ROCKMART, GEORGIA

Project Manual for

ROCKMART AMPHITHEATER COMPLEX

Project No. 15054 **Issue Date 10-21-2024**

STATE OF GEORGIA
W. MARK COCHRAN
CERTIFICATE NO. RA12865
REGISTERED ARCHITECT

OWNER

City of Rockmart, Georgia
316 N. Piedmont Ave.
Rockmart, GA 30153
(770) 684-5454

ARCHITECT

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ROCKMART, GEORGIA

City of Rockmart, Georgia
Certificate of Non-Discrimination

In connection with the performance of work under this contract, the bidder agrees as follows:

The bidder agrees not to discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, ancestry, or disability. The vendor shall take affirmative action to insure that employees are treated without regard to their race, creed, color, sex, national origin, ancestry, or disability.

Such action shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruiting or recruitment, advertising, lay-off or termination, rates of pay or other compensation and selection for training, including apprenticeship.

In the event of the bidder's non-compliance with this non-discrimination clause, the contract may be canceled or terminated by the City of Rockmart. The bidders may be declared, by the City of Rockmart, ineligible for further contracts with the City of Rockmart until satisfactory proof of intent to comply shall be made by the vendor.

The bidder agrees to include this non-discrimination clause in any sub-contracts connected with the performance of this agreement.

_____

BIDDER

_____

SIGNATURE

_____

TITLE

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
Drug-Free Workplace Certificate

By signature on this certificate, the Bidder certifies that the provisions of O.C.G.A. Section 50-24-1 through 50- 24-6 related to the "Drug-Free Workplace Act" will be complied with in full. The Bidder further certifies that:

1. A drug-free workplace will be provided for the Bidder's employees during the performance of the contract; and

2. Each contractor who hires a subcontractor to work in a drug-free workplace shall secure from that subcontractor the following written certification: "As part of the subcontracting agreement with (contractor's name), (subcontractor's name) certifies to the contractor that a drug-free workplace will be provided for the subcontractor's employees during the performance of this contract pursuant to O.C.G.A. Section 50-24-3(b)(7)."

By signature on this certificate, the Bidder further certifies that it will not engage in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

_____
BIDDER

_____
BY

_____
NAME (PRINTED)

_____
TITLE

_____
DATE

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
E-Verify Compliance Affidavit

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13- 10- 91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of the City of Rockmart, Georgia, has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A, § 13-10-91 (b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____

FEDERAL WORK AUTHORIZATION USE IDENTIFICATION NUMBER
(not required if less than 10 employees)

_____

SIGNATURE
(if fewer than 10 employees)

_____

DATE OF AUTHORIZATION

_____

NAME OF CONTRACTOR / COMPANY

_____

NAME OF PROJECT

_____

NAME OF PUBLIC EMPLOYER

(continued on next page)

ROCKMART, GEORGIA

City of Rockmart, Georgia
E-Verify Compliance Affidavit (continued)

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____ _____, 20_____, in _____ (city), _____(state).

_____
SIGNATURE OF AUTHORIZED OFFICER OR AGENT

_____
PRINTED NAME AND TITLE OF AUTHORIZED OFFICER OR AGENT

Subscribed and sworn before me on this the _____ day of _____, 20_____.

_____
NOTARY PUBLIC

_____
NOTARY PUBLIC COMMISSION EXPIRATION DATE

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
Non-Collusion Affidavit

The following affidavit is to accompany the bid:

_____

STATE, COUNTY

_____

OWNER, PARTNER, OR OFFICER OF FIRM / COMPANY

_____

NAME, ADDRESS, CITY, STATE

Being of lawful age, being first duly sworn, on oath says that he/she is the agent authorized by the bidder to submit the attached bid. Affidavit further states as bidder, that they have not been a party to any collusion among bidders in restraint of competition by agreement to bid at a fixed price or to refrain from bidding; or with any office of the City of Rockmart or any of their employees as to quantity, quality or price in the prospective contract; or any discussion between bidders and any official of the City of Rockmart or any of their employees concerning exchange of money or other things of value for special consideration in submitting a sealed bid for:

_____

FIRM NAME

_____

SIGNATURE

_____

TITLE

Subscribed and sworn before me on this the _____ day of _____, 20_____.

_____

NOTARY PUBLIC

_____

STATE OF GEORGIA, COUNTY

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
Notice of Commencement

TO: CLERK OF SUPERIOR COURT OF_____COUNTY, GEORGIA

Pursuant to O.C.G.A. § 13-10-62(a), not later than fifteen (15) days after physically commencing work on the property, the undersigned gives Notice of Commencement of improvements to property including the following information:

1. The Name, Address, and Telephone of General Contractor:

_____

_____

_____

2. The Name and Location of Public Work to be Constructed, or General Description of the Improvement:

_____

_____

_____

3. The Name and Address of the State or the Agency or Authority of the State that is Contracting for the Public Works Construction:

_____

_____

_____

4. The Name and Address of the Surety for the Performance and Payment Bonds, if any:

_____

_____

_____

(continued on next page)

ROCKMART, GEORGIA

City of Rockmart, Georgia
Notice of Commencement (continued)

5. The Name and Address of the Holder of the Security Deposit Provided, if any:

_____

_____

_____

_____
CONTRACTOR

_____
BY

_____
NAME (PRINTED)

_____
TITLE

THIS DOCUMENT MUST BE FILED WITH THE CLERK OF THE SUPERIOR COURT FOR THE COUNTY IN WHICH THE PROJECT IS LOCATED AND A COPY OF THIS DOCUMENT MUST BE POSTED AT THE PROJECT SITE NOT LATER THAN FIFTEEN (15) DAYS AFTER THE CONTRACTOR PHYSICALLY COMMENCES WORK ON THE PROPERTY.

WITHIN TEN (10) CALENDAR DAYS OF THE RECEIPT OF A WRITTEN REQUEST, GIVE A COPY OF THIS NOTICE OF COMMENCEMENT TO ANY SUBCONTRACTOR, MATERIAL MAN, OR PERSON MAKING THE REQUEST.

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
State of Georgia Prompt Pay Act Affidavit

THIS AFFIDAVIT IS TO ACCOMPANY THE BID

GEORGIA PROMPT PAY ACT: The Georgia Prompt Pay Act was enacted by the General Assembly in 1994 and took effect January 1, 1995. This act requires owners to pay contractors within 15 days of receipt of a pay request by the owner or the owner's representative. If payment is not made the owner shall pay the contractor 1% per month interest on the delayed payment. Additionally, the contractor must pay subcontractors within 15 days of receipt of payment from the owner.

This Act is Code Section 13-11-1 (Georgia Laws of 1994, p. 1398 par. 4)

_____
FIRM NAME

_____
SIGNATURE

_____
TITLE

Subscribed and sworn before me on this the _____ day of _____, 20_____.

_____
NOTARY PUBLIC

_____
STATE OF GEORGIA, COUNTY

END OF SECTION

ROCKMART, GEORGIA

City of Rockmart, Georgia
General Contractor License

A COPY OF THE GENERAL CONTRACTOR'S LICENSE IS TO ACCOMPANY THE BID

_____

LICENSE NUMBER

_____

LICENSE NAME

_____

LICENSE TYPE

It is required that any General Contractor submitting a Bid shall provide a valid and current copy of their General Contractor's license, as issued by the State of Georgia, as a condition precedent to being considered for the award of the contract. A Residential ONLY license WILL NOT qualify a General Contractor for award of the contract.

END OF SECTION

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

► **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ►

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	**Signature of U.S. person** ►	**Date** ►

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting,* later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the instructions for Part II for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code,* later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships,* earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code,* later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5[2]
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester,* later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/Businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code,* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor[2]
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee[1]
b. So-called trust account that is not a legal or valid trust under state law	The actual owner[1]
6. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	**Give name and EIN of:**
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity[4]
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships,* earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov.* You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint.* You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027.

Visit *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

ROCKMART, GEORGIA

City of Rockmart, Georgia
Contract Provisions for Federally-Assisted Construction Projects

INTRODUCTION

This project is being financially supported by federal funds awarded by the Appalachian Regional Commission (ARC) under the Community Development Block Grant (CDBG) Program. The City of Rockmart was awarded these funds by the Georgia Department of Community Affairs (DCA) and administers the local CDBG Program. ***As a result of using federal funds on this project there are several regulations that must be adhered to in order to receive prompt payment for work done under the program.***

The information provided on the following pages outlines several conditions that the Contractor ***must*** abide by in order to enter into a contract for the work described in the specifications and contract drawings.

The following conditions take precedence over any conflicting conditions in the contract and can be found in detail on the pages that follow:

- Section 3 Clause of the Urban Development Act of 1968
- Provision for Remedies Clause
- Termination for Convenience Clause
- Equal Employment Opportunity (EEO) Clause
- Standard Federal EEO Construction Contract Specifications (EO 11246)
- Notice of Requirement for Affirmative Action
- Certification of Non-Segregated Facilities
- Federal Labor Standards Provision, Georgia CDBG
- Wage Decision Applicable to the Project
- Acceptable Alternate Worksheet for Contractor Certification Regarding Debarment, etc.
- Performance, Payment and Bid Bonds
- Compliance with Clean Air and Clean Water Act
- Contractor and Subcontractor Affidavit and Agreement (for compliance with O.C.G.A. § 13-10-91)
- Debarment and Suspension (Executive Orders 12549 and 12689)
- Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)
- Section 6002 of the Solid Waste Disposal Act
- Rights to Inventions Made Under a Contract Agreement

APPLICATION TO SUBCONTRACTORS

No money under this contract shall be disbursed by the Contractor to any sub-contractor or agency except pursuant to a written contract which incorporates all the conditions listed above to the extent they are applicable.

ROCKMART, GEORGIA

City of Rockmart, Georgia
Contract Provisions for Federally-Assisted Construction Projects (continued)

CONCLUSION

The information provided on the previous pages outlines the conditions that the Contractor ***must*** abide by in order to enter into a contract for the work described in the specifications and contract drawings. The Bidder agrees to these conditions.

_____

BIDDER

_____

SIGNATURE

_____

TITLE

END OF SECTION

Section 3 Clause of the Urban Development Act of 1968

1.) The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project to be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.

2.) The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR Part 75 and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.

3.) The contractor will send to each labor organization or representative of workers with which he has a collective bargain-agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

4.) The contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 75. The contractor will not subcontract with any subcontractor where it has notice or knowledge that the letter has been found in violation of regulations under 24 CFR Part 75 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

5.) Compliance with the provisions of Section 3, the regulations set forth in the 24 CFR Part 75, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors, and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors, and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR Part 75.

Provision for Remedies Clause

1.) **Termination:** Unearned payments under this contract may be suspended or terminated upon refusal to accept any additional conditions that may be imposed by the City; or if the grant to the City under the Community Development Block Grant Program is suspended or terminated. Moreover, if through any cause, the Contractor shall fail to fulfill its obligations under this contract in a timely and proper manner, or if the Contractor shall violate any of the covenants, agreements, conditions or obligations of the contract documents; the City may terminate this contract by giving written notice to the Contractor and surety of such termination and specifying the effective date of such termination. In such event, the City may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall be liable to the City for any additional cost incurred by the Owner in its completion of the work and they shall also be liable to the Owner for liquidated damages for any delay in the completion of the work as provided below.

Furthermore, the Contractor will be paid an amount which bears the same ratio to the total compensation as the work and services actually performed bear to the total work and services required. Provided, however, that if less than sixty (60%) percent of the services required by this Contract have been performed upon the effective date of such termination, the Contractor shall be reimbursed (in addition to the above payment) for that portion of the actual out-of-pocket expenses (not otherwise reimbursed under this Contract) incurred by the Contractor during the Contract period which are directly attributable to the uncompleted portion of the services required by this Contract.

2.) **Liquidated Damages for Delays.** If the work is not completed within the time stipulated, therefore, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed and agreed liquidated damages (it being impossible to determine the damages occasioned by the delay) for each working day of delay, until the work is completed, the amount as set forth in the General Conditions of the contract between Owner and Contractor, and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

3.) **Excusable Delays.** The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:

(a) To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;

(b) To any acts of the Owner;

(c) To causes not reasonable foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine,

strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, and cyclones; and

(d) To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (a) (b) and (c) or this subparagraph "d".

Provided, however, that the Contractor promptly notified the Owner within ten (10) days of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If upon the basis of the terms of this contract the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

Termination for Convenience Clause

1.) Termination for Convenience of the City of Rockmart:

The City of Rockmart may terminate this contract at any time for any reason by giving at least thirty (30) days notice in writing to the contractor. If the contract is terminated by the City of Rockmart as provided herein, the contractor will be paid a fair payment as negotiated with the City for the work completed as of the date of termination.

Equal Employment Opportunity (EEO) Clause

During the performance of this contract, the Contractor agrees as follows:

1.) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2.) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

3.) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4.) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.

5.) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6.) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by the rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7.) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or

purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

CA-26

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

   a. "Covered Area" means the geographical area described in the solicitation from which this contract resulted.

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.

   c. "Employer Identification Number" means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   A Minority Group Member is:

   ...American Indian or Alaskan Native
   consisting of all persons having origins in any of the original people of North American and who maintain cultural identification through tribal affiliations or community recognition.

   ...Black
   consisting of all persons having origins in any of the Black racial groups of Africa.

   ...Asian or Pacific Islander
   consisting of all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Sub-Continent or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippines and Samoa.

   ...Hispanic
   consisting of all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin.

   ...Cape Verde an
   consisting of all persons having origins in the Cape Verde Islands.

   ...Portuguese
   consisting of all persons of Portuguese, Brazilian or other Portuguese culture or origin.

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000.00 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in the Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontract participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. the overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to make good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set for the Contractor in the solicitation from which this contract resulted are expressed as percentages in the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minority or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity . The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notifications to the Regional Director when the union or unions, with which the Contractor has a collective bargaining agreement, have not referred to the Contractor a minority person or woman sent by the Contractor or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under Paragraph 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, Supervisors etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, and providing written notification to, and discussing the Contractor's EEO policy with, other Contractors and subcontractors with whom the Contractor anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notifications to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Paragraph 7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Paragraph 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, reflected in the Contractor's minority and female workforce participation , makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The Contractor shall not enter into any subcontract with any person for firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, terminations and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in Paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246) (43 FR 14895)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, area as follows:

Timetable:	Goals for Minority Participation:	Goals for Female Participation:
Until Further Notice	19.5%	6.9%

These goals are applicable to each non-exempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, Federally assisted or non-Federally related project, contract or sub-contract.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3{a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the City of Rockmart, Georgia, and Polk County.

CERTIFICATE OF NON-SEGREGATED FACILITIES

We, _____(Company)
Certify that we do not and will not maintain or provide for our employees any segregated facilities at any of our establishments, and that we do not and will not permit our employees to perform their services at any location, under our control, where segregated facilities are maintained. We understand and agree that breach of this certification is a violation of Equal Opportunity clause required by Executive Order 11246, amended.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom or otherwise.

We further agree that (except where we have obtained identical certifications from proposed Subcontractors for specific time periods) we will obtain identical certifications from proposed Subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause; that we will retain such certification in our files; and that we will forward the following notice to such proposed Subcontractors (except where the proposed Subcontractors have submitted identical certifications for specific time periods).

NOTICE TO PROSPECTIVE SUBBUILDERS OF REQUIREMENT FOR CERTIFICATION OF NON-SEGREGATED FACILITIES. A certification of Non-segregated facilities as required by the 9 May 1967 order on Elimination of Segregated Facilities, by the Secretary of Labor (32 Fed. Reg. 7439, 19 May 1967), must be submitted from the provisions either for each subcontract or for all subcontracts during a period (i.e. quarterly, semi-annually, or annually).

NOTE: Whoever knowingly and willfully makes any false, fictitious or fraudulent representation may be liable to criminal prosecution under 18 U.S.C. 1001.

_____
(Name of Company)

By: _____

Date: _____ **Title:** _____

FEDERAL LABOR STANDARDS PROVISION
Georgia Community Development Block Grant

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A.1.(i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii)) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(a) The contracting officer shall require that any class of laborers or mechanics, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, US. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary.

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. **Withholding**. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to

pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 for under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) **Payrolls and basic records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project.) Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable program (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii)(a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), US. Government Printing Office, Washington, DC, 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5(a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph A.3(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4.(i) **Apprentices and Trainees.** Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the US. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as

stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ration permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeymen's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification.

If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the US. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journey hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performs. In addition, any trainee performing work on the job site in excess of the ration permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer

be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity**. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. **Compliance with Copeland Act requirements**. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. **Subcontracts**. The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may be appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. **Contract termination:** debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounded for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act Requirements**. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. **Disputes concerning labor standards**. Disputes arising out of a labor standards provision of this contract shall to be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the US. Department of Labor, or the employees or their representatives.

10. (i) **Certification of Eligibility**. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the US. Criminal Code, 18 U.S.C. 1001. Additionally, US. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of

...influencing in any way the action of such Administration...makes, utters or publishes any statement, knowing the same to be false...shall be fined not more than $5,000 or imprisoned not more than two years, or both."

11. **Complaints, Proceedings, or Testimony by Employees**. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. **Contract Work Hours and Safety Standards Act.** As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements:** No contractor or subcontractor contracting for any part of the contract work may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) **Violation:** liability for unpaid wages, liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages:** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any money payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) **Subcontracts:** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier

subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. **Health and Safety**

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat. 96).

(3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Wage Decision Applicable to Project

"General Decision Number: GA20240097 09/20/2024

Superseded General Decision Number: GA20230097

State: Georgia

Construction Type: Building

County: Polk County in Georgia.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2024
1	06/21/2024
2	09/20/2024

BOIL0026-001 01/01/2021

	Rates	Fringes
BOILERMAKER	$ 30.49	23.13

ELEV0032-001 01/01/2024

	Rates	Fringes
ELEVATOR MECHANIC	$ 49.86	37.885+a+b

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

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* ENGI0926-034 08/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR: Crane	$ 37.63	12.03

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* PLUM0072-024 08/01/2024

	Rates	Fringes
PIPEFITTER (Including Installation of HVAC Pipe, HVAC Unit, & HVAC Electrical /Temperature Controls)	$ 39.13	13.31

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* SUGA2012-015 08/11/2012

	Rates	Fringes
CARPENTER	$ 18.91	3.37
CEMENT MASON/CONCRETE FINISHER	$ 12.89 **	0.00
ELECTRICIAN	$ 23.34	3.70
IRONWORKER, REINFORCING	$ 17.72	0.00
IRONWORKER, STRUCTURAL	$ 16.75 **	0.00
LABORER: Common or General	$ 10.00 **	0.19
LABORER: Pipelayer	$ 15.50 **	0.00
OPERATOR: Backhoe/Excavator	$ 14.00 **	0.00
OPERATOR: Oiler	$ 12.00 **	0.00
PAINTER: Brush, Roller and Spray	$ 14.00 **	0.27
PLUMBER, Excludes Installation of HVAC Pipe,		

HVAC Unit, and HVAC Electrical/Temperature Controls	$ 17.54	1.27
ROOFER	$ 13.62 **	0.00
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 24.89	9.09
SHEET METAL WORKER, Excludes HVAC Duct Installation	$ 15.77 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.20) or 13658 ($12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R ◆1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an

internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

EMPLOYEE RIGHTS
UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

PREVAILING WAGES — You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME — You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT — Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES — Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY — If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.

ACCEPTABLE ALTERNATE WORK SHEET FOR CONTRACTOR CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION (LOWER-TIER PARTICIPANT) FOR HUD PROGRAMS

Certification regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower-Tier Covered Transactions pursuant to 24 Code of Federal Regulations, Part 24.510(b).

1. By signing and submitting this proposal, the prospective lower-tier participant certifies that neither it, its principals nor affiliates, is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Further, the Participant provides the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that an erroneous certification was rendered, in addition to other remedies available to the Federal Government, the Department or agency with which this transaction originated may pursue available remedies.

3. Further, the Participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the Participant learns that this certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. By submitting this proposal, it is agreed that should the proposed covered transaction be entered into, the Participant will 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 agency with which this transaction originated.

5. It is further agreed that by submitting this proposal, the Participant will include this Certification, without modification, in all lower-tier covered transactions and in all solicitations for lower-tier covered transactions.

Contractor Name_____Date_____

Title_____Address_____

City_____State_____Zip_____

NON-CERTIFICATION:

As the perspective lower-tier participant, I am unable to certify to statements in this Certification as explained in the attachment to this proposal.

Contractor Name_____Date_____

Title_____Address_____

City_____State_____Zip_____

The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

PERFORMANCE, PAYMENT and BID BONDS

Contract Performance and Payment Bonds issued in the full amount of the contract are required by federal procurement rules if the contract is for $100,000 or more.

A Bid Bond or other security is required by federal rules whenever the contract is for $100,000 or more.

Generally these bonds must be issued by a surety company satisfactory to the local government, qualified to do business in Georgia, and in a format meeting the federal and state legal requirements. The bonding company must also appear on the "List of Acceptable Sureties" published annually by the US Department of the Treasury.

COMPLIANCE WITH CLEAN AIR AND WATER ACTS

The contract is subject to the requirements of the Clean Air Act, as amended, 42 USC 1857 et. seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended from time to time.

In compliance with said regulations:

1.) The Contractor shall require of subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 4C CFR 15.20.

2.) The Contractor will comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and section 308 of the Federal Water Pollution Control Act as amended, (330 USC 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said section 114 and section 308, and all regulations and guidelines issued thereunder.

3.) The Contractor will provide prompt notice of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4.) The Contract will include or cause to be included the criteria and requirements to paragraph (1) through (4) of this section in every nonexempt subcontract and take such action as the Government will direct as a means of enforcing such provisions.

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(l)

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;

b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;

c) The Contractor will notify the public employer in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;

d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;

e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);

f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10- 91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and

g) Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the public employer within five business days of receipt.

_____ _____
Federal Work Authorization User Identification Number Date of Authorization

_____ _____
Name of Contractor Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20_____ in _____ (city), _____ (state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC
My Commission Expires: _____

Subcontractor Affidavit under O.C.G.A. § 13-10-91(b)(3)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five business days of receipt, a copy of the notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Subcontractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,201__.

_____
NOTARY PUBLIC

My Commission Expires:

_____

Sub-subcontractor Affidavit under O.C.G.A. § 13-10-91(b)(4)

By executing this affidavit, the undersigned sub-subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract for (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract) and (name of contractor) on behalf of (name of public employer) has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by O.C.G.A. § 13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of the receipt of any affidavit from a sub-subcontractor to (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Sub-subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

_____
Federal Work Authorization User Identification Number

_____
Date of Authorization

_____
Name of Sub-subcontractor

_____
Name of Project

_____
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____(city), _____(state).

_____
Signature of Authorized Officer or Agent

_____
Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,201__.

_____
NOTARY PUBLIC
My Commission Expires:

_____

Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the **Solid Waste Disposal Act**, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

SECTION 00 11 16 - INVITATION TO BID

Project:	Rockmart Amphitheater Complex.	Date:	October 21, 2024
Owner:	City of Rockmart, Georgia 316 N. Piedmont Ave. Rockmart, Georgia 30153	Architect:	CEVIAN Design Lab, LLC PO Box 35 Rome, Georgia 30162

Your firm is invited to submit a sealed Bid to the City of Rockmart, Georgia, for new construction of the Rockmart Amphitheater Complex located at 219 Church St, Rockmart Georgia, 30153. The sealed bids will be received by Stacey Smith, City Manager, in the Council Chambers of Rockmart City Hall, 316 N. Piedmont Avenue Rockmart, Georgia, 30153, until the **12th of December at 10:00 A.M. local time**, at which time and place the Bids will be publicly opened and read aloud. Bids not received by the indicated time will not be opened. Submit one copy of executed offer on Bid Forms provided, signed, sealed in a closed, opaque envelope, and clearly identified with Bidder's name and address, Project name, and Owner's name on the exterior.

Project Description: The work to be done consists of furnishing all the labor, tools, equipment, and materials necessary for the new construction of Rockmart Amphitheater Complex as described in the Specifications, Construction Drawings, and Bid Documents.

Bidder shall submit Bid on the Bid Form provided.

Bidder shall insert Project completion time in the space provided on the Bid Form.

Bidding Documents for a Stipulated Price contract may be obtained electronically from the City of Rockmart's website: http://www.rockmart-ga.gov/. Printed copies of the Bidding Documents for a Stipulated Price contract may be obtained from Greene's Blueprinting, LLC, located at 169 South Church Street, Canton, Georgia, 30114, and contact information being (770) 479 – 3773 and greeneprinting@greeneprinting.com. Bidding Documents can only be obtained as a complete set. Bidding Documents can only be obtained by General Contract and Subcontract Bidders.

Bidders will be required to provide Bid security according to the requirements in Document 00 21 13 - Instructions to Bidders. Refer to other Bidding requirements described in Document 00 21 13 - Instructions to Bidders.

Rockmart Amphitheater Complex is a partially federally funded project that is subject to Davis-Bacon labor standards and wage rates.

Your Bid will be required to be submitted under a condition of irrevocability for a period of 60 days after submission.

A Pre-Bid Meeting will be held for all Bidders at 10:00 A.M. local time on the 8th of November 2024, in the Council Chambers located at 316 N. Piedmont Ave, Rockmart, Georgia 30153. Bidders are not required to attend, but are strongly encouraged to do so.

The Owner reserves the right to reject any or all proposals, to waive informalities, and to re-solicit if deemed necessary.

City of Rockmart, Georgia

per: Stacey Smith, City Manager

END OF DOCUMENT

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

A. Document Includes:
1. Bid submission.
2. Intent.
3. Work identified in Contract Documents.
4. Contract Time.
5. Definitions.
6. Contract Documents identification.
7. Availability of documents.
8. Examination of documents.
9. Inquiries and Addenda.
10. Product substitutions.
11. Site examination.
12. Prebid meeting.
13. Bidder qualifications.
14. Subcontractors.
15. Submission procedure.
16. Bid ineligibility.
17. Bid Security.
18. Consent of surety or Agreement to bond.
19. Performance Assurance.
20. Insurance.
21. Bid Form requirements.
22. Fees for changes in the Work.
23. Bid Form signature.
24. Additional Bid information.
25. Selection and award of alternates.
26. Bid opening.
27. Duration of offer.
28. Acceptance of offer.

B. Related Documents:
1. Section 00 11 16 - Invitation to Bid.
2. Section 00 41 13 - Bid Form - Stipulated Sum (Single-Prime Contract)
3. Section 00 43 00 - Procurement Form Supplements: Appendices A to B
4. Section 00 73 13 - Supplementary Conditions – AIA
5. Section 01 20 00 - Price and Payment Procedures.

1.2 BID SUBMISSION

A. Bids signed and sealed, executed, and dated will be received by the Owner at the Council Chambers located at Rockmart City Hall, 316 N. Piedmont Avenue, Rockmart, Georgia, 30153, until **10:00 A.M. local time on the 12th of December 2024**, at which time and place the Bids will be publicly opened and read aloud.

B. Bids submitted after the above time will be returned to Bidder unopened.

C. Amendments to submitted Bids will be permitted when received in writing prior to Bid closing and when endorsed by the same party or parties who signed and sealed the Bid.

D. Bidders may withdraw their Bid by written request before the above time.

1.3 INTENT

A. The intent of this Bid request is to obtain an offer to perform work to complete the new construction of Rockmart Amphitheater Complex located at 219 Church Street, Rockmart, Georgia, 30153, for a Stipulated Sum contract, according to the Contract Documents.

1.4 WORK IDENTIFIED IN CONTRACT DOCUMENTS

A. Work of this proposed Contract comprises general construction and site development, including structural, plumbing, HVAC, electrical, site civil, landscaping, and architectural Work.

B. Location: 219 Church Street, Rockmart Georgia, 30153

C. Contract Documents identify the land, rights-of-way, and easements for the Work to be accessed and performed.

1.5 CONTRACT TIME

A. Identify Contract Time in Bid Form. Completion date in Agreement shall be Contract Time added to commencement date.

B. Owner requires Work of this Contract to be completed as soon as possible. Consideration will be given to time of completions when reviewing submitted Bids.

1.6 DEFINITIONS

A. Bidding Documents: Contract Documents supplemented with Advertisement for Bids, Invitation to Bid, Instructions to Bidders, Bid Form, Bid Form Supplements and Appendices, and Bid securities.

B. Contract Documents: Defined in AIA A201-2017 General Conditions of the Contract for Construction, Article 1, including issued Addenda.

C. Bid: Executed Bid Form and required attachments submitted according to Instructions to Bidders.

D. Bid Sum: Monetary sum identified by the Bidder in the Bid Form.

1.7 CONTRACT DOCUMENTS IDENTIFICATION

A. Contract Documents are identified as Rockmart Amphitheater Complex, Project number 15054, dated October 21, 2024, as prepared by the Architect, CEVIAN Design Lab, located at PO Box 35, Rome, GA 30162, and identified in the Project Manual.

1.8 AVAILABILITY OF DOCUMENTS

A. Bidding Documents may be obtained as stated in Advertisement for Bids and Invitation to Bid.

B. Partial sets of Bidding Documents will not be issued.

C. Construction Drawings are to be printed in color on Arch E (36” x 48”) media.

D. Bidding Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes. The Architect retains ownership and copyrights to all contract documents.

1.9 EXAMINATION OF DOCUMENTS

A. Bidding Documents may be viewed at the office of the Owner.

B. Upon receipt of Bidding Documents verify that documents are complete. Notify Architect if documents are incomplete.

C. Immediately notify Architect upon finding discrepancies or omissions in Bidding Documents.

1.10 INQUIRIES AND ADDENDA

A. Direct questions in writing via email to the Architect's Project Manager, Mark Cochran @ mark@ceviandesign.com.

B. Verbal answers are not binding on any party.

C. Submit questions not less than ten (10) calendar days before date set for receipt of Bids. Replies will be made by Addenda, which may be issued during Bidding period. Addenda will be posted to the City of Rockmart's website: http://www.rockmart-ga.gov/. Addenda become part of the Contract Documents. Include resultant costs in the Bid Sum.

1.11 PRODUCT SUBSTITUTIONS

A. Where Bidding Documents stipulate specified products and manufacturers, substitution requests will be considered by the Architect up to ten (10) calendar days before receipt of Bids.

B. Substitution requests will not be considered after the Bid period unless a product becomes unavailable through no fault of the Contractor.

C. With each substitution request, provide sufficient information for Architect to determine acceptability of proposed products. Comply with substitution request submittal requirements in Section 01 25 00 – Substitution Procedures.

D. When a request to substitute a product is made, the Architect may approve the substitution. Approved substitutions will be identified by Addenda.

1.12 SITE EXAMINATION

A. Examine the Project Site before submitting a Bid.

B. The Project Site can be accessed anytime by the General Contract and Subcontract Bidders.

1.13 PRE-BID MEETING

A. A Pre-Bid Meeting is scheduled for 10:00 A.M. local time on the 8th of November 2024, in the Council Chambers located at 316 Piedmont Avenue, Rockmart Georgia, 30153.

B. General Contract Bidders are not required to attend.

C. Representatives of the Architect and Owner will attend.

D. Information relevant to Bidding Documents will be issued by Addenda.

1.14 BIDDER QUALIFICATIONS

A. To demonstrate qualification for performing the Work of this Contract, Bidders are required to submit a copy of their General Contractor license to perform work in the State Georgia. A General Contractor license for only residential type work will not qualify a Bidder for the Work of this Contract.

B. To demonstrate qualification for performing the Work of this Contract, Bidders may be requested to submit written evidence of financial position, previous experience, current commitments, and business license.

1.15 SUBCONTRACTORS

A. Owner reserves the right to reject a proposed Subcontractor for reasonable cause.

B. Refer to AIA A201-2017 General Conditions of the Contract for Construction, Article 5.

1.16 SUBMISSION PROCEDURE

A. Bidders shall be solely responsible for delivery of Bids in manner and time prescribed.

B. Submit one copy of executed offer on Bid Forms provided, signed, sealed in a closed, opaque envelope, and clearly identified with Bidder's name and address, Project name, and Owner's name on the exterior.

1.17 BID INELIGIBILITY

A. Bids that are unsigned, improperly signed, improperly sealed, conditional, illegible, or obscure, or Bids that contain arithmetical errors, erasures, alterations, or irregularities of any kind, will be declared unacceptable at Owner's discretion.

B. Bid Forms, Appendices, and enclosures that are improperly prepared will be declared unacceptable at Owner's discretion.

C. Failure to provide bonds or insurance requirements will invalidate the Bid at Owner's discretion.

1.18 BID SECURITY

A. Bids shall be accompanied by Bid security as follows:
   1. Bid Bond in the amount of not less than five percent (5%) of the Bid Sum on standard surety company form.

B. Endorse Bid bond in name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.

C. Bid securities will be returned after delivery to the Owner of required performance and payment bonds by the accepted Bidder.

D. If the accepted Bidder fails to execute the Agreement and the indicated bonds within fourteen (14) days after the Notice of Award, the Notice of Award may be annulled, and the Bid security of the Bidder will be forfeited.

E. Include the cost of Bid security in the Bid Sum.

F. After a Bid has been accepted, Bid security will be returned to the respective Bidders.

G. If no contract is awarded, Bid security will be returned.

1.19 CONSENT OF SURETY OR AGREEMENT TO BOND

A. Submit with the Bid.

1.20 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a performance and payment bond as described in Document 00 73 13 - Supplementary Conditions - AIA.

B. Include the cost of performance and payment bonds in the Bid Sum and identify the cost when requested by Owner.

1.21 INSURANCE

A. Provide an executed "Undertaking of Insurance" on standard form provided by the insurance company stating insurance company's intention to provide insurance to the Bidder according to insurance requirements of Contract Documents.

B. Insurance Requirements:
   1. Comprehensive General Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, such Comprehensive General Liability and Broad Form Property Damage Insurance as shall protect Contractor and any Subcontractor performing Work covered by the Contract from claims for damages for bodily injury, including accidental death, as well as from claims for property damages, which may arise from operations under the Contract Agreements, whether such operations are by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them. The amount of insurance shall not be less than the following:
      a. General Aggregate $1,000,000.00
      b. Products Comp/Ops Aggregate $1,000,000.00
      c. Personal and Advertising Injury $1,000,000.00
      d. Each Occurrence $1,000,000.00
      e. Fire Damage (Any one fire) $50,000.00
      f. Medical Expenses (Any one person) $5,000.00
   2. Worker’s Compensation: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Worker’s Compensation Insurance for all of Contractor’s employees to be engaged in Work on the Project under this Contract, and in case any such Work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker’s Compensation Insurance for all of the latter’s employees to be engaged in such Work unless such employees are covered by the protection afforded by the Contractor’s Worker’s Compensation Insurance. Worker’s Compensation Insurance shall include Broad Form All States Endorsement and Voluntary Compensation. The amount insurance shall not be less than the following:
      a. Each Accident $100,000.00
      b. Disease – Policy Limit $500,000.00
      c. Disease – Each Employee $100,000.00
   3. Owner’s and Contractor’s Protective Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Owner’s and Contractor’s Protective Liability Insurance with the same limits as the Comprehensive General Liability.
   4. Automobile Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Comprehensive Automobile Liability Insurance. The insurance shall include coverage for owner, non-owned, and hired vehicles. Amounts shall not be less than the following:
      a. Comprehensive Single Limits (CSL) $1,000,000.00

5. Builder’s Risk: The Contractor shall purchase and maintain full Builder’s Risk Insurance on the project in the amount of 100% of the contract. Said Builder’s Risk policy shall cover the Interests of the Owner, Architect, Contractor, all sub-contractors, and the mortgagee. Any deductible on the Builder’s Risk policy shall be the responsibility of the Contractor. The Builder’s Risk policy shall be maintained, unless otherwise agreed to in writing by all parties, until final payment has been made or until no person or entity other than the Owner or Mortgagee has an insurable interest in the property.
6. Certificates of Insurance: Certificates acceptable to the Owner shall be attached to the signed Contract Documents when they are transmitted to the Owner for execution. All certificates of insurance issued in conjunction with the Contract shall contain the statement that, “Coverages afforded under the policies shall not be cancelled unless at least 60 days prior to cancellation written notice has been given to the Owner, as evidenced by receipts of registered or certified mail.” Other standard or preprinted cancellation language shall be deleted from the certificate. The Architect, Architect’s Engineers and Consultants, and Owner shall be a named insured.

1.22 BID FORM REQUIREMENTS

A. Complete requested information in the Bid Form and Bid Form Supplements.

B. Refer to Document 00 73 13 - Supplementary Conditions – AIA for inclusion of taxes.

1.23 FEES FOR CHANGES IN THE WORK

A. Include in the Bid Form the overhead and profit fees on Bidder's own Work and Work by Subcontractors, applicable for changes in the Work, whether additions to or deductions from the Work on which the Bid Sum is based.

B. Include in the Bid Form fees proposed for Subcontract work for changes (both additions and deductions) in the Work. The Contractor shall apply fees, as noted, to Subcontractor's gross (net plus fee) costs on additional Work.

1.24 BID FORM SIGNATURE

A. Sign Bid Form as follows:
   1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Include the words "Sole Proprietor" under the signature. Affix seal.
   2. Partnership: Signature of all partners in the presence of a witness who will also sign. Include the word "Partner" under each signature. Affix seal to each signature.
   3. Corporation: Signature of at least one duly authorized signing officer. Include the officer's capacity under each signature. Affix the corporate seal. If Bid is signed by officials other than the president, secretary, or treasurer of the company, submit a copy of the bylaws or a resolution of the board of directors authorizing them to do so, with the Bid Form in the Bid envelope.
   4. Joint Venture: Signature of all parties of the joint venture under their respective seals in a manner appropriate to such party as described above, similar to requirements for Partnerships.

1.25 ADDITIONAL BID INFORMATION

A. Complete and submit the following Appendices included in Document 00 43 00 - Procurement Form Supplements with Bid:
   1. Appendix A - List of Subcontractors: Include names of all Subcontractors and portions of the Work each Subcontractor will perform.
   2. Appendix B - List of Alternates: Include cost variation to Bid Sum applicable to the Work described in Section 01 20 00 - Price and Payment Procedures.

1.26 SELECTION AND AWARD OF ALTERNATES

A. Submit variation of Bid Sum for alternates listed in Document 00 43 00 - Procurement Form Supplements. Calculate change in Bid Sum by adding to or deducting from base Bid Sum.

B. Bids will be evaluated on total of base Bid Sum and deductive alternates. After determination of accepted Bidder, consideration will be given to additive alternates and Bid Sum adjustments.

1.27 BID OPENING

A. Bids will be opened publicly immediately after time for receipt of Bids. Bidders may be present.

1.28 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of 60 days after Bid closing date.

1.29 ACCEPTANCE OF OFFER

A. Owner reserves the right to waive irregularities, to accept or reject any or all offers, and to re-solicit if deemed necessary.

B. After acceptance by Owner, Architect, on behalf of Owner, will issue to the accepted Bidder a written Notice of Award.

C. The accepted Bidder shall assist and cooperate with Owner to prepare Agreement and shall execute Agreement within fourteen (14) days following the Notice of Award.

D. Notwithstanding delay in the preparation and execution of the Agreement, accepted Bidder shall be prepared, upon written Notice to Proceed, to commence work within fourteen (14) days following receipt of official written order of Owner to proceed, or on date stipulated in such order.

END OF DOCUMENT

SECTION 00 41 13 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

To: City of Rockmart, Georgia

c/o: Stacey Smith, City Manager

Project Title: Rockmart Amphitheater Complex

Project No. 15054

Date: .....

Submitted by: .....
(Bidder - print the full name of your firm/company)

.....
(Address)

.....
(Primary Contact Name)

.....
(Telephone)

.....
(Email)

1.1 OFFER

Having examined the Place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by the Architect for the above-referenced Project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

.....dollars ($.....),

in lawful money of the United States of America.

We have included the Bid security as required by the Instructions to Bidders.

All applicable federal taxes are included and State of Georgia, City of Rockmart taxes are included in the Bid Sum.

All Cash Allowances described in Section 01 20 00 - Price and Payment Procedures are included in the Bid Sum.

1.2 ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for sixty (60) days from the Bid closing date.

If this Bid is accepted by the Owner within the time period stated above, we will:
- Execute the Agreement within fourteen (14) days of receipt of the Notice of Award.
- Furnish the required bonds within fourteen (14) days of receipt of Notice of Award in the form described in Supplementary Conditions.
- Commence Work within fourteen (14) days following receipt of official written Notice to Proceed, or on date stipulated in such order.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the Bid security shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the Bid security or the difference between this Bid and the Bid upon which a Contract is signed.

In the event our Bid is not accepted within the time stated above, the required Bid security will be returned to the undersigned, according to the provisions of the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.3 CONTRACT TIME

If this Bid is accepted, we will:

- Complete the Work in ..... (…....) calendar weeks from Notice to Proceed.

1.4 CHANGES TO THE WORK

When the Architect establishes that the method of valuation for changes in the Work will be net cost plus a percentage fee according to General Conditions, our percentage fee shall be:

……% (percent) overhead and profit on the net cost of our own Work;

……% (percent) on the gross cost of work done by any Subcontractor.

On Work deleted from the Contract, our credit to the Owner shall be the Architect approved net cost plus:

……% (percent) of the overhead and profit percentage noted above.

1.5 ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum No. ..... Dated .....

Addendum No. ..... Dated .....

Addendum No. ..... Dated .....

Addendum No. ..... Dated .....

Addendum No. ..... Dated .....

Addendum No. ..... Dated .....

1.6 APPENDICES

A. The following documents are attached to and made a condition of the Bid:

Bid security in form of …….. .

Document 00 43 00 - Procurement Form Supplements including
Appendix A - List of Subcontractors
Appendix B - List of Alternates

1.7 BID FORM SIGNATURES

The Corporate Seal of…

.....
(Bidder - print the full name of your firm)

…was hereunto affixed in the presence of…

.....
(Authorized signing officer and title)
(Seal)

.....
(Authorized signing officer and title)
(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

SECTION 00 43 00 - PROCUREMENT FORM SUPPLEMENTS

To: City of Rockmart, Georgia

c/o: Stacey Smith, City Manager

Project Title: Rockmart Amphitheater Complex

Project No. 15054

Date: .....

Submitted by: .....
(Bidder - print the full name of your firm/company)

.....
(Address)

.....
(Primary Contact Name)

.....
(Telephone)

.....
(Email)

According to Document 00 21 13 - Instructions to Bidders and Document 00 41 13 - Bid Form - Stipulated Sum (Single-Prime Contract), we include the Appendices to Bid Form Supplements listed below. The information provided shall be considered an integral part of the Bid Form.

The following Appendices are attached to this Document:

Appendix A - List of Subcontractors: Include names of all Subcontractors and portions of the Work each Subcontractor will perform.

Appendix B - List of Alternates: Include cost variation to Bid Sum applicable to the Work described in Section 01 20 00 - Price and Payment Procedures.

BID FORM SUPPLEMENT SIGNATURES

The Corporate Seal of…

.....
(Bidder - Print the full name of your firm)

…was hereunto affixed in the presence of…

.....
(Authorized signing officer and title)
(Seal)

.....
(Authorized signing officer and title)
(Seal)

APPENDIX A - LIST OF SUBCONTRACTORS

The list of Subcontractors submitted below is an integral part of the Bid Form and is referenced in the Bid submitted by…

.....
(Bidder - Print the full name of your firm)

…to…

.....
(Owner)

…and dated…

.....
(Date)

The following work will be performed (or provided) by Subcontractors and coordinated by us:

WORK SUBJECT	**SUBCONTRACTOR NAME**
Site Work	
Concrete	
Waterproofing	
Cast Stone	
Unit Masonry	
Manufactured Stone Veneer	
Misc. / Handrail-Guardrail Steel	
Structural Steel	
Glulam Timber	
Rough Carpentry	
Membrane Roofing	
Metal Roofing	
Windows	
Doors & Frames	
Painting & Coatings	
Epoxy Flooring	
Toilet Partitions	
Fire Alarm	
Mechanical	
Plumbing	
Electrical	
Stainless Worktables, & Sinks	
Any Other:	

APPENDIX B - LIST OF ALTERNATES

The following list of alternates is an integral part of the Bid Form and is referenced in the Bid submitted by…

.....
(Bidder - Print the full name of your firm)

…to…

.....
(Owner)

…and dated…

.....
(Date)

The following amounts shall be added to or deducted from the Bid Sum. Refer to Schedule of Alternates in Section 01 20 00 - Price and Payment Procedures for description of alternates.

NO.	DESCRIPTION	COST
Alternate No. 1	Delete 5 rows of Amphitheater Seating per Drawing 1/A5.01	
Alternate No. 2	Construct Flat Stage and Flat Amphitheater Seating In lieu of Curved per Drawing 2/A5.01	
Alternate No. 3	Construct Front of House as shown per Drawing 3/A5.01	
Alternate No. 4	Delete Cast Stone Cap and LED Strip Light at Back of House and Replace with Snap on Fascia per Drawing Detail 4/A5.01	
Alternate No. 5	Delete Butterfly Roof System and Lighting at Concessions and Restroom per Drawing 1/A5.02	
Alternate No. 6	Delete Cast Stone Water-tables and A/C Skirt Wall at Concession and Restroom per Drawing 2/A5.02	
Alternate No. 7	Delete water tap and main water line. City to provide and install within 20’ of Concessions and Restroom structure.	
Alternate No. 8	Delete pump station system and forced main. Contractor shall be responsible for sewer tie-in from Concessions in to pump station. City to provided and install pump station within 30’ of where the main sewer line exits the building.	
Alternate No. 9	City to provide all worktables and shelving shown on sheet A2.08. Contractor to receive and install.	

Alternate No. 10	Delete sidewalk light bollards, post top light fixtures, post top light fixture poles, and post top light fixture pole foundations.	
Alternate No. 11	Delete from scope demolishing and removing existing structures and tree shown on sheet C302.	
Alternate No. 12	Replace Hadrian Stainless Steel Toilet Partitions and Urinal Screens as specified with Hadrian Powder Coated. All other specifications to remain the same. (Substitutions Permitted with Prior Approval). See Sheet A2.08	

END OF DOCUMENT

SECTION 00 52 14 - AGREEMENT FORM - AIA STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 SUMMARY

A. Document Includes:
   1. Agreement.

B. Related Documents:
   1. Document 00 72 14 - General Conditions - AIA (Single-Prime Contract).
   2. Document 00 73 13 - Supplementary Conditions - AIA.

1.2 AGREEMENT

A. AIA A101-2017 “Standard Form of Agreement between Owner and Contractor where the basis of payment is a Stipulated Sum” forms the basis of Agreement between the Owner and Contractor.

END OF DOCUMENT

SECTION 00 72 14 - GENERAL CONDITIONS - AIA STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 SUMMARY

A. Document Includes:
   1. General Conditions.

B. Related Documents:
   1. Document 00 52 14 - Agreement Form - AIA (Single-Prime Contract).
   2. Document 00 73 13 - Supplementary Conditions - AIA.

1.2 GENERAL CONDITIONS

A. AIA A201-2017 “General Conditions of the Contract for Construction” is the General Conditions of the Contract.

1.3 SUPPLEMENTARY CONDITIONS

A. Refer to Document 00 73 13 - Supplementary Conditions - AIA for modifications to General Conditions.

END OF DOCUMENT

SECTION 00 73 13 - SUPPLEMENTARY CONDITIONS - AIA

1.1 SUMMARY

A. Document Includes:
   A. Supplementary Conditions.

B. Related Documents:
   A. Document 00 41 13 - Bid Form - Stipulated Sum (Single-Prime Contract).
   B. Document 00 43 00 - Procurement Form Supplements: Appendices A to B.
   C. Document 00 52 14 - Agreement Form - AIA (Single-Prime Contract).
   D. Document 00 72 14 - General Conditions - AIA (Single-Prime Contract).

1.2 SUPPLEMENTARY CONDITIONS

A. These Supplementary Conditions modify AIA A201-2017 General Conditions of the Contract for Construction and other provisions of the Contract Documents as indicated below. All provisions not modified remain in full force.

B. The terms used in these Supplementary Conditions, which are defined in AIA A201-2017, have the meanings assigned to them in the General Conditions.

ARTICLE 1 - GENERAL PROVISIONS

1.1 - BASIC DEFINITIONS

Add the following Subparagraphs:

1.1.9	Products: New material, machinery, components, equipment, fixtures, and systems forming the Work, not including machinery and equipment used for preparation, fabrication, conveying, and erection of the Work. Products may also include existing materials or components required for reuse.
1.1.10	Furnish: To supply, deliver, unload, and inspect for damage.
1.1.11	Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, and make ready for use.
1.1.12	Provide: To furnish and install.

1.2 - CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Subparagraph:

1.2.4	Sections of Division 01 govern the execution of the Work of all Sections of the Specifications.

ARTICLE 7 - CHANGES IN THE WORK

7.3 - CONSTRUCTION CHANGE DIRECTIVES

Add the following Subparagraph:

7.1.4	The Agreement identifies the overhead and profit fees applicable to changes in the Work, whether additions to or deductions from the Work on which the Contract Sum is based, and it identifies the fees for Subcontract work for changes (both additions and deductions) in the Work. Contractor shall apply fees, as noted, to Subcontractor's gross (net plus fee) costs on additional work.

ARTICLE 8 – TIME

Add the following Subparagraph:

8.1.5	Contract Time is identified in Document 00 41 13 - Bid Form - Stipulated Sum (Single-Prime Contract).

ARTICLE 9 - PAYMENTS AND COMPLETION

9.3 - APPLICATIONS FOR PAYMENT

Add the following Subparagraph to Subparagraph 9.3.1:

9.3.1.3	Until Substantial Completion, Owner shall pay 90% (percent) of the amount due Contractor on account of progress payments.

ARTICLE 11 - INSURANCE AND BONDS

11.1 - CONTRACTOR'S LIABILITY INSURANCE

Add the following Subparagraph:

11.1.5	Insurance Requirements: A. Comprehensive General Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, such Comprehensive General Liability and Broad Form Property Damage Insurance as shall protect Contractor and any Subcontractor performing Work covered by the Contract from claims for damages for bodily injury, including accidental death, as well as from claims for property damages, which may arise from operations under the Contract Agreements, whether such operations are by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them. The amount of insurance shall not be less than the following: a. General Aggregate $1,000,000.00 b. Products Comp/Ops Aggregate $1,000,000.00 c. Personal and Advertising Injury $1,000,000.00 d. Each Occurrence $1,000,000.00 e. Fire Damage (Any one fire) $50,000.00 f. Medical Expenses (Any one person) $5,000.00 B. Worker's Compensation: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Worker's Compensation Insurance for all of Contractor's employees to be engaged in Work on the Project under this Contract, and in case any such Work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees to be engaged in such Work unless such employees are covered by the protection afforded by the Contractor's Worker's Compensation Insurance. Worker's Compensation Insurance shall include Broad Form All States Endorsement and Voluntary Compensation. The amount insurance shall not be less than the following: a. Each Accident $100,000.00 b. Disease – Policy Limit $500,000.00 c. Disease – Each Employee $100,000.00 C. Owner's and Contractor's Protective Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Owner's and Contractor's Protective Liability Insurance with the same limits as the Comprehensive General Liability. D. Automobile Liability: The Contractor shall procure and shall maintain during the life of the Contract Agreement, Comprehensive Automobile Liability Insurance. The insurance shall include coverage for owner, non-owned, and hired vehicles. Amounts shall not be less than the following: a. Comprehensive Single Limits (CSL) $1,000,000.00 E. Builder's Risk: The Contractor shall purchase and maintain full Builder's Risk Insurance on the project in the amount of 100% of the contract. Said Builder's Risk policy shall cover the Interests of the Owner, Architect, Contractor, all sub-contractors, and the mortgagee. Any deductible on the Builder's Risk policy shall be the responsibility of the Contractor. The Builder's Risk policy shall be maintained, unless otherwise agreed to in writing by all parties, until final payment has been made or until no person or entity other than the Owner or Mortgagee has an insurable interest in the property. F. Certificates of Insurance: Certificates acceptable to the Owner shall be attached to the signed Contract Documents when they are transmitted to the Owner for execution. All certificates of insurance issued in conjunction with the Contract shall contain the statement that, "Coverages afforded under the policies shall not be cancelled unless at least 60 days prior to cancellation written notice has been given to the Owner, as evidenced by receipts of registered or certified mail." Other standard or preprinted cancellation language shall be deleted from the certificate. The Architect, Architect's Engineers, Civil Engineer, and Owner shall be a named insured.

Add the following Paragraph and Subparagraphs:

11.6	Bonds
11.6.1	Contractor shall furnish bonds to Owner in the following amounts:
11.6.1.1	Furnish a 100% (percent) Performance Bond on standard surety bond form by a Surety licensed to do business in the State of Georgia as provided by Georgia Code Section 23-1704 and 23-1705.
11.6.1.2	Furnish a 100% (percent) Payment Bond on standard surety bond form by a Surety licensed to do business in the State of Georgia as provided by Georgia Code Section 23-1704 and 23-1705.

END OF DOCUMENT

SECTION 01 10 00 - SUMMARY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Contract description.
2. Owner-furnished products.
3. Contractor's use of Site and premises.
4. Future Work
5. Permits.
6. Specification conventions.

1.2 CONTRACT DESCRIPTION

A. Work of the Project includes furnishing all of the labor, tools, equipment, and materials necessary for the new construction of Rockmart Amphitheater Complex as described in the Specifications, Construction Drawings, and Bid Documents.

B. Perform Work of Contract under stipulated sum with Owner according to Conditions of Agreement.

1.3 OWNER-FURNISHED PRODUCTS

A. Owner's Responsibilities:
1. Arrange and pay for delivery to Site.
2. Upon delivery, inspect products jointly with Contractor.
3. Submit claims for transportation damage and replace damaged, defective, or deficient items.
4. Arrange for manufacturers' warranties, inspections, and service.
5. Install and finish products that are to be installed by Owner.
6. Repair or replace items damaged after receipt if damage is of no fault of the Contractor.

B. Contractor's Responsibilities:
1. Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
2. Handle and store products that are to be installed by Owner.
3. Handle, store, install, and finish products that are to be installed by Contractor.
4. Repair or replace items damaged after receipt if damage is the fault of the Contractor.
5. Provide site preparation, mechanical, plumbing, electrical, and data requirements as identified in Construction Drawings.
6. Coordinate with Owner to determine lead times and fabricator’s schedules.

C. Items furnished by Owner for installation by Owner:
1. Furniture.

D. Items furnished by Owner for installation by Contractor:
1. Merchandise Refrigerator x 2.
2. Ice Machine w/ Bin.
3. Solid Door Reach-in Refrigerator.
4. Cross-Temp One Section Convertible Reach-in Refrigerator / Freezer.
5. Insulated Heated Holding / Proofing Cabinet x 2.
6. Draft Beer Direct Draw Dispenser Cabinet.

1.4 CONTRACTOR'S USE OF SITE AND PREMISES

A. Construction Operations: Limited to Monday through Saturday.

B. Time Restrictions for Performing Work: 7:00 AM to 7:00 PM, Monday through Saturday local time. Sunday 12:00 PM to 7:00 PM

C. Sound Level Restrictions: Sound pressure level measured at boundary of Site shall not exceed 70 dBA.

1.5 FUTURE WORK

A. Provide additional empty conduits as shown on the electrical drawings.

1.6 PERMITS

A. Contractor and Subcontractors are required to furnish all necessary permits for construction of Work required by the authority having jurisdiction.

B. Permit fees will be waived by the City of Rockmart.

1.7 SPECIFICATION CONVENTIONS

A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

END OF SECTION

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cash allowances.

B. Testing and inspection allowances.

C. Schedule of Values.

D. Application for Payment.

E. Change procedures.

F. Defect assessment.

G. Unit prices.

H. Alternates.

1.2 CASH ALLOWANCES

A. Costs Included in Cash Allowances: Cost of product to Contractor or Subcontractor, less applicable trade discounts; delivery to Site and applicable taxes unless stated otherwise in Allowance Schedule.

B. Costs Not Included in Cash Allowances but Included in Contract Sum/Price: Product handling at Site including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing unless stated otherwise in Allowance Schedule.

C. Architect Responsibilities:
   1. Consult with Contractor for consideration and selection of products and suppliers.
   2. Select products in consultation with Owner and transmit decision to Contractor.
   3. Prepare Change Order.

D. Contractor Responsibilities:
   1. Assist Architect in selection of products and suppliers.
   2. Obtain proposals from suppliers and installers and offer recommendations.
   3. Upon notification of selection by Architect, execute purchase agreement with designated supplier and installer.
   4. Arrange for and process Shop Drawings, Product Data, and Samples. Arrange for delivery.
   5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.

E. Differences in costs will be adjusted by Change Order.

F. Allowance Schedule:
   1. Include the unit sum of $8.00 per-square-foot for purchase of material and delivery to Site of manufactured stone veneer.
   2. Include the stipulated sum of $5,000 for materials, fabrication, and installation of an exterior sign(s) for the main entrance.

3. Include the stipulated sum of $3,000 for layout, materials, fabrication, and installation of a bronze commemorative exterior plaque to be mounted on the Back of House structure.

1.3 TESTING AND INSPECTION ALLOWANCES

A. Costs of Testing and Inspecting to be incurred by Owner:
   1. Cost of engaging testing and inspecting agency.
   2. Execution of tests and inspecting.
   3. Reporting results.

B. Costs of Testing and Inspecting to be Included in Contract Sum:
   1. Costs of incidental labor and facilities required to assist testing or inspecting agency.
   2. Costs of testing services used by Contractor separate from Contract Document requirements.
   3. Costs of retesting upon failure of previous tests as determined by Architect.

C. Payment Procedures:
   1. The Owner will employ and pay for specified services of an independent firm to perform testing and inspection. Contractor shall coordinate services of testing agency with construction schedule and progress.
   2. Any retesting required because of non-conformance to specified requirements will be charged to Contractor. Differences in cost will be adjusted by Change Order.

1.4 SCHEDULE OF VALUES

A. Submit electronic file of schedule on Contractor's standard form to the Architect.

B. Submit Schedule of Values as electronic file within fourteen (14) days after date established in Notice to Proceed.

C. Format: Use the Construction Specifications Institute (CSI) MasterFormat for Specifications Divisions. Identify each line item with number and title of major Specification Section. Also identify bonds, insurance, and any other related cost.

D. Include in each line-item amount of allowances as specified in this Section.

E. Include within each line item, direct proportional amount of Contractor's overhead and profit.

F. Revise schedule to list approved Change Orders with each Application for Payment.

1.5 APPLICATION FOR PAYMENT

A. Submit an electronic file to the Architect of each Application for Payment on AIA G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet for G702.

B. Content and Format: Use Schedule of Values for listing items in Application for Payment.

C. Submit updated construction schedule with each Application for Payment.

D. Payment Period: Submit at intervals stipulated in the Agreement.

E. Submit three copies of waivers requested by Owner.

F. Substantiating Data: When Architect requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
   1. Current construction photographs specified in Section 01 33 00 - Submittal Procedures.

2. Partial release of liens from major Subcontractors and vendors.
3. Record Documents as specified in Section 01 70 00 - Execution and Closeout Requirements, for review by Owner, which will be returned to Contractor.
4. Affidavits attesting to off-Site stored products.
5. Construction Progress Schedule revised and current as specified in Section 01 33 00 - Submittal Procedures.

1.6 CHANGE PROCEDURES

A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Architect of any error, inconsistency, omission, or apparent discrepancy.

C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Architect; establish procedures for handling queries and clarifications.
1. Request for Information for requesting interpretations.
2. Architect may respond with a direct answer on the Request for Interpretation form, Clarification Notice.

D. Architect will advise of minor changes in the Work not involving adjustment to Contract Sum or Contract Time by issuing supplemental documentation.

E. Architect may issue AIA G709 or Notice of Change including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with stipulation of overtime work required and with the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within five (5) days.

F. Document requested substitutions according to Section 01 25 00 - Substitution Procedures.

G. Stipulated Sum Change Order: Based on AIA G709 or Notice of Change and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Architect.

H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Construction Change Directive. Changes in Contract Sum or Contract Time will be computed as specified for Time and Material Change Order.

I. Construction Change Directive: Architect may issue directive, on AIA G714 - Construction Change Directive signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum or Contract Time. Promptly execute change.

J. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Architect will determine change allowable in Contract Sum and Contract Time as provided in Contract Documents.

K. Maintain detailed records of Work done on time and material basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.

L. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.

M. Change Order Forms: AIA G701 - Change Order.

N. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

O. Correlation of Contractor Submittals:
   1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum.
   2. Promptly revise Progress Schedules to reflect change in Contract Time, revise sub schedules to adjust times for other items of Work affected by the change, and resubmit.
   3. Promptly enter changes in Record Documents.

1.7 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Architect, it is not practical to remove and replace the Work, the Architect will direct appropriate remedy or adjust payment.

C. The defective Work may remain, but unit sum will be adjusted to new sum at discretion of the Architect and Owner.

D. Defective Work will be partially repaired according to instructions of Architect, and unit sum will be adjusted to new sum at discretion of the Architect and Owner

E. Authority of the Architect and Owner to assess defects and identify payment adjustments is final.

F. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from transporting vehicle.
   4. Products placed beyond lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected products.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement. The Owner-Contractor Agreement may identify certain Alternates to remain an Owner option for a stipulated period of time.

B. Coordinate related Work and modify surrounding Work. Description for each Alternate is recognized to be abbreviated but requires that each change shall be complete for scope of Work affected.
   1. Coordinate related requirements among Specification Sections as required.
   2. Include as part of each Alternate: Miscellaneous devices, appurtenances, and similar items incidental to or necessary for complete installation.
   3. Coordinate Alternate with adjacent Work and modify or adjust as necessary to ensure integration.

C. Schedule of Alternates:
   a. See 00 43 00 – Procurement Form Supplements

b. See Sheets A2.08, A5.01 and A5.02 for drawings or descriptions of some alternates.
c. Refer to Sheet C302, C401, C501, C502, C601, and Sheet C602 for Pump Station, Forced Main, and Main Water Line.

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality assurance.

B. Product options.

C. Product substitution procedures.

D. Installer substitution procedures.

1.2 QUALITY ASSURANCE

A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.

B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.

C. Substitution Requests: Permitted for specified products. Do not substitute products unless substitution has been accepted and approved in writing by Architect.

1.3 PRODUCT OPTIONS

A. See Section 01 60 00 - Product Requirements.

1.4 PRODUCT SUBSTITUTION PROCEDURES

A. Where Bidding Documents stipulate specified products and manufacturers, substitution requests will be considered by the Architect up to ten (10) days before receipt of Bids.

B. Substitution requests will not be considered after the Bid period unless a product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
   1. Manufacturer's name.
   2. Product name and model or catalog number, as applicable.
   3. Product Data, Shop Drawings, and/or Certified Test Results attesting to proposed product equivalence. Burden of proof is on proposer.
   4. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
   5. Cost data comparing proposed substitution with specified product and the amount of net change to the Contract Sum.
   6. Changes required in other Work.
   7. Changes required to Contract Time.
   8. Availability of maintenance service and source of replacement parts, as applicable.

D. A request constitutes a representation that Bidder:
   1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.

2. Will provide same or greater warranty for substitution as for specified product.
3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
6. Will reimburse Owner and Architect for review or redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without prior approval during the Bid period.

F. Later claims by the Bidder for an addition to the Contract Time or Contract Sum because of changes in Work necessitated by the use of substitutions will not be considered.

G. Substitution Submittal Procedure:
1. Submit requests for substitutions via email to the Architect's Project Manager, Mark Cochran, at mark@ceviandesign.com
2. Submit an electronic file of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Architect will notify Contractor in writing of decision to accept or reject request.
4. Approved substitutions will be identified by Addenda.

1.5 INSTALLER SUBSTITUTION PROCEDURES

A. Architect and Owner will consider requests for substitutions within thirty (30) days after date established in Notice to Proceed.

B. Document each request with:
1. Installer's qualifications.
2. Installer's experience in work similar to that specified.
3. Other information as necessary to assist Architect and Owner's evaluation.

C. Substitution Submittal Procedure:
1. Submit an electronic file to the Architect of Request for Substitution for consideration. Limit each request to one proposed substitution.
2. Architect will notify Contractor in writing of decision to accept or reject request.

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination and Project conditions.

B. Preconstruction meeting.

C. Site mobilization meeting.

D. Progress meetings.

E. Closeout meeting.

1.2 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.

C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practical; place runs parallel with lines of building. Use spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
   1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important.

D. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.

E. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

G. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

A. Architect will schedule and preside over meeting after Notice of Award.
   1. Attendance Required: Contractor, Architect, Owner, appropriate governmental agency representatives, and others appropriate to the agenda.

B. Minimum Agenda:
   1. Execution of Owner-Contractor Agreement.
      a. Responsibility: Owner and Contractor, with Coordination by Architect.
   2. Submission of executed bonds and insurance certificates.
      a. Responsibility: Contractor.
   3. Designation of personnel representing parties in Contract, and Architect.
      a. Responsibility: Owner, Contractor, and Architect.
   4. Identification of communication procedures.
      a. Responsibility: Owner, Contractor, and Architect.
   5. Procedures and processing of Requests for Interpretations, field decisions, submittals, substitutions, Applications for Payments, Change Orders, and Contract closeout.
      a. Responsibility: Architect.
   6. Scheduling.
      a. Responsibility: Contractor.
   7. Critical Work sequencing.
      a. Responsibility: Contractor.

C. Contractor: Record minutes and distribute electronic file to participants within two (2) days after meeting, to Architect, Owner, and those affected by decisions made.

1.4 SITE MOBILIZATION MEETING

A. Contractor will schedule and preside over meeting at Project Site.

B. Attendance Required: Contractor, Contractor's superintendent, Architect, Owner, and others appropriate to agenda.

C. Minimum Agenda (all items fall under the responsibility of the Contractor):
   1. Use of premises by Owner and Contractor.
   2. Owner's requirements.
   3. Construction facilities and controls provided by Owner.
   4. Temporary utilities provided by Contractor.
   5. Building layout.
   6. Security and housekeeping procedures.
   7. Schedules.
   8. Procedures for testing.
   9. Procedures for maintaining record documents.
   10. Requirements for startup of equipment.
   11. Inspection and acceptance of equipment put into service during construction period.

D. Contractor: Record minutes and distribute electronic file to participants within two (2) days after meeting, to Architect, Owner, and those affected by decisions made.

1.5 PROGRESS MEETINGS

A. Contractor will schedule and administer meetings throughout progress of the Work at maximum two-week intervals.

B. Contractor will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.

C. Attendance Required: Contractor, Contractor's superintendent, Architect, Owner, and others appropriate to agenda.

D. Minimum Agenda (all items fall under the responsibility of the Contractor):

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems impeding planned progress.
5. Review of submittal schedule and status of submittals.
6. Review of off-Site fabrication and delivery schedules.
7. Maintenance of Progress Schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Review of Indoor Air Quality Management Plan.
13. Effect of proposed changes on Progress Schedule and coordination.
14. Other business relating to Work.

E. Contractor: Record minutes and distribute electronic file to participants within two (2) days after meeting, to Architect, Owner, and those affected by decisions made.

1.6 CLOSEOUT MEETING

A. Contractor will schedule and preside over Project closeout meeting with sufficient time to prepare for requesting Substantial Completion.

B. Attendance Required: Contractor, Contractor's superintendent, Architect, Owner, and others appropriate to agenda.

C. Notify Architect and Owner seven (7) days in advance of closeout meeting date.

D. Minimum Agenda (all items fall under the responsibility of the Contractor):
1. Start-up of facilities and systems.
2. Operations and maintenance manuals.
3. Testing, adjusting, and balancing.
4. System demonstration and observation.
5. Operation and maintenance instructions for Owner's personnel.
6. Temporary indoor-air-quality plan and procedures.
7. Contractor's inspection of Work.
8. Contractor's preparation of an initial "punch list."
9. Procedure to request Architect inspection to determine date of Substantial Completion.
10. Completion time for correcting deficiencies.
11. Inspections by authorities having jurisdiction.
12. Certificate of Occupancy and transfer of insurance responsibilities.
13. Partial release of retainage.
14. Final cleaning.
15. Preparation for final inspection.
16. Closeout Submittals as specified in Section 01 70 00 – Execution and Closeout Requirements.
17. Final Application for Payment.
18. Contractor's demobilization of Site.
19. Maintenance.

E. Contractor will record minutes and distribute an electronic file to participants within two (2) days after meeting, to Architect, Owner, and those affected by decisions made.

END OF SECTION

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittals.

B. Bar chart schedules.

C. Review and evaluation.

D. Updating schedules.

E. Distribution.

1.2 SUBMITTALS

A. Within seven (7) days after date established in Notice to Proceed, submit proposed bar chart schedule defining operations for completion of Work.

B. Participate in review of proposed bar chart schedule jointly with Architect and Owner.

C. Within fourteen (14) days after joint review of proposed bar chart schedule, submit revised bar chart schedule. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.

D. Submit updated schedules with each Application for Payment.

E. Submit as electronic file to Architect and Owner.

F. Schedule Updates:
   1. Overall percent complete, projected and actual.
   2. Completion progress by listed activity and sub-activity, to within five (5) working days prior to submittal.
   3. Changes in Work scope and activities modified since submittal.
   4. Delays in submittals or resubmittals, deliveries, or Work.
   5. Adjusted or modified sequences of Work.
   6. Other identifiable changes.
   7. Revised projections of progress and completion.

1.3 BAR CHART SCHEDULES

A. Format: Bar chart Schedule, to include at least:
   1. Identification and listing in chronological order of those activities reasonably required to complete the Work, including:

      a. Subcontract Work.
      b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
      c. Move-in and other preliminary activities.
      d. Equipment and equipment system test and startup activities.
      e. Project closeout and cleanup.
      f. Work sequences, constraints, and milestones.

1.4 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of schedules with Architect and Owner at each submittal.

B. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.

C. After review, revise schedules incorporating results of review, and resubmit within five (5) days.

1.5 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.

C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

D. Upon approval of a Change Order, include the change in the next schedule submittal.

E. Indicate changes required to maintain Date of Total Completion.

F. Submit sorts as required to support recommended changes.

G. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect including effects of changes on schedules of separate Contractors.

1.6 DISTRIBUTION

A. Following joint review, distribute an electronic file of updated schedules to Subcontractors, suppliers, Architect, Owner, and other applicable parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Definitions.

B. Submittal procedures.

C. Construction progress schedules.

D. Proposed product list.

E. Product data.

F. Electronic CAD files of Project Drawings.

G. Shop Drawings.

H. Samples.

I. Other submittals.

J. Test reports.

K. Certificates.

L. Manufacturer's instructions.

M. Manufacturer's field reports.

N. Erection Drawings.

O. Construction photographs.

P. Contractor review.

Q. Architect review.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect’s responsive action.

B. Informational Submittals: Written and graphic information and physical Samples that do not require Architect’s responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. Transmit each submittal with AIA G810 - Transmittal Letter or a form approved by the Architect.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

C. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.

D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.

E. Schedule submittals to expedite Project schedule.

F. Submit submittals electronically via email to Architect as PDF electronic files. Coordinate submission of related items.

G. For submittals with physical elements requiring transferal, deliver to Architect’s office. Verify address with Architect prior to scheduling delivery. Coordinate submission of related items.

H. For each submittal requiring review, allow fourteen (14) days excluding delivery time to and from Contractor.

I. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.

J. Allow space on submittals for Contractor and Architect or Engineer review stamps.

K. When revised for resubmission, identify changes made since previous submission.

L. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

M. Submittals not requested will not be recognized nor processed.

N. Incomplete submittals will not be reviewed. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Architect or Engineer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

A. Comply with Section 01 32 16 - Construction Progress Schedule

1.5 PROPOSED PRODUCT LIST

A. Within fourteen (14) days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

A. Product Data: Action Submittal: Submit to Architect for review for assessing conformance with information given and design concept expressed in Contract Documents.

B. Submit submittals electronically via email to Architect as PDF electronic files.

C. Mark each submittal to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. After review, distribute copies of submittals as appropriate and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.7 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.

B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:
   1. Use of files is solely at receiver's risk. Architect does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Architect of discrepancy and use information in hard-copy Drawings and Specifications.
   2. CAD files do not necessarily represent the latest Contract Documents, and do not represent existing conditions or as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating field measurements, addenda, and modifications.
   3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be returned.
   4. Receiver shall not hold Architect responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.
   5. Receiver shall understand that there is no guarantee that computer viruses are not present in files or in electronic media.
   6. Receiver shall not hold Architect responsible for such viruses or their consequences, and shall hold Architect harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.8 SHOP DRAWINGS

A. Shop Drawings: Action Submittal: Submit to Architect for assessing conformance with information given and design concept expressed in Contract Documents.

B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
   1. Include signed and sealed calculations to support design.
   2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
   3. Make revisions and provide additional information when required by authorities having jurisdiction.

D. Submit submittals electronically via email to Architect as PDF electronic files.

E. After review, distribute copies of submittals as appropriate and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.9 SAMPLES

A. Samples: Action Submittal: Submit to Architect for assessing conformance with information given and design concept expressed in Contract Documents.

B. Samples for Selection as Specified in Product Sections:
   1. Submit to Architect for aesthetic, color, and finish selection.
   2. Submit Samples of finishes, textures, and patterns for Architect selection.

C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.

D. Include identification on each Sample, with full Project information.

E. Submit two Samples; the Architect will retain all Samples submitted.

F. Samples will not be used for testing purposes unless specifically stated in Construction Drawings.

G. After review, distribute copies of submittals as appropriate and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.10 OTHER SUBMITTALS

A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.

B. Informational Submittal: Submit data for Architect’s knowledge as Contract administrator or for Owner.

C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.11 TEST REPORTS

A. Informational Submittal: Submit reports for Architect’s knowledge as Contract administrator or for Owner.

B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 CERTIFICATES

A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Architect.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect.

1.13 MANUFACTURER'S INSTRUCTIONS

A. Informational Submittal: Submit manufacturer's installation instructions for Architect’s knowledge as Contract administrator or for Owner.

B. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to the Owner.

C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 MANUFACTURER'S FIELD REPORTS

A. Informational Submittal: Submit reports for Architect’s knowledge as Contract administrator or for Owner.

B. Submit report in duplicate within five (5) days of observation to Architect for information.

C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.15 ERECTION DRAWINGS

A. Informational Submittal: Submit Drawings for Architect’s knowledge as Contract administrator or for Owner.

B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.

C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.16 CONSTRUCTION PHOTOGRAPHS

A. Provide photographs of Site and construction throughout progress of Work produced by an experienced photographer acceptable to Architect.

B. Submit photographs with Application for Payment.

C. Photographs: submit digital images via email to Architect.

D. Take a minimum of two (2) Site photographs from different directions and five (5) interior photographs indicating relative progress of the Work, five (5) days maximum before submitting.

E. Identify name of Project, orientation of view, construction phase, date and time of view, as text directly on photograph or in file name.

F. Digital Images: Deliver complete set of digital image electronic files via email to Owner with Project record documents. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio, uncropped.
   1. Digital Images: JPEG format with image resolution of not less than 1600 by 1200 pixels.
   2. Date and Time: Include date and time in filename for each image.

1.17 CONTRACTOR REVIEW

A. Review for compliance with Contract Documents and approve submittals before transmitting to Architect.

B. Contractor: Responsible for:
   1. Determination and verification of materials including manufacturer's catalog numbers.
   2. Determination and verification of field measurements and field construction criteria.

3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
4. Determination of accuracy and completeness of dimensions and quantities.
5. Confirmation and coordination of dimensions and field conditions at Site.
6. Construction means, techniques, sequences, and procedures.
7. Safety precautions.
8. Coordination and performance of Work of all trades.

C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.

D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Architect.

1.18 ARCHITECT REVIEW

A. Mass Submittals: six (6) or more submittals or items in one day or fifteen (15) or more submittals or items in one (1) week.

B. Do not make "mass submittals" to Architect. If "mass submittals" are received, Architect's review time stated above will be extended as necessary to perform proper review. Architect will review "mass submittals" based on priority determined by Architect after consultation with Owner and Contractor.

C. Informational submittals and other similar data are for Architect's information and do not require Architect's responsive action. These will not be reviewed or returned with comment.

D. Submittals made by Contractor that are not required by Contract Documents may be returned without action.

E. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order, Architect's Supplemental Instruction, or Construction Change Directive.

F. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control.

B. Tolerances.

C. References.

D. Labeling.

E. Mockup requirements.

F. Testing and inspection services.

G. Manufacturers' field services.

1.2 QUALITY CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.

B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

C. Perform Work using persons qualified to produce required and specified quality.

D. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current as of date for receiving Bids except where specific date is established by code.

C. Obtain copies of standards and maintain on Site when required by product Specification Sections.

D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference in reference documents.

1.5 LABELING

A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.

B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
   1. Model number.
   2. Serial number.
   3. Performance characteristics.

C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.6 MOCK-UP REQUIREMENTS

A. Assemble and erect mock-up panel, as indicated on Construction Drawings, with specified or indicated attachment and anchorage devices, flashings, seals, and finishes.

B. Accepted mockups shall be comparison standard for remaining Work.

C. Where mockup has been accepted by Architect, remove mockup, and clear area when directed to do so by Architect.

1.7 TESTING AND INSPECTION SERVICES

A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.

B. Independent firm will perform tests, inspections, and other services as required by Architect, Owner, and authorities having jurisdiction.
   1. Laboratory: Authorized to operate at Project location.
   2. Laboratory Staff: Maintain full-time Professional Engineer on staff to review services.
   3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.

C. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Architect or Owner.

D. Reports shall be submitted by independent firm to Architect, Owner, Contractor, and authorities having jurisdiction, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
   1. Submit final report indicating correction of Work previously reported as noncompliant.

E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
   1. Notify Architect and independent firm twenty-four (24) hours before expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional Samples and tests required for Contractor's use.

F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.

G. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Architect and Owner. Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum.

H. Agency Responsibilities:
1. Test Samples of mixes submitted by Contractor.
2. Provide qualified personnel at Site. Cooperate with Architect and Contractor in performance of services.
3. Perform indicated sampling and testing of products according to specified standards.
4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
5. Promptly notify Architect and Contractor of observed irregularities or nonconformance of Work or products.
6. Perform additional tests required by Architect.
7. Attend preconstruction meetings and progress meetings.

I. Agency Reports: After each test, promptly submit electronic file of report via email to Architect, Owner, Contractor, and authorities having jurisdiction. When requested by Architect, provide interpretation of test results. Include the following:
1. Date issued.
2. Project title and number.
3. Name of inspector.
4. Date and time of sampling or inspection.
5. Identification of product and Specification Section.
6. Location in Project.
7. Type of inspection or test.
8. Date of test.
9. Results of tests.
10. Conformance with Contract Documents.

J. Limits on Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency or laboratory may not approve or accept any portion of the Work.
3. Agency or laboratory may not assume duties of Contractor.
4. Agency or laboratory has no authority to stop the Work.

K. Special Inspections:
1. Special inspections reports and final report in accordance with International Building Code (IBC) Section 1704.2.4 shall be submitted to the authority having jurisdiction prior to the time that phase of the work is approved for occupancy.

1.8 MANUFACTURER'S FIELD SERVICES

A. When specified in Contract Documents, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, startup of equipment, testing, adjusting, and balancing of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect thirty (30) days in advance of required observations. Observer is subject to approval of Architect and Owner.

C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.

D. Refer to Section 01 33 00 - Submittal Procedures, "Manufacturer's Field Reports" Article.

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities:
   1. Temporary electricity.
   2. Temporary lighting for construction purposes.
   3. Temporary heating.
   4. Temporary cooling.
   5. Temporary ventilation.
   6. Communication services.
   7. Temporary water service.
   8. Temporary sanitary facilities.

B. Construction Facilities:
   1. Field offices and sheds.
   2. Vehicular access.
   3. Parking.
   4. Progress cleaning and waste removal.
   5. Project identification.
   6. Traffic regulation.
   7. Fire-prevention facilities.

C. Temporary Controls:
   1. Barriers.
   2. Enclosures and fencing.
   3. Security.
   4. Water control.
   5. Dust control.
   6. Erosion and sediment control.
   7. Noise control.
   8. Pest and rodent control.
   9. Pollution control.

D. Removal of utilities, facilities, and controls.

1.2 REFERENCES

A. ASTM International:
   1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   2. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
   3. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

1.3 TEMPORARY ELECTRICITY

A. Provide and pay for power service required from utility source as needed for construction operation.

B. Provide temporary electric feeder from electrical service at location as directed by Owner.

C. Power Service Characteristics: 240/120 volts, single-phase 3-wire, 100 amperes fused disconnect with the meter on the pole at the disconnect.

D. Provide power outlets with branch wiring and distribution boxes located as required for construction operations. Provide suitable, flexible power cords as required for portable construction tools and equipment.

E. Permanent convenience receptacles may be used during construction.

1.4 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain lighting for construction operations to achieve minimum lighting level of two (2) watts/sq ft.

B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, lamps, and the like, for specified lighting levels.

C. Maintain lighting and provide routine repairs.

D. Permanent building lighting may be used during construction.

1.5 TEMPORARY HEATING

A. Provide and pay for heating devices and heat as needed to maintain specified conditions for construction operations.

B. Enclose building before activating temporary heat according to "Enclosures and Fencing" Article in this Section.

C. Before operating permanent equipment for temporary heating purposes, verify installation is approved for operation, equipment is lubricated, and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts. Replace filters at Substantial Completion.

D. Maintain minimum ambient temperature of fifty (50) degrees F in areas where construction is in progress unless indicated otherwise in individual product data information.

1.6 TEMPORARY COOLING

A. Provide and pay for cooling devices and cooling as needed to maintain specified conditions for construction operations.

B. Enclose building before activating temporary cooling according to ""Enclosures and Fencing" Article in this Section.

C. Before operating permanent equipment for temporary cooling purposes, verify installation is approved for operation, equipment is lubricated, and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts. Replace filters at Substantial Completion.

D. Maintain maximum ambient temperature of eighty (80) degrees F in areas where construction is in progress unless indicated otherwise in individual product data.

1.7 TEMPORARY VENTILATION

A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.8 COMMUNICATION SERVICES

A. Telephone Service: Provide, maintain, and pay for telephone service to field office / Contractor's superintendent at time of Project mobilization and until completion of Work. Cellular service is acceptable.

1.9 TEMPORARY WATER SERVICE

A. Provide suitable quality water service as needed to maintain specified conditions for construction operations.

B. Contractor will pay cost of temporary water.

C. Extend branch piping with outlets located so that water is available by hoses with threaded connections. Provide temporary pipe insulation and heat tape to prevent freezing if temperature falls below thirty-six (36) degrees F.

1.10 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide facilities at time of Project mobilization and until completion of Work.

B. Maintain facilities in clean and sanitary condition daily.

1.11 FIELD OFFICES AND SHEDS

A. Field Office: Weathertight, with lighting, electrical outlets, heating, cooling, and ventilating equipment, and equipped with sturdy furniture including conference table and chairs to accommodate six (6) persons, and a drawing display table. A Field Office is not required if Contractor's office is within twenty (5) miles of Project Site. A home office does not suffice.

B. When permanent facilities are enclosed with operable utilities, relocate field offices and storage into building, with written agreement of Owner, and remove temporary buildings.

C. Construction: Portable or mobile buildings, or buildings constructed with floors raised aboveground, securely fixed to foundations with steps and landings at entrance doors.
   1. Construction: Structurally sound, secure, weathertight enclosures for office and storage spaces. Maintain during progress of Work; remove enclosures when no longer needed.
   2. Thermal Resistance of Floors, Walls, and Ceilings: Compatible with occupancy and storage requirements.
   3. Exterior Materials: Weather-resistant.
   4. Interior Materials: Sheet-type materials for walls and ceilings, prefinished or painted; resilient floor and bases.
   5. Lighting: Fifty (50) ft-C at desktop height; exterior lighting at entrance door(s).

D. Environmental Control:
   1. Heating, Cooling, and Ventilating for Offices: Automatic equipment to maintain comfort conditions.
   2. Storage Spaces: Heating and ventilating as needed to maintain products according to Contract Documents; lighting for maintenance and inspection of products.

E. Storage Areas and Sheds: Size to storage requirements for products of individual Specification Sections, allowing for access and orderly provision for maintenance and inspection of products to suit requirements in Section 01 60 00 - Product Requirements.

F. Preparation: Fill and grade Sites for temporary structures sloped for drainage away from buildings.

G. Installation:
   1. Install field office spaces ready for occupancy fourteen (14) days after date established by Notice to Proceed.
   2. Employee Residential Occupancy: Not allowed on Owner's property.

H. Maintenance and Cleaning:
   1. Provide regular custodial services for field office and periodic cleaning and maintenance for sheds and storage areas.
   2. Maintain walks free of mud, water, snow, and the like.

I. Removal: At completion of Work, remove buildings, foundations, utility services, and debris. Restore areas to same or better condition as original condition or to condition identified in Contract Documents.

1.12 VEHICULAR ACCESS

A. Construct temporary, all-weather access driveway from M.L.K. Jr. Street or street as indicated on Civil Drawings to serve construction area, of width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.

B. Construct temporary culverts to span low areas and allow unimpeded drainage as necessary.

C. Extend and relocate vehicular access as Work progress requires; do not impede traffic flow.

D. Locate as approved by Owner.

E. Provide unimpeded access for emergency vehicles. Maintain 20-foot-wide driveways with turning space between and around combustible materials.

F. Provide and maintain access to fire hydrants and control valves; keep access free of obstructions.

G. Provide means of removing mud from vehicle wheels before entering streets.

H. Use existing on-Site roads for construction traffic.

1.13 PARKING

A. Construct temporary gravel surface parking area to accommodate construction personnel.

B. Locate as approved by Owner.

C. If Site space is not adequate, provide additional off-Site parking.

D. Use of existing on-Site streets and driveways used for construction traffic is not permitted for parking. Tracked vehicles are not allowed on paved areas.

E. Do not allow heavy vehicles or construction equipment in gravel parking area.

F. Permanent Pavements:
   1. Base for permanent parking area may be used for construction traffic.
   2. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
   3. Use of permanent parking is permitted once paving is usable.

G. Maintenance:
   1. Maintain traffic and parking areas in sound condition, free of excavated material, construction equipment, products, mud, snow, ice, and the like.
   2. Maintain new permanent paved areas; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original condition.

H. Removal, Repair:
   1. Remove temporary materials and construction when permanent paving is usable.
   2. Repair permanent facilities damaged by use, to original condition.

I. Mud from Site vehicles: Provide means of removing mud from vehicle wheels before entering streets.

1.14 PROGRESS CLEANING AND WASTE REMOVAL

A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing spaces.

C. Broom and vacuum clean interior areas before starting surface finishing and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and rubbish from Site weekly and dispose of off-Site.

1.15 PROJECT IDENTIFICATION

A. Project Identification Sign:
   1. Contractor is to provide the sign, structure/frame, and installation for (2) 4’ x 8’ sheets, mounted on each side of a v-shaped sign.
   2. Signage graphics are to identify the Owner, Architect, and Contractor; Owner is to approve graphic design prior to fabrication.
   3. Signe structure is to withstand 60-mph wind velocity.
   4. Any other signage is to be approved by Owner.

B. Project Informational Signs:
   1. Provide informational sign at field office and storage shed(s) and provide directional signs to direct traffic into and within Site. Relocate as Work progress requires.
   2. No other signs are allowed without Owner's permission except those required by law.

C. Installation:
   1. Install Project identification sign within fourteen (14) days of date established by Notice to Proceed.
   2. Erect on the Site at the corner of Main and Ware Streets.
   3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
   4. Install sign surface plumb and level, with butt joints. Anchor securely.
   5. Paint exposed surfaces of sign, supports, and framing.

D. Maintenance: Maintain clean signs and supports; repair deterioration and damage.

E. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore area.

1.16 TRAFFIC REGULATION

A. Signs, Signals, and Devices:
   1. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs: As approved by authorities having jurisdiction.
   2. Traffic Control Signals: As approved by local jurisdictions.
   3. Traffic Cones, Drums, Flares, and Lights: As approved by authorities having jurisdiction.
   4. Flag Person Equipment: As required by authorities having jurisdiction.

B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

C. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

D. Haul Routes:
   1. Consult with authorities having jurisdiction and establish public thoroughfares to be used for haul routes and Site access.
   2. Confine construction traffic to designated haul routes.
   3. Provide traffic control at critical areas of haul routes to regulate traffic and to minimize interference with public traffic.

E. Traffic Signs and Signals:
   1. Provide signs at approaches to Site and on Site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
   2. Provide, operate, and maintain traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
   3. Relocate signs and signals as Work progresses, to maintain effective traffic control.

F. Removal:
   1. Remove equipment and devices when no longer required.
   2. Repair damage caused by installation.
   3. Remove post settings to depth of 2-feet.

1.17 FIRE-PREVENTION FACILITIES

A. Prohibit smoking within buildings under construction. Designate area on Site where smoking is permitted. Provide approved ashtrays in designated smoking areas.

B. Establish fire watch for cutting, welding, and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.

C. Portable Fire Extinguishers: NFPA 10; 10-pound capacity, 4A-60B: C UL rating.
   1. Provide two (2) fire extinguishers at building under construction.
   2. Provide minimum of one (1) fire extinguisher in field office and at each storage shed.
   3. Provide minimum of one (1) fire extinguisher on roof during roofing operations using heat-producing equipment.

1.18 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas and to protect adjacent properties from damage from construction operations.

B. Provide barricades as required by authorities having jurisdiction for public rights-of-way.

C. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.19 ENCLOSURES AND FENCING

A. Construction: Commercial-grade chain-link fence, or Owner - approved alternative.

B. Provide 6-foot-high fence around Concession and Restroom building, provide a separate 6-foot-high fence around Stage(s) and Back of House.

C. Exterior Enclosures:
1. Provide temporary weathertight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual product data, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.20 SECURITY

A. Security Program:
1. Protect Work on existing premises from theft, vandalism, and unauthorized entry.
2. Initiate program at Project mobilization.
3. Maintain program throughout construction period until Owner occupancy.

B. Entry Control
1. Allow entrance only to authorized persons with proper identification.
2. Maintain log of workers and visitors and make available to Owner upon request.

C. Restrictions:
1. Do no work on days indicated in Owner-Contractor Agreement.

1.21 WATER CONTROL

A. Grade Site to drain. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.

B. Protect Site from puddles or running water. Provide water barriers as required to protect Site from soil erosion and prevent runoff into storm water system.

1.22 DUST CONTROL

A. Execute Work by methods that minimize raising dust from construction operations.

B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.23 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.

B. Minimize surface area of bare soil exposed at one time.

C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.

D. Construct fill and waste areas by selective placement to avoid erosive surface silts and clays.

E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.

F. Comply with sediment and erosion control plan indicated on Drawings.

1.24 NOISE CONTROL

A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.25 PEST AND RODENT CONTROL

A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work and entering the facility.

B. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.26 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.

B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.27 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, and materials before Final Application for Payment inspection.

B. Grade site as indicated on Drawings.

C. Clean and repair damage caused by installation or use of temporary Work.

D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

END OF SECTION

SECTION 01 57 29 - TEMPORARY INDOOR AIR QUALITY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Construction Indoor Air Quality (IAQ) Management Plan.
   2. HVAC air filters.
   3. Building flush-out.
   4. Indoor air quality testing.

1.2 REFERENCES

A. American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE):
   1. ASHRAE 52.2 - Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size.

B. Sheet Metal and Air Conditioning National Contractors Association (SMACNA):
   1. SMACNA IAQ 2nd Edition 2007 - Guideline for Occupied Buildings under Construction, Chapter 3: Control Measures.

C. U.S. Environmental Protection Agency (EPA):
   1. EPA IAQ Testing - Compendium of Methods for the Determination of Air Pollutants in Indoor Air.

1.3 PLAN REQUIREMENTS

A. Develop and implement a Construction Indoor Air Quality (IAQ) plan as approved by Architect and Owner.

B. Intent:
   1. Prevent indoor air quality problems resulting from construction process.
   2. Protect HVAC system during construction, control pollutant sources, and interrupt contamination pathways.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit description and performance data for filters including MERV ratings.

C. Construction IAQ Management Plan: Submit plan describing methods and procedures for implementing and monitoring compliance as specified in this Section.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents:
   1. Submit construction photographs showing compliance with Construction IAQ Management Plan.

1.6 CONSTRUCTION IAQ MANAGEMENT PLAN

A. Implement Construction IAQ Management Plan at start of construction.

B. Review Construction IAQ Management Plan at preconstruction meeting and progress meetings specified in Section 01 30 00 - Administrative Requirements.

C. Distribute approved Construction IAQ Management Plan to Subcontractors and others affected by plan requirements.

D. Oversee plan implementation, instruct construction personnel about plan compliance, and document plan results.

E. Address the following requirements in Construction IAQ Management Plan:
   1. Permitting adequate airing-out of new materials.
   2. Proper curing of concrete before covering.
   3. Avoiding building occupancy while construction-related pollutants are present.
   4. Smoking inside building.
   5. Dust control.
   6. Debris removal.

1.7 SEQUENCING

A. Sequence material delivery and installation to avoid exposing insulation, carpeting, acoustical ceilings, gypsum board, and other absorptive materials to contamination and moisture.
   1. Enclose building before storing and installing moisture-sensitive products within building under construction.

PART 2 PRODUCTS

2.1 HVAC AIR FILTERS

A. Return Filters: Filtration media rated for minimum efficiency reporting value (MERV) when tested according to ASHRAE 52.2.
   1. Construction Return Filters: MERV of 8.
   2. Flush-Out Return Filters: MERV of 13.
   3. Permanent Filters: Per recommendation of HVAC equipment manufacturer.

B. Supply Filters: Per recommendation of HVAC equipment manufacturer.

PART 3 EXECUTION

3.1 FILTER INSTALLATION AND REPLACEMENT

A. Install construction return filter at each return grille before operating permanent air handlers during construction.

B. Replace filters after completing construction and before conducting building flush-out.
   1. Replace construction return filters with flush-out return filters.
   2. Replace supply filters.

C. Replace filters after conducting building flush-out and before occupancy.
   1. Replace flush-out return filers with permanent filters.

2. Replace supply filters.

3.2 BUILDING FLUSH-OUT

A. Conduct building flush-out after construction ends and before occupancy.
   1. Operate HVAC air systems using 100 percent outside air for two weeks, minimum.

3.3 CONSTRUCTION PHOTOGRAPHS

A. Section 01 33 00 - Submittal Procedures: Requirements for construction photographs.

B. Photograph construction operations to show compliance with Construction IAQ Management Plan.
   1. Take minimum of six (6) photographs on minimum of three (3) different occasions during construction to show consistent adherence with IAQ Management Plan.
   2. Take minimum of size (6) photographs at beginning and end of building flush-out to show consistent adherence to building flush-out sequence.
   3. Identify photographs as required in Section 01 33 00 - Submittal Procedures and identify IAQ sequence illustrated in each photograph.

3.4 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.

B. Conduct baseline indoor air quality testing procedure according to EPA IAQ Testing.
   1. Verify indoor air contaminants do not exceed the following limits:

CONTAMINANT	MAXIMUM CONCENTRATION
Formaldehyde	27 parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cubic meter
4-Phenylcyclohexene (4-PCH)	6.5 micrograms per cubic meter
Carbon Monoxide (CO)	9 parts per million and no greater than 2 parts per million above outdoor levels

C. Conduct air sample testing according to the following:
   1. Verify interior finishes, including but not limited to millwork, doors, paint, carpet and acoustic tiles, are installed.
   2. Test air quality before occupancy, during normal occupied hours, with building ventilation system starting at normal daily start time and operated at minimum outside air flow rate for occupied mode for duration of air testing.
   3. Test air quality for each portion of building served by separate ventilation system, using minimum one sampling point for each 25,000 sq ft, or one sampling point for each contiguous floor area, whichever is larger. Include sampling points in areas with least ventilation and greatest presumed contaminant source strength.
   4. Collect air samples between 3 and 6 feet above finished floor. Collect samples over minimum 4-hour period.

D. When tests indicate contaminants exceed maximum concentration limit, flush affected building area with outside air and retest.

1. Repeat flushing and retesting until measured contaminant concentrations are less than specified maximum limits.
2. Take air samples for retests at same location as initial tests.

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Product delivery requirements.

C. Product storage and handling requirements.

D. Product options.

E. Equipment electrical characteristics and components.

1.2 PRODUCTS

A. Comply with specified requirements and reference standards.

B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.

C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.

D. Furnish interchangeable components from same manufacturer for new components requiring replacement.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products according to manufacturer's instructions.

B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products according to manufacturer's instructions.

B. Store products with seals and labels intact and legible.

C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.

D. For exterior storage of fabricated products, place products on sloped supports aboveground.

E. Provide bonded off-Site storage and protection when Site does not permit on-Site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.

H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Products complying with specified reference standards or description.

B. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 01 25 00 - Substitution Procedures.

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.

B. Cord and Plug: Furnish minimum 6-foot-long cord and plug including grounding connector for connection to electric wiring system. Cord of longer length may be specified in individual Specification Sections.

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Field engineering.

B. Closeout procedures.

C. Starting of systems.

D. Demonstration and instructions.

E. Testing, adjusting, and balancing.

F. Project record documents.

G. Operation and maintenance data.

H. Manual for materials and finishes.

I. Manual for equipment and systems.

J. Spare parts and maintenance products.

K. Product warranties and product bonds.

L. Maintenance service.

M. Examination.

N. Preparation.

O. Execution.

P. Cutting and patching.

Q. Protecting installed construction.

R. Final cleaning.

1.2 FIELD ENGINEERING

A. Employ land surveyor registered in State of Georgia and acceptable to Architect and Owner.

B. Locate and protect survey control and reference points. Promptly notify Architect of discrepancies discovered.

C. Control datum for survey is indicated on Drawings.

D. Verify setbacks and easements; confirm Drawing dimensions and elevations.

E. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.

F. Submit copy of Site drawing signed by land surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.

G. Maintain complete and accurate log of control and survey Work as Work progresses.

H. Protect survey control points prior to starting Site Work; preserve permanent reference points during construction.

I. Promptly report to Architect loss or destruction of reference point or relocation required because of changes in grades or other reasons.

J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

K. Final Property Survey: Prior to Substantial Completion, prepare final property survey illustrating locations, dimensions, angles, and elevations of buildings and Site Work that have resulted from construction indicating their relationship to permanent benchmarks and property lines.
   1. Show significant features (real property) for Project.
   2. Include certification on survey, signed by surveyor, that principal metes, bounds, lines, levels, and elevations of Project are accurately shown.

1.3 CLOSEOUT PROCEDURES

A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
   1. Submit maintenance manuals, Project record documents, digital images of construction photographs, and other similar final record data in compliance with this Section.
   2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in compliance with this Section.
   3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
   4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
   5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
   6. Make final change-over of locks eliminating construction master-key system and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
   7. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
   8. Advise Owner of pending insurance changeover requirements.
   9. Perform final cleaning according to this Section.

B. Substantial Completion Inspection:
   1. When Contractor considers Work to be substantially complete, submit to Architect:
      a. Written notice that Work, or designated portion, is substantially complete.
      b. List of items to be completed or corrected (initial punch list).
   2. Within seven (7) days after receipt of request for Substantial Completion, Architect will make inspection to determine whether Work or designated portion is substantially complete.

3. Should Architect determine that Work is not substantially complete:
    a. Architect will promptly notify Contractor in writing, stating reasons for its opinion.
    b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Architect,
    c. Architect will reinspect Work.
    d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect's inspection.
4. When Architect finds that Work is substantially complete, Architect will:
    a. Prepare Certificate of Substantial Completion on AIA G704 - Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Architect and Owner (final punch list).
    b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.
5. After Work is substantially complete, Contractor shall:
    a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
    b. Complete Work listed for completion or correction within time period stipulated.

C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.
1. When Contractor considers Work to be complete, submit written notice that:
    a. Contract Documents have been reviewed.
    b. Work has been examined for compliance with Contract Documents.
    c. Work has been completed according to Contract Documents.
    d. Work is completed and ready for final inspection.
2. Submittals: Submit following:
    a. Final punch list indicating all items have been completed or corrected.
    b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
    c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
    d. Accounting statement for final changes to Contract Sum.
    e. Contractor's affidavit of payment of debts and claims on AIA G706 - Contractor's Affidavit of Payment of Debts and Claims.
    f. Contractor affidavit of release of liens on AIA G706A - Contractor's Affidavit of Release of Liens.
    g. Consent of surety to final payment on AIA G707 - Consent of Surety to Final Payment Form.
    h. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
    i. Certificate of Release: From authorities having jurisdiction.
    j. Submit pest-control final inspection report.
3. Perform final cleaning for Contractor-soiled areas according to this Section.

D. Final Completion Inspection:
1. Within seven (7) days after receipt of request for final inspection, Architect will make inspection to determine whether Work or designated portion is complete.
2. Should Architect consider Work to be incomplete or defective:
    a. Architect will promptly notify Contractor in writing, listing incomplete or defective Work.
    b. Contractor shall remedy stated deficiencies and send second written request to Architect that Work is complete.
    c. Architect will reinspect Work.
    d. Redo and Inspection of Deficient Work: Repeated until Work passes Architect's inspection.

1.4 STARTING OF SYSTEMS

A. Coordinate schedule for startup of various equipment and systems.

B. Notify Architect and Owner seven (7) days prior to startup of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.

E. Verify that wiring and support components for equipment are complete and tested.

F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.

G. When specified in Contract Documents, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.

H. Submit a written report according to Section 01 33 00 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel fourteen (14) days prior to date of final inspection.

B. Demonstrate Project equipment and instructed by qualified manufacturer's representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.

D. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time at equipment location.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.6 TESTING, ADJUSTING, AND BALANCING

A. Contractor will appoint, employ, and pay for services of an independent firm to perform testing, adjusting, and balancing for the HVAC system.

B. Reports will be submitted by independent firm to Architect and Owner indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

1.7 PROJECT RECORD DOCUMENTS

A. Maintain on Site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, product data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates used.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
   1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
   2. Include locations of concealed elements of the Work.
   3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components that are parallel to utilities.
   4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
   5. Identify and locate existing buried or concealed items encountered during Project.
   6. Measured depths of foundations in relation to finish main floor datum.
   7. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   8. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   9. Field changes of dimension and detail.
   10. Details not on original Drawings.

G. Submit PDF electronic files of marked-up documents to Architect with claim for final Application for Payment.

1.8 OPERATION AND MAINTENANCE DATA

A. Submit in PDF composite electronic indexed file.

B. Submit data bound in 8-1/2 x 11-inch text pages, three D side ring binders with durable plastic covers.

C. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project, and subject matter of binder when multiple binders are required.

D. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

E. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

F. Contents: Prepare table of contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by Specification Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
      g. Safety precautions to be taken when operating and maintaining or working near equipment.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop Drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Originals of warranties and bonds.

1.9 MANUAL FOR MATERIALS AND FINISHES

A. Submit two (2) physical sets of manual within ten (10) days after final inspection.

B. Submit in PDF composite electronic indexed file manual within ten (10) days after final inspection.

C. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom-manufactured products.

D. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

E. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.

F. Include listing in table of contents for design data, with tabbed fly sheet and space for insertion of data.

1.10 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two (2) physical sets of manual within ten (10) days after final inspection.

B. Submit in PDF composite electronic indexed file manual within ten (10) days after final inspection.

C. Each Item of Equipment and Each System: Include description of unit or system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include

performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

D. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

E. Include color-coded wiring diagrams as installed.

F. Operating Procedures: Include startup, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and special operating instructions.

G. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

H. Include servicing and lubrication schedule and list of lubricants required.

I. Include manufacturer's printed operation and maintenance instructions.

J. Include sequence of operation by controls manufacturer.

K. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

L. Include control diagrams by controls manufacturer as installed.

M. Include Contractor's coordination drawings with color-coded piping diagrams as installed.

N. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

O. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

P. Include test and balancing reports as specified in Section 01 40 00 - Quality Requirements.

Q. Include listing in table of contents for design data with tabbed dividers and space for insertion of data.

1.11 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in Contract Documents.

B. Deliver to Project Site and place in location as directed by Owner; obtain receipt prior to final payment.

1.12 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible Subcontractors, suppliers, and manufacturers within ten (10) days after completion of applicable item of Work.

B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Include a table of contents.

F. Submit data bound in 8-1/2 x 11-inch text pages, three D side ring binders with durable plastic covers.

G. Submit prior to final Application for Payment.

H. Time of Submittals:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten (10) days after acceptance.
   2. Make other submittals within ten (10) days after date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten (10) days after acceptance, listing date of acceptance as beginning of warranty or bond period.

1.13 MAINTENANCE SERVICE

A. Furnish service and maintenance of components indicated in Specification Sections during warranty period.

B. Examine system components at frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by manufacturer of original component.

D. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual Specification Sections.

D. Verify that utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.

B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Architect before proceeding.

C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.

D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
   1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
   2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
   3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Architect for final decision.

E. Allow for expansion of materials and building movement.

F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
   1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
   2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.

G. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.
   1. Refer questionable mounting heights choices to Architect for final decision.
   2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.

H. Adjust operating products and equipment to ensure smooth and unhindered operation.

I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 CUTTING AND PATCHING

A. Employ skilled and experienced installers to perform cutting and patching.

B. Submit written request in advance of cutting or altering elements affecting:

1. Structural integrity of element.
2. Integrity of weather-exposed or moisture-resistant elements.
3. Efficiency, maintenance, or safety of element.
4. Visual qualities of sight-exposed elements.
5. Work of Owner or separate contractor.

C. Execute cutting, fitting, and patching, including excavation and fill, to complete Work and to:
1. Fit the several parts together, to integrate with other Work.
2. Uncover Work to install or correct ill-timed Work.
3. Remove and replace defective and nonconforming Work.
4. Remove samples of installed Work for testing.
5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

D. Execute Work by methods to avoid damage to other Work and to provide proper surfaces to receive patching and finishing.

E. Cut masonry and concrete materials using masonry saw or core drill.

F. Restore Work with new products according to requirements of Contract Documents.

G. Fit Work tight to pipes, sleeves, ducts, conduits, and other penetrations through surfaces.

H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

I. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.

J. Identify hazardous substances or conditions exposed during the Work to Architect for decision or remedy.

3.5 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified in individual Specification Sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

3.6 FINAL CLEANING

A. Execute final cleaning prior to final Project assessment.
1. Employ experienced personnel or professional cleaning firm.

B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces.

C. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.

D. Replace filters of operating equipment.

E. Clean debris from roofs, gutters, downspouts, and drainage systems.

F. Clean Site; sweep paved areas, rake clean landscaped surfaces.

G. Remove waste and surplus materials, rubbish, and construction facilities from Site.

END OF SECTION

SECTION 03 10 00 - CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Formwork for cast-in place concrete.
   2. Shoring, bracing, and anchorage.
   3. Form accessories.
   4. Form stripping.

1.2 SYSTEM DESCRIPTION

A. Construct formwork, shoring, and bracing in accordance with ACI 318 to conform to applicable code requirements.

B. Vapor Retarder Permeance: Maximum 1 perm when tested according to ASTM E96/E96M, desiccant method or water method.

1.3 QUALITY ASSURANCE

A. Perform Work according to ACI 347 and ACI 301.

B. For wood products, comply with AF&PA.

PART 2 PRODUCTS

2.1 FORM MATERIALS

A. Form Materials: At discretion of Contractor and approved by Engineer.

2.2 FORMWORK ACCESSORIES

A. Form Ties: Snap-off type, galvanized metal, adjustable length, cone type, free of defects capable of leaving holes larger than 1 inch in concrete surface.

B. Spreaders: Standard, non-corrosive metal form clamp assembly, of type acting as spreaders and leaving no metal within 1 inch of concrete face. Wire ties, wood spreaders or through-bolts not permitted.

C. Form Anchors and Hangers:
   1. Do not use anchors and hangers leaving exposed metal at concrete surface.
   2. Symmetrically arrange hangers supporting forms from structural steel members.
   3. Penetration of structural steel members is not permitted.

D. Form Release Agent: Colorless mineral oil that will not stain concrete, or absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.

E. Corners: Fillet or Chamfer; 1-inch maximum size; maximum possible lengths.

F. Dovetail Anchor Slot: Galvanized steel, 22 gage thick, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

G. Flashing Reglets: Galvanized steel, 22 gage thick, longest possible lengths, with alignment splines for joints, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

H. Vapor Retarder: Underneath all slabs as indicated on Drawings; 10 mil thick, Class A, Stego Industries – Stego Wrap or equal, below grade application type.
   1. Lap and tape all joints, 24-inch minimum; install with joint tape recommended by Manufacturer.

I. Bituminous Joint Filler: ASTM D1751.

J. Slab Edge Joint Filler: ASTM D994, preformed asphalt expansion joint, ½ inch thick.

K. Nails, Spikes, Lag Bolts, Through-bolts, Anchorages: Size, strength and character to maintain formwork in place while placing concrete.

L. Water Stops: PVC, minimum 1,750 psi tensile strength, maximum minus 35 degrees F low temperature brittleness according to ASTM D-746, 6 inch wide, maximum possible lengths, ribbed profile, preformed corner sections, heat welded jointing.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify lines, levels, and centers before proceeding with formwork. Verify dimensions agree with Drawings.

3.2 INSTALLATION

A. Earth Forms:
   1. Footings may be cast into an earth-formed trench if soil conditions permit.
   2. Trench earth forms neatly, accurately, and at least 2 inches wider than footing widths indicated on Drawings.
   3. Trim sides and bottom of earth forms.
   4. All soil below slabs and footings shall be properly compacted and subgrade brought to a reasonable true and level plane before placing concrete.
   5. Construct wood edge strips at top of each side of trench to secure reinforcing and prevent trench from sloughing.
   6. Form sides of footings where earth sloughs.
   7. Clean forms of debris and loose material before depositing concrete.

B. Formwork - General:
   1. Provide top form for sloped surfaces steeper than 1.5 horizontal to 1 vertical to hold shape of concrete during placement, unless it can be demonstrated that top forms can be omitted.
   2. Construct forms to correct shape and dimensions, mortar-tight, braced, and of sufficient strength to maintain shape and position under imposed loads from construction operations.
   3. Camber forms where necessary to produce level finished soffits unless otherwise shown on Drawings.
   4. Carefully verify horizontal and vertical positions of forms. Correct misaligned or misplaced forms before placing concrete.
   5. Complete wedging and bracing before placing concrete.

C. Forms for Surfaces to Receive Membrane Waterproofing: Use plywood or steel forms. After erection of forms, tape form joints to prevent protrusions in concrete.

D. Erect formwork, shoring, and bracing to achieve design requirements, in accordance with requirements of ACI 301, ACI 347, and ACI 318.

E. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

F. Obtain Engineer's approval before framing openings in structural members not indicated on Drawings.

G. Install fillet or chamfer strips on external corners of beams, joists, columns, retaining walls and any exposed corner; 1-inch maximum size.

H. Do not reuse wood formwork more than 2 times for concrete surfaces to be exposed to view. Do not patch formwork.

3.3 APPLICATION - FORM RELEASE AGENT

A. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

B. Do not apply form release agent where concrete surfaces are indicated to receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

C. Reuse and Coating of Forms: Thoroughly clean forms and reapply form coating before each reuse. For exposed work, do not reuse forms with damaged faces or edges. Apply form coating to forms in accordance with manufacturer's specifications. Do not coat forms for concrete indicated to receive "scored finish." Apply form coatings before placing reinforcing steel.

3.4 INSTALLATION - INSERTS, EMBEDDED PARTS, AND OPENINGS

A. Install formed openings for items to be embedded in or passing through concrete Work.

B. Locate and set in place items required to be cast directly into concrete.

C. Coordinate with Work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.

D. Install accessories straight, level, and plumb. Ensure items are not disturbed during concrete placement.

E. Install water stops continuous without displacing reinforcement. Heat seal joints watertight.

F. Form Ties:
   1. Use sufficient strength and sufficient quantity to prevent spreading of forms.
   2. Place ties at least 1-inch away from finished surface of concrete.
   3. Leave inner rods in concrete when forms are stripped.
   4. Space form ties equidistant, symmetrical and aligned vertically and horizontally unless otherwise shown on Drawings.

G. Arrangement: Arrange formwork to allow proper erection sequence and to permit form removal without damage to concrete.

H. Construction Joints:
   1. Install surfaced pouring strip where construction joints intersect exposed surfaces to provide straight line at joints.

2. Just prior to subsequent concrete placement, remove strip and tighten forms to conceal shrinkage.
3. Show no overlapping of construction joints. Construct joints to present same appearance as butted plywood joints.
4. Arrange joints in continuous line straight, true and sharp.

I. Embedded Items:
1. Make provisions for pipes, sleeves, anchors, inserts, reglets, anchor slots, nailers, water stops, and other features.
2. Do not embed wood or uncoated aluminum in concrete.
3. Obtain installation and setting information for embedded items furnished under other Specification sections.
4. Securely anchor embedded items in correct location and alignment prior to placing concrete.
5. Verify conduits and pipes, including those made of coated aluminum, meet requirements of ACI 318 for size and location limitations.

J. Openings for Items Passing Through Concrete:
1. Frame openings in concrete where indicated on Drawings. Establish exact locations, sizes, and other conditions required for openings and attachment of work specified under other sections.
2. Coordinate work to avoid cutting and patching of concrete after placement.
3. Perform cutting and repairing of concrete required as result of failure to provide required openings.

K. Screeds:
1. Set screeds and establish levels for tops of concrete slabs and levels for finish on slabs.
2. Slope slabs to drain where required or as indicated on Drawings.
3. Before depositing concrete, remove debris from space to be occupied by concrete and thoroughly wet forms. Remove freestanding water.

L. Screed Supports:
1. For concrete over waterproof membranes and vapor retarder membranes, use cradle, pad or base type screed supports which will not puncture membrane.
2. Staking through membrane is not be permitted.

M. Cleanouts and Access Panels:
1. Provide removable cleanout sections or access panels at bottoms of forms to permit inspection and effective cleaning of loose dirt, debris and waste material.
2. Clean forms and surfaces against which concrete is to be placed. Remove chips, saw dust and other debris. Thoroughly blow out forms with compressed air just before concrete is placed.

3.5 FORMWORK

A. Cleaning:
1. Clean forms as erection proceeds.
2. Clean formed cavities of debris.
3. Flush with water or use compressed air.
4. During cold weather:
   a. Remove ice and snow from within forms.
   b. Do not use de-icing salts.
   c. Do not use water
   d. Use compressed air to remove foreign matter.

B. Removal:
1. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

2. Loosen forms carefully. Do not wedge tools against finish concrete surfaces.
3. Leave forms in place for minimum number of days according to ACI 347.

3.6 ERECTION TOLERANCES

A. Construct formwork to maintain tolerances according to ACI 301 and ACI 318.

B. Camber slabs and beams according to ACI 301.

3.7 FIELD QUALITY CONTROL

A. Inspect erected formwork, shoring, and bracing to ensure that Work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

B. Notify Engineer after placement of reinforcing steel in forms, but prior to placing concrete.

C. Schedule concrete placement to permit formwork inspection before placing concrete.

END OF SECTION

SECTION 04 20 00 - UNIT MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Concrete masonry units.
   2. Reinforcement and accessories.

1.2 SUBMITTALS

A. Product Data:
   1. Submit data for fabricated wire reinforcement and other accessories.

1.3 QUALITY ASSURANCE

A. Perform Work according to ACI 530/530.1 - Building Code Requirements and Specification for Masonry Structures and Related Commentaries.

B. Maintain one copy of the document on site.

1.4 AMBIENT CONDITIONS

A. Do not store reinforcing material directly on ground. Utilize blocking and other methods to prevent rust on accessories prior to installation.

B. Cold Weather Requirements: According to ACI 530.1 when ambient temperature or temperature of masonry units is less than 40 degrees F.

C. Hot Weather Requirements: According to ACI 530.1 when ambient temperature is greater than 100 degrees F or ambient temperature is greater than 90 degrees F with wind velocity greater than 8 mph.

PART 2 PRODUCTS

2.1 PERFORMANCE AND DESIGN CRITERIA

A. Concrete Masonry Compressive Strength (f'm): Per Structural Engineer’s Requirements.

2.2 MATERIALS

A. Hollow Load-Bearing CMU: ASTM C90; normal weight; type I, moisture controlled.

B. Solid Load-Bearing CMU: ASTM C90; normal weight; type I, moisture controlled.

C. Hollow Non-load-bearing CMU: ASTM C129; normal weight.

D. CMU Size: Comply with Drawings.

E. Special CMU Shape: ***All exposed corners in Concessions and Restroom building shall be bullnose type.***

2.3 ACCESSORIES

A. Single-Wythe Joint Reinforcement: ASTM A951; truss type; stainless steel; 0.187 (3/16) - inch diameter side rods with 0.148 (9 gauge) - inch diameter cross rods; hot-dip galvanized.
   1. Manufacturer: Hohmann & Barnard, Inc.
      a. Lox-All® Truss Joint Reinforcement: 120 Truss-Mesh
      b. Substitutions: Section 01 60 00 - Product Requirements.

B. Reinforcing Steel: ASTM A615, 60 ksi yield grade, deformed billet bars, uncoated finish.

C. Mortar and Grout: As specified in Section 04 05 14 - Masonry Mortaring and Grouting.

D. Self-Adhesive Type Flashing: Composite sheet 40 mil thick; 32-mil thick, rubberized asphalt integrally bonded to 8-mil thick, high-density cross laminated polyethylene film.
   1. Manufacturer: GCP
      a. Product: PERM-A-BARRIER® Wall Flashing; apply to a primed substrate per the application instructions of the Manufacturer.
      b. Press flashing firmly into place with a steel hand roller as soon as possible after placement; overlap adjacent pieces 2” and roll overlap with a steel hand roller; apply a bead of Universal Flashing & Sealant along all laps, seams, top edges, cuts, and penetrations and trowel into place.
      c. Product Primer: PERM-A-BARRIER® Adhesive Primer; apply to a dry and clean substrate per the application instructions of the Manufacturer.
      d. Apply primer by brush or roller and apply flashing the same day.
      e. Substitutions: Section 01 60 00 - Product Requirements.

E. Preformed Control Joints: Neoprene material. Furnish with corner and T-accessories, cement-fused joints. Profile as indicated.

F. Joint Filler: Closed cell PVC; oversized 50 percent to joint width; self-expanding.

G. Weeps: Open head joints.

H. Cavity Vents: Preformed aluminum grilles; UV and insect resistant; color as selected.

I. Cleaning Solution: Non-acidic, not harmful to masonry Work or adjacent materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that:
   1. Field conditions are acceptable and ready to receive Work.
   2. Items provided by other Sections of Work are properly sized and located.
   3. Built-in items are in proper location and ready for roughing into masonry Work.

3.2 PREPARATION

A. Direct and coordinate placement of metal anchors supplied to other Sections.

3.3 INSTALLATION

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form bed and head joints of uniform thickness.

C. Coursing of CMU:
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8-inches.
   3. Mortar Joints: ***All exterior joints to be flush struck, interior walls to be concave.***

D. Placing and Bonding:
   1. Lay solid masonry units in full bed of mortar, with full head joints.
   2. Lay hollow masonry units with face shell bedding on head and bed joints.
   3. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.
   4. Remove excess mortar as Work progresses.
   5. Interlock intersections and external corners.
   6. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment is required, remove mortar and replace.
   7. Perform Site cutting of masonry units with proper tools to assure straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
   8. Cut mortar joints flush where bitumen dampproofing is applied.
   9. Isolate masonry from vertical structural framing members with movement joint.
   10. Isolate top of masonry from horizontal structural framing members and slabs or decks with compressible joint filler.

E. Weeps and Vents: Furnish weeps and vents in outer wythe at 32-inches o.c. horizontally above through-wall flashing, above shelf angles and lintels, at bottom of walls.

F. Cavity Wall: Do not permit mortar to drop or accumulate into cavity air space or to plug weeps.

G. Joint Reinforcement and Anchorage - Single-Wythe Masonry:
   1. Install horizontal joint reinforcement 16 inches o.c.
   2. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
   3. Place joint reinforcement continuous in first and second joint below top of walls.
   4. Lap joint reinforcement ends minimum 6 inches.
   5. Reinforce joint corners and intersections with strap anchors 16 inches o.c.

H. Masonry Flashings:
   1. Extend flashings horizontally through outer wythe at foundation walls, above ledges, shelf angles, and lintels, under parapet caps, at bottom of walls, and turn down on outside face to form drip.
   2. Turn flashing up minimum 8 inches and bed into mortar joint of masonry backing.
   3. Lap end joints minimum 6 inches and seal watertight.
   4. Turn flashing; fold and seal at corners, bends, and interruptions.

I. Reinforced Masonry:
   1. Lay masonry units with cells vertically aligned and cavities clear of mortar and obstructions.
   2. Place reinforcement bars as indicated.
   3. Support and secure reinforcement from displacement.
   4. Place and consolidate grout fill without displacing reinforcing.
   5. Place grout according to ACI 530.1.

J. Control Joints:
   1. Install control joints as indicated on Drawings.
   2. Do not continue horizontal joint reinforcement through control joints.
   3. Install preformed control joint device in continuous lengths. Seal butt and corner joints.
   4. Size control joint as specified in Section 07 90 00 - Joint Protection for sealant performance.

K. Cutting and Fitting:
   1. Cut and fit for conduit, sleeves, and outlets. Coordinate with other Sections of Work to provide correct size, shape, and location.

3.4 TOLERANCES

A. Maximum Variation from Unit to Adjacent Unit: 1/16 inch.

B. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

C. Maximum Variation from Level Coursing: 1/8 inch in 3 feet and 1/4 inch in 10 feet; 1/2 inch in 30 feet.

D. Maximum Variation of Joint Thickness: 1/8 inch in 3 feet.

3.5 CLEANING

A. Clean soiled surfaces with cleaning solution.

3.6 PROTECTION

A. Protect exposed external corners subject to damage.

B. Protect base of walls from mud and mortar splatter.

C. Protect masonry and other items built into masonry walls from mortar droppings and staining caused by mortar.

D. Protect tops of masonry Work with waterproof coverings secured in place without damaging masonry. Provide coverings where masonry is exposed to weather when Work is not in progress. Maintain protection on tops of completed exterior walls until installation of permanent waterproof cap materials.

END OF SECTION

SECTION 04 72 00 - CAST STONE MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Cast stone sills, caps, and water table.

B. Related Requirements:
   1. Section 04 05 14 - Masonry Mortaring and Grouting.
   2. Section 04 20 00 - Unit Masonry.
   3. Section 04 73 00 - Manufactured Masonry Veneer.
   4. Section 06 10 00 - Rough Carpentry.
   5. Section 07 21 13 - Board Insulation.
   6. Section 07 62 00 - Sheet Metal Flashing and Trim.
   7. Section 07 90 00 - Joint Protection.

1.2 DEFINITIONS

A. Cast Stone: A refined architectural concrete building unit manufactured to simulate natural cut stone, used in Division 4 masonry applications.
   1. Dry Cast: Manufactured from zero slump concrete.
      a. Vibrant Dry Tamp (VDT) casting method: Vibratory ramming of earth moist, zero-slump concrete against a rigid mold until it is densely compacted.
      b. Machine casting method: Manufactured from earth moist, zero-slump concrete compacted by machinery using vibration and pressure against a mold until it becomes densely consolidated.
   2. Wet Cast: Manufactured from measurable slump concrete.
      a. Wet casting method: Manufactured from measurable slump concrete and vibrated into a mold until it becomes densely consolidated.

B. Quirk: A groove separating a bead or other molding from adjoining members.

1.3 REFERENCE STANDARDS

A. American Concrete Institute:
   1. ACI 530/530.1 – Building Code Requirements and Specification for Masonry Structures and Related Commentaries.
   2. ACI 318 – Building Code Requirements for Reinforced Concrete.

B. American Society for Testing and Materials (ASTM) - *Annual Book of ASTM Standards*
   1. ASTM C270 – Standard Specification for Mortar for Unit Masonry.
   2. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
   3. ASTM A1064 - Standard Specification for Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
   4. ASTM C33 - Standard Specification for Concrete Aggregates.
   5. ASTM C150 - Standard Specification for Portland Cement.
   6. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
   7. ASTM C426 - Standard Test Method for Linear Drying Shrinkage of Concrete Masonry Units.
   8. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
   9. ASTM C595 - Standard Specification for Blended Hydraulic Cements.

10. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
11. ASTM C666 - Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing.
12. ASTM C979 - Standard Specification for Pigments for Integrally Colored Concrete.
13. ASTM C989 - Standard Specification for Slag Cement for Use in Concrete and Mortars.
14. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete.
15. ASTM C1194 - Standard Test Method for Compressive Strength of Architectural Cast Stone.
16. ASTM C1195 - Standard Test Method for Absorption of Architectural Cast Stone.
17. ASTM C1364 - Standard Specification for Architectural Cast Stone.
18. ASTM D2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
19. ASTM D7957 - Standard Specification for Solid Round Glass Fiber Reinforced Polymer Bars for Concrete Reinforcement.
20. ASTM E111-17. Standard Test Method for Young's Modulus, Tangent Modulus, and Chord Modulus.

C. Cast Stone Institute:
   1. Technical Manual.

D. The Masonry Society:
   1. TMS 404; Standard for Design of Architectural Cast Stone.
   2. TMS 504 –23; Standard for Fabrication of Architectural Cast Stone
   3. TMS 604 –23; Standard Specification for Installation of Architectural Cast Stone

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data for cast stone units, anchors, and other accessories.

C. Shop Drawings:
   1. Indicate cast stone layout, profiles, cross sections, reinforcement, exposed faces, joint arrangement, anchoring methods, and anchors.
   2. Indicate cast stone types and locations.

D. Samples:
   1. Submit cast stone samples, illustrating finish, texture, and color options for the furnished product.

E. Test Reports:
   1. Submit manufacturer's test results of Cast Stone previously made by the manufacturer.
   2. Indicate concrete mix design compressive strength and water absorption.

F. Manufacturer's Certificate: Certify that products are produced by a manufacturer with a Cast Stone Institute® Plant Certification.

G. Manufacturer's Instructions: Submit instructions for anchor attachment, cast stone cleaning, and special Project installation conditions.

H. Warranty: Submit Cast Stone Institute® Member Limited Warranty.

1.5 QUALITY ASSURANCE

A. Perform Work according to ACI 530/530.1 and according to the Cast Stone Institute® Technical Manual.

B. Mockup: Provide full-size unit(s) for use in construction sample wall(s).

C. Warranty: 10 years.

1.6 QUALIFICATIONS

A. Manufacturer:
   1. Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.
   2. Cast Stone shall be produced in a plant certified by the Cast Stone Institute®.
   3. Manufacturer shall have sufficient plant facilities to produce the shapes, quantities and size of Cast Stone required in accordance with the project schedule.

B. Installer:
   1. Company specializing in performing Work of the Section with minimum three years' documented experience and approved by manufacturer.

1.7 MOCKUP

A. Construct mockup panel, per the Drawings. Coordinate with Work of other Sections.

B. The approved mock-up shall become the standard for appearance and workmanship for the project.

C. Locate where directed by Architect.

D. Remove when directed by Architect.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Mark cast stone units with same identification marks as shown on the Shop Drawings.

C. Provide an itemized list of product to support the bill of lading.

D. During shipping and storage protect cast stone from damage, soiling, and staining.

E. Accept cast stone on-Site in manufacturer’s protective packaging and inspect for damage.

F. Store materials according to manufacturer's instructions.

G. Provide ventilation to prevent condensation from forming on cast stone.

1.9 AMBIENT CONDITIONS

A. Cold Weather Requirements: According to Cast Stone Institute Bulletin # 41, and ACI 530/530.1, when ambient temperature or temperature of masonry units is less than 40 degrees F.

B. Hot Weather Requirements: According to Cast Stone Institute Bulletin # 48, and ACI 530/530.1, when ambient temperature is greater than 100 degrees F or ambient temperature is greater than 90 degrees F with wind velocity greater than 8 mph.

1.10 EXISTING CONDITIONS

A. Field Measurements:
   1. Verify field measurements prior to fabrication.
   2. Indicate field measurements on Shop Drawings.

PART 2 PRODUCTS

2.1 CAST STONE

A. Description:
   1. Comply with ASTM C1364.
   2. Architectural Cast Stone Units Fabrication Method: Dry casting or wet casting, as recommended by manufacturer.
   3. Finish: Fine-grained texture simulating natural cut stone.

B. Physical Properties:
   1. Compressive Strength - ASTM C1194: 6,500 psi minimum at 28 days.
   2. Absorption – ASTM C1195: 6.0% maximum at 28 days.
   3. Air Content – Provide sufficient air content to meet the freeze-thaw requirements for wet cast products, when the air content is tested in accordance with Test Method C173/C173M or Test Method C231/C231M. Air entrainment is not required for Vibrant Dry Tamp (VDT) products.
   4. Freeze-thaw – ASTM C666/C666M in accordance with ASTM C1364. The CPWL shall be less than 5.0% after 300 cycles of freezing and thawing.
   5. Linear Drying Shrinkage – ASTM C426: Test and report in accordance with ASTM C1364.

C. Job Site Testing: One sample from production units may be selected at random from the field for each 500 cubic feet (14 m 3) delivered to the job site.
   1. Three field cut cube specimens from each of these samples shall have an average minimum compressive strength of not less than 85% with no single specimen testing less than 75% of design strength as allowed by ACI 318.
   2. Three field cut cube specimens from each of these samples shall have an average maximum cold water absorption of 6.0%.
   3. Field specimens shall be tested in accordance with ASTM C1194 and C1195.

2.2 MATERIALS

A. Portland cement: Type I or Type III, white and/or grey, ASTM C150 or ASTM C595 Blended Hydraulic Cement (Type 1L).

B. Coarse aggregates: Granite, quartz or limestone, ASTM C33, except for gradation, and are optional for the Vibrant Dry Tamp (VDT) casting method.

C. Fine aggregates - Manufactured or natural sands, ASTM C33, except for gradation.

D. Colors - Inorganic iron oxide pigments, ASTM C979 except that carbon black pigments shall not be used.

E. Admixtures:
   1. Comply with ASTM C260 for air-entraining admixtures.

2. Comply with ASTM C494/C495M Types A - G for water reducing, retarding, accelerating, and high range admixtures
3. Other admixtures: Integral water repellents and other chemicals, for which no ASTM Standard exists, shall be previously established as suitable for use in concrete by proven field performance or through laboratory testing.
4. ASTM C618 mineral admixtures of dark and variable colors shall not be used in surfaces intended to be exposed to view
5. ASTM C989 granulated blast furnace slag may be used to improve physical properties. Tests are required to verify these features.

F. Water: potable.

G. Reinforcing bars:
1. ASTM A615/A615M: Grade 40 or 60.
2. ASTM D7957/D7957M: Standard Specification for Solid Round Glass Fiber Reinforced Polymer Bars for Concrete Reinforcement.
3. Welded Wire Fabric: ASTM A1064 / A1064M where applicable for wet cast units.

H. Fiber reinforcement (optional): Comply with ASTM C1116.

I. All anchors, dowels and other anchoring devices and shims shall be standard building stone anchors commercially available in a non-corrosive material such as zinc plated, galvanized steel, brass, high impact plastic shims, or stainless steel Type 302, 304 or 316.

2.3 PERFORMANCE AND DESIGN CRITERIA

A. Color and Finish: Match sample provided and on file with Architect.

B. All surfaces intended to be exposed to view shall have a fine-grained texture similar to natural stone, with no air voids in excess of 1/32 in. and the density of such voids shall be le ss than 3 occurrences per any 1 in.2 and not obvious under direct daylight illumination at a 5 ft distance.

C. Units shall exhibit a texture approximately equal to the approved sample when viewed under direct daylight illumination at a 10 ft distance.
1. ASTM D2244 permissible variation in color between units of comparable age subjected to similar weathering exposure.
a. Total color difference – not greater than 6 units.
b. Total hue difference – not greater than 2 units.

D. Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips shall not be obvious under direct daylight illumination from a 20 -ft distance.

E. The occurrence of crazing or efflorescence shall not constitute a cause for rejection.

F. Remove cement film, if required, from exposed surfaces prior to packaging for shipment.

2.4 REINFORCING

A. Reinforce the units as required by the drawings and for safe handling and structural stress.

B. Minimum reinforcing shall be 0.25 percent of the cross section area.

C. Reinforcement shall be noncorrosive where faces exposed to weather are covered with less than 1.5 in. of concrete material. All reinforcement shall have minimum coverage of twice the diameter of the bars.

D. Panels, soffits and similar stones greater than 24 in. (600 mm) in one direction shall be reinforced in that direction. Units less than 24 in. (600 mm) in both their length and width dimension shall be non-reinforced unless otherwise specified.

E. Welded wire fabric reinforcing shall not be used in dry cast products.

2.5 CURING

A. Cure units in a warm curing chamber approximately 100ºF (37.8ºC) at 95 percent relative humidity for approximately 12 hours, or cure in a 95 percent moist environment at a minimum 70ºF (21.1ºC) for 16 hours after casting. Additional yard curing at 95 percent relative humidity shall be 350-degree days (i.e. 7 days @ 50°F (10°C) or 5 days @ 70°F (21°C)) prior to shipping. Form cured units shall be protected from moisture evaporation with curing blankets or curing compounds after casting.

2.6 MANUFACTURING TOLERANCES

A. Minimum Thickness shall be 2.5 inches to facilitate testing for compressive strength and absorption as specified in ASTM C-1364 Standard Specification for Architectural Cast Stone.

B. Cross section dimensions shall not deviate by more than ±1/8 inch from approved dimensions.

C. Length of units shall not deviate by more than length/ 360 or ±1/8 inch, whichever is greater, not to exceed ±1/4 inch.

D. Maximum length of any unit shall not exceed 15 times the average thickness of such unit unless otherwise agreed by the manufacturer.

E. Warp, bow or twist of units shall not exceed length/ 360 or ±1/8 inch, whichever is greater.

F. Location of dowel holes, anchor slots, flashing grooves, false joints and similar features:
   1. On formed sides of unit, 1/8 inch.
   2. On unformed sides of unit, 3/8 inch. maximum deviation.

2.7 PRODUCTION QUALITY CONTROL

A. Testing:
   1. Test compressive strength and absorption from specimens taken from every 500 cubic feet of product produced.
   2. Perform tests in accordance ASTM C1194 and C1195.
   3. Have tests performed by an independent testing laboratory every six months.
   4. New and existing mix designs shall be tested for strength and absorption compliance prior to producing units.
   5. Retain copies of all test reports for a minimum of two years.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive Work.

B. Verify that items provided by other Sections of Work are properly sized and located.

C. Verify elevations, dimensions, and alignment of foundations and other supporting construction prior to beginning Work.

D. Check Cast Stone materials for fit and finish prior to installation; unacceptable units shall not be set.

3.2 PREPARATION

A. Coordinate installation of anchors furnished to other Sections.

B. Provide for erection procedures and induced loads during erection.

C. If required, furnish temporary bracing during installation and maintain temporary bracing in place until final support is provided.

3.3 TOLERANCES

A. Tolerances: According to Cast Stone Institute® Technical Manual.

B. Set stones 1/8 inch or less, within the plane of adjacent units.

C. Joints, plus - 1/16 inch, minus - 1/8 inch.

3.4 INSTALLATION

A. Jointing and Coursing:
   1. Joint Location: as indicated on shop drawings and at control and expansion joints, unless otherwise shown.
   2. Joint Width at Stone to Brick: 3/8 inch.
   3. Joint Width at Stone to Stone in Vertical Position: 3/8 inch.
   4. Joint Width at Stone to Stone Exposed on Top: 3/8 inch.
   5. Joint Shape: Concave.
   6. Joint Materials for Unit Pieces weighing 300 pounds or less:
      a. Mortar, Type N, ASTM C270.
      b. Use a full bed of mortar at all bed joints.
      c. Leave all vertical joints open for polyurethane sealant.
      d. Leave all joints with exposed tops or under relieving angles open for polyurethane sealant.
      e. Leave head joints in copings and projecting components open for polyurethane sealant.
   7. Joint Materials for Unit Pieces weighing 300 pounds or more:
      a. Units to rest on plastic high-impact setting shims.
      b. Plastic high-impact shims to be set into silicone sealant bed.
      c. Leave all vertical joints open for polyurethane sealant.
      d. Leave all joints with exposed tops or under relieving angles open for polyurethane sealant.
      e. Leave head joints in copings and projecting components open for polyurethane sealant.

B. Setting and Bonding:
   1. Install anchors to support and position cast stone.
   2. Drench cast stone units with clean running water, just prior to setting.
   3. Fill dowel holes and anchor slots completely with mortar or non-shrink grout.
   4. Lay cast stone units on plastic high-impact shims or in full bed of mortar, unless otherwise detailed.
   5. Leave head and top joints in units with exposed top surfaces open to receive sealant.
   6. Adjustments:
      a. Do not shift or tap cast stone units after mortar has achieved initial set.
      b. If adjustment is required, remove mortar and replace.
   7. Mortar Joints:
      a. Rake mortar joints 3/4 inches deep for pointing, and sponge face of each stone to remove excess mortar immediately after setting.

b. Pack mortar tightly into joint.
c. Tuck-point unit mortar joints to a slight concave profile.

8. Site cutting of cast stone units may be permitted with approval of architect.

C. Weeps:
1. Install weeps in vertical stone joints at 32 inches o.c., horizontally.
2. Locations: Immediately above horizontal flashings.

D. Cavity Wall:
1. Do not permit mortar to drop or accumulate into cavity air space or to plug weeps.

E. Flashings:
1. Extend flashings horizontally through cast stone at caps, water table, and coping; turn down on outside face.
2. Turn flashing up minimum 8 inches and seal to sheathing over framed backing.
3. Lap end joints minimum 6 inches and seal watertight.
4. Turn flashing, fold, and seal at corners, bends, and interruptions.

F. Control Joints:
1. Form control joint by omitting mortar at sealing joint, as specified in Section 07 90 00 - Joint Protection.
2. Size control joint, as specified in Section 07 90 00 - Joint Protection, for sealant performance.
3. Form expansion joint by priming ends of units, inserting properly sized backer rod, and installing required sealant.

3.5 CLEANING

A. Replace defective mortar.

B. Repair chips with touchup materials furnished by manufacturer.

C. Match adjacent Work.

D. Saturate units to be cleaned prior to applying an approved masonry cleaner; consult with the manufacture for appropriate cleaners.

E. Use nonmetallic tools in cleaning operations.

3.6 INSPECTION AND ACCEPTANCE

A. Inspect finished installation according to Cast Stone Institute® Technical Bulletin #36.

B. Do not field apply water repellent until repair, cleaning, inspection and acceptance is completed.

3.7 WATER REPELLENT

A. Apply water repellent in accordance with Cast Stone Institute® Technical Bulletin #35 or water repellent manufacturer’s directions. Product Basis of Design; Prosoco SL100 or equal.

3.8 PROTECTION

A. Protect cast stone from contact with mortar, soil, and other materials capable of staining or discoloring cast stone.

B. Coverings:

1. Protect tops of masonry work with waterproof coverings secured in place without damaging masonry.
2. Provide coverings where masonry is exposed to weather when Work is not in progress.
3. Maintain protection on tops of completed exterior walls until installation of permanent waterproof cap materials.

END OF SECTION

SECTION 04 73 00 – MANUFACTURED MASONRY VENEER

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Portland cement based manufactured stone veneer and trim.
   2. Reinforcement, anchorage, and accessories.

B. Related Sections:
   1. Section 04 20 00 – Unit Masonry.
   2. Section 07 60 00 – Flashing and Sheet Metal.
   3. Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI A118.4 Specifications for Latex-Portland Cement Mortar.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C 39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
   2. ASTM C 67 – Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
   3. ASTM C 144 – Standard Specification for Aggregate for Masonry Mortar.
   4. ASTM C 177 – Standard Test Method for Steady-State Head Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
   5. ASTM C 192 – Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
   6. ASTM C 207 – Standard Specification for Hydrated Lime for Masonry Purposes.
   7. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.
   8. ASTM C 482 – Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
   9. ASTM C 847 – Standard Specification for Metal Lath.
   10. ASTM C 932 – Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
   11. ASTM C1063 –Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.
   12. ASTM C1329 – Standard specification for Portland cement.
   13. ASTM C1670 – Standard Specification for Adhered Manufactured Stone Masonry Veneer Units

C. International Code Council (ICC):
   1. ESR Report.

D. Underwriter's Laboratory (UL):
   1. Building Materials Directory.

1.3 SUBMITTALS

A. Product Data:
   1. Submit data for manufactured masonry veneer, fasteners, and other accessories.

B. Samples:
   1. Submit a standard sample board consisting of small-scale pieces of veneer units showing full range of textures and colors.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with the applicable codes and the installation instructions of the manufacturer.

B. Installer Qualifications: Experienced mason, with three years documented experience, familiar with manufacturer's installation procedures and related local, state, and federal codes.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Accept manufactured stone veneer units on-Site in manufacturer's packaging. Inspect for damage. And follow manufacturer's instructions for storage and handling.

1.6 AMBIENT CONDITIONS

A. Use blocking and other methods to prevent rust on accessories prior to installation.

B. Cold Weather Requirements: According to ACI 530.1 when ambient temperature or temperature of masonry units is less than 40 degrees F.

C. Hot Weather Requirements: According to ACI 530.1 when ambient temperature is greater than 100 degrees F or ambient temperature is greater than 90 degrees F with wind velocity greater than 8 mph.

1.7 WARRANTY

A. Special Warranty:
   1. Manufacturer's standard warranty coverage against defects in materials when installed in accordance with manufacturer's installation instructions.

PART 2 PRODUCTS

2.1 MANUFACTURED STONE VENEER

A. Material Allowance:
   1. ***A material-only unit price allowance of $8.00 per-square-foot shall be included for manufactured stone veneer.***
   2. Allowance shall cover cost to the contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts.
   3. Cost not included in allowance but included in Contract Sum/Price: Product handling at the Site including loading and unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing unless otherwise stated.

B. Basis of Design:
   1. Manufacturer: TBD
   2. Tight fit stone, drystack mortar joint.
   3. Inside and outside corner pieces to be one-piece.

C. Approved Manufacturers:
   1. Eldorado Stone
   2. Cultured Stone
   3. Coronado Stone Products
   4. Substitutions: Section 01 60 00 - Product Requirements.

2.2 MATERIALS

A. Stone Veneer: precast veneer units consisting of Portland cement, lightweight aggregates, and mineral oxide pigments.
   1. Compressive Strength: ASTM C192 and ASTM C39, 5 sample average: greater than 1,800 psi.
   2. Shear Bond: ASTM C482, 50 psi, minimum
   3. Freeze-Thaw Test: ASTM C67, less than 3% weight loss and no disintegration.
   4. Thermal Resistance: ASTM C177, 0.473 at 1.387 inches thick.
   5. Weight per Square Foot: ASTM C1670, 15 pounds, saturated.

B. Weather Resistive Barrier: fluid applied to concrete masonry unit.

C. Reinforcing: ASTM C 847, 2.5lb/yd^2 (1.4kg/m^2) galvanized expanded metal lath complying with code agency requirements for the type of substrate over which stone veneer is installed; install with lath fastener per ASTM C 1063. Lath not required at Amphitheater Seating, Front of House, and A/C Skirt Walls.

D. Mortar:
   1. Cement: Portland cement complying with ASTM C 1329.
   2. Lime: ASTM C 207.
   3. Sand: ASTM C 144, natural or manufactured sand.
   4. Water: Potable.
   5. Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4.

E. Bonding Agent: Exterior integral bonding agent meeting ASTM C 932.

F. Water Repellent: Water based silane or siloxane masonry water repellent.

2.3 MORTAR MIXES

A. Jointless / Dry-Stacked Installation:
   1. Polymer modified mortar complying with ANSI A118.4.
   2. Mortar prepared to comply with ASTM C270. Type S mortar.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field conditions and substrates are acceptable and are ready to receive Work.

B. Verify that items provided by other Sections of Work are properly sized and located.

C. Verify that built-in items are in proper location and ready for roughing into masonry work.

D. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

E. Commencement of work by installer is acceptance of substrate.

3.2 PREPARATION

A. Protect adjacent work from contact with mortar.

B. Surface Preparation: Prepare substrate in accordance with manufacturer's installation instructions for the type of substrate being covered.

3.3 INSTALLATION

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Install and clean stone in accordance with manufacturer's installation instructions for Jointless/Dry-Stacked installation.

C. Install per National Concrete Masonry Association's *Installation Guide and Detailing Options for Adhered Manufactured Stone Veneer 5th Edition, 4th Printing*.

3.4 CLEANING

A. Remove excess mortar and mortar smears as Work progresses.

B. Replace defective mortar. Match adjacent Work.

C. Cleaning Veneer Units:
1. Wash with soft bristle brush and water/granulated detergent solution.
2. Rinse immediately with clean water.

D. Removing Efflorescence:
1. Allow veneer to dry thoroughly.
2. Scrub with soft bristle brush and clean water.
3. Rince immediately with clean water; allow to dry.
4. If efflorescence is still visible, contact manufacturer for assistance.

3.5 PROTECTION

A. Protect exposed external corners subject to damage.

B. Protect base of walls from mud and mortar splatter.

C. Protect masonry veneer and other items built into masonry walls from mortar droppings and staining caused by mortar.

D. Protect tops of masonry work with waterproof coverings secured in place without damaging masonry. Provide coverings where masonry is exposed to weather when Work is not in progress. Maintain protection on tops of completed exterior walls until installation of permanent waterproof cap materials.

END OF SECTION

SECTION 06 18 13 – STRUCTURAL GLUED LAMINATED TIMBER

PART 1 GENERAL

1.1 SUMMARY

A. This section includes structural glued laminated timber elements.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 REFERENCES

A. American Institute of Timber Construction (AITC)
   1. AITC Timber Construction Manual - Latest Edition
   2. AITC 109 - Standard for Preservative Treatment for Glulam
   3. AITC 111 - Recommended Practice for the Erection of Glulam
   4. AITC 117 - Design Standard Specifications for Glulam
   5. AITC 200 - Inspection Manual for Glulam (Separate Publication)

B. National Design Specifications for Stress-Grade Lumber And Its Fastenings

C. American Institute of Steel Construction (AISC)

D. American Society of Testing and Materials (ASTM):

E. American Wood Preservers Association (AWPA)

1.04 DEFINITIONS

A. Glued-Laminated timber is hereby defined to include wood members fabricated from 1" or 2" nominal thickness lumber glued face-to-face with the grain of all laminated approximately parallel longitudinally. Glued-Laminated timber is also referred to as glulam.

1.05 SYSTEM DESCRIPTION

A. Design Requirements and Performance Requirements:
   1. The extent of glued laminated timber work is shown on the drawings either by terminology used in this specification or by the abbreviations as indicated.
   2. Provide sizes and shapes shown on the plans. Final cross sections will be based on manufacturers' standard widths and depths. Manufacturer to provide design values (stresses) to fulfill structural demand in accordance with applicable provisions of AITC 117. 3. All laminated wood members must be manufactured by a <u>single</u> AITC licensed manufacturer bearing AITC stamp on each member.
   4. The glulam manufacturer or laminator is to be fully responsible for the structural integrity of the material they furnish. The laminator shall have an Engineer in their permanent employment to certify his design by stamping the shop drawings. The engineer must be registered in the State of Georgia.

1.06 SUBMITTALS

A. General:
   1. Section 01 33 00 - Submittal Procedures.

B. Product Data:
   1. Submit manufacturer's descriptive literature and product specifications.
   2. Submit certification, indicating glued-laminated timbers comply with requirements of the ANSI/AITC A190.1-latest edition.

C. Shop Drawings:
   1. Submit shop drawings showing full dimensions of each member. Indicate species and stress grade of lumber, type of glue, and other variables in required work. Manufacturer shall furnish (4) sets of shop drawings for architect's approval prior to fabrication. The general contractor shall verify dimensions and be responsible for coordinating same.

D. Samples:
   1. Submit samples of standard factory stain colors for architect's approval prior to fabrication.

1.07 QUALITY ASSURANCE

A. Standards
   1. Comply with "Structural Glued-Laminated Timber" ANSI/AITC A190.1- latest edition.
B. Manufacturer
   1. Provide factory-glued timber units, produced by an AITC licensed firm, qualified to issue the AITC "Quality Inspected" Mark. Factory mark each piece of glued-laminated timber with the AITC Quality Inspected Mark. Place AITC Mark on timber surfaces which will not be exposed in completed work.
C. Erector
   1. Erector Qualification: company specializing in the erection of glue laminated units with a minimum of 10 years documented experience.

1.08 PACKING, DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling, and Unloading:
   1. Before shipping or exposing to outdoor conditions, individually wrap each member with manufacturer's standard opaque, durable, water-resistant, plastic-coated paper covering with water resistant seams.
   2. Schedule delivery and installation of glued-laminated wood members to avoid extended on-site storage. Comply with AITC 111 - "Recommended Practice for Protection of Structural Glued-Laminated Timber during Transit, Storage and Erection".

B. Storage and Protection:
   1. Keep laminated wood members as dry as possible during all phases. General contractor is responsible for protection of the construction. If jobsite storage is necessary, place members on blocking a minimum of 6" off the ground, away from ponding water, avoiding ground contact and separated with blocking to allow air circulation around each member. Cover glulam with a waterproof covering which will not allow ultraviolet ray penetration of the materials at the jobsite or at temporary storage area.
   2. Time of removal of factory wrapping is optional, but it must be emphasized that the factory applied wrapping provides temporary protection from moisture, soiling, and damage in handling and

in-transit only. If further utilization of the wrap is desired for protection after shipment, the members should be inspected and provided with additional protection as necessary. If it is impractical to replace wrapping, ALL of it should be removed. Do not leave members partially exposed due to potential sun bleaching. Do not allow moisture to accumulate inside wrapping.

3. Do not remove wrapping on individually wrapped members until it will serve no useful purpose, including protection from the weather, soiling and damage from other work trades.

4. It is imperative that the field handling instructions sheet (brown envelope) that comes with the material shipment be thoroughly reviewed before unloading.

1.08 PROJECT/SITE CONDITIONS

A. Environmental Requirements

1. After completion of glulam work the general contractor is responsible for proper protection of all wood members. Initial building heat shall be elevated gradually to the desired level. To minimize checking the relative humidity of the building shall not be reduced rapidly.

1.09 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Warrant installed glued laminated structural units to be free from defects in material and workmanship for a period of 1 year.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers:

1. Manufacture of glued laminated timber shall be a member of AITC.

2.02 MATERIALS

A. Materials:

1. Lumber shall comply with ANSI/AITC A190.1 and applicable lumber association standards cited therein required to achieve glued laminated timber requirements for allowable stress, appearance, fabrication limitations and species.
2. Lumber species shall be Southern Pine.
3. Adhesives shall be wet-use (waterproof) complying to ANSI/AITC A190.1
4. Pressure Preservative treat members which are directly exposed to the weather or in constant moisture (ie. pool enclosure) in conformance with AITC 109. Pressure treat the lumber prior to gluing with Pentachlorophenol in mineral spirits to .3 lbs/cuft retention for above grade applications and to .6lbs/cuft for below grade. Two coats of matte varnish to be applied after treatment and staining.

2.03 FABRICATION

A. Wood:

1. Lumber shall be fabricated in accordance with ANSI/AITC A190.1.
2. Appearance Grade shall be AITC Architectural.
3. Except as otherwise indicated, fabricate horizontal straight load-bearing members, with a camber as shown on the drawings.
4. Drilling, end cutting, dapping, and addition fabrication to be done in AITC manufacturers plant.

B. Steel Connections:

1. Provide fabricated steel connections to join laminated to laminated, and laminated to supports, exclusive of items embedded in concrete, masonry, welded to structural steel, or connected to stud walls.
2. Steel work to conform to AISC Specifications.
3. Steel shall conform to Mild Steel M-1020.
4. Bolts shall conform to ASTM A-307 and are primed painted.
5. Bolts to be provided by glulam manufacturer for steel connections.
6. Note: Connections and bolts directly exposed to the weather, not under roof covered, or in natatorium / swimming pool enclosure shall be hot dipped galvanized. Stainless bolts to be used in natatoriums.

2.04 FINISHES

A. Wood:

1. Glue laminated members to receive a factory finish of (1) coat of an approved standard semi-transparent stain offered by the manufacturer.
2. Immediately after end-cutting each member to final length, the factory shall apply a saturation coat of end sealer to ends and other cross-cut surfaces.

PART 3 EXECUTION

3.01 ACCEPTABLE INSTALLERS

A. Erector:

1. Installation of glulam timbers shall be by manufacturer's installers where available.
2. Other installers shall be considered upon written request for approval which has been received by the Architect 7 days prior to bid date. Each request shall include the name of the installer, years in business, insurance coverage, and a list of 5 similar size projects in the area in the past year which the installer seeking approval has provided.

3.02 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

3.03 PREPARATION

A. Anchor bolt settings / or embedded weld plates and bearing elevations (not Structural Wood Systems responsibility) are extremely critical and must be held within 1/8" of the dimensions shown on the shop drawings. The general contractor is responsible for setting the anchor bolts and/or bearing elevations in the field.

3.04 ERECTION, INSTALLATION, APPLICATION INSTRUCTION

A. Comply with AITC 111 "Recommended Practice For the Erection of Glulam", manufacturer's instructions, and approved shop drawings. Handle and temporarily support members to prevent damage. All members must be adequately braced until the complete structural system (all pertinent construction materials) has been installed. Correction of minor misfits and a reasonable amount of cutting, reaming, re-drilling, or alignment with drift pins will be considered a legitimate expense of erection.

END OF SECTION

SECTION 07 10 00 – DRAINAGE MAT SYSTEM FOR WATERPROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Application of a geocomposite drainage system.

1.02 RELATED SECTIONS

A. Section 03 30 00 – Cast-in-Place Concrete.

B. Section 04 20 00 – Unit Masonry.

C Section 07 62 00 – Flashing and Sheet Metal.

.

D. Section 07 90 00 – Joint Sealants.

1.03 REFERENCES

A. ASTM D1621 (modified) – Standard Test Method for Compressive Properties Of Rigid Cellular Plastics.

B. ASTM D1777 - Standard Test Method for Thickness of Textile Materials.

C. ASTM D3776 - Standard Test Methods for Mass Per Unit Area (Weight) of Fabric.

D. ASTM D3786 - Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method.

E. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.

G. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.

H. ASTM D4716 – Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.

I. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile.

1.04 SUBMITTALS

A. Comply with Section 01 33 00 - Submittal Procedures.

B. Submit manufacturer's product data and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean dry area in accordance with manufacturer's instructions.

C. Protect materials during handling and application to prevent damage or contamination.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Product not intended for uses subject to abuse or permanent exposure to the elements.

B. Protect rolls from direct sunlight until ready for use.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

A. Basis of Design:

1. MEL-DRAIN 9055-B + MEL-TOTAL-DRAIN base: high strength dimple raised moulded polystyrene core with a monofilament fabric bonded to the dimples of the core. Used for horizontal deck and landscaping applications. Attached to the back side of the dimples is a polyethylene sheet designed to prevent soft waterproofing membranes from working their way into the back-side of the dimples. TOTAL-DRAIN provides both water collection and high-profile water flow to incorporated drainage exits.

2. Substitutions: Section 01 25 00 – Substitution Procedures.

2.03 ACCESSORIES

A. Termination Bar: TERMINATION BAR from W. R. MEADOWS.

B. Pointing Mastic: POINTING MASTIC from W. R. MEADOWS.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive membrane. Notify Architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

A. Protect adjacent surfaces not designated to receive drainage system.

B. Clean and prepare surfaces to receive drainage system in accordance with manufacturer's instructions.

3.03 APPLICATION

A. Vertical Application
1. Unroll drainage board with flat, core side against the wall or waterproofing membrane. Drainage board can be fastened at the top side with a suitable mechanical fastening system that is compatible with the substrate.
2. Adhere remainder of drainage board with mastic, compatible with this installation.

3. Overlap the flat side core lip with second sheet of drainage board to provide a continuous drainage layer (shingle fashion). Ensure excess filter fabric is overlapped with this next sheet.

B. Horizontal Application
1. Unroll drainage board and apply from high point to low point ensuring that overlap is in such a way so that water runs with the overlap.
2. Add appropriate ballast as needed to hold down drainage board.

3.04 PROTECTION

A. Backfill immediately using care to avoid damaging drainage layer and to ensure permanent placement of the drainage board.

3.05 LOCATIONS TO BE INSTALLED

A. BACK OF HOUSE AT AMPHITHEATER STAGE, SEE DRAWINGS FOR DETAILS

B. AMPHITHEATER SEATING AREA AT ALL SEAT WALL LOCATIONS, SEE DRAWINGS FOR DETAILS.

END OF SECTION

SECTION 07 14 16 - COLD-FLUID APPLIED WATERPROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Application of single-component, cold-applied, liquid waterproofing membrane.

1.02 RELATED SECTIONS

A. Section 03 30 00 – Cast-in-Place Concrete.

B. Section 04 20 00 – Unit Masonry.

C. Section 07 10 00 – Drainage Mat System for Waterproofing.

E. Section 07 62 00 – Flashing and Sheet Metal.

F. Section 07 90 00 – Joint Sealants.

1.03 REFERENCES

A. ASTM D146-97 - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Fabrics Used in Roofing and Waterproofing.

B. ASTM D412-98a(2002)e1 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers -Tension.

C. ASTM E96-00e1 (Method B) - Standard Test Methods for Water Vapor Transmission of Materials.

D. ASTM D1228 - Methods of Testing Asphalt Insulating Siding Surfaced with Mineral Granules.

E. ASTM C836 - Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.

F. ASTM D1970-01 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.

1.04 SUBMITTALS

A. Comply with Section 01 33 00 - Submittal Procedures.

B. Submit manufacturer's product data and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean, dry area in accordance with manufacturer's instructions.

C. Store adhesives and primers at temperatures of 40° F (5° C) and above to facilitate handling.

D. Do not store at temperatures above 90° F (32° C) for extended periods.

E. Protect materials during handling and application to prevent damage or contamination.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Product not intended for uses subject to abuse or permanent exposure to the elements.

B. Do not apply membrane when air, material, or surface temperatures are expected to fall below 30° F (-1° C) within four hours of completed application.

C. Do not apply membrane if rainfall is forecast or imminent within 12 hours.

D. Do not apply to frozen concrete.

E. Membrane can be applied to green concrete.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. W. R. MEADOWS®, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

A. Waterproofing Membrane: single-component, polymer-modified, cold-applied, liquid waterproofing membrane.
   1. Performance Based Spec: Waterproofing membrane shall have the following properties as determined by laboratory testing:
      a. Color: Black
      b. Solids: 70%
      c. Total Cure Time: 16-24 hours
      d. Shore “00” Hardness, ASTM C836: Passes
      e. Adhesion to Concrete, ASTM C836: Exceeds
      f. Low Temperature Flex and Crack Bridging, ASTM C836: Passes
      g. Stability, ASTM C836: Exceeds
      h. Elongation, ASTM D412: 1500%
      i. Water Absorption, ASTM D1970: 0.7%
      j. Water Vapor Transmission, ASTM E96 (Method B): 0.03 perms

   2. Proprietary Based Spec:
      a. MEL-ROL LM Waterproofing System by W. R. MEADOWS.

B. Substitutions Per: 01 25 00 Substitution Procedures

2.03 ACCESSORIES

A. Concrete Repair Materials: MEADOW-PATCH™ 5 and 20 Concrete Repair Mortars.

B. Waterproofing Protection Course: PERMINATOR™ 10 mil.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive membrane. Notify architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

A. Protect adjacent surfaces not designated to receive waterproofing.

B. Clean and prepare surfaces to receive waterproofing in accordance with manufacturer's instructions.

C. Do not apply waterproofing to surfaces unacceptable to manufacturer.

D. Concrete surfaces must be clean, relatively smooth, and free of standing water.

E. Patch all holes and voids and smooth out any surface misalignments.

F. Remove and patch all concrete form ties.

G. Apply primer coat of membrane diluted 4:1 with water if necessary to reduce blistering on concrete surfaces at a coverage rate of 100-150 $ft.^2$/U.S. gal (13.9 m^2/3.78 L) by spraying or rolling.

H. Allow primer coat to dry before proceeding to membrane application.

3.03 APPLICATION

A. Apply waterproofing membrane system in accordance with manufacturer's instructions.

B. Thoroughly mechanically mix membrane prior to application.

C. Apply membrane by spray, roller, or brush at a minimum coverage rate of 20-25 $ft.^2$/U.S. gal (1.9-2.3 m^2/3.78L) providing a thickness of 60 wet mils.

D. Frequently inspect surface area with a wet mil gauge to ensure consistent thickness.

E. Work material into any fluted rib forming indentations.

F. Cured thickness of membrane should be 45 mils dry.

G. Avoid use of products that contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with waterproofing membrane system.

3.04 PROTECTION

A. Protect membrane with application of waterproofing protection course, drainage board, or other approved material.

B. Backfill immediately using care to avoid damaging waterproofing membrane system.

END OF SECTION

SECTION 07 21 16 - BLANKET INSULATION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Batt insulation in exterior chase walls at Concessions and Restroom Building.

1.2 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
   2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   3. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
   4. ASTM E96M - Standard Test Methods for Water Vapor Transmission of Materials.
   5. ASTM E970 - Standard Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit manufacturer data on product characteristics, performance criteria, and limitations.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

D. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.

1.4 QUALITY ASSURANCE

A. Surface Burning Characteristics of Insulation Installed in Concealed Locations:
   1. Batt Insulation: Maximum 25/450 flame-spread/smoke-developed index when tested according to ASTM E84.

B. Surface Burning Characteristics of Insulation Installed in Exposed Locations:
   1. Maximum 25/450 flame-spread/smoke-developed index when tested according to ASTM E84.
   2. Attic Floor Insulation: Minimum 0.038 Btu/sq. ft.-h critical radiant flux when tested according to ASTM E970.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

C. Store according to manufacturer instructions.

D. Protection:
   1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
   2. Remove insulation that becomes wet or damp.
   3. Provide additional protection according to manufacturer instructions.

PART 2 PRODUCTS

2.1 BATT INSULATION

A. Manufacturers:
   1. Owens Corning
   2. Rockwool
   3. Johns Manville
   4. Substitutions: Section 01 25 00 – Substitution Procedures.

2.2 MATERIALS

A. Batt Insulation (Mineral):
   1. Description: Preformed mineral-wool-fiber batt, with friction fit.
   2. Comply with ASTM C665, Type I (unfaced).
   3. Thermal Resistance: R-value per Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Verify that substrate, adjacent materials, and insulation are dry and ready to receive insulation.

3.2 INSTALLATION

A. Install in exterior wall, roof, and ceiling spaces without gaps or voids.

B. Do not compress insulation.

C. Trim insulation neatly to fit spaces.

D. Insulate miscellaneous gaps and voids.

E. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within plane of insulation.

END OF SECTION

SECTION 07 27 26 - FLUID-APPLIED MEMBRANE AIR BARRIERS, VAPOR PERMEABLE

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:

1. Materials and installation methods for fluid-applied, vapor permeable air barrier membrane system located in the non-accessible part of the wall.
2. Materials and installation methods to bridge and seal air leakage pathways in roof and foundation junctions, window and door openings, control and expansion joints, masonry ties, piping and other penetrations through the wall assembly.

B. Related Sections include the following:

1. Section 04 20 00 – Unit Masonry
2. Section 07 62 00 – Sheet Metal Flashing and Trim
3. Section 07 90 00 – Joint Sealants

1.03 DEFINITIONS

A. Air Barrier Assembly: The collection of air barrier materials and auxiliary materials applied to an opaque wall, including joints and junctions to abutting construction, to control air movement through the wall.

1.04 PERFORMANCE REQUIREMENTS

A. General system performance, building envelope design: The building envelope shall be designed and constructed with a continuous air barrier to control air leakage into, or out of the conditioned space. An air barrier shall also be provided for interior partitions between conditioned space and space designed to maintain temperature or humidity levels which differ from those in the conditioned space by more than 50% of the difference between the conditioned space and design ambient conditions. All penetrations of the air barrier and paths of air infiltration/exfiltration shall be made airtight.

B. Membrane Performance: Air barrier shall be capable of performing as a continuous vapor-permeable air barrier and as a liquid-water drainage plane flashed to discharge incidental condensation or water penetration to the exterior.

The air barrier membrane shall have the following performance characteristics:

1. Membrane shall be continuous, with all joints made airtight
2. Membrane shall have a minimum vapor permeance of 10 perms.
3. It shall have an air permeance not to exceed 0.004 cfm/ft^2 under a pressure differential of 0.3 in. water (1.57 psf) (equal to 0.02 L/s.-m^2 @ 75 Pa), when tested in accordance with ASTM E2178.
4. Assembly shall have an air permeance not to exceed 0.04 cfm/sq. ft. under a pressure differential of 0.3 in. water (1.57 psf) (equal to 0.2 L/s. x sq. m. @ 75 Pa), when tested in accordance with ASTM E2357.

5. The air barrier membrane shall be joined in an airtight and flexible manner to the air barrier material of adjacent systems. Connection shall be made between:

    a. Foundation and walls
    b. Walls and windows or doors
    c. Exterior Walls
    d. Walls across construction, control, and expansion joints
    e. Walls to utility, pipe, and duct penetrations

1.05 REFERENCES

A. The following standards and publications are applicable to the extent referenced in the text. The most recent version of these standards is implied unless otherwise stated.

B. American Society for Testing and Materials (ASTM)

1.	ASTM C1193	Guide for Use of Joint Sealants
2.	ASTM D412	Standard Test Methods for Rubber Properties in Tension
3.	ASTM D570	Test Method for Water Absorption of Plastics
4.	ASTM D1004	Test Method for Initial Tear Resistance of Plastic Film and Sheeting
5.	ASTM D1876	Test Method for Peel Resistance of Adhesives
6.	ASTM D1938	Test Method for Tear Propagation Resistance of Plastic Film and Sheeting
7.	ASTM D1970	Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
8.	ASTM D4258	Practice for Surface Cleaning Concrete for Coating
9.	ASTM D4263	Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
10.	ASTM D4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
11.	ASTM E96	Test Methods for Water Vapor Transmission of Materials
12.	ASTM E154	Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
13.	ASTM E1186	Practice for Air Leakage Site Detection in Building Envelopes and Air Retarder Systems
14.	ASTM E2178	Standard Test Method for Air Permeance of Building Materials
15.	ASTM E2357	Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
16.	NPFA 285	Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

1.06 SUBMITTALS

A. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate; technical data; and tested physical and performance properties of air barrier.

B. Shop Drawings: Show locations and extent of air barrier. Include details for substrate joints and cracks, counter flashing strip, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.

1. Include details of interfaces with other materials that form part of air barrier

C. Samples: Submit representative samples of the following for approval:

1. Cured Fluid-Applied membrane
2. Self-Adhered Transition Membrane
3. Self-Adhered Through Wall Flashing

D. Product Certificates: For air barriers, certifying compatibility of air barrier and accessory materials with Project materials that connect to or that meet the barrier; signed by product manufacturer.

E. Qualification Data: For Applicator (1.07C)

F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for air barriers, submit certified test report showing compliance with requirements specified for ASTM E2178.

G. Warranty: Submit a sample warranty identifying the terms and conditions stated in Article 1.10.

1.07 QUALITY ASSURANCE

A. Manufacturer: Air barrier systems shall be manufactured and marketed by a firm with a minimum of 20 years experience in the production and sales of waterproofing and air barriers. Manufacturers proposed for use, but not named in these specifications shall submit evidence of ability to meet all requirements specified and include a list of projects of similar design and complexity completed within the past five years.

B. Source Limitations: Obtain primary air-barrier material and through wall flashing through one source from a single manufacturer. Should project require a vapor permeable and a vapor impermeable air barrier on same project, obtain vapor-permeable and vapor impermeable air barrier and through wall flashing from one source from a single manufacturer. See specification Section 07270 for fully adhered vapor impermeable air barrier.

C. Applicator Qualifications: A firm experienced in applying air barrier materials similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

D. Pre-Installation Conference: A pre-installation conference shall be held prior to commencement of field operations to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work. Preinstallation conference shall include the Contractor, installer, Architect, and system manufacturer's field representative. Agenda for meeting shall include but not be limited to the following:

1. Review of submittals
2. Review of special details and flashings

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials and products in labeled packages. Store and handle in strict compliance with manufacturer’s instructions, recommendations, and material safety data sheets. Protect from damage from sunlight, weather, excessive temperatures, and construction operations. Remove damaged material from the site and dispose of in accordance with applicable regulations.

B. Do not double-stack pallets of fluid applied membrane components on the job site. Provide cover on top and all sides, allowing for adequate ventilation.

C. Protect fluid-applied membrane components from freezing and extreme heat.

D. Sequence deliveries to avoid delays but minimize on-site storage.

1.09 PROJECT CONDITIONS

A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended by air barrier manufacturer. Protect substrates from environmental conditions that affect performance of air barrier. Do not apply air barrier to a wet substrate or during snow, rain.

1.10 WARRANTY

A. Submit manufacturer's warranty that air barrier and accessories are free of defects at time of delivery and are manufactured to meet manufacturer's published physical properties and material specifications.
B. Warranty Period: Five years from date of completion of the air barrier membrane installation.

PART 2 PRODUCTS

1.01 F

FLUID-APPLIED, VAPOR PERMEABLE MEMBRANE AIR BARRIER

A. FLUID APPLIED AIR BARRIER MEMBRANE: PERM-A-BARRIER® VPL 50RS UV Stable (20 mils) as manufactured by GCP Applied Technologies, 20 Moores Rd, Malvern, PA 19355, a fluid-applied, vapor permeable, silyl terminated polyether (STPE) membrane that cures to form a resilient, monolithic, fully bonded elastomeric membrane when applied to construction surfaces.

B. Substitutions Allowed Per: 01 25 00 Substitution Procedures

C. Product shall meet the following requirements:

1. Membrane Air Permeance: ASTM E2178: Not to exceed 0.004 cfm/ft.^{2} under a pressure differential of 0.3 in. water (1.57 psf) (equal to 0.02 L/s- m^2 @ 75 Pa)
2. Assembly Air Permeance: Provide a continuous air barrier assembly that has an air leakage not to exceed 0.04 cfm/ft.^{2} of surface area under a pressure differential of 0.3 in. water (1.57 psf) (equal to 0.2 L/s-m^2 of surface area at 75 Pa) when tested in accordance with ASTM E2357.
3. Water Vapor Permeance: ASTM E96, Method B: Greater than 10 perms @ 20mil
4. Pull Adhesion: ASTM D4541: minimum 30 psi or substrate failure to glass faced wall board, minimum 50 psi to concrete/CMU.
5. Low temperature flexibility: ASTM D1970: Pass at minus 20 degrees Fahrenheit (at minus 29 degrees Celsius).
6. Water resistance of in-place membrane: ASTM E331: Pass. No water penetration tested at 15 psf.
7. Nail sealability: ASTM D1970: Pass
8. UV Exposure Limit: Minimum 365 calendar days
9. Inservice temperature capability of 300ºF (149ºC)
10. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
11. Membrane shall be Black in color.

2.02 Ancillary Products

A HIGH TEMPERATURE TRANSITION MEMBRANE:
Perm-A-Barrier Ultra manufactured by GCP Applied Technologies; a 25 mil (0.635 mm) of self-adhesive butyl integrally bonded to 5 mil (0.127 mm) of high-density polyethylene film laminated to aluminum facer to provide a min. 30 mil (0.76 mm) thick robust membrane. Membrane shall be interleaved with disposable silicone-coated release liner until installed, conforming to the following:

1. Heat Resistance, 300°F (149°C)
2. Tensile Strength, ASTM D882: 5000 psi (34.5 MPa)
3. Elongation, membrane, ASTM D882: 200%
4. Adhesion to gypsum sheathing, ASTM D903: 5.0 lbs/in.

B. PENETRATIONS & TERMINATION SEALANT:
Sealant for Details, Final Terminations and Sheathing: **Perm-A-Barrier Universal Flashing & Sealant** manufactured by GCP Applied Technologies: a one-part, moisture curing, STPE material designed for use with fluid-applied membranes, self-adhered membrane and flashing tapes.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrates and conditions are ready to accept the Work of this section. Notify architect in writing of any discrepancies. Commencement of the Work or any parts thereof shall mean acceptance of the prepared substrates.
B. All surfaces must be sound, free from liquid water, clean and free of oil, grease, dirt, excess mortar, or other contaminants detrimental to the adhesion of the membranes. Fill voids, gaps, and spalled areas in substrate to provide an even plane. Strike masonry joints full-flush. Curing compounds or release agents used in concrete construction must be resin based without oil, wax or pigments.

3.02 SURFACE PREPARATION

A. Refer to manufacturer’s literature for requirements for preparation of substrates. Surfaces shall be sound and free of voids, spalled areas, loose aggregate, and sharp protrusions. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone, and debris. Use repair materials and methods that are acceptable to manufacturer of the fluid-applied air barrier assembly.

B. Exterior sheathing panels: Ensure that the boards are sufficiently stabilized with corners and edges fastened with appropriate screws. Refer to manufacturers literature for treating joints and exterior sheathing panels prior to the installation of the fluid applied air barrier.

C. Masonry Substrates: Apply air and vapor barrier over concrete block and brick with smooth trowel-cut mortar joints, struck full and flush. Fill all voids and holes, particularly in the mortar joints, with a lean mortar mix, non-shrinking grout or parge coat.

D. Related Materials: Treat construction joints and install flashing as recommended by manufacturer.

E. Clean, prepare, treat, and seal substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for air barrier application.

F. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

G. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.

H. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete.

I. Remove excess mortar from masonry ties, shelf angles, and other obstructions.

J. At changes in substrate plane, apply sealant PERM-A-BARRIER® Universal Flashing & Sealant at sharp corners and edges to form a smooth transition from one plane to another.

K. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for air barrier.

3.03 JOINT TREATMENT

A. Concrete and Masonry: Prepare, treat, grout, and fill joints and cracks in substrate according to ASTM C1193 and air barrier manufacturer's written instructions. Remove dust and dirt from joints and cracks complying with ASTM D4258 before coating surfaces.

1. Prime substrate as required.

B. Gypsum Sheathing: Fill joints with GCP Applied Technologies PERM-A-BARRIER® Universal Flashing & Sealant per manufacturer's written instructions.

3.04 AIR BARRIER MEMBRANE INSTALLATION

A. Apply air barrier membrane to achieve a continuous air barrier according to air barrier manufacturer's written instructions.

B. Apply air barrier membrane within manufacturer's recommended application temperature ranges.

C. Apply a continuous unbroken air barrier to substrates according to the following minimum thickness. Apply membrane in full contact around protrusions such as masonry ties.

1. Vapor-Permeable Membrane Air Barrier: 20-mil (0.51-mm) thickness

D. Do not cover air barrier until it has been tested and inspected by Owner's testing agency.

E. Correct deficiencies in or remove air barrier that do not comply with requirements; repair substrates and reapply air barrier components.

3.05 TRANSITION MEMBRANE INSTALLATION

All transition membranes must be placed prior to application of PAB VPL 50RS UV Stable.

A. Install strips, transition membrane, and auxiliary materials according to air barrier manufacturer's written instructions to form a seal with adjacent construction and maintain a continuous air barrier.

B. Connect and seal exterior wall air barrier membrane continuously to roofing membrane air barrier, concrete below-grade structures, floor-to floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

C. At end of each working day, seal top edge of strips and transition membrane to substrate with termination of PERM-A-BARRIER® Universal Flashing & Sealant.

D. Apply joint sealants forming part of air barrier assembly within sealant manufacturer's recommended application temperature ranges. Consult sealant manufacturer when sealant cannot be applied within these temperature ranges.

E. Wall Openings: Apply transition membrane so that a minimum of 3 inches (75 mm) of coverage is achieved over both substrates.

1. Transition Membrane: Roll firmly to enhance adhesion.

F. Fill gaps in perimeter frame surfaces of windows, curtain walls, storefronts, and doors, and miscellaneous penetrations of air barrier membrane with sealant.

G. Repair punctures, voids, and deficient lapped seams in strips and transition membrane. Slit and flatten fish-mouths and blisters. Patch with transition membrane extending 6 inches (150 mm) beyond repaired areas in strip direction.

3.06 FIELD QUALITY CONTROL

A. Testing Agency: Owner may engage a qualified testing agency to perform tests and inspections and prepare test reports.

B. Inspections: Air barrier materials and installation are subject to inspection for compliance with requirements. Inspections may include the following:

1. Continuity of air barrier system has been achieved throughout the building envelope with no gaps or holes.
2. Continuous structural support of air barrier system has been provided.
3. Masonry and concrete surfaces are smooth, clean, and free of cavities, protrusions, and mortar droppings.
4. Site conditions for application temperature and dryness of substrates have been maintained.
5. Maximum exposure time of materials to UV deterioration has not been exceeded.
6. Surfaces have been primed, if applicable
7. Laps in strips and transition membrane have complied with minimum requirements and have been shingled in the correct direction (or mastic has been applied on exposed edges), with no fish-mouths.
8. Termination sealant has been applied on cut edges.
9. Strips and transition membrane have been firmly adhered to substrate.
10. Compatible materials have been used.
11. Transitions at changes in direction and structural support at gaps have been provided.
12. Connections between assemblies (membrane and sealants) have complied with requirements for cleanliness, preparation and priming of surfaces, structural support, integrity, and continuity of seal.
13. All penetrations have been sealed.

C. Tests: Testing to be performed will be determined by Owner's testing agency from among the following tests:

1. Qualitative Testing: Air barrier assemblies will be tested for evidence of air leakage according to ASTM E1186.

D. Remove and replace deficient air barrier components and retest as specified above.

3.07 CLEANING AND PROTECTION

A. Protect air barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.

B. Protect air barrier from exposure to UV light and harmful weather exposure as required by manufacturer. Remove and replace main air barrier material exposed for more than 365 days.

C. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.

D. Remove masking materials after installation.

3.08 LOCATION

A. Air Barrier Shall be installed in the following locations:

1. At exterior wall side of all concrete block at Concessions and Restroom building.
2. At exterior wall side of all concrete block at Back of House structure.
3. Other location as noted in drawings.

SECTION 07 41 13 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Mechanically-seamed, standing seam metal roof panels, with related metal trim and accessories.

1.2 RELATED REQUIREMENTS

A. Division 07 Section "Air Barriers" for air barriers within roof assembly and adjacent to roof assembly.

B. Division 07 Section "Sheet Metal Flashing and Trim" for formed sheet metal copings, flashings, reglets, and roof drainage items in addition to items specified in this Section.

C. Division 07 Section "Manufactured Roof Specialties" for manufactured copings, reglets, and roof drainage items in addition to items specified in this Section.

D. Division 07 Section "Joint Sealants" for field-applied Joint Sealants.

1.3 REFERENCES

A. American Architectural Manufacturer's Association (AAMA): www.aamanet.org:

1. AAMA 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) & Zinc-Aluminum Coated Steel Substrates.
2. AAMA 809.2 - Voluntary Specification Non-Drying Sealants.

B. American Society of Civil Engineers (ASCE): www.asce.org/codes-standards:

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. ASTM International (ASTM): www.astm.org:

1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
4. ASTM A 980 - Standard Specification for Steel, Sheet, Carbon, Ultra High Strength Cold Rolled.
5. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
6. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
7. ASTM D 1003 - Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics.
8. ASTM D 2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
9. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.

10. ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
11. ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
12. ASTM E 1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
13. ASTM E 1980 - Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

D. Cool Roof Rating Council (CRRC): www.coolroofs.org/productratingprogram.html:

1. CRRC-1-2008 - CRRC Product Rating Program.

E. International Accreditation Service (IAS):

1. IAS AC 472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part B.

F. Underwriters Laboratories, Inc. (UL): www.ul.com:

1. UL 580 - Tests for Uplift Resistance of Roof Assemblies

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Prior to erection of framing, conduct preinstallation meeting at site attended by Owner, Architect, manufacturer's technical representative, inspection agency and related trade contractors.

1. Coordinate building framing in relation to metal panel system.
2. Coordinate openings and penetrations of metal panel system.
3. Coordinate work of Division 07 Sections "Roof Specialties" and "Roof Accessories" and openings and penetrations and manufacturer's accessories with installation of metal panels.
4. Coordinate work with Division 26 Sections for LED Architectural Strip Lighting.

1.5 QUALITY ASSURANCE

A. Manufacturer/Source: Provide metal roof panel assembly and accessories from a single manufacturer providing fixed-base roll forming, and accredited under IAS AC 472 Part B.

B. Manufacturer Qualifications: Approved manufacturer listed in this Section with minimum five years experience in manufacture of similar products in successful use in similar applications.

1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

a. Product data, including certified independent test data indicating compliance with requirements.
b. Samples of each component.
c. Sample submittal from similar project.
d. Project references: Minimum of five installations not less than five years old, with Owner and Architect contact information.
e. Sample warranty.
f. IAS AC 472 certificate.

2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
3. Approved manufacturers must meet separate requirements of Submittals Article.

C. Installer Qualifications: Experienced Installer with minimum of five years experience with successfully completed projects of a similar nature and scope.

1.6 ACTION SUBMITTALS

A. Product Data: Manufacturer’s data sheets for specified products.

B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, roof accessories, lightning arresting equipment, and special details. Make distinctions between factory and field assembled work.

1. Indicate points of supporting structure that must coordinate with metal panel system installation.
2. Include data indicating compliance with performance requirements.
3. Include structural data indicating compliance with requirements of authorities having jurisdiction.

C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of manufacturer's full range of colors.

D. Samples for Verification: Provide 12-inch long section of each metal panel profile. Provide color chip verifying color selection.

1.7 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Indicating compliance of products with requirements, witnessed by a professional engineer.

B. Qualification Information: For Installer firm and Installer’s field supervisor.

C. IAS Accreditation Certificate: Indicating that manufacturer is accredited under provisions of IAS AC 472.

D. Manufacturer's Warranty: Sample copy of manufacturer's standard warranty.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance data.

B. Manufacturer's Warranty: Executed copy of manufacturer's standard warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping.

1. Deliver, unload, store, and erect metal panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.
2. Store in accordance with Manufacturer's written instructions. Provide wood collars for stacking and handling in the field.

1.10 COORDINATION

A. Coordinate sizes, profiles, and locations of roof curbs and other roof-mounted equipment and roof penetrations, based upon sizes of actual selected equipment.

1.11 WARRANTY

A. Special Manufacturer’s Warranty: On manufacturer’s standard form, in which manufacturer agrees to repair or replace metal panel assemblies that fail in materials and workmanship within one year from date of Substantial Completion.

B. Special Panel Finish Warranty: On Manufacturer’s standard form, in which Manufacturer agrees to repair or replace metal panels that evidence deterioration of factory-applied finish within 25 years from date of Substantial Completion, including:

1. Fluoropolymer Two- Coat System:

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis of Design Manufacturer: MBCI Metal Roof and Wall Systems, Division of NCI Group, Inc.; Houston TX. Tel: (877)713-6224; Email: info@mbci.com; Web: www.mbci.com.

1. Substitutions Per: 01 25 00 Substitution Procedures

2.2 PERFORMANCE REQUIREMENTS

A. General: Provide metal roof panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.

B. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:

1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.

a. Wind Uplift Testing: Certify capacity of metal panels by actual testing of proposed assembly per ASTM E 1592.

2. Snow Loads: As indicated.
3. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/240 of the span with no evidence of failure.
4. Seismic Performance: Comply with ASCE 7, Section 9, "Earthquake Loads."

C. Air Infiltration, ASTM E 1680: Maximum 0.25 cfm/sq. ft. at static-air-pressure difference of 6.24 lbf/sq. ft.

D. Water Penetration Static Pressure, ASTM E 1646: No uncontrolled water penetration at a static pressure of 12 lbf/sq. ft.

E. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.

2.3 METAL ROOF PANELS

A. Mechanically-seamed, Concealed Fastener, Metal Roof Panels: Structural metal roof panel consisting of formed metal sheet with vertical ribs at panel edges, installed by lapping and mechanically interlocking edges of adjacent panels, and attaching panels to supports using concealed clips and fasteners in a weathertight installation.

1. Basis of Design: MBCI, BattenLok HS

2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality, Grade 340, Coating Class AZM150, pre-painted by the coil-coating process per ASTM A 755/A 755M.

a. Nominal Coated Thickness: 24 Gage.

b. Panel Surface: Smooth with striations in pan.
c. Exterior Finish: Fluoropolymer two-coat system.
d. Color: As selected by Architect from manufacturer's standard colors.

3. Panel Width: 16 inches.
4. Panel Seam Height: 2 inch.
5. Joint Type: Mechanically seamed.

2.4 METAL ROOF PANEL ACCESSORIES

A. General: Provide complete metal roof panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in profiles as indicated. Provide required fasteners, closure strips, thermal spacers, splice plates, support plates, and sealants as indicated in manufacturer's written instructions.

B. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet.

C. Panel Clips: Provide panel clip of type specified, at spacing indicated on approved shop drawings.

1. Two-piece Floating: ASTM C 645, with ASTM A 653/A 653M, G90 hot-dip galvanized zinc coating, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.

D. Panel Fasteners: Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by roof panel manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.

E. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:

1. Factory-Applied Seam Sealant: Manufacturer's standard hot-melt type.

2. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.

2.5 FABRICATION

A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.

B. Fabricate metal panel joints configured to accept factory-applied sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.

C. Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.

D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

2.6 FINISHES

A. Finishes, General: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

B. Fluoropolymer Two-Coat System: 0.2 – 0.3 mil primer with 0.7 - 0.8 mil 70 percent PVDF fluoropolymer color coat, AAMA 621.

1. Basis of Design: MBCI, Signature 300.

C. Interior Finish: 0.5 mil total dry film thickness consisting of primer coat and wash coat of manufacturer's standard light-colored acrylic or polyester backer finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine metal panel system substrate and supports with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panel installation.

1. Inspect metal panel support substrate to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
2. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system manufacturer but not greater than the following:

a. 1/4 inch in 20 foot in any direction.
b. 3/8 inch over any single roof plane.

B. Correct out-of-tolerance work and other deficient conditions prior to proceeding with insulated metal roof panel system installation.

3.2 PREPARATION

A. Miscellaneous Supports: Install subframing, girts, furring, and other miscellaneous panel support members according to ASTM C 754 and manufacturer's written instructions.

B. Flashings: Provide flashings as required to complete metal roof panel system. Install in accordance with Section 07 62 00 "Sheet Metal Flashing and Trim" and approved shop drawings.

3.3 METAL PANEL INSTALLATION

A. Mechanically-Seamed, Standing Seam Metal Roof Panels: Install weathertight metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal roof panels in orientation, sizes, and locations indicated, free of waves, warps, buckles, fastening stresses, and distortions. Anchor panels and other components securely in place. Provide for thermal and structural movement.

B. Attach panels to supports using clips, screws, fasteners, and sealants recommended by manufacturer and indicated on approved shop drawings.

1. Fasten metal panels to supports with concealed clips at each location indicated on approved shop drawings, with spacing and fasteners recommended by manufacturer.
2. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
3. Provide weatherproof jacks for pipe and conduit penetrating metal panels of types recommended by manufacturer.
4. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by manufacturer.

3.4 ACCESSORY INSTALLATION

A. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
3. Provide concealed fasteners except where noted on approved shop drawings.
4. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.

B. Joint Sealers: Install joint sealers where indicated and where required for weathertight performance of metal panel assemblies, in accordance with manufacturer's written instructions.

3.5 CLEANING AND PROTECTION

A. Remove temporary protective films immediately in accordance with metal roof panel manufacturer's instructions. Clean finished surfaces as recommended by metal roof panel manufacturer.

B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Architect.

END OF SECTION

SECTION 07 54 23 - TPO MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Mechanically fastened TPO membrane roofing system.

B. Roof insulation.

1.2 RELATED SECTIONS

A. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, cants, curbs, and blocking and for wood-based, structural-use roof deck panels.

B. Division 07 Section "Sheet Metal Flashing and Trim" flashings and counter flashings.

1.3 REFERENCES

A. Roofing Terminology: Refer to the following publications for definitions of roofing work related terms in this Section:

1. ASTM D 1079 “Standard Terminology Relating to Roofing and Waterproofing.”
2. Glossary of NRCA’s “The NRCA Roofing and Waterproofing Manual.”
3. Roof Consultants Institute “Glossary of Building Envelope Terms.”
4. Single Ply Roofing Industry (SPRI)
5. International Building Code (IBC)
6. American Society of Civil Engineers (ASCE-7) Minimum Design Loads for Buildings & Other Structures

B. Sheet Metal Terminology and Techniques: SMACNA “Architectural Sheet Metal Manual.”

1.4 DESIGN CRITERIA

A. General: Installed roofing membrane system shall remain watertight; and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.

B. Material Compatibility: Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.

C. Installer shall comply with current code requirements based on authority having jurisdiction.

D. Wind Uplift Performance: Roofing system shall meet the intent of systems that have been successfully tested by a qualified testing and inspecting agency to resist wind uplift pressure calculated in accordance with ASCE 7.

1.5 SUBMITTALS

A. Product Data: Manufacturer’s data sheets for each product to be provided.

B. Detail Drawings: Provide roofing system details and details of attachment to other work, including:

1. Base flashings and membrane terminations.
2. Tapered insulation, including slopes.
3. Crickets, saddles, and tapered edge strips, including slopes.
4. Insulation fastening and adhesive patterns.

C. Verification Samples: Provide for each product specified.

D. Installer Certificates: confirmation that installer is approved, authorized, or licensed by manufacturer to install roofing system.

E. Maintenance Data: Refer to Johns Manville’s latest published documents on www.JM.com.

F. Guarantees: Provide manufacturer’s current guarantee specimen.

G. Roofing sub-contractor shall provide a copy of the final System Assembly Letter issued by Johns Manville Roofing Systems indicating that the products and system to be installed shall be eligible to receive the specified manufacturer's guarantee when installed by a certified JM contractor in accordance with our application requirements, inspected and approved by a JM Technical Representative.

H. Prior to roofing system installation, roofing sub-contractor shall provide a copy of the Guarantee Application Confirmation document issued by Johns Manville Roofing Systems indicating that the project has been reviewed for eligibility to receive the specified guarantee and registered.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and who is eligible to receive the specified manufacturer's guarantee.

B. Manufacturer Qualifications: Qualified domestic U.S. owned and based manufacturer that has UL listing or accredited testing agency listing for roofing system identical to that used for this Project.

C. Test Reports:

1. Roof drain and leader test or submit plumber’s verification.

D. Source Limitations: Obtain all components from the single source roofing manufacturer guaranteeing the roofing system. All products used in the system shall be labeled by the single source roofing manufacturer issuing the guarantee.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.8 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and guarantee requirements.

1.9 GUARANTEE

A. Provide manufacturer's system guarantee equal to Johns Manville's Peak Advantage No Dollar Limit Roofing System Guarantee.

1. Single-source special guarantee includes roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners, adhesives, and manufacturer’s edge metal product, and other approved single-source components of roofing system marketed by the manufacturer.
2. Guarantee Period: 20 years from date of Substantial Completion.

B. Installer’s Guarantee: Submit roofing Installer's guarantee, including all components of roofing system for the following guarantee period:

1. Guarantee Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 THERMOPLASTIC POLYOLEFIN ROOFING MEMBRANE - TPO

A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, uniform, flexible sheet formed from a thermoplastic polyolefin, internally fabric or scrim reinforced. Basis of design: Johns Manville: JM TPO – 60 Mil.

1. Membrane Thickness: 60 mils nominal.
2. Mechanically Fastened System
3. Exposed Face Color: White

2.2 SUBSTITUTIONS

1. Substitutions Per: 01 25 00 Substitution Procedures

2.3 AUXILIARY ROOFING MATERIALS – SINGLE PLY

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's internally reinforced or scrim reinforced. Basis of design: JM TPO 60 mil

C. Sheet Flashing (Self-Adhered): 60 mil (1.5 mm) thick, manufacturer's internally reinforced or scrim reinforced with weldable selvage edges on each side of roll, one encapsulated edge and self-adhering capabilities in a wide installation temperature range. Basis of design: JM TPO SA – Flashing Membrane

1. Serviceable Installation Substrate Temperature: 20°F (-7°C) and rising.

D. Bonding Adhesive: Manufacturer's standard solvent-based bonding adhesive for membrane, and solvent-based bonding adhesive for base flashings. Basis of design: JM Membrane Bonding Adhesive (TPO&EPDM)

1. Serviceable Installation Ambient Air Temperature: 25°F and rising

E. Flashing Adhesive: Manufacturer's standard-solvent - based bonding adhesive for base flashings. Basis of design: JM Membrane Bonding Adhesive (TPO&EPDM)

1. Serviceable Installation Ambient Air Temperature: 25°F and rising.

F. Urethane Adhesive: Manufacturer’s standard two component no VOC urethane adhesive for fleece-backed membranes. Basis of design: JM Roofing Systems Urethane Adhesive (RSUA)

G. Urethane Adhesive: Manufacturer’s self-contained two-part, low-rise foam adhesive formulated to adhere fleece-backed membranes to substrate. Basis of design: JM Two-Part Urethane Insulation Adhesive Canister

H. Self-Adhered Primer: One-part penetrating primer solution to enhance the adhesion of self-adhering membranes. Basis of design: SA Primer

I. Roofing Asphalt: ASTM D 312-15, Type IV

J. Asphalt Primer: ASTM D 41. Basis of design: JM Asphalt Primer

K. Liquid Applied Flashing: Manufacturer’s single ply liquid and fabric reinforced flashing system created with a fleece polyester scrim and a two-component polyurethane-based liquid applied flashing material, consisting of a liquid resin and a curing agent. Basis of design: JM SP Liquid Flashing Resin and JM SP Liquid Flashing Scrim

L. Liquid Applied Flashing Primer: Manufacturer’s single ply liquid flashing primer. Basis of design: JM SP Liquid Flashing TPO and PVC Primer, JM SP Liquid Flashing Concrete Primer, or JM SP Liquid Flashing Metal and Wood Primer

M. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, with anchors. Basis of design: JM Termination Systems

N. Fasteners: Factory-coated steel fasteners and metal plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer. Basis of design: High Load Fasteners and Plates.

O. Polymer Fasteners: Glass-reinforced nylon fasteners with ¼" square drive and 1" head with Galvalume®*-coated 2" metal stress plates, designed to lock into the fastener head. Fasteners designed for fastening roof insulation to substrate and furnished by roofing system manufacturer. Basis of design: Polymer Auger Fasteners and Plates

P. Induction Welding Plate: A round specially coated Galvalume® plate with a recessed center and raised flat bonding surface specifically designed for induction welding application. Basis of design: JM TPO RhinoPlates

Q. Miscellaneous Accessories: Provide all accessories to meet the roofing manufacturer's guarantee requirements.

2.4 ROOF INSULATION

A. General: Preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.

B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2 (20 psi), Basis of design: ENRGY 3

1. Provide insulation package with minimum R Value: 25.
2. Provide insulation package with minimum thickness: 4.2"

2.5 TAPERED INSULATION

A. Tapered Insulation: ASTM C 1289, Type II, Class 1, Grade 2 (20 psi), provide factory-tapered insulation boards fabricated to slope of 1/8 inch per 12 inches (1:96), unless otherwise indicated. Basis of design: Tapered ENRGY 3.

2.6 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.

B. Provide saddles, crickets, tapered edge strips, and other insulations shapes where indicated for sloping to drain. Fabricate to slopes indicated. Basis of design: Tapered Fesco Edge Strips.

C. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and furnished by roofing system manufacturer. Basis of design: All Purpose Fasteners and UltraFast Plate.

D. Polymer Fasteners: Glass-reinforced nylon fasteners with ¼" square drive and 1" head with Galvalume®*-coated 3" metal stress plates, designed to lock into the fastener head. Fasteners designed for fastening roof insulation to substrate and furnished by roofing system manufacturer. Basis of design: Polymer Auger Fasteners and Plates

E. Urethane Adhesive: Manufacturer's two component polyurethane adhesive formulated to adhere insulation to substrate.

2.7 EDGE METAL COMPONENTS

A. Fascia System: Manufacturer's factory fabricated fascia consisting of a base piece and a snap-on cover. Provide product from single-source roofing system supplier that is included in the No Dollar Limit guarantee. Basis of design: Presto-Tite Fascia, 24 Gage Steel, Kynar Finish, Height per drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions for compliance with the requirements affecting performance of roofing system.

1. General:

   a. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
   b. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.

2. Wood Decks:

   a. Verify that wood decking is visibly dry and free of moisture.
   b. Verify that wood has ability to provide minimum fastener pull-out resistance.

      1) Provide documentation of pull-out resistance values in accordance with ANSI/SPRI FX-1 2016.

3. Ensure general rigidity and proper slope for drainage.
4. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units more than 1/16 inch (1.6 mm) out of plane relative to adjoining deck.

B. Unacceptable panels should be brought to the attention of the General Contractor and Project Owner's Representative and shall be corrected prior to installation of roofing system.

3.2 PREPARATION

A. Clean and remove from substrate sharp projections, dust, debris, moisture, and other substances detrimental to roofing installation in accordance with roofing system manufacturer's written instructions.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.

C. If applicable, prime surface of deck at a rate recommended by roofing manufacturer and allow primer to dry.

D. Proceed with each step of installation only after unsatisfactory conditions have been corrected.

3.3 INSULATION INSTALLATION

A. Coordinate installation of roof system components so insulation and cover board are not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system manufacturer's written instructions for installation of roof insulation and cover board.

C. Install tapered insulation under area of roofing to conform to slopes indicated.

D. Install insulation boards with long joints in a continuous straight line. Joints should be staggered between rows, abutting edges and ends per manufacturer’s written instructions. Fill gaps exceeding 1/4 inch (6 mm) with like material.

E. Install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

F. Trim surface of insulation boards where necessary at roof drains so completed surface is flush and does not restrict flow of water.

G. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

H. Preliminarily Fastened Insulation for Mechanically Fastened Membrane Systems: Install insulation with fasteners at rate required by roofing system manufacturer.

1. Fasten top layer to resist uplift pressure at corners, perimeter, and field of roof.

3.4 ROOFING MEMBRANE INSTALLATION, GENERAL

A. Install roofing membrane in accordance with roofing system manufacturer's written instructions, applicable recommendations of the roofing manufacturer and requirements in this Section.

B. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.

C. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.

1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation.
2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
3. Remove and discard temporary seals before beginning work on adjoining roofing.

3.5 MECHANICALLY FASTENED ROOFING MEMBRANE INSTALLATION

A. Install roofing membrane over area to receive roofing in accordance with roofing system manufacturer's written instructions.

1. Unroll roofing membrane and allow it to relax before installing.
2. Install sheet in accordance with roofing system manufacturer's written instructions.

B. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

C. Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.

D. Apply roofing membrane with side laps shingled with roof slope, where possible.

E. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.

    a. Remove and repair any unsatisfactory sections before proceeding with work.

3. Repair tears, voids, and lapped seams in roofing membrane that do not meet requirements.

F. Spread sealant or mastic bead over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.

G. In-Splice Attachment: Secure one edge of roofing membrane using fastening plates or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.

3.6 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical representative to inspect roofing installation on completion and submit report to Architect.

1. Notify Architect or Owner 48 hours in advance of date and time of inspection.

B. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.7 PROTECTION AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period.

B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SUMMARY

A. Section includes flashings and counterflashings and fabricated sheet metal items.

B. Related Sections:
1. Section 04 20 00 – Unit Masonry.
2. Section 07 41 13 – Sheet Metal Roofing.
3. Section 07 71 23 – Manufactured Gutters and Downspouts.
4. Section 07 90 00 – Joint Protection.
5. Section 09 90 00 – Painting and Coating.

1.2 REFERENCES

A. American Architectural Manufacturers Association:
1. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
2. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM International:
1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
2. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.

C. Sheet Metal and Air Conditioning Contractors:
1. SMACNA - Architectural Sheet Metal Manual.

1.3 DESIGN REQUIREMENTS

A. Sheet Metal Flashings: Conform to the criteria of SMACNA "Architectural Sheet Metal Manual.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data on manufactured components metal types, finishes, and characteristics.

C. Samples:
1. Submit manufacturer’s standard color chart.
2. If requested, submit specific physical color samples selected from the standard color chart, to illustrate metal finish color.

1.5 QUALIFICATIONS

A. Fabricator and Installer: Company specializing in sheet metal work with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials causing discoloration or staining.

PART 2 PRODUCTS

2.1 SHEET METAL FLASHING AND TRIM

A. Pre-Finished Aluminum Sheet: ASTM B209; 3003 alloy, H14 temper, as required for application and finish; 0.032 inch thick; plain finish; shop pre-coated with two coat polyester top coat; color as selected from manufacturer's standard color.

B. All sheet metal associated with the Metal Roof Panel system shall be provided by the same manufacturer as the Metal Roof Panel, shall have the same gage, and shall have the same finish as the Metal Roof Panels.

C. Pre-Formed TPO roofing snap-on fascia system shall be provided by the same manufacturer as the TPO roofing membrane and shall be either 0.04” aluminum or 24 Gage Steel with Kynar finish.

2.2 ACCESSORIES

A. Fasteners: of same metal as flashings and counterflashings and fabricated sheet metal items.

B. Slip Sheet: Rosin sized building paper.

C. Primer: Zinc molybdate type.

D. Protective Backing Paint: Zinc molybdate alkyd.

E. Sealant: Type E butyl or as specified in Section 07 90 00.

F. Plastic Cement: ASTM D4586, Type I.

G. Reglets: Recessed type, rigid extruded PVC; face and ends covered with plastic tape.

H. Downspout Boots: Cast iron.

2.3 FABRICATION

A. Form sections shape indicated on Drawings, accurate in size, square, and free from distortion or defects.

B. Fabricate cleats of same material as sheet metal, interlocking with sheet.

C. Form pieces in longest possible lengths.

D. Hem exposed edges on underside 1/2 inch; miter and seam corners.

E. Form material with standing seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

F. Fabricate corners from one piece with minimum 18-inch-long legs; seam for rigidity, seal with sealant.

G. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

H. Fabricate flashings to allow toe to extend 2 inches over roofing. Return and brake edges.

I. Seal metal joints.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

C. Verify roofing termination and base flashings are in place, sealed, and secure.

3.2 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.

B. Install surface mounted reglets. Seal top of reglets with sealant.

C. Paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to minimum dry film thickness of 15 mil.

3.3 INSTALLATION

A. Insert flashings into reglets to form tight fit. Secure in place with plastic wedges. Seal flashings into reglets with sealant.

B. Apply plastic cement compound between metal flashings and felt flashings.

C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

D. Seal metal joints watertight.

E. Connect downspouts to storm sewer system and downspout boots as indicated on Drawings. Seal connection watertight.

3.4 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements and 01 70 00.

B. Inspection will involve surveillance of Work during and after installation to ascertain compliance with specified requirements and Drawings.

END OF SECTION

SECTION 07 71 23 - MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes pre-finished galvanized steel and pre-finished aluminum gutters and downspouts.
   1. Provide cast iron downspout boots.

B. Related Sections:
   1. Section 07 41 13 – Metal Roof Panels.
   2. Section 07 62 00 - Sheet Metal Flashing and Trim.
   3. Section 07 90 00 - Joint Protection.
   4. Section 09 90 00 - Painting and Coating.

1.2 REFERENCES

A. American Architectural Manufacturers Association:
   1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
   2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
   3. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
   4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

B. ASTM International:
   1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
   2. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
   3. ASTM B32 - Standard Specification for Solder Metal.
   4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   5. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric).
   6. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction.

C. Federal Specification Unit:
   1. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.

D. Sheet Metal and Air Conditioning Contractors:
   1. SMACNA - Architectural Sheet Metal Manual

1.3 DESIGN REQUIREMENTS

A. Conform to SMACNA Manual for sizing components for rainfall intensity determined by storm occurrence of 1 in 10 years.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with SMACNA Manual.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope to drain.

C. Prevent contact with materials during storage capable of causing discoloration, staining, or damage.

1.7 COORDINATION

A. Section 01 30 00 - Administrative Requirements.

B. Coordinate Work with downspout discharge pipe inlet.

1.8 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Furnish five-year manufacturer warranty for gutter and downspout finishes.

PART 2 PRODUCTS

2.1 GUTTERS AND DOWNSPOUTS

A. Product Description:
   1. Gutters: Square Style, Gutters shall be provided by same manufacturer as Metal Roof Panels, and shall match the finish and gage of the Metal Roof Panels.
   2. Downspouts: Square Style, Downspouts shall be provided by same manufacturer as Metal Roof Panels, and shall match the finish and gage of the Metal Roof Panels.
   3. Downspout Boots: Cast iron; where applicable, per Drawings.

2.2 COMPONENTS

A. Gutters and downspouts to match color, gage, and finish of accessories called out in Section 07 41 13 Metal Roof Panels.

2.3 ACCESSORIES

A. Anchors and Supports: Profiled to suit gutters and downspouts.
   1. Anchoring Devices: In accordance with SMACNA requirements, and as recommended by fabricator.
   2. Gutter Supports: Brackets.
   3. Downspout Supports: Brackets.

B. Fasteners: Same material and finish as gutters and downspouts.

2.4 FABRICATION

A. Form gutters and downspouts of profiles indicated.

B. Fabricate with required connection pieces.

C. Form sections square, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance.

D. Hem exposed edges of metal.

E. Fabricate gutter and downspout accessories; seal watertight.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify surfaces are ready to receive gutters and downspouts.

3.2 PREPARATION

A. Paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to minimum dry film thickness of 15 mil.

3.3 INSTALLATION

A. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.

B. Do Not Slope Gutters.

C. Connect downspouts to downspout boots at storm sewer system, where applicable per Drawings. Seal connection watertight.

END OF SECTION

SECTION 07 90 00 - JOINT PROTECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes sealants and joint backing, and accessories.

1.2 REFERENCES

A. ASTM International:
   1. ASTM C834 - Standard Specification for Latex Sealants.
   2. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.
   3. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
   4. ASTM C1193 - Standard Guide for Use of Joint Sealants.
   5. ASTM D1056 - Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber.
   6. ASTM D1667 - Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
   7. ASTM D2628 - Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Products Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Samples: Submit two physical sample charts illustrating sealant colors for selection.

D. Manufacturer’s Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.

E. Warranty: Include coverage for installed sealants and accessories failing to achieve airtight seal, watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.

1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.5 MOCKUP

A. Construct mockup of sealant joints in conjunction with wall mockups specified in other sections.

B. Construct mockup with specified sealant types and with other components noted.
   1. Determine preparation and priming requirements based on manufacturers recommendations; take action necessary for correction of failure of sealant tests on mock-up.
   2. Verify sealants, primers, and other components do not stain adjacent materials.

C. Incorporate accepted mockup as part of Work.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.1 JOINT SEALERS

A. Manufacturers:
1. Sika Corporation
2. Bondaflex
3. Dow
4. GE Silicones
5. Substitutions: Section 01 60 00 - Product Requirements.

B. Products Description:
1. High Performance General Purpose Exterior (Nontraffic) Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single or multi-component.
   a. Color: Standard colors matching finished surfaces.
   b. Applications: Use for:
      1) Control, expansion, and soft joints in masonry.
      2) Joints between concrete and other materials.
      3) Joints between metal frames and other materials.
      4) Vertical Joint in Cast Stone
      5) Horizontal Joints in Cast Stone
      6) Other exterior nontraffic joints for which no other sealant is indicated.

2. General Purpose Traffic Bearing Sealant: Polyurethane; ASTM C920, Grade P, Class 25, Use T; single or multi-component.
   a. Color: Standard colors matching finished surfaces.
   b. Applications: Use for exterior and interior pedestrian and vehicular traffic bearing joints.

3. Exterior Foam Expansion Joint Sealer: Pre-compressed foam sealer; Polyurethane with water-repellent; products recommended by manufacturer for traffic-bearing use.
   a. Color: Face color as selected.
   b. Size: As required to provide watertight seal when installed.
   c. Applications: Use for exterior wall expansion joints.

4. Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, non-drying, non-skinning, non-curing.
   a. Applications: Use for concealed sealant bead in sheet metal work and concealed sealant bead in siding overlaps.

5. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
   a. Color: Standard colors matching finished surfaces.
   b. Applications: Use for interior wall and ceiling control joints, joints between door and window frames and wall surfaces, and other interior joints for which no other type of sealant is indicated.

6. Acoustical Sealant: Butyl or acrylic sealant; ASTM C920, Grade NS, Class 12-1/2, Uses M and A; single component, solvent release curing, non-skinning.
   a. Applications: Use for concealed locations only at acoustically rated construction.
      1) Provide sealant bead between top stud runner and structure and between bottom stud track and floor.

7. Water-based Acrylic Emulsion Latex: ASTM C834, single component, non-staining, non-bleeding, non-sagging.
   a. Color: Standard colors matching finished surfaces.
   b. Movement Capability: 2 to 5 percent.
   c. Service Temperature Range: 2 to 160 degrees F.
   d. Shore A Hardness Range: 15 to 40.
   e. Low movement capability and not recommended for outdoor use.

8. Acrylic Sealant: ASTM C920, Grade NS, Class 12-1/2, Uses NT, M, A; single component, solvent curing, non-staining, non-bleeding, non-sagging.
   a. Color: Standard colors matching finished surfaces.
   b. Movement Capability: Plus and minus 12-1/2 percent.
   c. Service Temperature Range: -13 to 180 degrees F.
   d. Shore A Hardness Range: 25 to 50.
   e. Medium movement capability.

9. Butyl Sealant: ASTM C920, Grade NS, Class 12-1/2, Use NT; single component, solvent release, non-skinning, non-sagging.
   a. Color: Standard colors matching finished surfaces.
   b. Movement Capability: Plus and minus 12-1/2 percent.
   c. Service Temperature Range: -13 to 180 degrees F.
   d. Shore A Hardness Range: 10 to 30.
   e. Medium movement capability.

10. Non-sag Polysulfide Sealant: ASTM C920, Grade NS, Class 25, Uses NT, M, A; two component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion, non-sagging type.
    a. Color: Standard colors matching finished surfaces.
    b. Movement Capability: Plus and minus 25 percent.
    c. Service Temperature Range: -40 to 180 degrees F.
    d. Shore A Hardness Range: 20 to 35.
    e. High movement capability.

11. Self-Leveling Polysulfide Sealant: ASTM C920, Grade P, Class 25, Uses T, M; two component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion, self-leveling type.
    a. Color: Standard colors matching finished surfaces.
    b. Movement Capability: Plus and minus 25 percent.
    c. Service Temperature Range: -40 to 180 degrees F.
    d. Shore A Hardness Range: 20 to 35.
    e. High movement capability and used for continuous water immersion.

12. Non-sag Polyurethane Sealant: ASTM C920, Grade NS, Class 25, Uses NT, M; single or multi-component, chemical curing, non-staining, non-bleeding, non-sagging type.
    a. Color: Standard colors matching finished surfaces.
    b. Movement Capability: Plus and minus 25 percent.
    c. Service Temperature Range: -40 to 180 degrees F.
    d. Shore A Hardness Range: 20 to 35.
    e. High movement capability.

13. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Class 25, Uses T, M, A; single or multi-component, chemical curing, non-staining, non-bleeding, self-leveling type.
    a. Color: Standard colors matching finished surfaces.
    b. Movement Capability: Plus and minus 25 percent.
    c. Service Temperature Range: -40 to 180 degrees F.
    d. Shore A Hardness Range: 20 to 35.
    e. High movement capability.
14. Silicone Sealant: ASTM C920, Grade NS, Class 25, Uses NT, A; single component, neutral curing, non-sagging, non-staining, fungus resistant, non-bleeding.
    a. Color: Standard colors matching finished surfaces.
    b. Movement Capability: Plus and minus 25 percent.
    c. Service Temperature Range: -65 to 180 degrees F.
    d. Shore A Hardness Range: 15 to 35.

2.2 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM D1056, sponge or expanded rubber; oversized 30 to 50 percent larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify substrate surfaces and joint openings are ready to receive work.

C. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter impairing adhesion of sealant.

B. Clean and prime joints.

C. Perform preparation in accordance with ASTM C1193.

D. Protect elements surrounding Work of this section from damage or disfiguration.

3.3 INSTALLATION

A. Perform installation in accordance with ASTM C1193.

B. Perform acoustical sealant application work in accordance with ASTM C919.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tool joints concave.

H. Pre-compressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.

I. Compression Gaskets: Avoid joints except at ends, corners, and intersections; seal joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface.

3.4 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.

B. Clean adjacent soiled surfaces.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.

B. Protect sealants until cured.

3.6 SCHEDULE

A. Exterior Joints for Which No Other Sealant Type is Indicated: Type Non-sag Polyurethane Sealant.

B. Control and Expansion Joints in Paving: Type Self-Leveling Polyurethane Sealant.

C. Exterior Wall Expansion Joints: Type Pre-compressed Foam Sealant.

D. Control, Expansion, and Soft Joints in Masonry, and Between Masonry and Adjacent Work: Type Non-sag Polyurethane Sealant.

E. Lap Joints in Exterior Sheet Metal Work: Type Butyl Sealant.

F. Butt Joints in Exterior Metal Work and Siding: Type Silicone Sealant.

G. Joints Between Exterior Metal Frames and Adjacent Work (except masonry): Type Non-sag Polyurethane Sealant.

H. Under Exterior Door Thresholds: Type Butyl Sealant.

I. Interior Joints for Which No Other Sealant is Indicated: Type Acrylic Sealant.

J. Control and Expansion Joints in Interior Concrete Slabs and Floors: Type Self-Leveling Polyurethane Sealant.

K. Joints Between Plumbing Fixtures and Walls and Floors, and Between Counter tops and Walls: Type Silicone Sealant.

L. In STC-Rated Walls, Between Metal Stud Track/Runner and Adjacent Construction, Between Outlet Boxes and Gypsum Board: Type Acrylic Sealant.

END OF SECTION

SECTION 08 12 14 - STANDARD STEEL FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes non-rated steel frames.
   1. Provide frames for exterior doors.

B. Related Sections:
   1. Section 04 20 00 - Unit Masonry.
   2. Section 08 13 14 - Standard Steel Doors.
   3. Section 08 71 00 - Door Hardware.

1.2 REFERENCES

A. American National Standards Institute:
   1. ANSI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.

B. ASTM International:
   1. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

C. Underwriters Laboratories Inc.:
   1. UL 10B - Fire Tests of Door Assemblies.
   2. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
   3. UL 1784 - Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate frame elevations, reinforcement, anchor types and spacing, location of cut-outs for hardware, and finish.

C. Product Data: Submit frame configuration and finishes.

1.4 QUALITY ASSURANCE

A. Conform to requirements of ANSI A250.8.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Accept frames on site in manufacturer's packaging. Inspect for damage.

C. Break seal on-site to permit ventilation.

1.7 COORDINATION

A. Coordinate Work with frame opening construction, door, and hardware installation.

B. Sequence installation to accommodate required door hardware electric wire connections.

PART 2 PRODUCTS

2.1 STANDARD STEEL FRAMES

A. Manufacturers:
   1. Steelcraft
   2. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Product Description: Standard shop fabricated steel frames, fire rated and non-rated types.
   1. Exterior Frames:
      a. Level 2, nominal 16 gage/0.053-inch thick material, base metal thickness.
   2. Interior Frames:
      a. Level 2, nominal 16 gage/0.053-inch thick material, base metal thickness.

2.2 ACCESSORIES

A. Removable Stops: Rolled steel channel shape, mitered corners; prepared for countersink style tamper proof screws.

B. Bituminous Coating: Non-asbestos fibered asphalt emulsion.

C. Primer: ANSI A250.10 rust inhibitive type.

D. Silencers: Resilient rubber fitted into drilled hole.

E. Weatherstripping: Resilient rubber set in steel retainer.

2.3 FABRICATION

A. Fabricate exterior frames, welded.

B. Fabricate frames with hardware reinforcement plates welded in place. Provide mortar guard boxes.

C. Fabricate frames to suit masonry wall coursing with 4-inch head member.

2.4 SHOP FINISHING

A. Steel Sheet: Galvanized to ASTM A653 A40.

B. Primer: Baked.

C. At masonry walls and interior restrooms, coat inside of frame profile with bituminous coating to minimum thickness of 1/16-inch.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install frames in accordance with ANSI A250.8.

B. Coordinate with masonry and wood framed wall construction for anchor placement.

C. Coordinate installation of frames with installation of hardware specified in Section 08 71 00 and doors in Section 08 13 14.

3.3 ERECTION TOLERANCES

A. Maximum Diagonal Distortion: 1/16-inch measured with straight edges, crossed corner to corner.

END OF SECTION

SECTION 08 13 14 - STANDARD STEEL DOORS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes non-rated and thermally insulated steel doors and door louvers.

B. Related Sections:
1. Section 08 12 14 - Standard Steel Frames.
2. Section 08 71 00 - Door Hardware.
3. Section 09 90 00 - Painting and Coating.

1.2 REFERENCES

A. American National Standards Institute:
1. ANSI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.

B. ASTM International:
1. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM E413 - Classification for Rating Sound Insulation.

C. Hollow Metal Manufacturers Association:
1. HMMA 810 - Hollow Metal Doors.

D. National Fire Protection Association:
1. NFPA 80 - Standard for Fire Doors, Fire Windows.

E. Steel Door Institute:
1. SDI 108 - Recommended Selection and Usage Guide for Standard Steel Doors.

F. Underwriters Laboratories Inc.:
1. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
2. UL 1784 - Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Shop Drawings: Indicate door elevations, internal reinforcement, closure method, and cut-outs for glazing, louvers, and finishes.

C. Product Data: Submit door configurations, location of cut-outs for hardware reinforcement.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ANSI A250.8.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Break seal on site to permit ventilation.

1.7 COORDINATION

A. Coordinate Work with door opening construction, door frame, and door hardware installation.

B. Coordinate installation to accommodate door hardware electric wire connections.

PART 2 PRODUCTS

2.1 STANDARD STEEL DOORS

A. Manufacturers:
   1. Steelcraft B-Series
   2. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Product Description:
   1. Exterior Doors (Insulated): ANSI A250.8, 1-3/4 inch thick.
      a. Level 2 - Heavy Duty, Model 2, seamless design.
   2. Interior Doors (Non-Rated): ANSI A250.8, 1-3/4 inch thick.
      a. Level 2 - Heavy Duty, Model 2, seamless design.

2.2 COMPONENTS

A. Face: Steel sheet in accordance with ANSI A250.

B. End Closure: Channel, 0.04 inches thick, flush.

C. Core: polystyrene foam or fiberglass fill.

D. Thermal Insulated Door: Total insulation R-Value of 4, measured in accordance with ASTM C1363.

E. Cap: Flush/Filled 18 Gage Top and Bottom Cap.

2.3 ACCESSORIES

A. Louvers:
   1. Material and Finish: Roll formed aluminum; shop painted finish to selected color.
   2. Louver Blade: Inverted V slat blade, sight proof, per Mechanical Drawings.
   3. Frame: install with tamper proof fasteners.

B. Removable Stops: Rolled steel channel shape, mitered corners; prepared for countersink style tamper proof screws.

C. Primer: ANSI A250.10 rust inhibitive type.

2.4 FABRICATION

A. Fabricate doors with hardware reinforcement welded in place.

2.5 SHOP FINISHING

A. Steel Sheet: Galvanized to ASTM A653 A40.

B. Primer: Baked.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install doors in accordance with ANSI A250.8.

B. Install door louvers, plumb and level.

C. Coordinate installation of doors with installation of frames specified in Section 08 12 14 and hardware specified in Section 08 71 00.

D. Touch-up damaged shop finishes.

3.3 ERECTION TOLERANCES

A. Maximum Diagonal Distortion: 1/16-inch measured with straight edges, crossed corner to corner.

3.4 ADJUSTING

A. Adjust door for smooth and balanced door movement.

END OF SECTION

SECTION 08 71 00 - DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes hardware for hollow steel doors and aluminum-framed entrances.

B. Related Sections:
1. Section 08 12 14 - Standard Steel Frames.
2. Section 08 13 14 - Standard Steel Doors.

1.2 REFERENCES

A. American National Standards Institute:
1. ANSI A156.1 - Butts and Hinges.
2. ANSI A156.2 - Bored and Preassembled Locks and Latches.
3. ANSI A156.3 - Exit Devices.
4. ANSI A156.4 - Door Controls - Closures.
5. ANSI A156.5 - Auxiliary Locks and Associated Products.
6. ANSI A156.6 - Architectural Door Trim.
7. ANSI A156.7 - Template Hinge Dimensions.
8. ANSI A156.8 - Door Controls - Overhead Holders.
9. ANSI A156.12 - Interconnected Locks and Latches.
10. ANSI A156.13 - Mortise Locks and Latches.
11. ANSI A156.15 - Closer Holder Release Devices.
12. ANSI A156.16 - Auxiliary Hardware.
13. ANSI A156.18 - Materials and Finishes
14. ANSI A156.19 - Power Assist and Low Energy Power Operated Doors.
15. ANSI A156.23 - Electromagnetic Locks.
16. ANSI A156.24 - Delayed Egress Locks.
17. ANSI A156 - Complete Set of 24 BHMA Standards (A156 Series) with Binder.

B. Builders Hardware Manufacturers Association:
1. BHMA Directory of Certified Products.

C. National Fire Protection Association:
1. NFPA 80 - Standard for Fire Doors, Fire Windows.

D. Underwriters Laboratories Inc.:
1. UL - Building Materials Directory.

E. Intertek Testing Services (Warnock Hersey Listed):
1. WH - Certification Listings.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures.

B. Shop Drawings:
1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.
2. Submit manufacturer's parts lists.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

C. Keys: Deliver to the Owner.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with the following requirements:
   1. ANSI A156 series.
   2. NFPA 80.
   3. UL 305.

B. Furnish hardware marked and listed in BHMA Directory of Certified Products.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Hardware Supplier: Company specializing in supplying commercial door hardware with minimum three years documented experience.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., as suitable for purpose specified and indicated.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Package hardware items individually with necessary fasteners, instructions, and installation templates, when necessary; label and identify each package with door opening code to match hardware schedule.

1.8 COORDINATION

A. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
   1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.

B. Coordinate Owner's keying requirements during course of Work.

1.9 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Furnish ten year manufacturer warranty for locksets and door closers.

1.10 MAINTENANCE MATERIALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Furnish special wrenches and tools applicable for each different and for each special hardware component.

C. Furnish maintenance tools and accessories supplied by hardware component manufacturer.

1.11 MAINTENANCE SERVICE

A. Provide service and maintenance services of door closers for one year from date of Substantial Completion.

PART 2 PRODUCTS

2.1 DOOR HARDWARE

A. Hinge
   1. Manufacturers:
      a. Ives
      b. McKinney Products Co.
      c. PBB Architectural
      d. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Lockset, Latch Set, and Cylinder
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

   2. All locksets and cylinders are to coordinate with the Owner's keying requirements; hardware supplier to provide temporary cylinders as required.

C. Exit Device
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

D. Closers
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

E. Door Controls and Overhead Holders
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

F. Push/Pulls, Protection Plates, Stops, Bumpers, and Trim (Flat Goods)
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

G. Weatherstripping, Sweeps, Gaskets, and Thresholds
   1. Manufacturers:
      a. See sheet A4.01 for manufacturer, make, and model.
      b. Substitutions: Section 01 25 00 – Substitution Procedures.

2.2 COMPONENTS

A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
   1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
   2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
   3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
      a. Finish: Match hardware item being fastened.
   4. Electrical Devices: Make provisions and coordinate requirements for electrical devices and connections for hardware.

B. Hinges: ANSI A156.1, five knuckle, full mortise butt type, complying with following general requirements unless otherwise scheduled.
   1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
   2. Number: Furnish minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.
   3. Size and Weight: 4-1/2 inch heavy weight typical for 1-3/4 inch doors.
   4. Pins: Furnish nonferrous hinges with non-removable pins (NRP) at exterior, out swinging doors; non-rising pins at interior doors.
   5. Tips: Flat button tips with matching plug.

C. Locksets: Furnish locksets compatible with specified cylinders. Typical 2-3/4 inch backset. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt; verify type of cutouts provided in metal frames.
   1. Mortise Locksets: ANSI A156.13, Series 1000, Grade 1, unless otherwise indicated.
   2. Bored (Cylindrical) Locksets: ANSI A156.2, Series 4000, Grade 1, unless otherwise indicated.
   3. Interconnected Locksets: ANSI A156.12, Series 5000, Grade 1, unless otherwise indicated.

D. Latch Sets: Match locksets.

E. Cylinders: ANSI A156.5, Grade 1, 6 pin type, removable cylinders.
   1. Keying: Keyed as directed by Owner.
   2. Include construction keying.
   3. Keys: Nickel silver. Stamp keys with “DO NOT DUPLICATE”.
   4. Supply keys in the following minimum quantities:
      a. 5 master keys.
      b. 2 change keys for each lock.

F. Push/Pulls, Manual Bolts, Protection Plates, Gaskets, Thresholds, and Trim: Furnish as indicated in Schedule, with accessories as required for complete operational door installations.
   1. Kickplates: A See sheet A4.01 for manufacturer, make, and model.
   2. Weatherstripping: See sheet A4.01 for manufacturer, make, and model.
   3. Thresholds: See sheet A4.01 for manufacturer, make, and model.
   4. Wall Stops: ANSI A156.1, Grade 1, convex or concave pad wall stop with no visible screws.
   5. Floor Stops: ANSI A156.1 Grade 1 dome type or standard floor type with no visible screws; furnish with accessories as required for applications indicated.
   6. Push/Pulls: See sheet A4.01 for manufacturer, make, and model.

2.3 ACCESSORIES

A. Lock Trim: Furnish levers with rose as selected from manufacturer’s full range of levers and roses.

2.4 FINISHING

A. Finishes: See sheet A4.01 for finishes.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify doors and frames are ready to receive door hardware and dimensions are as indicated on shop drawings.

C. Verify electric power is available to power operated devices and is of correct characteristics.

3.2 INSTALLATION

A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.

B. Mounting Heights From Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes where not otherwise indicated.
   1. Locksets: 38 inch.
   2. Push/Pulls: See sheet A4.01.
   3. Dead Locks: 48 inch.
   4. Push Pad Type Exit Devices: 42 inch.
   5. Top Hinge: Jamb manufacturer’s standard, but not greater than 10 inches from head of frame to center line of hinge.
   6. Bottom Hinge: Jamb manufacturer’s standard, but not greater than 12-1/2 inches from floor to center line of hinge.
   7. Intermediate Hinges: Equally spaced between top and bottom hinges and from each other.
   8. Hinge Mortise on Door Leaf: 1/4 inch to 5/16 inch from stop side of door.

3.3 FIELD QUALITY CONTROL

A. Hardware Supplier to inspect installation and certify hardware and installation has been furnished and installed in accordance with manufacturer's instructions.

3.4 ADJUSTING

A. Adjust hardware for smooth operation.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Do not permit adjacent work to damage hardware or hardware finish.

3.6 SCHEDULES

A. See sheet A4.01 for door hardware manufacturer, make, model, location, heights, and finishes.

END OF SECTION

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Gypsum board and joint treatment.
   2. Acoustic insulation.

B. Related Requirements:
   1. Section 09 22 26 – Metal Suspension Systems

1.2 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
   2. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board.
   3. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
   4. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
   5. ASTM C1396/C1396M - Standard Specification for Gypsum Board.
   6. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products to Wood Studs.
   7. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard.
   8. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction.
   9. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   10. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
   11. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
   12. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

B. Gypsum Association:
   1. GA - 214 - Levels of Finish for Gypsum Panel Products.
   2. GA - 216 - Application and Finishing of Gypsum Panel Products.
   3. GA - 600 - Fire Resistance and Sound Control Design Manual.

C. Intertek Testing Services (Warnock Hersey Listed):
   1. WH – Certification Listings.

D. National Fire Protection Association:
   1. NFPA 265 - Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls, Method B.
   2. NFPA 286 - Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Wall and Ceiling Interior Finish.

E. Underwriters Laboratories Inc:
   1. UL – Fire Resistance Directory.

1.3 SUBMITTALS

A. Section 01 33 00 – Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data on gypsum board, joint tape, and other components.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM C840:
   1. GA - 214 - Levels of Finish for Gypsum Panel Products.
   2. GA - 216 - Application and Finishing of Gypsum Panel Products.
   3. GA - 600 - Fire Resistance and Sound Control Design Manual.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

A. Manufacturers:
   1. Georgia-Pacific Gypsum, LLC
   2. National Gypsum Co.
   3. United States Gypsum Co.
   4. Substitutions: Section 01 60 00 - Product Requirements.

2.2 COMPONENTS

A. Gypsum Board Materials: ASTM C1396/C1396M
   1. Standard Gypsum Board: 1/2-inch thick, maximum available length in place; ends square cut, tapered edges.
   2. Moisture Resistant Gypsum Board: 1/2-inch thick, maximum available length in place; ends square cut, tapered edges.

2.3 ACCESSORIES

A. Acoustic Insulation: ASTM C665, Type I, unfaced, preformed mineral fiber, friction fit type, thickness per Drawings.

B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board; manufacturer per recommendation of gypsum board manufacturer.

C. Gypsum Board Accessories: ASTM C1047; paper-faced metal; corner beads, edge trim, and expansion joints.
   1. Edge Trim: Trim-Tex Architectural F-Reveal, ½" x ½" AS8710.

D. Joint Materials: ASTM C475/C475M and GA - 216; reinforcing tape, joint compound, and water.

E. Gypsum Board Screws: ASTM C1002; length to suit application.
   1. Screws for Wood Framing: Type W.

F. Gypsum Board Nails: ASTM C514; blued steel wire, deformed shank; length to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions are ready to receive work.

3.2 INSTALLATION

A. Acoustic Accessories:
   1. Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
   2. Install acoustic sealant within partitions.

B. Gypsum Board:
   1. Install gypsum board in accordance with ASTM C840, GA – 216, and GA - 600.
   2. Erect single layer standard gypsum board in most economical direction with ends and edges occurring over firm bearing.
   3. Fasten gypsum board to furring or framing with screws.
   4. Treat cut edges and holes in moisture resistant gypsum board with sealant
   5. Place control joints consistent with lines of building spaces.
   6. Place corner beads at external corners. Use longest practical length. Place Trim Tex Architectural F Reveal Bead edge trim where gypsum board abuts dissimilar materials.

C. Joint Treatment:
   1. Finish in accordance with GA – 214:
      a. Level 4: Walls exposed to view.
      b. Level 4: Ceilings exposed to view.

3.3 TOLERANCES

A. Section 01 40 00 – Quality Requirements: Tolerances.

B. Maximum Variation of Finished Gypsum Board Surface from Flat Surface: 1/8-inch in 10-feet.

END OF SECTION

SECTION 09 22 26 – METAL SUSPENSION SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes: Provide metal suspension system for gypsum board ceilings including but not limited to:

1. metal suspension systems for gypsum board assemblies.

B. Related Sections:

1. Division 01 Section “Sustainable Design and LEED Requirements” for additional LEED requirements.
2. Section 09 22 26, Suspension Systems.
3. Section 09 51 13, Acoustical Panel Ceilings.
4. Section 09 54 00, Specialty Ceilings.
5. Section 09 58 00, Integrated Ceiling Assemblies.
6. Section 13 48 00, Sound, Vibration, and Seismic Control.
7. Section 23 50 00, Central Heating Equipment.
8. Section 26 50 00, Lighting.

1.3 REFERENCES

A. Abbreviations and Acronyms:

1. ASCE: The American Society of Civil Engineers; www.asce.org.
2. CISCA: Ceilings & Interior Systems Construction Association; www.cisca.org.
3. LEED: Leadership in Energy and Environmental Design; www.usgbc.org.

B. Reference Standards:

1.	ASCE 7-10	- Minimum design loads for buildings and other structures
2.	ASTM A653/A653M	- Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
3.	ASTM C635/C635M	- Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
4.	ASTM C636/C636M	- Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels
5.	ASTM C754	- Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
6.	ASTM C841	- Standard Specification for Installation of Interior Lathing and Furring

7. ICC ES AC 156 - Acceptance Criteria for Seismic Certification by Shake-Table Testing of Nonstructural Components

1.4 SUBMITTALS

A. Product Data: Submit sheets listing dimensions, load carrying capacity and standard compliance.

B. Samples: Submit samples of main tee and cross tee with couplings.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Supply additional material equal to 5% of ceiling area. Additional material should match products installed and have the appropriate labels and identification.

B. Supply extra materials that match Products installed and are packaged with protective covering for storage and identified with labels describing contents.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect system components from excessive moisture in shipment, storage, and handling. Deliver in unopened bundles and store in a dry place with adequate air circulation. Do not deliver material to building until wet conditions such as concrete, plaster, paint, and adhesives have been completed and cured to a condition of equilibrium.

1.8 WARRANTY

A. Manufacturer Warranty: Submit a written warranty executed by manufacturer for a period of 40 years from date of Substantial Completion, agreeing to repair or replace suspension system components that fail or are compromised within the specified warranty period. Failed or compromised parts can include, but are not limited to:

1. Rusting or defects directly made by the manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Chicago Metallic 640-D Heavy Duty Double Web Suspension System manufactured by ROCKFON, 4849 South Austin Avenue, Chicago, IL 60638. 1-800-323-7164; www.rockfon.com.

2.2 MATERIALS

A. Seismic Performance: Acoustical ceiling shall withstand the effects of earthquake motions determined according to ASCE 7 and ICC ES AC 156.

B. Basic Steel Material and Finish: Commercial quality, CS Type A to ASTM A653/A653M, hot-dip galvanized to not less than G40 zinc coating designation.

C. Main Tees and Cross Tees: All suspension main tee and cross tee components are manufactured from commercial quality steel with factory punched cross tee slots, screw stop, hanger holes, and non-directional bayonet-style end couplings while furring tees feature a stab-type end tab coupling. The main tees are made with 0.018" thick steel with a 1-1/2" knurled face.

1. Structural Classifcation Standard: ASTM C635/C635M Heavy Duty.
2. Color: Bare steel
3. Specified Product: "Chicago Metallic 640 Non-Fire Rated Drywall Grid System" by ROCKFON.

D. Perimeter Treatment Components:

1. Wall Track: Manufactured from 0.020" thick steel, 1-9/16" high by 120" long with a 1" top and bottom flange.
2. Wall Angle: Manufactured from 0.020" thick steel, 1-15/32" by 1-15/32" by 120" long. [knurled][un-knurled].

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas and conditions, including structural framing to which metal acoustical ceiling suspension assemblies attach or abut, with installer present, for compliance with requirements specified in this and other Sections affecting ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of metal acoustical ceiling suspension assemblies.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install metal acoustical ceiling suspension assemblies to comply with ASTM C636/C636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

B. Furring Runners: Installed 48" on center, by direct suspension from existing structure in accordance with ASTM C754 and ASTM C841 with not less than 12 ga steel hanger wires, wrapped tightly 3 full turns at each end.

C. Furring Tees: Installed perpendicular to furring runners [16"] [24"] on center to form [ ] by [ ] modules in accordance with ASTM C754 and ASTM C841.

D. Cross Tees: Installed adjacent to each unsupported side of recessed fixtures.

E. Perimeter Treatment: Installed on vertical surfaces, intersecting suspension components, by appropriate method in accordance with industry accepted practice.

F. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and components at locations where imposed loads could cause deflection exceeding 1/360 span.

3.3 REPAIR

A. Remove damaged or compromised components; replace with undamaged components.

3.4 CLEANING

A. Clean exposed grid with non-solvent based non-abrasive commercial cleaning solution. Comply with manufacturer's instructions for cleaning grid components. Remove any components that cannot be effectively cleaned or repaired.

END OF SECTION

SECTION 09 90 00 - PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes surface preparation and field application of paints, transparent finishes, stains, varnishes, primer sealers, block filler, and other coatings.

1.2 REFERENCES

A. ASTM International:
   1. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.
   2. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.
   3. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.3 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this section.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data on finishing products, including VOC levels.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces

1.6 QUALITY ASSURANCE

A. Surface Burning Characteristics:
   1. Fire Retardant Finishes: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

B. Installer: Company specializing in performing Work of this Section with a minimum of three years documented experience.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Applicator: Company specializing in performing work of this section with minimum three years documented experience.

1.8 MOCKUP

A. Contractor may be asked to provide various 12” x 12” mockups of wall and ceiling paint color options; locate as directed by Architect.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

C. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

D. Paint Materials: Store at minimum ambient temperature of 45 degrees F and maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

E. Store materials in environmental conditions required by manufacturer's instructions.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements

B. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.

C. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.

D. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior, unless required otherwise by manufacturer's instructions.

E. Minimum Application Temperature for Varnish Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.

F. Provide lighting level of 80 ft candle measured mid-height at substrate surface.

1.11 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.

B. Furnish five-year manufacturer warranty for paints and coatings.

1.12 EXTRA MATERIALS

A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.

B. Supply 1 gallon of each color and type; store where directed.

C. Label each container with color, type, and room location(s), in addition to manufacturer's label.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

A. Manufacturers:
   1. Sherwin-Williams
   2. Benjamin Moore & Co.

3. PPG Industries
4. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Manufacturers: Sherwin Williams
1. Paint: per Finish Schedule.
2. Stain: per Finish Schedule.
3. Substitutions: Section 01 25 00 – Substitution Procedures.

2.2 COMPONENTS

A. Coatings: Ready mixed, except field catalyzed coatings. Prepare coatings:
1. To soft paste consistency, capable of being readily and uniformly dispersed to homogeneous coating.
2. For good flow and brushing properties.
3. Capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve finishes specified; commercial quality.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify surfaces and substrate conditions are ready to receive Work as instructed by product manufacturer.

C. Measure moisture content of porous surfaces using electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
1. Plaster and Gypsum Wallboard: 12 percent.
2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.
5. Concrete Floors: 8 percent.

3.2 PREPARATION

A. Correct defects and clean surfaces affecting work of this section.

B. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or applying finishes.

C. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

D. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

E. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

F. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

G. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

H. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.

I. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior paintable caulking compound after prime coat has been applied.

J. Exterior Wood Scheduled to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior caulking compound after sealer has been applied.

K. Glue-Laminated Beams: Prior to finishing, wash surfaces with solvent, remove grease and dirt.

L. Wood Doors Scheduled for Painting: Seal wood door top and bottom edge surfaces with tinted primer.

M. Metal Doors Scheduled for Painting: Prime metal door top and bottom edge surfaces.

3.3 APPLICATION

A. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

B. Apply each coat in uniform appearance.

C. Sand wood and metal surfaces lightly between coats to achieve required finish.

D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

E. Where clear finishes are required, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.

F. Prime concealed surfaces of interior and exterior woodwork with primer paint.

G. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.

H. Finishing Mechanical and Electrical Equipment:
   1. Paint shop primed equipment.
   2. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
   3. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports except where items are shop finished.
   4. Paint interior surfaces of air ducts and convector and baseboard heating cabinets visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.

5. Paint exposed conduit and electrical equipment occurring in finished areas.
6. Paint both sides and edges of plywood backboards for electrical and data equipment before installing equipment.
7. Color code equipment, piping, conduit, and exposed duct work as directed by Architect. Color band and identify with flow arrows, names, and numbering.
8. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements.

3.5 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.

B. Collect waste material which may constitute fire hazard, place in closed metal containers, and remove daily from site.

C. As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

3.6 SCHEDULE - EXTERIOR SURFACES

A. See sheet A3.01 for manufacturer, product type, finish coat, prime coat, sheen, and location of application.

3.7 SCHEDULE - INTERIOR SURFACES

A. See sheet A3.01 for manufacturer, product type, finish coat, prime coat, sheen, and location of application.

END OF SECTION

SECTION 10 14 00 - SIGNAGE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes interior signs.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate sign styles, lettering font, foreground and background colors, locations, overall dimensions of each sign.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements.

B. Package signs, labeled in name groups.

C. Store adhesive attachment tape at ambient room temperatures.

D. Protect from damage and surface abrasions. Damaged units are to be replaced.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Do not install signs when ambient temperature is lower than recommended by manufacturer.

C. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.1 INTERIOR SIGNS

A. Product Description: Interior signage displaying Room Name and, where applicable, Character Graphic. Per Door Signage Schedule on Drawings.

2.2 COMPONENTS

A. Raised Character Size and Style: Acrylic plastic, character adhered to base material:
   1. Character Color: per Shop Drawings.
   2. Character Thickness: 1/8 inch.
   3. Height: 1 inch.
   4. Edges: per Shop Drawings.
   5. Character Font: per Shop Drawings.
   6. Character Case: Uppercase.
   7. Include Room Name in Braille.

B. Individual Graphics, Material: Solid color acrylic plastic:
   1. Thickness: 1/8 inch.

2. Height: 2 to 3 inches.
3. Edges: per Shop Drawings.
4. Character Color: per Shop Drawings.
5. Character Font: per Shop Drawings
6. Character Case: Uppercase

C. Graphic Style: Handicapped type.

2.3 ACCESSORIES

A. Wall stand offs are to be provided for all signage.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

3.2 INSTALLATION

A. Install signs after doors and surfaces are finished, in locations compliant with the Americans with Disabilities Act.

B. Locate sign on wall surface, level.

3.3 LOCATION

A. Install signs at the following locations:
1. By entry door to Men’s and Women’s Restroom at Concessions and Restroom Building.
2. By entry door into Concessions area at Concessions and Restroom Building.

END OF SECTION

SECTION 10 21 13 - TOILET COMPARTMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Stainless Steel:
      a. Toilet partitions.
      b. Urinal privacy screens.

B. Related Requirements:
   1. Section 10 28 00 - Toilet, Bath, and Laundry Accessories.

1.2 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

1.3 COORDINATION

A. Coordinate Work with placement of support framing and anchors in wall.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data on panel construction, hardware, and accessories.

C. Shop Drawings: Indicate partition plan, elevation views, dimensions, door swings, details of wall and floor supports, and anchorage types.

D. Samples: For each finish product specified, two completed sets of color chips representing manufacturer’s full range of available colors and patterns.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Spare Parts:
   1. Furnish two sets of manufacturer's recommended spare parts.

C. Tools: Furnish special wrenches and other devices required for Owner to maintain panels and hardware.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years' documented experience.

B. Installer: Company specializing in performing Work of this Section with minimum three years' documented experience.

1.7 EXISTING CONDITIONS

A. Field Measurements: Verify field measurements prior to fabrication. Indicate field measurements on Shop Drawings.

1.8 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Manufacturer's Warranty: 25-year limited warranty for panels, doors, and stiles against breakage, corrosion, delamination, and defects in factory workmanship; 5-year guarantee against defects in material and workmanship for stainless steel door hardware and mounting brackets.

PART 2 PRODUCTS

2.1 TOILET COMPARTMENTS

A. Manufacturers:
   1. Hadrian
   2. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Stainless Steel Toilet Partitions:
   a. Hadrian Stainless Steel Elite Plus Series 72"
   b. Brushed Finish, Both Sides
   c. Headrail Braced
   d. Continuous Hinge
   e. Full Height Continuous Channel
   f. Coat Hook in all Partitions

2.2 URINAL SCREEN

A. Manufacturers:
   1. Hadrian
   2. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Stainless Steel Toilet Partitions:
   a. Hadrian Stainless Steel Elite Plus Series 72"
   b. Brushed Finish, Both Sides
   c. Headrail Braced

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify field measurements are as indicated on Shop Drawings.

C. Verify spacing of plumbing fixtures to assure compatibility with installation of compartments.

D. Verify correct location of built-in framing, anchorage, and bracing.

E. Verify areas scheduled to receive compartments for correct dimensions, plumbness of walls, and soundness of surfaces that would affect installation of mounting brackets.

3.2 PREPARATION

A. Prepare substrates including but not limited to blocking and supports in walls and ceilings at points of attachment using methods recommended by the manufacturer for achieving the best result for the substrates under the project conditions.

B. Do not proceed with installation until substrates have been properly prepared with blocking and supports in walls and ceilings at points of attachment and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.

3.3 INSTALLATION

A. Install products in strict compliance with manufacturer's written instructions and recommendations, including the following:
   1. Verify blocking and supports in walls and ceilings have been installed properly at points of attachment.
   2. Verify location does not interfere with door swings or use of fixtures.
   3. Use fasteners and anchors suitable for substrate and project conditions.
   4. Install units rigid, straight, plumb, and level.
   5. Conceal evidence of drilling, cutting, and fitting to room finish.
   6. Test for proper operation.

3.4 ERECTION TOLERANCES

A. Maximum Variation from Indicated Position:1/4-inch.

B. Maximum Variation from Plumb: 1/8-inch.

3.5 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements.

B. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.6 ADJUSTING

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 1/8-inch.

C. Adjust hardware for proper operation after installation.

D. Adjust hinges to position doors in closed position when unlatched. Return out swinging doors to closed position.

E. Adjust adjacent components for consistency of line or plane.

3.7 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Clean partition and screen surfaces with materials and cleansers according to manufacturer's recommendations.

END OF SECTION

SECTION 10 28 00 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Toilet accessories.

B. Related Requirements:
   1. Section 10 21 13 – Toilet Compartments.

1.2 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM A123 - Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
   2. ASTM A269 - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
   3. ASTM A653 - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc Iron Alloy Coated (Galvannealed) by the Hot Dip Process.
   4. ASTM A666 - Standard Specification for Annealed or Cold Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
   5. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
   6. ASTM C1036 - Standard Specification for Flat Glass.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures Requirements for submittals.

B. Product Data: Submit data on accessories, describing size, finish, details of function, and attachment methods.

1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years' documented experience.

B. Installer: Company specializing in performing Work of this Section with minimum three years' documented experience.

1.5 WARRANTY

A. Furnish ten-year manufacturer's warranty for electric hand dryers.

B. Furnish ten-year manufacturer's warranty for mirror glass and stainless steel mirror frames.

PART 2 PRODUCTS

2.1 TOILET AND CUSTODIAL ACCESSORIES

A. Manufacturers:

1. Bobrick
2. Georgia Pacific
3. Bradley Corporation
4. Vandal Stop Products
5. American Specialties, Inc.
6. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Performance and Design Criteria:
   1. Design grab bars and attachments to resist minimum 250 lb. concentrated load applied at any point in any direction.
   2. Exterior restrooms are to be vandal resistant.

C. Types of accessories required are listed on the following drawings: A2.08 Restroom and Concessions, Elevations and Plans

2.2 MATERIALS

A. Accessories: Shop assembled, free of dents and scratches, and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
   1. Grind weld joints smooth.
   2. Fabricate units made of metal sheet of seamless sheets with flat surfaces.

B. Keys: Furnish two keys for each keyed accessory to Owner; products from the same manufacturer are to be keyed the same.

C. Stainless Steel Sheet: ASTM A666, Type 304, all welded construction.

D. Stainless Steel Tubing: ASTM A269, Type 304 stainless steel.

E. Galvanized Sheet Steel: ASTM A653, G90 (Z275) zinc coating.

F. Mirror Glass (Type MR-F): ASTM C1036, Type 1 transparent float glass, Class 1 clear, Quality Q1 mirror select; type with copper and silver coating, and organic overcoating.

2.3 FINISHES

A. Stainless Steel: No. 4 satin brushed finish, unless otherwise indicate].

B. Chrome/Nickel Plating: ASTM B456, Type SC 2, polished finish, unless otherwise indicated.

C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats electrostatic-baked enamel.

D. Galvanizing: ASTM A123; hot-dip galvanize after fabrication.

2.4 INTERIOR TOILET ACCESSORIES

A. Types of accessories required are listed on the following drawings: A2.08 Restroom and Concessions, Elevations and Plans.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements.

B. Verify exact location of accessories for installation.

C. Verify field measurements and rough-in dimensions for recessed accessories are as instructed by manufacturer.

D. Ensure proper placement for installation of blocking, reinforcing plates, and concealed anchors in walls.

3.2 PREPARATION

A. Deliver inserts and rough-in frames to Site for timely installation.

B. Provide templates and rough-in measurements as required.

3.3 INSTALLATION

A. Do not install accessories until after completion of all finishes to adjacent wall and ceiling surfaces.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Turn over to Owner all keys and special tools required for lockable or secured accessories.

D. Mounting Heights and Locations: as indicated in this Section.

3.4 CLEANING

A. Clean mirrors and exposed surfaces using procedures as recommended by accessory manufacturer.

END OF SECTION

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Fire extinguishers.

1.2 DEFINITIONS

A. ADA: Americans with Disabilities Act.

1.3 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems.

B. National Fire Protection Association:
   1. NFPA 10 - Standard for Portable Fire Extinguishers.

C. UL:
   1. UL - Fire Protection Equipment Directory.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit extinguisher classifications, operational features, color and finish, anchorage details.

C. Shop Drawings:
   1. Submit reduced scale building plan showing locations of each type of fire protection specialty required.
   2. Indicate cabinet physical dimensions, locations, rough in measurements for recessed cabinets, blocking and attachment details, and fire ratings.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Operation and Maintenance Data:
   1. Submit test, refill, or recharge schedules.
   2. Submit recertification requirements.

1.6 QUALITY ASSURANCE

A. Comply with NFPA 10.

B. Provide extinguishers classified and labeled by UL for indicated purposes.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Inspection: Accept materials on Site and inspect for damage.

C. Store and protect materials according to manufacturer's instructions.

1.9 AMBIENT CONDITIONS

A. Section 01 50 00 - Temporary Facilities and Controls.

B. Do not install extinguishers when ambient temperature is capable of freezing extinguisher contents.

1.10 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements.

B. Furnish five-year manufacturer's warranty for fire extinguisher and fire extinguisher cabinets.

PART 2 PRODUCTS

2.1 FIRE EXTINGUISHERS

A. Manufacturers:
   1. Larsen’s Manufacturing Co.
   2. Activar Construction Products Group, Inc.
   3. Amerex Corporation
   4. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Multi-Purpose Dry Chemical Type:
   1. Tank: Steel.
   2. Furnish pressure gage.
   3. Class: per NFPA 10.
   4. Finish: Enamel to Red

C. Carbon Dioxide Type:
   1. Tank: Steel.
   2. Furnish pressure gage.
   3. Class: per NFPA 10.
   4. Finish: Enamel to Red

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements.

3.2 INSTALLATION

A. Install extinguisher compliant with ADA requirements.

END OF SECTION

SECTION 31 31 16 - TERMITE CONTROL

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Soil treatment for termite control.

1.2 REFERENCES

A. Environmental Protection Agency:
   1. EPA FIFRA - Federal Insecticide, Fungicide and Rodenticide Act.

B. National Pest Management Association:
   1. NPMA WDO - Wood Destroying Organism Library.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit toxicants to be used, composition by percentage, dilution schedule, intended application rate. Include product label information.

C. Test Reports: Indicate regulatory agency approval reports.

D. Manufacturer's Application Instructions: Indicate caution requirements and in accordance with current product label of chosen pesticide.

E. Manufacturer's Certificate: Certify Products meet or exceed current label specifications regarding pest and treatment site.

F. Certify applications followed NPMA WDO for termite control or other regional location guidance.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record moisture content of soil before application, date and rate of application, areas of application, diary of toxicity meter readings and corresponding soil coverage.

C. Operation and Maintenance Data: Indicate re-treatment schedule.

1.5 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.

B. Furnish five-year warranty.

C. Warranty: Include coverage for damage and repairs to building and building contents caused by termites. Repair damage. Re-treat where required.

D. Inspect and report annually to Owner in writing.

PART 2 PRODUCTS

2.1 MATERIALS

A. Manufacturers:
   1. Environmental Chemical Corporation
   2. Substitutions: Section 01 60 00 - Product Requirements.

B. Toxicant Chemical: EPA FIFRA approved; synthetically color dyed to permit visual identification of treated soil.

C. Diluent: Recommended by toxicant manufacturer.

2.2 MIXES

A. Mix toxicant to manufacturer's instructions.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

B. Verify soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.

C. Verify final grading and excavation are complete.

3.2 APPLICATION

A. Apply toxicant at the following locations:
   1. Under slabs-on-grade.
   2. Both sides of foundation surface.
   3. Soil within 10-feet of building perimeter to 1-foot depth.

B. Apply extra treatment to structure penetration surfaces including pipe or ducts, and soil penetrations including grounding rods or posts.

C. Re-treat disturbed treated soil with same toxicant as original treatment.

D. When inspection or testing identifies presence of termites, re-treat soil and re-test.

3.3 PROTECTION OF FINISHED WORK

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished Work.

B. Do not permit soil grading over treated work.

END OF SECTION

END OF PROJECT MANUAL

(Whew! Thank goodness…)