ROUTING: Urgent Rush	Routing Form ====================================	printed on: 10/15/2020
	ls Construction Co. ng Division	, Inc.
Project: Glenwood Children's Park	Stormwater Improve	ements
Contract No.: 8861 Enactment No.: RES-20-00697 Dollar Amount: 84,645.75	File No.: Enactment	
(Please DATE before routing)		
Signatures Required	Date Received	Date Signed
City Clerk	10/15/20	1 10/15/20
Director of Civil Rights	1 10/19/2020	10/19/2020
Risk Manager	10/20/2020	10/21/2020 121V
Finance Director	10/21/2020	\$10/23/2020
City Attorney	10/23/2020	1017-68-220
Mayor	10/27/2020	10/29/2020
	' '	, , ,

Please return signed Contracts to the City Clerk's Office Room 103, City-County Building for filing.

Original + 2 Copies

10/15/2020 10:32:36 enjls - Phil Gaebler 266-4059

Dis Rights: OK /(N/A) Problem - Hold Prev Wage: AA / Agency / No Contract Value: Seo (2001/2 AA Plan: Aproved Amendment'/ Addendum # _____ Type: POS / Dvlp / Sbdv / Gov't / Grant (PW) Goal / Loan / Agrmt



City of Madison

Legislation Details (With Text)

File #:	62031	Version: 1	Name:	Awarding Public Works Contract No. 8861, Glenwood Children's Park Stormwater Improvements
Туре:	Resolution		Status:	Passed
File created:	9/3/2020		In control:	Engineering Division
On agenda:	10/6/2020		Final action:	10/6/2020
Enactment date:	10/13/2020		Enactment #:	RES-20-00697
Title:	Awarding Publ (13th AD)	lic Works Contra	ct No. 8861, Glen	wood Children's Park Stormwater Improvements
Sponsors:	BOARD OF P	UBLIC WORKS		
Indexes:				

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Code sections:
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Attachments: 1. 8861BidOpeningTab.pdf, 2. 8861 contract.pdf

Date	Ver.	Action By	Action	Result
10/6/2020	1	COMMON COUNCIL		
9/16/2020	1	BOARD OF PUBLIC WORKS	RECOMMEND TO COUNCIL TO ADOPT UNDER SUSPENSION OF RULES 2.04, 2.05, 2.24, & 2.25 - REPORT OF OFFICER	Pass
9/4/2020	1	Engineering Division	Refer	

The proposed resolution awards the contract for Glenwood Children's Park Stormwater Improvements at a total cost of \$91,420, including contingency. Funding is available in the 2020 Adopted Capital Budget for Stormwater Quality System Improvements (Munis 13195-84-174).

Awarding Public Works Contract No. 8861, Glenwood Children's Park Stormwater Improvements (13th AD) BE IT RESOLVED, that the following low bids for miscellaneous improvements be accepted and that the Mayor and City Clerk be and are hereby authorized and directed to enter into a contract with the low bidder contained herein, subject to the Contractor's compliance with Section 39.02 of the Madison General Ordinances concerning compliance with the Affirmative Action provisions and subject to the Contractor's compliance with Section 33.07 of the Madison General Ordinances regarding Best Value Contracting:

BE IT FURTHER RESOLVED, that the funds be encumbered to cover the cost of the projects contained herein.

See attached document (Contract No. 8861) for itemization of bids.

EN- Steve Danner-Rivers

CONTRACT NO. 8861 GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS

JOE DANIELS CONSTRUCTION CO., INC. \$ 84,645.75

Acct. No. 13195-84-174: 54445 (91345) Contingency 8%+ \$ 84,645.75 ______6,774.25

GRAND TOTAL

<u>\$ 91,420.00</u>

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https://sbs.naic.org/solar-external-lookup/lookup/company/summary/54220104?jurisdictio... 9/29/2020

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\$84,645.75
ORIGINAL

BID OF _____ JOE DANIELS CONSTRUCTION CO., INC.

2020

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS

CONTRACT NO. 8861

PROJECT NO. 13195

MUNIS NO. 13195

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL MADISON, WISCONSIN ON __OCTOBER 6, 2020

> **CITY ENGINEERING DIVISION** 1600 EMIL STREET MADISON, WISCONSIN 53713

https://bidexpress.com/login

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

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This Proposal, and Agreement have been prepared by:

CITY ENGINEERING DIVISION CITY OF MADISON MADISON, DANE COUNTY, WISCONSIN

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Robert F. Phillips, P.E., City Engineer

RFP: pdg

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SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS
CONTRACT NO.:	8861
BID BOND	5%
PREQUALIFICATION APPLICATION DUE (2:00 P.M.)	AUGUST 27, 2020
BID SUBMISSION (2:00 P.M.)	SEPTEMBER 3, 2020
BID OPEN (2:30 P.M.)	SEPTEMBER 3, 2020
PUBLISHED IN WSJ	AUGUST 20 & 27, 2020

<u>PREQUALIFICATION APPLICATION</u>: Forms are available at the same location or on our website, <u>www.cityofmadison.com/business/pw/forms.cfm</u>. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

<u>BIDS TO BE SUBMITTED</u>: Bids may be submitted on line at <u>www.bidexpress.com</u>, or by hand at 1600 Emil St. Please note that in support of social distancing during COVID-19, the doors at 1600 Emil St. are locked, but there is a sign with phone numbers on the door. Please call one of the numbers on the door and staff will come to the door to receive your bid. Until further notice, the bid openings will be closed to the public to support the guidance of social distancing, as the City responds responsibly to COVID-19 impacts to services. The bids will be posted online after the bid opening. If you have any questions, please call Alane Boutelle at (608) 267-1197, or John Fahrney, (608) 266-9091.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2020 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, <u>www.cityofmadison.com/Business/PW/specs.cfm</u>.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be prequalified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid. In accordance with Section 39.02(9)(a)I. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (<u>www.bidexpress.com</u>). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond (City of Madison form) equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an \boxtimes

<u>Build</u> 101 120	<u>ling Demolition</u> □ Asbestos Removal □ House Mover	110 Building Demolition			
Stre	et, Utility and Site Construction				
201	Asphalt Paving	265 🔲 Retaining Walls, Precast Modular Units			
205	Blasting	270 Retaining Walls, Reinforced Concrete			
210 215	 Boring/Pipe Jacking Concrete Paving 	275 Sanitary, Storm Sewer and Water Main Construction			
220	Con. Sidewalk/Curb & Gutter/Misc. Flat Work	276 Sawcutting			
221	Concrete Bases and Other Concrete Work	280 🔲 Sewer Lateral Drain Cleaning/Internal TV Insp.			
222	Concrete Removal	285 Sewer Lining			
225 230	Dredging Fencing	290 🔲 Sewer Pipe Bursting 295 🔲 Soil Borings			
235	Fiber Optic Cable/Conduit Installation	300 Soil Nailing			
240	Grading and Earthwork	305 🔲 Storm & Sanitary Sewer Laterals & Water Svc.			
241	Horizontal Saw Cutting of Sidewalk	310 Street Construction			
242 245	Landscaping, Maintenance	315 Street Lighting 318 Tennis Court Resurfacing			
246	Ecological Restoration	320 Traffic Signals			
250	Landscaping, Site and Street	325 🔲 Traffic Signing & Marking			
251	Parking Ramp Maintenance	332 🔲 Tree pruning/removal			
252 255	 Pavement Marking Pavement Sealcoating and Crack Sealing 	333 Tree, pesticide treatment of 335 Trucking			
260	Petroleum Above/Below Ground Storage	340 Utility Transmission Lines including Natural Gas,			
	Tank Removal/Installation	Electrical & Communications			
262	Playground Installer	399 🗌 Other			
Brid 501	ge Construction Bridge Construction and/or Repair				
Build	ding Construction				
401	Floor Covering (including carpet, ceramic tile installation,	437 🔲 Metals			
	rubber, VCT	440 🔲 Painting and Wallcovering			
402	Building Automation Systems	445 Plumbing			
403 404	Concrete Doors and Windows	450 🔲 Pump Repair 455 🔲 Pump Systems			
405	Electrical - Power, Lighting & Communications	460 A Roofing and Moisture Protection			
410	Elevator - Lifts	464 🔲 Tower Crane Operator			
412	Fire Suppression	461 🔲 Solar Photovoltaic/Hot Water Systems			
413	Furnishings - Furniture and Window Treatments	465 Soil/Groundwater Remediation			
415 420	General Building Construction, Equal or Less than \$250,000 General Building Construction, \$250,000 to \$1,500,000	466 ☐ Warning Sirens 470 ☐ Water Supply Elevated Tanks			
420	General Building Construction, \$250,000 to \$1,500,000	475 Water Supply Elevated Tanks			
428	Glass and/or Glazing	480 Wood, Plastics & Composites - Structural &			
429	Hazardous Material Removal	Architectural			
430	Heating, Ventilating and Air Conditioning (HVAC)	499 🔲 Other			
433	Insulation - Thermal Masonry/Tuck pointing				
435					
Stat	e of Wisconsin Certifications				
1	Class 5 Blaster - Blasting Operations and Activities 2500 feet	and closer to inhabited buildings for quarries, open pits and			
2	road cuts. Class 6 Blaster - Blasting Operations and Activities 2500 feet	and closer to inhabited buildings for trenches, site			
-	excavations, basements, underwater demolition, underground				
3	Class 7 Blaster - Blasting Operations and Activities for structu				
4	the objects or purposes listed as "Class 5 Blaster or Class 6 B				
4 5	Petroleum Above/Below Ground Storage Tank Removal and I				
5	Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application:				
	www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Performance of Asbestos Abatement Certificate must be				
	attached.				
6	Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of				
7	Arboriculture	For Hire with the cortification in the esterant of turf and			
7	Pesticide application (Certification for Commercial Applicator I landscape (3.0) and possess a current license issued by the I				

8 State of Wisconsin Master Plumbers License.

SECTION B: PROPOSAL

Please refer to the Bid Express Website at <u>https://bidexpress.com</u> look up contract number and go to Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders City of Madison SBE Program Information

SBE NOT APPLICABLE

SECTION D: SPECIAL PROVISIONS

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.11 BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$63,500 for a single trade contract; or equal to or greater than \$311,500 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 103 AWARD AND EXECUTION OF THE CONTRACT

The awarded Contractor shall completely execute the signing of all contract documents and submit them to City Engineering (1600 Emil St) prior to <u>12:00pm on Thursday, October 8, 2020</u>. Delays in turning in the required completed contract documents will not adjust the project completion date. Payment and Performance Bonds shall be dated no sooner that Wednesday, October 7, 2020.

ARTICLE 104 SCOPE OF WORK

The work shall consist of construction of a diversion chamber, and modifying the existing ground and drainage directly adjacent to the current railroad arch culvert. Work will also include installation of stepped stones for an overflow from the diversion chamber to an existing channel, and installation of a new railing for the diversion chamber, as noted in the specifications and on the plans.

SECTION 104.4 INCREASED OR DECREASED QUANTITIES

The Contractor shall note that some bid item quantities may increase or decrease based on what is encountered in the field. If the actual field conditions vary from the plan quantity, no additional compensation shall be given for increasing or decreasing quantities. Any overruns shall be paid for under the appropriate bid item(s) without any penalty or change to the bid price for the associated bid item. The Contractor shall not be reimbursed for any deletions to the contract. No change to the unit bid price will be allowed for changes to the quantities.

SECTION 104.10 CLEANING UP

Excess concrete from finishing operations and from spillage shall be contained and removed immediately.

SECTION 105.9: SURVEYS, POINTS, AND INSTRUCTION

The City of Madison shall be responsible for setting all other lines and/or grades to complete the work for this contract. Any questions regarding the layout and staking of this project should be directed to City of Madison Parks Surveyor Dan Rodman at (608) 658-3087.

SECTION 105.12 COOPERATION BY THE CONTRACTOR

The Contractor shall use care around all existing trees, utilities and landscape features. Damage to these items during construction shall be repaired or replaced at the Contractor's expense. No trees, other than those shown on the plan to be removed, or cut without the approval of the Engineer.

The City will be purchasing limestone for the installation of the stepped stone overflow. The Contractor shall be responsible for contacting the supplier to arrange for either pick up or delivery of the materials to the job site. The supplier contact information is provided below:

Madison Block and Stone 5813 North Hwy 51 Madison, WI 53704 608-249-5633

The Contractor shall view all sites prior to bidding to become familiar with the existing conditions. The site has limited access for construction and staging.

It will be the responsibility of the Contractor to work with the utilities located to avoid conflicts in the field. Several utilities exist on site. The Contractor shall perform a One Call through Digger's Hotline for each site at least three days prior to beginning construction. To ensure that Parks-owned utilities are also marked, include the PARK NAME AT THE BEGINNING OF THE MARKING instructions field on the ticket, and send a copy of the ticket to the City of Madison Parks Surveyor (Dan Rodman / drodman@cityofmadison.com / tel (608)658-3087 / fax (608)267-1162).

The Contractor shall secure materials at the end of each work day to deter any potential vandalism and theft.

The Contractor shall attend a pre-construction meeting prior to the start of construction.

The Contractor warrants that its services are performed, within the limits prescribed by the City, with the usual thoroughness and competence of the consulting profession; in accordance with the standard for professional services at the time those services are rendered. The Contractor shall be responsible for the accuracy of the work performed under this Agreement, and shall promptly make necessary revisions or corrections resulting from their negligent acts, errors or omissions without additional compensation. The Contractor shall be responsible for any damages incurred as a result of their errors, omissions, or negligent acts and for any losses or costs to repair or remedy construction.

The Contractor shall take care when accessing the site not to damage existing asphalt paths, sidewalks, curb and gutter or existing utilities. Any damage shall be repaired by the Contractor per the Standard Specifications at no additional cost to the city.

SECTION 107.1 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall properly fence or barricade all work areas. The park will be open to the public during construction but fencing will be required to delineate a work zone. All trenches will need to be properly protected by backfilling or plating or by other means as approved by the Engineer, prior to leaving the site for the night or for extended lengths of time.

SECTION 107.1 PROTECTION AND RESTORATION OF PROPERTY, PROPERTY MONUMNETS AND PULBIC LAND SURVEY MONUMENTS

The Contractor shall coordinate with Parks for inspection and approval of all finished work before payment is received .This includes topsoil, seed mixes, matting and mulching. All restoration required on within the park as part of the access to the site shall be considered incidental to this contract.

SECTION 107.7 MAINTENANCE OF TRAFFIC

Do not close the Southwest Bike Path at any time.

Do not store equipment or park vehicles on Glenway Street.

Submit a Traffic Control Plan, including all necessary phases, to Tom Mohr, <u>tmohr@cityofmadison.com</u>, prior to the pre-construction meeting. The Traffic Control Plan shall address all requirements of this section of the Special Provisions. The Contractor shall not start work on this project until the Traffic Engineering Division has approved a traffic control plan and traffic control devices have been installed, in accordance with the approved plan. Failure of the Contractor to obtain approval of a Traffic Control Plan, as specified above, may prevent the Contractor from starting work and shall be considered a delay of the project, caused by the Contractor.

Alter traffic control from the provided Traffic Control Plan as conditions change in the field or as unexpected conditions occur. This includes relocating existing traffic control or providing additional traffic control. Install and maintain any necessary modifications or additions to the traffic control, as directed by the City Traffic Engineer, at no cost to the City. Conform all signing and barricading to the Federal Highways Administrations "Manual on Uniform Traffic Control Devices" (MUTCD).

Measure traffic control as a lump sum. Payment for traffic control is full compensation for constructing, assembling, hauling, erecting, re-erecting, maintaining, restoring, and removing nonpermanent traffic signs, drums, barricades, and similar control devices, for providing, placing, and maintaining work zone. Maintaining shall include replacing damaged or stolen traffic control devices. Measure temporary pavement markings, electronic arrow boards and changeable message signs as separate bid items.

Install type A low intensity flashing lights on all barricades used in the project per State of Wisconsin S.D.D. 15C2-4B. Install type C low intensity steady-burn lights on all barrels used in tapers.

Maintain emergency vehicle access at all times.

Do not store construction equipment and materials within street right-of-way that is outside the project limits.

Backfill, plate or protect work areas with traffic control devices during non-working hours.

Contact Tom Mohr, Traffic Engineering Division, <u>tmohr@cityofmadison.com</u>, 608-267-8725, with any questions concerning these traffic control specifications.

SECTION 107.13 TREE PROTECTION SPECIFICATIONS

The Contractor is advised to review Article 107.13 of the Standard Specifications for tree protection.

The intent of this design is to minimize the damage to those trees that remain following construction. Trees that must be protected are designated on the plans. It is recognized that grading operations and root cutting of some trees will need to occur within 5 feet of trees in order to complete the work, and care must be taken in these areas. For trees where construction operations, including grading, stone placement, filling, etc. occur within 5 feet of the trunk, construction operations near these trees shall be done under the supervision of a City of Madison Forestry Representative.

Roots shall be cut cleanly by using a saw, ax, lopping shears, chain saw, stump grinder, or other means which will produce a clean cut. Exposed roots shall be covered as soon as excavation and installation are complete. All roots over one (1) inch in diameter that are damaged shall be cleanly cut immediately

back of the damaged section on the same day of the excavation. The Contractor shall not rip or pull roots out towards the trunk of a tree while excavating with a backhoe. The use of a backhoe to cut roots is NOT acceptable.

Protection of existing trees trees shall be considered incidental to the work in this contract and no additional compensation will be provided.

The normal work hours for Forestry staff: 7:00 AM - 3:00 PM, Mon-Fri.

The contact information for Forestry Staff is:

Wayne Buckley Cell: (608) 220-0637 Office Phone: (608) 266-4892 Radio #: 701304 wbuckley@cityofmadison.com

SECTION 108.2 PERMITS

The City of Madison has obtained a City of Madison Erosion Control Permit. The Contractor shall meet the conditions of the permits by properly installing and maintaining the erosion control measures shown on the plans, specified in these Special Provisions, or as directed by the Construction Engineer or his designees. This work will be paid for under the appropriate contract bid items or, if appropriate items are not included in the contract, it shall be paid for as Extra Work.

The Contractor shall refer to section 210.6 Erosion Control Implementation and Enforcement for additional information on the requirements regarding this topic.

SECTION 109.2 PROSECUTION OF WORK

The Contractor shall begin work on **November 2, 2020**. The substantial completion date of this contract is **June 30, 2021.**

Work shall begin only after the start work letter is received. If it is desirable to begin work before the above-mentioned date, the Contractor shall establish a mutually acceptable date with the City Engineer, and the agreed upon date must be determined prior to the public preconstruction meeting.

Work cannot start on this contract until after the "Start to Work" letter has been received. Construction work must begin within seven (7) calendar days after the date appearing on notice to do so that was given to the Contractor at the preconstruction meeting. Construction work shall be carried at a rate so as to secure full completion within the contract times outlined in Section 109.7, the rate of progress and the time of completion being essential conditions of this Agreement. Definite notice of intention to start work shall be given to the Engineer at least seventy-two (72) hours in advance of beginning work.

The fixed, agreed upon, liquidated damages for failure to complete all work within the contract, unless otherwise specified in this section, shall be calculated in accordance with Article 109 of the Standard Specifications. The Contractor shall limit workdays from 7:00 am to 7:00 pm, Monday - Friday, unless approved by the Engineer in writing.

BID ITEM 10911 - MOBILIZATION

DESCRIPTION

Work under this item shall include all costs associated with mobilization of the Contractor to the site. Parking of equipment and staging is permitted within the Cross street bike path corridor, and within the construction fence near the channel construction.

METHOD OF MEASUREMENT

Mobilization shall be measured as a Lump Sum.

BASIS OF PAYMENT

Mobilization shall be measured as described above, and shall be paid at the contract unit price, which shall be considered full compensation for work as defined in this bid item.

BID ITEM 20101 - EXCAVATION CUT

DESCRIPTION

Work under this item shall include all materials, equipment, labor, and incidental necessary to excavate all material from the channel as shown on the plan set.

Total excavation quantity for this project is:

15 cubic yards

METHOD OF MEASUREMENT

Excavation Cut shall be measured per Cubic Yard, based on Plan Quantity without measurement thereof. The Plan Quantity for all excavation quantities was determined using the average end area method, based on 25 foot cross-sections and includes the quantity necessary for constructing the channel and wing wall.

BASIS OF PAYMENT

Excavation Cut shall be measured as described above, and shall be paid at the contract unit price, which shall be considered full compensation for work as defined in this bid item.

BID ITEM 20202 - FILL BORROW

DESCRIPTION

Work under this item shall include all materials, equipment, labor, and incidental necessary to fill the eroded area adjacent to the stone spillway and fill gaps outside the concrete channel.

The fill quantity is estimated at 15 cy for this project. Excess materials from Excavation Cut or Finish Grading may be used for fill at the discretion of the Engineer.

Double handling, stockpiling and placing fill is included in this bid item.

METHOD OF MEASUREMENT

Fill shall be measured by the cubic yard quantity as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Fill shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 20221 - TOPSOIL

DESCRIPTION

This item shall include all necessary work, labor and incidentals required to distribute, dispose and/or place topsoil to restore the disturbed soil within the construction boundary. Topsoil shall comply with Article 202 of the Standard Specifications and shall be 6inches thick (minimum).

Stripped topsoil can be stockpiled on site within the construction fence boundary or as directed by the Engineer.

Any additional topsoil material required beyond quantities available through stripped topsoil are included in the quantities for this bid item.

Excess topsoil shall be disposed offsite at a location to be determined and provided by the City at no extra cost to the City. Double handling, stockpiling and placing topsoil is included in this bid item.

METHOD OF MEASUREMENT

Topsoil shall be measured as each SY placed in the field as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Topsoil shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, labor, tools, equipment, disposal, and incidentals required to complete the work as set forth in the description.

BID ITEM 20701 – TERRACE SEEDING

DESCRIPTION

This work shall consist of preparing seed beds, furnishing and sowing the required seed, furnishing and applying the required stabilizers, fertilizer, and mulching material on all disturbed areas including areas damaged by construction activities, in accordance with Article 207 of the Standard Specifications. Seed mixture shall be either in whole, or a mixture of the City of Madison sun terrace mix and shade terrace mix applied appropriately based on shady and sunny areas of the site.

Since construction is limited to within the construction fence, no additional compensation shall be given for seeding quantities beyond what is specified in this contract.

Contractor is responsible for obtaining seed bed germination per Article 207 of the Standard Specifications, regardless of site conditions.

METHOD OF MEASUREMENT

Terrace Seeding shall be measured by the square yard quantity as listed in the proposal page without measurement thereof.

BASIS OF PAYMENT

Terrace Seeding shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, and incidentals required to complete the work as set forth in the description.

SECTION 210.1(d) STREET SWEEPING

When required by either the erosion control plan or the Construction Engineer, the Contractor shall perform mechanical Street sweeping on all streets or paved surfaces affected by construction equipment, hauling or related construction activities that result in mud tracking or siltation. Mechanical street sweeping shall be completed as directed by the Construction Engineer and shall remove and collect all loose material to the satisfaction of the Construction Engineer. Depending on site conditions, construction activities, and hauling methods utilized by the Contractor, mechanical street sweeping may be required multiple times throughout the day with an absolute minimum that all streets are clean at the end of the workday. Areas not accessible by mechanical street sweepers may require hand scraping with shovels. Sweepers used on to meet the requirements of this specification shall have the ability to collect debris, and pre-wet the pavement. Pre-wetting may be accomplished by a separate piece of equipment at the Contractor's option. Equipment that simply brooms material into the air or directs it toward the terrace without physical collection of it shall not be considered adequate.

BID ITEM 21061 - EROSION MATTING, CLASS I URBAN TYPE A

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary to install Erosion Matting, Class I Urban Type A on all seeded disturbed areas as noted in the plans.

The Class and Type requirements match those of the Wisconsin Department of Transportation Product Acceptability List (PAL) nomenclature. Products listed in the PAL as Class I Urban Type A are all 100 percent biodegradable, and therefore do not need to be designated ORGANIC.

Work under this bid item shall be as set forth in the latest edition of the Standard Specifications, except the Contractor shall note that special care with anchorage devices shall be required so as to not injure park users. Anchorage devices for the mat are required to be a product identified on the Wisconsin Department of Transportation Erosion Control Product Acceptability List (PAL) under the category of "Anchoring Devices for Class I, Urban Erosion Mat."

Anchorage devices shall be completely biodegradable. Photobiodegradable or metal anchorage devices shall not be allowed. Materials deemed to present a hazard from splintering or spearing shall not be approved, including solid wood devices.

Erosion Matting, Class I Urban Type A shall be installed correctly with correct anchorage, staple pattern, and overlap. To verify the staple pattern, the Contractor shall provide to the Engineer a manufacturer's recommended staple pattern for the type of matting installed.

Trimming of the Erosion Matting, Class I Urban Type A required to accommodate existing tree locations shall be considered incidental to this bid item.

METHOD OF MEASUREMENT

Erosion Matting, Class I Urban Type A shall be measured by the square yard quantity as listed in the proposal page without measurement thereof, not including run out and overlap.

BASIS OF PAYMENT

Erosion Matting, Class I Urban Type A shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 50641 - 30" ENDWALL INLET GATE

DESCRIPTION

Work under this item includes installation of a 30" endwall gate conforming to the specifications in standard detail 5.6.2 except for the paint color. The paint shall conform to the specifications in 506.2 but the color shall match the color of the railing. The Contractor shall submit a sample of the paint color for approval prior to painting the railings or the inlet gate.

BID ITEM 90001 - STORM CONTROL

DESCRIPTION

Work under this item shall include all labor, materials, equipment, and incidentals necessary to manage both wet and dry weather flow that may occur in the culvert, diversion chamber, channel, and pipes during the duration of the contract.

This project replaces a diversion structure within an active stormwater drainage ditch. Therefore, the Contractor shall be prepared to manage their work accordingly. The Contractor shall take all necessary precautions to protect the existing ditch and their work from damage due to rain events.

METHOD OF MEASUREMENT

Storm Control shall be measured as a Lump Sum.

BASIS OF PAYMENT

Storm Control shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 90002 - CONSTRUCTION FENCE (PLASTIC)

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary for the Contractor to provide, install, maintain and remove construction fence from the project site as shown on the plans.

Construction fencing shall be installed to discourage access to the construction area by the general public during the course of the project. Fencing shall be maintained throughout construction and adjusted or removed at the request of the Engineer.

This fence shall be highly visible (orange), constructed of a plastic web, and able to withstand the expected amount of use it shall receive on a construction site. Relocation of fencing may be required as

the work progresses. No extra payment shall be made for temporarily opening and re-closing the fence, or relocation of the fencing as needed to perform the work. Fencing shall be left in place until construction operations are complete.

Construction fencing shall be International Orange color, high-density polyethylene mesh conforming to the following:

- Mesh opening: 1 inch minimum to 3 inch maximum
- Height: 4 feet
- Ultimate tensile strength: Avg 3000 lb per 4' width (ASTM D638)

METHOD OF MEASUREMENT

Construction Fence (Plastic) shall be measured by the linear foot quantity as properly installed and approved.

BASIS OF PAYMENT

Construction Fence (Plastic) shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 90003 - PAINTED PEDESTRIAN RAILING

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary to install guard rails within the existing box culvert wing walls, as shown on the plans. The railing shall be installed at the grades and dimensions shown on Sheet D-2.

The guard rail shall consist of the following:

• 42-inch tall montage II, Majestic 2-Rail style by Ameristar fence products or equal.

The railing shall be galvanized steel and finished with the manufacturers standard paint system in bronze.

METHOD OF MEASUREMENT

Painted Steel Railing shall be measured per Linear Foot of railing installed.

BASIS OF PAYMENT

Painted Steel Railing shall be measured as described above and paid at the contract unit price, which shall be full compensation for providing, placing, maintaining, and removing the fencing.

BID ITEM 90004 - DIVERSION CHAMBER WITH STONE VENEER AND STAMPED FLOOR

DESCRIPTION

Work under this item shall include all work, materials, labor and incidentals necessary for the Contractor to install a concrete channel with a headwall, and footing and 8" PVC low flow pipe and structure, in accordance with these plans and specifications. The vertical faces and top and any exposed surfaces of the channel and headwall shall be finished with limestone veneer as described below except for the floor

of the diversion chamber. The diversion chamber floor is to be stamped with a form and colored to match the limestone veneer. All formwork, reinforcement, and stone bedding, and related materials required for the installation as described herein shall be considered incidental to this item.

The limestone veneer shall be Mill Creek Castle Rock stone, which will be supplied by the City. The Contractor is required to coordinate delivery of the stone to the site from the supplier. The limestone veneer will be secured to the concrete channel with MVIS polymer mortar. The MVIS polymer mortar will be supplied by the City. The Contractor is required to coordinate the delivery of the mortar to the site. Approximately 340 sf of limestone veneer stone and 45 bags of MVIS Mortar are required for this project.

INSTALLATION

The stone veneer shall be installed per the instructions of the MVIS mortar and Veneer installation instructions. The instructions are included in the specification book. The Contractor shall provide 48 hrs notice to the Engineer prior to the requested meeting date to inspect the finish on the concrete channel prior to the installation of the stone veneer. The channel shall be even without protrusions or defects that would impact the ability to install the veneer. The stacked stone wall portion is to be constructed without mortar.

The concrete needs to cure before the installation of the veneer. Due to the temperature requirements of the veneer installation, it will need to occur in spring 2021 when the minimum temperature has been achieved. The contractor will have 1 week to install the veneer from the time veneer installation is started. Mobilization will not be paid for this activity. Parks staff must be contacted prior to working in the park and a minimum of 48 hours' notice is required before remobilizing for the veneer installation.

METHOD OF MEASUREMENT

Channel and headwall with Stone Veneer shall be measured as a Lump Sum for the work described herein and as installed and approved.

BASIS OF PAYMENT

Diversion Chamber and Channel with Stone Veneer shall be measured as described above and shall be paid for at the contract unit price which shall be full compensation for all work, materials, tools, equipment, labor, hauling, placement, disposal and incidentals required to complete the work as set forth in the description.

BID ITEM 90005 – STONE SALVAGE AND REUSE

DESCRIPTION

Work includes all labor, materials and equipment necessary to remove and deconstruct the existing stonewall and excavate and salvage existing stones in the immediate vicinity of the work. All stones shall be stored onsite and shall be reused in the construction of the new stonewalls within the diversion chamber, in the area directly adjacent to the existing arch culvert and in the area of the channel downstream of the limestone slab spillway.

Salvaged Stones shall be used for construction of the stonewall within the diversion chamber. Stones shall be placed approximately 1.5ft -2ft tall and stacked in a way to minimize gaps and provide a stable wall. Stones may need to be cut or mechanically broken to complete this work.

Salvaged Stones shall be placed directly adjacent to the existing arch culvert and 48" RCP within the of the diversion chamber. Stones shall be placed evenly and flush to the arch culvert as shown in the plans.

Salvaged Stones shall be used to form containment of water on the, in accordance with the plans. Wall height shall be a minimum of 1' the length of the spillway. If there are excess Salvaged Stones the

Contractor may use them in the downstream channel to provide channel protection and points of interest. The location of the downstream stones must be approved by the Engineer prior to placement. A sketch of the stone placement is to be provided to the Engineer 48 hours prior to placement.

If there are not enough Salvaged Stones to complete the stonewall, non-grouted floor in the diversion chamber, or for the channel downstream of the limestone slabs then additional materials will be require and shall be considered incidental to this bid item. Any additional materials shall be dolomitic limestone and shall be of similar size as the salvaged stones.

The excavation and or fill required for the placement of the stones shall be paid for under the respective bid items. All bedding stone and geotextile fabric required to create the base for the salvaged stones shall be constructed in accordance with the plans and paid for under the appropriate bid item.

METHOD OF MEASUREMENT

Stone Salvage and Reuse shall be paid as a lump sum as approved by the Engineer.

BASIS OF PAYMENT

Stone Salvage and Reuse shall be paid for at the contract price and shall be full compensation for removal, salvage, storage and replacement of the existing stones and for any disposal of excess materials or for placement and purchase of additional materials, for all labor, equipment, tools and incidentals necessary to complete this item of work as described herein.

BID ITEM 90006 – SPILLWAY CONSTRUCTION

DESCRIPTION

Work includes all labor, materials and equipment necessary to place the 4-5 large stone slabs purchased by the City, to create the spillway. Each stone is estimated to weigh between 2-4 tons and be between 8" to 16" thick. The stone slabs will be placed over a bed of 3" clear stone and 8" of 34" clear stone as shown on detail sheet D-1. A 9' long section of stone is to be placed over HR filter fabric downstream of the last slab, fox valley cutter chip is to be used in this area. The fox valley cutter chip will be supplied by the city. The Contractor shall be responsible for contacting the supplier to arrange for either pick up or delivery of the materials to the job site.

METHOD OF MEASUREMENT

Spillway Construction shall be paid as a lump sum as approved by the Engineer.

BASIS OF PAYMENT

Spillway Construction and reuse shall be paid for at the contract price and shall be full compensation for removal of existing stones, preparation of base, placement of materials, disposal of excess materials and for all labor, equipment, tools and incidentals necessary to complete this item of work.

BID ITEM 90007 – 15" STRUCTURE WITH SOLID LID

DESCRIPTION

Work includes all labor, materials and equipment necessary to install an access structure connecting the 8" low flow PVC pipe. The structure is to have a solid lid. PVC, HDPE, Precast concrete or field poured concrete are all acceptable materials. A shop drawing is required for Engineer approval prior to installation.

METHOD OF MEASUREMENT

The 15" structure with solid lid will be measured per structure installed.

BASIS OF PAYMENT

The 15" structure with solid lid shall be paid for at the contract price and shall be full compensation for all labor, equipment, tools and incidentals necessary to complete this item of work.

BID ITEM 90008 - REMOVE 30" APRON END WALL

DESCRIPTION

Work includes all labor, materials and equipment necessary to remove and dispose of the 30" apron end wall on the upstream end of the 30" RCP.

METHOD OF MEASUREMENT

Apron end wall removal shall be measured as each end wall removed as approved by the Engineer.

BASIS OF PAYMENT

Apron end wall removal shall be paid for at the contract price and shall be full compensation for removal of the end wall and for all labor, equipment, tools and incidentals necessary to complete this item of work.



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MORTAR-SET STONE VENEER - SECTION 04 42 10

PART 1 GENERAL

1.1 Section Includes

- A. Section includes non-load bearing, full width dimensional stone veneer set in cement mortar and tied to a structural back-up wall including mortar, wall ties, weep system, special stone shapes, and installation of [plywood sheathing,] [gypsum sheeting,] [waterproof underlayment,] [vapor barrier underlayment,] [ridge board thermal insulation,] [and] [water repellent and anti-graffiti coating].
- B. Section includes special decorative cut stone shapes for trim.

1.2 Related Sections

- A. Section 03 30 00 Cast-In-Place Concrete: Concrete foundations.
- B. Section 04 22 00 Concrete Unit Masonry Assemblies: Masonry supporting wall.
- C. Section 05 40 00 Cold-Formed Metal Framing: Formed steel framed supporting wall.
- D. Section 05 50 00 Metal Fabrications: Lintels, shelf angles, structural supports, anchors and other built-in components for building into stone masonry by this section.
- E. Section 06 10 00 Rough Carpentry: [Structural wood stud wall framing] [and] [plywood sheathing] for supporting wood veneer.
- F. Section 07 13 26 Self-Adhering sheet Waterproofing: Self-adhering sheet membrane applied as part of this section to [plywood sheathing] [gypsum sheathing] [_____] as moisture barrier underlayment from stone veneer wall.
- G. Section 07 21 00 Thermal Insulation: Rigid board thermal insulation installed in exterior stone wall assembly.
- H. Section 07 62 00 Sheet Metal Flashing and Trim.
- I. Section 07 92 00 Joint Sealers: Sealant for perimeter and control joints.
- J. Section 09 21 16 Gypsum Board Assemblies: Gypsum sheathing substrate for stone veneer wall.
- K. Section 09 24 00 Portland Cement Plaster: Metal lath and scratch coat back-up supporting walls.
- L. Section 09 96 24 Water Repellent and Anti-Graffiti Coating: Clear coating applied to stone veneer to prevent water penetration and simplify

graffiti removal.

- 1.3 References
 - A. ASTM A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - B. ASTM A580 Standard Specification for Stainless Steel Wire.
 - C. ASTM A666 Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 - D. ASTM C79 Treated Core and Nontreated Core Gypsum Sheathing Board.
 - E. ASTM C91 Standard Specification for Masonry Cement.
 - F. ASTM C97 Standard Specification for Absorption and Bulk Specific Gravity of Dimension Stone.
 - G. ASTM C144 Aggregate for Masonry Mortar.
 - H. ASTM C150 Standard Specification for Portland Cement.
 - I. ASTM C170 Standard Specification for Compressive Strength of Dimension Stone.
 - J. ASTM C207 Hydrated Lime for Masonry Purposes.
 - K. ASTM C270 Mortar for Unit Masonry.
 - L. ASTM C476 Grout for Masonry.
 - M. ASTM C568 Standard Specification for Limestone Dimension Stone.
 - N. ASTM C615 Standard Specification for Granite Dimension Stone.
 - O. ASTM C616 Standard Specification for Quartz-Based Dimension Stone.
 - P. ASTM C 629 Standard Specification for Slate Dimension Stone.
 - Q. ASTM C780 Preconstruction Evaluation of Mortar for Plain and Reinforced Masonry.
 - R. ASTM C880 Standard Specification for Flexural Strength of Dimension Stone.
 - S. ASTM D226 Asphalt Saturated Organic Felt used in Roofing and Waterproofing.
 - T. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - U. ASTM D4632 Standard Test Method Grab Breaking Load and Elongation of Geotextiles.
 - V. ASTM D4632 Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
 - W. ASTM E96 Standard Test Method for Water Vapor Transmission of Materials.
 - X. ACI 530/ASCE 5/TMS 402 Building Code Requirements for Masonry Structures.
 - Y. ACI 530.1/ASCE 6/TMS 602 Specifications for Masonry Structures.
 - Z. National Concrete Masonry Association TEK 8-2A for masonry cleaning.

1.4 System Description

A. Design Requirements: Perform work in accordance with ACI 530/ASCE 5/TMS 402 Building Code Requirements for Masonry Structures, ACI 530.1/ASCE 6/TMS 602 Specifications for Masonry Structures, and the applicable Building Code.

1.5 Submittals

- A. Submit under provisions of Section 01 33 00.
- B. Product data for natural dimensional stone, mortar design, wall ties, weep system, and accessories.
- C. Shop drawings for layout of stone veneer work illustrating coursing and pattern details for installation of wall ties, built-in items, flashing, weep system, window and door openings, penetrations, control joints, and joints with adjacent materials.
- D. Copies of test reports or certificates showing compliance with specified requirements.
- E. Selection Samples: For each stone product specified, submit two samples, minimum size [6 inches] [152 mm] long, representing color range, surface, and texture.
- F. Mortar Samples: [1/2 by 4 inches] [13 by 102 mm] minimum, illustrating selected color.
- G. Weep system material: [4 by 4 inches] [102 by 102 mm] minimum size.
- H. Construct sample panel at location indicated or directed, and as follows:
 - 1. Recommended Size: 8 feet by 8 feet (2.4 m by 2.4 m) or a size that satisfies the architect. This size should be no less than 4 feet x 4 feet (1.2 m by 1.2 m).
 - 2. Include all stone unit types and sizes to be used including a typical corner condition, special shapes, and mortar joint treatment. Clean the sample panel using the same materials and tools as planned for the final stone masonry construction.
 - 3. Obtain architect's acceptance of sample panel before beginning construction activities of this section.
 - 4. Do not remove sample panel until construction activities of this section have been accepted by the Architect.

1.6 Quality Assurance

- A. Manufacture's qualifications: Company owning and operating stone quarry and specializing in quarrying, cutting, and dressing natural stone for masonry assemblies with 5 years minimum documented, successful experience.
- B. Installer qualifications: Company specializing in performing stone masonry work with 5 years documented, successful experience.

1.7 Mock-Up

- A. Quality Control: prepare mock-up of stone veneer wall illustrating color, finish, texture, joints, construction method, and workmanship quality and to establish standard of quality for completed work.
- B. Mock-Up shall be building corner [with [window] [door] opening] illustrating stone veneer and mortar combinations, coursing, and pattern. Mock-up shall be constructed with:
 - 1. Stone veneer as specified in this Section.
 - 2. Mortar, grout, wall ties, and weep system specified in this section.
 - 3. Structural supporting wall as specified in Section [].
 - 4. [Sheathing,] [Underlayment,] [Rigid board thermal insulation,] and other specified accessories.

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- 5. [Clear sealer and anti-graffiti coating.]
- C. Size: approximately [4 feet] [1.2 m] [_____] high by [4 feet] [1.2 m] [_____] long.
- D. Provide slab or foundation support as required by size of mock-up.
- E. Testing: Use water hose to test completed mock-up for water resistance and performance of weep system.
- F. Obtain Architect's approval of mock-up prior to beginning stone veneer installation.
- G. Retain mock-up during construction as quality standard. Completely remove when work is acceptable.

1.8 Pre-Installation Conference

- A. Project Management and Coordination: Convene a pre-installation conference at the site prior to commencing masonry veneer.
- B. Require attendance of entities directly concerned with exterior wall construction and masonry veneer.
- C. Review at meeting:
 - 1. Erection and removal of scaffolding.
 - 2. Protection of non-masonry building surfaces and adjacent elements.
 - 3. Installation procedures and manufacturer's recommendations.
 - 4. Availability of system materials.
 - 5. Preparation and acceptance of substrate.
 - 6. Protection of installed items and finishes.
 - 7. Approved mock-up to be used as measure of acceptance.
 - 8. Weather conditions forecast.
 - 9. Other items related to successful execution of work.

1.9 Handling

- A. Deliver, store, and handle stone units in a manner to avoid chipping, breakage, marring faces, and contact with contaminating materials.
- B. Store stone on wood pallets and store on dry, level surface. Cover pallets with tarps. Do not stack pallets or allow them to sit in standing water.
- C. Store mortar and cementitious materials in dry, weathertight enclosures with temperature maintained between [40 degrees F] [4 degrees C] to [110 degrees F] [43 degrees C].

1.10 Environmental requirements

- A. Maintain materials and surrounding air temperature to following limits prior to, during, and 24 hours after completion of masonry veneer [and application of water repellent coating]:
 - 1. Minimum [40 degrees F] [4 degrees C]
 - 2. Maximum [90 degrees F] [32 degrees C]
- B. Hot and Cold Weather Requirements: In accordance with ACI 530.1/ASCE 6/TMS 602 Specifications for Masonry Structures.
- C. When ambient temperature falls below [50 degrees F] [10 degrees C], heat mortar mixing water.

PART 2 PRODUCTS

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2.1 Acceptable Manufacturers

- A. Acceptable Stone Quarrier: Buechel Stone Corporation 800.236.4473
 - www.buechelstone.com
- B. [Requests for substitutions will be considered in accordance with provisions of Section 01 25 13 Product Substitution Procedures: Architect reserves the right to reject substitution requests based on natural stone color and texture, even though size, shapes, and properties are equivalent.] [Substitutions are not acceptable.]

2.2 Veneer Stone

A. Ashlar Line

1.Barnwood Blue Ashlar

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 6 inches] [13 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: gray, dark grays, charcoals, whites, blues, tans, with occasional greens, buffs and blacks.
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

2.Black Frost Ashlar

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 6 inches] [13 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: blacks, charcoals, grays, blues, whites, with occasional greens, buffs, and browns
- c. Color consistency: somewhat consistent
- d. Ends: squares
- e. Properties for granite complying with ASTM C615:

- 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
- Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.
- 3. Cabin Creek River Rock

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- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 12 inches] [12 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range:
 - 1) 65 percent gray to charcoal with occasional mauve
 - 2) 25 percent brown, buff, orange, yellow, red, and rust
 - 3) 10 percent purple, lavender, mauve, gray, buff, blue, cream, and brown
- c. Color consistency: somewhat consistent
- d. Finish: tumbled
- e. Ends: somewhat square
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 4. Castano Suede Ashlar
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: burnt tones, browns, and tans
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 5. Chilton Cambrian Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:

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- 1) 75 percent gray to charcoal with occasional mauve
- 2) 25 percent brown, buff, orange, yellow, red, and rust
- c. Color consistency: somewhat consistent
- d. Ends: square

e.

- Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 6. Chilton Country Squire
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: Gray to charcoal with occasional mauve
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Chilton Country Squire Jumpers
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [6 to 10 inches] [152 to 254 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: Gray to charcoal with occasional mauve
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

8. Chilton Custom Country Blend

a. Nominal size range:

- 1) Length: [6 to 42 inches] [152 to 1006 mm]
- 2) Height: [1/2 to 12 inches] [13 to 203 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range:
 - 1) 65 percent gray to charcoal with occasional mauve
 - 2) 25 percent brown, buff, orange, yellow, red, and rust
 - 3) 10 percent purple, lavender, mauve, gray, buff, blue, cream, and brown
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 9. Chilton Kensington Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 12 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 70 percent gray to charcoal with occasional mauve
 - 2) 30 percent purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

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10. Chilton Rustic

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown, buff, orange, yellow, red, and rust
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 11. Chilton Rustic No Reds
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown, buff, orange, yellow, and rust
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 12. Chilton Sedona Rustic
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: red, rust, burgundy, and occasional tans
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with

ASTM C97: 3 percent.

- 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 13. Colonial Gray River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: Gray to charcoal with occasional mauve
 - c. Color consistency: consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 14. Cream City River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to white
 - c. Color consistency: consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:

- 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
- 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

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15. Desert Ashlar

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown, tan, gold, and occasional cream
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 16. Desert Ashlar River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown, tan, gold, and occasional cream
 - c. Color consistency: consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 17. Fond du Lac Cambrian Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 75 percent light gray to white

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- 2) 25 percent brown, buff, tan, and gold
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 18. Fond du Lac Country Squire
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - Color range: light gray to white
 - c. Color consistency: consistent
 - d. Ends: square

b.

- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 19. Fond du Lac Country Squire Jumpers
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [6 to 10 inches] [152 to 254 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to white
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with
ASTM C 880: 8.27 Mpa.

- 20. Fond du Lac Custom Country Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 12 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 65 percent light gray to white
 - 2) 25 percent brown, buff, tan, and gold
 - 3) 10 percent gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 21. Fond du Lac Kensington Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 12 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 70 percent light gray to white
 - 2) 30 percent gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent

- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.
- 22. Fond du Lac Rustic
 - a. Nominal size range:

- 1) Length: [6 to 42 inches] [152 to 1006 mm]
- 2) Height: [1/2 to 8 inches] [13 to 203 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown, buff, tan, and gold
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

23.Highland Scotch Ashlar

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1/2 to 6 inches] [13 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: buffs, tans, golds, oranges, browns, grays, yellows, rusts, and whites with occasional burgundy and black
- c. Color consistency: somewhat consistent
- d. Ends: squares
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 24. Midnight Country Squire
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 610 mm]
 - 2) Height: [1/2 to 6 inches] [13 to 152 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray to black
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 25. Mill Creek Country Squire
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to buff with occasional blue veins
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 26. Mill Creek Kensington Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 12 inches] [13 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 70 percent light gray to buff with occasional blue veins
 - 2) 30 percent brown to buff
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 27. Prairie Dust Ashlar
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]

- b. Color range: white to buff with occasional veining
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 28. Prairie Dust Ashlar River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: white to buff with occasional veining
 - c. Color consistency: consistent
 - d. Ends: somewhat square
 - e. Finish: tumbled
 - f. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

29.Spalted Oak Ashlars

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 533 mm]
 - 2) Height: [1/2 to 6 inches] [13 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, tans, charcoals, whites, buffs, blues, dark grays, beiges, with occasional oranges, browns, and black
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

30. Stratford Cross

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range:
 - 1) 50 percent light gray to white
 - 2) 50 percent gray to charcoal with occasional mauve
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

31. Tennessee Splitface

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1006 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: orange, pink, and cream with swirls
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 32. Trenton Buff River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 503 mm]
 - 2) Height: [1/2 to 8 inches] [13 to 203 mm]

- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: light gray to buff with occasional blue veins
- c. Color consistency: consistent
- d. Finish: tumbled
- e. Ends: square
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

B. Castle Rock Line

- 1. Antique Bronze
 - a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [2 to 6 inches] [50 to 152 mm]
 - b. Color range: buff, brown, gray, and red
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 2. Antique Copper
 - a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [2 to 6 inches] [50 to 152 mm]
 - b. Color range: burnt tones, browns, buffs, black, red, mustard, occasional moss and lichens
 - c. Color consistency: somewhat consistent
 - d. Ends: somewhat square

- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

3.Barnwood Blue Castle Rock

- a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, dark grays, charcoals, whites, blues, tans, with occasional greens, buffs and blacks
- c. Color consistency: somewhat consistent
- d. Ends: somewhat square
- a. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

4.Black Frost Castle Rock

- a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [01 to 304 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: blacks, charcoals, grays, blues, whites, with occasional greens, buffs, and browns
- c. Color consistency: somewhat consistent
- d. Ends: somewhat square
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa

- 5. Buff Gray Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]

- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: shades of gray, blue, buff, cream, and brown
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 6. Buff Gray Country Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: shades of gray, blue, buff, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: random angles
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Castano Suede Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: burnt tones, browns, and tans
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance

with ASTM C170: 68.9 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 8. Charcoal Cobble Creek
 - a. Nominal size range:
 - 1) Length: [6 to 18 inches] [152 to 457 mm]
 - 2) Height: [5 to 10 inches] [127 to 254 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: Gray to charcoal with occasional mauve
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

9. Desert Castle Rock

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown to tan
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 10. English Tudor
 - a. Nominal size range:
 - 1) Length: [3 to 14 inches] [76 to 355 mm]
 - 2) Height: [3 to 5 inches] [76 to 127 mm]

- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: gray, blue, buff, mauve, lavender, purple, charcoal, cream, and brown
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 11. Fond du Lac Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 12. Fond du Lac Country Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: random angles
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance

with ASTM C170: 55 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 13. Full Color Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 14. Full Color Country Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: random angles
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 15. Gray Cobble Creek
 - a. Nominal size range:
 - 1) Length: [6 to 18 inches] [152 to 457 mm]

- 2) Height: [5 to 10 inches] [127 to 254 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: light gray to white
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

16.Highland Scotch Castle Rock

- a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: buffs, tans, golds, oranges, browns, grays, yellows, rusts, and whites with occasional burgundy and black
- c. Color consistency: somewhat consistent
- d. Ends: somewhat square
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.
- - 17. Midnight Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray to black
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with

ASTM C 880: 8.27 Mpa.

- 18. Mill Creek Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown to buff
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 19. Sahara Blue Castle Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown to buff with blue veining and some light gray color
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

20. Shady Oak

- a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]

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- b. Color range: tan, cream, gold, orange, and occasional black
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 21. Shady Oak River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: tan, cream, gold, orange, and occasional black
 - c. Color consistency: somewhat consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

22.Spalted Oak Castle Rock

- a. Nominal size range:
 - 1) Length: [4 to 24 inches] [101 to 609 mm]
 - 2) Height: [4 to 12 inches] [101 to 304 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, tans, charcoals, whites, buffs, blues, dark grays, beiges, with occasional oranges, browns, and black
- c. Color consistency: somewhat consistent
- d. Ends: somewhat square
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

3)Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa ****** ************************

- Stratford Cross Cobble Creek 23.
 - Nominal size range: a.
 - 1) Length: [6 to 18 inches] [152 to 457 mm]
 - Height: [5 to 10 inches] [127 to 254 mm] 2)
 - Width: [3 to 5 inches] [76 to 127 mm] 3)
 - Color range: b.
 - 50 percent light gray to white 1)
 - 2) 50 percent gray to charcoal with occasional mauve
 - Color consistency: consistent c.
 - Ends: square d.
 - Properties for limestone complying with ASTM C568: e.
 - Maximum absorption rate tested in accordance with 1) ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM 2) C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - Minimum flexural strength tested in accordance with 4) ASTM C 880: 8.27 Mpa.

Stone Panels Line C.

b.

- Bluestone Panels thermaled finish 1.
 - Size range: a.
 - Length: [23 5/8 inches] [600 mm] 1)
 - Height: [11 5/8 inches] [295 mm] 2)
 - Width: [3 5/8 inches] [92 mm] 3)
 - Color range: green to blue to brown.
 - c. Color consistency: somewhat consistent
 - Ends: square d.
 - Properties for quartzitic sandstone complying with ASTM e. C616:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM 2) C97: 2,560 kg per cubic meter.
 - Minimum compressive strength tested in accordance 3) with ASTM C170: 55 Mpa.
 - Minimum flexural strength tested in accordance with 4) ASTM C 880: 8.27 Mpa.

Chilton Buff Gray Panels

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2.

- a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - Color range: shades of gray, blue, buff, cream, and brown
- c. Color consistency: somewhat consistent
- d. Ends: square

b.

- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 3. Chilton Full Color Panels
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 4. Chestnut Panels sanded finish
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range: wide range of color movement. Colors can range from chestnut to walnut. Swirling, movement of color within a piece are common
 - c. Color consistency: inconsistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:

- 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
- 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 5. Fond du Lac Panels
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 6. Harvest Straw Panels sanded finish
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range mottled with shades of cream and buff; occasional flecks of brown; variegated
 - c. Color consistency: somewhat consistent

- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Indiana Full Color Range Panels sanded finish
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range gray, buff, silver-buff, and variegated
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 8. Mill Creek Panels
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown to buff
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 9. Silverdale Panels sanded finish
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range: yellow, cream to slight buff. Occasional swirls are common
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:

- 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
- Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

10. St. Croix

- a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range: buff to beige and is often mottled in appearance
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 11. Texas Cream sanded finish
 - a. Size range:
 - 1) Length: [23 5/8 inches] [600 mm]
 - 2) Height: [11 5/8 inches] [295 mm]
 - 3) Width: [3 5/8 inches] [92 mm]
 - b. Color range: light buff to cream
 - c. Color consistency: consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

D. Dimensional Line

- 1. Chilton Colonial Pavers 5" x 5"
 - a. Nominal size range:
 - 1) Length: [5 inches] [127 mm]
 - 2) Height: [5 inches] [5 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 2. Chilton Colonial Pavers 5" x 10"
 - a. Nominal size range:
 - 1) Length: [10 inches] [254 mm]
 - 2) Height: [5 inches] [5 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 3. Chilton Tailored Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:

- a) 20 percent [2 ¹/₄ inches] [57 mm]
- b) 40 percent [5 inches] [127 mm]
- c) 30 percent [7 ³/₄ inches] [196 mm]
- d) 10 percent [10 ½ inches] [266 mm]
- e) additional heights available:
 - 1) [13 ¹/₄ inches] [336 mm]
 - 2) [16 inches] [406 mm]
 - 3) [18³/₄ inches] [476 mm]
 - 4) [21 ½ inches] [546 mm]
 - 5) Specified [_____
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 4. Chilton Tailored Blend 50% Rockfaced
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent $[10 \frac{1}{2} \text{ inches}] [266 \text{ mm}]$
 - e) additional heights available:
 - 1) [13 ¹/₄ inches] [336 mm]
 - 2) [16 inches] [406 mm]
 - 3) [18³/₄ inches] [476 mm]
 - 4) [21 ¹/₂ inches] [546 mm]
 - 5) Specified []
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
 - c. Color consistency: somewhat consistent
 - d. Finish: 50 percent rockfaced
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM

C97: 2,560 kg per cubic meter.

- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 5. Desert Tailored Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ¹/₂ inches] [266 mm]
 - e) additional heights available:
 - 1) [13 ¼ inches] [336 mm]
 - 2) [16 inches] [406 mm]
 - 3) [18 ³/₄ inches] [476 mm]
 - 4) [21 ¹/₂ inches] [546 mm]
 - 5) Specified [_____
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown to tan
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.
- 6. Desert Tailored Blend River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent $[10 \frac{1}{2} \text{ inches}] [266 \text{ mm}]$
 - e) Specified []

- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown to tan
- c. Color consistency: somewhat consistent

- d. Finish: tumbled
- e. Ends: somewhat square
- f. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

7. Fond du Lac Colonial Pavers 5" x 5"

a. Nominal size range:

- 1) Length: [5 inches] [127 mm]
- 2) Height: [5 inches] [5 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: gray, light gray, buff, and white
- c. Color consistency: consistent
- d. Finish: tumbled
- e. Ends: square
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 8. Fond du Lac Colonial Pavers 5" x 10"
 - a. Nominal size range:
 - 1) Length: [10 inches] [254 mm]
 - 2) Height: [5 inches] [5 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: consistent
 - d. Finish: tumbled
 - e. Ends: square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance

with ASTM C170: 55 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 9. Fond du Lac Tailored Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¼ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ½ inches] [266 mm]
 - e) additional heights available:
 - 1) [13 ¼ inches] [336 mm]
 - 2) [16 inches] [406 mm]
 - 3) [18³/₄ inches] [476 mm]
 - 4) [21 ½ inches] [546 mm]
 - 5) Specified [_____]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: square
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 10. Fond du Lac Tailored Blend 50% Rockfaced
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ½ inches] [266 mm]
 - e) additional heights available:
 - 1) [13 ¼ inches] [336 mm]
 - 2) [16 inches] [406 mm]
 - 3) [18³/₄ inches] [476 mm]
 - 4) [21 ½ inches] [546 mm]
 - 5) Specified [_____
 - 3) Width: [3 to 5 inches] [76 to 127 mm]

- b. Color range: gray, light gray, buff, and white
- c. Color consistency: somewhat consistent
- d. Finish: 50 percent rockfaced
- e. Ends: square

f.

- Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 11. Indiana Dimensional
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ½ inches] [266 mm]

- e) Specified [
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- Color range: gray, buff, and silver-buff
- c. Color consistency: consistent
- d. Ends: square

b.

- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 12. Mill Creek Tailored Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height:
 - a) 20 percent [2 ¹/₄ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ½ inches] [266 mm]
 - e) additional heights available:
 - 1) [13 ¼ inches] [336 mm]

- 2) [16 inches] [406 mm]
- 3) [18³/₄ inches] [476 mm]
- 4) [21 ½ inches] [546 mm]
- 5) Specified [_____
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown to buff
- c. Color consistency: consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 13. Palace Blend River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height:
 - a) 20 percent [2 ¼ inches] [57 mm]
 - b) 40 percent [5 inches] [127 mm]
 - c) 30 percent [7 ³/₄ inches] [196 mm]
 - d) 10 percent [10 ½ inches] [266 mm]
 - e) Specified []
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Finish: tumbled
 - e. Ends: somewhat square
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.
- - 14. Victorian Blend River Rock
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height:
 - a) 20 percent [2 ¼ inches] [57 mm]

- b) 40 percent [5 inches] [127 mm]
- c) 30 percent [7 ³/₄ inches] [196 mm]
- d) 10 percent [10 ¹/₂ inches] [266 mm]

1

- e) Specified [_____
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: purple, lavender, mauve, gray, buff, blue, cream, and brown
- c. Color consistency: somewhat consistent
- d. Finish: tumbled
- e. Ends: somewhat square
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

15.Fond du Lac Shabby-Chic Tailored Blend

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 533 mm]
 - 2) Height: [2 1/4 to 7 3/4 inches] [57 to 127 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: light gray to white
- c. Color consistency: somewhat consistent
- d. Ends: square
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa

16. Chilton Shabby-Chic Tailored Blend

- a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 533 mm]
 - 2) Height: [2 1/4 to7 3/4 inches] [57 to 196 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray to charcoal with occasional mauves
 - c. Color consistency: somewhat consistent
- d. Ends: square; all sides sawn
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with

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ASTM C97: 3 percent.

- 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

E. Fieldledge Line

1.Barnwood Blue Siena

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [2 to 6 inches] [50 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, dark grays, charcoals, whites, blues, tans, with occasional greens, buffs, tans, and blacks
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

2.Black Frost Siena

- DIACK FIOSE SIEIIA
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [2 to 6 inches] [50 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
 - b. Color range: blacks, charcoals, grays, blues, whites, with occasional greens, buffs, and browns
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 3. Autumn Siena
 - a. Nominal size range:

- 1) Length: [4 to 16 inches] [101 to 406 mm]
- 2) Height: [2 to 8 inches] [50 to 203 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: buff, gray to black, orange, pink, and cream with swirls
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 4. Chilton Heritage Blend
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [2 to 12 inches] [50 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray to charcoal with occasional mauve, brown, buff, orange, yellow, red, rust, blue, lavender, purple, and charcoal
 - c. Color consistency: inconsistent
 - d. Ends: random

e.

- Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 5. Chilton Woodlake Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [1/2 to 16 inches] [50 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 70 percent gray to charcoal with occasional mauve
 - 2) 30 percent purple, lavender, mauve, gray, buff, blue, and brown

- c. Color consistency: somewhat consistent
- d. Ends: somewhat square with 30 percent irregular
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

6. Desert Colonial Blend

a. Nominal size range:

- 1) Length: [6 to 42 inches] [152 to 1066 mm]
- 2) Height: [1/2 to 16 inches] [50 to 406 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range:
 - 1) 75 percent brown to tan
 - 2) 30 percent white to buff with occasional veining
- c. Color consistency: somewhat consistent
- d. Ends: somewhat square with 25 percent irregular
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Fond du Lac Heritage Blend
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [2 to 12 inches] [50 to 304 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to white, brown, buff, tan, and gold
 - c. Color consistency: inconsistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance

with ASTM C170: 55 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 8. Fond du Lac Siena
 - a. Nominal size range:
 - 1) Length: [6 to 16 inches] [152 to 406 mm]
 - 2) Height: [2 to 8 inches] [50 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to white
 - c. Color consistency: consistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 9. Fond du Lac Woodlake Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [1/2 to 16 inches] [50 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 70 percent light gray to white
 - 2) 30 percent gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: somewhat square with 30 percent irregular
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

10.Highland Scotch Siena

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]

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- 2) Height: [2 to 6 inches] [50 to 152 mm]
- 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: buffs, tans, golds, oranges, browns, grays, yellows, rusts, and whites with occasional burgundy and black
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 11. Mill Creek Colonial Blend
 - a. Nominal size range:
 - 1) Length: [6 to 42 inches] [152 to 1066 mm]
 - 2) Height: [1/2 to 16 inches] [50 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range:
 - 1) 75 percent brown to buff
 - 2) 30 percent light gray to buff with occasional blue veins
 - c. Color consistency: somewhat consistent
 - d. Ends: somewhat square with 25 percent irregular
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

12. Mill Creek Siena

b.

- a. Nominal size range:
 - 1) Length: [6 to 16 inches] [152 to 406 mm]
 - 2) Height: [2 to 8 inches] [50 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - Color range: light gray to buff with occasional blue veins
- c. Color consistency: consistent
- d. Ends: random
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance

with ASTM C170: 55 Mpa.

4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 13. Sahara Blue Siena
 - a. Nominal size range:
 - 1) Length: [6 to 16 inches] [152 to 406 mm]
 - 2) Height: [2 to 8 inches] [50 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light gray to buff with occasional blue veins
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

14.Spalted Oak Siena

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [2 to 6 inches] [50 to 152 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, tans, charcoals, whites, buffs, blues, dark grays, beiges, with occasional oranges, browns, and black
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 15. Tamarack Siena
 - a. Nominal size range:
 - 1) Length: [6 to 16 inches] [152 to 406 mm]
 - 2) Height: [2 to 8 inches] [50 to 203 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: light buff to dark brown, ranges of green and

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light red. Stone has occasional veins

- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 16. Whispering Pines Pioneer Blend
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]
 - 2) Height: [1 to 16 inches] [25 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: greens, blues, and browns
 - c. Color consistency: somewhat consistent
 - d. Ends: random with 25 percent irregular shapes
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

F. Ledgestone Line

1.Barnwood Blue Ledgestone

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [1/2 to 3 inches] [13 to 76 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, dark gray, charcoals, whites, blues, tans, with occasional greens, buffs and blacks
- c. Color consistency: somewhat consistent
- d. Ends: random
 - e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

2.Black Frost Ledgestone

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [1/2 to 3 inches] [13 to 76 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: blacks, charcoals, grays, blues, whites with occasional greens, buffs, and browns
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 3. Chilton Ledgestone
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [100 to 400 mm]
 - 2) Height: [3/4 to 2 1/4 inches] [19 to 57 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, mauve, purple, lavender, buff, blue, brown, yellow, red, and rust
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 4. Chilton Rustic Ledgestone
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [100 to 400 mm]
 - 2) Height: [3/4 to 2 1/4 inches] [19 to 57 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown, buff, orange, yellow, red, and rust
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.

- Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 5. Cinnamon Bark Ledgestone
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [100 to 400 mm]
 - 2) Height: [3/4 to 2 1/4 inches] [19 to 57 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: silver, gold, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for dimensional slate complying with ASTM C629:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.25 percent.

- 6. Fond du Lac Ledgestone
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [100 to 400 mm]
 - 2) Height: [3/4 to 2 1/4 inches] [19 to 57 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Ends: random
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Fond du Lac Rustic Ledgestone
 - a. Nominal size range:
 - 1) Length: [4 to 16 inches] [100 to 400 mm]
 - 2) Height: [3/4 to 2 1/4 inches] [19 to 57 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown, buff, tan, and gold
 - c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

8.Highland Scotch Ledgestone

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [1/2 to 3 inches] [13 to 76 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
 - b. Color range: buffs, tans, golds, oranges, browns, grays, yellows, rusts, and whites with occasional burgundy and black
 - c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

9.Spalted Oak Ledgestone

- a. Nominal size range:
 - 1) Length: [4 to 16 inches] [102 to 406 mm]
 - 2) Height: [1/2 -3 inches] [13 to 76 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, tans, charcoals, whites, buffs, blues, dark grays, beiges, with occasional oranges, browns, and black
- c. Color consistency: somewhat consistent
- d. Ends: random
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 10. Whispering Pines Ledgestone
 - a. Nominal size range:
 - 1) Length: [6 to 24 inches] [152 to 609 mm]

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- 2) Height: [1 to 4 inches] [25 to 101 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: greens, blues, and browns
- c. Color consistency: consistent
- d. Ends: random
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

G. Mosaic Line

1. Antique Bronze Fieldstor

- Antique Bronze Fieldstone a. Nominal size range:
 - 1) Length: [3 to 24 inches] [76 to 609 mm]

- 2) Height: [3 to 24 inches] [76 to 609 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: buff, brown, gray, and red
- c. Color consistency: somewhat consistent
- d. Ends: irregular free form stone
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 2. Antique Copper Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 6 inches] [76 to 152 mm]
 - b. Color range: burnt tones, browns, buffs, black, red, mustard, occasional moss and lichen
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular free form stone

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- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

3.Barnwood Blue Webwall

- a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, dark grays, charcoals, whites, blues, tans with occasional greens, buffs, and blacks
- c. Color consistency: somewhat consistent
- d. Ends: irregular
 - e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

Minimum compressive strength tested in accordance with ASTM C170: 131

4.Black Frost Webwall

- a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 203 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: blacks, charcoals, grays, blues, whites, with occasional greens, buffs, and browns
- c. Color consistency: somewhat consistent
- d. Ends: irregular
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

5. Blue Ridge River Rock

- J. Dide Ridge River Rock
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]

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- b. Color range: purple, lavender, mauve, gray, buff, blue, and brown
- c. Color consistency: somewhat consistent
- d. Finish: tumbled
- e. Ends: irregular free form stone
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 6. Byron River Rock
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: consistent
 - d. Finish: tumbled
 - e. Ends: irregular free form stone
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 7. Castano Suede Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: burnt tones, browns, and tans
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular free form stone
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.

- 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 8. Chilton Antique Webwall
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: purple, lavender, mauve, gray, buff, blue, and brown
 - c. Color consistency: inconsistent
 - d. Finish: rockfaced

f.

- e. Ends: irregular free form stone
 - Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

9. Chilton Webwall

- a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: purple, lavender, mauve, gray, buff, blue, and brown
- c. Color consistency: inconsistent
- d. Ends: irregular free form stone
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

10. Desert Webwall

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- a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
- b. Color range: brown to tan
- c. Color consistency: somewhat consistent
- d. Ends: irregular free form stone
- e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 11. Desert Webwall River Rock
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: brown to tan
 - c. Color consistency: somewhat consistent
 - d. Finish: tumbled
 - e. Ends: irregular free form stone
 - f. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 12. Door County Cobbles [4"-8"] [6"-12"]
 - a. Nominal size range:
 - 1) Length:
 - a) 4"-8" [4 to 8 inches] [101 to 203 mm]
 - b) 6"-12" [6 to 12 inches] [152 to 304 mm]
 - 2) Height:
 - a) 4"-8" [4 to 8 inches] [101 to 203 mm]
 - b) 6"-12" [6 to 12 inches] [152 to 304 mm]
 - 3) Width:

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- a) 4"-8" [4 to 8 inches] [101 to 203 mm]
- b) 6"-12" [6 to 12 inches] [152 to 304 mm]
- b. Color range: cream to white with black
- c. Color consistency: consistent
- d. Ends: round
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 13. Fond du Lac Antique Webwall
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: gray, light gray, buff, and white
 - c. Color consistency: somewhat consistent
 - d. Finish: rockfaced
 - e. Ends: irregular free form stone
 - f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

b.

- 14. Fond du Lac Webwall
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]

- 2) Height: [3 to 16 inches] [76 to 406 mm]
- 3) Width: [3 to 5 inches] [76 to 127 mm]
- Color range: gray, light gray, buff, and white
- c. Color consistency: inconsistent
- d. Ends: irregular free form stone
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

15. Glacier River Rock

a.

- Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 6 inches] [76 to 152 mm]
- b. Color range: charcoal, buff, and tan
- c. Color consistency: somewhat consistent
- d. Ends: irregular free form stone
- e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 16. Granite Cobbles [4"-8"] [6"-12"]
 - a. Nominal size range:
 - 1) Length:
 - a) 4"-8" [4 to 8 inches] [101 to 203 mm]
 - b) 6"-12" [6 to 12 inches] [152 to 304 mm]
 - 2) Height:
 - a) 4"-8" [4 to 8 inches] [101 to 203 mm]
 - b) 6"-12" [6 to 12 inches] [152 to 304 mm]
 - 3) Width:
 - a) 4"-8" [4 to 8 inches] [101 to 203 mm]
 - b) 6"-12" [6 to 12 inches] [152 to 304 mm]
 - b. Color range: red, pinks, black, and blues
 - c. Color consistency: consistent
 - d. Ends: round
 - e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

17.Highland Scotch Webwall

- a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: buffs, tans, golds, oranges, browns, grays, yellows, rusts, and whites with occasional burgundy and black
- c. Color consistency: somewhat consistent
- d. Ends: irregular
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.

- 18. Mill Creek Webwall
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 6 inches] [76 to 152 mm]
 - b. Color range: brown to buff
 - c. Color consistency: consistent
 - d. Ends: irregular free form stone
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- - 19. Oak Grove River Rock
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 6 inches] [76 to 152 mm]
 - Color range: brown to buff
 - c. Color consistency: consistent
 - d. Finish: tumbled

b.

- e. Ends: irregular free form stone
- f. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM

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C97: 2,560 kg per cubic meter.

- 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
- 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 20. Ozark Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 12 inches] [76 to 304 mm]
 - 2) Height: [3 to 12 inches] [76 to 304 mm]
 - 3) Width: [3 to 6 inches] [76 to 152 mm]
 - b. Color range: burnt brown, tan, black, gray and red
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular free form stone
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 21. Pearl Gray
 - a. Nominal size range:
 - 1) Length: [3 to 18 inches] [76 to 457 mm]
 - 2) Height: [3 to 18 inches] [76 to 457 mm]
 - 3) Width: [3 to 8 inches] [76 to 203 mm]
 - b. Color range: gray, charcoal, and occasional yellows
 - c. Color consistency: consistent
 - d. Ends: irregular free form stone
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

22.Spalted Oak Webwall

a. Nominal size range:

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- 1) Length: [3 to 16 inches] [76 to 406 mm]
- 2) Height: [3 to 16 inches] [76 to 406 mm]
- 3) Width: [4 to 6 inches] [102 to 152 mm]
- b. Color range: grays, tans, charcoals, whites, buffs, blues, dark grays, beiges, with occasional oranges, browns, and black
- c. Color consistency: somewhat consistent
- d. Ends: irregular
- e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa

- 23. Split Door County Cobbles
 - a. Nominal size range:
 - 1) Length: [3 to 18 inches] [76 to 457 mm]
 - 2) Height: [3 to 18 inches] [76 to 457 mm]
 - 3) Width: [3 to 6 inches] [76 to 127 mm]
 - b. Color range: cream to white with black
 - c. Color consistency: consistent
 - d. Ends: irregular
 - e. Properties for limestone complying with ASTM C568:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 55 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 24. Split Granite Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 18 inches] [76 to 457 mm]
 - 2) Height: [3 to 18 inches] [76 to 457 mm]
 - 3) Width: [3 to 6 inches] [76 to 127 mm]
 - b. Color range: red, pinks, black, and blues
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular
 - e. Properties for granite complying with ASTM C615:
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 0.40 percent.
 - Minimum density tested in accordance with ASTM C97: 2,560 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 131 Mpa.

- 25. Tamarack Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 24 inches] [76 to 609 mm]
 - 2) Height: [3 to 24 inches] [76 to 609 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: buff, tan, yellows, and lavenders
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular free form stone
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

- 26. Whispering Pines Fieldstone
 - a. Nominal size range:
 - 1) Length: [3 to 16 inches] [76 to 406 mm]
 - 2) Height: [3 to 16 inches] [76 to 406 mm]
 - 3) Width: [3 to 5 inches] [76 to 127 mm]
 - b. Color range: green, blue, and brown
 - c. Color consistency: somewhat consistent
 - d. Ends: irregular free form stone
 - e. Properties for quartzitic sandstone complying with ASTM C616.
 - 1) Maximum absorption rate tested in accordance with ASTM C97: 3 percent.
 - 2) Minimum density tested in accordance with ASTM C97: 2,400 kg per cubic meter.
 - 3) Minimum compressive strength tested in accordance with ASTM C170: 68.9 Mpa.
 - 4) Minimum flexural strength tested in accordance with ASTM C 880: 8.27 Mpa.

2.3 Special Shapes

A. Provide shapes as indicated on the Drawings and as follows:1. [Arches]

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- 2. [Cornerstones]
- 3. [Edgestones]
- 4. [Headers]
- 5. [Keystones]
- 6. [Quoins]
- 7. [Ledges]
- 8. [Medallions]
- 9. [Sills]
- 10. [Other ____]
- B. Material shall be furnished in sizes indicated plus or minus [1/2 inch] [12 mm].
- C. Color shall be:
 - 1. [Bluestone]
 - 2. [Caramel Frappuccino]
 - 3. [Chestnut]
 - 4. [Chilton]
 - 5. [Desert]
 - 6. [Fond du Lac]
 - 7. [Frontier Gray]
 - 8. [Indiana Buff]
 - 9. [Mill Creek]
 - 10. [Rustic Buff]
 - 11. [Prairie Dust]
 - 12. [Silverdale]
 - 13. [Smoked Fog]
 - 14. [Spiced Linen]
 - 15. [St. Croix]
 - 16. [St. Mary Cream]
 - 17. [Texas Cream]
 - 18. [Match the veneer stone]
 - 19. [____]

2.4 Weep System

- A. Provide complete weep system to separate stone veneer from structural back-up wall and provide means to remove water entering air cavity and allow wall to vent properly; [EMC 3639] [EMC-3639XL] Weep System by Buechel Stone Corporation.
- B. System Components: Fabricated from plastic extrusions
 - 1. Collection and drainage membrane: corrugated plastic sheet with permeable fabric facing to be placed vertically and continuously behind stone veneer on structural back-up. [EMC 3639] [EMC-3639XL] by Buechel Stone Corporation.
 - Weeps: Cellular plastic material placed at base of stone veneer wall to receive water from collection and drainage membrane and convey it horizontally to weep strips spaced at [16 inches] [406 mm] [_____] and penetrating through base mortar bed; [SCW-3639] **OR** [WOW-3639] by Buechel Stone Corporation.
 - 3. Material properties:
 - a. Water vapor transmission tested in accordance with ASTM E96: 13.8 grains per hour per square foot.
 - b. Permeability tested in accordance with ASTM E96: 13.7

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perm-inches.

- c. Compressive strength tested in accordance with ASTM D1612: 30 PSI at 10 percent strain.
- d. Flexural breaking load tested in accordance with ASTM D4632: 136 pounds minimum
- e. Puncture resistance tested in accordance with ASTM D4833: 48.7 pounds.

2.5 Reinforcement and Wall Ties

- A. Reinforcing bars: [ASTM A615 (S1), 60 ksi yield grade.] [As specified in Section _____]
- B. Joint reinforcement: Truss type, cold-drawn steel conforming to ANSI/ASTM A82, 9 gauge minimum side and cross rods.
- C. Masonry anchors: Formed from [22 gauge ASTM A153 galvanized steel wire] [22 gauge ASTM A580 stainless steel wire].
 - 1. Adjustable eye and pintel type with rectangular wire shape and hook connection for non-aligned mortar joints.
 - 2. Bent strap anchors, [1 1/4 inches] [32 mm] wide, length as required.

2.6 Mortar

- A. Mortar Cement: Complying with ASTM C91:
 - 1. Type S
 - 2. Color [gray] [white] [____]
- B. Portland Cement: Complying with ASTM C150:
 - 1. Type I
 - 2. Color [gray] [white] [_____]
- C. Mortar Aggregate: Complying with ASTM C144, standard masonry type.
- D. Hydrated Lime: Complying with ASTM C207:
 - 1. Type S
 - 2. Type SA
- E. Water: Clean and potable.
- F. Mortar mix: ASTM C270 [1,000] [_____] PSI Type S using the Property Method.
- G. Color: Mineral oxide pigment. Color as selected by Architect.
- H. Mix mortar ingredients in accordance with ASTM C270. Mix only in quantities needed for immediate use.
 - 1. Do not use anti-freeze compounds.
 - 2. Use mortar within two hours after mixing.

2.7 Accessories

- A. Substrate: [CDX exterior grade plywood] [Plywood as specified in Section 06 10 00 – Rough Carpentry] [Moisture resistant gypsum sheathing complying with ASTM C79] [Gypsum sheathing as specified in Section 09210 – Gypsum Board Assemblies].
 - 1. Thickness: [[1/2] [5/8] [3/4] inch] [[13] [16] [19] mm].
- B. Underlayment: [Cold applied, self-adhering waterproof membrane composed of polyethylene film coated one side with rubberized asphalt adhesive] [30 pounds unperforated asphalt saturated felt complying with ASTM D226.] [_____].
- C. Setting buttons and shims: Plastic.

D. Flashings: Provide [copper] [galvanized sheet metal] [stainless steel] [self-adhered rubber] [_____] flashing for base of air cavity, at door and window lintels, window sills, and other locations as detailed on Drawings and reviewed shop drawings and as required to prevent water penetration and provide weathertight, complete, functional stone veneer installation.

1. Type: [_____] [As specified in Section 07 62 00 – Flashing and Sheet Metal.]

E. Sealants: Provide sealants and backing material for perimeter and control joints as detailed on Drawings and reviewed shop drawings and as required to provide a weathertight stone veneer installation.
1. Type: [_____] [As specified in Section 07 92 00 – Joint Sealants.]

PART 3 EXECUTION

3.1 Preparation

- A. Coordinate installation of stone with installation of other components to ensure timely execution of work and sequencing and to ensure sound, attractive, weather tight exterior wall system.
- B. Prior to starting installation, inspect project conditions:
 - 1. Verify that back-up wall construction is complete, rigid, plumb, and ready to receive stone.
 - 2. Verify that door and window openings and other penetrations are accurately located and fixed and adequately prepared for application of stone veneer.
 - 3. Verify built-in items are properly located and ready for roughing into masonry. Ensure built-in items are free of rust, ice, mud, and other foreign matter and that ferrous items are primed or galvanized.
 - 4. Verify that mechanical and electrical services within walls have been installed, tested, and approved.
 - 5. Verify that [plywood] [gypsum] sheathing substrate is:
 - a. Securely installed with ends and edges over firm bearing.
 - b. Clean, dry, smooth, free of voids, sharp edges, loose splinters, oil, grease, and other materials.
 - 6. Verify fasteners are flush with surface of substrate.
- C. Report deficiencies to Architect and do not proceed with stone installation until all deficiencies have been addressed.

3.2 Installation

- A. Install masonry and mortar in accordance with ACI 530.1/ASCE 6/TMS 602 Specifications for Masonry Structures.
- B. Underlayment: Install [asphalt felt underlayment] [self-adhered waterproofing underlayment] on wall substrate in accordance with manufacturer's instructions.
 - 1. Start installation at bottom of wall. Install underlayment horizontally with [4 inches] [102 mm] minimum side laps and [6 inches] [152 mm] minimum end laps.

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- 2. Do not leave underlayment exposed for lengthy period. Exercise care not to puncture or tear underlayment.
- C. Rigid board thermal insulation board: [Mechanically attached] [adhesive apply] insulation specified in Section 07 21 00 Thermal Insulation to [concrete unit masonry wall] [cast concrete wall] [stud and sheathing wall framing] [_____]. Total thickness of rigid thermal insulation shall be [[_____] [inches] [mm].] [as required to provide minimum r value of [19.00] [_____].] [as indicated on Drawings.]
- D. Flashing: Install flashing at base of air cavity, at door and window lintels, window sills, and other locations as detailed on Drawings and reviewed shop drawings in accordance with Section 07 62 00 – Flashing and Sheet Metal.
- E. Install weep system in accordance with manufacturer's instructions and reviewed shop drawings.
 - 1. Apply collection and drainage membrane in air cavity over complete back-up wall. Where sections join, overlap fabric facing.
 - 2. At base of air cavity and anchor weeps space at [16 inches] [406 mm] minimum and extend through stone veneer. After installation of stone, cut off excess weep material flush with stone edge.
- F. Stone installation:
 - 1. Layout work area in advance and distribute color range of stone uniformly over total work area.
 - 2. Coursing patterns: [Coursed] [Random Ashlar] [Free Form] [Random rubble] [Squared rubble] [As indicated on [Drawings] [reviewed shop drawings]] [To match approved mock-up]. Arrange stone pattern to provide color and uniformity, visual variations, blend of sizes, and regularity and neat appearance of joints. Exercise care to avoid concentration of any one color on any one wall surface. Do not use stacked vertical joints.
 - 3. Wall ties: Anchor stone veneer to back-up wall with wall ties as required to meet regulations of authorities having jurisdiction at Project site. As a minimum place ties as follows:
 - a. Provide one tie per [2 square feet] [0.19 square meter] of wall surface.
 - b. Space ties at [16 inches] [406 mm] minimum vertically and [32 inches] [813 mm] horizontally. Provide additional ties within [12 inches] [305 mm] of openings.
 - c. Embed ties in horizontal joints to depth of [2 inches] [51 mm] minimum.
 - 4. Joints: Lay stone with [1/2 inch] [12 mm] approximate mortar joints.
 - a. Fill joints with grouting mortar. Pack and work into voids.
 - b. When thumb-print hard, neatly tool surface to concave joint with round jointer slightly larger than joint width.
 - c. If a drystack installation is desired, stone shall be laid tight to one another as the stone will naturally allow.
- G. Remove excess mortar as work progresses to prevent staining.
- H. Remove units disturbed after laying, clean, and relay with fresh mortar. If adjustments are required, remove units, clean off mortar, and reset with fresh mortar.
- I. Exercise care that wet mortar is not splashed onto stone face during

Masterformat 2004 04 42 10-64 installation. Excess or splashed mortar shall be cleaned from face with dry burlap wipe. Remove excess mortar after mortar becomes hard enough not to smear but prior to mortar setting.

- J. Ensure that sealant materials are not smeared onto stone faces. Remove as recommended by manufacturer.
- K. Joining Work: Where fresh masonry joins partially set masonry.
 - 1. Remove loose stone and mortar.
 - 2. Clean and lightly wet surface of set masonry.
 - 3. To avoid a horizontal run of masonry, rack back 1/2 the length of stone in each course.
 - 4. Toothing is not permitted.

3.3 Field Quality Control

- A. Test mortar and grout in accordance with Section 01 45 00 Quality Control and ASTM C780.
- B. Testing of Mortar Mix: In accordance with ASTM C780, Annex A4, for mortar aggregate ratio and ASTM C780, Annex A5, for mortar water content.

3.4 Protection

- A. Protect installed products until completion of project.
- B. Cover the top of unfinished stone masonry work at the end of each workday to protect it from the weather.
- C. Touch-up, repair or replace damaged products before substantial completion.

3.5 Cleaning and Sealing

- A. Remove excess mortar and mortar smears as work progresses.
- B. Allow walls to air dry. Brush off mortar with stiff fiber brush. Do not use metallic tools for cleaning.
- C. Review www.buechelstone.com for detailed cleaning if chemicals are required.
- D. After cleaning, treat exposed stone surfaces and mortar joints with clear water repellent [and anti-graffiti] coating [_____]. Apply in accordance with manufacturer's instructions. Verify surfaces are clean and thoroughly dry prior to application.
- E. Review www.buechelstone.com for details on sealing stone.

END OF SECTION



MVIS[™] Veneer Mortar

DS-060.0-0717

Globally Proven Construction Solutions



1. PRODUCT NAME

MVIS™ Veneer Mortar

2. MANUFACTURER

LATICRETE International, Inc. 1 LATICRETE Park North Bethany, CT 06524-3423 USA Telephone: +1.203.393.0010, ext. 235 Tell Fract. 4 000 242 4700, ext. 235

Internet:	www.laticrete.com
Fax:	+1.203.393.1684
Toll Free:	1.800.243.4788, ext. 235
roiophono.	· 1.200.000.0010; 0AL 200

3. PRODUCT DESCRIPTION

MVIS Veneer Mortar is a patented, versatile polymer fortified mortar designed specifically for the installation of adhered masonry veneer, natural manufactured stone and thin brick. A high performance mix provides maximum non-sag performance for vertical installations and also obtains maximum bond strength to the substrate and selected veneers. Reinforced with Kevlar[®] for added strength, MVIS Veneer Mortar offers exceptional workability and is backed by an available LATICRETE[®] 25 Year System Warranty (United States and Canada) (see DS 025.0).

Uses

- For vertical, horizontal and overhead installation of manufactured stone and thin brick veneers on exterior and interior installations.
- Ideal for both commercial and residential installations

Advantages

- Incredible non-sag performance faster, easier installations
- Revolutionary patented formula provides maximum bond strength to veneers and substrate
- Exceeds ASTM C270 compressive strength requirements for masonry veneer installations
- Passes IBC and IRC shear bond strength code requirements for adhered masonry veneer when tested in accordance with ASTM C482
- Mixes only with water no admix needed
- Reinforced with Kevlar
- Lightweight mortar very smooth and easy to apply

- UL GREENGUARD GOLD certified for low VOCs
- Inhibits the growth of stain-causing mold and mildew with antimicrobial technology

Suitable Substrates

- Cement Mortar
- Concrete
- Concrete Block
- Cement Backer Board**
- Masonry And Brick

**Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use.

Packaging

40 lb (18 kg) bag

Colors

Grey

Approximate Coverage

40 lb (18 kg) bag

Trowel Size

Vertical Applications	ft2	m²
1/4" x 3/8" (6 mm x 9 mm) Notched Trowel	55 - 65	5.1 - 6.0
1/2" x 1/2" (12 mm x 12 mm) Notched Trowel	42 - 50	3.9 - 4.6
Adhered Masonry Veneer Application Method	28 - 33	2.6 - 3.1

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for two (2) years^ if stored off the ground in a dry area. ^ High humidity will reduce the shelf life of bagged product.

Limitations

- Mastics, adhesive mortars and pointing mortars for thin brick, masonry veneer, stone, pavers and thin brick are not replacements for waterproofing membranes or air and water barriers. When a waterproofing membrane or air and water barriers is required, MVIS Air & Water Barrier (see Section 10 FILING SYSTEM).
- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Not for use in submerged or steam room applications. For these applications use MVIS Hi-Bond Veneer Mortar.
- Use LATAPOXY[®] 300 Adhesive for installing green marble, Resin backed, or moisture sensitive tile, stone and agglomerates (refer to DS 633.0 for more information)

Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. For exterior vertical installations over framed construction, the substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/600 where L=span length (except where local building codes specify more stringent deflection requirements).

Cautions

Consult SDS for more safety information.

- Some marbles and other stone have low flexural strength and might not be suitable for exterior installations, check with veneer manufacturer for suitability.
- During cold weather, protect finished work from traffic until fully cured.
- Contains portland cement and silica sand. May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water.
- DO NOT take internally. Silica sand may cause cancer or serious lung problems. Avoid breathing dust. Wear a respirator in dusty areas.
- For white and light-colored stone, conduct test area to ensure no shadowing or staining is observed.
- Keep out of reach of children.

4. TECHNICAL DATA VOC/LEED Product Information



This product has been certified for Low Chemical Emissions (ULCOM/GG UL2818) under the UL GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes and Furnishings (UL 2818 Standard) by UL Environment.



Total VOC Content pounds/gallon (grams/liter) of product is 0.00 lb/gal (0.00 g/L).

Applicable Standard

ASTM C270, ANSI A118.4, ANSI A118.11, ASTM C482 This product has a cradle-to-gate (with options) Product-Specific (Type III) Environmental Product Declaration. The PCR review, life cycle assessment and declaration were independently verified by UL Environment in accordance with ISO 14025, ISO 14040 and ISO 14044.

Physical Properties

(Mixed with 5.9 qts (5.6 L) of water)

Test	Test Method	Results
Shear Bond, Vitreous Tile, 28 day	ANSI AS118.4 5.2.4	300-330 psi (2.1-2.3 MPa)
7 day Cure, Water Soak Test, Vitreous Tile	ANSI A118.4 5.2.3	200–300 psi (1.4–2.1 MPa)

Sag on Wall	ISO 13007-2 4.2	0 mm No Sag Observed
28 Day Cure Compressive Strength	ASTM C109	2400-2800 psi (16.6-19.3 MPa)

Working Properties

PotLife	4 Hours
Wet Density	11.1 lbs per Gallon (1.3 gm/cm ³)

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

5. INSTALLATION

Surface Preparation

All surfaces should be between 40°F (4°C) and 90°F (32°C) and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Rough or uneven concrete surfaces should be made smooth with MVIS Premium Mortar Bed. Expansion joints shall be provided through the adhered manufactured stone masonry veneer (AMSMV) from all construction or expansion joints in the substrate. Follow ANSI specification A108.01–3.7 "Requirements for Movement Joints: Preparations by Other Trades" or TCNA detail EJ-171 "Movement Joints—Vertical & Horizontal". Do not cover expansion joints with mortar.

 Installer must verify that deflection under all live, dead and impact loads of substrates does not exceed industry standards of L/600 for AMSMV units or stone installations where L=span length. For exterior vertical installations over framed construction, the substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/600 where L=span length.

Mixing-40 lb (18 kg) bag

Place approximately 5.9 qts (5.6 L) of clean water in a pail and slowly add the entire bag of MVIS Veneer Mortar. Mix with slow speed mixer for one minute or until a creamy smooth consistency is reached. Allow to slake for 5 minutes, remix and use. Jobsite conditions might vary. Add slightly more water if necessary for proper consistency.

Application

See applicable LATICRETE® details in MVIS Masonry Veneer Installation System Brochure (DS 002.8).

Note: If installing on sheathed wood or steel frame construction with wire lath, use MVIS Premium Mortar Bed for the wall render prior to installing applicable waterproofing membrane or MVIS Veneer Mortar.

If waterproofing is required, install MVIS Air & Water Barrier per instructions (see DS 661.0) to the substrate prior to installation of MVIS Veneer Mortar.

For adhered masonry veneers use a hand trowel to apply a thin coat of MVIS Veneer Mortar to cover entire back of the veneer unit. Spread additional mortar onto the back of the skim coated veneer unit sufficient to completely fill the space between the veneer unit and the substrate when compressed against the substrate. Press the mortar covered back of the veneer against the substrate at the desired final position. Slide the unit roughly 1" - 1 1/2" (25 - 38 mm) diagonally from the desired final position and back into the desired

position while maintaining even pressure. This should be done in such a manner as to squeeze the mortar to fill the entire space between the veneer unit and the substrate, helping to achieve 100% coverage to both the substrate and veneer unit, allowing excess mortar to extrude on all sides around the veneer unit. Clean excess extruded mortar with trowel and spread onto the next veneer unit to be installed.

Note: Prior to installation, ensure back of veneer units are clean of dust, laitance, loose concrete crumbs and any excess film that could impede bond.

For adhered masonry veneer using a hand trowel to apply MVIS Veneer Mortar into the substrate thoroughly and then comb on additional mortar (trowel size is determined by substrate flatness and finished material size). Back butter all veneer units 8" x 8" (200 mm x 200 mm) or larger to provide full bedding of the veneer. Place veneer into the mortar and adjust to desired position. Clean any excess mortar between veneers or sides of stone or tile veneer.

Note: Use proper sized notched trowel to ensure full bedding of the tile. Spread only enough mortar that can be covered with tile within 15–20 minutes. Adjust as necessary. Check mortar for complete coverage by periodically removing veneer unit and inspecting the transfer onto the back of the tile. The size and weight of the veneer will vary. Conduct a small test area for non-sag performance. Due to job site conditions and differences in finish material types; ledger boards, shims, wedges or spacers may be required to maintain finish levels and heights.

Grouting/Pointing

Point installation after a minimum of 12–24 hours curing time at 70°F (21°C). Cooler temperatures require a longer curing time. Point with MVIS Pointing Mortar, MVIS Epoxy Pointing Mortar, or MVIS Premium Pointing Mortar according to product instructions.

Cleaning

Clean tools with water.

6. AVAILABILITY AND COST

Availability

LATICRETE® and LATAPOXY® materials are available worldwide.

For Distributor Information, Call:

Toll Free: 1.800.243.4788 Telephone: +1.203.393.0010 For on-line Distributor Information, visit LATICRETE at www.laticrete.com.

Cost

Contact a LATICRETE Distributor in your area.

7. WARRANTY

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d

8. MAINTENANCE

Non-finish LATICRETE and LATAPOXY installation materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

9. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE Technical Service Hotline:

Telephone:	+1.203.393.0010, ext. 235
Toll Free:	1.800.243.4788, ext. 235
Fax:	+1.203.393.1948

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at www.laticrete.com.

10. FILING SYSTEM

Additional product information is available on our website at www.laticrete.com. The following is a list of related documents:

TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	The following is a not of follow accumolities
DS 230.13:	LATICRETE Product Warranty
DS 230.15:	LATICRETE 15 Year System Warranty - For
	Steel or Wood Framed Exterior Facades (United
	States and Canada)
DS 025.0:	LATICRETE 25 Year System Warranty (United
	States and Canada)
DS 228.0:	MVIS Pointing Mortar
DS 247.0:	MVIS Hi-Bond Veneer Mortar
DS 263.0:	MVIS Premium Mortar Bed
DS 274.0:	MVIS Premium Pointing Mortar
DS 633.0:	LATAPOXY [®] 300 Adhesive
DS 661.0:	MVIS Air & Water Barrier
DS 002.8:	MVIS Masonry Veneer Installation
	System Brochure

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LATICRETE International, Inc.

One LATICRETE Park North, Bethany, CT 06524-3423 USA • 1.800.243.4788 • +1.203.393.0010 • www.laticrete.com

SECTION E: BIDDERS ACKNOWLEDGEMENT

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

- 1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2020 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda Nos, through to the Contract, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
- 2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
- The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, 3. combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
- 4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. (IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).
- 5. hereby certify that all statements herein are made 1 on behalf of Joe Daniels Construction Co., Inc. (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of Wisconsin a partnership consisting of ____ : an individual trading as

_; of the City of <u>Madison</u> State of <u>Wisconsin</u> ; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

Joseph A. Daniels SIGNATURE

President TITLE, IF ANY

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Sworn and subscribed to before me this September 3rd day of

20 20 U)auspervi

(Notary Public or other officer authorized to administer oaths) My Commission Expires 07/17/2024

Bidders shall not add any conditions or qualifying statements to this Proposal.

Rev/03/30/2020-8861-Specbook-082020.doc

Contract 8861 – Joe Daniels Construction Co., Inc.

Section F: Best Value Contracting (BVC) Form

This section is a required document for the bid to be considered complete. There are two methods for completing the Best Value Contracting (BVC) form. Method one: The form can be filled out online and submitted to this site to be included with your electronic bid. Method two: The form can be downloaded from the site and submitted by hand to the City of Madison.

Method of Submittal of Best Value Contracting form (click in box below to choose) *

I will submit Bid Express fillable online form (BVC).

Best Value Contracting

1. The Contractor shall indicate the non-apprenticeable trades used on this contract. Trucking and landscaping

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.

No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.

Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.

First time contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.

Contractor has been in business less than one year.

Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

- BRICKLAYER
- CARPENTER
- CEMENT MASON / CONCRETE FINISHER
- CEMENT MASON (HEAVY HIGHWAY)
- DATA COMMUNICATION INSTALLER

ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE

- GLAZIER
- HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER
- □ INSULATION WORKER (HEAT and FROST)
- □ IRON WORKER (ASSEMBLER, METAL BLDGS)
- PAINTER and DECORATOR
- □ PLASTERER

- ROOFER and WATER PROOFER
- SHEET METAL WORKER
- SPRINKLER FITTER

- TAPER and FINISHER
- TELECOMMUNICATIONS (VOICE, DATA and VIDEO) INSTALLER-TECHNICIAN

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS

CONTRACT NO. 8861 DATE: 9/3/2020

DATE: 9/3/2020			Construction , Inc.
Item	Quantity	Price	Extension
Section B: Proposal Page			
10701 - TRAFFIC CONTROL - LUMP SUM	1.00	\$2,200.00	\$2,200.00
10911 - MOBILIZATION - LUMP SUM	1.00	\$18,500.00	\$18,500.00
20101 - EXCAVATION CUT - C.Y.	15.00	\$35.00	\$525.00
20102 - ROCK EXCAVATION - C.Y.	10.00	\$125.00	\$1,250.00
20201 - FILL BORROW - CY	35.00	\$35.00	\$1,225.00
20140 - GEOTEXTILE FABRIC TYPE HR NON-WOVEN - S.Y.	50.00	\$2.25	\$112.50
20217 - CLEAR STONE - TON	40.00	\$30.00	\$1,200.00
20221 - TOPSOIL - S.Y.	50.00	\$12.00	\$600.00
20401 - CLEARING - I.D.	27.00	\$26.00	\$702.00
20406 - GRUBBING - I.D.	27.00	\$26.00	\$702.00
21002 - EROSION CONTROL INSPECTION - EACH	3.00	\$500.00	\$1,500.00
21011 - CONSTRUCTION ENTRANCE (UNDISTRIBUTED) - EACH	1.00	\$2,500.00	\$2,500.00
21013 - STREET SWEEPING - LUMP SUM	1.00	\$1,800.00	\$1,800.00
21017 - SILT SOCK (8 INCH) COMPLETE - L.F.	100.00	\$8.00	\$800.00
21021 - SILT FENCE COMPLETE - L.F.	415.00	\$3.75	\$1,556.25
21061 - EROSION MATTING, CLASS I, URBAN TYPE A - S.Y.	380.00	\$4.50	\$1,710.00
60641 - 30" ENDWALL INLET GATE - EACH	1.00	\$1,950.00	\$1,950.00
90001 - STORM CONTROL - LUMP SUM	1.00	\$8,500.00	\$8,500.00
90002 - CONSTRUCTION FENCE (PLASTIC) - L.F.	1550.00	\$3.50	\$5,425.00
90003 - PAINTED PEDESTRIAN RAILING - L.F.	12.00	\$83.00	\$996.00
90004 - DIVERSION CHAMBER AND CHANNEL WITH STONE VENEER			
AND STAMPED FLOOR - LUMP SUM	1.00	\$16,996.00	\$16,996.00
90005 - STONE SALVAGE AND REUSE - LUMP SUM	1.00	\$3,800.00	\$3,800.00
90006 - SPILLWAY CONSTRUCTION - LUMP SUM	1.00	\$4,796.00	\$4,796.00
90007 - 15" STRUCTURE WITH SOLID LID - EACH	1.00	\$3,550.00	\$3,550.00
90008 - REMOVE 30" AE WITH GRATE - EACH	1.00	\$1,750.00	\$1,750.00
25 Items	Totals		\$84,645.75



Department of Public Works Engineering Division Robert F. Phillips, P.E., City Engineer

City-County Building, Room 115 210 Martin Luther King, Jr. Boulevard Madison, Wisconsin 53703 Phone: (608) 266-4751 Fax: (608) 264-9275 engineering@cityofmadison.com www.cityofmadison.com/engineering

BIENNIAL BID BOND

Deputy Division Manager Kathleen M. Cryan. Principal Engineer 2 Christopher J. Petykowski, P.E. John S. Fahrney, P.E. Principal Engineer 1 Christina M. Bachmann, P.E. Mark D. Moder, P.E. Janet Schmidt, P.E. Jamet Schmidt, P.E. Facilities & Sustainability Bryan Cooper, Principal Architect Mapping Section Manager Eric T. Pederson, P.S. Financial Manager

Steven B. Danner-Rivers

Deputy City Engineer

Gregory T. Fries, P.E.

Joe Daniels Construction Co., Inc.

(a corporation of the State of <u>Wisconsin</u> (individual), (partnership), (hereinafter referred to as the "Principal") and The Cincinnati Insurance Company

a corporation of the State of <u>Ohio</u> (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, Wisconsin (hereinafter referred to as the "City"), in the sum equal to the individual proposal guaranty amounts of the total bid or bids of the Principal herein accepted by the City, for the payment of which the Principal and the Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is that the Principal has submitted to the City certain bids for projects from the time period of February 1, 2020 through January 31, 2022

If the Principal is awarded the contract(s) by the City and, within the time and manner required by law after the prescribed forms are presented for its signature, the Principal enters into (a) written contract(s) in accordance with the bid(s), and files with the City its bond(s) guaranteeing faithful performance and payment for all labor and materials, as required by law, or if the City rejects all bids for the work described, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

In the event the Principal shall fail to execute and deliver the contract(s) or the performance and payment bond(s), all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to pay to the City within ten (10) calendar days of written demand a total equal to the sum of the individual proposal guaranty amounts of the total bid(s) as liquidated damages.

The Surety, for value received, hereby agrees that the obligations of it and its bond shall be in no way impaired or affected by any extension of time within which the City may accept a bid, and the Surety does hereby waive notice of any such extension.

This bond may be terminated by the Surety upon giving thirty (30) days written notice to the City of its intent to terminate this bond and to be released and discharged therefrom, but such termination shall not operate to relieve or discharge the Surety from any liability already accrued or which shall accrue before tile expiration of such thirty (30) day period.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

PRINCIPAL

Joe Daniels Construction Co., Inc. COMPANY NAME AFFIX SEAL

Bv

Joseph A. Daniels - President SURETY

The Cincinnati Insurance Company COMPANY NAME AFFIX SEAL

B SIGNATURE AND TITLE Elizabeth Mosca, Attorney-in-Fact

December 3, 2019 DATE

December 3, 2019

This certifies that I have been duly licensed as an agent for the Surety in Wisconsin under National Provider No. <u>12305256</u> for the year <u>2020</u> and appointed as attorney in fact with authority to execute this bid bond, which power of attorney has not been revoked.

December 3, 2019 DATE

AGENT SIGNATURE

PO Box 259408 ADDRESS

Madison, WI 53725-9408 CITY, STATE AND ZIP CODE

608-252-9674 TELEPHONE NUMBER

Note to Surety and Principal: Any bid submitted which this bond guarantees may be rejected if the Power of Attorney form showing that the Agent of Surety is currently authorized to execute bonds on behalf of Surety is not attached to this bond.

10/25/2019-BienniaiBidBond2019.doc

THE CINCINNATI INSURANCE COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY, a corporation organized under the laws of the State of Ohio, and having its principal office in the City of Fairfield, Ohio, does hereby constitute and appoint

Patrick A. McKenna; Judith A. Walker; Brooke L. Parker; Elizabeth Mosca and/or David Zenobi

of Madison, Wisconsin its true and lawful Attorney(s)-in-Fact to sign, execute, seal and deliver on its behalf as Surety, and as its act and deed, any and all bonds, policies, undertakings, or other like instruments, as follows; Any such obligations in the United States, up to

Thirty Million and No/100 Dollars (\$30,000,000,00).

This appointment is made under and by authority of the following resolution passed by the Board of Directors of said Company at a meeting held in the principal office of the Company; a quorum being present and voting, on the 6th day of December, 1958, which resolution is still in effect:

"RESOLVED, that the President or any Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 7th day of December, 1973.

"RESOLVED, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company, Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

IN WITNESS WHEREOF, THE CINCINNATI INSURANCE COMPANY has caused these presents to be sealed with its corporate seal, duly attested by its Vice President this 8th day of March, 2017.



STATE OF OHIO) 55: COUNTY OF BUTLER

THE CINCINNATI INSURANCE COMPANY

Vice President

On this 8th day of March, 2017, before me came the above-named Vice President of THE CINCINNATI INSURANCE COMPANY, to me personally known to be the officer described herein, and acknowledged that the seal affixed to the preceding instrument is the corporate seal of said Company and the corporate seal and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporation.



MARK J. HULLER, Attorney at Law NOTARY PUBLIC - STATE OF OHIO My commission has no expiration date. Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Secretary of THE CINCINNATI INSURANCE COMPANY, hereby certify that the above is a true and correct copy of the Original Power of Attorney issued by said Company, and do hereby further certify that the said Power of Attorney is still in full force and effect.

GIVEN under my hand and seal of said Company at Fairfield, Ohio, 3 day of December 3019



Secretary

SECTION H: AGREEMENT

THIS AGREEMENT made this <u>7</u><u>th</u> day of <u>0</u><u>th</u> day of <u>0</u><u>th</u> day in the year Two Thousand and Twenty between <u>JOE DANIELS CONSTRUCTION CO., INC.</u> hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted <u>OCTOBER 6, 2020</u>, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. Scope of Work. The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and contract; perform all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

- 2. **Completion Date/Contract Time**. Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion <u>SEE SPECIAL</u> <u>PROVISIONS</u>, the rate of progress and the time of completion being essential conditions of this Agreement.
- Contract Price. The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of <u>EIGHTY-FOUR THOUSAND SIX</u> <u>HUNDRED FORTY-FIVE AND 75/100</u> (\$84,645.75) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.
- 4. Affirmative Action. In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualification and application procedures

and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national original and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Affirmative Action Division Manager.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.

- 2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
- 3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or ten thousand dollars (\$10,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.

6. **Contractor Hiring Practices.**

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(I), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

a. **Definitions.** For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

- **b. Requirements.** For the duration of this Contract, the Contractor shall:
 - 1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

- 2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.
- 3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.
- 4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.
- 5. Comply with all other provisions of Sec. 39.08, MGO.
- c. **Exemptions:** This section shall not apply when:
 - 1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
 - 2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused this contract to be sealed with its corporate seal and to be executed by its Mayor and City Clerk on the dates written below.

Countersigned:

Leea el. Sainsbury	10-7-2020
Witness Keea I. Sainsbury	Date
Leea el. Sainsbur	10-7-2020
Witness Keea I. Sainsbury	Date

JOE DANIELS CONSTRUCTION CO., INC.

Company Name	
breght Paus	A0-7-2020
President Joseph A. Daniels	Date
Sal de a	10-7-2020
Secretary Samuel J. Daniels	Date

CITY OF MADISON, WISCONSIN

Provisions have been made to pay the liability that will accrue under this contract.

Date inance Witnes Date 10/15/2020 Witness Date

Approved as to form:

2020 12 City Attorney Mavor 10/15/20 Date City Clerk

0 1 0000

SECTION I: PAYMENT AND PERFORMANCE BOND

LET ALL KNOW BY THESE DOCUMENTS PRESENTED, that we **JOE DANIELS CONSTRUCTION CO., INC.** as principal, and ______ The Cincinnati Insurance Company

Company of <u>Ohio</u> as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of <u>EIGHTY-FOUR THOUSAND SIX HUNDRED FORTY-FIVE AND 75/100</u> (\$<u>84,645.75</u>) Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully perform all of the terms of the Contract entered into between him/herself and the City of Madison for the construction of:

GLENWOOD CHILDREN'S PARK STORMWATER IMPROVEMENTS CONTRACT NO. 8861

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the prosecution of said work, and save the City harmless from all claims for damages because of negligence in the prosecution of said work, and shall save harmless the said City from all claims for compensation (under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is to be void, otherwise of full force, virtue and effect.

- 1

Signed and sealed thisda	y of
Countersigned: Withess Keea I. Sainsbury Withess Keea I. Sainsbury Secretary Samuel J. Daniels	JOE DANIELS CONSTRUCTION CO., INC. Company Name (Principal) President Joseph A. Daniels Seal no seal
Approved as to form:	THE CINCINNATI INSURANCE COMPANY Surety Seal Salary Employee Image: Commission
Michael Hans City Attorney	By Attorney-in-Fact Patrick A. McKenna
This certifies that I have been duly licensed as an National Producer Number <u>650765</u> for the with authority to execute this payment and perform revoked.	ne year <u>2020</u> , and appointed as attorney-in-fact
October 7, 2020 Date	Agent Signature Patrick A. McKenna

THE CINCINNATI INSURANCE COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY, a corporation organized under the laws of the State of Ohio, and having its principal office in the City of Fairfield, Ohio, does hereby constitute and appoint

Patrick A. McKenna; Judith A. Walker; Brooke L. Parker; Elizabeth Mosca and/or David Zenobi

of Madison, Wisconsin its true and lawful Attorney(s)-in-Fact to sign, execute, seal and deliver on its behalf as Surety, and as its act and deed, any and all bonds, policies, undertakings, or other like instruments, as follows: Any such obligations in the United States, up to

Thirty Million and No/100 Dollars (\$30,000,000.00).

This appointment is made under and by authority of the following resolution passed by the Board of Directors of said Company at a meeting held in the principal office of the Company; a quorum being present and voting, on the 6th day of December, 1958, which resolution is still in effect:

"RESOLVED, that the President or any Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 7th day of December, 1973.

"RESOLVED, that the signature of the President or a Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

IN WITNESS WHEREOF, THE CINCINNATI INSURANCE COMPANY has caused these presents to be sealed with its corporate seal, duly attested by its Vice President this 8th day of March, 2017.



STATE OF OHIO COUNTY OF BUTLER)

) ss:

On this 8th day of March, 2017, before me came the above-named Vice President of THE CINCINNATI INSURANCE COMPANY, to me personally known to be the officer described herein, and acknowledged that the seal affixed to the preceding instrument is the corporate seal of said Company and the corporate seal and the signature of the officer were duly affixed and subscribed to said instrument



THE CINCINNATI INSURANCE COMPANY

Vice President

MARK J. HULLER, Attorney at Law NOTARY PUBLIC - STATE OF OHIO My commission has no expiration date. Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Secretary of THE CINCINNATI INSURANCE COMPANY, hereby certify that the above is a true and correct copy of the Original Power of Attorney issued by said Company, and do hereby further certify that the said Power of Attorney is still in full force and effect.

GIVEN under my hand and seal of said Company at Fairfield, Ohio. day of October, 2020 7fh





