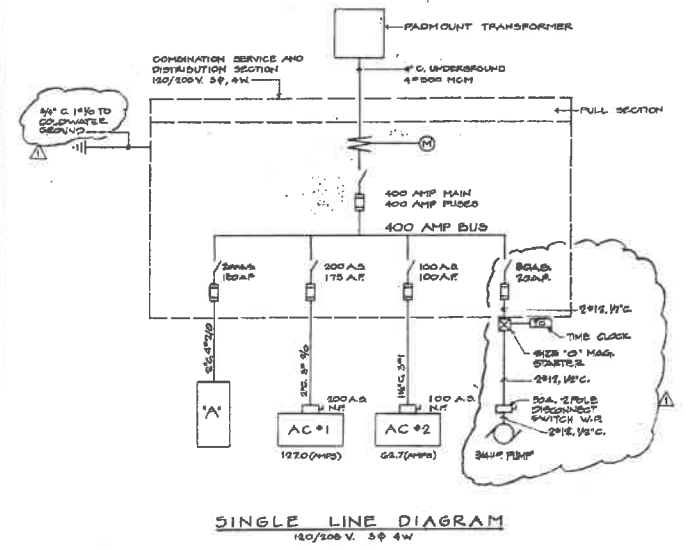
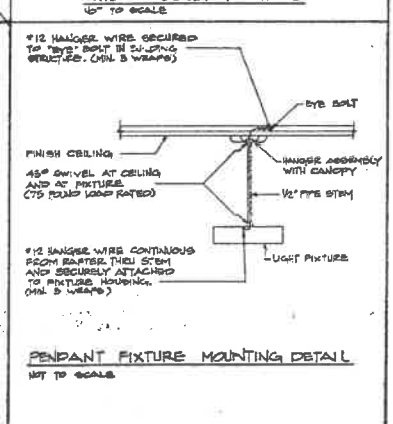
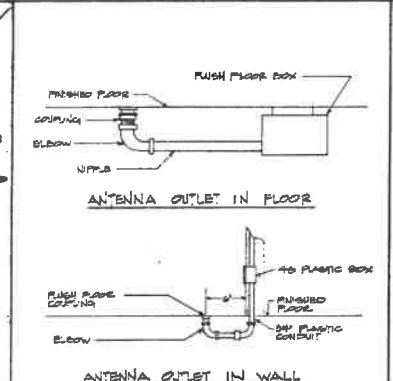
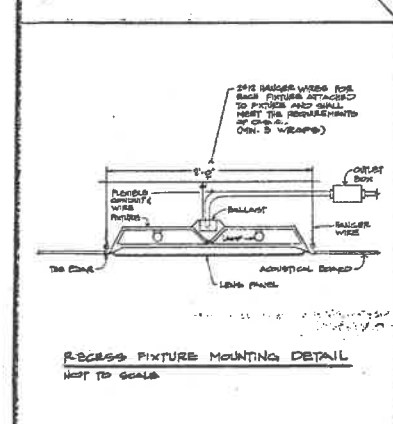
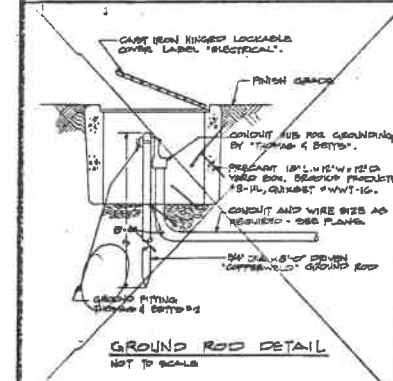
SYMBOLS

- INCANDESCENT OR MERCURY LIGHTING FIXTURE, WALL MOUNTED
 - ◻ INCANDESCENT OR MERCURY LIGHTING FIXTURE, RECESSED IN CEILING
 - ⊙ INCANDESCENT LIGHTING FIXTURE, RECESSED IN CEILING, ROUND
 - ◻ FLUORESCENT LIGHTING FIXTURE, CEILING OR PENDANT MOUNTED
 - ◻ FLUORESCENT LIGHTING FIXTURE, RECESSED IN CEILING
 - ⊙ GROUNDING TYPE DUPLEX CONVENIENCE OUTLET, 4-24"
 - ⊙ 4-24" OUTLET
 - ⊙ FLUSH DUPLEX CONVENIENCE OUTLET IN FLOOR BOX
 - ⊙ THERMOSTAT OUTLET, 4-5-2"
 - ⊙ THERMOSTAT BOX, WALL MOUNTED, 4-12"
 - ⊙ JUNCTION BOX, ABOVE CEILING
 - ⊙ MOTOR OUTLET
 - ⊙ MAGNETIC MOTOR STARTER
 - ⊙ DISCONNECT SWITCH, SIZE AND NUMBER OF POLES AS INDICATED
 - ⊙ PUBLIC TELEPHONE OUTLET, 24"
 - ⊙ TELEVISION OUTLET 24"
 - ⊙ FLUSH MOUNTED CABINET OR EQUIPMENT AS NOTED, 4'-6" TO TOP
 - ⊙ FLUSH MOUNTED PANEL, 4'-6" TO TOP
 - ⊙ PANELBOARD DESIGNATION
 - ⊙ TERMINAL CABINET DESIGNATION
 - ⊙ TOGGLE SWITCH, 48"
- SUFFIXES ON SWITCH SYMBOLS SHALL INDICATE THE FOLLOWING:
 S = SINGLE POLE, 2 = 2-POLE, 3 = 3-WAY, K = KEY OPERATE
 M = SPST MOMENTARY CONTACT SWITCH, P = WITH PILOT LIGHT
 a, b, c, ETC. INDICATE OUTLET CONTROLLED.
- INDICATES: A = FIXTURE TYPE, 2/40 = QUANTITY OF WATTAGE PER LAMP.
 ALSO NUMBER ADJACENT TO FIXTURE = CIRCUIT NUMBER AND LOWER CASE LETTER = CONTROLLING SWITCH
- WIREMOLD WITH 120V. RECEPTACLE AT 24" O.C.
 - CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS
 - CONDUIT RUN CONCEALED UNDER FLOOR OR BELOW GRADE
 - CONDUIT RUN EXPOSED
 - 2 #12 - 1/2" C. — 4 #12 - 3/4" C. — 6 #12 - 3/4" C.
 - 3 #12 - 1/2" C. — 5 #12 - 3/4" C. — 7 #12 - 3/4" C.
 - WIRE SIZE OTHER THAN #12 IS NOTED ON EACH CONDUIT RUN, WITH SIZE OF CONDUIT (I.E., 3 #10 - 3/8" C.)
 - PUBLIC TELEPHONE SYSTEM CONDUIT, 3/4" C.O.
 - PUBLIC TELEPHONE SYSTEM CONDUIT, 1" C.O.
 - WEATHERPROOF
 - TELEVISION SYSTEM CONDUIT, 1" C.O.
 - THE CLOCK WITH 24" HOUSING

FIXTURE SCHEDULE

FIXTURE TYPE	NO.	LAMP WATTS	TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION
A	2 1/2	25	FL	LIGHTGLOR OR EQUIVALENT BY ACME OR PRUDENTIAL	4 FT CD-1148 = FI CD-1162	RECESSED MOUNTED FLUORESCENT FIXTURE WITH TWO (2) 25 WATT (4) LAMP ACRYLIC PRISMATIC LENS AND WHITE BRASS MOUNTING HT. 10" TO BOTTOM
B	2	30	FL	LIGHTGLOR OR EQUIVALENT BY ACME OR PRUDENTIAL	10321	18" x 48" SURFACE MOUNTED FLUORESCENT WRAPAROUND WITH ACRYLIC LENS.
C	2	40	FL	LIGHTGLOR OR EQUIVALENT BY ACME OR PRUDENTIAL	68471	2'-2" RECESSED FLUORESCENT WITH PARABOLIC LOUVERS.
D	2	55	FL	LIGHTGLOR OR EQUIVALENT BY ACME OR PRUDENTIAL	61672	2'-6" RECESSED FLUORESCENT FIXTURE WITH PRISMATIC ACRYLIC LENS.
E	2	55	FL	ACME OR EQUIVALENT BY PRUDENTIAL OR LIGHTGLOR	432-24-4E	2'-6" SURFACE MOUNTED FLUORESCENT FIXTURE WITH REGRESS ALUMINUM DOOR FRAME, BAKED WHITE ENAMEL FINISH.
F	2	55	FL	LIGHTGLOR OR EQUIVALENT BY ACME OR PRUDENTIAL	10229	WALL MOUNTED FLUORESCENT WITH ACRYLIC DIFFUSER, 1/8" BY 1/8" LENS.
G	1	35	FL	ACME OR EQUIVALENT BY LIGHTGLOR OR PRUDENTIAL.	1001-48-H	SHRIMP OR CHAIN MOUNTED FLUORESCENT STRIP LIGHT, SURFACE MOUNTED FIXTURE SHALL HAVE AREA COVERED LABEL.
H	1	150	INC	LIGHTGLOR OR EQUIVALENT BY HALO OR PRESCOLITE	7790	ROUND RECESS INCANDESCENT WITH REGRESS FRESNEL LENS AND MATTE WHITE FINISH.
K	1	150	INC	LIGHTGLOR OR EQUIVALENT BY HALO OR PRESCOLITE	1201/1222	ROUND RECESS INCANDESCENT ADJUSTABLE EYE BALL. MATTE WHITE FINISH.
L	1	150	INC	LIGHTGLOR OR EQUIVALENT BY HALO OR PRESCOLITE	7301	SQUARE RECESS INCANDESCENT FIXTURE WITH REGRESS FRESNEL LENS. MATTE WHITE FINISH.
M	1	60	INC	HADCO	0-24	ALL CAST ALUMINUM, BRONZE FINISH WITH AMBER TEXTURE LENS. FOR WALL MOUNTING.
N	1	150	INC	SWIVELER	23016	ADJUSTABLE BULLET SHAPE LAMP HOLDER. MATTE BLACK FINISH.

- NOTES:**
- ALL FLUORESCENT FIXTURE SHALL BE FURNISHED WITH ENERGY SAVING BALLAST.
 - ALL FLUORESCENT LAMPS SHALL BE OF THE WATT WAVING TYPE.
 - EACH PENDANT FIXTURE SHALL BE SUPPORTED INDEPENDENTLY TO THE BUILDING STRUCTURE WITH MINIMUM #12 WIRE PASSING THROUGH THE STEM.
 - EACH LAY-IN FIXTURE IN SUSPENDED CEILING SHALL BE SUPPORTED FROM OPPOSITE CORNERS (DIAGONALLY) TO THE BUILDING STRUCTURE ABOVE WITH MINIMUM OF TWO (2) #12 WIRES. (PROVIDE BLACK AD BOLT/SCREW)



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STATEMENT OF DESIGN COMPLIANCE
 DIVISION 24 OF THE CALIFORNIA ENERGY CONSERVATION STANDARDS FOR NON-RESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND FOUND TO BE IN SUBSTANTIAL CONFORMANCE.

Engineer: Gregory Villanueva, AIA, ECGP Date: 7/14/80
 Project No. 80-001

DATE: 7.14.80
 SCALE: AS NOTED
 DRAWN BY: DLE
 JOB NO.:
 SHEET: 2 OF 2
 TOTAL SHEETS: 2

GENERAL

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. CONTRACTOR AT HIS OWN EXPENSE SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE FIELD LAYOUT OF BUILDING ELEMENTS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE DRAWINGS.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES: THE UNIFORM BUILDING CODE, 1976 EDITION, AND THE CITY OF SAN BERNARDINO BUILDING REGULATIONS. OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS SHALL BE COMPLIED WITH.
- A.S.T.M. SPECIFICATIONS NOTED ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARANCE AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS. LOAD SHALL NOT EXCEED THE DESIGN LOADING FOR THE SUPPORTING MEMBERS.
- DESIGN LIVE LOADS:
ROOFS - 20 PSF REDUCIBLE
ROOF MECHANICAL WELLS - ACTUAL MECHANICAL EQUIPMENT WHERE SHOWN

SPECIAL NOTE

- WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED, OR AS DIRECTED. WHERE ON ANY DRAWINGS A PORTION OF THE WORK IS DRAWN OUT AND THE REMAINDER IS INDICATED IN OUTLINE, THE DRAWN OUT PARTS SHALL APPLY ALSO TO ALL OTHER LIKE PORTIONS OF THE WORK.
- TYPICAL DETAILS ON SHEETS 01 & 02 INDICATE METHOD OF WORK, AND ARE INTENDED TO BE USED WHERE THEY APPLY. UNLESS THE CONDITION IS SPECIFICALLY DETAILED OTHERWISE, USE THESE DETAILS WHETHER OR NOT THEY ARE CROSS REFERENCED ON PLAN.

FOUNDATION

- FOUNDATION DESIGN IS BASED ON A SOIL REPORT BY: IRVINE SOILS ENGINEERING, INC. (C.C. NO. 1752, DATED JULY 11, 1979).
- THE CONTRACTOR SHALL REVIEW THE SOIL REPORT AT THE ARCHITECT'S OFFICE AND COMPLY WITH ALL OF ITS REQUIREMENTS.
- SOIL BEARING VALUE OF 1500 PSF (ISOLATED FTG.) WAS USED FOR DESIGN. FOOTINGS SHALL BE 1'-0" MINIMUM BELOW ADJACENT FINAL GRADE AND BEAR ON NATURAL SOIL OR APPROVED COMPACTED FILL.
- CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
- CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.
- EXCAVATIONS FOR FOOTINGS SHALL BE APPROVED BY THE FOUNDATION ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR SHALL NOTIFY FOUNDATION ENGINEER WHEN INSPECTION OF EXCAVATION IS READY. FOUNDATION ENGINEER SHALL SUBMIT LETTER OF COMPLIANCE TO THE OWNER.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
- FOOTINGS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY FOUNDATION ENGINEER, FOOTING ELEVATIONS WILL BE ALTERED BY CHANGE ORDER.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE FOUNDATION ENGINEER. FLOODING WILL NOT BE PERMITTED.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT ARE BELOW NEW FOOTINGS AND WITHIN A 25' SLICE FROM BOTTOM OF NEW FOOTING SHALL BE REMOVED AND ALL BACKFILL COMPACTED TO 95%.

CONCRETE

- ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 LATEST APPROVED EDITION) WITH MODIFICATIONS AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
- REINFORCED CONCRETE DESIGN IS BY THE "ULTIMATE STRENGTH DESIGN METHOD."
- CONCRETE MIXES CONFORMING TO A.S.T.M. C-94 SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY, AND APPROVED BY THE STRUCTURAL ENGINEER.
- SCHEDULE OF STRUCTURAL CONCRETE 28 DAY STRENGTHS AND TYPES:
ALL TYPES _____ 2000 P.S.I.
- PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C-150, TYPE I OR TYPE II.
- AGGREGATE FOR HARDENED CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF A.S.T.M. C-80 AND PROJECT SPECIFICATIONS.
- AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO A.S.T.M. C-390 AND PROJECT SPECIFICATIONS.
- FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS SHOWN ON THE DRAWINGS.
- DRYPACK UNDER SLAB/PLATES, GILL PLATES AND WHERE OTHERWISE NOTED ON DRAWINGS SHALL CONSIST OF 1 PART PORTLAND CEMENT AND 2 PARTS OF FINE AGGREGATE CONFORMING TO A.S.T.M. C-35, WITH ENOUGH WATER TO FORM A BALL WHEN SQUEEZED IN THE HAND. THE SPACE BETWEEN TWO SURFACES REQUIRING DRYPACK SHALL BE PACKED WITH THE DRYPACK MATERIAL BY TAMPING OR RAMMING WITH A BAR OR ROD UNTIL THE VOID ARE COMPLETELY FILLED.
- PLACEMENT OF CONCRETE SHALL CONFORM TO A.C.I. 308.2 (M) AND PROJECT SPECIFICATIONS. SANDBLAST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
- IF COLUMNS AND WALLS ARE PLACED WITH FLOOR, TWO HOUR MINIMUM MUST ELAPSE BETWEEN END OF COLUMN OR WALL POUR AND BEGINNING OF FLOOR POUR.
- CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS:
CONCRETE POURED DIRECTLY AGAINST EXPOSED _____ 3 IN.
- ALL REINFORCING BARS, WELDED BOLTS AND OTHER CONNECTIONS SHALL BE FULLY SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- PROVIDE SLEEVES FOR PIPES AND ELECTRICAL CONDUITS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- DEPTH OF PIPE SIZES (O.D.) WHEN NOTED ON STRUCTURAL DRAWINGS TO BE IN A SLAB SHALL NOT EXCEED 50 PER CENT OF SLAB THICKNESS AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING, UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF CONDUITS OR PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OTHERWISE ARE PROVIDED.
- PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 1/4" CHAMFER, UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
- CURBS OR FORMS USED ON CONCRETE THAT IS TO RECEIVE A RESILIENT TILE FINISH SHALL BE APPROVED BY THE TILE MANUFACTURER BEFORE USE.

REINFORCING STEEL (FOR CONCRETE & MASONRY)

- ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 LATEST APPROVED EDITION), AND THE MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION (1972 ED.) BY THE C. R. S. I. AND THE W. C. R. S. I., AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.
- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-36 OR A-36 GR. 60 FOR 1/2" BARS AND LARGER, AND GRADE 60 FOR 1/4" & 3/8" BARS.
- WELDS OF REINFORCEMENT SHALL BE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, ETC." AMERICAN WELDING SOCIETY, AWS-D12.1.
- ALL REINFORCING BAR ENDS SHALL BE MADE COLD.
- WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185.
- MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 BARS OR ONE FULL MESH, WHICHEVER IS GREATER.
- REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.
- BOWLS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE, SPACING AND NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE DETAIL, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (LATEST EDITION AND SUPPLEMENTS).
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION A-36 UNLESS OTHERWISE NOTED.
- PIPE COLUMNS SHALL CONFORM TO ASTM DESIGNATION A-53, GRADE "B". ALL STEEL TUBES SHALL CONFORM TO ASTM A-500 OR A-501.
- ALL BOLTS SHALL CONFORM TO ASTM A-307, GRADE "A" EXCEPT AS NOTED.
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR ARCHITECT'S REVIEW, BEFORE FABRICATION.
- BOLT HOLES IN STEEL SHALL BE 1/8 IN. LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED.
- ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE OR MASONRY, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.
- ALL WELDS SHALL BE IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE (AWS D1.1-78) OF THE AMERICAN WELDING SOCIETY.
- WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED.
- WELDING TESTS AND INSPECTIONS - SEE SPECIFICATIONS

WOOD

- FRAMING LUMBER SHALL BE DOUGLAS FIR, NO. 1 GRADE, UNLESS OTHERWISE NOTED. STUDS SHALL BE DOUGLAS FIR, STUDS, GRADE NO. 1 AND ALL POSTS SHALL BE GRADE NO. 1.
- ALL PLYWOOD SHALL BE CD WOOD, 5/8" THICK CONFORMING TO PRODUCT STANDARD PS-1-74. USE PLYWOOD WALLS SAME GRADE OR LARGER AS COMMON WIRE WALLS WITH LENGTH AT LEAST EQUAL TO 1/2 LENGTH OF COMMON WALL REQUIRED PLUS PLYWOOD THICKNESS.
- BOLT HOLES SHALL BE 1/8 IN. LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED. RETIGHTEN ALL NUTS PRIOR TO CLOSING IN.
- STANDARD CUT WHERSELS SHALL BE USED UNDER BOLT HEADS AND NUTS AGAINST WOOD. USE HEAVY PLATE OR WALLEABLE IRON WASHERS FOR ALL BOLTS DESIGNED TO ACT IN TENSION, SUCH AS LEDGERS AND HOLD DOWN ANCHORS. SEE DRAWINGS FOR LOCATION.
- ALL STUD PARTITIONS OR WALLS OVER 10 FT. HIGH SHALL HAVE 2" BRIDGING, SAME WIDTH AS THE STUD, PREFERABLY AT MID-HEIGHT BUT NOT TO EXCEED INTERVALS OF 8 FT.
- DO NOT SOLE OR NOTCH JOISTS, RAFTERS OR BEAMS, EXCEPT WHERE SHOWN IN DETAILS. OBTAIN ENGINEER'S APPROVAL FOR ANY NOTCHES OR NOTCHES NOT DETAILED. NOTCH THROUGH SILLS, PLATES, STUDS AND DOUBLE PLATES IN INTERIOR, BEARING AND SHEAR WALLS SHALL NOT EXCEED 1/3 THE PLATE OR STUD WIDTH. USE SCORED HOLES LOCATED IN THE CENTER OF THE STUD OR PLATE.
- APPROVED CROSS-BRIDGING OR SOLID BLOCKING SHALL BE SPACED AS FOLLOWS:
FOR RAFTERS MORE THAN 10 IN. IN DEPTH, AT 10'-0" O.C. MAX.
- ALL CORNER REFERENCES, UNLESS NOTED OTHERWISE, ARE FROM SIMPSON STRONG-TIE CATALOG, NO. 80-N-11 APPROVED EQUALS SHALL HAVE MATCHING U.C.S.D. RATINGS.
- EXPOSED MEMBERS AND TRUSS MEMBERS SHALL BE SELECT STRUCTURAL, FREE-OF-HEART-CENTER, KILN DRIED AND SPECIALLY SELECTED FOR APPEARANCE. CONTRACTOR IS WARNED OF LONG LEAD TIME ON KILN DRYING OF LARGE PIECES.

GLUED LAMINATED WOOD

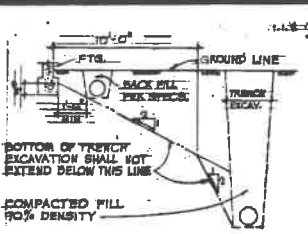
- GLUED LAMINATED WOOD BEAMS SHALL BE DOUGLAS FIR, COMBINATION 24 F. USE EXTERIOR TYPE ADHESIVES.
- ALL LAMINATIONS FOR "GLU LAM" BEAMS SHALL BE 1 1/2" THICK. ALL LAMINATIONS SHALL BE PARALLEL TO THE BOTTOM EDGE OF THE BEAM.
- BEAMS SHALL BE ARCHITECTURAL APPEARANCE GRADE.
- BOTTOM EDGE OF BEAM SHALL FOLLOW 1500 FT. RADIUS LINE UNLESS SPECIFIC CAMBERS ARE GIVEN.
- CONTRACTOR SHALL VERIFY LEAD TIME ON ALL DOUGLAS FIR BEAMS. HEM-FIR LAMINATIONS NOT PERMITTED.
- ALL MEMBERS EXPOSED TO THE WEATHER SHALL BE TREATED WITH AN APPROVED PRESERVATIVE.

DRAFTING SYMBOLS

DETAIL REFERENCE	○	SHEET NUMBER WHERE DETAIL IS DRAWN
SECTION REFERENCE	○	WHERE SECTION IS DRAWN
ELEVATION REFERENCE	○	WHERE ELEVATION IS DRAWN

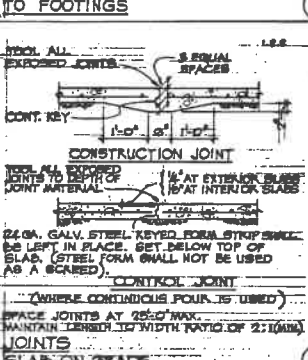
MATERIALS SYMBOLS

WOOD	[Symbol]
CONCRETE	[Symbol]
STRUCTURAL STEEL	[Symbol]

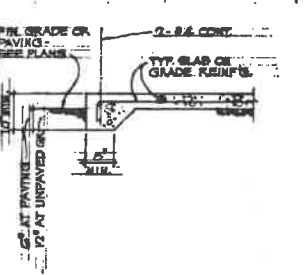


NOTE: THE CONTRACTOR SHALL COORDINATE ALL EXCAVATION OPERATIONS WITH BUILDING FOUNDATION REQUIREMENTS.

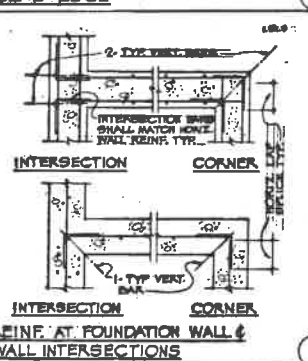
EXCAVATION PARALLEL TO FOOTINGS



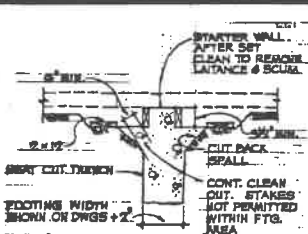
EXCAVATION PERPENDICULAR TO FOOTINGS



SLAB EDGE

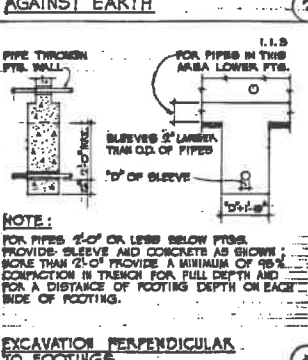


INTERSECTION

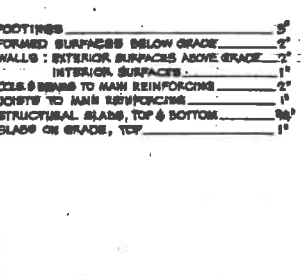


NOTE: FOOTINGS POURED AGAINST EARTH ARE SUBJECT TO APPROVAL OF STRUCTURAL ENGINEER.

FOOTINGS POURED AGAINST EARTH



CONCRETE PROTECTION FOR REINFORCING STEEL



DEPRESSED SLAB ON GRADE

SCHEDULE OF STRUCTURAL DRAWINGS

01	GENERAL NOTES & TYPICAL DETAILS
02	TYPICAL DETAILS
03	FOUNDATION PLAN SECTIONS & DETAILS
04	ROOF FRAMING PLAN SECTIONS & DETAILS
05	FRAMING ELEVATIONS & SECTIONS
06	FRAMING ELEVATIONS SECTIONS & DETAILS
07	FRAMING ELEVATIONS DETAILS

GREGORY VILLANUEVA AIA & ASSOCIATES PLANNING ARCHITECTURE

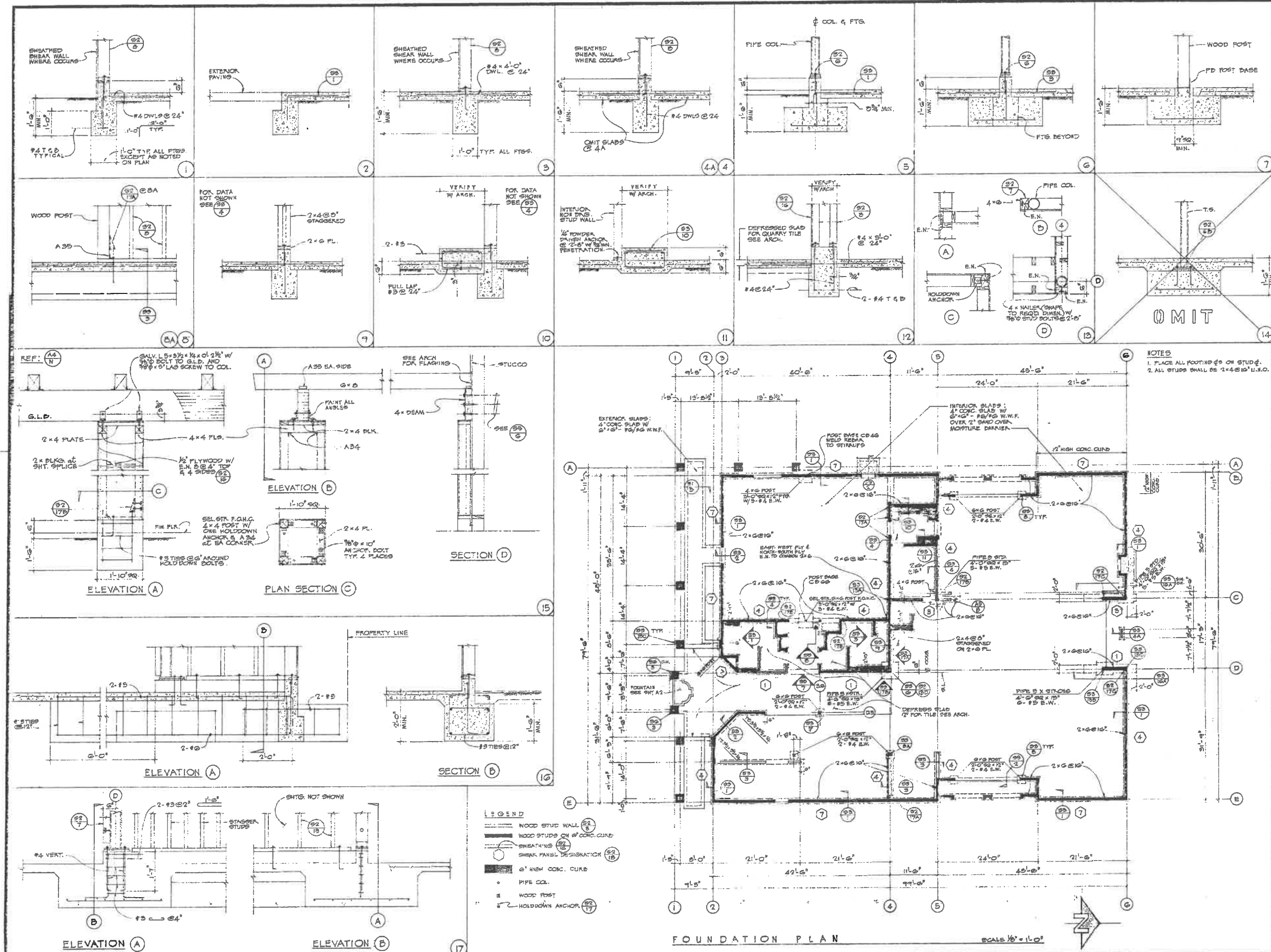
3400 IRVINE AVE. SUITE 221 NEWPORT BEACH, CALIFORNIA 92660
(714) 841-4433

SAN BERNARDINO PUBLIC LIBRARY WESTSIDE BRANCH CENTRAL CITY WEST PROJECT

STRUCTURAL ENGINEER
MARTIN S. TRAMER
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES TYPICAL DETAILS

DATE _____
SCALE NONE
DRAWN R.G.W.
JOB NO. _____
SHEET _____



REVISIONS	BY

GREGORY VILLANUEVA AIA & ASSOCIATES
 ARCHITECTURE PLANNING
 3400 IRVINE AVE. SUITE 221 NEWPORT BEACH, CALIFORNIA 92660
 (714) 941-1433

SAN BERNARDINO PUBLIC LIBRARY
WESTSIDE BRANCH
CENTRAL CITY WEST PROJECT

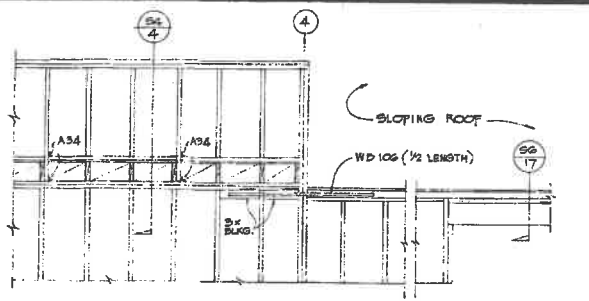
ARCHITECT
MARTIN TRANBARGER
 ARCHITECTURE
 1111 N. GARDEN ST. SUITE 200
 ANAHEIM, CALIF. 92815

FOUNDATION PLAN
SECTIONS & DETAILS

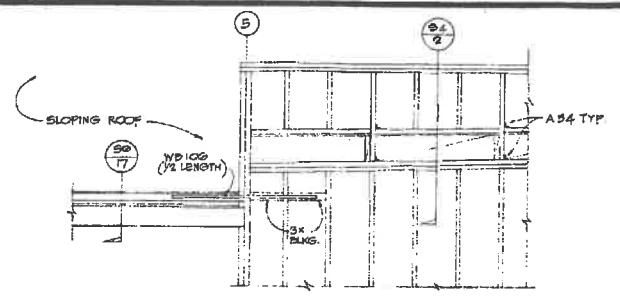
DATE	
SCALE	
DRAWN	
JOB NO.	
SHEET	
OF	

768-87

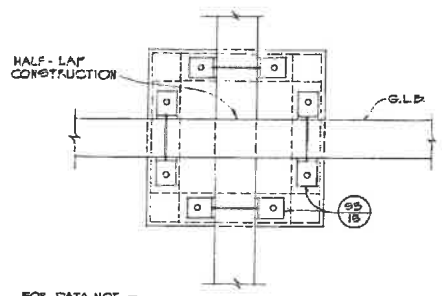
758-B-1



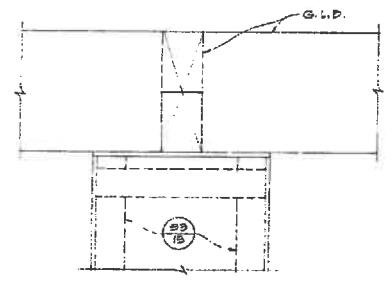
PARTIAL ELEVATION LINE (E) LOOKING WEST 1/2" = 1'-0"



PARTIAL ELEVATION LINE (D) LOOKING EAST 1/2" = 1'-0"

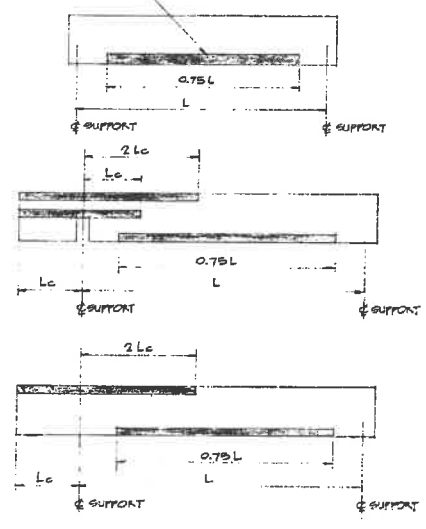


FOR DATA NOT SHOWN SEE (15)



TRELLIS BEAM at GRID LINES 1/A

TENSION LAMINATIONS: SPACE END JOINTS PER U.B.C. STD 25-10 SEC. 25.1004 (j)



SPACING OF END JOINTS IN G.L.D.

REVISIONS	BY

GREGORY VILLANUEVA AIA & ASSOCIATES
 ARCHITECTURE
 3400 IRVINE AVE. SUITE 231 NEWPORT-BEACH, CALIFORNIA 92660
 (714) 841-1429



SAN BERNARDINO PUBLIC LIBRARY
 WESTSIDE BRANCH
 CENTRAL CITY WEST PROJECT

STRUCTURAL ENGINEER
 MARTIN TRANBARGER
 REPORT NUMBER: DR-18208

FRAMING ELEVATIONS
 DETAILS

DATE
 SCALE
 DRAWN
 JOB NO.
 SHEET
 OF 57 SHEETS

758-B-1

EQUIPMENT SCHEDULE

AC-1 PAYNE MODEL 579C 240-490 YACD GAS/ELECTRIC ROOF TOP UNIT
 4,200 CFM @ 1/2" SP 7 1/2 HP COOLING CAP. 249,000 BTUH A.R.
 970 760-75 HEATING CAPACITY 490,000 / 270,000 BTUH
 INPUT 297,000 / 202,500 BTUH OUTPUT USING NATURAL GAS
 TOTAL FLA = 127 AMP @ 208V, 3Φ, 60 HZ
 EER = 7.0
 UNIT COMPLETE W/ (6) 16" x 20" x 2" & (2) 20" x 23" x 2" AIR FILTERS
 FARR 90/90 FROTHAWAY TYPE PREPAB ROOF CURB, MANUAL
 O.A. DAMPER, ECONOMIZER, RELIEF AIR DAMPER & ROOM
 THERMOSTAT W/ PLASTIC LOCKING GUARD
 MIN. O.S.A. = 890 CFM
 APPROX. OPERATING WT. = 3200 LBS

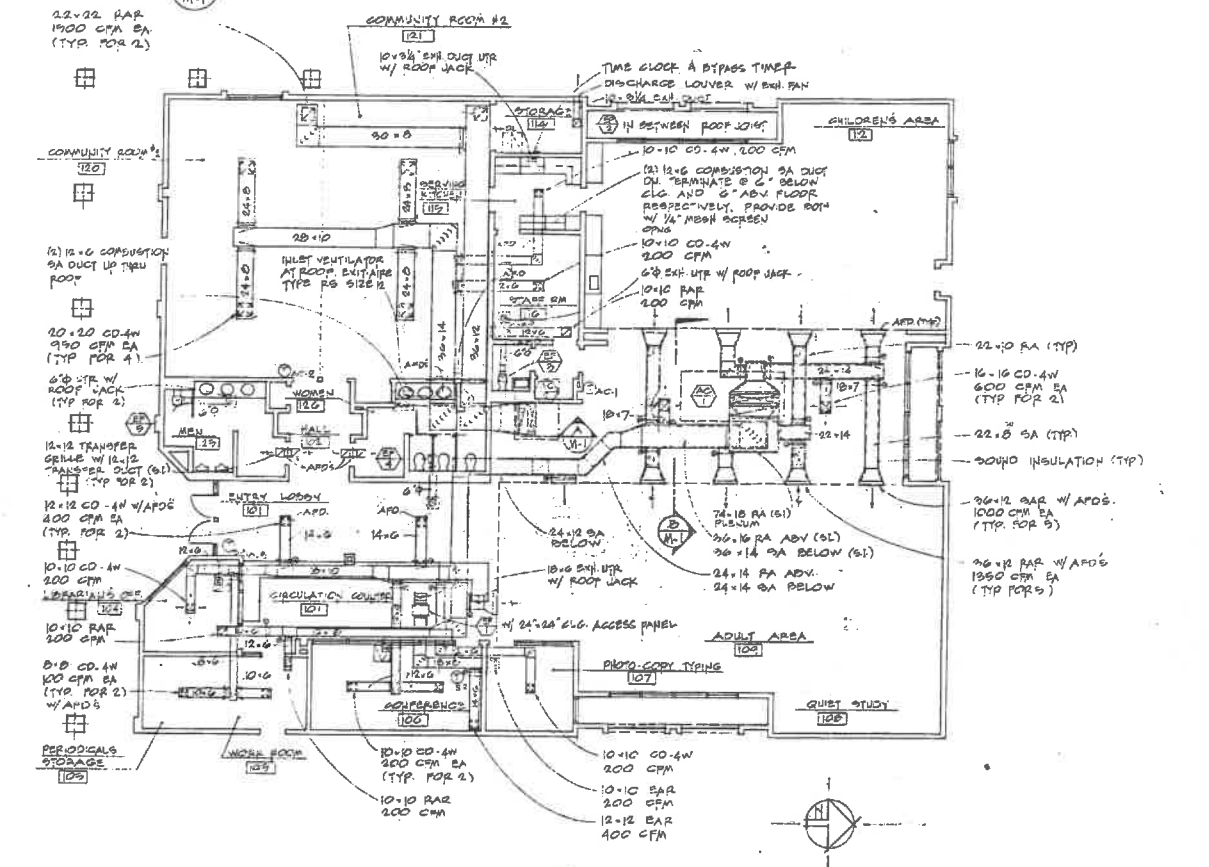
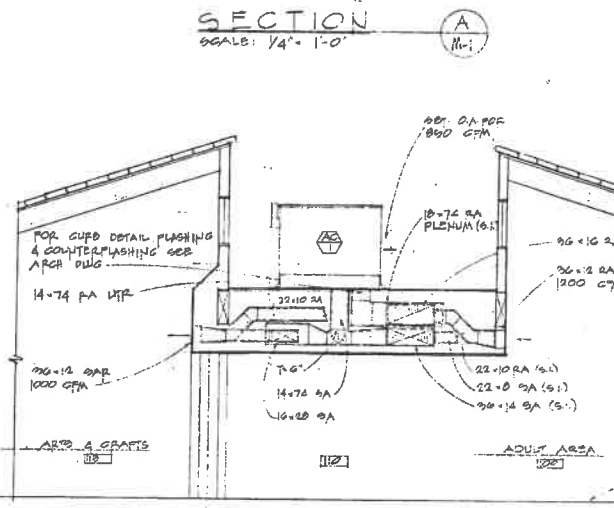
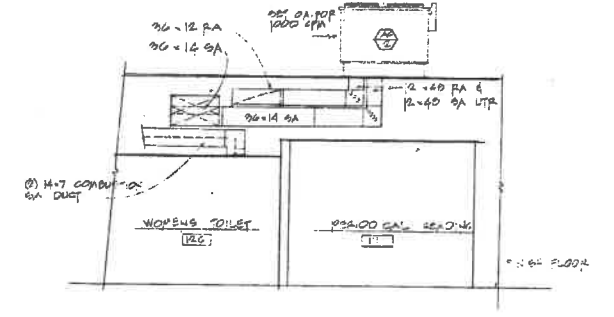
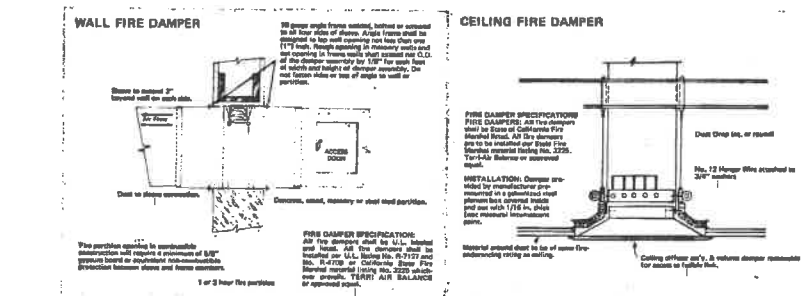
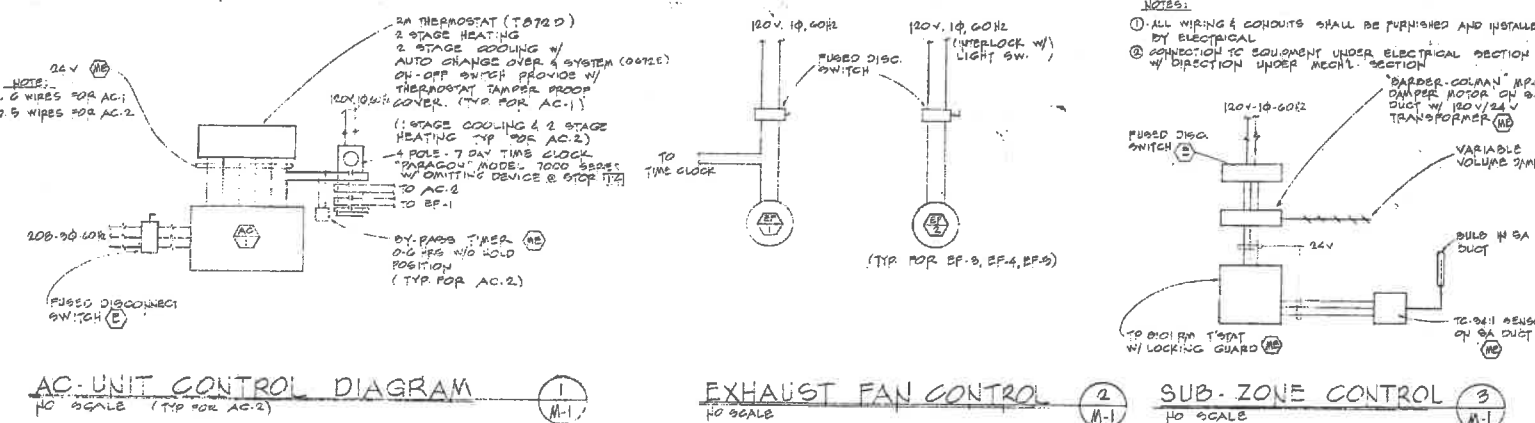
AC-2 PAYNE MODEL 579C 120-900 GAS/ELECTRIC ROOF TOP UNIT
 4,200 CFM @ 1/2" SP 3 HP MOTOR COOLING CAP. 122,000 BTUH
 A.R. 970 760-75 HEATING CAPACITY 700,000 / 180,000 BTUH
 INPUT 229,000 / 150,000 BTUH OUTPUT USING NATURAL GAS
 TOTAL FLA = 61.7 AMP @ 208V, 3Φ, 60 HZ
 EER = 7.0
 UNIT COMPLETE W/ (4) 16" x 25" x 2" AIR FILTERS FARR 90/90 FROTHAWAY
 TYPE PREPAB ROOF CURB, MANUAL O.A. DAMPER, ECONOMIZER,
 RELIEF AIR DAMPER & RM THERMOSTAT W/ PLASTIC LOCKING GUARD
 MIN. O.S.A. = 600 CFM
 APPROX. OPER. WT. = 1700 LBS

EX-1 EXHAUST FAN - CEILING MOUNTED
 GREENHECK MODEL 99-60 600 CFM @ 1/2" SP 1/2 HP MOTOR
 1100 RPM, 2.9 AMP, 120V, 1Φ-60 HZ PROVIDE W/ BACKDRAFT
 DAMPER & MODEL R6-60 FLAT ROOF DISCHARGE ROOF JACK

EX-2 EXHAUST FAN - CEILING MOUNTED
 GREENHECK MODEL 99-25 1200 CFM @ 1/2" SP 1/2 HP MOTOR
 1090 RPM, 1.0 AMP, 120V, 1Φ-60 HZ PROVIDE W/ BACKDRAFT
 DAMPER & MODEL WL-60 WALL LOUVERED DISCHARGE

EX-3 EXHAUST FAN - CEILING MOUNTED
 GREENHECK MODEL 99-27 1290 CFM @ 3/8" SP 1/2 HP MOTOR
 1990 RPM, 2.1 AMP, 120V, 1Φ-60 HZ PROVIDE W/ BACKDRAFT
 DAMPER & MODEL R6-60 FLAT ROOF DISCHARGE ROOF JACK

EX-4 EXHAUST FAN - CEILING MOUNTED
 GREENHECK MODEL 99-17 1000 CFM @ 1/2" SP 1/2 HP MOTOR
 1990 RPM, 0.7 AMP, 120V, 1Φ-60 HZ PROVIDE W/ BACKDRAFT
 DAMPER & MODEL R6-60 FLAT ROOF DISCHARGE ROOF JACK



AIR-CONDITIONING SYMBOLS & ABBREVIATIONS	
SYMBOL	DESCRIPTION
[Symbol]	DUCT FLEX
[Symbol]	DUCT BOND INSULATION
[Symbol]	EXHAUST (ADJUSTABLE)
[Symbol]	DUCT SECTION - RETURN
[Symbol]	DUCT SECTION - EXHAUST
[Symbol]	TURBINE VENT
[Symbol]	ROOF LOUVER
[Symbol]	DIRECTION OF FLOW
[Symbol]	ROOM THERMOSTAT - ONE IN
[Symbol]	LOW VOLTAGE
[Symbol]	LINE VOLTAGE
[Symbol]	ACCESS DOOR
[Symbol]	ACCESS PANEL
[Symbol]	CEILING DIFFUSER
[Symbol]	COMBUSTION AIR
[Symbol]	EXHAUST AIR
[Symbol]	EXHAUST AIR GRILLE
[Symbol]	EXHAUST AIR REGISTER
[Symbol]	EXHAUST-PNEUMATIC
[Symbol]	FLOOR DRAIN
[Symbol]	FLOOR SINK
[Symbol]	EXHAUST AIR FIRE DAMPER
[Symbol]	EXHAUST AIR THERMOSTAT
[Symbol]	NORMALLY CLOSED
[Symbol]	NORMALLY OPEN
[Symbol]	NOT IN CONTRACT
[Symbol]	MIXED AIR
[Symbol]	OUTSIDE AIR
[Symbol]	PNEUMATIC-ELBOW
[Symbol]	POINT OF CONNECTION
[Symbol]	RETURN AIR
[Symbol]	RETURN AIR GRILLE
[Symbol]	RETURN AIR REGISTER
[Symbol]	REPAIRING ELBOW
[Symbol]	REPAIRING TEE
[Symbol]	SUPPLY AIR
[Symbol]	SUPPLY AIR GRILLE
[Symbol]	SUPPLY AIR REGISTER
[Symbol]	SOUND INSULATION
[Symbol]	TO ROOF
[Symbol]	UNDER OTHER SECTION OF SPEC.
[Symbol]	MANUAL VOLUME DAMPER
[Symbol]	THROTTLED AND INSTALLED UNDER ELECTRICAL SECTION
[Symbol]	THROTTLED MECHANICAL DAMPER BY ELECTRICAL
[Symbol]	UP THRU ROOF
[Symbol]	AUTOMATIC FIRE DAMPER
[Symbol]	MANUAL VOLUME DAMPER
[Symbol]	MOTORIZED DAMPER
[Symbol]	CONCEALED DAMPER REGULATOR

REVISIONS

GREGORY VILLANUEVA AIA & ASSOCIATES ARCHITECTURE PLANNING
 3400 IRVINE AVE. SUITE 221 NEWPORT BEACH, CALIFORNIA 92660
 (714) 641-1828

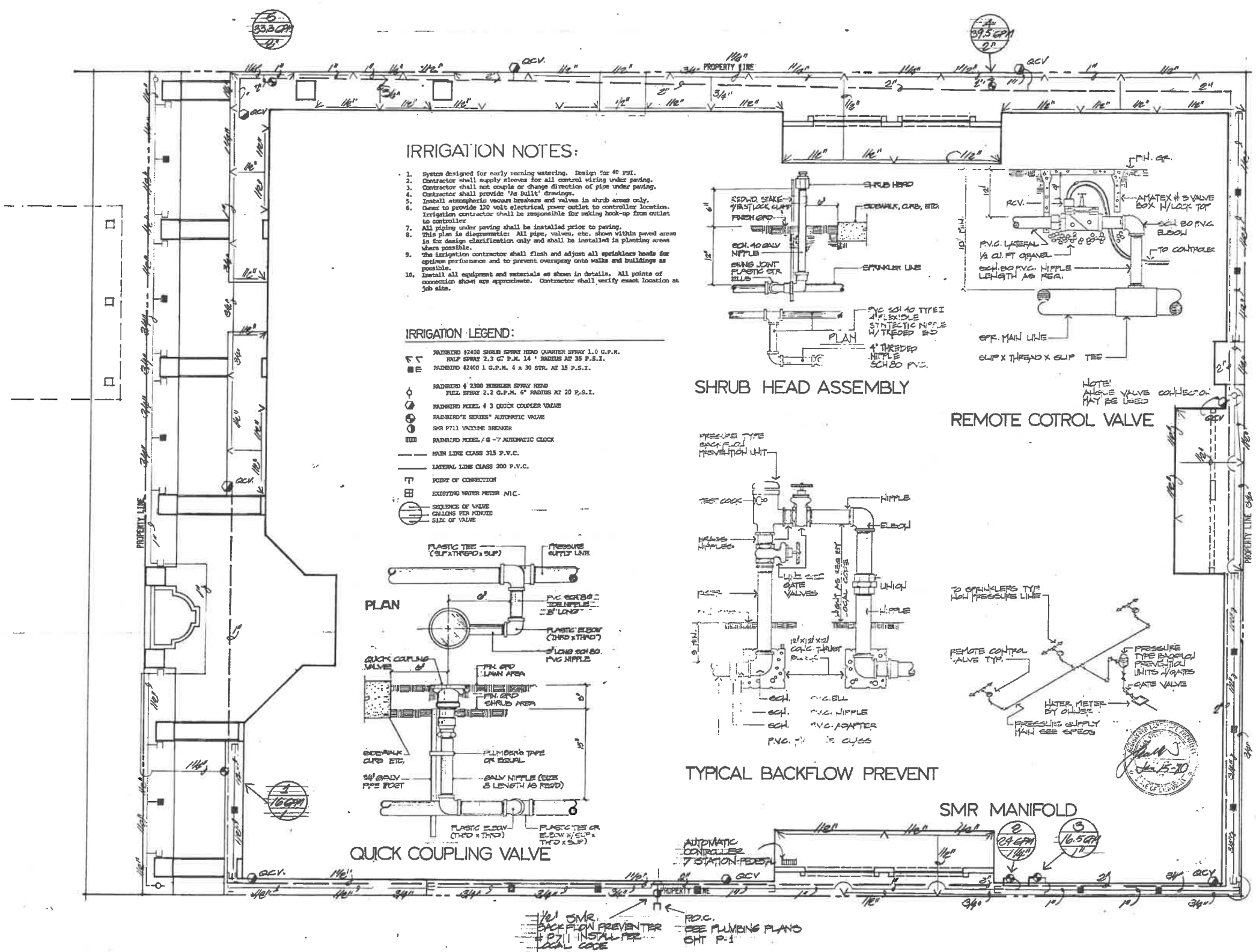
SAN BERNARDINO PUBLIC LIBRARY WESTSIDE BRANCH CENTRAL CITY WEST PROJECT

MECHANICAL FLOOR PLAN / LEGEND

DATE: 1-7-80
 SCALE: AS SHOWN
 DRAWN: JMB
 CHECKED: M-1
 DESIGNED: M-1
 PROJECT NO. 8001

ASSOCIATED CONSULTING ENGINEERS ASSOC.
 201 BOWEN AVENUE
 LOS ANGELES, CALIFORNIA 90001
 (213) 864-1414

758-B-1

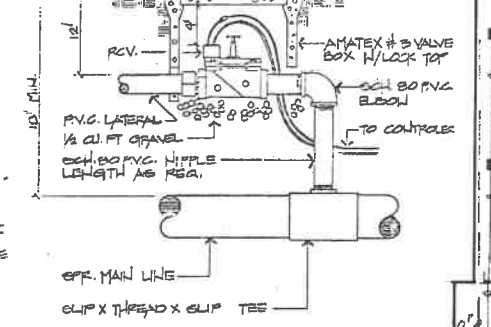
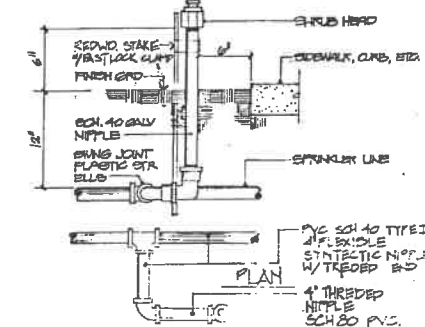


IRRIGATION NOTES:

1. System designed for early morning watering. Design for 40 PSI.
2. Contractor shall supply sleeves for all control wiring under paving.
3. Contractor shall not couple or change direction of pipe under paving.
4. Contractor shall provide "As Built" drawings.
5. Install atmospheric vacuum breakers and valves in shrub areas only.
6. Owner to provide 120 volt electrical power outlet to controller's location. Irrigation contractor shall be responsible for making hook-up from outlet to controller.
7. All piping under paving shall be installed prior to paving. This plan is diagrammatic. All pipe, valves, etc. shown within paved areas is for design clarification only and shall be installed in planting areas where possible.
8. The irrigation contractor shall flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walks and buildings as possible.
9. Install all equipment and materials as shown in details. All points of connection shown are approximate. Contractor shall verify exact location at job site.

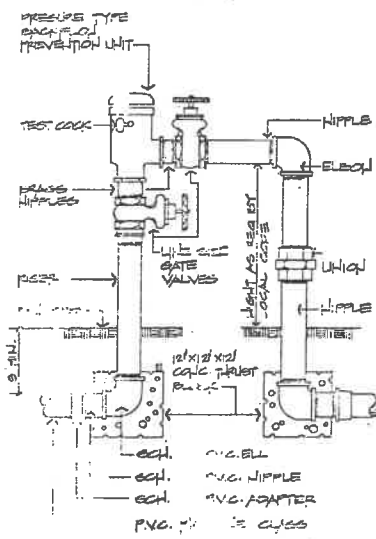
IRRIGATION LEGEND:

- MANHOLE #2400 SHURB SPRAY HEAD QUARTER SPRAY 1.0 G.P.M. FULL SPRAY 2.3 G.P.M. 14" RADIUS AT 35 P.S.I.
- MANHOLE #2400 1 G.P.M. 4 x 30 STR. AT 15 P.S.I.
- MANHOLE # 2300 KENSER SPRAY HEAD FULL SPRAY 2.2 G.P.M. 6" RADIUS AT 20 P.S.I.
- MANHOLE MODEL # 3 QUICK COUPLER VALVE
- MANHOLE "E" SERIES AUTOMATIC VALVE
- 500 FT. 11/2" VACUUM BREAKER
- MANHOLE MODEL # 8 - 7 AUTOMATIC CLOCK
- MAIN LINE CLASS 315 P.V.C.
- LATERAL LINE CLASS 200 P.V.C.
- POINT OF CONNECTION
- EXISTING WATER METER N.I.C.
- SYMBOLS OF VALVE GALLONS PER MINUTE SIZE OF VALVE

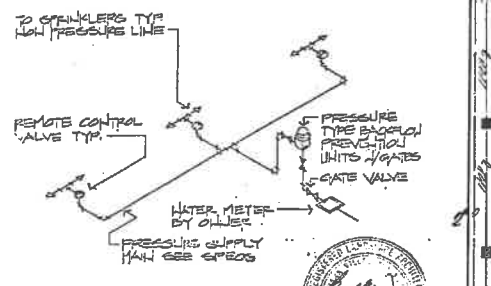


SHRUB HEAD ASSEMBLY

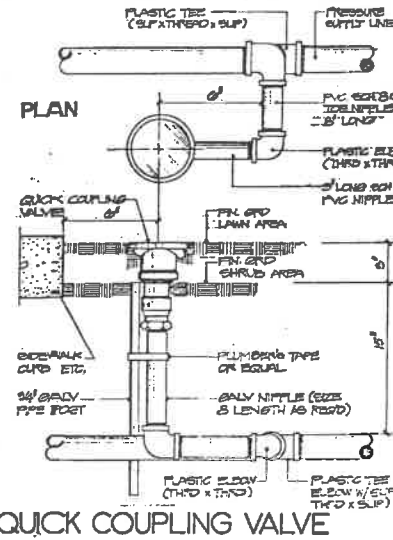
REMOTE CONTROL VALVE



TYPICAL BACKFLOW PREVENT



SMR MANIFOLD



QUICK COUPLING VALVE

IRRIGATION PLAN
 SCALE: 1/4"=1'-0"



REVISIONS

GREGORY VIL LANUEVA AIA & ASSOCIATES
 ARCHITECTURE PLANNING
 ALHAMBRA CALIFORNIA 91803
 913 SOUTH FREMONT AVENUE
 (213) 289-6926

SAN BERNARDINO PUBLIC LIBRARY
 WESTSIDE BRANCH
 CENTRAL CITY WEST PROJECT

LANDSCAPE

DATE: 1-7-80
 SCALE: 1/4"=1'-0"
 DRAWN: [Signature]
 JOB NO: 0001
 SHEET: 12
 OF: 12

758-B-1

APPENDIX D
CITY OF SAN BERNARDINO
MATERIAL SPECIFICATIONS

LED

4 ft. Single-Ended T8 Tube



FEATURES

- 5000 Kelvin Daylight white color temperature
- Meets DLC performance and efficiency criteria
- Equivalent to a 32-Watt fluorescent T8 tube
- Frosted glass lens evenly diffuses light
- Compatible with non-shunted sockets
- UL listed for use in damp locations
- Bi-Pin G13 base
- DLC® Part Number: PLTSP39215
- NSF /ANSI standard 2 coating

APPLICATIONS

- Office spaces and work environments
- Kitchens and bathrooms
- Security areas and basements



SKU#	Kelvin	Lumens	CRI	Wattage	Voltage	DLC?	Base	Life Hours	Warranty
PLT-90032	5000	1800	82	15	120-277	YES	Bi-Pin	50,000	5 Years

SPECIFICATIONS

DIMMABLE	NO	LUMENS	1,800
DLC LISTED	YES	VOLTAGE	120-277
SAFETY RATING	UL DAMP	LENS	FROSTED GLASS
CRI	82	BASE TYPE	G13
COLOR	DAYLIGHT WHITE	BALLAST TYPE	BALLAST BYPASS
COLOR TEMPERATURE	5000K	DIAMETER	1 IN.
LIFE HOURS	50,000	LENGTH	48 IN.
WATTAGE	15 WATTS	FLUORESCENT EQUAL.....	32 WATT



Fine Fissured Ceiling Tile, 24 in W x 48 in L



Home / Hardware & Building Materials / Ceilings / Ceiling Tiles / Fine Fissured Ceiling Tile, 24 in W x 48 in L, 8 PK

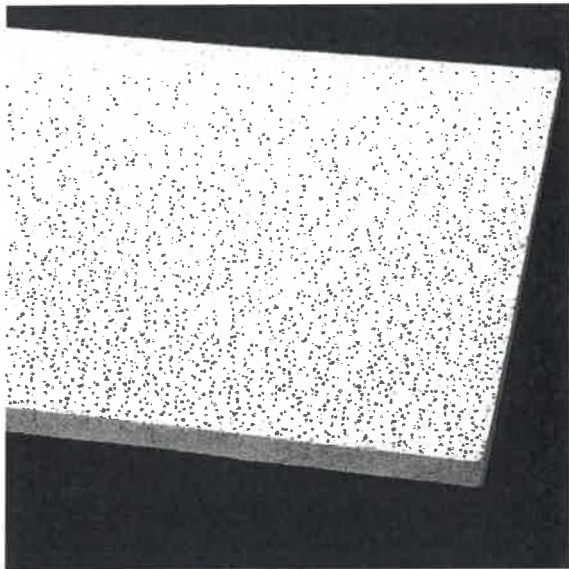
[Shop All Ceiling Tiles](#)

ARMSTRONG

Fine Fissured Ceiling Tile, 24 in W x 48 in L, 8 PK

Zoro #: G3321897 Mfr #: 1714

0 reviews [Write a Review](#)



Tap to zoom

Help us improve our product images

\$199.00

pkg. of 8 (\$24.88/ea)

- **Item:** Ceiling Tile
- **Series:** Fine Fissured
- **Length:** 48 in
- **Width:** 24 in
- **Noise Reduction Coefficient:** 0.7
- **Installation Method:** Grid (Suspended)
- **Edge Type:** Square Lay-In
- **Grid Size:** 15/16 in

[See full product details](#)



- This item: Fine Fissured Ceiling Tile, 24 in W x 48 in L, 8 PK \$199.00
- Cortega Ceiling Tile, 24 in W x 48 in L, 12 PK \$232.72
 - i This item includes a minimum quantity of 2
- Cortega Ceiling Tile, 24 in W x 24 in L, 16 PK \$67.22

Total Price **\$498.94**

Add All Three to Cart

Armstrong #1714 Specifications

Zoro #: G3321897 Mfr #: 1714

Item: Ceiling Tile	Series: Fine Fissured
Length: 48 in	Width: 24 in
Noise Reduction Coefficient: 0.7	Installation Method: Grid (Suspended)
Edge Type: Square Lay-In	Grid Size: 15/16 in
Color: White	Thickness: 3/4 in
Ceiling Attenuation Class: 40	Material: Mineral Fiber
Package Quantity: 8	Texture: Medium
Light Reflectance: 0.85	Features: Total Acoustics Product, Excellent Sound Absorption and Blocking, Non Directional, Durable
Standards: ASTM E1264, ASTM E84, CAN/ULC S110	Application: Band Rooms, Corridors, Healthcare, Libraries, Schools
Coverage: 64 sq ft	Resistant To: Bacteria, Mildew, Mold, Sag, Soil
Recycled Content: 42 %	Green Environmental Attribute: Product Contains a Minimum of 40% Post-Consumer Recycled Content
Length (Straight Wireway): 48 in	Country of Origin (subject to change): United States

Help us improve our product information

Straight Blade Devices

15A, 125V, 2 Pole, 3 Wire Grounding

Commercial Specification Grade Duplex Receptacles

HUBBELL

Features

- Easy access split circuit tab
- Fork terminal capable
- Smooth face
- Triple wipe contacts

Ordering Information

Description	Device Color	UPC Number	Catalog Number
Smooth face, side wired only	White	783585900070	CR15WHI

Listings

UL Listed to UL498 File No. E2186
Certified to CSA, C22.2, No. 42
NEMA® WD-6 Compliant

Specifications

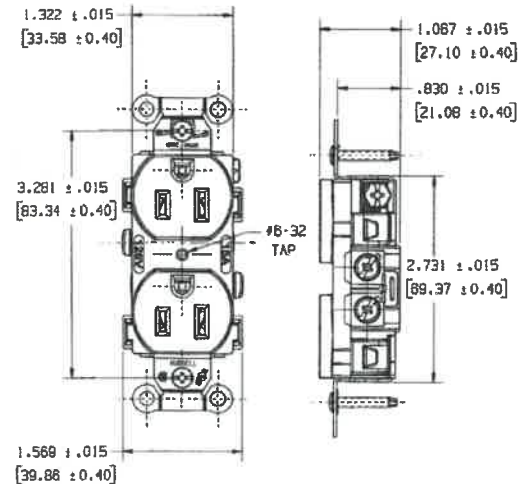
Face	Nylon
Base	Nylon
Power Contacts	.030 in. (.8) Brass
Mounting Strap	.040 in. (1) Galvanized steel
Terminal Screws	Plated steel
Automatic Self-grounding Staple	Stainless steel
Mounting Screws	Galvanized steel

Performance

Electrical	
Current Interrupting	Certified for current interrupting at full rated current
Dielectric Voltage	Withstands 2,000V minimum
Mechanical	
Product Identification	Ratings are a permanent part of the device
Terminal Accommodation	#14-#10 AWG copper stranded or solid conductor only
Terminal Identification	Terminals identified in accordance with UL 498 and CSA
Environmental	
Flammability	UL 94 V-2
Operating Temperatures	Maximum continuous 75°C; minimum -40°C (w/o impact)



15A 125V AC
NEMA 5-15R
UL CSA
0.5 HP



Complementary Products

Wallplate or Weatherproof Cover

Duplex Opening

Online Resources

Customer Sales Drawings
eCatalog

Dimensions in Inches (mm)

Hubbell Wiring Device-Kellems • Hubbell Incorporated (Delaware) • 40 Waterview Drive • Shelton, CT 06484

Phone (800) 288-6000 • Fax (800) 255-1031 • Specifications subject to change without notice.



NORTH SCULPTURE

FABRIC CORK BULLETIN BOARDS - DESIGNS - PRICING - SPECS

HOME ABOUT US PRODUCTS ORDER FORM

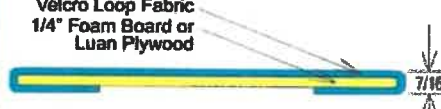


FABRIC CORK BULLETIN BOARDS - PRICING & CUT-AWAY CROSS SECTIONS

We build to your exact size, shape in any of **100 COLORS** of **VELCRO LOOP** or **BURLAP** fabric with cork underlay. For sizes not listed, round off to next larger size for pricing purposes only. Use pushpins and **VELCOINS®**. For larger expanses **install multiple boards butted together**. A subtle seam between boards acts as a positive design element. **ROLLING BULLETIN BOARDS** available. Ask for **FREE SWATCHES**. See [List of Customers](#) and [Praises](#). [ORDER FORM](#) - [BACKS of PANEL](#)

VELCRO OR BURLAP Call For Size Not Listed	FOAM BOARD OR PLYWOOD 7/16" Thick	ACOUSTIC HOMASOTE PANEL 9/16" Thick	PANEL & INTERIOR CORK 9/16" Thick	PANEL & INTERIOR FRAME 1" Thick	PANEL & INTERIOR FRAME & CORK 1 1/4" Thick
15 x 20"	\$99	\$119	\$179	\$179	\$209
20 x 30"	\$149	\$169	\$199	\$199	\$249
30 x 40"	\$179	\$199	\$259	\$259	\$299
48 x 48"	\$209	\$259	\$329	\$329	\$379
40 x 60"	\$259	\$299	\$379	\$379	\$429
48 x 60"	\$249	\$359	\$389	\$389	\$449
48 x 72"	\$299	\$369	\$399	\$399	\$499
48 x 84"	\$319	\$399	\$449	\$449	\$559
48 x 96"	\$339	\$429	\$499	\$499	\$599
48 x 108"	\$399	N/A	\$599	\$599	\$699
48 x 120"	\$499	N/A	\$699	\$699	\$799
48 x 144"	N/A	N/A	\$799	\$799	\$899
48 x 168"	N/A	N/A	\$899	\$899	\$999

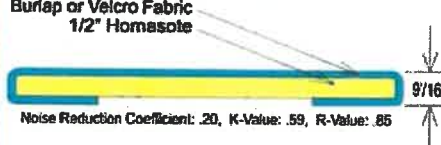
Foam Board or Luan Plywood Panel



Panel With Interior Frame



Acoustic Partical Board Panel



Panel With Interior Frame and Cork



Panel With Interior Cork



*For sizes not listed, round off to the next larger size for pricing purposes only.



ORDER FORM. Ships out within 10-12 business days or sooner. (800)791-1819 - [REQUEST SWATCHES](#) - NorthSculpture@gmail.com - [BACKS of PANELS](#) .
[Main](#) | [All Cork Boards](#) | [Bulletin Boards](#) | [Boards On Legs](#) | [Separate Boards](#) | [Cabinets](#) | [Partitions](#) | [Dry Erase Boards](#) | [Specialties](#) | [Tradeshow Walls](#) | [Tabletop Boards](#)
[Gallery](#) | [Customers](#) | [Endorsements](#) | [Articles](#) | [Site Map](#)

*VELCRO® and VELCOIN® are registered trademarks of VELCRO INDUSTRIES B.V.





Tile Specifications STANDARDS & REGULATIONS






pounds. Final selection of the tile should be based upon the breaking strength and the appropriate installation method. Tile integrity is critically dependent upon proper installation. The manufacturer recommends strict adherence to industry installation guidelines set forth in ANSI A108, A118 and A136.

Chemical Resistance, ASTM C650-04

Chemical resistance is measured using ASTM C650-04. A tile sample is placed in continuous contact with a variety of chemicals for 24 hours, rinsing the surface an

SHADE VARIATIONS

Tiles range from complete consistency to a more random appearance. Here's an overview of color and shading of individual tile selections.

-  **MONOCHROMATIC (V0)** | Very uniform, monochromatic color
-  **LOW (V1)** | Consistent color within each tile and from tile to tile
-  **MEDIUM (V2)** | Color variation within each tile
-  **HIGH (V3)** | Some variation from tile to tile, and within each tile
-  **RANDOM (V4)** | Considerable variation from tile to tile

Industry Standards

The American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are nationally recognized organizations, which identify and develop industry test methods and technical standards.

Neither ASTM nor ANSI establish an industry standard identifying a minimum COF value whereby ceramic tile may be labeled "slip resistant." All Standard Grade ceramic tile products manufactured by or for Lifeproof meet or exceed the requirements of ANSI A137.1. See product pages for series-specific technical data.

Abrasion Resistance, ASTM C1027-99

The durability of glazed tile is measured subjectively by observing the visible surface abrasion of the tile when subjected to the ASTM C1027-99 testing procedure. The manufacturer evaluates porcelain tile recommended for floor applications using this test method which includes the following classification system:



LifeProof Shadow Wood 6 in. x 24 in.
tile shown (SKU 100297/061)



Tile Specifications STANDARDS & REGULATIONS

CLASS ZERO | Not recommended for use on floors

CLASS ONE | Light Residential

Light traffic

Residential floor coverings in areas subject to soft-soled footwear or normal footwear traffic, without scratching dirt (i.e. domestic bathrooms and bedrooms without exterior access).

CLASS TWO | Residential

Medium to Light traffic

Residential floor coverings in areas subject to soft-soled footwear or normal footwear traffic with small amounts of scratching dirt (i.e. rooms in the living areas of homes except kitchens, entrances and other areas that may be subjected to high usage).

CLASS THREE | Heavy Residential or Light Commercial

Medium to Heavy Traffic

Residential or light commercial may withstand normal footwear and regular traffic, with some dirt and/or other abrasives present in limited quantities. Tile in this class may be used in light commercial installations with limited foot traffic and with no direct access to the outside. Examples may include residential kitchens and hallways with limited traffic from the outside.

CLASS FOUR | Commercial

Heavy Traffic

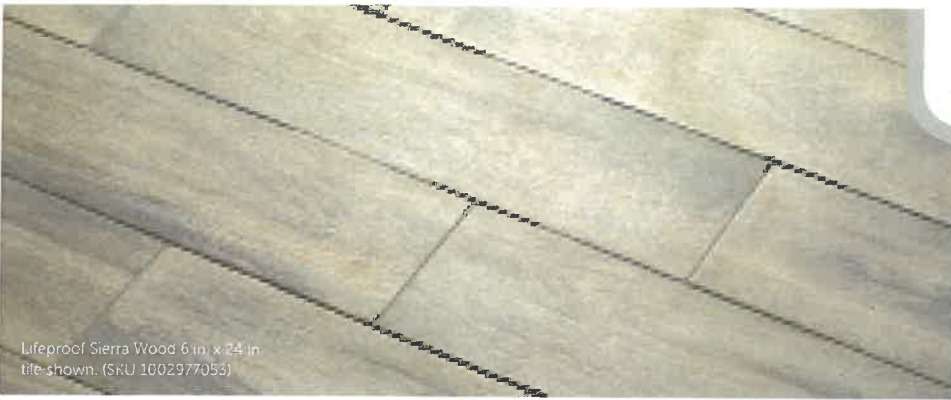
Residential and commercial floor coverings subjected to considerable traffic and scratching dirt (i.e. entrances, workrooms, inns, exhibition halls, and sales rooms, as well as other rooms in public and private buildings). Floors should be adequately protected against scratching dirt at the entrances to buildings by either floor mats or some other footwear cleaning device.

CLASS FIVE | Heavy Commercial

Heavy Traffic

Heavy commercial floor coverings subject to heavy traffic with very abrasive soil.



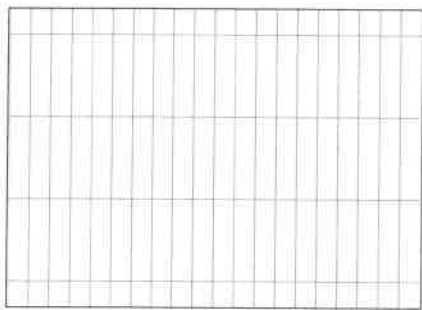


Lifeproof Sierra Wood 6 in. x 24 in. tile shown. (SKU 1002977053)

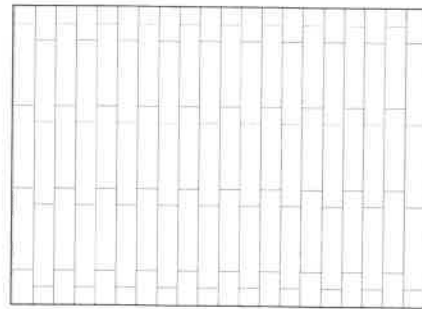


INSTALLATION IDEAS 6 IN. X 24 IN.

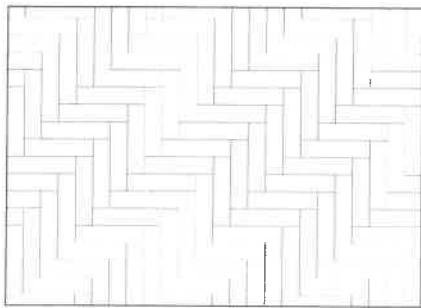
Getting authentically beautiful wood look floors has never been easier with Lifeproof porcelain tile. Create your own pattern or select the right one for your home from these examples below.



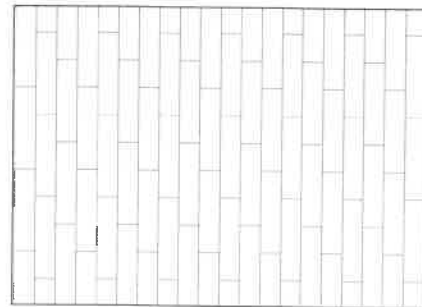
RECTANGULAR GRID



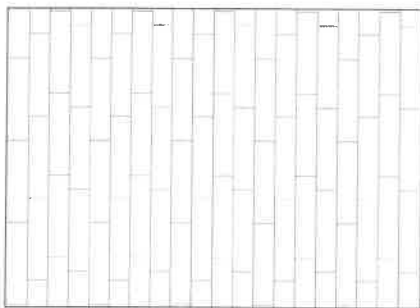
BRICKWORK 1/5 OFFSET



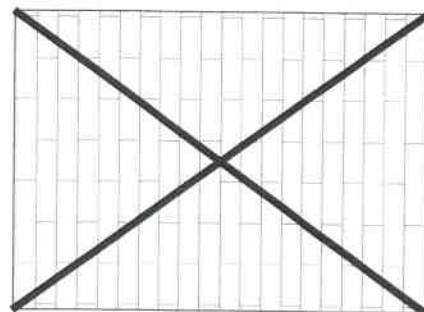
HERRINGBONE



BRICKWORK 1/3 OFFSET



RANDOM 1/3 OFFSET
NOTE: THE OFFSET SHOULD NOT EXCEED 33% WHEN INSTALLING A RANDOM OFFSET PATTERN



BRICKWORK 50% OFFSET
NOT RECOMMENDED

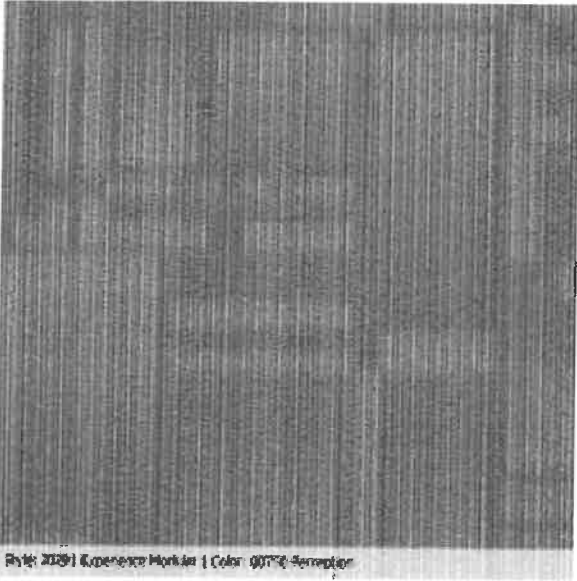
Remember to add at least 10% overage to your project for patterns, waste, breakage, or future repairs.

Project: Submittal for Delmann Heights Comm & Senior Center

Project #: 1

San Bernardino, CA

CSI: 09 68 13



File: 20291 Experience Modular | Color: 00750 Perception

<http://www.patcraft.com/>

CPT1

Patcraft

Product Name

Infinite Wisdom Collection - Experience Modular 24" X 24"

Product Number

10291

Color Name/Color Number

Perception/00750

Backing: EcoWorx Tile

Size: 24 in x 24 in x 0.24 in

Finish:

Shape:

Project: Submittal for Delmann Heights Comm & Senior Center

Category

Flooring

Type

Carpet Tile

Submitted by

Universal Metro, Inc.

<https://universalmetro.com/>

Architect

General Contractor

JCOS DEVELOPMENT

Documents in bold included:

Spec Sheet

[Installation Sheet]

[Maintenance Sheet]

[Warranty Sheet]

[SDS Sheet]

Product Notes

ADVISE INSTALLATION AND DIRECTION

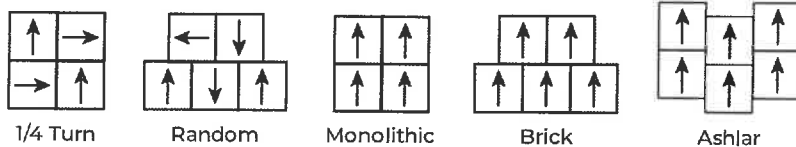
M | Experience PRODUCT SPECIFICATIONS



COLLECTION	Infinite Wisdom
STYLE NUMBER	10291
PRODUCT TYPE	Modular
CONSTRUCTION	Multi-Level Pattern Loop
FIBER TYPE	Eco Solution Q® Nylon
DYE METHOD	100% Solution Dyed
PRIMARY BACKING	Non-Woven Synthetic
SECONDARY BACKING	Ecoworx
PROTECTIVE TREATMENTS	SSP® Shaw Soil Protection

PRODUCT SIZE	US Units	Metric Units
GAUGE	24 inches x 24 inches	60.96 cm x 60.96 cm
STITCHES	1/12 inches	47.24 per 10 cm
FINISHED PILE THICKNESS	10 per inches	37.40 per 10 cm
AVERAGE DENSITY	0.095 inches	2.41 mm
TOTAL THICKNESS	6442 oz/yd ³	10.08
TUFTED YARN WEIGHT	0.24 inches	6.10 mm
GSA APPROVED PRODUCT	17 oz/yd ²	576.40 g/m ²
MERGEABLE DYE LOT	Yes	
	Yes	

Installation Methods



Performance Testing

PILL TEST	Pass
RADIANT PANEL	Class I
NBS SMOKE	Less than 450
ELECTROSTATIC PROPENSITY	Less than 3.5 kv
CRI GREENLABEL PLUS	GLP9968
ADA COMPLIANCE	>0.6, meets the recommended static coefficient of friction for ADA walking surfaces and accessible routes

M | Experience

Warranty

Lifetime Commercial Limited

Please visit patcraft.com for the most current warranty information.

Environmental Specifications

RECYCLABILITY 100% Recyclable

Materials

Ingredients

DOES NOT CONTAIN does not contain PVC, phthalates or PBD/PBDE

Recycled Content

TOTAL RECYCLED CONTENT (BY WEIGHT) 43%

PRE-CONSUMER 43%

POST-CONSUMER 0%

BIO-BASED/RAPIDLY RENEWABLE CONTENT (BY WEIGHT) 0%

PACKAGING 100% Recyclable

COUNTRY OF ORIGIN (MANUFACTURER) USA

Meets or exceeds all local and national regulations in country of manufacture. Manufactured in an ISO9001 & ISO14001 certified facility or equivalent. Recycled content is calculated using system allocation, mass balance, and direct insertion. The actual recycled content in this product will likely vary. For more information email info@patcraft.com.

Third Party Certifications

MBDC CRADLE TO CRADLE	Silver Certified
NSF 140	Gold Certified
CRI GREEN LABEL PLUS	Certified GLP9968
USGBC LEED	Contributes
BUILDING RESEARCH ESTABLISHMENT	Certified
GOOD ENVIRONMENTAL CHOICE AUSTRALIA	Certified

Specifications are subject to nominal manufacturing variances. Material supply and/or manufacturing processes may necessitate specification changes without notice. This carpet is an exclusive design and may not be duplicated in any manner. Use of this design in the creation of another carpet design is also strictly prohibited. Visit patcraft.com/testing for more information.

Project: Submittal for Delmann Heights Comm & Senior Center

Project #: 1

San Bernardino, CA

CSI: 09 65 19



<http://www.armstrong.com/commflooringna/>

LVT1

Armstrong Flooring Commercial

Product Name

Luxury Vinyl Tile - Parallel USA 20

Product Number

J5220

Color Name/Color Number

Sage Brown/J5220

Backing:

Size: 6 in x 48 in x 0.100 in

Finish: Medium Gloss

Shape: Plank

Project: Submittal for Delmann Heights Comm & Senior Center

Category

Flooring

Type

Luxury Vinyl Tile

Submitted by

Universal Metro, Inc.

<https://universalmetro.com/>

Architect

General Contractor

JCOS DEVELOPMENT

Documents in bold included:

Spec Sheet

[Installation Sheet]

[Maintenance Sheet]

[Warranty Sheet]

[SDS Sheet]

Product Notes

ADVISE INSTALLATION AND DIRECTION

PRODUCT SPEC PAGE

Parallel® USA 20 | Parallel® USA 12

Luxury Flooring

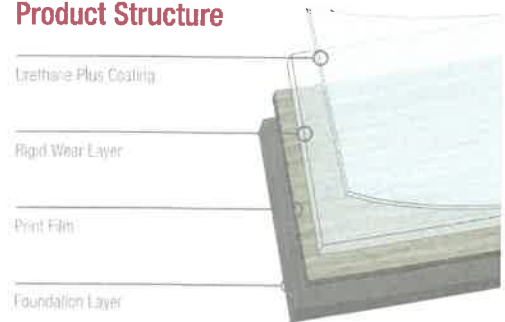
Performance

Construction	Product Line	International Product Specifications	Overall Thickness Wear Layer Thickness	Finish	Installation	Maintenance Options
Solid Vinyl Tile (aka, Luxury Flooring - LVT)	Parallel® USA 20 Parallel® USA 12	ASTM F 1700, Class III, Type B embossed surface	20 mil: 0.100 in. (2.5 mm) 0.020 in. (0.5 mm) 12 mil: 0.080 in. (2.0 mm) 0.012 in. (0.3 mm)	Urethane Plus	Full Spread Adhesives: S-288 Premium, S-315 Roll Strong™, S-980, S-1000 High-Moisture, S-240 Epoxy	No Polish – No Buff Polish – optional

Packaging

Sizes	Tiles per Carton/ Coverage	Shipping Weight per Carton
Parallel® USA 20 6 in. x 48 in. (152.4 mm x 1219.2 mm) 18 in. x 18 in. (457.2 mm x 457.2 mm)	18 – 36 ft² (3.34 m²) 16 – 36 ft² (3.34 m²)	34 lbs./carton (15.42 kg) 34 lbs./carton (15.42 kg)
Parallel® USA 12 6 in. x 48 in. (152.4 mm x 1219.2 mm) 18 in. x 18 in. (457.2 mm x 457.2 mm)	18 – 36 ft² (3.34 m²) 16 – 36 ft² (3.34 m²)	29 lbs./carton (13.15 kg) 29 lbs./carton (13.15 kg)

Product Structure



Testing

	Performance	Test Method	Requirement	Performance vs. Requirement
ASTM F 1700	Thickness	ASTM F 386	Nominal ± 0.005 in.	Meets
	Wear Layer Thickness	ASTM F 410	0.020 in. (0.5 mm) minimum for Commercial Use	Meets
	Size	ASTM F 2421	± 0.016 in. per linear foot	Meets
	Squareness	ASTM F 2421	0.010 in. maximum	Meets
	Residual Indentation	ASTM F 1914	Average less than 8%.	Meets
	Chemical Resistance	ASTM F 925	No more than slight change in surface dulling, attack or staining	Meets
	Heat Resistance	ASTM F 1514	ΔE < 8	Meets
	Light Resistance	ASTM F 1515	ΔE < 8	Meets
	Static Load Limit	ASTM F 970	≤ 0.005 in.	2000 psi*
	Dimensional Stability	Internal	≤ 0.018 in. per linear foot MD ≤ 0.012 in. per linear foot AMD	Meets
Additional Testing	Fire Test Data – Flame Spread	ASTM E 648	0.45 w/cm² or more Class I	Meets
	Fire Test Data – Smoke Evolution	ASTM E 662	450 or less	Meets
	Fire Test Data – Canada	CAN/ULC S102.2	Use dependent	Parallel 20: Flame Spread - 5; Smoke Developed - 75 Parallel 12: Flame Spread - 0; Smoke Developed - 50
	ADA Standards for Accessible Design	Chapter 3 Section 302.1	Floor surfaces shall be stable, firm and slip resistant	Meets
	Static Coefficient of Friction**	ASTM D2047 UL 410	≥ 0.5	Meets

* Testing at loads above 250 psi is outside the scope of the test method. Since testing is conducted on uninstalled flooring, results do not consider the performance of the adhesive, underlayment, or subfloor. These test results are not an indicator of the installed flooring system performance.

** Using the James Machine as described in D2047 and as directed in UL 410 for floor covering materials (FCM) using a leather foot under dry conditions. The application of site-applied floor sealers, polishes and other types of finishes routinely used to maintain resilient flooring materials will change the walking surface and consequently the SCOF value.

PRODUCT SPEC PAGE

Parallel® USA 20 | Parallel® USA 12

Luxury Flooring

Sustainability

Certification Attribute	Standard	3rd party Certification/Certifier
Low Emitting Material	GDH v1.2 (2017) aka CNPS 01350	FloorScore/SCG
Environmental Product Declaration (Product Specific EPD)	ISO 14025 and ISO 14040	Yes/A/E

Performance	Standard	Requirements	Performance vs. Requirements
TVOC Range	GDH v1.2 (2017) aka CNPS 01350	<0.5 mg/m ³	Meets
Low Emitting Adhesives S-288 Premium S-240 Epoxy S-315 Roll Strong™ S-543 High Moisture S-980 High Moisture S-1000 High Moisture	FloorScore™/SCAQMD	Less than 50 g/L	S-288 Exceeds - 14 g/L S-240 Exceeds - 10 g/L S-315 Roll Strong™ Exceeds - 0 g/L S-543 Exceeds - 0 g/L S-980 Exceeds - 0.1 g/L S-1000 Exceeds - 14 g/L
Material Ingredients/Transparency	LEED v4 (Option 1) WELL™ Feature 97	Content disclosure to 1000 ppm	Meets (See Armstrong Flooring Product Declaration)
Fundamental Material Safety Toxic Materials Reduction	WELL™ Feature 11 and 25	No asbestos, free of lead and phthalates (DEHP, DBP, BBP, DIDP, DNOP)	Meets
Sourcing of Raw Materials	LEED v4	Extended Producer Responsibility	Meets - See Armstrong On & On™ Floor Recycling Program
Recycled Content	ISO 14021	Contains recycled content	29% pre-consumer recycled content
Local Materials	LEED v4	Manufactured within 100 miles of job site	Made in Lancaster, PA, with global and domestic content
Acoustics	ASTM E492 ASTM E90 ASTM E2179	Impact Insulation Class Sound Transmission Class Sound Transmission Reduction	IIC – Parallel USA 20 – 53* Parallel USA 12 – 54* (6" concrete - no ceiling) STC – Parallel USA 20 – 51* Parallel USA 12 – 50* (6" concrete - no ceiling) Delta IIC (ΔIIC) – Parallel USA 20 – 22* Parallel USA 12 – 24* *Tested with S-1840 Quiet Comfort Luxury Flooring Underlayment.

Limited Warranty

Parallel® USA 20:

15-year Commercial Warranty / 30-year Residential Warranty when installed in strict accordance with installation instructions on ArmstrongFlooring.com

Parallel® USA 12:

7-year Commercial Warranty / 15-year Residential Warranty when installed in strict accordance with installation instructions on ArmstrongFlooring.com

ArmstrongFlooring.com/commercial | 1 888 276 7876



F 10384-020
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LEED™ is a registered trademark of the United States Green Building Council.
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Project: **Submittal for Delmann Heights Comm & Senior Center**

Project #: 1

San Bernardino, CA

CSI: 09 65 13.13

TBD

RB1

Tarkett

Product Name

Wall Base - Baseworks BASEWORKS THERMOSET RUBBER (TYPE TS)

Product Number

TSB 85 6 X 4 1/8 TOE

Color Name/Color Number

TBD/TBD

Backing:

Size: 6"

Finish:

Shape: Baseworks TOE

<https://commercial.tarkett.com>

Project: **Submittal for Delmann Heights Comm & Senior Center**

Category

Flooring

Type

Wall Base - Resilient

Submitted by

Universal Metro, Inc.

<https://universalmetro.com/>

Architect

General Contractor

JCOS DEVELOPMENT

Documents in bold included:

Spec Sheet

[Installation Sheet]

[Maintenance Sheet]

[Warranty Sheet]

[SDS Sheet]

Product Notes

ADVISE COLOR



Baseworks® Wall Base

Product Specification

1. PROPRIETARY PRODUCT/MANUFACTURER

- 1.1. **Proprietary Product:** Thermoset Rubber Wall Base.
Made in USA.
- 1.2. **Manufacturer:**
Tarkett North America Phone: (800) 899-8916
30000 Aurora Rd. (440) 543-8916
Solon, Ohio 44139
Web: www.tarkettna.com
- 1.3. **Proprietary Product Description:**
 - 1.3.1. **Construction:** Tarkett BaseWorks™ Thermoset Rubber Wall Base is manufactured from a proprietary rubber formulation designed specifically to meet the performance and dimensional requirements of ASTM F-1861, Type TS, Group 1 (solid), Style A and B, Standard Specification for Resilient Wall Base.
 - 1.3.2. **Styles & Physical Characteristics:**

TSB-XX with toe (Coved) or **TSBT-XX** toeless (Straight), 0.125" (3.17 mm) thickness, available in 2-1/2" (6.35 cm), 4" (10.16 cm), and 6" (15.24 cm) heights

Note: Available in 4-1/2" (11.43 cm) height as a special order.

Available in 4' (1.22 m) straight lengths and 120' (36.6 m) coiled lengths, 6" profile available in 100' (30.5 m) coiled lengths or 4' (1.22 m) straight lengths

Inside and Outside Corners available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

2. PRODUCT PERFORMANCE AND TECHNICAL DATA

- 2.1. Meets or exceeds the performance requirements for resistance to heat/light aging, chemicals, and dimensional stability when tested to the methods, as described, in ASTM F-1861.
- 2.2. **Flexibility:** ASTM F 137 - Will not crack, break, or show any signs of fatigue when bent around a 1/4" (6.4 mm) diameter cylinder.
- 2.3. **Resistance to Light:** ASTM F 1515 – Passes $\Delta E \leq 8.0$
- 2.4. **Fire Resistance** (ASTM E 648/NFPA 253) Critical Radiant Flux: Class 1 (Minimum 0.45 W/cm²)
- 2.5. **Flame Spread / Smoke Development** (ASTM E 84/NFPA 255): Class B, < 450
- 2.6. **Chemical Resistance (ASTM F 925):** Passed - 5% Acetic acid, 70% Isopropyl alcohol, Sodium hydroxide solution (5% NaOH), Hydrochloric acid solution (5% HCl), Sulfuric acid solution (5% H₂SO₄), Household ammonia solution (5% NH₄OH), Household bleach (5.25% NaOCl), Disinfectant cleaner (5% active phenol).

3. INSTALLATION

- 3.1. See Tarkett BaseWorks wall base installation instructions for complete details.
- 3.2. **Adhesives:**
 - **Tarkett 960 Cove Base Adhesive** (Porous surfaces):
Application: 1/8" x 1/8" x 1/8" square notched trowel
Approximate coverage:
 - 2 1/2" high – 300 to 350 linear feet/gallon
 - 4" high – 200 to 250 linear feet/gallon
 - 6" high – 100 to 150 linear feet/gallon
 - **Tarkett 946 Premium Contact Adhesive** (Non-porous surfaces)
Application: Brush or roller
Approximate coverage:
 - 1 Quart (0.95 liters) – 24 to 36 sq. ft.
 - 1 Gallon (3.79 liters) – 100 to 150 sq. ft.

4. AVAILABILITY AND COST

Available through authorized Tarkett distributors nationwide.

5. WARRANTY

Limited 2 year warranty. For complete details, contact Tarkett or an authorized Tarkett distributor.

6. MAINTENANCE

72 hours after installation is completed, initial maintenance procedures must be implemented in accordance with manufacturer's requirements. Refer to Tarkett BaseWorks Wall Base Installation & Maintenance Instructions for complete maintenance details.

7. TECHNICAL SERVICES

Samples: Submittal samples for verification and approval available upon request from Tarkett. Samples shall be submitted in compliance with the requirements of the contract documents. Accepted and approved samples shall constitute the standard materials which represent materials installed on the project.

For current Installation and Maintenance Instructions, Product Specifications, and other technical data, visit us on the web at www.tarkettna.com or contact Tarkett at 1-800-899-8916.

Tarkett North America

Technical Services Department
30000 Aurora Road
Solon, Ohio 44139
800.899.8916 Ext. 9297 Fax 440.632.5643
info@tarkettna.com

www.tarkettna.com

DIVISION 01: GENERAL REQUIREMENTS

01 1000 SUMMARY

- 01 1100 SUMMARY OF WORK
- 01 1400 WORK RESTRICTIONS

01 2000 PRICE AND PAYMENT PROCEDURES

- 01 2900 PAYMENT PROCEDURES

01 3000 ADMINISTRATIVE REQUIREMENTS

- 01 3100 PROJECT MANAGEMENT AND COORDINATION
- 01 3200 CONSTRUCTION PROGRESS DOCUMENTATION
- 01 3300 SUBMITTAL PROCEDURES
- 01 3500 SPECIAL PROCEDURES

01 4000 QUALITY REQUIREMENTS

- 01 4000 QUALITY REQUIREMENTS
- 01 4100 REGULATORY REQUIREMENTS
- 01 4200 REFERENCES
- 01 4301 QUALITY ASSURANCE - QUALIFICATIONS

01 5000 TEMPORARY FACILITIES AND CONTROLS

- 01 5200 CONSTRUCTION FACILITIES
- 01 5400 CONSTRUCTION AIDS
- 01 5600 TEMPORARY BARRIERS AND ENCLOSURES
- 01 5700 TEMPORARY CONTROLS

01 6000 PRODUCT REQUIREMENTS

- 01 6100 COMMON PRODUCT REQUIREMENTS
- 01 6200 PRODUCT OPTIONS
- 01 6600 PRODUCT DELIVERY, STORAGE, AND HANDLING REQUIREMENTS

01 7000 EXECUTION AND CLOSEOUT REQUIREMENTS

- 01 7300 EXECUTION
- 01 7400 CLEANING AND WASTE MANAGEMENT
- 01 7700 CLOSEOUT PROCEDURES
- 01 7800 CLOSEOUT SUBMITTALS

END OF TABLE OF CONTENTS

SECTION 01 1100

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements Summary of Work requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Provisions contained in Division 01 apply to Sections of Divisions 02 through 49 of Specifications. Instructions contained in Specifications are directed to Contractor. Unless specifically provided otherwise, obligations set forth in Contract Documents are obligations of Contractor.
- B. Contractor shall furnish total labor, materials, equipment, and services necessary to perform The Work in accordance with Contract Documents.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 1400
WORK RESTRICTIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Work Restrictions.

1.2 PROJECT CONDITIONS

- A. During construction period, Contractor will have use of premises for construction operations. Contractor will ensure that Contractor, its employees, subcontractors, and their employees comply with following requirements:
 - 1. Confine operations to areas within Contract limits shown on Drawings. Do not disturb portions of site beyond Contract limits.
 - 2. Do not allow alcoholic beverages, illegal drugs, or persons under their influence on Project site.
 - 3. Do not allow use of tobacco in any form on Project Site.
 - 4. Do not allow pornographic or other indecent materials on site.
 - 5. Do not allow work on Project site on Sundays except for emergency work.
 - 6. Refrain from using profanity or being discourteous or uncivil to others on Project Site or while performing The Work.
 - 7. Wear shirts with sleeves, wear shoes, and refrain from wearing immodest, offensive, or obnoxious clothing, while on Project Site.
 - 8. Do not allow playing of obnoxious and loud music on Project Site. Do not allow playing of any music within existing facilities.
 - 9. Do not build fires on Project Site.
 - 10. Do not allow weapons on Project Site, except those carried by law enforcement officers or other uniformed security personnel who have been retained by Owner or Contractor to provide security services.
- B. Existing Facilities:
 - 1. Provide reasonable use of existing facilities by Owner.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 2900**PAYMENT PROCEDURES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements to prepare and process Applications for Payments.

1.2 PAYMENT REQUESTS

- A. Use Payment Request forms per by Owner direction.
- B. Each Payment Request will be consistent with previous requests and payments certified by Architect and paid for by Owner.
- C. Request Preparation:
1. Complete every entry on Payment Request form.
 2. Entries will match data on approved schedule of values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.
 3. Submit signed Payment Request to Architect with current Construction Schedule.
- D. Provide following submittals before or with submittal of Initial Payment Request:
1. List of Subcontractors.
 2. Initial progress report.
 3. Contractor's Construction Schedule.
 4. Submittal Schedule.

1.3 SCHEDULE OF VALUES

- A. Submit schedule of values on Owner's standard form to Architect 10 days minimum before submission of Initial Payment Request as a necessary condition before payment will be processed. Coordinate preparation of schedule of values with preparation of Contractor's Construction Schedule. Correlate line items in Schedule of Values with other required administrative schedules and forms, including:
1. Contractor's Construction Schedule.
 2. Payment Request form.
 3. Schedule of Allowances.
 4. Schedule of Alternates.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 3100**PROJECT MANAGEMENT AND COORDINATION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Project Management and Coordination on Projects.

1.2 PROJECT COORDINATION

- A. Project designation for this Project is San Bernardino County Superintendent of Schools Brier Drive Renovation.
- B. This Project designation will be included on documents generated for Project by Contractor and Subcontractors, or be present on a cover letter accompanying such documents.

1.3 MULTIPLE CONTRACT COORDINATION

- A. Contractor shall be responsible for accurately maintaining and reporting schedule of The Work from Notice to Proceed to date of Substantial Completion.
- B. Contractor shall be responsible for providing Temporary Facilities And Controls for those who perform work on Project from Notice to Proceed to date of Substantial Completion.
- C. Contractor shall be responsible for providing Construction Waste Management And Disposal services for those who perform work on Project from Notice to Proceed to date of Substantial Completion.
- D. Contractor shall be responsible for Final Cleaning for entire Project and Site.

1.4 PROJECT MEETINGS AND CONFERENCES

- A. Preconstruction Conference:
 - 1. Attend preconstruction conference and organizational meeting scheduled by Architect at Project site or other convenient location.
 - 2. Be prepared to discuss items of significance that could affect progress, including such topics as:
 - a. Construction schedule.
 - b. Critical Work sequencing.
 - c. Current problems.
 - d. Designation of responsible personnel.
 - e. Material/Distribution of Contract Documents.
 - f. Equipment deliveries and priorities.
 - g. General schedule of inspections by Architect and its consultants.
 - h. General inspection of tests.
 - i. Office, work, and storage areas.
 - j. Preparation of record documents and O & M manuals.
 - k. Procedures for processing interpretations and Modifications.
 - l. Procedures for processing Payment Requests.
 - m. Project cleanup.

- n. Security.
 - o. Status of permits.
 - p. Submittal of Product Data, Shop Drawings, Samples, Quality Assurance / Control submittals.
 - q. Use of the premises.
 - r. Work restrictions.
 - s. Working hours.
3. Architect will record minutes of meetings and distribute copies to Owner and Contractor.
- B. Progress Meetings:
- 1. Attend progress meetings at Project site at regularly scheduled intervals determined by Architect, at least once a month.
 - 2. Progress meetings will be open to Owner, Architect, Subcontractors, and anyone invited by Owner, Architect, and Contractor.
 - 3. Be prepared to discuss items of significance that could affect progress, including following:
 - a. Progress since last meeting.
 - b. Whether Contractor is on schedule.
 - c. Activities required to complete Project within Contract Time.
 - d. Off-site fabrication problems.
 - e. Access.
 - f. Site use.
 - g. Temporary facilities and services.
 - h. Hours of work.
 - i. Hazards and risks.
 - j. Project cleanup.
 - k. Quality and Work standards.
 - l. Status of pending modifications.
 - m. Documentation of information for Payment Requests.
 - n. Maintenance of Project records.
 - 4. Architect will prepare minutes of progress meetings and distribute copies of minutes to Owner and Contractor.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 3200**CONSTRUCTION PROGRESS DOCUMENTATION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements for documenting the progress of construction during performance of the Work.

1.2 SCHEDULING OF WORK

- A. Bar Chart Schedule:
1. Submit horizontal bar chart schedule before Preconstruction Conference. Provide separate time bar for each construction activity listed on Owner's payment request form. Within each time bar, show estimated completion percentage. Provide continuous vertical line to identify first working day of each week. Show each activity in chronological sequence. Show graphically sequences necessary for completion of related portions of The Work. As The Work progresses, place contrasting mark in each bar to indicate actual completion.
 2. Provide copies of schedule for Architect and Owner and post copy in field office.
 3. Revise schedule monthly. Send copy of revised schedule to Owner and Architect and post copy in field office.
- B. Daily Construction Reports:
1. Prepare daily reports of operations at Project including at least following information:
 - a. List of Subcontractors at site.
 - b. Approximate count of personnel at site by trade.
 - c. High and low temperatures, general weather conditions.
 - d. Major items of equipment on site.
 - e. Materials or equipment items arriving at or leaving site.
 - f. Accidents and unusual events.
 - g. Site or structure damage by water, frost, wind, or other causes.
 - h. Meetings, conferences, and significant decisions.
 - i. Visitors to the job including meeting attendees.
 - j. Stoppages, delays, shortages, losses.
 - k. Any tests made and their result if known.
 - l. Meter readings and similar recordings.
 - m. Emergency procedures.
 - n. Orders and requests of governing authorities.
 - o. Modifications received, carried out.
 - p. Services connected, disconnected.
 - q. Equipment or system tests and start-ups.
 - r. Brief summary of work accomplished that day.
 - s. Signature of person preparing report.
 2. Submit daily reports to Architect at least weekly.
 3. Maintain copies of daily reports at field office.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Submittal Procedures.

1.2 SUBMITTAL SCHEDULE

- A. Furnish submittal schedule within 10 days after receipt of Notice to Proceed, listing items specified to be furnished for review to Architect including product data, shop drawings, samples, and Informational submittals.
 - 1. Coordinate submittal schedule with Contractor's construction schedule.
 - 2. Enclose the following information for each item:
 - a. Scheduled date for first submittal.
 - b. Related Section number.
 - c. Submittal category.
 - d. Name of Subcontractor.
 - e. Description of part of the Work covered.
 - f. Scheduled date for resubmittal.
 - g. Scheduled date for Architect's final release or approval.
- B. Print and distribute copies to Architect and Owner and post copy in field office. When revisions are made, distribute to same parties and post in same location.
- C. Revise schedule monthly. Send copy of revised schedule to Owner and Architect.

1.3 SUBMITTAL PROCEDURES

- A. Coordination:
 - 1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently before performance of related construction activities to avoid delay.
 - a. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - b. Coordinate transmittal of different types of submittals required for related elements of The Work so processing will not be delayed by need to review submittals concurrently for coordination. Architect reserves right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - 2. Processing Time:
 - a. Allow sufficient review time so installation will not be delayed by time required to process submittals, including time for resubmittals.
 - 1) Allow 14 days for initial review. Allow additional time if processing must be delayed to allow coordination with subsequent submittals. Architect will promptly advise Contractor when submittal being processed must be delayed for coordination.
 - 2) If an intermediate submittal is necessary, process same as initial submittal.
 - 3) Allow 7 days for reprocessing each submittal.

- 4) No extension of Contract Time will be authorized because of failure to transmit submittals to Architect in sufficient time before work is to be performed to allow processing.
3. Identification:
 - a. Place permanent label or title block on each submittal for identification. Include name of entity that prepared each submittal on label or title block.
 - 1) Provide space approximately 4 by 5 inches on label or beside title block on Shop Drawings to record Contractor's review and approval markings and action taken.
 - 2) Include following information on label for processing and recording action taken:
 - a) Project name.
 - b) Date.
 - c) Name and address of Architect.
 - d) Name and address of Contractor.
 - e) Name and address of Subcontractor.
 - f) Name and address of supplier.
 - g) Name of manufacturer.
 - h) Number and title of appropriate Specification Section.
 - i) Drawing number and detail references, as appropriate.
4. Transmittal:
 - a. Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using transmittal letter. On transmittal, record relevant information and requests for data. Include Contractor's certification that information complies with Contract Document requirements, or, on form or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations.
 - b. Submittals received from sources other than Contractor or not marked with Contractor's approval will be returned without action.

1.4 ACTION SUBMITTALS

- A. Product Data:
 1. Submit Product Data, as required by individual Sections of Specifications.
 2. Mark each copy of each set of submittals to show choices and options used on Project. Where printed Product Data includes information on products that are not required for Project, mark copies to indicate information relating to Project.
 3. Certify that proposed product complies with requirements of Contract Documents. List any deviations from those requirements on form or separate sheet.
 4. Submit electronic copy each required submittal unless otherwise required. Architect will return submittal marked with action taken and with corrections or modifications required.
- B. Shop Drawings:
 1. Submit newly prepared graphic data to accurate scale. Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches. Highlight, encircle, or otherwise show deviations from Contract Documents. Include following information as a minimum:
 - a. Dimensions.
 - b. Identification of products and materials included.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 2. Do not reproduce Contract Documents or copy standard information as basis of Shop Drawings. Standard printed information prepared without specific reference to Project is not acceptable as Shop Drawings.
 3. Review and designate (stamp) approval of shop drawings. Unless otherwise specified, submit to Architect electronic copy of shop drawings required by Contract Documents. Shop drawings not required by Contract Documents, but requested by Contractor or supplied by Subcontractor, need not be submitted to Architect for review.
- C. Samples:

1. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 - a. Mount, display, or package Samples so as to ease review of qualities specified. Prepare Samples to match samples provided by Architect, if applicable. Include following:
 - 1) Generic description of Sample.
 - 2) Sample source.
 - 3) Product name or name of manufacturer.
 - 4) Compliance with recognized standards.
 - 5) Availability and delivery time.
2. Submit 3 Physical Samples for review of kind, color, pattern, and texture, for final check of these characteristics with other elements, and for a comparison of these characteristics between final submittal and actual component as delivered and installed. Color card is not acceptable.
 - a. Where variations in color, pattern, texture or other characteristics are inherent in material or product represented, submit set of three samples minimum that show approximate limits of variations.
 - b. Refer to other specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to Contractor for incorporation into The Work. Such Samples shall be undamaged at time of use. On transmittal, indicate special requests regarding disposition of Sample submittals.
3. Where Samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit full set of choices for material or product. Preliminary submittals will be reviewed and returned with Architect's mark indicating selection and other action.
4. Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three sets. One will be returned marked with action taken.
5. Samples, as accepted and returned by Architect, will be used for quality comparisons throughout course of construction.
 - a. Unless noncompliance with Contract Documents is observed, submittal may serve as final submittal.
 - b. Sample sets may be used to obtain final acceptance of construction associated with each set.

1.5 INFORMATIONAL SUBMITTALS

- A. Informational submittals are design data, test reports, certificates, manufacturer's instructions, manufacturer's field reports, and other documentary data affirming quality of products and installations. Submit electronic copy of each required submittal unless otherwise required. Architect will return electronic copy marked with action taken and with corrections or modifications required.
 1. Certificates: Describe certificates intended to document affirmations by Contractor or others that the work is in accordance with the Contract Documents, but do not repeat provisions of Parts 2 or 3.
 2. Delegated Design Submittals / Design Data: Describe submittals intended to demonstrate design work prepared by Contractor's licensed professionals.
 3. Test And Evaluation Reports: Describe submittal of test reports or evaluation service reports intended to document required tests.
 4. Manufacturer Instructions: Describe submittals intended to document manufacturer instructions.
 5. Source Quality Control Submittals: Describe submittal of source quality control documentation.
 6. Field Quality Control Submittals: Describe submittal of field quality control documentation.
 7. Manufacturer Reports: Describe submittal of Manufacturer reports as documentation of manufacturer activities.
 8. Special Procedure Submittals: Describe submittals intended to document special procedures. An example would be construction staging or phasing for remodeling an existing facility while keeping it in operation. While the Contractor would normally be responsible for managing this, submittal of his plan as documentation could be specified.

9. Qualification Statements: Describe submittals intended to document qualifications of entities employed by Contractor.

1.6 CLOSEOUT SUBMITTALS

- A. This title groups submittals that occur during project closeout. Coordinate with section 01 7800 Closeout Submittals.
 1. Maintenance Contracts: Describe submittal of the maintenance contract.
 2. Operations & Maintenance Data: Describe submittal of operation and maintenance data necessary for products of the Section.
 3. Bonds: Describe submittals of bonds specific to this Section.
 4. Warranty Documentation: Describe submittal of final executed warranty document.
 5. Record Documentation: Describe submittal of record documentation specific to this Section.
 6. Software: Describe submittal of extra copy operating system and other utility software necessary to operate and maintain software during life of product.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. This title groups maintenance material submittals required by Section.
 1. Spare Parts: Describe spare parts necessary for Owner's use in facility operation and maintenance. 'Parts' are generally understood to be items such as filters, motor drive belts, lamps, and other similar manufactured items that require only simple replacement.
 2. Extra Stock Materials: Describe extra stock materials to be provided for Owner's use in facility operation and maintenance. Extra stock materials are generally understood to be items such as ceiling tiles, flooring, paint etc.
 3. Tools and Software:
 - a. Describe tools to be provided for Owner's use in facility operation and maintenance. Tools are generally understood to be wrenches, gauges, circuit setters, etc, required for proper operation or maintenance of a system.
 - b. If necessary, describe submittal of an extra copy of operating system and other utility software necessary to operate and maintain the software during expected life of product.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 3500**SPECIAL PROCEDURES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements for Special Procedures.

1.2 ACCELERATION OF WORK

- A. Complete The Work in accordance with Construction Schedule. If Contractor falls behind schedule, take such actions as are necessary, at no additional expense to Owner, to bring progress of The Work back in accordance with schedule.
- B. Owner may request proposal for completion of The Work at date earlier than expiration of Contract Time. Promptly provide requested proposal showing cost of such acceleration of The Work. Consult with Owner and Architect regarding possible options to decrease cost of such acceleration. If Owner determines to order acceleration of The Work, change in Contract Sum and Contract Time resulting from acceleration will be included in a Change Order.

1.3 OWNER'S SAFETY REQUIREMENTS

- A. Personal Protection:
1. Contractor shall ensure:
 - a. Positive means of fall protection, such as guardrails system, safety net system, personal fall arrest system, etc, is provided to employees whenever exposed to a fall six feet or more above a lower level.
 - b. Personnel working on Project shall wear hard hats and safety glasses as required by regulation and hazard.
 - c. Personnel working on Project shall wear long or short sleeve shirts, long pants, and hard-toed boots or other sturdy shoes appropriate to type and phase of work being performed.
- B. Contractor Tools And Equipment:
1. Contractor shall ensure:
 - a. Tools and equipment are in good working condition, well maintained, and have necessary guards in place.
 - b. Ground Fault Circuit Interrupters (GFCI) is utilized on power cords and tools.
 - c. Scaffolding and man lifts are in good working condition, erected and maintained as required by governmental regulations.
 - d. Ladders are in good condition, well maintained, used as specified by Manufacturer, and secured as required.
- C. Miscellaneous:
1. Contractor shall ensure:
 - a. Protection is provided on protruding rebar and other similar objects.
 - b. General Contractor Superintendent has completed the OSHA 10-hour construction outreach training course or equivalent.
 - c. Implementation and administration of safety program on Project.

- d. Material Safety Data Sheets (MSDS) are provided for substances or materials for which an MSDS is required by governmental regulations before bringing on site.
- e. Consistent safety training is provided to employees on Project.
- 2. Report accidents involving injury to employees on Project that require off-site medical treatment to Owner's designated representative.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 4000**QUALITY REQUIREMENTS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are used to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
1. Specific quality assurance and quality control requirements for individual construction activities are specified in Sections that specify those activities and Section 01 4523. Requirements in those Sections may also cover production of standard products.
 2. Specified tests, inspections, and related actions do not limit Contractor's other quality control procedures that facilitate compliance with Contract Document requirements.
 3. Requirements for Contractor to provide quality assurance and quality control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
1. Section 01 3300: 'Submittal Procedures'.
 2. Section 01 4301: 'Quality Assurance – Qualifications' establishes minimum qualification levels required.
 3. Section 01 4523: 'Testing and Inspecting Services' for testing and inspection, and testing laboratory services for materials, products, and construction methods.
 4. Divisions 01 thru 49 establish responsibility for providing specific testing and inspections.

1.3 REFERENCES

- A. Association Publications:
1. Council of American Structural Engineers. CASE Form 101: *Statement of Special Inspections*. Washington, DC: CASE, 2001. (c/o American Council of Engineering Companies, 1015 15th St., NW, Washington, DC 20005; 202-347-7474; www.acec.org).
 2. International Code Council (IBC):
 - a. IBC Chapter 17, 'Structural Tests and Special Inspections'.
 3. The American Institute of Architects. AIA Document A201, *General Conditions of the Contract for Construction*. Washington, DC. 2007.
 4. The Construction Specifications Institute. *Project Resource Manual/CSI Manual of Practice*, 5th Edition. New York, McGraw-Hill, 2005.
- B. Definitions:
1. Accreditation: Process in which certification of competency, authority, or credibility is presented. Verify that laboratories have an appropriate quality management system and can properly perform certain test methods (e.g., ANSI, ASTM, and ISO test methods) and calibration parameters according to their scopes of accreditation.

2. Approved: To authorize, endorse, validate, confirm, or agree to.
3. Contract Documents: Engineering and Architectural Drawings and Specifications issued for construction, plus clarification drawings, addenda, approved change orders and contractor designed elements.
4. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with requirements indicated; and having complied with requirements of authorities having jurisdiction.
5. Field Quality Control: Testing, Inspections, Special Testing and Special Inspections to assure compliance to Contract Documents.
6. Inspection/Special Inspection: Inspection of materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards:
 - a. Inspection: Not required by code provisions but may be required by Contract Documents.
 - b. Special Inspection: Required by code provisions and by Contract Documents.
 - c. Inspection-Continuous: Full-time observation of the Work requiring inspection by approved inspector who is present in area where the Work is being performed.
 - d. Inspection-Periodic: Part-time or intermittent observation of the Work requiring inspection by approved inspector who is present in area where the Work has been or is being performed and at completion of the Work.
7. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - a. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of corresponding generic name.
8. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish standard by which the Work will be judged.
9. Observation: Visual observation of building / site elements or structural system by registered design professional for general conformance to approved construction documents at significant construction stages and at completion. Observation does not include or waive responsibility for performing inspections or special inspections.
10. Owner's Representative: Owner's Designated Representative (Project Manager or Facilities Manager) who will have express authority to bind Owner with respect to all matters requiring Owner's approval or authorization.
11. Preconstruction Testing: Tests and inspections that are performed specifically for Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
12. Product Testing: Tests and inspections that are performed by testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
13. Quality Assurance: Testing, Inspections, Special Testing and Special Inspections provided for by Owner.
14. Quality Control: Testing, Inspections, Special Testing and Special Inspections provided for by Contractor.
15. Service Provider: Agency or firm qualified to perform required tests and inspections.
16. Source Quality Control Testing: Tests and inspections that are performed at source, i.e., plant, mill, factory, or shop.
17. Special Inspection: See Inspection.
18. Special Inspector: Certified individual or firm that implements special inspection program for project.
19. Special Test: See Test.
20. Test/Special Test: Field or laboratory tests to determine characteristics and quality of building materials and workmanship.
 - a. Test: Not required by code provisions but may be required by Contract Documents.
 - b. Special Test: Required by code provisions and by Contract Documents.

21. Testing Agency: Entity engaged to perform specific tests, inspections, or both.
22. Testing Agency Laboratory: Agency or firm qualified to perform field and laboratory tests to determine characteristics and quality of materials and workmanship.
23. Verification: Act of reviewing, inspecting, testing, etc. to establish and document that product, service, or system meets regulatory, standard, or specification requirements.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and standards establish different or conflicting requirements for minimum quantities or quality levels, comply with most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: Quantity or quality level shown or specified shall be minimum provided or performed. Actual installation may comply exactly with minimum quantity or quality specified, or it may exceed minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for context of requirements. Refer uncertainties to Architect for decision before proceeding.

1.5 QUALITY ASSURANCE

- A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to verify compliance and guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

1.6 QUALITY CONTROL

- A. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements performed by Contractor. They do not include inspections, tests or related actions performed by Architect, Owner, governing authorities or independent agencies hired by Owner or Architect.
 1. Where services are indicated as Contractor's responsibility, engage a qualified Testing Agency to perform these quality control services.
 - a. Contractor shall not employ same testing entity engaged by Owner, without Owner's written approval.
- B. Coordination: Coordinate sequence of activities to accommodate required quality assurance and quality control services with minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 2. Comply with Contract Document requirements for Section 01 7300 "Execution" for Cutting and Patching.
- B. Protect construction exposed by or for Quality Assurance and Quality Control activities.
- C. Repair and protection are Contractor's responsibility, regardless of assignment of responsibility for Quality Assurance and Quality Control Services.

END OF SECTION

SECTION 01 4100
REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Regulatory Requirements.

1.2 ASBESTOS

- A. Contract Documents for this Project have been prepared in accordance with generally accepted professional architectural and engineering practices. Accordingly, no asbestos or products containing asbestos have been knowingly specified for this Project. Notify Architect immediately for instructions if materials containing asbestos are brought to site for inclusion in the Work.
- B. At Architect's direction and with Owner's approval, a certified asbestos inspector will collect samples and an independent testing laboratory will perform testing procedures on suspect materials.
- C. Certify that based upon best knowledge, information, inspection, and belief no building materials containing asbestos were used in construction of Project. Submit certification on form provided by Owner.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 4200**REFERENCES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Reference standards, definitions, specification format, and industry standards.

1.2 REFERENCES

- A. Definitions:
1. Approved: The term "approved," when used to convey Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
 2. Directed: The term "directed" is a command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," and "permitted" have the same meaning as "directed."
 3. Experienced: The term "experienced," when used with an entity, means having successfully completed a minimum often previous projects similar in size and scope to this Project; being familiar with the special requirements indicated, and having complied with requirements of authority having jurisdiction.
 4. Furnish: The term "furnish" means supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
 5. General: Basic Contract definitions are included in the Conditions of the Contract.
 6. Indicated: The term "indicated" refers to requirements expressed by graphic representations, or in written form on Drawings, in Specifications, and in other Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
 7. Install: The term "install" describes operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
 8. Installer: An "Installer" is the Contractor or another entity engaged by the Contractor, as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 9. Project Site: The term "Project site" means the space available for performing construction activities. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
 10. Provide: The term "provide" means to furnish and install, complete and ready for the intended use.
 11. Regulations: The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
 12. Submitted: The terms "submitted," "reported," "satisfactory" and similar words and phrases means submitted to Architect, reported to Architect and similar phrases.
 13. Testing Agencies: A "testing agency" is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, or to report on and, if required, to interpret results of those inspections or tests.
 14. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

B. References Standards:

1. Specification Format: Specifications will follow MasterFormat™ 2004 for organizing numbers and titles. (The Construction Specifications Institute, Project Resource Manual/CSI Manual of Practice, 5th Edition. New York, McGraw-Hill, 2005).
 - a. Specification Identifications:
 - 1) The Specifications use section numbers and titles to help cross referencing in the Contract Documents.
 - 2) Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.
 - b. Specification Language:
 - 1) Specifications should be prepared, with concern and respect for their legal status. Specifications should be Clear, Concise, Correct and Complete.
 - 2) Streamlining: Streamlining is used to list products, materials, reference standards, and other itemized specifications. This technique places the subject first and provides keywords for quick reference
 - c. Sentence Structure:
 - 1) Specifications to be written in the "Imperative Mood".
 - a) The verb that clearly defines the action becomes the first word in the sentence.
 - b) The imperative sentence is concise and readily understandable.
 - 2) Streamlining is used to list products, materials, reference standards, and other itemized specifications. This technique places the subject first and provides keywords for quick reference.
 - d. Abbreviated Language:
 - 1) Abbreviations should be used only on drawings and schedules where space is limited.
 - 2) Abbreviations with multiple meanings should be avoided, unless used in different disciplines where their meaning is clear from the context in which they are used.
 - 3) Abbreviations should be limited to five or fewer letters
 - a) The verb that clearly defines the action becomes the first word in the sentence.
 - e. Symbols:
 - 1) Caution should apply to symbols substituted for words or terms.
 - f. Numbers:
 - 1) The use of Arabic numerals rather than words for numbers is recommended.

C. Industry Standards:

1. Except where Contract Documents specify otherwise, construction industry standards will apply and are made a part of Contract Documents by reference.
2. Where compliance with two or more standards is specified and standards apparently establish different or conflicting requirements for minimum quantities or quality levels, refer to Architect for decision before proceeding. Quantity or quality level shown or specified will be minimum provided or performed. Actual installation may comply exactly with minimum quantity or quality specified, or it may exceed minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for context of requirements. Refer uncertainties to Architect for decision before proceeding.
3. Each entity engaged in construction on Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with Contract Documents. Where copies of standards are needed for performance of a required construction activity, Contractor will obtain copies directly from publication source.
4. Trade Association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in Contract Documents, are defined to mean association names. Names and addresses are subject to change and are believed to be, but are not assured to be, accurate and up to date as of date of Contract Documents.

AABC	Associated Air Balance Council	Washington	DC	(202) 737-0202	www.aabchq.com
AAMA	American Architectural Manufacturers Association	Schaumburg	IL	(847) 303-5664	www.aamanet.org
AASHTO	American Association of	Washington	DC	(202) 624-5800	www.aashto.org

	State Highway & Transportation Officials				
AAMA	American Architectural Manufacturers Association	Schamungburg	IL	(847) 303-5774	www.aamanet.org
AASHTO	American association of State Highways and Transportation Officials	Washington	DC		www.transportation.org www.aashto.org
ACI	American Concrete Institute International	Farmington Hills	MI	(248) 848-3700	www.aci-int.org
AGA	American Gas Association	Washington	DC	(202) 824-7000	www.aga.org
AHRI	Air Conditioning Heating & Refrigeration Institute	Arlington	VA	(703) 524-8800	www.ari.org
AIA	American Institution of Architects	Washington	DC	(202) 626-7300	www.aia.org
AISC	American Institute of Steel Construction	Chicago	IL	(312) 670-2400	www.aisc.org
AISI	American Iron & Steel Institute	Washington	DC	(202) 452-7100	www.steel.org
AITC	American Institution of Timber Construction	Englewood	CO	(303) 792-9559	www.aitc-glulam.org
AMCA	Air Movement & Control Association International	Arlington Heights	IL	(847) 394-0150	www.amca.org
ANSI	American National Standards Institute	New York	NY	(212) 642-4900	www.ansi.org
APA	APA-Engineered Wood Association	Tacoma	WA	(253) 565-6600	www.apawood.org
API	American Petroleum Institute	Washington	DC	(202) 682-8000	www.api.org
AQMD	South Coast Air Quality Management District	Diamond Bar	CA	(909) 396-2000	www.aqmd.gov
ASHRAE	American Society of Heating, Refrigerating, & Air-Conditioning Engineers	Atlanta	GA	(404) 636-8400	www.ashrae.org
ASME	American Society of Mechanical Engineers International	New York	NY	(800) 843-2763	www.asme.org
ASTM	ASTM International	West Conshohocken	PA	(610) 832-9500	www.astm.org
AWI	Architectural Woodwork Institute	Potomac Falls	VA	(571) 323-3636	www.awinet.org
AWPA	American Wood Protection Association	Birmingham	AL	(205) 733-4077	www.awpa.com
AWS	American Welding Society	Miami	FL	(800) 443-9353	www.aws.org
AWWA	American Water Works Assoc	Denver	CO	(303) 794-7711	www.awwa.org
BHMA	Builders Hardware Manufacturers Association	New York	NY	(212) 297-2122	www.buildershardware.com
BIA	Brick Industry Association	Reston	VA	(703) 620-0010	www.bia.org
CFI	International Certified Floor-covering Installers, Inc.	Kansas City	MO	(816) 231-4646	www.cfi-installers.org
CRI	Carpet & Rug Institution	Dalton	GA	(706) 278-3176	www.carpet-rug.com
CRSI	Concrete Reinforcing Steel Institute	Schaumburg	IL	(847) 517-1200	www.crsi.org
CISPI	Cast Iron Soil Pipe Institute	Chattanooga	TN	(423) 892-0137	www.cispi.org
DHI	Door & Hardware Institute	Chantilly	VA	(703) 222-2010	www.dhi.org
DIPRA	Ductile Iron Pipe Research Association.	Birmingham	AL	(205) 402-8700	www.dipra.org
EIMA	EIFS Industry Members As-	Morrow	GA	(800) 294-3462	www.eima.com

	sociation				
FM	FM Global	Johnston	RI	(401) 275-3000	www.fmglobal.com
FSC	Forest Stewardship Council	Bonn, Germany		+49 (0) 228 367 66 0	www.fsc.org
GA	Gypsum Association	Hyattsville	MD	(301) 277-8686	www.gypsum.org
GS	Green Seal	Washington	DC	(202) 872-6400	www.greenseal.org
HPVA	Hardwood Plywood & Veneer Association	Reston	VA	(703) 435-2900	www.hpva.org
ICC	International Code Council	Washington	DC	(888) 422-7233	www.iccsafe.org
ICC-ES	ICC Evaluation Service	Whittier	CA	(562) 699-0543	www.icc-es.org
ICBO	International Conference of Building Officials				(See ICC)
ISO	International Organization for Standardization	Geneva, Switzerland			www.iso.org
ISSA	International Slurry Surfacing Association	Annapolis	MD	(410) 267-0023	www.slurry.org
KCMA	Kitchen Cabinet Manufacturers Association	Reston	VA	(703) 264-1690	www.kcma.org
LPI	Lightning Protection Institute	Maryville	MO	(800) 488-6864	www.lightning.org
MFMA	Maple Flooring Manufacturers' Association	Deerfield	IL	(888) 480-9138	www.maplefloor.org
MSS	Manufacturer's Standardization Society of The Valve and Fittings Industry	Vienna	VA	(703) 281-6613	www.mss-hq.com
NAAMM	National Association of Architectural Metal Manufacturers	Glen Ellyn	IL	(630) 942-6591	www.naamm.org
NEC	National Electric Code	(from NFPA)			
NEMA	National Electrical Manufacturer's Association	Rosslyn	VA	(703) 841-3200	www.nema.org
NFPA	National Fire Protection Association	Quincy	MA	(800) 344-3555	www.nfpa.org
NFRC	National Fenestration Rating Council	Greenbelt	MD	(301) 589-1776	www.nfrc.org
NSF	NSF International	Ann Arbor	MI	(734) 769-8010	www.nsf.org
PCA	Portland Cement Association	Skokie	IL	(847) 966-6200	www.cement.org
PCI	Precast / Prestressed Concrete Institute	Chicago	IL	(312) 786-0300	www.pci.org
PEI	Porcelain Enamel Institute	Norcross	GA	(770) 676-9366	www.porcelainenamel.com
RFCI	Resilient Floor Covering Institute	LaGrange	GA	(706) 882-3833	www.rfci.com
SCTE	Society of Cable Telecommunications Engineers	Exton	PA	(800) 542-5040	www.scte.org
SDI	Steel Deck Institute	Fox River Grove	IL	(847) 458-4647	www.sdi.org
SDI	Steel Door Institute	Westlake	OH	(440) 899-0010	www.steeldoor.org
SIGMA	Sealed Insulating Glass Manufacturer's Association	Chicago	IL	(312) 644-6610	www.arcata.com
SJI	Steel Joist Institute	Myrtle Beach	SC	(843) 293-1995	www.steeljoist.org
SMACNA	Sheet Metal & Air Conditioning Contractors National Association	Chantilly	VA	(703) 803-2980	www.smacna.org
SPIB	Southern Pine Inspection Bureau	Pensacola	FL	(850) 434-2611	www.spib.org
SSMA	Steel Stud Manufacturer's Association	Glen Ellyn	IL	(630) 942-6592	www.ssma.com

TCNA	Tile Council of North America	Anderson	SC	(864) 646-8453	www.tileusa.com
TPI	Truss Plate Institute	Alexandria	VA	(703) 683-1010	www.tpinst.org
TPI	Turfgrass Producers International (formally American Sod Producers Association)	East Dundee	IL	(847) 649-5555	www.turfgrasssod.org
UL	Underwriters Laboratories	Camas	WA	(877) 854-3577	www.ul.com
WDMA	Window and Door Manufacturer's Association	Chicago	IL	(312) 321-6802	www.nwwda.org
WWPA	Western Wood Products Association	Portland	OR	(503) 224-3930	www.wwpa.org

D. Federal Government Agencies:

- Names and titles of federal government standard or specification producing agencies are often abbreviated. Following acronyms or abbreviations referenced in Contract Documents represent names of standard or specification producing agencies of federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up to date as of date of Contract Documents.

CS	Commercial Standard (U S Department of Commerce)	Washington	DC	(202) 512-0000	www.doc.gov
EPA	Environmental Protection Agency	Washington	DC	(202) 272-0167	www.epa.gov
FCC	Federal Communications Commission	Washington	DC	(888) 225-5322	www.fcc.gov
FS	Federal Specifications Unit (Available from GSA)	Washington	DC	(202) 619-8925	www.gsa.gov
MIL	Military Standardization Documents (U S Department of Defense)	Philadelphia	PA	(215) 697-2179	www.dod.gov
NIST	National Institute of Standards and Technology, technology Administration (US Department of Commerce)	Gaithersburg	MD	(301) 975-4500	www.ts.nist.gov
OSHA	Occupational Safety & Health Administration (U S Department of Labor)	Washington	DC	202) 219-8148	www.osha.gov
PS	Product Standard of NBS (U S Department of Commerce)	Washington	DC	(202) 512-1800	www.doc.gov

E. Governing Regulations / Authorities:

- Contact authorities having jurisdiction directly for information and decisions having a bearing on the Work.
- Obtain copies of regulations required to be retained at Project Site, available for reference by parties who have a reasonable need for such reference.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 4301**QUALITY ASSURANCE - QUALIFICATIONS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Related Documents:
 - 1. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.
- B. Related Requirements:
 - 1. Section 01 4000: 'Quality Requirements' includes administrative and procedural requirements for quality assurance and quality control.
 - 2. Section 01 4523: 'Testing and Inspecting Services' for testing and inspection, and testing laboratory services for materials, products, and construction methods.

1.2 REFERENCES

- A. Definitions:
 - 1. Accreditation: Process in which certification of competency, authority, or credibility is presented. Verify that laboratories have an appropriate quality management system and can properly perform certain test methods (e.g., ANSI, ASTM, and ISO test methods) and calibration parameters according to their scopes of accreditation.
 - 2. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
 - 3. Testing Agency: Entity engaged to perform specific tests, inspections, or both.
 - 4. Testing Agency Laboratory: Agency or firm qualified to perform field and laboratory tests to determine characteristics and quality of materials and workmanship.
- B. Reference Standards:
 - 1. ASTM International:
 - a. ASTM E329-11a, 'Standard Specification for Agencies Engaged in Construction Inspection and/or Testing.'

1.3 QUALIFICATIONS

- A. Qualifications: Qualifications paragraphs in this Article establish minimum qualification levels required; individual Specification Sections specify additional requirements:
 - 1. Fabricator / Supplier / Installer Qualifications: Firm experienced in producing products similar to those indicated for this Project and with record of successful in-service performance, as well as sufficient production capacity to produce required units.
 - a. Approved:
 - 1) Where heading '*Approved Suppliers / Distributors / Installers / Applicators / Fabricators*' is used to identify list of specified suppliers / distributors / installers / applicators / fabricators, use only listed suppliers / installers / fabricators.
 - 2) No substitutions will be allowed.
 - 2. Factory-Authorized Service Representative Qualifications:
 - a. Authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

3. Installer Qualifications:
 - a. Firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
4. Manufacturer Qualifications:
 - a. Firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
5. Manufacturer's Field Services Qualifications:
 - a. Experienced authorized representative of manufacturer to inspect field-assembled components and equipment installation, including service connections.
6. Professional Engineer Qualifications:
 - a. Professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of kind indicated. Engineering services are defined as those performed for installations of system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.
7. Specialists:
 - a. Certain sections of Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations.
 - b. Specialists shall satisfy qualification requirements indicated and shall be engaged for activities indicated.
 - c. Requirement for specialists shall not supersede building codes and regulations governing the Work.
8. Testing Agency Qualifications:
 - a. Independent Testing Agency with experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1) Testing Laboratory:
 - a) AASHTO Materials Reference Laboratory (AMRL) Accreditation Program.
 - b) Cement and Concrete Reference Laboratory (CCRL).
 - c) Nationally Recognized Testing Laboratory (NRTL): Nationally recognized testing laboratory according to 29 CFR 1910.7.
 - d) National Voluntary Laboratory (NVLAP): Testing Agency accredited according to National Institute of Standards and Technology (NIST) Technology Administration, U. S. Department of Commerce Accreditation Program.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 5200
CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Construction Facilities.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Prepare schedule indicating dates for implementation and termination of each temporary facility.
- B. Keep facilities clean and neat in appearance. Operate in safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or allow them to interfere with progress of The Work. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on Project site.
- C. Maintain facilities in good operating condition until removal.
- D. Remove each temporary facility when need has ended, or when replaced by authorized use of permanent facility, or by Substantial Completion. Complete permanent construction that may have been delayed because of interference with temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that make up temporary facilities are property of Contractor.
 - 2. By Substantial Completion, clean and renovate permanent facilities used during construction period.

1.3 SANITARY FACILITIES

- A. Provide temporary sanitary toilet. Service and maintain temporary toilet in a clean, sanitary condition. Use of existing restroom facilities will not be allowed.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 5400
CONSTRUCTION AIDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Construction Aids.

1.2 SCAFFOLDING, PLATFORMS, STAIRS, ETC

- A. Furnish and maintain equipment such as temporary stairs, ladders, ramps, platforms, scaffolds, hoists, runways, derricks, chutes, and elevators as required for proper execution of The Work.
- B. Apparatus, equipment, and construction shall meet requirements of applicable laws and safety regulations.
- C. Protect walls, floors and ceilings of path of travel to work area during construction.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 5600**TEMPORARY BARRIERS AND ENCLOSURES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Temporary Barriers and Enclosures.

1.2 GENERAL

- A. Protection Of Existing Improvements: Protect wall, door, ceilings, carpet, etc. including overhead protection where required. Repair damage to existing improvements caused by construction activities.
- B. Protection Of Adjacent Property: Provide necessary protection for adjacent spaces and lateral support thereof.

1.3 TEMPORARY DUST BARRIERS

- A. The Contractor shall provide any and all dust control barriers required.

1.4 TEMPORARY NOISE BARRIERS

- A. The Contractor shall use only such equipment on the work and in such state of repair that the emission of sound there from is within the noise tolerance level of that equipment as established by Cal-OSHA.

1.5 TEMPORARY BARRICADES

- A. Comply with standards and code requirements in erecting barricades, warning signs, and lights.
- B. Take necessary precautions to protect persons, including members of the public, from injury or harm.

1.6 TEMPORARY SECURITY BARRIERS

- A. Install temporary enclosures of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and other violations of security.
- B. Secure materials and equipment stored on site.
- C. Secure building at the end of each work day.
- D. Maintain building security until Substantial Completion.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 5700
TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Temporary Controls.

1.2 TEMPORARY ENVIRONMENTAL CONTROLS

- A. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and reduce possibility that air, waterways, and subsoil might be contaminated or polluted, or that other undesirable effects might result:
 - 1. Avoid use of tools and equipment that produce harmful noise.
 - 2. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near site.
- B. Protect building from damage from rain water and all other water:
 - 1. For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with requirements of applicable local regulations. Where feasible, use permanent facilities.
 - 2. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways before discharge.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 6100**COMMON PRODUCT REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements for Common Product Requirements.

1.2 GENERAL

- A. Provide products that comply with Contract Documents, that are undamaged, and, unless otherwise indicated, new and unused at time of installation. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
- B. Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on surfaces of products that will be exposed to view in occupied spaces or on building exterior.
1. Locate required product labels and stamps on concealed surface or, where required for observation after installation, on accessible surface that is not conspicuous.
 2. Provide permanent nameplates on items of service-connected or power-operated equipment. Locate on easily accessible surface that is inconspicuous in occupied spaces. Nameplate will contain following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.
- C. Where specifications describe a product or assembly by specifying exact characteristics required, with or without use of brand or trade name, provide product or assembly that provides specified characteristics and otherwise complies with Contract requirements.
- D. Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by manufacturer for application described. General overall performance of product is implied where product is specified for specific application. Manufacturer's recommendations may be contained in published product literature, or by manufacturer's certification of performance.
- E. Where specifications only require compliance with an imposed code, standard, or regulation, select product that complies with standards, codes or regulations specified.
- F. Where Specifications require matching an established Sample, Architect's decision will be final on whether proposed product matches satisfactorily. Where no product available within specified category matches satisfactorily nor complies with other specified requirements, refer to Architect.
- G. Where specified product requirements include phrase ` . . . as selected from manufacturer's standard colors, patterns, textures . . . ' or similar phrase, select product and manufacturer that comply with other specified requirements. Architect will select color, pattern, and texture from product line selected.

- H. Remove and replace products and materials not specified in Contract Documents but installed in the Work with specified products and materials at no additional cost to Owner and for no increase in Contract time.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 6200
PRODUCT OPTIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Product Options.

1.2 GENERAL

- A. Product Selection:
 - 1. When option of selecting between two or more products is given, product selected will be compatible with products previously selected, even if previously selected products were also options.
- B. Non-Conforming Work:
 - 1. Non-conforming work as covered in General Conditions applies, but is not limited, to use of non-specified products or manufacturers.
- C. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include:
 - 1. Substitutions And Equal Products:
 - a. Generally speaking, substitutions for specified products and systems, as defined in the Uniform Commercial Code, are not acceptable. However, equal products may be approved upon compliance with Contract Document requirements.
 - b. Acceptable Products / Manufacturers / Suppliers / Installers:
 - 1) Use specified products / manufacturers unless approval to use other products / manufacturers has been obtained from Architect by Addendum.
 - 2) Use 'Equal Product Approval Request Form' to request approval of equal products, manufacturers, or suppliers before bidding or before installation, as noted in individual Sections.
 - c. Quality / Performance Standard Products / Manufacturers:
 - 1) Use specified product / manufacturer or equal product from specified manufacturers only.
 - 2) Products / manufacturers used shall conform to Contract Document requirements.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 6600**PRODUCT DELIVERY, STORAGE, AND HANDLING REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Product Delivery, Storage, and Handling Requirements.

1.2 GENERAL

- A. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

1.3 DELIVERY AND ACCEPTANCE REQUIREMENTS

- A. Schedule delivery to reduce long-term storage at site and to prevent overcrowding of construction spaces.
- B. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
- C. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.

1.4 STORAGE AND HANDLING REQUIREMENTS

- A. Store products at site in manner that will simplify inspection and measurement of quantity or counting of units.
- B. Store heavy materials away from Project structure so supporting construction will not be endangered.
- C. Store products subject to damage by elements above ground, under cover in weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 7300**EXECUTION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements for governing Execution of the Work.

1.2 COMMON INSTALLATION PROVISIONS

- A. Manufacturer's Instructions: Comply with Manufacturer's installation instructions and recommendations to extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents. Notify Architect of conflicts between Manufacturer's installation instructions and Contract Document requirements.
- B. Provide attachment and connection devices and methods necessary for securing Work. Secure work true to line and level. Anchor each product securely in place, accurately located, and aligned with other Work. Allow for expansion and building movement.
- C. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain best visual effect. Refer questionable choices to Architect for final decision.
- D. Install each component during weather conditions and Project status that will ensure best possible results. Isolate each part of completed construction from incompatible material as necessary to prevent deterioration.
- E. Mounting Heights: Where mounting heights are not shown, install individual components at standard mounting heights recognized within the industry or local codes for that application. Refer questionable mounting height decisions to Architect for final decision.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION Not Used****END OF SECTION**

SECTION 01 7400**CLEANING AND WASTE MANAGEMENT****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Administrative and procedural requirements for Cleaning and Waste Management as described in Contract Documents.
- B. Related Requirements:
 - 1. In addition to standards described in this section, comply with all requirements for cleaning-up as described in various other Sections of these Specifications.

1.2 REFERENCES

- A. Definitions:
 - 1. Asphalt Pavement, Brick, and Concrete (ABC) Rubble: Rubble that contains only weathered (cured) asphalt pavement, clay bricks and attached mortar normally used in construction, or concrete that may contain rebar. The rubble shall not be mixed with, or contaminated by, another waster or debris.
 - 2. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
 - 3. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
 - 4. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
 - 5. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
 - 6. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
 - 7. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

PART 2 - PRODUCTS Not Used**PART 3 - EXECUTION****3.1 PROGRESS CLEANING**

- A. Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
- B. Keep premises broom clean during progress of the Work.
- C. Keep site and adjoining streets reasonably clean. If necessary, sprinkle rubbish and debris with water to suppress dust.
- D. During handling and installation, protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from soiling, damage, or deterioration until Substantial Completion.
- E. Clean and maintain completed construction as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure ability to operate without damaging effects.

- F. Supervise construction activities to ensure that no part of construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.
- G. Before and during application of painting materials, clear area where such work is in progress of debris, rubbish, and building materials that may cause dust. Sweep floors and vacuum as required and take all possible steps to keep area dust free.
- H. Clean exposed surfaces and protect as necessary to avoid damage and deterioration.
- I. Place extra materials of value remaining after completion of associated work that have become Owner's property as directed by Owner or Architect.
- J. Construction Waste Management And Disposal:
 - 1. Remove waste materials and rubbish caused by employees, Subcontractors and dispose of legally. Remove unsuitable or damaged materials and debris from building and from property.
 - a. Provide adequate waste receptacles and dispose of materials when full.
 - b. Properly store volatile waste and remove daily.
 - c. Do not deposit waste into storm drains, sanitary sewers, streams, or waterways. Do not discharge volatile, harmful, or dangerous materials into drainage systems.
 - 2. Do not burn waste materials or build fires on site. Do not bury debris or excess materials on Owner's property.

3.2 FINAL CLEANING

- A. Immediately before Substantial Completion, thoroughly clean building and area where The Work was performed. Remove all rubbish from under and about building, landscaped areas and parking lot and leave building and Project Site ready for occupancy by Owner.
- B. Comply with individual manufacturer's cleaning instructions.
- C. Clean each surface or unit to condition expected in normal, commercial building cleaning and maintenance program, including but not limited to:
 - 1. Interior Cleaning:
 - a. Clean inside glazing, exercising care not to scratch glass.
 - b. Remove marks, stains, fingerprints and dirt.
 - c. Clean and polish woodwork and finish hardware.
 - d. Remove labels that are not permanent labels.
 - e. Clean plumbing fixtures and tile work. Remove spots, soil or paint.
 - f. Clean surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean light fixtures and lamps.
 - g. Clean other fixtures and equipment and remove stains, paint, dirt, and dust.
 - h. Remove temporary floor protection and clean floors.
 - i. Steam clean all carpet throughout facility.
 - j. Strip all finish off of VCT tile and properly clean and seal floors prior to application of 5 coats of finish per manufacturer's maintenance instructions.
 - 2. Exterior Cleaning:
 - a. Clean and polish finish hardware.
 - b. Remove temporary protection systems.
 - c. Clean dirt, mud, and other foreign material from paving, sidewalks, and gutters.
 - d. Clean drop inlets, through-curb drains, and other drainage structures.
 - e. Remove trash, debris, and foreign material from landscaped areas.

END OF SECTION

SECTION 01 7700
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes But is Not Limited To:
1. Administrative and procedural requirements for Closeout Procedures.

1.2 GENERAL

- A. Schedule closeout procedures in the two weeks before expiration of Contract Time. Weeks will be marked by Architect's weekly before Final Closeout Review, Final Closeout Review, and expiration of Contract Time.
- B. Date of Substantial Completion shall fall within week between Architect's final weekly visit and Final Closeout Review. Date of Substantial Completion shall not occur until Construction Schedule shows completion of construction work, unless agreed to by Architect and included on Certificate of Substantial Completion.

1.3 PRELIMINARY CLOSEOUT REVIEWS

- A. Confirm with Architect when Substantial Completion of The Work will be achieved.
1. Final Architect's weekly visits will serve as Preliminary Closeout Reviews to determine if Final Closeout Review will occur as scheduled and that Substantial Completion of the Work will be achieved by that date.
 2. By final weekly Architect visit, notify Owner and Architect of date when Substantial Completion of The Work will be achieved.
- B. Arrange with Architect date for Final Closeout Review to confirm Substantial Completion.

1.4 CLOSEOUT REQUIREMENTS

- A. Before Final Closeout Review:
1. Deliver Closeout Submittals to Architect.
 2. Deliver tools, spare parts, extra stock, and similar items as required by the Contract Documents.
 3. Complete start-up testing of systems, and instruction of Owner's maintenance personnel as required by the Contract Documents.
 4. Discontinue or change over and remove temporary facilities from site, along with construction tools, mock-ups, and similar elements.
 5. Complete final cleaning requirements.

1.5 FINAL CLOSEOUT REVIEW

- A. Participate in Final Closeout Review.

- B. When Owner and Architect have confirmed that Contractor has achieved Substantial Completion of The Work, Owner, Architect, and Contractor will execute Certificate of Substantial Completion that contains:
1. Date of Substantial Completion.
 2. Punch List of Work not yet accepted.
 3. Amount to be withheld for completion of Punch List work.
 4. Time period for completion of Punch List work.
 5. Amount of liquidated damages set forth in Supplementary Conditions to be assessed if Contractor fails to complete Punch List work within time set forth in Certificate.
- C. Final Acceptance Conference:
1. Notify Architect in writing when work on Punch List has been completed.
 2. Arrange with Architect date and time for Final Acceptance Conference.
 3. When Owner and Architect have confirmed that Contractor has completed Punch List work, Architect will issue letter to Owner authorizing final payment.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

SECTION 01 7800**CLOSEOUT SUBMITTALS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes But is Not Limited To:
 - 1. Administrative and procedural requirements for Closeout Submittals.

1.2 GENERAL

- A. Workmanship bonds, final certifications, equipment check-out sheets, and similar documents.
- B. Releases enabling Owner unrestricted use of The Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- C. Project photographs, damage or settlement survey, and similar record information required by Contract Documents.

1.3 OPERATIONS AND MAINTENANCE DATA

- A. Operations And Maintenance Manuals that include:
 - 1. Copy of complete Project Manual including Addenda, Modifications as defined in General Conditions, and other interpretations issued during construction.
 - a. Mark these documents to show variations in actual Work performed in comparison with text of specifications and Modifications. Show substitutions, selection of options, and similar information, particularly on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 - b. Note related record drawing information and Product Data.
 - 2. Operations and maintenance submittals required by Contract Documents.
 - 3. Certifications required by Contract Documents.
 - 4. Copies of warranties required by Contract Documents.
 - 5. Testing and Inspection Reports required by Contract Documents.

1.4 WARRANTIES

- A. When written guarantees beyond one year after substantial completion are required by Contract Documents, secure such guarantees and warranties properly addressed and signed in favor of Owner. Include these documents in Operations & Maintenance Manuals specified above.
- B. Delivery of guarantees and warranties will not relieve Contractor from obligations assumed under other provisions of Contract Documents.

1.5 PROJECT RECORD DOCUMENTS

- A. Do not use record documents for construction purposes. Protect from deterioration and loss in secure, fire-resistive location. Provide access to record documents for Architect's reference during normal working hours.

- B. Maintain clean, undamaged set of Drawings. Mark set to show actual installation where installation varies from the Work as originally shown. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - 2. Mark new information that is important to Owner, but was not shown on Drawings.
 - 3. Note related Change Order numbers where applicable.

1.6 SPARE PARTS

- A. Provide items that are indicated in individual Sections.

1.7 EXTRA STOCK MATERIALS

- A. Provide items that are indicated in individual Sections.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION Not Used

END OF SECTION

DIVISION 02: EXISTING CONDITIONS

02 4000 DEMOLITION AND STRUCTURE MOVING

02 4119 SELECTIVE STRUCTURE DEMOLITION

END OF TABLE OF CONTENTS

SECTION 02 4119**SELECTIVE STRUCTURE DEMOLITION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Salvage of existing items to be reused.
- B. Reference Standards:
 - 1. National Fire Protection Association / American National Standards Institute:
 - a. NFPA 241, 'Standard for Safeguarding Construction, Alteration, and Demolition Operations', 2009 Edition.
 - 2. American National Standards Institute / American Society of Safety Engineers:
 - a. ANSI / ASSE A10.6-2006, 'Safety Requirements for Demolition Operations.'

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Storage of removed items or materials will not be permitted on-site.
- B. Scheduling:
 - 1. Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, on Schedule specified in Section 01 3200.

1.3 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
 - 1. Comply with governing EPA notification regulations before beginning selective demolition.
 - 2. Comply with hauling and disposal regulations of authorities having jurisdiction.
 - 3. Standards: Comply with ANSI A10.6 and NFPA 241.

1.4 FIELD CONDITIONS

- A. Existing Conditions:
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 2. Prior to demolition, the Contractor shall obtain verification from the utility owner(s) that the existing utilities, including electrical, wastewater, and/or water facilities, are not operational and are ready for demolition.
 - 3. The Contractor shall examine the various Drawings, visit the site, determine the extent of the Work, the extent of work affected therein, and all conditions under which he is required to perform the various operations.

PART 2 - PRODUCTS: Not Used**PART 3 - EXECUTION****3.1 EXAMINATION**

- A. Verification Of Conditions:
 - 1. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
 - a. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Evaluation And Assessment:
 - 1. Hazardous Materials:
 - a. It is not expected that hazardous materials will be encountered in the Work. Identified hazardous materials will be removed by Owner before start of the Work.
 - b. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Architect.
 - 2. Inventory and record condition of items to be removed and reinstalled.
 - 3. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure nature and extent of conflict. Promptly submit written report to Architect.
 - 4. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- A. Temporary Facilities:
 - 1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 2. Maintain fire-protection facilities in service during selective demolition operations.
- B. Temporary Shoring if needed:
 - 1. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 2. Strengthen or add new supports when required during progress of selective demolition.
- C. Utility Services:
 - 1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - a. Arrange to shut off indicated utilities with utility companies.
 - b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 SELECTIVE DEMOLITION

- A. General:
 - 1. Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

- 2. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - a. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - b. Conduct operations to minimize damage by falling debris or other causes to adjacent buildings, structures, roadways, other facilities, and persons.
 - c. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - d. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - e. Maintain adequate ventilation when using cutting torches.
 - f. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - g. Dispose of demolished items and materials promptly.

- B. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Protect items from damage during transport and storage.
 - 3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- C. Existing Items to Remain:
 - 1. Protect construction indicated to remain against damage and soiling during selective demolition.
 - 2. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition,
 - 3. Protect in place the utility service, fence, tree, or device during the prosecution of the demolition work as specified.
 - 4. Where indicated on the Drawings, the designated facilities shall remain intact and in service during the prosecution of the demolition work.

- D. Damage:
 - 1. Promptly repair damage caused to adjacent facilities by demolition operations as directed by the City at no cost to the City.

3.4 TRAFFIC AND ACCESS

- A. Conduct work to ensure minimum interference with on-site and off-site roads, streets, sidewalks, and occupied or used facilities.
- B. Do not close or obstruct streets, sidewalks, or other occupied or used facilities without permission from the City. Provide alternate routes around closed or obstructed traffic in access ways.
- C. Coordinate truck routing and timing with City.

3.5 CLEANING

- A. General:
 - 1. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
 - 2. Return adjacent areas to condition existing before selective demolition operations began.

B. Waste Management:

1. All material, equipment, rubble, debris, and other products of the demolition shall become the property of the Contractor for his disposal off-site in accordance with all applicable laws and ordinances at the Contractor's expense. The sale of salvageable materials by the Contractor shall only be conducted off-site. The sale of removed items on the site is prohibited by the City
2. Disposal of Demolished Materials:
 - a. Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
 - 1) Do not allow demolished materials to accumulate on-site.
 - 2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3) Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

END OF SECTION

DIVISION 06: WOOD, PLASTICS, AND COMPOSITES

06 2000 FINISH CARPENTRY

06 2001 COMMON FINISH CARPENTRY REQUIREMENTS

06 2024 DOOR, FRAME, AND FINISH HARDWARE INSTALLATION

END OF TABLE OF CONTENTS

SECTION 06 2001**COMMON FINISH CARPENTRY REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and install sealants required for items installed under this Section, as described in Contract Documents.
- B. Products Installed But Not Furnished Under This Section:
 - 1. Selected Building Specialties.
 - 2. Miscellaneous as specified elsewhere.
- C. Related Requirements:
 - 1. Section 07 9213: 'Elastomeric Joint Sealants' for quality of sealants, submittal and installation requirements.
 - 2. Sections in Division 10: Furnishing of Specialties.

1.2 REFERENCES

- A. Association Publications:
 - 1. Architectural Woodwork Institute / Architectural Woodwork Manufacturers Association of Canada / Woodwork Institute, 46179 Westlake Drive, Suite 120, Potomac Falls, VA www.awinet.org.
 - a. Architectural Woodwork Standards (AWS), 1st Edition, 2009'.
- B. Definitions:
 - 1. Grade: Unless otherwise noted, this term means Grade rules for Economy, Custom, and/or Premium Grade:
 - a. Economy Grade: The lowest acceptable grade in both material and workmanship requirements, and is for work where price outweighs quality considerations.
 - b. Custom Grade: Typically specified for and adequately covers most high-quality architectural woodwork, providing a well-defined degree of control over a project's quality of materials, workmanship, or installation.
 - c. Premium Grade: The highest Grade available in both material and workmanship where the highest level of quality, materials, workmanship, and installation is required.
- C. Reference Standards:
 - 1. ASTM International:
 - a. ASTM C578-11b, 'Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation'.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. Blum Inc, Stanley, NC www.blum.com.
 - b. Bommer Industries, Landrum, SC www.bommer.com.
 - c. Dow Chemical, Midland, MI www.dow.com.
 - d. Hafele America Co., Archdale, NC hafele.com.

- e. Ives, Indianapolis, IN www.iveshardware.com.
- f. Knape & Vogt, Grand Rapids, MI www.knapeandvogt.com
- g. SOSS Door Hardware (Division of Universal Industrial Products Company) Pioneer OH
www.soss.com.
- h. Stanley, New Britain, CT www.stanleyhardware.com
- i. TWP Inc., Berkley, CA www.twpinc.com.

B. Glue: Waterproof and of best quality.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
- 1. Verify walls, ceilings, floors, and openings are plumb, straight, in-line, and square before installing Architectural Woodwork.
 - 2. Report conditions that are not in compliance to Architect before starting installation.

3.2 PREPARATION

- A. Surface Preparation:
- 1. Install Architectural Woodwork after wall and ceiling painting is completed in areas where Architectural Woodwork is to be installed.
- B. Items Installed But Not Furnished Under This Section: Install in accordance with requirements specified in Section furnishing item.

3.3 INSTALLATION

- A. Special Techniques:
- 1. AWS Custom Grade is minimum acceptable standard, except where explicitly specified otherwise, for installation of architectural woodwork.
- B. General Architectural Woodwork Installation:
- 1. Fabricate work in accordance with measurements taken on Project site.
 - 2. Scribe, miter, and join accurately and neatly to conform to details.
 - 3. Exposed surfaces shall be machine sanded, ready for finishing.
 - 4. Allow for free movement of panels.
 - 5. Countersink nails. Countersink screws and plug those exposed to view.

END OF SECTION

SECTION 06 2024**DOOR, FRAME, AND FINISH HARDWARE INSTALLATION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Installed But Not Furnished Under This Section:
 - 1. Flush wood doors.
 - 2. Door frames.
 - 3. Finish hardware.
- B. Related Requirements:
 - 1. Sections under 08 1000 heading: Furnishing of metal frames.
 - 2. Sections under 08 7000 heading: Furnishing of finish hardware.

1.2 REFERENCES

- A. Association Publications:
 - 1. Door and Hardware Institute (DHI) 14150 Newbrook Drive, Suite 200 Chantilly, VA www.dhi.org, *Installation Guide for Doors & Hardware* by Door & Hardware Institute.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Storage And Handling Requirements:
 - 1. Metal Frames:
 - a. Protect metal frames from damage before and during installation.

PART 2 - PRODUCTS: Not Used**PART 3 - EXECUTION****3.1 INSTALLATION**

- A. Hollow Metal Frames:
 - 1. Site Tolerances:
 - a. Squareness: 1/16 inch (1.6 mm) from top edge to opposite top edge.
 - b. Plumbness: 1/16 inch (1.6 mm) from top of jamb to bottom of jamb.
 - c. Alignment: 1/16 inch (1.6 mm) from plane of left side face of jamb to right side face of jamb.
 - d. Twist: 1/16 inch (1.6 mm) across throat of jamb plane measured across each face to plane of opposite jamb throat.
 - e. Finished Clearance Between Door And Frame:
 - 1) 1/16 inch (1.6 mm) at head and hinge jamb plus 1/16 inch (1.6 mm) maximum
 - 2) 1/8 inch (3 mm) at strike jamb plus or minus 1/16 inch (1.6 mm) maximum.
 - 3) 1/2 inch (12.7 mm) to top of finished floor surface or 1/4 inch (6 mm) to top of threshold, plus or minus 1/16 inch (1.6 mm) maximum.
- B. Doors:
 - 1. When Project is completed, doors shall not bind, stick, or be mounted so as to cause future hardware difficulties.

2. Do not impair utility or structural strength of door in fitting of door, applying hardware, or cutting and altering door louvers, panels, or other special details.
- C. Hardware:
1. General:
 - a. Install using set of Manufacturer's installation, adjustment, and maintenance instructions submitted with hardware under Section 08 7101. Follow as closely as possible.
 - b. Mount closers on jamb stop side of door in parallel arm configuration where it is physically possible to do so and not damage or hinder operation of door or closer.
 2. Hardware for Wood Doors:
 - a. If doors are not factory-machined, use hardware templates furnished by Hardware Manufacturer when mounting hardware.
 - b. Set hinges flush with edge surface. Be sure that hinges are set in a straight line to prevent distortion.
 - c. Mount door latches high in strike plate opening so when door later settles, latch will not bind.

3.2 FIELD QUALITY CONTROL

- A. Non-Conforming Work: Non-conforming work as covered in the General Conditions applies, but is not limited to the following:
1. Correct any work found defective or not complying with contract document requirements at no additional cost to the Owner.
 2. Door frames:
 - a. Door frames damaged by use of crowbar or other prying devices to set door frames shall be repaired or replaced at no additional cost to Owner.

END OF SECTION

DIVISION 07: THERMAL AND MOISTURE PROTECTION

07 2000 THERMAL PROTECTION

07 2116 BLANKET INSULATION

07 9000 JOINT PROTECTION

07 9213 ELASTOMERIC JOINT SEALANTS

END OF TABLE OF CONTENTS

SECTION 07 2116
BLANKET INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Furnish and install insulation in metal framing as described in Contract Documents.

1.2 REFERENCES

- A. Reference Standards:
 - 1. ASTM International:
 - a. ASTM C665-12, 'Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing'.

1.3 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
 - 1. Insulation shall be manufactured to be in compliance with California Building Code (CBC) or other applicable building codes.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:
 - 1. Insulation:
 - a. Acceptable Manufacturers:
 - 1) Certainteed Corp, Valley Forge, PA www.certainteed.com.
 - 2) Guardian Fiberglass, Greer, SC www.guardianbp.com.
 - 3) Johns Manville, Denver, CO www.jm.com.
 - 4) Knauf Fiber Glass, Shelbyville, IN www.knaufusa.com.
 - 5) Owens-Corning Fiberglass Corporation, Toledo, OH www.owens-corning.com.
 - b. Equal as approved by Architect before bidding.
- B. Materials:
 - 1. Thermal And Acoustic Insulation:
 - a. Faced Insulation:
 - 1) Kraft faced meeting requirements of ASTM C665, Type II, Class C.
 - 2) Foil faced meeting requirements of ASTM C665, Type III.
 - a) Class B: Enclosed insulation.
 - b. Order insulation by 'R' factor rather than 'U' factor, rating, or thickness, either 16 or 24 inches (400 or 600 mm) wide according to framing spacing.
 - c. 'R' Factor Required:
 - 1) Metal Wall Stud Framing:

R11	3-1/2 inches deep	89 mm deep
R19	5-1/2 inches deep	140 mm deep

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General:
 - 1. Leave no gaps in insulation envelope.

- B. In Framing:
 - 1. Install insulation behind wiring, around duct and vent line penetrations, and in similar places.
 - 2. Fit ends of batts snug against top and bottom plates.
 - 3. Fit batts snug against stud framing at each side.
 - 4. Where insulation is not enclosed by structure or drywall, support in place with wire or other suitable material.

END OF SECTION

SECTION 07 9213**ELASTOMERIC JOINT SEALANTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and install sealants not specified to be furnished and installed under other Sections.
 - 2. Quality of sealants to be used on Project not specified elsewhere, including submittal, material, and installation requirements.
- B. Related Requirements:
 - 1. Furnishing and installing of sealants is specified in Sections specifying work to receive new sealants.

1.2 REFERENCES

- A. Association Publications:
 - 1. American Architectural Manufacturers Association (AAMA):
 - a. 'Voluntary Specifications and Test Methods for Sealants'.
 - 2. ASM International:
 - a. 'Adhesives and Sealants', Volume 3, ASM International Handbook Committee, (May 1999).
 - b. Committee C24 on Building Seals and Sealants for various Specifications, Guides, Test Methods, and Practices related to sealant specifying and application.
 - c. Committee E6 on Building Performance for various Specifications, Guides, Test Methods, and Practices related to sealant use with air barriers, vapor retarders, and exterior enclosure systems and materials.
 - 3. The Adhesive and Sealing Council, Inc. (ASC) / Sealant, Waterproofing & Restoration Institute (SWR Institute):
 - a. 'Sealants: The Professional's Guide'.
 - b. 'Joint Sealants, Whole Building Design Guide'.
- B. Definitions:
 - 1. Adhere: To cause two surfaces to be held together by adhesion.
 - 2. Adhesive: An adhesive, as defined by The American Society for Testing and Materials (ASTM), is 'a substance capable of holding materials together by surface attachment'.
 - 3. Caulk: Caulks have variety of definitions but are generally recognized as materials used in applications where only minor elastomeric properties are needed.
 - 4. Elastomer: Rubbery material which returns to approximately its original dimensions in short time after relatively large amount of deformation.
 - 5. Flow: Movement of adhesive during bonding process before adhesive is set.
 - 6. Joint: Location at which two substrates are held together with layer of adhesive.
 - 7. Primer: Coating applied to surface, prior to application of an adhesive, to improve performance of the bond.
 - 8. Sealant. Sealants are generally used in applications where elastic properties are needed while adhesives are generally used in applications where bonding strength and rigidity are needed. With technology advancements both sealants and adhesives can be used interchangeably depending on applications performance requirements.
 - 9. Sealant Types and Classifications:
 - a. ASTM Specifications:
 - 1) Type:

- a) Type S: Single-component sealant.
- b) Type M: Multi-component sealant.
- 2) Grade:
 - a) Grade P: Pourable or self-leveling sealant used for horizontal traffic joints.
 - b) Grade NS: Non-sag or gunnable sealant used for vertical and non-traffic joints.
- 3) Classes: Represent movement capability in percent of joint width.
 - a) Class 100/50: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand of at least 100 percent increase and decrease of at least 50 percent of joint width as measured at time of application.
 - b) Class 50: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand increase and decrease of at least 50 percent of joint width as measured at time of application.
 - c) Class 25: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand increase and decrease of at least 25 percent of joint width as measured at time of application.
 - d) Class 12: Sealant that, when tested for adhesion and cohesion under cyclic movement shall withstand increase and decrease of at least 12 percent of joint width as measured at time of application.
- 4) Use:
 - a) T (Traffic): Sealant designed for use in joints in pedestrian and vehicular traffic areas such as walkways, plazas, decks and parking garages.
 - b) NT (Non-Traffic): Sealant designed for use in joints in non-traffic areas.
 - c) I (Immersion): Sealant that meets bond requirements when tested by immersion (Immersion rated sealant applications require primer).
 - d) M (Mortar): Sealant that meets bond requirements when tested on mortar specimens.
 - e) G (Glass): Sealant that meets bond requirements when tested on glass specimens.
 - f) A (Aluminum): Sealant that meets bond requirements when tested on aluminum specimens.
 - g) O (Other): Sealant that meets bond requirements when tested on substrates other than standard substrates, being glass, aluminum, mortar.
- b. Federal Specifications:
 - 1) Type:
 - a) Type I: Self-leveling, pour grade.
 - (1) Compound which has sufficient flow to give smooth level surface when applied in horizontal joint at 40 deg F (4.4 deg C).
 - b) Type II: Non-sag, gun grade
 - (1) Compound which permits application in joints on vertical surfaces without sagging (slumping) at temperatures 40 deg F (4.4 deg C) and 122 deg. F (50 deg. C).
 - c) Type NS: Non-sag, gun grade.
 - (1) Non-sag shall be a compound which permits application in joints on vertical surfaces without sagging (slumping) at temperatures between -20 deg F and 122 deg. F (- 29 and 50 deg. C).
 - 2) Class:
 - a) Class A: Compounds resistant to 50 percent total joint movement (includes Type I and Type II).
 - (1) Capable of resisting compression-extension cycling of plus and minus 25 percent of nominal half inch width.
 - b) Class B: Compounds resistant to 25 percent total joint movement (includes Type I and Type II).
 - (1) Capable of resisting compression-extension cycling of plus and minus 12 1/2 percent of nominal half inch width.
- 10. Shelf Life: Period of time, usually beginning with date of manufacture, during which stored adhesive will remain effective or useful.

11. **Silicone:** Any member of family of polymeric products whose molecular backbone is made up of alternating silicon and oxygen atoms and which has pendant hydrocarbon groups attached to silicon atoms. Used primarily as a sealant. Offers excellent resistance to water and large variations in temperature (minus 100 deg F to + 600 deg F) (minus 73.3 deg C to + 316 deg C).
 12. **Stability:** Ability of material to remain unchanged.
 13. **Storage Life:** Period of time during which packaged adhesive can be stored under specified temperature conditions and remain suitable for use.
 14. **Substrate:** Material upon surface of which an adhesive-containing substance is spread for any purpose, such as bonding or coating.
 15. **Surface Preparation:** Physical and /or chemical preparation of substrate to render it suitable for adhesive joining. Same as substrate preparation or pre-bond preparation.
 16. **Toxicity:** Material shall have no adverse effect on health of personnel when used for its intended purpose.
- C. Reference Standards:
1. American Association of State and Highway Transportation Officials:
 - a. AASHTO T 132-87(2013), 'Standard Method of Test for Tensile Strength of Hydraulic Cement Mortars'.
 2. ASTM International:
 - a. ASTM C639-01(2011), 'Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants'.
 - b. ASTM C661-06(2011), 'Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer'.
 - c. ASTM C679-03(2009), 'Standard Test Method for Tack-Free Time of Elastomeric Sealants'.
 - d. ASTM C719-13, 'Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)'.
 - e. ASTM C793-05(2010), 'Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants'.
 - f. ASTM C794-10, 'Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants'.
 - g. ASTM C920-14, 'Standard Specification for Elastomeric Joint Sealants'.
 - h. ASTM C1135-00(2011), 'Standard Test Method for Determining Tensile Adhesion Properties of Structural Sealants'.
 - i. ASTM C1184-13, 'Standard Specification for Structural Silicone Sealants'.
 - j. ASTM C1193-13, 'Standard Guide for Use of Joint Sealants'.
 - k. ASTM C1248-08(2012), 'Standard Test Method for Staining of Porous Substrate by Joint Sealants'.
 - l. ASTM C1330-02(2013), 'Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants'.
 - m. ASTM C1481-12 'Standard Guide for Use of Joint Sealants with Exterior Insulation & Finish Systems (EIFS)'.
 - n. ASTM D412-06(2013), 'Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension'.
 - o. ASTM D2202-00(2010), 'Standard Test Method for Slump of Sealants'.
 - p. ASTM D2240-05(2010), 'Standard Test Method for Rubber Property-Durometer Hardness'.
 - q. ASTM D5893-10, 'Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements'.
 - r. ASTM E119-12a, 'Standard Test Methods for Fire Tests of Building Construction and Materials'.
 3. Federal Specifications:
 - a. Federal Specification TT-S-001543A (CON-NBS), 'Sealing Compound: Silicone Rubber Base (for Caulking, Sealing & Glazing in Buildings and Other Structures)' (9 Jun 1971).
 - b. TT-S-00230C (CON-NBS), 'Sealing compound: Elastomeric Type, Single Component (For Caulking, Sealing, And Glazing In Buildings And Other Structures.' (2 Feb 1970).
 4. Government Services Administration (GSA), Commercial Item Descriptions (CID):
 - a. GSA CID A-A-272A, 'Sealing Compound: Silicone Rubber Base (For Caulking, Sealing, and Glazing in Buildings and Other Structures)'.
 - b. GSA CID A-A-1556, 'Sealing Compound Elastomeric Type, Single Component (For Caulking, Sealing, and Glazing in Buildings and Other Structures)'.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Scheduling:
 - 1. Schedule work so waterproofing, water repellents and preservative finishes are installed after sealants, unless sealant manufacturer approves otherwise in writing.
 - 2. Ensure sealants are cured before covering with other materials.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements:
 - 1. Deliver and keep in original containers until ready for use.
 - 2. Inspect for damage or deteriorated materials.
- B. Storage and Handling Requirements:
 - 1. Handle, store, and apply materials in compliance with applicable regulations and material safety data sheets (MSDS).
 - 2. Handle to prevent inclusion of foreign matter, damage by water, or breakage.
 - 3. Store in a cool dry location, but never under 40 deg F (4 deg C) or subjected to sustained temperatures exceeding 90 deg F (32 deg C) or as per Manufacturer's written recommendations.
 - 4. Do use sealants that have exceeded shelf life of product.

1.5 FIELD CONDITIONS

- A. Ambient Conditions:
 - 1. Do not install sealant during inclement weather or when such conditions are expected. Allow wet surfaces to dry.
 - 2. Follow Manufacturer's temperature recommendations for installing sealants.

1.6 WARRANTY

- A. Manufacturer Warranty:
 - 1. Signed warranties against adhesive and cohesive failure of sealant and against infiltration of water and air through sealed joint for period of three (3) years from date of Substantial Completion.
 - a. Manufacturer's standard warranty covering sealant materials.
 - b. Applicator's standard warranty covering workmanship.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. Dow Corning Corp., Midland, MI www.dowcorning.com.
 - b. Franklin International, Inc. Columbus, OH www.titebond.com.
 - c. GE Sealants & Adhesives (see Momentive Performance Materials Inc.).
 - d. Laticrete International Inc., Bethany, CT www.laticrete.com.
 - e. Momentive Performance Materials Inc. (formally GE Sealants & Adhesives), Huntersville, NC www.ge.com/silicones.
 - f. Sherwin-Williams, Cleveland, OH www.sherwin-williams.com.
 - g. Sika Corporation, Lyndhurst, NJ www.sikaconstruction.com or Sika Canada Inc, Pointe Claire, QC www.sika.ca.
 - h. Tremco, Beachwood, OH www.tremcosealants.com or Tremco Ltd, Toronto, ON (800) 363-3213.

B. Materials:

1. Design Criteria:

a. Compliance: Meet or exceed requirements of these standards:

- 1) ASTM C920: Elastomeric joint sealant performance standard.
- 2) ASTM C639 or ASTM D2202: Flow (sag or slump).
- 3) ASTM C661 or ASTM D2240: Durometer hardness (shore A).
- 4) ASTM C679 or ASTM C794: Tack free time (peel strength).
- 5) ASTM C719: Joint movement capability.
- 6) ASTM 793: Effects of accelerated weathering.
- 7) ASTM C1135 or ASTM D412: Tensile adhesion strength.
- 8) ASTM C1184: Structural silicone sealants.
- 9) ASTM C1248: Staining.
- 10) ASTM D412: Modulus.
- 11) ASTM D5893: Silicone Joint Sealant for Concrete Pavements.
- 12) Federal Specification TT-S-001543A.
- 13) Federal Specification TT-S-00230C.
- 14) GSA CID A-A-272A.
- 15) GSA CID A-A-1556.

b. Comply with Manufacturer's ambient condition requirements.

c. Sealants must meet Manufacturer's shelf-life requirements.

d. Sealants must adhere to and be compatible with specified substrates.

e. Sealants shall be stable when exposed to UV, joint movements, and particular environment prevailing at project location.

f. Primers (Concrete, stone, masonry, and other nonporous surfaces typically do not require a primer. Aluminum and other nonporous surfaces except glass require use of a primer. Installer Option to use Adhesion Test to determine if primer is required or use primer called out in related sections):

1) Adhesion Test:

- a) Apply silicone sealant to small area and perform adhesion test to determine if primer is required to achieve adequate adhesion. If necessary, apply primer at rate and in accordance with Manufacturer's instructions. See 'Field Quality Control' in Part 3 of this specification for Adhesive Test.

2) If Primer required, shall not stain and shall be compatible with substrates.

3) Allow primer to dry before applying sealant.

2. General Interior Sealants:

a. General:

- 1) Inside jambs and heads of door frames.
- 2) Both sides of interior door frames.
- 3) Miscellaneous gaps between substrates.

b. Design Criteria:

- 1) Meet ASTM C920, Type S, Grade NS, NT, and Class 25 test requirements.
- 2) 100 percent silicone sealant.

c. Non-Paintable Sealant (Installer Option A):

1) Approved Product. See Section 01 6200

- a) Dow Corning: Tub, Tile, And Ceramic Silicone Sealant.
- b) Laticrete: Latasil Silicone Sealant.
- c) Momentive Performance Materials (formerly, GE Sealants & Adhesives): GE SCS2800 SilGlaze II Silicone Sealant.
- d) Sherwin Williams: White Lightning Silicone Ultra Low Odor Window and Door Sealant.
- e) Tremco: Tremsil 200 Silicone Sealant.
- f) Franklin International: Titebond 2601 (White) 2611 (Clear) 100% Silicone Sealant.

d. Paintable Sealant (Installer Option B):

1) Approved Product. See Section 01 6200

- a) Momentive Performance Materials (formerly, GE Sealants & Adhesives): GE SCS7000 Paintable Silicone Sealant.

3. Sealants For Interior Joints:
 - a. General:
 - 1) Countertops and backsplash to wall.
 - 2) Sinks and lavatories to countertops.
 - 3) Joints between plumbing fixtures and other substrates
 - b. Interior Ceramic Tile Joints are furnished in Section 07 9213 and installed in Section 09 3013 'Ceramic Tiling' including the following:
 - 1) Ceramic tile inside corners.
 - 2) Ceramic tile and paver tile joints.
 - c. Description:
 - 1) One-part acetoxo cure silicone sealant with fungicides to resist mold and mildew.
 - d. Design Criteria:
 - 1) Meet ASTM C920, Type S, Grade NS, NT, and Class 25 test requirements.
 - 2) 100 percent silicone sealant.
 - e. Color: As selected by Architect from Manufacturer's standard colors.
 - f. Approved Products. See Section 01 6200
 - 1) Dow Corning: Tub, Tile, And Ceramic Silicone Sealant.
 - 2) Laticrete: Latasil Tile and Stone Silicone Sealant.
 - 3) Momentive Performance Materials (formerly, GE Sealants & Adhesives): GE SCS1700 Sanitary Silicone Sealant.
 - 4) Tremco: Tremsil 200 Silicone Sealant.

2.2 ACCESSORIES

- A. Bond Breaker Tape:
 1. Pressure sensitive tape as by Sealant Manufacturer to suit application.
 2. Provide tape to prevent adhesion to joint fillers or joint surfaces at back of joint and allow sealant movement.
- B. Joint Backing:
 1. Comply with ASTM C1330.
 2. Flexible closed cell, non-gassing polyurethane or polyolefin rod or bond breaker tape as recommended by Sealant Manufacturer for joints being sealed.
 3. Oversized 25 to 50 percent larger than joint width.
- C. Joint Cleaner:
 1. Non-corrosive and non-staining type as recommended by Sealant Manufacturer, compatible with joint forming materials.
- D. Masking Tape:
 1. Non-staining, non-absorbent tape product compatible with joint sealants and adjacent joint surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
 1. Examine substrate surfaces and joint openings are ready to receive Work.
 - a. Verify each sealant is compatible for use with joint substrates.
 - b. Verify joint surfaces are clean and dry.
 - c. Ensure concrete surfaces are fully cured.
 2. Sealants provided shall meet Manufacturer's shelf-life requirements.
 3. Notify Architect of unsuitable conditions in writing.
 - a. Do not proceed until unsatisfactory conditions are corrected.
 4. Commencement of Work by installer is considered acceptance of substrate.

3.2 PREPARATION

- A. Surface Preparation:
 - 1. Surfaces shall be clean, dry, free of dust, oil, grease, dew, or frost. Prepare substrates in accordance with Manufacturer's instructions:
 - a. Porous surfaces: Abrasive-clean followed by blasting with oil-free compressed air.
 - b. Nonporous surfaces: Use two-cloth solvent wipe in accordance with ASTM C1193.
 - c. High-pressure water cleaning: Exercise care that water does not enter through failed joints.
 - 2. Field test joints in inconspicuous location.
 - a. Verify joint preparation and primer required to obtain optimum adhesion of sealants to joint substrate.
 - b. When test indicates sealant adhesion failure, modify joint preparation primer, or both and retest until joint passes sealant adhesion test.
 - 3. Masking: Apply masking tape as required to protect adjacent surfaces and to ensure straight bead line and facilitate cleaning.
- B. Joints:
 - 1. Prepare joints in accordance with ASTM C1193.
 - a. Clean joint surfaces of contaminants capable of affecting sealant bond to joint surface using Manufacturer's recommended instructions for joint preparation methods.
 - b. Remove dirt, dust, oils, wax, paints, and contamination capable of affecting primer and sealant bond.
 - c. Clean concrete joint surfaces to remove curing agents and form release agents.
- C. Protection:
 - 1. Protect elements surrounding the Work of this section from damage or disfiguration.

3.3 APPLICATION

- A. General:
 - 1. Apply silicone sealant in accordance with Manufacturer's instructions.
 - 2. Do not use damaged or deteriorated materials.
 - 3. Install primer and sealants in accordance with ASTM C1193 and Manufacturer's instructions.
 - 4. Apply primer where required for sealant adhesion.
 - 5. Install sealants immediately after joint preparation.
 - 6. Do not use silicone sealant as per the following:
 - a. Apply caulking/sealant at temperatures below 40 deg F (4 deg C).
 - b. Below-grade applications.
 - c. Brass and copper surfaces.
 - d. Materials bleeding oils, plasticizers, and solvents.
 - e. Structural glazing and adhesive.
 - f. Surfaces to be immersed in water for prolonged time.
- B. Joint Backing:
 - 1. Install joint backing to maintain sealant joint ratios recommended by Manufacturer.
 - 2. Install without gaps, twisting, stretching, or puncturing backing material. Use gage to ensure uniform depth to achieve correct profile, coverage, and performance.
 - 3. Rod for open joints shall be at least 1-1/2 times width of open joint and of thickness to give solid backing. Backing shall fill up joint so depth of sealant bite is no more than 3/8 inch (9.5 mm) deep.
- C. Bond Breaker:
 - 1. Install bond breaker where joint backing is not used or where backing is not feasible.
 - a. Apply bond-breaker tape in shallow joints as recommended by Sealant Manufacturer.

- D. Sealant:
1. Apply sealant with hand-caulking gun with nozzle of proper size to fit joints. Use sufficient pressure to insure full contact to both sides of joint to full depth of joint. Apply sealants in vertical joints from bottom to top.
 2. Fill joint opening to full and proper configuration.
 3. Apply in continuous operation.
 4. Tool joints immediately after application of sealant if required to achieve full bedding to substrate or to achieve smooth sealant surface. Tool joints in opposite direction from application direction, i.e., in vertical joints, from the top down. Do not 'wet tool' sealants.
 5. Depth of sealant bite shall be 1/4 inch (6 mm) minimum and 1/2 inch (12.7 mm) maximum, but never more than one half or less than one fourth joint width.
- E. Caulk gaps between painted or coated substrates and unfinished or pre-finished substrates. Caulk gaps larger than 3/16 inch (5 mm) between painted or coated substrates.

3.4 TOLERANCES

- A. Provide joint tolerances in accordance with Manufacturer's printed instructions.

3.5 CLEANING

- A. Remove masking tape and excess sealant.
- B. Clean adjacent materials, which have been soiled, immediately (before setting) as recommended by Manufacturer.
- C. Waste Management: Dispose of products in accordance with manufacturer's recommendation.

END OF SECTION

DIVISION 08: OPENINGS

08 0000 OPENINGS

08 0601 HARDWARE GROUP AND KEYING SCHEDULES

08 1000 DOORS AND FRAMES

08 1213 HOLLOW METAL FRAMES

08 1429 FLUSH WOOD DOORS: FACTORY-FINISHED, CLEAR

08 7000 HARDWARE

08 7101 COMMON FINISH HARDWARE REQUIREMENTS

08 7102 HANGING DEVICES

08 7103 SECURING DEVICES

08 7104 OPERATING TRIM

08 7106 CLOSING DEVICES

08 7107 PROTECTIVE PLATES AND TRIM

08 7108 STOPS AND HOLDERS

08 7109 ACCESSORIES

END OF TABLE OF CONTENTS

SECTION 08 0601**HARDWARE GROUP AND KEYING SCHEDULES****PART 1 - HARDWARE GROUP SCHEDULE for FINISH HARDWARE****1.1 DEFINITIONS**

- A. Builders Hardware Manufacturer's Association (BHMA) Hardware Functions:
1. F-75 Passage Latch: Latch bolt operated by lever from either side at all times.
 2. F-76 Privacy Lock: Latch bolt operated by lever from either side. Outside lever locked by push button inside and unlocked by emergency key from outside or rotating lever from inside.
 3. F-81 Office Door Lock: Dead locking latch bolt operated by lever from either side, except when outside lever is locked by turn button in inside lever. When outside lever is locked, latch bolt is operated by key in outside lever or by rotating inside lever. Turn button must be manually rotated to unlock outside lever.
 4. F-84 Classroom Deadlock: Dead locking latch bolt operated by lever from either side, except when outside lever is locked, latch bolt is operated by key in outside lever or by rotating inside lever.
 5. F-86 Utility Space Door Lock: Dead locking latch bolt operated by key in outside lever or by rotating inside lever. Outside lever is always fixed.

1.2 SINGLE INTERIOR DOORS:

- A. Group 20: **Doors 101-A and 102-A.**
1. 3 each: Hinges.
 2. 1 each: Lockset Function F-75.
 3. 1 each: Closer.
 4. 1 each: Threshold.
 5. 1 each: Kick Plate
 6. 1 each: Stop.
 7. 1 set: Smoke Gaskets.
- B. Group 21: **Doors 201-A and 202-A.**
1. 3 each: Hinges.
 2. 1 each: Lockset Function F-86.
 3. 1 each: Closer.
 4. 1 each: Threshold.
 5. 1 each: Kick Plate
 6. 1 each: Stop.
 7. 1 set: Smoke Gaskets.

END OF SECTION

SECTION 08 1213**HOLLOW METAL FRAMES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Hollow metal frames.
- B. Related Requirements:
 - 1. Section 06 2024: 'Door, Frame, And Finish Hardware Installation' for installation.

1.2 REFERENCES

- A. Reference Standards:
 - 1. American Architectural Manufacturers Association / Window & Door Manufacturers Association / CSA Group:
 - a. AAMA/WDMA/CSA 101/I.S.2/A440-17, 'North American Fenestration Standard/Specification for windows, doors, and skylights'.
 - 2. ASTM International:
 - a. ASTM A568/A568M-17a, 'Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for.'
 - b. ASTM A653/A653M-17, 'Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process'.
 - 3. Steel Door Institute:
 - a. SDI A250.8-2017, 'Specifications for Standard Steel Doors and Frames'.
 - b. SDI A250.11-2012, 'Recommended Erection Instructions for Steel Frames'.

1.3 SUBMITTALS

- A. Informational Submittals:
 - 1. Copy of SDI A250.11.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Approved Manufacturers. See Section 01 6200.
 - a. Any current member of Steel Door Institute.
- B. Frames:
 - 1. Cold rolled furniture steel:
 - a. Interior Frames: 16 ga. (1.6 mm).
 - 2. Provide labeled frame to match fire rating of door.
 - 3. Finish:
 - a. Use one of following systems:
 - 1) Prime surfaces with rust inhibiting primer.
 - 2) Galvanize.

4. Anchors: 16 US ga (1.6 mm) minimum meeting UL or other code acceptable requirements for door rating involved.
- C. Fabrication:
1. General Requirements:
 - a. Frames shall be welded units. Provide temporary spreader on each welded frame.
 - b. Provide Manufacturer's gauge label for each item.
 - c. Make breaks, arrises, and angles uniform, straight, and true. Accurately fit corners.
 2. Frame width dimension:
 - a. Fabricate frame 1/8 inch (3 mm) wider than finished wall thickness as described in Contract Documents.
 3. Provide mortar guards at strikes and hinges.
 4. Anchors:
 - a. Provide three jamb anchors minimum for each jamb. On hinge side, install one anchor at each hinge location. On strike side, install one anchor at strike level and anchors at same level as top and bottom hinges. Tack weld anchors on frames intended for installation in framed walls.
 - b. Frames installed before walls are constructed shall be provided with extended base anchors in addition to other specified anchors.
 - c. Anchor types and configurations shall meet wall conditions.

PART 3 - EXECUTION: Not Used

END OF SECTION

SECTION 08 1429**FLUSH WOOD DOORS: Factory-Finished, Clear****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Factory-finished flush wood doors.
- B. Related Requirements:
 - 1. Section 06 2024: Installation.

1.2 REFERENCES

- A. Reference Standards
 - 1. American National Standards Institute / Composite Panel Association:
 - a. ANSI A208.1-1999, 'Particleboard.'
 - 2. American National Standards Institute / Hardwood Plywood & Veneer Association:
 - a. ANSI / HPVA HP-1-2004 01-Jan-2004 'American National Standard for Hardwood and Decorative Plywood.'
 - 3. Architectural Woodwork Institute:
 - a. AWI Standards, 'Architectural Woodwork Quality Standards, 8th Edition, Version-2, 2005.'
 - 4. ASTM International:
 - a. ASTM C1036-06, 'Standard Specification for Flat Glass.'
 - b. ASTM C1048-04, 'Standard Specification for Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.'

1.3 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings:
 - a. Schedule showing type of door at each location. Included shall be size, veneer, core type, fire rating, hardware prep, openings, blocking, etc.
 - b. Indicate factory finish color and type.
- B. Closeout Submittals:
 - 1. Operations And Maintenance Data: Include following in Operations And Maintenance Manuals:
 - a. Manufacturer's product literature on doors and factory finish.
 - b. Maintenance and repair instructions.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
 - 1. Deliver in clean truck and, in wet weather, under cover.
 - 2. Deliver to building site only after plaster, cement, and taping compound are completed and dry and after interior painting operations have been completed.
 - 3. Individually wrap in polyethylene bags for shipment and storage. Leave shipping bag on door after installation until immediately before substantial completion inspection.

- B. Storage And Handling Requirements:
1. Store doors in a space having controlled temperature and humidity range between 25 and 55 percent. Store flat on level surface in dry, well ventilated space. Cover to keep clean but allow air circulation. Do not subject doors to direct sunlight, abnormal heat, dryness, or humidity.
 2. Handle with clean gloves and do not drag doors across one another or across other surfaces.

1.5 WARRANTY

- A. Manufacturer's standard full door warranty for lifetime of original installation.
1. Warranty shall include finishing, hanging, and installing hardware if manufacturing defect was discovered after door was finished and installed.
 2. Warranty to include defects in materials including following:
 - a. Delaminating in any degree.
 - b. Warp or twist of 1/4 inch or more in door panel at time of one-year warranty inspection.
 - c. Telegraphing of core assembly: Variation of 1/100 inch or more in 3 inch span.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Manufacturers:
1. Approved Manufacturers.
 - a. Oshkosh Architectural Door Co., Oshkosh, WI.
 - b. Marshfield Door Systems Inc, Marshfield, WI.
 - c. VT Industries, Holstein, IA.
 - d. Haley, Buena Park, CA
 - e. Equal as approved by Architect prior to bidding.
- B. Wood Doors:
1. Type: AWI PC-5ME or FD-5ME.
 2. Grade: AWI Premium, except face veneer.
 3. Fully Type I Construction: Adhere all glue lines with Type I adhesive, including veneer lay-up.
 4. Face Veneer:
 - a. Plain sliced Red Oak meeting requirements of AWI Grade A, 1/50 inch thick minimum immediately before finishing.
 - b. Face veneers shall be running book matched.
 5. Core:
 - a. Fully bonded to stiles and rails and sanded as a unit before applying veneers.
 - b. Non-Rated:
 - 1) 32 lb density meeting requirements of ANSI A208.1 Mat Formed Wood Particle Board, Grade 1-L-1 minimum.
 - 2) Stiles:
 - a) 1-3/8 inches deep minimum before fitting.
 - b) Stile face to be hardwood matching face veneer material, thickness manufacturer's standard.
 - 3) Rails:
 - a) 1-1/8 inches.
 - b) Manufacturer's option.
 6. Particleboard core shall contain recycled content.
 7. Composite wood material (particleboard core, stave core) shall contain no added urea formaldehyde.
- C. Fabrication:
1. Doors shall be factory-machined. Coordinate with Section 08 1213 and Sections under 08 7000.

2. Provide doors requiring lites with factory- or shop-installed lites and stops to match fire rating of door.
- D. Finishes:
1. Factory Finishing:
 - a. Applied by Door Manufacturer before leaving factory.
 - b. Color:
 - 1) Color selected by Architect from manufacturer's premium colors to match existing.
 - c. Finish: AWI Finish System TR-6 Catalyzed Polyurethane Premium Grade for unfilled, open-grain woods.

2.2 SOURCE QUALITY CONTROL

- A. Verification of Performance:
1. Doors shall have following information permanently affixed on top of door:
 - a. Manufacturer:
 - b. Door designation or model.
 - c. Veneer species.
 - d. Factory finish.

PART 3 - EXECUTION: Not Used

END OF SECTION

SECTION 08 7101**COMMON FINISH HARDWARE REQUIREMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. General requirements for finish hardware related to architectural wood doors.
- B. Related Requirements:
 - 1. Section 06 2024: Installation.
 - 2. Section 08 0601: Hardware Group Schedules.

1.2 REFERENCES

- A. Association Publications:
 - 1. Builders Hardware Manufacturers Association (BHMA), 355 Lexington Avenue, 15th Floor, New York, NY 10017-6603, Tel: 212-297-2122 Fax: 212-370-9047, www.buildershardware.com.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Hardware Templates:
 - a. Provide hardware templates to Sections within 14 days after Architect approves hardware schedule.
 - b. Supply necessary hardware installation templates to Section 06 2024 before pre-installation conference.

1.4 SUBMITTALS

- A. Action Submittals:
 - 1. Product Data:
 - a. Manufacturer's cut sheets.
 - b. Two copies of Manufacturer's installation, adjustment, and maintenance instructions for each piece of hardware. Include one set in Operations And Maintenance Manual and send one set with hardware when delivered.
 - c. Copy of hardware schedule.
 - d. Written copy of keying system explanation.
 - 2. Shop Drawings:
 - a. Submit hardware schedule indicating hardware to be supplied.
 - b. Schedule shall indicate details such as proper type of strikeplates, spindle lengths, hand, backset, and bevel of locks, hand and degree opening of closer, length of kickplates, length of rods and flushbolts, type of door stop, and other necessary information necessary to determine exact hardware requirements.
- B. Closeout Submittals:
 - 1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Operations and Maintenance Data:

- 1) Manufacturer's installation, adjustment, and maintenance instructions for each piece of hardware.
- b. Record Documentation:
 - 1) Manufacturers documentation:
 - a) Manufacturer's literature and/or cut sheets.
 - b) Include keying plan and bitting schedule.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 1. Suppliers: Requirements of Section 01 4301 applies, but not limited to following:
 - a. Shall have two years minimum experience in providing, detailing, scheduling, and installing builders hardware and shall employ at least one full time DHI Architectural Hardware Consultant (AHC).

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Storage And Handling Requirements:
 1. Neatly and securely package hardware items by hardware group and identify for individual door with specified group number and set number used on Supplier's hardware schedule.
 2. Include fasteners and accessories necessary for installation and operation of finish hardware in same package.

PART 2 - PRODUCTS

2.1 FINISHES

- A. Hardware Finishes:
 1. Finishes for steel, brass, or bronze hardware items shall match existing.
 2. Materials other than steel, brass, or bronze shall be finished to match existing.

2.2 FASTENERS

- A. Fasteners shall be of suitable types, sizes and quantities to properly secure hardware. Fasteners shall be of same material and finish as hardware unless otherwise specified. Fasteners exposed to weather shall be non-ferrous or corrosion resisting steel.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before ordering materials, examine documents to be assured that material to be ordered is appropriate for substrate to which it is to be secured and will function as intended.

END OF SECTION

SECTION 08 7102**HANGING DEVICES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Hinges for flush wood.
- B. Related Requirements:
 - 1. Section 08 7101: Common Hardware Requirements.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. Hager Companies, St Louis, MO www.hagerhinge.com.
 - b. Ives, New Haven, CT www.iveshardware.com.
 - c. McKinney, Scranton, PA www.mckinneyhinge.com.
 - d. PBB, Ontario, CA www.pbbinc.com.
 - e. Stanley, New Britain, CT www.stanleyworks.com.
- B. Hinges:
 - 1. Sizes:
 - a. 1-3/4 inch doors and fire-rated doors in metal frames:
 - 1) Standard: 4-1/2 inches by 4-1/2 inches.
 - 2) Wide Throw: 4-1/2 inches by width required.
 - 2. Approved Products.
 - a. Interior:
 - 1) Hager: BB 1279.
 - 2) Ives: 5BBI.
 - 3) McKinney: TA 2714.
 - 4) MacPro / McKinney: MPB79.
 - 5) PBB: BB81.
 - 6) Stanley: FBB 179.

PART 3 - EXECUTION: Not Used**END OF SECTION**

SECTION 08 7103
SECURING DEVICES

PART 1 - GENERAL**1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Items for architectural wood or hollow metal doors:
 - a. Locksets and latchsets
- B. Related Requirements:
 - 1. Section 08 7101: Common Hardware Requirements.

1.2 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
 - 1. Standard Key Delivery:
 - a. Include change keys with hardware.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Manufacturer List:
 - a. Glynn-Johnson, Indianapolis, IN www.glynn-johnson.com.
 - b. Hager, St Louis, MO www.hagerhinge.com.
 - c. Ives, New Haven, CT www.iveshardware.com.
 - d. Knappe & Vogt, Grand Rapids, MI www.knappeandvogt.com.
 - e. Precision Hardware, Romulus, MI www.precisionhardware.com.
 - f. Rockwood, Manufacturing Co, Rockwood, PA www.rockwoodmfg.com.
 - g. Sargent, New Haven, CT www.sargentlock.com.
 - h. Schlage, Colorado Springs, CO www.schlage.com.
 - i. Von Duprin, Indianapolis, IN www.vonduprin.com.
 - j. Yale Commercial Locks, Lenoir City, TN www.yalecommercial.com.
- B. General:
 - 1. Backsets shall be 2-3/4 inches.
 - 2. Furnish lead shields where required.
- C. Locksets And Latchsets:
 - 1. Lever Operated:
 - a. Approved Products.
 - 1) 7 Series by Sargent.
 - 2) AL Series by Schlage.
 - 3) 5300LN by Yale.

PART 3 - EXECUTION

3.1 CLOSE-OUT ACTIVITIES

A. Owner's Instructions:

1. Before Final Acceptance Meeting, send master keys to Owner's Representative.

END OF SECTION

SECTION 08 7104

OPERATING TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Products Furnished But Not Installed Under This Section:
 - 1. Interior push / pulls.
- B. Related Requirements:
 - 1. Section 08 7101: Common Hardware Requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Standard Door Push / Pulls:
 - 1. Size: 15 inches (380 mm) by 3-1/2 inch (89 mm).
 - 2. Acceptable Products:
 - a. PS3515, PL3515 / 80301 by Glynn-Johnson, Indianapolis, IN www.glynn-johnson.com.
 - b. 39E, 30S by Hager, St Louis, MO www.hagerhinge.com.
 - c. 8200, 8302 by Ives, Wallingford, CT www.iveshardware.com.
 - d. 70B, 105x70B by Rockwood Manufacturing Co, Rockwood, PA www.rockwoodmfg.com.
 - e. Equal as approved by Architect before installation. See Section 01 6200.

PART 3 - EXECUTION: Not Used

END OF SECTION

SECTION 08 7106**CLOSING DEVICES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Closers for flush wood doors.
- B. Related Requirements:
 - 1. Section 08 7101: 'Common Finish Hardware Requirements'.
 - 2. Section 08 7108: 'Stops And Holders'.

1.2 SUBMITTALS

- A. Closeout Submittals:
 - 1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Warranty Documentation:
 - 1) Manufacturer's final, executed copy of warranty.

1.3 WARRANTY

- A. Manufacturer Warranty:
 - 1. Manufacturer's Standard Warranty, five (5) years minimum.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Approved Manufacturers.
 - a. 7900 Series by Dorma Architectural Hardware, Reamstown, PA www.dorma.com/usa.
 - b. 1461 Series by LCN Closers, Princeton, IL www.lcnclosers.com.
 - c. 8501 Series by Norton Door Controls, Charlotte, NC www.nortondoорcontrols.com.
 - d. 1431 Series by Sargent, New Haven, CT www.sargentlock.com.
- B. Surface-Mounted Overhead Door Closers:
 - 1. Closers provided under this Section shall be from same Manufacturer.
 - 2. Provide parallel arms on closers unless door position in relation to adjacent wall requires otherwise. Provide covers.
 - a. Delayed action closing.
 - 3. Door Closers on doors that swing 180 degree as shown on Contract Documents:
 - a. Closers shall allow for 180 degree opening and not be used as a stop. Wall stop or Floor stop is specified in Door Schedule and Section 08 7108, 'Stops And Holders'.
 - b. Closers shall have following features:
 - 1) Adjustable sweep speed.
 - 2) Adjustable backcheck.
 - 3) Non-handed, non-sized.
 - 4. Door Closers on doors that swing 90 degree as shown on Contract Documents:
 - a. Closers shall allow for 100 degree opening and not be used as a stop.

- b. Closers shall have following features:
 - 1) Adjustable sweep speed.
 - 2) Adjustable backcheck.
 - 3) Non-handed, non-sized.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount closers on stop side of door wherever conditions permit.
- B. Through-bolt hardware-to-door connections.

3.2 ADJUSTING

- A. Adjust closers to provide maximum opening force as required by governing code authority and proper backcheck and sweep speed.

END OF SECTION

SECTION 08 7107**PROTECTIVE PLATES AND TRIM****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Kick plates.
- B. Related Requirements:
 - 1. Section 08 7101: Common Hardware Requirements and VMR Suppliers.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Acceptable Manufacturers:
 - a. Glynn-Johnson, Indianapolis, IN www.glynn-johnson.com.
 - b. Hager, St Louis, MO (800) 255-3590 or (314) 772-4400 www.hagerhinge.com.
 - c. Ives, Wallingford, CT www.iveshardware.com.
 - d. Rockwood Manufacturing Co, Rockwood, PA www.rockwoodmfg.com.
 - e. Equal as approved by Architect before installation. See Section 01 6200.
- B. Protective Plates:
 - 1. Material: 0.050 inch thick Stainless Steel.
 - 2. Sizes:
 - a. Kick Plates: 10 inches high by width of door less 3/4" on each side.
 - b. Armor Plates: 48 inches high by width of door less 3/4" on each side.

PART 3 - EXECUTION: Not Used**END OF SECTION**

SECTION 08 7108
STOPS AND HOLDERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Products Supplied But Not Installed Under This Section:
 - 1. Door stops.
- B. Related Sections:
 - 1. Section 08 7101: Common Hardware Requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. Hager, St Louis, MO www.hagerhinge.com.
 - b. Ives, Wallingford, CT www.iveshardware.com.
 - c. Rockwood Manufacturing Co, Rockwood, PA www.rockwoodmfg.com.
- B. Stops:
 - 1. Use wall type stops unless indicated otherwise on Door Schedule.
 - 2. Provide model appropriate for substrate. Wall stops may be either cast or wrought.
 - 3. Acceptable Products:

a.	Interior Wall	Exterior Wall	Floor Mount	Overhead.
b. Hager	236W	255W	243F	---
c. Ives	WS407CCV	WS447	FS438	---
d. Rockwood	409	474 / 475	440 / 441	---
e.	Equal as approved by Architect before Installation. See Section 01 6200.			

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Interface With Other Work: When using overhead stops, coordinate installation with door closer and other door hardware.

END OF SECTION

SECTION 08 7109**ACCESSORIES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Acoustical seals.
 - 2. Smoke Gaskets.
 - 3. Thresholds (metal) where required for wood doors and hollow metal doors.
- B. Related Requirements:
 - 1. Section 08 7101: Common Hardware Requirements and Approved Suppliers.

1.2 REFERENCES

- A. Association Publications:
 - 1. American Architectural Manufacturers Association (AAMA):
 - a. AAMA 607.1-77, 'Voluntary Guide Specification and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum'.
 - b. AAMA 611-98. 'Voluntary Standards for Anodized Architectural Aluminum'.
 - c. AAMA 701/702-04 Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals.
 - 2. National Association of Architectural Metal Manufacturers (NAAMM):
 - a. Metal Finishes Manual for Architectural and Metal Products.
- B. Reference Standards:
 - 1. American National Standards Institute / Builders Hardware Manufacturers Association:
 - a. ANSI / BHMA A156.18-2006, 'Materials and Finishes'.
 - b. ANSI / BHMA A156.21-2009, 'American National Standard for Thresholds'.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. Hager, St Louis, MO www.hagerhinge.com.
 - b. Ives, Wallingford, CT www.iveshardware.com.
 - c. NGP - National Guard Products, Memphis, TN www.ngpinc.com.
 - d. Pemko Manufacturing, Ventura, CA www.pemko.com.
- B. Smoke Gaskets:
 - 1. Color as selected by Architect.
 - 2. Acceptable Products:
 - a. 726 by Hager.
 - b. 5050 by NGP.
 - c. PK55 by Pemko.
 - d. Equal as approved by Architect before bidding. See Section 01 6200.

- C. Thresholds:
 - 1. Acceptable Products:
 - a. Interior Doors at Acoustic Seals, Approved Products:
 - 1) Carpet Both Sides:
 - a) 505S-DBA by Hager.
 - b) 414DKB by NGP.
 - c) 236D by Pemko.
 - 2) Carpet / Concrete, Wood, or Resilient Flooring:
 - a) 504S-DBA by Hager.
 - b) 417DKB by NGP.
 - c) 174D by Pemko.
 - 3) Concrete, Wood, or Resilient Flooring Both Sides:
 - a) 418S-DBA by Hager.
 - b) 411DKB by NGP.
 - c) 151D by Pemko.
- D. Silencers:
 - 1. Acceptable Products:
 - a. 307D by Hager.
 - b. SR64 by Ives.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install smoke gaskets and acoustical seals in manner to give continuous air-tight fit.
 - 1. Install smoke gaskets as per Manufacturer's installation requirements:
 - a. Hinge Jamb: Install smoke gaskets on jamb face of door frame so door will compress smoke gasket.
 - b. Header and Strike Jamb: Install smoke gaskets on face of stop of door frame so door will compress smoke gasket.
 - 2. Install acoustical seal with seal under door.

END OF SECTION

DIVISION 09: FINISHES

09 0000 FINISHES

09 0503 FLOORING SUBSTRATE PREPARATION

09 2000 PLASTER AND GYPSUM BOARD

09 2216 NON-STRUCTURAL METAL FRAMING

09 2900 GYPSUM BOARD

09 3000 TILING

09 3013 CERAMIC TILING

09 9000 PAINTS AND COATINGS

09 9001 COMMON PAINTING AND COATING REQUIREMENTS

09 9123 INTERIOR PAINTED GYPSUM BOARD, PLASTER

09 9413 INTERIOR TEXTURED FINISHING

END OF TABLE OF CONTENTS

SECTION 09 0503**FLOORING SUBSTRATE PREPARATION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
1. Preparing floor substrate to receive flooring as described in Contract Documents.
 2. Remove existing flooring and prepare floor as described in Contract Documents.
- B. Related Requirements:
1. Section 01 4000: 'Quality Requirements' for administrative and procedural requirements for quality assurance and quality control.
 2. Section 01 4301: 'Quality Assurance – Qualifications' establishes minimum qualification levels required.
 3. Section 01 7800: 'Closeout Submittals'.

1.2 REFERENCES

- A. Association Publications:
1. American Concrete Institute, Farmington Hills, MI www.concrete.org. Abstracts of ACI Periodicals and Publications.
 - a. ACI 302.2R-06, *Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials* (August 15, 2006).
 2. Council of American Structural Engineers. CASE Form 101: *Statement of Special Inspections*. Washington, DC: CASE, 2001. (c/o American Council of Engineering Companies, 1015 15th St., NW, Washington, DC 20005; 202-347-7474; www.acec.org).
 3. International Code Council (IBC):
 - a. IBC Chapter 17, 'Structural Tests and Special Inspections'.
- B. Definitions (Following are specifically referenced for testing):
1. Accreditation: Process in which certification of competency, authority, or credibility is presented. Verify that laboratories have an appropriate quality management system and can properly perform certain test methods (e.g., ANSI, ASTM, and ISO test methods) and calibration parameters according to their scopes of accreditation.
 2. Approved: To authorize, endorse, validate, confirm, or agree to.
 3. Field Quality Control: Testing, Inspections, Special Testing and Special Inspections to assure compliance to Contract Documents.
 4. Inspection/Special Inspection: Inspection of materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards:
 - a. Inspection: Not required by code provisions but may be required by Contract Documents.
 - b. Special Inspection: Required by code provisions and by Contract Documents.
 - c. Inspection-Continuous: Full-time observation of the Work requiring inspection by approved inspector who is present in area where the Work is being performed.
 - d. Inspection-Periodic: Part-time or intermittent observation of the Work requiring inspection by approved inspector who is present in area where the Work has been or is being performed and at completion of the Work.
 5. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform particular construction operation, including installation, erection, application, and similar operations.

6. Observation: Visual observation of building / site elements or structural system by registered design professional for general conformance to approved construction documents at significant construction stages and at completion. Observation does not include or waive responsibility for performing inspections or special inspections.
 7. Owner's Representative: Owner's Designated Representative (Project Manager or Facilities Manager) who will have express authority to bind Owner with respect to all matters requiring Owner's approval or authorization.
 8. Preconstruction Testing: Tests and inspections that are performed specifically for Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
 9. Product Testing: Tests and inspections that are performed by testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
 10. Relative Humidity (RH) Testing: Testing of concrete slabs is defined as ratio of actual amount of water vapor present in volume of air at given temperature to maximum amount that air could hold at that temperature, expressed as percentage.
 - a. Relative Humidity test method covers quantitative determination of percent relative humidity in concrete slabs for field or laboratory tests.
 - b. Moisture test results indicate moisture condition of slab only at time of test.
 11. Quality Assurance: Testing, Inspections, Special Testing and Special Inspections provided for by Owner.
 12. Quality Control: Testing, Inspections, Special Testing and Special Inspections provided for by Contractor.
 13. Service Provider: Agency or firm qualified to perform required tests and inspections.
 14. Source Quality Control Testing: Tests and inspections that are performed at source, i.e., plant, mill, factory, or shop.
 15. Special Inspection: See Inspection.
 16. Special Inspector: Certified individual or firm that implements special inspection program for project.
 17. Special Test: See Test.
 18. Test/Special Test: Field or laboratory tests to determine characteristics and quality of building materials and workmanship.
 - a. Test: Not required by code provisions but may be required by Contract Documents.
 - b. Special Test: Required by code provisions and by Contract Documents.
 19. Testing Agency: Entity engaged to perform specific tests, inspections, or both.
 20. Testing Agency Laboratory: Agency or firm qualified to perform field and laboratory tests to determine characteristics and quality of materials and workmanship.
 21. Verification: Act of reviewing, inspecting, testing, etc. to establish and document that product, service, or system meets regulatory, standard, or specification requirements.
- C. Reference Standards:
1. ASTM International:
 - a. ASTM E329-11a: 'Standard Specification for Agencies Engaged in Construction Inspection and/or Testing'.
 - b. ASTM E543-09, 'Standard Specification for Agencies Performing Nondestructive Testing'.
 - c. ASTM E1212-09, 'Standard Practice for Quality Management Systems for Nondestructive Testing Agencies'.
 - d. ASTM F710-10, 'Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring'.
 - e. ASTM F2170-09, 'Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes'.

1.3 SUBMITTALS

- A. Closeout Submittals:
1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Record Documentation:

- 1) Testing and Inspection Reports:
 - a) Testing Agency Testing Reports of Alkalinity and Concrete Moisture testing.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Storage And Handling Requirements:
 1. Provide storage space and protection for flooring and installation accessories if materials are delivered before start of flooring installation.

1.5 FIELD CONDITIONS

- A. Ambient Conditions:
 1. Coordinate with each flooring system specification section for ambient conditions required for each floor system.

PART 2 - PRODUCTS Not Used

PART 3 - EXECUTION

3.1 PREPARATION

- A. Flooring Preparation:
 1. Prepare floor substrate in accordance with Carpet And Rug Institute (CRI) best practices to receive carpet installation and to provide installation that meets Carpet Manufacturer's warranty requirements:
 - a. Concrete floor slab patching:
 - 1) Cracks, chips and joints must be properly patched or repaired.
 - b. Concrete surface cured, clean, dry, and free of foreign substances that will compromise carpet and/or other flooring installations.
 - 1) Removal of curing compounds.
 - 2) Remove glue, mastic, mortar, grout or residue after removal of existing flooring. Grind as necessary to remove any residue or slab imperfections prior to installation of new flooring.
 - 3) Remove paint, sealer, grease, oil, silicone sealants, and other materials incompatible with flooring adhesives.
 - 4) Removal of overspray from painted walls (essential so glue will stick).
 2. Vacuum and damp mop floor areas to receive flooring before flooring installation.

END OF SECTION

SECTION 09 2216

NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Furnish and install metal framing and blocking as described in Contract Documents.

1.2 REFERENCES

- A. Reference Standards:
 - 1. ASTM International:
 - a. ASTM A653/A653M-11, 'Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process'.
 - b. ASTM A1003/A1003M-13, 'Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members'.
 - c. ASTM C645-11a, 'Standard Specification for Nonstructural Steel Framing Members'.
 - d. ASTM C754-11, 'Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products'.
 - e. ASTM E119-12a, 'Standard Test Methods for Fire Tests of Building Construction and Materials'.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Conferences:
 - 1. Schedule pre-installation conference to be held after submittals have been reviewed and returned by Architect, but before beginning metal framing work.
 - 2. In addition to agenda items specified in Section 01 3100, review following:
 - a. Identify location of required blocking.

1.4 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
 - 1. ICC approved.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. CEMCO, City of Industry, CA www.cemcosteel.com.
 - b. Clark Western, Cincinnati, OH www.clarksteel.com.
 - c. Dietrich Industries Inc, Columbus, OH www.dietrichindustries.com.
 - d. Steeler Inc, Seattle, WA www.steeler.com.
 - e. Any member of Steel Stud Manufacturer's Association (SSMA).
 - f. Equal as approved by Architect before bidding. See Section 01 6200.

- B. Materials:
1. Framing:
 - a. General:
 - 1) 20 ga (0.95 mm) minimum, unless noted greater on Drawings, meeting requirements of ASTM C645.
 - 2) Steel Sheet Components: Comply with ASTM C645 requirements for metal unless otherwise indicated.
 - 3) Steel Coating Requirement: Comply with ASTM C645 roll-formed from hot dipped galvanized steel complying with ASTM A1003/A1003M and ASTM A653/A653M G40 (Z120) or equivalent corrosion resistant coating. A40 galvanized products are not acceptable.
 - b. Steel Studs and Runners: Cold-formed galvanized steel C-studs, as per ASTM C645 for conditions indicated.
 - c. Bridging, blocking, strapping, and other accessories shall be as described in Contract Documents or as required by Manufacturer's system.
 - d. Acceptable Products:
 - 1) Any member of Steel Stud Manufacturer's Association (SSMA).
 - 2) Equal as approved by Architect before bidding. See Section 01 6200.
- C. Fasteners:
1. Corrosion resistant coated self-drilling. Self treading steel drill screws.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Interface With Other Work:
1. Coordinate with other Sections to provide blocking necessary for their work.
 2. Coordinate with other Sections for location of blocking required for installation of equipment and building specialties.
- B. Tolerances:
1. 1/8 inch (3 mm) in 10 feet (3 meters) with 1/4 inch (6 mm) maximum in height of wall.
 2. Distances between parallel walls shall be 1/4 inch (6 mm) maximum along length and height of wall.
- C. Framing:
1. Installation Standard: ASTM C754.
 2. Specifications of Stud Wall Manufacturer shall govern this work unless more stringent requirements are required by Contract Documents.

END OF SECTION

SECTION 09 2900**GYPSUM BOARD****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and install gypsum board as described in Contract Documents.
- B. Related Requirements:
 - 1. Section 07 9219: Quality of acoustical sealants.
 - 2. Section 09 3013: Installation of backerboard joint reinforcing.
 - 3. Section 09 9413: Textured finishing.

1.2 REFERENCES

- A. Definitions:
 - 1. Accessories: Metal or plastic beads, trim, or moulding used to protect or conceal corners, edges, or abutments of the gypsum board construction.
 - 2. Drywall Primer: Paint material specifically formulated to fill the pores and equalize the suction difference between gypsum board surface paper and the compound used on finished joints, angles, fastener heads, and accessories and over skim coatings.
 - 3. Skim Coat: Either a thin coat of joint compound trowel applied, or a material manufactured especially for this purpose and applied in accordance with manufacturer's recommendations, over the entire surface.
 - 4. Texturing: Regular or irregular patterns typically produced by applying a mixture of joint compound and water, or proprietary texture materials including latex base texture paint, to a gypsum board surface previously coated with drywall primer.
- B. Reference Standards:
 - 1. ASTM International:
 - a. ASTM C11-10, 'Standard Terminology Relating to Gypsum and Related Building Materials and Systems.'
 - b. ASTM C475/C475M-02(2007), 'Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.'
 - c. ASTM C840-08, 'Standard Specification for Application and Finishing of Gypsum Board.'
 - d. ASTM C1002-07, 'Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.'
 - e. ASTM C1047-10, 'Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.'
 - f. ASTM C1178/C1178M-08, 'Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel.'
 - g. ASTM C1396/C1396M-09a, 'Standard Specification for Gypsum Board.'
 - h. ASTM E84-10, 'Standard Test Method for Surface Burning Characteristics of Building Materials.'
 - i. ASTM E90-09, 'Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.'
 - j. ASTM E119-10a, 'Standard Test Method for Fire Tests of Building Construction and Materials.'

- k. ASTM E413-04, 'Classification for Rating Sound Insulation.'
2. Gypsum Association:
 - a. GA-214-07e, 'Recommended Levels of Gypsum Board Finish.'
 - b. GA-216-07: 'Application and Finishing of Gypsum Panel Products.'
 - c. GA-600-09, 'Fire Reference Design Manual.'
 - d. GA-801-07, 'Handling and Storage of Gypsum Panel Products: A Guide for Distributors, Retailers, and Contractors.'
3. Underwriters Laboratories, Inc.
 - a. UL 263: 'Test Method for Fire Tests of Building Construction and Materials.'
 - b. UL 723: 'Standard for Safety Test for Surface Burning Characteristics of Building Materials; Tenth Edition September 10 2008.'

1.3 SUBMITTALS

- A. Informational Submittals:
 1. Test And Evaluation Reports:
 - a. Fire test results or assembly diagrams and numbers confirming products used will provide required fire ratings with installation configurations used.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. General:
 1. Following recommendations of GA-801 Guide for Handling and Storage of Gypsum Panel Products unless local, state or federal laws or agency rules differing from the recommendations shall take precedence.
- B. Delivery And Acceptance Requirements:
 1. Deliver materials in original packages, containers, or bundles bearing brand name, applicable standard designation, and Manufacturer's name.
- C. Storage And Handling Requirements:
 1. Store material under roof and keep dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack gypsum board flat to prevent sagging.

1.5 FIELD CONDITIONS

- A. Ambient Conditions:
 1. Comply with ASTM C840 or GA-216 requirements, whichever are more stringent:
 - a. Do not install interior products until installation areas are enclosed and conditioned.
 - 1) Temperature shall be 50 deg F and 95 deg F maximum day and night during entire joint operation and until execution of Certificate of Substantial Completion.
 - 2) Provide ventilation to eliminate excessive moisture.
 - 3) Avoid hot air drafts that will cause too rapid drying.
 - b. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Manufacturers:

1. Manufacturer Contact List:
 - a. American Gypsum, Dallas, TX www.americangypsum.com.
 - b. CertainTeed Gypsum, Inc; Tampa, FL www.certainteed.com.
 - c. Georgia Pacific, Atlanta, GA www.gp.com.
 - d. National Gypsum, Charlotte, NC www.nationalgypsum.com.
 - e. Pabco Gypsum, Newark, CA www.pabco gypsum.com.
 - f. United States Gypsum Co, Chicago, IL www.usg.com.
- B. Materials:
 1. Interior Gypsum Board:
 - a. General:
 - 1) Size:
 - a) Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.
 - 2) Quality Standard:
 - a) Core: Fire-resistant rated gypsum core.
 - b) Complies with Type X requirements of ASTM C1396/C1396M (Section 5).
 - c) Surface paper: Face paper suitable for painting.
 - d) Long edges: Tapered edge.
 - e) Overall thickness: 5/8 inch unless noted otherwise on the drawings.

2.2 ACCESSORIES

- A. Manufacturers:
 1. Manufacturer Contact List:
 - a. Kinetics Noise Control, Dublin, OH www.kineticsnoise.com.
 - b. Magnum Products, Lenaxa, KS www.levelcoat.com.
 - c. National Gypsum, Charlotte, NC www.nationalgypsum.com.
 - d. Soundproofing Co, San Marcos, CA www.soundproofing.org.
 - e. United States Gypsum Co, Chicago, IL www.usg.com.
 - f. Westpac Materials Inc, Orange, CA www.westpacmaterials.com.
 - g. Wm. Zinsser & Co, Somerset, NJ www.zinsser.com.
 2. Gypsum Board Mounting Accessories:
 - a. Acceptable Products:
 - 1) Resilient Sound Isolation Clips:
 - a) Sound Transmission: As per ASTM E90 and E413:
 - (1) IsoMax by Kinetics Noise Control.
 - (2) SSP Clips by Soundproofing Co.
 - (3) Equal as approved by Architect before installation. See Section 01 6200.
 3. Corner And Edge Trim:
 - a. Metal, paper-faced metal, paper-faced plastic, or solid vinyl meeting requirements of ASTM C1047. Surfaces to receive bedding cement treated for maximum bonding.
 4. Joint Compound:
 - a. Best grade or type recommended by Board Manufacturer and meeting requirements of ASTM C475/C475M.
 - 1) Use Taping Compound for first coat to embed tape and accessories.
 - 2) Use Taping Compound or All-Purpose Compound for subsequent coats except final coat.
 - 3) Use Finishing Compound for final coat and for skim coat.
 5. Joint Reinforcing:
 - a. Paper reinforcing tape acceptable to Gypsum Board Manufacturer.
 6. Fasteners:
 - a. Bugle head screws meeting requirements of ASTM C1002:
 - 1) Gypsum Board:

- a) Type S: For fastening gypsum board to steel framing and ceiling suspension members, of length to penetrate steel framing 3/8 inch minimum.
 - b) Type W: For fastening gypsum board to wood members, of length to penetrate wood framing 5/8 inch minimum.
- 2) Glass Mat Gypsum Tile Backer:
- a) Wood Framing: 11 ga (0.1233 in) galvanized with 7/16 inch head, hot dipped. Screws: Type W or Type S Hi-Lo, bugle head, rust resistant.
- B. Primer / Surfacers On Surfaces To Receive Texturing:
- 1. Acceptable Products:
 - a. Sheetrock First Coat by USG.
 - b. Prep Coat by Westpac Materials.
 - c. Level Coat by Magnum Products.
 - d. Equal as approved by Architect before bidding. See Section 01 6200.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
- 1. Examine substrate and verify framing is suitable for installation of gypsum board.
 - 2. Examine gypsum board before installation. Reject panels that are wet, moisture damaged, and mold damaged.
 - 3. Notify Architect of unsuitable conditions in writing.
 - a. Do not install board over unsuitable conditions.
 - 4. Commencement of Work by installer is considered acceptance of substrate.

3.2 INSTALLATION

- A. Interface With Other Work:
- 1. Coordinate with Division 06 for location of backblocking for edges and ends of gypsum board and for blocking required for installation of equipment and building specialties.
 - 2. Do not install gypsum board until required blocking is in place.
- B. General: Install and finish as recommended in ASTM C840 or GA-216 unless specified otherwise in this Section.
- C. Interior Gypsum Board:
- 1. General:
 - a. Install so trim and reinforcing tape are fully backed by gypsum board. No hollow spaces between pieces of gypsum board over 1/8 inch wide before taping are acceptable.
 - b. Rout out backside of gypsum board to accommodate items that extend beyond face of framing, but do not penetrate face of gypsum board, such as metal door frame mounting brackets, etc.
 - 2. Single Layer Application:
 - a. Apply ceilings first using minimum of two men.
 - b. Use board of length to give minimum number of joints.
 - c. On walls over 108 inches high and on ceilings, apply board perpendicular to support.
 - d. Stagger end joints. End and edge joints of board applied on ceilings shall occur over framing members or be back blocked with 2x4 blocking. End joints of board horizontally applied on walls shall occur over framing members. Edge joints of board vertically applied on walls shall occur over framing members.

- e. Butt edges in moderate contact. Do not force in place. Shim to level.
 - f. Leave facings true with joint, finishing flush. Vertical work shall be plumb and ceiling surfaces level.
 - g. Scribe work closely. Keep joints as far from openings as possible. If joints occur near an opening, apply board so vertical joints are centered over openings. No vertical joints shall occur within 8 inches of external corners or openings.
 - h. Install board tight against support with joints even and true. Tighten loose screws.
 - i. Caulk perimeter joints in sound insulated rooms with specified acoustical sealant.
3. Fastening:
- a. Apply from center of board towards ends and edges.
 - b. Apply screws 3/8 inch minimum from ends and edges, one inch maximum from edges, and 1/2 inch maximum from ends.
 - c. Spacing:
 - 1) Ends: Screws not over 7 inches on center at edges where blocking or framing occurs.
 - 2) Wood Framed Walls And Ceilings: Screws 7 inches on center in panel field.
 - 3) Metal Framed Walls: Screws 12 inches on center in panel field.
 - d. Set screw heads 1/32 inch below plane of board, but do not break face paper. If face is accidentally broken, apply additional screw 2 inches away.
 - e. Screws on adjacent ends or edges shall be opposite each other.
 - f. Drive screws with shank perpendicular to face of board.
4. Trim:
- a. Corner Beads:
 - 1) Attach corner beads to outside corners.
 - a) Attach metal corner bead with staples spaced 4 inches on center maximum and flat taped over edges of corner bead. Also, apply screw through edge of corner bead where wood trim will overlay corner bead.
 - b) Set paper-faced trim in solid bed of taping compound.
 - b. Edge Trim: Apply where gypsum board abuts dissimilar material. Hold channel and 'L' trim back from exterior window and door frames 1/8 inch to allow for caulking.
5. Finishing:
- a. General:
 - 1) Tape and finish joints and corners throughout building as specified below to correspond with final finish material to be applied to gypsum board. When sanding, do not raise nap of gypsum board face paper or paper-faced trim.
 - 2) First Coat:
 - a) Apply tape over center of joint in complete, uniform bed of specified taping compound and wipe with a joint knife leaving a thin coating of joint compound. If metal corner bead is used, apply reinforcing tape over flange of metal corner bead and trim so half of tape width is on flange and half is on gypsum board.
 - b) Completely fill gouges, dents, and fastener dimples.
 - c) Allow to dry and sand lightly if necessary to eliminate high spots or excessive compound.
 - 3) Second Coat:
 - a) Apply coat of specified joint compound over embedded tape extending 3-1/2 inches on both sides of joint center. Use finishing compound only if applied coat is intended as final coat.
 - b) Re-coat gouges, dents, and fastener dimples.
 - c) Allow to dry and sand lightly to eliminate high spots or excessive compound.
 - 4) Third Coat: Apply same as second coat except extend application 6 inches on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.
 - 5) Fourth Coat: Apply same as second coat except extend application 9 inches on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.
 - a. Finishing Levels: Finish panels to levels indicated below and according to ASTM C840, GA-216 or GA-214:

- 1) Gypsum Board Surfaces to Receive Vinyl Wall Covering, Acoustic Wall Carpeting, Multi-Color Coating System, and Painted Texturing, and Smooth Gypsum Board Surfaces:
 - a) GA-214-07e Level 4: 'All and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. All joint compound shall be smooth and free of tool marks and ridges. Coat prepared surface with specified primer.'
- 2) Painted, Untextured Gypsum Board Surfaces, Except in Mechanical, Storage, And Utility Areas:
 - a) GA-214-07e Level 5: 'All joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over flat joints and one separate coat of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. A thin skim coat of joint compound trowel applied, or a material manufactured especially for this purpose and applied in accordance with manufacturer's recommendations, shall be applied to the entire surface. The surface shall be smooth and free of tool marks and ridges. Coat prepared surface with specified primer.'

3.3 FIELD QUALITY CONTROL

A. Non-Conforming Work:

1. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - a. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - b. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.4 CLEANING

- #### A. Remove from site debris resulting from work of this Section including taping compound spills.

END OF SECTION

SECTION 09 3013

CERAMIC TILING

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Furnish and install floor and wall tile, grout, setting bed, thresholds and install ceramic tile and tile setting materials and accessories as described in Drawings.
- B. Related Requirements:
 - 1. Section 09 2900: Installation of backerboard behind ceramic tile, except for joint reinforcing.
- C. Products Installed But not Furnished Under This Section:
 - 1. Interior Ceramic Tile Joint Sealants:
- D. Related Requirements:
 - 1. Section 07 9213: 'Elastomeric Joint Sealants'.

1.2 REFERENCES

- A. Association Publications:
 - 1. American National Standard Specification (ANSI) for the Installation of Ceramic Tile.
 - 2. International Standards Organization (ISO) 13007, 'Classification for Adhesives and Grout'.
 - 3. Tile Council of North America:
 - a. TCNA Handbook, 'Handbook for Ceramic Tile Installation, 2011'.
- B. Definitions:
 - 1. Crack Isolation: Prevention of transfer of cracks from substrate through tile or stone when substrate is subjected to horizontal movement of cracks.
 - 2. Dry-Set Mortar: Water-retentive hydraulic cement mortar usable with or without sand. When this mortar is used, neither tile nor walls have to be soaked during installation.
 - 3. Dynamic Coefficient of Friction (DCOF): Measures ratio of forces necessary to keep two surfaces sliding.
 - 4. Epoxy Grout: Mortar system employing epoxy resin and epoxy hardener portions.
 - 5. Grout: Rich or strong cementitious or chemically setting mix used for filling tile joints.
 - 6. ISO 13007 Standards Product Classifications:
 - a. Adhesives:

Types	Classes	Special Characteristics
C = Cementitious (Thin-Set Mortars)	1 = Normal 2 = Improved	F = Fast-Setting T = Slip-Resistant E = Extended Open Time S1 = Deformable S2 = Highly Deformable P1 = Plywood Adhesion P2 = Improved Plywood Adhesion

D = Dispersion (Mastics)	1 = Normal 2 = Improved	F = Fast-Setting T = Slip-Resistant E = Extended Open Time
R = Reaction Resin (Epoxies)	1 = Normal 2 = Improved	T = Slip-Resistant

- 1) Cementitious Adhesive (C): Mixture of hydraulic binding agents (e.g. portland cement), aggregates, and organic additives (e.g. latex polymers, moisture retention additive, etc...) to be mixed with water or latex admix before mixing.
- 2) Dispersion Adhesive (D): Ready-to-use mixture of organic binding agents in the form of an aqueous polymer dispersion, organic additives and mineral fillers - mastic type products.
- 3) Reaction Resin Adhesive (R): Single or multi-component mixture of synthetic resin, mineral fillers and organic additives in which curing occurs by chemical reaction – epoxy or urethane based products.
- 4) Class 1 (1): Adhesive has passed minimum pass level tests that are mandatory for that adhesive type.
- 5) Class 2 (2): Adhesive has passed same tests as Class 1 and/or other applicable tests, but at higher pass levels.
- 6) Fast-Setting (F): Adhesive with accelerated cure time that must achieve minimum strength requirements of fast setting adhesive. This designation does not apply to reaction resin adhesives (R).
- 7) Slip-Resistance (T): Downward movement of a tile applied to combed adhesive layer on vertical surface must be ≤ 0.5mm for a C or D adhesive, and ≤ 5mm for a type R adhesive.
- 8) Extended Open Time (E): Maximum time interval after application at which tiles can be embedded in applied adhesive and meet tensile adhesion strength requirement must be ≥ 30 minutes. This designation does not apply to reaction resin adhesives (R).
- 9) Deformability (S): Capacity of hardened adhesive to be deformed by stresses between tile and substrate without damage to installed surface – to pass S1 requirements an adhesive must be able to deform ≥ 2.5mm but < 5mm; to pass S2 requirements an adhesive must be able to deform ≥ 5mm. This designation does not apply to reaction resin adhesives (R).
- 10) Exterior Glue Plywood (P): Adhesive with ability to bond tile or stone to exterior glue plywood substrates (interior only). This designation does not apply to reaction resin adhesives (R) or dispersion adhesives (D).

b. Grouts:

Types	Classes	Special Characteristics
CG = Cementitious Grout	1 = Normal 2 = Improved	F = Fast-Setting A = High Abrasion Resistance W = Reduced Water Absorption
RG = Reaction Resin Grouts	1 = Normal 2 = Improved	Higher performance characteristics than improved cementitious grouts

- 1) Cementitious Grout (CG): Mixture of hydraulic binding agents (e.g. portland cement), aggregates, inorganic and organic additives (e.g. latex polymers, moisture retention additive, etc...).
- 2) Reaction Resin Grout (RG): Single or multi-component mixture of synthetic resin, mineral fillers and organic additives in which curing occurs by chemical reaction – epoxy or urethane based products.
- 3) Class 1 (1): Grout has passed minimum pass level tests that are mandatory for cementitious grouts.

- 4) Class 2 (2): Cementitious grout has passed same tests as Class 1 and/or other applicable tests, but at higher pass levels.
- 5) Fast-Setting (F): Grout with accelerated cure time that must achieve minimum compressive strength requirements under normal conditions within twenty four (24) hours. This designation applies only to cementitious grouts (CG).
- 6) High Abrasion Resistance (A): Capability of grout to resist wear. This designation applies only to cementitious grouts (CG).
- 7) Reduced Water Absorption (W): Grout has lower water absorption rate than standard cementitious grout. This designation applies only to cementitious grouts (CG).
7. Latex/Polymer Modified Portland Cement Mortar: Latex/Polymer modified portland cement mortar is a mixture of portland cement, sand, and special latex/polymer additive that is used as a bond coat for setting tile.
8. Mastic: Tile adhesive.
9. Mortar Bed: Layer of mortar on which tile is set. Final coat of mortar on wall, floor or ceiling is called a mortar bed.
10. Movement Joints:
 - a. Construction Joint: Surface where two successive placements of concrete meet, across which it may be desirable to achieve bond, and through which reinforcement may be continuous.
 - b. Contraction Joint: Formed, sawed or tooled groove in concrete structure to create weakened plane and regulate location of cracking resulting from dimensional change of different parts of structure. See also Isolation Joint.
 - c. Control joint: See contraction joint.
 - d. Expansion Joint: (1) Separation provided between adjoining parts of structure to allow movement where expansion is likely to exceed contraction; (2) Isolation joint intended to allow independent movement between adjoining parts
 - e. Isolation Joint: Separation between adjoining parts of concrete structure, usually vertical plane, at designated location such as to interfere least with performance of structure, yet such as to allow relative movement in three directions and avoid formation of cracks elsewhere in concrete and through which all or part of bonded reinforcement is interrupted.
11. Mud: Slang term for mortar.
12. Non-vitreous tile: Tile with water absorption of more than 7.0 percent.
13. Pavers: Unglazed porcelain or natural clay tile formed by dust-pressed method and similar to ceramic mosaics in composition and physical properties but relatively thicker with 6 in.- or more of facial area. (ASTM C 242).
14. Sanded Cement Grout: Factory prepared mixture of cement, graded sand, and other ingredients to produce water-resistant, dense, uniformly colored material. Used for joints of 1/8 inch (3 mm) width or greater.
15. Static Coefficient of Friction (SCOF): Measures ratio of forces necessary to start two surfaces sliding. (older measurement of friction replaced by dynamic coefficient of friction (DCOF)).
16. Setting Bed: See Mortar Bed.
17. Tile:
 - a. Ceramic Tile: Ceramic surfacing unit, usually relatively thin in relation to facial area, made from clay or mixture of clay; and other ceramic material, called body of the tile, having either 'glazed' or 'unglazed' face, and fired above red heat to temperature sufficiently high to produce specific physical properties and characteristics.
 - b. Paver Tile: Unglazed porcelain or natural clay tile formed by dust-pressed method and similar to ceramic mosaics in composition and physical properties but relatively thicker (usually 3/8 inch (9.5 mm) thick) with 6 inch (150 mm) or more of facial area. (ASTM C242).
 - c. Porcelain Tile: Ceramic mosaic tile or paver that is generally made by dust-pressed method, of composition resulting in tile that is dense, fine-grained, and smooth with sharply formed face, usually impervious. (ASTM C242).
 - d. Wall Tile: Glazed tile with body that is suitable for interior use and which is usually nonvitreous and is not required nor expected to withstand excessive impact.
18. Thin-set: Term used to describe bonding of tile with suitable materials applied approximately 1/8 inch thick.
19. Urethane: Elastomeric polymer with excellent chemical and water resistance.

20. Unsanded Cement Grout: Factory prepared mixture of cement and additives that provide water retentivity. Used for joints of 1/8 inch (3 mm) or less.
 21. Vapor Retarder: Waterproof membrane placed under concrete floor slabs that are placed on grade.
 22. Vitreous Tile: Ceramic tile with low porosity, used indoors or outdoors, in wet or dry locations.
 23. Waterproof Membrane: Membrane to provide positive waterproof floor over substrate, which is to receive tile installation using a wire reinforced mortar bed.
- C. Reference Standard:
1. American National Standards Institute:
 - a. ANSI A108/A118/A136.1, 'American National Standards Specifications for the Installation of Ceramic Tile', Version 2013.1 (compilation of standards):
 - 1) Installation Standards:
 - a) A108.01, 'General Requirements: Subsurfaces and Preparation by Other Trades'.
 - b) A108.02, 'General Requirements: Materials, Environmental, and Workmanship'.
 - c) A108.05, 'Installation of Ceramic Tile with Dry-Set Portland Cement Mortar of Latex-Portland Cement Mortar'.
 - d) A108.6, 'Installation of Tile with Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy'.
 - e) A108.10, 'Installation of Grout in Tilework'.
 - f) A108.17, 'Installation of Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone'.
 - 2) Material Specifications:
 - a) A118.1, 'Dry-Set Portland Cement Mortar'.
 - b) A118.3, 'Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive'.
 - c) A118.4, 'Latex Portland Cement Mortar'.
 - d) A118.6, 'Cement Grouts for Tile Installation'.
 - e) A118.7, 'High-Performance Polymer Modified Latex/Portland Cement Grouts for Tile Installation'.
 - f) A118.10, 'Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations'.
 - g) A118.12, 'Crack Isolation Membranes for Thin-set Ceramic Tile and Dimension Stone Installations'.
 - b. ANSI A137.1-2012, 'National Standard Specifications for Ceramic Tile'.
 2. ASTM International:
 - a. ASTM A1064/A1064M-13, 'Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete'.
 - b. ASTM C144-11, 'Standard Specification for Aggregate for Masonry Mortar'.
 - c. ASTM C150/C150M-12, 'Standard Specification for Portland Cement'.
 - d. ASTM C206-03(2009), 'Standard Specification for Finishing Hydrated Lime'.
 - e. ASTM C207-06(2011), 'Standard Specification for Hydrated Lime for Masonry Purposes'.
 - f. ASTM C242-14, 'Standard Terminology of Ceramic Whitewares and Related Products'.
 - g. ASTM C373-14, 'Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products'.
 - h. ASTM C482-02(2009), 'Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste'.
 - i. ASTM C501-84(2009), 'Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser'.
 - j. ASTM C648-04(2009), 'Standard Test Method for Breaking Strength of Ceramic Tile'.
 - k. ASTM C847-12, 'Standard Specification for Metal Lath'.
 3. International Organization for Standardization:
 - a. ISO 13007-1:2010, 'Ceramic tiles - Grouts and adhesives - Part 1: Terms, definitions and specifications for adhesives'.
 - b. ISO 13007-2:2010, 'Ceramic tiles - Grouts and adhesives - Part 2: Test methods for adhesives'.
 - c. ISO 13007-3:2010, 'Ceramic tiles - Grouts and adhesives - Part 3: Terms, definitions and specifications for grouts'.

- d. ISO 13007-4:2010, 'Ceramic tiles - Grouts and adhesives - Part 4: Test methods for grouts'.
4. Tile Council of North America:
 - a. TCNA B415-11, 'Wood or Metal Studs, Mortar Bed Walls, Mortar Bed Floor, Ceramic Tile'.
 - b. TCNA F111-11, 'On-Ground or Above-Ground Concrete, Unbonded Mortar Bed, Ceramic Tile'.
 - c. TCNA F113-11, 'On-Ground or Above Ground Concrete, Ceramic Tile (Direct Bond w/Optional Membrane)'.
 - d. TCNA F115-11, 'On-Ground Concrete, Ceramic Tile, Epoxy or Furan Grout'.
 - e. TCNA F125a-11 'On Ground or Above Ground Concrete' – Crack Isolation Membrane – Ceramic Tile'.
 - f. TCNA W221-11, 'Solid Backing, Mortar Bed, Ceramic Tile'.
 - g. TCNA W244c-11, 'Wood or Metal Studs , Cement Backer Board, Ceramic Tile'.
 - h. TCNA W245-11, 'Wood or Metal Studs, Coated Glass Mat Water-Resistant Gypsum Backer Board, Ceramic Tile'.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Conference:
 1. In addition to agenda items specified in Section 01 3100, review following:
 - a. Review installation scheduling, coordination with related work, and placement of tile.
 - b. Review Manufacturer's installation requirements, submittals, and Installers requirements to assure issuance of Manufacturer's system warranty.
 - c. Review surface preparation.
 - d. Review water-proofing and crack isolation membrane requirements.
 - e. Review tile base installation requirements.
 - f. Review floor tile grout thickness requirements.

1.4 SUBMITTALS

- A. Action Submittals:
 1. Samples:
 - a. 24 inch (600 mm) square sample on specified tile backer showing all types of tile, grout, and colors specified. 1/2 of sample board shall show floor tile and 1/2 shall show wall tile.
 - b. One sample of each type of base tile and trim piece to be used on Project.
- B. Informational Submittals:
 1. Certificates:
 - a. Master grade certificate.
 - 1) Conform to ANSI A137.1.
 2. Manufacturer's Instructions:
 - a. Provide instructions for installation of tile-setting materials.
 3. Source Quality Control Submittals:
 - a. Provide Manufacturer documentation indicating proposed materials will satisfy requirements for Manufacturer's Warranty.
 4. Qualification Statement. See Section 01 4301 for qualifications:
 - a. Installer:
 - 1) Provide Qualification documentation if requested by Architect or Owner.
- C. Closeout Submittals:
 1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Operations and Maintenance Data:
 - 1) Cleaning and maintenance instructions.
 - b. Warranty Documentation:
 - 1) Include copy of final, executed warranty.
 - c. Record Documentation:

- 1) Manufacturers Documentation:
 - a) Manufacturer's cut sheets of materials used in installed system.
 - b) Tile color and pattern selections.

1.5 QUALITY ASSURANCE

- A. Source Of Materials:
 1. Provide materials obtained from one (1) source for each type and color of tile, grout, and setting materials for Manufacture's system warranty.
- B. Qualifications:
 1. Installer: Requirements of Section 01 4301 applies, but not limited to following:
 - a. Minimum three (3) years experience installing specified tile installations.
 - b. Minimum five (5) satisfactorily completed installations of comparable quality, scope, similar size, and complexity in past two (2) years before bidding.
 - c. Upon request, submit documentation.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
 1. Deliver and store packaged materials in their original unopened containers with labels intact until time of use.
- B. Storage and Handling Requirements:
 1. Store and handle materials in a manner to prevent damage or contamination by water, freezing, or foreign matter.
 2. Keep grade seals intact and cartons dry until tile are used.

1.7 FIELD CONDITIONS

- A. Ambient Conditions:
 1. Do not apply tile setting materials to surfaces that contain frost.
 2. Keep ambient temperatures of area to receive tile work and surface temperatures of substrates at 50 deg F (10 deg C) minimum during preparation of mortar bed, laying of tile, and for seventy two (72) hours after completion of tile work. Use electric heat to prevent discoloration of grout.
 3. Temperature of substrate shall be 60 deg F (15.6 deg C) and rising for application of epoxy and furan unless otherwise specifically authorized by Manufacturer.
 4. Maintain epoxy at stable temperature between 60 deg F (15.6 deg C) and 90 deg F (32 deg C) during curing period.

1.8 WARRANTY

- A. Manufacturer Warranty:
 1. Manufacturer's twenty five (25) year minimum system warranty on tile-setting materials for surface preparation, setting materials and grouting materials; includes replacement of defective materials and replacement of tile, including labor and materials at original cost at time of installation.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:

1. Approved Manufacturer's:
 - a. Custom Building Products, Seal Beach, CA www.custombuildingproducts.com.
 - b. Crossville, Inc., Crossville, TN www.crossvilleinc.com
 - c. Dal-Tile Corp., Div. of Mohawk Industries, Dallas, TX www.daltile.com.
 - d. Laticrete International Inc., Bethany, CT www.laticrete.com.
 - e. Mapei Americas Headquarters, Deerfield Beach, FL www.mapei.com.
 - f. Merkrete, by Parex USA, Inc., Anaheim, CA www.merkrete.com.
 - g. Schuler Systems L.P., Plattsburgh, NY www.schluter.com.

- B. Design Criteria:
 1. General:
 - a. Paver Tile: Standard grade porcelain tile, solid color throughout, graded in accordance with ANSI A137.1:
 - 1) Cove Base with external and internal corner pieces shall be standard grade.
 - b. Ceramic Tile:
 - 1) Tile shall be standard quality, white or off-white body, square or cushion edge, graded in accordance with ANSI A137.1.
 - 2) Square edge, white body, lug type wall tile. Field wall tile shall have two lugs on each edge to assure uniform joint, approximately 0.040 inch (one mm).
 - 3) External and internal corner pieces shall be standard grade.
 2. Capabilities:
 - a. Paver Tile:
 - 1) Water Absorption when tested in accordance with ASTM C373: 0.1 to 0.5 percent.
 - 2) Abrasive Wear Resistance when tested in accordance with ASTM C501: 275 minimum.
 - 3) Breaking Strength when tested in accordance with ASTM C648: 300 lbs minimum.
 - 4) Bond Strength when tested in accordance with ASTM C482: 200 psi minimum.
 - 5) Coefficient of Friction: 0.42 minimum as measured by DCOF (Dynamic Coefficient of Friction) AcuTest method and requirements as per ANSI A137.1.

- C. Description of Materials:
 1. Paver Tile:
 - a. Tile Sizes:
 - 1) Floor Tile: 12 inches (300 mm) x 12 inches (600 mm)
 - 2) Cove Base: 6 inches by 12 inches (150 mm by 300 mm) with bull-nosed top:
 - a) External and internal corner pieces to match with bull-nosed top.
 - 3) Wall Tile: 12 inches (300 mm) x 24 inches (600 mm)
 - 4) Bull Nose: 4 (100 mm) x 24 inches (600 mm)
 - a) External and internal corner pieces to match with bull-nosed top.
 - b. Approved Colors.
 - 1) Floor Tile: Reminiscent by Daltile Color – Reclaimed Gray RM23
 - 2) Cove Base: Reminiscent by Daltile Color – Reclaimed Gray RM23
 - 3) Wall Tile: Reminiscent by Daltile Color – Memento White RM20.
 - 4) Bull Nose: Reminiscent by Daltile Color – Memento White RM20..

- D. Materials:
 1. Paver Floor Tile:
 - a. Approved Products.
 - 1) Daltile, Inc
 - 2) Equal approved by Architect prior to bidding.
 2. Wall Tile:
 - a. Approved Products.
 - 1) Daltile, Inc
 - 2) Equal approved by Architect prior to bidding.
 3. Mortar Bed:
 - a. Portland Cement: Meet requirements of ASTM C150/C150M, Type 1, designation shall appear on bag.
 - b. Hydrated Lime:

- 1) Meet Requirements of one of following:
 - a) ASTM C206.
 - b) ASTM C207, Type S (designation shall appear on bag).
- c. Sand: Clean, washed, well-graded, meeting requirements of ASTM C144 with gradation of 100 percent passing No. 8 sieve with not over five (5) percent passing No. 100 sieve.
- d. Latex Additive; in lieu of all water:
 - 1) Meet warranty requirements.
 - 2) Meet requirements of ANSI A118.4.
 - 3) Acceptable Products:
 - a) CUSTOM: Thin-Set Mortar Admix.
 - b) LATICRETE: Latex Additive.
 - c) MAPEI: Planicrete AC.
 - d) MERKRETE: 150 Latex Admixture.
4. Metal Trim:
 - a. Approved Products.
 - 1) Tile / Carpet Junction: Schluter-RENO-AETK.
 - 2) Over Expansion Joints In Slabs: Schluter DILEX-BWS, color G, PG, or HB as selected by Architect.
5. Joint Sealants:
 - a. Interior Ceramic Tile Joints are furnished in Section 07 9213 and installed in Section 09 3013 'Ceramic Tiling' including the following:
 - 1) Ceramic and paver cove base inside corners.
 - 2) Ceramic and paver tile joints.
 - 3) Termination joints in showers.
6. Backer Board Joint Reinforcing: 2 inch (50 mm) wide glass fiber mesh tape.
7. Tile Setting Products:
 - a. Use only products of same Manufacturer to validate warranty, unless otherwise acceptable to Ceramic Tile Supplier.
 - b. Latex-Portland Cement Mortar For Floors:
 - 1) Design Criteria:
 - a) Meet Requirements of ANSI A118.4, ANSI A118.6, ANSI 118.11, or ANSI A118.15 and ISO 13007 C2ES1P2 for manufactured mortar.
 - 2) Approved Products. See Section 01 62 00 for definitions of Categories:
 - a) CUSTOM: Megalite Thinset or FlexBond Fortified Thin-Set Mortar.
 - b) LATICRETE: 254 Platinum Thinset.
 - c) MAPEI: Ultraflex 3.
 - d) MERKRETE: 735 Premium Flex.
 - c. Latex/Polymer Modified Portland Cement Mortar For Walls:
 - 1) Meet Requirements of ANSI A118.4, ANSI A118.6, or ANSI A118.15 and ISO 13007; C2ES1P2 for manufactured mortar.
 - 2) Approved Products. See Section 01 6200 for definitions of Categories:
 - a) CUSTOM: Megalite Thin-Set Mortar or FlexBond Fortified Thin-Set Mortar.
 - b) LATICRETE: 254 Platinum Thinset.
 - c) MAPEI: Ultraflex 3.
 - d) MERKRETE: 735 Premium Flex.
 - d. Floor Grout (Epoxy):
 - 1) Meet Requirements of ANSI A118.3 or ANSI A118.6 and ISO 13007 RG.
 - 2) Color:
 - a) CUSTOM: No. 335 Winter Gray.
 - b) Equal approved by Architect prior to bidding.
 - 3) Approved Products. See Section 01 6200 for definitions of Categories:
 - a) CUSTOM: CEG-Lite 100% Solids Commercial Epoxy Grout.
 - e. Wall Grout (Modified Polymer):
 - 1) Meet Requirements of ANSI A118.6 or ANSI A118.6 and ISO 13007.
 - 2) Color:
 - a) CUSTOM: No. 543 Driftwood.
 - b) Equal approved by Architect prior to bidding.
 - 3) Approved Products. See Section 01 6200:
 - a) CUSTOM: PolyBlend Non-Sanded Grout or Prism SureColor Grout.

- b) LATICRETE: 1600 Series Unsanded Dry Set Wall Grout with 1776 Grout Admix Plus additive.
- c) MAPEI: Keracolor-U Unsanded Polymer-Modified Grout.
- d) MERKRETE: Non-Sanded ColorGrout, latex modified.
- f. Waterproofing Membrane:
 - 1) Meet Requirements of ANSI A118.10.
 - 2) Approved Products. See Section 01 6200 for definitions for Categories:
 - a) Troweled applied, cement based:
 - (1) CUSTOM: FractureFree Crack Prevention Membrane.
 - (2) LATICRETE: Hydro Ban.
 - (3) MAPEI, Mapelastic 315.
 - (4) MERKRETE: Hydro-Guard SP-1.
 - b) Liquid applied, latex based:
 - (1) CUSTOM: RedGard Waterproofing or Crack Prevention Membrane or FractureFree Crack Prevention Membrane.
 - (2) LATICRETE: Hydro Ban.
 - (3) MAPEI: Mapelastic AquaDefense.
 - (4) MERKRETE: Hydro-Guard SP-1.
- g. Crack Isolation Membrane:
 - 1) Meet Requirements of ANSI A118.12.
 - 2) Approved Products. See Section 01 6200.
 - a) Flexible, thin, load-bearing, fabric-reinforced:
 - (1) CUSTOM: Crack Buster Pro Crack Prevention Mat Underlayment, with Peel & Stick Primer.
 - (2) LATICRETE: Blue 92 Anti-Fracture Membrane.
 - (3) MAPEI, Mapeguard SM, and Primer SM.
 - (4) MERKRETE: Hydro-Guard SP-1.
 - b) Liquid applied, latex based:
 - (1) CUSTOM: RedGard Waterproofing and Crack Prevention Membrane or FractureFree Crack Prevention Membrane.
 - (2) LATICRETE: Hydro Ban.
 - (3) MAPEI, Mapelastic AquaDefense.
 - (4) MERKRETE: Fracture Guard 5000.
- h. Stone Thresholds:
 - 1) Texture and color variation shall be within limits established by Architect's approved sample.
 - 2) Free of defects that would materially impair strength, durability, and appearance.
 - 3) Finish: 80 grit exterior hone.
 - 4) White marble, one (1) piece, 7/8 inch (22 mm) thick by 2 1/2 inches (64 mm) by door opening width. Cross-section to meet handicap accessibility requirements.

E. Mixes:

1. Mortar Beds:

	Portland Cement	Dry Sand	Damp Sand	Hydrated Lime*
Floor Mix	One Part	5 Parts	4 Part	1/10 Part
Wall Mix	One Part	--	5-1/2 to 7 Parts	1/2 Part
Showers	One Part **	--	4 Part	--

* Optional

** Use waterproofing admixture. Mix dry then add minimum amount of water.

PART 3 - EXECUTION:

3.1 INSTALLERS

A. Acceptable Installers:

- 1. Meet Quality Assurance Installer Qualifications as specified in Part 1 of this specification.

3.2 EXAMINATION

- A. Verification Of Conditions:
1. Examine substrates where tile will be installed for compliance with requirements for installation tolerances and other conditions effecting performance of installed tile.
 2. Verify tile substrate is well cured, dry, clean, and free from oil or waxy films, and curing compounds.
 3. Notify Architect in writing if surfaces are not acceptable to install tile:
 - a. Do not lay tile over unsuitable surface.
 - b. Commencing installation constitutes acceptance of surfaces and approval of existing conditions.

3.3 PREPARATION

- A. Surface Preparation:
1. Allow concrete to cure for twenty eight (28) days minimum before application of mortar bed.
 2. Repair and clean substrate in accordance with installation standards and manufacturer's instructions.

3.4 INSTALLATION

- A. Interface With Other Work:
1. Grounds, anchors, plugs, hangers, door frames, electrical, mechanical, and other work in or behind tile shall be installed before tile work is started.
- B. Special Techniques:
1. Install in accordance with following latest TCNA installation methods:
 - a. Flush Concrete Slabs with crack isolation membrane: TCNA F115.
 - b. Mortar Bed on Concrete Slab: TCNA F111 with reinforcing.
 - c. Framed Walls: TCNA W245 with waterproof membrane.
 - d. Tile Cove Base: TCNA Flush style.
- C. Tolerances:
1. Plane of Vertical Surfaces:
 - a. 1/8 inch in 8 feet (3 mm in 2.450 meters) from required plane shall be plumb and true with square corners.
 2. Variation In Slab Grade:
 - a. Plus or minus 1/8 inch (3 mm) in any 10 feet (3.050 m) of floor slab and distance between high point and low point of slab of 1/2 inch (12.7 mm).
 - b. Slab Testing Procedure:
 - 1) Place ends of straightedge on 3/8 inch (10 mm) high shims.
 - 2) Floor is satisfactory if 1/4 inch (6 mm) diameter steel rod rolled under straightedge will not touch anywhere along 10 foot (3.050 m) length and 1/2 inch (12.7 mm) diameter steel rod will not fit under straightedge anywhere along 10 foot (3.050 m) length.
- D. General:
1. Install tile in pattern indicated:
 - a. Align joints when adjoining tiles on floor, base, walls, and trim are same size.
 - b. Adjust to minimize tile cutting and to avoid tile less than half size.
 - c. Center and balance areas of tile if possible.
 2. Extend tile into recesses and under equipment and fixtures to form a complete covering without interruption:
 3. Maintain heights of tilework in full courses to nearest obtainable dimension where heights are given in feet and inches (meters and millimeters) and are not required to fill vertical spaces exactly.
 4. Install cut tile with cuts on outer edges of field:

- a. Provide straight cuts that align with adjacent materials.
 - b. When possible, smooth cut edges of tile or use appropriate cutter or wet saw to produce smooth cuts.
 - c. Do not install tile with jagged or flaked edges.
5. Terminate tile neatly at obstructions, edges, and corners, without disruption of pattern or joint alignment:
 - a. Fit tile closely where edges are to be covered by trim, escutcheons, or similar devices.
 6. Provide straight tile joints of uniform width, subject to variance in tolerance allowed in tile size:
 - a. Make joints smooth and even, without voids, cracks, or excess mortar or grout.
 7. Use a beating block and hammer or rubber mallet so faces and edges of individual tiles are flush and level with faces and edges of adjacent tiles, and to reduce lippage.
 8. Accessories in tilework shall be evenly spaced, properly centered with tile joints, and level, plumb, and true to correct projection.
 9. Leave finished installation clean and free of cracked, chipped, broken, unbonded, and otherwise defective tile work.
- E. Application On Concrete Floor:
1. On Mortar Bed:
 - a. Apply mortar bed to depth equal to depression in slab minus 1/2 inch (12.7 mm).
 - b. Properly cure before installing tile.
 2. Clean substrate surface thoroughly.
 - a. Dampen if very dry, but do not saturate.
 3. Install tile with 100 percent contact with mortar bed.
 - a. Obtaining 100 percent contact may require troweling mortar layer on back of each tile before placing on mortar bed.
 4. Install base by flush method (square or thin-lip method is not acceptable):
 - a. Allow for expansion joint directly above any expansion or control joints in slab.
 5. Insert temporary filler in expansion joints.
- F. Application On Walls:
1. On Glass Mat Gypsum Tile Backer Over Framing:
 - a. Embed fiberglass reinforcing tape at joints with mortar used to adhere tile.
 2. Dampen dry backings as determined by environmental conditions and Manufacturer's recommendations to achieve cure.
 3. Allow for sealant joints full height at room corners in wall tile. Insert temporary filler in expansion joints.
 4. Install wall tile directly atop bull-nosed paver tile base.
- G. Application Of Mortar:
1. Do not spread more mortar than can be covered within ten (10) to fifteen (15) minutes:
 - a. If 'skinning' occurs, remove mortar and spread fresh material.
 - b. Spread mortar with notches running in one (1) direction, perpendicular to pressing, pushing and pulling of tile during placement.
 2. Install tile before mortar has started initial cure:
 - a. For thin set mortar application, use notch trowel that will achieve the recommended coverage of mortar after tiles have been installed.
 3. Place tile in fresh mortar, press, push and pull tile slightly to achieve as near 100 percent coverage and contact of tile with setting material and substrate as possible:
 - a. Average contact area shall be not less than eighty (80) percent except on exterior or shower installations where contact area shall be ninety five (95) percent when not less than three (3) tiles or tile assemblies are removed for inspection. The eighty (80) percent or ninety five (95) percent coverage shall be sufficiently distributed to give full support of the tile.
 - b. Support corners and edges with mortar leaving no hollow corners or edges.
 4. Install so there is 1/8 inch (3 mm) of mortar between tile and substrate after proper bedding:
 - a. Periodically remove sheets or individual tiles to assure proper bond coverage consistent with industry specifications.
 - b. If coverage is found to be insufficient, use a larger size notch trowel.

H. Application Of Grout:

1. Firmly set tile before applying grout:
 - a. This requires forty eight (48) hours minimum.
2. Before grouting:
 - a. Remove all paper and glue from face of mounted tile.
 - b. Remove spacers or ropes before applying grouting:
3. Mixing Grout:
 - a. Use clean buckets and mixing tools:
 - 1) Use sufficient pressure and flow grout in progressively to avoid air pockets and voids.
 - b. Machine mixing of grout is preferred to assure uniform blend. To prevent trapping air bubbles into prepared grout, use slow speed mixer.
 - c. Slake for fifteen (15) minutes.
 - d. Water or latex additives used for mixing with dry grout shall be measured accurately.
4. Before grouting entire area, do a test area to assure there will be no permanent staining or discoloration of tile and to verify that excess grout can be easily removed from tile surface:
 - a. If necessary, pre-coat exposed surfaces of tile with a grout release recommended by Grout Manufacturer to facilitate removal of excess grout.
5. Installing Grout:
 - a. Use caution, when grouting glazed ceramic tiles to prevent scratching or damaging surface of tile.
 - b. Dampen dry joints prior to grouting with sand-portland cement grout, standard sanded cement grout, standard unsanded cement grout, polymer modified sanded tile grout, and polymer modified unsanded tile grout. Do not leave puddles of water in joints before grouting.
 - c. Keep an adequate joint depth open for grouting. Force maximum amount of grout into joints.
 - d. Apply grout to produce full, smooth grout joints of uniform width, and free of voids and gaps
 - 1) Fill joints of cushion edge tile to depth of cushion.
 - 2) Fill joints of square edge tile flush with surface.
 - 3) Fill joint between wall tile and bull-nosed paver tile base with floor grout.
 - e. Install floor tile with grout thickness of 3/16 inch (4.76 mm) maximum.
 - f. Remove excess grout from surface of tile before it loses its plasticity or begins to set.
 - g. Finished grout shall be uniform in color, smooth, and without voids, pin holes, or low spots.

I. Curing:

1. Keep installation at 65 to 85 deg F (18 to 30 deg C) during first eight (8) hours of cure. Shade area completely from sun during this period.

J. Application of Joint Sealants:

1. Apply joint sealants after grout has cured:
 - a. This requires forty eight (48) hours minimum.
2. Before applying sealant:
 - a. Remove spacers or ropes before applying joint sealants.
 - b. Apply backer rod and joint sealants at expansion joints.

3.5 FIELD QUALITY CONTROL

A. Non-Conforming Work:

1. Correct any work found cracked, chipped, broken, unbounded and otherwise defective or not complying with contract document requirements at no additional cost to the Owner.

3.6 CLEANING

- A. If one has been used, remove grout release and clean tile surfaces so they are free of grout residue and foreign matter:
 1. If a grout haze or residue remains, use a suitable grout haze remover or cleaner.
 2. Flush surface with clean water before and after cleaning.

3.7 PROTECTION

- A. Close to traffic areas where tile is being set and other tile work being done:
 - 1. Keep closed until tile is firmly set.
 - 2. Before, during, and after grouting, keep area clean, dry, and free from foreign materials and airflow that will interfere with setting and curing of grout.
- B. Newly tiled floors shall not be walked on nor worked on without using kneeling boards or equivalent protection of tiled surface.
- C. After cleaning, provide protective covering and maintain conditions protecting tile work from damage and deterioration:
 - 1. Where tiled surfaces will be subject to equipment or wheel traffic or heavy construction traffic, cover protective covering with 1/4 inch (6 mm) hardboard, plywood, or similar material.

END OF SECTION

SECTION 09 9001

COMMON PAINTING AND COATING REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Common procedures and requirements for field-applied painting and coating.
- B. Related Requirements:
 - 1. Section 07 9213: 'Elastomeric Joint Sealants' for quality of Elastomeric Joint Sealants.

1.2 REFERENCES

- A. Definitions:
 - 1. Damage Caused By Others: Damage caused by individuals other than those under direct control of Painting Applicator (MPI(a), PDCA P1.92).
 - 2. Gloss Levels:
 - a. Specified paint gloss level shall be defined as sheen rating of applied paint, in accordance with following terms and values, unless specified otherwise for a specific paint system.

Gloss Level '1'	Traditional matte finish - flat	0 to 5 units at 60 degrees to 10 units maximum at 85 degrees.
Gloss Level '2'	High side sheen flat - 'velvet-like' finish	10 units maximum at 60 degrees and 10 to 35 units at 85 degrees.
Gloss Level '3'	Traditional 'eggshell-like' finish	10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
Gloss Level '4'	'Satin-like' finish	20 to 35 units at 60 degrees and 35 units minimum at 85 degrees.
Gloss Level '5'	Traditional semi-gloss	35 to 70 units at 60 degrees.
Gloss Level '6'	Traditional gloss	70 to 85 units at 60 degrees.
Gloss Level '7'	High gloss	More than 85 units at 60 degrees.

- 3. Properly Painted Surface:
 - a. Surface that is uniform in appearance, color, and sheen and free of foreign material, lumps, skins, runs, sags, holidays, misses, strike-through, and insufficient coverage. Surface free of drips, spatters, spills, and overspray caused by Paint Applicator. Compliance will be determined when viewed without magnification at a distance of 5 feet (1.50 m) minimum under normal lighting conditions and from normal viewing position (MPI(a), PDCA P1.92).
 - 4. Latent Damage: Damage or conditions beyond control of Painting Applicator caused by conditions not apparent at time of initial painting or coating work.
- B. Reference Standards:
 - 1. The latest edition of the following reference standard shall govern all painting work:
 - a. MPI(a), 'Architectural Painting Specification Manual' by Master Painters Institute (MPI), as issued by local MPI Accredited Quality Assurance Association having jurisdiction.
 - b. MPI(r), 'Maintenance Repainting Manual' by Master Painters Institute (MPI), as issued by local MPI Accredited Quality Assurance Association having jurisdiction.

1.3 SUBMITTALS**A. Action Submittals:**

1. Product Data:
 - a. Include following information for each painting product, arranged in same order as in Project Manual.
 - 1) Manufacturer's cut sheet for each product indicating ingredients and percentages by weight and by volume, environmental restrictions for application, and film thicknesses and spread rates.
 - 2) Provide one (1) copy of 'MPI Approved Products List' showing compliance for each MPI product specified.
 - a) MPI Information is available from MPI Approved Products List using the following link: <http://www.paintinfo.com/mpi/approved/index.shtml>.
 - 3) Confirmation of colors selected and that each area to be painted or coated has color selected for it.
2. Samples: Provide two 4 inch by 6 inch (100 mm by 150 mm) minimum draw-down cards for each paint or coating color selected for this Project.

B. Informational Submittals:

1. Manufacturer Instructions:
 - a. Manufacturer's substrate preparation instructions and application instruction for each painting system used on Project.
2. Qualification Statement:
 - a. Applicator:
 - 1) Provide Qualification documentation if requested by Architect or Owner.

C. Closeout Submittals:

1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Record Documentation:
 - 1) Manufacturer's documentation:
 - a) Manufacturer's cut sheet for each component of each system.
 - b) Schedule showing rooms and surfaces where each system was used.

D. Maintenance Materials Submittals:

1. Extra Stock Materials:
 - a. Provide painting materials in Manufacturer's original containers and with original labels in each color used. Label each can with color name, mixture instructions, date, and anticipated shelf life.
 - b. Provide one (1) quart of each finish coat and one (1) pint of each primer and of each undercoat in each color used.

1.4 QUALITY ASSURANCE**A. Regulatory Agency Sustainability Approval:**

1. Conform to work place safety regulations and requirements of those authorities having jurisdiction for storage, mixing, application and disposal of all paint and related hazardous materials.
2. Paint and painting materials shall be free of lead and mercury, and have VOC levels acceptable to local jurisdiction.
3. Master Painters Institute (MPI) Standards:
 - a. Products: Comply with MPI standards indicated and listed in 'MPI Approved Products List'.
 - b. Preparation and Workmanship: Comply with requirements in 'MPI Architectural Painting Specification Manual' for products and coatings indicated.

B. Field Samples:

1. Before application of any paint system, meet on Project site with Architect, Owner's representative, and Manufacturer's representative. Architect may select one (1) surface for

- application of each paint system specified. This process will include establishing acceptable substrate conditions required for Project before application of paints and coatings.
2. Apply paint systems to surfaces indicated by Architect following procedures outlined in Contract Documents and Product Data submission specified above.
 3. After approval of samples, proceed with application of paint system throughout Project. Approved samples will serve as standard of acceptability.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
 1. Deliver specified products in sealed, original containers with Manufacturer's original labels intact on each container.
 2. Deliver amount of materials necessary to meet Project requirements in single shipment.
- B. Storage And Handling Requirements:
 1. Store materials in single place.
 2. Keep storage area clean and rectify any damage to area at completion of work of this Section.
 3. Maintain storage area at 55 deg F (13 deg C) minimum.

1.6 FIELD CONDITIONS

- A. Ambient Conditions:
 1. Perform painting operations at temperature and humidity conditions recommended by Manufacturer for each operation and for each product for both interior and exterior work.
 2. Apply painting systems at lighting level of 540 Lux (50 foot candles) minimum on surfaces to be painted.
 - a. Inspection of painting work shall take place under same lighting conditions as application.
 - b. If painting and coating work is applied under temporary lighting, deficiencies discovered upon installation of permanent lighting will be considered latent damage as defined in MPI Manual, PDCA P1-92.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Performance:
 1. Design Criteria:
 - a. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - b. All materials, preparation and workmanship shall conform to requirements of 'Architectural Painting Specification Manual' by Master Painters Institute (MPI).
 - c. All paint manufacturers and products used shall be as listed under Approved Product List section of MPI Painting Manual.
 - d. Provide Premium Grade systems (2 top coats) as defined in MPI Architectural Painting Specification Manual, except as otherwise indicated.
 - e. Where specified paint system does not have Premium Grade, provide Budget Grade.
 - f. Provide products of same manufacturer for each coat in coating system.
 - g. Where required to meet LEED (Leadership in Energy and Environmental Design) program requirements, use only MPI listed materials having an "L" rating designation.

- B. Materials:
1. Materials used for any painting system shall be from single manufacturer unless approved otherwise in writing by painting system manufacturers and by Architect. Include manufacturer approvals in Product Data submittal.
 2. Linseed oil, shellac, turpentine, and other painting materials shall be pure, be compatible with other coating materials, bear identifying labels on containers, and be of highest quality of an approved manufacturer listed in MPI manuals. Tinting color shall be best grade of type recommended by Manufacturer of paint or stain used on Project.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
1. Directing applicator to begin painting and coating work will indicate that substrates to receive painting and coating materials have been previously inspected as part of work of other Sections and are complete and ready for application of painting and coating systems as specified in those Sections.
- B. Pre-Installation Testing:
1. Before beginning work of this Section, examine, and test surfaces to be painted or coated for adhesion of painting and coating systems.
 2. Report in writing to Architect of conditions that will adversely affect adhesion of painting and coating work.
 3. Do not apply painting and coating systems until party responsible for adverse condition has corrected adverse condition.
- C. Evaluation And Assessment:
1. Report defects in substrates that become apparent after application of primer or first finish coat to Architect in writing and do not proceed with further work on defective substrate until such defects are corrected by party responsible for defect.

3.2 PREPARATION

- A. Protection Of In-Place Conditions:
1. Protect other finish work and adjacent materials during painting. Do not splatter, drip, or paint surfaces not intended to be painted. These items will not be spelled out in detail but pay special attention to the following:
 - a. Do not paint finish copper, bronze, chromium plate, nickel, stainless steel, anodized aluminum, or monel metal except as explicitly specified.
 - b. Keep cones of ceiling speakers completely free of paint.
 - c. On existing work where ceiling is to be painted, speakers and grilles are already installed, and ceiling color is not being changed, mask off metal grilles installed on ceiling speakers. If ceiling color is being changed, remove metal grilles and paint, and mask off ceiling speakers.
- B. Surface Preparation:
1. Prepare surfaces in accordance with MPI requirements and requirements of Manufacturer for each painting system specified, unless instructed differently in Contract Documents. Bring conflicts to attention of Architect in writing.
 2. Fill minor holes and cracks in wood surfaces to receive paint or stain.
 3. Surfaces to be painted shall be clean and free of loose dirt. Clean and dust surfaces before painting or finishing.

3.3 APPLICATION

- A. Interface With Other Work:
 - 1. Coordinate with other trades for materials and systems that require painting before installation.
 - 2. Schedule painting and coating work to begin when work upon which painting and coating work is dependent has been completed. Schedule installation of pre-finished and non-painted items, which are to be installed on painted surfaces, after application of final finishes.
- B. Paint or finish complete all surfaces to be painted or coated as described in Contract Documents,
- C. Apply sealant in gaps 3/16 inch (5 mm) and smaller between two substrates that are both to be painted or coated. Sealants in other gaps furnished and installed under Section 07 9213.
- D. Spread materials smoothly and evenly. Apply coats to not less than wet and dry film thicknesses and at spreading rates for specified products as recommended by Manufacturer.
- E. Touch up suction spots after application of first finish coat.
- F. Paint shall be thoroughly dry and surfaces clean before applying succeeding coats.
- G. Make edges of paint adjoining other materials or colors clean, sharp, and without overlapping.
- H. Finished work shall be a 'Properly Painted Surface' as defined in this Section.

3.4 FIELD QUALITY CONTROL

- A. Non-Conforming Work:
 - 1. Correct deficiencies in workmanship as required to leave surfaces in conformance with 'Properly Painted Surface,' as defined in this Section.
 - 2. Correction of 'Latent Damage' and 'Damage Caused By Others,' as defined in this Section, is not included in work of this Section.

3.5 CLEANING

- A. General:
 - 1. As work proceeds and upon completion of work of any painting Section, remove paint spots from floors, walls, glass, or other surfaces and leave work clean, orderly, and in acceptable condition.
- B. Waste Management:
 - 1. Remove rags and waste used in painting operations from building each night. Take every precaution to avoid danger of fire.
 - 2. Paint, stain and wood preservative finishes and related materials (thinners, solvents, caulking, empty paint cans, cleaning rags, etc.) shall be disposed of subject to regulations of applicable authorities having jurisdiction.
 - 3. Remove debris caused by work of paint Sections from premises and properly dispose.
 - 4. Retain cleaning water and filter out and properly dispose of sediments.

END OF SECTION

SECTION 09 9123**INTERIOR PAINTED GYPSUM BOARD, PLASTER****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Preparing, priming, and finish painting new and existing interior gypsum board and plaster surfaces as described in Contract Documents.
- B. Related Requirements:
 - 1. Section 09 9413: 'Interior Textured Finishing' for textured finishes.

PART 2 - PRODUCTS**2.1 SYSTEM**

- A. Manufacturers:
 - 1. Approved Manufacturers and Products.
 - a. Products listed in edition of MPI Approved Product List current at time of bidding and later are approved, providing they meet VOC requirements in force where Project is located.
- B. Description:
 - 1. Breakroom:
 - a. New Surfaces: Use MPI(a) INT 9.2F Waterborne Epoxy Finish system.
 - b. Previously Finished Surfaces: Use MPI(r) RIN 9.2E Waterborne Epoxy Finish system.
 - 2. All Other:
 - a. New Surfaces: Use MPI(a) INT 9.2B Latex Finish system.
 - b. Previously Finished Work: Use MPI(r) RIN 9.2B Latex Finish system.
- C. Performance:
 - 1. Design Criteria:
 - a. New Surfaces: MPI Premium Grade finish requirements.
 - b. Deteriorated Existing Surfaces: MPI Premium Grade finish requirements.
 - c. Sound Existing Surfaces: MPI Custom Grade requirements.
 - d. Gloss / Sheen Required:
 - 1) Breakroom: Gloss Level 6.
 - 2) Ceiling: Gloss Level 1 or 2 to match existing.
 - 3) Remaining Painted Surfaces: Gloss Level 5.
- D. Materials:
 - 1. Primers:
 - a. MPI Product 50, 'Primer Sealer, Latex, Interior'.
 - 2. Finish Coats:
 - a. Breakroom:
 - 1) Buildings with only Gypsum Board surfaces in rooms:
 - a) MPI Product 115, 'Epoxy-Modified Latex, Interior, Gloss (MPI Gloss Level 6)'.
 - b. Ceiling:
 - 1) MPI Product 53, 'Latex, Interior, Flat (MPI Gloss Level 1)'.
 - c. Remaining Painted Surfaces:
 - 1) MPI Product 141, 'Latex, Interior, High Performance Architectural, Semi-Gloss (MPI Gloss Level 5)'.

PART 3 - EXECUTION**3.1 APPLICATION**

- A. General: See appropriate paragraphs of Section 09 9001.
- B. New Surfaces:
 - 1. Primer: Apply primer to be covered with other paint coats with roller only, or with spray gun and back-rolled.
- C. Existing Painted Surfaces:
 - 1. Remove deteriorated existing paint down to sound substrate by scraping or sanding. Feather edges of existing paint by sanding to be smooth with adjacent surfaces.
 - 2. Clean surface with mild soap and water, or with tri-sodium phosphate (TSP). Wash surfaces that have been defaced with marking pens, crayons, lipstick, etc, with solvent recommended by Paint Manufacturer. Spot prime such surfaces.
 - 3. Spackle and tape cracks. Sand to smooth finish and spot prime.
 - 4. Sand or chemically etch existing painted surface as required to prepare surface to accept new paint.
 - 5. Re-clean surface.
 - 6. Apply primer coat.
 - 7. Apply finish coats.

END OF SECTION

SECTION 09 9413**INTERIOR TEXTURED FINISHING****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and apply texturing on walls and ceilings to match existing as described in Contract Documents.
- B. Related Requirements:
 - 1. Section 09 2900: Priming.
 - 2. Section 09 9001: 'Common Painting And Coating Requirements'.
 - 3. Section 09 9123: Finish painting.

1.2 REFERENCES

- A. Definitions:
 - 1. Drywall Texture: Compound rolled, sprayed, or troweled onto sheetrock after taping and floating of joints is complete. Uses same material as joint compound, but thinned down with water and applied to wall surface:
 - a. Light Orange Peel: Sprayed texture leaves light splatter on walls. Resembles peel of orange. If done with fine spray, can be one of the lightest, least noticeable of the texture styles.
 - b. Smooth - Smooth application of texture over sheetrock wall that feathers out sheetrock joints, and creates even, non-textured wall.

1.3 SUBMITTALS

- A. Action Submittals:
 - 1. Samples:
 - a. Light Orange Peel Texture:
 - 1) Provide minimum of three (3) 24 inch (600 mm) square control samples on primed gypsum wallboard of 'light orange peel' texture to show possible variations.

1.4 QUALITY ASSURANCE

- A. Field Samples:
 - 1. Before performing work of this Section, prepare control samples.
 - 2. Architect will inspect control sample at pre-installation conference following preparation of control sample. When sample is approved, work of this Section may proceed. Approved samples will be kept at site at all times work of this section is being performed.

PART 2 - PRODUCTS**2.1 SYSTEM**

- A. Manufacturers:
 - 1. Manufacturer Contact List:
 - a. National Gypsum, Charlotte, NC www.nationalgypsum.com.
 - b. U S Gypsum Co, Chicago, IL www.usg.com.

- B. Materials:
 - 1. Quality Standards:
 - a. ProForm Perfect Spray EM/HF by National Gypsum.
 - b. Sheetrock Wall & Ceiling Texture by U S Gypsum.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Location:
 - 1. Walls and ceilings:
 - a. Light Orange Peel Texture to match existing:
 - 1) All areas except those listed in following paragraph.
- B. Finishing:
 - 1. Light Orange Peel Texture:
 - a. After gypsum board is taped, sanded, and primed, apply texture. Closely match samples accepted by Architect.
 - 2. Smooth:
 - a. After gypsum board is taped, sanded, and primed, apply texture.

END OF SECTION

DIVISION 10: SPECIALTIES

10 1000 INFORMATION SPECIALTIES

10 1490 MISCELLANEOUS CODE SIGNAGE

10 2000 INTERIOR SPECIALTIES

10 2113 METAL TOILET COMPARTMENTS
10 2813 COMMERCIAL TOILET ACCESSORIES
10 2814 BABY-CHANGING STATION

END OF TABLE OF CONTENTS

SECTION 10 1490**MISCELLANEOUS CODE SIGNS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Supplied But Not Installed Under This Section
 - 1. Code Signs
- B. Related Sections
 - 1. Division 06: Installation

1.2 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings: Schedule showing signs required, location, and text.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Restroom Accessibility Signs
 - 1. Men's – equilateral triangle 1/4" thick, 12" long edges with base parallel to floor and vertex pointing upward. ANSI A117.1 symbol for men.
 - 2. Women's – circle 1/4" thick, 12" in diameter. ANSI A117.1 symbol for women.
 - 3. Unisex – circle 1/4" thick, 12" in diameter. ANSI A117.1 symbol for unisex facilities.
 - 4. Mount in center of door at 60" above floor to symbol center.
 - 5. Brown background with contrasting symbol, engraved.
- B. Handicap Symbol of Accessibility
 - 1. Mount on building exterior adjacent to accessible entrance; mount 40" above floor.
 - 2. Mount adjacent to accessible restrooms.
 - 3. White symbol on blue background.
- C. Tactile Exit Signs
 - 1. Provide tactile exit signs as shown on drawings in compliance with CBC Section 1117B.5
- D. Approved Manufacturers
 - 1. Inland Pacific – Spokane, WA (800) 541-4000
 - 2. CCSW Graphics – Corpus Christi, TX (800) 322-4515
 - 3. Mark Master – Tampa, FL (800) 441-6275
 - 4. South Texas Graphics Specialties, Inc. – Houston, TX (713) 467-4499
 - 5. AA White Company – Providence RI (401) 453-4300

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Install signs square and plumb.
- B. Mount with permanent two-sided tape.

END OF SECTION

SECTION 10 2113**METAL TOILET COMPARTMENTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
1. Furnish and install metal toilet compartments as described in Contract Documents.

1.2 REFERENCES

- A. Definitions:
1. Stainless Steel: Stainless steels are alloys of iron to which at least 10 percent chromium has been added to increase corrosion resistance and will not rust when exposed to weather. To obtain greater corrosion resistance, more nickel and chromium are added to the alloy. Along with iron and chromium, all stainless steels contain some carbon to make it stronger.
 - a. Stainless Steel Alloys:
 - 1) Type 304 (UNS S30400): Austenitic stainless steel with non-magnetic properties in annealed condition that provide good corrosion resistance to both chemical and atmospheric exposures, with high resistance to oxidations. Most common and widely used stainless steel.
- B. Reference Standards:
1. ASTM International:
 - a. ASTM A167-99(2009), 'Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.'
 - b. ASTM A484/A484M-12, 'Standard Specification for General Requirements for Stainless Steel Bars, Billets, and Forgings'.

1.3 SUBMITTALS

- A. Action Submittals:
1. Product Data:
 - a. Color selection.
- B. Closeout Submittals:
1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Warranty Documentation:
 - 1) Final, executed copy of Warranty.
 - b. Record Documentation:
 - 1) Manufacturers documentation:
 - a) Manufacturer's literature or cut sheet.
 - b) Color selection.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
1. Materials shall be delivered in original, unopened packages with labels intact.
- B. Storage And Handling Requirements:

1. Store and handle in compliance with Manufacturer's instructions and recommendations.

1.5 WARRANTY

- A. Manufacturer Warranty:
 1. Manufacturer's standard warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 1. Accurate Partitions Inc, Lyons, IL www.accuratepartitions.com.
 2. AMPCO Products Inc, Miami, FL www.ampco.com.
 3. Columbia Partitions, Columbia, SC www.psisc.com.
 4. Flush-Metal Partition Corp, Maspeth, NY www.flushmetal.com.
 5. Global Steel Products Corp, Eastanollee, GA www.globalpartitions.com.
 6. Hadrian Inc, Mentor, OH www.hadrian-inc.com.
 7. Knickerbocker Partitions Corp, Freeport, NY www.knickerbockerpartition.com.
 8. Metpar, Westbury, NY www.metpar.com.
 9. Equal as Approved by Architect before bidding. See Section 01 6200.

2.2 MANUFACTURED UNITS

- A. Toilet And Miscellaneous Partitions:
 1. Floor-mounted, overhead-braced.
 2. Panels:
 - a. Galvanized bonderized steel sheets (minimum 0.00015 inch (0.004 mm) zinc coating).
 - b. Edges bound interlocked with drawn molding welded on corners.
 - c. Corners welded and ground smooth.
 - d. Sound deadening honeycomb core.
 - e. Provide wood blocking on all panels that have grab bars.
 - f. Gauge:
 - 1) Doors: 22 ga (0.08 mm) minimum.
 - 2) Panels: 22 ga (0.08 mm) minimum.
 - 3) Pilasters: 22 ga (0.08 mm) minimum.
 - 4) Screens: 22 ga (0.08 mm) minimum.
 3. Posts:
 - a. 20 ga (one mm) minimum of same construction and finish as panels.
 4. Headrails:
 - a. Aluminum.
 - b. 20 ga (one mm) minimum of same construction and finish as panels.
 - c. Anti-grip design.
 5. Plinths:
 - a. 20 ga (one mm) Type 304 stainless steel, Number 4 finish.
 - b. 3 inch (76 mm) minimum high, secured with concealed clips.
 - c. All fasteners used to attach Plinths, Posts and Pilasters to the floor shall be Type 304 stainless steel.
 6. Anchorages and fasteners:
 - a. Concealed: Non-corrosive, protective finish.
 - b. Tamper resistant Torx Head with pin screws.
 7. Hardware:
 - a. Each door:

- 1) Gravity type hinges with double handed, nylon bottom cam, adjustable for partial door closing position, bottom hinge finished flush with door bottom.
 - 2) Sliding or concealed door bolt with emergency access.
 - 3) Door strike and keeper with rubber bumper.
 - 4) Coat hook / door bumper.
- b. Finish: Chrome plated.
 - c. Meet requirements of ASTM B86, Alloy AG 40A.

2.3 FINISHES

- A. Finish And Color:
 1. Powder-coated paint finish.
Color as selected by Architect from manufacturer's standard colors to match existing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
 1. Field verify dimensions.
 2. Verify that necessary blocking has been installed in framed walls for partition installation and for place where coat hook / door bumper will strike wall.

3.2 INSTALLATION

- A. Install pilasters rigid, plumb, and level. Maintain proper door openings. Anchor pilaster to floor with Type 304 stainless steel fasteners embedded 2 inches (50 mm) into concrete slab below setting bed.
- B. Secure panels to walls with two stirrup brackets minimum attached near top and bottom of each panel. Use fasteners of length to provide one inch (25 mm) embedment into blocking or masonry.
- C. Secure overhead brace to face sheets with two fasteners minimum per face. Set door tops parallel with brace. Set door bottom 12 inches (300 mm) above floor.
- D. Plinth to be level with and snug to floor.

3.3 FIELD QUALITY CONTROL

- A. Non-Conforming Work: Non-conforming work as covered in the General Conditions applies, but is not limited to the following:
 1. Correct any work found defective or not complying with contract document requirements at no additional cost to the Owner.
 2. Replace damaged or severely scratched materials with new materials at no additional cost to the Owner.

3.4 ADJUSTING

- A. Lubricate hardware as recommended by Manufacturer.
- B. Set hinges on out-swinging doors to return to nearly closed position.

- C. Perform final adjustments to pilaster leveling devices, door hardware, and other operating parts of partition assembly just before Substantial Completion.

3.5 CLEANING

- A. Remove protective masking. Clean exposed surfaces of partitions, hardware, fittings, and accessories.
- B. Touch-up minor scratches and other finish imperfections using materials and methods recommended by Manufacturer.

END OF SECTION

SECTION 10 2813**COMMERCIAL TOILET ACCESSORIES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
 - 1. Selected accessories for Rest Rooms:
 - a. Sanitary Napkin Disposal Container.
 - b. Toilet Tissue Dispenser
 - c. Mirrors.
 - d. Grab Bars.
 - e. Napkin Disposal
 - f. Soap Dispenser
 - g. Seat Cover Dispenser
 - h. Towel Dispenser / Waste Receptacle
- B. Related Requirements:
 - 1. Section 09 2216: Blocking for metal framing
 - 2. Section 06 2001: Installation.

1.2 SUBMITTALS

- A. Action Submittals:
 - 1. Shop Drawings:
 - a. Schedule showing items used, location where installed, and proper attaching devices for substrate.
- B. Closeout Submittals:
 - 1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Warranty Documentation:
 - 1) Final, executed copy of Warranty.
 - b. Record Documentation:
 - 1) Manufacturers documentation:
 - a) Manufacturer's literature or cut sheets.

1.3 WARRANTY

- A. Manufacturer Warranty:
 - 1. Manufacturer's standard warranty against rusting.

PART 2 - PRODUCTS**2.1 MANUFACTURED UNITS**

- A. Manufacturers:
 - 1. Manufacturer List:
 - a. A & J Washroom Accessories, New Windsor, NY www.ajwashroom.com.
 - b. American Accessories Inc (AAI), Denison, TX www.aaiusaonline.com.

- c. American Specialties Inc (ASI), Yonkers, NY www.americanspecialties.com.
- d. Bobrick Washroom Equipment Inc, North Hollywood, CA www.bobrick.com or Bobrick Washroom Equipment of Canada Ltd, Scarborough, ON (416) 298-1611.
- e. Bradley Corp, Menomonee Falls, WI www.bradleycorp.com.
- f. General Accessory Manufacturing Co (GAMCO), Durant, OK www.gamcousa.com.

B. Materials:

- 1. Approved Products. See Section 01 6200.
 - a. Rest Rooms:
 - 1) Sanitary Napkin Disposal Container:
 - a) Bradley, model 4722-15, surface mounted, satin finish as design standards
 - b) Equal as approved prior to bidding
 - 2) Soap Dispenser:
 - a) Bradley, model 6326, lavatory-mounted, stainless steel finish as design standards
 - b) Equal as approved prior to bidding
 - 3) Mirrors: Frameless Glass with clip fasteners
 - a) Bradley, model 747-3636, 36" x36", design standards
 - b) Equal as approved prior to bidding
 - 4) Grab Bars:
 - a) Concealed mount, 18 ga (1.27 mm), type 304 stainless steel, 1-1/2 inch (38 mm) diameter, and peened (non-slip) finish in configuration shown on Drawings. Bradley design standards.
 - b) Equal as approved prior to bidding
 - 5) Toilet Tissue Dispenser
 - a) Bradley, model 5402, dual roll, stainless steel as design standards
 - b) Equal as approved prior to bidding
 - 6) Seat Cover Dispenser:
 - a) Bradley, model 5831, surface-mounted, 250 capacity, stainless steel, satin finish as design standards
 - b) Equal as approved prior to bidding
 - 7) Towel Dispenser / Waste Receptical Combination
 - a) Bradley, model 2252-10, semi-recessed, high capacity towel dispenser and 4.9 gallon waste receptacle, stainless steel, satin finish as design standard
 - b) Equal as approved prior to bidding.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Install using mounting devices proper for base structure.
- B. Where possible, mount like items in adjoining compartments back-to-back on same partition.

END OF SECTION

SECTION 10 2814
BABY-CHANGING STATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Products Furnished But Not Installed Under This Section:
 - 1. Baby-changing station.
- B. Related Requirements:
 - 1. Section 09 2216: 'Non-Structural Metal Framing' for blocking in metal-framed walls.
 - 2. Section 06 2001: Installation.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the efforts of the various trades affected by the Work of this Section.
 - 2. Coordinate completions of blocking in walls.
- B. Sequencing:
 - 1. Install baby-changing stations after the following as been completed:
 - a. Adjacent walls and ceilings are finished and painted.

1.3 SUBMITTALS

- A. Informational Submittals:
 - 1. Manufacturer Instructions:
 - a. Printed installation instructions.
- B. Closeout Submittals:
 - 1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Bonds:
 - 1) \$10,000,000 minimum product liability insurance policy.
 - b. Warranty Documentation:
 - 1) Include copy of final, executed warranty.
 - c. Record Documentation:
 - 1) Manufacturers Documentation:
 - a) Manufacturer's literature or cut sheets.

1.4 WARRANTY

- A. Manufacturer Warranty:
 - 1. Manufacturer's standard 5-year warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Approved Manufacturers. See Section 01 6200.
 - 1. Koala, Denver, CO www.koalabear.com.
 - 2. Equal as approved by Architect prior to bidding.
- B. Baby Changing Station:
 - 1. Molded high impact polyethylene with integral straps for securing baby.
 - 2. Surface mounted.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
 - 1. Verify that solid blocking has been installed where changing station is to be installed.
 - 2. Do not install unit by any other means other than screws or lag bolts into solid blocking.

3.2 INSTALLATION

- A. Install items in accordance with Manufacturer's submitted, written instructions for screws or lag bolts into solid substrate. Install using mounting devices proper for base structure.

END OF SECTION

DIVISION 12: FURNISHINGS

12 3000 STONE FABRICATIONS

12 3661.19 QUARTZ COUNTERTOPS

END OF TABLE OF CONTENTS

SECTION 12 3661**QUARTZ COUNTERTOPS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Section Includes Products Furnished But Not Installed Under This Section:
 - 1. Quartz countertops.
 - 2. Setting materials and accessories.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 06 – Rough Carpentry for blocking
 - 3. Section 07 – Joint Sealants.

1.2 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. A108.5 - Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar.
 - 2. A118.4 - Latex-Portland Cement Mortar.
- B. ASTM International (ASTM):
 - 1. C97 - Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
 - 2. C99 - Standard Test Method for Modulus of Rupture of Dimension Stone.
 - 3. C170 - Standard Test Method for Compressive Strength of Dimension Stone.
 - 4. C241 - Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic.
 - 5. C482 - Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
 - 6. C484 - Standard Test Method for Thermal Shock Resistance of Glazed Ceramic Tile.
 - 7. C531 - Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes.
 - 8. C648 - Standard Test Method for Breaking Strength of Ceramic Tile.
 - 9. C650 - Standard Test Method for Resistance of Ceramic Tile to Chemical Substances.
 - 10. C672/C672M - Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals.
 - 11. C880 - Standard Test Method for Flexural Strength of Dimension Stone.
 - 12. C1026 - Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling.
 - 13. C1028 - Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
 - 14. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

- A. Shop Drawings: Include countertop layout, dimensions, materials, finishes, cutouts, and attachments.
- B. Samples:
 - 1. 3 x 3 inch quartz samples in specified colors.
 - 2. Joint sealer samples – full range of colors for selection.

1.4 QUALITY ASSURANCE

- A. Fabricator and Installer Qualifications: Minimum [2] years documented experience in work of this Section.
- B. Mockup:
 - 1. Construct countertop mockup, [1] foot wide, full depth, with splash.
 - 2. Larger sample as Approved mockup may remain as part of the Work.

1.5 WARRANTY

- A. Provide manufacturer's 10 year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Design Standard – Viatera by LG Haysys
 - 1. Color – Everest
- B. Equal as approved by architect prior to bidding.

2.2 MATERIALS

- A. Quartz Sheet:
 - 1. Product: LG VIATERA
 - 2. Composition: Quartz aggregate, resin, and color pigments formed into flat slabs.
 - 3. Anti-microbial protection: Microban by Microban International, Inc., integral to sheet.
 - 4. Thickness: ½" minimum with turned down edges.
 - 5. Physical characteristics:
 - a. Static coefficient of friction: 1.02 dry, 0.51 wet, tested to ASTM C1028.
 - b. Water absorption: Maximum 0.03 percent, tested to ASTM C97.
 - c. Compressive strength: Minimum 29,000 psi, tested to ASTM C170.
 - d. Bond strength: Minimum 210 psi, tested to ASTM C482.
 - e. Modulus of rupture: Minimum 6300 psi, tested to ASTM C99.
 - f. Flexural strength: Minimum 5800 psi, tested to ASTM C880.
 - g. Breaking strength: Minimum 480 lbf, tested to ASTM C648.
 - h. Stain resistance: Not affected by 10 percent hydrochloric acid or 10 percent KOH, tested to ASTM C650.
 - i. Thermal shock resistance: Pass 5 cycles, tested to ASTM C484.
 - j. Abrasive index: 65-Ha = 25, tested to ASTM C241.
 - k. Thermal expansion: 1.670×10^{-5} in/in/deg F, tested to ASTM C531.
 - l. Deicing resistance: Rating of 0, tested to ASTM C672/C672M.
 - m. Freeze/thaw resistance: 0 tiles at 15 cycles, tested to ASTM C1026.
 - n. Flame spread rating: Class 1, tested to ASTM E84.

2.3 ACCESSORIES

- A. Adhesive: Type recommended by quartz manufacturer.
- B. Joint Sealer:
 - 1. Latisil Tile and Stone Sealant by Laticrete International, Inc.
 - 2. Color: To be selected from manufacturer's full color range.

2.4 FABRICATION

- A. Cut quartz panels accurately to required shapes and dimensions.
- B. Radius exposed edges.
- C. Fabricate with hairline joints.

- D. Cut holes for sinks, faucets and toilet accessories as needed.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean surfaces to receive countertops; remove loose and foreign matter than could interfere with adhesion.

3.2 INSTALLATION

- A. Install countertops in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Adhere countertops to supports with continuous beads of adhesive.
- C. Set plumb and level. Align adjacent pieces in same plane.
- D. Install with hairline joints.
- E. Fill joints between countertops and adjacent construction with joint sealer; finish smooth and flush.

3.3 INSTALLATION TOLERANCES

- A. Maximum variation from level and plumb: 1/8 inch in 10 feet, noncumulative.
- B. Maximum variation in plane between adjacent pieces at joint: Plus or minus 1/16 inch.

3.4 CLEANING

- A. Clean countertops in accordance with manufacturer's instructions.

3.5 PROTECTION

- A. Protect installed countertops with non-staining sheet coverings.

END OF SECTION

APPENDIX E
CITY OF SAN BERNARDINO
BUSINESS REGISTRATION CERTIFICATE APPLICATION FORM



CITY OF SAN BERNARDINO
BUSINESS REGISTRATION CERTIFICATE APPLICATION

CITY HALL 290 NORTH "D" STREET, SAN BERNARDINO, CA 92401
OFFICE 201 N. E ST., 1st FLR., SAN BERNARDINO, CA 92401
MAILING P.O. BOX 1318, SAN BERNARDINO, CA 92402
PHONE: (909) 384-5302

ACCOUNT NO: CLASS

THE FOLLOWING IS PUBLIC INFORMATION:

New Renewal Other

City of San Bernardino Business Start Date:

Name of Business/DBA:

Location of Business: Address (CANNOT BE P.O.BOX) City State Zip Code

Mailing Address: Address City State Zip Code

Name of Owner/Corporation: Business Phone#: (Attach separate sheet for corporate officers/partners)

Description of Business/ Products Sold:

Business Type: Sole Ownership Partnership Corporation LLC

Contractor's State License / State Sales Tax #:

Contractor's License Expiration Date: Number of Employees:

THE FOLLOWING IS CONFIDENTIAL INFORMATION:

STATE LAW REQUIRES THE CITY TO OBTAIN INFORMATION FROM THE BUSINESSES IT REGISTERS AND TRANSMIT IT TO THE STATE FRANCHISE TAX BOARD. YOUR COMPLETION OF THE INFORMATION REQUESTED ON THIS APPLICATION IS APPRECIATED, AND WILL ELIMINATE THE NEED FOR A FRANCHISE TAX BOARD INVESTIGATOR TO CONTACT YOU TO OBTAIN THIS INFORMATION. THE FOLLOWING MAY BE RELEASED ONLY TO A TAXING AUTHORITY OR ANYONE WITH A COURT ORDER DEMANDING SAME (SAN BERNARDINO MUNICIPAL CODE SECTION 64021)

OWNER/CORPORATE OFFICE CONTACT INFORMATION

Residence Address City State Zip Code

Home Phone # Driver's License # Date of Birth

Social Security # Partnership/Corporation Tax ID # State

Employer Identification # State Federal

E-mail address E-mail Renewals Only

I DECLARE, UNDER THE PENALTY OF PERJURY, THAT THIS APPLICATION HAS BEEN EXAMINED BY ME AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IS A TRUE, CORRECT AND COMPLETE STATEMENT OF FACTS.

SIGNATURE (X)

Owner Authorized Representative (PLEASE NOTE: APPLICATION CANNOT BE ACCEPTED OR PROCESSED WITHOUT A SIGNATURE.)

Table with 2 columns: COMPUTATION OF FEES, FEE AMOUNT. Rows include GROSS RECEIPTS, PRIOR YEAR ADJUSTMENT, FLAT RATE, NUMBER OF VEHICLES/GAMES OR VENDING MACHINES, PENALTY, EXT. ENF. FEE, OTHER, STATE MANDATED DISABILITY ACCESS AND EDUCATION FUND, and TOTAL AMOUNT DUE.

MAKE CHECK OR MONEY ORDER PAYABLE TO THE CITY OF SAN BERNARDINO CREDIT/DEBIT CARD ACCEPTED (ADDITIONAL FEES APPLY)

For Office Use Only:

Expiration Date: Amount: \$ Check #: Date: By: