

General Decision Number: TX140002 01/03/2014 TX2

Superseded General Decision Number: TX20130002

State: Texas

Construction Type: Building

County: Bexar County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes and apartments up to and including 4 stories). (Use current heavy & highway general wage determination for Paving & Utilities Incidental to Building Construction).

Modification Number	Publication Date
0	01/03/2014

ASBE0087-001 01/01/2012

	Rates	Fringes
Asbestos/Insulator Worker (Includes application of all insulating materials, protective coverings, coatings, and finishings to all types of mechanical systems.).....	\$ 21.87	8.07

BRTX0001-004 05/01/2011

	Rates	Fringes
BRICKLAYER.....	\$ 24.50	1.97

ELEC0060-001 06/03/2013

	Rates	Fringes
CABLE SPLICER.....	\$ 25.20	3.75+12%
ELECTRICIAN.....	\$ 25.60	4.65+8%

ELEC0060-002 06/01/2009

	Rates	Fringes
ELECTRICIAN (Low Voltage including pulling & installing cable through conduit).....	\$ 19.51	8%+4.92

ELEV0081-001 01/01/2013

	Rates	Fringes
Elevator Constructor MECHANIC.....	\$ 35.89	25.185+a

FOOTNOTE; A. 6% under 5 years based on regular hourly rate
for all hours worked. 8% over 5 years based on regular
hourly rate for all hours worked.

New Year's Day, Memorial Day, Independence Day, Labor Day,
Thanksgiving Day, Friday after Thanksgiving Day, Christmas
Day, and Veterans Day.

ENGI0450-001 07/01/2009

	Rates	Fringes
Power equipment operators: Cranes.....	\$ 29.75	8.75

IRON0066-001 06/01/2013		
	Rates	Fringes
IRONWORKER (Excluding metal building erectors)		
Structural.....	\$ 19.60	5.95

MARB0002-001 07/01/2005		
	Rates	Fringes
TILE SETTER.....	\$ 18.50	6.10

PLUM0142-001 07/01/2012		
	Rates	Fringes
Plumbers and Pipefitters (Including HVAC WORK).....		
	\$ 29.78	9.35

SFTX0669-001 07/01/2013		
	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....		
	\$ 26.36	16.62

SHEE0067-001 04/01/2009		
	Rates	Fringes
Sheet metal worker (Including HVAC Duct Work).....		
	\$ 25.18	10.75

SUTX1988-002 11/01/1988		
	Rates	Fringes
Acoustical Ceiling Installer.....	\$ 12.26	
CARPENTER (Excluding Acoustical Ceiling Installer & Drywall Hanger).....		
	\$ 10.64	
CEMENT MASON/CONCRETE FINISHER....	\$ 11.46	
DRYWALL HANGER.....	\$ 11.88	
GLAZIER.....	\$ 10.78	1.40
IRONWORKER (Excluding Metal Building Assemblers)		
Reinforcing.....	\$ 10.19	3.57
Laborers:		

Mason Tenders.....	\$ 8.36	1.78
Mortar Mixers.....	\$ 8.99	
PLASTERER'S TENDERS.....	\$ 8.68	
Unskilled.....	\$ 7.25	
LATHER.....	\$ 15.25	
PAINTER (Excluding Tapers/Finishers).....	\$ 8.01	
PLASTERER.....	\$ 15.25	
Power equipment operators:		
Front End Loader.....	\$ 7.36	
Roofers:		
Kettlemen.....	\$ 8.85	
Roofers.....	\$ 8.14	
Waterproofers.....	\$ 7.25	
Sheet Metal Worker		
Other Work.....	\$ 11.62	
Taper/Finisher.....	\$ 7.99	
TRUCK DRIVER.....	\$ 7.25	

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

=====

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) (ii)).

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 union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first

four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows 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. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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 Regional Office for the area in which the survey was conducted because those Regional Offices have 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.

=====

END OF GENERAL DECISION

AN ORDINANCE 2008-11-20-1045

AMENDING ORDINANCE 71312 CONCERNING WAGE AND HOUR
LABOR STANDARD PROVISIONS FOR CITY OF SAN ANTONIO
CONSTRUCTION PROJECTS.

* * * * *

WHEREAS, federal and state laws require that all companies working on publicly funded construction projects must pay prevailing wage rates to its contractor and subcontractor employees, as determined by the U.S. Department of Labor; and

WHEREAS, governing procedures were established to ensure the City's compliance with various state laws through Ordinance No. 71312 approved on March 29, 1990 which provided for the Wage and Labor Standard Provision for locally funded City construction projects; and

WHEREAS, there have been changes in state law, as well as, organizational and process changes within the City that necessitate an amendment to Ordinance No. 71312; and

WHEREAS, this Ordinance amends Ordinance No. 71312 to a) reflect the changes in the Texas Government Code, Section 2258, Prevailing Wages, (superseding Article 5159a, Revised Civil Statutes), b) incorporate changes in the City's organizational structure renaming the Wage and Hour Office of the Public Works Department to the Labor Compliance Office, Capital Improvements Management Services Department, c) reflect changes in the City processes and the implementation of an electronic compliance program, and d) clarify language and eliminate ambiguities in the Ordinance, including the processes used by contractors for the restitution of underpayment of wages to workers whose contact information or current address is unknown; and

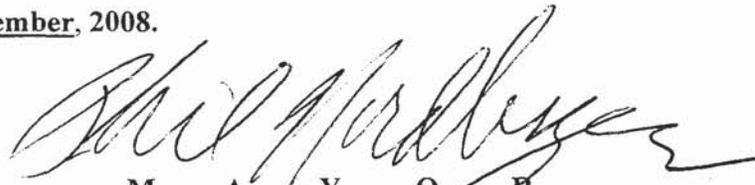
WHEREAS, approval of this Amendment will accurately reflect current laws, City organizational structure and current processes; **NOW THEREFORE,**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1. Ordinance No. 71312 concerning Wage and Hour Labor Standard Provisions for City of San Antonio construction projects are hereby amended and the amended Wage and Labor Standard Provisions are attached hereto and incorporated by reference herein as Attachment I.

SECTION 2. This Ordinance shall take effect ten days after passage.

PASSED AND APPROVED this 20th day of November, 2008.


M A Y O R
PHIL HARDBERGER

ATTEST:


City Clerk

APPROVED AS TO FORM:


FLM City Attorney For

WAGE AND LABOR STANDARD PROVISIONS
CITY OF SAN ANTONIO FUNDED CONSTRUCTION

Contents

1. GENERAL STATEMENT
2. LABOR COMPLIANCE OFFICE, CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT RESPONSIBILITIES
3. CLAIMS & DISPUTES PERTAINING TO WAGE RATES
4. BREACH OF WAGE & LABOR STANDARDS PROVISIONS
5. EMPLOYMENT OF LABORERS/MECHANICS NOT LISTED IN WAGE DETERMINATION DECISION
6. MINIMUM WAGE
7. OVERTIME COMPENSATION
8. PAYMENT OF CASH EQUIVALENT FRINGE BENEFITS
9. WORK CONDUCTED ON HOLIDAYS
10. UNDERPAYMENT OF PREVAILING WAGES OR SALARIES
11. POSTING WAGE DETERMINATION DECISION/STATEMENT AND "NOTICE TO EMPLOYEES"
12. PAYROLLS & BASIC PAYROLL RECORDS
13. LABOR DISPUTES
14. COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY EMPLOYEES
15. EMPLOYEE INTERVIEWS TO ASSURE WAGE & LABOR STANDARD COMPLIANCE
16. "ANTI-KICKBACK" PROVISION
17. "FALSE OR DECEPTIVE INFORMATION" PROVISION
18. EMPLOYMENT OF APPRENTICES/TRAINEEES
19. JOBSITE CONDITION
20. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED
21. PROVISIONS TO BE INCLUDED IN SUBCONTRACTS
22. CONTRACTOR'S RESPONSIBILITY

1. GENERAL STATEMENT

For all City of San Antonio funded public works construction contracts, the City of San Antonio, in accordance with Texas Government Code Section 2258, requires that not less than the general prevailing wage rates (minimum hourly base pay and minimum hourly fringe benefit contribution) for work of similar character be paid to contractor and subcontractor employees. These wage rates are derived from the most current applicable federal prevailing wage rates as published by the United States Department of Labor, Dallas, Texas and authority of Ordinance Nos. 60110 and 71312 as amended and passed by the City Council of the City of San Antonio.

Any deviation from Wage and Labor Standard Provisions compliance shall be cause for City's withholding either periodic interim or final payment to the contractor until such deviations are properly corrected.

2. LABOR COMPLIANCE OFFICE, CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT RESPONSIBILITIES

Labor Compliance Office, Capital Improvements Management Services Department, City of San Antonio, is primarily responsible for all Wage and Labor Standard Provisions investigation and enforcement and will monitor contractor/subcontractor practices to assure the Director of Capital Improvements Management Services Department that:

- a. Appropriate weekly compliance statements and payroll records are submitted to the City by the contractor/subcontractors and that such are reviewed for compliance with the Wage and Labor Standard Provisions.
- b. Apprentices/trainees working on the project are properly identified by the contractor/subcontractor on payroll records and documented as being included in programs currently sanctioned by appropriate federal or state regulatory agencies.
- c. Applicable Wage Determination Decisions, including any applicable modifications and related statements must be posted at the work-site by the contractor and that proper job classification and commensurate minimum hourly base and fringe wage rates are paid.
- d. Employees are periodically interviewed (at random) to assure proper work classification and wage rates.
- e. The Labor Compliance Office will investigate all allegations that no person employed by contractor/subcontractor is induced against his will, by any means, to give up any part of the compensation to which he is otherwise entitled.
- f. That any and all periodic administrative directives to the Labor Compliance Office from the Director of Capital

Improvements are being implemented. For purpose of these Wage and Labor Standard Provisions, the Director of Capital Improvements Management Services means the Director, his successor, or his designee.

3. CLAIMS & DISPUTES PERTAINING TO WAGE RATES

Claims and disputes not promptly and routinely settled by the contractor/subcontractor and employee pertaining to wage rates, or to job classifications of labor employed regarding the work covered by this contract, shall be reported by the employee in writing, within sixty (60) calendar days of employee's receipt of any allegedly incorrect classification, wage or benefit report, to the Labor Compliance Office, City of San Antonio for further investigation. Claims and disputes not reported by the employee to the City's Wage & Hour Office in writing within the sixty (60) calendar day period shall be deemed waived by the employee for the purposes of the City administering and enforcing the City's contract rights against the contractor on behalf of the employee. Waiver by the employee of this City intervention shall not constitute waiver by the City to independently pursue contractual rights it has against the contractor/subcontractor for breach of contract and other sanctions available to enforce the Wage and Labor Standard Provisions.

4. BREACH OF WAGE & LABOR STANDARD PROVISIONS

The City of San Antonio reserves the right to terminate a contract for cause if the contractor/subcontractors shall knowingly and continuously breach, without timely restitution or cure, any of these governing Wage and Labor Standard Provisions. A knowing and unremedied proven violation of these Wage and Labor Standard Provisions may also be grounds for debarment of the contractor/subcontractor from future City of San Antonio contracts for lack of responsibility, as determined by the City of San Antonio. Recurrent violations, whether remedied or not, will be considered by the Director of Capital Improvements Management Services Department when assessing the responsibility history of a potential contractor/subcontractor prior to competitive award of future Project Management Office projects. The general remedies stated in this paragraph 4. above, are not exhaustive and not cumulative for the City reserves legal and contractual rights to other specific remedies outlined herein below and in other parts of this contract and as are allowed by applicable City of San Antonio ordinances, state and federal statutes.

5. EMPLOYMENT OF LABORERS/MECHANICS NOT LISTED IN WAGE DETERMINATION DECISION

In the event that a contractor/subcontractor discovers that construction of a particular work element requires a certain employee classification and skill that is not listed in the wage determinations decision contained in the original contract documents, contractor/subcontractors will make prompt inquiry

(before bidding, if possible) to the Labor Compliance Office identifying that class of laborer/mechanics not listed in the wage determination decision who are intended to be employed, or who are being employed, under the contract. Using his best judgment and information resources available to him at the time, and any similar prior decisions, the Director of Capital Improvements Management Services Department, City of San Antonio shall classify said laborers/mechanics by issuing a special local wage determination decision to the contractor/subcontractor, which shall be enforced by the Labor Compliance Office.

6. MINIMUM WAGE

All laborers/mechanics employed to construct the work governed by this contract shall be paid not less than weekly the full amount of wages due (minimum hourly base pay and minimum hourly fringe benefit contribution for all hours worked, including overtime) for the immediately preceding pay period computed at wage and fringe rates not less than those contained in the wage determination decision included in this contract. Only payroll deductions as are mandated by state or federal law and those legal deductions previously approved in writing by the employee, or as are otherwise permitted by state or federal law, may be withheld by the contractor/subcontractor.

Should the contractor/ subcontractor subscribe to fringe benefit programs for employees, such programs shall be fully approved by the City in adopting a previous U.S. Department of Labor (DOL) decision on such fringe benefit programs or by applying DOL criteria in rendering a local decision on the adequacy of the fringe benefit programs. The approved programs shall be in place at the time of City contract execution and provisions thereof disclosed to the Labor Compliance Office, City of San Antonio, for legal review prior to project commencement.

Regular contractor/subcontractor contributions made to, or costs incurred for, approved fringe benefit plans, funds or other benefit programs that cover periods of time greater than the one week payroll periods of time period (e.g. monthly or quarterly, etc.) shall be prorated by the contractor/subcontractor on weekly payroll records to reflect the equivalent value of the hourly and weekly summary of fringe benefits per employee.

7. OVERTIME COMPENSATION

No contractor/subcontractor contracting for any part of the City of San Antonio funded contract work (except for worksite related security guard services) which may require or involve the employment of laborers/mechanics shall require or permit any laborer/mechanic in any seven (7) calendar day work period in which he or she is employed on such work to work in excess of 40 hours in such work period unless said laborer/mechanic receives compensation at a rate not less than one and one-half times the basic hourly rate of pay for all hours worked in

CORRECTED (7-15-2010)

excess of 40 hours in a seven (7) calendar day work period. Fringe benefits must be paid for straight time and overtime; however, fringe benefits are not included when computing the overtime rate.

8. PAYMENT OF CASH EQUIVALENT FRINGE BENEFITS

The contractor/subcontractor is allowed to pay a minimum hourly cash equivalent of minimum hourly fringe benefits listed in the wage determination decision in lieu of the contribution of benefits to a permissible fringe benefit plan for all hours worked including overtime as described in paragraph 6 above. An employee is not allowed to receive less than the minimum hourly basic rate of pay specified in the wage determination decision.

9. WORK CONDUCTED ON HOLIDAYS

If a laborer/mechanic is employed in the normal course and scope of his or her work on the jobsite on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, and Martin Luther King, Jr. Day, or the calendar days observed as such in any given year, work performed shall be paid for at no less than one and one half (1 1/2) times the regular minimum hourly base pay regardless of the total number of the laborer/mechanic has accumulated during the pay period.

10. UNDERPAYMENT OF PREVAILING WAGES OR SALARIES

a. When a "full investigation" (as called for in and as construed under Texas Government Code Section 2258) establishes underpayment of wages by contractor/subcontractor to laborers/mechanics employed upon the work covered by a contract with the City of San Antonio, the City shall withhold an amount from the contractor, out of any payments (Interim progress and/or final) due the contractor, the City of San Antonio may also consider it necessary to secure ultimate payment by the appropriate party to such laborers/mechanics, of full wages plus possible penalty (see b. below). The amount withheld, excluding any possible penalty to be retained by City, may be disbursed at an appropriate time after "full investigation" by the City of San Antonio, for and on behalf of the contractor/subcontractor (as may be appropriate), to the respective laborers/mechanics to whom the same is due or on their behalf to fringe benefit plans, funds or programs for any type of minimum fringe benefits prescribed in the applicable wage determination decision.

b. Texas Government Code Section 2258, states that the contractor shall forfeit as a penalty to the City of San Antonio the sum of sixty dollars (\$60.00) for each calendar day, or portion thereof, for each laborer, workman, or mechanic, who is paid less than the said stipulated rate for any work done under this contract, whether by the contractor himself or by any subcontractor working under him. Pursuant to and supplemental to this statutory authority, the City of

San Antonio and the contractor/subcontractor contractually acknowledge and agree that said sixty dollar (\$60.00) statutory penalty shall be construed by and between the City of San Antonio and the contractor/subcontractor as liquidated damages and will apply to any violations of paragraphs 6, 7, or 9 herein, resulting from contractor/subcontractor underpayment violations.

- c. If unpaid or underpaid workers cannot be located by the Contractor or the City after diligent efforts to accomplish same, the contractor shall report the wages as "unclaimed property" in accordance to Texas State law.

The City of San Antonio requires that the prime contractor send to the Labor Compliance Office a copy of the supporting documentation for the unclaimed property submitted to the State.

11. POSTING WAGE DETERMINATION DECISIONS/AND NOTICE TO LABORERS/MECHANICS STATEMENT

The applicable wage determination decision as described in the "General Statement" (and as specifically included in each project contract), outlining the various worker classifications and mandatory minimum wages and minimum hourly fringe benefit deductions, if any, of laborers/mechanics employed and to be employed upon the work covered by this contract, shall be displayed by the contractor/subcontractor at the site of work in a conspicuous and prominent public place readily and routinely accessible to workmen for the duration of the project. In addition, the contractor/subcontractor agrees with the contents of the following statement, and shall display same, in English and Spanish, near the display of the wage determination decision:

NOTICE TO LABORERS/MECHANICS

Both the City of San Antonio and the contractor/subcontractor agree that you must be compensated with not less than the minimum hourly base pay and minimum hourly fringe benefit contribution in accordance with the wage rates publicly posted at this jobsite and as are applicable to the classification of work you perform.

Additionally, you must be paid not less than one and one-half times your basic hourly rate of pay for any hours worked over 40 in any seven (7) calendar day work period, and for any work conducted on the following holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day, and Martin Luther King Day or the calendar days observed as such in any given year.

Apprentice and trainee hourly wage rates and ratios apply only to apprentices and trainees recognized under approved Federal, or State, apprenticeship training program registered with the Bureau of Apprenticeship and Training, U.S. Dept. of Labor.

If you believe that your employer is not paying the posted minimum wage for the type of work you do, you must make direct inquiry to the employer and inquire in writing within sixty (60) calendar days of your receipt of any allegedly incorrect wage or benefit check or report, to the City of San Antonio Labor Compliance Office, Capital Improvements Management Services Department, P.O. Box 839966, San Antonio, Texas 78283-3966. It is mandatory that the worker promptly file written inquiry of any allegedly incorrect wage or benefit checks or reports with the City of San Antonio, Labor Compliance Office within the sixty (60) calendar day period so that they do not waive your potential right of recovery under the provisions of the City of San Antonio Project Management Office contract that governs this project.

Both the City of San Antonio and the contractor/subcontractor agree that no laborer/mechanic who files a complaint or inquiry concerning alleged underpayment of wages or benefits shall be discharged by the employer or in any other manner be discriminated against by the employer for filing such complaint or inquiry.

12. PAYROLLS & BASIC PAYROLL RECORDS

- a. The contractor and each subcontractor shall prepare payroll reports in accordance with the "General Guideline" instructions furnished by the Labor Compliance Office of the City of San Antonio. Such payroll submittals shall contain the name and address of each such employee, his correct labor classification, rate of pay, daily and weekly number of hours worked, any deductions made, and actual basic hourly and fringe benefits paid. The contractor shall submit payroll records each week, and no later than seven (7) working days following completion of the workweek being processed, to the Labor Compliance Office, City of San Antonio. These payroll records shall include certified copies of all payrolls of the contractor and of his subcontractors, it being understood that the contractor shall be responsible for the submission and general mathematical accuracy of payrolls from all his subcontractors. Each such payroll submittal shall be on forms deemed satisfactory to the City's Labor Compliance Office and shall contain a "Weekly Statement of Compliance", as called for by the contract documents. Such payrolls will be forwarded to Capital Improvements Management Services, Labor Compliance Office, City of San Antonio, P.O. Box 839966, San Antonio, Texas 78283-3966.
- b. All City of San Antonio construction contracts are subject to contract compliance tracking, and the prime contractor and any subcontractors are required to provide any stated and/or requested contract compliance-related data electronically in the Labor Compliance Electronic Certified Payrolls System. The prime contractor and all subcontractors are required to respond not later than the stated response date or due date to any instructions or

request for information from the Labor Compliance Office. All prime contractors and subcontractors shall periodically review the City of San Antonio labor Compliance Electronic Certified Payrolls System to manage contact information and the contract records. The prime contractor shall ensure that all subcontractors have completed all requested forms and that all contact information is accurate and up-to-date. The City of San Antonio Labor Compliance Office may require additional information related to the contract to be provided through the San Antonio Labor Compliance Electronic Certified Payrolls System at any time before, during, or after contract award.

- c. A designated point of contact for contractor access to the San Antonio Labor Compliance Electronic Certified Payrolls System shall be provided for each prime contractor upon award of the contract.
- d. Copies of payroll submittals and basic supporting payroll records of the contractor/subcontractors accounting for all laborers/mechanics employed under the work covered by this contract shall be maintained during the course of the work and preserved for a period of three (3) years after completion of the project. The contractors/subcontractors shall maintain records which demonstrate: any contractor commitment to provide fringe benefits to employees as may be mandated by the applicable wage determination decision, that the plan or program is adjudged financially responsible by the appropriate approving authority, (i.e. U. S. Department of Labor, U.S. Department of Treasury, etc.), and that the provisions, policies, certificates, and description of benefits of the plan or program as may be periodically amended, have been clearly communicated in a timely manner and in writing, to the laborers/mechanics affected prior to their performing work on the project.
- e. The contractor/subcontractor shall make the above records available for inspection, copying, or transcribing by authorized representatives of the City of San Antonio at reasonable times and locations for purposes of monitoring compliance with this contract.
- f. All certified payrolls submitted to the Labor Compliance Office are deemed true and accurate. If upon review of the certified payrolls, wage underpayment violations are identified and noted, restitution will be calculated and penalties will be issued to the prime contractor of the project. In order to refute a wage violation, the contractor/subcontractor must provide supporting documentation to the Labor Compliance Office for review and consideration.

13. LABOR DISPUTES

The contractor/subcontractor shall immediately notify the Project Management Office or designated representative of any actual or impending contractor/subcontractor labor dispute

which may affect, or is affecting, the schedule of the contractor, or any other contractor/subcontractor work. In addition, the contractor/subcontractor shall consider all appropriate measures to eliminate or minimize the effect of such labor disputes on the schedule, including but not limited to such measures as: promptly seeking injunctive relief if appropriate; seeking appropriate legal or equitable actions or remedies; taking such measures as establishing a reserved rate, as appropriate; if reasonably feasible, seeking other sources of supply or service; and any other measures that may be appropriately utilized to mitigate or eliminate the jobsite and scheduling effects of the labor dispute.

14. COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY EMPLOYEES

No laborers/mechanics to whom the wage, salary, or other labor standard provisions of this contract are applicable shall be discharged in any other manner discriminated against by the contractor/subcontractors because such employee has filed any formal inquiry or complaint or instituted, or caused to be instituted, any legal or equitable proceeding or has testified, or is about to testify, in any such proceeding under or relating to the wage and labor standards applicable under this contract.

15. EMPLOYEE INTERVIEWS TO ASSURE WAGE AND LABOR STANDARD COMPLIANCE

Contractor/subcontractors shall allow expeditious jobsite entry of City of San Antonio Labor Compliance representatives displaying and presenting proper identification credentials to the jobsite superintendent or his representative. While on the jobsite, the Labor Compliance representatives shall observe all jobsite rules and regulations concerning safety, internal security and fire prevention. Contractor/subcontractors shall allow project employees to be separately and confidentially interviewed at random for a reasonable duration by the Labor Compliance representatives to facilitate compliance determinations regarding adherence by the contractor/subcontractor to these Wage and Labor Standard Provisions.

16. "ANTI-KICKBACK" PROVISION

No person employed in the construction or repair of any City of San Antonio public work shall be induced, by any means, to give up to any contractor/subcontractor or public official or employee any part of the hourly and/or fringe benefit compensation to which he is otherwise entitled.

17. "FALSE OR DECEPTIVE INFORMATION PROVISION"

Any person employed by the contractor/subcontractor in the construction or repair of any City of San Antonio public work, who is proven to have knowingly and willfully falsified, concealed or covered up by any deceptive trick, scheme, or device a material fact, or made any false, fictitious or fraudulent statement or representation, or made or used any

false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be permanently removed from the jobsite by contractor/subcontractor. The City of San Antonio reserves the right to terminate this contract for cause as a result of serious and uncured violations of this provision.

18. EMPLOYMENT OF APPRENTICES/TRAINEES

- a. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship & Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his 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 & Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor/subcontractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in (b) below or is not registered or otherwise employed as stated above, shall be paid the wage rate for the classification of work he actually performs. The contractor/subcontractor is required to furnish to the Labor Compliance Office of the City of San Antonio, a copy of the certification, along with the payroll record that the employee is first listed on. The wage rate paid apprentices shall be not less than the specified rate in the registered program for the apprentice's level of progress expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination decision.
- b. Trainees will be permitted to work at less than the predetermined rate for the work performed when they are employed pursuant to an individually registered program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen shall not be greater than that 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 his/her level of progress. Any employee listed on the payroll at a trainee wage rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the wage rate determined by the classification of work he actually performs. The contractor/subcontractor is required to furnish a copy of the trainee program certification, registration of employee-trainees, ratios and wage rates

prescribed in the program, along with the payroll record that the employee is first listed on, to the Labor Compliance Office of the City of San Antonio. In the event the Employment and Training Administration withdraws approval of a training program, the contractor/subcontractor 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 by the Employment and Training Administration.

- c. Paragraphs above shall not operate to exclude training programs approved by the OFCCP, United States Department of Labor and as adopted by the Associated General Contractors (AGC) of Texas, Highway, Heavy, Utilities and Industrial Branch. Guidelines for these training programs shall be the same as those established for federally funded projects. This sub-paragraph shall not apply to those portions of a project deemed to be building construction.
- d. The Ratio to Apprentice to Journeyman for this project shall be the same as the ratio permitted under the plan approved by the Employment and Training, Administration, Bureau of Apprenticeship and Training, U.S. Department of Labor, by Craft. A copy of the allowable Ratios is included with the applicable Wage Determination Decision in the specifications for this project.

When a "full investigation" (as called for in, and as construed under, Texas Government Code Section 2258) evidences a violation of the Apprentice or Trainee to Journeyman ratios effective for contractor/subcontractor employees working on this contract, the City of San Antonio, in addition to such other rights as may be afforded it under state and/or federal law and/or other sections of this contract, shall withhold from the contractor, out of any payments (interim progress and/or final) due the contractor, the liquidated damages sum of seventy-five dollars (\$75.00) for each calendar day, or portion thereof, for each certified Apprentice or Trainee employee assigned to a Journeyman that exceeds the maximum allowable Apprentice/Trainee to Journeyman ratio stipulated for any work done under this contract, whether by the contractor himself or by any subcontractor working under him.

19. JOBSITE CONDITIONS

Contractors/subcontractors shall not allow any person employed for the project to work in surroundings or under construction conditions which are unsanitary, unhealthy, hazardous, or dangerous as governed by industry standards and appropriate local, state and federal statutes, ordinances, and regulatory guidelines.

20. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED

- a. The contractor/subcontractor shall knowingly only employ persons of appropriate ages commensurate with the degree of

required skill, strength, maturity and judgment associated with the activity to be engaged in, but not less than the age of fourteen (14) years, as governed by the Texas Child Labor Law, Chapter 51 of the Texas Labor Code "Child Labor" and Texas Department of Labor and Standards rulings and interpretations associated with that statute. It is hereby noted that in some circumstances generally governed by this section, a federal statute (see: Fair Labor Standards Act, 29 USCS Section 212; Volume 6A of the Bureau of National Affairs Wage Hour Manual at Paragraph 96:1; "Child Labor Requirements in Nonagricultural Occupations" WH Publication 1330, July 1978 as may be amended), could pre-empt the Texas Statute and therefore be the controlling law on this subject. The contractor/subcontractor should seek clarification from state and federal agencies and legal counsel when hiring adolescent employees for particular job classifications.

- b. Prohibited persons not to be employed are also those persons who, at the time of employment for this contract, are serving sentence in a penal or correctional institution except that prior approval by the Director of Capital Improvements Management Services is required to employ any person participating in a supervised work release or furlough program that is sanctioned by appropriate state or federal correctional agencies.
- c. The Contractor/subcontractors shall be responsible for compliance with the provisions of the "Immigration Reform and Control Act of 1986" Public Law 99-603, and any related State enabling or implementing statutes, especially as they in combination apply to the unlawful employment of aliens and unfair immigration-related employment practices affecting this contract.

21. PROVISIONS TO BE INCLUDED IN SUBCONTRACTS

The contractor shall cause these Wage and Labor Standard Provisions, or reasonably similar contextual adaptations hereof, and any other appropriate state and federal labor provisions, to be inserted in all subcontracts relative to the work to bind subcontractors to the same Wage and Labor Standards as contained in these terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors or sub-subcontractors and to give the contractor similar, if not greater, general contractual authority over the subcontractor or subcontractors as the City of San Antonio may exercise over the contractor.

22. CONTRACTOR'S RESPONSIBILITY

The prime contractor shall be responsible for ensuring that its subcontractors comply with the Wage and Labor Standards Provisions.

**ADDITIONAL REQUIREMENTS
FROM THE
AVIATION DEPARTMENT**

INSURANCE REQUIREMENTS

PROJECT DESCRIPTION

The Project Scope: This project consists of the re-roofing of the existing Aviation Maintenance Building, approximately 13,850 sf, to include removal of existing skylights, vents, existing metal roof porch with polyiso board and new single-ply TPO roof membrane system to meet a 20 year NDL roof warranty.

INSURANCE

A) Prior to the commencement of any work under this Agreement, Bidder shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City’s Risk Management Department, which shall be clearly labeled “Aviation Maintenance Building Re-Roof Project” in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must have the agent’s signature and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer’s authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City’s Risk Management Department. No officer or employee, other than the City’s Risk Manager, shall have authority to waive this requirement.

B) The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City’s Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

C) A Bidder’s financial integrity is of interest to the City; therefore, subject to Bidder’s right to maintain reasonable deductibles in such amounts as are approved by the City, Bidder shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Bidder’s sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best’s rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

<u>TYPE</u>	<u>AMOUNTS</u>
1. Workers' Compensation	Statutory
2. Employers' Liability	\$500,000/\$500,000/\$500,000
3. Broad form Commercial General Liability Insurance to include coverage for the following: a. Premises/Operations *b. Independent Contractors c. Products/Completed Operations	For <u>Bodily Injury</u> and <u>Property Damage</u> of \$1,000,000 per occurrence; \$2,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage

d. Personal Injury e. Contractual Liability f. Damage to property rented by you	f. \$100,000
4. Business Automobile Liability a. Owned/leased vehicles b. Non-owned vehicles c. Hired Vehicles	<u>C</u> ombined <u>S</u> ingle <u>L</u> imit for <u>B</u> odily <u>I</u> njury and <u>P</u> roperty <u>D</u> amage of \$1,000,000 per occurrence

D) Bidder agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same insurance coverages required of Bidder herein, and provide a certificate of insurance and endorsement that names the Bidder and the CITY as additional insureds. Respondent shall provide the CITY with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City’s Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City’s Risk Manager, which shall become a part of the contract for all purposes.

E) As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all endorsements thereto and may require the deletion, revision, or modification of particular policy terms, conditions, limitations, or exclusions (except where policy provisions are established by law or regulation binding upon either of the parties hereto or the underwriter of any such policies). Bidder shall be required to comply with any such requests and shall submit a copy of the replacement certificate of insurance to City at the address provided below within 10 days of the requested change. Bidder shall pay any costs incurred resulting from said changes.

City of San Antonio
Attn: Risk Management Department
P.O. Box 839966
San Antonio, Texas 78283-3966

F) Bidder agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers’ compensation and professional liability policies;

- Provide for an endorsement that the “other insurance” clause shall not apply to the City of San Antonio where the City is an additional insured shown on the policy;
- Workers’ compensation, employers’ liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of the City.
- Provide advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

G) Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Bidder shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Bidder’s performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

H) .In addition to any other remedies the City may have upon Bidder’s failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Bidder to stop work hereunder, and/or withhold any payment(s) which become due to Bidder hereunder until Bidder demonstrates compliance with the requirements hereof.

I) Nothing herein contained shall be construed as limiting in any way the extent to which Bidder may be held responsible for payments of damages to persons or property resulting from Bidder’s or its subcontractors’ performance of the work covered under this Agreement.

J) It is agreed that Bidder’s insurance shall be deemed primary and non-contributory with respect to any insurance or self insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.

K) It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided..

L) Bidder and any Subcontractors are responsible for all damage to their own equipment and/or property.

INDEMNIFICATION

BIDDER covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of

any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to BIDDER' activities under this Agreement, including any acts or omissions of BIDDER, any agent, officer, director, representative, employee, bidder or subcontractor of BIDDER, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, it s officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT BIDDER AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. BIDDER shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or BIDDER known to BIDDER related to or arising out of BIDDER' activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at BIDDER's cost. The CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving BIDDER of any of its obligations under this paragraph.

INDEMNIFICATION

BIDDER covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to BIDDER' activities under this Agreement, including any acts or omissions of BIDDER, any agent, officer, director, representative, employee, bidder or subcontractor of BIDDER, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, it s officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT BIDDER AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. BIDDER shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or BIDDER known to BIDDER related to or arising out of BIDDER' activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at BIDDER's cost. The CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving BIDDER of any of its obligations under this paragraph.

Additional Supplemental General Conditions Required For Aviation Department Projects

- 1) The use of explosives is strictly prohibited on airports.
- 2) The Contractor will be responsible for construction staking except for verifying and making benchmarks for horizontal and vertical control.
- 3) Survey Layout:
The Contractor shall employ an experienced and competent surveyor, registered in the State of Texas, to lay out the detail lines and grades of the work from the horizontal and vertical control established in those contract documents. A closed traverse and level loop within a close proximity of the construction will be provided by the surveyor to the Contractor. A copy of such work will be presented to the Architect/Engineer for review prior to any field layout by the Contractor.
- 4) This contract shall be a calendar day contract.
- 5) Extension of Time for Adverse Weather:
Extension of time for adverse weather conditions not reasonably anticipated as provided in Subparagraph 8.3.1 will be granted for those days where precipitation is 0.10 inch or greater and where the number of such days exceed the normal number of rain days in that particular month. This provision shall cease at the time of Substantial Completion. The determination of the normal number of rain days per month shall be according to Local Climatological Data prepared by the National Oceanic and Atmospheric Administration.

For the San Antonio area, the climatological data is recorded at the airport weather station. The Contractor may expect adverse weather for the number of calendar days in accordance with the following local climatological data prepared by NOAA.

	0.10 In. or More Precipitation at <u>San Antonio Airport</u>
January	2
February	4
March	2
April	4
May	4
June	3
July	3
August	3
September	5
October	6
November	3
December	3
 Total Days Lost	 42

6/9/2009

SGC-Aviation-1

4/17/2012

The contractor agrees that the measure of adverse weather during the period covered by the Specification shall be the number of days in excess of those shown for each month.

- 6) Aviation Department may close the construction site due to security reasons. The contractor will not be compensated for any loss due to shut down for the first three closures. Each day shall be counted as one shut down regardless of the total hours involved for each day.
- 7) Contractor shall provide, prepare and distribute agendas and minutes for all construction progress meetings and/or coordination meetings.
- 8) As per FAA policy, the prime contractor must provide the Aviation Department a Buy American Preference certificate.
- 9) Staging Area and Storage Area:
 - A) The contractor needs to maintain areas in a clean and neat condition.
 - B) If the contractor and/or their subcontractors store equipment, fuel, paint, or other hazardous material at the staging areas, and/or storage areas, the contractor will perform and pay the costs for soil and water testing before use of the site, upon exit from the site and any site remediation that may be necessary, as directed by the owner.
 - C) Prior to occupying and upon vacating any staging areas and/or storage areas, the contractor shall submit to the owner a minimum of 10 photographs documenting the initial and final conditions of the staging areas and/or storage areas. Each photograph must have a date. During the construction, the contractor needs to provide 5 progress photographs for each area with each payment request.
 - D) The contractor shall provide two weeks written notice to the owner prior to vacating the staging areas and/or storage areas.
 - E) The policies stated here will be applied to the areas owned by the private citizens and leased by the contractor for the project involved.

CITY OF SAN ANTONIO



**CRANE AND/OR TEMPORARY
CONSTRUCTION EQUIPMENT
PROCEDURES IN AND AROUND AIRPORTS
BUILDING PERMIT FORM**

Permit No. _____
Crane Co.: _____
Max Tip Height: _____
Duration of Crane: _____
Hours of Operation: _____
Address: _____
Crane Co. Signature (Print and Sign): _____

The purpose of the Airport Zoning ordinance is to prevent hazards to air navigation and airspace so as to protect the lives and property within the limits of San Antonio and the vicinity of airports (San Antonio International and Stinson Municipal Airports, Randolph and Lackland Air Force Bases, and Martindale and Camp Bullis Airfields). The ordinance is to prevent cranes and construction equipment from penetrating; however briefly, the City's airspace unless a special temporary authorization is obtained from the Aviation Department or the FAA. The primary considerations, before approving a crane or temporary construction equipment are the height and location/site of the equipment. The Aviation Department will decide to either approve the request or to involve the FAA based on the height and location of the equipment. The FAA's processing time is at least 60 workdays.

When using a crane or temporary construction equipment, please comply with the following:

1. Notify the Aviation Department as soon as it is decided obstruction equipment is needed for the project, but minimally 48 hours before the actual work starts. Phone numbers are 210-207-3514 and/or cell phone 210-355-2214.
2. Provide a detailed description of where the crane will be used. Use crossing or intersecting streets not an address.
3. Provide the date the equipment will be used, the hours of operation and the maximum height of the equipment.

Once approval is given, it is imperative to comply with the following:

1. The equipment will only operate during daylight hours.
2. The equipment will only operate during Visual Flight Rules (VFR) conditions, which is 3 mile visibility or greater.
3. The equipment will be lowered to the surrounding height when not in use.
4. The equipment will be obstruction flagged.

Thank you for maintaining a safe environment for the traveling public. If you have any questions please call Jim Wingate at 210-207-3514 or Alan Lopez at 210-207-3897.

E-Mail Address and phone numbers

Federal Aviation Administration – www.faa.gov
Bruce Beard - 817-838-1996, bruce.beard@faa.gov fax: 817-838-1991
Jim Wingate -210-207-3514, james.wingate@sanantonio.gov fax: 210-207-3544

Update: February 2010

THE FOLLOWING ITEMS ARE SPECIAL PROVISIONS TO
THE CITY OF SAN ANTONIO
STANDARD SPECIFICATIONS FOR CONSTRUCTION
DATED JUNE 2008

1. Item 700 Project Schedules.....7 Pages

General

1. None

Standard Specifications

1. Delete Item 700 - Cost Loaded Schedules (*dated June 2008*) in its entirety and replace with Item 700 – Project Schedules (*dated February 2010*) shown on the attached document.

ITEM 700
✦
PROJECT SCHEDULES

This item shall govern the creation, maintenance, and delivery of Critical Path Method (CPM) project schedules.

CRITICAL PATH METHOD PROJECT SCHEDULE

The Contractor shall create and maintain a Critical Path Method (CPM) Project Schedule showing the manner of execution of work that the contractor intends to follow in order to complete the contract within the allotted time. The project schedule shall employ computerized CPM for the planning, scheduling and reporting of the work as described in this specification. The CPM project schedule shall be prepared using the Precedence Diagram Method (PDM). The Contractor shall create and maintain the schedule using Primavera Project Manager 5.x or above or Primavera Contractor 4.1 or above. For construction contracts under \$300K and project durations 90 days or less, the project schedule can be created and maintained in Microsoft Project software. The observance of the requirements herein is an essential part of the work to be done under the contract. No direct compensation will be allowed for fulfilling these requirements, as such work is considered subsidiary to the various bid items of the contract.

PERSONNEL

The Contractor shall provide an individual, referred to hereafter as the Scheduler, to create and maintain the Project Schedule. The Scheduler shall be proficient in Critical Path Method (CPM) analysis as demonstrated through certification from Project Management Institute (PMI), Association for the Advancement of Cost Engineering (AACE) or possess sufficient experience to be

able to perform required tasks on the specified software and be able to prepare and interpret reports from the software. The Scheduler shall be made available for discussion or meetings when requested by the City.

PROJECT SCHEDULE

1. GENERAL:

At least twenty (20) calendar days prior to the pre-construction conference, the Contractor shall submit a Project Schedule, which shall show the sequence and interdependence of activities required for complete performance of the work. All schedule submittals shall be in the electronic form to include PDF plots of the schedule, a PDF plot defining the Critical Path and two week look-ahead, and include the native Primavera file format. The Contractor shall submit the schedule to the Web-portal and Project Manager via electronic mail, CD-Rom, floppy disc, or any other electronic media acceptable to the City. The City will review the Project Schedule within twenty (20) calendar days for compliance with the specifications and notify the Contractor at the pre-construction conference of its acceptability. No work shall begin until the City has accepted the Project Schedule.

2. SEQUENCE:

The Project Schedule shall show the sequence and interdependence of activities required for complete performance of the work. The Contractor shall be responsible for assuring all work sequences are logical and show a coordinated plan of the work. The purpose of

the City requiring the Project Schedule shall be to:

- a. Ensure adequate planning during the execution and progress of the work in accordance with the allowable number of calendar days and all milestones.
- b. Assure coordination of the efforts of the Contractor, City, Utilities and others that may be involved in the project and that activities are included in the schedule highlighting coordination points with others,
- c. Assist the Contractor and City in monitoring the progress of the work and evaluating proposed changes to the contract, and
- d. Assist the City in administering the contract time requirements.

3. ACTIVITIES:

Each activity on the Project Schedule shall include:

- a. An activity number utilizing an alphanumeric designation system that is agreeable to the City;
- b. Concise description of the work represented by the activity; and
- c. Activity durations in whole work days with a maximum of twenty (20) work days. Durations greater than twenty (20) work days may be used for non-construction activities (mobilization, submittal preparation, curing, etc.), and other activities mutually agreeable between the City and Contractor.

The Contractor shall provide to the City a legend for all abbreviations. The activities shall be coded so that organized plots of the

Project Schedule may be produced. Typical activity coding includes traffic control phase, location and work type. Show an estimated production rate per working day for each work activity. Activity durations shall be based on production rates shown.

4. WORK DURATION AND RESOURCES:

The schedule layout shall be grouped by Project and then by Work Breakdown Structure (WBS) for organizational purposes. The original and remaining duration shall be displayed. The grouping band will, by default, report work days planned. One additional level of effort activity shall be added to the schedule as a "time calculator" with a seven-day calendar without holidays. The calculation of their days will show up in the duration columns in Primavera.

If specified by general note, the Contractor shall plan and incorporate major resources into the Project Schedule. Major resources are defined as crews and equipment that constrain the Contractor from pursuing available work. The resources shall accurately represent the Contractor's planned equipment and manpower to achieve the productivity rates specified above.

Work shall be scheduled based upon the Contractor's standard work week utilizing the appropriate calendar assignments in Primavera software. If the Contractor's initial baseline plan is to perform the Work on a six or seven-day work week, then the appropriate calendar in Primavera must be used and the Engineer must be notified in writing through the Submittal process. This does not affect the total calendar days allotted by the contract.

Assign working calendars for the days you plan to work. Designate all City holidays (12) as non-working days (holidays). For dates beyond the current calendar year assume that

the City holidays are the same as the current calendar year.

Seasonal weather conditions shall be considered and included in the Project Schedule for all work influenced by temperature and/or precipitation. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions. Average historical weather data is available through the National Oceanic and Atmospheric Administration (NOAA). These effects will be simulated through the use of work calendars for each major work type (i.e., earthwork, concrete paving, structures, asphalt, drainage, etc.). Project and work calendars should be updated each month to show days actually able to work on the various work activities.

Total float is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, for each and every activity in the schedule. Float time in the Project Schedule is a shared commodity between the City and the Contractor.

Only City responsible delays in activities that affect milestone dates or the contract completion date, as determined by CPM analysis, will be considered for a time extension.

5. OTHER REQUIREMENTS:

Code and organize all work by Work Breakdown Structure (WBS). An example WBS will be provided by the City.

Percent complete type shall be Duration Percent Complete.

Duration type shall be Fixed Units

Submittals shall be included in the schedule with a logical tie to what each drives.

Proposed Change Orders shall be added the schedule identifying it as a Proposed Change Order. This task must be linked to the schedule with logical ties and approved by the City. Upon approval of Change Order, task will be renamed identifying work performed and Change Order number and resources will be added to the task.

Constraints are limited to project start, project finish, material delivery, and use on Submittals. If a schedule requires additional constraints, then an explanation shall accompany the schedule Submittal.

The schedule shall include activity milestones for material delivery.

Default progress is disallowed.

If work is performed out of sequence, then an explanation must be included in the project narrative.

JOINT REVIEW, REVISION AND ACCEPTANCE

Within twenty (20) calendar days of receipt of the Contractor's proposed Project Schedule, the City shall evaluate the schedule for compliance with this specification, and notify the Contractor of its findings. If the City requests a revision or justification, the Contractor shall provide a satisfactory revision or adequate justification to the satisfaction of the City within seven (7) calendar days. If the Contractor submits a Project Schedule for acceptance, which is based on a sequence of work not shown in the plans, then the Contractor shall notify the City in writing, separate from the schedule submittal.

The City's review and acceptance of the Contractor's Project Schedule is for conformance to the requirements of the

contract documents only. Review and acceptance by the City of the Contractor's Project Schedule does not relieve the Contractor of any of its responsibility for the Project Schedule or of the Contractor's ability to meet interim milestone dates (if specified) and the contract completion date, nor does such review and acceptance expressly or by implication warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of the Contractor's Project Schedule. In the event the Contractor fails to define any element of work, activity or logic and the City review does not detect this omission or error, such omission or error, when discovered by the Contractor or City shall be corrected by the Contractor at the next monthly schedule update and shall not affect the project completion date.

Acceptance by the City of a Baseline or project update schedule that exceeds contractual time does not alleviate the Contractor from meeting the contractual completion date.

Payment may be delayed until acceptable baseline or updated schedule is received and accepted by the City.

UPDATES

The Project Schedule shall be updated on a monthly basis. The Project Schedule update shall be submitted one week prior to the pay application submittal. The Contractor shall meet with the City each month at a scheduled update meeting to review actual progress made through the Data Date of the schedule update as determined by the Project Manager. The review of progress will include dates activities actually started and/or completed, the percentage of work completed, the remaining duration of each activity started and/or completed, and the amount of work to complete with an analysis of the relationship

between the remaining duration of the activity and the quantity of material to install over that given period of time with a citation of past productivity. The monthly schedule update shall include a progress narrative explaining progress, identifying progress made out of sequence, defining the Critical Path, identification of any potential delays, etc. The Project Schedule Narrative template will be required for the narrative.

The project schedule update layout shall be grouped by Project, then WBS. The layout shall include the following columns:

- a. Activity ID
- b. Activity Description
- c. Original Durations
- d. Remaining Durations
- e. Start and Finish Dates
- f. Baseline Start and Finish Dates
- g. Total Float
- h. Performance Percent Complete
- i. Display logic and target bars in the Gantt bar chart view

PROJECT SCHEDULE REVISIONS

If the Contractor desires to make major changes in the Project Schedule, the Contractor shall notify the City in writing and submit the proposed schedule revision. The written notification shall include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule. Major changes are hereby defined as those that may affect compliance with the contract requirements or those that change the critical path. All other changes may be accomplished through the monthly updating process without written notification.

TIME IMPACT ANALYSIS

The Contractor shall notify the City when an impact may justify an extension of contract time or adjustment of milestone dates. This notice shall be made in writing as soon as

possible, but no later than the end of the next estimate period after the commencement of an impact or the notice for a change is given to the Contractor. Not providing notice to the City within twenty (20) calendar days after receipt will indicate the Contractor's approval of the time charges as shown on that time statement. Future consideration of that statement will not be permitted and the Contractor forfeits his right to subsequently request a time extension or time suspension unless the circumstances are such that the Contractor could not reasonably have knowledge of the impact by the end of the next estimate period.

When changes are initiated or impacts are experienced, the Contractor shall submit to the City a written time impact analysis describing the influence of each change or impact. A "time impact analysis" is an evaluation of the effects of changes in the construction sequence, contract, plans, or site conditions on the Contractor's plan for constructing the project, as represented by the schedule. The purpose of the time impact analysis is to determine if the overall project has been delayed, and if necessary, to provide the Contractor and the City a basis for making adjustments to the contract.

A time impact analysis shall consist of one or all of the steps listed below:

1. Establish the status of the project before the impact using the most recent project schedule update prior to the impact occurrence.
2. Predict the effect of the impact on the most recent project schedule update prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. Any other changes made to the schedule including modifications to the

calendars or constraints shall be noted.

3. Track the effects of the impact on the schedule during its occurrence. Note any changes in sequencing, and mitigation efforts.
4. Compare the status of the work prior to the impact (Step 1) to the prediction of the effect of the impact (Step 2), and to the status of the work during and after the effects of the impact are over (Step 3). Note that if an impact causes a lack of access to a portion of the project, the effects of the impact may extend to include a reasonable period for remobilization.

The time impact analysis shall be electronically submitted to the City. If the Project Schedule is revised after the submittal of a time impact analysis but prior to its approval, the Contractor shall promptly indicate in writing to the City the need for any modification to its time impact analysis. One (1) copy of each time impact analysis shall be submitted within fourteen (14) calendar days after the completion of an impact. The City may require Step 1 and Step 2 of the time impact analysis be submitted at the commencement of the impact, if needed to make a decision regarding the suspension of contract time. Approval or rejection of each time impact analysis by the City shall be made within fourteen (14) calendar days after receipt unless subsequent meetings and negotiations are necessary.

MEASUREMENT and PAYMENT

Project Schedule will not be measured or paid for directly, but shall be included in the unit price bid for the items of construction in which the operations occur.

PROJECT SCHEDULE NARRATIVE

PROJECT NAME:	
CONTRACTOR NAME:	
PERIOD ENDING:	
SUBMITTAL DATE:	
PREPARED BY:	

Evaluation Summary	
NTP:	
Data Date:	
Contractual Completion Date:	
Current Scheduled Completion Date:	
Previous Period Scheduled Completion Date:	
Contract Calendar Days:	

Yes No

Yes	No	
		Contractor has included both a hard copy (pdf) and the native Primavera file format?
		Project calendars have been updated to reflect actual charged working days for the progress period, according to the contract time statement?
		Schedule update reflects approved change orders for the progress period?
		Have any major changes been made to the schedule? <i>(A major change is defined as those that may affect compliance with the contract requirements or those that change the critical path. If yes, written notification is required to include the reason for the proposed revision, what the revision is comprised of, and how the revision was incorporated into the schedule.)</i> If yes, provide details in Section 3 & 5 below.
		Are any delays included in this schedule submittal for which the Contractor intends to submit a Time Impact Analysis (TIA) for a claim delay? If yes, provide details in Section 6 below.

<p>1. Identify general progress for the update period.</p>
<p>2. Identify work performed out of sequence and provide an explanation for the reason.</p>

3. Describe any changes made to the project's logic and the reason for the change(s).
4. Identify any new constraints used and provide an explanation for their use.
5. Define the critical path of the project, including any changes from the previous update.
6. Identify any delays that have occurred for the progress period, the reason for the delay, and current status.
7. Identify any potential delays and possible mitigation efforts.
8. Other comments.



Safety Bulletin 13-01

Operational Safety on the Airport During Construction

This bulletin comes to you from the Safety Division

PURPOSE: To enhance the visibility and safety of airport employees

Today the San Antonio Airport has many Construction projects taking place. Some on the AOA side and others on the Non-AOA side (Terminal A Renovation).

NON-AOA Side:

Everyone that is entering the construction site must comply with the Contractor Safety Rules. At a minimum, you must have a Hard Hat, Safety Glasses, and Reflective Safety Vest (ANSI 2, Class 2) to enter. ***This is to protect the Contractor, from possible fines. Please do not ask for any exceptions to this rule.***

AOA Side:

Runway Safety Areas (RSA): No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Open trenches or excavations are not permitted within the RSA while the runway is open.

Runway Object Free Areas (ROFA): Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports District Office for approval.

Runway Approach/Departure Areas: All personnel, materials, and/or equipment, must remain clear of the applicable threshold sitting surfaces, as defined in Appendix 2, "Threshold Sitting Requirements," of AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures.

Obstacle Free Zone (OFZ): In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions.

Taxiway Safety Areas (TSA): No construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted when the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. Open trenches or excavations are not permitted within the TSA while the taxiway is open.

Taxiway Object Free Areas (TOFA): Restrictions are more stringent compared to the ROFA as aircraft wings regularly penetrate the TOFA. No construction may occur within the TOFA while the taxiway is open for aircraft operations, except as noted in AC 150/5370-2F.

Barricades: Barricades are not permitted in any active safety area. Use of barricades is an acceptable method used to identify and define the limits of construction and hazardous areas on airports. The spacing of barricades must prevent a breach, barring a deliberate act. For example, if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 ft.

The FAA has place emphasis on Construction Safety on the AOA by publishing Airport Certification Information Bulletin (ACIB) 12-04.

Safety Reporting Methods: Use Voluntary Safety Report Form (SMS FM 02)

SAFETY HOTLINE – 1 (210) 207-1600

FAX – 1 (210) 207-1689

E MAIL – safety.report@sanantonio.gov

John Chase (210) 207-1656

SECTION 01 10 00

SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: City of San Antonio - Aviation Maintenance Bldg. Re-roof.
- B. Owner's Name: City of San Antonio.
- C. Architect's Name: RVK.
- D. Project Scope: The Project consists of the re-roofing of the existing Aviation Maintenance Building, approximately 13,850 sf, to include the removal of existing skylights, vents, existing metal roof panels with polyiso board and new single ply TPO roof membrane system to meet a 20-yr. NDL roof warranty.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in the General Conditions.

1.03 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.

1.03 DEFINITIONS

- A. Shop Drawings: Drawings, diagrams, schedules and other data specifically prepared for the Work by the Contractor or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- B. Product Data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- C. Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- D. Governmental Review Comments: Written comments and process stamps by authorized governmental representatives on or accompanying returned documents previously submitted for building permits, operating licenses, code or ordinance approvals or variances, or other similar or related governmental reviews or approvals.
- E. "A ACTION": Fabrication, manufacture and/or construction may proceed, providing the Work is in accordance with all requirements of the Contract Documents. The Architect's final acceptance of the Work will be contingent upon such compliance.
- F. "B ACTION": Manufacture and fabrication for construction may proceed. The Architect's final acceptance of the Work will be contingent upon compliance with all notations and all requirements of the Contract Documents.
- G. "C ACTION": No work shall be fabricated, manufactured and/or constructed. The Contractor shall redraw and resubmit the Shop Drawings or other submittals to conform with all requirements of the Contract Documents. Resubmit to the Architect, until resubmission is not required. Submittals marked "C ACTION" are not permitted on the construction site.

1.04 PROJECT COORDINATION

- A. During construction, coordinate use of site and facilities through the Project Coordinator.
- B. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- C. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.
- D. Coordinate field engineering and layout work under instructions of the Project Coordinator.

- E. Make the following types of submittals to Architect through the Project Coordinator:
 - 1. Requests for interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Manufacturer's instructions and field reports.
 - 6. Applications for payment and change order requests.
 - 7. Progress schedules.
 - 8. Coordination drawings.
 - 9. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
- B. Agenda:
 - 1. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
 - 2. Designation of personnel representing the parties to Contract and Architect.
 - 3. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 4. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 SITE MOBILIZATION MEETING

- A. Owner will schedule a meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Special Consultants.
 - 5. Contractor's Superintendent.
- C. Agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements and occupancy prior to completion.
 - 3. Construction facilities and controls provided by Owner.
 - 4. Temporary utilities provided by Owner.
 - 5. Survey and building layout.
 - 6. Security and housekeeping procedures.
 - 7. Schedules.
 - 8. Application for payment procedures.
 - 9. Procedures for testing.
 - 10. Procedures for maintaining record documents.
 - 11. Requirements for start-up of equipment.
 - 12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Architect, as appropriate to agenda topics for each meeting.
- C. Recommended Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Planned progress during succeeding work period.
 - 9. Maintenance of quality and work standards.
 - 10. Effect of proposed changes on progress schedule and coordination.
 - 11. Other business relating to Work.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.05 GOVERNMENTAL REVIEW COMMENTS

- A. Submit within seven (7) days of receipt from governmental agency.

3.06 REQUESTS FOR INFORMATION

- A. Submit written Requests for Information (RFI) using Architect provided form. See Section 01 30 00, Attachment "A", Request for Information. If desired, the form can be provided to the Contractor on electronic media, WordPerfect 8.0 or Microsoft Word.
- B. Complete upper portion of RFI form. Number RFI's sequentially. Limit each RFI to one subject. Describe nature of additional information required with references to existing drawings as required. When the Contractor has envisioned a possible solution, submit proposed solution with RFI.
- C. Submit RFI by fax or e-mail to the Architect, if desired. If submitting drawing in hard copy format, if drawings exceed 8-1/2" x 11" size, submit four (4) copies with RFI.
- D. Architect/Engineer will review RFI and provide additional information required for continuation of project consistent with design intent. If required, additional drawings will be issued with the RFI response.

3.07 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Should the Contractor, Sub-contractor or material supplier desire to obtain the Architect's or Engineer's drawing in an electronic format (CADD drawings) for use as an aid in preparing shop drawings, the Contractor shall complete the ELECTRONIC FILE TRANSFER AGREEMENT, See Section 01 30 00 Attachment "B." Separate magnetic media files for this project must be obtained directly from each discipline that produced them (Structural, MEP, Architectural, etc.). Submit the completed ELECTRONIC FILE TRANSFER AGREEMENT directly to the design professional that produced the documents desired. When the files are ready for pick-up at the design professional's office, the Contractor, Sub-contractor or material supplier will be notified by telephone, or if e-mail option is selected, the files will be forwarded by e-mail.
- C. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- D. Samples will be reviewed only for aesthetic, color, or finish selection.
- E. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - CLOSEOUT SUBMITTALS.

3.08 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.09 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- B. Submit for Owner's benefit during and after project completion.

3.10 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies that Contractor requires, plus two copies that will be retained by Architect.
- B. Documents for Information: Submit two copies.
- C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.11 SUBMITTAL PROCEDURES

- A. Transmit each submittal with approved form.
- B. Sequentially number each different type of submittal, i.e. shop drawings and samples, requests for information, etc.
- C. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- D. Identify Project, Contractor, Subcontractor, manufacturer or supplier; pertinent drawing and detail number, specification section number, and applicable standards such as ASTM, ANSI, etc. as appropriate on each copy.
- E. 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 in accordance with the requirements of the Work and Contract Documents.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- I. Provide space for Contractor and Architect review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.
- M. Architect will inform Contractor when submittals are available for pick-up at business address if hard copies are involved.

END OF SECTION

**SECTION 01 3000.1- ATTACHMENT A
REQUEST FOR
INFORMATION**

TO: Juan Medrano, RVK
210.733.3549 - fax
juan.medranao@rvk-architects.com

FROM: _____
CONTRACTOR: _____

PROJECT: Aviation Maintenance Bldg. Re-Roof

RFI Number: _____

SUBJECT: _____

Date: _____

Architect's Project No. 12217
Shop Dwg. Submitted ___ Yes ___ No ___ N/A

LOCATION OF WORK: _____

AFFECTED DRAWINGS: _____

DESCRIPTION (QUESTION):

PROPOSED SOLUTION:

Please respond by: _____

Attachments: _____ Signature: _____

RESPONSE:

Response by: ___ Architect ___ MEP Engineer ___ Structural Engineer ___ Civil Engineer ___ Other

Reference Drawings: _____

RESPONSE/COMMENT:

Date of Reply: _____

Attachments: _____ Signature: _____

ELECTRONIC FILE TRANSFER AGREEMENT

Pursuant to the request of _____ ("Contractor") for RVK and its consultants ("Architect") will deliver BIM model and/or AutoCadd files ("Files") subject to the following terms and conditions:

The Files are not Contract Documents for the Project. Data contained on the electronic Files are instruments of service and are transmitted for Contractor's information only. Only hard copy drawings and specifications are Contract Documents. These Files were created by the Architect for the express purpose of creating 2D contract documents. No implication is intended for any purpose beyond the production of 2D documents.

The Contractor agrees that the Files, except as expressly set forth above, are not fit for any particular purpose, including, but not limited to, quantity take offs, clash detection, ascertainment of construction or installation tolerances and clearances, preparation of shop drawings, coordination drawings, fabrication drawings, or the manufacture of any building components or system. No representation is made regarding the accuracy or completeness of the Files. In the event that a conflict arises between the signed or sealed hard copy documents prepared by the Architect and its consultants and the electronic Files, the hard copy documents shall govern. As such, any omissions or conflicts with the Files, with respect to the content of the Contract Documents, shall not be used as a basis for an increase in the Contract Sum or Time.

The Contractor acknowledges that the model Files do not account for or incorporate means, methods, shop standards, and routing economies required by individual subcontractors for the scope of work. Modifications to the information and routings of selected components may be required and are the responsibility of the Contractor. Therefore, the Contractor agrees that by the use of these Files, the Contractor is not relieved of its duty to fully comply with the Contract Documents, including and without limitation, the need to check, confirm and coordinate all dimensions and determine field measurements, verification of the field conditions and the coordination of the Work.

The Files to be furnished include work prepared by the Architect, Structural, Mechanical, Electrical, and Plumbing consultants only. Files will be furnished in Autodesk®.rvt and/or .dwg format only. One set of electronic Files will be furnished. Contractor assumes responsibility for distributing pertinent Files to its subcontractors.

The Contractor further acknowledges that the Architect makes no representations as to the compatibility of the Files with the user's hardware, software, and other systems. Additionally, the Files are not warranted to be free of any anomalies, errors, viruses, malware or other unintended defects

Furthermore, the Contractor shall, to the fullest extent permitted by law, indemnify and hold those providing the Files harmless against all damages, liability or costs, including reasonable attorneys' fees and defense costs, arising out of or resulting from the Contractor and its Subcontractor's use of the requested electronic Files.

The Contractor shall require each subcontractor, to the extent of the work to be performed by the subcontractor, to be bound by the terms and conditions of this Agreement.

Because information presented on the electronic files can be modified, unintentionally or otherwise, we reserve the right to remove all indicia of ownership and/or involvement from each electronic display.

Upon receipt of the signed Agreement, the Files will be transmitted to the undersigned via electronic media as requested and appropriate to the size of the Files.

Agreed:

Date

(Contractor firm name and contact name)

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Quality assurance submittals.
- C. Control of installation.
- D. Tolerances.
- E. Manufacturers' field services.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

1.03 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.04 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers.
- D. Vehicular access and parking.
- E. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power , consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- B. Existing facilities may not be used.

1.03 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations .
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Existing parking areas may be used for construction parking.

1.06 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 40 00 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Do not use products having any of the following characteristics:
 - 1. Made using or containing CFC's or HCFC's.
 - 2. Made of wood from newly cut old growth timber.
- C. Where all other criteria are met, Contractor shall give preference to products that:
 - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 2. Result in less construction waste.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- C. Products specified by brand name establish the level of quality desired but are in no way intended to limit competition unless substitutions is specifically excluded with a statement similar to "NO SUBSTITUTIONS ALLOWED."

2.03 HAZARDOUS MATERIALS

- A. PCB or items containing PCB shall not be used or incorporated into the Work.
- B. Asbestos containing materials shall not be incorporated into the Work. Asbestos containing materials shall be defined as materials containing asbestos fibers in an amount greater than 1%, as defined by the asbestos National Emission Standards for Hazardous Air Pollutants (asbestos NESHAP), 40 Code of Federal Regulations (CFR) pt. 61, subp. M, which has been incorporated into Minnesota Rule 7011.9920.

- C. Urea formaldehyde or materials containing urea formaldehyde shall not be incorporated into the Work, except that plywood and particleboard materials containing urea formaldehyde may be used, providing said materials do not give gaseous emissions in excess of the following levels, as defined by the United States Department of Housing and Urban Development standards for testing these products under controlled air chamber conditions and HUD-specified pressures.
 - 1. Plywood - 0.2 ppm
 - 2. Particleboard - 0.3 ppm
- D. Dispose of excess or unused hazardous materials and waste products resulting from work of Subcontract in compliance with governmental regulations. Hazardous materials may not be placed in Contractor's trash facilities.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the 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 reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
 - 6. Agrees that, should a substitution be accepted and this substitution prove within the Warranty Period, the Contractor's standard one-year warranty or the product's warranty beyond one year whichever is greater, to be defective or otherwise unsatisfactory for service for which it was intended, the Contractor shall replace defective material with material originally specified at no additional cost.
- D. Substitution Submittal Procedure:
 - 1. Complete the Substitution Request form (Attachment A)
 - 2. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 3. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 4. The Architect will notify Contractor in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Prevent contact with material that may cause corrosion, discoloration, or staining.
- H. Provide equipment and personnel to store products by 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.

END OF SECTION

SECTION 01 6000.1 - ATTACHMENT A

REQUEST FOR
SUBSTITUTION
REVIEW

OWNER
ARCHITECT RVK
CONTRACTOR
CONSULTANT
CONSULTANT
CONSULTANT

PROJECT: Aviation Maintenance Bldg. Re-Roof
10233 John Saunders Drive
San Antonio, Texas

SUBSTITUTION REVIEW NUMBER:

INITIATION DATE:

OWNER:

ARCHITECT: RVK

ARCHITECT'S PROJECT NO: 12217

CONTRACT FOR: General Construction

CONTRACT DATE:

The Contractor is requesting a substitution which requires the Architect and/or Engineer to review it to determine its acceptability for use on the project. The cost of this review will be paid to the Architect and/or Engineer by the Owner as an additional service. An equal amount will be deducted from the Contract sum by subsequent change order, the Contractor thereby reimbursing the Owner for the expense. The Architect and/or Engineer shall proceed with this service promptly. No time extension will be granted for substitutions except where specified material are no longer available due to no fault of the Contractor.

Specification Section:

Description:

The final review cost will be determined by the actual time required to provide the service based on the Architect's and/or Engineer's hourly billing rates in effect at the time the work is performed. Based on the Architect/Engineer's present knowledge of the anticipated review effort, the cost is expected to amount to at least \$_____ but will probably be less than \$_____ and will probably require ____days to complete.

Agreed to:

Agreed to:

Agreed to:

ARCHITECT:
David Bomersbach, AIA, LEED AP BD+C
RVK

CONTRACTOR:

OWNER:

Date:_____

Date:_____

Date: _____

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Cutting and patching.
- C. Cleaning and protection.
- D. Closeout procedures, except payment procedures.

1.02 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of 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. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- 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 any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- I. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.07 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.08 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.09 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Notify Architect when work is considered ready for Substantial Completion.

- C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion review.
 - 1. Submit Contractor's Substantial Completion inspection punch list listing all items to be repaired or completed after Substantial Completion. Organize list by room, in walking order, to allow for ease of verification.
 - 2. After Substantial Completion inspection by the Architect and Owner, add any additional item to the Contractor's punch list. Add additional items under the appropriate room for ease of verification. Architect will provide his punch list, including consultants under his purview, by electronic means for Contractor's convenience in combining said list into one document.
- D. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- E. Notify Architect when work is considered finally complete.
- F. Complete items of work determined by Architect's final inspection.

END OF SECTION

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 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.
- 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.

- 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 utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings : Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

- J. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Original warranties and bonds.
- K. Arrange content by systems under section numbers, including subdivisions within each section, and sequence of Table of Contents of this Project Manual.

3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

END OF SECTION

SECTION 06 10 00
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roofing nailers.
- B. Preservative treated wood materials.
- C. Fire retardant treated wood materials.

1.02 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- B. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2012.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing, wood preservative materials, and application instructions.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
 - 3. Anchors: Toggle bolt type for anchorage to hollow masonry.

2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

- B. Fire Retardant Treatment:
- C. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.

END OF SECTION

SECTION 07 01 50.19
PREPARATION FOR RE-ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Partial removal of existing roofing system components in preparation for a new roof membrane system.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
- C. Schedule work to coincide with commencement of installation of new roofing system.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing roof surface is clear and ready for work of this section.

3.02 PREPARATION

- A. Sweep roof surface clean of loose matter.

3.03 MATERIAL REMOVAL

- A. Remove only existing roofing materials, i.e., skylight panels, roof appertanances, etc., that can be replaced with new materials or reinstalled the same day.

END OF SECTION

SECTION 07 41 13
METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural roofing of preformed steel panels to replace existing translucent panels.
- B. Fastening system.
- C. Factory finishing.
- D. Accessories and miscellaneous components.

1.02 REFERENCE STANDARDS

- A. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

PART 2 PRODUCTS

2.01 STRUCTURAL METAL ROOF PANELS

- A. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Type: Single skin, uninsulated.
 - 2. Steel Panels:
 - a. Aluminum-zinc alloy-coated SS (structural steel) sheet conforming to ASTM A792/A792M; minimum AZ50 coating.
 - b. Steel Thickness: Minimum 0.024 inch.
 - 3. Profile: Lapped seam, with integral sealant bead and exposed fastener system.
 - 4. Texture: Smooth.
 - 5. Width: Maximum panel coverage of 16 inches.

2.02 ATTACHMENT SYSTEM

- A. Exposed System: Provide manufacturer's recommended stainless steel fasteners engineered to meet performance requirements and equipped with appropriate sealant separators to provide weathertight connections that will accommodate anticipated thermal movement.

2.03 PANEL FINISH

- A. Siliconized Polyester Coating: Epoxy primer and silicone-modified polyester enamel topcoat with minimum dry film thickness of 0.8 mil; color and gloss to match sample.

2.04 ACCESSORIES AND MISCELLANEOUS ITEMS

- A. Sealants: As specified in Section 07 90 05.
 - 1. Exposed sealant must cure to rubber-like consistency.
 - 2. Concealed sealant must be non-hardening type.

2.05 FABRICATION

- A. Panels: Fabricate panels and accessory items at factory, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Overall: Install roofing system in accordance with panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
 - 1. Install roofing system with exposed fasteners prefinished to match panels.

END OF SECTION

SECTION 07 54 00
THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Mechanically attached system with thermoplastic roofing membrane.
- B. Insulation, flat and tapered.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood nailers and curbs.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim: Flashing and Counterflashings .

1.03 REFERENCE STANDARDS

- A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2013.
- B. ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing; 2011a.
- C. FM DS 1-28 - Wind Design; Factory Mutual Research Corporation; 2007.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- C. Specimen Warranty: For approval.
- D. Shop Drawings: Indicate joint or termination detail conditions and conditions of interface with other materials.
- E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Store products in weather protected environment, clear of ground and moisture.
- C. Protect foam insulation from direct exposure to sunlight.

1.06 FIELD CONDITIONS

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not expose materials vulnerable to water in quantities greater than can be weatherproofed the same day.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Roofers Warranty: Provide a two year written roofer's warranty under the provisions of Section 01 70 00.
- C. System Warranty: Provide written manufacturer's no dollar limit (NDL) system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes. Warranty shall include labor for removal and disposal of failed components, and all components of roof system, including flashing and counter flashing.
 - 1. Warranty Term: 20 years.
 - 2. For repair and replacement include costs of both material and labor in warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Thermoplastic Polyolefin Membrane Materials:
 - 1. Carlisle Roofing Systems, Inc; Sure-Weld TPO: www.carlisle-syntec.com.
 - 2. Firestone Building Products, LLC; UltraPly TPO: www.firestonebpc.com.
 - 3. GAF; EverGuard TPO: www.gaf.com.
 - 4. Sika Sarnafil; Sarnafil S327 EnergySmart: www.usa.sarnafil.sika.com.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Insulation:
 - 1. As approved by membrane manufacturers.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 ROOFING

- A. Thermoplastic Membrane Roofing: One ply membrane, mechanically fastened, over insulation.
- B. Roofing Assembly Requirements:
 - 1. Factory Mutual Classification: Class I and windstorm resistance of I-75, in accordance with FM DS 1-28.
- C. Acceptable Insulation Types - Constant Thickness Application:
 - 1. Minimum 2 layers of polyisocyanurate board.
- D. Acceptable Insulation Types - Tapered Application: Any type that meets requirements and is approved by membrane manufacturer for application.

2.03 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Membrane:
 - 1. Material: Thermoplastic polyolefin (TPO) complying with ASTM D6878.
 - 2. Reinforcing: Internal fabric.
 - 3. Thickness: 0.060 inch, minimum.
 - 4. Sheet Width: Factory fabricated into largest sheets possible.
 - 5. Color: White.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Fasteners: As recommended and approved by membrane manufacturer.
- D. Flexible Flashing Material: Same material as membrane.

2.04 INSULATION

- A. Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type II, Class 1, cellulose felt or glass fiber mat both faces; Grade 1 and with the following characteristics:
 - 1. Compressive Strength: 20 psi
 - 2. Board Size (Bottom layer): 48 x 96 inch boards cut to fit between metal roof ribs.
 - 3. Board Thickness (Bottom layer): 1.5 inch.
 - 4. Board Size (Top layer): 48 x 96 inch.
 - 5. Board Thickness (Top Layer): 2 inch.
 - 6. Board Edges: Square.
 - 7. Manufacturer: As approved by membrane manufacturer..

2.05 ACCESSORIES

- A. Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.
- B. Insulation Fasteners: Appropriate for purpose intended and approved by roofing manufacturer.
 - 1. Length as required for thickness of insulation material and penetration of roof purlins, with metal washers.
- C. Sealants: As recommended by membrane manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Perform work in accordance with manufacturer's instructions.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- E. Do not expose materials vulnerable to water in quantities greater than can be weatherproofed the same day.

3.02 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

3.03 INSULATION - UNDER MEMBRANE

- A. Attachment of Insulation:
 - 1. Mechanically fasten top layer of insulation, over loose-laid bottom layer, to deck in accordance with roofing manufacturer's instructions to meet wind pressure requirements .
- B. Lay subsequent layers of insulation with joints staggered minimum 6 inch from joints of preceding layer.
- C. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.
- D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- E. Do not apply more insulation than can be covered with membrane in same day.

3.04 MEMBRANE APPLICATION

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Overlap edges and ends and seal seams by solvent welding, minimum 3 inches. Seal permanently waterproof. Apply uniform bead of sealant to joint edge.
- D. Mechanical Attachment: Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- E. Around roof penetrations, seal flanges and flashings with flexible flashing.
- F. Install roofing expansion joints where indicated. Make joints watertight.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers as agreed during installation of the Work.

3.06 CLEANING

- A. Remove bituminous markings from finished surfaces.
- B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- C. Repair or replace defaced or damaged finishes caused by work of this section.

3.07 PROTECTION

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.
- C. Repair or replace uncleanable, defaced or damaged finishes caused by work of other construction operations.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, and drip edge metal.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood nailers.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2011.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2011.
- C. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2012)e1.
- D. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2012.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 0.02 inch thick base metal.
- B. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 0.02 inch thick base metal, shop pre-coated with PVDF coating.
 - 1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
 - 2. Color: As selected by Architect from manufacturer's standard colors.

2.02 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Primer: Zinc chromate type.
- C. Sealant: Type 2 specified in Section 07 90 05.
- D. Plastic Cement: ASTM D4586, Type I.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet, minimum 3 inches wide, 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 flat lock 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 flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

2.04 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: 24 gage, prefinished; Profile as indicated.
- B. Downspouts: 24 gage, prefinished; Profile as indicated.
- C. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: Type recommended by fabricator.
 - 2. Gutter Supports: Straps.
 - 3. Downspout Supports: Brackets.
- D. Seal metal joints.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION

- A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- 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. Secure gutters and downspouts in place using fasteners.
- F. Slope gutters 1/4 inch per 10 feet, minimum.

END OF SECTION

SECTION 07 90 05
JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.

1.02 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.01 SEALANTS

- A. Type 1 - General Purpose Exterior Sealant: Silicone; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single component.
 - 1. Color: To be selected by Architect from manufacturer's standard range.
 - 2. Product: 795 manufactured by Dow Corning.
 - 3. Applications: Use for:
 - a. Joints between metal frames and other materials.
 - b. Other exterior joints for which no other sealant is indicated.
- B. Type 2 - Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, nondrying, nonskinning, noncuring.
 - 1. Product: Tremco Butyl manufactured by Tremco Global Sealants.
 - 2. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
 - b. Concealed sealant bead in siding overlaps.

2.02 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 D 1667, closed cell PVC; 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

3.01 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker where joint backing is not used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave.

END OF SECTION