



Transition Resources Corporation

# TRC Anderson Head Start

Site Upgrades

812 West 13<sup>th</sup> Street  
Anderson, Indiana 46016

July, 2014

*"Structured around listening"*



Architect:  
krM Architecture+  
1020 Jackson Street  
Anderson, Indiana 460 16  
765-649-8477 tel  
765-649-8484 fax  
Email:info@krmarchitecture.com  
[www.krmarchitecture.com](http://www.krmarchitecture.com)

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NOT USED

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1 SECTION 00 02 00 - NOTICE TO BIDDERS

2  
3 Notice is hereby given that TELAMON CORPORATION will receive sealed bids for furnishing all  
4 labor and materials, tools, equipment and transportation necessary for:

5  
6 Site upgrades and foundation for a modular unit to be used for TRC Head Start Anderson  
7 located at 812 West 13<sup>th</sup> Street in Anderson IN

8  
9 Bids will be received for one prime contract for all work.

10  
11 **Bids will be received until Thursday, August 14<sup>th</sup>, 2014 at 2:00 pm prevailing local time**

12  
13 Bids shall be delivered to:

14 Proposals submitted by fax will not be accepted. Proposals submitted electronically should be  
15 emailed to [kgordon@transitionresources.org](mailto:kgordon@transitionresources.org) and [dmontgomery@krmarchitecture.com](mailto:dmontgomery@krmarchitecture.com)  
16 (Email preferred) or mailed to:

17  
18 Transition Resources Corporation  
19 ATTN: TRC – Anderson Head Start  
20 600 Corporation Drive  
21 Pendleton, IN 46064

22  
23 Please contact Gordon Upchurch for any questions: [gupchurch@transitionresources.org](mailto:gupchurch@transitionresources.org) or  
24 M: (765) 623-8737

25  
26 Bids will be opened in private by the owner.

27  
28 All bids received after the published bid time will not be considered.

29  
30 All work shall be in accordance with plans, specifications, and intent prepared by:  
31 krM Architecture, 1020 Jackson Street, Anderson, Indiana 46016 pH. (765) 649-8477

32  
33 A one hundred percent (100%) labor and materials performance bond and payment bond will  
34 be required of the successful bidder.

35  
36 A five percent (5%) bid security in the form of an acceptable bid bond or certified check shall  
37 be submitted with all bids.

38  
39 Plans and specifications will be made available as follows:

- 40  
41 1. Electronic download in the form via owners website:  
42 *not available now, link will be emailed out.*  
43  
44 2. Eastern Engineering – access to printing plans at Contractors expense  
45 <http://easternengineering.com/index.php>  
46

47 Additional bidding requirements are contained in the Project Manual.

48  
49 Each bidder will be required to comply with all applicable equal employment opportunity laws  
50 building codes and regulations of the United States of America and the State of Indiana.

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7  
8  
9

**A pre-bid meeting will be held on Monday, August 4th at 1 pm. The meeting will be held at the location of the existing facility – outside west of the Anderson Head Start building.**

All work for this project shall comply with items outlined in Instructions to Bidders, Section 00-10-00

END OF SECTION

1 SECTION 00 10 00 - INSTRUCTIONS TO BIDDERS AND TERMS OF THE CONTRACTS

2  
3 PART 1 - GENERAL

4  
5 Sealed Bids will be received as published in the Notice to Bidders.

6  
7 OWNER DESIGNATION

8  
9 Bids are for the TRC – Anderson Head Start site upgrade and modular foundation

10  
11 PLANS AND SPECIFICATIONS

12 All work on this project shall be performed in accordance with the drawings, specifications, and  
13 intent prepared by krM Architecture, 1020 Jackson Street, Anderson, Indiana 46016 and their  
14 consultants.

15  
16 All work shall be performed in accordance with the contract documents.

17  
18 Plans and specifications are on file in those places designated in the Notice to Bidders.

19  
20 The term “specifications”, “specification manual”, and “project manual” all refer to this booklet.

21  
22 BID TERMS OR TIME PERIOD

23 The bids submitted shall be binding and valid for a period of not less than sixty (70) days past the  
24 date of bid submission and opening.

25  
26 Bid Evaluation Process: Telamon reserves the right to waive any irregularities, reject any  
27 or all bids, or accept any bid when, in the opinion of Telamon, when such action will  
28 serve their best interest. Telamon has the right to refuse any or all offers. Telamon may  
29 issue one contract for all work or it may split the work up at its sole option. The bids will  
30 be evaluated based on Price, Contractor Qualifications and the ability to meet proposal  
31 requirements.

32  
33  
34 CONTRACT FORMS

35 Contract Agreement Form shall be A.I.A. Form A101, 2007 edition.

36  
37 Payment forms shall be A.I.A. Form G702, and G703 Application and Certification for Payment.

38  
39 QUESTIONS AND INTERPRETATIONS OF BID DOCUMENTS

40 Interpretation or explanation of Contract Documents will not be made by the Owner. All such  
41 inquiries shall be made to the Construction Manager’s office.

42  
43 Bidders shall promptly notify the Owners representative: Gordon Upchurch of any ambiguity,  
44 inconsistency or error which they may discover upon examination of the Bidding Documents or of  
45 site and local conditions.

46  
47 No oral, telephone or telegraphic instruction for information shall be binding on the Owner,  
48 Architect, GC, or Bidder unless confirmed by Addendum.

49  
50 ADDENDA

51 Any additional information required by the Bidders, revisions in the Work, changes or additions,  
52 discrepancies in the Bidding Documents, or clarifications will be in the form of Addenda written  
53 and issued by the Architect or Owner to all Prime Bidders of Record as of the date of such  
54 Addenda.



1 All Addenda issued prior to the time and date set for termination of bidding shall become a part of  
2 the Bidding Documents and Bidders shall list by number and date on the form or proposal, all  
3 Addenda which have been received by him prior to submittal of his bid. The lump sum proposal  
4 amount shall include all work described by all such Addenda. It shall be the Bidder's  
5 responsibility to determine that he has received all Addenda, since no extra costs will be allowed  
6 by failure of the Bidder to do so.

#### 7 8 SUBSTITUTIONS AND APPROVALS DURING BIDDING

9 Whenever products or materials are specified as "Standards" or they are otherwise named,  
10 approval of other equal quality products shall be obtained by requesting in writing and presenting  
11 for evaluation, no later than seven (7) days prior to the date set for receipt of bids. Conform to  
12 process outlined in section 01631 of these specifications. There will be no substitutions "as  
13 equal" after the bidding.

14 If approval is granted, product or material will be added by Addendum.

15 No direct reply will be made to any requests for changes, but any requested changes approved  
16 by the Designer will be stated in an Addendum issued to all prime bidders.

17 All decisions of the Architect are final.

#### 18 19 20 21 22 ELECTRONIC DRAWING USE

23 KRM will provide to the GC at request a disk containing the background drawings for the project  
24 in AutoCad format. These drawings are not contract documents and are not certified to contain  
25 only accurate information. They contain old layers, in-accuracies and the normal dated  
26 information that is part of the design process. However they are being given to the contractor to  
27 allow them to use them however they deem appropriate to reduce time in preparing submittals  
28 and shop drawings. Prior to providing the disc the GC will be required to sign a release indicating  
29 that it is understood that the drawings are not contract documents and the contractor is using  
30 them at his own risk. The GC may forward the files to sub contractors and suppliers.

#### 31 32 PRIME CONTRACTORS

33 All work for the complete construction of the Project will be under a single contract between the  
34 Owner and the General Contractor based on the bids received and combinations awarded.

#### 35 36 37 BIDDER'S REPRESENTATION

38 Each bidder, by making his bid, represents that he has read and understands the bidding  
39 documents and the specification manual.

40 Each bidder by making his bid represents that he had visited the site and familiarized himself with  
41 the local conditions under which the work is to be performed. He fully has analyzed the complex  
42 structural demolition and all other aspects of this project.

43 No additional costs of any type will be allowed by the failure of the Bidder to avail himself of the  
44 privilege of a complete and thorough on-site inspection.

#### 45 46 47 INCLUSION OF INCIDENTAL ITEMS

48 Many of the items indicated in the plans and specifications are general in nature to describe the  
49 scope of the work performed. It is the responsibility of The Contractors to supply all incidental  
50 material items and labor required to provide a complete, properly functioning installation of each  
51 component and/or system of the work described.

#### 52 53 54 PRE-BID CONFERENCE

55 A pre-bid conference will be held as described in the Notice to Bidders. All bidding contractors,  
56 sub-contractors and suppliers are encouraged to attend this conference. Bidders are not required

1 to attend this conference, but are held responsible for any site conditions, or existing building  
2 conditions, that are apparent to a site visit and for any matters discussed at this meeting. Meeting  
3 minutes will be mailed via addendum.

4  
5 **CONSTRUCTION COORDINATION**

6 This project will be under the direct control of the General Contractor (GC).

7  
8 **INDIANA STATE SALES TAX**

9 Materials and supplies purchased for this project are not subject to sales tax

10  
11 **OCCUPATIONAL SAFETY AND HEALTH**

12 These construction documents and the joint and several phases of construction hereby  
13 contemplated are to be governed, at all times, by applicable provisions of the federal laws, but  
14 not limited to the latest amendments of the following:

15  
16 Williams-Steiger Occupational Safety & Health Act of  
17 1970, 29 U.S.C.ss651-678, and The Indiana Occupational  
18 Safety Act, IC 22-8-1.1 et seq.

19  
20 Part 1910-Occupational Safety & Health Standards,  
21 Chapter XVII of Title 29, Code of Federal Regulations.

22  
23 Part 15268-Safety & Health Regulations for Construction,  
24 Chapter XVII of Title 29, Code of Federal Regulations.

25  
26 The Contractors, Sub-Contractors, and their employees shall be solely responsible to conduct  
27 their work in conformance with the regulations contained in The Act and as amended. All  
28 material suppliers and manufacturers shall be fully aware of their responsibilities and the  
29 requirements of the finished project under the regulations of this act, and as amended. Such  
30 materials and fabricated products incorporated in this project shall, at the time of installation or  
31 application, be in conformance with the regulations of this act, and as amended.

32  
33  
34 **LABOR AND CONSTRUCTION CONDITIONS AND COORDINATION OF THE WORK**

35 Bidders are required to inform themselves fully of the conditions relating to construction and labor  
36 under which the work will be performed, and the Contractor must employ as far as possible, such  
37 methods and means in the carrying out of this work as will not cause any interruptions or  
38 interference with any other contractors with whom the owner may wish to contract. During this  
39 project, it is the owner's intention to have a separate telephone, computer, and furnishings  
40 contractor which will be working at the site intermittently.

41  
42 **COMPETITIVE CLAUSE**

43 Where in these Specifications one or more certain materials, trade names, or articles of certain  
44 manufacturers are mentioned, it is done for express purpose of establishing a basis of durability  
45 and efficiency and not for the purpose of limiting competition. Other names of materials can be  
46 used, if in the opinion of the Architect and Owner they are equal in durability and efficiency to  
47 those mentioned and of design in harmony with the work as outlined and the Architect give a  
48 written approval of a substitution before the articles and materials are included in the bid. Items  
49 can be substituted only in accordance with the procedure outlined above for product substitution  
50 before bidding.

51  
52 **BUILDING LAWS**

53 All building construction work, alternates, repairs or mechanical installation and appliances  
54 connected therewith shall comply with the Indiana Department of Fire Prevention and Building  
55 Safety, regulations and local building code regulations, and such statutory regulations pertaining  
56 to this type of work. Such rules and regulations are to be considered part of these Specifications.

1  
2 NO DAMAGES FOR DELAYS

3 If performance of work is delayed by the acts or omissions of the Owner, Architect, Engineer, or  
4 by separate contractors, or by other causes not within the contractors control, Contractor shall be  
5 limited to an extension of the Contract Time, which shall constitute the Contractor's sole and  
6 exclusive remedy by reason of such delay and contractor shall have no right to receive any  
7 additional compensation or damages as a result of any delays whatsoever.

8  
9 COMPLIANCE

10 Contractor is aware of, is fully informed about, and in full compliance with its obligations  
11 under existing applicable law and the regulations listed below:

- 12  
13 a. Davis-Bacon Act (40 USC 276a to a07) as supplemented by Department of  
14 Labor regulations (29 CFR Part 5)  
15  
16 b. Copeland Anti-Kickback Act (18 USC 874) as supplemented in Department of  
17 Labor regulations (29 CFR Part 3)  
18  
19 c. Contract Work Hours and Safety Standards Act, Sections 103 and 107 (40 USC  
20 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5)  
21  
22 d. Executive Order 11246 of September 14, 1965 (Equal Employment Opportunity),  
23 as amended by Executive Order 11375 of October 13, 1967  
24  
25 e. Sales and Use Tax –Indiana State Sales Tax: Materials and supplies purchased  
26 for this project are NOT subject to sales tax. Owner will supply number to  
27 successful bidder.”  
28

29 SCOPE OF WORK

30 It is the intention of these Specifications and the drawings to coordinate and produce a complete  
31 and useable building. Any items not specifically mentioned but required to achieve same shall be  
32 included. See other sections in this manual for additional descriptions of the work.  
33

34 OWNER RESERVES THE RIGHT TO REJECT AND SELECT SUB-CONTRACTORS

35 The owner reserves the right to provide direction in the final selection of sub-contractors.  
36

37 SUBMISSION OF SUPPLIERS AND SUB-CONTRACTORS

38 In addition to the information to be provided on the bid form, within 24 hours after the bid, the low  
39 bidders are to submit to the Architect a complete list of sub-contractors, supplier and all products.  
40 This includes the list provided in the mechanical and electrical section of these specification  
41 manuals. This list shall not be varied from during the project except due to rejection or approval  
42 by the owner.  
43

44 PERMITS

45 The GC shall obtain all building permits. The Contractors or appropriate sub-contractors are  
46 responsible for paying and securing other permits that may be required to complete to work of  
47 each sub-contractors work. All inspection fees, tap fees, or other incidental costs required by  
48 utility companies or the town/city shall be paid by the Contractor.  
49

50 PREPARATION OF BID PROPOSAL FORMS

51 Bid proposals shall be submitted on the bid Form included in this specification booklet.  
52 Please photo-copy the enclosed bid form for final use.  
53

54 GUARANTEE

55 The Contractor shall guarantee all of his workmanship and materials referred to in these  
56 Specifications and shall correct all defects discovered within two (2) years after date of final

1 certificate, or longer if specifications require longer terms. Various components may require  
2 significantly longer guarantees. If conflicting warranty information is found notify architects office  
3 prior to bidding. The more extended period of warranty should be followed unless changed in  
4 writing by the architect's office. This includes all equipment and work related to any MEP scope  
5 of the project. In cases where suppliers include a warranty period of longer than two (2) years this  
6 shall continue after expiration of contractor's period and will be coordinated directly between  
7 owner and manufacture.

#### 8 9 FINAL ACCEPTANCE

10 All documents, guarantees, final waivers, operating instructions (O&M Manuals), record  
11 drawings, etc., called for in the Specifications and/or Contract, shall be submitted to the Architect  
12 for review and approval and will then be turned over to the Owner. All items needing correcting  
13 shall also be complete and found acceptable. This will constitute final acceptance of the project,  
14 and The Contractor will be paid the balance of retainage withheld sixty-one (61) days after this  
15 date, if everything is 100% complete.

#### 16 17 VALUE OF CLOSE OUT DOCUMENTS

18 The value of the O&M manuals, as built drawings and other close out documents shall constitute  
19 40% of the retainage or 2% of the value of the contract. None of the final 2% will be released until  
20 all final closeout documents have been submitted reviewed and accepted.

#### 21 22 COMMENCEMENT OF WORK

23 The Contractor shall commence work immediately upon the issuance of the Notice to Proceed  
24 from the Owner.

#### 25 26 WORK SCHEDULE

27 The contractors are to comply with the schedule found in section 01 31 00. This will become part  
28 of the contract.

#### 29 30 CONTRACT TERMINATION

31 The Owner reserves the right to terminate the contract and withhold an amount of payment it  
32 deems necessary if the contractor refuses to comply with the terms, conditions and specifications  
33 of this contract and/or if found to be in violation of any Federal, State or local law and/or  
34 ordinance.

#### 35 36 BID BOND, PERFORMANCE BOND, AND PAYMENT BOND

37 When making a Procurement Award for the construction or improvement of facilities, and the  
38 amount of the project expenditure exceeds \$100,000, the following requirements will apply:

- 39  
40 • Each bidder will be required to provide a Bid Guarantee, which is a firm commitment in  
41 the form of a Bid Bond, Certified Check, or other negotiable instrument accompanying  
42 the bid as assurance that the bidder will execute the applicable contractual documents  
43 within the specified period, if the bid is accepted. The amount of the Bid Bond shall be  
44 5% of the bid value.
- 45 • The award contractor will be required to execute a "Performance Bond" at 100% of the  
46 contract price.
- 47 • The award contractor will be required to execute a "Payment Bond" at 100% of the  
48 contract price. A Payment Bond assures payment to all persons supplying labor and  
49 material in connection with the work provided in the contract.
- 50 • Obtain bonds under the contract from companies holding certificates of authority as  
51 acceptable sureties pursuant to 31 CFR, part 223, "Surety Companies Doing Business  
52 with the United States".

#### 53 54 GENERAL LIABILITY

1 Contractors must have current \$1,000,000 per occurrence General Liability, and Workmen's  
2 Compensation Insurance to meet NC State statutory limits. The Certificate of Insurance must  
3 show Telamon Corporation as an additional insured. This information must be type written on the  
4 certificate. Sample language "Telamon Corporation, its officers, employees, agents, and  
5 principals are additional insureds with respect to General Liability coverages on this form." Any  
6 engineering or architectural firm shall have Professional Liability Insurance in the amount of  
7 \$1,000,000 per occurrence.

#### 8 9 10 TERMS OF PAYMENT

11 The GC shall prepare his requisition for payment as of the last day of the month and submit it,  
12 with the required number of copies, to the Architect for approval. The amount of the payment due  
13 the Contractor shall be determined by adding to the total value of work completed to date, the  
14 value of materials properly stored on the site and deducting five percent (5%) of the total amount  
15 to be retained until the project is 100% complete. Material being billed for if not on project site will  
16 need to be accounted for by invoices, location material stored, and/or photographs as requested  
17 by architect's office. The total value of work completed to date shall be based on the estimated  
18 quantities of work completed to date on each item and the unit prices established in the COST  
19 BREAKDOWN and adjusted in accordance with the value of work completed to date on approved  
20 change orders.

21  
22 Partial lien waivers shall be submitted with each pay application.

23  
24 Monthly or partial payments made by the Owner to the Contractor are monies advanced for the  
25 purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be  
26 responsible for the care and protection of all materials and work upon which payments have been  
27 made until final acceptance of such work and materials by the Owner. Such payments shall not  
28 constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract  
29 and the delivery of all improvements embraced in this Contract complete and satisfactory to the  
30 Owner in all details.

#### 31 32 FINAL PAYMENT

33 After final inspection and acceptance by the Owner, of all work under the Contract, the Contractor  
34 shall prepare a request for final payment which shall be based upon the carefully measured or  
35 computed quantity of each item of work at the applicable unit prices stipulated in the Agreement.  
36 The total amount of the final payment due the Contractor under this Contract shall be the lump-  
37 sum shown in the Agreement or this sum as adjusted by approved change orders. Final payment  
38 to the Contractor shall be made subject to furnishing the Owner with a release in satisfactory  
39 form of all claims against the Owner arising under and by virtue of the Contract, other than such  
40 claims, if any, as may be specifically accepted by the Contractor from the operation of the  
41 release.

42  
43 The Owner, before paying the final payment may require the Contractor to furnish releases or  
44 receipts from all subcontractors having performed any work and all persons having supplied  
45 materials, equipment (installed on the project) and services to the Contractor, if the Owner deems  
46 the same necessary in order to protect its interest. The Owner, however, may if it deems such  
47 action advisable, make payment in part or in full to the Contractor without requiring the furnishing  
48 of such releases or receipts and any payments so made shall in no way impair the obligations of  
49 any surety or sureties furnished under this Contract. See other specification sections for  
50 additional information.

#### 51 52 WITHHOLDING PAYMENTS

53 The Owner may withhold from any payment otherwise due to the Contractor so much as may be  
54 necessary to protect the Owner and if it so elects may also withhold any amounts due from the  
55 Contractor to any subcontractors or material dealers, for work performed or material furnished by  
56 them. The foregoing provisions shall be construed solely for benefit of the Owner and will not

1 require the Owner to determine or adjust any claims or disputes between the Contractor and his  
2 subcontractors or material dealers, or to withhold any monies for their protection unless the  
3 Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the  
4 Contractor shall in no way impair the obligations of any surety or sureties under any bond or  
5 bonds furnished under this Contract.

6  
7 BEHAVIOR ON OWNER PROPERTY

- 8 a. The General Contractor and each Subcontractor shall be responsible for enforcing the  
9 project work rules among their employees.
- 10 b. Any persons on the project found to be under the influence of drugs or alcohol shall be  
11 removed from the project immediately.
- 12 c. Tobacco products will not be permitted on the owner property.
- 13 d. Enforce strict discipline and good order among employees.
- 14 e. Labor shall be skilled in assigned task or trade.
- 15 f. Any harassment or fraternization with the staff, patients, or visitors will be grounds for  
16 immediate dismissal from the jobsite.
- 17 g. Shoes, shirts and long pants will be worn at all times. Tennis shoes will not be proper attire  
18 for this project.
- 19 h. Hard hats will be worn at all times, until finishing operations begin.
- 20 i. Clothing with inappropriate/obscene graphics and/or language will not be permitted.
- 21 j. Habitual profanity or offensive behavior will be grounds for immediate dismissal from the  
22 jobsite.
- 23 k. Workers shall enter and exit the construction site at the designated entry.
- 24 l. Workers shall park in designated areas only.
- 25 m. The use of radios or other sound producing devices is prohibited.
- 26 n. Workers are to keep the project clean of personal litter. Areas used for breaks or lunch shall  
27 be cleaned up immediately by those using the area.
- 28 o. Work breaks will not be permitted inside any existing facilities.
- 29 p. Workers are not to use the owners existing restroom facilities.
- 30 q. The activities of all construction workers shall be confined inside the construction limits  
31 defined on the plans.

32  
33  
34 SEE ATTACHMENTS THAT FOLLOW THIS SECTION IMMEDIATELY:

35  
36  
37 Attachments:

- 38
- 39 A. NOT USED
- 40 B. NOT USED
- 41 C. Telamon Corporation - Procurement Contract Provisions
- 42 D. Copeland Act Contract Provisions
- 43 E. Davis-Bacon Act Contract Provisions
- 44 F. U.S. Department of Labor – Payroll Certification WH-347
- 45 G. NOT USED
- 46 H. Unconditional Waiver and Release Upon Final Payment
- 47 I. Davis-Bacon Poster
- 48 J. Davis-Bacon Labor Rates

**CONTRACTORS BID**  
(To be completed for all bids)  
(Please type or print)

**TELAMON CORPORATION**  
**TRC – ANDERSON HEAD START**  
Site upgrades and modular foundation  
**August 14<sup>th</sup>, 2014 – 2 PM**

1. Bidder (Firm): \_\_\_\_\_  
Address: \_\_\_\_\_  
City/State: \_\_\_\_\_
2. Telephone Number: \_\_\_\_\_
3. Person to contact regarding this Bid: \_\_\_\_\_
4. Person to email regarding this Bid: \_\_\_\_\_

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the work for this public works project.

BASE BID for demolition and remodel into Head Start facility

For the sum of \_\_\_\_\_  
(sum in words)  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)  
(sum in figures)

IN KIND CONTRIBUTION for Head Start facility remodel project

*The Administration for Children and Families (ACF) requires all Head Start grantees such as Telamon Corporation to provide contributions equal to 25% of their total Federal Head Start funding (or 20% of the total Federal and non-Federal combined).-Telamon Corporation is asking for an in-kind contribution from the General Contractor that might range from 2%-10% of Base bid.*

***In-kind is defined as*** property or services that benefit a grant supported project or program (such as the Head Start Program) and are contributed by non-Federal third parties without charge to the grantee. In-kind contributions may consist of the value of real property and equipment and the value of goods and services directly benefiting the grant program and specifically identifiable to it.

For the sum of \_\_\_\_\_  
(sum in words)  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)

TOTAL BID: *Base Bid minus In-Kind contributions*

For the sum of \_\_\_\_\_  
(sum in words)  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)

ADDENDUM: The undersigned acknowledges receipt of the following Addenda:

Receipt of Addenda No.(s) \_\_\_\_\_  
(List out Addendums received)

ALTERNATES: list out prices

\$ \_\_\_\_\_ Alternate #1 – not used

\$ \_\_\_\_\_ Alternate #2 – not used

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of seventy (70) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within seventy (70) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference            YES \_\_\_\_\_      NO \_\_\_\_\_

Has visited jobsite                        YES \_\_\_\_\_      NO \_\_\_\_\_

Insert number of calendar days for the duration of the construction project. \_\_\_\_\_ Days



The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the Governmental Unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The Contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS  
(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States. I.C. 5-16-8-2. I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

Name of Undersigned, or Bidder preparing bid:

---

(Sign and Print)

**SECTION: EXPERIENCE QUESTIONNAIRE**

1. What projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	When Completed	Name and Address of Owner

2. What projects are now in process of construction by your organization?

Contract Amount	Class of Work	When to be Completed	Name and Address of Owner

3. List (3) Three references for customers of which you have performed work

---

---

---

---

---

1  
2 SECTION 00 35 00 - GENERAL CONDITIONS  
3  
4 PART 1 - GENERAL  
5  
6 The 2007 edition of A.I.A. Document A201 General Conditions of the Contract for Construction is  
7 to be considered part of this Project manual as the General Conditions of each prime Contract  
8 and is included on the following pages.  
9  
10 There are several specification sections in this specification manual that add additional  
11 requirements to work described in the A201 document. Where additional work is described is to  
12 be provided above that described in A201, the contractor is to provide the additional work.  
13  
14 Some provisions of the AIA General Conditions are changed as part of this specification manual  
15 in supplementary general conditions and other sections. The specific changes listed in this  
16 specification manual shall take precedence over the AIA General Conditions  
17  
18 PART 2 - PRODUCTS  
19  
20 Not Applicable  
21  
22 PART 3 - EXECUTION  
23  
24 Not Applicable  
25  
26  
27 END OF SECTION



# AIA<sup>®</sup> Document A310<sup>™</sup> – 2010

## **Bid Bond**

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

**BOND AMOUNT: \$**

**PROJECT:**

*(Name, location or address, and Project number, if any)*

Sample

**ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Init.

Signed and sealed this day of ,

\_\_\_\_\_  
*(Contractor as Principal)* *(Seal)*

\_\_\_\_\_  
*(Witness)*

\_\_\_\_\_  
*(Title)*

\_\_\_\_\_  
*(Surety)* *(Seal)*

\_\_\_\_\_  
*(Witness)*

\_\_\_\_\_  
*(Title)*

Init.

# AIA<sup>®</sup> Document A201<sup>™</sup> – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

Sample

**THE OWNER:**

*(Name, legal status and address)*

**THE ARCHITECT:**

*(Name, legal status and address)*

### TABLE OF ARTICLES

- |    |  |
|----|--|
| 1  | GENERAL PROVISIONS                               |
| 2  | OWNER  |
| 3  | CONTRACTOR                                       |
| 4  | ARCHITECT  |
| 5  | SUBCONTRACTORS                                   |
| 6  | CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS |
| 7  | CHANGES IN THE WORK                              |
| 8  | TIME   |
| 9  | PAYMENTS AND COMPLETION                          |
| 10 | PROTECTION OF PERSONS AND PROPERTY               |
| 11 | INSURANCE AND BONDS                              |
| 12 | UNCOVERING AND CORRECTION OF WORK                |
| 13 | MISCELLANEOUS PROVISIONS                         |
| 14 | TERMINATION OR SUSPENSION OF THE CONTRACT        |
| 15 | CLAIMS AND DISPUTES                              |

### ADDITIONS AND DELETIONS:

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This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Init.

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User Notes:

(1380468595)



# AIA® Document A101™ – 2007

## Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

**AGREEMENT** made as of the    day of    in the year  
*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:  
*(Name, legal status, address and other information)*

and the Contractor:  
*(Name, legal status, address and other information)*

for the following Project:  
*(Name, location and detailed description)*

| Sample

The Architect:  
*(Name, legal status, address and other information)*

The Owner and Contractor agree as follows.

**ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™–2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

**TABLE OF ARTICLES**

- 1 THE CONTRACT DOCUMENTS**
- 2 THE WORK OF THIS CONTRACT**
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**
- 4 CONTRACT SUM**
- 5 PAYMENTS**
- 6 DISPUTE RESOLUTION**
- 7 TERMINATION OR SUSPENSION**
- 8 MISCELLANEOUS PROVISIONS**
- 9 ENUMERATION OF CONTRACT DOCUMENTS**
- 10 INSURANCE AND BONDS**

**ARTICLE 1 THE CONTRACT DOCUMENTS**

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

**ARTICLE 2 THE WORK OF THIS CONTRACT**

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

**ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

**§ 3.1** The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

**§ 3.2** The Contract Time shall be measured from the date of commencement.

**§ 3.3** The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:

*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)*



**Portion of Work**

**Substantial Completion Date**

, subject to adjustments of this Contract Time as provided in the Contract Documents.  
*(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)*

**ARTICLE 4 CONTRACT SUM**

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be (\$ ), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:  
*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

§ 4.3 Unit prices, if any:  
*(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price Per Unit (\$0.00)
------	-----------------------	-------------------------

§ 4.4 Allowances included in the Contract Sum, if any:  
*(Identify allowance and state exclusions, if any, from the allowance price.)*

Item	Price
------	-------

**ARTICLE 5 PAYMENTS**

**§ 5.1 PROGRESS PAYMENTS**

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than ( ) days after the Architect receives the Application for Payment.  
*(Federal, state or local laws may require payment within a certain period of time.)*

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor’s Applications for Payment.

Init.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of percent ( %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of percent ( %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and  
*(Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)*
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:

*(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)*

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

## § 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

## ARTICLE 6 DISPUTE RESOLUTION

### § 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

#### **§ 6.2 BINDING DISPUTE RESOLUTION**

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)*

- Arbitration pursuant to Section 15.4 of AIA Document A201–2007
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

#### **ARTICLE 7 TERMINATION OR SUSPENSION**

**§ 7.1** The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

**§ 7.2** The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

#### **ARTICLE 8 MISCELLANEOUS PROVISIONS**

**§ 8.1** Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

**§ 8.2** Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located. *(Insert rate of interest agreed upon, if any.)*

%

**§ 8.3** The Owner's representative:  
*(Name, address and other information)*

**§ 8.4** The Contractor's representative:  
*(Name, address and other information)*

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

#### ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

§ 9.1.4 The Specifications:

*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

Section	Title	Date	Pages
---------	-------	------	-------

§ 9.1.5 The Drawings:

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

Number	Title	Date
--------	-------	------

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

.2 Other documents, if any, listed below:

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents)*

Init.

*unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)*

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

*(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201-2007.)*

**Type of insurance or bond**

**Limit of liability or bond amount (\$0.00)**

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
**OWNER** *(Signature)*

\_\_\_\_\_  
**CONTRACTOR** *(Signature)*

\_\_\_\_\_  
*(Printed name and title)*

\_\_\_\_\_  
*(Printed name and title)*

Init.

1 SECTION 00 80 00 - SUPPLEMENTARY GENERAL CONDITIONS (for AIA 2007 A201)

2  
3 PART 1 - GENERAL

4  
5 The following Supplements modify, change, delete from or add to the General Conditions of the  
6 Contract for Construction, A.I.A. form A201

7  
8 PROGRESS PAYMENTS

9  
10 Add the following:

11  
12 Affidavits and Waivers of Lien Requirements:

13  
14 Concurrent with the submittal of each partial payment application for all work completed by the  
15 Contractors, subcontractors and suppliers during the current period, the Contractor shall furnish  
16 Affidavit and Waivers of Lien evidencing that all wages for labor and all invoices for material or  
17 services which were the basis of and included in the previous partial payment have been paid in full.  
18 Waivers of Lien shall show actual dollar amounts.

19  
20 HAZARDOUS MATERIAL

21  
22 If hazardous materials such as asbestos or PCB's are encountered that are not anticipated in the  
23 contract, the Contractor shall notify the Architect and Owner immediately and stop work in the area of  
24 the hazardous material discovery. No additional cost shall be claimed due to this stoppage.

25  
26 CHANGES IN THE WORK

27  
28 The allowance for overhead and profit combined, included in the total cost to the Owner, shall be  
29 based on the following schedule:

30  
31 For the Contractor, for any work performed by his own forces, fifteen percent (15%) of the cost.

32  
33 For the Contractor, for work performed by his sub-contractor, five percent (5%) of the amount due the  
34 Subcontractor.

35  
36 For each Subcontractor involved, for any work performed by his own forces, fifteen percent (15%) of  
37 the cost.

38  
39  
40  
41  
42 Cost shall be limited to the following:

43  
44 Invoiced cost of materials, including cost of delivery, cost of labor, wages, fringes, payroll taxes and  
45 insurance, rental value of power tools and equipment and bond premiums.

46  
47 Overhead shall include the following:

48  
49 Small tools, incidentals, supervision, general office expense and all other expenses not included in  
50 "cost."

51  
52 If the net value of a change results in a credit from the Contractor, the credit shall be the net cost,  
53 without overhead or profit. The cost as used herein shall include all items of labor, materials, and  
54 equipment.

1 SECTION 00 80 00 - SUPPLEMENTARY GENERAL CONDITIONS (for AIA 2007 A201)

2  
3 PART 1 - GENERAL

4  
5 The following Supplements modify, change, delete from or add to the General Conditions of the  
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9  
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11  
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13  
14 Concurrent with the submittal of each partial payment application for all work completed by the  
15 Contractors, subcontractors and suppliers during the current period, the Contractor shall furnish  
16 Affidavit and Waivers of Lien evidencing that all wages for labor and all invoices for material or  
17 services which were the basis of and included in the previous partial payment have been paid in full.  
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22 If hazardous materials such as asbestos or PCB's are encountered that are not anticipated in the  
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26 CHANGES IN THE WORK

27  
28 The allowance for overhead and profit combined, included in the total cost to the Owner, shall be  
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31 For the Contractor, for any work performed by his own forces, fifteen percent (15%) of the cost.

32  
33 For the Contractor, for work performed by his sub-contractor, five percent (5%) of the amount due the  
34 Subcontractor.

35  
36 For each Subcontractor involved, for any work performed by his own forces, fifteen percent (15%) of  
37 the cost.

38  
39  
40  
41  
42 Cost shall be limited to the following:

43  
44 Invoiced cost of materials, including cost of delivery, cost of labor, wages, fringes, payroll taxes and  
45 insurance, rental value of power tools and equipment and bond premiums.

46  
47 Overhead shall include the following:

48  
49 Small tools, incidentals, supervision, general office expense and all other expenses not included in  
50 "cost."

51  
52 If the net value of a change results in a credit from the Contractor, the credit shall be the net cost,  
53 without overhead or profit. The cost as used herein shall include all items of labor, materials, and  
54 equipment.

1 In order to facilitate checking of quotations for extras or credits, all proposals, except those so  
2 minor that their propriety can be seen by inspection, shall be accompanied by a complete breakdown  
3 of costs including labor, material and subcontracts. Labor and material shall be marked up in the  
4 manner prescribed above. Where major cost items are subcontracts they shall be broken down also.  
5 In no case will a change involving over \$600 be approved without such a breakdown.  
6

#### 7 ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

8  
9 RE 1.1.2 – delete (3) on line 6

10 RE: 1.1.2 – Add a 1.1.2.1 – This agreement will be amended to provide “No Lien” provisions.

11  
12 RE: 1.2.2 – delete 1.2.2 in its entirety and replace with the following: Execution of the contract by the  
13 Contractor is a representation that the contractor has visited the site, become familiar with the local  
14 condition under which the construction is to be performed and the project constructed; is aware of the  
15 possible problems inherent of the construction and the Project, and correlated these observations with  
16 the requirements of the contract documents.  
17

18 RE 1.2.4 – Add paragraph as follows: Should discrepancies appear among Contract documents  
19 contractor shall request interpretation in writing before proceeding with the work. If contractor fails to  
20 make such request, no excuse will thereafter be entertained for failure to carry out work in satisfactory  
21 manner. Should conflict occur in or between drawings and specifications, Contractor is deemed to  
22 have included the more expensive way of doing work in contractors bid unless Contractor shall have  
23 asked for and obtained written decision before submission of Contractor bid Proposal as to which  
24 method or material will be required.  
25

26 RE 1.2.5 – Add paragraph as follows: When there is a conflict or discrepancy between a reference  
27 standard and the specifications, the more stringent requirements shall apply.  
28

29 RE 1.5.2 – Delete in entirety and replace with the following: Execution of the contract by the  
30 Contractor is a representation that the contractor has visited the site, become familiar with the local  
31 condition under which the construction is to be performed and the project constructed; is aware of the  
32 possible problems inherent of the construction and the Project, and correlated these observations with  
33 the requirements of the contract documents.  
34

35 Delete paragraph 4.2.11

36 Modify paragraph 4.2.12 to read:

37 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably  
38 inferable from the Contract Documents and will be in writing or in the form of Drawings.  
39  
40  
41  
42

#### 43 CLAIMS AND DISPUTES

#### 45 RESOLUTION OF CLAIMS AND DISPUTES

46  
47 Delete "ARTICLE 4.4 RESOLUTION OF CLAIMS AND DISPUTES" its entirety.  
48

#### 49 ARBITRATION

50  
51 “Delete “ARTICLE 15.4 ARBITRATION” in its entirety and add the following:  
52

53 16.1 The parties will attempt in good faith to resolve any controversy or claim arising out of or relating  
54 to this agreement promptly by negotiations between senior executives of the parties who have  
55 authority to settle the controversy (and preferably by executives who do not have direct responsibility  
56 for administration of this Agreement).



1  
2 16.2 The disputing party shall give the other party written notice of the dispute specifying that it falls  
3 within this dispute resolution paragraph. If agreed to by both parties the dispute will be submitted to  
4 arbitration within the dispute resolution paragraph. If both parties do not agree the issue must be  
5 solved through other processes. Within twenty (20) days after receipt of said notice, the receiving party  
6 shall submit to the other a written response. The notice and response shall include (1) a statement of  
7 each party's position and a summary of the evidence and arguments supporting its position, and (2)  
8 the name and title of the executive who will represent that party. The executives shall meet in at a  
9 mutually acceptable time and place within thirty (30) days of the date of the disputing party's notice  
10 and thereafter as often as they reasonably deem necessary to exchange relevant information and to  
11 attempt to resolve the dispute.  
12

13 16.3 If agreed to by both parties the claim will be settled by arbitration in accordance with the Center  
14 for Public Resources Model Procedure for Mediation of Business Disputes.  
15

16 16.4 If the matter has not been resolved pursuant to the aforesaid mediation procedure within sixty  
17 (60) days of the initiation of such procedure, or if either party will not participate in a mediation, the  
18 controversy shall be settled by arbitration in accordance with the Center for Public Resources Rules  
19 for Non-Administered Arbitration of Business Disputes, by one arbitrator. The arbitrator shall be  
20 selected from the CPR Panel of Distinguished Neutrals and agreed to by both parties. During the  
21 selection process, both parties shall disclose their contacts or the contacts of their counsel with the  
22 arbitrators being considered. The arbitration shall be governed by the United States Arbitration Act, 9  
23 U.S.C. 1-16, and judgment upon the award rendered by the arbitrator may be entered by any court  
24 having jurisdiction thereof. The place of arbitration shall be a mutually agreeable site in the County  
25 Seat of projects location. The arbitrator is not empowered to award damages in excess of actual  
26 damages, including punitive damages.  
27

28 16.5 All deadlines specified in this Article 4.5 may be extended by mutual agreement.  
29

30 16.6 During arbitration proceedings, the Owner and Contractor shall comply with Subparagraph 3.7.4  
31

32 16.7 No arbitration arising out of or relating to the Contract Documents shall include, by consolidation  
33 or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by  
34 written consent containing specific reference to the Agreement and signed by the Architect, Owner,  
35 Contractor, owner's consulting architect and any other person or entity sought to be joined.  
36 No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the  
37 Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially  
38 involved in a common question of fact or law whose presence is required if complete relief is to be  
39 accorded in arbitration. No person or entity other than the Owner, Contractor or a separate contractor  
40 as described in Article 6 shall be included as an original third party or additional third party to an  
41 arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an  
42 additional person or entity shall not constitute consent to arbitration of a dispute not described therein  
43 or with a person or entity not named or described therein. The foregoing agreement to arbitrate and  
44 other agreements to arbitrate with an additional person or entity duly consented to by parties to the  
45 Agreement shall be specifically enforceable under applicable law in any court having jurisdiction  
46 thereof.  
47

48 16.8 The procedures specified in this Article 4.5 shall be the sole and exclusive procedures for the  
49 resolution of disputes between the parties arising out of or relating to this Agreement; provided,  
50 however, that a party may seek a preliminary injunction or other preliminary judicial relief in a court  
51 located in Indiana if in its judgment such action is necessary to avoid irreparable damage. Should  
52 any party to this Agreement initiate litigation, such suit shall be brought in a court located in the State  
53 of Indiana. All applicable statutes of limitation shall be tolled while the procedures specified in this  
54 Article 4.5 are pending. The parties will take such action, if any, required to effectuate such tolling.  
55

56 ARTICLE 5

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Delete item 5.4.2

ARTICLE 7

Delete item 7.3.8

ARTICLE 11

INSURANCE

Delete Article 11 in its entirety and replace with the following:

Section 11.a. Contractor's Liability Insurance. The Contractors shall purchase and maintain such insurance as will protect him from the claims set forth below, any or all of which may arise out of or result from the operations of the Contractor, his Subcontractors, and anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable, whether on or adjacent to the Project or elsewhere:

- (a) claims under Worker's Compensation and Occupational Diseases Acts and any other employee benefits acts applicable to the performance of the Work;
- (b) claims for damages because of bodily injury and personal injury, including death; and
- (c) claims for damage to property.

The Contractor's general liability insurance shall also provide coverage for the following and will name as an additional named insured the Owner.

- (a) contractual liability insurance as applicable to any held harmless agreements in the Contract;
- (b) completed operations
- (c) broad form property coverage for property in the care, custody, or control of the Contractor.

Such insurance shall specifically include coverage for property damage, bodily injury and personal injury from explosion, collapse, and underground operations.

(a) Workers' Compensation	Statutory	
Employers Liability:		
Bodily Injury by accident, each accident	\$ 500,000	
Bodily Injury by disease, each employee	500,000	
Bodily Injury by disease, aggregate	500,000	

(b) General Liability

- 1) If insured under Comprehensive General Liability Form:  
Bodily injury, property damage combined single limit \$1,000,000
- 2) If insured under Commercial General Liability Form:  
Bodily injury, property damage \$1,000,000

1 Products and Completed Operations Aggregate \$1,000,000  
2 General Aggregate \$ 2,000,000  
3

4 Commercial General Liability form must include  
5 "Aggregate Per Project" endorsement.  
6

7 (c) Automobile Liability  
8

9 Bodily injury and property damage combined single limit \$1,000,000  
10

11 (d) Excess Liability (Umbrella) \$5,000,000  
12

13 Section 11.B. Certificates to be Filed With Owner. Certificates of Insurance shall be filed with the  
14 Owner prior to commencement of the Work. These certificates shall contain a provision that  
15 coverages afforded under the policies will not be canceled until at least fifteen (15) days after prior  
16 written notice has been given to the Owner.  
17

18 Section 11.C. Property Insurance.  
19

20 The Contractors and Subcontractors shall provide their own insurance for their materials, equipment,  
21 and tools.  
22

23 Section 11.D. Waiver of Rights. The Owner and Contractor waive all rights against each other for  
24 damages caused by fire or other perils to the extent covered by insurance provided under Article. The  
25 Contractor shall require similar waivers from Subcontractors.  
26

27  
28 PART 2: PRODUCTS  
29

30 Not Applicable.  
31

32 PART 3: EXECUTION  
33

34 Not Applicable.  
35  
36

37 END OF SECTION

# TELAMON CORPORATION Transition Resources Corporation

## Procurement Contract Provisions

The following provisions, as applicable, are conditions and assurances agreed and certified to by the contractor upon acceptance of a contract to provide certain goods or services, and are made part thereof.

1. The contractor shall comply with Executive Order 11246, as amended by Executive Order 11375, "Amending Executive Order 1246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR Part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
2. All contracts and subgrants in excess of \$2000 for construction or repair of facilities awarded by recipients and subrecipients are subject to the Copeland "Anti-Kickback" Act, 18 U.S.C. 874, as supplemented by Department of Labor regulations, (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which s/he is otherwise entitled.
3. When required by Federal program legislation, all construction contracts awarded by recipients and subrecipients of more than \$2000 are subject to the Davis-Bacon Act, (40 U.S.C., 276a to a-7) and as supplemented by Dept of Labor regulations (29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction". Under this Act contractors are required to pay wages to laborer and mechanics at a rate not less than the minimum wages specified in the current wage determination made by the Secretary of Labor. In addition, contractors are required to pay wages not less than once a week. **Copies of these provisions are attached and made part of this contract.**

**Weekly payroll information recorded on Optional Form WH-347 or its equivalent (also attached) must be submitted to the local Telamon project official for inclusion with billing information.**

4. Where applicable, all contracts awarded by recipients in excess of \$2000 for construction contracts and in excess of \$2500 for other contracts that involve the employment of laborers or mechanics are required to comply with sections 102 and 107 of the Contract Work Hours and Safety Standards Act, (40 U.S.C. 327-333) as supplemented by Department of Labor regulations (29 CFR part 5). Section 102 requires the contractor to compute the wages of every mechanic and laborer on the basis of a standard, work week of 40 hours. Work in excess of the standard work week is permissible provided that the payment of wages in excess of 40 hours at 1 ½ times the basic pay rate. Section 107 provides that no laborer or mechanic shall be required to work in surroundings or under working conditions that are unsanitary, hazardous or dangerous.
5. Any inventions resulting from experimental, developmental or research work shall be subject to 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements."
6. Recipients of contracts and subgrants in excess of \$100,000 agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, (42 U.S.C., 7401 et seq.) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.).
7. Contractors who bid for an award of more than \$100,000 must file, with Telamon, a certification of compliance with restrictions of the Byrd Anti-Lobbying Amendment, (31 U.S.C., 1352), that it has not and will not use federally appropriated funds to pay any person or organization for influencing or attempting to influence a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant or other award covered by the amendment. Contractors shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.
8. Contractors shall certify that they are not prohibited from receiving procurement awards pursuant to Executive Orders 12549 and 12689, "Debarment and Suspension", and do not appear on the General Services Administration's "List of Parties Excluded from Federal Procurement or Nonprocurement Programs."
9. **Contractors shall provide a current Certificate of Insurance naming Telamon Corporation as an additional insured** and which verifies general liability and Workers Compensation coverage. In West Virginia in lieu of a Workers Compensation certificate of insurance, a valid current Certificate of coverage from the WV Workers Compensation Commission is required.

**CONTRACTOR:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

# Davis-Bacon Act Contract Provisions

## (1) Minimum wages:

- (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
  - (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (2) The classification is utilized in the area by the construction industry; and
  - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## **(2) Withholding:**

Telamon Corporation shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## **(3) Payrolls and basic records:**

- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (ii) (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate Federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under Sec. 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be maintained under Sec. 5.5(a)(3)(i) of Regulations, 29 CFR Part 5 and that such information is correct and complete;
  - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
  - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **(4) Apprentices and trainees:**

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

## **(5) Compliance with Copeland Act requirements:**

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

## **(6) Subcontracts:**

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

## **(7) Contract termination: debarment:**

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



## **(8) Compliance with Davis-Bacon and Related Act requirements:**

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

## **(9) Disputes concerning labor standards:**

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

## **(10) Certification of eligibility:**

- (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

## **(11) Contract Work Hours and Safety Standards Act:**

- (i) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (ii) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (11)(i) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (11)(i) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (11)(i) of this section.
- (iii) Withholding for unpaid wages and liquidated damages. Telamon Corporation shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (11)(ii) of this section.
- (iv) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (11)(i) through (iv) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (11)(i) through (iv) of this section.

## **(12) Record Retention and Maintenance:**

In addition to the clauses contained in paragraph (11) the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of Telamon Corporation, the Department of Labor, or any other duly authorized representative and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

**PAYROLL**

(For Contractor's Optional Use; See Instructions at [www.dol.gov/whd/forms/wh347instr.htm](http://www.dol.gov/whd/forms/wh347instr.htm))



Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

OMB No.: 1235-0008  
Expires: 01/31/2015

NAME OF CONTRACTOR		OR SUBCONTRACTOR		ADDRESS																					
PAYROLL NO.		FOR WEEK ENDING		PROJECT AND LOCATION								PROJECT OR CONTRACT NO.													
(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT	OR	ST	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK				
						HOURS	MON	TUE	WED	THU	FRI	SAT				SUN	FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS					
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

**Public Burden Statement**

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

Date \_\_\_\_\_

I, \_\_\_\_\_  
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the  
(Contractor or Subcontractor)

\_\_\_\_\_ ; that during the payroll period commencing on the  
(Building or Work)

\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_,  
all persons employed on said project have been paid the full weekly wages earned, that no rebates have  
been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ from the full  
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly  
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part  
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,  
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2) That any payrolls otherwise under this contract required to be submitted for the above period are  
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the  
applicable wage rates contained in any wage determination incorporated into the contract; that the classifications  
set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship  
program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and  
Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered  
with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in  
the above referenced payroll, payments of fringe benefits as listed in the contract  
have been or will be made to appropriate programs for the benefit of such employees,  
except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid,  
as indicated on the payroll, an amount not less than the sum of the applicable  
basic hourly wage rate plus the amount of the required fringe benefits as listed  
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE
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THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR  
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE  
31 OF THE UNITED STATES CODE.

**Note: These Instructions may be found online at [www.dol.gov](http://www.dol.gov). From the DOL home page, follow the sequence of links listed below in yellow to find the Instructions page.**

[April 1, 2003](#) [DOL Home](#) > [ESA](#) > [WHD](#) > [Forms](#) > WH-347 Instructions

## Instructions For Completing Payroll Form, WH-347

**General:** The use of the WH-347 payroll form is not mandatory. This form has been made available for the convenience of contractors and subcontractors required by their Federal or Federally aided construction-type contracts and subcontracts to submit weekly payrolls. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 CFR, Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

This form meets needs resulting from the amendment of Davis-Bacon Act to include fringe benefits provisions. Under this amended law, the contractor is required to pay not less than fringe benefits as predetermined by the Department of Labor, in addition to payment of not less than the predetermined rates. The contractor's obligation to pay fringe benefits may be met either by payment of the fringes to the various plans, funds or programs or by making these payments to the employees as cash in lieu of fringes.

This payroll provides for the contractor's showing on the face of the payroll all monies to the employees, whether as basic rates or as cash in lieu of fringes and provides for the contractor's representation in the statement of compliance on the rear of the payroll that he is paying to other fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions concerning the preparation of the payroll follow:

**Contractor or Subcontractor:** Fill in your firm's name and check appropriate box.

**Address:** Fill in your firm's address.

**Column 1 - Name, Address, and Social Security Number of Employee:** The employee's full name and Social Security Number must be shown on each weekly payroll submitted. The employee's address must also be shown on the payroll covering the first week in which the employee works on the project. The address need not be shown on subsequent weekly payrolls unless the address changes.

**Column 2 - Withholding Exemptions:** This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

**Column 3 - Work Classifications:** List classification descriptive of work actually performed by employees. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, see Contracting Officer or Agency representative. Employee may be shown as having worked in more than one classification provided accurate breakdown of hours so worked is maintained and shown on submitted payroll by use of separate entries.

**Column 4 - Hours worked:** On all contracts subject to the Contract Work Hours Standard Act enter as overtime hours worked in excess of 8 hours per day and 40 hours a week.

**Column 5 - Total:** Self-explanatory

**Column 6 - Rate of Pay, including Fringe Benefits:** In straight time box, list actual hourly rate paid the employee for straight time worked plus in lieu of fringes paid the employee. When recording the straight time hourly rate, any cash paid in lieu of fringes may be shown separately from the basic rate, thus \$3.25/.40. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. In overtime box shown overtime hourly rate paid, plus any cash in lieu of fringes paid the employee. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962. In addition to paying no less than the predetermined rate for the classification which the employee works, the contractor shall pay to approved plans, funds or

programs or shall pay as cash in lieu of fringes amounts predetermined as fringe benefits in the wage decision made part of the contract. See "FRINGE BENEFITS" below.

**FRINGE BENEFITS - Contractors who pay all required fringe benefits:** A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of labor shall continue to show on the face of the payroll the basic cash hourly rate and overtime rate paid to his employees just as he has always done. Such a contractor shall check paragraph 4(a) of the statement on the reverse of the payroll to indicate that he is also paying to approved plans, funds or programs not less than the amount predetermined as fringe benefits for each craft. Any exceptions shall be noted in section 4(c).

**Contractors who pay no fringe benefits:** A contractor who pays no fringe benefits shall pay to the employee, and insert in the straight time hourly rate column of the payroll, an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringes at the straight time rate. In addition, the contractor shall check paragraph 4(b) of the statement on the reverse of the payroll to indicate that he is paying fringe benefits in cash directly to his employees. Any exceptions shall be noted in Section 4(c).

#### **Use of Section 4(c), Exceptions**

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employee as cash in lieu of fringes and the hourly amount paid to plans, funds, or programs as fringes. The contractor shall pay, and shall show that he is paying to each such employee for all hours (unless otherwise provided by applicable determination) worked on Federal or Federally assisted project an amount not less than the predetermined rate plus cash in lieu of fringes as shown in Section 4(c). The rate paid and amount of cash paid in lieu of fringe benefits per hour should be entered in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

**Column 7 - Gross Amount Earned:** Enter gross amount earned on this project. If part of the employees' weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus \$63.00/\$120.00.

**Column 8 - Deductions:** Five columns are provided for showing deductions made. If more than five deductions should be involved, use first 4 columns; show the balance deductions under "Other" column; show actual total under "Total Deductions" column: and in the attachment to the payroll describe the deduction contained in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 CFR, Part 3. If the employee worked on other jobs in addition to this project, show actual deductions from his weekly gross wage, but indicate that deductions are based on his gross wages.

**Column 9 - Net Wages Paid for Week:** Self-explanatory

**Totals** - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

**Statement Required by Regulations, Parts 3 and 5:** While this form need not be notarized, the statement on the back of the payroll is subject to the penalties provided by 18 USV 1001, namely, possible imprisonment of 5 years or \$10,000.00 fine or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See paragraph entitled "FRINGE BENEFITS" above for instructions concerning filling out paragraph 4 of the statement.

**U.S. Department of Labor**  
Frances Perkins Building  
200 Constitution Avenue, NW  
Washington, DC 20210

**1-866-4-USWAGE**

**TTY: 1-866-487-9243**

**UNCONDITIONAL WAIVER AND RELEASE  
UPON FINAL PAYMENT**

The undersigned has been paid in full for all labor, services, equipment or material furnished to Telamon Corporation for the job located at: \_\_\_\_\_ except for final payment of \$ \_\_\_\_\_ and does hereby release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job.

This document also releases \_\_\_\_\_ from liability with subcontractors signed below. (Contractor)

Dated: \_\_\_\_\_

Company Name: \_\_\_\_\_

\_\_\_\_\_  
Signature of Authorized Person Title

**NOTICE TO PERSONS SIGNING THIS WAIVER: This document waives your rights unconditionally and states that you have been paid for giving up those rights. This document is enforceable against you if you sign it, even if you have not been paid.**

**THE UNDERSIGNED HAVE PERFORMED/PROVIDED EITHER LABOR, SERVICES, EQUIPMENT, OR MATERIALS ON THE PROJECT DESCRIBED ABOVE AND HAVE BEEN PAID IN FULL TO DATE**

\_\_\_\_\_  
(Company Name) (Title)

\_\_\_\_\_  
(Signature of Subcontractor) (Date)

\_\_\_\_\_  
(Company Name) (Title)

\_\_\_\_\_  
(Signature of Subcontractor) (Date)

\_\_\_\_\_  
(Company Name) (Title)

\_\_\_\_\_  
(Signature of Subcontractor) (Date)

\_\_\_\_\_  
(Company Name) (Title)

General Decision Number: IN140002 06/20/2014 IN2

Superseded General Decision Number: IN20130002

State: Indiana

Construction Type: Building

Counties: Adams, Allen, Bartholomew, Benton, Blackford, Boone, Carroll, Cass, Clinton, DeKalb, Delaware, Fountain, Fulton, Grant, Hamilton, Hancock, Hendricks, Howard, Huntington, Jay, Johnson, Madison, Marion, Miami, Monroe, Montgomery, Morgan, Noble, Shelby, Steuben, Tippecanoe, Tipton, Wabash, Warren, Wells, White and Whitley Counties in Indiana.

BUILDING CONSTRUCTION(does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	01/03/2014
1	01/17/2014
2	02/14/2014
3	02/28/2014
4	04/04/2014
5	05/09/2014
6	05/23/2014
7	06/06/2014
8	06/13/2014
9	06/20/2014

ASBE0018-004 06/01/2013

BARTHOLOMEW, BENTON, BOONE, CARROLL, CLINTON, DELAWARE, FOUNTAIN, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JOHNSON, MADISON, MARION, MONROE, MONTGOMERY, MORGAN, SHELBY, TIPPECANOE, TIPTON, AND WARREN COUNTIES:

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems).....	\$ 31.23	15.45
HAZARDOUS MATERIAL HANDLER (includes preparation, wettings, stripping, removal, scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not,		



from mechanical systems).....\$ 18.75 9.70

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ASBE0041-002 03/01/2014

ADAMS, ALLEN, BLACKFORD, DE KALB, GRANT, HUNTINGTON, JAY,  
MIAMI, NOBLE, STEUBEN, WABASH, WELLS AND WHITLEY COUNTIES:

Rates Fringes

ASBESTOS WORKER/HEAT & FROST  
INSULATOR (includes  
application of all insulating  
materials, protective  
coverings, coatings and  
finishings to all types of  
mechanical systems).....\$ 29.43 14.60

HAZARDOUS MATERIAL HANDLER  
(includes preparation,  
wettings, stripping, removal,  
scrapping, vaccuming, bagging  
& disposing of all insulation  
materials, whether they  
contain asbestos or not, from  
mechanical systems).....\$ 21.15 12.20

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ASBE0075-003 06/01/2013

CASS, FULTON and WHITE COUNTIES

Rates Fringes

ASBESTOS WORKER/HEAT & FROST  
INSULATOR (includes  
application of all insulating  
materials, protective  
coverings, coatings and  
finishings to all types of  
mechanical systems).....\$ 31.40 17.54

HAZARDOUS MATERIAL HANDLER  
(includes preparation,  
wetting, stripping, removal,  
scrapping, vaccuming, bagging  
& disposing of all insulation  
materials, whether they  
contain asbestos or not, from  
mechanical systems).....\$ 25.80 12.10

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BOIL0374-002 01/01/2013

Rates Fringes

BOILERMAKER.....\$ 33.78 25.19

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BRIN0003-001 06/01/2013

INDIANAPOLIS

BOONE, HANCOCK, HENDRICKS, JOHNSON, MARION, MONTGOMERY, MORGAN and SHELBY COUNTIES

	Rates	Fringes
Bricklayer, Stone Mason, Pointer, Caulking.....	\$ 30.06	11.11
TERRAZZO FINISHER.....	\$ 19.07	7.06
TERRAZZO WORKER/SETTER.....	\$ 29.57	10.96
Tile & Marble Finisher.....	\$ 19.96	7.07
Tile, Marble Setter.....	\$ 28.98	10.85

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BRIN0004-004 06/01/2013

FORT WAYNE  
ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS AND WHITLEY COUNTIES:

	Rates	Fringes
BRICKLAYER (STONE MASON, MARBLE MASONS, POINTER, CLEANER, AND CAULKER).....	\$ 28.77	12.49
Terrazzo Grinder Finisher.....	\$ 24.21	9.10
Terrazzo Worker Mechanic.....	\$ 28.52	11.20
Tile Setter & Marble Mason Mechanic.....	\$ 25.80	11.01
Tile, Marble & Terrazzo Finisher.....	\$ 21.07	9.07

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BRIN0004-021 06/01/2013

BLOOMINGTON  
BARTHOLOMEW and MONROE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 27.45	10.65
TERRAZZO FINISHER.....	\$ 18.00	4.10
TERRAZZO WORKER/SETTER.....	\$ 27.80	7.07
Tile & Marble Finisher.....	\$ 18.82	4.10
Tile & Marble Setter; Mosaic Worker.....	\$ 27.27	6.97

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BRIN0011-001 06/01/2013

LAFAYETTE  
BENTON, CARROLL, CLINTON, FOUNTAIN, TIPPECANOE, WARREN and WHITE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 27.13	14.17

TERRAZZO FINISHER.....	\$ 19.07	7.06
TERRAZZO WORKER/SETTER.....	\$ 29.57	10.96
Tile & Marble Finisher.....	\$ 19.96	7.07
Tile & Marble Setter; Mosaic Worker.....	\$ 28.98	10.85

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BRIN0018-001 06/01/2013

SOUTH BEND CHAPTER: CASS, FULTON, GRANT, HOWARD, MIAMI and  
WABASH COUNTIES

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 27.61	12.14
Terrazzo Worker Finisher.....	\$ 28.79	10.42
TERRAZZO WORKER/SETTER.....	\$ 29.41	13.18
Tile & Marble Finisher.....	\$ 27.79	10.42
Tile, Marble Setter.....	\$ 28.41	13.18

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BRIN0019-001 06/01/2013

MUNCIE CHAPTER  
BLACKFORD, DELAWARE, HAMILTON, JAY, MADISON AND TIPTON COUNTIES:

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 28.65	12.83
TERRAZZO FINISHER.....	\$ 19.07	7.06
TERRAZZO WORKER/SETTER.....	\$ 29.57	10.96
Tile & Marble Finisher.....	\$ 19.96	7.07
Tile & Marble Setter; Mosaic Worker.....	\$ 28.98	10.85

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\* CARP0111-001 06/01/2014

BARTHOLOMEW, JOHNSON (Townships of Union, Hensley, Franklin,  
Nineva, Needham and Blue River), SHELBY COUNTIES

	Rates	Fringes
Carpenters: Carpenters, Drywall Insallers, Piledrivers.....	\$ 26.13	15.79
Millwrights.....	\$ 26.94	17.97
Soft Floor Layers.....	\$ 26.05	13.30

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\* CARP0215-001 06/01/2014

BENTON, CARROLL, CLINTON, TIPPECANOE, WARREN AND WHITE  
COUNTIES:

	Rates	Fringes
CARPENTER.....	\$ 27.81	16.75
MILLWRIGHT.....	\$ 27.97	17.02

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\* CARP0232-001 06/01/2014

ALLEN, DEKALB, NOBLE, STEUBEN and WHITLEY COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 23.97	15.65

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\* CARP0615-001 06/01/2014

ADAMS, CASS, FULTON, GRANT, HOWARD, HUNTINGTON, MIAMI, TIPTON,  
WABASH and WELLS COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 24.70	15.89

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\* CARP0912-001 06/01/2014

	Rates	Fringes
CARPENTER		
BLACKFORD, DELAWARE, JAY AND MADISON COUNTIES		
Carpenters, Drywall.....	\$ 27.32	15.79
Millwrights.....	\$ 26.94	17.97
Soft Floor Layers.....	\$ 26.05	13.30
BOONE, FOUNTAIN, HENDRICKS, MONROE, MONTGOMERY AND MORGAN COUNTIES		
Carpenters, Drywall.....	\$ 27.61	15.79
Millwrights.....	\$ 26.94	17.97
Soft Floor Layers.....	\$ 26.05	13.30

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\* CARP0912-002 06/01/2014

HAMILTON, HANCOCK, JOHNSON (Townships of White River, Pleasant  
and Clark), MARION

	Rates	Fringes
Carpenters:		
Carpenters, Drywall		
Installers, Piledrivers.....	\$ 29.12	15.79
Millwrights.....	\$ 26.94	17.97
Soft Floor Layers.....	\$ 26.05	13.30

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\* CARP1029-001 06/01/2014

ADAMS, ALLEN, CASS, DEKALB, ELKHART, FULTON, GRANT, HOWARD, HUNTINGTON, KOSCIUSKO, LAGRANGE, MARSHALL, MIAMI, NOBLE, ST. JOSEPH, STEUBEN, TIPTON, WABASH, WELLS and WHITLEY COUNTIES

	Rates	Fringes
MILLWRIGHT.....	\$ 25.16	19.77
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ELEC0305-003 01/01/2014		

ADAMS, ALLEN, DE KALB, HUNTINGTON, NOBLE, STEUBEN, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 30.18	14.86
-----		
ELEC0481-005 06/01/2014		

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MADISON, MARION, MONTGOMERY, MORGAN AND SHELBY COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 33.80	17.35
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ELEC0538-006 06/01/2013		

FOUNTAIN AND WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 32.34	17.17
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ELEC0668-002 06/01/2013		

BENTON, CARROLL, CASS, FULTON, TIPPECANOE and WHITE COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 31.25	15.54

FOOTNOTE: a. PAID HOLIDAYS: New Years Day, Memorial Day, July 4th, Labor Day, Veterans Day Thanksgiving Day and Christmas Day

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ELEC0725-006 09/01/2013		
MONROE COUNTY		

	Rates	Fringes
Communication Technician.....	\$ 26.35	11.58

Includes the installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound and vision production and reproduction apparatus, equipment and appliances used for domestic, commercial, education, entertainment and private telephone systems.

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ELEC0725-011 06/02/2014

MONROE COUNTY:

	Rates	Fringes
ELECTRICIAN.....	\$ 34.66	15.97

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ELEC0855-003 06/01/2013

BLACKFORD, DELAWARE, AND JAY COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 31.80	13.43

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ELEC0873-002 03/01/2013

CLINTON, GRANT, HOWARD, MIAMI, TIPTON AND WABASH COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 32.43	12.33

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ELEV0034-003 01/01/2014

BARTHOLOMEW, BENTON, BLACKFORD, BOONE, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, FULTON, GRANT, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JAY, JOHNSON, MADISON, MARION, MIAMI, MONROE, MONTGOMERY, MORGAN, SHELBY, TIPPECANOE, TIPTON, WABASH, WARREN, AND WHITE COUNTIES

	Rates	Fringes
Elevator Constructor Mechanic.....	\$ 42.59	26.785+a+b

PAID HOLIDAYS:

- a. New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.
- b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

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ELEV0044-002 01/01/2014

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS, and  
WHITLEY COUNTIES

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 44.06	26.785+a+b

PAID HOLIDAYS:

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

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

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ENGI0103-001 06/01/2013

BENTON, CARROLL, CASS, CLINTON, GRANT, HOWARD, MIAMI,  
TIPPECANOE, TIPTON, WABASH, and WHITE COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 30.61	15.09
GROUP 2.....	\$ 27.61	15.09
GROUP 3.....	\$ 26.04	15.09
GROUP 4.....	\$ 22.34	15.09

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: A-Frame Winch Truck, Air Compressors over 600  
cu.ft., Air Tugger, Autograde (CMI), Auto Patrol, Backhoe,  
Ballast Regulator (RR), Batcher Plant (electrical control  
concrete), Bending Machine (pipe), Bituminous Plant  
(engineer), Bituminous Plant, Bituminous Mixer Travel  
Plant, Bituminous Paver, Bituminous Roller, Buck Hoist,  
Bull Dozer, Cable Way, Chicago Boom, Clamshell, Concrete  
Mixer (21 cu. ft. or over), Concrete Paver, Concrete  
Pump(crete), Crane, Craneman, Crusher Plant, Derrick,  
Derrick Boat, Dinkey, Dope Pots (pipeline), Dragline,  
Dredge Operator, Dredge Engineer, Drill Operator,,  
Elevating Grader, Elevator, Ford Hoe (or similar type  
equipment), Forklift, Formless Paver, Gantry Crane,  
Gradall, Grademan, Grout Pump, Helicopter Crew, Heterington  
Paver, High-Lift, Hoist, Hopto, Hough Loader (or similar  
type), Hydro Crane, Hydro Hammer, Locomotive Crane,  
Locomotive, Mechanic, Mobile Mixer, Motor Crane, Mucking  
Machine, Multiple Tamping Machine (rr), Overhead Crane,  
Pile Driver, Pulls, Push Dozer, Push Boats, Roller (sheep

foot), Ross Carrier, Scoop, Shovel, Side Boom, Swing Crane, Tail Boom, Tar Machine (pipeline), Throttle Valve, Tower Crane, Trench Machine, Welder (heavy duty), Truck Mounted Concrete Pump, Truck-Mounted Drill, Well Point, Whirleys

GROUP 2: Air Compressor (up to 600 cu. ft.), Brakeman, Bull Float, Concrete Mixer (over 10s and under 21s), Concrete Spreader or Puddler, Deck Engine, Drill Helper, Electric Vibrator Kompactor (earth or rock), Finishing Machine, Gireman, Greaser (on grease facilities servicing heavy equipment), Material Pump, Motor Boats, Motor Crane Oiler, Portable Loader, Post Hole Digger, Power Broom, Rock Roller, Roller-Wobble Whell (earth or rock), Spike Machine (RR) Seamen Tiller, Spreader Rock, Sub Grader, Tamping Machine, Truck Mounted Drill Oiler, Welding Machine, Widener (apsco or similar type)

GROUP 3: Air Compressor 210 cu ft & over, Bituminous Distributor, Chair Cart, Concrete Curing Machine, Concrete Saw, Dope Pot Power Agitated, Flex Plane, Form Grader, Hydrohammer, Jacks Hydraulic Power Driven, Paving Joint Machine, Post Hole Digger, Roller Earth, Throttle Valve, Track Jack Power Driven, Tractor Farm Type, Truck Crane Driver

GROUP 4: Air Compressor (under 200 cu. fr. per min), Bituminous Distributor, Cement Gun, Concrete Saw, Conveyor, Deck Hand Oiler, Earth Roller, Form Grader, Generator, Guardrail Driver, Heater, Oiler, Paving Joint Machine, Power Traffic Signals, Steam Jenny, Vibrator, Water Pump, "JLG" Lifts and "Scissor" Lift or similar machine

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ENGI0103-002 06/01/2013

BLACKFORD, DELAWARE, HAMILTON, HANCOCK, JAY, JOHNSON, MADISON, MARION, and SHELBY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 32.80	13.43
GROUP 2.....	\$ 31.85	13.43
GROUP 3.....	\$ 27.80	13.43
GROUP 4.....	\$ 24.10	13.43

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Air Compressor (pressurizing shafts, tunnels & drivers); Air Tugger; Auto Patrol; Back Filler; Back Hoe; Boom Cat; Boring Machine; Bull Dozer; Caisson Drilling Machine; Cherry Picker; Compactor (with dozer blade); Concrete Mixer (dual drum); Concrete plant; Concrete Pump; Crane with all attachments; Crane- Electric overhead; Derrick; Ditching Machine (18' and over); Dredge; Elevators (when hoisting material or tools); Fork Lift (machinery);



Formless Paver; Generator (power for welders of compressor); Gradall; Helicopter; Helicopter Winch Operator; High Lift-Front End Loader; Hoist-Material and/or Personnel over 3 Floors; Locomotive; Mechanic on job site; Mucking Machine; Panel Board Concrete Plant; Pile Driver; Push Cat; Scoop & Tractor; Scraper-Rubber Tired; Spreader-Tractor Mounted; Straddle Carrier-Ross Type; Sub Base Finish Machine (C.M.I. or smiliar); Tower Crane; Tractor with Backhoe (over 1/2 yard); Welder (craft)

GROUP 2: A Frame Truck; Batcher Plant (automatic dry batch); Bending Machine-Power Driven; Bituminous Mixer; Bituminous Paver; Bituminous Plant Engineer; Boatman; Bull Float; Compactor or Tamper-Self Propelled; Concrete Mixer (21 cu. ft. or over); Concrete Spreader-Power Driven; Dinkey Engine; Ditching Machine; Ditching Machine (less than 18"); Drilling Machine; Finish Machine & Bull Float; Finishing Machine; Fireman-Pile Driving and Boilers; Fork Lift-Masonry & Material; Gunitite Machine; Head Greaser; Hoist-Material and/or personnel 3 floors and under; Mechanic in shop; Mesh Depresser-Mesh Placer; P.C.C. Concrete Belt Placer; Ruller-Asphalt, stone & sub base; Sheepsfoot Roller- Self Propelled; Shop Mule; Spreader or Base Paver-Self Propelled; Sub Grader; Throttle valve with air compressor or boiler; Tractor with Backhoe (1/2 yard & under); Tractor-high lift-farm type; Tractor-Industrial Type; Tractor with Winch; Well Points; Winch Trick

GROUP 3: Air Compressor (210 cu. ft. & over); bituminous Distributor; Chair Cart; Concrete Curing Machine; Concrete Saw; Dope Pot Power Agitated; Flex Plane; Form Grader; Hydrohammer; Jacks-Hydraulic-Power Driven; Minor Equipment opr. 3,4, or 5; Paving Joint Machine; Post Hole Digger; Roller-Earth; Throttle Valve; Track Jack-Power Driven; Tractor-Farm Type; Truck Crane Driver

GROUP 4: Air Compressor (less than 210 cu. ft.); Concrete Mixer (under 21cu. ft.); Conveyor; Generator; Mechanical Heater; Oiler; Operator-2 pieces of miner equipment; Power Broom; Pump; Welding Machine

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ENGI0103-007 10/01/2013

ADAMS, ALLEN, DEKALB, HUNTINGTON, STEUBEN, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 30.63	14.52
GROUP 2.....	\$ 29.68	14.52
GROUP 3.....	\$ 26.68	14.52
GROUP 4.....	\$ 23.18	14.52

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Air Tugger; Auto Patrol, Back Filler; Back Hoe; Boom Cat; Boring Machine; Bull Dozer; Caisson Drilling Machine; Cherry Picker; Compactor (with dozer blade); Concrete Mixer (dual drum); Concrete Plant; Concrete Pump; Crane with all attachments; Crane Electric overhead; Derrick; Ditching Machine (18" and over); Dredge; Fork Lift (machinery); Formless Paver; Gradall; Helicopter; Helicopter Winch Operator; High Lift Front End Loader; Hoist Material and/or personnel over 3 floors; Locomotive; Mechanic on Job Site; Mucking Machine; Panel Board Concrete Plant; Pile Driver; Push Cat; Scoop & Tractor; Scraper Tubber Tired; Skid Steer Machine (grading and back hoe); Spreader Tractor Mounted; Straddle Carrier Ross Type; Sub Base Finish Machine (C.M.I. or similar); Tower Crane; Tractor with backhoe (over 1/2 yard); Welder for Craft Work.

GROUP 2: A-Frame Truck; Batch Plant (automatic dry batch); Bending Machine Power Driven; Bituminous Mixer; Bituminous Paver; Bituminous Plant Engineer; Boatman; Bull Float; Compactor or Tamper Riding Only; Concrete Mixer (21 cu. ft. or over); Concrete Spreader Power Driven; Dinkey Engine; Ditching Machine (less than 18" riding only); Drilling Machine; Elevators (when hoisting material or tools); Finish Machine and bull Float (excluding trowelling machine); Fireman Pile Driving and Boilers; Gunite Machine; Head Greaser; Hoist Material and/or personnel 3 floors and under; Mesh Depressor Mesh Placer; P.C.C. Concrete Belt Placer; Roller Asphalt, Stone & Sub Base; Sheepsfoot Roller Self Propelled; Shop Mule; Spreader or Base Paver Self Propelled; Sub Grader; Throttle Valve with Air Compressor or Boiler; Tractor with Backhoe (1/2 yard & under); Tractor High Lift Farm Type; Tractor Industrial Type; Tractor with Winch; Winch Truck.

GROUP 3: Bituminous Distributor; Chair Cart; Concrete Cuting Machine; Dewatering Sytems; Dope Pot Power Agitated; Flex Plane; Fork Lift (masonry and material); Form Grader; Hydrohammer; Jacks Hydraulic Power Driven; Paving Joint Machine; Post Hole Digger (machine Mounted); Roller Earth; Skid Steer Machine (fork lift and trasporting); Throttle Valve; Track Jack Power Driven; Tractor Farm Type.

GROUP 4: Air Compressor (pressurizing shafts, tunnels and divers); Air Compressor (over 210 cu. ft.); Concrete Saw; Conveyor; Generators; Oiler; Operating minor equipment; Power Broom; Truck Crane Driver; Welding Machines over 300 amps (2 or more).

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ENGI0150-017 06/01/2013

FULTON and NOBLE COUNTIES

Rates

Fringes

Power equipment operators:

GROUP 1.....	\$ 27.75	22.55
GROUP 2.....	\$ 26.40	22.55
GROUP 3.....	\$ 25.60	22.55
GROUP 4.....	\$ 24.80	22.55
GROUP 5.....	\$ 22.20	22.55

## POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Mechanic, Asphalt Plant, Asphalt Spreader, Auto Grader; Batch Plant, Benoto (requires 2 Engineers), Boiler and Throttle Valve, Boring Machine (road), Bulldozers (with engines of 140 net horse power or more) Caisson Rigs, Central Redi-mix Plant, Concrete Conveyor Systems, Concrete Power (over 27E cu. ft.), Concrete Paver (27E cu. ft. and under), Concrete Pumps/Grout concrete placer (Truck Mounted), Concrete Tower, Cranes and backhoes (all), Cranes, Hammerhead Tower, Creter Crane, Derricks (all), Forklift (capble of hoisting and mechanically moving forks horizontally), Grader, Elevating, Highlift Shovels or Front End Loaders (over 3 yd bucket), Hoists (2 or more drums), Locomotives (all), Laser screed, Motor Patrol, Pile Drivers and Skid Rig, Pre-Stress Machines, Pump Cretes & Similar Types, Rock Drill (Self-Propelled), Rock Drill (self propelled Truck Mounted), Scoops (tractor drawn), Slip-Form Paver, Tournapull, Tractor with Boom & Side Boom, Trenching Machine (12 or more inches in width), Combination Backhoe Front End Loader Machine with backhoe 1/2 yd bucket or attachments.

GROUP 2: Air Compressor (600 cu. ft. and over), Bob Cat (over 3/4 cu. yd.), Boilers, Broom (all powered propelled), Bull Dozers with engines of less than 140 net horsepower, combination backhoe front end loader 1/2 yf bskhhoe or under, Compressor and Throttle Valve, Concrete Breaker (truck mounted), Concrete Mixer (of moore than 21 cu. ft. capacity), Forklift (with fixed or tilt mast), Greaser Engineer, Highlift shovel or front endloader 3 yd bucket and under, Hoists (1 drum), Hydrulic Boom Truck, Post Hole Digger (vehicle mounted), Pump Cretes (squeeze crete type pumps, Gypsum, bulker , Rollers(all), Steam Generators, Stone Crushers, Stradddle Buggies, Tractors, Winch Trucks (with "a" frame.

GROUP 3: Buck Hoist, Combination (small equipment operator), .Conveyor (portable), Grouting Machine, Hoist Elevators (material and personnel), Hydraulic Power Units, Grouting and Pile Driving, Stud Welder, Trenching Machines less than 12 inches in width, Welding Machines (8 through 15).

GROUP 4: Bobcat (up to and including 3/4 cu. yd.). Compressor (over 210 cu. ft. and less than 600 cu. ft.), Generator (over 50 kw.), Heaters, Mechanical, Hoists (all elevator, permanent installation), Hoist (automatic), Hoist (tugger single drum), Oilers, Pumps, Well Points and electric submersible, Small Rubber Tired End Loaders (1/4 cu. yd. and under), Tractors (farm type) Welding Machines (2 through 8).

GROUP 5: Bobcats and forklifts (commercial or residential).

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ENGI0181-004 04/01/2013

BARTHOLOMEW COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP A.....	\$ 29.98	13.90
GROUP B.....	\$ 21.85	13.90

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP A: A-frame winch truck, articulating dump, autograde (CMI), auto patrol, ballast regulator (RR), batcher plant (electrical control concrete), bending machine (pipe), bituminous plant (engineer), bituminous plant, bituminous mixer travel plant, bituminous paver, bituminous roller, boring machine, buck hoist, bull dozer, cable way, Chicago boom, chimney hoist, clamshell, concrete mixer (21 cu.ft. or over), concrete paver, concrete pump (crete), construction elevator (Allmac or similar) creane, creaneman, crawler backhoe, bcreawler high-lift, crusher plant, derrick, derrick boat, dinkey, directional/boring machine, dope pots (pipeline), double drum tugger (electric or air), dragline, dredge operator, dredge engineer, drill operator, elevating grader, extendable boom forklift, formless paver, gantry crane, gator (or similar type tiller), gradeall, grader, grademan, greaser (on grease facility servicing heavy equipment), G.P.S. System (on equipment within the classificaitons), grout pump, head greaser, helicopter crew, Hetherington paver, hoist (motorized, gas or disel), hydraulic crane, ghdro blaster, Industrial type forklift (over 9,000 lbs.), laser concrete screed, laser or remote controlled equipment (within the classifications), locomotive crane, locomotive, mechanic, mobile mixer, botor creane, mucking machine, multiple tamping machine (RR) overhead crane, pile driver, pulls, push dozer, push boats, roller (sheep foot), rough terrain crain, R.T. backhoe, R.T. endloader, Ross carrier, scoop, shovel, side boom, skidsteer loader (bobcat or similar type), swing crane, tail boom, tar machine (pipeline), tower crane, trench machine, welder (heavy duty), truck mounted concrete pump, truck-mounted drill, vacuum truck, well point, whirleys

GROUP B: Air compressor (1 or more, 600 cfm and over), air compressor with throttle valve, bituminous distributor, brakeman, bullfloat, cement gun, concret mixer, concrete say, soncrete spreader or puddlers, conveyor, deck hand oiler, deck engine, drill helper, earth roller electric vibrator compactor (earth or rock), elevator (in-plant, automatic), finishing machine fireman, form grader, generator, guard-rail driver, heater, oiler, Industrial

type forklift (9,000 lbs and under), aterail pump, motor boats, paving joint machine, post hole digger, power broom, power traffic signals, rock roller, rock spreader, Roller (earth or rock), spike machine (RR), steam jenny, sub grader, taping machine, gruck crane oiler, truck mounted drill oiler Tugger (one-drum, air or electric)vibrator, vibro-piling hammer- hydraulic hammer or auger, water pump, widener (apsco or similar type) welding machine, JLG lifts and scissor lifts or similar machine.

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ENGI0841-008 04/01/2013

BOONE, FOUNTAIN, HENDRICKS, MONROE, MONGOMERY, MORGAN, and WARREN COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 29.75	16.75
GROUP 2.....	\$ 22.10	16.75

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Power Cranes, Draglines, Derricks, Shovels, Gradalls, Mechanics, Tractor Highlift, Tournadozer. Concret Mixers with Skip Tournamixer, Two-Drum Machine, One-Drum Hoist with Tower or Boom, Cableways, Tower Machines, Motor Patrol, Boo Tractor, Boom or Winch Truck, Winch or Hydraulic Boom Truck, Truck Crane, Tournapull, Tractor Operating Scoops, Bulldozer, Push Tractor, Asphalt Planer, Finishing Machine on Asphalt, Large Rollers on Earth, Rollers on Asphalt Mix, Ross Carrier or Similar Machine, Gravel Processing Machine, Asphalt Plant Engineer, Paver Operator, Farm Tractor with Half Yard Bucket and/or Backhoe Attachments, Dredge Engineer, or Dredge Operator, Central Mix Plant Engineer, CMI or Similar Type Machine, Truck or Skid Mounted Concrete Pump, Tower Crane, Engine or Rock Crusher Plant, Concrete Plant Engineer, Ditching Machine with Dual Attachment, Tractor Mounted Loaders, Cherry Picker, Hydro Crane, Standard or Dinkey Locomotives, Scoopmobiles, Euclid Loader, Soil Cement Machine, Back Filler, Elevating Machine, Power Blade, Drilling Machines including Well Testing, Caissons, Shaft or any similartype Drilling Machines, Motor Driven Paint Machine, Pipe Cleaning Machine, Pipe Wrapping Machine, Pipe Bending Machine, Apsco Paver, Boring Machine, (Equipment Greased), Barber-Greene Loaders, Formless Paver, (Well Point System), Concrete Spreader, Hydra Ax, Span Saw and Similar Types, Marine Scoops, Brush Mulcher, Brush Burner, Mesh Placer, Tree Mover, Helicopter Crew (3), Piledriver-Skid or Crawler, Stump Remover, Root Rake, Tug Boat Operator, Refrigerating Machine, Freezing Operator, Chair Cart-Self Propelled, Hydra Seeder, Straw Blower Power Sub Grader, Bull Float, Finishing Machine, Self-Propelled Pavement Breaker (Backhoe Attached), Lull (or Similar Type Machine),

Two Air Compressors, Compressors Hooked in Manifold, Overhead Crane, Chip Spreader, Mud Cat, Sull-Air Fork Lifts (Except when used for Landscaping Work), Soil Stabilizer (Seaman Tiller, Bo Mag, Rago Gator and Similar types or Equipment), Tube Float, Spray Machine, Curing Machine, Concrete or Asphalt Milling Machine, Snooper Truck Operator.

GROUP 2: Concrete Mixers without Skips, Rock Crusher, Ditching Machine Under 6', Curbing Machine, One Drum Machines without Tower or Boom, Air Tugger, Self-Propelled Concrete Saw, Machin- Mounted Post Hole Digger, Two to Four Generators, Water Pumps, or Welding Machines, with 400 ft., Air Compressor 600 cu. ft. and Under, Rollers on Aggregate and Seal Coat Surfaces, Fork Lifts (When used for Landscaping Work), Concrete and Blacktop Curb Machine, Farm Tractor with less than Half Yard Bucket, One Water Pump, Iolers, Air Valves or Steam Valves, One Welding Machine, Truck Jack, Mud Jack, Gunnite Machine, House Elevators when used for Hoisting Material, Engine Tenders, Wagon Drill, Flex Plane, Conveyor, Siphons nad Pulsometer, Switchman, Fireman on Paint Pots, Fireman on Asphalt Plants, Distributor Operators on Trucks, Tampers, Self-Propelled Power Broom, Striping Machine (motor driven), Form Tamper, Bulk Cement Plan Equipment Greaser, Deck Hands, Truck Crane Oiler Driver, Cement Blimps, Form Grader, Temporary Heat, Throttle Valve, Farm Tractor, Super Sucker (and similar type of equipment). FOOTNOTE: Employees operating booms from 149 ft. to 199 ft. including jib, shall receive an additional seventy five cents (.75)per hour above the rate. Employees operating booms over 199 ft. including jib, shall receive an additional one dollar and twenty-five cents (\$1.25) per hour above the regular rate.

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\* IRON0022-004 06/01/2014

BARTHOLOMEW; BENTON, BOONE; CARROLL; CASS; CLINTON; DELAWARE (S 2/3); FOUNTAIN; FULTON (SW 1/4 OF COUNTY); GRANT (SW PORTION); HAMILTON; HANCOCK; HENDRICKS; HOWARD; JOHNSON; MADISON; MARION; MIAMI; MONROE; MONTGOMERY; MORGAN; SHELBY; TIPPECANOE; TIPTON; WARREN AND WHITE COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 29.84	19.55

The following holidays shall be observed: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after Thanksgiving and Christmas Day. Any holiday which occurs on a Sunday shall be observed the following Monday, unless the legal observance of these holidays is changed by law.

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IRON0147-004 06/01/2013

ADAMS, ALLEN, BLACKFORD, DEKALB, DELAWARE (NORTHEAST THIRD OF COUNTY), FULTON (EASTERN PART), GRANT (EXCLUDING SOUTHWEST PORTION), HUNTINGTON, JAY, MIAMI (NORTHEAST HALF), NOBLE (EXCLUDING NORTHEAST TIP), STEUBEN, WABASH, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 24.94	18.62
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* IRON0292-006 06/01/2014		

FULTON (Remainder of County) and NOBLE (Northeastern Tip) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 27.62	18.66
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LABO0120-001 06/01/2013		

MARION and SHELBY COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.38	12.25
GROUP 2.....	\$ 23.13	12.25
GROUP 3.....	\$ 23.38	12.25

LABORER CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Chain Saw and Demolition Saw; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Concrete Conveyor Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Asbestos Removal and Hazardous Waste Removal.

GROUP 2: Plaster Tenders; Mason Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers and Masons; Water Blast Machine.

GROUP 3: Dynamite men, Drillers-air track or wagon drilling for explosives.

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LABO0204-001 06/01/2013

FOUNTAIN, HENDRICKS, and WARREN COUNTIES

Rates Fringes

Laborers:

Caisson and Tunnel Work in Compressed and Free Air

GROUP 1.....	\$ 21.17	12.25
GROUP 2.....	\$ 21.37	12.25
GROUP 3.....	\$ 21.47	12.25
GROUP 4.....	\$ 22.17	12.25

LABORERS

GROUP 1.....	\$ 21.17	12.25
GROUP 2.....	\$ 21.92	12.25
GROUP 3.....	\$ 22.17	12.25

LABORER CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Chain Saw and Demolition Saw; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Concrete Conveyor Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver, Asbestos Removal, Hazardous Waste Removal.

GROUP 2: Plaster Tenders; Mason Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers and Masons; Water



Blast Machine.

GROUP 3: Dynamite men, Drillers-air track or wagon drilling for explosives.

LABORER CLASSIFICATIONS For CAISSON AND TUNNEL WORK In COMPRESSED and FREE AIR

GROUP 1: Cage Tenders, Dump Men, Flagman, Signalman, Top Laborers, Rod Men.

GROUP 2: Concrete Repairmen, Lock Tenders (pressure side), Motor men, Muckers, Grout Machine, Track Layers, Air Hoist, Key Board, Agitator Car, Car Pushers, Concrete Laborers, Grout Laborers, Lock Tenders (free air side), Steel Setters, Tuggers, Switchmen.

GROUP 3: Mucking Machine, Laser Beam, Liner Plate & Ring Setter, Shield Drivers, Power Knife, Welders Burners, Pipe Jacking Machine, Skinners, Maintenance Technician, Miner, Bricklayer Tenders, Concrete Blowers, DRillers, Erectors, Form Men, Jackhammermen, Mining Machine.

GROUP 4: Dynamite Men, Drillers air track or wagon drilling for explosives.

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LABO0213-001 06/01/2013

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLS AND WHITLEY COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 19.13	11.90
GROUP 2.....	\$ 19.63	11.90
GROUP 3.....	\$ 20.13	11.90

LABORERS CLASSIFICATION

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for Masons and Plasterers); Mechanic Tenders; Window Washers and cleaners; Railroad Workers; Masonry Wall Washers; Portable Water pumps with discharge up to (3) inches; Flag & Signal Person; Waterproofing; Handling of Creosot Lumber or like treated material (excluding railroad material); Asphalt Rakers and Lutemen; Kettlemen; Air Tool Operators; Pneumatic Tool Operators; Air and Electric Vibrators and Chipping Hammer Operators; Earth Compactors Jackmen and Sheetmen working Ditches deeper than (6) ft.in depth; Laborers working in ditches (6) ft.in depth or deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layer (metallic or non-metallic); Motor driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core

Drill Operators; Cement, Lime or Silica Clay Handlers (bulk or bag); Handling of Toxic Materials damaging to clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking; Screed Man or Screw Operator on Asphalt Paver; Chain and Demolition Saw Operators; Concrete Conveyor Assemblers

GROUP 2: Plaster Tenders; Mortar Mixers; Welders (Acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operator; Scaffold Builders when working for Plasterers; Water Blast Machine

GROUP 3: Dynamite men-drillers-air track or wagon drilling for explosives

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LABO0274-001 06/01/2013

BENTON, BOONE, CARROLL, CASS, CLINTON, FULTON, HOWARD, MIAMI, MONTGOMERY, TIPPECANOE, TIPTON, and WHITE COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 21.28	12.25
GROUP 2.....	\$ 22.03	12.25
GROUP 3.....	\$ 22.28	12.25

LABORER CLASSIFICATIONS

GROUP 1: Building and construction laborers; Scaffold builders (other than for masons or plasterers); Railroad Workers; Masonry Wall Washers (interior & exterior); All Portable Water Pumps with Discharge of Up to Three (3) Inches; Handling of Creosote Lumber or Like Treated Material (excluding railroad material); Asphalt Rakers and Lutemen; Earth Compactors; Jackmen and Sheetmen Working Ditches Deeper than Six (6) Feet in Depth; Laborers Working Ditches Six (6) Feet in Depth or Deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layers (metallic or non-metallic); Motor Driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handler (bulk or bag); Handling of Toxic Material Damaging to Clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Chain Saw and Demolition Saw Operators; Concrete Saw; Concrete Conveyor Assemblers; Applying of Curing Compound; Sinking of Wellpoints; Dewatering Header Systems

GROUP 2: Plaster Tenders; Mason Tenders; Mortar Mixers; Welders (acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operators; Scaffold Builders for Plasterers; Scaffold Builders for Masons;

Water Blast Machine Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos Removal; Hazardous Waste Removal; All Boiler Setters Laborers, including Expediters, Bottom Men, Bell Men, and Mason Tenders

GROUP 3: Dynamite man, Drillers-air track or wagon for explosives.

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LAB00741-003 06/01/2013

BARTHOLOMEW, JOHNSON, MONROE, and MORGAN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 21.18	12.25
GROUP 2.....	\$ 21.93	12.25
GROUP 3.....	\$ 22.18	12.25

LABORERS CLASSIFICATIONS

GROUP 1: Building and Construction Laborers; Scaffold Builders (other than for masons or plasterers); Railroad Workers; Masonry Wall Washers (interior & exterior); Portable Water Pumps with Discharge up to three (3) inches; Handling of Creosote Lumber or Like Treated Material (excluding railroad material); Asphalt Rakers and Lutemen; Earth Compactors; Jackmen and Sheetmen Working Ditches Deeper than Six (6) Feet in Depth; Laborers Working Ditches Six (6) Feet in Depth or Deeper; Assembly of Unicrete Pump; Tile Layers (sewer or field) and Sewer Pipe Layers (metallic or non-metallic); Motor Driven Wheelbarrows and Concrete Buggies; Hyster Operators; Pump Crete Assemblers; Core Drill Operators; Cement, Lime or Silica Clay Handler (bulk or bag); Handling of Toxic Material Damaging to Clothing; Pneumatic Spikers; Deck Engine and Winch Operators; Water Main and Cable Ducking (metallic and non-metallic); Screed Man or Screw Operator on Asphalt Paver; Chain Saw and Demolition Saw Operators; Concrete Saw; Concrete Conveyor Assemblers; Applying of Curing Compound; Sinking of Wellpoints; Dewatering Header Systems

GROUP 2: Plaster Tenders; Mason Tenders; Mortar Mixers; Welders (acetylene or electric); Cutting Torch or Burner; Cement Nozzle Laborers; Cement Gun Operators; Scaffold Builders for Plasterers; Scaffold Builders for Masons; Water Blast Machine Operators; Air Tool Operators and all Pneumatic Tool Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos Removal; Hazardous Waste Removal; Biler Setters Laborers, including expediters, bottom men, bell men, and Mason Tenders

GROUP 3: Dynamite men; Drillers-air track or wagon drilling for explosives

LABO1112-001 06/01/2013

BLACKFORD, DELAWARE, GRANT, HANCOCK, HAMILTON, JAY, and MADISON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 20.86	12.25
GROUP 2.....	\$ 21.61	12.25
GROUP 3.....	\$ 21.86	12.25

LABORER CLASSIFICATIONS

GROUP 1: Building and construction laborers, scaffold builders (other than for masons of plasterers), mechanic tenders, window washers and cleaners, railroad workers, masonry wall washers, portable water pumps with discharge up to 3 inches, signal & flag person, Waterproofing, hauling of creosote lumber or like treated material (excluding railroad material), asphalt rakers and lutemen, kettlemen, air tool operator, pneumatic tool operator, air & electric vibrators and chipping hammer operator, earth compactors, jackman & sheetmen in ditches more than 6 feet deep, laborers in ditches 6' deep or deeper, assembly of uncrete pump, tile layers (sewer or field), sewer pipe layers, motor- driven wheelbarrows and concrete buggies, hyster operator, pumpcrete assemblers, core drill operator, cement, lime or silica clay handlers, handling of toxic materials damaging to clothing, pneumatic spikers, deck engine & winch operator, water main & cable ducking, screed man or screw operator on asphalt paver, chain saw & demolition saw operator, concrete conveyor assembler

GROUP 2: Plaster tenders; mortar mixers; welders (acetylene or electric); cutting torch or burner; cement nozzle laborers; cement gun operators; scaffold builders for plasterers; scaffold builders for masons; water blast machine operator; Air tool Operators and all Pnuematic Tool Operators, Air and Electric Vibrators and Chipping Hammer Operators; Asbestos removal; Hazardous waste removal; All Boiler Setters Laborers, including expediters, bottom men, bell men, and Mason Tenders

GROUP 3: Dynamite men-drillers-air track or wagon drilling for explosives

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 PAIN0047-003 06/01/2014

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MARION, MONROE, MORGAN AND SHELBY COUNTIES:

Rates	Fringes
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PAINTER

Brush and Roller.....	\$ 24.43	12.43
Spray and Sandblasting.....	\$ 25.43	12.43

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PAIN0080-001 06/01/2014

BENTON, CARROLL, CASS, CLINTON, FOUNTAIN, MONTGOMERY TIPPECANOE  
AND WARREN COUNTIES

Rates Fringes

PAINTER

Brush and Roller.....	\$ 23.85	13.80
Spray and Sandblasting.....	\$ 24.85	13.80

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PAIN0091-005 06/01/2014

FULTON COUNTY

Rates Fringes

PAINTER

Brush & Roller, Drywall Taping & Finishing, Vinyl/Paper Hanging.....	\$ 26.32	12.75
Spray.....	\$ 26.82	12.75

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PAIN0460-002 06/01/2014

WHITE COUNTY

Rates Fringes

Painters:

Brush & Roller.....	\$ 33.99	21.28
Drywall Finisher.....	\$ 34.79	21.28

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PAIN0469-001 07/01/2013

ADAMS, ALLEN, DEKALB, GRANT, HUNTINGTON, NOBLE, STEUBEN,  
WABASH, WELLS, and WHITLEY COUNTIES

Rates Fringes

Painters:

101' & over'.....	\$ 22.31	11.57
31' - 60'.....	\$ 21.71	11.57
61' - 100'.....	\$ 22.11	11.57
Brush, Roller, Paperhanger, & Drywall Finishing.....	\$ 20.86	11.57
Lead Abatement.....	\$ 25.86	11.57
Spray & Sandblast Pot Tenders and Ground Personnel.....	\$ 21.76	11.57

Spray, Sandblast, Power Tools, Waterblast, & Steam Cleaning.....	\$ 21.86	11.57
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PAIN0669-001 04/01/2014

BLACKFORD, DELAWARE, FAYETTE, FRANKLIN, HENRY, HOWARD, JAY,  
MADISON, MIAMI, RANDOLPH, RUSH, TIPTON, UNION and WAYNE COUNTIES

	Rates	Fringes
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Painters:

Brush; Roller; Paperhanging; Drywall Finishers.....	\$ 20.00	11.14
Spray/Waterblasting; Sandblasting.....	\$ 21.00	11.14

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PAIN1165-010 07/01/2013

FULTON COUNTY

	Rates	Fringes
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GLAZIER.....	\$ 23.14	14.30
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PAIN1165-013 07/01/2013

ADAMS, ALLEN, BLACKFORD, DEKALB, GRANT, HUNTINGTON, JAY, NOBLE,  
STEUBEN, WABASH, WELLS, WHITLEY

	Rates	Fringes
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GLAZIER.....	\$ 22.50	11.62
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PAIN1165-016 07/01/2013

BARTHOLOMEW, BENTON, BOONE, CARROLL, CASS, CLINTON, DELAWARE,  
FOUNTAIN, HAMILTON, HANCOCK, HENDRICKS, HOWARD, JOHNSON,  
MADISON, MARION, MIAMI, MONROE, MONTGOMERY, MORGAN, SHELBY,  
TIPPECANOE, TIPTON, WARREN, and WHITE COUNTIES

	Rates	Fringes
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GLAZIER.....	\$ 25.86	13.22
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PLAS0101-002 06/01/2007

FULTON COUNTY

	Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER...	\$ 23.19	9.75
PLASTERER.....	\$ 24.06	11.25

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PLAS0101-003 06/01/2012

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS AND  
WHITLEY COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 23.32	10.85
PLASTERER.....	\$ 24.18	9.31

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PLAS0692-006 06/01/2013

AREA #46

BARTHOLOMEW, BOONE, HENDRICKS, JOHNSON, MARION, MONROE, MORGAN  
and SHELBY COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 25.04	12.48

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PLAS0692-007 06/01/2013

AREA #75

MONROE COUNTY

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 25.00	11.30

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PLAS0692-009 07/01/2013

AREA #83

BLACKFORD, DELAWARE, GRANT, HAMILTON (Northern Part), HANCOCK  
(Northern Part), JAY, MADISON and WABASH COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 24.94	11.95
PLASTERER.....	\$ 25.69	11.75

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PLAS0692-015 06/01/2013

AREA #121

BENTON, CARROLL, CASS, CLINTON, FOUNTAIN, HOWARD, MIAMI,  
MONTGOMERY, TIPPECANOE, WARREN, WHITE and VERMILLION (Northern  
Part) COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 25.70	13.90
PLASTERER.....\$ 26.21	14.05

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PLAS0692-023 06/01/2013

AREA #532

BOONE, HAMILTON (SOUTH HALF OF COUNTY NORTH TO NEW ROUTE INDIANA #32 INCLUDING NOBLESVILLE); HANCOCK COUNTY (SOUTHERN AND WESTERN PART OF HANCOCK COUNTY, NORTH TO BUT NOT INCLUDING FORTVILLE); HENDRICKS, JOHNSON, MARION and MORGAN COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...\$ 26.00		14.00

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PLAS0821-001 05/01/2007

BARTHOLEMEW AND SHELBY COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...\$ 21.90		8.25

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PLUM0136-006 10/01/2013

MONROE COUNTY

	Rates	Fringes
Plumbers and Pipefitters.....\$ 33.91		15.51

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PLUM0157-002 07/01/2013

BENTON, CARROLL, CLINTON, FOUNTAIN, MONTGOMERY, TIPPECANOE, WARREN AND WHITE COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters.....\$ 36.02		13.74

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PLUM0166-001 07/01/2013

ADAMS, ALLEN, BLACKFORD, DE KALB, GRANT, HUNTINGTON, NOBLE, STEUBEN, WABASH, WELLS, and WHITLEY COUNTIES

	Rates	Fringes
Plumber and Steamfitter.....\$ 29.86		14.91

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PLUM0172-002 06/03/2013

CASS and FULTON COUNTIES



	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 30.50	17.53

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PLUM0440-002 12/01/2013

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, HOWARD,  
JOHNSON AND MARION COUNTIES; MIAMI COUNTY (SOUTH OF A STRAIGHT  
LINE WHERE ROUTE 218 ENTERS W. BOUNDARY); MORGAN, SHELBY and  
TIPTON COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 34.07	15.34

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PLUM0440-003 12/01/2013

DELAWARE, JAY and MADISON COUNTIES

	Rates	Fringes
Plumber and Steamfitter.....	\$ 34.07	15.34

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\* ROOF0023-003 06/01/2014

ALLEN, DEKALB, NOBLE, STEUBEN, and WHITLEY COUNTIES

	Rates	Fringes
ROOFER		
COMPOSITION.....	\$ 19.83	8.73
SLATE & TILE.....	\$ 20.33	8.73

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\* ROOF0023-007 06/01/2014

FULTON COUNTY

	Rates	Fringes
ROOFER		
COMPOSITION.....	\$ 27.61	13.07
SLATE & TILE.....	\$ 28.11	13.07

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\* ROOF0023-010 06/01/2014

ADAMS, HUNTINGTON, MIAMI, WABASH, and WELLS COUNTIES

	Rates	Fringes
ROOFER		
COMPOSITION.....	\$ 27.61	13.07
SLATE & TILE.....	\$ 28.11	13.07

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ROOF0119-003 09/01/2010

BARTHOLOMEW, BOONE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MARION, MONROE, MORGAN and SHELBY COUNTIES

Rates Fringes

Roofers:

COMPOSITION.....	\$ 23.78	10.22
SLATE and TILE.....	\$ 24.78	10.22

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ROOF0119-005 09/01/2010

BENTON, CARROLL, CASS, CLINTON, FOUNTAIN, MONTGOMERY, TIPPECANOE, WARREN and WHITE COUNTIES

Rates Fringes

ROOFER.....	\$ 23.78	10.22
Slate and Tile.....	\$ 24.78	10.22

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ROOF0205-001 05/01/2010

BLACKFORD, DELAWARE, GRANT, HOWARD, JAY, MADISON, and TIPTON COUNTIES

Rates Fringes

ROOFER.....	\$ 20.64	8.54
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SFIN0669-002 07/01/2013

Rates Fringes

SPRINKLER FITTER.....	\$ 34.04	17.63
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SHEE0020-003 07/01/2012

ADAMS, ALLEN, BLACKFORD, CASS, DEKALB, GRANT, HOWARD, HUNTINGTON, JAY, MIAMI, NOBLE, STEUBEN, WABASH, WELLS, and WHITLEY COUNTIES

Rates Fringes

Sheet metal worker (HVAC Duct Work).....	\$ 29.97	18.84
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SHEE0020-004 07/01/2010

BARTHOLOMEW, BOONE, DELAWARE, HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MADISON, MARION, MONROE, MORGAN, SHELBY AND TIPTON COUNTIES

Rates Fringes

Sheet metal worker (Including HVAC Duct Work).....\$ 31.46 16.77

SHEE0020-016 01/01/2014

FULTON COUNTY

Rates Fringes

Sheet metal worker.....\$ 28.73 20.72

SHEE0020-020 07/01/2012

BENTON, CLINTON, CARROLL, FOUNTAIN, MONTGOMERY, TIPPECANOE, WARREN AND WHITE COUNTIES

Rates Fringes

Sheet metal worker (Including HVAC Duct Work).....\$ 31.01 19.41

TEAM0135-001 04/01/2013

BARTHOLOMEW, BENTON, BLACKFORD, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, GRANT, HOWARD, JAY, MADISON, MARION, MIAMI, MONROE, MONTGOMERY, TIPPECANOE, TIPTON, WABASH, WARREN, & WHITE COUNTIES

Rates Fringes

TRUCK DRIVER GROUP 1.....\$ 26.75 344.80/WK+A GROUP 2.....\$ 27.25 344.80/WK+A GROUP 3.....\$ 27.45 344.80/WK+A GROUP 4.....\$ 27.60 344.80/WK+A GROUP 5.....\$ 28.75 344.80/WK+A

A: \$27.70 PER DAY.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Single Axle Trucks, seven (7) cu. yds. or less than ten and one-half (10 1/2) tons, dumpsters, scoop-mobiles five (5) cu.yds. and under or less than seven and one-half (7 1/2) tons, mixer trucks three (3) cu.yds. and under, air compressors and welding machines, including those pulled by separate units, batch trucks-wet or dry- 2"34-E" batches or less, truck driver helpers, warehousemen, mechanic's helpers, greasers and tiremen, all pick-up trucks and other vehicles. Drivers on dumpsters or similar dumpsters, mounted on four (4) wheel truck rated two (2) cu.yds. or less, and small pallet type fork-lift operator and drivers on pallet jacks or similar type equipment.

GROUP 2: Drivers on tandem axle eighteen (18) cu.yds. or twenty-four (24) tons gross, six (6) wheel trucks, Koehring or similar dumpsters, tract trucks, Euclids, hug bottom dumps, tournapulls, tounatrailers, tournarockers, or similar equipment when used for transportation purposes under nine (9) cu.yds. or less than thirteen and one-half (13 1/2) tons, tandems and semi-trailer service trucks, mixer trucks over three (3) cu.yds. and including six and one-half (6 1/2) cu.yds., fork lift, four (4) wheel A-frame trucks when used for transportation purposes, four (4) wheel winch trucks, pavement breakers, batch trucks-wet or dry- over 2 up to and including 4-"34-E" batches two (2) men oil distributors, fork-lift under four (4) ton and vacuum trucks.

GROUP 3: Koehring or similar dumpsters, tract trucks, semi-trailer water trucks, Euclids, hug bottom dumps, tournapulls, tournatrailers, tournarockers, tractor trailers, tandems, Q- frame winch trucks, hydrolift turcks or similar equipment when used for transportation purposes, mixer trucks over six and one-half (6 1/2) cu.yds, batch trucks wet or dry over 4 - "34-E" batches single equipment operated by employees withing this Bargaining unit. Six (6) wheel pole trailers and one (1) man oil distributors, fork-lift over four (4) ton and mobile mixers.

GROUP 4: Drivers on heavy equipment over sixteen (16) cu.yds. or twenty-four (24) ton, such as Koehring or similar dumpsters, tract trucks, Euclids, hug bottom dumps, tournapulls, tournarockers or similar equipment when used for transportation purposes, pole trailers over six (6) wheels, water pulls, low-boy trailers tandem axles, quad axle or more no-weight limitation, diesel and/or heavy equipment mechanics.

GROUP 5: Mechanic furnishing his own tools.

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 \* TEAM0364-002 06/01/2014

FULTON COUNTY

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 25.16	A+B
GROUP 2.....	\$ 25.37	A+B
GROUP 3.....	\$ 25.45	A+B
GROUP 4.....	\$ 26.03	A+B

FOOTNOTES:

A. HEALTH & WELFARE: \$287.70 per week for each employee.  
 PENSION: \$61.20 per week for each employee.

B. HOLIDAYS: New Year's Day, Memorial Day, Fourth of July,

Labor Day, Thanksgiving Day and Christmas Day.

TRUCK DRIVER CLASSIFICATIONS

- GROUP 1: Pick-up Trucks
- GROUP 2: Single Axle Trucks
- GROUP 3: Tandem, Tri-axle and Fuel Trucks
- GROUP 4: Semi-trailer Trucks

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 TEAM0414-001 07/01/2013

ADAMS, ALLEN, DEKALB, HUNTINGTON, NOBLE, STEUBEN, WELLS, AND WHITLEY COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 25.72	586.20/WK
Group 2.....	\$ 25.91	586.20/WK
Group 3.....	\$ 26.01	586.20/WK
Group 4.....	\$ 26.11	586.20/WK
Group 5.....	\$ 24.21	586.20/WK

TRUCK DRIVER CLASSIFICATIONS:

- GROUP 1: Truck Driver Helper
- GROUP 2: Truck Driver on Fork Lifts
- GROUP 3: Truck Driver on Tandem, Semi, or Tri-axle
- GROUP 4: Truck Driver on Water Trucks and Mechanic
- GROUP 5: Truck Driver Euclid/Earth Movers

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 TEAM0716-001 06/01/2013

HAMILTON, HANCOCK, HENDRICKS, JOHNSON, MORGAN, AND SHELBY COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 25.87	13.45
Group 2.....	\$ 25.94	13.45
Group 3.....	\$ 26.02	13.45

TRUCK DRIVER CLASSIFICATIONS:

- GROUP 1: Truck Driver Helper
- GROUP 2: Truck Driver on Fork Lifts
- GROUP 3: Truck Driver on Tandem, Semi, or Tri-axle

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

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).  
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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

#### Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

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

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

#### Non-Union Identifiers

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

as a General Wage Determination on that date.

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

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WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

Administrative Review Board

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

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

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END OF GENERAL DECISION



## Copeland Act Contract Provisions

### **(1) Purpose:**

This part prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

### **(2) Weekly statement with respect to payment of wages.**

- (a) As used in this section, the term employee shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.
- (b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3 and part 5 of this chapter during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on form WH 348, “Statement of Compliance”, or on an identical form on the back of WH 347, “Payroll (For Contractors Optional Use)” or on any form with identical wording. Sample copies of WH 347 and WH 348 may be obtained from the Government contracting or sponsoring agency, and copies of these forms may be purchased at the Government Printing Office.
- (c) The requirements of this section shall not apply to any contract of \$2,000 or less.
- (d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify. [29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982]

### **(3) Submission of weekly statements and the preservation and inspection of weekly payroll records.**

- (a) Each weekly statement required under Sec. 3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

- (b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

(Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1215-0017)

#### **(4) Payroll deductions permissible without application to or approval of the Secretary of Labor.**

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

- (a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.
- (b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A bona fide prepayment of wages is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.
- (c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.
- (d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: Provided, however, That the following standards are met:
  - (1) The deduction is not otherwise prohibited by law;
  - (2) It is either:
    - (i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or
    - (ii) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;
  - (3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and
  - (4) The deductions shall serve the convenience and interest of the employee.
- (e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.
- (f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.
- (g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.
- (h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.
- (i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: Provided, however, That a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.
- (j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under Sec. 516.25(a) of this title shall be kept.

- (k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either
  - (1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or
  - (2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

## **(5) Payroll deductions permissible with the approval of the Secretary of Labor.**

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under Sec. 3.5. The Secretary may grant permission whenever he finds that:

- (a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;
- (b) The deduction is not otherwise prohibited by law;
- (c) The deduction is either
  - (1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or
  - (2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and
- (d) The deduction serves the convenience and interest of the employee.

## **(6) Applications for the approval of the Secretary of Labor.**

Any application for the making of payroll deductions under Sec. 3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

- (a) The application shall be in writing and shall be addressed to the Secretary of Labor.
- (b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of Sec. 3.6, and specifies any conditions which have changed in regard to the payroll deductions.
- (c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of Sec. 3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.
- (d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.
- (e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

**(7) Action by the Secretary of Labor upon applications.**

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of Sec. 3.6; and shall notify the applicant in writing of his decision.

**(8) Prohibited payroll deductions.**

Deductions not elsewhere provided for by this part and which are not found to be permissible under Sec. 3.6 are prohibited.

**(9) Methods of payment of wages.**

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

**(10) Regulations part of contract.**

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see Sec. 5.5(a) of this subtitle.

1 SECTION 01 01 00 - SUMMARY OF THE WORK

2

3 PART 1 - GENERAL

4

5 RELATED DOCUMENTS:

6

7 Drawings and general provisions of Contract, including General and Supplementary  
8 Conditions and Division-1 Specification sections, apply to work of this section.

9

10 PROJECT/WORK IDENTIFICATION:

11 The work is site work surrounding the installation of a modular unit west of the existing  
12 Head start facility located on 812 West 13<sup>th</sup> Street in Anderson, IN. The modular unit is  
13 NOT part of this scope of work. TRC Head start is contracting out the installation of the  
14 modular building currently. Site work includes sidewalks, grading and under-ground  
15 utility hookups, water, electric, sanitary, storm, gas, for the new modular unit.

16

17 The 8" concrete block foundation, footer & plate.

18

19

20 PRIME CONTRACTS

21 There will be (1) prime contractor for all construction work – General Contractor (GC)

22

23 SCHEDULE:

24 This work is to occur immediately, with substantial completion goal of November 1<sup>st</sup>  
25 2014

26

27 WORK OF THE PROJECT:

28 The contractors are to provide all material, labor, equipment, transportation, and other  
29 efforts that may be needed to provide a complete and useable facility. The GC shall  
30 coordinate the construction of the project.

31

32 The work generally includes:

33

- 34 1. Foundations for modular unit (provided by site contractor)
- 35 2. Upgrading and adding new sidewalks
- 36 3. Site utility work

37

38

39

40 END OF SECTION 01 01 00

## SECTION 01 02 00 - ALLOWANCES

### PART 1 - GENERAL

#### RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

Reminder: General Conditions of the Contract include the following subparagraph pertaining to "Allowances":

“ the Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance;...”.

#### DESCRIPTION OF REQUIREMENTS:

Definitions and Explanations: Certain requirements of the work related to each allowance are shown and specified in contract documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by change order.

Allowances should be listed as separate items on Schedule of Values and on Continuation Sheets attached to Pay Application. Unused allowances or portions not used shall be returned back to the owner by Change Order at end of project.

The cash allowance shall be drawn against and authorized in the same method described for changes to the work.

### PART 2 - PRODUCTS (Not Applicable)

### PART 3 - EXECUTION

#### LIST OF ALLOWANCES

END OF SECTION

## SECTION 01 02 70 - APPLICATIONS FOR PAYMENT

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements governing Applications for Payment.
- B. Coordinate the Schedule of Values and Applications for Payment with the Construction Schedule, List of Subcontracts, and Submittal Schedule.

#### 1.02 SCHEDULE OF VALUES

- A. Coordinate preparation of Schedule of Values with preparation of the Construction Schedule. Correlate line items in the Schedule of Values with other required administrative schedules and forms. Each Contractor's surety company will provide written documentation of their agreement with schedule of values.
- B. Submit the Schedule of Values to the Architect via Construction Manager at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment.
  - 1. Where the Work is separated into phases that require separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- C. Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
- D. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
  - 1. Generic name.
  - 2. Related Specification Section.
  - 3. Name of subcontractor.
  - 4. Name of manufacturer or fabricator.
  - 5. Name of supplier.
  - 6. Change Orders (numbers) that have affected value.
  - 7. Dollar value.
  - 8. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.
- E. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items with separate costs for labor and material.
- F. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- G. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including

its total cost and proportionate share of general overhead and profit margin.

- H. At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.

### 1.03 APPLICATIONS FOR PAYMENT

- A. General: Each Application for Payment shall be consistent with previous applications and payments. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is the 25th day of each month, unless another day is indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period ending 7 days prior to the date for each progress payment and starting the day following the end of the preceding period.
- C. Payment Application Forms: Use Document and Continuation Sheets provided at the end of this section for Application for Payment.
- D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
- E. Transmittal: Submit 3 executed copies of Application for Payment to the Construction Manager; copies shall be complete, including waivers of lien and similar attachments.
- F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. List of principal suppliers and fabricators.
  - 3. Schedule of Values.
  - 4. Contractor's Construction Schedule (preliminary if not final).
  - 5. Schedule of principal products.
  - 6. Schedule of unit prices.
  - 7. Submittal Schedule (preliminary if not final).
  - 8. List of Contractor's staff assignments.
  - 9. List of Contractor's principal consultants.
  - 10. Copies of building permits.
  - 11. Copies of authorizations and licenses from governing authorities for performance of the Work.
  - 12. Initial progress report.
  - 13. Report of pre-construction meeting.
  - 14. Certificates of insurance and insurance policies.
- G. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for owner occupancy of designated portions of the Work. Administrative actions and submittals that shall proceed or coincide with this application include:
  - 1. Occupancy permits and similar approvals.
  - 2. Warranties (guarantees) and maintenance agreements.



3. Test/adjust/balance records.
4. Maintenance instructions (O&M Manuals).
5. Record/As-Built Drawings
6. Meter readings.
7. Start-up performance reports.
8. Change-over information related to Owner's occupancy, use, operation and maintenance.
9. Final cleaning.
10. Advice on shifting insurance coverages.
11. Final progress photographs.
12. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

H. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Assurance that unsettled claims will be settled.
4. Assurance that Work not complete and accepted will be completed without undue delay.
5. Transmittal of required Project construction records to Owner.
6. Certified property survey.
7. Proof that taxes, fees and similar obligations have been paid.
8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish and similar elements.
10. Change of door locks to Owner's access.

I. Application for Reduction of Retainage or Retainage Release: Administrative actions and submittals which must precede or coincide with submittal of the release of retainage include the following:

1. Submit (30) thirty days after approval of Final Payment Application
2. Completion and close-out of all project related items for full retainage release.
3. For partial retainage release list all remaining items with associated value(s) to be held. Value shall be amount agreeable based on Architects/Engineers estimate.

PART 2 - PRODUCTS (Not Applicable)  
PART 3 - EXECUTION (Not Applicable)  
END OF SECTION

1 SECTION 01 04 50 - CUTTING AND PATCHING

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawings and general provisions of contract, including General and Supplementary  
10 Conditions and other Division-1 Specification sections, apply to work of this section.

11  
12 DESCRIPTION OF REQUIREMENTS:

13  
14 Definition: "Cutting and patching" includes cutting into existing or new construction to provide or  
15 the installation or performance of other work and subsequent fitting and patching required to  
16 restore surfaces to their original condition. The contractor is required to perform all cutting and  
17 patching that may be required to allow all new components of the construction to be installed.  
18 The contractors are to closely examine the existing structure for and evaluate the amount of  
19 cutting and patching required to allow the designs to be fully implemented. Any cutting and  
20 patching that is required to allow the design to be fully completed is to be included in the work of  
21 the contractor whether or not it is specifically shown on the drawings or defined in the  
22 specifications manual.

23  
24 "Cutting and patching" is performed for coordination of the work, to uncover work for access or  
25 inspection, to obtain samples for testing, to permit alterations to be performed or for other similar  
26 purposes.

27  
28 Cutting and patching performed during the manufacture of products, or during the initial  
29 fabrication, erection or installation processes is not considered to be "cutting and patching"  
30 under this definition. Drilling of holes to install fasteners and similar operations are also not  
31 considered to be "cutting and patching".

32  
33 Refer to other sections of these specifications for specific cutting and patching requirements and  
34 limitations applicable to individual units of work.

35  
36 Unless otherwise specified requirements of this section apply to mechanical and electrical work.  
37 Refer to Division-15 and Division-16 sections for additional requirements and limitations on  
38 cutting and patching of mechanical and electrical work.

39  
40 WHEN REQUIRED

41  
42 Only perform cutting and patching when required as part of a quality installation procedure.  
43 Cutting and patching to install components that could have been installed with a better quality  
44 installation prior to covering the required installation area is subject to complete removal and re-  
45 installation rather than cutting and patching a newly constructed area.

46  
47 QUALITY ASSURANCE:

48  
49 Requirements for Structural Work: Do not cut and patch structural work in a manner that would  
50 result in a reduction of load-carrying capacity or of load-deflection ratio.

51  
52 Before cutting and patching the following categories of work, obtain the Architect's approval to  
53 proceed with cutting and patching as described in the procedural proposal for cutting and  
54 patching.

1 Structural steel and miscellaneous structural metals, including lintels, equipment supports, stair  
2 systems and similar categories of work.

3  
4 Structural concrete.

5 Foundation construction.

6 Structural decking.

7 Piping, ductwork, vessels and equipment.

8  
9 Operational and Safety Limitations: Do not cut and patch operational elements or safety related  
10 components in a manner that would result in a reduction of their capacity to perform in the  
11 manner intended, including energy performance, or that would result in increased maintenance,  
12 or decreased operational life or decreased safety.

13  
14 Before cutting and patching the following elements of work, and similar work elements where  
15 directed, obtain the Architect approval to proceed with cutting and patching as proposed in the  
16 proposal for cutting and patching: Control, communication, conveying, and electrical wiring  
17 systems. Be particularly careful working around spray on fireproofing. Repair all that is disturbed

#### 18 19 CUTTING AND PATCHING OF FINISHED SURFACES

20  
21 Evaluate the areas to be cut to allow new construction to be implemented. Provide all material  
22 and labor to cut, and patch back to finished condition as required to match the finishes intended  
23 for the general area.

24  
25 Visual Requirements: Do not cut and patch work exposed on the building's exterior or in its  
26 occupied spaces, in a manner that would, in the Architect's opinion, result in lessening the  
27 building's aesthetic qualities. Do not cut and patch work in a manner that would result in  
28 substantial visual evidence of cut and patch work. Remove and replace work judged by the  
29 Architect to be cut and patched in a visually unsatisfactory manner.

#### 30 31 SUBMITTALS:

32  
33 Procedural Proposal for Cutting and Patching: Where prior approval of cutting and patching is  
34 required, submit proposed procedures for this work well in advance of the time work will be  
35 performed and request approval to proceed. Include the following information, as applicable, in  
36 the submittal:

37  
38 Describe nature of the work and how it is to be performed, indicating why cutting and patching  
39 cannot be avoided. Describe anticipated results of the work in terms of changes to existing  
40 work, including structural, operational and visual changes as well as other significant elements.

41  
42 List utilities that will be disturbed or otherwise be affected by work, including those that will be  
43 relocated and those that will be out-of-service temporarily. Indicate how long utility service will  
44 be disrupted.

45  
46 Approval by the Architect to proceed with cutting and patching work does not waive the  
47 Architect's right to later require complete removal and replacement of work found to be cut and  
48 patched in an unsatisfactory manner.

#### 49 50 51 PART 2 - PRODUCTS

#### 52 53 54 MATERIAL:

1 General: Except as otherwise indicated, or as directed by the Architect, use materials for cutting  
2 and patching that are identical to existing materials. If identical materials are not available, or  
3 cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible  
4 with regard to visual effect. Use materials for cutting and patching that will result in equal-or-  
5 better performance characteristics.

6  
7  
8 PART 3 - EXECUTION

9  
10  
11 INSPECTION:

12  
13 Before cutting, examine the surfaces to be cut and patched and the conditions under which the  
14 work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take  
15 corrective action before proceeding with the work.

16  
17 PREPARATION:

18 Temporary Support: To prevent failure provide temporary support of work to be cut.

19  
20 Protection: Protect other work during cutting and patching to prevent damage. Provide protection  
21 from adverse weather conditions for that part of the project that may be exposed during cutting  
22 and patching operations.

23  
24 Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

25  
26 Take precautions not to cut existing pipe, conduit or duct serving the building but scheduled to be  
27 relocated until provisions have been made to bypass them.

28  
29 PERFORMANCE:

30  
31 General: Employ skilled workmen to perform cutting and patching work. Except as otherwise  
32 indicated or as approval by the Architect, proceed with cutting and patching at the earliest  
33 feasible time and complete work without delay.

34  
35 Cutting: Cut the work using methods that are least likely to damage work to  
36 be retained or adjoining work. Where possible review proposed procedures with the original  
37 installer; comply with original installer's recommendations.

38  
39 In general, where cutting is required use hand or small power tools designed for sawing or  
40 grinding, not hammering and chopping. Cut through concrete and masonry using a cutting  
41 machine such as a carborundum saw or core drill to insure a neat hole. Cut holes and slots  
42 neatly to size required with minimum disturbance of adjacent work. To avoid marring existing  
43 finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.  
44 Temporarily cover openings when not in use.

45  
46 Comply with requirements of applicable sections of Division 2 where cutting and patching  
47 required excavating and backfilling.

48  
49 By-pass utility services such as pipe and conduit, before cutting, where such utility services are  
50 shown or required to be removed, relocated or abandoned. Cut-off conduit and pipe in walls or  
51 within partitions to be removed. After by-pass and cutting, cap, valve or plug and seal tight  
52 remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter.

53  
54 Patching: Patch with seams which are durable and as invisible as possible. Comply with specified  
55 tolerance for the work.

- 1 Where feasible, inspect and test patched areas to demonstrate integrity of work.  
2  
3 Restore exposed finishes of patched areas and where necessary extend finish restoration into  
4 retained adjoining work in a manner which will eliminate evidence of patching and refinishing.  
5  
6 Where removal of walls or partitions extends one finished area into another finished area, patch  
7 and repair floor and wall surfaces in the new space to provide an even surface of uniform color  
8 and appearance. If necessary to achieve uniform color and appearance, remove existing floor  
9 and wall coverings and replace with new materials.  
10  
11 Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken  
12 surface containing patch, after patched area has received prime and base coat.  
13  
14 Patch, repair or re-hang existing ceiling as necessary to provide an even plane surface of uniform  
15 appearance.  
16  
17 CLEANING:  
18  
19 Thoroughly clean areas and spaces where work is performed or used as access to work.  
20 Remove completely point, mortar, oils, putty and items of similar nature. Thoroughly clean piping,  
21 conduit and similar features before painting or other finishing is applied. Restore damaged pipe  
22 covering to its original condition.  
23  
24  
25 END OF SECTION  
26  
27

1 SECTION 01 07 00 ABBREVIATIONS AND SYMBOLS

2 PART 1 GENERAL

3 ARCHITECTURAL DRAWING ABBREVIATIONS

4

5 Architectural abbreviations used on the Drawings shall be as defined in the following  
6 list. Discrepancies or abbreviations used on the Drawings but not included in this list  
7 shall be as interpreted by the Architect. In cases where different abbreviations are used  
8 on the drawings and the abbreviation is explained on the drawing, the drawing shall  
9 take precedence.

10

11	ABV	above	CAB	cabinet
12	AFF	above finished floor	CPT	carpet (ed)
13	ACC	access, accessible	CSMT	casement
14	AP	access panel	CI	cast iron
15	AC	acoustical	CB	catch basin
16	ACMU	acoustical concrete masonry unit	CK	caulk (ing), caulk (ing)
17			CLG	ceiling
18	ACPL	acoustical plaster	CEM	cement
19	ACP	acoustical panels	PCPL	cement plaster (Portland)
20	ACT	acoustical tile	CER	ceramic
21	ADDN	addition	CT	ceramic tile
22	ADH	adhesive	CHBD	chalkboard
23	ADJ	adjacent	CHAM	chamfer
24	ADJT	adjustable	C	channel
25	AGG	aggregate	CIR	circle
26	A/C	air conditioning	CIRC	circumference
27	ALT	alternate	CLR	clear (ance)
28	ALUM	aluminum	CLOS	closet
29	ANC	anchor, anchorage	COL	column
30	AB	anchor bolt	COMB	combination
31	ANOD	anodized	COMP	compress (ed), (ion), (ible)
32	APX	approximate	CONC	concrete
33	ARCH	architect (ural)	CMU	concrete masonry unit
34	ASB	asbestos	cx	connection
35	ASPH	asphalt	CONST	construction
36	BPT	baked paint	ci	construction joint
37	BSMT	basement	CONT	continuous or continue
38	BRG	bearing	CONTR	contract (or)
39	BM	beam or bench mark	CJT	control joint
40	BEL	below	CPR	copper
41	BET	between	CG	corner guard
42	BVL	beveled	CORR	corrugated
43	BIT	bituminous or bitumen	CTR	counter
44	BLK	block	CFL	counter-flashing
45	BLKG	blocking	CTSK	countersunk
46	BD	board	CRS	course (s)
47	BW	both ways	DP	damp-proofing

1	BOT	bottom	DEM	demolish, demolition
2	BR	brick	DMT	demountable
3	BRZ	bronze	DEPT	department
4	BLDG	building	DEP	depressed
5	BUR	built-up roofing		
6	DTL	detail	FLR	floor (ing)
7	DIAG	diagonal	FD	floor drain
8	DIAM	diameter	FLUR	fluorescent
9	DIM	dimension	FLDG	folding
10	DPR	dispenser	FTG	footing
11	DO/"	ditto	FND	foundation
12	DIV	division	FR	frame (d), (ing)
13	DR	door	FRA	fresh air
14	DTA	dovetail anchor	FS	full size
15	DTS	dovetail anchor slot	FUR	furred (ing)
16	DN	down	FUT	future
17	DS	downspout	GA	gage, gauge
18	D	drain	GV	galvanized
19	DT	drain tile	GI	galvanized iron
20	DWR	drawer	GKT	gasket (ed)
21	DWG	drawing	GC	general contract (or)
22	DF	drinking fountain	GL	glass, glazing
23	EA	each	GRG	glass reinforced gypsum
24	EW	each way	GST	glazed structural tile
25	ELEC	electric (al)	GB	grab bar
26	EC	electrical contractor	GD	grade, grading
27	EP	electrical panelboard	GR	ground
28	EWC	electric water cooler	GCMU	ground concrete masonry units
29	EL	elevation		
30	ELEV	elevator	GVL	gravel
31	EMER	emergency	GYP	gypsum
32	ENC	enclose (ure)	GBD	gypsum board
33	EPT	epoxy paint	GPL	gypsum plaster
34	EQ	equal	HDCP	handicapped
35	EQP	equipment	HR	handrail
36	EST	estimate	HBD	hardboard
37	EXH	exhaust	HDW	hardware
38	EXG	existing	HWD	hardwood
39	EB	expansion bolt	HDR	header
40	EJT	expansion joint	HTG	heating
41	EXP	exposed	HVAC	heating/ventilating/air conditioning
42	EXT	exterior		
43	FAB	fabricator	HD	heavy duty
44	FB	face brick	HWC	heavy weight concrete
45	FBD	fiberboard	HT	height
46	FGL	fiberglass	HC	hollow core
47	FRP	fiberglass reinforced	HM	hollow metal
48		plastic	HOR	horizontal
49	FRPP	fiberglass reinforced	HB	hose bibb
50		plastic panel	HWH	hot water heater

1	FIN	finish (ed)	INCIN	incinerator
2	PPE	finished floor elevation	INCL	include (d), (ing)
3	FFL	finished floor line	ID	inside diameter
4	PA	fire alarm	INS	insulate (d), (ion)
5	FE	fire extinguisher	INT	interior
6	PEC	fire extinguisher cabinet	INV	invert
7	FP	fireproof	JC	janitor's closet
8	FLG	flashing	JT	joint
9	FHWS	flathead wood screw	JST	joist
10	KCPL	Keene's cement plaster	PTD	paper towel dispenser
11	KPL	kickplate	PTR	paper towel receptor
12	KIT	kitchen	PAR	parallel
13	KO	knockout	PBD	particle board
14	LBL	label	PTN	partition
15	LAB	laboratory	PVMT	pavement
16	LAM	laminated (d)	PERF	perforate (d)
17	LVL	laminated veneer lumber	PERI	perimeter
18	LAV	laboratory	PLAS	plaster
19	LH	left hand	PLAM	plastic laminate
20	L	length or steel angle	PL	plate
21	LT	light	PWD	plywood
22	LW	lightweight	PCP	Portland cement plaster
23	LWC	lightweight concrete	PCF	pounds per cubic foot
24	LTL	lintel	PFL	pounds per lineal foot
25	LKR	locker	PSF	pounds per square foot
26	LVR	louver	PSI	pounds per square inch
27	MH	manhole	PCC	precast concrete
28	MFR	manufacture (er)	PFB	prefabricate (d)
29	MRB	marble	PCMU	prefaced concrete masonry units
30	MAS	masonry	PFN	prefinished
31	MO	masonry opening	PRF	preformed
32	MTL	material (s)	PSC	prestressed concrete
33	MAX	maximum	PL	property line
34	MECH	mechanic (al)	QT	quarry tile
35	Mc	mechanical contractor	QUAN	quantity
36	MCAB	medicine cabinet	RBT	rabbet, rebate
37	MBR	member	RAD	radius
38	MMB	membrane	RWL	rainwater leader
39	MET	metal	REC	recessed
40	MCP	metal composite panels	REF	reference
41	MCB	metal corner bead	RFL	reflect (ed), (ive), (or)
42	MEZZ	mezzanine	REFR	refrigerator
43	MWK	millwork	REG	register
44	MIN	minimum	RE	reinforce (d), (ing)
45	MIR	mirror	RCP	reinforced concrete pipe
46	misc	miscellaneous	REM	remove
47	MOD	modular or modified	REQ	required
48	MLDG	molding, moulding	RES	resilient
49	MT	mount (ed), (ing)	RET	return
50	MOV	movable		



1	MULL	mullion	RA	return air
2	NRC	noise reduction coefficient	RVS	reverse (side)
3	NOM	nominal	REV	revision (s), revised
4	NIC	not in contract	RH	right hand
5	NTS	not to scale	R	riser
6	OC	on center (s)	RD	roof drain
7	OPG	opening	RPG	roofing
8	OPP	opposite	RM	room
9	OD	outside diameter	RO	rough opening
10	OA	overall	RB	rubber base
11	OH	overhead	RBT	rubber tile
12	PT	paint (ed)	SF	sand float finish
13	PNL	panel	SND	sanitary napkin dispenser
14	SNR	sanitary napkin receptor	TPD	toilet paper dispenser
15	SCH	schedule	TPTN	toilet partition
16	SCN	screen	T&G	tongue and groove
17	SNT	sealant	TFE	top of footing elevation
18	SEC	section	TW	top of wall
19	SS	service sink	TB	towel bar
20	SHT	sheet	T	tread
21	SV	sheet vinyl	TF	trowelled finish
22	SH	shelf, shelving	TYP	typical
23	SIM	similar	UC	undercut
24	S	sink	UH	unit heater
25	SC	solid core	UL	Underwriters Laboratory
26	SPKR	speaker	UNF	unfinished
27	SPEC	specification (s)	UON	unless otherwise noted
28	SB	splash block	UR	urinal
29	SQ	square	VJ	v-joint (ed)
30	SSV	stain, seal & varnish	VBR	vapor barrier
31	SST	stainless steel	VAR	varnish/varies
32	STD	standard	VNR	veneer
33	ST	steel	VERT	vertical
34	STOR	storage	VIN	vinyl
35	SD	storm drain	VB	vinyl base
36	STR	structural	VCT	vinyl composition tile
37	SCT	structural clay tile	VF	vinyl fabric
38	SUS	suspended	VT	vinyl tile
39	SW	switch	VWC	vinyl wall Covering
40	SUP	supplier	WSCT	wainscot
41	SYM	symmetry (ical)	WC	water closet
42	SYN	synthetic	WP	waterproofing
43	SYS	system	WWF	welded wire fabric
44	TKBD	tackboard	WT	weight
45	TP	tangent point	W	width, wide
46	TEL	telephone	WG	wire glass
47	TV	television	W/	with
48	TEMP	temperature	WDW	window
49	TZ	terrazzo	WM	wire mesh
50	TH	test hole	W/O	without

1	THK	thick (ness)	WD	wood
2	THR	threshold	WB	wood base
3			WPT	working point
4				

5 SYMBOLS USED FOR ABBREVIATIONS ON DRAWINGS:

6				
7	centerline		perpendicular	
8				
9	d	penny		round

10  
11  
12 END OF SECTION  
13

1 SECTION 01 09 00 - DEFINITIONS, AND STANDARDS

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawings and general provisions of Contract, including General and Supplementary  
10 Conditions and other Division-1 Specification sections, apply to work of this section.  
11

12  
13 DESCRIPTION OF REQUIREMENTS:

14  
15 General: This section specifies procedural and administrative requirements for  
16 compliance with governing regulations and codes and standards imposed upon the  
17 Work. These requirements include obtaining permits, licenses, inspections, releases  
18 and similar documentation, as well as payments, statements and similar requirements  
19 associated with regulations, codes and standards.  
20

21 The term, "Regulations", is defined to include laws, statutes, ordinances and lawful  
22 orders issued by governing authorities, as well as those rules, conventions and  
23 agreements within the construction industry which effectively control the performance  
24 of the work regardless of whether they are lawfully imposed by governing authority or  
25 not.  
26

27  
28 DEFINITIONS:

29  
30 The terms General Contractor and Construction Manager shall be used interchangeably  
31 and shall be considered to have the same meaning throughout the Contract  
32 Documents.  
33

34 General Explanation: A substantial amount of specification language consists of  
35 definitions of terms found in other contract documents, including the drawings.  
36 (Drawings are recognized as being diagrammatic in nature and not completely  
37 descriptive of the requirements indicated thereon). Certain terms used in contract  
38 documents are defined in this article. Definitions and explanations contained in this  
39 section are not necessarily either complete or exclusive, but are general for the Work to  
40 the extent that they are not stated more explicitly in another element of the contract  
41 documents.  
42

43 General Requirements: The provisions or requirements of other Division-1 sections  
44 apply to entire work of the Contract and, where so indicated, to other elements which  
45 are included in the project.  
46

47 Indicated: The term "indicated", is a cross-reference to graphic representations, notes  
48 or schedules on the drawings, to other paragraphs or schedules in the specifications,  
49 and to similar means of recording requirements in contract documents. Where terms

1 such as "shown", "noted", "scheduled", and "specified" are used in lieu of "indicated",  
2 it is for the  
3 purpose of helping the reader locate the cross-reference, and no limitation of location is  
4 intended except as specifically noted.

5  
6 Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed",  
7 "requested", "authorized", "selected", "approved", "required", "accepted", and  
8 "permitted" mean "directed by Architect", "requested by Architect", and similar  
9 phrases. However, no such implied meaning will be interpreted to extend  
10 Architect's/Engineer's responsibility into Contractor's area of construction supervision.

11  
12 Approve: Where used in conjunction with the Architect's/ Engineer's response to  
13 submittals, requests, applications, inquiries, reports and claims by the Contractor, the  
14 meaning of term "approved" will be held to limitations of the Architect's/ Engineer 's  
15 responsibilities and duties as specified in General and Supplementary Conditions. In no  
16 case will the Architect/ Engineer's approval be interpreted as a release of the  
17 Contractor from responsibilities to fulfill requirements of contract documents.

18  
19 Project Site: The term "project site" is defined as the space available to the Contractor  
20 for performance of the Work, either exclusively or in conjunction with others performing  
21 other work as part of the project. The extent of the project site is shown on the  
22 drawings, and may or may not be identical with the description of the land upon which  
23 project is to be built.

24  
25 Provide: Except as otherwise defined in greater detail, the term "provide" means "to  
26 furnish and install, complete and ready for intended use", as applicable in each  
27 instance. unless specifically noted "furnish" means the same as provide. Unless  
28 specifically described otherwise "install" means the same as provide.

29  
30 Installer: The term "installer" is defined as "the entity" (person or firm) engaged by the  
31 Contractor, its subcontractor or subcontractor for performance of a particular unit of  
32 work at the project site, including installation, erection, application and similar required  
33 operations. It is a requirement that installers are experienced in the operations they are  
34 engaged to perform.

35  
36 Testing Laboratories: The term "testing laboratory" is defined as an independent entity  
37 engaged to perform specific inspections or tests of the work, either at the project site or  
38 elsewhere, and to report, and (if required) interpret results of those inspections or tests.

#### 39 40 41 DRAWING SYMBOLS:

42  
43 General: Included in section 01070 of this specification a list of drawing symbols and  
44 abbreviations is listed. Where not otherwise noted, symbols are defined by  
45 "Architectural Graphic Standards", published by John Wiley & Sons, Inc., seventh  
46 edition. Where a specific note is made on a drawing indicating a material type, that  
47 symbol shall become the dominant symbol indication for the drawings.

48 Mechanical/Electrical

49

1 Drawings: Graphic symbols used on mechanical and electrical drawings are generally  
2 aligned with symbols recommended by ASHRAE. See divisions 15 and 16 for additional  
3 definitions of symbols. Where appropriate, these symbols are supplemented by more  
4 specific symbols as recommended by other technical associations including ASME,  
5 ASPE, IEEE and similar organizations. Refer instances of uncertainty to the Architect/  
6 Engineer for clarification before proceeding. See also mechanical and electrical  
7 drawings for symbol identifications  
8  
9

## 10 INDUSTRY STANDARDS:

11  
12 Applicability of Standards: Except where more explicit or stringent requirements are  
13 written into the contract documents, applicable construction industry standards have  
14 the same force and effect as if bound into or copied directly into the contract  
15 documents. Such industry standards are made a part of the contract documents by  
16 reference. Individual specification sections indicate which codes and standards the  
17 Contractor must keep available at the project site for reference.  
18

19 Referenced standards (standards referenced directly in the contract documents) take  
20 precedence over non-referenced standards that are recognized in the industry for  
21 applicability to the Work.  
22

23 Non-referenced Standards: Except as otherwise limited by the contract documents,  
24 non-referenced standards recognized in the construction industry are defined as having  
25 direct applicability to the Work and will be enforced for the performance of the Work.  
26 The decision as to whether an industry code or standard is applicable to the Work, or  
27 as to which of several standards are applicable, is the sole responsibility of the  
28 Architect.  
29

30 Publication Dates: Except as otherwise indicated, where compliance with an industry  
31 standard is required, comply with standard in effect as of date of contract documents.  
32

33 Conflicting Requirements: Where compliance with two or more standards is specified,  
34 and where these standards establish different or conflicting requirements for minimum  
35 quantities or quality levels, the most stringent requirement will be enforced, unless the  
36 contract documents specifically indicate a less stringent requirement. Refer  
37 requirements that are different, but apparently equal, and uncertainties as to which  
38 quality level is more stringent to the Architect for a decision before proceeding.  
39

40 Minimum Quantities or Quality Levels: In every instance the quantity or quality level  
41 shown or specified in intended to be the minimum for the work to be provided or  
42 performed. Unless otherwise indicated, the actual work may either comply exactly, with  
43 in specified tolerances, with the minimum quantity or quality specified, or may exceed  
44 that minimum within reasonable limits. In complying with requirements, the indicated  
45 numeric values are either minimum or maximum values, as notes, or as appropriate for  
46 the context of the requirements. Refer instances of uncertainty to the Architect for  
47 decision before proceeding.  
48

49 Copies of Standards: The contract documents require that each entity performing work  
50 be experienced in that part of the work being performed. Each entity is also required to

1 be familiar with industry standards applicable to that part of the work. Copies of  
2 applicable standards are not bound with the contract documents.

3  
4 Where copies of standards are needed for proper performance of the Work, the  
5 Contractor is required to obtain such copies directly from the publication source.

6  
7 Although certain copies of standards needed for enforcement of the requirements may  
8 be required submittals, the Architect/ Engineer reserves the right to require the  
9 Contractor to submit additional copies of these standards as necessary for  
10 enforcement of the requirements.

#### 11 12 13 GOVERNING REGULATIONS/AUTHORITIES:

14  
15 General: The procedure followed by the Architect has been to contact governing  
16 authorities where necessary to obtain information needed for the purpose of preparing  
17 contract documents; recognizing that such information may or may not be of  
18 significance in relation to the Contractor's responsibilities for performing the Work.  
19 Contact governing authorities directly for necessary information and decision having a  
20 bearing on performance of the Work.

21  
22 This Project is to conform to the Building Laws of The State of Indiana and The United  
23 States of America.

24  
25 Copies of Regulations: Obtain copies of the following regulations and retain at the  
26 project site during the Contract Time, available for reference by parties at the site who  
27 have a reasonable need for such reference.

28  
29 Uniform Building Code and Indiana Amendments  
30 Uniform Mechanical Code and Indiana Amendments  
31 National Electrical Code and Indiana Amendments  
32 Uniform Plumbing Code and Indiana Amendments  
33 OSHA Regulations for site safety.

#### 34 35 36 SUBMITTALS:

37 Permits, Licenses and Certificates: For the Owner's records, submit copies of permits,  
38 licenses, certifications, inspection reports, releases, jurisdictional settlements, notices,  
39 receipts for fee payments, judgments, and similar documents, correspondence and  
40 records established in conjunction with compliance with standards and regulations  
41 bearing upon performance of the work.

42  
43  
44 PART 2 - PRODUCTS (not applicable)

45  
46  
47 PART 3 - EXECUTION (not applicable)

48  
49 END OF SECTION

1 SECTION 01 20 00 - PROJECT MEETINGS

2  
3 PART 1 - GENERAL

4  
5 1.01 SUMMARY

6  
7 A. This Section specifies administrative and procedural requirements for project  
8 meetings including but not limited to:

- 9  
10 1. Pre-Construction Conferences.  
11 2. Pre-Installation Conferences.  
12 3. Coordination Meetings.  
13 4. Progress Meetings.  
14

15 1.02 PRE-CONSTRUCTION CONFERENCE

16  
17 A. The Architect and GC will schedule a pre-construction conference and  
18 organizational meeting at the Project site or other convenient location no later  
19 than 15 days after execution of the Agreement and prior to commencement of  
20 construction activities. The meeting will be conducted to review responsibilities  
21 and personnel assignments.  
22

23 B. Attendees: The Owner, Architect, GC and their consultants, each Prime  
24 Contractor and their superintendent, major subcontractors, manufacturers,  
25 suppliers and other concerned parties shall each be represented at the  
26 conference by persons familiar with and authorized to conclude matters relating  
27 to the Work.  
28

29 C. Agenda: Discuss items of significance that could affect progress including such  
30 topics as:

- 31  
32 1. Tentative construction schedule.  
33 2. Critical Work sequencing.  
34 3. Designation of responsible personnel.  
35 4. Procedures for processing field decisions and Change Orders.  
36 5. Procedures for processing Applications for Payment.  
37 6. Distribution of Contract Documents.  
38 7. Submittal of Shop Drawings, Product Data and Samples.  
39 8. Preparation of record documents.  
40 9. Use of the premises  
41 10. Office, Work and Storage areas.  
42 11. Equipment deliveries and priorities.  
43 12. Safety procedures.  
44 13. First aid.  
45 14. Security.  
46 15. Housekeeping.  
47 16. Working hours.  
48 17. Owner requirements.  
49 18. Temporary Facilities and Controls.  
50  
51

1 1.03 PRE-INSTALLATION CONFERENCES

- 2
- 3 A. Conduct a pre-installation conference at the site before each construction
- 4 activity that requires coordination with other construction. The installer and
- 5 representatives of manufacturers and fabricators involved in or affected by the
- 6 installation, and its coordination or integration with other materials and
- 7 installations that have preceded or will follow, shall attend the meeting. Advise
- 8 the Architect and GC of scheduled meeting dates.
- 9
- 10 B. Review the progress of other construction activities and preparations for the
- 11 particular activity under consideration at each pre-installation conference,
- 12 including requirements for:
- 13 1. Contract Documents.
- 14 2. Options.
- 15 3. Related Change Orders.
- 16 4. Purchases.
- 17 5. Deliveries.
- 18 6. Shop Drawings, Product Data and quality control Samples.
- 19 7. Possible conflicts.
- 20 8. Compatibility problems.
- 21 9. Time schedules.
- 22 10. Weather limitations.
- 23 11. Manufacturer's recommendations.
- 24 12. Compatibility of materials.
- 25 13. Acceptability of substrates.
- 26 14. Temporary facilities.
- 27 15. Space and access limitations.
- 28 16. Governing regulations.
- 29 17. Safety.
- 30 18. Inspection and testing requirements.
- 31 19. Required performance results
- 32 20. Recording requirements.
- 33 21. Protection.
- 34
- 35 C. GC will record significant discussions and agreements and disagreements of
- 36 each conference, along with the approved schedule. GC will distribute the
- 37 record of the meeting to everyone concerned, promptly, including the Owner
- 38 and Architect.
- 39
- 40 D. Do not proceed if the conference cannot be successfully concluded. Initiate
- 41 whatever actions are necessary to resolve impediments to performance of Work
- 42 and reconvene the conference at the earliest feasible date.
- 43

44 1.04 COORDINATION MEETINGS

- 45
- 46 A. Conduct Project coordination meetings at regularly scheduled times as
- 47 scheduled by Construction Manager. Project coordination meetings are in
- 48 addition to specific meetings held for other purposes, such as regular progress
- 49 meetings and special pre-installation meetings.
- 50 B. Request representation at each meeting by every party currently involved in
- 51 coordination or planning for the construction activities involve.



1 C. 1.05 PROGRESS MEETINGS

2  
3 A. The Construction Manager/General Contractor will conduct progress meetings  
4 at the Project site at regularly scheduled intervals and will record and distribute  
5 meeting minutes.  
6

7 B. Attendees: In addition to representatives of the Owner and Architect, GC, each  
8 Contractor, subcontractor, supplier or other entity concerned with current  
9 progress or involved in planning, coordination or performance of future activities  
10 shall be represented at these meetings by persons familiar with the Project and  
11 authorized to conclude matters relating to progress.  
12

13 C. Agenda: Review and correct or approve minutes of the previous progress  
14 meeting. Review other items of significance that could affect progress. Include  
15 topics for discussion as appropriate to the current status of the Project.  
16

17 1. Contractor's Construction Schedule: Contractors shall review progress  
18 since the last meeting. Determine where each activity is in relation to the  
19 Contractor's Construction Schedule, whether on time or ahead or behind  
20 schedule. Determine how construction behind schedule will be  
21 expedited; secure commitments from parties involved to do so. Discuss  
22 whether schedule revisions are required to ensure that current and  
23 subsequent activities will be completed within the Contract Time.  
24

25 2. Review the present and future needs of each entity present, including  
26 such items as:  
27 a. Interface requirements.  
28 b. Time.  
29 c. Sequences.  
30 d. Deliveries.  
31 e. Off-site fabrication problems.  
32 f. Access.  
33 g. Site utilization.  
34 h. Temporary facilities and services.  
35 i. Hours of Work.  
36 j. Hazards and risks.  
37 k. Housekeeping.  
38 l. Quality and Work standards.  
39 m. Change Orders.  
40 n. Documentation of information for payment requests.  
41

42 D. Reporting: Copies of meeting minutes will be distributed to each party present  
43 and to other parties who should have been present by GC.  
44

45 E. Schedule Updating: Construction Manager/General Contractor shall revise the  
46 construction schedule after each progress meeting where revisions to the  
47 schedule have been made or recognized. He shall issue the revised schedule to  
48 all concerned including Owner, Construction Manager, Architect and Architect's  
49 consultants.  
50

51 END OF SECTION

1 SECTION 01 34 00 - SUBMITTALS

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawings and general provisions of Contract, including General and Supplementary Conditions  
10 and other Division-1 Specification sections, apply to work of this section.

11  
12 DESCRIPTION OF REQUIREMENTS:

13  
14 The types of submittal requirements specified in this section include shop drawings, product  
15 data, samples and miscellaneous work-related submittals. Individual submittal requirements are  
16 specified in applicable sections for each unit of work. Refer to other Division-1 sections and  
17 other contract documents for requirements of administrative submittals.

18  
19 Definitions: Work-related submittals of this section are categorized for convenience as follows:

20  
21 Shop drawings include specially-prepared technical data for this project, including drawings,  
22 diagrams, performance curves, data sheets, schedules, templates, patterns, reports,  
23 calculations, instructions, measurements and similar information not in standard printed form for  
24 general application to a range of similar projects.

25  
26 Product data include standard printed information on materials, products and systems; not  
27 specially-prepared for this project, other than the designation of selections from among  
28 available choices printed therein.

29  
30 Samples include both fabricated and un-fabricated physical examples of materials, products  
31 and units of work; both as complete units and as smaller portions of units of work; either for  
32 limited visual inspection or (where indicated) for more detailed testing and analysis.

33  
34 Mock-ups are a special form of samples, which are too large or otherwise inconvenient for  
35 handling in specified manner for transmittal of sample submittals.

36  
37 Miscellaneous submittals related directly to the work (non-administrative) include warranties,  
38 maintenance agreements, workmanship bonds, project photographs, survey data and reports,  
39 physical work records, quality testing and certifying reports, copies of industry standards,  
40 record drawings, field measurement data, operating and maintenance materials, overrun stock,  
41 and similar information, devices and materials applicable to the work and not processed as  
42 shop drawings, product data or samples.

43  
44 GENERAL SUBMITTAL REQUIREMENTS:

45  
46 Scheduling: Where appropriate in administrative submittals (listing of products, manufacturers,  
47 suppliers and subcontractors, and in job progress schedule), show principal work-related  
48 submittals and time schedules for coordination of submittal activity with related work in each  
49 instance.

50  
51 Listing: Prepare a separate listing, organized by related specification section number sequence,  
52 showing principal work-related submittals and their initial submittal dates as required for  
53 coordination of the work. Submit listing within 45 days of date of commencement of the work.  
54

1 Coordination and Sequencing: Coordinate preparation and processing of submittals with  
2 performance of the work so that work will not be delayed by submittals. Coordinate and  
3 sequence different categories of submittals for same work, and for interfacing units of work, so  
4 that one will not be delayed for coordination of A/E's review with another.  
5

6 Preparation of Submittals: Provide permanent marking on each submittal to identify project,  
7 date, Contractor, subcontractor, submittal name and similar information to distinguish it from  
8 other submittals. Show Contractor's executed review and approval marking and provide space  
9 for Architect's "Action" marking. Package each submittal appropriately for transmittal and  
10 handling. Submittals are to be delivered to the Architects office by means of e-mail. Files are to  
11 be PDF (Portable Document File as created by Adobe Acrobat or like program) format; name of  
12 file should include spec section number and product name, multiple pages within submittals  
13 should be in one file. Each submittal should be e-mailed in separate e-mails with project name  
14 and file name in the subject line. Size of file should be of a manageable size that can be  
15 transmitted easily by email. E-mail address will be provided by Architects office after award of  
16 project. Contractor should notify architect prior to preparing of submittals with sheets larger  
17 than 11"x17", if PDF files may not be easily created, for consideration of hardcopy submittal.  
18 Submittals which are received from sources other than through Contractor's office or submitted  
19 in forms other than PDF files without prior approval will be returned by Architect "without  
20 action".  
21

22 Transmittal Form: Prepare a draft of special transmittal form for project, and submit to Architect  
23 for acceptance. Provide places to indicate project, date, "To: "; "From: "; names of  
24 subcontractors, suppliers, manufacturers, required references, category and type of submittal,  
25 purpose, description, distribution record (for both transmittal and submittals), and signature of  
26 transmitter.  
27

#### 28 SPECIFIC-CATEGORY SUBMITTAL REQUIREMENTS: 29

30 General: Except as otherwise indicated in individual work sections, comply with requirements  
31 specified herein for each indicated category of submittal. Provide and process intermediate  
32 submittals, where required between initial and final, similar to initial submittals.  
33

34 Shop Drawings: Provide newly-prepared information, in PDF file format to be e-mailed to  
35 Architects office, with graphic information at accurate scale (except as otherwise indicated),  
36 with name of preparer indicated (firm name). Show dimensions and not which are based on field  
37 measurement. Identify materials and products in the work shown. Indicate compliance with  
38 standards, and special coordination requirements. Do not allow shop drawing copies without  
39 appropriate final "Action" markings by Architect to be used in connection with the work. See  
40 General Submittal Requirements for PDF file information.  
41

42 Initial Submittal: PDF file unless approved by architect prior to preparation. If approval of  
43 hardcopy submittal 2 blue-line or black-line prints; one will be returned.  
44

45 Final Submittal: PDF file unless approved by architect prior to preparation. If approval of  
46 hardcopy submittal 3 prints, plus 2 additional prints where required for maintenance manuals;  
47 plus number of prints needed for distribution to others (other than Architect); 2 will be retained  
48 and remainder will be returned, one of which is to be marked-up and maintained by the  
49 Contractor as "Record Document".  
50

51 Product Data: Collect required data into one submittal for each unit of work or system; and mark  
52 each copy to show which choices and options are applicable to project. Include manufacturer's  
53 standard printed recommendations for application and use, compliance with standards,  
54 application of labels and seals, notation of field measurements which have

1 been checked, and special coordination requirements. Maintain one set of product data (for  
2 each submittal) at project site, available for reference by Architect and others. Submit in PDF  
3 format.

4  
5 Submittals: Do not submit product data, or allow its use on the project, until compliance with  
6 requirements of contract documents has been confirmed by Contractor. Submittal is for  
7 information and record, unless otherwise indicated. Initial submittal is final submittal unless  
8 returned promptly by Architect, marked with an "Action" which indicates an observed non-  
9 compliance. Submit in PDF format. Contractor to print where required for maintenance manuals.

10  
11 Provide a preliminary single-copy submittal where required (or desired by Contractor) for  
12 selection of options by Architect.

13  
14 Installer's Copy: Do not proceed with installation of materials, products or systems until final  
15 copy of applicable product data is in possession of Installer.

16  
17 Samples: Provide units identical with final condition of proposed materials or products for the  
18 work. Include "range" samples (not less than 3 units) where unavoidable variations must be  
19 expected, and describe or identify variations between units of each set. Provide full set of  
20 optional samples where Architect's/Engineer's selection is required. Prepare samples to match  
21 Architect's/Engineer's sample where so indicated. Include information with each sample to  
22 show generic description, source or product name and manufacturer, limitations, and  
23 compliance with standards. Samples are submitted for review and confirmation of color,  
24 pattern, texture and "kind" by Architect. Architect will not "test" samples (except as otherwise  
25 indicated) for compliance with other requirements, which are therefore the exclusive  
26 responsibility of Contractor.

27  
28 Submittal: At Contractor's option, provide preliminary submittal of a single set of samples for  
29 Architect's/Engineer's review and "Action". Otherwise, initial submittal is final submittal unless  
30 returned with "Action" which requires resubmittal. Submit 3 sets of samples in final submittal;  
31 one set will be returned.

32  
33 Quality Control Set: Maintain returned final set of samples at project site, in suitable condition  
34 and available for quality control comparisons by Architect, and by others.

35  
36 Reusable Samples: Returned samples which are intended or permitted to be incorporated in the  
37 work are so indicated in the individual work sections, and must be in undamaged condition at  
38 time of use.

39  
40 Mock-Ups: Mock-ups and similar samples specified in individual work sections recognized as  
41 a special type of sample. Comply with requirements for "samples" to greatest extent possible,  
42 and process transmittal forms to provide a record of activity.

43  
44 Inspection and Test Reports: Classify each as either "shop drawing" or "product data",  
45 depending upon whether report is uniquely prepared for project or a standard publication of  
46 workmanship control testing at point of production, and process accordingly.

47  
48 Warranties: Refer to "Products" section for specific general requirements on warranties,  
49 product/workmanship bonds, and maintenance agreements. In addition to copies desired for  
50 Contractor's use, furnish 2 executed copies, except furnish 2 additional (conformed) copies  
51 where required for maintenance manuals.

52  
53 Records of Actual Work: Furnish 4 copies, one of which will be returned for inclusion in "Record  
54 Documents" as specified in "Closeout" section.

1 Standards: Where copy submittal is indicated, and except where specified integrally with  
2 "Product Data" submittal, submit a single copy for Architect's/Engineer's use. Where  
3 workmanship at project site and elsewhere is governed by standard, furnish additional copies to  
4 fabricators, installers and others involved in performance of the work.  
5  
6 Closeout Submittals: Refer to individual work sections and to "closeout" sections for specific  
7 requirements on submittal of closeout information, materials, tools and similar items.  
8  
9 Record Document Copies: Furnish one set.  
10  
11 Maintenance/Operating Manuals: See specification section related to this specific requirement.  
12  
13 Materials and Tools: Refer to individual work sections for required quantities of spare parts,  
14 extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be  
15 submitted.  
16  
17 General Distribution: Provide additional distribution of submittals (not included in foregoing copy  
18 submittal requirements) to subcontractors, suppliers, fabricators, installers, governing  
19 authorities and others as necessary for proper performance of the work. Include such additional  
20 copies in transmittal to Architect where required to receive "Action" marking before final  
21 distribution. Record distributions on transmittal forms.  
22  
23 ACTION ON SUBMITTALS:  
24  
25 Architect's/Engineer's Action: Where action and return is required or requested, Architect will  
26 review each submittal, mark with "Action", and where possible return within 2 weeks of receipt.  
27 Where submittal must be held for coordination, Contractor will be so advised by A/E without  
28 delay.  
29  
30 Action Stamp: Architect's/Engineer's action stamp, for use on submittals to be returned to  
31 Contractor, is self-explanatory as marked.  
32  
33 PART 2 - PRODUCTS (not applicable).  
34  
35 PART 3 - EXECUTION (not applicable).  
36  
37 END OF SECTION

1 SECTION 01370 – SCHEDULE OF VALUES

2

3 PART 1 – GENERAL

4

5 RELATED DOCUMENTS

6

7 Drawings and general provisions of the Contract, including General and Supplementary  
8 Conditions and Division 1 Specification Sections, apply to this Section.

9

10 SUBMITTALS

11

12 SCHEDULE OF VALUES:

13 Contractor shall submit a Schedule of Values within seven (7) days after the date of the “Notice  
14 to Proceed” or the contract date, whichever is the earlier.

15

16 Submit three (3) copies for the Owner, and the Architect/Engineer’s review.

17

18 Each Schedule of Values shall have the Contractor’s name, Bid Category name and number,  
19 project name and number and shall be dated, signed and notarized.

20

21 PART 2 – PRODUCTS

22

23 SCHEDULE FORMAT

24

25 FORM:

26 A Schedule of Values shall be submitted in the format as detailed on AIA Document G703.

27 Use the project manual Table of Contents as a guide to establish the format for the Schedule  
28 of Values. A line item shall be given for each labor and material item.

29

30 “General Conditions” items such as superintendence, bond/insurance cost, mobilization,  
31 demobilization, safety, submittals, clean up, O&M’s, record drawings, and project close-out,  
32 shall be listed as a separate line items.

33

34 A final list of additional line items will be provided at the pre-construction meeting.

35

36 PART 3 – EXECUTION

37

38 SCHEDULE CONTENT

39

40 VALUES:

41 Each item shall be the assigned separate labor and materials values for that portion of the  
42 Work.

43

44 CONTRACT BREAKDOWN/REVIEW/PURPOSE:

45 Breakdown of Contract, once accepted by the Owner and the Architect/Engineer, will be used  
46 in evaluating monthly applications for payment.

47

47 END

1 SECTION 01 41 00 - TESTING LABORATORY SERVICES

2  
3 PART 1 - GENERAL

4  
5  
6 DESCRIPTION

7  
8 Work included:

9  
10 The cost of the testing will be paid by the Owner. The GC is to coordinate and facilitate the  
11 testing with the Owners' selected testing laboratory

12  
13 Cooperate with the Owner's selected testing laboratory and all others responsible for testing and  
14 inspecting the work.

15  
16 Provide other testing and inspecting as specified to be furnished by the Contractor in this section  
17 and/or elsewhere in these Specifications.

18  
19 Related work described elsewhere:

20  
21 Requirements for testing may be described in various other sections of these Specifications.

22  
23 Where no testing requirements are described, but the Owner decides that testing is required, the  
24 Owner may direct that such testing be performed under current standards for testing. Payment  
25 for such testing will be described in this Section.

26  
27 Items that may be tested on this project shall include but not necessarily limited to the following  
28 (both new and existing): welded or bolted connections of structural steel, bearing capacity of  
29 soils and concrete.

30  
31 Work not included:

32  
33 Selection of testing laboratory: The Owner will select a pre-qualified independent testing  
34 laboratory.

35  
36 Payment for initial testing: The Owner will pay for initial services of the testing laboratory as  
37 further described in this Section.

38  
39  
40 QUALITY ASSURANCE

41 Qualifications of testing laboratory: The testing laboratory will be qualified to the Owner's  
42 approval in accordance with ASTM E329.

43  
44 Codes and standards: Testing, when required, will be in accordance with pertinent codes and  
45 regulations and with selected standards of the American Society for Testing and Materials.

46  
47 PRODUCT HANDLING

48 Promptly process and distribute required copies of test reports and related instructions to ensure  
49 necessary retesting and replacement of materials with the least possible delay in progress of the  
50 Work.

51  
52  
53 PAYMENT FOR TESTING

54 Initial services The Owner will pay for initial testing services requested by Owner.

55 When initial test indicate non-compliance with the Contract Documents, the costs of initial test  
56 associated with the non-compliance will be deducted by the Owner from the Contract Sum.

1  
2 Retesting: When initial test indicate non-compliance with the Contract Documents, all  
3 subsequent retesting occasioned by the non-compliance shall be performed by the same testing  
4 agency and the costs thereof will be deducted by the Owner from the Contract Sum.  
5

#### 6 7 CODE COMPLIANCE TESTING

8 Inspections and tests required by codes or ordinances, or by a plan approval authority, and which  
9 are made by a legally constituted authority, shall be the responsibility of and shall be paid for by  
10 the Contractor, unless otherwise provided in the Contract Documents.

#### 11 12 CONTRACTOR'S CONVENIENCE TESTING

13 Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole  
14 responsibility of the Contractor.  
15

#### 16 INSPECTION BY OWNER'S PERSONNEL

17 From time to time, personnel in the employ of the Owner may inspect the Work where the Work is  
18 in progress, but shall have no authority to direct the Contractor or request changes in the Work  
19 except through the Architect.  
20

#### 21 PART 2 - PRODUCTS

22  
23 Not Applicable

#### 24 PART 3: EXECUTION

#### 25 26 COOPERATION WITH TESTING LABORATORY

27 Representatives of the testing laboratory shall have access to the Work at all times. Provide  
28 facilities for such access in order that the laboratory may properly perform its function.  
29

#### 30 31 TAKING SPECIMENS

32 Specimens and samples for testing, unless otherwise provided in the Contract Documents, will  
33 be taken by the testing personnel. Sampling equipment and personnel will be provided by the  
34 testing laboratory. Deliveries of specimens and samples to the testing laboratory will be  
35 performed by the testing laboratory.  
36

#### 37 38 SCHEDULES FOR TESTING

39 Establishing the schedule:

40 By advance discussion with the testing laboratory selected by the Owner, determine the time  
41 required for the laboratory to perform its tests and to issue each of its findings. Provide required  
42 time within the construction schedule.  
43

44 Revising the schedule:

45 When changes of construction schedule are necessary during construction, coordinate such  
46 changes of schedule with the testing laboratory as required.  
47

48 Adherence to schedule:

49 When the testing laboratory is ready to test according to the established schedule, but is  
50 prevented from testing or taking specimens due to incompleteness of the Work, all extra charges  
51 for testing attributable to the delay may be back-charged to the Contractor and shall not be  
52 borne by the Owner.  
53

#### 54 55 ALTERNATIVE INSPECTION PROCEDURE



- 1 The Architect shall have the right to require alternative inspection procedure other than as
- 2 specified when, in the Architect's judgment; other inspections are required to demonstrate
- 3 compliance with the Contract requirements. Costs of such alternative inspections will be borne
- 4 by the Owner if products are found to comply; otherwise, costs shall be borne by the Contractor.
- 5
- 6 END OF SECTION

1 SECTION 01 50 00 - TEMPORARY FACILITIES

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawings and general provisions of the Contract, including General and Supplementary  
10 Conditions and other Division-1 Specification sections, apply to the work of this section.

11  
12 DIVISION OF RESPONSIBILITIES

13  
14 The General Contractor is responsible for all temporary facilities listed in this specification  
15 section and required for a complete well executed project.  
16 with the following exceptions:

17  
18 DESCRIPTION OF REQUIREMENTS:

19  
20 All contractors are to closely follow the regulations set forward by all governing agency  
21 including OSHA for safety at the jobsite. The requirements set forward below are minimums  
22 that are not in any way to conflict with OSHA standards. The contractors are to provide  
23 items beyond the listing wherever required by public safety standards and OSHA.

24  
25 This section specifies administrative and procedural requirements for temporary services  
26 and facilities, including such items as temporary utility services, temporary construction and  
27 support facilities, and project security and protection.

28  
29 Use Charges: Contractor shall be responsible for making each particular connection that is  
30 needed to accomplish the work.

31  
32 All utility usage bills except telephone will be paid by the owner during both phases.

33  
34 Temporary utility services required for use at the project site include but are not limited to  
35 the following:

- 36  
37 Water service and distribution.  
38 Temporary electric power and light.  
39 Telephone service.  
40 Storm and sanitary sewer.

41  
42 Provide adequate utility capacity at each stage of construction. Prior to availability of  
43 temporary utilities at the site, provide trucked-in services for start-up of construction  
44 operations.

45  
46 Obtain and pay for temporary easements required to bring temporary utilities to the project  
47 site, where the Owner's permanent easement cannot be utilized for that purpose.

48  
49 Temporary construction and support facilities required for the project include but are not  
50 limited to the following:

- 1
- 2 Temporary heat.
- 3 Field offices and storage sheds.
- 4 Temporary roads and paving.
- 5 Sanitary facilities, including drinking water.
- 6 Dewatering facilities and drains.
- 7 Temporary enclosures.
- 8 Hoists and temporary elevator use.
- 9 First aid station.
- 10 Project identification, bulletin boards and signs.
- 11 Waste disposal services.
- 12 Rodent and pest control.
- 13 Construction aids and miscellaneous general services and
- 14 facilities.

15  
16 Alternate temporary services and facilities, equivalent to those specified, may be used,  
17 subject to acceptance by the Architect.

18  
19 Security and protection facilities and services required for the project include but are not  
20 limited to the following:

- 21
- 22 Temporary fire protection.
- 23 Barricades, warning signs, lights.
- 24 Sidewalk bridge or enclosure fence for the site.
- 25 Environmental protection.

26  
27 Alternate security and protection methods or facilities, equivalent to those specified, may  
28 be used, subject to acceptance by the Architect.

29  
30  
31 **QUALITY ASSURANCE:**

32  
33 Regulations: Comply with requirements of local laws and regulations governing construction  
34 and local industry standards, in the installation and maintenance of temporary services and  
35 facilities, including but not limited to the following:

- 36
- 37 Building Codes, including local requirements for permits,
- 38 testing and inspection.
- 39 Health and safety regulations.
- 40 Utility company regulations and recommendations governing
- 41 temporary utility services.
- 42 Police and Fire Department rules and recommendations.
- 43 Police and Rescue Squad recommendations.
- 44 Environmental protection regulations governing use of water and
- 45 energy, and the control of dust, noise and other nuisances.

46  
47  
48 Standards: Comply with the requirements of NFPA Code 241, "Building Construction and  
49 Demolition Operations", the ANSI-A10 Series standards for "Safety Requirements for

1 Construction and Demolition", and the NECA National Joint Guideline NJG-6 "Temporary  
2 Job Utilities and Services".

3  
4 Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", as  
5 prepared jointly by AGC and ASC for industry recommendations.

6  
7 Inspections: Inspect and test each service before placing temporary utilities in use. Arrange  
8 for required inspections and tests by governing authorities, and obtain required  
9 certifications and permits for use.

10  
11  
12 **SUBMITTALS:**

13  
14 Reports and Permits: During progress of the work, submit copies of reports and permits  
15 required by governing authorities, or necessary for installation and efficient operation of  
16 temporary services and facilities.

17  
18 Submit copies of reports of tests, inspections, meter readings and similar procedures  
19 performed on temporary utilities before, during and after performance of the work. Submit  
20 copies of permits, easements and similar documentation necessary for the installation, use  
21 and operation of temporary utility services. Reports and permits required for the use of  
22 temporary utility services and their use include but are not limited to the following:

- 23  
24 Temporary heat.  
25 Ventilation.  
26 Temporary electric power and light.

27  
28  
29 **JOB CONDITIONS:**

30  
31 General: Provide each temporary service and facility ready for use at each location when the  
32 service or facility is first needed to avoid delay in performance of the work. Maintain, expand  
33 as required and modify temporary services and facilities as needed throughout the  
34 progress of the Work. Do not remove until services or facilities are no longer needed, or are  
35 replaced by the authorized use of completed permanent facilities.

36  
37 With the establishment of the job progress schedule, establish a schedule for the  
38 implementation and termination of service for each temporary utility. At the earliest feasible  
39 time, and when acceptable to the Owner and Architect, change over from the use of  
40 temporary utility service to the use of the permanent service, to enable removal of the  
41 temporary utility and to eliminate possible interference with completion of the work.

42  
43 Conditions of Use: Operate temporary services and facilities in a safe and efficient manner.  
44 Do not overload temporary services or facilities, and do not permit them to interfere with the  
45 progress of the work. Do not allow unsanitary conditions, public nuisances or hazardous  
46 conditions to develop or persist on the site.

47  
48 Temporary Utilities: Do not permit the freezing of pipes, flooding or the contamination of  
49 water sources.

1 Temporary Construction and Support Facilities: Maintain temporary facilities in such a  
2 manner as to prevent discomfort to users. Take necessary fire prevention measures.  
3 Maintain temporary support facilities in a sanitary manner so as to avoid health problems  
4 and other deleterious effects.

5  
6 Security and Protection: Maintain site security and protection facilities in a safe, lawful and  
7 publicly acceptable manner. Take necessary measures to prevent erosion of the site.

#### 8 9 DUMPSTER

10 Each Contractor is to furnish their own dumpster and pick-up service at their cost.

## 11 12 PART 2 - PRODUCTS

### 13 14 15 MATERIALS AND EQUIPMENT:

16  
17 General: Provide new materials and equipment for temporary services and facilities; used  
18 materials and equipment that are undamaged and in serviceable condition may be used, if  
19 acceptable to the Architect. Provide only materials and equipment that are recognized as  
20 being suitable for the intended use, by compliance with appropriate standards. Temporary  
21 Utilities: Where the local utility company provides only a portion of the temporary utility,  
22 provide the remainder with matching, compatible materials and equipment. Comply with  
23 the utility company's recommendations.

24  
25 Water Hoses: Where shut-off nozzles are used at the water hose discharge, provide heavy-  
26 duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of  
27 the water distribution system.

28  
29 Electrical Service: Comply with applicable NEMA, NECA and UL standards and governing  
30 regulations for materials and layout of temporary electric service, including those  
31 requirements included in Division-16 sections.

32  
33 Voltage Differences: Provide identification warning signs at power outlets which are other  
34 than 110-129 volt power. Provide polarized outlets for plug-in type outlets, to prevent  
35 insertion of 110-120 volt plugs higher voltage outlets.

36  
37 Ground-Fault Protection: Provide receptacle outlets equipped with ground-fault circuit  
38 interrupters, reset button and pilot light, for plug-in connection of power tools and  
39 equipment.

40  
41 Electrical Power Cords: Use only grounded extension cords; use "hard-service" cords  
42 where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to  
43 connect separate lengths of electric cords, if single lengths will not reach areas of work.

44  
45 Lamps and Light Fixtures: Provide general service incandescent lamps of wattage indicated  
46 or required for adequate illumination. Protect lamps with guard cages or tempered glass  
47 enclosures, where fixtures are exposed to breakage by construction operations. Provide  
48 exterior fixtures where  
49 fixtures are exposed to the weather or moisture.

1 Temporary Construction and Support Facilities: Provide facilities that can be maintained  
2 properly throughout their use at the project site.  
3

4 Heating Units: Provide temporary heating units that have been tested and labeled by UL,  
5 FM or another recognized trade association related to the fuel being consumed.  
6

7 Temporary Offices and Similar Construction: For temporary offices, fabrication shops,  
8 storage sheds and similar construction, provide either standard prefabricated or mobile  
9 units or the equivalent job-built construction. Provide insulated, weather tight units, heated  
10 or air-conditioned where indicated, lockable entrances, operable windows, roofing,  
11 foundations adequate for normal loading, including wind loads, serviceable finishes, and  
12 mechanical and electrical equipment necessary to achieve ambient conditions indicated.  
13 See other specification sections for more requirements.  
14

15 Self-Contained Toilet Units: Provide single-occupant self- contained toilet units of the  
16 chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with  
17 a glass fiber reinforced polyester shell or similar non-absorbent material.  
18

19 Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with a flame-spread  
20 rating of 15 or less. For temporary enclosures where work is being or will be performed,  
21 provide translucent tarpaulins made of nylon reinforced laminated polyethylene to admit the  
22 maximum amount of daylight and reduce the need for temporary lighting.  
23

24 First Aid Supplies: Comply with governing regulations and recognized recommendations  
25 within the construction industry.  
26

27 Drinking Water Provide potable water approved by local health authorities. Where well  
28 lwater must be used, comply with local health authorities recommendations for type and  
29 frequency of testing water for potability.  
30

31 Sign Materials: For signs and directory boards, provide exterior type, Grade B-B High  
32 Density Concrete Form Overlay Plywood conforming to PS-1, of sizes and thicknesses  
33 indicated. Provide exterior grade acrylic-latex-base enamel for painting panels and applying  
34 graphics.  
35

36 Security and Protection Facilities:  
37

38 Fire Extinguishers: Provide type "A" fire extinguishers for temporary offices and similar  
39 spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In  
40 other locations provide type "ABC" dry chemical extinguishers, or a combination of several  
41 extinguishers of NFPA recommended types for the exposures in each case.  
42

43 Plywood: For fences and vision barriers, provide exterior type, minimum 3/8" thick plywood,  
44 prime and finish painted. For safety barriers, sidewalk bridges and similar direct-contact  
45 uses, provide minimum 5/8" thick exterior plywood, prime and finish painted.  
46

47 Open-Mesh Fencing: Provide No. 11-gage galvanized chain link fabric fencing 6 feet high  
48 with galvanized barbed wire top strand and galvanized steel pipe posts, 1-1/2" I.D. for line  
49 posts, and 2-1/2" I.D. for corner posts.  
50

1  
2 PART 3 - EXECUTION

3  
4  
5 INSTALLATION, GENERAL:

6  
7 General: Use qualified tradesmen for installation of temporary services and facilities. Locate  
8 temporary services and facilities where they will serve the entire project adequately and  
9 result in minimum interface with the performance of the Work.

10  
11 Relocate, modify and extend services and facilities as required during the course of work  
12 so as to accommodate the entire work of the project.

13  
14  
15 TEMPORARY UTILITY INSTALLATION:

16  
17 General: Engage the local utility company to install temporary service to the project, or to  
18 make connections to existing service. Arrange with the companies and existing users for an  
19 acceptable time when service can be interrupted, where necessary, to make connections for  
20 temporary services.

21  
22 Water Service:

23  
24 General: Install water service and distribution piping of sizes and pressures adequate for  
25 construction purposes during the construction period and until permanent service is in use,  
26 including but not limited to the following uses:

- 27  
28 Construction processes.  
29 Fire protection.  
30 Drinking water.  
31 Sanitary facilities.  
32 Cleaning.  
33 Plant and lawn watering.

34  
35 Obtain water service from the nearby water main of the local water authority, as permitted  
36 by the governing authority.

37  
38 Provide temporary water service with a 2" meter and shut-off valve near connection to the  
39 water main or from existing building service

40  
41 As soon as construction operations at each floor level require water, extend service, the full  
42 height of the building to form a temporary water and fire water standpipe. Provide  
43 distribution piping for temporary water to each location of use. Provide one outlet for  
44 each floor level of construction spaced so that water can be reached with a 100 foot length  
45 of hose. Provide one 3/4" flexible rubber hose 100 feet long with an adjustable nozzle, at  
46 each outlet where work requiring water is in progress.

47  
48 Maintain hose connections and outlet valves in leakproof condition. Where finish work  
49 below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size

1 to minimize the possibility of water damage. Drain water promptly from pans as it  
2 accumulates.

3  
4 Temporary Electric Power Service:

5  
6 General: Provide a weatherproof, grounded temporary electric power service and  
7 distribution system of sufficient size, capacity, and power characteristics to accommodate  
8 performance of work during the construction period. Whenever an overhead floor or roof  
9 deck has been installed, install temporary lighting adequate to provide sufficient illumination  
10 for safe work and traffic conditions in every area of work.

11  
12 Temporary Service: Install service and grounding in compliance with the National Electric  
13 Code (NFPA 70). Include necessary meters, transformers, overload protected disconnect  
14 and main distribution switch gear.

15  
16 Install electric power service underground except where overhead service must be used to  
17 avoid construction conflicts or to comply with governing regulations.

18  
19 Connect temporary service to the local electric power company main in the manner directed  
20 by company officials.

21  
22 Provide temporary service with an automatic ground-fault interrupter feature, activated from  
23 the circuits of the system.

24  
25 Power Distribution System: Provide circuits of adequate size and proper characteristics for  
26 each use. In general run wiring overhead, and rise vertically where wiring will be least  
27 exposed to damage from construction operations. Provide rigid steel conduit or equivalent  
28 raceways for wiring which must be exposed on grade, floors, decks or other areas of  
29 possible damage or abuse.

30  
31 Provide metal conduit, tubing or armored cable for protection of temporary power wiring  
32 where exposed to possible damage during construction operations. Where permitted by  
33 code, wiring of circuits not exceeding 110-120 Volt 20 Amp rating, and wiring of lighting  
34 circuits may be non-metallic sheathed cable in areas where located overhead and exposed  
35 for surveillance. Do not wire temporary lighting with plain, exposed (insulated) electrical  
36 conductors. Provide metal enclosures or  
37 boxes for wiring devices.

38  
39 Provide overload-protected disconnect switch for each temporary circuit and each  
40 temporary lighting circuit, located at the power distribution center.

41  
42 For power hand tools and task lighting, provide temporary 4- gang outlets at each floor  
43 level, spaced so that a 100 foot extension cord can reach each area of work. Provide a  
44 separate 110-120 Volt 20 Amp circuit for each 4-gang outlet (4 outlets per circuit).

45  
46 Temporary Lighting:

47  
48 Provide local switching of temporary lighting, spaced to allow lighting to be turned off in  
49 patterns to conserve energy and retain light suitable for work-in-progress, access traffic,  
50 security check and project lock-up.



1  
2 Provide not less than one 200-watt incandescent lamp per 1000 square feet of floor area,  
3 uniformly distributed, for general construction lighting, or equivalent illumination of a similar  
4 nature. In corridors and similar traffic areas provide one 100- watt incandescent lamp every  
5 50 feet. In stairways and at ladder runs, provide lamp minimum per story, located to  
6 illuminate each landing and flight.

7  
8 Install and operate temporary lighting that will fulfill security and protection requirements,  
9 without the necessity of operating the entire temporary lighting system.

10  
11 Temporary Telephones:

12  
13 General: Arrange for the local telephone company to install temporary service to the project.  
14 Provide service of the type and capacity indicated in other Division-1 sections.

15  
16 Sewers and Drainage:

17  
18 General: If existing sewers are available for temporary drainage near the site prior to  
19 completion of permanent sewers, provide temporary connections to remove effluent that  
20 can be lawfully discharged into the sewers. If existing sewers cannot be used for  
21 discharged, provide drainage ditches, dry wells, waste stabilization ponds and similar  
22 discharge facilities to remove effluent that can be lawfully discharged in that manner. If  
23 neither existing sewers nor drainage facilities can be lawfully used for discharge of effluent,  
24 provide containers to remove and dispose of effluent off the site in a lawful manner.

25  
26 Before discharge of liquid wastes into sewers or drainage facilities, filter out excessive  
27 amounts of soil, construction debris, chemicals, oils and similar contaminants that might  
28 clog sewers or pollute waterways. Provide temporary filter beds, settlement tanks,  
29 separators and similar devices to purify effluent to acceptable levels.

30  
31 Connect temporary sewers to the municipal sewer systems in the manner directed by the  
32 sewer department officials.

33  
34 Maintain temporary sewers and drainage facilities in a clean, sanitary condition, ready for  
35 maximum use. Following heavy usage, restore normal conditions promptly. Provide and  
36 maintain temporary earthen embankments and similar barriers in and around construction  
37 excavations and subgrade construction, sufficient to prevent flooding of the work by runoff  
38 of storm water from heavy rain storms.

39  
40 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION:

41  
42 General: Provide a reasonably neat and uniform appearance in temporary construction and  
43 support facilities acceptable to the Architect and the Owner.

44  
45 Locate field offices, storage and fabrication sheds and other support facilities for easy  
46 access to the Work and approved by architect and owner. Position offices so that windows  
47 give the best possible view of construction activities.

1 Except as otherwise indicated, make the change-over from use of temporary services and  
2 facilities to use of permanent services and facilities at the earliest feasible date at each  
3 portion of the building, to minimize hazards and interferences with performance of the Work.  
4  
5 Maintain field offices, storage and fabrication sheds, temporary sanitary facilities, waste  
6 collection and disposal systems, and project identification and temporary signs until near  
7 substantial completion.  
8 Immediately prior to substantial completion remove these facilities. Personnel remaining at  
9 the site beyond substantial completion will be permitted to use certain permanent facilities,  
10 under restricted use conditions acceptable to the Owner. Provide trash barrels throughout  
11 the project.  
12  
13 Temporary Heat:  
14  
15 General: Provide temporary heat where indicated or needed for performance of the Work,  
16 curing or drying of recently installed work or protection of work in place from adverse effects  
17 of low temperatures or high humidity. Select facilities known to be safe and without  
18 deleterious effect upon the work in place or being installed. Coordinate with ventilation  
19 requirements to produce the indicated ambient condition required and to minimize the  
20 consumption of fuel or energy.  
21  
22 Maintain a minimum temperature of 55 deg F (7 deg C) in permanently enclosed portions of  
23 the building and areas finished work has been installed.  
24  
25 END OF SECTION  
26

1 SECTION 01 51 50 - CONTRACTOR'S SUPERINTENDENT

2  
3 The General Contractor is to provide at least one full time construction superintendent on this  
4 project at the site full time. The Construction Superintendent (CS) is to be charged with control of  
5 the site, coordination of prime contractors and sub-contractors, sequencing of construction,  
6 expediting work, overall quality control and overall project management at the site. If in the  
7 opinion of the Owner or Architect additional contractor supervisory staff is required to coordinate  
8 and expedite the project, the GC shall add similar staff.

9  
10 The construction Superintendent is not to be a working superintendent. His charge is to expedite  
11 and coordinate the work of others.

12  
13 The quality of the Construction Superintendent is to be of the highest quality available in the  
14 industry.

15  
16 The Construction Superintendent shall have the following characteristics as a minimum:

17 A - At least eight years experience total in supervision of high quality large construction  
18 projects where quality craftsmanship is critical.

19 B - A pleasant personality with the ability to communicate with non-construction individuals.

20 C - A high degree of construction knowledge.

21 D - The ability to persuade workmen, sub-contractors and others in the project to perform at a  
22 high quality of workmanship on a regular basis.

23 E - The ability to anticipate problems in advance of the problems becoming critical allowing the  
24 problems to worked out in advance

25 F - The ability to anticipate the need for various work to be completed to allow the project to  
26 continue in a smooth fashion.

27 G - The ability to easily read drawings and specifications.

28  
29 The CS is to be employed by the Contractor for exclusive use on this project during the duration  
30 of the project. If the CS is dismissed or leaves the project for any reason the Contractor shall  
31 replace the CS immediately with another. The CS cannot be removed or replaced unless  
32 approved by the owner and design team or leaves the employment of the Construction Company.

33  
34 If during the project the design team and owner deems that the CS is not performing his role as  
35 outlined the design team may request that the CS be removed and replaced. The Contractor  
36 shall immediately replace the CS with another individual acceptable to the design team and  
37 owner . The decision of the design team is to be final in this issue.

38  
39 END OF SECTION

1 SECTION 01 54 00 – FIELD OFFICES AND SHEDS

2

3 PART ONE - GENERAL

4

5 The General Contractor is not required to provide a temporary office on the site for the duration  
6 of the construction project. NO office space can be located within the existing facility. If a  
7 temporary office structure is placed on site, Owner must approve of location.

8

9 Repair all existing surfaces to their original condition if disturbed by sheds, trailers, and  
10 construction related traffic unless plans show new work that would deem repairs unnecessary.  
11 Remove all temporary utilities as it relates to this section.

12

13 Storage Sheds

14

15 1 - All Storage sheds/storage trailers on site shall be maintained in a neat and orderly manner.  
16 The contractor is to recognize that it is the owners desire to maintain a neat and orderly  
17 appearing site throughout construction. The GC is to assign site space allocation to all other  
18 contractors.

19

20 See section above for repairs needed after trailers/sheds are removed from site

21

22 END OF SECTION

23

24

1 SECTION 01 63 10 - PRODUCTS AND SUBSTITUTIONS

2  
3 PART 1- GENERAL

4  
5 WHERE APPLICABLE:

6  
7 **It is intended that substitutions of materials occur only when products are unavailable**  
8 **as specified. This section only applies if after complete research it is determined that a**  
9 **product cannot be supplied as specified.**

10  
11 RELATED DOCUMENTS:

12  
13 Drawings and general provisions of Contract, including General and Supplementary Conditions  
14 and other Division-1 Specification sections, apply to work of this section.

15  
16  
17 DESCRIPTION OF REQUIREMENTS:

18  
19 Definitions: Definitions used in this paragraph are not intended to negate the meaning of other  
20 terms used in the contract documents, including such terms as, "specialties", "system",  
21 "structure", "finishes", "accessories", "furnishings", "special construction" and similar terms. Such  
22 terms are self-explanatory and have recognized meanings in the construction industry.

23  
24 "Products" are items purchased for incorporation in the Work, regardless of whether they were  
25 specifically purchased for the project or taken from the Contractor's previously purchased stock.  
26 The term "product" as used herein includes the terms "material", "equipment", "system" and other  
27 terms of similar intent.

28  
29 "Named Products" are products identified by use of the manufacturer's name for a product,  
30 including such items as a make or model designation, as recorded in published product literature,  
31 of the latest issue as of the date of the contract documents.

32  
33 "Materials" are products that must be substantially cut, shaped, worked, mixed, finished, refined  
34 or otherwise fabricated, processed, or installed to Form units of work.

35  
36 "Equipment" is defined as a product with operational parts, regardless of whether motorized or  
37 manually operated, and in particular, a product that requires service connections such as wiring  
38 or piping.

39  
40 Substitutions: The Contractor's requests for changes in the products, materials, equipment and  
41 methods of construction required by the contract documents are considered requests for  
42 "substitutions", and are subject to the requirements specified herein. The following are not  
43 considered as substitutions:

- 44
- 45 • Revisions to the contract documents, where requested by the Owner, or Architect are  
46 considered as "changes" not substitutions.
  - 47
  - 48 • Substitutions requested during the bidding period, which have been accepted prior to the  
49 Contract Date, are included in the contract documents and are not subject to the  
50 requirements for substitutions as herein specified.
  - 51
  - 52 • Specified Contractor options on products and construction methods included in the  
53 contract documents are choices available to the Contractor and are not subject to the  
54 requirements for substitutions as herein specified.
  - 55

1 Standards: Refer to Division-1 section "Definitions and Standards" for the applicability of industry  
2 standards to the products specified for the project, and for the acronyms used in the text of the  
3 specification sections.

4  
5  
6 **QUALITY ASSURANCE:**

7  
8 **Source Limitations:** To the fullest extent possible, provide products of the same generic kind,  
9 from a single source, for each unit of work.

10  
11 When it is discovered that specified products are available only from sources that do not or  
12 cannot produce an adequate quantity to complete project requirements in a timely manner,  
13 consult with the Architect for a determination of what product qualities are most important before  
14 proceeding. The Architect will designate those qualities, such as visual, structural, durability, or  
15 compatibility, that are most important. When the Architect's determination has been made, the  
16 Contractor is to select products from those sources that produce products that possess the most  
17 important qualities, to the fullest extent possible.

18  
19 **Compatibility of Options:** Compatibility of products is a basic requirement of product selection.  
20 When the Contractor is given the option of selecting between two or more products for use on the  
21 project, the product selected must be compatible with not her products previously selected, even  
22 if the products previously selected were also Contractor options. The complete compatibility  
23 between the various choices available to the Contractor is not assured by the various  
24 requirements of the Contract documents, but must be provided by the Contractor.

25  
26 **Substitution Request Submittal:**

27  
28 **Request for Substitutions:** Submit 3 copies of each request for substitution. In each request  
29 identify the product or fabrication or installation method to be replaced by the substitution; include  
30 related specification section and drawing numbers, and complete documentation showing  
31 compliance with the requirements for substitutions. Include the following information, as  
32 appropriate, with each request.

33  
34 Provide complete product data, drawings and descriptions of products, and fabrication and  
35 installation procedures.

36  
37 Provide samples where applicable or requested.

38  
39 Provide a detailed comparison of the significant qualities of the proposed substitution with those  
40 of the work originally specified. Significant qualities include elements such as size, weight,  
41 durability, performance and visual effect where applicable.

42  
43 Provide complete coordination information. Include all changes required in other elements of the  
44 work to accommodate the substitution, including work performed by the Owner and separate  
45 Contractors.

46  
47 Provide a statement indicating the effect the substitution will have on the work schedule in  
48 comparison to the schedule without approval of the proposed substitution. Include information  
49 regarding the effect of the proposed substitution on the Contract Time.

50  
51 Provide complete cost information, including a proposal of the net change, if any in the Contract  
52 Sum.

53  
54 Provide certification by the Contractor to the effect that, in the Contractor's opinion, after thorough  
55 evaluation, the proposed substitution will result in work that in every significant respect is equal-to

1 or better than the work required by the Contract documents, and that it will perform adequately in  
2 the application indicated.  
3  
4 Include in this certification, the Contractor's waiver of rights to additional payment or time, which  
5 may subsequently be necessary because of the failure of the substitution to perform adequately.  
6  
7 Change Order Form: Submit requests for substitutions in the form and in accordance with  
8 procedures required for change order proposals.  
9  
10 Architect's Action: Within one week of receipt of the Contractor's request for substitution, the  
11 Architect will request additional information or documentation as may be needed for evaluation of  
12 the request. Within 2 weeks of receipt of the request, or within one week of receipt of the  
13 requested additional information or documentation, which ever is later, the Architect will notify the  
14 Contractor of either the acceptance or rejection of the proposed substitution.  
15  
16 Acceptance will be in the form of a change order.  
17  
18 Rejection will include a statement giving reasons for the rejection.  
19  
20 Work-Related Submittals: The Contractor's submittal of and the Architect's acceptance of shop  
21 drawings, product data or samples Which relate to work not complying with requirements of the  
22 contract documents, does not constitute an acceptable or valid request for a substitution, nor  
23 approval thereof.  
24  
25  
26 PART 2 - PRODUCTS  
27 Not Applicable  
28  
29 PART 3 - EXECUTION  
30 Not Applicable:  
31  
32 END OF SECTION

1 SECTION 01 70 00 - PROJECT CLOSEOUT

2  
3 PART 1 - GENERAL

4  
5 RELATED DOCUMENTS:

6  
7 Drawings and general provisions of Contract, including General and Supplementary  
8 Conditions and other Division-1 Specification sections, apply to work of this section.  
9

10 DESCRIPTION OF REQUIREMENTS:

11  
12 Definitions: Project closeout is the term used to describe certain collective project  
13 requirements, indicating completion of the Work that are to be fulfilled near the end of  
14 the Contract time in preparation for final acceptance and occupancy of the Work by the  
15 Owner, as well as final payment to the Contractor and the normal termination of the  
16 Contract.  
17

18 Specific requirements for individual units of work are included in the appropriate  
19 sections in Divisions 2 through 16.  
20

21 Time of closeout is directly related to "Substantial Completion"; therefore, the time of  
22 closeout may be either a single time period for the entire Work or a series of time  
23 periods for individual elements of the Work that have been certified as substantially  
24 complete at Different dates. This time variation, if any, shall be applicable to the other  
25 provisions of this section.  
26

27 PREREQUISITES TO SUBSTANTIAL COMPLETION:

28  
29 General: Complete the following before requesting the Architect's inspection for  
30 certification of substantial completion, either for the entire Work or for portions of the  
31 Work. List known exceptions in the request.  
32

33 In the progress payment request that coincides with, or is the first request following, the  
34 date substantial completion is claimed, show either 100% completion for the portion of  
35 the Work claimed as "substantially complete", or list incomplete items, the value of  
36 incomplete work, and reasons for the Work being incomplete.  
37

38 Include supporting documentation for completion as indicated in these contract  
39 documents.  
40

41 Submit a statement showing an accounting of changes to the Contract Sum.  
42

43 Submit specific warranties, workmanship/maintenance bonds, maintenance  
44 agreements, final certifications and similar documents.  
45

46 Submit record drawings/As-built Drawings, maintenance manuals.  
47

48 Deliver tools, spare parts, and extra stock of material and similar physical items to the  
49 Owner. A signed receipt, listing all items required/turned over by contractor on one  
50 document, from the owner must be presented as part of final payments.



1  
2 Complete start-up testing of systems, and instruction of the Owner's operating and  
3 maintenance personnel. Discontinue or change over and remove temporary facilities  
4 and services from the project site, along with construction tools and facilities, mock-  
5 ups, and similar elements.

6  
7 Change all filters to new.

8  
9 Complete final cleaning up requirements, including touch-up painting of marred  
10 surfaces.

11  
12 Touch-up and otherwise repair and restore marred exposed finishes.

13  
14 Inspection Procedures: Upon receipt of the Contractor's request for inspection, the  
15 Architect will either proceed with inspection or advise the Contractor of unfilled  
16 prerequisites. Contractor should not have work remaining that would be listed as "work  
17 to be finished" on the Punch List.

18  
19 Following the initial inspection, the Architect will either prepare the certificate of  
20 substantial completion, or will advise the Contractor of work which must be performed  
21 before the certificate will be issued. The Architect will repeat the inspection after  
22 notification that contractor is complete and when assured that the Work has been  
23 substantially completed.

24  
25 Results of the completed inspection will form the initial "punch-list" for final  
26 acceptance.

27  
28 Reinspection Procedure: The Architect will reinspect the Work upon receipt of the  
29 Contractor's notice that the work, including punch-list items resulting from earlier  
30 inspections, has been completed, except for these items whose completion has been  
31 delayed because of circumstances that are acceptable to the Architect. Reinspection,  
32 including area(s) to be reviewed, will be at Architects discretion and may only include  
33 certain areas and work.

34  
35 Upon completion of reinspection, the Architect will either prepare a certificate of final  
36 acceptance, or will advise the Contractor of work that is incomplete or of obligations  
37 that have not been fulfilled, but are required for final acceptance.

38  
39 If necessary, the reinspection procedure will be repeated. However, if due to incomplete  
40 work responsible contractor(s) may bear costs of reinspection process.

41  
42 Record Drawings: Maintain a record set of black line white-prints of contract drawings  
43 and shop drawings in a clean, undamaged condition. Mark-up the set of record  
44 documents to show the actual installation where the installed work varies substantially  
45 from the work as originally shown. Mark whichever drawing is most capable of showing  
46 the actual "field" condition fully and accurately; however, where shop drawings are  
47 used for mark-up, record a cross-reference at the corresponding location on the  
48 working drawings. Give particular attention to concealed work that would be difficult to  
49 measure and record at a later date. Drawings to be scanned as PDF files after approval  
50 of drawings have been given by the Architects office. Distribute as follows: Owner to

1 receive original hard copies of prints and one (1) CD containing all drawings as PDF files  
2 (send to architect for acceptance and forwarding to Owner, Architects office to receive  
3 (1) CD containing all drawings as PDF files, Construction Manager/General Contractor  
4 should retain (1) CD containing all drawings as PDF files for future reference. See  
5 mechanical specifications for any other requirements that may need to be followed.  
6 Special care should be taken to be sure that all lines, markings, text, etc. is transferred  
7 during the scanning process and that the file shows a complete and clear page.  
8

9 Record Product Data: Maintain one copy of each product data submittal. Mark these  
10 documents to show significant variations in the actual Work performed in comparison  
11 with the submitted information. Include both variations in the products as delivered to  
12 the site, and variations from the manufacturer's instructions and recommendations for  
13 installation. Give particular attention to conceal products and portions of the Work  
14 which cannot otherwise be readily discerned at a later date by direct observation. Note  
15 related change orders and mark-up of record drawings and specifications.  
16

17 Upon Completion of mark-up, submit complete set of record product data to the  
18 Architect for the Owner's records.  
19

20 Maintenance Manuals: Submit maintenance manuals as described in other  
21 specification sections in this specification manual.  
22

23 PART 2 - PRODUCTS (Not Applicable)  
24

25 PART 3 - EXECUTION  
26

27 General Operating and Maintenance Instructions: Arrange for each installer of  
28 operating equipment and other work that requires regular or continuing maintenance, to  
29 meet at the site with the Owners personnel to provide necessary basic instruction in the  
30 proper operation and maintenance of the entire Work. Where installers are not  
31 experienced in the required procedures, include instruction by the manufacturer's  
32 representatives. Provide written documentation stating what training was given and  
33 duration of training. This should be signed by both the contractor and owner and copy  
34 provided to be inserted into the O&M Manual(s).  
35

36 As part of this instruction provide a detailed review of the following items:

37 Maintenance manuals

38 Record documents

39 Spare parts and materials and attic stock

40 Tools

41 Cleaning Warranties, bonds, maintenance agreements and similar continuing  
42 commitments.  
43

44 FINAL CLEANING:

45 Cleaning: Provide final cleaning of the Work at the time indicated. Employ experienced  
46 workers of professional cleaners for final cleaning. See other specification sections for  
47 this work.  
48

49 Removal of Protection: Except as otherwise indicated or requested by the Architect,  
50 remove temporary protection devices and facilities which were installed during the

1 course of the work to protect previously completed work during the remainder of the  
2 construction period.  
3  
4 Where extra materials of value remaining after completion of associated work have  
5 become the Owner's property, dispose of these materials to the Owner's best  
6 advantage as directed.  
7  
8  
9 END OF SECTION  
10

1 SECTION 01 71 00 - PROJECT RECORD DOCUMENTS

2  
3 PART 1 - GENERAL

4  
5  
6 DESCRIPTION

7  
8 Related Requirements Specified Elsewhere.

- 9  
10
  - Section 01 72 00 Operations and Maintenance Data.
  - See divisions 15 and 16 for electronic as built drawing requirements

11  
12  
13 In addition to the requirements of the Conditions of the Contract, the following requirements shall  
14 be complied with in respect to Project Record Documents.

15  
16 The General Contractor shall maintain at the site for the Owner one record copy of:

- 17  
18
  - Drawings
  - Specifications
  - Addenda
  - Change Orders and Other Modifications to the Contract
  - Architect's Field Orders or written instructions
  - Approved Shop Drawings, Product Data and Samples
  - Field Test records
  - Construction photographs

19  
20  
21  
22  
23  
24  
25  
26  
27  
28 MAINTENANCE OF DOCUMENTS AND SAMPLES

29  
30 Store documents and samples in General Contractor's field office apart from documents used for  
31 construction.

- 32  
33
  - Provide files and racks for storage of documents
  - Provide locked cabinet or storage space for storage of samples

34  
35  
36 File documents and samples in accordance with Data Filing Format of the Uniform Construction  
37 Index.

38  
39 Maintain documents in a clean, dry, legible condition and in good order. Do not use record  
40 documents for construction purposes.

41  
42 Make documents and samples available at all times for inspection by Architect.

43  
44  
45 RECORDING

46  
47 Label each document "PROJECT RECORD" in neat large printed letters.

48  
49 Each Prime Contractor is to record information concurrently with construction progress for their  
50 portion of work. Field records of construction shall be submitted to the Architect at the close of  
51 the project for preparation of "As Built" drawings.

- 52  
53
  - Do not conceal any work until required information is recorded
  - Record horizontal and vertical locations of underground utilities and appurtenances,  
54 referenced to permanent surface improvements

55

- 1       • Record location of internal utilities and appurtenances concealed in the construction,  
2       Referenced to visible and accessible features of the structure  
3       • Field changes of dimension and detail  
4       • Changes made by Change Order  
5       • Details not on original contract drawings  
6

7 Specifications and Addenda: Legibly mark each Section to record:  
8

- 9       • Manufacturer, trade name, catalog number, and Supplier of each product and item of  
10       equipment actually installed.  
11

## 12 13 RECORD DRAWINGS

14  
15 As construction progresses each Prime Contractor is to carefully mark with dimensions the  
16 locations of all concealed piping, conduits and other materials which will not be visible after  
17 construction.

18  
19 Show all changes to the drawings as they are actually constructed in the field. These drawings  
20 will be reviewed once a month by the architect. The drawings are to be maintained and  
21 organized by the GC.  
22

## 23 24 SUBMITTAL

25  
26 At Contract closeout, the GC is to deliver the record documents to the Architect. See section  
27 01700 for other requirements.  
28

29 Accompany submittal with transmittal letter in duplicate containing:  
30

- 31       • Date  
32       • Project title and number  
33       • Contractor's name and address  
34       • Title and number of each record document  
35       • Certification that each document is complete and accurate  
36       • Signature of Contractor or his authorized representative  
37

38  
39 END OF SECTION

1 SECTION 01 71 10 - CLEANING

2  
3 PART 1 - GENERAL

4  
5 DESCRIPTION

6  
7 A. Related Requirements Specified Elsewhere.

8  
9 1. Cleaning of certain specific products are specified in their respective sections.

10  
11 B. In addition to the requirements of the Conditions of the Contract, the following  
12 requirements shall be complied with in respect to Cleaning.

13  
14 SAFETY REQUIREMENTS

15  
16 A. Hazards Control.

17  
18 1. Store volatile wastes in covered metal containers and remove from premises daily.

19 2. Prevent accumulation of wastes which create hazardous conditions.

20 3. Provide adequate ventilation during use of volatile or noxious substances.

21  
22 B. Conduct cleaning and disposal operations to comply with local ordinances and anti-  
23 pollution laws.

24  
25 1. Do not burn or bury rubbish and waste materials on project site.

26 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm  
27 or sanitary drains.

28 3. Do not dispose of wastes into streams or waterways.

29  
30 PART 2 - PRODUCTS

31  
32 A. Use only cleaning materials recommended by manufacturer of surface to be  
33 cleaned.

34  
35 B. Use cleaning materials only on surfaces recommended by cleaning material  
36 manufacturer.

37  
38 PART 3 - EXECUTION

39  
40  
41 A. Project Clean-up and Rubbish Container:

42  
43 b. No trash will be allowed to accumulate for a period of  
44 longer than one week.

45 i. The GC will be responsible for erecting a suitable, closed,  
46 relatively dust-free chute for use by all trades during  
47 construction above ground floor.

48 j. The GC will be responsible for cleaning the streets and  
49 adjacent areas during construction.

- 1 k. Cleaning of concrete foundation (water and mud) shall be  
2 by the GC to allow for masonry foundations.  
3 C. Demolition Work:  
4  
5 a. Debris resulting from the demolition work required shall be  
6 removed from the site daily.  
7 b. No removed materials will be allowed to accumulate in the  
8 building or around the premises  
9 c. It will be each Contractor's responsibility to perform as  
10 listed above, but, in case of a dispute, the Architect shall  
11 have the right to order the trash and rubbish removed, and  
12 the cost shall be charged to the Contractor responsible as  
13 may be decided by the Architect.  
14

15 D. Dumpster - Trash Service Provided by the General Contractor:

- 16  
17 a. The General Contractor shall provide a dumpster on the  
18 jobsite at all times for his use and the use of all trades for  
19 Project Clean-up, but not for the disposal of packaging  
20 and crating generated by other Prime Contractors.  
21

22 E. Clean-Up of Work Areas During Construction:

- 23  
24 a. The GC shall provide and maintain a clean-up service  
25 throughout the construction period for all areas of site and  
26 the building for all trades.  
27

28 FINAL CLEANING

29  
30 A. General Contractor shall provide the following:

- 31  
32 1. In preparation for substantial completion or occupancy, conduct final inspection  
33 of sight-exposed interior and exterior surfaces, and of concealed spaces.  
34  
35 2. Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials  
36 from sight-exposed interior and exterior finished surfaces; polish surfaces so  
37 designated to shine finish.  
38  
39 3. Repair, patch and touch-up marred surfaces to specified finish, to match  
40 adjacent surfaces.  
41  
42 4. Remove all foreign materials from roof and site area.  
43

44 B. Final clean up includes the following by the GC:

- 45  
46 1. Final cleaning shall take place after each of the Contractors has performed his  
47 cleaning work as called for in the paragraph above.  
48 2. Employ professional cleaners for final cleaning.  
49 3. Wash and clean all glass.  
50 4. Broom clean paved surfaces.

- 1 5. Clean all floor surfaces of dirt and dust, mop, and wax.
- 2 6. Polish all metal.
- 3 7. Vacuum all carpets
- 4 8. Clean all walls
- 5 9. Clean all other surfaces in preparation for use by the owner.
- 6 10. Clean all mechanical and electrical equipment. Including all dust and debris on
- 7 top of equipment in addition to items required in other divisions.
- 8 11. Mechanical chases and other areas that persons may need access to should be
- 9 cleaned out removing all construction material not needed and all other debris.
- 10 Surfaces in these areas are to be free of oils and any other chemical or
- 11 contaminants that would transfer to persons entering these spaces.
- 12 12. All cabinets, built in shelving, and other storage related areas should be clean
- 13 and ready for use owner use.
- 14
- 15 D. Owner will assume responsibility for cleaning as of time designated on certificate of
- 16 Substantial Completion, Conditional Acceptance or partial Occupancy, whichever is
- 17 first, for Owner's acceptance of Project or portion thereof.
- 18
- 19
- 20 END OF SECTION



1 SECTION 01 72 00 - OPERATIONS AND MAINTENANCE MANUALS

2  
3 PART 1 - GENERAL

4  
5 INTENT OF MANUALS

6  
7 It is critical to the completion of this project for the Owner to receive one (1) digital (PDF on disk)  
8 complete sets of detailed maintenance and as built manuals. The intent of the requirement is to  
9 form a user's manual of the complete building. Every component shall be recorded, detailed,  
10 catalogued, maintainable, replaceable, cleanable and repairable through the use of these  
11 manuals. These manuals are as important as any component in the building.

12  
13 If multi phased project, manuals shall be submitted at the end of phase one for that work. At the  
14 end of phase two and after approval of phase two manual material all information should be  
15 combined using the following requirements. Owner training of equipment shall also occur at that  
16 time.

17  
18 Last pay application and release of retainage will not be reviewed or approved until acceptable  
19 Operations and Maintenance have been received for approval and requirements followed in  
20 preparing.

21  
22 DESCRIPTION

23  
24 A. Related Requirements Specified Elsewhere.

- 25  
26 1. Section 01710 Project Record Documents  
27 2. MC and EC see divisions 15 and 16 for additional requirements.

28  
29 OPERATIONS AND MAINTENANCE DATA

30  
31 A. Each Prime contractor separately shall compile product data and related information  
32 appropriate for Owner's maintenance and operation of products furnished under the Contract.

- 33  
34 1. Prepare operating and maintenance data as specified in this Section and as referenced in  
35 other pertinent sections of Specifications.  
36  
37 2. Operations and maintenance data shall be available to the Owner at the time of beneficial  
38 occupancy.

39  
40 B. Instruct Owner's personnel in the maintenance of products and in the operation of equipment  
41 and systems.

42  
43 QUALITY ASSURANCE

44  
45 A. Preparation of data shall be done by personnel:

- 46  
47 1. Trained and experienced in maintenance and operation of the described products.  
48  
49 2. Completely familiar with requirements of this Section.  
50  
51 3. Skilled as a technical writer to the extent required to communicate essential data.  
52  
53 4. Skilled as a draftsman competent to prepare required drawings.

54  
55 FORM OF SUBMITTALS

1 A. Prepare data in the form of an instructional manual for use by Owner's  
2 personnel.

3  
4 B. Format:

5  
6  
7 1. Provide PDF of each separate product, or each piece of operating  
8 equipment.

9  
10 2. Cover: Identify each volume with type or printed title "OPERATIONS AND  
11 MAINTENANCE INSTRUCTIONS." List:

- 12 a. Title or Project.
- 13 b. Identity of separate structure as applicable.
- 14 c. Identity of general subject matter covered in the manual.

15  
16  
17 CONTENT OF MANUAL

18  
19 A. Neatly typewritten table of contents for each volume, arranged in a systematic order.

20  
21 1. Contractor, name of responsible principal, address and telephone number.

22 2. A list of each product, the name, address and telephone number of:

- 23
- 24 a. Subcontractor or installer.
- 25 b. Maintenance contractor, as appropriate.
- 26 c. Identify the area of responsibility of each.
- 27 d. Local source of supply for parts and replacement.

28  
29 3. Identify each product by product name and other identifying symbols as set  
30 forth in Contract Documents.

31  
32 B. Product Data:

33  
34 1. Include only those sheets which are pertinent to the specific product.

35 2. Annotate each sheet to:

- 36 a. Clearly identify the specific product or part installed.
- 37 b. Clearly identify the data applicable to the installation.
- 38 c. Delete references to inapplicable information.

39  
40 C. Drawings:

41  
42 1. Supplement product data with drawings as necessary clearly illustrate:

- 43 a. Relations of component parts of equipment and systems.
- 44 b. Control and flow diagrams.

45 2. Coordinate drawings with information on Record Documents to assure correct illustration of  
46 completed installation.

47 3. Do not use Record Documents as maintenance drawings.

48  
49 D. Written text, as required to supplement product data for the particular  
50 installation:

51  
52 1. Organize in a consistent format under separate headings for different  
53 procedures.

54  
55 2. Provide a logical sequence of instructions for each procedure.

56

1 E. Photostatic copy of each warranty, bond and service contract issued.

2  
3 1. Provide information sheet for Owner's personnel, give:

- 4 a. Proper procedures in the event of failure.
- 5 b. Instances which might affect the validity of warranties or bonds.

6  
7 **MANUAL FOR MATERIALS AND FINISHES**

8  
9 A. Submit one (1) copy of complete manual in final form.

10  
11 B. Content, for architectural products, applied materials and finishes:

12  
13 1. Manufacturer's data, giving full information on products.

- 14 a. Catalog number, size, composition.
- 15 b. Color and texture designations.
- 16 c. Information required for recording special manufactured products.

17 2. Instructions for care and maintenance.

- 18 a. Manufacturer's recommendation for types of cleaning agents and methods.
- 19 b. Cautions against cleaning agents and methods which are detrimental to the
- 20 product.
- 21 c. Recommended schedule for cleaning and maintenance.

22  
23 C. Content, for moisture-protection and weather-exposed products:

24  
25 1. Manufacturer's data, giving full information on products.

- 26 a. Applicable standards.
- 27 b. Chemical composition.
- 28 c. Details of installation.

29 2. Instructions for inspection, maintenance, and repair.

30  
31 D. Additional requirements for maintenance data: The respective sections of  
32 Specifications.

33  
34 E. Provide complete information for products specified in all specification  
35 sections with no exception.

36  
37 **MANUAL FOR EQUIPMENT AND SYSTEMS**

38  
39 A. Submit one (1) copy of complete manual in final form.

40  
41 B. Content for each unit of equipment and system as appropriate:

42  
43 1. Description of unit and component parts.

- 44 a. Function, normal operation characteristics, and limiting conditions.
- 45 b. Performance curves, engineering data and tests.
- 46 c. Complete nomenclature and commercial number of all replacement parts.

47  
48 2. Operation procedures:

- 49 a. Start-up, break-in, routine and normal operating instructions.
- 50 b. Regulation, control, stopping, shut-down and emergency instructions.
- 51 c. Summer and winter operating instructions.
- 52 d. Special operating instructions.

53  
54 3. Maintenance Procedures:

- 55 a. Routine operations
- 56 b. Guide to "trouble-shooting"

- 1 c. Disassembly, repair and reassembly.
- 2 d. Alignment, adjusting and checking.
- 3
- 4 4. Servicing and lubrication schedule:
  - 5 a. List of lubricants required.
  - 6
  - 7 5. Manufacturer's printed operating and maintenance instructions.
  - 8 6. Description of sequence of operation by control manufacturer.
  - 9 7. Original and manufacturer's parts list, illustrations assembly drawings and diagrams required.
  - 10 8. As-installed control diagrams by controls manufacturer.
  - 11 9. Each contractor's coordination drawings.
  - 12 10. Charts of valve tag numbers, with the location and function of each valve.
  - 13 11. List of original manufacturer's spare parts, manufacturer's current prices and recommended
  - 14 quantities to be maintained in storage.
  - 15 12. Other data as required under pertinent sections of specifications.
  - 16 C. Content, for each electric and electronic system, as appropriate:
    - 17
    - 18 1. Description of system and component parts.
      - 19 a. Function, normal operating characteristics and limiting conditions.
      - 20 b. Performance curves, engineering data and tests.
      - 21 c. Complete nomenclature and commercial number of replaceable parts.
    - 22 2. Operating procedures:
      - 23 a. Routine and normal operating instructions.
      - 24 b. Sequences required.
      - 25 c. Special operating instructions;.
    - 26 3. Maintenance procedures:
      - 27 a. Routine operations.
      - 28 b. Guide to "trouble-shooting."
      - 29 c. Disassembly, repair and reassembly.
      - 30 d. Adjustment and checking.
    - 31 4. Manufacturer's printed operating and maintenance instructions.
    - 32 5. List of original manufacturer's spare parts, manufacturer's current prices
    - 33 and recommended quantities to be maintained in storage.
    - 34
    - 35 6. Other data as required under pertinent sections of Specifications.
    - 36
    - 37 D. Prepare and include additional data when the need for such data becomes
    - 38 apparent during instruction of Owner's personnel.
    - 39
    - 40 E. Additional requirements for operations and maintenance data: The respective sections of
    - 41 Specifications.
    - 42
    - 43 F. Provide complete information for products specified for:
      - 44
      - 45 1. Cabinets and Storage.
      - 46 2. Plumbing Equipment.
      - 47 3. Fire Protection.
      - 48 4. Power or Heat Generation.
      - 49 5. Refrigeration.
      - 50 6. Air Distribution.
      - 51 7. Controls and Instrumentation.
      - 52 8. Motors (Electrical)
      - 53 9. Power Generation.
      - 54 10. Power Transmission.
      - 55 11. Lighting.
      - 56 12. Special Systems.

1 13. Heating and Cooling.

2

3 SUBMITTING SCHEDULE

4

5 A. Submit one (1) copy of preliminary drafts of proposed formats and  
6 outlines of contents sixty (60) days prior to final inspection or acceptance.

7

8 B. Submit one (1) copy of completed data in final form fifteen (15) days  
9 prior to final inspection or acceptance with comments.

10

11 C. Submit one (1) copy of approved data in final form ten (10) days after  
12 final inspection or acceptance.

13

14 INSTRUCTION OF OWNER'S PERSONNEL

15

16 A. Prior to final inspection or acceptance, fully instruct Owner's designated  
17 operating and maintenance personnel in the operation, adjustment and  
18 maintenance of all products, equipment and systems.

19

20 B. Operations and maintenance manuals shall constitute the basis of  
21 instruction.

22

23 1. Review contents of manuals with personnel in full detail to explain all

24

25

APPROVALS

26

Operating and maintenance data submittals shall be approved by the Architect.

27

See Payments and Completion Articles in Conditions of the Contract.

28

29

END OF SECTION

1 SECTION 01 73 00 - WARRANTIES AND BONDS

2  
3 PART 1 - GENERAL

4  
5 WARRANTIES AND BONDS

- 6  
7 A. Compile specified warranties and bonds.  
8  
9 B. Compile specified service and maintenance contracts.  
10  
11 C. Co-execute submittals when so specified.  
12  
13 D. Review submittals when so specified.  
14  
15 E. Submit to Architect for transmittal to Owner.

16  
17 SUBMITTAL REQUIREMENTS

- 18  
19 A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the  
20 respective manufacturers, suppliers and subcontractors.  
21  
22 B. Number of original copies required: one (1) PDF each.  
23  
24 C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each  
25 item.  
26  
27 1. Product or work item.  
28 2. Firm, with name of principal, address and telephone number.  
29 3. Scope.  
30 4. Date of beginning of warranty, bond or service and maintenance contract.  
31 5. Duration.  
32 6. Provide information for Owner's personnel:  
33 a. Proper procedure in case of failure.  
34 b. Instances which might affect the validity of warranty or bond.  
35 7. Contractor, name of responsible principal, address and telephone number.

36  
37 FORM OF SUBMITTALS

- 38  
39 A. Prepare in duplicate packets.  
40  
41 B. Format: PDF Digital format  
42  
43 1. Size: digital  
44 a. Fold larger sheets to fit into binders.  
45 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND  
46 BONDS." List:  
47  
48 a. Title or Project.  
49 b. Name of Contractor.  
50  
51 C. Binders: Commercial quality, three-ring, with durable and cleanable  
52 plastic covers.

53  
54 TIME OF SUBMITTALS

- 55  
56 A. For equipment or component parts or equipment put into service during

1 progress of construction:  
2  
3 1. Submit duplicate original signed document within ten (10) days after  
4 inspection and acceptance.  
5  
6 B. Make final submittals within ten (10) days after Date of Substantial  
7 Completion, prior to final request for payment.  
8  
9 C. For items of work when acceptance is delayed materially beyond the Date of Substantial  
10 Completion; provide up-dated submittal within ten (10) days after acceptance, listing the date of  
11 acceptance as the start of the warranty period.  
12  
13 SUBMITTALS REQUIRED  
14  
15 A. Submit warranties, bonds, service and maintenance contracts as specified  
16 in the Specifications.  
17  
18 PART 2 - PRODUCTS  
19  
20 Not Applicable  
21  
22 PART 3 - EXECUTION  
23  
24 Not Applicable  
25  
26  
27 END OF SECTION  
28  
29

1 SECTION 02 06 50 - SELECTIVE BUILDING DEMOLITION

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawing and general provisions of Contract, including General and Supplementary conditions  
10 and Division-1 Specification sections, apply to work specified in this section.

11  
12  
13 DESCRIPTION OF WORK:

14 The extent of building demolition of the existing building is shown on drawings.

15 Generally portions of the existing building are to be demolished, modified or removed to allow the  
16 new building construction and remodeling to occur.

17 Demolition includes complete or partial wrecking of structures portions of structures and removal  
18 and disposal of demolished materials, as shown on drawings and herein specified.

19  
20 Relationship and completeness of the drawings

21 The demolition drawings are intended to show general scope of the items that need to be  
22 removed. The omission of items from these drawings that could have inspected prior to bidding  
23 does not eliminate the requirement that the Contractors remove all components needed to  
24 facilitate the new and remodeled components of the building.

25 It is the Contractors responsibility to examine fully the site and building to fully understand the  
26 demolition items needed. This is to include all shoring, bracing and other means as required.

27 The contractors are to perform all demolition work required to allow the construction and  
28 remodeling to take place that is indicated or specified elsewhere in the plans or specifications

29  
30 Scope of the work

31 Remove all building components as indicated on the plans and required to allow the new designs  
32 to be implemented.

33  
34  
35  
36  
37  
38  
39  
40  
41  
42 SUBMITTALS:

43 Schedule: Submit proposed methods and operations of building demolition to Architect for review  
44 prior to start of work. Include in schedule coordination for shut-off, capping and continuation of  
45 utility services as required.

46  
47  
48  
49 JOB CONDITIONS:

50 Conditions existing at time of inspection for bidding purposes will be maintained by Owner in so  
51 far as practicable. However, variations within structure may occur by Owner's removal and  
52 salvage operations prior to start of demolition work.

53 Partial Removal: Items of salvageable value to Contractor may be removed from structure as  
54 work progresses. Salvaged items must be transported from site as they are removed.



1  
2 Storage or sale of removed items on site will not be permitted.

3  
4 Explosives: Use of explosives will not be permitted.

5  
6 Traffic: Conduct demolition operations and removal of debris to ensure minimum interference  
7 with roads, streets, walks, and other adjacent occupied or used facilities.

8  
9 Do not close or obstruct streets, walks or other occupied or used facilities without permission  
10 from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic  
11 ways if required by governing regulations.

12  
13 Protections: Ensure safe passage of persons around area of demolition. Conduct operations to  
14 prevent injury to adjacent buildings, structures, other facilities, and persons. Erect temporary  
15 covered passageways as required by authorities having jurisdiction.

16  
17 Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or  
18 collapse of structures to be demolished and adjacent facilities to remain.

19  
20 Damages: Promptly repair damages caused to adjacent facilities by demolition operations at no  
21 cost to Owner.

22  
23 Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against  
24 damage during demolition operations.

25  
26  
27 PART 2 - PRODUCTS (Not applicable).

28  
29  
30 PART 3 - EXECUTION

31  
32  
33 DEMOLITION:

34  
35 Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to  
36 limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing  
37 regulations pertaining to environmental protection.

38  
39 Do not use water when it may create hazardous or objectionable conditions such as ice, flooding,  
40 and pollution.

41  
42 Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition  
43 operations, as directed by Architect or governing authorities. Return adjacent areas to condition  
44 existing prior to the start of work.

45  
46 Neatly Cut opening or modifications to structure. Use diamond saw method to cut openings in  
47 poured concrete or masonry. At contractors option block openings may be knocked out and then  
48 the sides/top of the openings rebuilt. Openings and structural modifications must be neat in  
49 appearance, and straight lined saw cut even in concealed spaces unless permission differently is  
50 specifically given by the architect.

51  
52 Demolish concrete and masonry in small sections.

53  
54 Remove structural framing members and lower to ground by hoists, derricks, or other suitable  
55 methods.

56

- 1 Break up and remove concrete slabs-on-grade indicated. Locate demolition equipment
- 2 throughout structure and remove materials so as to not impose excessive loads to supporting
- 3 walls, floors or framing.
- 4
- 5 Below-Grade Construction:
- 6
- 7 Demolish foundation walls to a depth of not less than 12" below existing ground surface.
- 8 Demolish and remove below-grade wood, metal construction, and floor construction except
- 9 concrete slabs on grade.
- 10
- 11
- 12 DISPOSAL OF DEMOLISHED MATERIALS:
- 13
- 14 General: Remove from site debris, rubbish, and other materials resulting from demolition
- 15 operations.
- 16
- 17 Burning of removed materials from demolished structures will not be permitted on site.
- 18
- 19 Removal: Transport materials removed from demolished structures and dispose of off site.
- 20
- 21
- 22 END OF SECTION

1 SECTION 02 07 50 – SOIL POISONING

2

3 PART 1 - GENERAL

4

5 RELATED DOCUMENTS:

6

7 Drawings and general provisions of Contract, including General and  
8 Supplementary Conditions and Division-1 Specification sections, apply to work  
9 of this section.

10

11 DESCRIPTION OF WORK:

12

13 Under all new construction areas under buildings provide soil poisoning to  
14 eliminate current and future infestation of insects and plant material.

15

16 Product is to be warranted for a period of not less than ten years.

17

18 Product is to be applied by a licensed applicator knowledgeable of the product  
19 being installed.

20

21 Submittal: - submit all product literature describing safety, use rates,  
22 governmental approvals, warranties and other components.

23

24 PART 2 - PRODUCTS:

25

26 Provide products approved by the EPA and other governmental agencies as  
27 safe for under slab soil poisoning

28

29 PART 3 – EXECUTION

30

31 Install prior to granular fill and other final construction operations.

32

33

34 END OF SECTION

35

1 SECTION 03 31 00 - CONCRETE WORK

2  
3 PART 1 - GENERAL

4  
5  
6 RELATED DOCUMENTS:

7  
8 Drawings and general provisions of Contract, including General and Supplementary  
9 Conditions and Division-1 Specification sections apply to work specified in this section.

10  
11  
12 DESCRIPTION OF WORK:

13  
14 Extent of concrete work is shown on drawings.

15  
16 It is generally to include but is not limited to:

- 17  
18 • Exterior concrete walks and curbs  
19 • Foundation concrete  
20 • Vapor barriers under concrete

21  
22 QUALITY ASSURANCE:

23  
24 Codes and Standards: Comply with provisions of following codes, specifications and  
25 standards, except where more stringent requirements are shown or specified:

26  
27 ACI 301 "Specifications for Structural Concrete for Buildings".

28  
29 ACI 318 "Building Code Requirements for Reinforced Concrete".

30  
31 Concrete Reinforcing Steel Institute, "Manual of Standard Practice".

32  
33  
34 SUBMITTALS:

35  
36 Shop Drawings; Reinforcement: Submit shop drawings for fabrication, bending, and  
37 placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard  
38 Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup  
39 spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include  
40 special reinforcement required and openings through concrete structures.

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PART 2 - PRODUCTS

FORM MATERIALS:

Form for Exposed Finish Concrete: Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection.

Use plywood complying with U.S. Product Standard PS-1 "B-B (Concrete Form)

Plywood", Class I, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible inspection trademark.

Forms for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

REINFORCING MATERIALS:

Reinforcing Bars: ASTM A 615, Grade 60, deformed.

Welded Wire Fabric: ASTM A 185, welded steel wire fabric.

Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable.

For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected, (CRSI, Class I) or stainless steel protected (CRSI, Class Z).

CONCRETE MATERIALS:

- Portland Cement: ASTM C 150, Type I, unless otherwise acceptable to Architect.

1 Use one brand of cement throughout project, unless otherwise acceptable to Architect.  
2  
3 Fly Ash: ASTM C 618, Type C or Type F.  
4  
5 Limit use of fly ash to not exceed 25% of cement content by weight.  
6  
7 Normal Weight Aggregates: ASTM C 33, and as herein specified. Provide aggregates  
8 from a single source for exposed concrete.  
9  
10 For exterior exposed surfaces, do not use fine or course aggregates containing  
11 spalling-causing deleterious substances.  
12  
13 All exterior concrete shall be mixed using only crushed limestone aggregate. No gravel  
14 aggregate in exterior walks or walls exposed weather.  
15  
16 Local aggregates not complying with ASTM C 33 but which have shown by special test  
17 or actual service to produce concrete of adequate strength and durability may be used  
18 when acceptable to Architect.  
19  
20 Water: Potable.  
21  
22 Air-Entraining Admixture: ASTM C 260.  
23  
24 Available Products: Subject to compliance with requirements, products which may be  
25 incorporated in the work include, but are not limited to, the following:  
26  
27 "Sika Aer"; Sika Corp.  
28 "MB-VR or MB-AE"; Master Builders.  
29 "Dorex AEA"; W. R. Grace.  
30 "Edoco 2001 or 2002" Edoco Technical Products.  
31  
32 Water-Reducing Admixture: ASTM C 494, Type A and contain not more than 0.1%  
33 chloride ions.  
34  
35 Available Products: Subject to compliance with requirements, products which may be  
36 incorporated in the work include, but are not limited to, the following:  
37  
38 "Eucon WR-75"; Euclid Chemical Co.  
39 "Pozzolith 344"; Master Builders.  
40 "Plastocrete 160"; Sika Chemical Corp.  
41 "Chemtard"; Chem-Masters Corp.  
42  
43  
44 Calcium Chloride or admixtures containing more than 0.1% chloride ions are not  
45 permitted.  
46

1 RELATED MATERIALS:

2  
3 Moisture Barrier: Provide moisture barrier cover over prepared base material where  
4 indicated. Use only materials which are resistant to decay when tested in accordance  
5 with ASTM E 154, as follows:

6  
7 Polyethylene sheet not less than 8 mils thick.

8  
9 Non-Shrink Grout: CRD-C 621, factory pre-mixed grout.

10  
11 Available Products: Subject to compliance with requirements, products which may be  
12 incorporated in the work include, but are not limited to, the following:

13  
14 Non-metallic

15  
16 "Masterflow 713"; Master Builders.

17 "SonogROUT"; Sonneborn-Contech.

18 "Euco-NS"; Euclid Chemical Co.

19  
20 "Crystex"; L & M Const. Chemical Co.

21 "Sure-Grip Grout"; Dayton Superior Corp.

22 "Horngrout"; A. C. Horn.

23  
24 Liquid Membrane Forming Curing Compound: Liquid type membrane- forming curing  
25 compound complying with ASTM C 309, Type I, Class A unless other type acceptable  
26 to Architect. Moisture loss not more than 0.055 gr./sq. cm. when applied at 200 sq  
27 ft./gal.

28  
29 Available Products: Subject to compliance with requirements, products which may be  
30 incorporated in the work include, but are not limited to, the following:

31  
32 "Masterseal"; Master Builders.

33 "A-H 3 Way Sealer"; Anti-Hydro Waterproofing Co.

34 "Ecocure"; Euclid Chemical Co.

35 "Clear Seal"; W.R. Grace.

36 "Spartan-Cote"; The Burke Co.

37 "Kure-N-Seal"; Sonneborn-Contech.

38 "Polyclear"; Upco Chemical/USM Corp.

39 "L & M Cure"; L & M Construction Chemicals.

40 "LR-152"; Protex Industries.

41  
42 Bonding Compound: Polyvinyl acetate or acrylic base, rewettable type.

43  
44 Available Products: Subject to compliance with requirements, products which may be  
45 incorporated in the work include, but are not limited to, the following:

46  
47 "J-40 Bonding Agent"; Dayton Superior Corp.

48 "Weldcrete"; Larsen Products.

49 "Everbond"; L & M Construction Chemicals.

50 "EucoWeld"; Euclid Chemical Co.

1 "Hornweld"; A.C. Horn.  
2 "Sonocrete"; Sonneborn-Contech.  
3 "Acrylic Bondcrete"; The Burke Co.

#### 4 5 PROPORTIONING AND DESIGN OF MIXES: 6

7 Prepare design mixes for each type and strength of concrete by either laboratory trial  
8 batch or field experience methods as specified in ACI 301. If trial batch method used,  
9 use an independent testing facility acceptable to Architect for preparing and reporting  
10 proposed mix designs. The testing facility shall not be the same as used for field  
11 quality control testing unless otherwise acceptable to Architect.  
12

13 Design mixes to provide normal weight concrete with the following properties.  
14

- 15 • 4000 psi 28-day compressive strength; W/C ratio, 0.44 maximum (non-air-  
16 entrained), 0.35 maximum (air-entrained). For slabs, poured concrete walls,  
17 elevated slabs on metal decks and concrete piers. Minimum cement 564  
18 pounds per cubic yard  
19
- 20 • 3000 psi 28-day compressive strength; W/C ratio, 0.58 maximum (non-air-  
21 entrained), 0.46 maximum (air-entrained). For footings. Minimum cement 470  
22 pounds per cubic yard  
23
- 24 • 4000 psi 28-day compressive strength; W/C ratio, 0.35 maximum (air-  
25 entrained). For exterior walks and curb. Exterior concrete shall be mixed with  
26 crushed stone aggregate only. No rounded gravel. Minimum cement 564  
27 pounds per cubic yard.  
28

29 Grout mix for filling masonry voids and reinforcing to be pea gravel aggregate mix with  
30 28 day compressive strength of 3,000 psi.  
31

32 Adjustment to Concrete Mixes: Mix design adjustments may be requested by  
33 Contractor when characteristics of materials, job conditions, weather, test results, or  
34 other circumstances warrant; at no additional cost to owner and as accepted by  
35 Architect. Laboratory test data for revised mix design and strength results must be  
36 submitted to and accepted by Architect before using in work.  
37

38 Admixtures: Use water-reducing admixture or high range water-reducing admixture  
39 (super plasticizer) in concrete as required for placement and workability.  
40

41 Use non-chloride accelerating admixture in concrete slabs placed at ambient  
42 temperatures below 50 deg. F (10 deg. C).  
43

44 Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated.  
45 Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at  
46 point of placement having total air content with a tolerance of plus-or- minus 1 1/2%  
47 within following limits:  
48

49 Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or  
50 subjected to hydraulic pressure: 5.5% (severe exposure) 1 1/2" max. aggregate.



1  
2 Other Concrete: 2% to 4% air.

3  
4 Use admixtures for water-reducing and set-control in strict compliance with  
5 manufacturer's directions.

6  
7 Water-Cement Ratio: Provide concrete for following conditions with maximum water-  
8 cement (WC) ratios as follows:

9  
10 Subjected to freezing and thawing; WC 0.50.

11  
12 Subjected to deicers/watertight; WC 0.45.

13  
14 Slump Limits: Proportion and design mixes to result in concrete slump at point of  
15 placement as follows:

16  
17 Ramps, slabs, and sloping surfaces: Not more than 3".

18  
19 Reinforced foundation systems: Not less than 1" and not more than 3".

20  
21 Concrete containing HRWR admixture (super plasticizer): Not more than 8" after  
22 addition of HRWR to verified 2"-3" slump concrete.

23  
24 Other Concrete: Not less than 4".

25  
26  
27 CONCRETE MIXES:

28  
29 Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as herein specified.

30  
31 During hot weather, or under conditions contributing to rapid setting of concrete, a  
32 shorter mixing time than specified in ASTM C 94 may be required.

33  
34 When air temperature is between 85 deg. F (30 deg. C) and 90 deg. F (32 deg. C),  
35 reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air  
36 temperature is above 90 deg. F (32 deg. C), reduce mixing and delivery time to 60  
37 minutes.

38  
39  
40 PART 3 - EXECUTION

41  
42 FLOOR SLAB FLATNESS

43  
44 All floor slabs shall have a flatness complying with floor flatness F curves. The  
45 standards for the interior slabs of this building shall be as follows:

46  
47 Minimum Flatness (F<sub>f</sub>)F-number - 20

48 Minimum Levelness (F<sub>l</sub>)F-number - 17

49  
50 See other division 3 specifications for other concrete slab requirements.

1  
2  
3  
4 FORMS:

5  
6 Design, erect, support, brace and maintain formwork to support vertical and lateral  
7 loads that might be applied until such loads can be supported by concrete structure.  
8 Construct formwork so concrete members and structures are of correct size, shape,  
9 alignment, elevation and position.

10  
11 Design formwork to be readily removable without impact, shock or damage to cast-in-  
12 place concrete surfaces and adjacent materials.

13  
14 Construct forms to sizes, shapes, lines and dimensions shown, and to obtain accurate  
15 alignment, location, grades, level and plumb work in finished structures. Provide for  
16 openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets,  
17 chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features  
18 required in work. Use selected materials to obtain required finishes. Solidly butt joints  
19 and provide back-up at joints to prevent leakage of cement paste.

20  
21 Fabricate forms for easy removal without hammering or prying against concrete  
22 surfaces. Provide crush plates or wrecking plates where stripping may damage cast  
23 concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to  
24 place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets,  
25 recesses, and the like, to prevent swelling and for easy removal.

26  
27 Provide temporary openings where interior area of formwork is inaccessible for  
28 cleanout, for inspection before concrete placement, and for placement of concrete.  
29 Securely brace temporary openings and set tightly to forms to prevent loss of concrete  
30 mortar. Locate temporary openings on forms at inconspicuous locations.

31  
32 Chamfer exposed corners and edges as indicated, using wood, metal, PVC or rubber  
33 chamfer strips fabricated to produce uniform smooth lines and tight edge joints.

34  
35 Form Ties: Factory-fabricated, adjustable-length, removable or snapoff metal form ties,  
36 designed to prevent form deflection, and to prevent spalling concrete surfaces upon  
37 removal.

38  
39 Unless otherwise indicated, provide ties so portion remaining within concrete after  
40 removal is 1" inside concrete and will not leave holes larger than 1" diameter in  
41 concrete surface.

42  
43 Provisions for Other Trades: Provide openings in concrete formwork to accommodate  
44 work of other trades. Determine size and location of openings, recesses and chases  
45 from trades providing such items. Accurately place and securely support items built into  
46 forms.

47  
48 Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive  
49 concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is

1 placed. Retighten forms and bracing after concrete placement is required to eliminate  
2 mortar leaks and maintain proper alignment.

3  
4  
5 **PLACING REINFORCEMENT:**

6  
7 Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing  
8 Reinforcing Bars", for details and methods of reinforcement placement and supports,  
9 and as herein specified.

10  
11 Clean reinforcement of loose rust and mill scale, earth, ice, and other materials which  
12 reduce or destroy bond with concrete.

13  
14 Accurately position, support and secure reinforcement against displacement by  
15 formwork, construction, or concrete placement operations. Locate and support  
16 reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.

17  
18 Place reinforcement to obtain at least minimum coverage for concrete protection.  
19 Arrange, space and securely tie bars and bar supports to hold reinforcement in position  
20 during concrete placement operations. Set wire ties so ends are directed into concrete,  
21 not toward exposed concrete surfaces.

22  
23 Install welded wire fabric in all ground slabs or slabs on grade. Lay in as long lengths as  
24 practicable. Lap adjoining pieces at least one full mesh and lace splices with wire.  
25 Offset end laps in adjacent widths to prevent continuous laps in either direction.

26  
27  
28 **JOINTS:**

29  
30 Construction Joints: Locate and install construction joints, as indicated or, if not  
31 indicated locate so as not to impair strength and appearance of the structure, as  
32 acceptable to Architect.

33  
34 Provide keyways at least 1-1/2" deep in construction joints in walls, slabs and between  
35 walls and footings; accepted bulkheads designed for this purpose may be used for  
36 slabs.

37  
38 Place construction joints perpendicular to main reinforcement. Continue reinforcement  
39 across construction joints.

40  
41 Isolation Joints in Slabs-on-Ground: Construct isolation joints in slabs-on- ground at  
42 points of contact between slabs on ground and vertical surfaces, such as column  
43 pedestals, foundation walls, grade beams and elsewhere as indicated.

44  
45 Joint filler and sealant materials are specified in Division 7 sections of these  
46 specifications.

47  
48 Contraction (Control) Joints in Slabs-on-Ground: Construct contraction joints in slabs-  
49 on-ground to form panels of patterns as shown, or if not shown, a maximum of 400  
50 square feet with a maximum length-to-width ratio of 1:1.5. Joints may be formed using

1 1/4"x1" plastic or fiberboard strips or use inserts by saw cuts as soon as possible after  
2 slab finishing without dislodging 1/8" to 1/4" wide to 1/4 of the slab depth, unless  
3 otherwise indicated.

4  
5 Crack Joints: In all ground slabs or slabs on grade provide a tooled in joint at least 1"  
6 deep in every 25 square feet for exterior or every 100 square feet for interior. Provide in  
7 locations acceptable to the Architect if not indicated on the plans.

8  
9 Joint sealant material: is specified in Division-7 sections of these specifications.

#### 10 11 12 INSTALLATION OF EMBEDDED ITEMS:

13  
14 General: Set and build into work anchorage devices and other embedded items  
15 required for other work that is attached to, or supported by, cast-in-place concrete. Use  
16 setting drawings, diagrams, instructions and directions provided by suppliers of items  
17 to be attached thereto.

18  
19 Edge Forms and Screed Strips for Slabs: Set edge forms or bulkheads and intermediate  
20 screed strips for slabs to obtain required elevations and contours in finished slab  
21 surface. Provide and secure units sufficiently strong to support types of screed strips  
22 by use of strike-off templates or accepted compacting type screeds.

#### 23 24 25 PREPARATION OF FORM SURFACES:

26  
27 Clean re-used forms of concrete matrix residue, repair and patch as required to return  
28 forms to acceptable surface condition.

29  
30 Coat contact surfaces of forms with a form-coating compound before reinforcement is  
31 placed.

32  
33 Thin form-coating compounds only with thinning agent of type, and in amount, and  
34 under conditions of form-coating compound manufacturer's directions. Do not allow  
35 excess form-coating material to accumulate in forms or to come into contact with in-  
36 place concrete surfaces against which fresh concrete will be placed. Apply in  
37 compliance with manufacturer's instructions.

38  
39 Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect  
40 against rusting. Rust-stained steel formwork is not acceptable.

1 CONCRETE PLACEMENT:

2  
3 Preplacement Inspection: Before placing concrete, inspect and complete formwork  
4 installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts  
5 to permit installation of their work; cooperate with other trades in setting such work.  
6 Moisture wood forms immediately before placing concrete where form coatings are not  
7 used.

8  
9 Coordinate the installation of joint materials and moisture barriers with placement of  
10 forms and reinforcing steel.

11  
12 General: Comply with ACI 304 "Recommended Practice for Measuring, Mixing,  
13 Transporting, and Placing Concrete", and as herein specified.

14  
15 Deposit concrete continuously or in layers of such thickness that no concrete will be  
16 placed on concrete which has hardened sufficiently to cause the formation of seams or  
17 planes of weakness. If a section cannot be placed continuously, provide construction  
18 joints as herein specified. Deposit concrete as nearly as practicable to its final  
19 location to avoid segregation.

20  
21 Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper  
22 than 24" and in a manner to avoid inclined construction joints. Where placement  
23 consists of several layers, place each layer while preceding layer is still plastic to avoid  
24 cold joints.

25  
26 Consolidate placed concrete by mechanical vibrating equipment supplemented by  
27 hand-spading, rodding or tamping. Use equipment and procedures for consolidation of  
28 concrete in accordance with ACI recommended practices.

29  
30 Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators  
31 vertically at uniformly spaced locations not farther than visible effectiveness of machine.  
32 Place vibrators to rapidly penetrate placed layer and at least 6" into preceding layer. Do  
33 not insert vibrators into lower layers of concrete that have begun to set. At each  
34 insertion limit duration of vibration to time necessary to consolidate concrete and  
35 complete embedment of reinforcement and other embedded items without causing  
36 segregation of mix.

37  
38 Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous  
39 operation, within limits of construction joints, until the placing of a panel or section is  
40 completed.

41  
42 Consolidate concrete during placing operations so that concrete is thoroughly worked  
43 around reinforcement and other embedded items and into corners.

44  
45 Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or  
46 darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior  
47 to beginning finishing operations.

48  
49 Maintain reinforcing in proper position during concrete placement operations.

50

1 Cold Weather Placing: Protect concrete work from physical damage or reduced  
2 strength which could be caused by frost, freezing actions, or low temperatures, in  
3 compliance with ACI 306 and as herein specified.

4  
5 When air temperature has fallen to or is expected to fall below 40 deg. F (4 deg. C),  
6 uniformly heat water and aggregates before mixing to obtain a concrete mixture  
7 temperature of not less than 50 deg. F (10 deg. C), and not more than 80 deg. F (27  
8 deg. C) at point of placement.

9  
10 Do not use frozen materials or materials containing ice or snow. Do not place concrete  
11 on frozen subgrade or on subgrade containing frozen materials.

12  
13 Do not use calcium chloride, salt and other materials containing antifreeze agents or  
14 chemical accelerators, unless otherwise accepted in mix designs.

15  
16 Hot Weather Placing: When hot weather conditions exist that would seriously impair  
17 quality and strength of concrete, place concrete in compliance with ACI 305 and as  
18 herein specified.

19  
20 Cool ingredients before mixing to maintain concrete temperature at time of placement  
21 below 90 deg. F (32 deg. C). Mixing water may be chilled, or chopped ice may be used  
22 to control temperature provided water equivalent of ice is calculated to total amount of  
23 mixing water. Use of liquid nitrogen to cool concrete is Contractor's option..

24  
25 Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel  
26 temperature will not exceed the ambient air temperature immediately before  
27 embedment in concrete.

28  
29 Fog spray forms, reinforcing steel and subgrade just before concrete is placed.

30  
31 Use water-reducing retarding admixture (Type D) when required by high temperatures,  
32 low humidity, or other adverse placing conditions.

### 33 34 SCHEDULE OF CONCRETE SURFACE FINISHING

35 Interior Floor slabs – Smooth Steel Trowel Finish

36 Interior of basement walls – to be finished as exposed to view concrete

37 Exterior walks – Light Broom Finish

### 38 39 40 FINISH OF FORMED SURFACES:

41  
42 Rough Form Finish: For formed concrete surfaces not exposed-to-view in the finish  
43 work or by other construction, unless otherwise indicated. This is the concrete surface  
44 having texture imparted by form facing material used, with tie holes and defective areas  
45 repaired and patched and fins and other projections exceeding 1/4" in height rubbed  
46 down or chipped off.

47  
48 Smooth Finish: For formed concrete surfaces exposed-to-view, or that are to be  
49 covered with a coating material applied directly to concrete, or a covering material  
50 applied directly to concrete, such as waterproofing, dampproofing, painting or other

1 similar system. This is as-cast concrete surface obtained with selected form facing  
2 material, arranged orderly and symmetrically with a minimum of seams. Repair and  
3 patch defective areas with fins or other projections completely removed and smoothed.  
4 Rub the concrete while still green with a cement, sand, water mixture to leave a smooth  
5 uniform color and finish.

#### 6 7 CONCRETE CURING AND PROTECTION:

8  
9 General: Protect freshly placed concrete from premature drying and excessive cold or  
10 hot temperatures.

11  
12 Start initial curing as soon as free water has disappeared from concrete surface after  
13 placing and finishing. Weather permitting; keep continuously moist for not less than 7  
14 days.

15  
16 Begin final curing procedures immediately following initial curing and before concrete  
17 has dried. Continue final curing for at least 7 days in accordance with ACI 301  
18 procedures. Avoid rapid drying at end of final curing period.

19  
20 Curing Methods: Perform curing of concrete by curing and sealing compound, by moist  
21 curing, by moisture-retaining cover curing, and by combinations thereof, as herein  
22 specified.

23  
24 Provide curing and sealing compound to interior slabs as follows:

25  
26 Apply specified curing and sealing compound to concrete slabs as soon as final  
27 finishing operations are complete (within 2 hours). Apply uniformly in continuous  
28 operation by power-spray or roller in accordance with manufacturer's directions.  
29 Recoat areas subjected to rainfall within 3 hours after initial application. Maintain  
30 continuity of coating and repair damage during curing period.

31  
32 Do not use membrane curing compounds on surfaces which are to be covered with  
33 coating material applied directly to concrete, liquid floor hardener, waterproofing,  
34 dampproofing, membrane roofing, flooring such as ceramic or quarry tile, glue-down  
35 carpet, painting, and other coatings and finish materials, unless otherwise  
36 acceptable to Architect.

37  
38 Curing Formed Surfaces: Cure formed concrete surfaces, including undersides of  
39 beams, supported slabs and other similar surfaces by moist curing with forms in place  
40 for full curing period or until forms are removed. If forms are removed, continue curing  
41 by methods specified above, as applicable.

42  
43 Curing Unformed Surfaces: Cure unformed surfaces, such as slabs, floor topping, and  
44 other flat surfaces by application of appropriate curing method.

45  
46 Sealer and Dustproofers: Apply a second coat of specified curing and sealing compound  
47 to entire concrete slab close to the time of building completion or prior to surfaces  
48 given a first coat. This applies to any areas specified to sealed concrete finish on the  
49 room finish schedule.

50

1  
2 MISCELLANEOUS CONCRETE ITEMS:  
3

4 Filling-In: Fill-in holes and openings left in concrete structures for passage of work by  
5 other trades, unless otherwise shown or directed, after work of other trades is in place.  
6 Mix, place and cure concrete as herein specified, to blend with in-place construction.  
7 Provide other miscellaneous concrete filling shown or required to complete work.  
8

9 Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is  
10 still green and steel-troweling surfaces to a hard, dense finish with corners,  
11 intersections and terminations slightly rounded.  
12

13 Reinforced Masonry: Provide concrete grout for reinforced masonry lintels and bond  
14 beams where indicated on drawings and as scheduled. Maintain accurate location of  
15 reinforcing steel during concrete placement. Grout is to be high slump mix with the  
16 aggregate being made of pea gravel for easy transportability. The grout strength shall  
17 be a minimum of 3,000 psi.  
18

19  
20 CONCRETE SURFACE REPAIRS:  
21

22 Patching Defective Areas: Repair and patch defective areas with cement mortar  
23 immediately after removal of forms, when acceptable to Architect.  
24

25 Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by  
26 tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1".  
27 Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen  
28 with water and brush-coat the area to be patched with specified bonding agent.  
29 Place patching mortar after bonding compound has dried.  
30

31 For exposed-to-view surfaces, blend white portland cement and standard portland  
32 cement so that, when dry, patching mortar will match color surrounding. Provide test  
33 areas at inconspicuous location to verify mixture and color match before proceeding  
34 with patching. Compact mortar in place and strike-off slightly higher than surrounding  
35 surface.  
36

37 Repair finished unformed surfaces that contain defects which affect durability of  
38 concrete. Surface defects, as such, included crazing, cracks in excess of 0.01" wide or  
39 which penetrate to reinforcement or completely through non-reinforced sections  
40 regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other  
41 objectionable conditions.  
42

43 Correct high areas in unformed surfaces by grinding, after concrete has cured at least  
44 14 days.  
45

46 Correct low areas in unformed surfaces during, or immediately after completion of  
47 surface finishing operations by cutting out low areas and replacing with fresh concrete.  
48 Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds  
49 may be used when acceptable to Architect.  
50



1 Repair defective areas, except random cracks and single holes not exceeding 1"  
2 diameter, by cutting out and replacing with fresh concrete. Remove defective areas to  
3 sound concrete with clean, clearance all around. Dampen concrete surfaces in contact  
4 with patching concrete and apply bonding compound. Mix patching concrete of same  
5 materials to provide concrete of same type or class as original concrete. Place,  
6 compact and finish to blend with adjacent finished concrete. Cure in same manner as  
7 adjacent concrete.  
8  
9 Repair isolated random cracks and single holes not over 1" in diameter by dry-pack  
10 method. Groove top of cracks and cut-out holes to sound concrete and clean of dust,  
11 dirt and loose compound. Mix dry-pack, consisting of one part portland cement to 2  
12 1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as  
13 required for handling and placing. Place dry pack after bonding compound has dried.  
14 Compact dry-pack mixture in place and finish to match adjacent concrete. Keep  
15 patched area continuously moist for not less than 72 hours.  
16  
17 Perform structural repairs with prior approval of Architect for method and procedure,  
18 using specified epoxy adhesive and mortar.  
19  
20 Repair methods not specified above may be used, subject to acceptance of Architect.  
21  
22  
23 END OF SECTION

1 SECTION 04 20 00 – Unit Masonry

2  
3 PART 1 - GENERAL

4  
5 RELATED DOCUMENTS:

6  
7 Drawings and general provisions of Contract, including General and Supplementary  
8 Conditions and Division-1 Specification sections, apply to work of this section.  
9

10  
11 DESCRIPTION OF WORK:

12  
13 Extent of each type of masonry work is indicated on drawings and schedule.

14  
15 Types of masonry work required include:

- 16  
17
  - 18 • Architectural Concrete Unit Masonry.
  - 19 • Masonry Insulation
  - 20 • Masonry Waterproofing
  - 21 • Masonry reinforcing and ties

22

23 QUALITY ASSURANCE:

24  
25 Single Source Responsibility for Masonry Units: Obtain exposed masonry units of  
26 uniform texture and color, or a uniform blend within the ranges accepted for these  
27 characteristics, from one manufacturer for each different product required for each  
28 continuous surface or visually related surfaces.  
29

30 Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform  
31 quality, including color for exposed masonry, from one manufacturer for each  
32 cementitious component and from one source and producer for each aggregate.  
33

34 Field Constructed Mock-Ups: none required  
35  
36

37 SUBMITTALS:

38  
39 Product Data: Submit manufacturer's product data for each type of masonry unit,  
40 accessory, and other manufactured products, including certifications that each type  
41 complies with specified requirements.  
42

43 Shop Drawings: Submit cutting drawings for stone showing sizes, profiles and locations  
44 of each unit required. Submit dimension, profile, and setting drawings for stone units.  
45

46 Samples for Verification Purposes: Submit the following samples:

47  
48 Unit masonry samples for each type of exposed masonry unit required; include in each  
49 set the full range of exposed color and texture to be expected in completed work.  
50

1 Include size variation data verifying that actual range of sizes for brick falls within ASTM  
2 C 216 dimension tolerances for brick where modular dimensioning is indicated.

3  
4  
5 DELIVERY, STORAGE, AND HANDLING:

6  
7 Deliver masonry materials to project in undamaged condition.

8  
9 Store and handle masonry units to prevent their deterioration or damage due to  
10 moisture, temperature changes, contaminants, corrosion or other causes.

11  
12 Store cementitious materials off the ground, under cover and in dry location.

13  
14 Store aggregates where grading and other required characteristics can be maintained.

15  
16 Store masonry accessories including metal items to prevent deterioration by corrosion  
17 and accumulation of dirt.

18  
19  
20 PROJECT CONDITIONS:

21  
22 Protection of Work: During erection, cover top of walls with waterproof sheeting at end  
23 of each day's work. Cover partially completed structures when work is not in progress.

24  
25 Extend cover a minimum of 24 inches down both sides and hold cover securely in  
26 place.

27  
28 Do not apply uniform floor or roof loading for at least 12 hours after building masonry  
29 walls or columns.

30  
31 Do not apply uniform concentrated loads for at least 3 days after building masonry  
32 walls or columns.

33  
34 Staining: Prevent grout or mortar or soil from staining the face of masonry to be left  
35 exposed or painted. Remove immediately grout or mortar in contact with such  
36 masonry.

37  
38 Protect base of walls from rain-splashed mud and mortar splatter by means of  
39 coverings spread on ground and over wall surface.

40  
41 Cold Weather Protection:

42  
43 Do not lay masonry units which are wet or frozen.

44  
45 Remove any ice or snow formed on masonry bed by carefully applying heat until top  
46 surface is dry to the touch.

47  
48 Remove masonry damaged by freezing conditions.

1 For clay masonry units with initial rates of absorption (suction) which require them to be  
2 wetted before laying, comply with the following requirements:  
3  
4 For units with surface temperatures above 32 deg. F (0 deg. C), wet with water heated  
5 to above 70 deg. F ( 21 deg. C).  
6  
7 For units with surface temperatures below 32 deg. F (0 deg. C), wet with water heated  
8 to above 130 deg. F (54 deg. C).  
9  
10 Perform the following construction procedure while the work is progressing.  
11 Temperature ranges Indicated below apply to air temperatures existing at time of  
12 installation except for grout. For grout, temperature ranges apply to anticipated  
13 minimum night temperatures. In heating mortar and grout materials, maintain mixing  
14 temperature selected within 10 deg. F (6 deg. C).  
15  
16 40 deg. F (4 deg. C) to 32 deg. F (0 deg. C):  
17  
18 Mortar: Heat mixing water to produce mortar temperature between 40 deg. F ( 4 deg.  
19 C) and 120 deg. F ( 49 deg. C).  
20  
21 Grout: Follow normal masonry procedures.  
22  
23 32 deg. F (0 deg. C) to 25 deg. F (-4 deg. C):  
24  
25 Mortar: Heat mixing water and sand to produce mortar temperatures between 40 deg.  
26 F (4 deg. C) and 120 deg. F (49 deg. C); maintain temperature of mortar on boards  
27 above freezing.  
28  
29 Grout: Heat grout materials to 90 deg. F (32 deg. C) to produce in-place grout  
30 temperature of 70 deg. F (21 deg. C) at end of work day.  
31  
32 25 deg. F (-4 deg. C) to 20 deg. F (-7 deg. C):  
33  
34 Mortar: Heat mixing water and sand to produce mortar temperatures between 40 deg.  
35 F (4 deg. C) and 120 deg. F (49 deg. C); maintain temperature of mortar on boards  
36 above freezing.  
37 Grout: Heat grout materials to 90 deg. F (32 deg. C) to produce in-place grout  
38 temperature of 70 deg. F (21 deg. C) at end of work day.  
39  
40 Heat both sides of walls under construction using salamanders or other heat sources.  
41  
42 Use windbreaks or enclosures when wind is in excess of 15 mph.  
43  
44 20 deg. F (-7 deg. C) and below:  
45  
46 Mortar: Heat mixing water and sand to produce mortar temperatures between 40 deg.  
47 F (4 deg. C) and 120 deg. F (49 deg. C).  
48  
49 Grout: Heat grout materials to 90 deg. F (32 deg. C) to produce in-place grout  
50 temperature of 70 deg. F (21 deg. C) at end of work day.

1  
2 Masonry Units: Heat masonry units so that they are above 20 deg. F (-7 deg. C) at time  
3 of laying.

4  
5 Provide enclosure and auxiliary heat to maintain an air temperature of at least 40 deg. F  
6 (4 deg. C) for 24 hours after laying units.

7  
8 Do not heat water for mortar and grout to above 160 deg. F (71 deg. C).

9  
10 Protect completed masonry and masonry not being worked on in the following manner.  
11 Temperature ranges indicated apply to mean daily air temperatures except for grouted  
12 masonry. For grouted masonry, temperature ranges apply to anticipated minimum  
13 night temperatures.

14  
15 40 deg. F (4 deg. C) to 32 deg. F (0 deg. C):

16  
17 Protect masonry from rain or snow for at least 24 hours by covering with weather-  
18 resistive membrane.

19  
20 32 deg. F (0 deg. C) to 25 deg. F (-4 deg. C):

21  
22 Completely cover masonry with weather-resistive membrane for at least 24 hours.

23  
24 25 deg. F (-4 deg. C) to 20 deg. F (-7 deg. C):

25  
26 Completely cover masonry with weather-resistive insulating blankets or similar  
27 protection for at least 24 hours, 48 hours for grouted masonry.

28  
29 20 deg. F (-7 deg. C) and below:

30  
31 Except as otherwise indicated, maintain masonry temperature above 32 deg. F (0 deg.  
32 C) for 24 hours using enclosures and supplementary heat, electric heating blankets,  
33 infrared lamps or other methods proven to be satisfactory. For grouted masonry  
34 maintain heated enclosure to 40 deg. F (4 deg. C) for 48 hours.

## 35 36 37 PART 2 - PRODUCTS

### 38 39 BRICK MADE FROM CLAY OR SHALE:

40  
41 General: Comply with referenced standards and other requirements indicated below  
42 applicable to each form of brick required.

43  
44 Size: Provide bricks manufactured to the following actual dimensions:

45  
46 Standard Modular: 2-1/4" x 3-5/8" x 7-5/8". VERIFY IN FIELD THAT DIMENSIONS  
47 MATCH EXISTING EXTERIOR BRICK

1 For sills, caps and similar applications resulting in exposure of brick surfaces which  
2 otherwise would be concealed from view, provide uncored or unfrogged units with all  
3 exposed surfaces finished.  
4  
5 Facing Brick: none  
6  
7 Concrete Masonry Units:  
8 General: Comply with referenced standards and other requirements indicated below  
9 applicable to each form of concrete masonry unit required.  
10  
11 Provide special shapes where required for lintels, corners, jambs, sash, control joints,  
12 headers, bonding and other special conditions.  
13  
14 Provide bullnose units for all outside corners unless otherwise indicated.  
15  
16 Concrete Block: Provide units complying with characteristics indicated below for  
17 Grade, Type, face size, exposed face and, under each form of block included, for  
18 weight classification.  
19  
20 Grade N.  
21  
22 Size: Manufacturer's standard units with nominal face dimensions of 16" long x 8" high  
23 (15-5/8" x 7-5/8" actual) x thickness indicated.  
24  
25 Type I, moisture-controlled units.  
26  
27 Exposed Faces: Manufacturer's standard color and texture, scored for interior units to  
28 match existing.  
29  
30 Faces are to be dense with low percentage of graininess or voids.  
31  
32 Hollow Load bearing Block: ASTM C 90 and as follows:  
33  
34 Weight Classification: Normal weight (no light weight block).  
35  
36 Concrete Building Brick: Provide units complying with ASTM C 55 and characteristics  
37 indicated below for grade, type, size and weight classification.  
38  
39 Grade: Same as indicated for concrete block.  
40 Type: Same as indicated for concrete block.  
41 Size: As required.  
42  
43 Concrete block unit uniformity: Concrete block units are to be fabricated with parallel  
44 faces which are square 90 degrees with the bottom and sides. All block units are to be  
45 the same size.  
46  
47 Non-parallel or square geometry or inconsistent sizes shall be cause for rejection and  
48 re-construction.  
49  
50

1 JOINT REINFORCEMENT, TIES AND ANCHORING DEVICES:

2  
3 Materials: Comply with requirements indicated below for basic materials and with  
4 requirements indicated under each form of joint reinforcement, tie and anchor for size  
5 and other characteristics. "Exterior" shall be defined as any wythe within a multiple-  
6 wythe assembly with an exterior exposure. All masonry reinforcing materials are to be  
7 hot dipped galvanized.

8  
9 Hot-Dip Galvanized Steel Wire: ASTM A 82 for uncoated wire and with ASTM A 123,  
10 Class B-2 (1.5 oz. per sq. ft. of wire surface) for zinc coating applied after prefabrication  
11 into units.

12  
13 Application: Use for masonry exposed to exterior and in contact with earth.

14  
15 Zinc-Coated (Galvanized) Steel Sheet: Carbon steel with zinc coating complying with  
16 ASTM A 525, Coating Designation G90.

17  
18 Application: Use for dovetail slots and where indicated.

19  
20 Joint Reinforcement: Provide welded-wire units prefabricated with deformed  
21 continuous side rods and plain cross rods into straight lengths of not less than 10',  
22 with prefabricated corner and tee units, and complying with requirements indicated  
23 below:

24  
25 Width: Fabricate joint reinforcement in units with widths of approximately 2" less than  
26 nominal width of walls and partitions as required to provide mortar coverage of not less  
27 than 5/8" on joint faces exposed to exterior and 1/2" elsewhere.

28  
29 Wire Size for Side Rods: 0.1875" diameter.

30  
31 Wire Size for Cross Rods: 0.148" diameter.

32  
33 For single-wythe masonry provide type as follows with single pair of side rods:

34  
35 Truss design with continuous diagonal cross rods spaced not more than 16" o.c.

36  
37 For multi-wythe masonry provide as follows:

38  
39 Tab design with single pair of side rods and rectangular box-type cross ties spaced not  
40 more than 16" o.c.; with side rods spaced for embedment within each face shell of  
41 back-up wythe and ties extended to within 1" of exterior face of facing wythe.

42  
43 **For Anchoring masonry to steel stud wall:**

44  
45 Use units with adjustable 2-piece triangular wire ties where horizontal joints of facing  
46 wythe do not align with those of back-up.

47  
48 Bent-Wire Ties: Provide individual prefabricated bent-wire units complying with  
49 requirements indicated below:

1 Wire Size: 0.1875" diameter.  
2 Two piece unit allowing vertical movement but resisting lateral movement  
3 Screw attach vertical piece to steel studs.  
4  
5 Length: Provide units of length not less than that required for embedment into each  
6 wythe of 1.5" for solid units and for embedment of tie end into face shells of hollow  
7 units, with not less than 5/8" mortar cover on exterior face joints, 1/2" elsewhere.  
8  
9 Tie Shape for Hollow Masonry Units Laid with Cells Vertical: Triangular.  
10  
11 Tie shape for Solid Masonry Unit Construction: Z-shaped ties with ends bent 90 deg to  
12 provide hooks not less than 2" long.  
13  
14 Hot dipped galvanized finish.  
15  
16 Flexible Anchors: Where flexible anchors are indicated for connecting masonry to  
17 structural framework, provide 2-piece anchors as described below which permit vertical  
18 or horizontal differential movement between wall and framework parallel to, but resist  
19 tension and compression forces perpendicular to, plane of wall.  
20 For Anchoring to Pre-Cast Concrete Panels  
21  
22 Pre-Cast panel manufacturer is to imbed in the precast panel dovetail slots at 36" on  
23 center.  
24  
25 Anchors are to be triangular wire type described below with dovetail anchors to insert in  
26 the concrete panels.  
27  
28 Use units with adjustable 2-piece triangular wire ties where horizontal joints of facing  
29 wythe do not align with those of back-up.  
30  
31 Bent-Wire Ties: Provide individual prefabricated bent-wire units complying with  
32 requirements indicated below:  
33  
34 Wire Size: 0.1875" diameter.  
35 Two piece unit allowing vertical movement but resisting lateral movement  
36 Screw attach vertical piece to steel studs.  
37  
38 Length: Provide units of length not less than that required for embedment into each  
39 wythe of 1.5" for solid units and for embedment of tie end into face shells of hollow  
40 units, with not less than 5/8" mortar cover on exterior face joints, 1/2" elsewhere.  
41  
42 Tie Shape for Hollow Masonry Units Laid with Cells Vertical: Triangular.  
43  
44 Tie shape for Solid Masonry Unit Construction: Z-shaped ties with ends bent 90 deg to  
45 provide hooks not less than 2" long.  
46  
47 Flexible Anchors: Where flexible anchors are indicated for connecting masonry to  
48 structural framework, provide 2-piece anchors as described below which permit vertical  
49 or horizontal differential movement between wall and framework parallel to, but resist  
50 tension and compression forces perpendicular to, plane of wall.



1  
2 Hot dipped galvanized finish.

3  
4 **For anchorage to concrete block:**

5  
6 Provide manufacturer's standard anchors with dovetail anchor section formed from  
7 0.1046" (12 gage) thick sheet metal and triangular-shaped wire tie section sized to  
8 extend within 1" of masonry face.

9  
10 Wire Size: 0.1875" diameter.

11  
12 Hot dipped galvanized finish

13  
14 Dovetail Slots: Furnish dovetail slots, with filler strips, of slot size indicated, fabricated  
15 from 0.0336" (22 gage) sheet metal.

16  
17 Available Manufacturers: Subject to compliance with requirements, manufacturers  
18 offering products which may be incorporated in the work include, but are not limited to,  
19 the following:

20  
21 AA Wire Products Co.  
22 Dur-O-Wall, Inc.  
23 Heckman Building Products, Inc.  
24 Hohmann & Barnard, Inc.  
25 Masonry Reinforcing Corp. of America.  
26 National Wire Products Corp.

27  
28 **CONCEALED FLASHING MATERIALS:**

29  
30 Vinyl Sheet Flashing: Flexible sheet flashings especially formulated from virgin polyvinyl  
31 chloride with plasticizers and other modifiers to remain flexible and waterproof in  
32 concealed masonry applications, black in color and of thickness indicated below:

33  
34 Thickness: 40 mils.

35  
36 Adhesive for Flashings: Of type recommended by manufacturer of flashing material for  
37 use indicated.

38  
39 Available Products: Subject to compliance with requirements, products which may be  
40 incorporated in the work include, but are not limited to, the following:

41  
42 Vinyl Sheet Flashing:

43  
44 "Vi-Seal Plastic Flashing"; Afco Products Inc.  
45 "BFG" Vinyl Water Barrier; B.F. Goodrich Co.  
46 "Nuflex"; Sandell Manufacturing Co., Inc.  
47 "Wascoseal"; York Manufacturing, Inc.

48  
49  
50 **MISCELLANEOUS MASONRY ACCESSORIES**

1  
2 Reinforcing Bars: Deformed steel, ASTM A 615, Grade 60 for bars No. 3 to No. 18.

3  
4 Premolded Control Joint Strips: Material as indicated below, designed to fit standard  
5 sash block and to maintain lateral stability in masonry wall; size and configuration as  
6 indicated.

7  
8 Styrene-butadiene rubber compound complying with ASTM D 2000,  
9 Designation 2AA-805.

10  
11 Bond Breaker Strips: Asphalt-saturated organic roofing felt complying with ASTM D  
12 226, Type I (No. 25 asphalt felt).

13  
14 Weepholes: Provide the following for weepholes:

15  
16 Cotton Cord: Sash cord of length required to produce 2" exposure on exterior and 18"  
17 in cavity between wythes.

18  
19 Reglets: shall be as manufactured by Cheney or Fry Reglet. Reglet into masonry walls  
20 shall be Cheney type B or equal by Fry.

21  
22  
23 **INSULATION:**

24  
25 Extruded Polystyrene Board Insulation: Rigid cellular polystyrene thermal insulation with  
26 closed cells and integral high density skin, formed by the expansion of polystyrene base  
27 resin in an extrusion process to comply with ASTM C 578, Type IV; 5-year aged r-value  
28 of 5 Btu/(hr x sf x deg F) at 75 deg F (24 deg C); in manufacturer's standard lengths and  
29 widths; thicknesses as indicated.

30 Available Products: Subject to compliance with requirements, products which may be  
31 incorporated in the work include, but are not limited to, the following:

32  
33 "Styrofoam SM/SB"; Dow Chemical USA.

34 "Foamular 250"; UC Industries.

35 "Certifoam", Minnesota Diversified Products, Inc.

36 Adhesive: Type recommended by insulation board manufacturer for application  
37 indicated.

38  
39 **MASONRY CLEANERS:**

40  
41 Job-Mixed Detergent Solution: Solution of trisodium phosphate (1/2 cup dry measure)  
42 and laundry detergent (1/2 cup dry measure) dissolved in one gallon of water.

43  
44 Available Products: Subject to compliance with requirements, a product which may be  
45 used to clean unit masonry surfaces includes, but is not limited to, the following:

46  
47 "Sure Klean" No. 600 Detergent; ProSoCo, Inc.

48  
49  
50 **MORTAR AND GROUT MIXES:**

1  
2 Portland Cement: ASTM C 150, Type I, Except Type III may be used for cold weather  
3 construction. Provide natural color or white cement as required to produce required  
4 mortar color.

5  
6 Hydrated Lime: ASTM C 207, Type S.

7  
8 Aggregate for Mortar: ASTM C 144, except for joints less than 1/4" use aggregate graded  
9 with 100% passing the No. 16 sieve.

10  
11 White Mortar Aggregates: Natural white sand or ground white stone.

12  
13 Aggregate for Grout: ASTM C 404

14  
15 Water: Clean and potable.

16  
17 WATER REPELLENT SOLUTION

18  
19 The water repellent solution shall be a siloxane based penetrating sealer designed  
20 specifically for the treatment of masonry materials. The product shall:

- 21  
22 Allow masonry to maintain breathability  
23 Provide deep penetrating pore action.  
24 Sealer shall not alter the appearance of the brick.  
25 Be applied with a low pressure airless sprayer.

26  
27 Acceptable products for water repellent:

- 28  
29 Euco Weather guard by Euclid Chemical Company  
30 Chemtrete by Dynamit Nobel  
31 Tamms SMS 250  
32 Hydrozo

33  
34 Warranty

35  
36 Waterepelancy shall be warranted in writing by the manufacturer for a period of not less  
37 than 10 years. This warranty is to be delivered to the Owner prior to final payment.

38  
39  
40 PART 3 - EXECUTION

41  
42  
43 INSTALLATION, GENERAL:

44  
45 Wetting Clay Brick: Wet brick made from clay or shale which have ASTM C 67 initial  
46 rates of absorption (suction) if more than 30 grams per 30 sq. in. per minute. Use  
47 wetting methods which ensure each clay masonry unit being nearly saturated but  
48 surface dry when laid.

49  
50 Do not wet concrete masonry units.

1  
2 Cleaning Reinforcing: Before placing, remove loose rust, ice and other coatings from  
3 reinforcing.

4  
5 Thickness: Build cavity and composite walls, floors and other masonry construction to  
6 the full thickness shown. Build single- wythe walls (if any) to the actual thickness of the  
7 masonry units, using units of nominal thickness indicated.

8  
9 Build chases and recesses as shown or required for the work of other trades. Provide  
10 not less than 8" of masonry between chase or recess and jamb of openings, and  
11 between adjacent chases and recesses.

12  
13 Leave openings for equipment to be installed before completion of masonry work. After  
14 installation of equipment, complete masonry work to match work immediately adjacent  
15 to the opening.

16  
17 Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges.  
18 Cut units as required to provide continuous pattern and to fit adjoining work. Use full-  
19 size units without cutting where possible.

20  
21 Use dry cutting saws to cut concrete masonry units.

#### 22 23 24 CONSTRUCTION TOLERANCES:

25 Variation from Plumb: For vertical lines and surfaces of columns, walls and arrises do  
26 not exceed 1/4" in 10' or 3/8" in a story height not to exceed 20', nor 1/2" in 40' or  
27 more. For external corners, expansion joints, control joints and other conspicuous lines  
28 do not exceed 1/4" in any story or 20' maximum, nor 1/2" in 40' or more. For vertical  
29 alignment of head joints do not exceed plus or minus 1/4" in 10', 1/2" maximum.

30  
31 Variation from Level: For bed joints and lines of exposed lintels, sills, parapets,  
32 horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20'  
33 maximum, nor 1/2" in 40' or more. For top surface of bearing walls do not exceed 1/  
34 8" between adjacent floor elements in 10' or 1/16" within width of a single unit.

35  
36 Variation of Linear Building Line: For position shown in plan and related portion of  
37 columns, walls and partitions, do not exceed 1/2" in any bay or 20' maximum, nor 3/4"  
38 in 40' or more.

39  
40 Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from  
41 dimensions shown, do not exceed minus 1/4" nor plus 1/2".

42  
43 Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated by  
44 more than plus or minus 1/8", with a maximum thickness limited to 1/2". Do not exceed  
45 head joint thickness indicated by more than plus or minus 1/8".

#### 46 47 LAYING MASONRY WALLS:

48  
49 Layout walls in advance for accurate spacing of surface bond patterns with uniform  
50 joint widths and to accurately locate openings, movement-type joints, returns and

1 offsets. Avoid the use of less-than-half-size units at corners, jambs and wherever  
2 possible at other locations.  
3  
4 Lay-up walls to comply with specified construction tolerances, with courses accurately  
5 spaced and coordinated with other work.  
6  
7 Pattern Bond: Lay exposed masonry in running bond with vertical joint in each course  
8 centered on units in courses above and below. Lay concealed masonry with all units in  
9 a wythe in running bond or bonded by lapping not less than 2". Bond and interlock  
10 each course of each wythe at corners. Do not use units with less than nominal 4"  
11 horizontal face dimensions at corners or jambs.  
12  
13 Stopping and Resuming Work: Rack back 1/2-unit length in each course; do not tooth.  
14 Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose  
15 masonry units and mortar prior to laying fresh masonry.  
16  
17 Built-in Work: As the work progresses, build-in items specified under this and other  
18 sections of these specifications. Fill in solidly with masonry around built-in items.  
19 Fill space between hollow metal frames and masonry solidly with mortar, unless  
20 otherwise indicated.  
21  
22 Where built-in items are to be embedded in cores of hollow masonry units, place a layer  
23 of metal lath in the joint below and rod mortar or grout into core.  
24  
25 Fill cores in hollow concrete masonry units with grout 3 courses (24") under bearing  
26 plates, beams, lintels, posts and similar items, unless otherwise indicated.  
27 MORTAR BEDDING AND JOINTING:  
28  
29 Lay solid brick size masonry units with completely filled bed and head joint; butter ends  
30 with sufficient mortar to fill head joints and shove into place. Do not slush head joints.  
31  
32 Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical  
33 face shells. Bed webs in mortar in starting course on footings and in all courses of  
34 piers, columns and pilasters, and where adjacent to cells or cavities to be reinforced or  
35 filled with concrete or grout. For starting course on footings where cells are not grouted,  
36 spread out full mortar bed including areas under cells.  
37  
38 Set stone units in full bed of mortar with all vertical joints slushed full. Fill dowel, anchor  
39 and similar holes solid. Wet stone joint surface thoroughly before setting; for stone  
40 surfaces which are soiled, clean bedding and exposed surfaces with fiber brush and  
41 soap powder followed by thorough rinsing with clear water. Use plastic or lead joint  
42 spacer buttons to prevent joint collapse when setting stone units.  
43  
44 Joints for stone units are to be of white mortar to match stone  
45  
46 Maintain joint widths, except for minor variations required to maintain bond alignment.  
47 Where not required to match existing, lay walls with 3/8" joints.  
48  
49 Cut joints flush for masonry walls which are to be concealed or to be covered by other  
50 materials, unless otherwise indicated.

1  
2 Tool exposed joints slightly concave for exterior work using a jointer larger than joint  
3 thickness, unless otherwise indicated.

4  
5 For interior brick walls use a fully raked joint back 3/8".

6  
7 Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not  
8 pound corners or jambs to shift adjacent stretcher units which have been set in  
9 position. If adjustments are required, remove units, clean off mortar and reset in fresh  
10 mortar.

#### 11 12 13 CAVITY WALLS:

14  
15 Keep cavity clean of mortar droppings and other materials during construction. Strike  
16 joints facing cavity flush.

17  
18 Tie exterior wythe to back-up with individual metal ties spaced not more than 18" o.c.  
19 vertically and 24" o.c. horizontally. Stagger alternate courses.

20  
21 Provide weep holes in exterior wythe of cavity wall located immediately above ledges  
22 and flashing, spaced 2'-0" o.c., unless otherwise indicated.

23  
24 Cover cavity side of weep holes with copper or plastic insect screening before loose-fill  
25 masonry insulation is placed in cavity.

#### 26 27 28 29 CAVITY WALL AND MASONRY-CELL INSULATION:

30 On units of plastic insulation, install small pads of adhesive spaced approximately 1'-0"  
31 o.c. both ways on inside face. Fit courses of insulation between wall ties and other  
32 confining obstructions in cavity, with edges butted tightly both ways. Press units firmly  
33 against inside wythe of masonry or other construction as shown.

34  
35 Fill all cracks and open gaps in insulation with foamed in crack sealer compatible with  
36 insulation and masonry.

#### 37 38 HORIZONTAL JOINT REINFORCEMENT:

39  
40 General: Provide continuous horizontal joint reinforcement as indicated. Install  
41 longitudinal side rods in mortar for their entire length with a minimum cover of 5/8" on  
42 exterior side of walls, 1/2" elsewhere. Lap reinforcing minimum of 6".

43  
44 Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise  
45 indicated.

46  
47 Reinforce walls with continuous horizontal joint reinforcing unless specifically to be  
48 omitted.

49

1 Provide continuity at corners and wall intersection by use of prefabricated "L" and "T"  
2 sections. Cut and bend reinforcement units as directed by manufacturer for continuity  
3 at returns, offsets, column fireproofing, pipe enclosures and other special conditions.

4  
5 Space continuous horizontal reinforcement as follows:

6  
7 For multi-wythe walls (solid or cavity) where continuous horizontal reinforcement acts  
8 as structural bond or tie between wythes, space reinforcement as required by code but  
9 not more than 16" o.c. vertically.

10  
11 For single-wythe walls, space reinforcement at 16" o.c. vertically, unless otherwise  
12 indicated.

13  
14 For parapets, space reinforcement at 8" o.c. vertically, unless otherwise indicated.

15  
16 Reinforce masonry openings greater than 1'-0" wide, with horizontal joint reinforcement  
17 placed in 2 horizontal joints approximately 8" apart, immediately above the lintel and  
18 immediately below the sill. Extend reinforcement a minimum of 2'-0" beyond jambs of  
19 the opening except at control joints.

## 20 21 22 VERTICAL STEEL REINFORCING AND GROUTED CELLS

23 Where called for provide vertical steel reinforcing in the hollow cells of the concrete  
24 blocks. Bars to be continuous in one piece to the largest degree possible. At splices lap  
25 25 bar diameters.

26  
27 Fill all cells of steel reinforced cells with pea gravel grout.

28  
29 Fill cells as the wall is constructed with grout being installed in lifts no higher than 48"  
30 per lift.

## 31 ANCHORING MASONRY WORK:

32  
33 General: Provide anchor devices of type indicated.

34  
35 Anchor masonry to structural members where masonry abuts or faces structural  
36 members to comply with the following:

37  
38 Provide an open space not less than 1" in width between masonry and structural  
39 member, unless otherwise indicated. Keep open space free of mortar or other rigid  
40 materials.

41  
42 Anchor masonry to structural members with flexible anchors embedded in masonry  
43 joints and attached to structure.

44 Space anchors as not more than 24" o.c. vertically and 36" o.c. horizontally.

45  
46 Locate anchor section relative to course in which tie section is embedded to allow  
47 maximum vertical differential movement of tie up and down.

48

1 Space anchors as indicated but not more than 16" o.c. vertically and 24" o.c.  
2 horizontally. Install additional anchors within 1'-0" of openings and at intervals around  
3 perimeter not exceeding 3'-0".

#### 4 5 CONTROL AND EXPANSION JOINTS:

6  
7 General: Provide vertical and horizontal expansion, control and isolation joints in  
8 masonry where shown, or where not shown, at a maximum horizontal distance of 20  
9 feet. Build-in related items as the masonry work progresses.

10  
11 Build flanges of factory-fabricated expansion joint units into masonry.

12  
13 Build-in non-metallic joint fillers in all construction and expansion joints.

14  
15 LINTELS: none required

16  
17 Install steel lintels where indicated or required. All steel lintels to be hot dipped  
18 galvanized steel.

19  
20 Provide masonry lintels where shown and wherever openings of more than 1'-0" for  
21 brick size units and 2'-0" for block size units are shown without structural steel or other  
22 supporting lintels. Provide precast or formed-in- place masonry lintels. Cure precast  
23 lintels before handling and installation. Temporarily support formed-in-place lintels.

24  
25 For hollow concrete masonry unit walls, use specially formed U-shaped lintel units with  
26 reinforcement bars placed as shown filled with coarse grout.

27  
28 Provide minimum bearing of 8" at each jamb, unless otherwise indicated.

#### 29 30 FLASHING OF MASONRY WORK:

31  
32 General: Provide concealed flashing in masonry work at, or above, shelf angles, lintels,  
33 ledges and other obstructions to the downward flow of water in the wall so as to divert  
34 such water to the exterior. Prepare masonry surfaces smooth and free from projections  
35 which could puncture flashing. Place through-wall flashing on sloping bed of mortar  
36 and cover with mortar. Seal penetrations in flashing with mastic before covering with  
37 mortar. Extend flashings through exterior face of masonry and turn down to form drip.

38  
39 Extend flashing the full length of lintels and shelf angles and minimum of 4" into  
40 masonry each end. Extend flashing from exterior face of outer wythe of masonry,  
41 through the outer wythe, turned up a minimum of 4", and through the inner wythe to  
42 within 1/2" of the interior face of the wall in exposed work. Where interior surface of  
43 inner wythe is concealed by furring, carry flashing completely through the inner wythe  
44 and turn up approximately 2". At heads and sills turn up ends not less than 2" to form a  
45 pan.

46 Install flashing to comply with manufacturer's instructions.

47  
48 Provide weep holes in the head joints of the first course of masonry immediately above  
49 concealed flashings. Space 24" o.c., unless otherwise indicated.

50



1  
2 REPAIR, POINTING AND CLEANING:

3  
4 Remove and replace masonry units which are loose, chipped, broken, stained or  
5 otherwise damaged, or if units do not match adjoining units as intended. Provide new  
6 units to match adjoining units and install in fresh mortar or grout, pointed to eliminate  
7 evidence of replacement.

8  
9 Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes,  
10 and completely fill with mortar. Point- up all joints including corners, openings and  
11 adjacent work to provide a neat, uniform appearance, prepared for application of  
12 sealants.

13  
14 Final Cleaning: After mortar is thoroughly set and cured, clean masonry as follows:

15  
16 Remove large mortar particles by hand with wooden paddles and non-metallic scrape  
17 hoes or chisels.

18  
19 Test cleaning methods on sample wall panel; leave 1/2 panel unclean for comparison  
20 purposes. Obtain Architect's approval of sample cleaning before proceeding with  
21 cleaning of masonry.

22  
23 Use bucket and brush hand cleaning method described in BIA "Technical Note No. 20  
24 Revised" to clean brick masonry made from clay or shale, using detergent masonry  
25 cleaner.

26  
27 Clean concrete unit masonry to comply with masonry manufacturer's directions and  
28 applicable NCMA "Tek" bulletins.

29  
30 Clean limestone units to comply with recommendations in "ILI Handbook" published by  
31 Indiana Limestone Institute of America.

32  
33 Clean stone/precast concrete units to comply with recommendations of the  
34 manufacturer or, if manufacturer's recommendations not available, comply with  
35 recommendations for limestone units.

36  
37 Protection: Provide final protection and maintain conditions in a manner acceptable to  
38 Installer, which ensures unit masonry work being without damage and deterioration at  
39 time of substantial completion.

40  
41 WATER REPELLENT TREATMENT

42  
43 General: Apply specified water repellent treatment as recommended by the  
44 manufacturer. Follow all recommended protection procedures to protect adjacent  
45 material, bushes, shrubs, cars, walks, etc. In the absence of specific recommendations,  
46 take all precautions and maskings needed to protect adjacent materials.

47  
48 Apply water repellent to the brick areas on the entire exterior of the building.  
49

- 1 Apply water repellent by the method and at the rate recommended by the
- 2 manufacturer. Apply only in environmental conditions favorable to the product Protect
- 3 masonry surfaces or guard as needed until the material is dry.
- 4
- 5 END OF SECTION 04 20 00

1 SECTION 05 50 00 - METAL FABRICATIONS

2  
3 PART 1 - GENERAL

4  
5  
6 RELATED DOCUMENTS:

7  
8 Drawings and general provisions of Contract, including General and Supplementary  
9 Conditions and Division-1 Specification sections, apply to work of this section.

10  
11  
12 DESCRIPTION OF WORK:

13  
14 Definition: Metal fabrications include items made from iron and steel shapes, plates,  
15 bars, strips, tubes, pipes and castings which are not a part of structural steel or other  
16 metal systems specified elsewhere.

17  
18 Extent of metal fabrications is indicated on drawings and schedules.

19  
20 Types of work in this section include metal fabrications for but not limited to:

- 21
- 22 • Rough hardware
  - 23 • Loose bearing and leveling plates
  - 24 • Loose steel lintels
  - 25 • Miscellaneous framing and supports
  - 26 • Miscellaneous steel trim
- 27

28 Structural steel is specified in another section within Division 5.

29  
30 Architectural handrails are specified in another section within division 5

31  
32 SYSTEM PERFORMANCES:

33  
34 Structural Performances: Provide assemblies which, when installed, comply with the  
35 following minimum requirements for structural performance, unless otherwise indicated.

36  
37 Trends and Platforms of Steel Stairs: Capable of withstanding a uniform load of 100 lbf.  
38 per sq. ft. or a concentrated load of 300 lbf so located as to produce maximum stress  
39 conditions.

40  
41 Handrails and Toprails: Capable of withstanding the following loads applied as  
42 indicated when tested per ASTM E 935.

43  
44 Concentrated loads of 200 lbf applied at any point in any direction.

45  
46 Uniform load of 50 lbf per linear ft. applied simultaneously in both vertical and horizontal  
47 directions.

48  
49  
50 QUALITY ASSURANCE:

1  
2 Shop Assembly: Preassemble items in shop to greatest extent possible to minimize  
3 field splicing and assembly. Disassemble units only as necessary for shipping and  
4 handling limitations. Clearly mark units for reassembly and coordinated installation.  
5

6  
7 SUBMITTALS:

8  
9 Product Data: Submit manufacturer's specifications, anchor details and installation  
10 instructions for products used in miscellaneous metal fabrications, including paint  
11 products and grout.  
12

13 Shop Drawings: Submit shop drawings for fabrication and erection of miscellaneous  
14 metal fabrications. Include plans, elevations and details of sections and connections.  
15 Show anchorage and accessory items. Provide templates for anchor and bolt  
16 installation by others.  
17

18 Where materials or fabrications are indicated to comply with certain requirements for  
19 design loadings include structural computations, material properties and other  
20 information needed for structural analysis.  
21

22 Samples: Submit 2 sets of representative samples of materials and finished products  
23 as may be requested by Architect.  
24

25  
26 PART 2 - PRODUCTS:

27  
28  
29 MATERIALS:

30  
31 Ferrous Metals

32  
33 Metal Surfaces, General: For fabrication of miscellaneous metal work which will be  
34 exposed to view, use only materials which are smooth and free of surface blemishes  
35 including pitting, seam marks, roller marks, rolled trade names and roughness.  
36

37 Steel Plates, Shapes and Bars: ASTM A 36.

38  
39 Steel Bar Grating: ASTM A 569 or ASTM A 36.  
40

41 Steel Tubing: Cold formed, ASTM A 500; or hot-rolled, ASTM A 501.  
42

43 Structural Steel Sheet: Hot-rolled, ASTM A 570; or cold-rolled ASTM A 611, Class 1; of  
44 grade required for design loading.  
45

46 Galvanized Structural Steel Sheet: ASTM A 446, of grade required for design loading.  
47 Coating designation as indicated, or if not indicated, G90.  
48

1 Steel Pipe: ASTM A 53; Type and grade (if applicable) as selected by fabricator and as  
2 required for design loading; black finish unless galvanizing is indicated; standard weight  
3 (schedule 40), unless otherwise indicated.

4  
5 Gray Iron Castings: ASTM A 48, Class 30.

6  
7 Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either  
8 malleable iron, ASTM A 47, or cast steel, ASTM A 27. Provide bolts, washers and  
9 shims as required, hot-dip galvanized, ASTM A 153.

10  
11 Grout:

12 Non-Shrink Non-Metallic Grout: Pre-mixed, factory-packaged, non-staining, non-  
13 corrosive, non-gaseous grout complying with CE CRD-C621. Provide grout  
14 specifically recommended by manufacturer for interior and exterior applications of type  
15 specified in this section.

16  
17 Fasteners:

18 General: Provide zinc-coated fasteners for exterior use or where built into exterior  
19 walls. Select fasteners for the type, grade and class required.

20  
21 Bolts and Nuts: Regular hexagon head type, ASTM A 307, Grade A. Masonry  
22 Anchorage Devices: Expansion shields, FS FF-S-325. Toggle Bolts: Tumble-wing type,  
23 FS FF-B-588, type, class and style as required.

24  
25 Paint:

26 Shop Primer for Ferrous Metal: Manufacturer's or Fabricator's standard, fast-curing,  
27 lead-free, "universal" primer; selected for good resistance to normal atmospheric  
28 corrosion, for compatibility with finish paint systems indicated and for capability to  
29 provide a sound foundation for field- applied topcoats despite prolonged exposure;  
30 complying with performance requirements of FS TT-P-645.

31  
32 Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds in  
33 galvanized steel, complying with Military Specifications MIL-P-21035 (Ships) or SSPC-  
34 Paint-20.

35  
36 Non-Slip Aggregate Finish: Factory-graded, packaged material containing fused  
37 aluminum oxide grits or crushed emery as abrasive aggregate; rust- proof and non-  
38 glazing; unaffected by freezing, moisture or cleaning materials.

39  
40  
41 FABRICATION, GENERAL:

42  
43 Workmanship: Use materials of size and thickness indicated or, if not indicated, as  
44 required to produce strength and durability in finished product for use intended. Work  
45 to dimensions indicated or accepted on shop drawings, using proven details of  
46 fabrication and support. Use type of materials indicated or specified for various  
47 components of work.

48  
49 Form exposed work true to line and level with accurate angles and surfaces and  
50 straight sharp edges. Ease exposed edges to a radius of approximately 1/32" unless

1 otherwise indicated. Form bent-metal corners to smallest radius possible without  
2 causing g rain separation or otherwise impairing work.  
3  
4 Weld corners and seams continuously, complying with AWS recommendations. At  
5 exposed connections, grind exposed welds smooth and flush to match and blend with  
6 adjoining surfaces.  
7  
8 Form exposed connections with hairline joints, flush and smooth, using concealed  
9 fasteners wherever possible. Use exposed fasteners of type indicated or, if not  
10 indicated, Phillips flat-head (countersunk) screws or bolts.  
11  
12 Provide for anchorage of type indicated, coordinated with supporting structure.  
13 Fabricate and space anchoring devices to provide adequate support for intended use.  
14  
15 Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish  
16 hardware and similar items.  
17  
18 Galvanizing: Provide a zinc coating for those items shown or specified to be galvanized,  
19 as follows:  
20  
21 ASTM A 153 for galvanizing iron and steel hardware.  
22  
23 ASTM A 123 for galvanizing rolled, pressed and forged steel shapes, plates, bars and  
24 strip 1/8" thick and heavier.  
25  
26 ASTM A 386 for galvanizing assembled steel products.  
27  
28 Fabricate joints which will be exposed to weather in a manner to exclude water or  
29 provide weep holes where water may accumulate.  
30  
31 Shop Painting:  
32  
33 Apply shop primer to surfaces of metal fabrications except those which are galvanized  
34 or as indicated to be embedded in concrete or masonry, unless otherwise indicated,  
35 and in compliance with requirements of SSPC-PA1 "Paint Application Specification N  
36 o. 1" for shop drawings.  
37  
38 Surface Preparation: Prepare ferrous metal surfaces to comply with minimum  
39 requirements indicated below for SSPC surface preparation specifications and  
40 environmental exposure conditions of installed metal fabrications.  
41  
42  
43 ROUGH HARDWARE:  
44  
45 Furnish bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels  
46 and other miscellaneous steel and iron shapes as required for framing and supporting  
47 woodwork, and for anchoring or securing woodwork to concrete or other structures.  
48 Straight bolts and other stock rough hardware items are specified in Division-6  
49 sections.  
50

1 Fabricate items to sizes, shapes and dimensions required. Furnish malleable-iron  
2 washers for heads and nuts which bear on wood structural connections; elsewhere,  
3 furnish steel washers.

4  
5  
6 LOOSE BEARING AND LEVELING PLATES:  
7

8 Provide loose bearing and leveling plates for steel items bearing on masonry or  
9 concrete construction, made flat, free from warps or twists, and of required thickness  
10 and bearing area. Drill plates to receive anchor bolts and for grouting as required.  
11 Galvanize after fabrication.

12  
13  
14 LOOSE STEEL LINTELS:  
15

16 Provide loose structural steel lintels for openings and recesses in masonry walls and  
17 partitions as shown. Weld adjoining members together to form a single unit where  
18 indicated. Provide not less than 8" bearing at each side of openings, unless otherwise  
19 indicated.

20  
21 Galvanize loose steel lintels to be installed in exterior walls.  
22

23  
24 EXTERIOR STEEL BEAMS AND COLUMNS

25 All exterior steel beam and columns to be hot-dipped galvanized. This includes all roof  
26 top steel for mechanical supports.  
27

28  
29 MISCELLANEOUS FRAMING AND SUPPORTS:  
30

31 Provide miscellaneous steel framing and supports which are not a part of structural  
32 steel framework, as required to complete work.  
33

34 Fabricate miscellaneous units to sizes, shapes and profiles indicated or, if not indicated,  
35 of required dimensions to receive adjacent other work to be retained by framing. Except  
36 as otherwise indicated, fabricate from structural steel shapes, plates and steel bars of  
37 welded construction using mitered joints for field connection. Cut, drill and tap units to  
38 receive hardware and similar items.  
39

40 Equip units with integrally welded anchors for casting into concrete or building into  
41 masonry. Furnish inserts if units must be installed after concrete is placed.  
42

43 Except as otherwise indicated, space anchors 24" o.c. and provide minimum anchor  
44 units of 1-1/4" x 1/4" x 8" steel straps.  
45

46 Galvanize miscellaneous frames and supports where indicated.  
47  
48

1 Fabricate steel railings and handrails to design, dimensions, and details indicated.  
2 Provide railings and handrails members formed of sizes and wall thickness indicated,  
3 but not less than that required to support design loading.

4  
5  
6  
7  
8  
9 PART 3 - EXECUTION

10  
11  
12 PREPARATION

13  
14 Field Measurements: Take field measurements prior to preparation of shop drawings  
15 and fabrication, where possible. Do not delay job progress; allow for trimming and  
16 fitting where taking field measurements before fabrication might delay work.

17  
18 Coordinate and furnish anchorages, setting drawings, diagrams, templates,  
19 instructions, and directions for installation of anchorages, such as concrete inserts,  
20 sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be  
21 embedded in concrete or masonry construction. Coordinate delivery of such items to  
22 project site.

23  
24  
25 INSTALLATION

26  
27 General:

28  
29 Fastening to In-Place Construction: Provide anchorage devices and fasteners where  
30 necessary for securing miscellaneous metal fabrications to in-place construction;  
31 including treaded fasteners for concrete and masonry inserts, toggle bolts, through-  
32 bolts, lag bolts, wood screws and other connectors as required.

33  
34 Cutting, Fitting and Placement: Perform cutting, drilling and fitting required for  
35 installation of miscellaneous metal fabrications. Set work accurately in location,  
36 alignment and elevation, plus, level, true and free of rack, measured from established  
37 lines and levels. Provide temporary bracing or anchors in formwork for items which are  
38 to be built into concrete masonry or similar construction.

39  
40 Fit exposed connections accurately together to form tight hariline joints. Weld  
41 connections which are not to be left as exposed joints, but cannot be shop welded  
42 because of shipping size limitations. Grind exposed joints smooth and touch-up shop  
43 point coat. Do not weld, cut or abrade the surfaces of exterior units which have been  
44 hot-dip galvanized after fabrication, and are intended for bolted or screwed field  
45 connections.

46  
47 Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc  
48 welding, appearance and quality of welds made, and methods used in correcting  
49 welding work.



1 Setting Loose Plates: Clean concrete and masonry bearing surfaces of any bond-  
2 reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of  
3 bearing plates.

4  
5 Set loose leveling and bearing plates on wedges, or other adjustable devices. After the  
6 bearing members have been positioned and plumbed, tighten the anchor bolts. Do not  
7 remove wedges or shims, but if protruding, cut-off flush with the edge of the bearing  
8 plate before packing with grout. Use metallic non-shrink grout in concealed locations  
9 where not exposed to moisture; use non-metallic non-shrink grout in exposed  
10 locations, unless otherwise indicated.

11  
12 Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

13  
14 Steel Pipe Railings and Handrails:

15  
16 Adjust railing prior to anchoring to ensure matching alignment at abutting joints. Space  
17 posts at spacing indicated, or if not indicated, as required by design loadings. Plumb  
18 posts in each direction. Secure posts and railing ends to building construction as  
19 follows:

20  
21 Anchor posts in concrete by core drilling holes not less than 5" deep and 3/4" greater  
22 than outside diameter of post. Clean holes of all loose material, insert posts and fill  
23 annular space between post and concrete with non-shrink, non-metallic grout, mixed  
24 and placed to comply with grout manufacturer's directions.

25  
26 Leave anchorage joint exposed; wipe off excess grout and level 1/8" build-up, sloped  
27 away from post. For installation exposed on exterior or to flow of water, seal grout to  
28 comply with grout manufacturer's directions.

29  
30 For hollow masonry anchorage, use toggle bolts having square heads.

31  
32 For stud partitions use lag bolts set into wood backing between studs. Coordinate with  
33 stud installations for accurate location of backing members.

34  
35 ADJUST AND CLEAN

36  
37 Touch-Up Painting: Immediately after erection, clean field welds, bolted connections,  
38 and abraded areas of shop paint, and paint exposed areas with same material as used  
39 for shop painting.

40  
41 Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.

42  
43 For galvanized surfaces: Clean field welds, bolted connections and abraded areas and  
44 apply galvanizing repair paint to comply with ASTM A 780.

45  
46  
47  
48  
49 END OF SECTION

1 SECTION 07 20 00 - INSULATION

2  
3 PART 1 - GENERAL

4  
5  
6 RELATED DOCUMENTS:

7  
8 Drawings and general provisions of Contract, including General and Supplementary Conditions  
9 and Division-1 specification sections, apply to work of this section.

10  
11  
12 DESCRIPTION OF WORK:

13  
14 Extent of insulation work is shown on drawings and indicated by provisions of this section.

15  
16 Applications of insulation specified in this section include the following:

- 17 • Board type building insulation
- 18 • Board-type building insulation, concealed.
- 19 • Blanket-type building insulation.
- 20 • Polyvinyl Vapor Barrier

21  
22  
23 RELATED SECTIONS

24  
25 Extruded polystyrene board insulation for cavity walls is specified in Division-4 section "Masonry".

26  
27 Sound attenuation blankets installed as part of metal-framed gypsum drywall assemblies are  
28 specified in Division-9 section "Gypsum Drywall".

29  
30 Board type insulation for roofs is specified with the roofing system.

31  
32  
33 QUALITY ASSURANCE:

34  
35 Thermal Resistivity: Where thermal resistivity properties of insulation materials are designed by r-  
36 values they represent the rate of heat flow through a homogenous material exactly 1" thick,  
37 measured by test method included in reference material standard or otherwise indicated. They  
38 are expressed by the temperature difference in degrees F between the two exposed faces  
39 required to cause one BTU to flow through one square foot per hour at mean temperatures  
40 indicated.

41  
42 Fire Performance Characteristics: Provide insulation materials which are identical to those whose  
43 fire performance characteristics, as listed for each material or assembly of which insulation is a  
44 part, have been determined by testing, per method indicated below, by UL or other testing and  
45 inspecting agency acceptable to authorities having jurisdiction.

46  
47 Surface Burning Characteristics: ASTM E 84.

48  
49 Fire Resistance Ratings: ASTM E 119.

50  
51 Combustion Characteristics: ASTM E 136.

52  
53  
54 SUBMITTALS:

1 Product Data: Submit manufacturer's product literature and installation instructions for each type  
2 of insulation and vapor retarder material required.

3  
4 Certified Test Reports: If requested by the Architect, submit copies of certified test reports  
5 showing compliance with specified performance values, including r-values (aged values for  
6 plastic insulations), densities, compression strengths, fire performance characteristics, perm  
7 ratings, water absorption ratings and similar properties.

8  
9  
10 DELIVERY, STORAGE, AND HANDLING:

11  
12 General Protection: Protect insulations from physical damage and from becoming wet, soiled, or  
13 covered with ice or snow. Comply with manufacturer's recommendations for handling, storage  
14 and protection during installation.

15  
16 Protection for Plastic Insulation:

17  
18 Do not expose to sunlight, except to extent necessary for period of installation and concealment.

19  
20 Protect against ignition at all times. Do not deliver plastic insulating materials to project site ahead  
21 of installation time. Complete installation and concealment of plastic materials as rapidly as  
22 possible in each area of work.

23  
24  
25 PART 2 - PRODUCTS

26  
27  
28 ACCEPTABLE MANUFACTURERS:

29  
30 Manufacturers: Subject to compliance with requirements, provide products of one of the  
31 following:

32  
33 Manufacturers of Extruded Polystyrene Board Insulation:

34  
35 Amoco Foam Products Co.  
36 Dow Chemical U.S.A.  
37 Minnesota Diversified Products, Inc.  
38 UC Industries.

39  
40 Manufacturers of Glass Fiber Insulation:

41  
42 CertainTeed Corp.  
43 Knauf Fiber Glass GmbH.  
44 Manville Corp.  
45 Owens-Corning Fiberglas Corp.

46  
47 Manufacturers of Air infiltration barriers

48 Dupont  
49 Reemar  
50 Amoco

51  
52  
53 INSULATING MATERIALS:

54  
55 General: Provide insulating materials which comply with requirements indicated for materials,  
56 compliance with referenced standards, and other characteristics.

1  
2 Performed Units: Sizes to fit applications indicated, selected from manufacturer's standard  
3 thicknesses, widths and lengths.

4  
5 **Extruded Polystyrene Board Insulation:** Rigid, cellular thermal insulation with closed-cells and  
6 integral high density skin, formed by the expansion of polystyrene base resin in an extrusion  
7 process to comply with ASTM C 518 for Type indicated; with 5-year aged r-values of 5.4 and 5 at  
8 40 and 75 deg.F (4.4 and 23.9 deg.C), respectively; and as follows:

9  
10 Type IV, 1.6 lb./cu. ft. min. density, unless otherwise indicated.

11  
12 Surface Burning Characteristics: Maximum flame spread and smoke developed values of 5 and  
13 165, respectively.

14  
15 Compressive Strength: Minimum 25 psi for all other areas uses unless "high strength" is  
16 indicated.

17  
18 **Unfaced fiberglass Blanket/Batt Insulation:**  
19 To be fiberglass batts pre-cut for wall applications R-19.

20  
21  
22 AUXILIARY INSULATING MATERIALS:

23  
24 **Polyethylene Vapor Retarder:** 6-mil polyethylene film, with laboratory-tested vapor transmission  
25 rating of 0.2 perms, natural color.

26  
27 **Un-faced blanket type insulation** - for the primary exterior wall insulation provide un-faced  
28 fiberglass blankets the full thickness of the stud walls or cavities the insulation is being installed  
29 into.

30  
31 **Foil-faced blanket type insulation** - for use where noted to have a heavy craft/foil composite  
32 with fiber reinforced facing. Units to be installed with foil side facing building interior. Screw or  
33 other wise securely attached to studs or other substrate. Units to have overlapping foil facing.  
34 Overlap the facings and apply reinforced foil tape full length at joints to form effective vapor  
35 barrier.

36  
37 **Adhesive for Bonding Insulation:** Type recommended by insulation manufacturer, and  
38 complying with requirements for fire performance characteristics.

39  
40 Mechanical Anchors: Type and size recommended by insulation manufacturer for type of  
41 application and condition of substrate.

42  
43 **Crack Sealer for Board Insulation:** Provide polymeric insulating foam in aerosol dispenser  
44 designed for filling voids in board insulation.

45  
46 Product: Subject to compliance with requirements, provide "Polycel 100" by Construction  
47 Products Div., W.R. Grace & Co.

48  
49  
50 PART 3 - EXECUTION

51  
52  
53 INSPECTION AND PREPARATION:

54  
55 Require Installer to examine substrates and conditions under which insulation work is to be  
56 performed. A satisfactory substrate is one that complies with requirements of the section in which

1 substrate and related work is specified. Obtain Installer's written report listing conditions  
2 detrimental to performance of work in this section. Do not proceed with installation of insulation  
3 until unsatisfactory conditions have been corrected.

4  
5 Clean substrates of substances harmful to insulations or vapor retarders, including removal of  
6 projections which might puncture vapor retarders.

7  
8 **INSTALLATION, GENERAL:**

9  
10 Comply with manufacturer's instructions for particular conditions of installation in each case. If  
11 printed instructions are not available or do not apply to project conditions, consult manufacturer's  
12 technical representative for specific recommendations before proceeding with work.

13  
14 Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly  
15 around obstructions, and fill voids with insulation. Remove projections which interfere with  
16 placement.

17  
18 Apply a single layer of insulation of required thickness, unless otherwise shown or required to  
19 make up total thickness.

20  
21  
22 **INSTALLATION OF PERIMETER INSULATION:**

23  
24 Comply with waterproofing manufacturer's instructions for installation of insulation and protection  
25 boards. Where waterproofing and insulation manufacturer's instructions conflict, follow the more  
26 restrictive or complete instruction.

27 Protect top surface of horizontal insulation (from damage during concrete work) by application of  
28 protection board.

29  
30 **INSTALLATION OF GENERAL BUILDING INSULATION:**

31  
32 Apply insulation units to substrate by method complying with manufacturer's recommendations. If  
33 no specific method is indicated, bond units to substrate with adhesive or use mechanical  
34 anchorage to provide permanent placement and support of units.

35  
36 Seal joints between closed-cell (non-breathing) insulation units by applying mastic or sealant to  
37 edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed  
38 installation with mastic or sealant.

39  
40 **INSTALLATION OF VAPOR RETARDERS:**

41  
42 General: Extend vapor retarder to extremities of areas to be protected from vapor transmission.  
43 Secure in place with adhesives or other anchorage system as indicated. Extend vapor retarder  
44 to cover miscellaneous voids in insulated substrates, including those which have been stuffed  
45 with loose fiber-type insulation.

46  
47 All exterior walls shall have vapor barriers applied over the inside of the wall studs.

48  
49 Install vapor barriers at other specified locations as indicated on the plans.

50  
51 Seal vertical joints in vapor retarders over framing by lapping not less than 2 wall studs. Fasten  
52 vapor retarders to framing at top, end and bottom edges, at perimeter of wall openings and at  
53 lap joints; space fasteners 16" o.c.

54

1 Seal joints caused by pipes, conduits, electrical boxes and similar items penetrating vapor  
2 retarders with cloth or aluminized tape of type recommended by vapor retarder manufacturer to  
3 create an air-tight seal between penetrating objects and vapor retarder.

4

5 Repair any tears or punctures in vapor retarders immediately before concealment by other work.  
6 Cover with tape or another layer of vapor retarder.

7

#### 8 AIR INFILTRATION BARRIER

9

10 Where indicated install Tyvek type air infiltration Barrier.

11 Apply where shown on the drawings prior to the masonry anchors being installed. Install with all  
12 joints lapped and taped with manufacturers recommended joint taping materials. Follow  
13 manufacturer's instructions closely.

14

#### 15 PROTECTION:

16 General: Protect installed insulation and vapor retarders from harmful weather exposures and  
17 from possible physical abuses, where possible by non-delayed installation of concealing work or,  
18 where that is not possible, by temporary covering or enclosure.

19

20 END OF SECTION

1 SECTION 07 60 00 – FLASHING AND SHEET METAL

2  
3  
4 PART 1 - GENERAL

5  
6  
7 RELATED DOCUMENTS:

8  
9 Drawings and general provisions of Contract, including General and Supplementary Conditions  
10 and Division-1 Specification sections, apply to work of this section.

11  
12  
13 DESCRIPTION OF WORK:

14  
15 Extent of each type of flashing and sheet metal work is indicated on drawings and by provisions  
16 of this section.

17  
18 RELATED WORK SPECIFIED ELSEWHERE

19  
20 Division 8 aluminum curtain wall and aluminum store front

21  
22  
23 SUBMITTALS:

24  
25 Product Data; Flashing, Sheet Metal, Accessories: Submit manufacturer's product data,  
26 installation instructions and general recommendations for each specified sheet material and  
27 fabricated product.

28  
29 Samples; Flashing, Sheet Metal, Accessories: Submit 8" square samples of specified sheet  
30 materials to be exposed as finished surfaces.

31  
32 Submit 12" long, completely finished units of specified factory- fabricated products exposed as  
33 finished work.

34  
35 Shop Drawings; Flashing, Sheet Metal, Accessories: Submit shop drawings showing layout,  
36 joining, profiles, and anchorages of fabricated work, including major counter-flashings,  
37 trim/fascia units, gutters, downspouts, scuppers and expansion joint systems; layouts at 1/4"  
38 scale, details at 3" scale.

39  
40  
41 JOB CONDITIONS:

42  
43 Coordinate work of this section with interfacing and adjoining work for proper sequencing of each  
44 installation. Ensure best possible weather resistance and durability of the work and protection of  
45 materials and finishes.

46  
47  
48 PART 2 – PRODUCTS

49  
50 Finish Aluminum is to be finished on the interior and exterior with full strength Kynar 500 fluorepon  
51 finish. Product is to be a Duranar finish, AAMA 605.2-92, ASCA 96, 2 coat system including a  
52 primer coat and a color coat, monochromatic, as manufactured or licensed by PPG Industries, Inc.  
53 The finish is to be only applied in a controlled interior environment by and applicator approved  
54 and licensed by PPG Industries, inc.

55 Thickness is to be two coats, minimum 1.2 mil dry film thickness.

56

1 Color is to be chosen from the manufacturer's standard line of colors.

2  
3  
4 FLASHING AND SHEET METAL MATERIALS:

5  
6 To be 22 gauge pre-finished metal as described below.

7  
8  
9 ROOF AND WALL COPINGS

10  
11 On top of all wall systems there is to be a coping system fabricated of 22 gauge thick pre-finished  
12 galvanized steel. These copings are to be custom fabricated to fit all wall sections. Units are to be  
13 formed with keeper hooks, drip lips and expansion joints. All expansion joints are to have internal  
14 concealed slip joints to allow expansion and contraction. Slip joint liner is to be coated with same  
15 finish as coping.

16  
17 Finish on coping is to be full strength fluropen finish such as Kynar. Color as selected by  
18 architect.

19  
20 Design unit to allow thermal expansion and contraction. Method of this provision is to be  
21 indicated on the shop drawings.

22  
23 Product to be as manufactured by:

- 24 • Hickman,
- 25 • Construction Specialties
- 26 • M.M Systems Corporation
- 27 • Architectural Products Co.

28  
29 Product to be equal to Hickman Permasnap.

30  
31  
32 FABRICATED UNITS:

33  
34 General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details  
35 shown, and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and  
36 other recognized industry practices. Fabricate for waterproof and weather-resistant performance;  
37 with expansion provisions for running work, sufficient to permanently prevent leakage, damage or  
38 deterioration of the work. Form work to fit substrates. Comply with material manufacturer  
39 instructions and recommendations for r forming material. Form exposed sheet metal work  
40 without excessive oil-canning, buckling and tool marks, true to line and levels indicated, with  
41 exposed edges folded back to form hems.

42  
43 Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams. For metal other than  
44 aluminum, tin edges to be seamed, form seams, and solder. Form aluminum seams with epoxy  
45 seam sealer; rivet joints for additional strength where required.

46  
47 Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be  
48 used, or would not be sufficiently water/weatherproof, form expansion joints of intermeshing  
49 hooked flanges, not less than 1" deep, filled with mastic sealant (concealed within joints).

50  
51 Sealant Joints: Where movable, non-expansion type joints are indicated or required for proper  
52 performance of work, form metal to provide for proper installation of elastomeric sealant, in  
53 compliance with SMACNA standards.



1 Separations: Provide for separation of metal from noncompatible metal or corrosive substrates  
2 by coating concealed surfaces at locations of contact, with bituminous coating or other  
3 permanent separation as recommended by manufacturer/fabricator.

4  
5  
6 PART 3 - EXECUTION

7  
8  
9 INSTALLATION REQUIREMENTS:

10  
11 General: Except as otherwise indicated, comply with manufacture's installation instructions and  
12 recommendations, and with SMACNA "Architectural Sheet Metal Manual". Anchor units of work  
13 securely in place by methods indicated, providing for thermal expansion of metal units; conceal  
14 fasteners where possible, and set units true to line and level as indicated. Install work with laps,  
15 joints and seams which will be permanently watertight and weatherproof.

16  
17 Bed flanges of work in a thick coat of bituminous roofing cement where required for waterproof  
18 performance.

19  
20 Install counter-flashing in reglets, either by snap-in seal arrangement, or by wedging in place for  
21 anchorage and filling reglet with mastic or elastomeric sealant, as indicated and depending on  
22 degree of sealant exposure.

23  
24 Install elastic flashing in accordance with manufacturer's recommendations. Where required,  
25 provide for movement at joints by forming loops or bellows in width of flashing. Locate cover or  
26 filler strips at joints to facilitate complete drainage of water from flashing. Seam adjacent flashing  
27 sheets with adhesive, seal and anchor edges in accordance with manufacturer's  
28 recommendation.

29  
30 Nail flanges of expansion joint units to curb nailers, at maximum spacing of 6". Fabricate seams  
31 at joints between units with minimum 3" overlap, to form a continuous waterproof system.

32  
33  
34 CLEANING AND PROTECTION:

35  
36 Clean exposed metal surfaces, removing substances which might cause corrosion of metal or  
37 deterioration of finishes.

38  
39 Protection: Installer shall advise Contractor of required procedures for surveillance and  
40 protection of flashings and sheet metal work during construction, to ensure that work will be  
41 without damage or deterioration, other than natural weathering, at time of substantial completion.

42  
43  
44  
45 END OF SECTION

1 SECTION 07 90 00 - JOINT SEALERS

2

3

4 PART 1 - GENERAL

5

6

7 DESCRIPTION

8

9 Work included: The work includes the furnishing of all labor, tool equipment and  
10 services necessary for and reasonably incidental to the execution of caulking and  
11 sealant work shown on the drawings or as specified.

12

13 Work to be caulked:

14

15 Areas listed below.

16

17 The following joints are to be caulked/sealed whether or not they are detailed on the  
18 drawings. Additional locations may be called for on the drawings.

19

20

21 1. Perimeter of exterior openings where aluminum or steel frames meet exterior facade  
22 of building (i.e. precast, brick, block or stone.

23

24 2. Expansion and control joints in exterior surfaces of brick, stone or masonry.

25

26 3. Control and expansion joints in exterior surfaces of unit masonry walls

27

28 4. Coping joints and coping to facade joints

29

30 5. Cornice and wash (or horizontal surface joints)

31

32 6. Exterior joints in a horizontal wearing surface and walks one or two part  
33 polyurethane, self leveling grade.

34

35 7. Joints at top of non-load bearing masonry walls at the underside of poured  
36 concrete.

37

38 8. Joint between walks and building walls.

39

40

41 RELATED WORK SPECIFIED ELSEWHERE

42

43 Sealing of metal channels and drop ceiling system, Section 09511.

44

45 Sealing of joints around attenuating drywall partitions, Section 09250.

46

47 Sealing of exterior and interior perimeters of all electrical and mechanical items which  
48 penetrates the facade of the building, Division 15 and 16.

49

50

1 QUALITY ASSURANCE

2  
3 Use only qualified workmen thoroughly skilled and especially trained in the techniques  
4 of caulking, who can demonstrate to the satisfaction of the Architect of their ability to  
5 perform the work in a satisfactory manner.

6  
7 Mixing and application of the sealant shall be in strict accordance with the  
8 manufacturer's printed direction.

9  
10 Before delivery to the job, submit samples of caulking and sealing compound for  
11 approval.

12  
13  
14 DELIVERY, STORAGE AND HANDLING

15  
16 Deliver caulking and sealing compounds to the job in unbroken sealed containers  
17 bearing the manufacturer's mixing directions. Store materials in sealed containers in a  
18 dry protected area above the ground or floor.

19  
20 Protect caulking materials before, during and after installation. Protect the work of  
21 other trades during installation.

22  
23 Do not use caulking materials that have been stored for a period of time exceeding the  
24 maximum recommended shelf life of the materials.

25  
26  
27 GUARANTEE

28  
29 Contractor warrants workmanship for a period of two (2) years in accordance with  
30 terms of the contractor's written warranty. Materials are warranted in accordance with  
31 the manufacturer's written warranty.

32  
33 JOB CONDITIONS

34  
35 The joint configuration, the joint surfaces and backing forming the sealant rabbet shall  
36 be as detailed in the drawings and in accordance with the contract specifications. All  
37 known detrimental conditions shall be reported immediately in writing to the Contractor  
38 and/or Architect for correction by the Contractor.

39  
40 Do not proceed with the installation of sealant if the joint width is less than design, until  
41 written notification of the conditions is submitted to the Contractor and a written  
42 acknowledgement with order to proceed is provided by the Contractor.

43  
44 Do not proceed with the installation of sealant under adverse weather conditions, when  
45 joints to be sealed are damp, wet or frozen, or when temperatures are below or above  
46 the manufacturer's recommended limitations for installation. Consult the manufacturer  
47 for specific instructions before proceeding.

48  
49  
50 PART 2 - PRODUCTS

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SEALANTS

Contractor to use the product recommended by the manufacturer as being the top-of-the-line, best sealant for each application.

The materials are generally to be silicone sealants as manufactured by General Electric – Silpruf line of sealants.

For masonry work select only sealants that will not bleed

ACCEPTABLE MANUFACTURERS

Dow Corning, General Electric, (silicone)  
Tremco, Sika (polyurethane)

MATERIALS

Silicone Sealant  
Tremco Spectrum One

BACKER ROD

To be compressible foam type round backer rod placed in all construction joints. Material shall be closed cell and certified not to release expansive gas that may cause sealant to bubble

MATERIALS - PERFORMANCE REQUIREMENTS

Specifications: Conform to applicable Federal or ASTM Specifications.

Color: As selected by Architect from manufacturer's standard color or special color if applicable.

Sealant Primer: Suitable to the substrate surface as recommended by the sealant manufacturer. Knowledge of whether the primer is staining or non-staining should be obtained prior to application.

Joint Backing: Preformed compressible, resilient, non-waxing, non-extruding, non-staining strips or rod (polyethylene urethane, foam) as recommended by sealant manufacturer. Backing shall be of size and shape to suite the various conditions and shall be compatible with the sealant, primers, and substrates.

1 PART 3 - EXECUTION

2  
3 Surface Conditions: Joint surfaces to receive a sealant shall be sound, clean, dry and  
4 free of all visible contaminants. Application of non-visible coatings to surface of rabbet  
5 area prior to application of sealant shall be controlled by the Architect/Contractor in  
6 consultation with sealant manufacturer.

7  
8 Joint Size: Joint size to be determined by Architect based upon building movement,  
9 sealant capabilities and substrate requirements.

10  
11  
12 PREPARATION OF SURFACES

13  
14 Primer: Thoroughly clean joints and apply primer, if recommended by manufacturer, to  
15 a dry surface. Apply primer prior to installation of joint backer, bond breaker or sealant.

16  
17 Joint Backing: In joints where the depth of the joint exceeds the required depth of the  
18 sealant, install joint backing to provide backing and uniform depth of sealant. Joint  
19 backing shall be installed with approximately 30% compression. Do not stretch, twist,  
20 puncture or tear joint backing. Butt joint backing at intersections.

21  
22 Bond Breaker Tape: Install bond breaker tape smoothly at back of joint where joint  
23 backing is not required or cannot be installed. (Sealant shall adhere only to the sides  
24 and not to the back of the joint so as to eliminate "three point adhesion.")

25  
26 INSTALLATION

27 Sealant Application: Apply sealant in accordance with manufacturer's application  
28 manual or instructions, using hand guns or pressure equipment, with proper nozzle  
29 size, on clean, dry, properly prepared substrate. Force sealant into joint and against the  
30 side of joint to make uniform. Avoid pulling the sealant from sides. Fill sealant space  
31 completely with sealant.

32  
33 Tooling: Tooling is required to insure firm full contact with the interfaces of the joint.  
34 Tool joint to form smooth, uniform beads with slightly concave surfaces. Finish joints  
35 shall be straight, uniform, smooth and neatly finished. Remove any excess sealant from  
36 adjacent surface of joint, leaving work in a neat, clean condition.

37  
38 Where an irregular surface or sensitive joint border exists, the applicator shall apply  
39 making tape at edges of joint to insure joint neatness and protection. Tape to be  
40 removed after sealant is applied.

41  
42  
43 CLEANING

44  
45 Clean off excess compound or smears with cleaning material recommended by  
46 manufacturer of compound. Leave work in a condition satisfactory to Architect.

47  
48  
49 END OF SECTION

## SECTION 31 01 51 - UNDERGROUND UTILITY PROTECTION

### PART 1 - GENERAL

#### PROTECTION

A. Existing utility lines and structures indicated or known and existing utility lines for this Project shall be protected from damage during construction

B. The general contractor is to Locate and flag all lines and structures before beginning any excavation operations. The general contractor shall have the site completely marked by all utilities. The GC is to verify with utilities that markings are accurate. The GC is to be responsible for final utility verification prior to excavation or demolition.

#### REMOVAL AND RELOCATION

A. When utility lines and structures are encountered within the area of operations, notify the Design team and affected utility in ample time for the necessary measures to be taken to prevent interruption of the services.

#### UNKNOWN LOCATIONS

A. Damage to existing utility lines or structures not indicated or known shall be reported immediately to the Design team and the affected utility.

If it is determined by the design team that the utility line could have been discovered prior to damage by careful marking and requesting utility company markings the General Contractor shall pay the cost of utility line repair. If the utility could not have been known ahead of time the repairs will be made at the owner's expense.

### PART 2 - PRODUCTS

Not Applicable

### PART 3 - EXECUTION.+

Not Applicable

END OF SECTION 31 01 51

1 SECTION 31 10 00 - SITE CLEARING

2  
3  
4 PART 1 - GENERAL

5  
6 RELATED DOCUMENTS:

7 Drawings and general provisions of Contract, including General and  
8 Supplementary Conditions and Division-1 Specification sections, apply to work  
9 of this section.

10  
11 DESCRIPTION OF WORK:

12 The site clearing is to include the removal of all items above and below grade  
13 required to allow the new facilities to be installed.

14  
15 Site clearing work includes, but is not limited to:

- 16  
17
- 18 • Pavement Removal
  - 19 • Topsoil stripping.
  - 20 • Clearing and grubbing.
  - 21 • Removing above-grade improvements.
  - 22 • Removing below-grade improvements.
  - 23 • Sidewalk Removal
  - 24 • Curb Removal

25 JOB CONDITIONS:

26 Traffic: Conduct site clearing operations to ensure minimum interference with  
27 roads, streets, walks, and other adjacent occupied or used facilities. Do not  
28 close or obstruct streets, walks or other occupied or used facilities without  
29 permission from the owner and authorities having jurisdiction.

30  
31 Protection of Existing Improvements: Provide protections necessary to prevent  
32 damage to existing improvements indicated to remain in place. Protect adjacent  
33 properties from damage.

34  
35 Restore damaged improvements to their original condition, as acceptable to  
36 parties having jurisdiction.

37  
38 Protection of Existing Trees and Vegetation: Protect existing trees and other  
39 vegetation indicated to remain in place, against unnecessary cutting, breaking or  
40 skinning of roots, skinning and bruising of bark, smothering of trees by  
41 stockpiling construction materials or excavated materials within drip line, excess  
42 foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary  
43 guards to protect trees and vegetation to be left standing.

1 Improvements on Adjoining Property: Authority for performing removal and  
2 alteration work on public right-of-way adjoining Owner's property will be  
3 obtained by Owner prior to award of contract.

4  
5 Extent of work on adjacent property is indicated on Drawings.

6  
7  
8 PART 2 - PRODUCTS: Not applicable to work of this section.

9  
10  
11 PART 3 - EXECUTION

12  
13 SITE CLEARING:

14 General: Remove grass and other vegetation, improvements, or obstructions  
15 interfering with installation of new construction. Remove such items elsewhere  
16 on site or premises as specifically indicated. Removal includes digging out  
17 stumps and roots.

18  
19 Topsoil: Topsoil is defined as friable clay loam surface soil found in a depth of  
20 not less than 4". Satisfactory topsoil is reasonably free of subsoil, clay lumps,  
21 stones, and other objects over 2" in diameter, and without weeds, roots, and  
22 other objectionable material.

23  
24 Strip topsoil to whatever depths encountered in a manner to prevent  
25 intermingling with underlying subsoil or other objectionable material.

26  
27 Stockpile topsoil in storage piles where deemed best by Contractor. Stock pile  
28 no more topsoil than will be needed for completion at the end of the building.  
29 Construct storage piles to freely drain surface water. Cover storage piles if  
30 required to prevent wind-blown dust.

31  
32 Clearing and Grubbing: Clear site of trees, shrubs and other vegetation, except  
33 for those indicated to be left standing. Remove from site and dispose of.

34  
35 Completely remove stumps, roots, and other debris protruding through ground  
36 surface.

37  
38 Fill depressions caused by clearing and grubbing operations with satisfactory  
39 soil material, unless further excavation or earthwork is indicated.

40  
41 Place fill material in horizontal layers not exceeding 6" loose depth and  
42 thoroughly compact to a density equal to adjacent original ground.

43  
44 Removal of Improvements: Remove existing above-grade and below-grade  
45 improvements necessary to permit construction, and other work as indicated.

46



1 Abandonment or removal of certain underground pipe or conduits may be  
2 shown on mechanical or electrical drawings, and is included under work of  
3 those sections. Removal of abandoned underground piping or conduit  
4 interfering with construction is included under this section.

5

6 Pavement removal: Remove all asphalt and concrete pavements on the site  
7 entirely and dispose of. This includes removal of all base and sub-base  
8 materials. Remove all curbs, drainage structures, bases, and other items on  
9 site.

10

11 DISPOSAL OF WASTE MATERIALS:

12 Removal from Owner's Property: Remove waste materials and unsuitable and  
13 excess topsoil from Owner's property and dispose of off site in legal manner.

14

15

16 END OF SECTION

1 SECTION 31 20 00 - EARTHWORK

2  
3 PART 1 - GENERAL

4  
5 RELATED DOCUMENTS:

6  
7 Drawing and general provisions of the Contract, including General and Supplementary  
8 Conditions and Division-1 Specification sections, apply to work of this section.  
9

10 DESCRIPTION OF WORK:

11  
12 Extent of earthwork is indicated on drawings, and includes, but is not limited to:

13  
14 Excavation of the site to footing elevations shown on the drawings.

15  
16 Hauling and off-site removal of excess top soil and subsoil.

17  
18 Preparation of sub-grade for building slabs, walks, and pavements.

19  
20 Drainage fill for the support of floor slabs and drainage fill above the waterproofing assembly.

21  
22 Purchasing and placing fill as required for proper elevations under buildings, slabs, etc.

23  
24 Backfilling at exterior walls and of trenches within building lines.

25  
26 Replacement of subsoil and topsoil above the building and rough grading to elevations shown on  
27 the drawings.  
28

29 Excavation for Mechanical/Electrical Work: Excavation and backfill required in conjunction with  
30 underground mechanical and electrical utilities, and buried mechanical and electrical  
31 appurtenances is to be performed by the Contractor. Their work shall comply with the standards  
32 set in this section.  
33

34 Definition: "Excavation" consists of removal of material encountered to sub-grade elevations  
35 indicated and subsequent disposal of materials removed.  
36  
37

38 QUALITY ASSURANCE:

39  
40 Codes and Standards: Perform excavation work in compliance with applicable requirements of  
41 governing authorities having jurisdiction.  
42

43 Testing and Inspection Service: The Owner will engage soil testing and inspection service for  
44 quality control testing during earthwork operations.

45 JOB CONDITIONS:

46  
47 Site Information: Data on indicated subsurface conditions are not intended as representations or  
48 warranties of accuracy or continuity between soil bearings. It is expressly understood that the  
49 Owner will not be responsible for interpretations or conclusions drawn there from by the  
50 Contractor. Data are made available for convenience of the Contractor.  
51

52 The Contractor, at no cost to the Owner, may make additional test borings and other exploratory  
53 operations.  
54

55 Existing Utilities:

1 Where existing utilities are to remain in place, provide adequate means of protection during  
2 earthwork operations. The Contractor shall locate and verify the location of all existing utilities  
3 prior to excavation. The information on the site plans of existing utilities is not known to be  
4 accurate. It is a reflection of information supplied by a variety of sources.  
5

6 Should uncharted, or incorrectly charted, piping or other utilities be encountered during  
7 excavation, consult utility owner immediately for directions. Cooperate with the Owner and utility  
8 companies in keeping respective services and facilities in operation. Repair damaged utilities to  
9 satisfaction of utility owner.

10  
11 Provide minimum of 48-hour notice to Architect, and receive written notice to proceed before  
12 interrupting any utility.  
13

14 Use of Explosives: The use of explosives is NOT permitted.  
15

16 Protection of Persons and Property: Barricade open excavations occurring as part of this work  
17 and post with warning lights.  
18

19 Operate warning lights as recommended by authorities having jurisdiction.  
20

21 Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by  
22 settlement, lateral movement, undermining, washout and other hazards created by earthwork  
23 operations.  
24

25 Perform excavation within drip-line of large trees to remain by hand, and protect the root system  
26 from damage or dry-out to the greatest extent possible. Maintain moist condition for root system  
27 and cover exposed roots with burlap. Paint root cuts of 1" diameter and larger with emulsified  
28 asphalt tree paint.

## 29 PART 2 - PRODUCTS

30  
31

### 32 SOIL MATERIALS:

#### 33 Definitions:

34  
35 Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification  
36 groups GW, GP, GM, SM, SW and SP.  
37

38 Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification  
39 groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.  
40

41 Sub-base Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed  
42 stone, crushed slag, natural or crushed sand.  
43

44 Drainage Fill: Washed, evenly graded mixture of crushed stone, crushed or uncrushed gravel,  
45 with 100% passing a 1-1/2" sieve and not more than 5% passing a No. 4 sieve.  
46

47 Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2" in  
48 any dimension, debris, waste, frozen materials, vegetable and other deleterious matter. Fill  
49 materials shall consist of new granular fill materials hauled in from off site material areas.

50 Contractor shall maintain separate stocks of topsoil and of subsoil.  
51  
52

## 53 PART 3 - EXECUTION

54  
55

### 56 EXCAVATION:

1  
2 Excavation is Unclassified, and includes excavation to sub-grade elevations indicated, regardless  
3 of character of materials and obstructions encountered.

4  
5 Unauthorized excavation consists of removal of materials beyond indicated sub-grade elevations  
6 or dimensions without specific direction of Architect. Unauthorized excavation, as well as  
7 remedial work directed by Architect, shall be at Contractor's expense.

8  
9 Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending  
10 indicated bottom elevation of footing or base to excavation bottom, without altering required top  
11 elevation. Lean concrete fill may be used to bring elevations to proper position, when  
12 acceptable to Architect.

13  
14 Elsewhere, backfill and compact unauthorized excavations as specified for authorized  
15 excavations of same classification, unless otherwise directed by Architect.

16  
17 Additional Excavation: When excavation has reached required sub-grade elevations, notify  
18 Architect who will make an inspection of conditions.

19  
20 If unsuitable bearing materials are encountered at required sub-grade elevations, carry  
21 excavations deeper and replace excavated material as directed by Architect.

22  
23 Removal of unsuitable material and its replacement as directed will be paid on basis of contract  
24 conditions relative to changes in work.

25  
26 Stability of Excavations: Slope sides of excavations to comply with local codes and ordinances  
27 having jurisdiction. Shore and brace where sloping is not possible because of space restrictions  
28 or stability of material excavated.

29  
30 Maintain sides and slopes of excavations in safe condition until completion of backfilling.

31  
32 Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations  
33 and from flooding project site and surrounding area.

34  
35 Do not allow water to accumulate in excavations. Remove water to prevent softening of  
36 foundation bottoms, undercutting footings, and soil changes detrimental to stability of sub-grades  
37 and foundations. Provide and maintain pumps, well points, sumps, suction and discharge  
38 lines, and other dewatering system components necessary to convey water away from  
39 excavations.

40  
41 Establish and maintain temporary drainage ditches and other diversions outside excavation limits  
42 to convey rain water and water removed from excavation to collecting or run-off areas. Do not  
43 use trench excavations as temporary drainage ditches.

44  
45 Material Storage: Stockpile satisfactory excavated materials where directed, until required for  
46 backfill or fill. Place, grade and shape stockpiles for proper drainage.

47  
48 All excess material soil material and waste materials shall be disposed of as herein specified.

49  
50 Silt Fencing: Provide Silt Fencing around all areas and excavations to prevent water runoff and  
51 soil run-off into storm water systems or onto adjacent properties.

52  
53 Excavation for Structures: Conform to elevations and dimensions shown within a tolerance of  
54 plus or minus 0.10', and extending a sufficient distance from footings and foundations to permit  
55 placing and removal of concrete formwork, installation of services, other construction, and for  
56 inspection.

1  
2 In excavating for footings and foundations, take care not to disturb bottom of excavation.  
3 Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to  
4 required lines and grades to leave solid base to receive other work.  
5

6 Excavation for Pavements: Cut surface under pavements to comply with cross-sections,  
7 elevations and grades as shown.

8 Excavation for Trenches: Dig trenches to the uniform width required for particular item to be  
9 installed, sufficiently wide to provide ample working room. Provide 6" to 9" clearance on both  
10 sides of pipe or conduit.  
11

12 Excavate trenches to depth indicated or required. Carry depth of trenches for piping to establish  
13 indicated flow lines and invert elevations. Beyond building perimeter, keep bottoms of trenches  
14 sufficiently below finish grade to avoid freeze-ups.  
15

16 For pipes or conduit 5" or less in nominal size and for flat-bottomed, multiple-duct conduit units,  
17 do not excavate beyond indicated depths. Hand excavate bottom cut to accurate elevations and  
18 support pipe or conduit on undisturbed soil.  
19

20 For pipes or conduit 6" or larger in nominal size, tanks and other mechanical/electrical work  
21 indicated to receive sub-base, excavate to sub-base depth indicated, or, if not otherwise  
22 indicated, to 6" below bottom of work to be supported.  
23

24 Except as otherwise indicated, excavate for exterior water-bearing piping (water or drainage) so  
25 top of piping is no less than 4'-6" below finish grade.  
26

27 Do not backfill trenches until tests and inspections have been made and backfilling authorized by  
28 Architect. Use care in backfilling to avoid damage or displacement of pipe systems.  
29

30 For piping or conduit less than 2'-6" below surface of roadways, provide 4" thick concrete base  
31 slab support. After installation and testing of piping or conduit, provide minimum 4" thick  
32 encasement (sides and top) of concrete prior to backfilling or placement of roadway sub-base.  
33

#### 34 35 **COMPACTION:**

36  
37 General: Control soil compaction during construction providing minimum percentage of density  
38 specified for each area classification indicated below.  
39

40 Percentage of Maximum Density Requirements: Compact soil to not less than the following  
41 percentages of maximum density for soils which exhibit a well-defined moisture density  
42 relationship (cohesive soils) determined in accordance with ASTM D 1557; and not less than the  
43 following percentages of relative density, determined in accordance with ASTM D 2049, for soils  
44 which will not exhibit a well-defined moisture-density relationship (cohesionless soils).  
45

46 Structures, Building Slabs and Steps, Pavements: Compact top 12" of sub-grade and each layer  
47 of backfill or fill material at 90% maximum density for cohesive material or 95% relative density  
48 for cohesionless material.  
49

50 Lawn or Unpaved Areas: Compact top 6" of sub-grade and each layer of backfill or fill material at  
51 85% maximum density for cohesive soils and 90% relative density for cohesionless soils.  
52

53 Walkways: Compact top 6" of sub-grade and each layer of backfill or fill material at 90%  
54 maximum density for cohesive material or 95% relative density for cohesionless material.  
55

1 Moisture Control: Where sub-grade or layer of soil material must be moisture conditioned before  
2 compaction, uniformly apply water to surface of sub-grade, or layer of soil material, to prevent  
3 free water appearing on surface during or subsequent to compaction operations.

4  
5 Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to  
6 specified density.

7  
8 Soil material that has been removed because it is too wet to permit compaction may be  
9 stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing or pulverizing until  
10 moisture content is reduced to a satisfactory value.

11  
12 **BACKFILL AND FILL:**

13  
14 General: Place acceptable soil material in layers to required sub-grade elevations. Except as  
15 noted below or on the drawings, use satisfactory excavated or borrow material.

16  
17 Under walks and pavements, use sub-base material, or satisfactory excavated or borrow  
18 material, or combination of both.

19  
20 Under steps, use sub-base material.

21  
22 Under building slabs, use drainage fill material.

23  
24 Under piping and conduit, use sub-base material where sub-base is indicated under piping or  
25 conduit; shape to fit bottom 90 deg. of cylinder.

26  
27 Backfill excavations as promptly as work permits, but not until completion of the following:

28  
29 Acceptance of construction below finish grade including, where applicable, damp-proofing,  
30 waterproofing, and perimeter insulation. Inspection, testing, approval, and recording locations of  
31 underground utilities.

32  
33 Removal of concrete formwork.

34  
35 Removal of trash and debris.

36  
37 Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials,  
38 obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip,  
39 or break-up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond  
40 with existing surface.

41  
42 When existing ground surface has a density less than that specified under "Compaction" for  
43 particular area classification, break up ground surface, pulverize, moisture-condition to optimum  
44 moisture content, and compact to required depth and percentage of maximum density.

45  
46 Placement and Compaction: Place backfill and fill materials in layers not more than 8" in loose  
47 depth for material compacted by heavy compaction equipment, and not more than 4" in loose  
48 depth for material compacted by hand-operated tampers.

49  
50 Before compaction, moisten or aerate each layer as necessary to provide optimum moisture  
51 content. Compact each layer to required percentage of maximum dry density or relative dry  
52 density for each area classification. Do not place backfill or fill material on surfaces that are  
53 muddy, frozen, or contain frost or ice.

54  
55 Place backfill and fill materials evenly adjacent to structures, piping or conduit to required  
56 elevations. Take care to prevent wedging action of backfill against structures or displacement of

1 piping or conduit by carrying material uniformly around structure, piping or conduit to  
2 approximately same elevation in each lift.

3  
4  
5 **GRADING:**

6  
7 General: Uniformly grade areas within limits of grading under this section, including adjacent  
8 transition areas. Smooth finished surface within specified tolerances, compact with uniform levels  
9 or slopes between points where elevations are indicated, or between such points and existing  
10 grades.

11  
12 Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from  
13 structures and to prevent ponding.

14  
15 Finish surfaces free from irregular surface changes, and as follows:

16  
17 Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10' above or  
18 below required sub-grade elevations.

19  
20 Walks: Shape surface of areas under walks to line, grade and cross-section, with finish surface  
21 not more than 0.10' above or below required sub-grade elevation.

22  
23 Pavements: Shape surface of areas under pavement to line, grade and cross-section, with finish  
24 surface not more than 1/2" above or below required sub-grade elevation.

25 Grading Surface of Fill Under Building Slabs: Grade smooth and even, free of voids, compacted  
26 as specified, and to required elevation. Provide final grades within a tolerance of 1/2" when tested  
27 with a 10' straightedge.

28  
29 Compaction: After grading, compact sub-grade surfaces to the depth and indicated percentage of  
30 maximum or relative density for each area classification.

31  
32  
33 **PAVEMENT SUB-BASE COURSE:**

34  
35 General: Sub-base course consists of placing sub-base material, in layers of specified thickness,  
36 over sub-grade surface to support a pavement base course.

37  
38 See other Division 2 sections for paving specifications.

39  
40 Grade Control: During construction, maintain lines and grades including crown and cross-slope of  
41 sub-base course.

42  
43 Placing: place sub-base course material on prepared sub-grade in layers of uniform thickness,  
44 conforming to indicate cross-section and thickness. Maintain optimum moisture content for  
45 compacting sub-base material during placement operations.

46  
47 When a compacted sub-base course is shown to be 6" thick or less, place material in a single  
48 layer. When shown to be more than 6" thick, place material in equal layers, except no single layer  
49 more than 6" or less than 3" in thickness when compacted.

50  
51  
52 **BUILDING SLAB DRAINAGE COURSE:**

53  
54 General: Drainage course consists of placement of drainage fill material, in layers of indicated  
55 thickness, over sub-grade surface to support concrete building slabs.

1 Placing: Place drainage fill material on prepared sub-grade in layers of uniform thickness,  
2 conforming to indicate cross-section and thickness. Maintain optimum moisture content for  
3 compacting material during placement operations.

4  
5 When a compacted drainage course is shown to be 6" thick or less, place material in a single  
6 layer. When shown to be more than 6" thick, place material in equal layers, except no single layer  
7 more than 6" or less than 3" in thickness when compacted.

#### 8 9 10 FIELD QUALITY CONTROL

11  
12 Quality Control Testing During Construction: Allow testing service to inspect and approve sub-  
13 grades and fill layers before further construction work is performed.

14 Footing Sub-grade: For each strata of soil on which footings will be placed, conduct at least one  
15 test to verify required design bearing capacities. Subsequent verification and approval of each  
16 footing sub-grade may be based on a visual comparison of each sub-grade with related tested  
17 strata, when acceptable to Architect.

18  
19 Paved Areas and Building Slab Sub-grade: Make at least one field density test of sub-grade for  
20 every 2000 sq. ft. of paved area or building slab, but in no case less than 3 tests. In each  
21 compacted fill layer, make one field density test for every 2000 s q. ft. of overlaying building slab  
22 or paved area, but in no case less than 3 tests.

23  
24 Foundation Wall Backfill: Take at least 2 field density tests, at locations and elevations as  
25 directed.

26  
27 If in opinion of Architect, based on testing service reports and inspection, sub-grade or fills which  
28 have been placed are below specified density, provide additional compaction and testing at no  
29 additional expense.

#### 30 31 32 MAINTENANCE:

33  
34 Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of  
35 trash and debris.

36  
37 Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.

38  
39 Reconditioning Compacted Areas: Where completed compacted areas are disturbed by  
40 subsequent construction operations or adverse weather, scarify surface, re-shape, and compact  
41 to required density prior to further construction.

42  
43 Settling: Where settling is measurable or observable at excavated areas during general project  
44 warranty period, remove surface (pavement, lawn or other finish), add backfill material, compact,  
45 and replace surface treatment. Restore appearance, quality, and condition of surface or finish to  
46 match adjacent work, and eliminate evidence of restoration to greatest extent possible.

#### 47 48 DISPOSAL OF EXCESS AND WASTE MATERIALS:

49  
50 All excess soil materials shall be removed from the site and deposited in approved dumping  
51 areas

52  
53 Remove excess excavated material, trash, debris and waste materials and dispose of it off  
54 Owner's property.

55  
56 END OF SECTION 31 20 00



## SECTION 31 20 01 - SITE USAGE

### PART 1 - GENERAL

The usage of this site is to be tightly controlled by the General Contractor (GC). It is important to environment of the surrounding community that the disruption caused by the construction is minimized to the greatest degree possible.

The Contractors and all Sub-Contractors are to make every effort to take steps even beyond those listed in this specification section and elsewhere in this manual to ensure that the surrounding neighborhood remains safe, quiet, clean and in general, minimally disrupted.

#### **Tire cleaning**

All trucks leaving the site shall be checked for wheel and truck mud. If present, all mud and dirt shall be washed off so that there is no possibility of dropping mud after leaving the site. Any construction mud found on streets attributed to construction will be cleaned immediately by the City of and the Contractor invoiced for the cleaning.

#### **Parking**

All construction parking for workmen is to take place where directed by the owner.

#### **Site Fencing**

When requested by the owner the GC is construct fencing and barricades to provide safety. It should be anticipated that fencing will used.

#### **Site Cleanliness and professionalism**

The site is to remain ordered and clean at all times. Weeds and grass are to be cut down regularly. All materials are to be well organized neatly stacked and in general present a neatly organized site. Regular removal of debris is to take place. Mud is to be cleaned from pavements. Besides the safety improvements a neat site creates a neat site portrays a professional image to the community regarding the project, which is required.

#### **Public Street Usage**

Contractors are to make individual arrangements with the Government for the use of street areas.

#### **Modifications**

It is recognized that the contractors' expertise in coordinating construction will likely generate more specific ideas on the management of the site. The Contractor may modify these requirements if agreeable by the owner. In addition, additional site usage restrictions may be imposed on the contractor if required to allow un-disrupted library services or a matter of public safety.

#### **Dust and dirt**

The Contractors shall control dust and dirt by whatever means are required to prevent air bone dust generated from earthwork operations, masonry sawing or any other procedures. In addition to precautions outlined elsewhere in this specification manual, the Contractor shall maintain moist soil by watering during excavation periods and as

required, and use only wet masonry saw unless covered and approved by the Architect.

END OF SECTION 31 20 01

## SECTION 31 30 10 - EXCAVATION AND BACKFILL

### PART 1: GENERAL

- 1.1 The provisions of the Notice to Bidders, Instructions to Bidders, Proposals, General Conditions, Supplementary Conditions, Division 1, General Requirements, and of Sections 26 01 00 and 26 05 00, are included as a part of this Section as though bound herein.
- 1.2 The following is supplemental to the requirements of Divisions 2, Site Work.
- 1.3 This Contractor (and any Subcontractor) shall do all the excavating of any materials encountered, backfill, cutting and patching as shown or as necessary for installation of underground wiring, foundations and equipment in his contract. Provide and maintain bracing, shoring or sheathing necessary to support walls of excavations.
- 1.4 Trenches shall be opened in straight lines. Exterior trenches shall have minimum depth of 30" which shall be maintained between top of largest conduit or duct and finish grade. The trenching depth in the fields may change because of the underdrain system.
- 1.5 Trenches in unpaved areas may use excavated material for backfill. All trenches under paved area or walks shall be backfilled with granular material.
- 1.6 The excavated material which is to be used for trench backfilling shall be stored so that it will not cause a hazard to the work, workmen, and so that it will cause a minimum of inconvenience to travel, adjacent property or other Contractors. No excavated materials shall be placed on an adjoining, nonpermanent type of pavement or adjoining lawns or shrubbery when possible. The excess excavated material which was to be used but is not required for backfilling shall be removed from the site and disposed of by the Contractor at his expense. Temporary storing of the material shall be treated as above.
- 1.7 All job excavated materials which are used for trench backfill shall be compacted in by any method except settlement by water. In the baseball fields compaction must take place in 6" lifts. All Backfill shall be clean and shall be of such composition that said material can be compacted to 95 percent relative compaction by the compaction method used and with water added, if needed, to bring it to optimum moisture content. Compaction in the baseball fields shall be 100 percent relative compaction.
- 1.8 Where excavation is necessary in an existing lawn, carefully remove and store sod. After backfilling trench, replace sod. Care shall be exercised during the work to see that no unnecessary damage is done to lawn in storing of dirt or other construction material. Should unnecessary damage occur, in opinion of Design team, the Contractor shall be required to recondition lawns at his own expense.
- 1.9 In addition, each Contractor shall provide and maintain warning barricades, flags, warning lights, etc., and shall conduct his work so as to create a minimum amount of inconvenience to others, traffic, construction, and the like. Temporary suspension of work does not relieve the Contractor of responsibility for the above

requirements.

- 1.10 Where roots of live trees are encountered in excavations, they shall be carefully protected during constructions. Contractor shall cut or remove interfering, trees, remove all stumps, rocks, etc., in line of excavation; however, approval of Design team shall be obtained before any tree is removed or cut. Any shrubbery in line of excavation shall be removed with ball of dirt and replaced at completion of excavation.
- 1.11 Where excavation is necessary in existing pavements, Contractors for whose work excavation is required shall pay all fees and costs of opening street or pavement and all costs of filling and repaving in accordance with the requirements of and to satisfaction of Municipality, Utility or Owner of such paving.
- 1.12 Where existing sidewalks, drives and roadways must be cut, they shall be saw cut in straight lines to present neat appearance when relaid. At such locations the backfill medium shall be compacted crushed stone or approved equal, from bottom of finished surface to bottom of the trench.
- 1.13 Where an open cut trench crosses a street, alley, driveway, parking area or traveled roadway, any of which have been paved with hot asphaltic concrete, concrete or bituminous seal, or when a trench parallels a roadway pavement and the centerline of the sewer is within six (6) feet of the edge of the pavement, the trench shall be backfilled with granular material for the full length of the trench plus one foot on each end of the trench. The shoulders of such backfill shall be sloped away along the length of the trench from the ends at the ratio of one and one-half horizontally to one vertically.
- 1.14 Where an open trench is cut in a paved area as described above, the trench shall immediately be surfaced with crushed stone. Stone shall be kept up flush with the adjacent pavement and shall be of such a depth that there shall be a minimum of eight (8) inches of compacted No. 53 crushed stone left in the trench below the final pavement thickness.
- 1.15 The Contractor shall restore damaged or removed pavements as herein specified. All pavements, concrete walks and improved surfaces such as crushed stone parking areas, walks, or drives shall be restored to as good as or better condition than before construction.
- 1.16 All pavement disturbed by the construction operation shall be restored including that caused by storage use and movement of construction materials, construction equipment, etc. Where trenches are located across pavement, the Contractor shall place stone in the trench immediately after backfill so as to maintain traffic and access. The trench shall be thus maintained until such time as the pavement may be restored.
- 1.17 Concrete pavements, sidewalks and curbs shall be replaced to the same thickness as the original pavement unless otherwise specified herein. Concrete street pavement replacement shall be minimum thickness of nine (9) inches.
- 1.18 Edges of existing pavements, sidewalks and curbs shall be neatly sawed in two (2) parallel lines straddling the trench. Where such edge is closer than two (2) feet to an existing control joint, the concrete shall be removed back to the joint and

resulting panel poured monolithic. Any reinforcing steel protruding into the trench cut shall be left intact to help reinforce the repair.

- 1.19 The Contractor shall use high early strength concrete with a maximum slump of four (4) inches. Water shall not be added at the job site. The repair shall not be opened to traffic for seventy-two (72) hours after initial set. Concrete shall be covered with ethylene film or an approved, non-staining curing compound during the cure period.
- 1.20 Concrete walks shall be one course construction, four (4) inches in thickness, reinforced with 6 x 6 mesh, 10 gauge, with a four (4) inch gravel underlay. A 1/2 inch expansion joint with premolded filler shall be used at one end of each sidewalk or curb cut.
- 1.21 Where the trench cut is made through concrete which has been resurfaced with asphalt, the repair shall be made in kind, that is, replace concrete portion and then resurface it with hot mix to provide a uniform job,

## PART 2: PRODUCTS

- 2.1 Bituminous pavement replacement shall consist of a minimum of 8 inches thickness of compacted crushed stone base and a wearing surface of a 3-inch hot mix bituminous surface in accordance with State Highway Specifications. Base shall be No. 53 stone or No. 53 and No. 2. Each layer shall be compacted with a road roller or the wheels of heavy equipment. Existing pavement thicker than such minimum shall be replaced to thickness in kind. Hot mix surface shall be (1) one (2) two-inch layer of binder and 1 inch wearing surface. The 1-inch thick top course shall be of Type 'D' surface material which shall be placed so that the trench surface is 1/2-inch above adjacent pavement.  
The top course shall be feathered out at least six inches over the existing pavement to form a seal.
- 2.2 Concrete for pavements, sidewalks or curbs shall be 4,000 psi concrete, using high-early strength cement and limestone large aggregate.

## PART 3: EXECUTION

- 3.1 All work required by this Section shall be performed by skilled craftsmen experienced in the particular field of work.
- 3.2 All work to be done in a workmanlike manner in accordance with specific requirements of Divisions 2 and 3 of these Specifications.

END OF SECTION 33 30 10

## SECTION 31 41 00 - STORM AND SANITARY DRAINAGE

### PART 1 - GENERAL

1.1 Many of the specifications are shown on the drawings. The drawings take precedence over these specification if there is a conflict.

#### 1.2 SUMMARY

A. Many of the materials and requirements are shown on the drawings. Information shown on the drawings take precedence over items in this specification section.

B. Section Includes:

1. Pipe and fittings.
2. Manholes.
3. Cleanouts.
4. Nonpressure transition couplings.
5. Expansion joints.
6. Catch basins.
7. Stormwater inlets.
8. Pipe outlets.

#### 1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings:

1. Manholes: Include plans, elevations, sections, details, frames, and covers.
2. Catch basins and stormwater inlets. Include plans, elevations, sections, details, frames, covers, and grates.

C. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.

D. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet (1:500) and vertical scale of not less than 1 inch equals 5 feet (1:50). Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.

E. Product Certificates: For each type of cast-iron soil pipe and fitting, from manufacturer.

F. Field quality-control reports.

- G. Storm water chamber system installation recommendations.
  - 1. Provide full manufacturers instructions for the installation of the storm water chamber system.
  - 2. Schedule a pre-installation meeting to review installation procedures.

#### 1.4 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
  - 1. Notify Owner and Architect no fewer than five days in advance of proposed interruption of service.
  - 2. Do not proceed with interruption of service without Owner's written permission.

### PART 2 - PRODUCTS

- 2.1 Refer to plans for specific pipe type and location. Pipe materials below are to apply when a specific material type is not noted on the drawings or to supplement information on the drawings.

#### 2.2 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A 74, Service class.
- B. Gaskets: ASTM C 564, rubber.
- C. Calking Materials: ASTM B 29, pure lead and oakum or hemp fiber.

#### 2.3 SANITARY SEWER DRAIN PIPE

- 1. SDR 35 smooth plastic sewer pipe. Gasketed connections

#### 2.4 HDPE PIPE AND FITTINGS

- A. Corrugated PE Drainage Pipe and Fittings NPS 3 to NPS 10 (DN 80 to DN 250): AASHTO M 252M, Type S, with smooth waterway for coupling joints.
  - 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
  - 2. Soiltight Couplings: AASHTO M 252M, corrugated, matching tube and fittings.

## 2.5 PERIMETER FOUNDATION DRAIN PIPE

- A. Corrugated and perforated HDPE smooth wall plastic pipe. Heavy duty. Provide a geo tactile sock on the pipe.

## 2.6 NONPRESSURE TRANSITION COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.

## 2.7 CLEANOUTS

### A. Cast-Iron Cleanouts:

1. Description: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside calk or spigot connection and countersunk, tapered-thread, brass closure plug.
2. Top-Loading Classification(s): Medium Duty.
3. Sewer Pipe Fitting and Riser to Cleanout: ASTM A 74, Service class, cast-iron soil pipe and fittings.

### B. Plastic Cleanouts:

1. Description: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.

## 2.8 MANHOLES

### A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478 (ASTM C 478M), precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Diameter: 48 inches (1200 mm) minimum unless otherwise indicated.
3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
4. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (102-mm) minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
5. Riser Sections: 4-inch (102-mm) minimum thickness, and lengths to provide depth indicated.
6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated, and top of cone of size that matches grade rings.
7. Joint Sealant: ASTM C 990 (ASTM C 990M), bitumen or butyl rubber.
8. Resilient Pipe Connectors: ASTM C 923 (ASTM C 923M), cast or fitted into manhole walls, for each pipe connection.



9. Steps: Individual FRP steps or FRP ladder or deformed, 1/2-inch (13-mm) steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch (300- to 400-mm) intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches (1500 mm).
10. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.
11. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

B. Manhole Frames and Covers:

1. See drawings for specifications and manufacturers model numbers for casting, lids and grates

## 2.9 CONCRETE

A. General: Cast-in-place concrete according to ACI 318, ACI 350/350R (ACI 350M/350RM), and the following:

1. Cement: ASTM C 150, Type II.
2. Fine Aggregate: ASTM C 33, sand.
3. Coarse Aggregate: ASTM C 33, crushed gravel.
4. Water: Potable.

B. Portland Cement Design Mix: 4000 psi (27.6 MPa) minimum, with 0.45 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 185/A 185M, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

C. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi (27.6 MPa) minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.

1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to three-fourths of pipe diameter. Form curved channels with smooth, uniform radius and slope.
  - a. Invert Slope: 2 percent through manhole.
2. Benches: Concrete, sloped to drain into channel.
  - a. Slope: 8 percent.

D. Ballast and Pipe Supports: Portland cement design mix, 3000 psi (20.7 MPa) minimum, with 0.58 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 185/A 185M, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

## 2.10 CATCH BASINS

### A. Standard Precast Concrete Catch Basins:

1. Description: ASTM C 478 (ASTM C 478M), precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (102-mm) minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
3. Riser Sections: 4-inch (102-mm) minimum thickness, 48-inch (1200-mm) diameter, and lengths to provide depth indicated.
4. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
5. Joint Sealant: ASTM C 990 (ASTM C 990M), bitumen or butyl rubber.
6. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
7. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch (150- to 225-mm) total thickness, that match 24-inch- (610-mm-) diameter frame and grate.
8. Steps: Individual FRP steps or ASTM A 615/A 615M, deformed, 1/2-inch (13-mm) steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch (300- to 400-mm) intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 60 inches (1500 mm) .
9. Pipe Connectors: ASTM C 923 (ASTM C 923M), resilient, of size required, for each pipe connecting to base section.

### B. Frames and Grates:

1. See drawings for specifications and manufacturers model numbers for casting, lids and grates.

## PART 3 - EXECUTION

### 3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Division 2 Section "Earthwork."

### 3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping

as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.

- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
  - 1. Install piping pitched down in direction of flow.
  - 2. Install piping NPS 6 (DN 150) and larger with restrained joints at tee fittings and at changes in direction. Use corrosion-resistant rods, pipe or fitting manufacturer's proprietary restraint system, or cast-in-place concrete supports or anchors.
  - 3. Install piping with 48-inch (1220-mm) minimum cover.
  - 4. Install hub-and-spigot, cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook."
  - 5. Install hubless cast-iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook."
  - 6. Install ductile-iron piping and special fittings according to AWWA C600 or AWWA M41.
  - 7. Install PE corrugated sewer piping according to ASTM D 2321.
  - 8. Install PVC sewer piping according to ASTM D 2321 and ASTM F 1668.
  - 9. Install nonreinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
  - 10. Install reinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
- G. Install corrosion-protection piping encasement over the following underground metal piping according to ASTM A 674 or AWWA C105:
  - 1. Hub-and-spigot, cast-iron soil pipe and fittings.
  - 2. Hubless cast-iron soil pipe and fittings.
  - 3. Ductile-iron pipe and fittings.
  - 4. Expansion joints.

### 3.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:

1. Join hub-and-spigot, cast-iron soil piping with gasketed joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.
2. Join hub-and-spigot, cast-iron soil piping with calked joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for lead and oakum calked joints.
3. Join hubless cast-iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-coupling joints.
4. Join ductile-iron culvert piping according to AWWA C600 for push-on joints.
5. Join ductile-iron piping and special fittings according to AWWA C600 or AWWA M41.
6. Join corrugated PE piping according to ASTM D 3212 for push-on joints.
7. Join PVC corrugated sewer piping according to ASTM D 2321 for elastomeric-seal joints.
8. Join nonreinforced-concrete sewer piping according to ASTM C 14 (ASTM C 14M) and ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
9. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
10. Join dissimilar pipe materials with nonpressure-type flexible couplings.

### 3.4 CLEANOUT INSTALLATION

- A. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
  - 1.
  2. Use Medium-Duty, top-loading classification cleanouts in paved foot-traffic areas.
  3. Use Heavy-Duty, top-loading classification cleanouts in vehicle-traffic service areas.
- B. Set cleanout frames and covers in earth in cast-in-place concrete block, 18 by 18 by 12 inches (450 by 450 by 300 mm) deep. Set with tops 1 inch (25 mm) above surrounding earth grade.
- C. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.

### 3.5 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants according to ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.

- D. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches (76 mm) above finished surface elsewhere unless otherwise indicated.

### 3.6 CATCH BASIN INSTALLATION

- A. Set frames and grates to elevations indicated.

### 3.7 STORMWATER INLET AND OUTLET INSTALLATION

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.
- E. Construct energy dissipaters at outlets, as indicated.

### 3.8 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318.

### 3.9 CHANNEL DRAINAGE SYSTEM INSTALLATION

- A. Install with top surfaces of components, except piping, flush with finished surface.
- B. Assemble channel sections to form slope down toward drain outlets. Use sealants, adhesives, fasteners, and other materials recommended by system manufacturer.
- C. Embed channel sections and drainage specialties in 4-inch (102-mm) minimum concrete around bottom and sides.
- D. Fasten grates to channel sections if indicated.
- E. Assemble channel sections with flanged or interlocking joints.
- F. Embed channel sections in 4-inch (102-mm) minimum concrete around bottom and sides.

### 3.10 STORM WATER STORAGE CHAMBER INSTALLATION

- A. The installation of the Storm water storage chambers is to follow the manufacturers recommended guidelines.

- B. Provide instructions from the manufacturers in the submittals for review
- C. Schedule an on site pre-installation conference to review the installation procedures.

### 3.11 CONNECTIONS

- A. Connect nonpressure, gravity-flow drainage piping in building's storm building drains specified in Division 15 Section "Storm Drainage Piping."
- B. Make connections to existing piping and underground manholes.
  - 1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch (150-mm) overlap, with not less than 6 inches (150 mm) of concrete with 28-day compressive strength of 3000 psi (20.7 MPa).
  - 2. Make branch connections from side into existing piping, NPS 4 to NPS 20 (DN 100 to DN 500). Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye with not less than 6 inches (150 mm) of concrete with 28-day compressive strength of 3000 psi (20.7 MPa).
  - 3. Make branch connections from side into existing piping, NPS 21 (DN 525) or larger, or to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches (76 mm) of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches (150 mm) of concrete for minimum length of 12 inches (300 mm) to provide additional support of collar from connection to undisturbed ground.
    - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi (20.7 MPa) unless otherwise indicated.
    - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
  - 4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
- C. Connect to sediment interceptors specified in Division 2 Section "Interceptors."

### 3.12 IDENTIFICATION

- A. Materials and their installation are specified in Division 2 Section "Earthwork." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
  - 1. Use warning tape or detectable warning tape over ferrous piping.

2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

### 3.13 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches (610 mm) of backfill is in place, and again at completion of Project.
  1. Submit separate reports for each system inspection.
  2. Defects requiring correction include the following:
    - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
    - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
    - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
    - d. Infiltration: Water leakage into piping.
    - e. Exfiltration: Water leakage from or around piping.
  3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
  4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
  1. Do not enclose, cover, or put into service before inspection and approval.
  2. Test completed piping systems according to requirements of authorities having jurisdiction.
  3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
  4. Submit separate report for each test.
  5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
    - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
    - b. Option: Test plastic piping according to ASTM F 1417.
    - c. Option: Test concrete piping according to ASTM C 924 (ASTM C 924M).
- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

END OF SECTION 31 41 00

## **SECTION 32 31 13 – Chain Link Fencing and Gates**

### **PART 1 - GENERAL**

#### **RELATED DOCUMENTS:**

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### **DESCRIPTION OF WORK:**

Extent of chain link fences and gates is indicated on drawings.

#### **QUALITY ASSURANCE:**

Provide chain link fences and gates as complete units controlled by a single source including necessary erection accessories, fittings, and fastenings.

#### **SUBMITTALS:**

Product Data: Submit manufacturer's technical data, and installation instructions for metal fencing, fabric, gates and accessories.

#### **JOB CONDITIONS:**

Do not deliver equipment until building is enclosed and ready for installation.

### **PART 2 - PRODUCTS**

Dimensions indicated for pipe, roll-formed, and H-sections are outside dimensions, exclusive of coatings.

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

Manufacturer: Subject to compliance with requirements, provide products of one of the following:

#### Galvanized steel fencing and fabric:

Allied Tube and Conduit Corp.  
American Fence Corp.  
Anchor Fence, Inc.

#### Steel Fabric:

Fabric: No. 9 Ga. (0.148" +/- 0.005") size steel wires, 2" mesh, with top and bottom selvages knuckled for all fabric heights.

Furnish one-piece fabric widths for fencing up to 12' high.



Fabric Finish: Galvanized, ASTM A 392, Class I, with not less than 1.2 oz. Zinc per sq. ft. of surface.

Steel Framework, General: Galvanized Steel, ASTM A 120 or A 123, with not less than 1.8 oz. Zinc per sq. ft. of surface.

Fittings and Accessories: Galvanized, ASTM A 153, with zinc weights per table I.

Up to 6' Fabric Height: 2" OD steel pipe, 2.72 lbs. Per lin. Ft.

7' to 12' Fabric Height: 3" OD, 5.79 lbs per lin. Ft.

Over 12: Fabric Height: 4" OD, 9.11 lbs. Per lin. Ft.

Line Posts: Space 8'-0" o.c. unless otherwise indicated.

Gate Posts: Furnish posts for supporting single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows:

<u>Leaf width</u>	<u>Gate Post</u>	<u>lbs. / lin. Ft.</u>
6' to 13'	4.000" OD	9.11

Top, middle and Bottom rails: Manufacturer's longest lengths, with expansion type couplings, approximately 6" long, for each joint. Provide means for attaching top rail securely to each gate corner, pull and end post.

Fabric vertical span up to 6': 1.66" OD pipe, 2.27 lbs. Per ft.

Fabric vertical span over 6': 2.0" OD pipe, 2.72 lbs. Per ft.

Wire Ties: 9 ga. Galvanized steel

Post tops: provide weathertight closure cap with loop to receive top rail: one cap for each post except where flexible plastic pipe is indicated for cover top rail.

Stretcher Bars: One-Piece lengths equal to full height of fabric, with minimum cross-section of 3/16" x 3/4". Provide one stretcher bar for each gate and end post, and 2 for each corner and pull post, except where fabric is integrally woven into post.

Stretcher Bar Bands: Space not over 15" o.c., to secure stretcher bars to end, corner, pull, and gate posts.

## GATES:

Fabrication: Fabricate perimeter frames of gates from metal and finish to match fence framework. Assemble gate frames by welding or with special fittings and rivets for rigid connections, providing security against removal or breakage connections. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware and accessories. Space frame members maximum of 8' apart unless otherwise noted.

Provide same fabric as for fence, unless otherwise indicated. Install fabric with stretchers at vertical edges and at top and bottom edges. Attach stretcher bars to gate frame at not more than 15" o.c.

Install diagonal cross-bracing consisting of 3/8" diameter adjustable length truss rods on gates to ensure frame rigidity without sag or twist.

Swing Gates: Fabricate perimeter frames of minimum 1.90" OD pipe.

Gate Hardware: Provide hardware and accessories for each gate, galvanized per ASTM A 153, and in accordance with the following:

Hinges: Size and material to suit gate size, non-lift-off type, offset to permit 180 degree gate opening. Provide 1 1/2" pair of hinges for each leaf over 6' nominal height.

Latch: Forked type or plunger-bar type to permit operation from either side of gate, with padlock eye as integral part of latch.

Double Gates: Provide gate stops for double gates, consisting of mushroom type flush plate with anchors, set in concrete, and designed to engage center drop rod or plunger bar. Include locking device and padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock.

Concrete: provide concrete consisting of Portland cement, ASTM C 150. aggregate ASTM C 33, and clean water. Mix materials to obtain concrete with a minimum 28 day compressive strength of 2500 psi using at least 4 sacks of cement per cu. Yd., 1" maximum size aggregate, maximum 3" slump and 2% to 4% entrained air.

### **PART THREE – EXECUTION**

Installation:

Do not begin installation and erection before final grading is completed, unless otherwise permitted.

Excavation: Drill or hand excavate (using post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

Setting Posts: Center and align posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.

Unless otherwise indicated, extend concrete footings 2" above grade and trowel to a crown to shed water.

Top Rails: Run rail continuously through post caps, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer.

Center Rails: Provide center rails where indicated. Install in one piece between posts and flush with post on fabric side, using special offset fittings where necessary.

Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension.

Fabric: Leave approximately 2" between finish grade and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released.

Stretcher Bars: Thread through or clamp to fabric 4" o.c., and secure to posts with metal bands spaced 15" o.c.

END OF SECTION 32 31 13