



## **HALES CORNERS MEMORIAL POST #299**

**@ Clifford's Supper Club (414-425-6226)  
10418 W. Forest Home Ave,  
Hales Corners, WI. 53130**

PAGE 1 of 6

### **Hales Corners Veterans Memorial**

#### **Due Diligence Information For Milwaukee County Department of Parks, Recreation & Culture**

The American Legion Hales Corners Memorial Post 299, The Hales Corners VFW Post 10394 and Troop 598 Boy Scout Mitchell McGlinn (Eagle Scout Project) have formed a committee named:

### **The Hales Corners Veterans Memorial Committee**

for the purpose of fund raising, designing & constructing the

### **Hales Corners Veterans Memorial**

to honor Veterans, there Families, America, Freedom & our Community.

The Hales Corners Memorial will be located in Hales Corners Park, and we believe this project will greatly enhance hales Corners Park & our community.

The total estimated cost of the project construction is \$145,000, and the Hales Corners Veterans Memorial Committee has raised \$135,000 to date.

The estimated yearly maintenance cost is \$1,500. The responsibility of these costs are addressed in this document under #2, Operating Budget Impact & #14 Capital Management/Maintenance



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### **Attachments:**

- Exhibit A: Hales Corners Veterans Memorial List of Committee Members.
- Exhibit B: American Legion Hales Corners Memorial Post 299 List of Post officers.
- Exhibit C: Hales Corners VFW 10394 List of Post officers.
- Exhibit D: Hales Corners Veterans Memorial Current Finance Report.
- Exhibit E: American legion Hales Corners Memorial Post Current Finance Report.
- Exhibit F: Hales Corners VFW 10394 Post Current Finance Report.
- Exhibit G: Hales Corners Veterans Memorial Savings & Checking Bank Statements.
- Exhibit H: Architectural, Structural & Civil Drawings Prepared By Plunkett Raysich Architects.
- Exhibit I: Construction Specifications Prepared By Plunkett Raysich Architects.
- Exhibit J: Hunzinger Construction Co. Construction Cost Proposal.
- Exhibit K: American legion Hales Corners Memorial Post 299 Investment Account Statement
- Exhibit L; Tri-City national Bank letter of financial stability for the Hales Corners Veterans memorial & American legion Hales Corners Memorial Post 299.



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### **1. Cash Flow Projections:**

There are no future cash flow projections. The purpose of the Hales Corners Memorial is not money making venture and will not have cash flow projections. The construction costs have been obtained through fund raising & possible short-term borrowing if needed & the maintenance contingency fund of \$12,000 (Per the county request) have been met.

### **2. Operating Budget Impact:**

The future operating costs consists of maintenance only. The design concept of the project, was a "low maintenance" design. The yearly on going maintenance should consist of light bulb replacement, anti-graffiti sealer & flag replacement. This will be the responsibility, accomplished and funded by The Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial Committee.

### **3. Debt Management Schedule:**

The American legion Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial Committee hold no debt.

### **4. Legal Liability:**

The Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial Committee have no outstanding or pending legal issues.

### **5. Financial Reporting Systems:**

Monthly & yearly finance reports for the American Legion Hales Corners Memorial Post 299 & the Hales Corners Veterans Memorial are prepared by Finance Officer Jim Helminski, & reviewed by Past Commander Joseph Huber. Monthly & yearly finance reports for the Hales Corners VFW Post 10394 is prepared by Quartermaster Andy Hushek. Both the American Legion Hales Corners Memorial Post 299 & the Hales Corners VFW Post 10394 finance reports are also reviewed and approved by there post membership as well.



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### **6. Right-to-Audit Provisions:**

The American Legion Hales Corners Memorial Post 299, the Hales Corners Veterans Memorial & the Hales Corners VFW Post 10394 here by states that Milwaukee County may audit its records pertaining to any lease agreement that may execute with Milwaukee County.

### **7. Project Feasibility Study:**

The feasibility of this project is considered the total construction costs, which are covered by donations & fund raising. Please see attached Tri City National Bank Statements & Hunzinger Construction Co. construction proposal.

### **8. Key Factors to Success/Failure:**

The key factors to this success of this project are a quality design, fund raising for construction & maintenance costs & a location for the project. We have completed the design & fund raising & are working with the Milwaukee County Parks, Recreation & culture Department thru this application of "Due Diligence" to secure our site in the Hales Corners Park.

### **9. Governance Structure/Procedure:**

Please see Exhibit A: Hales Corners Veterans Memorial Committee organizational list of committee members, Exhibit B: American Legion Hales Corners Memorial Post 299 organizational list officers & Exhibit C: Hales Corners VFW Post 10394 organizational list of officers.

### **10. Public Policy Impacts:**

Milwaukee County will prepare a public policy impact statements as part of there final report, if necessary. The construction of the Hales Corners Veterans Memorial will be a great addition to the Hales Corners Park, the Village of Hales Corners & the Milwaukee County Park System. This project is a great way to honor our Veterans, there families & an avenue to bring our community together by accomplishing a common goal.



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### **11. Employee/Labor Relations:**

The American Legion Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial are not involved in any labor contracts.

### **12. Environmental Concerns:**

There are no environmental concerns with the construction of the Hales Corners Veterans Memorial.

### **13. Tax Consequences:**

There are no tax consequences or implications, the American Legion Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Memorial is non-profit/tax exempt.

### **14. Capital Management/Maintenance:**

A cost proposal (Exhibit J) from Hunzinger Construction Co. is provided for the construction of the Veterans Memorial. The cost is covered thru funds raised to date (see Exhibit G Bank Statements) & possible short-term borrowing from Tri City National Bank if needed. The future operating costs consists of maintenance only.

The design concept of the project, was a "low maintenance" design. The yearly on going maintenance should consist of light bulb replacement, anti-graffiti sealer & flag replacement. This will be the responsibility, accomplished and funded by The Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial Committee.

### **15. Conflicts of Interest/Ethics:**

To the knowledge of American Legion Hales Corners Memorial Post 299, the Hales Corners Veterans Memorial Committee & Hales Corners VFW Post 10394 there are no known conflicts of interest to this proposal.



## **HALES CORNERS MEMORIAL POST #299**

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### **16. Performance Measurements:**

Since the Hales Corners Veterans Memorial is a non for profit & non cash collecting entity, we have not prepared a strategic plan. Our success is measured by the amount of visitors to the Memorial & increased patriotism & community values.

### **17. Organization Chart/Mission Statement:**

Please see Exhibit A: Hales Corners Veterans Memorial Committee organizational list of committee members, Exhibit B: American Legion Hales Corners Memorial Post 299 organizational list officers & Exhibit C: Hales Corners VFW Post 10394 organizational list of officers.

### **18. Necessary Documentation:**

The Hales Corners Veterans Memorial Committee will provide all construction, financial & organizational documents relevant to this proposal.

### **19. Bank Disclosure:**

The American Legion Hales Corners Memorial Post 299, the Hales Corners VFW Post 10394 & the Hales Corners Veterans Memorial committee understands that they are responsible for the cost of construction & maintenance of the Hales Corners Veterans Memorial as stipulated in the lease agreement.

# Hales Corners Veterans Memorial - Hales Corners, WI

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## *The Meaning and Symbolism of the Design Concept*

*The Five-Pointed Star is chosen to honor the Five Branches of the United States Military – Army, Marines, Navy, Coast Guard, and Air Force.*

*The Five Branches of the United States Military are depicted by lighted columns placed at the star's points, equally within a circle so that no branch is viewed above another. The Five Branches often work together, to serve and protect the guiding principles of the United States and its Allies. Standing tall and resolute, each tapered column houses the emblem seal of each branch, etched in black granite.*

*The Five-Pointed Star is also chosen to honor the United States Flag, where the blue Union is bedecked with fifty such white stars, one for each State in the Union. The Flag is a symbol of Liberty and Freedom, and the Memorial celebrates the men and women who defend that Liberty and Freedom.*

*The Five-Pointed Star is also chosen to honor the military tradition of placing a Blue Star Flag in the home of a family whose immediate family member is serving our Country. Likewise, the star honors the military tradition of placing a Gold Star Flag in the home of a family whose immediate family member has died while serving our Country.*

*The Five-Pointed Star informs an internal Pentagon, a symbol of National Defense and Protection. Here, this five sided "room" provides a contemplative environment for visitors, defined by the Five Military Branch columns and integral benches focused inward to honor a single prominent United States Flag.*

*As the internal Pentagon focuses inward, the Five Points of the Star reach outward, an invitation along five paths connecting to nature and other points of interest including the Hales Corners Library and the Hales Corners Recreation Complex. This duality of outward and inward expression seeks to attract visitors who may enter casually, to always depart reflectively.*

*The color white is chosen for the columns and benches to evoke a sense of Peace, Purity, Clarity, Reverence, Wholeness, and Completion. These traits are fitting of a Veterans Memorial, to foster calmness and serenity among its visitors, which the Veterans who have gone before them have already achieved. The color also pays tribute to the Arlington National Cemetery, where simple white headstones mark the graves of some 240,000 service men and women, each placed equally without regard to Military Branch or rank.*

*The central lighted United States Flag on its own five-sided white plinth is symbolic of the sacrifices made by the people of the United States in support of our Veterans. Inscribed pavers encircle this plinth, where names of families and other supporting groups honor the service of these brave Veterans who have made the ultimate sacrifice.*

# Hales Corners Veterans Memorial Committee

## Members

1. Boy Scout Mitchell McGlinn      Committee Co –Chairperson  
Sophomore Whitnall High School
2. Howard Hingiss                      Co-Committee Chairperson  
Member American Legion Hales  
Corners Memorial Post 299  
Member Hales Corners VFW Post 10394
3. Donald Schwartz                      Trustee Liaison to Village Board of  
Hales Corners  
President-Friends of Hales  
Corners Pool  
President- Hales Corners  
Chamber of Commerce
4. Harold Bolstad                        Secretary  
Member American Legion Hales  
Corners Memorial Post 299
5. Andy Hushek                            Fund Raising Chairman  
Member Hales Corners VFW Post 10394  
Member American Legion Hales  
Corners Memorial Post 299
6. Dan Conatty                            Commander American Legion  
Hales Corners Memorial Post 299
7. Jim Helminski                         Memorial Finance Chairman  
Member American Legion Hales  
Corners Memorial Post 299
8. Joseph Huber                          Construction Chairman  
Member & Past Commander  
American Legion Hales Corners  
Memorial Post 299





9. Mark Herr

Partner, Plunkett Raysich  
Architects, Veterans Memorial  
Architect



**AMERICAN LEGION POST 299  
HALES CORNERS, WISCONSIN**

POST COMMANDER • DANIEL CONATY • PHONE (414) 430-2374



July 13, 2011

The following individuals are Currently holding officer positions within Post 299

- |                    |                     |
|--------------------|---------------------|
| 1. Commander       | Daniel Conaty       |
| 2. First Vice      | Ken Carpenter       |
| 3. Second Vice     | William Mastopietro |
| 4. Third Vice      | Andrew Hushek       |
| 5. Finance Officer | James Helminski     |
| 6. Adjutant        | Wayne Kankelfitz    |
| 7. Post Historian  | Howard Hingiss      |
| 8. Chaplain        | Bill Leon           |

Sincerely,

Daniel Conaty  
Post 299 Commander

**MISSION STATEMENT**

To support The American Legion programs for veterans, young people, and community  
To advance the understanding of patriotism and responsibility of citizenship  
To promote individual integrity and family values



VETERANS OF FOREIGN WARS OF THE U.S.  
AN ORGANIZATION OF VETERANS  
WHO HAVE FOUGHT  
AMERICA'S FOREIGN WARS  
ON LAND AND SEA  
AND IN THE AIR

FROM:  
Andrew Hushek  
5315 W. Arizona St.  
Milwaukee, WI 53219

Elected Officers of the Hales Corners Veterans of Foreign Wars Post 10394:

Commander: Jerry Blaski

Senior Vice Commander: Russ Owens

Junior Vice Commander: John Brillowsk:

Quartermaster: Andrew Hushek

Advocate: Brent Martins

Chaplain: Vern Fisher

Surgeon: Willy Mastropietro

Trustee 1 year: John Matize

Trustee 2 year: Dan Miracle

Trustee 3 year: Hector Parada

Respectfully Submitted

A handwritten signature in black ink, appearing to read "Andrew Hushek".

Andrew Hushek

Quartermaster VFW Post 10394

VETERANS OF FOREIGN WARS OF THE UNITED STATES

**AMERICAN LEGION  
HALES CORNERS MEMORIAL POST 299  
MAY 2011, FINANCE REPORT**

(A) CHECKING ACCOUNT TRANSACTIONS/BALANCE							CODES	
DATE	CHECK #	CODE	ITEM	WITHDRAWAL	DEPOSIT	BALANCE		
			BEGINNING BALANCE			\$1,809.45		
5/3/11		R2	March Meeting		\$279.00	\$2,088.45		
5/4/11		R2	April Meeting		\$179.00	\$2,267.45		
5/9/11	1956	E2	Post Meeting/Cliffords	\$394.00		\$1,873.45		
5/20/11			Poppies		\$479.67	\$2,353.12		
5/23/11			Poppies		\$1,800.61	\$4,153.73		
5/23/11		R1	Membership		\$35.00	\$4,188.73	REVENUE	
5/31/11			Poppies		\$10.19	\$4,198.92	R1 Member Dues R2 Post Meetings R3 Post Meeting Raffles R4 Uniforms/Co-pay R5 Christmas & Picnic R6 PUFL R7 Misc. R8 Investment	
<b>ENDING BALANCE</b>							<b>\$4,198.92</b>	EXPENSE
								E1 Installation Dinner E2 Post Meetings E3 District Meeting E4 Member Dues E5 Convention E6 Admin & Flowers E7 Hats E8 Badger Boys & Girls E10 Christmas E11 Flags

ACC. CODE	POST ACCOUNT SUMMARIES	VETERANS MEMORIAL ACCOUNT SUMMARY (E)
A.	(A) GENERAL CHECKING ACCOUNT: \$4,198.92	BEGINNING BALANCE: \$68,002.61
B.	(B) GENERAL SAVINGS ACCOUNT: \$404.70	DONATIONS: \$0.00
B.	GENERAL SAVINGS ACCOUNT INTEREST:	
C.	(C) BINGO ACCOUNT AS OF FEB.: \$525.69	BRICKS: \$3,444.00
D.	(D) INVESTMENT ACCOUNT : \$134,740.00 (AS OF Dec. 2010)	EXPENSES: -\$193.99
		INTEREST \$17.69
	<b>POST NET WORTH: \$139,369.31</b>	<b>ENDING BALANCE: \$71,270.31</b>





TRUSTEES' REPORT OF AUDIT of

The Books and Records of the Quartermaster and Adjutant of Males Corners-Franklin Post 10394

Department of Wisconsin For the Fiscal Quarter ending JUNE 30TH, 2011

Fiscal Quarters: Jan 1 to Mar 31 Apr 1 to Jun 30 Jul 1 to Sep 30 Oct 1 to Dec 31

FUNDS:	10. Net Cash Balances at Beginning of Quarter	11. Receipts During Quarter	12. Expenditures During Quarter	13. Net Cash Balances at End of Quarter
1. National and Department Duos	\$0.00	\$425.00	\$425.00	\$0.00
2. Admission or Application Fees (Department)				\$0.00
3. Post General Fund	\$18,831.02	\$903.15	\$570.50	\$19,163.67
4. Post Relief Fund	\$2,783.68	\$1,817.57	\$70.00	\$4,831.25
5. Post Duos Reserve Fund	\$161.00	\$0.00	\$0.00	\$161.00
6. Post Home or Building Fund				\$0.00
7. Post Caravan or Club Fund				\$0.00
8. Other	\$0.00	\$0.00	\$0.00	\$0.00
- Fuel Tab	\$0.00	\$0.00	\$0.00	\$0.00
- Bingo	\$0.00	\$0.00	\$0.00	\$0.00
- National Honor	\$0.00	\$0.00	\$0.00	\$0.00
9. Bonds and Investments Not Credited to Funds				\$0.00
<b>14. TOTALS</b>	<b>\$21,275.70</b>	<b>\$3,155.72</b>	<b>\$1,065.50</b>	<b>\$23,365.92</b>

16. OPERATIONS	
Have required payroll deductions been made?	N/A
Have payments been made to the proper state and Federal agencies this quarter?	N/A
Have sales taxes been collected and paid?	N/A
Are all employees bonded?	N/A
Amount of outstanding bills	0
Value of Real Estate	\$0.00
Amount of Liability Insurance	\$0.00
Owed on Mortgages and Loans	\$0.00
Value of Personal Property	\$1,129.00
Amount of Property Insurance	\$0.00

17. RECONCILIATION OF CASH AND INVESTMENTS	
General Fund and Checking Account	
Ending Balance Per Bank Statement	\$7,076.33
Less: Outstanding Checks	\$0.00
Plus: Deposits in Transit	\$0.00
Account Balance	\$7,076.33
Other Checking Accounts (If applicable)	
Ending Balance Per Bank Statement	
Less: Outstanding Checks	
Plus: Deposits in Transit	
Account Balance	\$0.00
Savings Account Balance	\$16,290.59
Cash on Hand	\$41.00
Total Cash	
Bonds and Other Investments	
Total Cash and Investments	\$23,365.92

18. TRUSTEES' AND COMMANDERS CERTIFICATE OF AUDIT

DATE 6 Jul, 2011

This is to certify that we (or qualified accountants) have audited the books and records of the Adjutant and Quartermaster of POST 10394 for the Fiscal Quarter ending 30-Jun-11 in accordance of the National By-Laws and that this Report is a true and correct statement thereof to the best of our knowledge and belief. All Vouchers and Checks have been examined and found to be properly approved and checks properly cashed/designed.

Post Quartermaster Andrew Hupel Signed [Signature] Trustee  
 (Name)  
5515 W. Arizona St Signed [Signature] Trustee  
Milwaukee, WI 53219 Signed [Signature] Trustee  
 (Address)

This is to certify that the Office of the Quartermaster is bonded with WVW of Wisconsin in the amount of \$ 25,000 until 31 Aug, 2011, and that this Audit is correctly made out to the best of my knowledge and belief.

Signed: [Signature] Quartermaster

NOTE: Forward Original (Blue) Copy to your Department Quartermaster - See instructions on reverse side of both Yellow and Blue copies

FD-414

Statement of Account  
0002144702



TRI-CITY NATIONAL BANK

HALES CORNERS MEMORIAL POST 299  
C/O JAMES W HELMINSKI  
10130 W BUNZEL AVE  
HALES CORNERS WI 53130

June 30, 2011  
Total days in statement period: 30  
(6)

Direct Inquiries to:  
Dial Tri-City (414-874-2489)

Tri City National Bank  
5555 S 108TH St  
Hales Corners WI 53130

### Summary of Account Balance

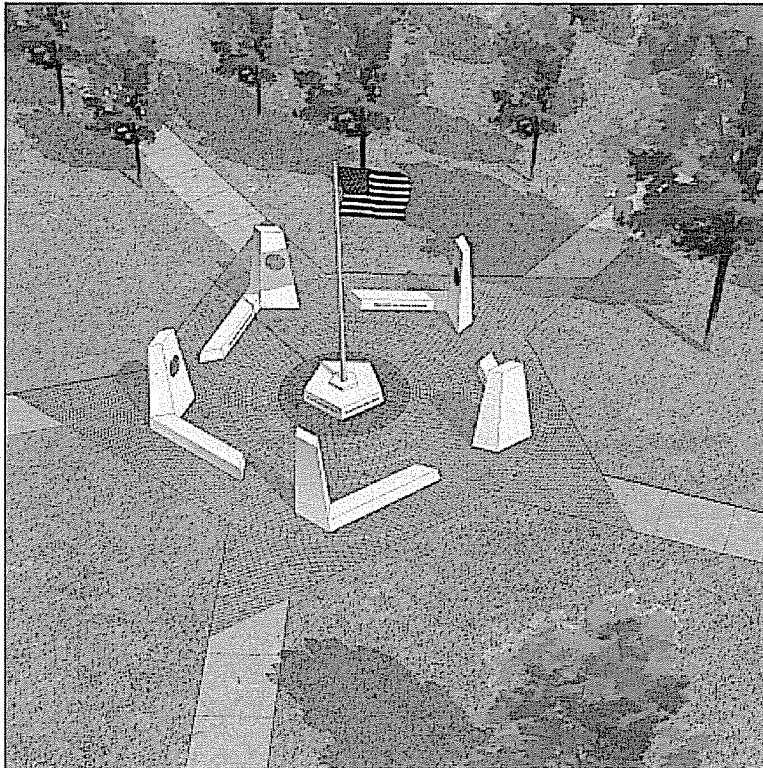
Account	Number	Ending Balance
Non-Profit MM Investor	0002144702	\$73,260.18

Direct Inquiries to:  
Dial Tri-City (414-874-2489)

Tri City National Bank  
5555 S 108TH St  
Hales Corners WI 53130

### Summary of Account Balances

Account	Number	Ending Balance
Checking Account	0002114108	\$2,979.07
Corporate Statement Savings	0201053307	\$404.76
Corporate Statement Savings	0201078075	\$575.09



Project Manual For:

## **HALES CORNERS VETERAN'S MEMORIAL**

Hales Corners Park  
Hales Corners, WI 53130

PRA Project No. 10067  
10 November 2010



## PROJECT MANUAL

for

**HALES CORNERS VETERAN'S MEMORIAL**Hales Corners Park  
Hales Corners, WI 53130

PRA Project No. 10067

10 November 2010

Owner	American Legion Post 299	
Architect	Plunkett Raysich Architects LLP 11000 West Park Place Milwaukee, WI 53224	Ph: 414 359-3060 Fax: 414 359-3070
Civil Engineer	One Source Consulting, Inc. 11805 W. Hampton Ave. Milwaukee, WI 53225	Ph: 414 462-9005 Fax: 414 462-9006
Landscape Designer	David J. Frank Landscape Contracting N120 W21350 Freistadt Rd. Germantown, WI 53022	Ph: 262 255-4888 Fax:

HALES CORNERS VETERAN'S MEMORIAL  
Hales Corners Park  
Hales Corners, WI 53130

PRA Project No. 10067  
10 November 2010

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Architect's Disclaimer: The following documents in this manual were prepared by the identified entities under separate contracts with the Owner. The Architect makes no endorsements, warranties or representations regarding this information.

Civil Engineer:

Division 31 – Earthwork Specification Sections

Site Clearing  
Earthwork

Landscape Designer:

Division 32 – Exterior Improvements

Planting

END OF DISCLAIMER

**REQUEST FOR INTERPRETATION FORM**

Project: Hales Corners Veteran's Memorial

RFI Number: \_\_\_\_\_

Date: \_\_\_\_\_

To: Plunkett Raysich Architects, LLP

From: \_\_\_\_\_

Re: \_\_\_\_\_  
\_\_\_\_\_

Contractor's Request: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed: \_\_\_\_\_

Date Response Requested: \_\_\_\_\_

To: \_\_\_\_\_  
\_\_\_\_\_

THIS IS NOT A CHANGE ORDER, A CONSTRUCTION CHANGE DIRECTIVE NOR A REQUEST FOR A PROPOSAL

Architect's Interpretation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Proceeding with the Work in compliance with this interpretation indicates the Contractor's acceptance of no change in the Contract Sum and Contract Time.

Signed: \_\_\_\_\_  
Project Manager, Plunkett Raysich Architects, LLP

Date: \_\_\_\_\_

**SUBSTITUTION REQUEST FORM**

Date Received \_\_\_\_\_

PROJECT: Hales Corners Veteran's Memorial

SPECIFIED ITEM: \_\_\_\_\_  
Spec. Section and Page Description

PROPOSED SUBSTITUTION: \_\_\_\_\_

REASON FOR REQUEST: \_\_\_\_\_

Attach data adequate for evaluation; identify applicable portions of the data. If applicable, attach description of changes to the Work required for proper installation of the substitution. If submitted after Award of Contract, attach itemized cost difference between proposed and specified work.

ATTACHMENTS: \_\_\_\_\_

\_\_\_\_\_

The undersigned certifies that the proposed substitution, unless indicated otherwise in attachments:

- Does not affect weights, dimensions, and locations indicated in the Contract Documents.
- Will have no adverse affect on other trades or contractors, the construction schedule, required code compliance and the specified warranty requirements.
- Will have maintenance and service parts locally and readily available.

The undersigned further certifies that the performance, function, appearance and quality of the proposed substitution are equivalent or superior to the specified item.

The undersigned agrees to pay architectural and engineering fees for revisions, reviews, design and detailing, and for additional construction costs caused by the requested substitution.

SUBMITTED BY: \_\_\_\_\_ (Authorized Signature - faxed or copied signatures not acceptable) \_\_\_\_\_ (Date)

\_\_\_\_\_  
(Name and Title)

\_\_\_\_\_  
(Firm Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_ (email) \_\_\_\_\_ (Telephone No.) \_\_\_\_\_ (Fax No.)

\_\_\_\_\_ REQUEST QUALIFIES FOR ACCEPTANCE, based on the information submitted and subject to compliance with the Contract Documents. This acceptance does not constitute the Architect's endorsement of the proposed substitution. Acceptance of this substitution will be issued in the form of an addendum prior to award of the contract or a change order after award of the contract.

\_\_\_\_\_ REQUEST DENIED. Proposed substitution does not comply with Contract Document requirements.

\_\_\_\_\_ REQUEST DENIED. Information is inadequate for evaluation of Request.

REMARKS: \_\_\_\_\_

\_\_\_\_\_

PLUNKETT RAYSICH ARCHITECTS CONSULTANT: \_\_\_\_\_

\_\_\_\_\_  
Project Manager Date Project Manager Date

1    **GENERAL CONDITIONS**

2

3

4    AIA DOCUMENT A201-2007

5

6    AIA Document A201 - 2007, General Conditions of the Contract for Construction, published by the  
7    American Institute of Architects, is hereby made a part of the Contract Documents.

8

9    Copies of this document are available for purchase on line at [www.aia.org](http://www.aia.org) or from the local  
10   distributor:

11

12           AIA Wisconsin  
13           321 South Hamilton Street  
14           Madison WI 53703-4000

15

16           Phone: 608 257-8477

17           Fax: 608 257-0242

18

19

20    **END OF GENERAL CONDITIONS**

1 **SUPPLEMENTARY CONDITIONS**

2  
3  
4 **TABLE OF ARTICLES**

5  
6 The Supplementary Conditions modify the following paragraphs of AIA Document A201-2007,  
7 General Conditions of the Contract for Construction. Where a portion of the General Conditions is  
8 modified or deleted by the Supplementary Conditions, the unaltered portions of the General  
9 Conditions remain in effect.

10  
11 Correlation and Intent of the Contract Documents  
12 Ownership and Use of Drawings, Specifications and Other Instruments of Service  
13 Labor and Materials  
14 Changes in the Work  
15 Substantial Completion  
16 Insurance and Bonds

17  
18 **CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS**

19  
20 Add the following to Subparagraph 1. 2.1:

21  
22 1.2.1.1 In the case of conflicts or discrepancies within or among the Contract Documents  
23 not clarified by Addendum, the better quality or greater quantity of work, as determined by  
24 the Architect, shall be provided.

25  
26 **OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF**  
27 **SERVICE**

28  
29 Add the following to Paragraph 1.6:

30  
31 1.6.1 Copies of Architect's CAD files will be provided to Contractor for Contractor's use in  
32 connection with Project, subject to execution of AIA Document C106-2007 "Digital Data  
33 Licensing Agreement" and receipt of \$350 processing fee for each discipline (Civil,  
34 Landscaping, Architectural, Structural, Plumbing, Fire Protection or Electrical) requested.

35  
36 **LABOR AND MATERIALS**

37  
38 3.4.2.2 The Owner is entitled to reimbursement from the Contractor for amounts paid to the  
39 Architect for reviewing the Contractor's proposed substitutions and making agreed-upon  
40 changes in the Drawings and Specifications resulting from such substitutions.

41  
42 **CHANGES IN THE WORK**

43  
44 Add the following to Paragraph 7.1:

45  
46 7.1.4 The combined overhead and profit included in the total cost to the Owner of a change  
47 in the Work shall be based on the following schedule:

- 48  
49 1. For the Contractor, for Work performed by the Contractor's own forces, 15 percent  
50 of the cost.  
51  
52 2. For the Contractor, for Work performed by the Contractor's Subcontractors, 7-1/2  
53 percent of the cost.  
54  
55 3. For each Subcontractor involved, for Work performed by that Subcontractor's own  
56 forces, 15 percent of the cost.  
57

- 1           4. For each Subcontractor involved, for Work performed by the Subcontractor's Sub-
- 2           subcontractors, 7-1/2 percent of the amount due the Sub-subcontractor.
- 3
- 4           5. Cost to which overhead and profit is to be applied shall be determined in accordance
- 5           with Subparagraph 7.3.7.
- 6
- 7           6. In order to facilitate checking of quotations for extras or credits, all proposals shall
- 8           be accompanied by a complete itemization of costs including labor, materials and
- 9           Subcontracts. Where major cost items are Subcontracts, they shall be itemized
- 10          also.

11

12 **SUBSTANTIAL COMPLETION**

13

14 Add the following to Subparagraphs 9.8.5:

15

16           9.8.5.1 The adjustment for Work that is incomplete or not in accordance with the

17           requirements of the Contract Documents shall be equal to 2-1/2 times estimated cost to

18           complete or correct the Work as determined by the Architect.

19

20 **INSURANCE AND BONDS**

21

22 Add the following Clauses to Subparagraph 11.1.2:

23

24           11.1.2.1 The limits for Worker's Compensation and Employers' Liability insurance shall

25           meet statutory limits mandated by State and Federal Laws. If limits in excess of those

26           required by statute are to be provided, or the employer is not statutorily bound to obtain such

27           insurance, or additional coverages are required, additional coverages and limits for such

28           insurance shall be as follows:

29

30           Each accident	\$ 1,000,000
31           Disease, policy limit	\$ 3,000,000
32           Disease, each employee	\$ 1,000,000

33

34           11.1.2.2 The limits for Commercial General Liability insurance including coverage for

35           Premises-Operations; Independent Contractor's Protective, Products and Completed

36           Operations, Contractual Liability, Personal Injury and Broad Form Property Damage

37           (including coverage for Explosion, Collapse and Underground Hazards) shall be as follows:

38

39           Each Occurrence	\$ 1,000,000
40           General aggregate	\$ 3,000,000
41           Personal and Advertising Injury	\$ 2,000,000
42           Products-Completed Operations Aggregate	\$ 1,000,000

- 43
- 44           1. The policy shall be endorsed to have the General Aggregate apply to this Project
- 45           only.
- 46
- 47           2. The Contractual Liability insurance shall include coverage sufficient to meet the
- 48           obligations in AIA Document A201-2007 under Paragraph 3.18.
- 49
- 50           3. Products and Completed Operations insurance shall be maintained for a minimum
- 51           period of *<insert number>* year[s] after either 90 days following Substantial
- 52           Completion or final payment, whichever is earlier.

53

54           11.1.2.3 Automobile Liability Insurance (owned, non-owned and hired vehicles) for bodily

55           injury and property damage:

56

57           Each accident	\$ 1,000,000
----------------------------	--------------

58



1           11.1.2.4 Umbrella or Excess Liability Coverage:

2

3

Each occurrence

\$ 5,000,000

4

5

6    END OF SUPPLEMENTARY CONDITIONS

1     **SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES**

2  
3  
4     **MINOR CHANGES IN THE WORK**

5  
6     Architect will issue to the Contractor supplemental instructions authorizing minor changes in the  
7     work, not involving adjustment to the Contract Sum or Contract Time, as a response to a Request for  
8     Architect's Interpretation; a form for this is included in the Project Manual.

9  
10    **OWNER-INITIATED PROPOSAL REQUESTS**

11  
12    Architect will issue a detailed description of proposed changes in the work that will require  
13    adjustment to the Contract Sum or Contract Time.

14  
15    Within 7 days of receipt of a proposal request, submit an estimate of cost necessary to execute the  
16    change to the Architect for the Owner's review.

17  
18            Include effect the proposed change in the work will have on the Contract Time.

19  
20    **CONTRACTOR-INITIATED PROPOSALS**

21  
22    When latent or unforeseen conditions require modifications to the Contract, the Contractor may  
23    propose changes by submitting a request for a change to the Architect.

24  
25            Include a statement outlining the reasons for the change and the effect of the change on the  
26            work. Provide a complete description of the proposed change. Indicate the total effect of  
27            the proposed change on the Contract Sum and Contract Time .

28  
29    **CONSTRUCTION CHANGE DIRECTIVES**

30  
31    Architect will issue a Construction Change Directive on AIA Form G714.

32  
33    **CHANGE ORDERS**

34  
35    On Owner's approval of a Proposal, Architect will issue a Change Order for signatures of Owner and  
36    Contractor on AIA Document G701.

37  
38    The Contractor shall revise Schedule of Values and Application of Payment AIA Form G702 to  
39    record each authorized Change Order as a separate line item, and adjust the Contract Sum as  
40    shown on Change Order.

41  
42  
43    **END OF SECTION**

1     **SECTION 01290 - PAYMENT PROCEDURES**

2  
3  
4     **DEFINITIONS**

5  
6     Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to  
7     various portions of the Work and used as the basis for reviewing Contractor's Applications for  
8     Payment.

9  
10    **SCHEDULE OF VALUES**

11  
12    Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's  
13    Construction Schedule.

14  
15         Submit the Schedule of Values to Architect at earliest possible date, but no later than  
16         fourteen (14) days before the date scheduled for submittal of initial Applications for Payment.

17  
18    Format and Content: Use the Project Manual table of contents as a guide to establish line items for  
19    the Schedule of Values. Provide at least one line item for each Specification Section.

20  
21         Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation  
22         of Applications for Payment and progress reports.

23  
24         Each item in the Schedule of Values and Applications for Payment shall be complete.  
25         Include total cost and proportionate share of general overhead and profit for each item.

26  
27         Schedule Updating: Update and resubmit the Schedule of Values before the next Applica-  
28         tions for Payment when Change Orders result in a change in the Contract Sum.

29  
30    **APPLICATIONS FOR PAYMENT**

31  
32    Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation  
33    Sheets.

34  
35         Include amounts of Change Orders, and list Construction Change Directives, issued before  
36         last day of construction period covered by application.

37  
38    Transmittal: Submit three (3) signed and notarized original copies of each Application for Payment  
39    to the Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien  
40    and similar attachments.

41  
42    Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens  
43    from subcontractors, sub-subcontractors, suppliers and from every other entity who is lawfully  
44    entitled to file a mechanic's lien for construction period covered by the previous application.

45  
46         Submit partial waivers on each item for amount requested, after deduction for retainage, on  
47         each item.

48  
49         When an application shows completion of an item, submit final or full waivers.

50  
51         Submit final Application for Payment with final waivers from every entity involved with  
52         performance of the Work covered by the applications who is lawfully entitled to a lien.

53  
54    Initial Application for Payment: Administrative actions and submittals that must precede or coincide  
55    with submittal of first Application for Payment include the following:

56  
57         Schedule of Values  
58         Contractor's Construction Schedule

- 1 Copies of Building Permits
- 2 Copies of Authorizations and Licenses from Authorities having Jurisdiction for Performance
- 3 of the Work
- 4 Initial Progress Report
- 5 Report of preconstruction conference
- 6 Certificates of insurance and insurance policies
- 7 Performance and payment bonds
- 8 Data needed to acquire Owner's insurance
- 9
- 10 Application for Payment at Substantial Completion: After issuing of the Certificate of Substantial
- 11 Completion, submit an Application for Payment showing 100 percent completion.
- 12
- 13 Include a statement showing an accounting of changes to the Contract Sum.
- 14
- 15 Final Payment Application: Submit final Application for Payment with releases and supporting
- 16 documentation not previously submitted and accepted, including:
- 17
- 18 Closeout requirements.
- 19 Proof that taxes, fees and similar obligations were paid.
- 20 Updated final statement, accounting for changes to the Contract Sum.
- 21 AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
- 22 AIA Document G706A, "Contractor's Affidavit of Release of Liens."
- 23 AIA Document G707, "Consent of Surety to Final Payment."
- 24 Evidence that claims have been settled.
- 25
- 26
- 27 END OF SECTION

1    **SECTION 01310 – PROJECT MANAGEMENT AND COORDINATION**

2  
3  
4    **SUBMITTALS**

5  
6    Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates  
7    maximum utilization of space for efficient installation of different components or if coordination is  
8    required for installation of products and materials fabricated by separate entities.

9  
10           Indicate functional and spatial relationships of components of architectural,  
11           structural, civil, mechanical, and electrical systems.

12  
13    **PROJECT MEETINGS**

14  
15    General: Schedule and conduct meetings at project site.

16  
17           Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.

18  
19           Minutes: Record significant discussions and agreements achieved. Distribute meeting  
20           minutes within three days of meeting.

21  
22    Pre-construction Conference: Schedule a pre-construction conference no later than 15 days after  
23    execution of the Agreement.

24  
25           Agenda: Discuss items of significance that could affect progress, including:

26  
27                   Procedures for processing field decisions and Change Orders  
28                   Procedures for processing Applications for Payment  
29                   Submittal procedures  
30                   Preparation of record documents

31  
32    Pre-installation Meetings: Conduct a preinstallation meeting before each construction activity that  
33    requires coordination with other construction.

34  
35           Agenda: Review progress of other construction activities and preparations for the particular  
36           activity under consideration, including requirements for:

37  
38                   Contract Documents  
39                   Related Change Orders  
40                   Submittals  
41                   Review of mockups  
42                   Possible conflicts  
43                   Warranty requirements  
44                   Testing and inspecting requirements

45  
46           Do not proceed with installation if the meeting cannot be successfully concluded. Initiate  
47           whatever actions are necessary to resolve impediments to performance of the work and  
48           reconvene the meeting at earliest feasible date.

49  
50    Progress Meetings: Conduct progress meetings at regular intervals. Coordinate dates of meetings  
51    with preparation of payment requests.

52  
53           Agenda: Review and correct or approve minutes of previous progress meeting. Review  
54           items that could affect progress.

55  
56           Contractor's Construction Schedule: Review progress since the last meeting.  
57           Determine how construction behind schedule will be expedited; secure commitments  
58           from parties involved to do so. Discuss whether schedule revisions are required to

1 ensure that current and subsequent activities will be completed within the contract  
2 time.

3

4

Issue revised schedule concurrently with the report of each meeting.

5

6

#### REQUESTS FOR ARCHITECT'S INTERPRETATION (RFIs)

7

8 Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and  
9 if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form  
10 specified.

11

12 Content of the RFI: Include a detailed, legible description of item needing interpretation and the  
13 following:

14

15

Project name.

16

Date.

17

Name of Contractor.

18

Name of Architect.

19

RFI number, numbered sequentially.

20

Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or  
21 the Contract Sum, Contractor shall state impact in the RFI.

22

Contractor's signature.

23

Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop  
24 Drawings, and other information necessary to fully describe items needing interpretation.

25

26

Hard-Copy RFIs: Form included as page 00931-2 of the Project Manual.

27

28

Software-Generated RFIs: Software-generated form with substantially the same content as  
29 indicated above.

30

31

Architect's Action: Architect will review each RFI, determine action required, and return it. Allow  
32 seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be  
33 considered as received the following working day.

34

35

On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to  
36 affected parties. Review response and notify Architect within seven days if Contractor disagrees  
37 with response.

38

39

RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit  
40 log monthly.

41

42

43

END OF SECTION

1     **SECTION 01 33 00 – SUBMITTAL PROCEDURES**

2  
3  
4     **DEFINITIONS**

5  
6     Action Submittals: Written and graphic information that requires Architect's responsive action.

7  
8     Informational Submittals: Written information that does not require Architect's approval. Submittals  
9     may be rejected for not complying with requirements.

10  
11     **SUBMITTAL PROCEDURES**

12  
13     Processing Time: Time for review shall commence on Architect's receipt of submittal.

14  
15         Allow not less than 14 days for initial review of each submittal. Allow additional time if  
16         processing must be delayed to permit coordination with subsequent submittals. Architect will  
17         advise Contractor when a submittal being processed must be delayed for coordination.

18  
19         Where sequential review of submittals by Architect's consultants, Owner or other parties is  
20         required, allow 21 days for initial review of each submittal.

21  
22         No extension of the Contract Time will be authorized because of failure to transmit  
23         submittals enough in advance of the work to permit processing or delays due to return of  
24         incomplete submittals.

25  
26     Deviations: Highlight, encircle or otherwise identify deviations from the Contract Documents on  
27     submittals.

28  
29     Transmittal: Package each submittal appropriately for shipping and handling or submit electronically.  
30     Include a transmittal form with each submittal.

31  
32         Transmittal Form: Use Contractor's standard transmittal form.

33  
34     Distribution: Furnish copies of approved submittals to manufacturers, subcontractors, suppliers,  
35     fabricators, installers, authorities having jurisdiction, and others as necessary for performance of  
36     construction activities. Show distribution on transmittal forms.

37  
38     Use for Construction: Use only submittals with mark indicating "Conditionally Approved" or "Comply  
39     with Notations" on Architect's review stamp.

40  
41  
42     **ACTION SUBMITTALS**

43  
44     Number of Copies: Submit 3 paper copies or 1 electronic copy of each submittal, unless otherwise  
45     indicated. Architect will return 1 copy.

46  
47     Product Data: Collect information into a single submittal for each element of construction and type of  
48     product or equipment.

49  
50         Mark each copy of each submittal to show which products and options are applicable.

51  
52     Shop Drawings: Prepare project-specific information, drawn accurately to scale.

53  
54     Samples: Submit Samples for review of kind, color, pattern, and texture .

55  
56         Disposition: Maintain sets of approved Samples at Project site.

57  
58         Samples for Initial Selection: Submit manufacturer's color charts.

1  
2  
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58

Samples for Verification: Submit Samples prepared from same material to be used for the Work that show full range of color and texture variations expected.

#### INFORMATIONAL SUBMITTALS

Number of Copies: 2

Certificate and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification.

Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners and other information specified.

Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that installer complies with the requirements of the Contract Documents.

Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with the requirements of the Contract Documents.

Material Test Reports: Submit reports prepared by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with the requirements of the Contract Documents.

Field Test Reports: Submit reports prepared by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests.

Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

Manufacturer's Instructions: Manufacturer's recommendations, guidelines and procedures for installing and operating products and equipment.

Manufacturer's Field Reports: Preparer documentation of factory-authorized service representative's tests and inspections.

Insurance Certificates and Bonds: Written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

Material Safety Data Sheets (MSDSs): Do not submit to Architect.

#### DELEGATED DESIGN

Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.



1    **CONTRACTOR'S REVIEW**

2

3    Review each submittal and check for coordination with other Work of the Contract and compliance  
4    with the Contract Documents. Note correction and field dimensions. Mark with approval stamp  
5    before submitting to Architect.

6

7    **ARCHITECT'S ACTION**

8

9    Architect will not review submittals that do not bear Contractor's approval stamp and will return them  
10   without action.

11

12   Action Submittals: Architect will review each submittal, mark-up to indicate corrections or  
13   modifications required and return it. Architect will stamp each submittal to indicate status.

14

15   Information Submittals: Architect will review each submittal and will reject and return it to the  
16   Contractor if it does not comply with requirements.

17

18   Partial submittals are not acceptable and will be returned without review.

19

20   Submittals not required by the Contract Documents may not be reviewed and may be discarded.

21

22

23   **END OF SECTION**

1     **SECTION 01 40 00 - QUALITY REQUIREMENTS**

2  
3  
4     **SUBMITTALS**

5  
6     Qualification Data: For testing agencies to demonstrate their capabilities and experience in the form  
7     of a recent report by a recognized authority.

8  
9     Reports: Certified written reports that include:

- 10  
11         Date of issue  
12         Project title and number  
13         Name, address and telephone number of testing agency  
14         Dates and locations of samples and tests or inspections  
15         Description of the Work and test and inspection method  
16         Test and inspection results and an interpretation of test results  
17         Ambient conditions at time of sample taking and testing and inspecting  
18         Opinions on whether tested or inspected Work complies with the Contract Documents  
19         Name and signature of laboratory inspector

20  
21     Permits, Licenses and Certificates: For Owner's records, submit copies of permits, licenses,  
22     certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee  
23     payments, judgments, correspondence, records and similar documents, established for compliance  
24     with standards and regulations bearing on performance of the Work.

25  
26     **QUALITY ASSURANCE**

27  
28     Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this  
29     Project and with a record of successful in-service performance, as well as sufficient production  
30     capacity to produce required units.

31  
32     Factory-Authorized Service Representative Qualifications: An authorized representative of the  
33     Manufacturer who is trained and approved by Manufacturer to inspect installation of manufacturer's  
34     products that are similar in material, design, and extent to those indicated for this Project.

35  
36     Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work  
37     similar in material, design, and extent to that indicated for this Project, whose work has resulted in  
38     construction with a record of successful in-service performance.

39  
40     Professional Engineer Qualifications: A Professional Engineer who is legally qualified to practice in  
41     jurisdiction where Project is located and who is experienced in providing engineering services of the  
42     kind indicated.

43  
44     Testing Agency Qualifications: An agency with the experience and capability to conduct testing and  
45     inspecting indicated, as documented by ASTM E 548.

46  
47     Mockups: Notify Architect five (5) days in advance of dates and times when mockups will be  
48     constructed.

49  
50         Demonstrate the proposed range of aesthetic effects and workmanship.

51  
52         Obtain Architect's approval of mockups before starting work, fabrication and construction.

53  
54                 Approval of mockups does not constitute approval of deviations from the Contract  
55                 Documents contained in mockups unless such deviations are specifically approved  
56                 by Architect in writing.

1 Maintain mockups during construction in an undisturbed condition as a standard for judging  
2 the completed Work.

3

4 Approved mockups may become part of the completed Work if undisturbed at time of  
5 Substantial Completion, unless otherwise indicated.

6

#### 7 QUALITY CONTROL

8

9 Unless otherwise indicated, provide quality-control services specified or required by authorities  
10 having jurisdiction.

11

12 Submit additional copies of each written report directly to authorities having jurisdiction,  
13 when they so direct.

14

15 Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative  
16 to inspect field-assembled components and equipment installation, including service connections.  
17 Report results in writing.

18

19 Retesting and Reinspecting: Regardless of whether original tests or inspections were Contractor's  
20 responsibility, provide quality-control services, including retesting and reinspecting, for construction  
21 that revised or replaced Work that failed to comply with requirements established by the Contract  
22 Documents.

23

24 Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties.  
25 Provide qualified personnel to perform required tests and inspections.

26

27 Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work  
28 during performance of its services.

29

30 Interpret tests and inspections and state in each report whether tested and inspected work  
31 complies with or deviates from requirements.

32

33 Submit a certified written report, in duplicate, of each test, inspection and similar quality-  
34 control service through Contractor.

35

36 Do not release, revoke, alter or increase requirements of the Contract Documents or  
37 approve or accept any portion of the Work.

38

39 Associated Services: Cooperate with agencies performing required tests, inspections and similar  
40 quality-control services, and provide reasonable auxiliary services as requested. Notify agency  
41 sufficiently in advance of operations to permit assignment of personnel. Provide the following:

42

#### 43 REPAIR AND PROTECTION

44

45 On completion of testing, inspections, sample taking, and similar services, repair damaged  
46 construction and restore substrates and finishes.

47

48 Protect construction exposed by or for quality-control service activities.

49

50 Repair and protection are the Contractor's responsibility, regardless of the assignment of  
51 responsibility for quality-control services.

52

53

54 END OF SECTION

**SECTION 01 42 15 - STANDARD ARCHITECTURAL DRAWING ABBREVIATIONS**

A	air (medical)	CT	ceramic tile
AC	acoustical ceiling	CTR	center or counter
ACF	access floor	CTSK	countersunk
ACM	aluminum composite material	CUB	cubicle
ADA	Americans with Disabilities Act	CUH	cabinet unit heater
ADH	adhesive	CURT	curtain
AFF	above finished floor		
AHU	air handling unit	DBL	double
ALT	Alternate	DEFS	direct-applied exterior finish system
ALUM	aluminum	DET	detail
ANOD	anodized	DF	drinking fountain
ATTD	attached	DFT	dry film thickness
AWP	acoustical wall panel	DIA	diameter
		DIAG	diagonal
B	base	DIM	dimension
B/	bottom	DN	down
BB	bulletin board	DP	depth or deep
BD	board	DR	door
BF	barrier free	DS	downspout
BG	bullet-resistant security glass	DWG	drawing
BL	blinds	DWL	dowel
BLDG	building		
BLKG	blocking	EA	each
BM	beam or bench mark	EIFS	exterior insulation and finish system
BOT	bottom	EJ	expansion joint
BR	brick	EL	elevation
BRG	bearing	ELEC	electrical
BSMT	basement	ELEV	elevator
BTWN	between	EMBD	electronic marker board
BUR	built-up roof	EP	electrical panel
		EQ	equal
C	carpet	ETR	existing to remain
CAB	cabinet	EW	eye wash
CB	catch basin	EWC	electric water cooler
CBD	chalk board	EWH	electric wall heater
CC	cubicle curtain	EXP	exposed
CG	corner guard	EXT	exterior
CJ	control joint	EXTG	existing
CK	cork		
CL	center line	F	filler
CLG	ceiling	FAB	fabric
CLOS	closet	FB	face brick
CLR	clear	FD	floor drain
CMU	concrete masonry unit	FE	fire extinguisher -(bracket mtd.)
COL	column	FER	fire extinguisher in (recessed cab.)
COMM	communication	FES	fire extinguisher in (surface mtd. cab.)
CONC	concrete	FESR	fire extinguisher in (semi-recessed cab.)
CONF	conference		
CONT	continuous	FF	factory finish
CONTR	contractor	FG	fire rated safety glass
CORR	corridor	FHC	fire hose cabinet
CMPT	compartment	FIN	finish(ed)
CR	crash rail	FL	flush
CRK	cork (flooring)		
CS	computer station		

FLR	floor	MAX	maximum
FLRG	flooring	MBD	marker board
FLSHG	flashing	MBL	marble
FM	floor mat	MECH	mechanical
FND	foundation	MEZZ	mezzanine
FR	frame	MFR	manufacturer
FRP	fiberglass reinforced plastic	MG	monolithic float glass
FRT	fire retardant treated	MICRO	microwave
FTG	footing	MIN	minimum, minute
FV	film viewer	MISC	miscellaneous
GA	gauge	MLAM	metal laminate
GALV	galvanized	MJT	movement joint
GB	grab bar	MO	masonry opening
GR	grout	MTD	mounted
GRAN	granite	MTL	metal
GYP	gypsum	NA	not applicable
H	height (high)	NC	nurse call station
HB	hose bibb	NIC	not in contract
HD	hair dryer, hand dryer, head or hard	NO	number
HDWR	hardware	NOM	nominal
HORIZ	horizontal	NTS	not to scale
HPC	high performance coating	O	oxygen
HR	hour	OC	on center
HSS	hollow structural section	OD	outside diameter
HVAC	heating, ventilating, air conditioning	OHD	overhead door
IBC	international building code	OPNG	opening
ID	inside diameter	OPP	opposite
IE	invert elevation	PA	paint
IG	insulating glass	PAD	paint, dryfall
INSUL	insulation	PAE	paint with eggshell finish
INT	interior	PAF	paint with flat finish
IRWC	impact resistant wall covering	PART	partition
JAN	janitor	PAS	paint with semi-gloss finish
JST	joist	PASS	passage
JT	joint	PAT	paint with satin finish
KD	knocked-down	PAX	paint, epoxy
KO	knock(ed)-out	PBD	particle board
KS	knee space	PC	pre-cast
KT	keyboard tray	PE	poured epoxy
LAB	laboratory	PERP	perpendicular
LAM	laminated(d)	PG	patterned glass
LAV	lavatory	PL	plate
LG	long, laminated glass	PLAM	plastic laminate
LIN	linoleum	PLAS	plaster
LKR	locker	PLBG	plumbing
LL	lead lined	PLYWD	plywood
LSJ	long span joist	PP	push plate (barrier free door activator)
LT	light	PPT	parapet
MAS	masonry	PS	projection screen
		PSF	pounds per square foot
		PT	preservative treated or porcelain tile
		PTD	paper towel dispenser
		PTS	pneumatic tube station

PTM	patch to match	TBD	tack board
PU	poured urethane	TEL	telephone
QT	quarry tile	TEMP	tempered <i>or</i> temporary
QTZ	quartz surfacing material	TER	terrazzo
R	riser/radius	TH	thick(ness)
RAF	resilient athletic flooring	TLT	toilet
RB	resilient base	TOB	top of beam
RBR	rubber, rubber flooring	TOD	top of deck
RD	roof drain	TOF	top of footing
REF	refrigerator	TOJ	top of joist
REINF	reinforced	TOM	top of masonry
REQD	required	TOS	top of slab <i>or</i> top of steel
REV	revision	TOW	top of wall
RF	resilient flooring	TP	toilet partition
RFG	roofing	TPG	topping
RM	room	TPH	toilet paper holder
RO	rough opening	TS	tubing, structural <i>or</i> transition strip
RST	resilient stair tread	TV	television <i>or</i> TV outlet
RT	resilient tile	TWC	tackable wall covering
RTU	rooftop unit	TYP	typical
S	switch	UC	undercounter <i>or</i> cabinet
SC	special coating	UCD	undercut door
SCHD	schedule	UCL	undercabinet light
SCONC	sealed concrete	UH	unit heater
SD	soap dispenser	UNEXC	unexcavated
SG	spandrel glass	UNFIN	unfinished
SGT	structural glazed tile	UNO	unless noted otherwise
SHT	sheet	V	vinyl
SIM	similar	VAC	vacuum
SL	slate	VAR	varies
SLD	solid surfacing material	VCT	vinyl composition tile
SM	sheet metal	VENT	ventilator
SND/D	sanitary napkin dispenser/disposal unit	VERT	vertical
SPG	specialty glass	VIF	verify in field
SQ	square	VT	vinyl tile
SS	stainless steel	W	width <i>or</i> wide
ST	stone	W/	with
STC	storage cabinet	W/O	without
STCONC	stained concrete	WC	wall covering
STD	standard	WD	wood
STL	steel	WDW	window
STN	stain	WDWK	wood work
STOR	storage	WF	wide flange
STRUCT	structure <i>or</i> structural	WLHG	wallhung
SUSP	suspended	WRC	wardrobe cabinet
SV	sheet vinyl	WSCT	wainscot
T	tread	WWF	welded wire fabric
T/	top of	WWR	welded wire reinforcement
T & G	tongue and groove		

END OF SECTION

1     **SECTION 01 60 00 - PRODUCT REQUIREMENTS**

2  
3  
4     **SUBMITTALS**

5  
6     Substitution Requests: Submit 3 copies of form included as page 00 63 25 of Project Manual.

7  
8             Form of Acceptance:     During Bidding: Addendum.

9  
10                             After award of Contract: Change Order.

11  
12     **QUALITY ASSURANCE**

13  
14     Source Limitations: To the fullest extent possible, provide products of the same kind, from a single  
15     source.

16  
17     **PRODUCT DELIVERY, STORAGE AND HANDLING**

18  
19     Deliver, store and handle products in accordance with the manufacturer's recommendations, using  
20     means and methods that will prevent damage, deterioration and loss.

21  
22             Deliver products to the site in the manufacturer's original packaging, bearing brand name  
23             and identification of manufacturer and including instructions for handling and installing.

24  
25     **PRODUCT WARRANTIES**

26  
27     Warranties specified in other Sections shall be in addition to, and run concurrent with, other  
28     warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on  
29     product warranties do not relieve Contractor of obligations under requirements of the Contract  
30     Documents.

31  
32             Owner reserves the right to limit selection to products with warranties not in conflict with  
33             requirements of the Contract Documents.

34  
35     **GENERAL PRODUCT REQUIREMENTS**

36  
37     Provide products that comply with the Contract Documents, that are undamaged and, unless  
38     specifically otherwise indicated, unused at the time of installation.

39  
40     Provide products that do not contain asbestos of any type and that are certified as such by  
41     manufacturer.

42  
43     Descriptive, performance, and reference standard requirements in the Specifications establish  
44     minimum "salient characteristics" of products.

45  
46     Provide products complete with all accessories, trim, finish, fasteners, and other items needed for a  
47     complete installation.

48  
49     Product Options: Unless custom products or non-standard options are specified, provide standard  
50     products of types that have been produced and used successfully in similar situations on other  
51     projects.

52  
53             Where product specifications are accompanied by the term "as selected," Architect will make  
54             selection.

55  
56             Where product specifications are accompanied by the term "custom color," Architect will  
57             provide sample of color to be matched without regard to color ranges offered by  
58             Manufacturers of products.

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Where product specifications are accompanied by the term "match sample," sample to be matched is Architect's.

Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.

Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.

## PRODUCT SELECTION PROCEDURES

Products: Where "Products" paragraph includes a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.

Available Products: Where "Available Products" paragraph includes a list of names of both products and manufacturers, products that may be incorporated into the Work include, but are not limited to, products specified that comply with requirements.

Manufacturers: Where "Manufacturers" paragraph includes a list of manufacturers' names, provide products of one of the manufacturers listed that comply with requirements.

Basis-of-Design Products: Where "Basis of Design Product" paragraph includes a list of other manufacturers' names, provide either the basis of design product or comply with provisions of "Comparable Products" Article to obtain approval of a product of one of the other named manufacturers.

Or Equal: Where products are specified by name and accompanied by the term "or equal" or other term of similar meaning, comply with provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.

Visual Matching: Where Specifications require matching a sample or finish designation of a particular manufacturer, select a product that complies with requirements and matches sample or finish to satisfaction of Architect.

## PRODUCT SUBSTITUTIONS

Conditions: Architect will consider Contractor's request for substitution under the following conditions. The requested substitution:

Offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume.

Is consistent with the intent of the Contract Documents.

Has received necessary approvals of authorities having jurisdiction.

Has been coordinated with other portions of the Work.

## COMPARABLE PRODUCTS

Where products are specified by a specific manufacturer's model designation, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:

Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.



- 1
- 2
- 3
- 4
- 5

Evidence that proposed product provides specified warranty.

END OF SECTION

**SECTION 01 73 00 - EXECUTION REQUIREMENTS****SUBMITTALS**

Certificates: Submit certificate signed by licensed Land Surveyor and Professional Engineer certifying that location and elevation of improvements comply with requirements.

Certified Surveys: Submit two (2) copies signed by Land Surveyor and Professional Engineer.

**EXAMINATION**

Examine substrates, areas and conditions for compliance with requirements for execution of the work.

Proceeding with the work indicates acceptance of substrates and conditions.

**PREPARATION**

Existing Utility Interruptions: Do not interrupt utilities serving in-use facilities except under the following conditions and then only after arranging alternative temporary services:

Notify Architect and Owner not less than 3 days in advance of proposed utility interruptions.

Do not proceed with utility interruptions without Owner's written permission.

Review of Contract Documents and Field Conditions: Promptly on discovery of the need for clarification of the contract documents submit a Request for Interpretation to Architect on form included in the manual. Include a detailed description of problem encountered, together with recommendations for resolving it.

**CONSERVATION**

Carry out construction activities to ensure that operations are carried out with consideration given to conservation of energy, water and materials.

Salvage materials and equipment involved in performance of, but not actually incorporated into, the work.

**FIELD ENGINEERING**

Reference Points: Locate existing permanent benchmarks, control points and similar reference points before beginning the work. Preserve and protect permanent benchmarks and control points during construction operations.

Benchmarks: Establish and maintain a minimum of two permanent benchmarks on project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmarks.

Final Property Survey: Prepare a final property survey showing significant features of real property for project. Include on the survey the certification signed by land surveyor or professional engineer, that principal metes, bounds, lines and levels of project are accurately positioned as shown on the survey.

At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the "official property survey."

**CONSTRUCTION LAYOUT**

- 1  
2 Engage a licensed land surveyor or professional engineer to lay out the work using accepted  
3 surveying practices.  
4
- 5 Record Log: Maintain a log of layout control work. Record deviations from required lines and levels.  
6 Make the log available for reference to the Architect and the Contractor.  
7
- 8 **INSTALLATION**  
9
- 10 Locate the work and components of the work accurately, in correct alignment and elevation.  
11
- 12 Install products to withstand indicated design loads.  
13
- 14 Comply with manufacturer's written instructions and recommendations for installing products in  
15 applications indicated.  
16
- 17 Install products at the time and under conditions that will ensure the best possible results. Maintain  
18 conditions required for product performance until Substantial Completion.  
19
- 20 Allow for building movement, including changes in atmospheric conditions.  
21
- 22 Conduct construction operations so no part of the work is subjected to damaging operations or  
23 loading in excess of that expected during normal conditions of occupancy.  
24
- 25 Anchors and Fasteners: Provide anchors and fasteners to anchor each component securely in  
26 place.  
27
- 28           Furnish setting drawings, templates, and directions for installing anchorages. Deliver to  
29 Project site in time for installation.  
30
- 31 Mounting Heights: Where mounting heights are not indicated, mount components at heights  
32 approved by Architect.  
33
- 34 Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated,  
35 arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.  
36
- 37 Hazardous Materials: Use products, cleaners and installation materials that are not considered  
38 hazardous.  
39
- 40 **PROGRESS CLEANING AND PROTECTION**  
41
- 42 Site: Maintain project site free of waste materials and debris.  
43
- 44 Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper  
45 execution of the work.  
46
- 47 Installed Work: Clean installed surfaces according to written instructions of manufacturer or  
48 fabricator.  
49
- 50           Protect as necessary to ensure freedom from damage and deterioration at time of  
51 Substantial Completion.  
52
- 53 Waste Disposal: Do not burn waste. Do not bury debris or excess materials on Owner's property.  
54 Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste  
55 materials from project site and dispose of lawfully.  
56
- 57 **END OF SECTION**

1     **SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT**

2  
3     **WASTE MANAGEMENT GOALS**

4  
5     Employ processes that ensure the generation of as little waste as possible .

6  
7     Salvage or recycle 50 percent by weight of total waste generated by the Work.

8  
9     **SUBMITTALS**

10  
11     Waste Management Plan: Submit within 30 days of the Notice of Award, commencement of the  
12     Work, or the Notice to Proceed, whichever is earlier

13  
14     Waste Reduction Progress Reports: Submit Concurrently with each Application for Payment.

15  
16     **QUALITY ASSURANCE**

17  
18     Waste Management Conference: Review methods and procedures related to waste management.

19  
20     **WASTE MANAGEMENT PLAN**

21  
22     Develop a plan consisting of waste identification and waste reduction plan. Indicate quantities by  
23     weight or volume, but use same units of measure throughout waste management plan.

24  
25     Waste Identification: Indicate anticipated types and quantities of waste generated by the Work.  
26     Include assumptions for estimates.

27  
28     Waste Reduction Plan: List each type of waste and whether it will be salvaged, recycled, or  
29     disposed of in landfill or incinerator.

30  
31     **PLAN IMPLEMENTATION**

32  
33     Implement approved waste management plan. Provide handling, containers, storage, signage,  
34     transportation, and other items required to implement waste management plan for the duration of the  
35     Contract.

36  
37     **RECYCLING**

38  
39     Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for  
40     recycling waste materials shall accrue to Contractor.

41  
42     Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate  
43     recyclable waste by type at Project site to the maximum extent practicable.

44  
45         Provide appropriately marked containers or bins for controlling recyclable waste

46  
47         Inspect containers and bins for contamination and remove contaminated materials if found.

48  
49         Remove recyclable waste from Owner's property and transport to recycling receiver or  
50         processor.

51  
52     **DISPOSAL OF WASTE**

53  
54     Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials  
55     from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities  
56     having jurisdiction.

57  
58     **END OF SECTION**

1     **SECTION 01 77 00 - CLOSEOUT PROCEDURES**

2  
3  
4     **SUBSTANTIAL COMPLETION**

5  
6     Preliminary Procedures: Before requesting inspection for determining date of Substantial  
7     Completion, complete the following. List items below that are incomplete in request.

8  
9         Prepare and submit to Owner and Architect a list of items to be completed and corrected  
10         (Punch List), the value of items on the list and reasons why the work is not complete.

11  
12         Advise Owner of pending insurance changeover requirements.

13  
14         Submit warranties, maintenance service agreements, final certifications and similar  
15         documents.

16  
17         Obtain and submit release permitting Owner unrestricted use of the work and access to  
18         services and utilities. Include occupancy permits, operating certificates and similar releases.

19  
20         Prepare and submit project record documents, operation and maintenance manuals,  
21         damage or settlement surveys, property surveys and similar final record information.

22  
23         Deliver tools, spare parts, extra materials, keys and similar items to location designated by  
24         Owner. Label with manufacturer's name and model number where applicable.

25  
26         Complete final cleaning requirements.

27  
28         Touch-up and otherwise repair and restore marred exposed finishes to eliminate visual  
29         defects.

30  
31     Inspection: Submit a written request for inspection for Substantial Completion. On receipt of  
32     request, Architect

33  
34         Re-inspection: Request re-inspection when the incomplete work identified in previous in-  
35         spection is complete.

36  
37         Results of completed inspection will form the basis of requirements for Final Completion.

38  
39     **FINAL COMPLETION**

40  
41     Preliminary Procedures: Before requesting final inspection for determining date of Final Completion,  
42     complete the following:

43  
44         Submit a final Application for Payment.

45  
46         Submit certified copy of Architect's Substantial Completion inspection list of items to be  
47         completed (punch list), endorsed and dated by Architect. The certified copy of the list shall  
48         state that each item has been completed or otherwise resolved for acceptance.

49  
50         Submit evidence of final, continuing insurance coverage complying with insurance  
51         requirements.

52  
53         Instruct Owner's personnel in operation, adjustment and maintenance of products, and  
54         systems.

55  
56     Inspection: Submit a written request for final inspection for acceptance. On receipt of request,  
57     Architect, Owner and Contractor will either proceed with inspection or Contractor will be notified of

1 unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will  
2 notify Contractor of construction that must be completed before certificate will be issued.

3  
4 Re-inspection: Request re-inspection when the incomplete work identified in previous  
5 inspection is complete.

#### 6 7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

8  
9 Include name and identification of each space and area affected by construction operations with  
10 incomplete items including areas disturbed by Contractor that are outside the limits of construction.

11  
12 Organize list of spaces sequentially, starting with exterior areas and proceeding .

13  
14 Submit one copy of Punch List to Architect.

#### 15 16 PROJECT RECORD DOCUMENTS

17  
18 Record Drawings: Maintain and submit one set each of Contract Drawings and shop drawings.

19  
20 Mark prints to show the actual installation where it varies from that shown originally. Require  
21 entity that obtained record data to mark up the prints.

22  
23 Give particular attention to information on concealed elements that cannot be readily  
24 identified and recorded later.

25  
26 Mark either Contract Drawings or shop drawings, whichever is most capable of  
27 showing actual conditions. Where shop drawings are marked, show cross-reference  
28 on Contract Drawings.

29  
30 Note Construction Change Directive numbers, Change Order numbers, Alternate numbers  
31 and similar identification.

32  
33 Identify and date each record drawing; include the designation "PROJECT RECORD  
34 DRAWING" in a prominent location. Organize into manageable sets; bind each set with  
35 durable paper cover sheets. Include identification on cover sheets.

36  
37 Record Specifications: Submit one copy of Project Manual, including addenda and contract modifi-  
38 cations. Mark copy to indicate the actual product installation where installation varies from that indi-  
39 cated in specifications, addenda and contract modifications.

40  
41 Note related Change Orders and Record Drawings, where applicable.

42  
43 Record Product Data: Submit one copy of each product data submittal. Mark to indicate the actual  
44 product installation where installation varies substantially from that indicated in product data.

45  
46 Note related Change Orders, record drawings and record specifications, where applicable.

47  
48 Miscellaneous Record Submittals: Assemble and submit miscellaneous records required by  
49 specifications for record keeping and submittal. Bind or file miscellaneous records and identify each.

#### 50 51 OPERATION AND MAINTENANCE MANUALS

52  
53 Assemble a complete set of operation and maintenance data indicating the operation and  
54 maintenance of each system, subsystem and piece of equipment not part of a system.

55  
56 Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index  
57 data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate  
58 contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on

- 1 front and spine with the printed title, "OPERATION AND MAINTENANCE MANUAL," project name  
2 and subject matter of contents.  
3  
4 **WARRANTIES**  
5  
6 Organize warranty documents into an orderly sequence based on the table of contents of the Project  
7 Manual.  
8  
9 Bind warranties in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders.  
10  
11 Identify each binder on the front and spine with the printed title "WARRANTIES" and Project name  
12  
13 **DEMONSTRATION AND TRAINING**  
14  
15 Instruct Owner's personnel to operate, adjust and maintain equipment and systems.  
16  
17 **FINAL CLEANING**  
18  
19  
20  
21 Clean project site, yard and grounds, in areas disturbed by construction activities, including  
22 landscape development areas, of rubbish, waste material, litter and other foreign  
23 substances.  
24  
25 Remove labels that are not permanent.  
26  
27 Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that  
28 already show evidence of repair or restoration.  
29  
30 Do not paint over "UL" and similar labels, including mechanical and electrical  
31 nameplates.  
32  
33 Replace parts subject to unusual operating conditions.  
34  
35 Leave project clean and ready for occupancy.  
36  
37  
38 **END OF SECTION**

**SECTION 03 30 00 - CAST-IN-PLACE CONCRETE****SUBMITTALS**

Product Data: For each type of product indicated.

Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

Steel Reinforcement Shop Drawings: Detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

Comply with ACI 315 "Details and Detailing of Concrete Reinforcement" published in SP-66 ACI Detailing Manual or MCP302-Part 3.

**QUALITY ASSURANCE**

ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

ACI 301, "Specification for Structural Concrete," Sections 1 through 5.

ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

**FORM-FACING MATERIALS**

Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties that will leave no corrodible metal closer than 1 inch to the plane of concrete surface.

**STEEL REINFORCEMENT**

Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

Plain-Steel Wire: ASTM A 82, as drawn.

Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

Bar Supports: Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI "Manual of Standard Practice," of greater compressive strength than concrete.

For slabs-on-grade, use chairs with plates to prevent penetration of vapor retarder.

**CONCRETE MATERIALS**

Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

Portland Cement: ASTM C 150, Type I.



- 1  
2 Fly Ash: ASTM C 618, Class C.  
3  
4 Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.  
5  
6 Blended Hydraulic Cement: ASTM C 595, Type IS, portland blast-furnace slag or  
7 Type I (SM), slag-modified portland cement.  
8  
9 Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide  
10 aggregates from a single source.  
11  
12 Coarse-Aggregate: Crushed stone or gravel.  
13  
14 Fine Aggregate: Natural sand, free of materials with deleterious reactivity to alkali in  
15 cement.  
16  
17 Water: ASTM C 94/C 94M.

18  
19 ADMIXTURES

- 20  
21 Air-Entraining Admixture: ASTM C 260.  
22  
23 Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other  
24 admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in  
25 hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.  
26  
27 Water-Reducing Admixture: ASTM C 494/C 494M, Type A.  
28  
29 Mid Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type A.  
30  
31 Water-Reducing, Non-Chloride Accelerator: ASTM C 494/C 494M, Type C.  
32  
33 Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.  
34  
35 High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F or G

36  
37 CURING MATERIALS

- 38  
39 Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to  
40 fresh concrete.  
41  
42 Products:  
43  
44 Axim Concrete Technologies; Cimfilm.  
45 Euclid Chemical Company (The); Eucobar.  
46 L&M Construction Chemicals, Inc.; E-Con.  
47 Meadows, W. R., Inc.; Sealtight Evapre.  
48

- 49 Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing  
50 approximately 9 oz./sq. yd. when dry.  
51

- 52 Moisture-Retaining Cover: ASTM C 171, curing paper, polyethylene film or white-burlap-  
53 polyethylene sheet.  
54

- 55 Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.  
56

57 CONCRETE MIXTURES, GENERAL  
58

1 Prepare design mixtures for each type and strength of concrete, proportioned on the basis of  
2 laboratory trial mixture or field test data, or both, according to ACI 301.

3  
4 Use a qualified independent testing agency for preparing and reporting proposed mixture  
5 designs based on laboratory trial mixtures. Do not use the same Agency as used for Field  
6 Quality Control Testing

7  
8 Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

9  
10 Admixtures: Use admixtures according to manufacturer's written instructions.

11  
12 Slump Limit for concrete containing high-range water-reducing admixture:  
13 8"maximum

14  
15 Use water reducing and retarding admixture when required by high temperatures, low  
16 humidity, or other adverse placement conditions.

17  
18 Use water-reducing admixture in pumped concrete and concrete with a water-cementitious  
19 materials ratio below 0.50.

## 20 21 CONCRETE MIXTURE SCHEDULE

22 23 24 25 26 27 28	Class	Type of Construction	Min. Comp Strength @ 28 Days (PSI)	Slump Before addn. of HRWR (in. +/- 1 in.)	Max. Agg. Size (in.)	Min. Lbs. of Cementitious Materials per cu yd.	Air Entrain- ment % +/- 1½%	Notes
29 30 31 32	1	Footings	3000	5	1.5	470	4.5	(1)

### 33 Notes:

34  
35 (1) Use a maximum of 50% replacement of portland cement with ground granulated blast-  
36 furnace slag and fly ash at a 1:1 ratio, up to 350 pounds per cubic yard. If fly ash is used  
37 alone, limit the maximum replacement to 25%.

## 38 39 FABRICATING REINFORCEMENT

40  
41 Fabricate steel reinforcement according to CRSI "Manual of Standard Practice."

## 42 43 CONCRETE MIXING

44  
45 Provide ready-mixed concrete. Measure, batch, mix, and deliver concrete according to  
46 ASTM C 94/C 94M, and furnish batch ticket information.

## 47 48 FORMWORK

49  
50 Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral,  
51 static, and dynamic loads, including construction loads that might be applied, until structure can  
52 support such loads.

## 53 54 REMOVING AND REUSING FORMS

55  
56 Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support  
57 weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours

1 after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and  
2 curing and protection operations are maintained.

#### 3 4 STEEL REINFORCEMENT

5  
6 Comply with CRSI "Manual of Standard Practice" for placing reinforcement.

#### 7 8 JOINTS

9  
10 Construction Joints: Install so strength and appearance of concrete are not impaired, at locations  
11 indicated or approved by Architect.

12  
13 Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened  
14 or partially hardened concrete surfaces.

#### 15 16 CONCRETE PLACEMENT

17  
18 Do not add water to concrete during delivery at Project site or during placement.

19  
20 Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new  
21 concrete will be placed on concrete that has hardened enough to cause seams or planes of  
22 weakness.

23  
24 Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

25  
26 Begin initial floating to form a uniform and open-textured surface plane, before excess  
27 bleedwater appears on the surface. Do not further disturb slab surfaces before starting  
28 finishing operations.

29  
30 Cold-Weather Placement: Comply with ACI 306.1. Protect concrete from physical damage or  
31 reduced strength that could be caused by frost, freezing actions, or low temperatures.

32  
33 Hot-Weather Placement: Comply with ACI 301.

#### 34 35 CONCRETE PROTECTING AND CURING

36  
37 Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during  
38 curing.

39  
40 Cure concrete according to ACI 308.1, by one or a combination of the following methods, unless  
41 otherwise indicated:

42  
43 Moisture Curing: Keep surfaces continuously moist for not less than seven days.

44  
45 Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for  
46 not less than seven days.

47  
48 Curing Compound: Apply uniformly in continuous operation by power spray or roller.

#### 49 50 FIELD QUALITY CONTROL

51  
52 Testing and Inspecting: Engage a qualified testing and inspecting agency to perform tests and  
53 inspections and to submit reports.

54  
55 Inspections:

56  
57 Steel reinforcement placement.

1 Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172  
2 shall be performed according to the following requirements:  
3  
4       Testing Frequency: Obtain one composite sample for each day's pour of each concrete  
5 mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu.  
6 yd. or fraction thereof.  
7  
8       Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but  
9 not less than one test for each day's pour of each concrete mixture. Perform additional tests  
10 when concrete consistency appears to change.  
11  
12       Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each  
13 composite sample, but not less than one test for each day's pour of each concrete mixture.  
14  
15       Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40  
16 deg F and below and when 80 deg F and above, and one test for each composite sample.  
17  
18       Compression Test Specimens: ASTM C 31/C 31M.  
19  
20               Cast and laboratory cure two sets of two standard cylinder specimens for each  
21 composite sample.  
22  
23       Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured  
24 specimens at 7 days and one set of two specimens at 28 days.  
25  
26               A compressive-strength test shall be the average compressive strength from a set of  
27 two specimens obtained from same composite sample and tested at age indicated.  
28  
29       Correct deficiencies in the Work that test reports and inspections indicate dos not comply with the  
30 Contract Documents.  
31  
32  
33       END OF SECTION

1    **SECTION 03 45 00 – PLANT-PRECAST ARCHITECTURAL CONCRETE**

2  
3  
4    SUMMARY

5  
6    Exposed aggregate units.

7  
8    DESIGN CRITERIA

9  
10   Design precast members and connections to withstand own weight, wind loads, loads due to seismic  
11   forces, erection forces, live and dead loads, in addition to any other loads required by the governing  
12   building code for the building type being erected.

13  
14   Precast fabricator shall be responsible for analyzing, designing and furnishing of all precast-to-  
15   precast and precast-to-concrete (cast-in-place concrete) connections. Where connection forces are  
16   given on the construction drawings, precaster may utilize these forces directly in the design of the  
17   connections. Location of gravity and lateral supports for precast panels shall be in accordance with  
18   the contract document requirements, unless approved in writing by the Architect.

19  
20   Component connections shall accommodate building movement where appropriate. Provide  
21   adjustment to accommodate misalignment of structure without permanent distortion, damage to  
22   components, wrecking of joint connection, breakage of seals and moisture penetration.

23  
24   Design modifications may be made only as necessary to meet field conditions and to insure proper  
25   fitting of the work, and only as acceptable to Architect. Maintain general design concept shown  
26   without increasing or decreasing sizes of members or altering profiles and alignment shown. Provide  
27   complete design calculations and drawings prepared by a professional engineer, registered in the  
28   state where project is located, if design modifications are anticipated.

29  
30   SUBMITTALS

31  
32   Shop Drawings: Show complete information for fabrication and installation of precast concrete units.  
33   Indicate member dimensions and cross section; location, size and type of reinforcement, including  
34   special reinforcement and lifting devices necessary for handling and erection.

35  
36        Show layout, dimensions and identification of each precast unit corresponding to sequence  
37        and procedure of installation. Indicate welded connections by AWS standard symbols.  
38        Detail inserts, connections and joints, including accessories and construction at openings in  
39        precast units.

40  
41        Show location and details of anchorage devices that are to be embedded in other  
42        construction.

43  
44        Indicate protective finishes for metal items including connectors.

45  
46   Samples: Submit samples approximately 12 x 12 x 2 inches to illustrate quality, color and texture of  
47   surface finish.

48  
49   QUALITY ASSURANCE

50  
51   Codes and Standards: Comply with provisions of following codes, specifications and standards,  
52   except as otherwise indicated:

53  
54        ACI 318 "Building Code Requirements for Reinforced Concrete."

55  
56        Concrete Reinforcing Steel Institute, "Manual of Standard Practice."

57  
58        American Welding Society D1.4, "Structural Welding Code Reinforcing Steel."

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Fabrication Qualifications: Produce precast concrete units at fabricating plant engaged primarily in manufacturing of similar units, unless Architect agrees that plant fabrication or delivery to site is impractical.

Fabricator shall be a producer member of the Pre-stressed Concrete Institute (PCI) and participate in its Plant Certification Program or if not a PCI member shall be a participant in PCI's Plant Certification Program.

Fabricator shall be qualified in accordance with PCI MNL-116, Manual for Quality Control for Plants and Production of Structural Precast Concrete Products.

Firms shall have more than 5 years successful experience in fabrication of precast concrete units similar to units required for this project. Fabricator shall submit a list of 6 projects where units similar to this project have been supplied. Fabricators shall have sufficient production capacity to produce required units without causing delay in work.

Qualifications of Erector: Firms that have a minimum of five (5) years successful experience in the erection of architectural precast concrete units, similar to units required for this project, will be acceptable.

Erector shall be qualified in accordance with PCI MNL-116, Manual for Quality Control for Plants and Production of Structural Precast Concrete Products.

#### DELIVERY, STORAGE AND HANDLING

Deliver precast concrete units to project site in such quantities and at such times to assure continuity of installation. Store units at project site to prevent cracking, distortion, warping, staining or other physical damage and so that markings are visible. Lift and support units only at designated lifting or supporting points as shown on final shop drawings.

Provide all items to be embedded in cast-in-place concrete in a timely manner to the general contractor for placement.

#### WARRANTY

Replace units showing crazes, chips, cracks, disintegration, discoloration or other defects when units are wet or dry, due to inadequate quality of precast concrete or faulty erection, within five (5) years of Substantial Completion with new units at no cost to Owner.

#### FORMWORK

Provide forms and, where required, form facing materials of metal, plastic, wood or other acceptable material that is non-reactive with concrete and will produce required finish surfaces.

#### REINFORCING MATERIALS

All reinforcing required for panels to be either hot-dip galvanized or epoxy coated. This includes custom cut ends.

Reinforcing Bars: ASTM A 615, Grade 60, unless otherwise indicated.

Epoxy Coated Reinforcing Bars: ASTM A 775.

Low-Alloy Steel Reinforcing Bars: ASTM A 706.

Galvanized Reinforcing Bars: ASTM A 767, Class II (2.0 oz. zinc psf), hot-dip galvanized after fabrication and bending.

- 1  
2 Steel Wire: ASTM A 82, plain, cold drawn, steel.  
3  
4 Welded Wire Fabric: ASTM A 185.  
5  
6 Welded Deformed Steel Wire Fabric: ASTM A 497.  
7  
8 Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers  
9 and other devices for spacing, supporting and fastening reinforcing.  
10  
11 For exposed to view concrete surfaces, where legs of supports are in contact with forms,  
12 provide supports with legs that are plastic protected (CRSI, Class 1) or stainless steel  
13 protected (CRSI, Class 2).  
14

#### 15 CONCRETE MATERIALS

- 16  
17 Portland Cement: ASTM C 150, Type I or Type III  
18  
19 Use only one brand and type of cement throughout the project, unless otherwise acceptable to  
20 Architect.  
21  
22 Use white portland cement for facing concrete mix to match Architect's control sample.  
23  
24 Standard gray portland cement may be used for non-exposed back up concrete.  
25  
26 Coarse Aggregate for Facing Mixes: ASTM C 33; hard, durable, carefully selected and graded; free  
27 of material causing staining or reacting with cement.  
28  
29 Use aggregate from same source as those used in Architect's control sample.  
30  
31 Fine Aggregate for Facing Mixes: ASTM C 33; manufactured sand of same material as coarse  
32 aggregate, unless otherwise acceptable to Architect.  
33  
34 Pigments: Non-fading, resistant to lime and other alkalies.  
35  
36 Water: Drinkable, free from foreign materials in amounts harmful to concrete and embedded steel.  
37  
38 Air-Entraining Admixture: ASTM C 260  
39  
40 Water-Reducing, Retarding, Accelerating Admixtures: ASTM C 494, Type as selected by Fabricator  
41 and containing not more than 0.1% chloride ions.  
42

#### 43 GROUT MATERIALS

- 44  
45 Cement Grout: Portland cement, ASTM C 150, Type I, and clean, natural sand, ASTM C 404.  
46

#### 47 PROPORTIONING AND DESIGN OF MIXES

- 48  
49 Prepare design mixes for each type of concrete required.  
50  
51 Design mixes may be prepared by independent testing facility or by qualified precast manufacturing  
52 plant personnel, at precast manufacturer's option.  
53  
54 Proportion mixes by either laboratory trial batch or field experience methods, using materials to be  
55 employed on the project for each type of concrete required, complying with ACI 318.  
56

1 Facing Mix: Standard weight concrete consisting of specified Portland cement, aggregates,  
2 admixtures and water to produce the following properties: Cement content of facing and back up mix  
3 shall be a minimum of 7-1/2 bags per cubic yard.

4  
5 Compressive Strength: 5,000-psi minimum at 28 days

6  
7 Total Air Content: Not less than 4% nor more than 6%

8  
9 Back up Concrete: Standard weight concrete with compressive strength of 5000-psi at 28 days.

10  
11 Admixtures: Use air-entraining admixture in strict compliance with manufacturer's direction.

12  
13 Admixtures containing chloride ions are not permitted.

#### 14 15 FABRICATION

16  
17 Fabricate precast concrete units complying with manufacturing and testing procedures, quality  
18 control recommendations, and dimensional tolerances of PCI MNL 117.

19  
20 Fabricate units straight, smooth and true to size and shape, with exposed edges and corners precise  
21 and square unless otherwise indicated.

22  
23 Precast units that are warped, cracked, broken, spalled, stained or otherwise defective will  
24 not be acceptable.

25  
26 Built-In Items: Provide slots, holes and other accessories in units to receive light fixtures, flagpoles,  
27 stone medallions, and other similar work as indicated.

28  
29 Provide inserts and anchorages cast into units, for attachment of loose hardware as re-  
30 quired.

31  
32 Anchorages: Provide loose steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers  
33 and other miscellaneous steel shapes not provided by other trades, necessary for securing precast  
34 units to supporting and adjacent members.

35  
36 Surface Finish: Fabricate precast units and provide exposed surface finishes as follows:

37  
38 Exposed aggregate finish, using chemical retarding agents applied to concrete forms, with  
39 washing and brushing procedures after form removal.

40  
41 As cast or float finish for unexposed surfaces.

#### 42 43 INSTALLATION

44  
45 Deliver anchorage items that are to be embedded in other construction before start of such work.  
46 Provide setting diagrams, templates, instructions and directions as required for installation.

47  
48 Do not install precast units until concrete has attained its design compressive strength.

49  
50 Install precast concrete members plumb, level and in alignment within PCI MNL 17 specified limits of  
51 erection tolerances. Provide temporary supports and bracing as required to maintain position, sta-  
52 bility and alignment as members are being permanently connected.

53  
54 Maintain horizontal and vertical joint alignment and uniform joint width as erection  
55 progresses.

56  
57 Accessories: Install clips, hangers and other accessories required for erection of precast units to  
58 supporting members and back up materials.



1  
2 Anchor units in final position by bolting, welding, grouting or as otherwise indicated. Remove tempo-  
3 rary shims, wedges and spacers as soon as possible after anchoring is completed.

4  
5 At bolted connections, use lock washers or other acceptable means to prevent loosening of  
6 nuts.

7  
8 At welded connections, apply rust inhibitive coating on damaged areas, same as shop-  
9 applied material. Use galvanizing repair coating on galvanized surfaces.

10  
11 Cleaning: Clean exposed facings to remove dirt and stains that may be on units after erection and  
12 completion of joint treatments. Wash and rinse in accordance with precast manufacturer's recom-  
13 mendations. Protect other work from damage due to cleaning operations. Do not use cleaning ma-  
14 terials or processes that could change the character of exposed concrete finishes.

15  
16 FIELD QUALITY CONTROL

17  
18 Conduct inspections, perform testing and make repairs or replace unsatisfactory precast units.

19  
20 Limitations to the amount of patching that will be permitted is subject to acceptance of  
21 Architect.

22  
23 In addition to above, in-place precast units may be rejected for any one of the following:

24  
25 Exceeding the specified installation tolerances.

26  
27 Damaged during construction operations.

28  
29 Exposed to view surfaces that develop surface finish deficiencies.

30  
31 Other defects as listed in PCI MNL 117.

32  
33  
34 END OF SECTION

1     **SECTION 07 92 00 - JOINT SEALANTS**

2  
3  
4     **PERFORMANCE REQUIREMENTS**

5  
6     Provide joint sealants that establish and maintain watertight and airtight continuous joint seals  
7     without staining or deteriorating joint substrates.

8  
9     **SUBMITTALS**

10  
11     Product Data: For each joint-sealant product indicated.

12  
13     Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants  
14     showing the full range of colors available for each product exposed to view.

15  
16     Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate  
17     their capabilities and experience. Include lists of completed projects with project names and  
18     addresses, names and addresses of architects and owners and other information specified.

19  
20     Pre-construction Field Test Reports: Indicate which sealants and joint preparation methods resulted  
21     in optimum adhesion to joint substrates based on pre-construction testing specified in "Quality  
22     Assurance" Article.

23  
24     Field Test Report Log: For each elastomeric sealant application, include information specified in  
25     "Field Quality Control" Article.

26  
27     Warranties: Special Warranties specified in this Section.

28  
29     **QUALITY ASSURANCE**

30  
31     Installer Qualifications: Engage an Installer who has successfully completed within the last year at  
32     least 5 joint sealant applications similar in type and size to that of this project and who will assign  
33     mechanics from these earlier applications to this project, of which one will serve as lead mechanic.

34  
35     Pre-construction Field-Adhesion Testing: Before installing elastomeric sealants, field test their  
36     adhesion to joint substrates as follows:

37  
38         Test Method: Test joint sealants by hand-pull method described below:

39  
40             Install joint sealants in 60-inch long joints using same materials and methods for  
41             joint preparation and joint-sealant installation required for the completed work. Allow  
42             sealants to cure fully before testing.

43  
44             Make knife cut from one side of joint to the other, followed by two cuts approximately  
45             2-inch long at sides of joint and meeting cross cut at one end. Place a mark 1-inch  
46             from crosscut end of 2-inch piece.

47  
48             Use fingers to grasp 2-inch piece of sealant between cross-cut end and 1-inch mark;  
49             pull firmly at a 90 degree angle or more in direction of side cuts while holding a ruler  
50             along side of sealant. Pull sealant out of joint to the distance recommended by  
51             sealant manufacturer for testing adhesive capability, but not less than that equaling  
52             specified maximum movement capability in extension; hold this position for 10  
53             seconds.

54  
55             For joints with dissimilar substrates, check adhesion to each substrate separately.  
56             Do this by extending cut along one side, checking adhesion to opposite side, and  
57             then repeating this procedure for opposite side.

1 Report whether sealant in joint connected to pulled-out portion failed to adhere to joint  
2 substrates or tore cohesively. Include data on pull distance used to test each type of product  
3 and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is  
4 obtained.

5  
6 Preinstallation Meeting: At Contractor's directions, Installer, joint sealer Manufacturers'  
7 representatives and other trades whose work affects installation of joint sealers shall meet at project  
8 site to review procedures and time schedule proposed for installation of joint sealers to be  
9 coordinated with other related work.

#### 10 11 WARRANTY

12  
13 Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace  
14 elastomeric joint sealants that do not comply with performance and other requirements specified in  
15 this Section within specified warranty period.

16  
17 Warranty Period: Five (5) years from date of Substantial Completion.

18  
19 Special Manufacturer's Warranty: Written warranty, signed by elastomeric sealant Manufacturer,  
20 agreeing to furnish elastomeric joint sealants to repair or replace those that do not comply with  
21 performance and other requirements specified in this Section within specified warranty period.

22  
23 Warranty Period:

24  
25 Silicone Sealants: 20 years from date of Substantial Completion.

26  
27 Sealants other than Silicone: 10 years from date of Substantial Completion.

#### 28 29 SEALANTS, GENERAL

30  
31 Compatibility: Provide joint sealants, joint fillers and other related materials that are compatible with  
32 one another and with joint substrates under conditions of service and application, as demonstrated  
33 by testing and field experience.

#### 34 35 EXTERIOR SEALANTS

36  
37 Medium Modulus (+/-50%) Silicone Sealant: One-part, neutral cure; ASTM C 920, Type S, Grade  
38 NS, Class 50, Use NT, G, A, M, O.

39  
40 Application: Pre-cast concrete joints

41  
42 Products: Dow Corning 795 Silicone Building Sealant  
43 Dow Corning 791 Silicone Perimeter Sealant  
44 Pecora 895 Silicone Sealant  
45 Tremco Spectrem 2 or Spectrem 3

#### 46 47 JOINT SEALANT BACKING

48  
49 Backer Rod: ASTM C 1330 cylindrical sealant backings of size and density to control sealant depth  
50 and otherwise contribute to producing optimum sealant performance.

51  
52 Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer  
53 for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of  
54 joint. Provide self-adhesive tape where applicable.

## 1 INSPECTION

2

3 Inspect joints indicated to receive joint sealants for compliance with requirements for joint  
4 configurations, installation tolerances and other conditions affecting joint sealant performance.

5

## 6 PREPARATION

7

8 Clean out joints immediately before installing joint sealants to comply with recommendations of joint  
9 sealant manufacturers.

10

11 Prime joint substrates where recommended by joint sealant manufacturer based on pre-construction  
12 tests or prior experience. Confine primers to areas of joint sealant bond; do not allow spillage or  
13 migration onto adjoining surfaces.

14

## 15 INSTALLATION

16

17 Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint  
18 sealants as applicable to materials, applications, and conditions indicated.

19

20 Installation of Sealant Backings: Install sealant backings to support sealants during application at  
21 position required to produce cross-sectional shapes and depths of installed sealants relative to joint  
22 widths that allow optimum sealant movement capability.

23

24 Installation of Sealants: Prepare, mix and install sealants by proven techniques that result in  
25 sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for  
26 each joint configuration and providing uniform, cross sectional shapes and depths relative to joint  
27 widths which allow optimum sealant movement capability. Prevent three-sided adhesion. Sealant  
28 depth shall be one half of joint width, with a minimum depth of 1/4-inch and a maximum depth of 1/2-  
29 inch, unless otherwise recommended by the manufacturer. Width of sealant shall not be less than  
30 1/4-inch.

31

32 Joint Configuration: Figure 6A in ASTM C 962, unless otherwise indicated.

33

## 34 FIELD QUALITY CONTROL

35

36 Test adhesion of joint sealants according to "Test Method" in Part 1 Article "Pre-construction Field-  
37 Adhesion Testing."

38

39 Extent of Testing:

40

41 Perform 10 tests for the first 1000 feet of joint length for each type of exterior sealant and  
42 joint substrate.

43

44 Perform one test for each 1000 feet of joint length thereafter or one test per each floor per  
45 elevation.

46

47 Repair sealants pulled from test area by applying new sealants following same procedures used to  
48 originally seal joints.

49

50 Evaluation of Field-Test Results: Sealants not evidencing adhesive failure from testing or  
51 noncompliance with other indicated requirements will be considered satisfactory. Remove sealants  
52 that fail to adhere to joint substrates during testing or to comply with other requirements. Retest  
53 failed applications until test results prove sealants comply with indicated requirements.

54

55

56 END OF SECTION

1     **SECTION 31 10- 00 - SITE CLEARING**

2  
3  
4     **SUMMARY**

5  
6     Protecting existing trees and plants to remain.  
7     Removing existing trees and plants.  
8     Clearing and grubbing.  
9     Disconnecting, capping or sealing, and removing site utilities.  
10    Stripping and removing topsoil.  
11    Removing site improvements.

12  
13    **MATERIAL OWNERSHIP**

14  
15    Except for materials indicated to remain Owner's property, cleared materials will become  
16    Contractor's property and shall be removed from Project site.

17  
18    **SUBMITTALS**

19  
20    Photographs of existing trees, plantings and adjoining construction sufficiently detailed to show  
21    conditions that might be misconstrued as damage caused by operations.

22  
23    **PROJECT CONDITIONS**

24  
25    Traffic: Minimize interference with adjoining parking areas, streets, walks, and other adjacent  
26    occupied or used facilities during site-clearing operations.

27  
28    Utility Locator Service: Notify utility locator service for area where Project is located before site  
29    clearing.

30  
31    Erosion Control: Do not commence site-clearing operations until temporary erosion and  
32    sedimentation control measures are in place.

33  
34    **TREE PROTECTION**

35  
36    Erect and maintain temporary fencing around tree protection zones before starting site clearing.  
37    Remove fences when construction is complete.

38  
39    Where excavation for new construction is required within tree protection zones, clear and excavate  
40    by hand methods to minimize damage to root systems.

41  
42        Temporarily protect roots from damage.

43  
44        Coat cut faces of roots more than 1-1/2 inches in diameter with approved coating formulated  
45        for use on damaged plant tissues.

46  
47        Back-fill with soil, as soon as possible.

48  
49    **CLEARING AND GRUBBING**

50  
51    Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new  
52    construction.

53  
54        Cut minor roots and branches of trees indicated to remain in a clean and careful manner .

55  
56        Grind stumps and remove roots, obstructions, and debris to a depth of 18 inches below  
57        exposed sub-grade.

## 1 UTILITIES

2

3 Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.

4

5 Do not interrupt utilities serving occupied facilities without Architect's written permission.

6

7 Excavate for and remove underground utilities indicated to be removed.

8

## 9 TOPSOIL STRIPPING

10

11 Limit topsoil stripping to areas required to be disturbed for Project construction.

12

13 Remove sod and grass before stripping topsoil.

14

15 Strip topsoil to depths encountered.

16

## 17 SITE IMPROVEMENTS

18

19 Remove existing improvements as required for new construction and elsewhere as indicated.

20

21 Remove to 12 inches below elevation required for excavation or below final grade.

22

23 Neatly saw cut existing pavement at termination line before removal.

24

25 Paint cut ends of steel reinforcement to remain with liquid, two-part, epoxy coating complying  
26 with ASTM A 775/A 775M to prevent corrosion.

27

## 28 RESTORATION

29

30 Restore damaged improvements to their original condition.

31

32 Repair or replace trees and vegetation indicated to remain that are damaged by construction  
33 operations.

34

35

36 END OF SECTION

1     **SECTION 31 20 00 – EARTH MOVING**

2  
3  
4     **SUBMITTALS**

5  
6     Material Test Reports:

7  
8             Classification according to ASTM D 2487 of each on-site and borrow soil material proposed  
9             for fill and backfill.

10  
11    **SOIL MATERIALS**

12  
13    Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM, or a  
14    combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris,  
15    waste, frozen materials, vegetation, and other deleterious matter.

16  
17    Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT  
18    according to ASTM D 2487, or a combination of these groups.

19  
20             Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of  
21             optimum moisture content at time of compaction.

22  
23    Sub-base Material: Approved Naturally or artificially graded mixture of natural or crushed gravel,  
24    crushed stone and natural or crushed sand; subsection 212.2 of the State of Wisconsin Department  
25    of Transportation Standard Specifications for Highway and Structure Construction, 1996 Edition; or  
26    engineered fill.

27  
28    Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone,  
29    and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and  
30    not more than 12 percent passing a No. 200 sieve.

31  
32    **DEWATERING**

33  
34    Prevent surface water and ground water from entering excavations, from ponding on prepared sub-  
35    grades, and from flooding Project site and surrounding area.

36  
37    Protect sub-grades from softening, undermining, washout, and damage by rain or water  
38    accumulation.

39  
40    **EXCAVATION**

41  
42    Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If  
43    applicable, extend excavations a sufficient distance from structures for placing and removing  
44    concrete formwork, for installing services and other construction, and for inspections.

45  
46             Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate  
47             by hand to final grade just before placing concrete reinforcement. Trim bottoms to required  
48             lines and grades to leave solid base to receive other work.

49  
50    If unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill  
51    material as directed.

52  
53    **FILL**

54  
55    Place fill, including backfill and sub-base course, on sub-grades free of mud, frost, snow, or ice.

56  
57    Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill  
58    material will bond with existing material.

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Place and compact fill material in layers to required elevations as follows:

Under grass and planted areas, use satisfactory soil material.

Under walks and pavements, use sub-base material.

Under steps and ramps, use engineered fill.

Under structural slabs, use engineered fill.

Uniformly moisten or aerate sub-grade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

## COMPACTION

Place soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

Under structures, steps, and pavements, scarify and re-compact top 12 inches of existing sub-grade and each layer of backfill or fill soil material at 95 percent.

Under walkways, scarify and re-compact top 6 inches below sub-grade and compact each layer of backfill or fill soil material at 92 percent.

Under lawn or unpaved areas, scarify and re-compact top 6 inches below sub-grade and compact each layer of backfill or fill soil material at 85 percent.

## GRADING

Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish sub-grades to required elevations within the following tolerances:

Lawn or Unpaved Areas: Plus or minus 1 inch.

Walks: Plus or minus 1 inch.

Pavements: Plus or minus 1/2 inch.

Grading inside Structural Element Lines: Finish sub-grade to a tolerance of 1/2-inch when tested with a 10-foot straightedge and 3/4-inch over the entire excavation.

## FIELD QUALITY CONTROL

Testing Agency: Engage a qualified independent geotechnical engineering testing agency to perform field quality control testing.

Footing Sub-grade: At footing sub-grades, at least one test of each soil stratum shall be performed to verify design bearing-capacities. Subsequent verification and approval of other footing sub-grades may be based on a visual comparison of sub-grade with tested sub-grade when approved by Architect.



- 1 Testing agency shall test compaction of soils in place according to ASTM D 1556, ASTM D 2167,  
2 ASTM D 2922, and ASTM D.2937, as applicable. Tests will be performed at the following locations  
3 and frequencies:  
4
- 5 Paved and Structural Slab Areas: At sub-grade and at each compacted fill and backfill layer,  
6 at least one (1) test for every 2500 sq. ft. or less of paved area or building slab, but in no  
7 case fewer than three (3) tests.  
8
- 9 Foundation Wall Backfill: At each compacted backfill layer, at least one (1) test for each 100  
10 feet or less of wall length, but no fewer than two (2) tests.  
11
- 12 END OF SECTION

**SECTION 32 13 13 - CONCRETE PAVING****SUMMARY**

Walkways

**Related Sections:**

Division 03 Section "Cast-in-Place Concrete" for concrete materials and mix requirements.

**SUBMITTALS**

Design Mixtures: For each concrete pavement mixture.

Field quality-control test reports.

**QUALITY ASSURANCE**

Manufacturer Qualifications: Manufacturer who complies with ASTM C 94/C 94M requirements for production facilities and equipment.

Testing Agency Qualifications: An agency qualified according to ASTM C 1077 and ASTM E 329 .

**FORMS**

Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials.

Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

**STEEL REINFORCEMENT**

Plain-Steel Welded Wire Reinforcement: ASTM A 185.

Reinforcing Bars: ASTM A 615/A 615M, Grade 60 deformed.

Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60.

Bar Supports: Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete, and as follows:

**CURING MATERIALS**

Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

White Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B.

**RELATED MATERIALS**

Expansion-Joint and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.

Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

Epoxy Bonding Adhesive: ASTM C 881.

## 1 CONCRETE MIXTURES

2  
3 Prepare design mixtures for each type and strength of concrete, proportioned on the basis of  
4 laboratory trial mixture or field test data, or both, according to ACI 301.

5  
6 Use a qualified independent testing agency for preparing and reporting proposed mixture  
7 designs based on laboratory trial mixtures. Do not use the same Agency as used for Field  
8 Quality Control Testing

9  
10 Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

11  
12 Admixtures: Use admixtures according to manufacturer's written instructions.

13  
14 Slump Limit for concrete containing high-range water-reducing admixture:  
15 8"maximum

16  
17 Use water reducing and retarding admixture when required by high temperatures, low  
18 humidity, or other adverse placement conditions.

19  
20 Use water-reducing admixture in pumped concrete and concrete with a water-cementitious  
21 materials ratio below 0.50.

22  
23 Color Pigment: ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing  
24 admixtures; color stable, non-fading, and resistant to lime and other alkalis.

25  
26 Manufacturers:

27  
28 Conspec Marketing & Manufacturing Co., Inc.; a Dayton Superior Company.  
29 Elementis Pigments, Inc.  
30 Scofield, L. M. Company.  
31 Solomon Colors.  
32 Approved substitute

33  
34 Color: Architect to select from manufacturer's standard colors.

35  
36 CONCRETE MIXTURE SCHEDULE

37

38	39	40	41	42	43	44	45	46
Class	Type of Construction	Min. Comp Strength @ 28 Days (PSI)	Slump Before addn. of HRWR (in. +/- 1 in.)	Max. Agg. Size (in.)	Min. Lbs. of Cementitious Materials per cu yd.	Air Entrainment % +/- 1½%	Notes	
47	48	49	50	51	52	53	54	55
1	Footings	3000	5	1.5	470	4.5	(1)	
2a	Exterior slab-on-grade	4500	3	0.75	564	6.0	(2)(3)(4)	

56 Notes:

57 (1) Use a maximum of 50% replacement of portland cement with ground granulated blast-  
58 furnace slag and fly ash at a 1:1 ratio, up to 350 pounds per cubic yard. If fly ash is used  
alone, limit the maximum replacement to 25%.

(2) Use a maximum of 30% replacement of portland cement with ground granulated blast-  
furnace slag and fly ash at a 1:1 ratio, up to 350 pounds per cubic yard, with a maximum  
25% fly ash. If fly ash is used alone, limit the maximum replacement to 25%.

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56

(3) Maximum water to cementitious materials ratio by weight: 0.45.

(4) High-Range, Water-Reducing Admixture may be used in mixture.

#### EXAMINATION

Proof-roll subbase to identify soft pockets and areas of excess yielding.

Subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch require correction according to requirements in Division 2 Section "Earthwork."

#### EDGE FORMS AND SCREED CONSTRUCTION

Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement.

#### STEEL REINFORCEMENT

Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

#### JOINTS

Construction Joints: Provide construction joints at locations where pavement operations are stopped for more than one-half hour.

Provide preformed keyway-section forms or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.

Isolation and Expansion Joints: Form joints using preformed joint-filler strips.

Provide isolation joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.

Provide expansion joints at minimum intervals of 50 feet.

Contraction Joints: Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness.

Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch radius.

Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius.

#### CONCRETE PLACEMENT

Moisten subbase to provide a uniform dampened condition at time concrete is placed.

Comply with ACI 301 requirements for transporting and placing concrete.

Do not add water to concrete during delivery or at Project site.

Cold-Weather Placement: Comply with ACI 306.1.

## 1 FINISHING

2

3 Float Finish: Float surface with power-driven floats, or by hand floating if area is small or inaccessible  
4 to power units. Cut down high spots and fill low spots. Refloat surface immediately to uniform  
5 granular texture.

6

7 Broom Finish: Draw a soft bristle broom across float-finished concrete surface perpendicular to line  
8 of traffic to provide a uniform, fine-line texture.

9

10 Detectable Warning Surfaces: At curb cuts and other locations indicated or required by code,  
11 provide stamped cast-in-place concrete, pre-cast concrete pavers or cast-in vitrified polymer  
12 composite panels complying with ANSI A117.1 (705.3.1).

13

## 14 CONCRETE PROTECTION AND CURING

15

16 Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy  
17 conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations.  
18 Apply according to manufacturer's written instructions after placing, screeding, and bull floating or  
19 darbying concrete, but before float finishing.

20

21 Curing Compound: Begin curing after finishing concrete but not before free water has disappeared  
22 from concrete surface.

23

## 24 PAVEMENT TOLERANCES

25

26 Comply with tolerances of ACI 117 and as follows:

27

28 Elevation: 1/4 inch.

29 Thickness: Plus 3/8 inch, minus 1/4 inch.

30 Surface: Gap below 10-foot-long, unlevelled straightedge not to exceed 1/4 inch.

31 Joint Spacing: 3 inches.

32 Contraction Joint Depth: Plus 1/4 inch, no minus.

33 Joint Width: Plus 1/8 inch, no minus.

34

## 35 FIELD QUALITY CONTROL

36

37 Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests  
38 and inspections and prepare test reports.

39

40 Testing Frequency: Obtain at least 1 composite sample per ASTM C 172 for each 5000 sq. ft. or  
41 fraction thereof of each concrete mix placed each day.

42

43 Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not  
44 less than one test for each day's pour of each concrete mix. Perform additional tests when concrete  
45 consistency appears to change.

46

47 Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than  
48 one test for each day's pour of each concrete mix.

49

50 Compression Test Specimens: ASTM C 31; cast and laboratory cure one set of three standard  
51 cylinder specimens for each composite sample.

52

53 Compressive-Strength Tests: ASTM C 39; test 1 specimen at 7 days and 2 specimens at 28 days.

54

55 Remove and replace concrete pavement where test results indicate that it does not comply with  
56 specified requirements.

57

58 END OF SECTION

1    **SECTION 32 13 40 - CONCRETE PAVERS**

2  
3  
4    **SUMMARY**

5  
6    Pre-cast concrete pavers in an aggregate setting bed.

7  
8    **SUBMITTALS**

9  
10   Product Data: For the pavers.

11  
12   Sieve Analyses: For aggregate setting-bed materials, according to ASTM C 136.

13  
14   Samples for Verification: Full-size unit paver.

15  
16   **QUALITY ASSURANCE**

17  
18   Source Limitations: Obtain each type of product (unit pavers, joint material and setting material)  
19   from one source with resources to provide materials and products of consistent quality in  
20   appearance and physical properties.

21  
22   **DELIVERY, STORAGE, AND HANDLING**

23  
24   Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location,  
25   cover tops and sides of stacks with waterproof sheeting, securely tied.

26  
27   Store aggregates where grading and other required characteristics can be maintained and  
28   contamination avoided.

29  
30   **PROJECT CONDITIONS**

31  
32   Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost.  
33   Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by  
34   frost or freezing.

35  
36   **CONCRETE PAVERS**

37  
38   Solid paving units, made from normal-weight concrete with a compressive strength not less than  
39   8000 psi and water absorption not more than 6 percent according to ASTM C 140, and no breakage  
40   and not more than 1 percent mass loss when tested for freeze-thaw resistance according to  
41   ASTM C 67.

42  
43        Thickness: 2-3/4 inches.

44  
45        Face Size and Shape: Custom, as indicated.

46  
47        Color: As selected by Architect from manufacturer's full range.

48  
49   Personalized "donor" bricks are to be identical to standard bricks. The Owner is to identify  
50   inscriptions required and location of each brick. Inscriptions are to be inset and glazed black.

51  
52   **AGGREGATE SETTING-BED MATERIALS**

53  
54   Graded Aggregate for Base: Clean mixture of crushed stone, crushed gravel, and manufactured or  
55   natural sand; ASTM D 448, Size 10, with 100 percent passing a No. 4 sieve and 10 to 30 percent  
56   passing a No. 100 sieve; meeting deleterious substance limits of ASTM C 33 for fine aggregates.  
57   "Traffic Bond" is acceptable.

1 Sand for Leveling Course: Sound, sharp, washed, natural sand or crushed stone complying with  
2 gradation requirements in ASTM C 33 for fine aggregate.

3  
4 Sand for Joints: Fine, sharp, washed, natural sand or crushed stone with 100 percent passing  
5 No. 16 sieve and no more than 10 percent passing No. 200 sieve.

6  
7 EXAMINATION

8  
9 Examine areas indicated to receive paving for compliance with requirements for installation  
10 tolerances and other conditions affecting performance.

11  
12 Proceed with installation only after unsatisfactory conditions have been corrected.

13  
14 AGGREGATE SETTING-BED

15  
16 Where applicable, compact soil subgrade uniformly to at least 95 percent of ASTM D 698 laboratory  
17 density.

18  
19 Proof-roll prepared subgrade to identify soft pockets and areas of excess yielding. Excavate  
20 soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by  
21 Architect, and replace with compacted backfill or fill as directed.

22  
23 Place aggregate base, compact by tamping with plate vibrator, and screed to a minimum depth of 6  
24 inches, except where otherwise indicated.

25  
26 Place leveling course and screed to a thickness of 1 to 1-1/2 inches, taking care that moisture  
27 content remains constant and density is loose and constant until pavers are set and compacted.  
28 Treat leveling course with herbicide to inhibit growth of grass and weeds.

29  
30 CONCRETE PAVERS

31  
32 Do not use pavers with chips, cracks, voids, discolorations, and other defects that might be visible in  
33 finished work.

34  
35 Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting  
36 where possible. Hammer cutting is not acceptable.

37  
38 Cut pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped  
39 edges.

40  
41 Set pavers with a minimum joint width of 1/16 inch and a maximum of 1/8 inch, being careful not to  
42 disturb leveling base. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8  
43 inch with pieces cut to fit from full-size unit pavers.

44  
45 Joint Pattern: As indicated on Drawings.

46  
47 Tolerances: Do not exceed 1/16-inch unit-to-unit offset from flush (lippage) nor 1/8 inch in  
48 24 inches and 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.

49  
50 Set personalized pavers in locations directed by the owner.

51  
52 Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf  
53 compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate  
54 under the following conditions:

55  
56 After edge pavers are installed and there is a completed surface or before surface is  
57 exposed to rain.

- 1           Before ending each day's work, fully compact installed concrete pavers to within 36 inches of
- 2           the laying face. Cover pavers that have not been compacted, and leveling course on which
- 3           pavers have not been placed, with nonstaining plastic sheets to protect them from rain.
- 4
- 5           Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers
- 6           and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of
- 7           sand on the surface for joint filling.
- 8
- 9           Do not allow traffic on installed pavers until sand has been vibrated into joints.
- 10
- 11
- 12          END OF SECTION



1     **SECTION 32 13 75 - PAVEMENT JOINT SEALANTS**

2  
3  
4     **SUBMITTALS**

5  
6     Product Data: For each joint-sealant product indicated.

7  
8     Qualification Data: For Installer.

9  
10    Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing  
11    agency, for sealants.

12  
13    **QUALITY ASSURANCE**

14  
15    Installer Qualifications: Trained and approved in writing by Manufacturer.

16  
17    Source Limitations: Obtain each type of joint sealant through one source from a single  
18    Manufacturer.

19  
20    Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article  
21    from a qualified testing agency based on testing of current sealant products within a three (3) year  
22    period preceding the commencement of the Work.

23  
24            Testing Agency Qualifications: An independent testing agency qualified according to  
25            ASTM C 1021 for testing indicated, as documented according to ASTM E 548.

26  
27    **PROJECT CONDITIONS**

28  
29    Do not proceed with installation of joint sealants under the following conditions:

30  
31            When ambient and substrate temperature conditions are outside limits permitted by joint-  
32            sealant manufacturer.

33  
34            When joint substrates are wet or covered with frost.

35  
36            Where joint widths are less than those allowed by joint-sealant manufacturer for applications  
37            indicated.

38  
39            Where contaminants capable of interfering with adhesion have not yet been removed from  
40            joint substrates.

41  
42    **MATERIALS**

43  
44    Provide joint sealants, backing materials, and other related materials that are compatible with one  
45    another and with joint substrates under conditions of service and application indicated, as  
46    demonstrated by joint-sealant Manufacturer based on testing and field experience.

47  
48    Joint Sealant: Single-component, low-modulus, neutral-curing, self-leveling silicone sealant  
49    complying with ASTM D 5893 for Type SL.

50  
51            Products: Subject to compliance with requirements, provide one of the following:

52  
53                    Crafco Inc.; RoadSaver Silicone SL.

54                    Dow Corning Corporation; 890-SL.

55                    Approved Substitute

1 Joint-Sealant Backer: Non-staining; compatible with joint substrates, sealants, primers, and other  
2 joint fillers and approved for applications indicated by joint-sealant Manufacturer based on field  
3 experience and laboratory testing.

4

5           ASTM D 5249, Type 3, of diameter and density required to control sealant-depth and to  
6 prevent bottom-side adhesion of sealant.

7

#### 8 EXAMINATION

9

10 Examine joints indicated to receive joint sealants for compliance with Manufacturer's requirements  
11 for joint configuration, installation tolerances, and other conditions affecting joint-sealant  
12 performance.

13

14           Proceed with installation only after unsatisfactory conditions have been corrected.

15

#### 16 PREPARATION

17

18 Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply  
19 with joint-sealant manufacturer's written instructions.

20

#### 21 INSTALLATION OF JOINT SEALANTS

22

23 Comply with joint-sealant Manufacturer's written installation instructions for products and applications  
24 indicated, unless more stringent requirements apply.

25

26 Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint  
27 sealants as applicable to materials, applications, and conditions indicated.

28

29 Install backer materials of type indicated to support sealants during application and at position  
30 required to produce cross-sectional shapes and depths of installed sealants relative to joint widths  
31 that allow optimum sealant movement capability.

32

33           Do not leave gaps between ends of backer materials.

34

35           Do not stretch, twist, puncture, or tear backer materials.

36

37           Remove absorbent backer materials that have become wet before sealant application and  
38 replace them with dry materials.

39

40 Install sealants using proven techniques that comply with the following and at the same time  
41 backings are installed:

42

43           Place sealants, so they directly contact and fully wet joint substrates.

44

45           Completely fill recesses provided for each joint configuration.

46

47           Produce uniform, cross-sectional shapes and depths relative to joint widths that allow  
48 optimum sealant movement capability.

49

50           Provide recessed joint configuration to comply with joint-sealant Manufacturer's written  
51 instructions, unless otherwise indicated.

52

#### 53 CLEANING

54

55 Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods  
56 and with cleaning materials approved by Manufacturers of joint sealants and of products in which  
57 joints occur.

58

## 1 PROTECTION

2

3 Protect joint sealants during and after curing period from contact with contaminating substances and  
4 from damage so sealants are without deterioration or damage at time of Substantial Completion. Cut  
5 out and remove damaged or deteriorated joint sealants. Install new joint sealant so repairs are  
6 indistinguishable from original work.

7

8

9 END OF SECTION

1     **SECTION 32 50 00 – SITE FURNISHINGS**

2  
3  
4     **PART 1 - GENERAL**

5  
6     RELATED DOCUMENTS

7  
8     Drawings and general provisions of the Contract, including General and Supplementary Conditions  
9     and Division 01 Specification Sections, apply to the work of this Section.

10  
11    SUMMARY

12  
13    Flagpoles  
14    Skateboard Deterrents

15  
16    Related Sections include:

17  
18         Division 03 Section "Cast-in-Place Concrete" for concrete materials and mixes.

19  
20    SUBMITTALS

21  
22    Product data: For each type of product specified, including details of construction relative to  
23    materials, dimensions of individual components and finishes, and installation requirements.

24  
25    Shop Drawings: Show product and installation details not adequately indicated in product data.

26  
27    QUALITY ASSURANCE

28  
29    Uniformity of Manufacturer: For each type of product indicated, furnish products of a single  
30    manufacturer, including fittings, accessories and anchorage devices.

31  
32    DELIVERY, STORAGE AND HANDLING

33  
34    Deliver components packed to prevent damage.

35  
36    Store in secure areas, out of weather and protected from damage.

37  
38  
39    **PART 2 - PRODUCTS**

40  
41    FLAGPOLES

42  
43    Manufacturers: Subject to compliance with requirements, provide products of one of the following:

44  
45         American Flagpole, Div. of Kearney National  
46         Baartol Co. Inc.  
47         Concord Industries, Inc.  
48         Eder Flag Mfg. Co.

49  
50    Design Criteria: Installed flagpoles shall withstand a 100 mph wind when flying flags of indicated  
51    size.

52  
53    Delivery and Handling: Spiral-wrap flagpoles with heavy Kraft paper or other protective wrapping  
54    and prepare for shipment in hard fiber tube or other protective container.

55  
56    Fabrication: Cone tapered aluminum flagpole fabricated from seamless extruded tubing, complying  
57    with ASTM B 241, alloy 6063 T6, with a minimum wall thickness of 3/16 inch, tensile strength not

1 less than 30,000 psi and a yield point of 25,000 psi. Heat treat and age harden flagpoles after  
2 fabrication.

3

4 Height: *30 feet.*

5

6 Construct pole in one piece if possible. If more than one piece is necessary, provide snug  
7 fitting precision joints with self-aligning internal splicing sleeve arrangement for weather tight  
8 hairline field joints.

9

10 Finial Ball: 14-gauge spun aluminum flush seam ball, size to match pole butt diameter, finished to  
11 match pole shaft.

12

13 Internal Halyard System: Furnish pole with internal halyard system consisting of a manually  
14 operated, geared stainless steel winch with control stop device and removable handle. Provide  
15 stainless steel braided aircraft type cable and concealed revolving truck assembly with plastic coated  
16 counterbalance and sling. Provide reinforced, flush access door, secured with cylinder lock. Make  
17 provisions to accommodate up to 3 flags to be flown from pole simultaneously.

18

19 Foundation Tube: Ground set flagpole, provide 16 gauge minimum galvanized corrugated steel  
20 tube, or 12 gauge rolled steel tube, sized to suit flagpole and installation. Furnish complete with  
21 welded steel bottom base and support plate, lightning ground spike and steel centering wedges, all  
22 welded construction. Provide loose hardwood wedges at top for plumbing pole after erection.  
23 Galvanize steel parts after assembly, including foundation tube.

24

25 Provide base flash collar, finished to match flagpole.

26

27 Finish: Finish designations prefixed by AA comply with the system established by the Aluminum  
28 Association for designating aluminum finishes.

29

30 Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: non-specular as  
31 fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I,  
32 clear coating 0.018 mm or thicker) complying with AAMA 611.

33

### 34 SKATEBOARD DETERRENTS

35

36 Basis of Design: Skatestoppers FR0.12 Skate Deterrent

37

38 Material: 6061-T6 Aluminum

39

40 Color: Clear Anodized

41

42 Mounting Hardware: Skatestoppers Smart Pin Plus system

43

44

### 45 PART 3 - EXECUTION

46

#### 47 INSTALLATION

48

49 Flagpoles: Install flagpole in compliance with final shop drawings. Provide positive lightning ground.  
50 Paint portions of flagpole below grade with a heavy coat of bituminous paint.

51

52 Excavation: Excavate for foundation concrete to neat clean lines in undisturbed soil.  
53 Provide forms where required due to unstable soil conditions. Remove wood, loose soil,  
54 rubbish and other foreign matter from excavation and moisten the earth before placing  
55 concrete.

56

57 Concrete: 28-day compressive strength of not less than 3000 psi.

58

1 Skateboard Deterrents: Locate deterrents no more than 36" apart and no more than 18" from the  
2 end of horizontal surfaces to be protected. Provide drilled anchors to meet manufacturer's  
3 requirements. Place immediately after mixing. Compact in place by use of vibrators. Moist cure  
4 exposed concrete for not less than seven days, or use a non-staining curing compound in cold  
5 weather.

6 Finish trowel exposed concrete surfaces to smooth, dense surface. Provide positive  
7 slope for water runoff to base perimeter.

8

9 CLEANING AND PROTECTION

10

11 At completion of the installation, clean work area and soiled surfaces in accordance with  
12 manufacturer's instructions. Protect units from damage until Substantial Completion.

13

14 END OF SECTION

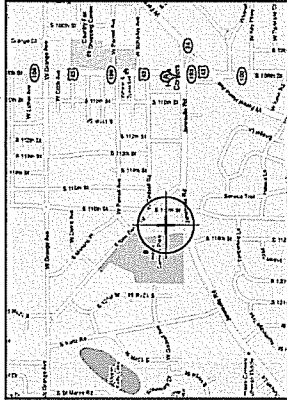
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PRA Project No. ( )

(Date)

Page 2

**DRAFT COPY**  
**NOT FOR CONSTRUCTION**



Location Map

# HALES CORNERS VETERAN'S MEMORIAL

Construction Documents  
Issued for Permit

Hales Corners Park  
Hales Corners, WI 53130

Client Name  
Hales Corners Veterans Memorial  
PRA # 10067  
10 December 2010

## Drawing Index

- Civil
  - C-1 Grading and Erosion Control Plan
  - C-2 Site Construction Details
- Architectural
  - 200 Plan, Sections & Details
- Landscape
  - L-1 Landscape Plan

## Project Information

Applicable Codes and Zoning  
Wisconsin enacted commercial building code, 2002  
Assembly occupancy, Group A-3  
Zoning: Village of Hales Corners ordinance

ADA Access Route  
Memorial fully accessible

## Project Team

Civil Engineering  
One Source Consulting  
Tel 414 462-9005  
Fax 414 462-9006  
Landscape Designer  
David J. Frank Landscape  
Tel 262 255-4888  
Fax  
Construction Manager  
Hunzinger Construction Inc.  
Tel 262 797-0797  
Fax 262 797-0474



THE INFORMATION SHOWN ON THIS DRAWING CONCERNING PRICE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED AND IS BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS THEY ARE KNOWN TO EXIST IN THE PROPERTY. THE OWNER WILL MAKE VISUAL OBSERVATION OF THE PROPERTY AND THE BUILDING THAT OTHERWISE CANNOT BE LOCATED BY A VISUAL OBSERVATION OF THE PROPERTY OF WHICH THE CONTRACTOR WOULD HAVE NO KNOWLEDGE.

SCALE IN FEET  
0 10 20

**DISBURS & BROTHERS**  
ENGINEERS & ARCHITECTS  
1001 Park Road, Suite 201  
Tulsa, Oklahoma 74104  
Tel: 918 (900) 242-8511  
www.D&BofTulsa.com

C-1

REVISIONS

No.	Description	Date

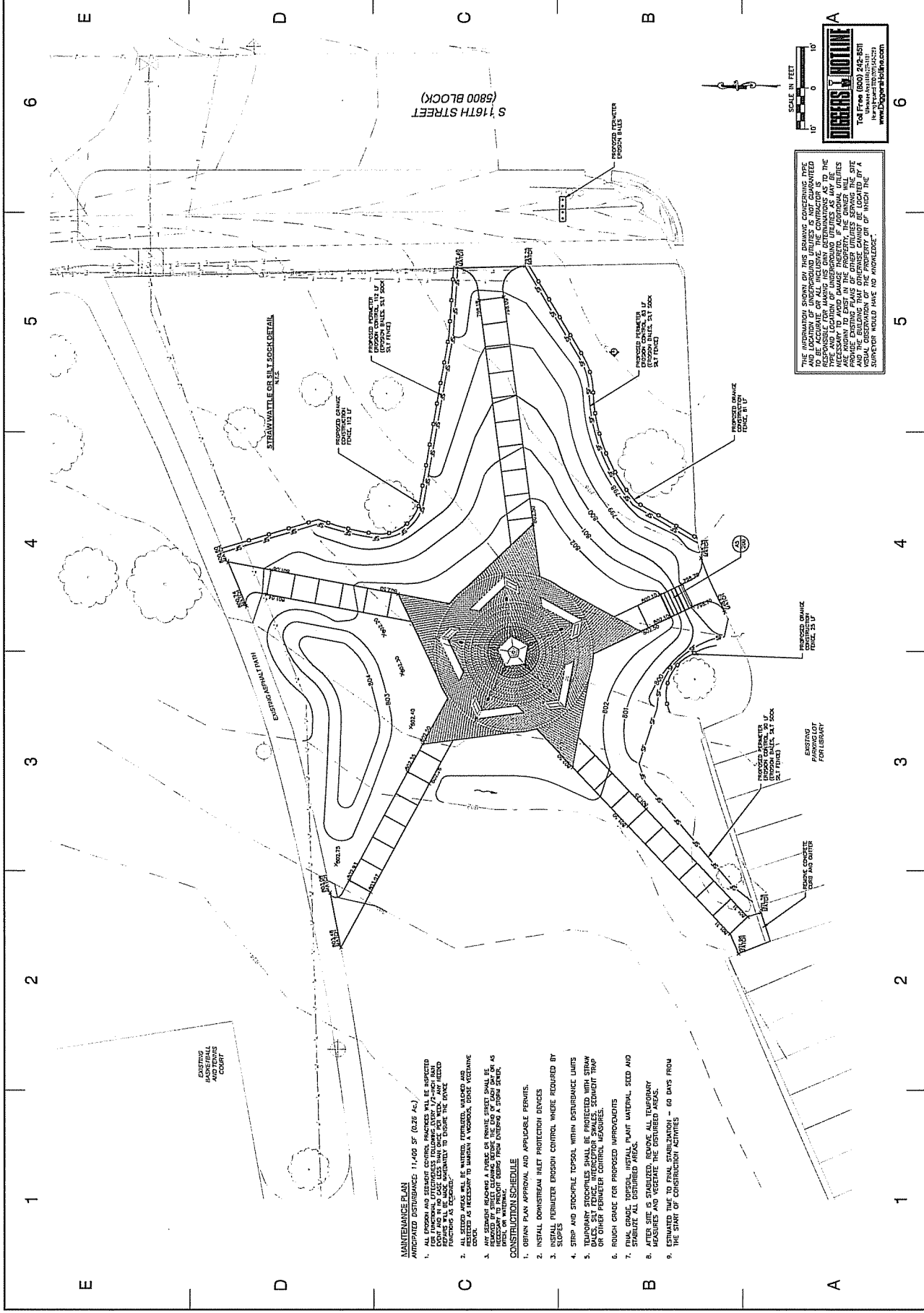
GRADING AND EROSION CONTROL PLAN  
HALES CORNERS VETERANS MEMORIAL  
5800 S 16TH STREET  
HALES CORNERS, WI  
BLUNKETT PAVISH ARCHITECTS  
11000 WEST PARK PLACE  
WILWAUKEE, WI 53224

James A. Blunkett  
Professional Engineer  
No. 16103  
Wisconsin  
Exp. 12/31/11

One Source Consulting  
11000 W. HAWTHORN AVE  
SUITE 200  
WILWAUKEE, WI 53224  
www.onsourceconsulting.com

GENERAL NOTES

No.	Description



**MAINTENANCE PLAN**  
ANTICIPATED DISTURBANCE: 11,400 SF (0.26 AC.)  
1. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED WEEKLY AND IN CASE LESSE THAN DAILY VISUAL INSPECTION TO DETERMINE FUNCTIONING AS INTENDED.  
2. ALL SEDIMENT AREAS WILL BE WATERED, SEEDING, MULCHED AND PROTECTED AS NECESSARY TO PREVENT EROSION AND VEGETATION LOSS.  
3. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE STREET SHALL BE REMOVED TO PREVENT OBSTRUCTION TO TRAFFIC AND TO PREVENT CONTAMINATION OF ADJACENT AREAS.

**CONSTRUCTION SCHEDULE**  
1. OBTAIN PERMITS AND APPLICABLE PERMITS.  
2. INSTALL DOWNSTREAM SILENT PROTECTION DEVICES.  
3. INSTALL PERIMETER EROSION CONTROL WHERE REQUIRED BY PERMITS.  
4. STRIP AND STOCKPILE TOPSOIL WITHIN DISTURBANCE LIMITS.  
5. CONSTRUCT EROSION CONTROL MEASURES, STEEP SLOPE SOD, STABILIZATION AND OTHER PERIMETER CONTROL MEASURES.  
6. ROUGH GRADE FOR PROPOSED IMPROVEMENTS.  
7. FINAL GRADE, TOPSOIL, INSTALL PLANT MATERIAL, SEED AND STABILIZE ALL DISTURBED AREAS.  
8. AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND VEGETATE THE DISTURBED AREAS.  
9. ESTIMATED TIME TO FINAL STABILIZATION - 60 DAYS FROM THE START OF CONSTRUCTION ACTIVITIES.

EXISTING PAVED/PAVED ASPHALT DRIVEWAY

PROPOSED CHANNEL CONSTRUCTION DETAIL

PROPOSED PERIMETER EROSION CONTROL DETAIL

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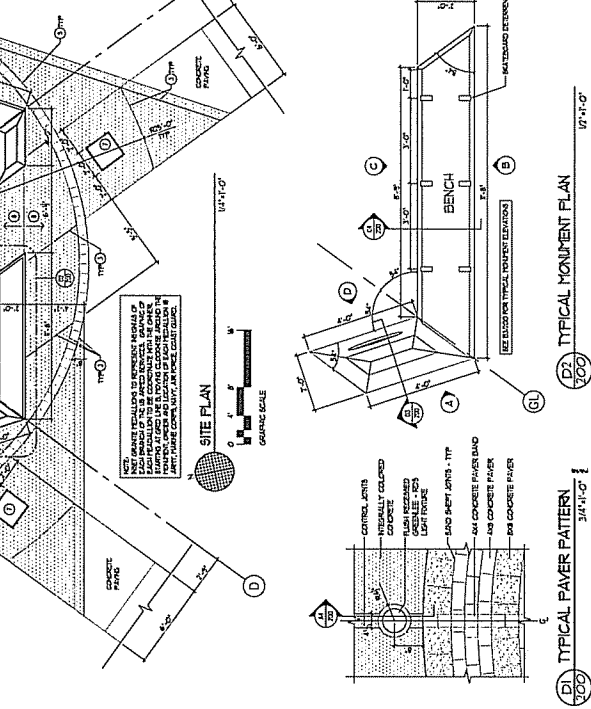
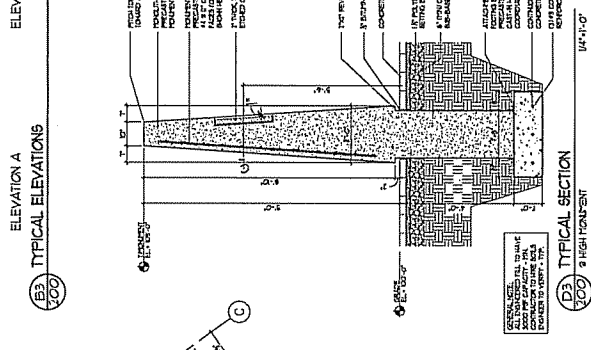
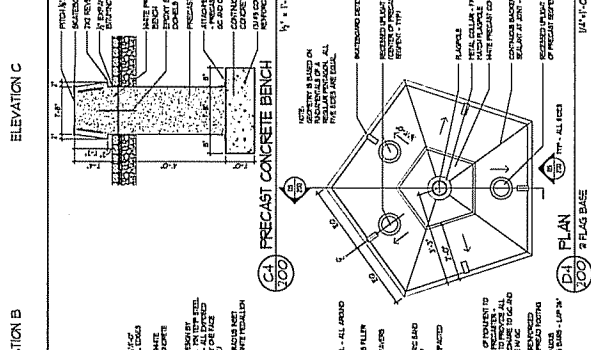
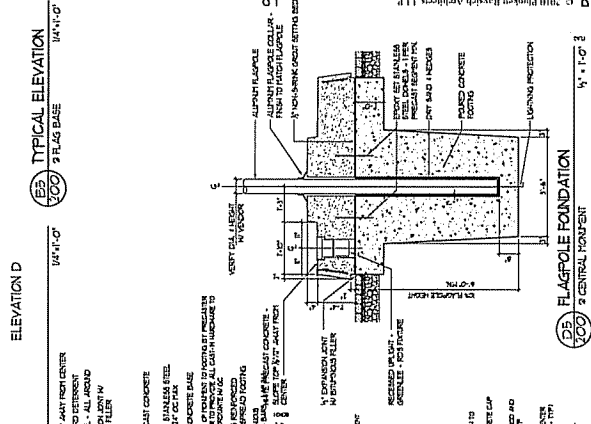
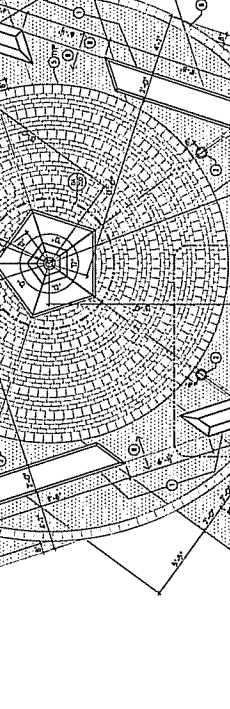
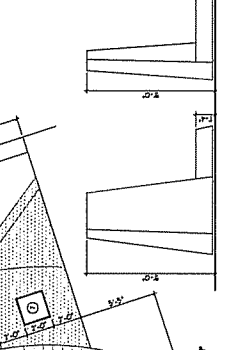
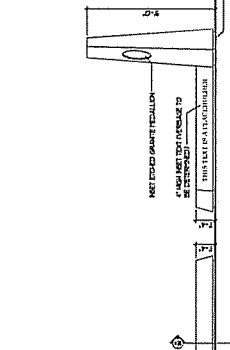
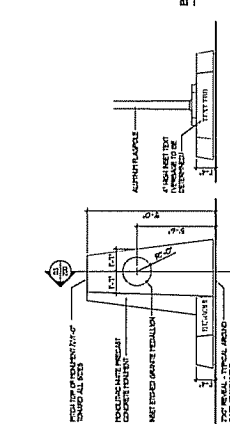
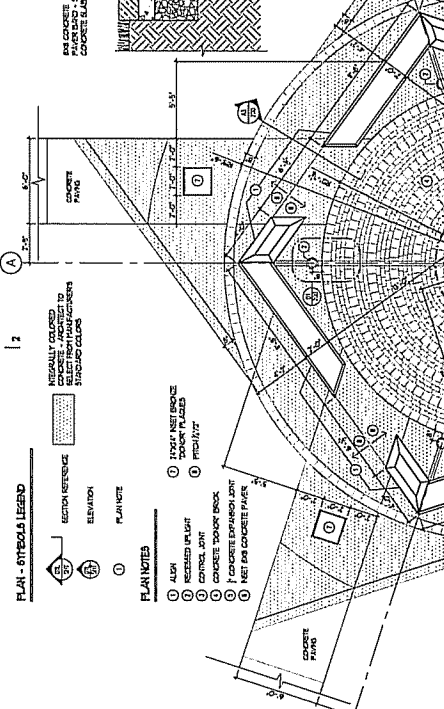
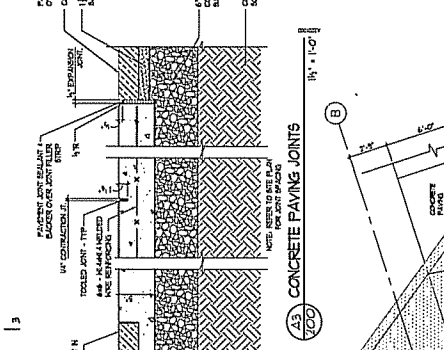
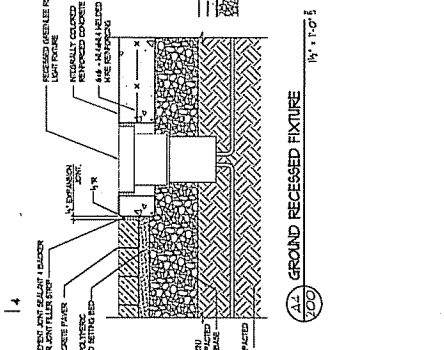
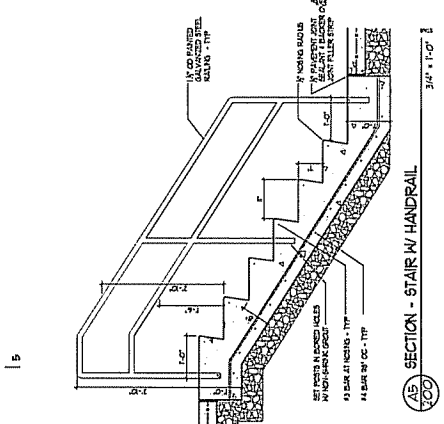
PROPOSED PERIMETER EROSION CONTROL DETAIL

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PROPOSED PERIMETER EROSION CONTROL DETAIL





**PLAN - SYMBOLS LEGEND**

- SECTION REFERENCE
- ELEVATION
- PLAN NOTE

**PLAN NOTES**

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**Joe Huber**

---

**From:** Scott Wendt [SWendt@hunzinger.com]  
**Sent:** Thursday, February 17, 2011 8:18 AM  
**To:** Joe Huber  
**Subject:** Hales Corners Veterans Memorial  
**Attachments:** HCVM Bid Sheet Revised 2011-02-17.pdf

Good morning Joe. Attached please find the revised bid recap that we discussed earlier last week (I caught the bug that was going around late last week and did not work part of Wednesday – Friday). Per the schedule reviewed at the previous committee meeting the ‘drop dead’ date for award, in order to complete the project by the 4<sup>th</sup> of July, is March 29<sup>th</sup>.

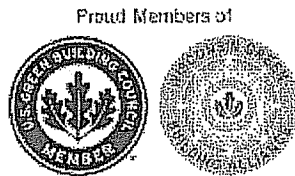
If you have any questions, please contact myself or Dave at your convenience.....thank you.

Scott Wendt, LEED® AP

Project Manager  
Hunzinger Construction Company  
Phone: 262.432.9160  
Fax: 262.797.0474  
E-mail: [swendt@hunzinger.com](mailto:swendt@hunzinger.com)  
Website: [www.hunzinger.com](http://www.hunzinger.com)



Hunzinger's Sustainable Building Solutions™  
team of LEED Accredited Professionals  
provide sustainable solutions at all  
budget levels.



Project: Hales Corners Veteran's Memorial

PHASE	DESCRIPTION	#	SUBCONTRACTOR	AMOUNT	Comments
01 00 00	General Conditions				Does not include procurement and fees associated with plan approval
	::Project Manager (6 hrs/week)	1	Hunzinger	\$2,100	
	::Site Supervision (8 hrs/week)	1	Hunzinger	\$2,800	
	::Safety Inspection (1 hr/week)	1	Hunzinger	\$375	
	::Temporary Toilets	1	Hunzinger	\$250	
	::Construction Material Testing	2	Professional Service Inc.	\$1,671	
03 30 00	::Surveyor ALLOWANCE	-	ALLOWANCE	\$2,000	
03 45 00	Cast-in-Place Concrete	2	Hunzinger	\$39,000	
03 45 00	Precast Architectural Concrete	2	ICP	\$32,600	
05 50 00	Misc. Metal	2	Badger Railing	\$1,225	
07 92 00	Joint Sealants	-	IN VARIOUS	IN VARIOUS	
16 00 00	Electrical	3	Lemberg	\$12,670	Does not include We Energies costs as we no new service is required
31 10 00	Site Clearing	3	Schneider Excavating	\$19,914	
31 20 00	Earth Moving	3	Schneider Excavating	IN ABOVE	
32 13 13	Concrete Paving	2	Hunzinger	IN ABOVE	
32 13 40	Concrete Pavers	4	DJ Frank	\$6,925	Includes F&I pavers at outer perimeter
	:: Donor Pavers & Plaques	-	Furnished By Owner	\$0	
32 13 75	Pavement Joint Sealants	4	DJ Frank	IN BELOW	
32 50 00	Site Furnishings				
	:: Flag Pole	1	Eder Flag Company	\$4,408	
	::Skateboard Deterants	2	ICP	IN ABOVE	
	::Granite Medallions	-	Furnished By Owner	\$0	
32 90 00	Planting	4	By Owner	\$0	DJF will provide guidance to Owner's team
	Project Contingency (5%)			\$6,297	
	<b>SUB TOTAL</b>			<b>\$132,235</b>	
	P&P Bonds	NO		\$0	
	Building Permit	YES		\$774	
	Insurance	0.98%		\$1,296	
	Contractor Fee	5.0%		\$6,612	
	<b>FEE DONATION BY HUNZINGER</b>			<b>(\$6,612)</b>	
	<b>GRAND TOTAL</b>			<b>\$134,305</b>	

56250T



April 1, 2011 - June 30, 2011

### Ameriprise Achiever Circle Portfolio Review

AMERICAN LEGION POST 299

Your Personal Advisor is:

MARK KARPINGER CFP®

262-641-4100

Client Number: 2006 5380 6 001

Group ID Number: 0958 3959 3 001

### Portfolio Snapshot

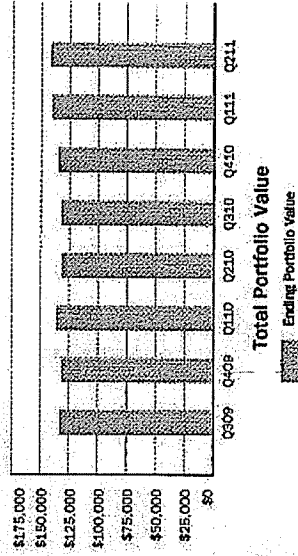
Beginning Value	This Year	This Period
Net Additions & Withdrawals	\$134,740.10	\$140,030.81
Change in Value	\$0.00	\$0.00
<b>Ending Value</b>	<b>\$141,818.21</b>	<b>\$141,818.21</b>

Net Additions & Withdrawals: all money deposited or withdrawn from your portfolio.  
 Change in Value: the change in market value of your portfolio.  
 Ending Value does not reflect total amount available for withdrawal or any pending transactions.

View current account information online with My Financial Account. To register, you'll need your client number (listed above) and Social Security number. Visit [ameriprise.com/myfinancialaccounts](http://ameriprise.com/myfinancialaccounts).

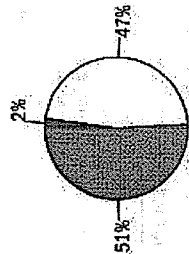
### Portfolio Progress

Portfolio Value on June 30, 2011: \$141,818.21



### Portfolio Allocation

Asset Class	Previous Periods		This Period
	One Year Ago	Last Period	
Cash Equivalents	\$6,009.83	\$2,411.88	\$3,074.53
Equities	\$45,633.33	\$65,820.37	\$66,335.03
Fixed Income	\$79,565.37	\$71,798.56	\$72,408.65
Total Assets	\$131,208.53	\$140,030.81	\$141,818.21
Total Liabilities	\$0.00	\$0.00	\$0.00
<b>Total Portfolio Value</b>	<b>\$131,208.53</b>	<b>\$140,030.81</b>	<b>\$141,818.21</b>



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Available cash within each account is shown in the account detail pages. To view accounts with check writing privileges see Page 2.



1-866-455-3297  
www.ameriprise.com

02000958355500000106/30/2011



July 18, 2011

To Whom It May Concern:

Re: Hales Corners Memorial Post 299

This letter shall serve as verification that Hales Corners Memorial Post 299 currently has available to them \$81,638.00 in deposit accounts with Tri City National Bank.

Hales Corners Memorial Post 299 has been an excellent customer of Tri City National Bank since January, 1982 and we would appreciate any courtesies you could extend to them

Should you have any questions please contact me at 414-425-3200

Sincerely,

Tri City National Bank

Marie Sandlin  
Personal Banking Officer

MS/mgs