

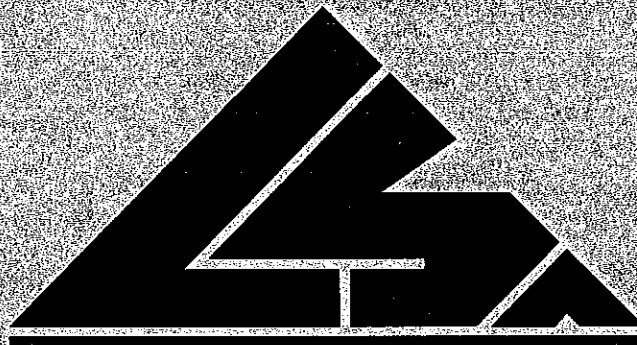
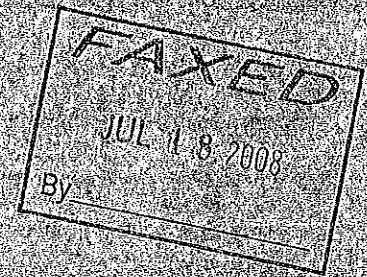
PROJECT MANUAL

The Church of Jesus Christ of Latter-Day Saints

FLAGSTAFF STAKE CENTER SITE IMPROVEMENTS

505-3293

Flagstaff, Arizona
Flagstaff Arizona Stake



LOREN V. SADLER
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July 2008

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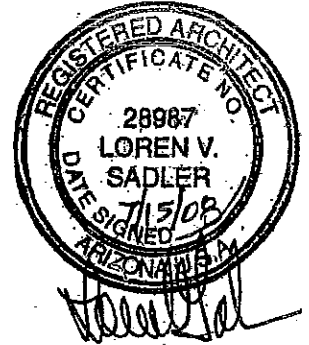
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INVITATION TO BID

1. **PROJECT:**

Flagstaff Stake Center
Site Improvements

2. **LOCATION:**

625 E Cherry Ave
Flagstaff, AZ 86001

3. **OWNER:**

Corporation of the Presiding Bishop of
The Church of Jesus Christ of Latter-day Saints,
A Utah Corporation Sole
50 East North Temple Street
Salt Lake City, Utah 84150

4. **ARCHITECT:**

Loren V. Sadler, Architect, Inc.
221 W. Hillview St.
Winslow, AZ 86047
928.289.4282 Phone
928.289.0250 Fax

6. **DESCRIPTION OF PROJECT:**

A. Addition of parking, replacement of light poles, concrete curbs and fencing.

7. **TYPE OF BID:** Bids will be on a lump-sum basis. Segregated bids will not be accepted.

8. **TIME OF COMPLETION:** The time limit for completion of this Work will be 60 calendar days and as noted in the Agreement.

9. **BID OPENING:** Sealed bids will be received at time and place to be announced. Bids will be publicly opened at time and place to be announced.

10. **BIDDING DOCUMENTS:**

A. Bidding Documents may be obtained at the Architect's office.

11. **BIDDER'S QUALIFICATIONS:** Bidding by the General Contractors will be by invitation only.

12. **OWNER'S RIGHT TO REJECT BIDS:** The Owner reserves the right to reject any or all bids and to waive any irregularity therein.

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS

1. DEFINITIONS:

- A. The definitions set forth in Section 1 of the General Conditions are applicable to the documents included under Bidding Requirements.
- B. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The proposed Contract Documents consist of the documents identified as Contract Documents in the Form of Agreement, except for Modifications. The Bidding Requirements are those documents identified as such in the proposed Project Manual.
- C. Addenda are written or graphic documents issued by the Architect prior to execution of the Contract which modify or interpret the Bidding Documents. They become part of the Contract Documents as noted in the Form of Agreement upon execution of the Contract.

2. BIDDER'S REPRESENTATIONS:

- A. By submitting a bid, the bidder represents that
 - 1. Bidder has carefully studied and compared the Bidding Documents with each other. Bidder understands the Bidding Documents and the bid is fully in accordance with the requirements of those documents,
 - 2. Bidder has thoroughly examined the site and any building located thereon, has become familiar with local conditions which might directly or indirectly affect the contract work, and has correlated its personal observations with the requirements of the proposed Contract Documents, and
 - 3. Bid is based on the materials, equipment, and systems required by the Bidding Documents without exception.

3. BIDDING DOCUMENTS:

- A. Copies
 - 1. Bidding Documents may be obtained as set forth in the Invitation to Bid.
 - 2. Partial sets of Bidding Documents will not be issued.
 - 3. Bidders will use complete sets of Bidding Documents in preparing bids and make certain that those submitting sub-bids to them have access to all portions of the documents that pertain to the work covered by sub-bid, including General Conditions, Supplementary Conditions, and Division 01. Bidder assumes full responsibility for errors or misinterpretations resulting from use of partial sets of Bidding Documents by itself or any sub-bidder.
- B. Interpretation or Correction Of Bidding Documents
 - 1. Bidders will request interpretation or correction of any apparent errors, discrepancies and omissions in the Bidding Documents.
 - 2. Corrections or changes to Bidding Documents will be made by written addenda.
- C. Substitutions and Equal Products
 - 1. Generally speaking, substitutions for specified products and systems, as defined in the Uniform Commercial Code, are not acceptable. However, equal products may be approved upon compliance with Contract Document requirements.
 - 2. Base bid only on materials, equipment, systems, suppliers or performance qualities specified in the Bidding Documents.

3. Architect is only authorized to consider requests for approval of equal products to replace specified products in Sections where the heading 'Acceptable Manufacturers' is used and statement, 'Equal as approved by Architect before bidding. See Section 016000' or 'Equal as approved by Architect before installation. See Section 016000,' appears. In Sections where the afore-mentioned statements do not appear and a different heading is used, Architect is authorized as Owner's representative to decline consideration of requests for approval of equal products. Approvals of equal products in such Sections must be made by Owner and will generally be for subsequent Projects.

D. Addenda - Addenda will be sent to bidders and to locations where Bidding Documents are on file no later than one week prior to bid opening or by fax no later than 24 hours prior to bid opening.

4. BIDDING PROCEDURES:

A. Form and Style of Bids

1. Use Owner's Bid Form.
2. Fill in all blanks on Bid Form by typewriter or by printing manually in ink. Signatures will be in longhand and executed by representative of bidder duly authorized to make contracts.
3. Bids will bear no information other than that requested on bid form. Do not delete from or add to the information requested on the bid form.

C. Submission of Bids

1. Submit bid in sealed opaque envelope containing only bid form and bid security. Envelopes will be sealed, bear bidder's name, and include the following:

BID FOR

Flagstaff Stake Center
Site Improvements
505 - 3293

If bid is sent by mail, enclose sealed envelope in separate mailing envelope with notation 'SEALED BID ENCLOSED' on face.

2. It is bidder's sole responsibility to see that its bid is received at specified time. Bids received after specified bid opening time will be returned to bidders unopened.
3. No oral, facsimile transmitted, telegraphic, or telephonic bids, modifications, or cancellations will be considered.

D. Modification or Withdrawal of Bid

1. Bidder guarantees there will be no revisions or withdrawal of bid amount for 45 days after bid opening.
2. Prior to bid opening, bidders may withdraw bid by written request or by reclaiming bid envelope.
3. Prior to bid opening, bidder may mark and sign on the sealed envelope that bidder acknowledges any or all Addenda.

5. CONSIDERATION OF BIDS:

A. Opening of Bids - See Invitation to Bid.

B. Rejection of Bids - Owner reserves right to reject any or all bids and to waive any irregularity therein.

C. Acceptance of Bid

1. No bidder will consider itself under contract after opening and reading of bids until Agreement between Owner and Contractor is fully executed.
2. Bidder's past performance, organization, subcontractor selection, equipment, and ability to perform and complete its contract in manner and within time specified, together with amount of bid, will be elements considered in award of contract.

CONTRACTOR BID PROPOSAL AND MAINTENANCE PROJECT AGREEMENT (U.S.)

Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, ("Owner") and the undersigned Contractor ("Contractor") hereby agree as follows:

1. **Project Site.**
Property Number: 505-3293
Address: 625 E Cherry Ave
Project Type: Remodel
Project Name: Flagstaff Stake Center-Site Improvements
2. **Scope of the Work.** Contractor will furnish all labor, materials, and equipment necessary to complete the Work in accordance with the Contract Documents. The Work is all labor, materials, equipment, construction, and services required by the Contract Documents.
3. **Contract Documents.** Contract Documents consist of:
 - a. This Agreement;
 - b. The Specifications (Division 01 and Divisions _____)
 - c. Drawings entitled _____ and dated _____.
 - d. Addendum No. _____ dated _____; and
 - e. All written Field Changes, written Construction Change Directives and written Change Orders when prepared and signed by Owner and Contractor.
4. **Compensation.** Owner will pay Contractor for performance of Contractor's obligations under the Contract Documents the sum of _____ Dollars (\$_____). This is the Contractor's Bid Proposal Amount.
5. **Payment.**
 - a. If the Contractor's Bid Proposal Amount is over \$50,000.00, Contractor will submit to Owner a schedule of values which allocates the Contractor's Bid Proposal Amount to various portions of the Work. This schedule, when accepted by Owner will be used as a basis for reviewing Contractor's payment requests.
 - b. Not more than once each month, Contractor will submit a payment request to Owner. Owner will pay Contractor for work completed within thirty (30) days after Owner receives:
 - (1) Contractor's payment request for work to date;
 - (2) a certification by Contractor that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the current payment request; and
 - (3) releases of all mechanics' liens and claims of subcontractors, laborers, or material suppliers who supplied labor and/or materials for the Work covered by the payment request.Owner may modify or reject the payment request if, in Owner's opinion, the Work for which payment is requested is not acceptable or is less complete than represented on the payment request.
6. **Extras and Change Orders.** Owner may order changes in the Work by altering, adding to, or deducting from the Work. In the event of such a change, Contractor's compensation and/or the time of completion will be adjusted to reflect the change. Contractor will not commence work on any change until either:
 - (a) Contractor and Owner have agreed in writing to the amount of the adjustment resulting from the change; or (b) Owner has issued an order for the change acknowledging that there is a dispute regarding the compensation adjustment relating to the change. If Contractor proceeds with a change in the Work without complying with the preceding sentence, Contractor agrees that it will not be entitled to any additional compensation for such change.
7. **Correction of Work.** Contractor will promptly correct, at its own expense,
 - (a) any portion of the Work which
 - 1) fails to conform to the requirements of the Contract Documents, or
 - 2) is rejected by the Owner as defective or because it is damaged or rendered unsuitable during installation or resulting from failure to exercise proper protection.
 - (b) any defects due to faulty materials, equipment, or workmanship which appear within a period of one year from the date of Substantial Completion or within such longer period of time as may be prescribed by law or the terms of any applicable special warranty required by the Contract Documents.
8. **Time of Completion.** Contractor will complete the Work and have it ready for Owner's inspection within _____ (_____) calendar days from Notice to Proceed issued by Owner. Time is of the essence. If Contractor is delayed at any time in the progress of the Work by any act or neglect of Owner, or by changes in the Work, or by strikes, lockouts, unusual delay in transportation, unavoidable casualties, or acts of nature beyond Contractor's control, then the time for completion will be extended by the time that completion of the Work is delayed. However, Contractor expressly waives any damages for any such delays other than those delays willfully caused by Owner.
9. **Permits, Surveys, and Taxes.** Contractor will obtain and pay for all permits and licenses, and also pay any applicable taxes. Contractor will also obtain and pay for any surveys it needs to perform the Work. Contractor will conform to all ordinances and covenants governing the Project Site and/or Work.
10. **Payment of Subcontractors and Materialmen.** Contractor will promptly pay for all labor, materials, and equipment used to perform the Work.
11. **Contractor's Insurance.** Prior to performing any work, Contractor will obtain and maintain during the term of this Agreement: Commercial General Liability Insurance, Workers' Compensation Insurance, Automobile Liability Insurance, and Employers' Liability Insurance. In the event the Contractor's Bid Proposal Amount is over \$100,000.00, Contractor's Commercial General Liability Insurance will meet the following additional requirements:
 - a. Insurance Services Office (ISO) form *Commercial General (CG) 00 01 (11/93)* or an equivalent, occurrence policy with limits of not less than One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) in the aggregate.
 - b. Contractor's insurer will add the Owner as an additional insured on this policy using ISO endorsement *CG 2010 (10/93)* or its equivalent.Automobile Liability Insurance will be for "any auto" for which Contractor may be legally responsible, and with not less than

One Hundred Thousand Dollars (\$100,000.00) combined single limit coverage. In the event the Contractor's Bid Proposal Amount is over \$100,000.00, the required Automobile Liability Insurance combined single limit coverage will be at least One Million Dollars (\$1,000,000.00).

Contractor will submit an ACORD 25-S certificate or its equivalent to Owner. Certificate will contain a cancellation clause of the certificate amended to read: "Should any of the above described policies be cancelled before the expiration date thereof, the issuing insurer will mail 30 days prior written notice to the certificate holder names to the left." At Contractor's option, Contractor may submit this certificate annually to be on file with Owner to cover all maintenance projects that Contractor performs for Owner.

12. **Independent Contractor Relationship.** The parties expressly agree that Contractor is not an agent or employee of Owner but is an independent contractor solely responsible for all expenses relating to Contractor's business.

13. **Indemnity and Hold Harmless.**

a. Contractor will indemnify and hold harmless Owner and Owner's representatives, employees, agents, architects, and consultants from and against any and all claims, damages, liability, demands, costs, judgments, awards, settlements, causes of action, losses and expenses (collectively "Claims" or "Claim"), including but not limited to attorney fees, consultant fees, expert fees, copy costs, and other expenses, arising out of or resulting from performance of the Work, attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of real or personal property, including loss of use resulting therefrom, except to the extent that such liability arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity includes, without limitation, indemnification of Owner from all losses or injury to Owner's property, except to the extent that such loss or injury arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity applies, without limitation, to include Claims occurring both during performance of the Work and/or subsequent to completion of the Work. In the event that any Claim is caused in part by a party indemnified hereunder, that party will bear the cost of such Claim to the extent it was the cause thereof. In the event that a claimant asserts a Claim for recovery against any party indemnified hereunder, the party indemnified hereunder may tender the defense of such Claim to Contractor. If Contractor rejects such tender of defense and it is later determined that the negligence of the party indemnified hereunder did not cause all of the Claim, Contractor will reimburse the party indemnified hereunder for all costs and expenses incurred by that party in defending against the Claim. Contractor will not be liable hereunder to indemnify any party for damages resulting from the sole negligence of that party.

b. In addition to the foregoing, Contractor will be liable to defend Owner in any lawsuit filed by any Subcontractor relating to the Project. Where liens have been filed against Owner's property, Contractor (and/or its bonding company which has issued bonds for the Project) will obtain lien releases and record them in the appropriate county and/or local jurisdiction and provide Owner with a title free and clear from any liens of Subcontractors. In the event that Contractor and/or its bonding company are unable to obtain a lien release, Owner in its absolute discretion may require Contractor to provide a bond around the lien or a bond to discharge the lien, at Contractor's sole expense.

- c. In addition to the foregoing, Contractor will indemnify and hold Owner harmless from any claim of any other contractor resulting from the performance, nonperformance or delay in performance of the Work by Contractor.
- d. The indemnification obligation herein will not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or a Subcontractor under worker's compensation acts, disability benefit acts, or other employee benefit acts.

14. **Resolution of Disputes.** In the event there is any dispute arising under the Contract Documents which cannot be resolved by agreement between the parties, either party may submit the dispute with all documentation upon which it relies to Director of Field Operation Support Services, Physical Facilities Department, 50 East North Temple, 11th Floor, Salt Lake City, Utah 84150, who will convene a dispute resolution conference within thirty (30) days. The dispute resolution conference will constitute settlement negotiations and any settlement proposal made pursuant to the conference will not be admissible as evidence of liability. In the event that the parties do not resolve their dispute pursuant to the dispute resolution conference, either party may commence legal action to resolve the dispute. Any such action must be commenced within six (6) months from the first day of the dispute resolution conference or be time barred. Submission of the dispute to the Director as outlined above is a condition precedent to the right to commence legal action to resolve any dispute. In the event that either party commences legal action to adjudicate any dispute without first submitting the dispute to the Director, the other party will be entitled to obtain an order dismissing the litigation without prejudice and awarding such other party any costs and attorneys fees incurred by that party in obtaining the dismissal, including without limitation copy costs, and expert and consultant fees and expenses.

15. **Termination of Agreement by Contractor.** In the event Owner materially breaches any term of the Contract Documents, Contractor will promptly give Written Notice of the breach to Owner. If Owner fails to cure the breach within ten (10) days of the Written Notice, Contractor may terminate the Agreement by giving Written Notice to Owner and recover from Owner the percentage of the Contract Sum represented by the Work completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets. Contractor will not be entitled to unearned profits or any other compensation or damages as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

16. **Termination of Agreement by Owner for Cause.** Should Contractor make a general assignment for the benefit of its creditors, fail to apply enough properly skilled workmen or specified materials to properly prosecute the Work in accordance with Contractor's schedule, or otherwise materially breach any provision of the Contract Documents, then Owner may, without any prejudice to any other right or remedy, give Contractor Written Notice thereof. If Contractor fails to cure its default within ten (10) days, Owner may terminate this Agreement by giving Written Notice to Contractor, take possession of the premises and all materials, tools, and appliances thereon, and finish the Work by whatever method Owner deems expedient. In such case, Contractor will not be entitled

to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the expense of finishing the Work, including compensation for additional administrative, architectural, consultant, and legal services (including without limitation attorneys fees, expert fees, copy costs, and other expenses), such excess will be paid to Contractor. If such expense exceeds the unpaid balance, Contractor will pay the difference to Owner. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

17. **Termination of Agreement by Owner for Convenience.** Notwithstanding any other provision contained in the Contract Documents, Owner may, without cause and in its absolute discretion, terminate the Agreement at any time. In the event of such termination, Contractor will be entitled to recover from Owner the percentage of the Contract Sum equal to the percentage of the Work which Owner and/or its architect determines has been completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets. Contractor will not be entitled to unearned profits or any other compensation as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Owner may, in Owner's sole discretion, take legal assignment of subcontracts and other contractual rights of Contractor. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.
18. **Assignment of Contract.** The parties hereto will not assign any rights or obligations under this Agreement without the prior written consent of the other party.

19. **Integration Clause.** The Contract Documents reflect the full agreement of the parties with respect to the Project and the Work and supersede all prior discussions, agreements, and representations regarding the subject matter of the Contract Documents. The Contract Documents may be amended only in a written document signed by both parties hereto.
20. **Applicable Law.** The parties acknowledge that the Contract Documents have substantial connections to the State of Utah. The Contract Documents will be deemed to have been made, executed, and delivered in Salt Lake City, Utah. To the maximum extent permitted by law, (i) the Contract Documents and all matters related to their creation and performance will be governed by and enforced in accordance with the laws of the State of Utah, excluding conflicts of law rules, and (ii) all disputes arising from or related to the Contract Documents will be decided only in a state or federal court located in Salt Lake City, Utah and not in any other court or state. Toward that end, the parties hereby consent to the jurisdiction of the state and federal courts located in Salt Lake City, Utah and waive any other venue to which they might be entitled by virtue of domicile, habitual residence, place of business, or otherwise.
21. **Enforcement.** In the event either party commences legal action to enforce or rescind any term of the Contract Documents, the prevailing party will be entitled to recover its attorneys fees and costs, including without limitation all copy costs and expert and consultant fees and expenses, in that action and on all appeals, from the other party.
22. **Bid Proposal/Agreement.** Contractor's submission to Owner of this agreement signed by Contractor will constitute Contractor's offer and bid proposal to perform the Work described in this agreement according to the terms thereof. Owner's signing of this agreement and delivery to Contractor of the signed copy thereof will constitute acceptance of Contractor's offer and will convert this document to a binding agreement.

OWNER:

Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole,

By: _____
Designated Representative

(Print Name:) _____

Address: _____

Telephone No: _____

Date: _____

Reviewed by: _____

CONTRACTOR:

(Contractor Name)

By: _____

(Print Name) (Title)

Contractor Address: _____

Telephone No: (_____) _____

Fed. I.D. or SSN: _____ License No: _____

Date: _____

EQUAL PRODUCT APPROVAL REQUEST FORM

Project Name: Flagstaff Stake Center – Site Improvements Request Number: _____

TO: _____

FROM: _____

BID DATE: _____

A proposed product is not legally approved and cannot legally be included in a bid or used in the Work until it appears in an Addendum or other Contract Modification as defined in the General Conditions. See Instructions To Bidders Paragraph 3,C, General Conditions, and Section 016000.

PROPOSED EQUAL PRODUCT:

Specification Section: _____

Specified Products: _____

Proposed Product: _____

The Undersigned certifies:

1. Proposed equal product has been fully investigated and determined to be equal or superior in all respects to specified products.
2. Same warranty will be furnished for proposed equal product as for specified products.
3. Same maintenance service and source of replacement parts, as applicable, is available.
4. Proposed equal product will have no adverse effect on other trades and will not affect or delay progress schedule.
5. Proposed equal product does not affect dimensions and functional clearances.

ATTACHMENTS:

Include the following attachments -

1. Copy of the Project Manual Section where the proposed equal product would be specified, rewritten or red-lined to include any changes necessary to correctly specify the proposed equal product. Identify completely changes necessary to the original Project Manual Section.
2. Copies of details, elevations, cross-sections, and other elements of the Project Drawings redone as necessary to show changes necessary to accommodate proposed equal product. Identify completely the changes from the original Drawings.
3. Complete product literature and technical data, installation and maintenance instructions, test results, and other information required to show complete conformance with requirements of the Contract Documents.

SIGNED: _____

Company _____

Address _____

City, State, Zip _____

Telephone _____ Fax _____

SECTION 01 1000

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY OF WORK

A. Work Covered By Contract Documents:

1. Provisions contained in Division 01 apply to Sections of Divisions 02 through 49 of Specifications. Instructions contained in Specifications are directed to Contractor. Unless specifically provided otherwise, obligations set forth in Contract Documents are obligations of Contractor.
2. Contractor will furnish total labor, materials, equipment, and services necessary to perform The Work in accordance with Contract Documents.

1.2 WORK RESTRICTIONS

- ###### A. During construction period, Contractor will have use of premises for construction operations. Contractor will ensure that Contractor, its employees, subcontractors, and their employees comply with following requirements:
1. Confine operations to areas within Contract limits shown on Drawings. Do not disturb portions of site beyond Contract limits.
 2. Do not allow alcoholic beverages, illegal drugs, or persons under their influence on Project site.
 3. Do not allow use of tobacco in any form on Project Site.
 4. Do not allow work on Project site on Sundays except for emergency work.
 5. Refrain from using profanity or being discourteous or uncivil to others on Project Site or while performing The Work.
 6. Wear shirts with sleeves, wear shoes, and refrain from wearing immodest, offensive, or obnoxious clothing, while on Project Site.
 7. Do not allow playing of obnoxious and loud music on Project Site. Do not allow playing of any music within existing facilities.
 8. Do not build fires on Project Site.
 9. Reasonably accommodate use of existing facilities by Owner.
 10. Do not allow weapons on Project Site, except those carried by law enforcement officers or other uniformed security personnel who have been retained by Owner or Contractor to provide security services.
- ###### B. Do not load or permit any part of the structure to be loaded with a weight that will endanger its safety. Questions of structural loading as part of construction means and methods shall be addressed by a licensed structural engineer engaged by Contractor, subject to the review by Architect.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

SECTION 01 2000

PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 PAYMENT PROCEDURES

A. Payment Requests:

1. Each Payment Request will be consistent with previous requests and payments certified by Architect and paid for by Owner.
2. Use Payment Request forms provided by Owner.
3. Request Preparation:
 - a. Complete every entry on Payment Request form.
 - b. Entries will match data on approved schedule of values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.
 - c. Submit signed Payment Request to Architect with current Construction Schedule.
4. Provide following submittals before or with submittal of Initial Payment Request:
 - a. List of Subcontractors.
 - b. Initial progress report.
 - c. Contractor's Construction Schedule.
 - d. Submittal Schedule.
5. Provide Affidavit of Contractor and Consent of Surety with Payment Request following Substantial Completion.

B. Schedule Of Values:

1. Submit schedule of values on Owner's standard form to Architect 20 days minimum before submission of Initial Payment Request as a necessary condition before payment will be processed. Coordinate preparation of schedule of values with preparation of Contractor's Construction Schedule. Correlate line items in Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Payment Request form.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Project Meetings And Conferences:

1. Preconstruction Conference:
 - a. Attend preconstruction conference and organizational meeting scheduled by Architect at Project site or other convenient location.
 - b. Be prepared to discuss items of significance that could affect progress, including such topics as:
 - 1) Status of permits.
 - 2) Construction schedule.
 - 3) Critical Work sequencing.
 - 4) Designation of responsible personnel.
 - 5) Procedures for processing interpretations and Modifications.
 - 6) Procedures for processing Payment Requests.
 - 7) Distribution of Contract Documents.
 - 8) Submittal of Product Data, Shop Drawings, Samples, Quality Assurance / Control submittals.
 - 9) Preparation of record documents and O & M manuals.
 - 10) Use of the premises.
 - 11) Office, work, and storage areas.
 - 12) Equipment deliveries and priorities.
 - 13) Security.
 - 14) Project cleanup.
 - 15) Working hours.
 - 16) Current problems.
 - 17) General schedule of inspections by Architect and its consultants.
 - 18) General inspection of tests.
 - c. Architect will record minutes of meetings and distribute copies to Owner and Contractor within three working days.
2. Progress Meetings:
 - a. Attend progress meetings at Project site at regularly scheduled intervals determined by Architect, at least once a month.
 - b. Progress meetings will be open to Owner, Architect, Subcontractors, and anyone invited by Owner, Architect, and Contractor.
 - c. Be prepared to discuss items of significance that could affect progress, including following -
 - 1) Progress since last meeting.
 - 2) Whether Contractor is on schedule.
 - 3) Activities required to complete Project within Contract Time.
 - 4) Labor and materials provided under separate contracts.
 - 5) Off-site fabrication problems.
 - 6) Access.
 - 7) Site use.
 - 8) Temporary facilities and services.
 - 9) Hours of work.
 - 10) Hazards and risks.
 - 11) Project cleanup.
 - 12) Quality and Work standards.
 - 13) Status of pending modifications.
 - 14) Documentation of information for Payment Requests.
 - 15) Maintenance of Project records.
 - d. Architect will prepare minutes of progress meetings and distribute copies of minutes to Owner and Contractor within three working days.
3. Pre-installation Conferences -
 - a. Attend pre-installation conferences specified in Contract Documents as scheduled by Architect.
 - b. Be prepared to discuss following items:
 - 1) Requirements of Contract Documents.

- 2) Completed work is necessary for installation of items or systems.
- 3) Conditions not in compliance with installation requirements.
- 4) Installation and inspection schedule.
- 5) Coordination between trades.
- 6) Space and access limitations.
- 7) Testing.
- c. Architect will prepare meeting minutes and distribute minutes to Owner and Contractor within three working days.

1.2 CONSTRUCTION PROGRESS DOCUMENTATION

A. Scheduling of Work:

1. Bar Chart Schedule:

- a. Submit horizontal bar chart schedule before Preconstruction Conference. Provide separate time bar for each construction activity listed on Owner's payment request form. Within each time bar, show estimated completion percentage. Provide continuous vertical line to identify first working day of each week. Show each activity in chronological sequence. Show graphically sequences necessary for completion of related portions of The Work. As The Work progresses, place contrasting mark in each bar to indicate actual completion.
- b. Provide copies of schedule for Architect and Owner and post copy in field office.
- c. Revise schedule monthly. Send copy of revised schedule to Owner and Architect and post copy in field office.

B. Network Analysis Schedule:

1. General Requirements:

- a. Submit and maintain Critical Path Method (CPM) schedule for the Work. Computerized network diagram will serve as 'Master Construction Schedule' for Project, giving mathematical analysis (printout) of that network, which verifies and validates logic and planning and defines critical path. Display accepted schedule in site construction office at all times.
- b. Utilize CPM schedule for planning, organizing, and directing the Work, for reporting progress, and for requesting payment for work completed. Review schedule each month in progress meeting.
- c. Clearly explain abbreviations used in CPM schedules in legend of symbols, either separate or attached.

2. Schedule Requirements:

- a. CPM schedule will clearly show sequential interdependencies, with activity duration and float clearly represented. Sequence(s) of activities with no float will be clearly identified as Critical Path(s).
- b. Scheduling system will be capable of baseline comparison analysis. Upon development and acceptance of schedule, 'freeze' initial schedule as baseline schedule. As work progresses, provide graphics displaying actual progress bars versus baseline or target bars.
- c. Activity durations will be in workdays.
- d. Activity Content:

- 1) CPM schedule will include but not be limited to following activities as they apply to Project.
 - a) Construction tasks (Maximum 20 day duration for any activity).
 - b) Shop drawings submittal and approval process.
 - c) Ordering, fabrication, and delivery of major materials and equipment.
 - d) Checkout, start-up, and test and balance of major equipment.
 - e) Submittals of record drawings and maintenance manuals.
 - f) Cleanup and punch out tasks.
 - g) Critical coordination activities required to insure timely support and inspections.
 - h) Owner purchased/installed items and Owner's separate contract work.
 - i) Pre-final, final inspections and substantial completion.
 - j) Final payment.
 - k) Owner occupancy.
- 2) Schedule submittal activities to allow sufficient time for work to be procured and installed, even if submittal is unacceptable and re-submittal is required.

3. Submittals:

- a. Submit initial submittal, complete revisions, and periodic reports in three hard copies, one reproducible and two prints or plots, and one copy on 3.5 inch floppy discs or on CD.
- b. Submit completed network program consisting of PERT, GANTT, and mathematical analysis prior to preconstruction meeting.

- c. Review development status of network CPM schedule with Owner and Architect during preparation period.
- 4. Report Formats:
 - a. Standard set of reports submitted each month including initial submittals will consist of following:
 - 1) Graphics:
 - a) GANTT chart of entire project. Progress bar chart will include target or baseline comparison bars. Bar positions will be early start / early finish with float clearly defined.
 - b) Time-scaled logic diagram or time-scaled network, also called PERT chart, with critical path clearly defined.
 - c) PERT and GANTT charts will include tabulation of each activity. Furnish following information for each activity on PERT and GANTT charts. Sequencing of columns on GANTT chart will match following:
 - d) GANTT Chart Column Layout:
 - (1) Activity / Task Description.
 - (2) Estimated duration of activity / task.
 - (3) Start status.
 - (4) Status.
 - (5) Start date by calendar date.
 - (6) End date by calendar date.
 - (7) Latest start date by calendar date.
 - (8) Latest end date by calendar date.
 - (9) Total slack or float time in calendar days.
 - (10) Percentage of activity achieved.
 - e) Program or means used in making mathematical computation will compile total value of completed and partially completed activities. Program will also accept revised completion dates as modified by Change Order time adjustments and accompanying recomputations of float dates.
 - f) PERT Chart Box Layout:
 - (1) Task / Activity Name.
 - (2) Duration.
 - (3) Start Date.
 - (4) End Date.
 - (5) Status (critical task).
 - b. Graphics outlined above will comply with following criteria unless noted otherwise:
 - 1) Sheet size of diagram will be 24 by 36 inches minimum and time scaled in weeks unless approved otherwise.
 - 2) On each page include title block containing as minimum following information:
 - a) Project Title.
 - b) Project Number.
 - c) Contractor's Business Name.
 - d) Date of Submittal and/or Revision.
 - e) Progress Computation Date.
 - f) Legend of Symbols and Abbreviations as applicable.
 - 3) Prepare and submit to Architect upon request additional charts, reports, and current copy on disk of Project program.
- 5. CPM Schedule Implementation And Monitoring:
 - a. Where Contractor is shown to be behind schedule, provide accompanying written summary, cause, and explanation of planned remedial action.
 - 1) CPM schedules will reflect those instances, Modifications or other alterations to schedule, which have impact on final completion or interim target dates within schedule.
 - 2) Owner may withhold payments or portions of payments upon failure to maintain scheduled progress of the Work as shown on accepted CPM schedule.
 - b. Float time belongs to Project, not to Contractor or to Owner, and may be utilized by both parties.
- 6. Schedule Changes And Updates:
 - a. Update CPM Schedule prior to each submittal to Owner and Architect. Correlate Schedule of Values graphically with CPM schedule for evaluation of monthly Payment Request.
 - b. Include additional activities added to CPM schedule by Contractor submitted schedule charts. It is Owner's intent that Project be managed and operated by CPM schedule.

7. Approved Project Management Software Programs:
 - a. Time Line 5.0 Project Management or Timeline 6.0 for Windows by Symantec Corp. Egghead Software, 1192 East Draper Parkway #442, Draper, UT (800) 659-3447, Rob Codo FAX 800-598-3447 - Tech Support (503) 465-8600
 - b. Primavera P3 Project Planner by Primavera Systems Inc, Two Bala Plaza, Bala Cynwyd, PA 19004 (215) 667-8600
 - c. Suretrak 2.0 Project Scheduler by Expedition CMT Consulting, P O Box 1184, Sandy, UT 84091 (801) 501-0945
 - d. Mac Project II or Mac Project Pro by Claris Corp, P O Box 58168, Santa Clara, CA 95052-8868
- C. Daily Construction Reports:
 1. Prepare daily reports of operations at Project including at least following information:
 - a. List of Subcontractors at site.
 - b. Approximate count of personnel at site by trade.
 - c. High and low temperatures, general weather conditions.
 - d. Major items of equipment on site.
 - e. Materials, equipment, or Owner-furnished items arriving at or leaving site.
 - f. Accidents and unusual events.
 - g. Site or structure damage by water, frost, wind, or other causes.
 - h. Meetings, conferences, and significant decisions.
 - i. Visitors to the job including meeting attendees.
 - j. Stoppages, delays, shortages, losses.
 - k. Any tests made and their result if known.
 - l. Meter readings and similar recordings.
 - m. Emergency procedures.
 - n. Orders and requests of governing authorities.
 - o. Modifications received, carried out.
 - p. Services connected, disconnected.
 - q. Equipment or system tests and start-ups.
 - r. Brief summary of work accomplished that day.
 - s. Signature of person preparing report.
 2. Submit daily reports to Architect at least weekly.
 3. Maintain copies of daily reports at field office.

1.3 SUBMITTAL PROCEDURES

- A. General:
 1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently before performance of related construction activities to avoid delay.
 - a. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - b. Coordinate transmittal of different types of submittals required for related elements of The Work so processing will not be delayed by need to review submittals concurrently for coordination. Architect reserves right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - c. Allow sufficient review time so installation will not be delayed by time required to process submittals, including time for resubmittals.
 - 1) Allow 7 days for initial review. Allow additional time if processing must be delayed to allow coordination with subsequent submittals. Architect will promptly advise Contractor when submittal being processed must be delayed for coordination.
 - 2) If an intermediate submittal is necessary, process same as initial submittal.
 - 1) Allow 3 days for reprocessing each submittal.
 - 2) No extension of Contract Time will be authorized because of failure to transmit submittals to Architect in sufficient time before work is to be performed to allow processing.
 2. Place permanent label or title block on each submittal cover sheet for identification. Include name of entity that prepared each submittal on label or title block.

- a. Provide two spaces approximately 4 by 5 inches on label or beside title block on Shop Drawings or on cover sheet to record Contractor's and Architect's review and approval markings and action taken.
 - b. Include following information on label for processing and recording action taken:
 - 1) Project name.
 - 2) Date.
 - 3) Name and address of Architect.
 - 4) Name and address of Contractor.
 - 5) Name and address of Subcontractor.
 - 6) Name and address of supplier.
 - 7) Name of manufacturer.
 - 8) Number and title of appropriate Specification Section.
 - 9) Drawing number and detail references, as appropriate.
 3. Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using transmittal letter. On transmittal, record relevant information and requests for data. Include Contractor's certification that information complies with Contract Document requirements, or, on form or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations.
 4. Submittals received from sources other than Contractor or not marked with Contractor's approval will be returned without action.
- B. Submittal Schedule:**
1. Furnish submittal schedule within 20 days after receipt of Notice to Proceed, listing items specified to be furnished for review to Architect including product data, shop drawings, samples, and quality assurance / control submittals.
 - a. Coordinate submittal schedule with Contractor's construction schedule.
 - b. Enclose the following information for each item:
 - 1) Scheduled date for first submittal.
 - 2) Related Section number.
 - 3) Submittal category.
 - 4) Name of Subcontractor.
 - 5) Description of part of the Work covered.
 - 6) Scheduled date for resubmittal.
 - 7) Scheduled date for Architect's final release or approval.
 2. Print and distribute copies to Architect and Owner and post copy in field office. When revisions are made, distribute to same parties and post in same location.
 3. Revise schedule monthly. Send copy of revised schedule to Owner and Architect and post copy in field office.
- C. Product Data:**
1. Submit Product Data, as required by individual Sections of the Specifications.
 2. Mark each copy of each set of submittals to show choices and options used on Project. Where printed Product Data includes information on products that are not required for Project, mark copies to indicate information relating to Project.
 3. Certify that proposed product complies with requirements of Contract Documents. List any deviations from those requirements on form or separate sheet.
 4. Submit five copies of each required submittal unless otherwise required. Architect will return three copies marked with action taken and with corrections or modifications required.
- D. Shop Drawings:**
1. Submit newly prepared graphic data to accurate scale. Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches. Highlight, encircle, or otherwise show deviations from Contract Documents. Include following information as a minimum:
 - a. Dimensions.
 - b. Identification of products and materials included.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 2. Do not reproduce Contract Documents or copy standard information as basis of Shop Drawings. Standard printed information prepared without specific reference to Project is not acceptable as Shop Drawings.

3. Review and designate (stamp) approval of shop drawings. Unless otherwise specified, submit to Architect six copies of shop drawings required by Contract Documents. Shop drawings not required by Contract Documents, but requested by Contractor or supplied by Subcontractor, need not be submitted to Architect for review.

E. Samples:

1. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 - a. Mount, display, or package Samples so as to ease review of qualities specified. Prepare Samples to match samples provided by Architect, if applicable. Include following:
 - 1) Generic description of Sample.
 - 2) Sample source.
 - 3) Product name or name of manufacturer.
 - 4) Compliance with recognized standards.
 - 5) Availability and delivery time.
 - b. Submit Samples for review of kind, color, pattern, and texture, for final check of these characteristics with other elements, and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 - 1) Where variations in color, pattern, texture or other characteristics are inherent in material or product represented, submit set of three samples minimum that show approximate limits of variations.
 - 2) Refer to other specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
 - 3) Refer to other Sections for Samples to be returned to Contractor for incorporation into The Work. Such Samples shall be undamaged at time of use. On transmittal, indicate special requests regarding disposition of Sample submittals.
 - c. Where Samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit full set of choices for material or product. Preliminary submittals will be reviewed and returned with Architect's mark indicating selection and other action.
 - d. Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three sets. One will be returned marked with action taken.
 - e. Samples, as accepted and returned by Architect, will be used for quality comparisons throughout course of construction.
 - 1) Unless noncompliance with Contract Documents is observed, submittal may serve as final submittal.
 - 2) Sample sets may be used to obtain final acceptance of construction associated with each set.

F. Quality Assurance / Control: Quality Assurance / Control submittals are design data, test reports, certificates, manufacturer's instructions, manufacturer's field reports, and other documentary data affirming quality of products and installations. Submit five copies to Architect immediately upon receipt.

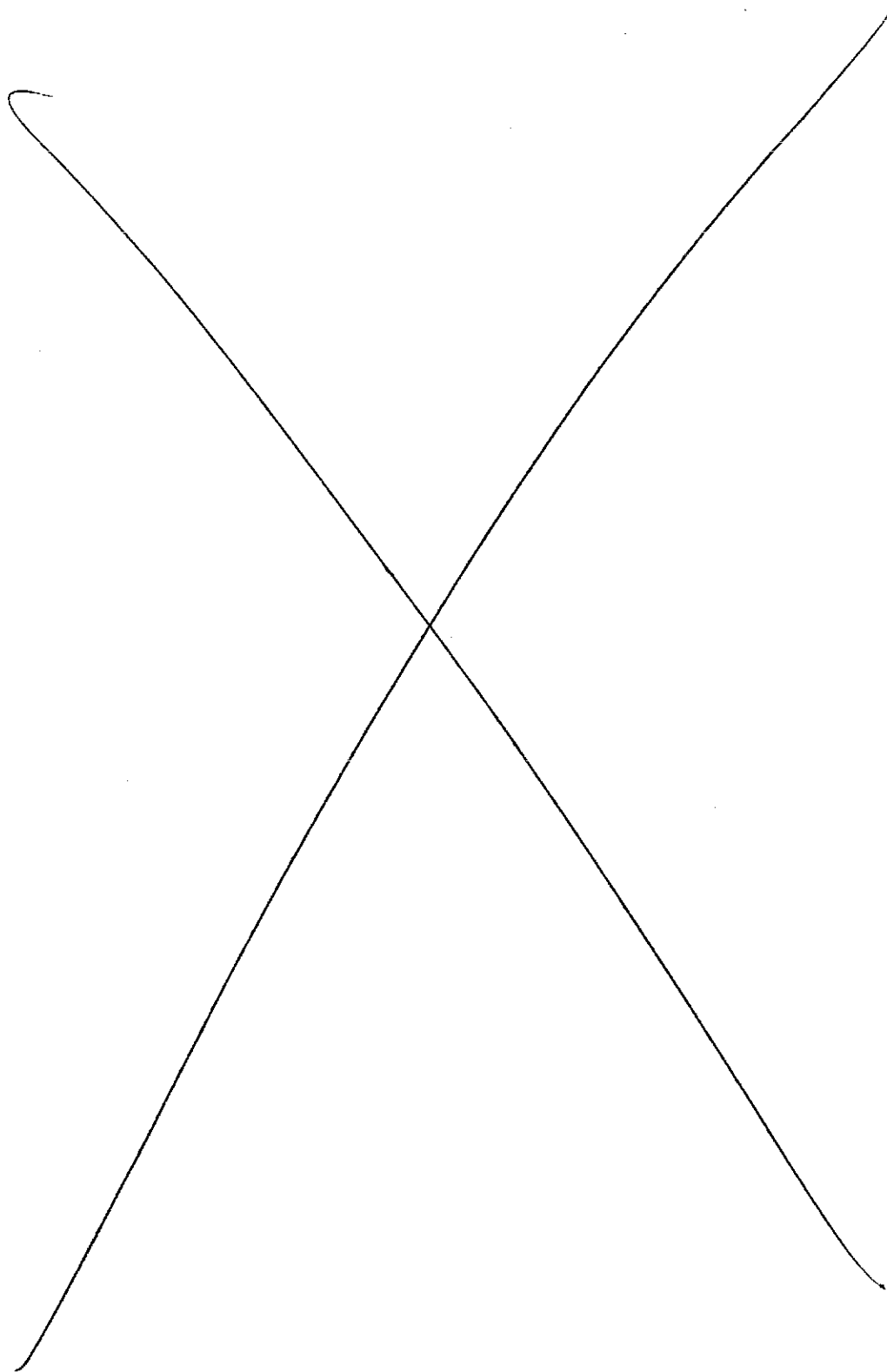
1.4 SPECIAL PROCEDURES

- A. Acceleration of Work
 1. Complete The Work in accordance with Construction Schedule. If Contractor falls behind schedule, take such actions as are necessary, at no additional expense to Owner, to bring progress of The Work back in accordance with schedule.
 2. Owner may request proposal for completion of The Work at date earlier than expiration of Contract Time. Promptly provide requested proposal showing cost of such acceleration of The Work. Consult with Owner and Architect regarding possible options to decrease cost of such acceleration. If Owner determines to order acceleration of The Work, change in Contract Sum and Contract Time resulting from acceleration will be included in a Change Order.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION



SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 ADMINISTRATIVE REQUIREMENTS

- A. Where necessary, provide temporary service. Comply with utility company's recommendations.
 - 1. Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.
 - 2. Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.
 - 3. Arrange with utility company and existing users for time when service can be interrupted, where necessary, to make connections for temporary services.
 - 4. Provide adequate capacity at each stage of construction. Before temporary utility availability, provide trucked-in services.
 - 5. Obtain construction easements necessary to bring temporary and/or permanent utilities to site.
 - 6. Use qualified personnel for installation and maintenance of temporary facilities. Locate facilities where they will serve Project adequately and result in minimum interference with the Work of Owner or other Contractors on Project Site. Relocate and modify facilities as required.
 - 7. Pay cost and use charges for temporary facilities and utilities.
 - 8. Owner's meeting schedule for Sundays must not be interrupted by utility changes.
- B. Prepare schedule indicating dates for implementation and termination of each temporary utility. At earliest feasible time and when acceptable to Owner, change over from use of temporary service to use of permanent service.
- C. Keep temporary services and facilities clean and neat in appearance. Operate in safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or allow them to interfere with progress of The Work. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on Project site.
- D. Limit availability of temporary facilities to essential and intended uses to reduce waste and abuse.
- E. Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage and if members to occupy building ensure temperature range of 68 F – 72 F during any and all meeting times.
 - 2. Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- F. Remove each temporary facility and control when need has ended, or when replaced by authorized use of permanent facility, or by Substantial Completion. Complete permanent construction that may have been delayed because of interference with temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that make up temporary facilities are property of Contractor.
 - 2. By Substantial Completion, clean and renovate permanent facilities used during construction period, including but not limited to:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subjected to unusual operating conditions.
 - c. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION

3.1 TEMPORARY UTILITIES:

- A. Temporary Electric Power: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period.

3.2 CONSTRUCTION FACILITIES:

- A. Sanitary Facilities:
 - 1. Provide temporary sanitary toilet.
 - 2. Service and maintain temporary toilet in a clean, sanitary condition.

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 COMMON PRODUCT REQUIREMENTS

- A. Provide products that comply with Contract Documents, that are undamaged, and, unless otherwise indicated, new and unused at time of installation. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
- B. Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on surfaces of products that will be exposed to view in occupied spaces or on building exterior.
 1. Locate required product labels and stamps on concealed surface or, where required for observation after installation, on accessible surface that is not conspicuous.
 2. Provide permanent nameplates on items of service-connected or power-operated equipment. Locate on easily accessible surface that is inconspicuous in occupied spaces. Nameplate will contain following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.
- C. Where specifications describe a product or assembly by specifying exact characteristics required, with or without use of brand or trade name, provide product or assembly that provides specified characteristics and otherwise complies with Contract requirements.
- D. Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by manufacturer for application described. General overall performance of product is implied where product is specified for specific application. Manufacturer's recommendations may be contained in published product literature, or by manufacturer's certification of performance.
- E. Where specifications only require compliance with an imposed code, standard, or regulation, select product that complies with standards, codes or regulations specified.
- F. Where Specifications require matching an established Sample, Architect's decision will be final on whether proposed product matches satisfactorily. Where no product available within specified category matches satisfactorily nor complies with other specified requirements, refer to Architect.
- G. Where specified product requirements include phrase *... as selected from manufacturer's standard colors, patterns, textures ...* or similar phrase, select product and manufacturer that comply with other specified requirements. Architect will select color, pattern, and texture from product line selected.

Remove and replace products and materials not specified in Contract Documents but installed in the Work with specified products and materials at no additional cost to Owner and for no increase in Contract time.

1.2 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
- B. Schedule delivery to reduce long-term storage at site and to prevent overcrowding of construction spaces.

- C. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
- D. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- E. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
- F. Store products at site in manner that will simplify inspection and measurement of quantity or counting of units.
- G. Store products subject to damage by elements above ground, under cover in weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. When option of selecting between two or more products is given, product selected will be compatible with products previously selected, even if previously selected products were also options.
- B. Non-conforming work as covered in Article 12.3 of General Conditions applies, but is not limited, to use of non-specified products or manufacturers.
- C. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include:
 - I. Substitutions And Equal Products:
 - a. Generally speaking, substitutions for specified products and systems, as defined in the Uniform Commercial Code, are not acceptable. However, equal products may be approved upon compliance with Contract Document requirements.
 - b. Approved Products / Manufacturers / Suppliers:
 - 1) Category One:
 - a) Owner has established 'Value Managed Relationships' that extend beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
 - b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
 - 2) Category Two:
 - a) Owner has established National Contracts that contain provisions extending beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
 - b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
 - 3) Category Three:
 - a) Specified products are provided to Church Projects under a National Account Program. Use these products to preserve advantages that accrue to Owner from those programs. No substitutions or equal products will be allowed on this Project.
 - 4) Category Four:
 - a) Provide only specified products available from manufacturers listed. No substitutions, private-labeled, or equal products, or mixing of manufacturers' products is allowed on this Project.
 - b) In Sections where lists recapitulating Manufacturers previously mentioned in Section are included under heading '*Manufacturers*' or '*Approved Manufacturers*', this is intended as a convenience to Contractor as a listing of contact information only. It is not intended that all manufacturers in list may provide products where specific products and manufacturers are listed elsewhere in Section.

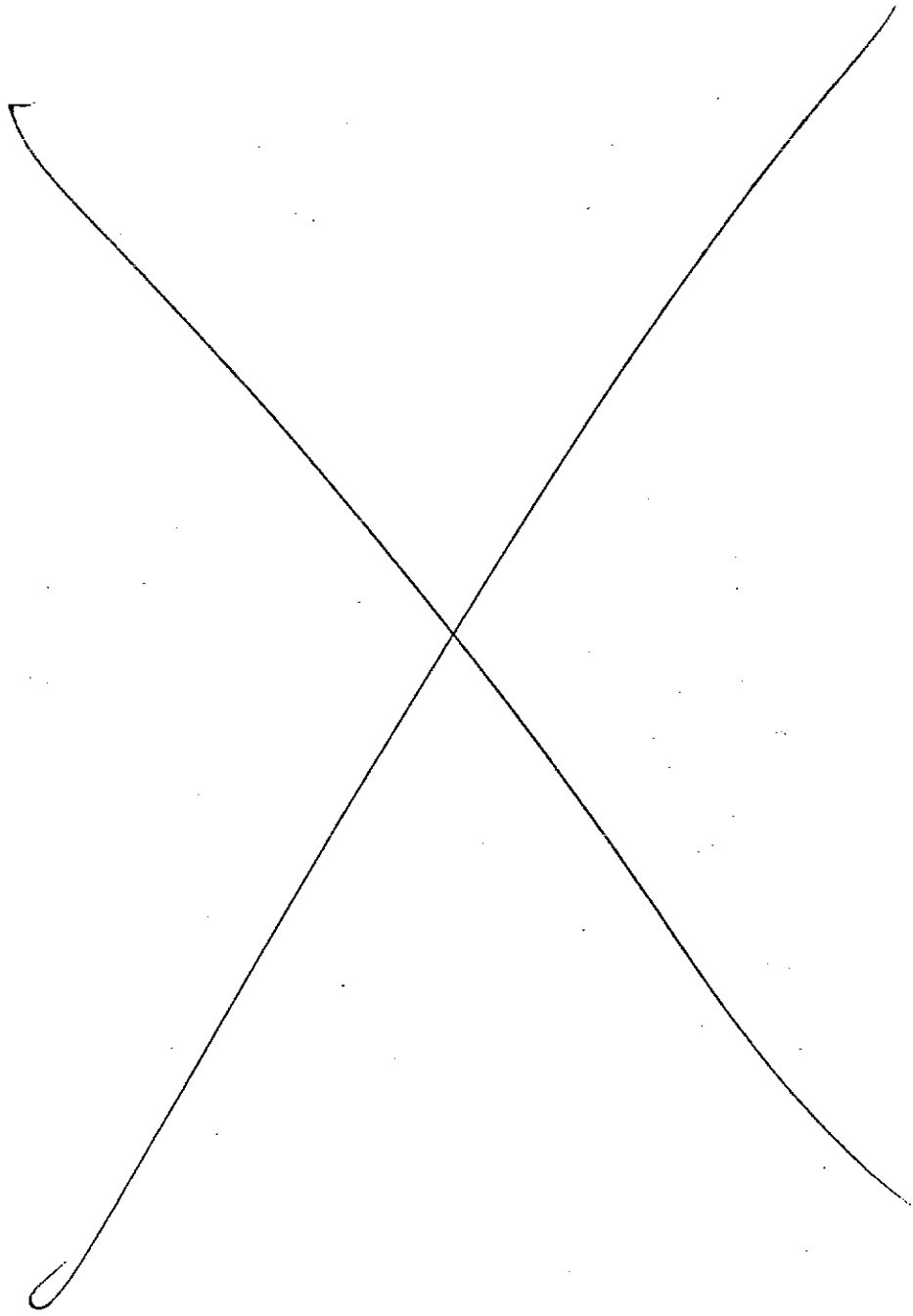
- c. Acceptable Products / Manufacturers / Suppliers:
 - 1) Type One: Use specified products / manufacturers unless approval to use other products / manufacturers has been obtained from Architect by Addendum.
 - 2) Type Two: Use specified product / manufacturer unless approval to use other products and manufacturers has been obtained from Architect in writing before installing or applying unlisted or private-labeled products.
 - 3) Use 'Equal Product Approval Request Form' to request approval of equal products, manufacturers, or suppliers before bidding or before installation, as noted in individual Sections.
- d. Quality Standard Products / Manufacturers:
 - 1) Class One: Use specified product / manufacturer or equal product from specified manufacturer only.
 - 2) Class Two: Use specified product / manufacturer or equal product from any manufacturer.
 - 3) Products / manufacturers used shall conform to Contract Document requirements.

2.2 OWNER SUPPLIED PRODUCTS

A. Administrative Requirements:

- 1. General:
 - a. Review 'Contractor Notification Report' listing Owner-furnished products to be delivered for Project.
 - 1) Review delivery dates and vendor lead times for each item and coordinate with construction schedule. Immediately report recommended changes to Owner's Purchasing Coordinator listed in "Contractor Notification report." Contact vendors directly if changes to delivery dates become necessary during construction.
 - 2) Report problems in coordinating delivery dates with construction schedule to Architect and Owner's Purchasing Coordinator.
 - b. Receive and unload Owner-furnished materials and products.
 - 1) Provide labor and equipment necessary to receive, unload, and store materials and products.
 - 2) Verify that number of packages received matches number listed on bill of lading.
 - 3) Check for external damage.
 - 4) Note discrepancies between pieces received and pieces listed on bill of lading as well as instances of visible damage on bill of lading before signing. Include Project Name and Project Number on bill of lading
 - 5) Store and protect deliveries. Report deliveries made outside of delivery schedule to Owner's Purchasing Coordinator.
 - c. Within 24 hours of delivery:
 - 1) Open and inspect each piece of freight delivered. Note concealed damage not observed at time of delivery.
 - 2) Compare 'Contractor Notification Report' with packing slips. Note discrepancies in number, size, color, model numbers, etc.
 - 3) Deliver bills of lading on which loss or damage is recorded, or copy, to Owner's Purchasing Coordinator together with report of concealed damage and discrepancies.
 - 4) Notify Owner's Purchasing Coordinator immediately of damage and discrepancies.
 - d. As directed by Owner, either repair or replace shortages and damage not recorded and reported as specified above at no additional cost to Owner.

END OF SECTION



SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL: Not Used

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Inspect materials and equipment before installation. Reject damaged and defective items.
- B. Require installer of each major component to examine both substrate and conditions under which work is to be done. Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Recheck measurements and dimensions before starting each installation.
- D. Bracing, Shoring, And Sheathing: Design, furnish, and install all shoring, bracing, and sheathing as required for safety and for proper execution of the Work and have same removed if required when the Work is completed.

3.2 GENERAL INSTALLATION PROVISIONS

- A. Manufacturer's Instructions: Comply with Manufacturer's installation instructions and recommendations to extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents. Notify Architect of conflicts between Manufacturer's installation instructions and Contract Document requirements.
- B. Provide attachment and connection devices and methods necessary for securing Work. Secure work true to line and level. Anchor each product securely in place, accurately located, and aligned with other Work. Allow for expansion and building movement.
- C. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain best visual effect. Refer questionable choices to Architect for final decision.
- D. Install each component during weather conditions and Project status that will ensure best possible results. Isolate each part of completed construction from incompatible material as necessary to prevent deterioration.
- E. Coordinate temporary enclosures with required inspections and tests, to reduce necessity of uncovering completed construction for that purpose.
- F. Mounting Heights: Where mounting heights are not shown, install individual components at standard mounting heights recognized within the industry or local codes for that application. Refer questionable mounting height decisions to Architect for final decision.

3.3 CLEANING AND WASTE MANAGEMENT

- A. Progress Cleaning:
 - 1. Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
 - 2. Keep premises broom clean during progress of the Work.
 - 3. Keep site and adjoining streets reasonably clean. If necessary, sprinkle rubbish and debris with water to suppress dust.
 - 4. During handling and installation, protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from soiling, damage, or deterioration until Substantial Completion.
 - 5. Clean and maintain completed construction as frequently as necessary throughout construction period. Adjust and lubricate operable components to ensure ability to operate without damaging effects.
 - 6. Supervise construction activities to ensure that no part of construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.
 - 7. Before and during application of painting materials, clear area where such work is in progress of debris, rubbish, and building materials that may cause dust. Sweep floors and vacuum as required and take all possible steps to keep area dust free.

8. Clean exposed surfaces and protect as necessary to avoid damage and deterioration.
 9. Place extra materials of value remaining after completion of associated work have become Owner's property as directed by Owner or Architect.
- B. Construction Waste Management And Disposal:
1. Remove waste materials and rubbish caused by employees, Subcontractors, and contractors under separate contract with Owner and dispose of legally. Remove unsuitable or damaged materials and debris from building and from property.
 - a. Provide adequate waste receptacles and dispose of materials when full.
 - b. Properly store volatile waste and remove daily.
 - c. Do not deposit waste into storm drains, sanitary sewers, streams, or waterways. Do not discharge volatile, harmful, or dangerous materials into drainage systems.
 2. Do not burn waste materials or build fires on site. Do not bury debris or excess materials on Owner's property.
- C. Final Cleaning:
1. Immediately before Substantial Completion, thoroughly clean building and area where The Work was performed. Remove all rubbish from around building, landscaped areas and parking lot and leave building and Project Site ready for occupancy by Owner.
 2. Comply with individual manufacturer's cleaning instructions.
 3. Clean each surface or unit to condition expected in normal, commercial building cleaning and maintenance program, including but not limited to:
 - a. Exterior Cleaning:
 - 1) Remove temporary protection systems.
 - 2) Clean dirt, mud, and other foreign material from paving, sidewalks, and gutters.
 - 3) Clean drop inlets, through-curb drains, and other drainage structures.
 - 4) Remove trash, debris, and foreign material from landscaped areas.

3.4 CLOSEOUT PROCEDURES

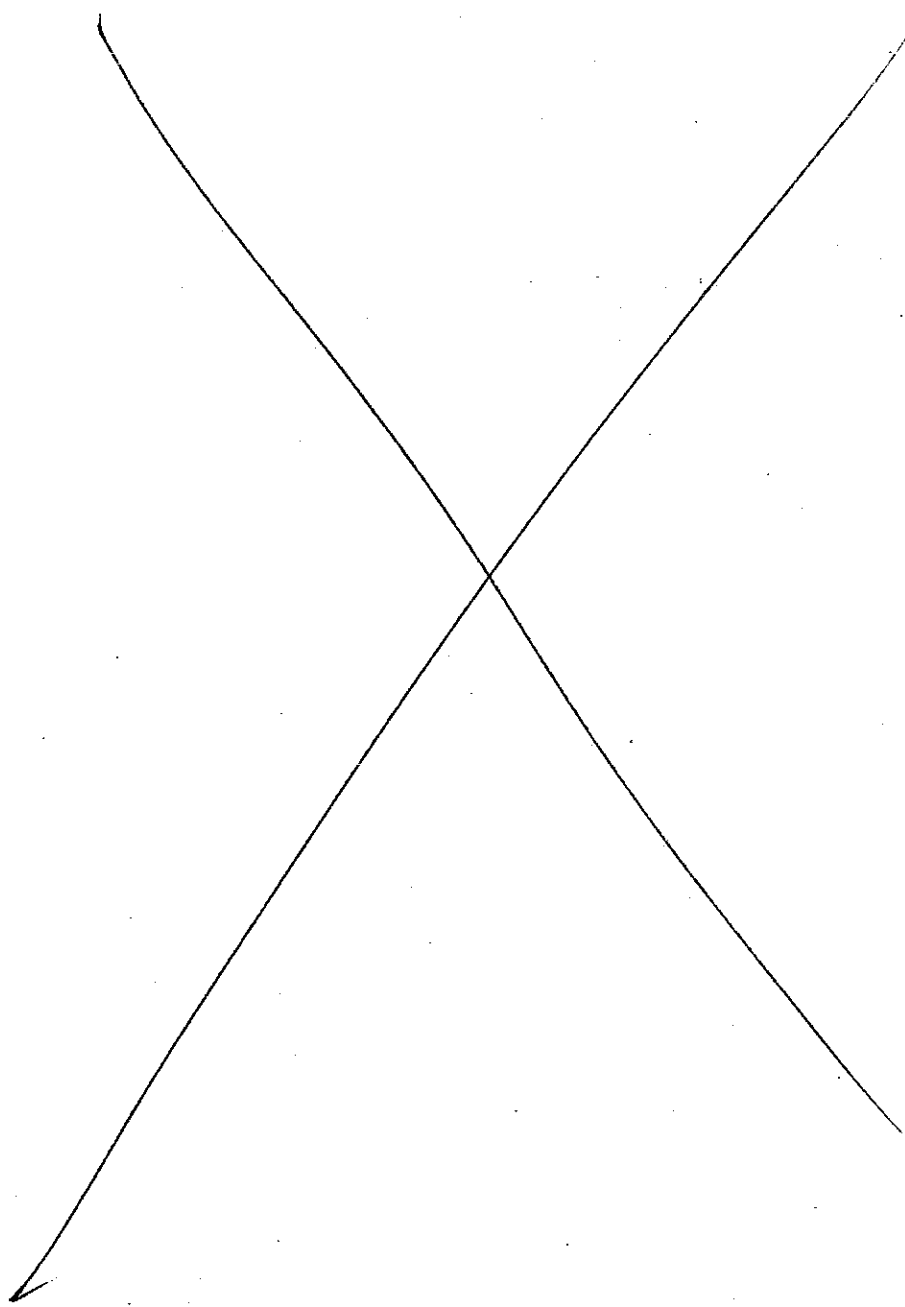
- A. General:
1. Schedule closeout procedures in the four weeks before expiration of Contract Time. Weeks will be marked by three Architect's weekly visits before Final Closeout Review, Final Closeout Review, and expiration of Contract Time.
 2. Date of Substantial Completion shall fall within week between Architect's final weekly visit and Final Closeout Review. Date of Substantial Completion shall not occur until Construction Schedule shows completion of construction work, unless agreed to by Architect and included on Certificate of Substantial Completion.
- B. Preliminary Closeout Reviews:
1. Confirm with Architect when Substantial Completion of The Work will be achieved.
 - a. Architect's visit will serve as Preliminary Closeout Reviews to determine if Final Closeout Review will occur as scheduled and that Substantial Completion of the Work will be achieved by that date.
 - b. By final Architect visit, notify Owner and Architect of date when Substantial Completion of The Work will be achieved.
 2. Arrange with Architect date for Final Closeout Review to confirm Substantial Completion.
- C. Closeout Requirements:
1. Before Final Closeout Review:
 - a. Deliver Closeout Submittals to Architect.
 - b. Deliver tools, spare parts, extra stock, and similar items as required by the Contract Documents.
 - c. Complete start-up testing of systems, and instruction of Owner's maintenance personnel as required by the Contract Documents.
 - d. Discontinue or change over and remove temporary facilities from site, along with construction tools, mock-ups, and similar elements.
 - e. Complete final cleaning requirements.
- D. Final Closeout Review:
1. Participate in Final Closeout Review.
 2. When Owner and Architect have confirmed that Contractor has achieved Substantial Completion of The Work, Owner, Architect, and Contractor will execute Certificate of Substantial Completion that contains:

- a. Date of Substantial Completion.
 - b. Punch List of Work not yet accepted.
 - c. Amount to be withheld for completion of Punch List work.
 - d. Time period for completion of Punch List work.
 - e. Amount of liquidated damages set forth in Supplementary Conditions to be assessed if Contractor fails to complete Punch List work within time set forth in Certificate.
3. Final Acceptance Conference:
- a. Notify Architect in writing when work on Punch List has been completed.
 - b. Arrange with Architect date and time for Final Acceptance Conference.
 - c. When Owner and Architect have confirmed that Contractor has completed Punch List work, Architect will issue letter to Owner authorizing final payment.

3.5 CLOSEOUT SUBMITTALS

- A. General:
- 1. Workmanship bonds, final certifications, equipment check-out sheets, and similar documents.
 - 2. Releases enabling Owner unrestricted use of The Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 3. Project photographs, damage or settlement survey, and similar record information required by Contract Documents.
- B. Completion And Correction List: Punch List listing portions of The Work not able to be completed in accordance with requirements of Contract Documents before date of Substantial Completion.
- C. Maintenance Contracts
- D. Operations And Maintenance Data:
- 1. Operations And Maintenance Manuals that include:
 - a. Copy of Soils Report.
 - b. Copy of complete Project Manual including Addenda, Modifications as defined in General Conditions, and other interpretations issued during construction.
 - 1) Mark these documents to show variations in actual Work performed in comparison with text of specifications and Modifications. Show substitutions, selection of options, and similar information, particularly on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 - 2) Note related record drawing information and Product Data.
 - c. Product Data: One copy of each Product Data submittal required by Contract Documents.
 - d. Operations and maintenance manuals required by Contract Documents.
 - e. Certifications required by Contract Documents.
 - f. Copies of warranties required by Contract Documents.
- E. Warranties:
- 1. When written guarantees beyond one year after substantial completion are required by Contract Documents, secure such guarantees and warranties properly addressed and signed in favor of Owner. Include these documents in Operations & Maintenance Manuals specified above.
 - 2. Delivery of guarantees and warranties will not relieve Contractor from obligations assumed under other provisions of Contract Documents.
- F. Project Record Documents:
- 1. Do not use record documents for construction purposes. Protect from deterioration and loss in secure, fire-resistant location. Provide access to record documents for Architect's reference during normal working hours.
 - 2. Maintain clean, undamaged set of Drawings. Mark set to show actual installation where installation varies from the Work as originally shown. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - a. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - b. Mark new information that is important to Owner, but was not shown on Drawings.
 - c. Note related Change Order numbers where applicable.

END OF SECTION



SECTION 09 9114

EXTERIOR PAINTED CMU, CONCRETE, STUCCO

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
 - 1. Preparing and painting new exterior masonry, concrete, and stucco surfaces as described in Contract Documents.
 - 2. Preparing and painting following existing exterior CMU, concrete, and stucco surfaces as described in Contract Documents.

- B. Related Sections:
 - 1. Section 09 9001: Common Painting Requirements.

1.2 SYSTEM DESCRIPTION

- A. Concrete And Stucco: Use MPI(a) EXT 3.1A Latex Finish system for new work and MPI(r) REX 3.1A Latex Finish system for previously painted work.

- B. CMU: Use MPI(a) EXT 4.2A Latex Finish system for new work and MPI(r) REX 4.2A Latex Finish system for previously painted work.

- C. Use MPI Premium Grade finish requirements for new work and deteriorated existing work. Use MPI Custom Grade requirements for sound existing work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Gloss / Sheen Level Required: Gloss Level 1.

- B. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
 - 1. Products listed in edition of MPI Approved Product List current at time of bidding and later are approved, providing they meet VOC requirements in force where Project is located.
 - 2. Block Filler, New CMU Only: MPI Product 4.
 - 3. Finish Coats: MPI Product 10.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Except for steam cured products, cure cement type surfaces from 60 to 90 days in accordance with Paint Manufacturer's recommendations before painting.

3.2 APPLICATION

- A. General: See appropriate paragraphs of Section 09 9001.
- B. New Surfaces:
 - 1. On highly porous surfaces when weather is exceptionally hot and dry, it may be desirable to dampen surface before applying first coat of an emulsion paint.
 - 2. Completely cover voids in masonry block.
 - 3. Roll after spraying if necessary to eliminate pinholing.
- C. Existing Painted Surfaces:
 - 1. Remove deteriorated and chalked existing paint down to sound substrate by scraping and or high-pressure spray. Feather edges of existing paint by sanding to be smooth with adjacent surfaces.
 - 2. Clean existing sound painted surfaces as well as scraped and sanded existing painted surfaces as recommended by Paint Manufacturer.
 - 3. Fill cracks with masonry crack filler.
 - 4. Prime scraped and sanded areas.
 - 5. Apply finish coat as required for new work.
- D. Existing Unpainted Surfaces:
 - 1. Power wash surfaces to be painted.
 - 2. Fill cracks with masonry crack filler.
 - 3. Apply block filler and finish coat as required for new work.

END OF SECTION

SECTION 32 0113

ASPHALT PAVING SURFACE TREATMENT: SLURRY SEAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. Furnish and apply slurry seal to existing asphalt paving as described in Contract Documents.

1.2 REFERENCES

- A. American Society For Testing And Materials:
1. ASTM C 131-03, 'Standard Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.'
 2. ASTM D 242-95 (2000), 'Standard Specification for Mineral Filler for Bituminous Paving Mixtures.'
 3. ASTM D 977-03, 'Standard Specification for Emulsified Asphalt.'
 4. ASTM D 2397-02, 'Standard Specification for Cationic Emulsified Asphalt.'
- B. International Slurry Surfacing Association:
1. ISSA

1.2 SYSTEM DESCRIPTION

- A. Design Requirements: This specification meets requirements of ISSA, Type I or II.

1.3 PROJECT CONDITIONS

- A. Project Environmental Requirements: Do not apply slurry seal at temperatures below 55 deg F 13 deg C.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Asphalt Emulsion:
1. Conform to requirements of ASTM D 977 or ASTM D 2397.
 2. Percent of emulsion to aggregate shall be between 10 and 18 percent residual asphalt based on dry weight of aggregate.
- B. Latex Additive: Add at plant at rate of 2.5 parts latex to 100 parts emulsified asphalt.
- C. Aggregate:
1. Mineral aggregate consisting of natural or manufactured sand, slag, or combination thereof.
 - a. 100 percent crushed material.
 - b. Material shall be clean and free from organic matter and other deleterious substances and show loss of not more than 35 when tested in accordance with ASTM C 131.
 - c. Mineral fillers shall meet requirements of ASTM D 242 and following gradation requirements:
 - 1) Sieve Percent Passing by Weight
 No. 4 100

	No. 8	90 - 100
	No. 16	65 - 90
	No. 30	40 - 65
	No. 50	25 - 42
	No. 100	15 - 30
	No. 200	10 - 20
2)	Sieve	Percent Passing by Weight
	3/8 Inch	100
	No. 4	90 - 100
	No. 8	65 - 90
	No. 16	45 - 70
	No. 30	30 - 50
	No. 50	18 - 30
	No. 100	10 - 21
	No. 200	5 - 15

D. Water: Potable and free from harmful soluble salts.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Immediately before applying slurry, clean surface of loose material, silt spots, vegetation, oil spots, and other objectionable material. Power brooms, power blowers, air compressors, water flushing equipment, and hand brooms are acceptable for cleaning existing pavement.
- B. Apply tack coat of one part emulsion, 3 parts water at rate of 0.05 to 0.10 gal per sq yd 0.23 to 0.45 L per sq m.

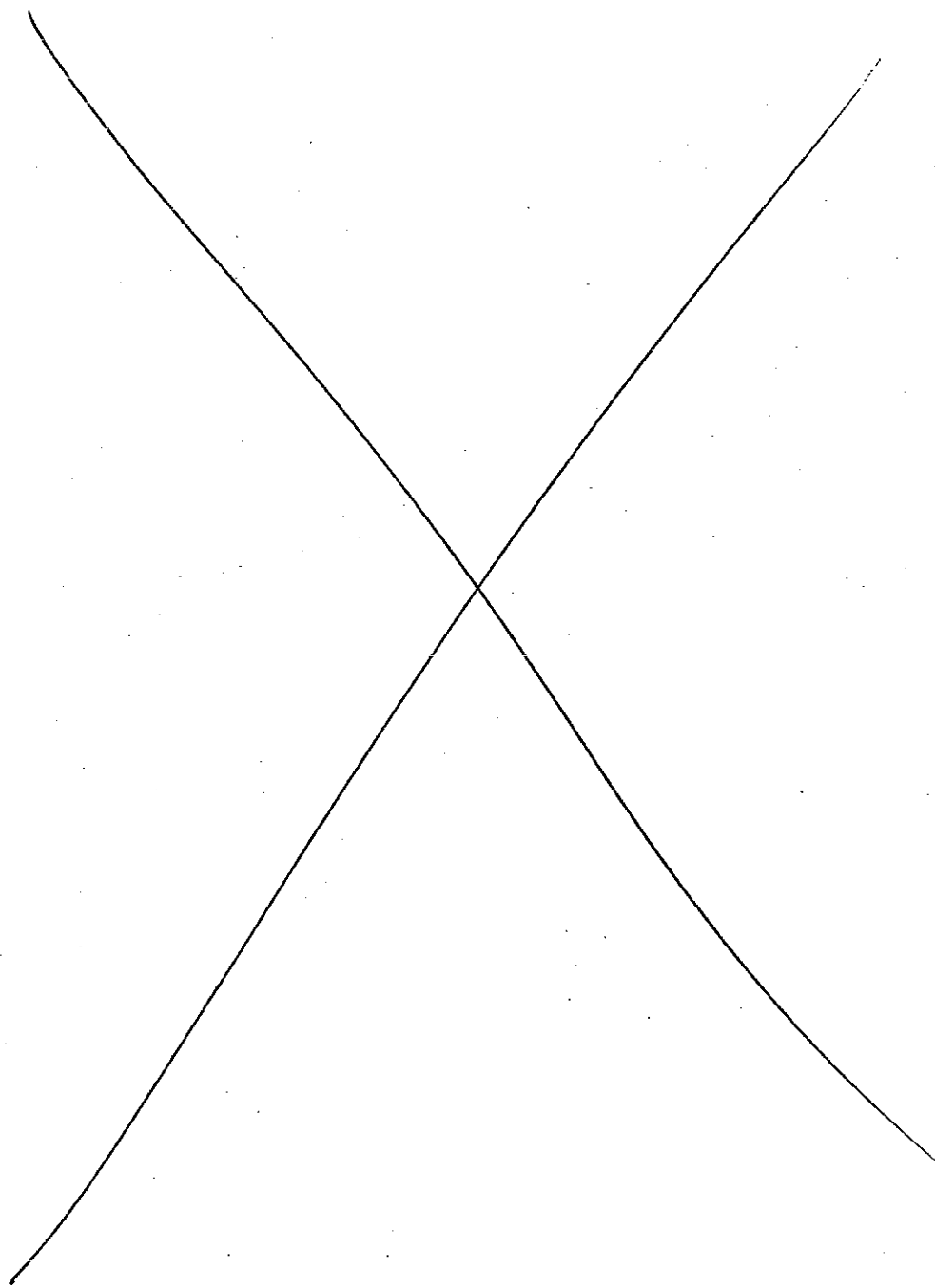
3.2 APPLICATION

- A. Slurry Mixing Machine:
 1. Continuous flow mixing unit capable of delivering accurately predetermined proportion of aggregate, water, and asphalt emulsion to mixing chamber and to discharge thoroughly mixed production on continuous basis.
 2. Attach to mixer mechanical type squeegee distributor equipped with flexible material in contact with surface to prevent loss of slurry from distributor.
- B. Surface may be pre-wetted by fogging ahead of slurry box providing no water is accumulated in front of slurry box.
- C. Maintain adequate amounts of slurry in spreader to insure complete coverage. No lumping, balling, unmixed aggregate, or streaking due to oversize aggregate is acceptable.
- D. Use approved squeegees to spread slurry in areas not accessible to slurry mixer.
- E. Apply at rate of 8 to 12 lbs per sq yd 4.35 to 6.5 kg per sq m based on dry aggregate weight.
- F. Roll with 6 to 8 ton pneumatic tired roller with minimum contact pressure of 40 psi after emulsion has broken.
- G. No unsightly joints or other visual imperfections are permitted on finished product.

3.3 PROTECTION

- A. Allow treated areas to cure 24 hours minimum before opening to traffic.

END OF SECTION



SECTION 32 0116
ASPHALT PAVING REPAIR: CRACK SEALING

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. Repair cracks in existing asphalt pavement as described in Contract Documents.

1.2 REFERENCES

- A. American Society For Testing And Materials:
1. ASTM D 36-95 (2000), 'Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus).'
 2. ASTM D 113-99, 'Standard Test Method for Ductility of Bituminous Materials.'
 3. ASTM D 5329-04, 'Standard Test Methods for Sealants and Fillers, Hot-Applied, for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements.'

1.3 SUBMITTALS

- A. Quality Assurance / Control: Certification from manufacturer confirming crack sealant properties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Crack Sealant:
1. Homogeneous blend of asphalt cement and plasticizers combined in such a manner as to produce material with following properties:
 - a. Material shall pour readily and penetrate large cracks at temperatures below 400 deg F.
 - b. Cone Penetration at 77 deg F: 50 Maximum.
 - c. Flow at 140 deg F when tested in accordance with ASTM D 3407: 1/8 inch maximum.
 - d. Resilience at 77 deg F when tested in accordance with ASTM D 3407: 30 percent minimum.
 - e. Softening Point when tested in accordance with ASTM D 36: 195 deg F minimum in cold climates and 220 deg F in hot climates.
 - f. Ductility at 77 deg F, 2 inches per min when tested in accordance with ASTM D 113: 12 inches.
 - g. Flexibility: 1/8 inch thick specimen of product conditioned to minus 20 deg F shall be capable of being bent to 90 deg angle over one inch mandrel in two seconds without cracking.
 - h. Asphalt Compatibility when tested in accordance with ASTM D 3407: Pass.
 - i. Curing: Product shall contain no water or volatile solvents and shall cure immediately upon cooling to sufficient viscosity to prevent tracking by traffic.
 2. Type One Acceptable Products:
 - a. PLS by Crafc0, Chandler, AZ www.crafc0.com.
 - b. Flexifill 9075H or R by Koch Materials Co, Northumberland, PA www.kochmaterials.com.
 - c. Elastoflex 66 by Maxwell Products, Salt Lake City, Utah (800) 266-2090 or (801) 972-2097.
 - d. Equal as approved by Architect before bidding. See Section 01 6000.
- B. Soil Sterilant:
1. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
 - a. Arsenal.
 - b. Mixture of Roundup and Surflan.

PART 3 - EXECUTION

3.1 PREPARATION

- A. One week prior to beginning crack repair operations, treat cracks with soil sterilant at maximum rate recommended by Manufacturer to kill existing weeds.

B. After weeds have died, remove by using wire wheel on crack cleaner / edger.

3.2 PERFORMANCE

A. Crack Repair:

1. Do not rout or fill cracks smaller than 1/8 inch wide.
2. Using carbide tipped router bit, rout existing cracks measuring between 1/8 and 3/8 inch wide to be 1/2 inch wide and 3/4 inch deep minimum. Do not rout cracks containing previously applied crack sealant without Architect's approval.
3. Clean routed cracks and unrouted cracks larger than 3/8 inch with compressed air at 60 psi and 100 cu ft per minute minimum. Do not perform cleaning operations when cracks are wet or muddy.
4. Apply crack sealant to full depth of crack. Smooth applied sealant with squeegee or device on hand wand leaving sealant flush with parking lot. Band-Aid on top of crack shall be 3 inches maximum. At cracks between asphalt paving and concrete, do not allow excess sealant on concrete.

3.3 CLEANING

A. Upon completion of crack sealing operations, clean up and remove debris.

END OF SECTION

SECTION 32 0117
ASPHALT PAVING REPAIR: STRUCTURAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To:
1. Remove and replace paving and base in specific areas as described in Contract Documents.

1.2 REFERENCES

- A. American Society For Testing And Materials:
1. ASTM C 131-03, 'Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.'
 2. ASTM D 1557-02, 'Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.'
 3. ASTM D 3381-92 (1999), 'Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.'

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Soil Sterilant:
1. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
 - a. Arsenal.
 - b. Mixture of Roundup and Surflan.
- B. Base:
1. Road Base type gravel or crushed rock, graded as follows:
 - a.

Sieve	Percent by Weight Passing Sieve.
1) 1 inch	100
2) 3/4 inch	85 - 100
3) No. 4	45 - 60
4) No. 10	30-50
5) No. 200	5 - 10 (non-plastic)
- C. Asphaltic Concrete
1. Asphalt Cement:
 - a. Meet requirements of ASTM D 3381, Viscosity grade (Original Asphalt) as follows:
 - 1) AC5 in cold climatic conditions.
 - 2) AC10 in moderate climatic conditions.
 - 3) AC20 in hot climatic conditions.
 2. Aggregates:
 - a. Fine to coarse mineral aggregates with wear less than 40 percent as determined by ASTM C 131 and mineral filler suitable for pavement meeting following gradation requirements:
 - 1)

Sieve	Percent by Weight Passing Sieve
a) 3/4 inch	100
b) 1/2 inch	95 - 100
c) 3/8 inch	80 - 95
d) No. 4	54 - 71
e) No. 8	38 - 54
f) No. 30	17 - 32
g) No. 200	3 - 8 (non-plastic)

PART 3 - EXECUTION

3.1 PERFORMANCE

- A. Preparation: Locate all utilities in designated area for excavation. Work around utilities as required.
- B. Replacement of designated Areas
 - 1. Cut edges of pavement in rectangular shape and for one foot minimum beyond damaged material. Make vertical cuts using pavement saw or cold planer.
 - 2. Base:
 - a. 6 inches thick compaction.
 - b. Compact to 95 percent minimum density as determined by ASTM D 1557.
 - c. Finished base course shall be true to line and grade within plus or minus 1/4 inch in 10 feet.
 - 3. Apply soil sterilant at maximum rate recommended by Manufacturer.
 - 4. Apply emulsion to base and tack coat to vertical edges of existing asphalt and curbs.
 - 5. Paving:
 - a. Place full depth at temperatures between 250 and 325 deg F.
 - b. Longitudinal bituminous joints shall be vertical and properly tack coated if cold. Transverse joints shall always be tack coated.
 - c. Compaction:
 - 1) Compact asphaltic concrete paving to 96 percent minimum of design density.
 - 2) Roll with powered equipment capable of obtaining specified density. Vibratory plate compactor may be used for areas too small for large power equipment.
 - 3) Begin breakdown rolling immediately after asphalt is placed when asphalt temperature is at maximum. Complete breakdown rolling before mix temperature drops below 240 deg F. Complete handwork compaction concurrently with breakdown rolling.
 - 4) Complete intermediate rolling as soon as possible after breakdown rolling and before mix temperature drops below 185 deg F. Do not roll paving for compaction purposes after asphalt temperature falls below 185 deg F.
 - 5) Execute compaction so visibility of joints is minimized. Complete finish rolling to improve asphalt surface as soon as possible after intermediate rolling and while asphalt paving is still warm. Do not use vibration for finish rolling.
 - d. Surface shall be uniform with no 'birdbaths.' Leave finished surfaces clean and smooth. Variations from specified grades shall not exceed 1/2 inch.

3.2 CLEANING

- A. Upon completion of repair operations, clean up and remove debris.

END OF SECTION

**SECTION 32 1723
PAVEMENT MARKINGS**

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:

1. Furnish material and apply pavement and curb markings as described in Contract Documents.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Paint handicap spaces to conform to ADA Standards and local code requirements.

1.3 PROJECT CONDITIONS

A. Project Environmental Requirements:

1. Apply only on dry surfaces, during favorable weather, and when damage by rain, fog, or condensation not anticipated.
2. Latex Paint:
 - a. Atmospheric temperature above 50 deg F.
 - b. When temperature is not anticipated to drop below 50 deg F during drying period.
3. Alkyd or Chlorinated Rubber Paint:
 - a. Atmospheric temperature above 40 deg F.
 - b. When temperature is not anticipated to drop below 40 deg F during drying period.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Paint:

1. Non-reflectORIZED.
2. Types:
 - a. Acrylic Latex for uncured paving.
 - b. Alkyd or chlorinated rubber for cured paving.
3. Colors:
 - a. Yellow: Parking stripes, crosswalk stripes, and safety markings.
 - b. Blue And White: Handicapped markings.
 - c. Red: Fire lanes and no parking zones.
4. Type Two Acceptable Products:
 - a. 442XX Traffic Marking Paint by ICI Devoe, Cleveland, OH www.devoepaint.com.
 - b. Set-Fast Traffic Marking Paint by Sherwin-Williams, Cleveland, OH www.sherwin-williams.com
 - c. Equal as approved by Architect before application. See Section 01 6000.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Do not apply acrylic latex system until paving has cured 7 days minimum. Do not apply alkyd or chlorinated rubber systems until paving has cured 3 months minimum.
- B. Surfaces shall be dry and free of grease and loose dirt particles. Scrape and wire brush chipped or damaged paint on existing curbs.
- C. Perform layout with chalk or lumber crayon only.

3.2 APPLICATION

- A. Site Tolerances:
 - 1. General: Make lines parallel, evenly spaced, and with sharply defined edges.
 - 2. Line Widths: 4" Typical.
 - a. Plus or minus 1/4 inch variance on straight segments.
 - b. Plus or minus 1/2 inch variance on curved alignments.
- B. Provide two coat application, each coat applied at 150 sq ft per gal. Apply second coat after three hours minimum or when first coat is thoroughly dried, whichever is longer.

3.3 CLEANING

- A. Remove drips, overspray, improper markings, and paint material tracked by traffic by sand blasting, wire brushing, or other method approved by Architect before performance.

END OF SECTION