APPROVED

MINUTES OF JANUARY 5, 2021 COMMITTEE OF THE WHOLE MEETING
GLENCOE PARK DISTRICT
999 GREEN BAY ROAD, GLENCOE, ILLINOIS 60022

The meeting was called to order at 7:01pm and roll was called.

Committee Members present:	Staff present:
Lisa Brooks, President	Lisa Sheppard, Executive Director/Secretary
Stefanie Boron, Vice President	Carol Mensinger, Director of Finance/HR
Michael Covey, Treasurer	Chris Leiner, Director of Parks/Maintenance
Josh Lutton, Commissioner	Bobby Collins, Director of Recreation/Facilities
Dudley Onderdonk, Commissioner	Erin Classen, Supt. of Marketing/Communications
	Jenny Runkel, Administrative Assistant

Members of the Public in attendance who signed in or spoke: Caleb Barth, Stephani Briskman, Brandon Hinkle, John MacManus, Bart Schneider, Adam Wohl

Matters from the Public: There were no matters from the public.

Discussion on Glencoe Beach Pier Re-Surfacing Concepts: Director Leiner indicated that Lake Michigan has given our beach a beating. Caleb Barth of Baird gave the presentation attached to these minutes. Mr. Barth indicated that Lake Michigan experiences periods of high and low water. Pier options include Alternative #1 – More Robust Decking Replacement (probable cost $466,069) and Alternative 2 – Cast-In-Place Concrete Overlay Deck (probable cost $225,675). Alternatives are meant to minimize the current issue of water trapped under the pier decking. Railing options include steel, which will need rust maintenance, or a more expensive polymer, which doesn't rust. Mr. Barth's scope did not include a structural assessment on the pier, which was completed a few years ago and was found to be structurally sound. These options are based on statistical analysis of 100 years of water level history and storm events. A six-inch increase should cover lake level rise in future. The project will begin in fall, as a spring project could impact the beach season. This study was focused on the decking, not on shore fortifications costing millions of dollars. During original dialogue at a previous meeting, the Board discussed and ended conversation on how fortifications would affect the look and feel at the beach and how it would look during low water level timeframes.

Discussion ensued on maintenance, the last capital investment in the early 90's, spending about $70,000 last year to repair 60 feet at the end of the pier which lasted about 30 days before Lake Michigan removed it, insurance funds received for that damage, the pier protecting the swimming beach, the project will take approximately a month, boating beach stairs project scheduled for spring, the crib wall would be worked on in fall as well located on the ramp, and doing nothing would be a safety issue. If the Board decides to pass on this project (labeled option zero), the transition from asphalt to concrete would be removed and the railings would either be repaired or removed. A

ramp might also be required, requiring design work. The insurance payment for damage was reviewed.

Commissioner Lutton asked for gross cost, net cost, and insurance detail prior to the next discussion. Sheppard indicated it would be discussed next at the February meeting.

Commissioners gave feedback on the options including option two meeting the need, option one is more for aesthetics, and we currently have option one which didn't last.

Staff prefers option two, which has better aesthetics and durability and is also less expensive by about 50%. Staff will bring approximately three stamped concrete options to the Board for review, if this option is chosen. This project was approved for Year-One Capital Projects at the September 15 regular Board meeting and has $225,000 budgeted in the FY2021/22 Budget going before the Board for approval in March.

The Lakefront Advisory Group will see a presentation on option two at their January 13 meeting.

Chair Brooks, after discussion and unofficial consensus from the Committee, directed staff to move forward with creating a Baird contract for option 2 to bring to the Board for approval at the February regular Board meeting.

Discussion on Contract Design Services for Lakefront Park Center Bluff Stabilization, Crib Wall Replacement, and Drainage: Sheppard indicated this project was approved by the Board as a Year One Capital Project. John MacManus of Altamanu explained the project of scope in a presentation attached to these minutes. Altamanu is the prime on the project, CBBEL is a consultant to Altamanu. This project includes the entire center of the bluff to Hazel and will protect the halfway house from storm water damage. Breaking up the project has the least disruption to the beach season, captures the COVID-19 bid environment, decreases the use of subcontractors, and targets the work to a specialized contractor as opposed to a general contractor. Discussion ensued including this project making future aesthetic improvements possible and that the Village and water plant staff attended meetings and are behind the project.

Chair Brooks, after discussion and unofficial consensus from the Committee, directed staff to advance approval of the design contract at the February Board meeting.

Update on Capital Fund Balance Projection: At the Board's request for more financial information prior to voting on the proposed Kalk Park Plaza Project, staff shared the approved Three-Year Capital Project list and explained that a number of our projects came very close to bid or significantly under due to the aggressive COVID-19 bid market. Staff came up with the financial outlook when this round of projects are completed and indicated what would have to change if the District moved forward with the plaza and what future projects could be incorporated down the line.

We will receive grant funds from the IDNR or OSLAD, but have not received them yet. Over $600,000 in project savings was realized. Staff are confident that the District can afford to pay for this project.

Other Business: The Duke Park construction fence came down over winter break and the park is open. There will be a small dedication with the Zirlin family as soon as their plaque arrives. We hope to have a bigger dedication in the spring when the interactive fountain and train are operating.

The Connect Glencoe project is almost complete, the social spaces arrived and will be installed in spring once the foundations are installed. We received a $14,200 donation yesterday for the Circles social space, benches, and a picnic table with a total of approximately $30,000 in donations for the Linear Trail project.

Following brush removal, the Veterans Park trail gateway wall revealed to be falling apart. The allowance in the bid of $10,000 for limited tuck-pointing and repairs will not cover the wall, however 80% of the wall will be covered by state funding under the grant. The District will only need to spend $4,000 for $40,000 worth of work. In spring, the wall will be disassembled, photographed, and put back together with the same stones using modern construction techniques.

We are already seeing incredible use of Duke Park. There is a substantial punch list of repairs to be done in spring including regrading, crooked benches, deer prints in the concrete, etc.

Adjourn: Commissioner Lutton moved to adjourn the meeting at 8:26pm. Commissioner Boron seconded the motion, which passed by unanimous voice vote.

Respectfully submitted,

_____

Lisa M. Sheppard
Secretary

Baird.

W.F. Baird & Associates Ltd.

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Phone | +1 608 273 0592 Email | madison@baird.com

Mr. Chris Leiner
Director of Parks and Maintenance | Glencoe Parks District
999 Green Bay Road
Glencoe, IL 60022

via email to cleiner@glencoeparkdistrict.com

Status: Draft
December 11, 2020

Reference # 13359.101.L2.RevA
RE: GLENCOE PIER DECK REPLACEMENT CONCEPTUAL DESIGN

Dear Mr. Leiner,

Introduction

W.F. Baird & Associates Ltd. (Baird) is providing conceptual design services to the Glencoe Park District (Park District) for the repair/replacement of the Glencoe Beach pier deck in Glencoe, IL. Two conceptual alternatives were developed and are presented in this letter for the Park District's consideration.

The conceptual alternatives were developed with the criteria outlined in the previously issued Basis of Design (BoD) (reference 13359.101.L1.RevA).

Conceptual Design

Deck Replacement Alternatives

The low elevation of the pier exposes the deck to severe environmental forces during periods of moderate to high water levels on Lake Michigan. Two alternative concepts were developed and evaluated, as summarized below. Conceptual sketches for each alternative are provided in **Attachment 1**. The evaluation of the alternatives was based upon a number of factors, including aesthetics, environmental impact, functionality, durability/resiliency, regulatory requirements, opinion of probable construction cost, construction duration, and maintenance requirements.

Alternative 1 – More Robust Decking Replacement

The Alternative 1 deck surface consists of composite decking. Notable features of Alternative 1 are as follows:

- Demo remaining asphalt overlay, existing perimeter angle, HSS handrail sleeve, and handrail. Preserve and protect the steel sheet pile channel cap.
- Install new pier perimeter angle and HSS sleeve.
- Place concrete overlay, minimum 3.5" thick, to level pier deck surface.

- Pressure wash existing pier concrete cap to develop bond with new concrete overlay. The layer between the existing concrete cap and the new overlay shall be designed for bonded behavior according to ACI 325.13R-06.
- General structural condition of the existing concrete cap and the new concrete overlay shall be assessed prior to installing the new concrete overlay. Deteriorated cracks, joints, and/or punchouts shall be repaired.
- Concrete compressive strength of 4,000 psi (28 days).
- Concrete overlay according to ACI 325.13R-06. Reinforcement (Welded wire or rebar) shall be added if active cracks are found in the existing concrete cap. The addition of fibers to the overlay might also be considered.
- Saw-cut joints designed according to ACI 360R-06 shall be used in the concrete overlay for crack control. Joints in the overlay shall also match and existing joints in the concrete cap.
- To provide adequate drainage, the concrete overlay shall include v-shaped drainage grooves with a 1% slope. The use of v-shaped blockouts might also be evaluated.

- Install 4x4 sleepers, anchor to pier concrete surface with brackets and post-installed concrete screw anchors:
  - Structural steel shapes and plates shall conform to ASTM A36.
  - Connection elements shall be hot-dip galvanized after fabrication.
  - Hot-dip galvanized ASTM A307 bolts shall be used to attach the sleepers to the sleeper brackets.
  - Stainless steel screw anchors shall be one of the following or approved equivalent:
    - Simpson stainless steel Titen HD screw anchors.
    - Hilti KWIK HUS-EZ SS316 stainless steel screw anchors.
- Install HDPE decking:
  - Weardeck, Lumberock, or approved equivalent HDPE Boards shall be used for the decking and sleeper system. Product literature for each is provided in **Attachment 2**.
  - Appropriate end-to-end and side-to-side spacing shall be provided between deck boards to account for thermal expansion, drainage, debris removal, and/or air circulation.
  - Simpson Strong-Tie Deck-Drive DCU composite screws or approved equivalent shall be used to attach the deck boards to the sleepers.
  - Minimum 2 screws shall be used at each board-sleeper intersection.
- Install new handrail and replace light fixtures.
- Top of deck elevation shall be increased by approximately 0'-6".

Alternative 2 – Cast-In-Place Concrete Overlay Deck

The Alternative 2 deck surface consists of a stamped concrete overlay. Notable features area as follows:

- Demo remaining asphalt overlay, existing perimeter angle, HSS handrail sleeve, and handrail. Preserve and protect the steel sheet pile channel cap.
- Place concrete overlay, minimum 5" thick, to level/slope pier deck surface:
  - Pressure wash existing pier concrete cap to develop bond with new concrete overlay. The layer between the existing concrete cap and the new overlay shall be designed for bonded behavior according to ACI 325.13R-06.

- General structural condition of the existing concrete cap and the new concrete overlay shall be assessed prior to installing the new concrete overlay. Deteriorated cracks, joints, and/or punchouts shall be repaired.
- Concrete compressive strength of 5,000 psi (28 days).
- Reinforcing steel shall be deformed steel bars conforming to ASTM A615 – Grade 60. Minimum rebar for crack control according to ACI 360R-06. Two layers of rebar steel might be needed where overlay thickness exceeds 8 inches.
- Smooth dowels shall conform to ASTM A615 – Grade 60. Doweled expansion joints shall be provided at appropriate locations (TBD).
- Joint protection (sealing and filling) according to ACI 360R-06.
- Stamped and/or colored finishing shall follow the recommendations given in ACI 310R-13. See **Attachment 3** for example stamp patterns.
- The finished surface shall have a 1% (or 1/8" per foot) slope to provide adequate drainage.

- Install new handrail and replace light fixtures.
- Top of deck elevation shall be increased by approximately 0'-3".

Evaluation of Alternatives

Table 1 presents a matrix comparison of the two alternative concepts. The alternatives have been ranked relative to one another under various factors to facilitate the Park District's identification of a Preferred Alternative. The evaluation criteria included the following:

- Aesthetics – physical appearance / how well the alternative will match the overall ambiance of the existing Lakefront Park and Glencoe Beach structures;
- Environmental impact – the pollution and energy consequences of the manufacturing/production process of the primary materials;
- Functionality – slipperiness, thermal comfort, and wearability;
- Durability / Resiliency – ability to survive and recover from severe storm events;
- Regulatory requirements – complexity of the regulatory process to gain approval for the construction of the project;
- Opinion of probable construction cost – itemized cost estimate detail is provided in **Attachment 4**;
- Construction duration – how long construction will impact the use of the pier; and
- Maintenance requirements.

Table 1: Matrix Comparison of Alternatives

Evaluation Factor	Alt. 1	Alt. 2	Notes
Aesthetics	G	S	• Composite decking is often preferred for its aesthetics over a concrete overlay (positive for ALT 1). • The concrete surface could be stamped with a flagstone pattern to align with other structures in the park. (positive for ALT 2)

Evaluation Factor	Alt. 1	Alt. 2	Notes
Environmental Impact	G	S	• Composite products are often created from recycled plastics. (positive for ALT 1) • Manufacturing cement results in high levels of CO2. Sourcing aggregate/sand locally often minimizes further impacts to the environment. (negative for ALT 1 & 2)
Functionality	G	G	• Composite decking retains heat more rapidly than concrete (positive for ALT 2) • Composite decking is more flexible to foot traffic. (positive for ALT 1)
Durability / Resiliency	G	E	• Alternative 2 has fewer modes of failure / damage that could be caused by the environment. (positive for ALT 2)
Regulatory Requirements	G	G	• Both alternatives will have the same regulatory requirements; the regulatory requirements were defined in the BoD.
Opinion of Probable Construction Cost (OPCC)	P	G	• The Alternative 1 OPCC exceeds the available budget; the durability of the system (i.e., minimize sleeper size and anchoring) could be adjusted/minimized to decrease the OPCC. • The Alternative 2 OPCC meets the available budget.
Construction duration	S	G	• The construction duration for ALT 1 will be longer than ALT 2. (positive for ALT 2)
Maintenance	S	E	• Composite decking has been known to sag/warp unpredictably following installation. (negative for ALT 1) • The cast-in-place concrete overlay should require minimal maintenance with proper construction QC/QA and expansion/control joint details. (positive for ALT 2)

Note: E=Excellent, G=Good, S=Satisfactory, P=Poor

Conclusion

The proposed pier deck replacement alternatives were developed to meet the owner's requirements and design criteria outlined in the BoD document with a goal of improving the durability of the pier deck and minimizing future maintenance requirements.

Baird recommends that the Park District review the information provided in the conceptual design letter and provide feedback and guidance on the desired improvements. The feedback and guidance provided will form the basis for the design development of the preferred alternative in the next phase of the work.

We appreciate the opportunity to work with the Park District on this project. Feel free to give me a call at 608-515-4587 with questions.

Best regards,

Caleb Barth | Marine Engineer
Baird & Associates
E: cbarth@baird.com

CC: Jamie Briones

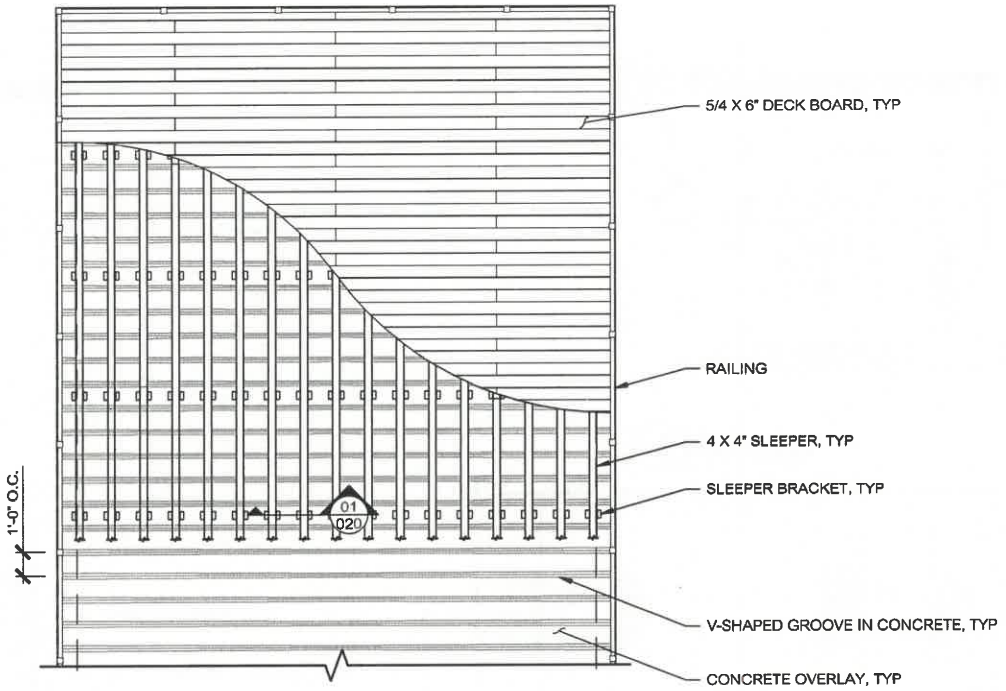
Attachments:

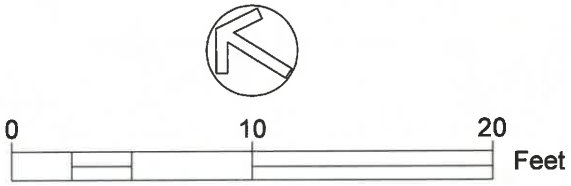
1 - Conceptual Sketches
2 - Decking Product Literature
3 - Stamped / Colored Concrete Options
4 - Opinion of Probable Construction Cost

Attachment 1 - Conceptual Sketches

IN PROGRESS

DRAFT





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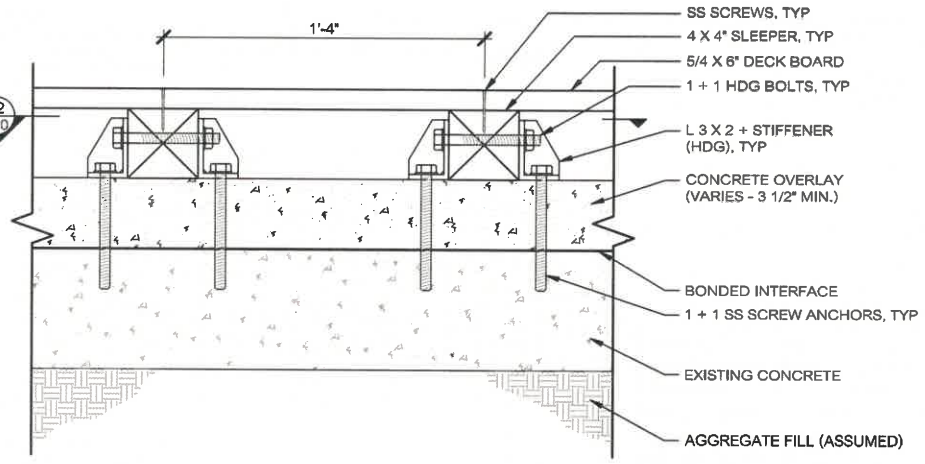
ALTERNATIVE 1 PLAN VIEW

GLENCOE BEACH PIER DECK REPAIR

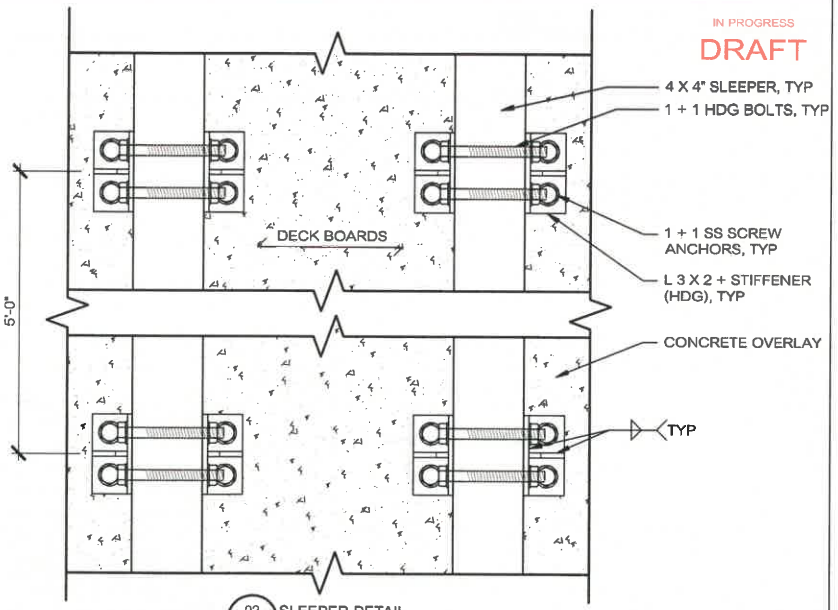
Project Number: 13359.101

Date: 2020-12-11

Baird.

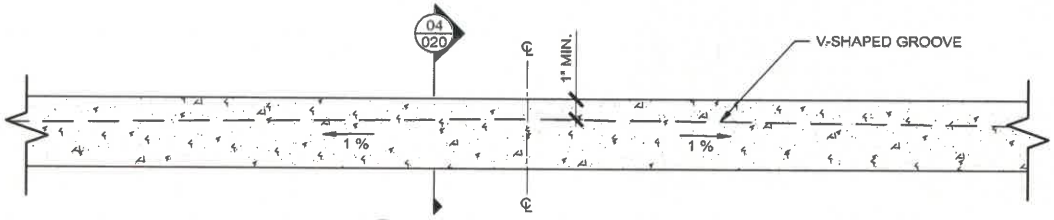


01/020 DECKING CROSS SECTION
SCALE: 1" = 6"



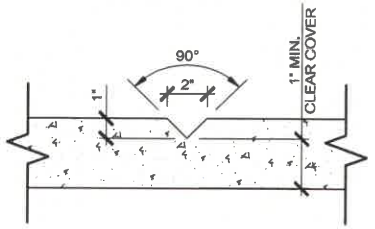
02/020 SLEEPER DETAIL
SCALE: 1" = 6"

NOTE: DECKING AND EXISTING CONCRETE NOT SHOWN FOR CLARITY.



03/020 V-SHAPED DRAINAGE GROOVE DETAIL
SCALE: 1" = 6"

NOTE: DECKING AND EXISTING CONCRETE NOT SHOWN FOR CLARITY.



04/020 V-SHAPED DRAINAGE GROOVE CROSS SECTION
SCALE: 1" = 6"

0 1 2 Feet

ALTERNATIVE 1 DETAILS

GLENCOE BEACH PIER DECK REPAIR

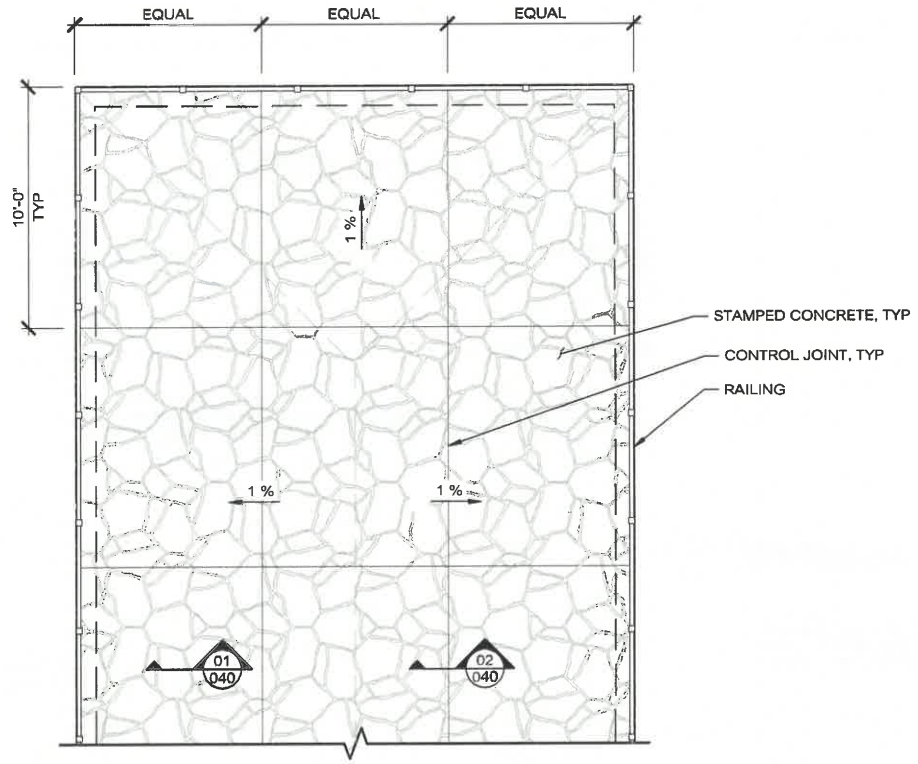
Project Number: 13359.101

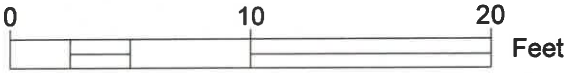
Date: 2020-12-11

Baird.

IN PROGRESS

DRAFT





ALTERNATIVE 2 PLAN VIEW

GLENCOE BEACH PIER DECK REPAIR

Project Number: 13359.101

Date: 2020-12-11

Baird.

IN PROGRESS

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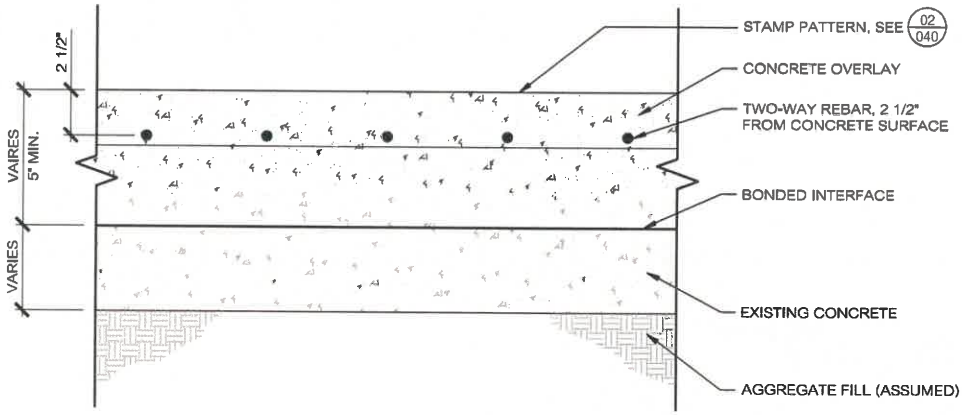

01/020 STAMPED CONCRETE CROSS SECTION
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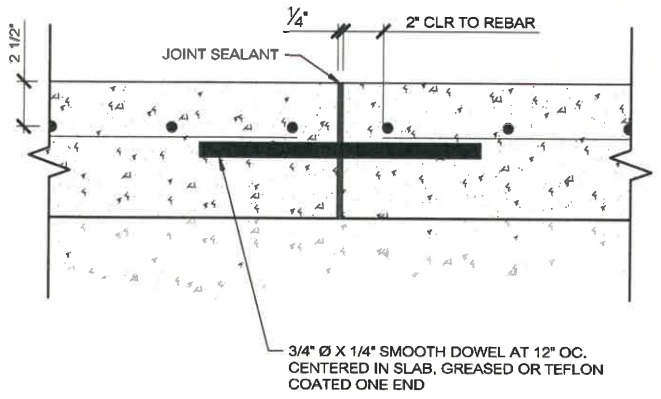
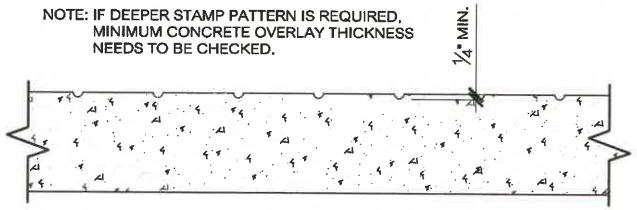
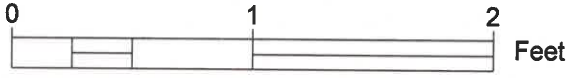


02/040 TYPICAL EXPANSION JOINT DETAIL
SCALE: 1" = 6"

NOTE: IF DEEPER STAMP PATTERN IS REQUIRED, MINIMUM CONCRETE OVERLAY THICKNESS NEEDS TO BE CHECKED.



03/020 STAMP PATTERN DEPTH DETAIL
SCALE: 1" = 6"



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ALTERNATIVE 2 DETAILS

GLENCOE BEACH PIER DECK REPAIR

Project Number: 13359.101

Date: 2020-12-11

Baird.

Attachment 2 - Decking Product Literature

Authorized Distributor/Dealer

Lumberock® Premium Decking
885 Church Road, Elgin, IL 60123
Visit lumberock.com or call 800-480-2327

Find us on Facebook at
www.facebook.com/lumberock

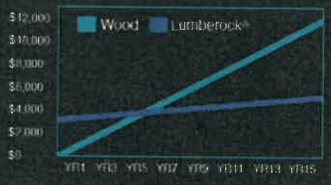
A product of ENGINEERED PLASTIC SYSTEMS LLC

EPS LRE 04/17

A SMART INVESTMENT

It's true that Lumberock® costs more up front than traditional wood products, however our synthetic lumber will never crack, rot, splinter or peel, and decks built with Lumberock® require minimal maintenance. Compare that to traditional wood which requires bi-yearly sanding and staining — a time-consuming and cumbersome process. Within five years of owning a Lumberock® deck or dock, you will have recouped your investment and saved yourself hours of labor.

Cost of Lumberock® vs. Cost of Wood



CLEANING & CARE

One of the primary advantages to using Lumberock® is that the boards require almost no maintenance whatsoever after their installation. When dirt or debris begin to accumulate on your deck or dock, simply sweep it away, hose it off or lightly wash the boards with soap and water. Any standard household cleaner can be used. Occasionally, mold and mildew will form on dirt that has built up on the boards, but it will not permeate the surface of the board and can be removed with a light pressure washing. Additionally, stains from food, oil, beverages and grease will not adhere Lumberock® Premium Decking.

WE ROCK – HERE'S WHY

Completely Synthetic Deck/Dock Boards

Lumberock® uses innovative extrusion technology to combine a mineral-filled compound with high density polyethylene plastic. This formula allows us to manufacture solid/non-porous dimensional profiles that are extremely durable and that will not rot, crack, splinter or peel. Because no organic fills are used, there is nothing for mold or mildew to adhere to and nothing for water to decompose. Bacteria, insects and other organisms that thrive in areas with outdoor exposure and lots of moisture cannot permeate the surface or interior of the board. Lumberock® can endure prolonged submersion in saltwater and freshwater and is protected by our Limited Lifetime Warranty even in these conditions. Additionally, our board features increased strength and decreased thermal expansion due to our use of a mineral fill additive.

Traditional Installation

Lumberock® requires no special tools for installation. Standard carpentry tools will do the trick and no pre-drilling is necessary. All of our boards feature rounded edges to help hide straight line imperfections sometimes caused during installation.

Lumberock® should be fastened to the deck frame using standard fastening systems, such as stainless steel screws. For 5/4x6 deck and dock boards, we recommend a joist span of 16" on centers for residential projects and 12" on centers for commercial/angle projects. For 2x6 and 2x8 deck and dock boards, we recommend a joist span of 24" on centers for residential projects and 16" on centers for commercial/angle projects.

MADE IN U.S.A.

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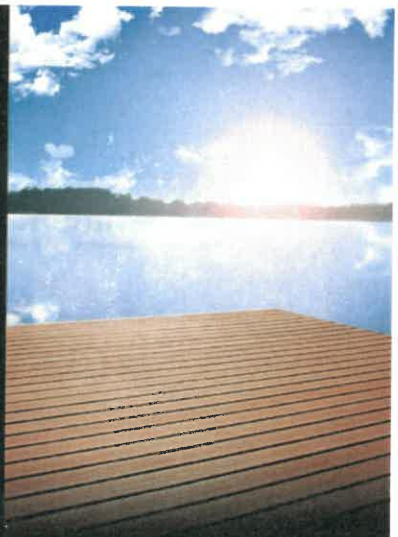

LUMBEROCK®
PREMIUM DECKING

IDEAL FOR WATERFRONT APPLICATIONS

LUMBEROCK®
PREMIUM DECKING

Solid!

Lumberock® is a synthetic dimensional lumber made from the unique combination of HDPE plastic and a natural mineral fill material.

- Increased Strength & Durability
- Minimal Maintenance
- Easy to Install
- No Permanent Staining
- Completely Waterproof
- No Organic Fills or PVC
- No Noticeable Fading
- Natural Wood-Grain Pattern
- Will Never Rot, Crack or Splinter
- High Performance
- Mold & Mildew Free
- Impenetrable Surface
- Cuts & Routers Like Wood

Lumberock® is engineered to withstand harsh, wet environments making it the ideal choice for your dock, marina, boardwalk or swimming pool project.

Available Colors

DOCK PROFILES

5/4 x 6 DOCK BOARD

Actual Dimensions:
1"x5.5" (2.5cm x 14cm)
Lengths:
12ft, 16ft, 20ft

2 x 6 DOCK BOARD

Actual Dimensions:
1.5"x5.5" (3.8cm x 13.7cm)
Lengths:
12ft, 16ft, 20ft

2 x 8 DOCK BOARD

Actual Dimensions:
1.5"x7.5" (3.8cm x 19cm)
Lengths:
12ft, 16ft

1 x 10 TRIM BOARD

Actual Dimensions:
0.75"x9.5" (1.9cm x 24cm)
Lengths:
8ft

1 x 1-1/2 PILING STRIP

Actual Dimensions:
0.75"x9.5" (1.9cm x 3cm)
Lengths:
8ft

BACKED BY OUR
LIMITED LIFETIME WARRANTY

Product Information and Installation Guide

WearDeck™
Reinforced Polymeric Lumber

Product Information and Installation Guide

Product Composition:

High Density Polyethylene (HDPE) resin and a proprietary blend of additives including pigments, UV inhibitors, and AO stabilizers.

Product Features and Benefits:

- Highest Live Load Capacity Ratings in the industry
  - Our 5/4x6" board supports 120 lbs/SqFt at 24" O.C.
  - Requires less understructure
- Heat Reflective
  - Reduces our boards surface temperatures by 30 percent
  - New Barefoot colors stay cool for bare feet
- 8 vibrant colors in a bold wood grain, slip-resistant finish:
  - Cool Gray, Sand, Cedar, Weatherwood, Saddle, White, Barefoot Grey, Barefoot Sand
  - Maximum color retention with 25-year UV package
- 25-year Commercial Warranty and Lifetime Residential Warranty
- Custom cut-to-order program reduces waste, cost and labor
- Available in up to 28 ft. lengths (industry exclusive)
- Minimal thermal expansion & contraction
  - Maximum of 1/32" on a 20' board
- Easy to maintain
  - Clean with soap and water or a pressure cleaner at a safe distance
- Weatherproof and Waterproof
  - Withstands harsh heat, hurricanes and saltwater
- Rated for ground contact and underwater installation
- No mold or mildew
- Easy for builders to use
  - Rip, edge and route our product
  - Core color matches skin

WearDeck™
Reinforced Polymeric Lumber

Decking Profiles:

Standard Deck Board 5/4x6"

Actual Dimensions: 1.05x5.5"

Standard Lengths: 12' 16' 20'

Custom Lengths: Up to 28'

Woodgrain: One Side

Colors Available: All

Standard Deck Board 5/4x8"

Actual Dimensions: 1.05x7.25"

Standard Lengths: 12' 16' 20'

Custom Lengths: Up to 28'

Woodgrain: One Side

Colors Available: All

Standard Deck Board 2x6"

Actual Dimensions: 1.35x5.5"

Standard Lengths: 12' 16' 20'

Custom Lengths: Up to 28'

Woodgrain: One Side

Colors Available: All

WearDeck™
Reinforced Polymeric Lumber

Standard Deck Board 2x4"

Actual Dimensions: 1.5x3.5"

Standard Lengths: 16' 20'

Custom Lengths: Not available

Woodgrain: Both Sides

Colors Available: All

Standard Deck Board 2x8"

Actual Dimensions: 1.5x7.25"

Standard Lengths: 12' 16' 20'

Custom Lengths: Not Available

Woodgrain: Both Sides

Colors Available: All colors at 12' and 16'. White, Cedar, and Saddle at 20'.

Standard Deck Board 2x10"

Actual Dimensions: 1.5x9.25"

Standard Lengths: 12' 20'

Custom Lengths: Not Available

Woodgrain: Both Sides

Colors Available: All colors at 12'. White, Cedar, and Saddle at 20'.

Standard Deck Board 1/2x6"

Actual Dimensions: 0.5x5.5"

Standard Lengths: 18'

Custom Lengths: Not Available

Woodgrain: Both Sides

WearDeck™
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Colors Available: All

Standard Deck Board 1/2x10"

Actual Dimensions: 0.5x9.5"

Standard Lengths: 12'

Custom Lengths: Not Available

Woodgrain: Both Sides

Colors Available: All

Custom Lengths:

Our Custom Cut-to-Order Program provides customers the opportunity to purchase custom length boards up to 28ft at no additional cost.
Reduce waste, labor, and time on the job.

Profiles offered: 5/4x6", 5/4x8", and 2x6"

Minimum: 800 linear feet per cut.

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Standard Decking Bundle: Sizes and Weights

Use these standard bundle quantities and weights for calculating truckloads. Truckload orders are approximately 44,000lbs or at least 18-21 pallets. Use weights for orders of standard lengths and weight per foot to calculate total weights for Custom Cut to Length Program orders. If you need 12 or 20' lengths, it is possible to order full bundles.

Profile	PCS/Bundle	12' wt per Bundle	16' wt per Bundle	20' wt per Bundle	Wt per Ft
5/4 X6"	64	1459 lbs	1946 lbs	2432 lbs	1.90 lbs
5/4 X8"	48	1475 lbs	1966 lbs	2458 lbs	2.56 lbs
2 X 4"	36	N/A	968 lbs	1210 lbs	1.68 lbs
2 X 6"	40	1162 lbs	1549 lbs	1936 lbs	2.42 lbs
2 X 8"	30	1296 lbs	1728 lbs	2160 lbs	3.60 lbs
2 X10"	25	1335 lbs	N/A	2225 lbs	4.60 lbs
1/2 X6"	64	Available in bundles of 18 ft @ 1037 lbs			0.90 lbs
1/2X10"	48	Available in bundles of 12 ft @ 979 lbs			1.60 lbs

WearDeck™
Reinforced Polymeric Lumber

BASIC INSTALLATION INFORMATION:

WearDeck Reinforced Polymeric Lumber in all profiles produces decking that easily exceeds generally accepted standards for application.

1. 5/4" decking spans 24 inches on center (O.C.) for deck and dock applications.

Live Load Capacity:
266 lbs./ft² at 16" O.C.
120 lbs./ft² at 24" O.C.

2. 2" x 6" decking spans 24 inches O.C. for deck and dock applications.

Live Load Capacity:
306 lbs./ft² at 24" O.C.

Joist Spacing:

WearDeck is designed to perform above accepted standards at the 24" on center spacing as indicated above. However, using the generally accepted decking joist spacing standards provides an installation far superior to any competitor. We recommend the installation guidelines below for exceptional performance.

5/4 x 6" joists spacing

16" on center
12" on center if installed diagonally. Commercial applications are generally a minimum of 12 inches on center
(Always refer to the overriding local building code requirements)

2 x 6" joists spacing

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24" on center
16" on center if installed diagonally. Commercial applications are generally 16" on center, possibly 12" for straight commercial applications. (Always refer to the overriding local building code requirements)

For commercial applications, **ALWAYS** follow local municipal building code standards for ALL commercial installations, which generally require closer joist spacing by applicable code.

Check Your Joists:

- All joists must be level to each other in order to attain a proper quality installation. This is responsibility of the homeowner, builder or contractor.
- Joists may require blocking/bridging in order to maintain straight and level joists based on material used to construct deck. This is the responsibility of the homeowner, builder or contractor.

- For cantilevering; 5/4" x 6" maximum of 2" & 2 x 6" maximum of 4".
  - Provide a minimum of a 1/8" to 1/4" inch gap between exterior walls, pilings, posts, & retaining walls or any solid fixed structure when installing all decking. This is to accommodate any potential movement of main structures (walls, pilings, posts etc....) not the deck board.
  - WearDeck's unsurpassed strength & stability adds significantly to the structural stability of any deck or dock structure, when properly applied.
  - WearDeck has a directional grain pattern, which for appearance purposes ONLY is best applied with the 5 grain peaks on board face running in the same direction. Wood grain pattern repeats every 37.5 inches.

FASTENING & WORKABILITY:

WearDeck works well with a variety of fastening options listed below. We recommend building with Stainless Steel Composite Deck Screws. Stainless Steel Composite Deck Screws offer exceptional longevity and appearance as they capture surface material. Screws that are not designed specifically for

composite deck boards will not provide the best or proper appearance at the board's surface.

Examples of Acceptable Fasteners:

1. Starborn, Simpson Strong-Tie, Deckmate, TrapEase by Fasten Master, Tiger Claw, etc.
2. We recommend CAMO for excellent for drive tools and concealed fastening applications. As with use on any decking application, concealed fastening methods do not provide as strong of an application as face fastening.

Fastening Recommedations:

When face fastening a 5/4" board, use at a minimum, a #9 x 2 ½" exterior rated composite type screw.

3. When face fastening a 2" board, use at a minimum, a #10 x 2 ¾
4. " exterior rated composite type screw.
5. Predrilling is NOT GENERALLY REQUIRED, however in the extreme cold of winter, testing to determine best method of application is recommended.
6. WearDeck can be installed with standard tools used for installing any wood deck or dock.
7. A MINIMUM of 2 fasteners should be placed from ½ to 1 inch from ends & edges of decking at a minimum of every 24 inches or every joist for proper standard decking applications. Your particular application may require a more fasteners based on needs of your structure. Applications for other than standard decking use, example 2x8s or 2x10s, may require special bolts or screws based on your particular application or structures needs.
8. ½" x 6" or ½" x 10" Fascia is designed for use as trim over a completely solid, level boardtoboard, surface. WearDeck Fascia is not designed to be used as decking, decking cap or any walkable wear surface or to span any distance without solid level board-to-board support.

When used properly, as designed for fascia or trim purposes, should be installed as indicated below:

A. ½" x 6" should be fastened with a minimum of 2 screws every 12 inches starting at 1" from ends and edges of each board, allowing 1/16th inch gap between ends / butt joints of each board, screw should be at least a
#8 x 1 5/8" long. Example of cap capture screw would be; Deckmate #8 x 1 5/8" T20 star drive composite

B. ½" x 10" should be fastened with a minimum of 2 screws every 12 inches applied vertically starting at 1" from ends and edges of each board, allowing 1/16th inch gap between ends of each board, screw should be at least a #8 x 1 5/8 inches long. Example of cap capture screw would be; Deckmate #8 x 1 5/8" T20 star drive composite.

C. Screws can be composite deck type screw with cap capture threads or standard style threads, cap capture style screws provide the best appearance.

*** MINIMUM requirements stated above but Fastening & fastener decisions are entirely the responsibility of the homeowner, builder or contractor.

DECK SPACING GUIDELINES:

WearDeck provides the most stable composite decking board on the market today. Because of our strenuous manufacturing standards, WearDeck outperforms any known product in the industry today, particularly in terms of thermal expansion and contraction tolerance during the extreme heat of summer or the extreme cold of winter.

Thermal Expansion = 1/32" in the length of a 20' 5/4 x 6" or 2 x 6" deck board

This allows for generally unheard of spacing requirements:

WearDeck™
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- End to end spacing minimum of 1/16 inch.
- Side to side spacing minimum of 1/16 inch. *

*General building practices call for wider side to side spacing to allow for proper drainage, debris removal and/or air circulation, PLEASE consider these factors when installing any decking material. WearDeck is rated for ground contact and can be installed underwater.

FACE FASTENING GUIDELINES:

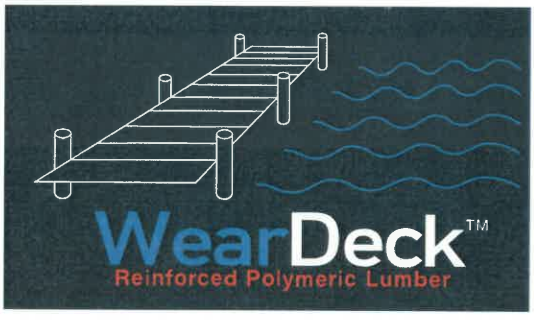
Even with WearDeck's superior characteristics we recommend using the most commonly accepted fastening methods. Use of a quality composite decking style screw is recommended for best performance and appearance.

1. Straight at 90° to deck board.
2. When face fastening place screws NO closer than ½ inch from the end and ½ inch from the side from side edge of deck board, using 2 screws at each joist connection. Builders most often find that installing screws approximately 1" from end and edges of boards provides a better look and overall optimal application.
3. A MINIMUM of 2 fasteners should be placed from ½ to 1 inch from ends & edges of decking at a minimum of every 24 inches or every joist for proper standard decking applications. Your particular application may require a more fasteners based on needs of your structure. Applications for other than standard decking use, example 2x8s or 2x10s, may require special bolts or screws based on your particular structures needs.
4. MINIMUM requirements are stated but ALL Fastening & fastener decisions are the responsibility of the homeowner, builder or contractor.

CLEANING:

Generally keeping the decking surface rinsed to remove excess dirt and debris will keep surface in excellent condition. We recommend periodic cleaning for the best overall appearance.

1. Promptly clean any stain with a good household cleaner and a natural bristle brush.



2. However, if dirt is allowed to build up on the surface for a prolonged time tougher buildup may occur which could require extra effort to remove.
3. WearDeck has NO organic compounds so WearDeck will not support mildew or mold growth but if allowed to become and stay dirty the dirt, soil, debris will grow mold or mildew, requiring extra effort to clean. Again, standard cleaning practices will keep your WearDeck beautiful for years.
4. Cleaning solutions such as; DAWN dishwashing solution, 409, Simple Green, Fantastik, etc. should work well for general cleaning needs.
5. IF there is a grill on the deck, a non-rubber backed mat is recommended to protect against grease drops. If grease stains or any stain occurs they should be cleaned as soon as possible. The longer they remain the harder they are to remove from any surface / any product. DAWN dishwashing solution generally does an excellent job removing most grease stains.
6. Pressure Washing is NOT RECOMMENDED. However, if pressure washer is used always keep spray tip from 12 to 18 inches away from deck material with a wide fan spray setting at medium pressure. NEVER use a fine point spray setting when cleaning any plastic, composite or wood decking material, as fine point spray on a pressure washer can and will most often damage any decking material regardless of type.

RE-DECKING AN OLD DECK OR DOCK:

IMPORTANT: When re-decking an old deck or dock after removal of old surface material it is necessary that the remaining structure be properly inspected, re-nailed and/or re-screwed. Boards should be replaced where necessary before new decking can be installed on what then should be a secure deck structure that is very importantly, level board to board. This is the responsibility of the homeowner, builder or contractor.

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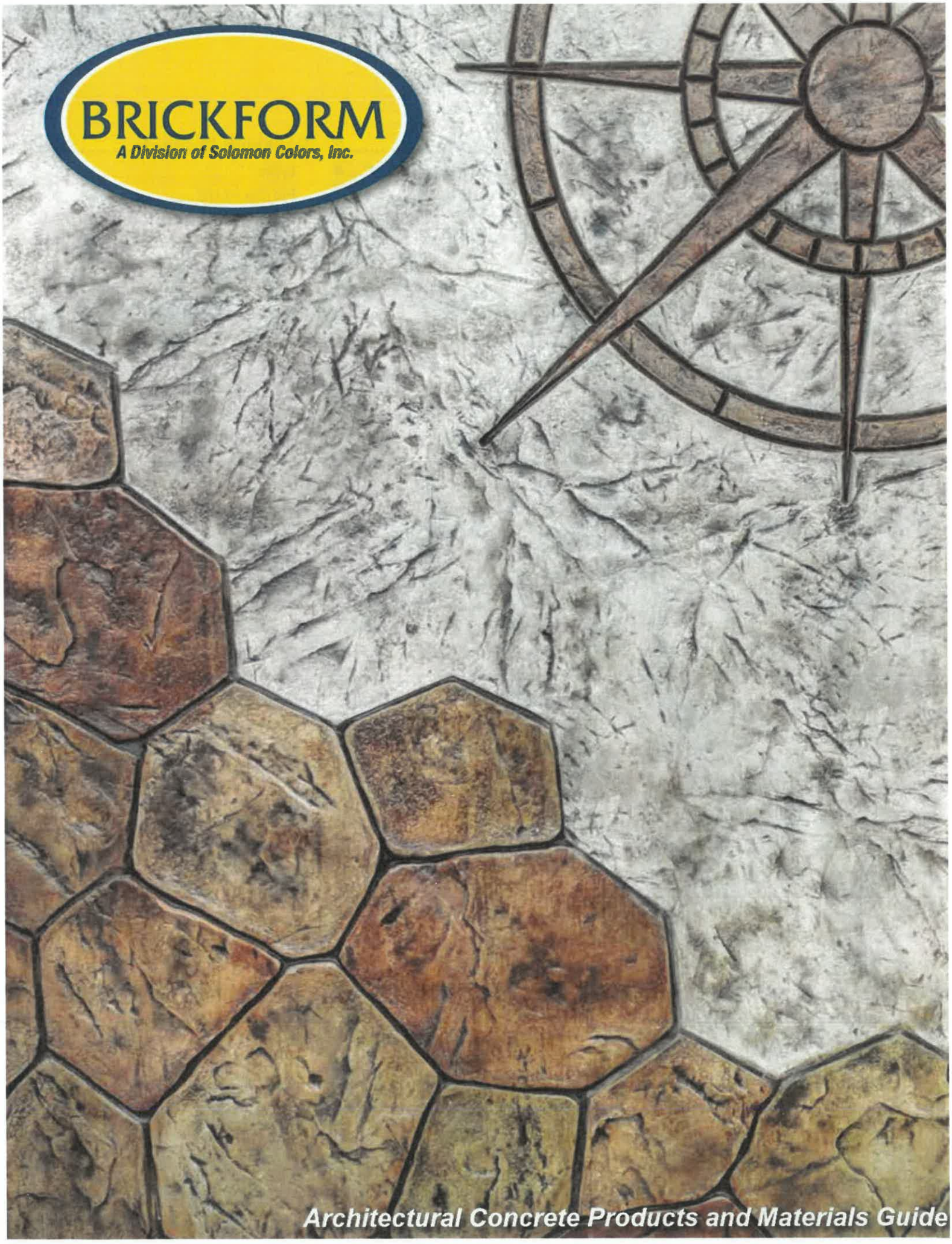
Attachment 3 Stamped/Colored Concrete Options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A Division of Solomon Colors, Inc.
Architectural Concrete Products and Materials Guide

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More Information Online

www.Brickform.com

www.solomoncolors.com

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Seamless Skins

Brickform Seamless Skins™ are feathered-edged skins that produce continuous texture with no grout or joint lines. Brickform texture skins are available in ultra-flexible, classic flex, and standard flex materials, all designed with unsurpassed quality. Seamless skins are compatible with Brickform Stampable Overlay.

Rough Stone Texture (C)

A natural stone texture characterized by a continuous coarse surface with several distinguishing veins

See page 15 for ordering information.

Blue Stone Texture (A)
A natural stone surface with a sandy texture that includes clefts which leave a layered appearance.

Limestone Texture (B)
A natural stone surface, similar to Veronica Stone but with a finer texture.

Heavy Stone Texture (D)
A rough, natural stone surface containing chips, fractures, pockmarks and veins.

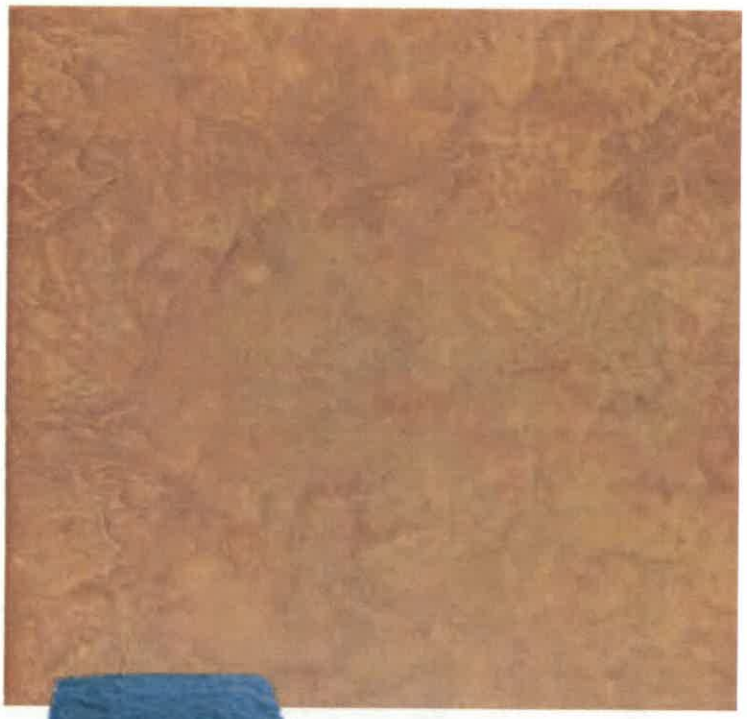
Sanded Slate Texture (E)
Similar to our slate texture with the addition of a lightly sanded appearance across the entire texture field.

Renaissance Slate Texture (F)

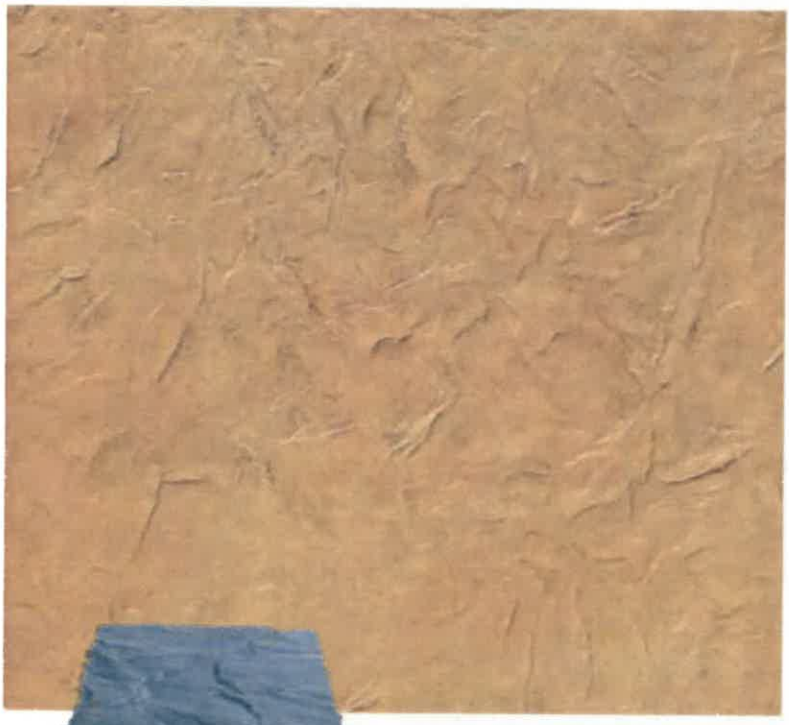
A natural stone surface with a slight sandstone texture that includes various veins, typically running in a similar direction

See page 15 for ordering information.

Chiseled Slate Texture (G)
A naturally laminated stone texture, split along parallel planes, hand-tooled to create a chipped, fragmented look.



Yucatan Texture (J)
A stone surface consisting of deep chips, pits and fractures creating a continuously undulating texture.



Roman Slate Texture (H)
A sanded slate stone surface that utilizes dips, ridges and veins to create a continuously changing texture across the entire surface.

Original Roman Slate Texture (I)
A smooth slate stone surface that utilizes dips, ridges and veins to create a continuously changing texture across the entire surface.

Sierra Seamless Texture (K)
A natural stone texture with an ocean-worn surface that combines rough, heavy, stone appearance with water-washed ridges, veins and clefts.

Texas Sea Shells (N)
Random pieces of sea shells and coral of various sizes, shapes and types laid in a random fashion over a field of sand.

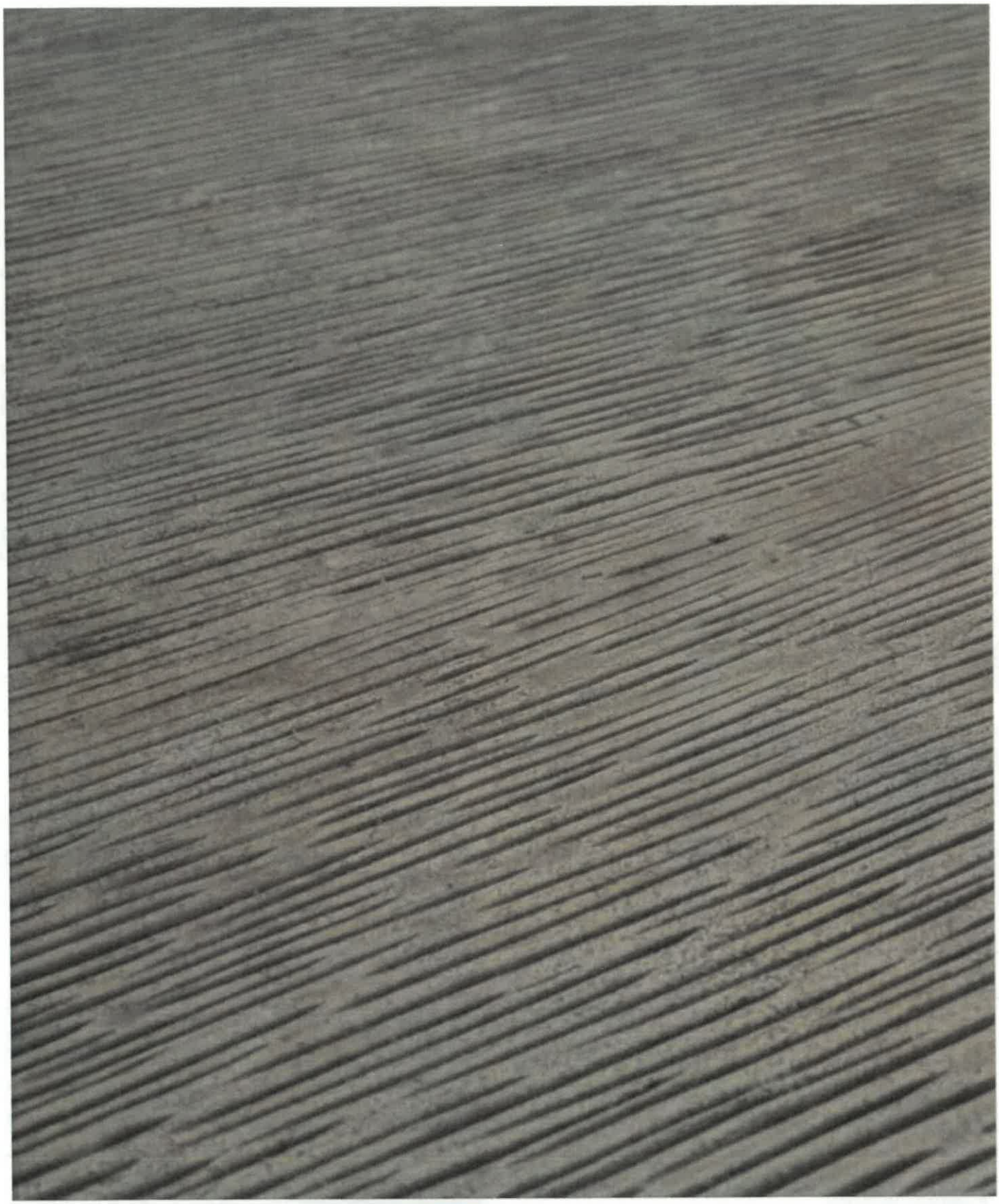
See page 15 for ordering information.

Rocky Mountain Stone Texture (L)
A natural stone surface that incorporates a rough, uneven texture with naturally etched veins and ridges.

Veronica Stone (M)
The design is similar Bush Stone, and appears to be created by a mason's bush hammer with a pitted and irregular surface.

Smooth Slate Texture (O)
A naturally laminated stone texture, split along parallel planes, creating an uneven surface that incorporates various veins and ridges.

Desert Slate Texture (P)
A simulated slate texture that combines numerous clefts and irregular surfaces to create the ideal concrete impressions.



Casa Rubia (Y)

A unique hand-chiseled texture that yields a thatch-like appearance. Great for pool decks

See page 15 for ordering information.

Elk Mountain Texture (Q)
A consistent light stone texture, making it appealing for indoor and outdoor applications.

Elk Mountain Texture (veined) (R)
A light stone texture with well-placed fractures, making it appealing for indoor and outdoor applications.

Regal Ashlar Slate (S)
A robust texture, with constantly changing ridges that bring a majestic and noble look to any surface.

Cracked Mud (T)
A bold, daring, natural earth texture with a surface that looks and feels real.

Lunar Rock (U)
An out-of-this-world look that will transform any hardscape. The surface boasts a meteor shower of texture with a variety of impacted stones.

Super Slate (V)
A blended slate pattern with enhanced highlights.

Sidewalk Stone (W)
A rustic blend of soft and strong textures, giving a traditional feel to any surface.

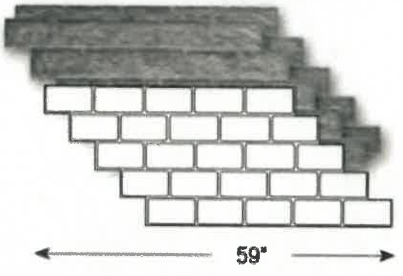
Riviera Texture (X)
A naturally laminated stone texture, split along parallel planes, creating an uneven surface that incorporates various veins and ridges.

Paladiano Texture Mats *by Bob Harris*

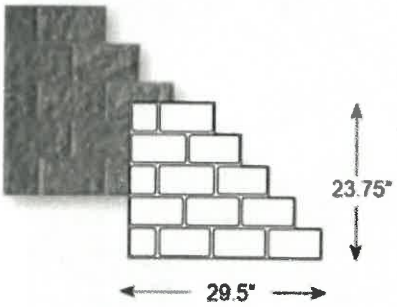
These speciality tools are cast from natural stones in historical regions with authentic textures and shapes that are pleasing to the eye from all angles. England, Italy, Bulgaria, Greece, Cyprus and France are the locations which inspired the "Wonders of the World" stamping tool line.

Part #	YORKSHIRE COBBLE	Size	Weight	# per set
PD-100	Full tools	59" x 23.5"	22 lbs	6
PD-105	Left	29.5" x 23.75"	11 lbs	2
PD-110	Single Stone	8.5" x 4.75"	1 lb	3
PD-115	Double Row Border	43.5" x 9.5"	9 lbs	1
PD-120	Soldier Course Border	41.5" x 8"	7 lbs	1
PD-125	2x2 skin	24" x 24"	4 lbs	1
PD-130	1x1 skin	12" x 12"	1 lb	1
PD-100F	Full Floppy	59" x 23.5"	16 lbs	1
FM-6570	Touch-up wheel			1
PD-100S	Full set YORKSHIRE COBBLE with Instructional DVD			17

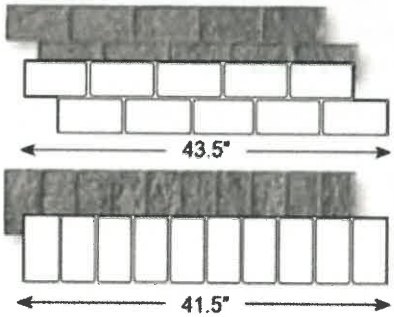
Yorkshire Cobble



Yorkshire Cobble
Full Tool, PD-100
59" x 23.5"
(149.9 x 59.7 cm)
I, II



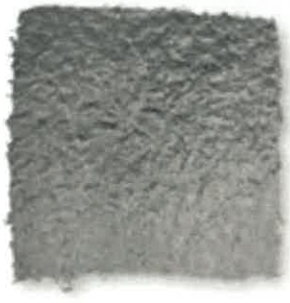
Yorkshire Cobble
Left Tool, PD-105
29.5" x 23.75"
(74.9 x 60.3 cm)



Yorkshire Cobble
Double Row Border, PD-115
43.5" x 9.5" (110.5 x 24.1 cm)

Yorkshire Cobble
Soldier Course Border, PD-120
41.5" x 8" (105.4 x 20.3 cm)

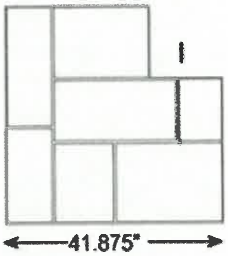
Also Available:
PD-110, Single Stone
8.5" x 4.75" (21.6 x 12.1 cm)

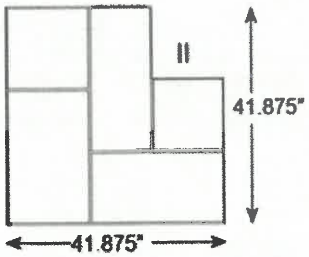


Yorkshire Cobble
Small Skin, PD-125
24" x 24"
(61 x 61 cm)

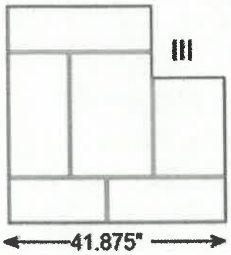
Also Available:
PD-130, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

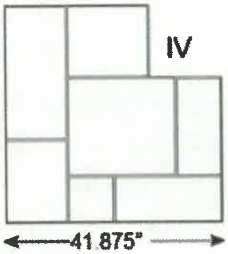
Fractured Cyprus Slate

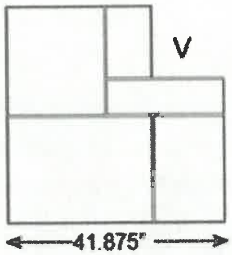


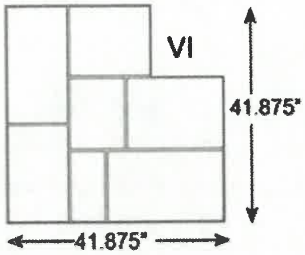


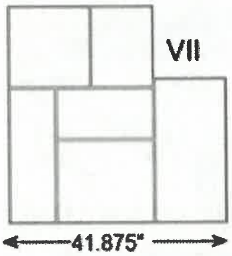
Fractured Cyprus Slate
Full Tool, PD-600
41.875" x 41.875"
(106.4 x 106.4 cm)
I, II, III, IV, V, VI, VII, VIII

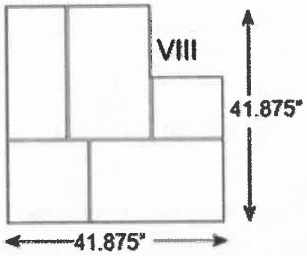












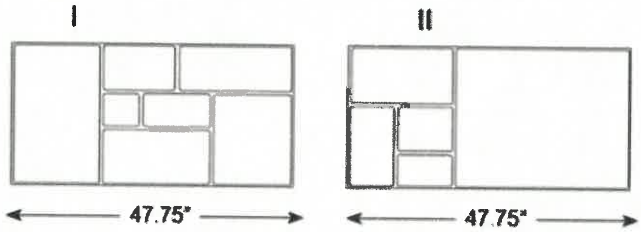
Fractured Cyprus Slate
Small Skin, PD-605
24" x 24"
(61 x 61 cm)

Also Available:
PD-610, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

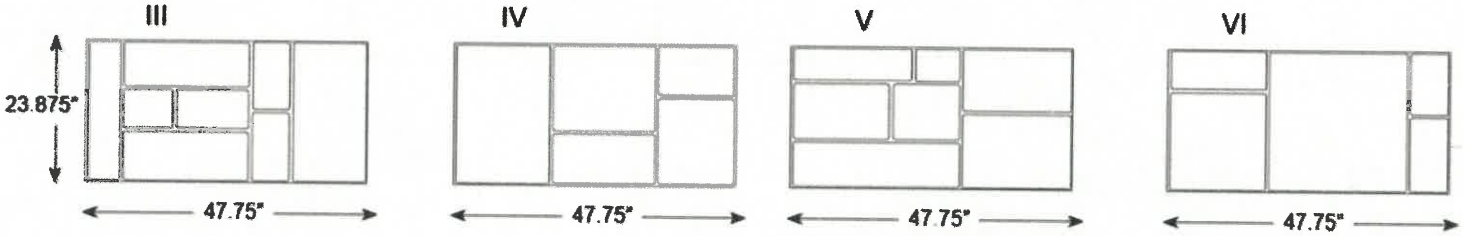
Part #	FRACTURED CYPRUS SLATE	Size	Weight	# per set
PD-600	Full tool	41.875" x 41.875"	33 lbs	8
PD-605	2x2 skin	24" x 24"	4 lbs	2
PD-610	1x1 skin	12" x 12"	1 lb	1
PD-600F	Full Floppy	41.875" x 41.875"	20 lbs	1
FM-6520	Touch-up wheel			1
PD-600S	Full set FRACTURED CYPRUS SLATE with Instructional DVD			13

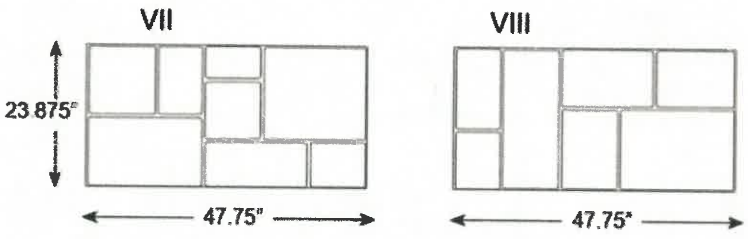
Part #	STONES OF ATHENS	Size	Weight	# per set
PD-400	Full tool	47.75" x 23.875"	24 lbs	6
PD-405	2x2 skin	24" x 24"	4 lbs	3
PD-410	1x1 skin	12" x 12"	1 lb	1
PD-400F	Full Floppy	47.75" x 23.875"	17 lbs	2
FM-6570	Touch-up wheel			1
PD-400S	Full set STONES OF ATHENS with Instructional DVD			15

Stones of Athens



Stones of Athens
Full Tool, PD-400
47.75" x 23.875"
(121.3 x 60.6 cm)
I, II, III, IV, V, VI, VII, VIII

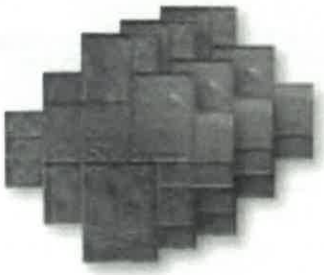


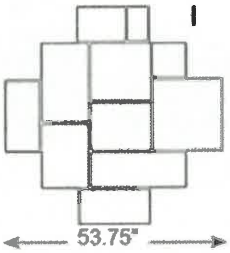


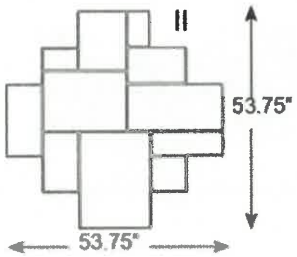
Stones of Athens
Small Skin, PD-405
24" x 24"
(61 x 61 cm)

Also Available:
PD-410, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

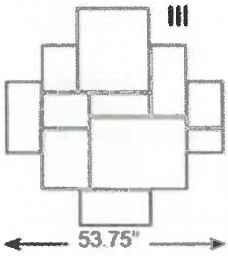
Rotating Venetian Marble

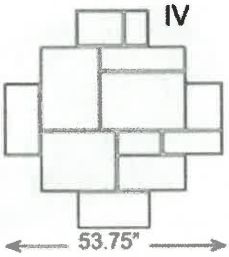


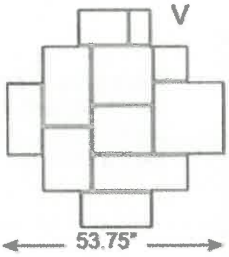


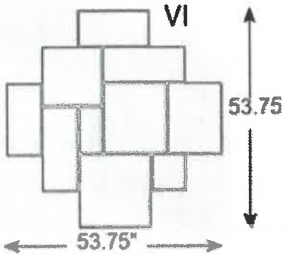


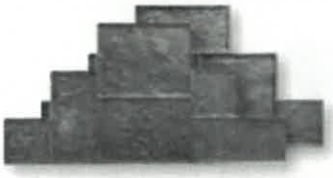
Rotating Venetian Marble
Full Tool, PD-500
53.75" x 53.75"
(136.5 x 136.5 cm)
I, II, III, IV, V, VI

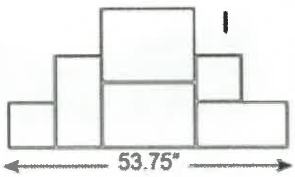


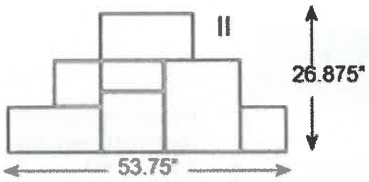




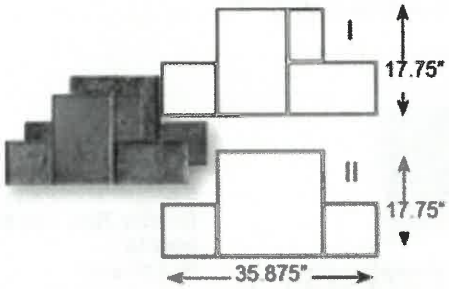








Rotating Venetian Marble
Half Tool, PD-505
53.75" x 26.875"
(106.4 x 68.3 cm)
I, II



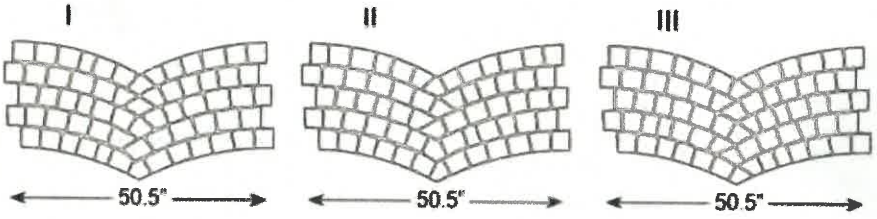
Rotating Venetian Marble
Quarter Tool, PD-510
35.875" x 17.75"
(91.1 x 45.1 cm)
I, II

Pavimento of Paris
Small Skin, PD-515
24" x 24"
(61 x 61 cm)

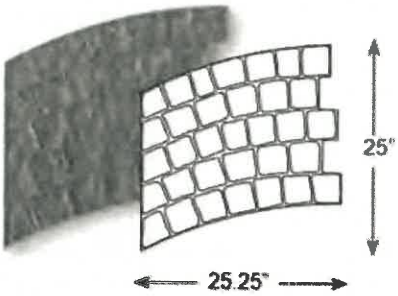
Also Available:
PD-520, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

Part #	ROTATING VENETIAN MARBLE	Size	Weight	# per set
PD-500	Full tool	53.75" x 53.75"	30 lbs	6
PD-505	Half Tool	53.75" x 26.875"	20 lbs	2
PD-510	1/4 Tool	35.875" x 17.75"	10 lbs	2
PD-515	2x2 skin	24" x 24"	4 lbs	2
PD-520	1x1 skin	12" x 12"	1 lb	1
PD-500F	Full Floppy	53.75" x 53.75"	25 lbs	1
FM-6540	Touch-up wheel			1
PD-500S	Full set ROTATING VENETIAN MARBLE with Instructional DVD			15

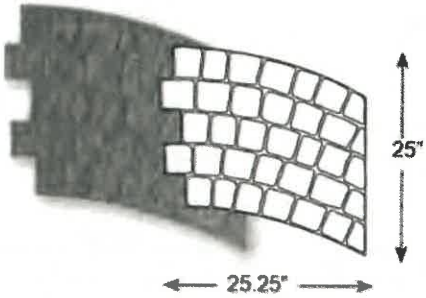
Pavimento of Paris



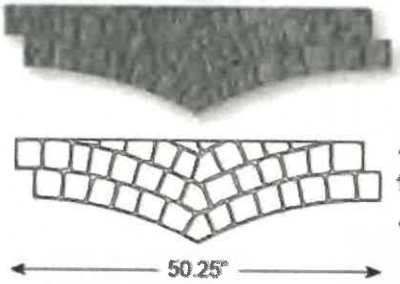
Pavimento of Paris
Full Tool, PD-200
25" 50.5" x 25"
(128.3 x 63.5 cm)
I, II, III



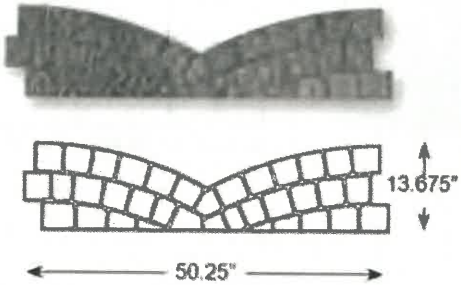
Pavimento of Paris
Half Tool, Left, PD-205
25.25" x 25"
(64.1 x 63.5 cm)



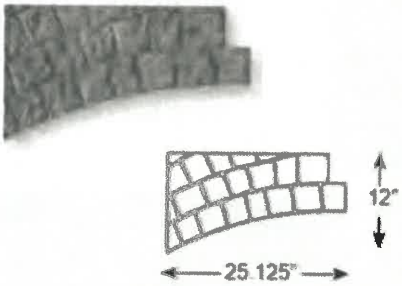
Pavimento of Paris
Half Tool, Right, PD-210
25.25" x 25"
(64.1 x 63.5 cm)



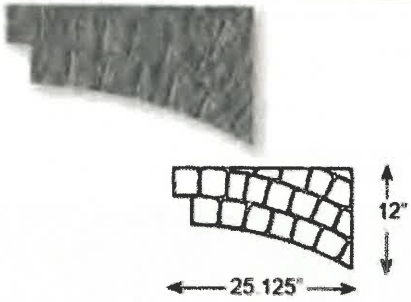
Pavimento of Paris
Half Tool, Top, PD-215
50.25" x 12"
(127.6 x 30.5 cm)



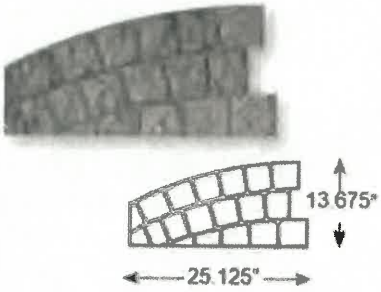
Pavimento of Paris
Half Tool, Bottom, PD-220
50.25" x 13.675"
(127.6 x 34.7 cm)



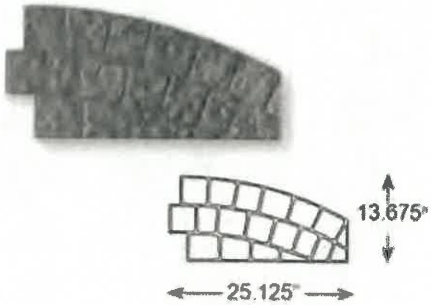
Pavimento of Paris
Quarter Tool, Top Left, PD-217
25.125" x 12"
(63.8 x 30.5 cm)



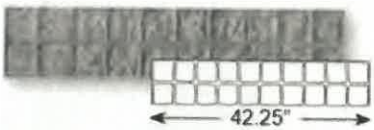
Pavimento of Paris
Quarter Tool, Top Right, PD-216
25.125" x 12"



Pavimento of Paris
Quarter Tool, Bottom Left, PD-222
25.125" x 13.675"
(63.8 x 34.7 cm)



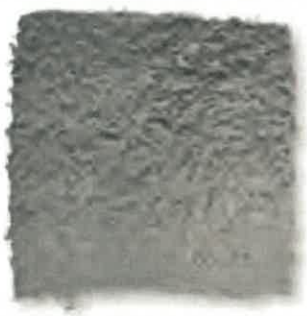
Pavimento of Paris
Quarter Tool, Bottom Right, PD-221
25.125" x 13.675"
(63.8 x 34.7 cm)



Pavimento of Paris
Stacked Bond, PD-230
42.25" x 8.5" (107.3 x 21.6 cm)

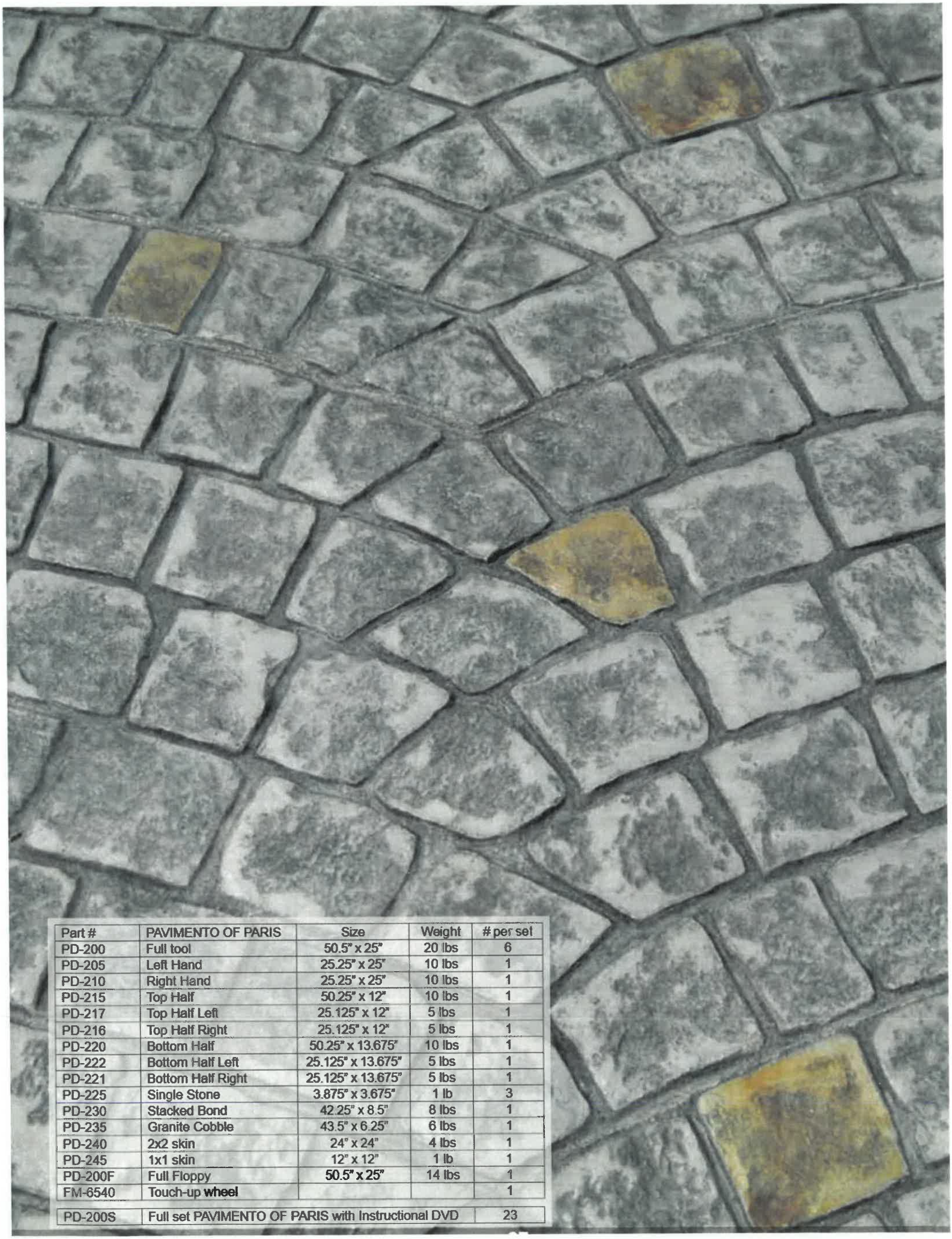
Pavimento of Paris
Granite Cobble, PD-235
43.5" x 6.25" (110.5 x 15.9 cm)

Also Available:
PD-225, Single Stone
3.875" x 3.675" (9.8 x 9.3 cm)



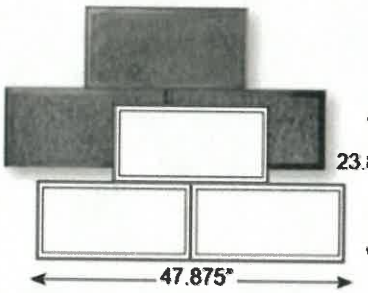
Pavimento of Paris
Small Skin, PD-240
24" x 24"
(61 x 61 cm)

Also Available:
PD-245, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

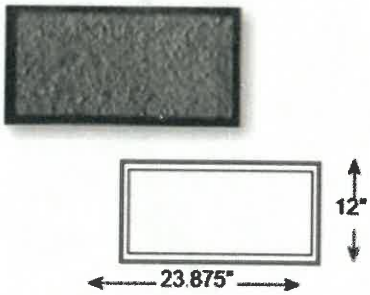


Part #	PAVIMENTO OF PARIS	Size	Weight	# per set
PD-200	Full tool	50.5" x 25"	20 lbs	6
PD-205	Left Hand	25.25" x 25"	10 lbs	1
PD-210	Right Hand	25.25" x 25"	10 lbs	1
PD-215	Top Half	50.25" x 12"	10 lbs	1
PD-217	Top Half Left	25.125" x 12"	5 lbs	1
PD-216	Top Half Right	25.125" x 12"	5 lbs	1
PD-220	Bottom Half	50.25" x 13.675"	10 lbs	1
PD-222	Bottom Half Left	25.125" x 13.675"	5 lbs	1
PD-221	Bottom Half Right	25.125" x 13.675"	5 lbs	1
PD-225	Single Stone	3.875" x 3.675"	1 lb	3
PD-230	Stacked Bond	42.25" x 8.5"	8 lbs	1
PD-235	Granite Cobble	43.5" x 6.25"	6 lbs	1
PD-240	2x2 skin	24" x 24"	4 lbs	1
PD-245	1x1 skin	12" x 12"	1 lb	1
PD-200F	Full Floppy	50.5" x 25"	14 lbs	1
FM-6540	Touch-up wheel			1
PD-200S	Full set PAVIMENTO OF PARIS with Instructional DVD			23

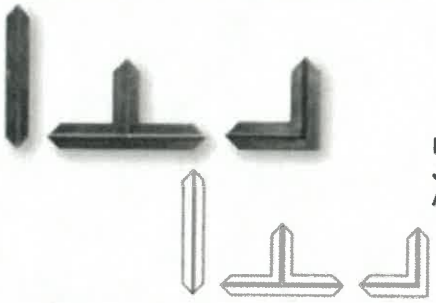
Hammered Sofia Stone



Hammered Sofia Stone
Full Tool, PD-300
47.875" x 23.875"
(121.6 x 60.6 cm)



Hammered Sofia Stone
Single Stone, PD-305
23.875" x 12"
(60.6 x 34.7 cm)



Hammered Sofia Stone
Joint Tools, PD-310
Assorted sizes

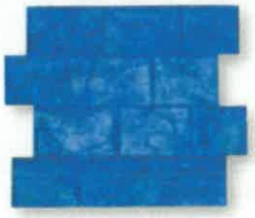
Hammered Sofia Stone
Small Skin, PD-315
24" x 24"
(61 x 61 cm)

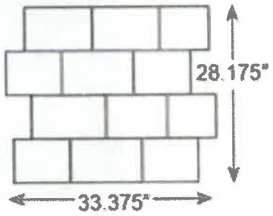
Also Available:
PD-320, Extra-Small Skin
12" x 12" (30.5 x 30.5 cm)

Part #	HAMMERED SOFIA STONE	Size	Weight	# per set
PD-300	Full tool	47.875" x 23.875	18 lbs	8
PD-305	Single Stone	23.875" x 12"	6 lbs	2
PD-310	Joint tools	assorted	1 lb	3
PD-315	2x2 skin	24" x 24"	2 lbs	1
PD-320	1x1 skin	12" x 12"	1 lb	1
PD-300F	Full Floppy	47.875" x 23.875	12 lbs	1
PD-300S	Full set HAMMERED SOFIA STONE with Instructional DVD			16

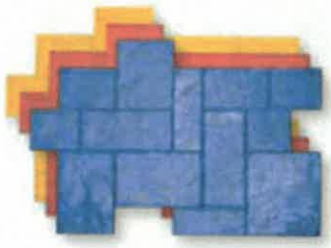
Stone Texture Mats

Whether you want the look of granite, blue stone, old English cobblestone, Mexican tile, or pavers, Brickform offers an array of texture mats that simulate a broad range of natural stone materials. Achieving these beautiful results with Brickform precision tools is often more affordable and easier than it is with natural materials. Brickform has a stone texture tool ready to complement any design theme – from an Italian Villa to an English Country Garden.





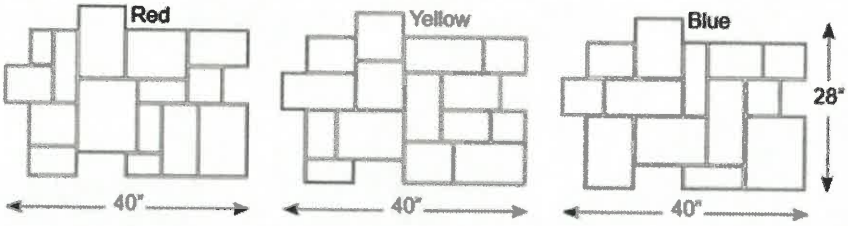
Large Cobble, FM-580
28.125" x 33.375" (71.43 x 84.77 cm) Blue
Larger rough-cut cobblestones
Matching skin/touch-up wheel: Smooth Slate/TW-1
Joint width ¼"-½", depth 3/8"
Stone size 6 ½"-6 ¾" wide, 7 ½"-11 ¼" long

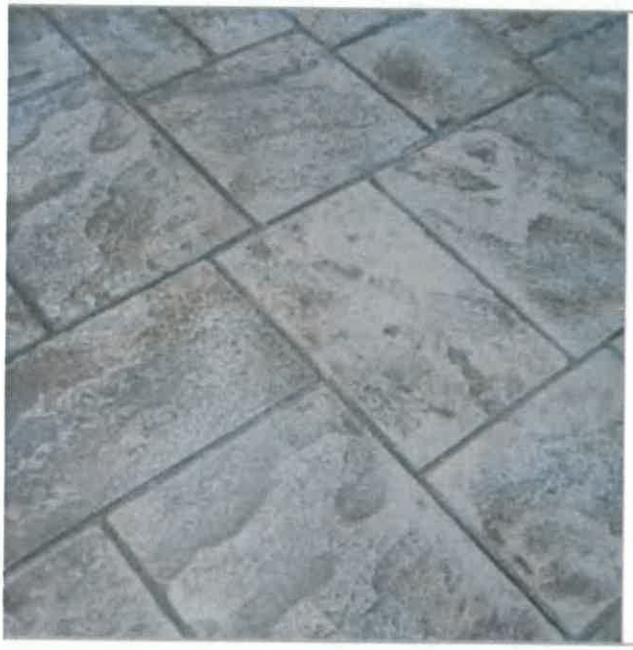


Tuscany Stone, FM-1775

28" x 40" (71.12 x 101.60 cm)
Red, Yellow and Blue
A large tool with a stone texture and interlocking joints on all four sides
Matching skin/touch-up wheel: Rough Stone/TW-5
Joint ¼" wide, 3/16" deep
Stone sizes vary from 3 ⅞" x 7 ¾" to 3 ⅞" x 9 ⅛"

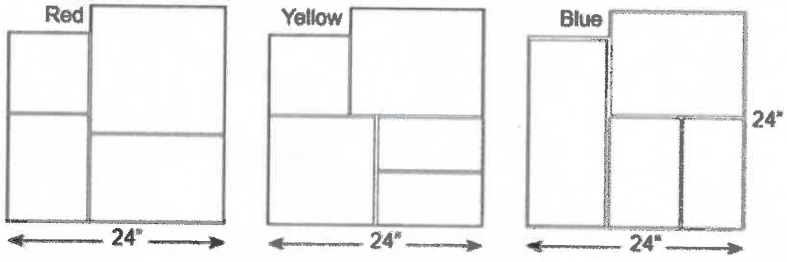
Also Available: Tuscany Border, FM-1785





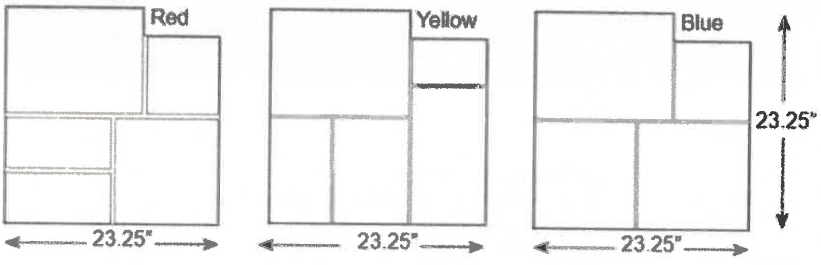
Rough Cut Ashlar, FM-100 S/O

24" x 24" (60.96 x 60.96 cm)
Red, Yellow and Blue
Rough hand-tooled stones arranged in an Ashlar pattern
Matching skin/touch-up wheel: Rough Stone/TW-2
Grout ¼"-⅜" wide, ¼" deep
Available as gang tool, see page 61 for details.

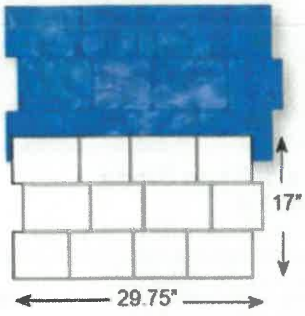


Australian Ashlar Cut Stone, FM-150 S/O

23.25" x 23.25" (59.05 x 59.05 cm)
Red, Yellow and Blue
A coarse rugged Blue Stone set in an Ashlar pattern
Matching touch-up wheel: TW-1
Grout ⅛"-¾" wide
Grout ⅝" deep

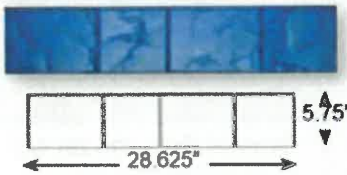


S/O - Compatible with Brickform Stampable Overlay



London Cobble, FM-540 S/O
17" x 29.75" (43.18 x 75.56 cm) Blue
A traditional lightly textured cobblestone pattern
Matching skin/touch-up wheel. Slate/TW-1
Joint ⅛"-¼" wide, ¼" deep
Stone size 5 ½"-5 ⅝" wide, 6"-8" long

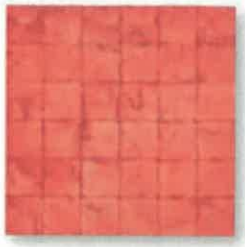
Available as gang tool, see page 59 for details.
Available as Contractors Choice, EF-540.

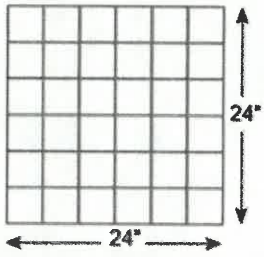


London Cobble Strip, FM-560 S/O
5.75" x 28.625"
(14.605 x 72.71 cm) Blue
Matching skin/touch-up wheel. Slate/TW-1
Joint ⅛"-¼" wide, ¼" deep
Stone size 5 ½"-5 ¾" wide, 5 ¼"- 8" long

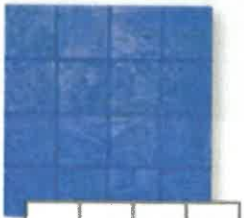
A lightly textured cobblestone pattern in a single strip

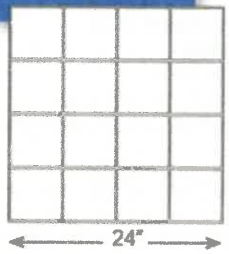
S/O - Compatible with Brickform Stampable Overlay



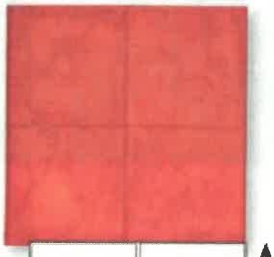


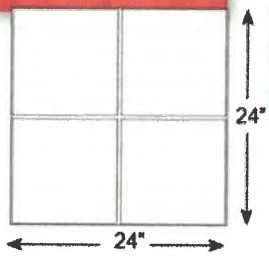
4" x 4" Slate Sets, FM-200 S/O
24" x 24" (60.96 x 60.96 cm) Red
Slate texture with a hand-chiseled edge
Matching skin/touch-up wheel: Smooth Slate/TW-1
Joint size 1/16"-1/8" wide
Stone size 4"





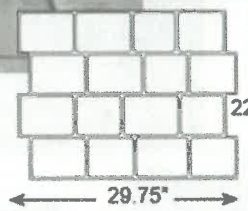
6" x 6" Granite Sets, FM-250 S/O
24" x 24" (60.96 x 60.96 cm) Blue
Rough Stone texture with a hand-chiseled edge
Matching skin/touch-up wheel: Rough Stone/TW-1
Joint size 3/8"-1/2" wide, 1/4" deep
Stone size 5 3/4"



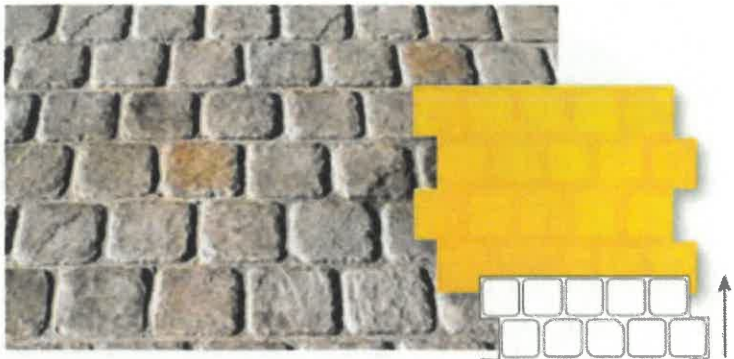


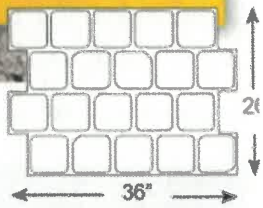
12" x 12" Cut Stone,
FM-300 S/O
24" x 24" (60.96 x 60.96 cm) Red
A rough natural stone, hand-tooled to create a chipped and fragmented texture
Matching skin/touch-up wheel: Smooth Slate/TW-1
Joint size 1/4"-3/4" wide, 3/8" deep
Stone size 12"

S/O - Compatible with Brickform Stampable Overlay

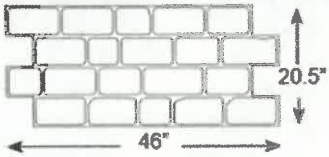


Windsor Cobble, FM-500 S/O
22.75" x 29.75" (57.78 x 75.56 cm) Blue
A traditional cobblestone pattern with wider joints
Matching skin/touch-up wheel: Smooth Slate/TW-2
Joint size ⅛"-⅜" wide, ½" deep
Stone size 5 ¼"-5 ½" wide, 6"-7 ¾" long



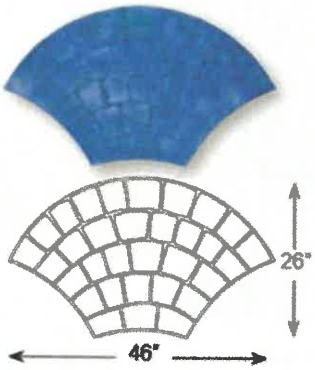


6" x 6" Edinburgh Cobble, FM-520
26" x 36" (66.04 x 91.44 cm) Yellow
A rugged weathered cobblestone pattern
Matching touch-up wheel: TW-7
Joint size ½"-¾" wide, ½" deep
Stone size 5 ¾"-6" wide, 5 ⅞"-6 ¼" long
Available as Contractors Choice, EF-520



Cheshire Cobble
(Smooth Grout), FM-525
20.5" x 46" (52.07 x 116.84 cm) Red
A traditional cobblestone pattern with smooth, ungrouted joints
Matching touch-up wheel: TW-1
Joint size ¼"-¾" wide, ⅜" deep
Stone size 4 ⅜"-4 ⅞" wide, 5 ¼"-9 ½" long

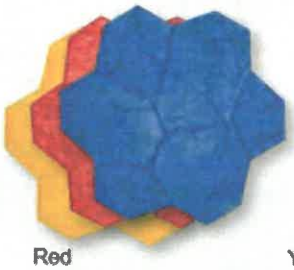
HINT! Matching thin mats "floppies" are available for all Brickform Texture Mats



European Fan, FM-650 S/O

26" x 46" (66.04 x 116.84 cm) Blue
An elegant European fan pattern, consisting of slightly curved rectangular slate stones
Matching skin/touch-up wheel: Smooth Slate/TW-2
Joint size ¼"-½" wide, ¾" deep
Stone size 3 ¾"-5 ½" wide, 4"-6 ½" long

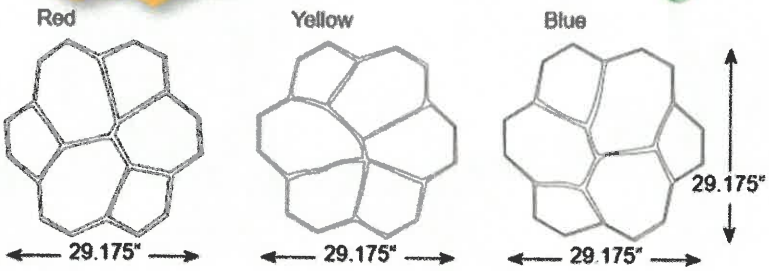
Available as Contractors Choice, EF-650

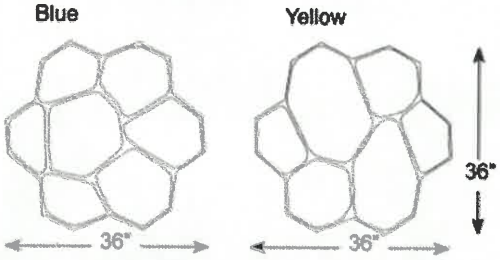


Random Stone, FM-700

29.125" x 29.125" (73.97 x 73.97 cm) Red, Yellow and Blue. *Heavily textured random fieldstones*
Matching skin/touch-up wheel: Rough Stone/TW-2
Joint size ¼"-¾" wide, ⅜" deep
Stone size 7"-11 ½" wide, 10"-15" long

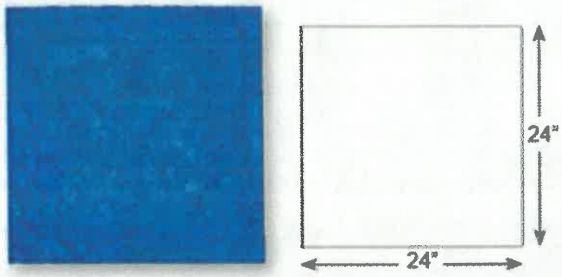
Available as Contractors Choice, EF-700



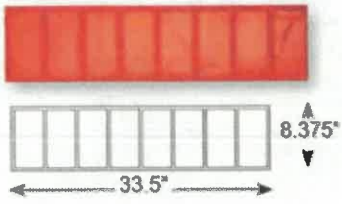


Large Random Stone, FM-750

36" x 36" (91.44 x 91.44 cm) Yellow and Blue
Similar to Random Stone but 40% larger
Matching skin/touch-up wheel: Rough Stone/TW-7
Joint size ½"-1" wide, ⅜" deep
Stone size 7"-14" wide, 13"-20 ½" long

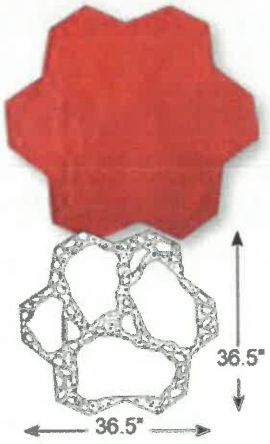


24" x 24" Yucatan Stone, FM-1100 S/O
24" x 24" (60.96 x 60.96 cm) Blue
A single square of rough Yucatan stone texture
Matching skin/touch-up wheel: Yucatan/TW-5
Surrounding joint size ¼" wide, ¼" deep



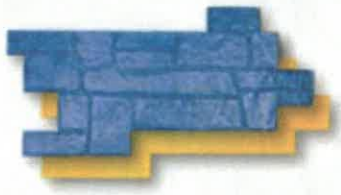
4" x 8" Cut Stone Border, FM-1225
8.375" x 33.5" (21.27 x 85.09 cm) Red
A border of slate rectangles laid side-by-side
Matching skin/touch-up wheel: Smooth Slate/TW-3
Joint size ⅜" wide, ¼" deep
Stone size 4" wide, 8" long

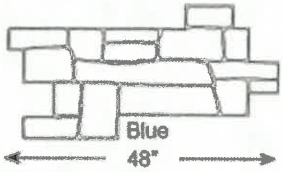
Also Available: Cut Stone Single Brick FM-1284, 4" x 8"

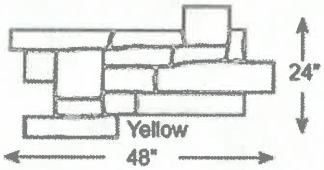


Patio Stone, FM-1295 S/O
36.5" x 36.5" (92.71 x 92.71 cm) Red
A roughly textured arrangement of random stones
Joint size ½"-2 ½" wide

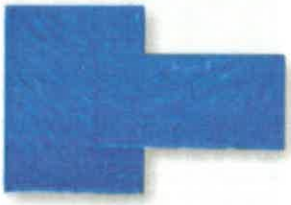
HINT! Matching thin mats "floppies" are available for all Brickform Texture Mats

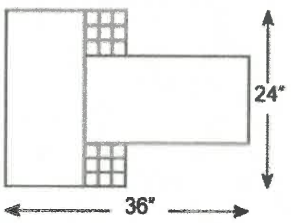






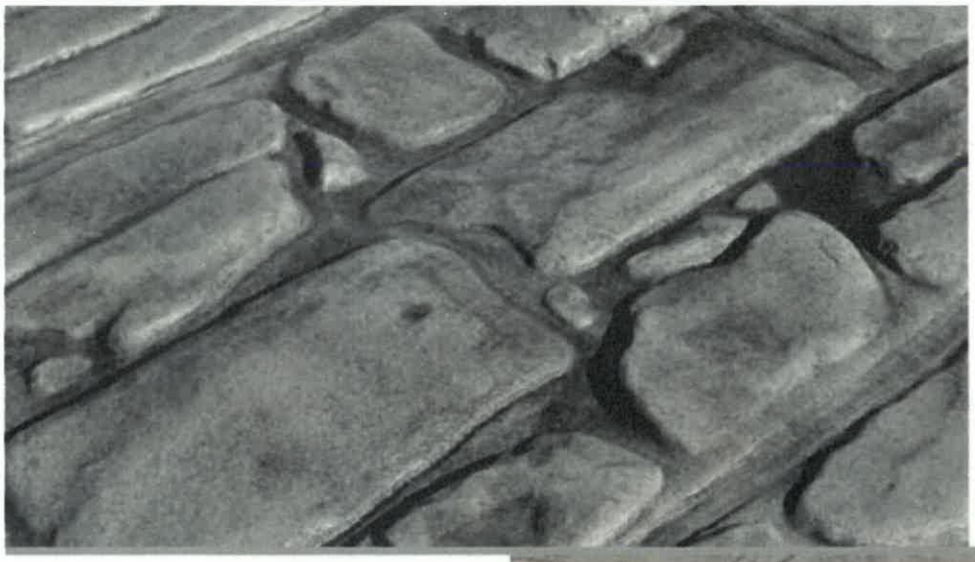
Roman Cobble, FM-1465
48" x 24" (121.9 x 61cm)
Blue and Yellow
A historic reproduction of cobbles that have a variety of stone shapes for old world appeal.
Matching skin/touch-up wheel:
Rough Stone/TW-6
Joint size ⅛"-½" wide, 1/16"-⅜" deep

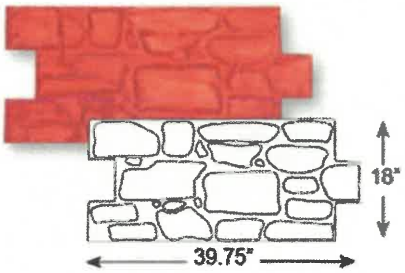




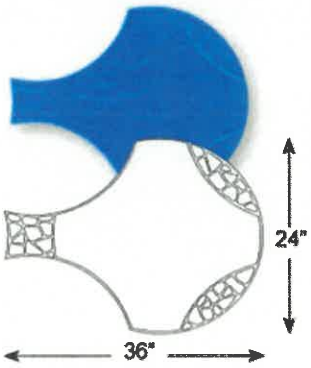
Basket Weave New Stone Weave Look, FM-460
36" x 24" (91.44 x 61cm) Blue
Matching skin: Regal Ashlar Slate

S/O - Compatible with Brickform Stampable Overlay





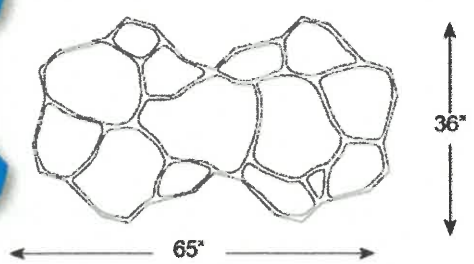
English Field Stone, FM-1350
18" x 39.75" (45.72 x 100.965 cm) Red
A natural arrangement of river rock, emulating the look of smooth English fieldstones
Matching touch-up wheel: TW-6
Joint size ¼"-1" wide, ¾" deep
Stone size 1"-6" wide, 1"-11 ¼" long

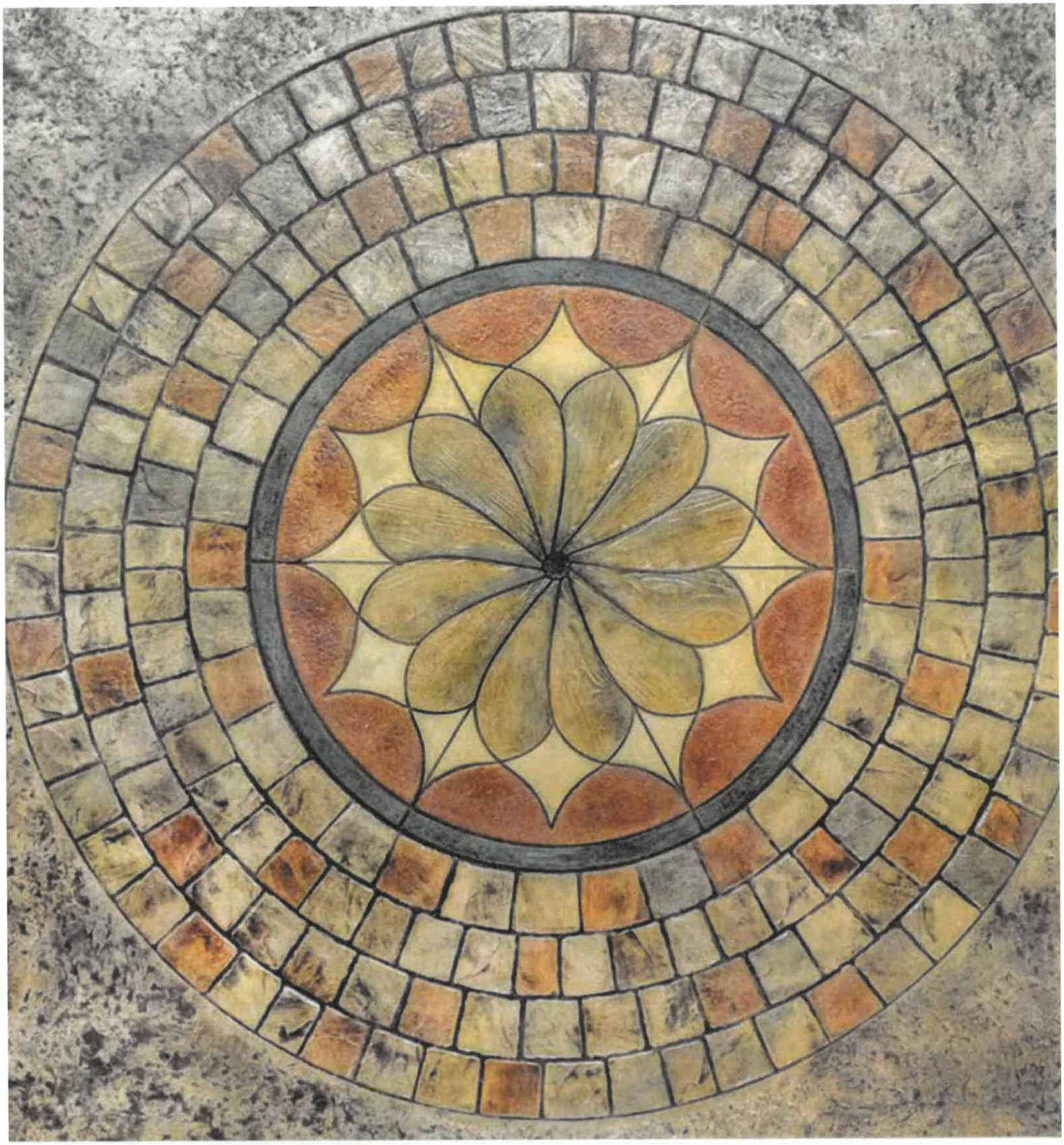


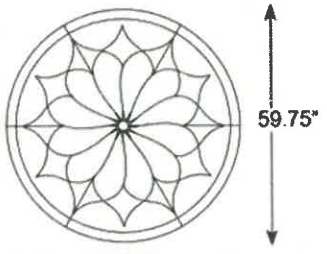
Circulos Del Sol, FM-640
24" x 36" (60.96 x 116.84 cm)
Blue
Matching skin: Regal Ashlar Slate

Also Available:
FM-640LR, Left/Right
FM-640TB, Top/Bottom

Lincoln Trail Large Random, FM-760
65" x 36" (165.1 x 91cm)
Blue







Lotus Blossom Medallion, FM-2492
60" x 60" (152.4 x 152.4 cm) Yellow
Joint size ⅜" wide, ⅜"-½" deep

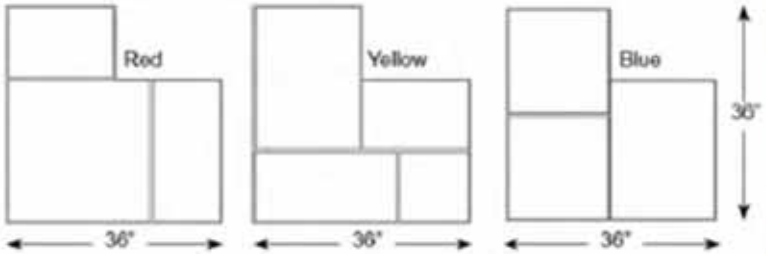
Slate Texture Mats

Slate is a sleek, metamorphic rock with fine veining patterns. The grain pattern of slate makes it a common resource for tile flooring because it is easily split into thin sheets. Brickform slate texture tools recreate the elegant, clean design of slate without the expense and hassle of installing fragile natural stones. Brickform Ashlar texture mats reflect the handcrafted, intricately-fitting stones of historic Ashlar configurations.

36" Ashlar Cut Slate, FM-3120 S/O

36" x 36" (91.44 x 91.44 cm)
Red, Yellow and Blue
Stones with a slate surface in an Ashlar pattern
Matching skin/touch-up wheel:
Smooth Slate/TW-5
Joint size ⅛"-½" wide, ½" deep

Available as Contractors Choice, EF-3120

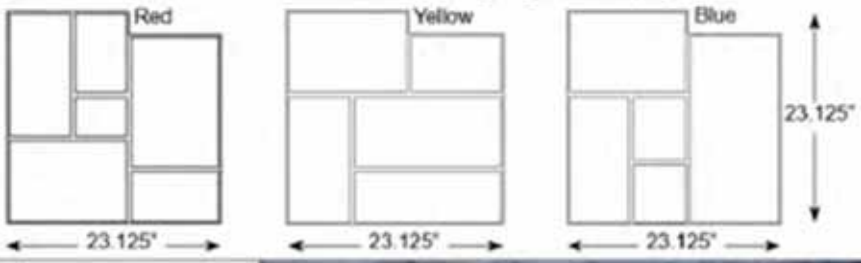


Ashlar Cut Slate, FM-3125 S/O

23.125" x 23.125" (58.74 x 58.74 cm)
Red, Yellow and Blue
A naturally laminated stone texture split along parallel planes, hand-tooled to create a more pronounced, chipped, fragmented texture with small, deep joints
Matching skin/touch-up wheel: Smooth Slate/TW-1
Joint size ⅛"-½" wide, ⅝" deep
Stone size 5 ½"-9 ⅛" wide, 6 ¼"-20 ⅛" long

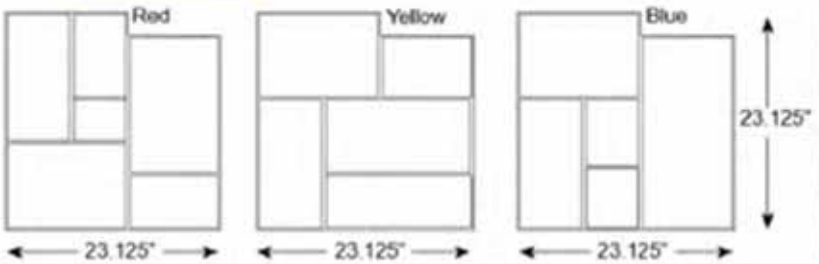
Available as Contractors Choice, EF-3125.

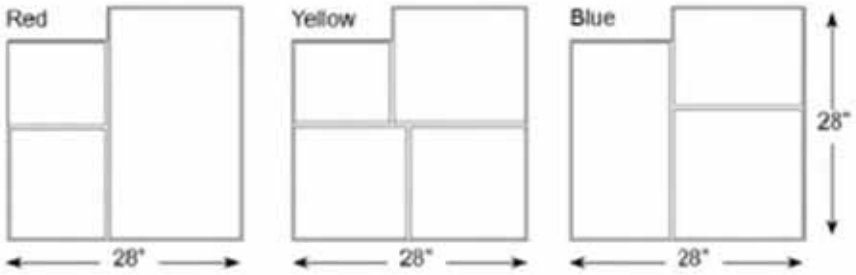
Available as gang tool, see page 61 for details.



Aidan Ashlar, FM-3130 S/O

23.125" x 23.125" (58.74 x 58.74 cm)
Red, Yellow and Blue
Similar to the Ashlar Cut Slate but with broad shallow joints
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ¼"-⅝" wide, ½" deep
Stone size 5 ½"-9 ⅛" wide, 6 ¼"-20 ⅛" long

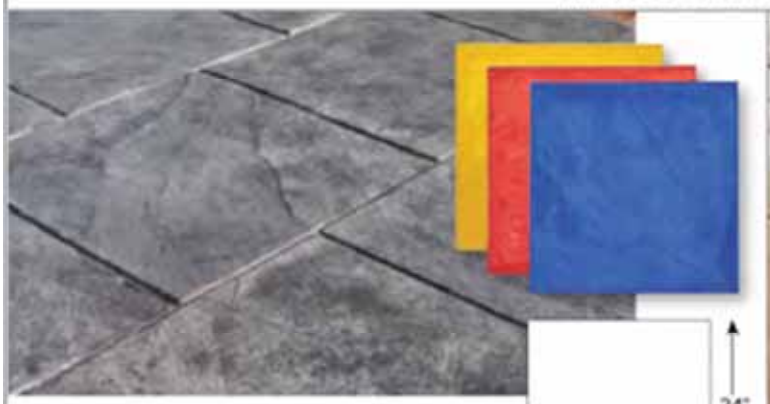


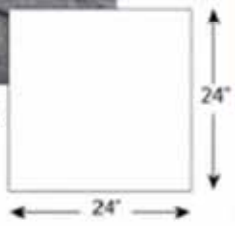


Large Ashlar Cut Slate
FM-3150 S/O
28" x 28" (71.12 x 71.12 cm)
Red, Yellow and Blue

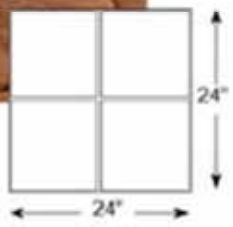
Similar to Ashlar Cut Slate but the overall size is larger, with a softer texture
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ⅝"-¾" wide, ½" deep
Stone size 10"-16" wide, 12"-26" long

Available as Contractors Choice, EF-3150

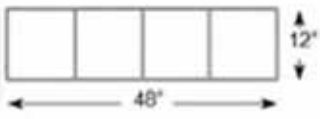




24" x 24" Slate Texture, FM-3200 S/O
24" x 24" (60.96 x 60.96 cm)
Red, Yellow and Blue
One complete stone with hand-tooled slate texture
Matching skin/touch-up wheel: Smooth Slate/TW-5

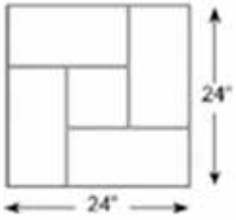


12" x 12" Slate, FM-3250 S/O
24" x 24" (60.96 x 60.96 cm) Blue
Slate tiles laid in a parallel pattern
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ⅛"-½" wide, ¼" deep
Stone size 12" square

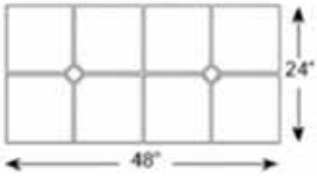


12" x 12" Slate Border
FM-3300 S/O
12" x 48" (30.48 x 121.92 cm) Red
A border of four 12" slate squares in a row
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ⅜" wide, ½" deep

S/O - Compatible with Brickform Stampable Overlay



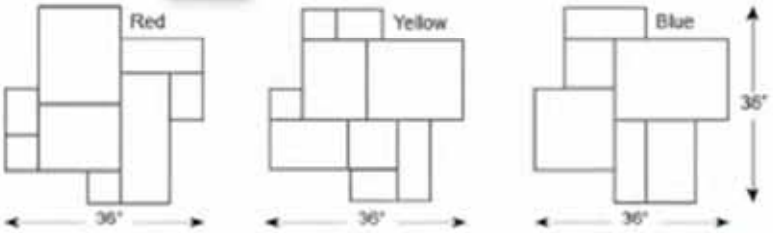
California Weave, FM-3500 S/O
24" x 24" (60.96 x 60.96 cm) Red
Slate bricks form a woven pattern around a slate square.
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ⅛"-¼" wide, ½" deep
Stone sizes 8"x8" and 8"x16"

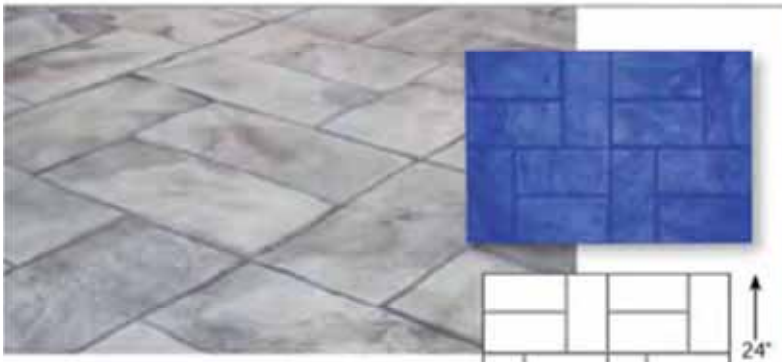


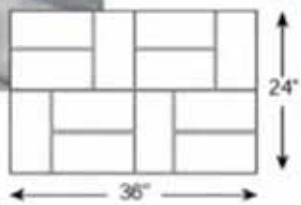
Slate with Diamond Inset
FM-3350 S/O
24" x 48" (60.96 x 121.92 cm) Blue
An elegant arrangement of Italian slate, with diamond-shaped insets for added detail
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ⅛" wide, ¼" deep
Stone size 12" square, diamond inset size 4" square

Walkway Slate, FM-3400 S/O
18" x 36" (45.72 x 91.44 cm)
*Red, Yellow and Blue
*Stone sizes vary
Square and rectangular slate tiles, of various sizes, set in parallel rows.
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ½"-⅝" wide, ½" deep
Stone size 18" wide, 12"-24" long

Grand Ashlar, FM-3675
36" x 36" (91.44 x 91.44 cm)
Red, Yellow and Blue
Stones of various shapes and sizes laid in an Ashlar pattern, with a slate texture
Matching touch-up wheel: TW-5
Joint size ⅛"-¾" wide, ⅝" deep
Stone size 6"-15" wide, 6"-22" long



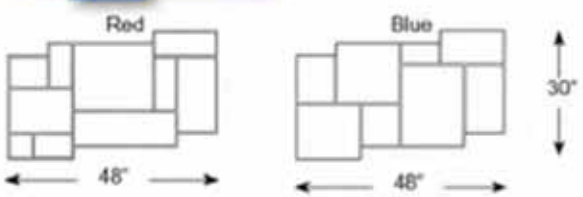




New England Basket Weave
FM-3600 S/O
24" x 36" (60.96 x 91.44 cm) Blue
Hand-tooled slate in a basket weave pattern
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ¼"-⅝" wide, ¾" deep
Stone size 6" wide, 12" long

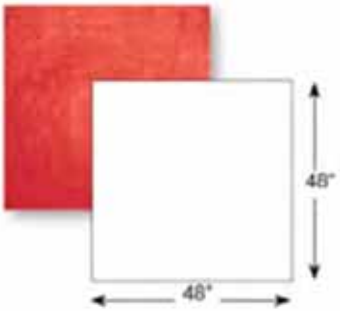
Herringbone Slate, FM-3550 S/O
32" x 40" (81.28 x 101.6 cm) Blue
A classic herringbone pattern of slate stones laid at right angles to each other
Matching skin/touch-up wheel: Smooth Slate/TW-5
Joint size ¼"-⅝" wide, ⅜" deep
Stone size 8" wide, 16" long

American Ashlar Slate, FM-3160
48" x 30" (121.9 x 61cm)
Red and Blue



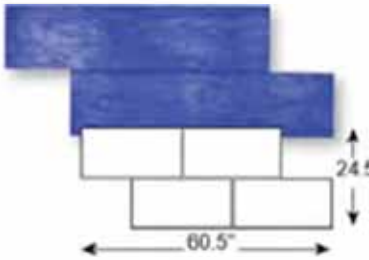
S/O - Compatible with Brickform Stampable Overlay

Slate Texture Mats *Made-to-Order* *2-week production lead time*



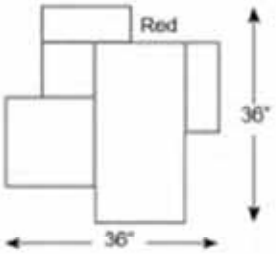
48" x 48" Slate Texture w/joint, FM-3190 S/O
48" x 48"
(121.92 x 121.92 cm) Red
A large single stone with slate texture and sharp cut corners and quarter inch surrounding joint

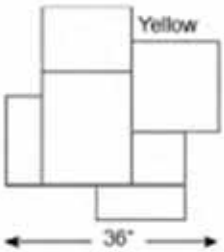
Matching skin/touch-up wheel:
Smooth Slate/TW-5
Surrounding joint ¼" wide, ¼" deep

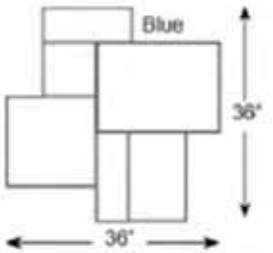


Running Bond Slate, FM-3575
24.5" x 60.5"
(62.23 x 153.67 cm) Blue
Renaissance slate texture set in a running bond pattern

Matching skin/touch-up wheel: Slate/TW-3
Joint size ½" wide, ¼" deep
Stone size 11 ¾" wide, 23 ¼" long







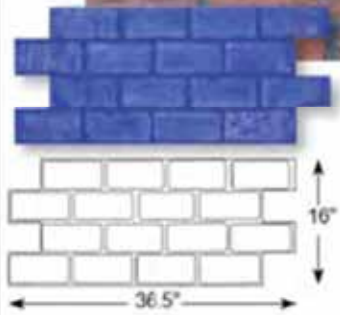
Regal Ashlar (Blue Stone), FM-3650 S/O
36" x 36" (91.44 x 91.44 cm) Red, Yellow, and Blue
Blue stone textured tiles, with worn beveled edges, arranged in an ashlar pattern
Touch-up wheel: TW-5
Joint size ⅜" wide, ¼" deep. Stone size 6"-15" wide, 9"-30" long.

Brick Texture Mats

Herringbone Used Brick
FM-5000 S/O
25.5" x 36.5" (64.77 x 92.71 cm) Red
A weatherworn brick surface with an uneven texture and rounded broken edges
Matching skin/touch-up wheel: Used Brick/TW-4
Joint size ⅛"-½" wide, ¼" deep
Brick size 3 ⅝" wide, 7 ½" long

Available as gang tool, see page 59 for details.
Available as Contractors Choice, EF-5000

Herringbone New Brick
(Fine Grout), FM-5050 S/O
25.5" x 36.5" (64.77 x 92.71 cm) Red
A wire-cut common brick texture with sharp corners and few indentations or irregularities over the surface
Matching skin/touch-up wheel: New Brick/TW-4
Joint size ⅛"-½" wide, ¼" deep
Brick size 3 ⅝" wide, 7 ½" long



Running Bond Used Brick
FM-5100 S/O
16" x 36.5" (40.64 x 92.71 cm) Blue
Used bricks laid end-to-end, with sandy joints
Matching skin/touch-up wheel: Used Brick/TW-4
Joint size ⅛"-½" wide, ¼" deep
Brick size 3 ½" wide, 7 ½" long

Available as Contractors Choice, EF-5100
Available as gang tool, see page 61 for details.

Running Bond New Brick

FM-5150 S/O

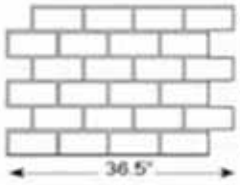
24" x 36.5" (60.96 x 92.71 cm) Red

A running bond pattern with smooth joints

Matching skin/touch-up wheel: New Brick/TW-4

Joint size ⅛"-¼" wide, ½" deep

Brick size 3 ½" wide, 7 ½" long



Available as Contractors Choice, EF-5150

Basket Weave Used Brick

FM-5200 S/O

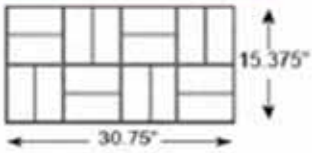
15.375" x 30.75" (39.05 x 78.10 cm) Blue

Used bricks in a basket weave pattern with smooth ungrouted joints

Matching skin/touch-up wheel: Used Brick/TW-4

Joint size ⅛"-¼" wide, ⅝" deep

Brick size 3 ⅝" wide, 7 ⅛" long



Available as gang tool, see page 61 for details.

Basket Weave New Brick

FM-5250 S/O

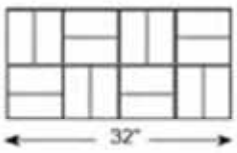
16" x 32" (40.64 x 81.28 cm) Blue

New bricks in a basket weave pattern with sandy joints

Matching skin/touch-up wheel: New Brick/TW-4

Joint size ⅛"-½" wide, ¼" deep

Brick size 3 ⅝" wide, 7 ¾" long



Herringbone New Brick

(Sanded Joint) FM-5900 S/O

25.25" x 36.5" (64.12 x 92.71 cm) Red

New bricks with sandy joints

Matching skin/touch-up wheel: New Brick/TW-4

Joint size ⅛"-½" wide, ¼" deep

Brick size 3 ⅝" wide, 7 ¾" long

4" x 8" New Brick Border,

FM-5325, S/O

8.5" x 32.25" (21.59 x 81.92 cm) Red

A border of new bricks laid side-by-side

Matching skin/touch-up wheel: New Brick/TW-7

Also Available: **4" x 8" Used Brick Border, FM-5300 S/O**

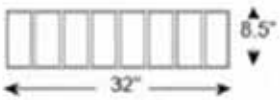
8.5" x 32" (21.59 x 81.28 cm) Red

A border of used bricks laid side-by-side

Matching skin/touch-up wheel: Used Brick/TW-4

Joint size ⅛"-½" wide, ¼" deep

Brick size 3 ½" wide, 7 ½" long



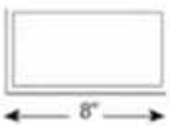
Single New Brick, FM-5550 S/O

4" x 8" (10.16 x 20.32 cm) Red

A single new brick with sharp edges

Joint size ⅛" wide, ¼" deep

Brick size 3 ⅝" wide, 7 ⅝" long

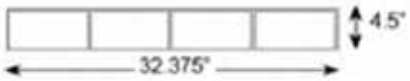


Also Available:

Single Used Brick, FM-5500 S/O

4" x 8" (10.16 x 20.32 cm) Blue

A single used brick with rounded edges



Used Brick Runner, FM-5600 S/O

4.5" x 32.375"

(11.43 x 82.23 cm) Blue

A border of used bricks laid end-to-end

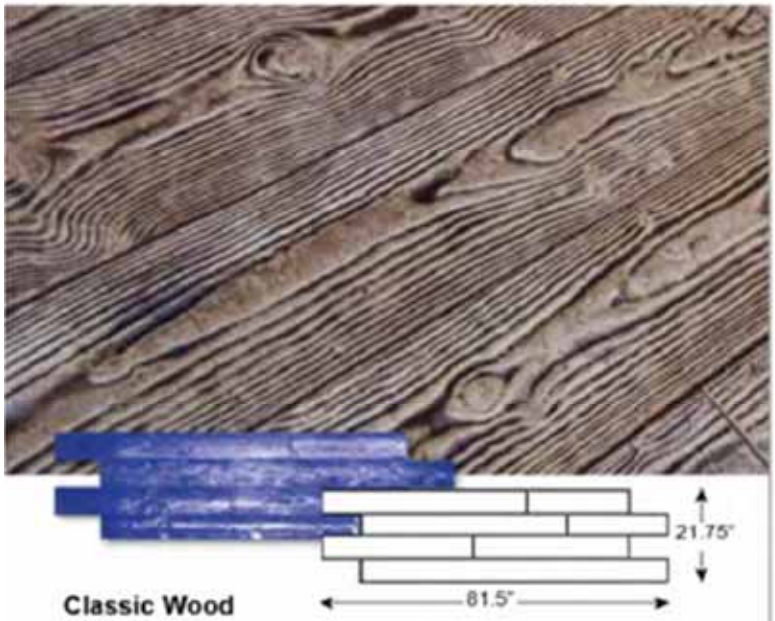
Joint size ⅛" wide, ¼" deep

Brick size 3 ⅝" wide, 7 ¼" long

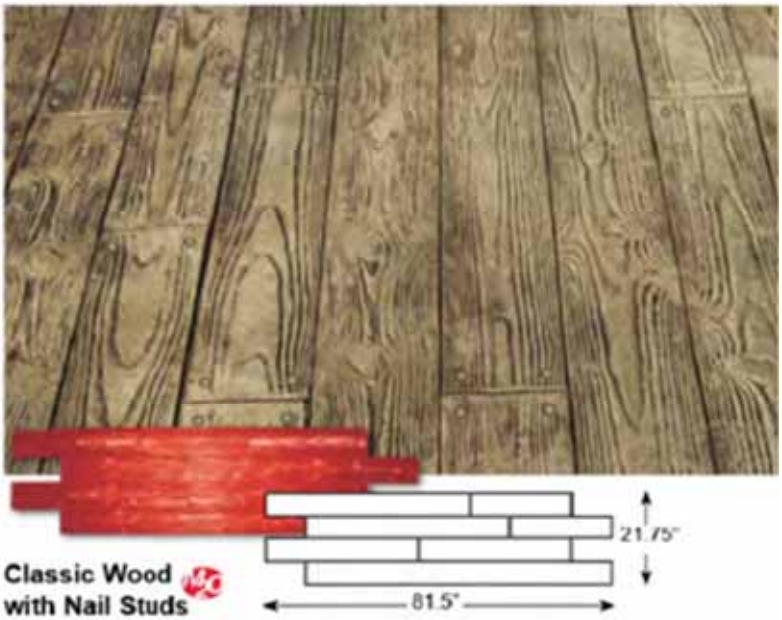
HINT! Matching thin mats "floppies" are available for all Brickform Texture Mats

Wood Texture Mats

Made-to-Order
2-week production lead time



Classic Wood
FM-8700 S/O
81.5" x 21.75" (207 x 55.2 cm) Blue
Combining multiple wood grains to offer a bold, pronounced, exposed grain texture with six-inch wide planks
Matching skin/touch-up wheel: FM-8700FE/TW-5
Joint size ⅛" wide, 5/16" deep
Plank size 6" wide, 23 ½"-71" long



Classic Wood with Nail Studs
FM-8710 S/O
81.5" x 21.75" (207 x 55.2 cm) Red
Combining multiple wood grains to offer a bold, pronounced, exposed grain texture with six-inch wide planks and oversized nail heads
Matching skin/touch-up wheel: FM-8700FE/TW-5
Joint size ⅛" wide, 5/16" deep
Plank size 6" wide, 23 ½"-71" long

2' Cedar Wood Plank, FM-8110 S/O
11.5" x 24" (29.21 x 60.96 cm) Blue

3' Cedar Wood Plank, FM-8210 S/O
11.5" x 36" (29.21 x 91.44 cm) Blue

4' Cedar Wood Plank, FM-8310 S/O
11.5" x 48" (29.21 x 121.92 cm) Blue

6' Cedar Wood Plank, FM-8410 S/O
11.5" x 72" (29.21 x 182.88 cm) Blue

8' Cedar Wood Plank, FM-8510 S/O
11.5" x 96" (29.21 x 243.84 cm) Blue

A cedar wood texture with coarse, pronounced grain and a rough surface appearance that incorporates oversized nail heads at each end

Matching skin/touch-up wheel: FM-8010FE/TW-5
Surrounding joint ⅛"

2' Wood Plank, FM-8100 S/O
12" x 24" (30.48 x 60.96 cm) Blue

3' Wood Plank, FM-8200 S/O
12" x 36" (30.48 x 91.44 cm) Blue

4' Wood Plank, FM-8300 S/O
12" x 48" (30.48 x 121.92 cm) Blue

6' Wood Plank, FM-8400 S/O
12" x 72" (30.48 x 182.88 cm) Blue

8' Wood Plank, FM-8500 S/O
12" x 96" (30.48 x 243.84 cm) Blue

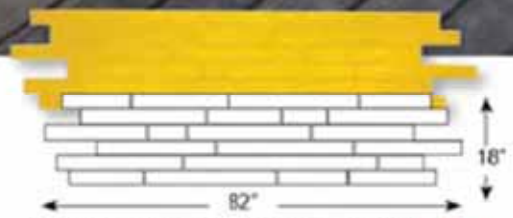
A wood grain texture with lightly pronounced veins and a mild surface texture

Matching skin/touch-up wheel: FM-8000FE/TW-5
Surrounding joint ⅛"

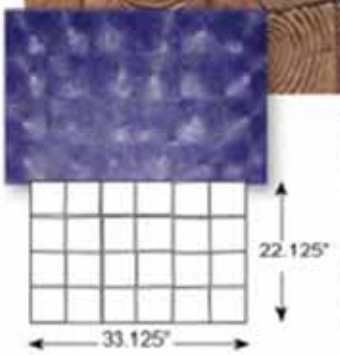
S/O - Compatible with Brickform Stampable Overlay


Classic Wood

Bridges of Madison County



3" Cedar Wood Flooring, FM-8015
18" x 82" (45.72 x 208.28 cm) Yellow
Cedar wood planks laid end-to-end
Matching skin/touch-up wheel: FM-8000FE/TW-5
Joint size ⅜"-½"wide, ¾" deep. Plank size 3" wide, 7 ½"-38" long



Wood Block
FM-8600 S/O
22.125" x 33.125" (56.19 x 84.13 cm)
Blue
Wood blocks cut perpendicular to the grain

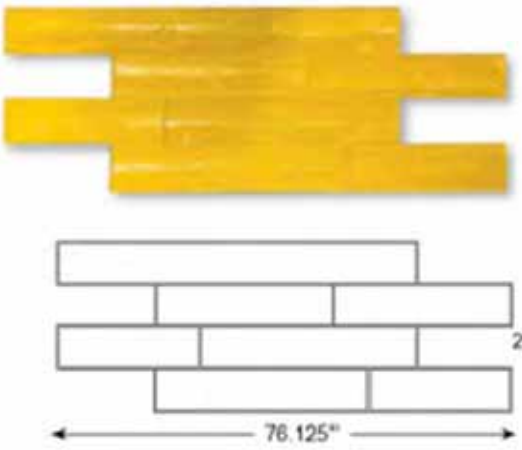
Matching skin/touch-up wheel:
FM-8000FE/TW-1
Joint size ⅜"-½" wide, ¾" deep
Block size 5 ¼" square

Bridges of Madison County

Deep in the American heartland reside the historic Bridges of Madison County. Subject of the eponymous novel, film, and musical, they are now the inspiration for Brickform's newest line of textures. These stamps were derived from real planks and timbers dating back to the late 19th century.

4' Wood Plank, FM-8320B S/O **floppy available*
15" x 48" (38.1 x 121.92 cm) Blue
6' Wood Plank, FM-8420 S/O
15" x 72" (38.1 x 182.88 cm) Blue
8' Wood Plank, FM-8520 S/O
15" x 96" (38.1 x 243.84 cm) Blue
10' Wood Plank, FM-8620 S/O
15" x 120" (38.1 x 304.8 cm) Blue
Surrounding joint depth ¼"

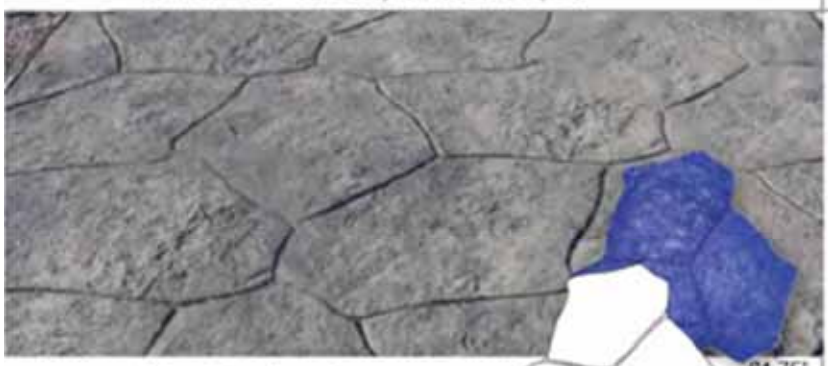
Bridges Set FM-8020S includes:
FM-8320B, Qty:1 (4') FM-8520B, Qty:2 (8')
FM-8420B, Qty:2 (6') FM-8620B, Qty:2 (10')



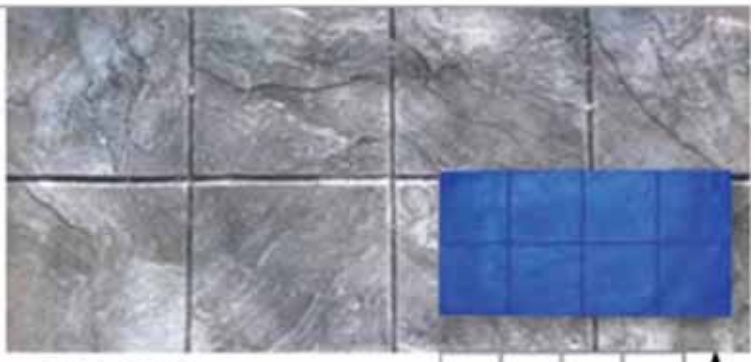
Weathered Wood Plank, FM-8750
76.125" x 29.625
(193.36 x 75.25 cm)
Yellow

16" x 16" Slate, TM-300
32" x 48" (81.28 x 121.92 cm) Pattern: A
Slate squares in two rows, with angled, ungrouted joints
Matching skin/touch-up wheel: Slate/TW-6
Joint size ½"-⅝" wide, ¼" deep. Stone size 16" square

European Fan, TM-400
28" x 50" (71.12 x 127 cm) Pattern: A
Curved slate bricks gracefully arranged in a European Fan pattern
Matching skin/touch-up wheel: Slate/TW-7
Joint size ⅜"-½" wide, ¼" deep. Stone size 5 ⅛"- 5½" wide, 4 ⅛"-7" long



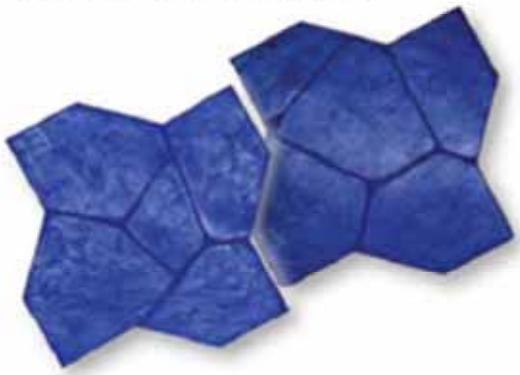
Mesa Random Stone, TM-500
61.75" x 61.75" (156.85 x 156.85 cm)
Pattern: A
Random stones sculpted to have a rough, irregular shape. Matching skin: Mesa Stone
Joint size ¼"-⅜" wide, ⅜" deep. Stone size 26"-30" wide, 40" long

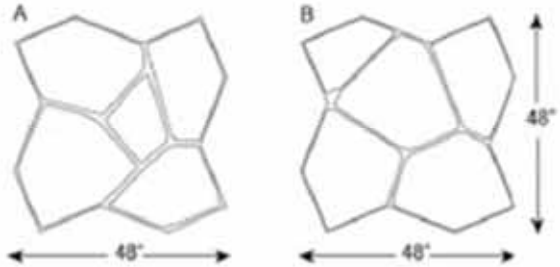


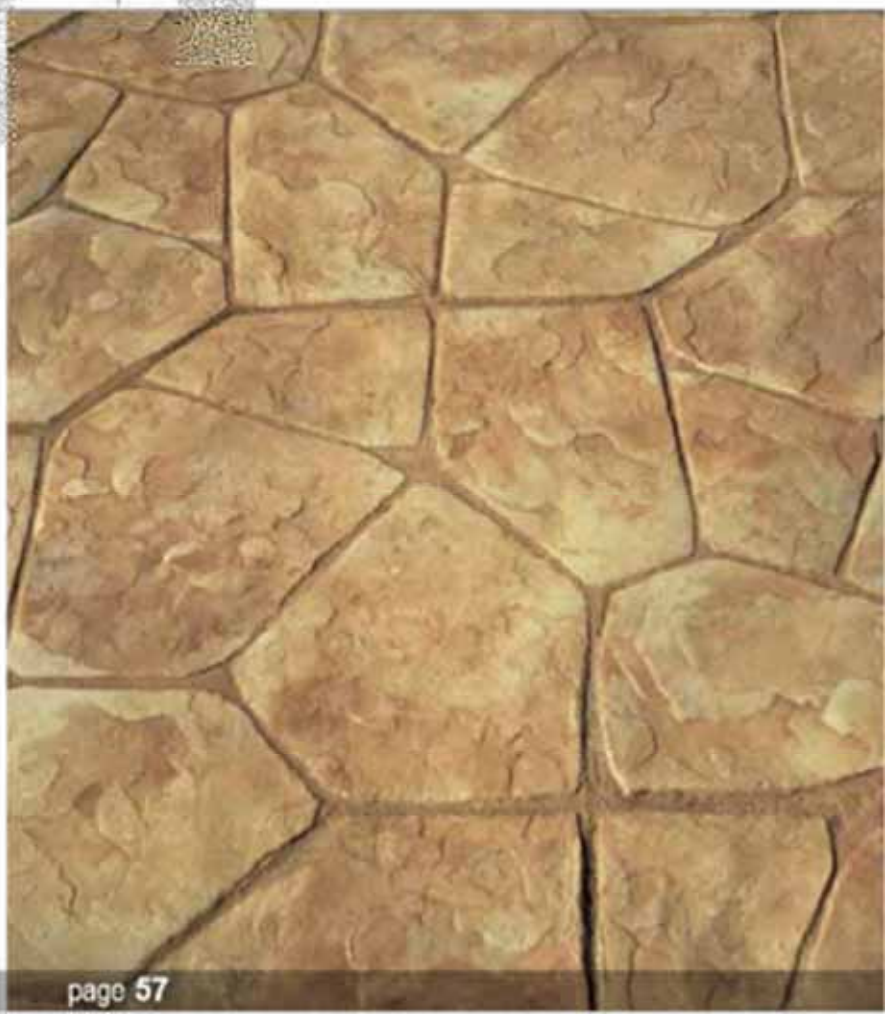
12" x 12" Slate - 1/4" Joint, TM-600
24" x 48" (60.96 x 121.92 cm) Pattern: A
Rows of slate squares with beveled edges
Matching skin/touch-up wheel: Slate/TW-5
Joint size ⅛"-½" wide, ¼" deep
Stone size 12" square

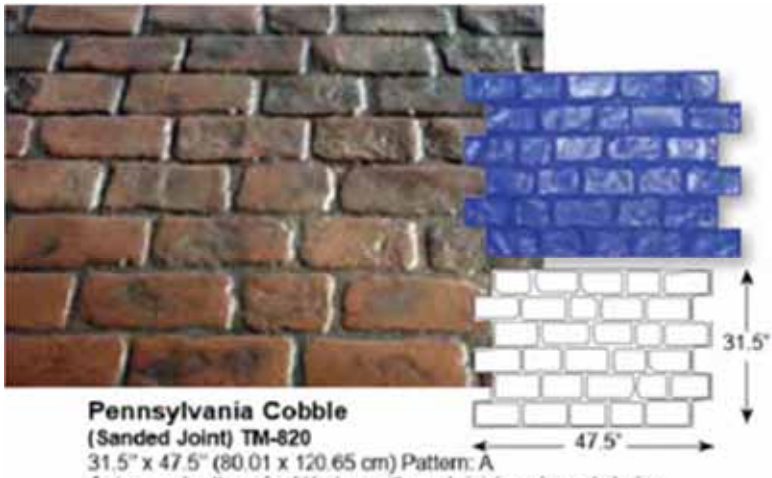
Flagstone, TM-700
48" x 48" (121.92 x 121.92 cm)
Pattern: A and B
Flagstones with hand chiseled edges grouped in a random formation

Matching touch-up wheel: TW-6
Joint size ⅝"-1½" wide, ¼" deep
Stone size 11-21 ½" wide, 16 ⅛"-21 ½" long



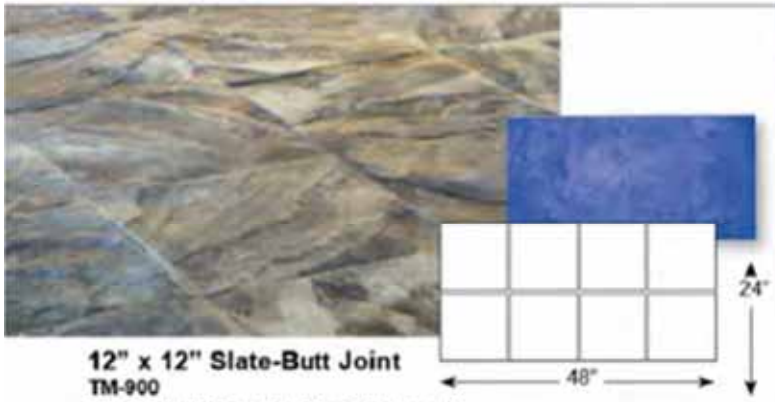




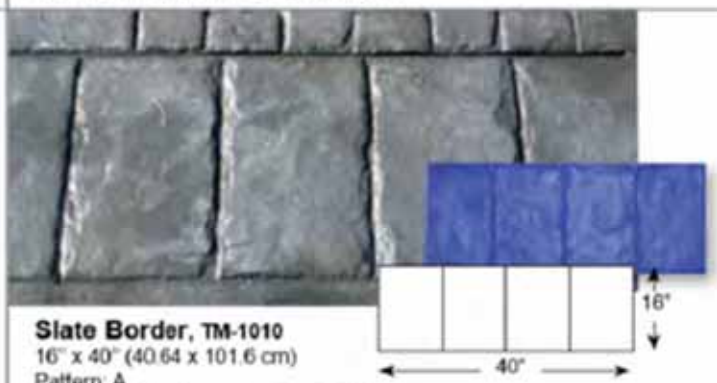


Pennsylvania Cobble
(Sanded Joint) TM-820
31.5" x 47.5" (80.01 x 120.65 cm) Pattern: A
A staggered pattern of cobblestone with sandy joints and rounded edges
Matching touch-up wheel: TW-7
Joint size ⅜"-1" wide, ½" deep. Stone size 4 ½"-4 ¾" wide, 5¼"-9¼" long

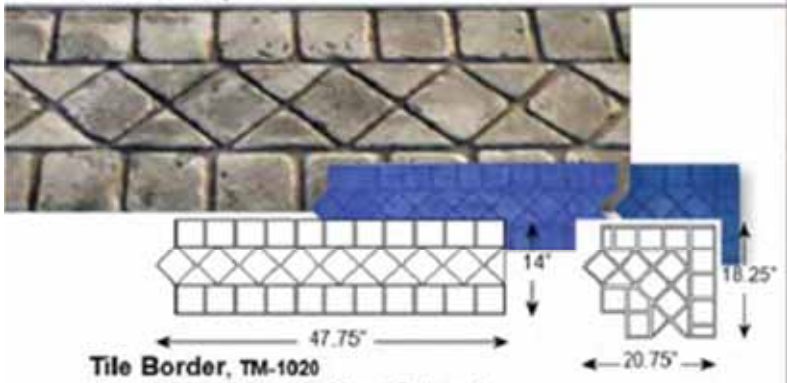
Pennsylvania Station Cobble
(Smooth Joint) TM-840
53.5" x 30.875" (135.89 x 78.42 cm) Pattern: A
A staggered pattern of cobblestone with smooth joints and rounded edges
Matching touch-up wheel: TW-6
Joint size ⅜"-1" wide, ½" deep. Stone size 4 ½".



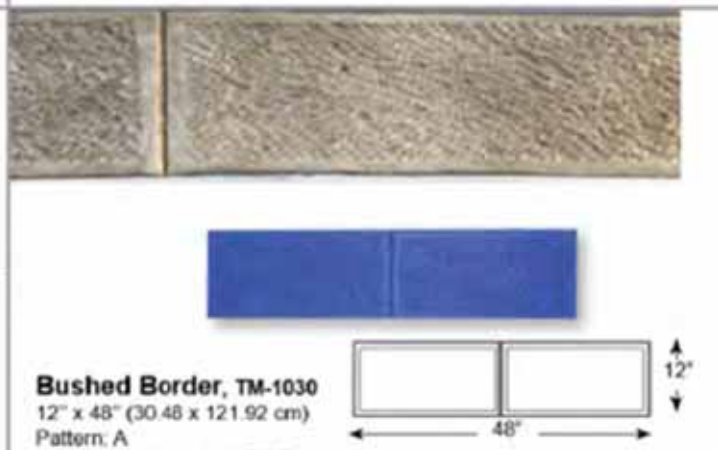
12" x 12" Slate-Butt Joint
TM-900
24" x 48" (60.96 x 121.92 cm) Pattern: A
Sharp slate squares butted up against each other in two rows
Matching skin/touch-up wheel: Slate/Chisel
Stone size 12" square



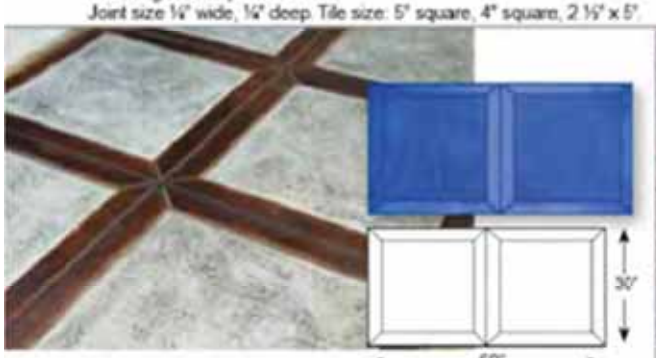
Slate Border, TM-1010
16" x 40" (40.64 x 101.6 cm)
Pattern: A
Matching skin/touch-up wheel: Slate/TW-3
Joint size ¼"-⅝" wide, ½" deep
Stone size 9 ½" wide, 15 ½" long



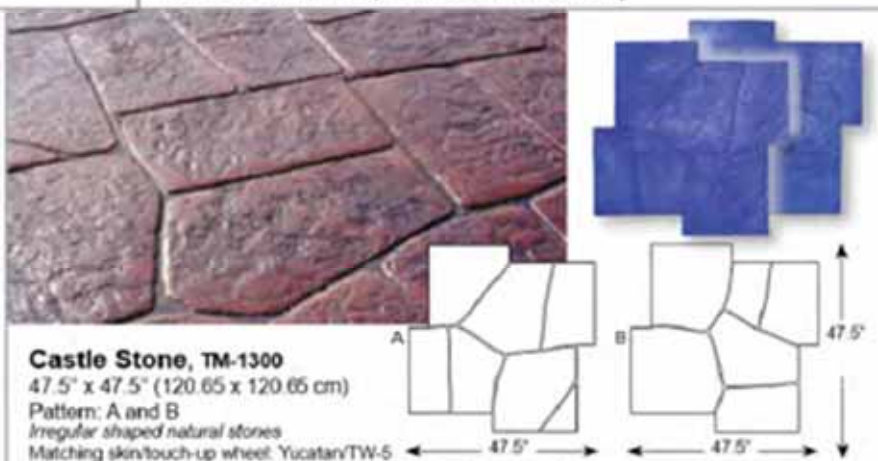
Tile Border, TM-1020
14" x 47.75" (35.56 x 121.28 cm) Pattern: A
TM-1020-1 Tile Border Corner Piece
18.25" x 20.75" (46.36 x 52.71 cm) Pattern: A
Matching touch-up wheel: TW-2
Joint size ⅛" wide, ¼" deep. Tile size: 5" square, 4" square, 2 ½" x 5".



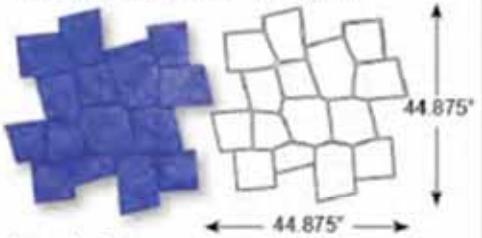
Bushed Border, TM-1030
12" x 48" (30.48 x 121.92 cm)
Pattern: A
Matching touch-up wheel: TW-5
Joint size ½" wide, ¼" deep. Stone size 10" wide, 22" long



30" x 30" Bushed Stone, TM-1200
30" x 60" (76.2 x 152.4 cm) Pattern: A
Two bushed stones with square corners and sharp beveled edges
Matching touch-up wheel: TW-5
Joint size ⅜" wide, ¼" deep. Stone size 30" square

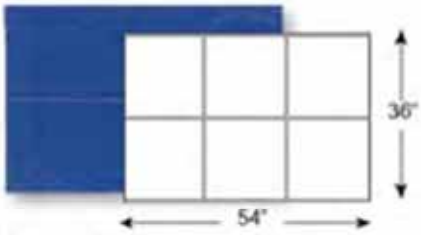


Castle Stone, TM-1300
47.5" x 47.5" (120.65 x 120.65 cm)
Pattern: A and B
Irregular shaped natural stones
Matching skin/touch-up wheel: Yucatan/TW-5
Joint size ⅜"-⅝" wide, ½" deep. Stone size 9 ½"-21" wide, 11 ¾"-25" long



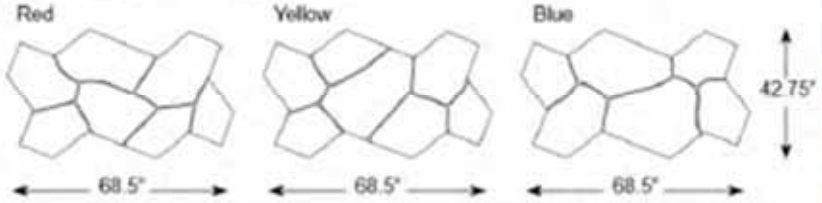
Luccia Stone, TM-1350
44.875" x 44.875" (113.98 x 113.98 cm) Pattern: A
Slate stones with irregular edges, in a random pattern
Matching skin: Smooth Slate
Joint size ¼" wide, ½" deep
Stone sizes 6 ½" x 7 ½" to 10 ¾" x 11 ½"

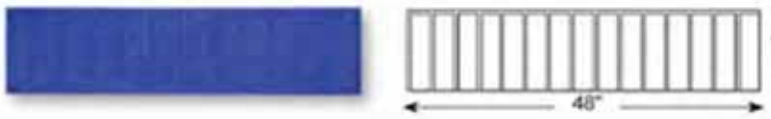
12" x 12" Mexican Tile, TM-1400
24" x 48" (60.96 x 121.92 cm) Pattern: A
Beautiful Mexican tiles with sandy joints
Matching touch-up wheel: TW-7
Joint size ¾" wide, ¼" deep
Tile size 11 ¼" square



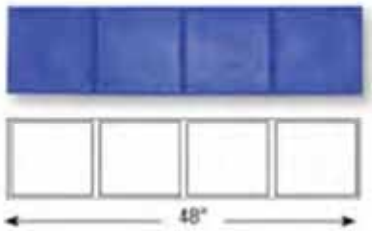
18" x 18" Slate, TM-1620
36" x 54" (91.44 x 137.16 cm) Pattern: A
Three slates with sharp edges, laid in two rows
Matching skin/touch-up wheel: Slate/TW-5
Joint size ½"-⅝" wide, ⅝" deep
Stone size 18" square

Verona Stone, TM-1500
42.75" x 68.5" (108.58 x 173.99 cm)
Red, Yellow and Blue
A unique random pattern of irregular stones
Matching skin/touch-up wheel: Blue Stone/TW 2-3
Joint size ¼"-½" wide, ¼" deep
Stone size 13"-21" wide, 19 ½"-30 ½" long



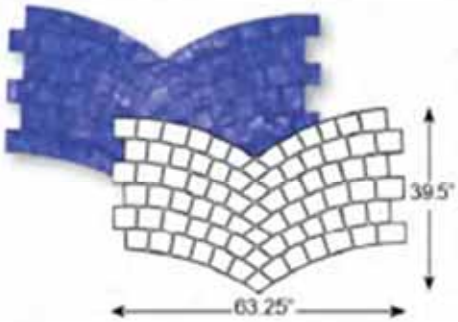


4" x 12" Brick Border, TM-1000 MTO
12" x 48" (30.48 x 121.92 cm) Pattern: A
Matching skin/touch-up wheel: New Brick/TW-6
Joint size ½" wide, ¾" deep
Brick size 3 ½" wide, 11" long



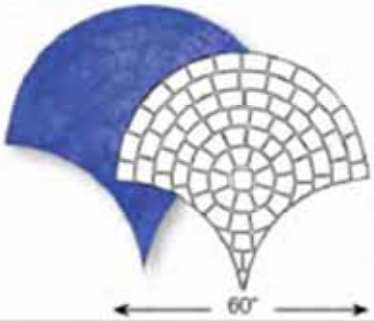
12" x 12" Mexican Tile Border, TM-1040 MTO
12" x 48"
(30.48 x 121.92 cm)
Pattern: A

Matching skin/touch-up wheel:
New Brick/TW-7
Joint size ¾" wide, ¼" deep
Tile size 11 ¼" square



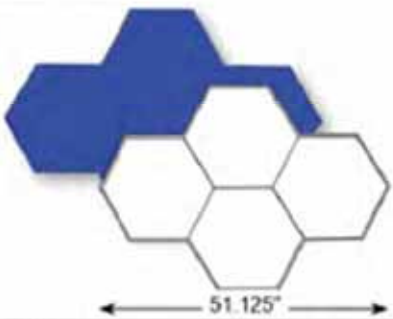
Danish Fan, TM-1100 MTO
39.5" x 63.25"
(100.33 x 160.65 cm)
Pattern: A
Rectangular stones of various sizes laid in a fan pattern with flat joints

Matching skin/touch-up wheel:
Slate/TW-1
Joint size ⅛"-¼", ⅝" deep
Stone size 4-4 ½" wide,
4"-5 ½" long



Tear Drop Fan, TM-1600 MTO
56" x 60"
(142.24 x 152.4 cm)
Pattern: A
Utah stones laid in a teardrop fan pattern

Matching skin/touch-up wheel:
Utah Stone/TW-1
Joint size ½"-¾" wide, ½" deep
Stone sizes vary 3 ¼" x 4 ½"
to 4 ½"x6 ¼"



Hexagon, TM-1660 MTO
Smooth with 1/2" Joints
35.375" x 51.125"
(89.85 x 129.85 cm)
Pattern: A
Smooth hexagon tiles in an interlocking pattern

Touch-up wheel: TW-6
Joint size ½" wide, ½" deep
Tile size 10" per side

Attachment 4 Opinion of Probable Construction Cost

Glencoe Pier Deck Replacement - Alternative 1

Baird.

Itemized Opinion of Probable Construction Costs
Concept Design

Project No 13369.101
Date: 12/11/2020

Item	Unit	Quantity	Unit Cost	Extension	Sub Total
1.0 General Requirements					**$46,000**
1.1 Mobilization/Demobilization	LS	1	$40,000	$40,000	
1.2 Erosion Control	LS	1	$6,000	$6,000	
2.0 Site Preparation and Selective Demolition					**$8,027**
2.1 Grade Sand Back	LS	1	$870	$870	
2.2 Demo and Dispose of Asphalt	SF	3,360	$1.48	$4,977	
2.3 Demo and Dispose of Handrail and Perimeter Angle	LF	404	$5.40	$2,181	
3.0 Deck Replacement					**$272,847**
3.1 Concrete overlay, 4000psi, minimal reinforcement	CY	114	$211	$24,021	
3.2 Supply and Install Sleeper Brackets	EA	1,008	$161	$162,470	
3.3 Supply and Install 4x4 Sleepers	LF	5,040	$4.31	$21,736	
3.4 Supply and Install Decking	LF	14,336	$5.21	$74,621	
4.0 Handrail Replacement					**$31,674**
4.1 Supply and install new handrails	LF	404	$70	$28,391	
4.2 Supply and install perimeter angle	LF	608	$5.40	$3,283	
5.0 Lighting					**$7,190**
5.1 Add grounding to lightposts	LS	1	$1,190	$1,190	
5.2 Supply and install LED fixture	EA	8	$1,000	$6,000	

Sub-Total	$364,738
Job Office Overhead 10%	$36,474
Home Office Overhead & Profit 15%	$60,182
Bond 1%	$4,614
Total	$466,009
Design Growth Contingency 10%	$46,601
Owner's Contingency 5%[1]	$25,630
Total W/ Contingencies	$538,240
Low End Estimate (+0%)[2]	$540,000
High End Estimate (+15%)[2]	$630,000

Estimate of soft costs

Final Design and Permitting Services	$60,000
Limited Bidding and Construction Services	$25,000

[1] Owner's Contingecy is added to account for risks attributed to the owner during construction and other change orders during construction.
[2] The estimate accuracy range is applied to account for the range in expected bids due to variations in contractor availability, material price fluctuations, etc.

Glencoe Pier Deck Replacement - Alternative 2

Baird.

Itemized Opinion of Probable Construction Costs
Concept Design

Project No 13368.101
Date: 12/11/2020

Item	Unit	Quantity	Unit Cost	Extension	Sub Total
1.0 General Requirements					**$46,000**
1.1 Mobilization/Demobilization	LS	1	$40,000	$40,000	
1.2 Erosion Control	LS	1	$6,000	$6,000	
2.0 Site Preparation and Selective Demolition					**$8,027**
2.1 Grade Sand Back	LS	1	$870	$870	
2.2 Demo and Dispose of Asphalt	SF	3,360	$1.48	$4,977	
2.3 Demo and Dispose of Handrail and Perimeter Angle	LF	404	$6.40	$2,181	
3.0 Concrete Deck Overlay					**$83,666**
3.1 Concrete overlay, 5000 psi, reinforced	CY	146	$242	$36,099	
3.2 Slab texture stamping	SF	6,720	$7.21	$48,466	
4.0 Handrail Replacement					**$32,860**
4.1 Supply and install new handrails	LF	404	$70	$28,391	
4.2 Supply and install perimeter angle	LF	608	$7.35	$4,469	
5.0 Lighting					**$7,180**
5.1 Add grounding to lightposts	LS	1	$1,180	$1,180	
5.2 Supply and install LED fixture	EA	6	$1,000	$6,000	

Sub-Total	$176,633
Job Office Overhead 10%	$17,663
Home Office Overhead & Profit 15%	$29,144
Bond 1%	$2,234
Total	$225,675
Design Growth Contingency 10%	$22,567
Owner's Contingency 6%[1]	$12,412
Total W/ Contingencies	$260,654
Low End Estimate (+0%)[2]	$270,000
High End Estimate (+15%)[2]	$320,000

Estimate of soft costs

Final Design and Permitting Services	$80,000
Limited Bidding and Construction Services	$26,000

[1] Owner's Contingecy is added to account for risks attributed to the owner during construction and other change orders during construction.
[2] The estimate accuracy range is applied to account for the range in expected bids due to variations in contractor availability, material price fluctuations, etc.

CALEB BARTH, PE
MARINE ENGINEER

Baird.

As an engineer with Baird, Mr. Barth has been extensively involved in a variety of multi-disciplinary projects in the Great Lakes, Atlantic Coast, Gulf of Mexico, Caribbean, Africa, and Australia. Mr. Barth is experienced in the design of port and harbor infrastructure, waterfronts, and a variety of hard and soft solutions for coastal erosion. As project manager, Mr. Barth has led teams of multi-disciplinary teams and delivered projects from concept to construction on budget. Mr. Barth is experienced in constructability reviews, cost estimating, permitting, and construction field support.

12 YEARS' EXPERIENCE	EDUCATION	AFFILIATIONS
Coastal Structures Cost Estimating Project Delivery	B.Sc. | Civil Engineering	Registered Professional Engineer: Illinois, Wisconsin

PROJECT EXPERIENCE

New York/ New Jersey Harbor & Tributaries Study (HATS) | NY/NJ, USACE – New York District | 2019-Present

The New York District (NYD) Corps of Engineers is conducting a feasibility level study to advance the conceptual design of the New York New Jersey Harbor and Tributary Study (HAT Study) structural flood risk features. Mr. Barth was the cost estimate Task Leader the HAT Study which included advancing five alternatives consisting of an array of Storm Surge Barriers (SSB's) and Shore-Based Measures (SBM's) to determine a Tentatively Selected Plan (TSP).

Marina Revetment and Breakwater Repairs | Hammond, Indiana, Lake Michigan | Hammond Port Authority | 2016-Present

Project Manager providing field investigation, permitting, final design, bidding, quarry quality assurance, and construction administration services for repairs to 1,100 feet of rubblemound breakwater, repairs to 700 feet of rubblemound revetment, the installation of a new 500 feet long cast-in-place concrete sea wall, and the extension of an existing intake pipe relieving platform.

Highland Park Lakefront Interceptor Protection | Highland Park, Illinois, Lake Michigan | North Shore Water Reclamation District | 2017-Present

Project Manager providing field investigation, permitting, and final design services for the protection of an existing sanitary sewer interceptor that runs parallel to the beach on Lake Michigan. The project entails the installation of approximately 1,000 ft of shoreline protection, consisting of a series of detached armor stone breakwaters, shore-tied armor stone groins, and associated pocket beaches.

Living Breakwaters | Staten Island, NY, Raritan Bay | Governor's Office of Storm Recovery | 2018-Present

Baird is the construction manager to facilitate the construction of a series of breakwaters designed to buffer neighborhoods from wave damage and erosion while providing a more biodiverse habitat for juvenile fish, oysters, and other organisms. Mr. Barth was responsible for value engineering, procurement support, and contractor selection. Mr. Barth will be the Deputy Resident Engineer when construction starts in the second half of 2021.

Town Docks Replacement | Town of Palm Beach, Florida | 2018-Present

Baird provided master planning, regulatory, final design, bidding, and construction services for the replacement of the dockage system. The overhaul includes removing the existing fixed dock system and replacing it with a state-of-the-art floating docks system that can accommodate mega-yachts up to 250 feet in length. Mr. Barth provided structural engineering services for the floating dockage anchorage and developed the performance specifications.

Barbados Resort | Barbados, West Indies | Confidential Client | 2017-2019

Baird's client is developing 500m of coastline as part of a new resort in Barbados. Baird undertook design and permitting work to support shoreline enhancement including protection of the existing natural reef. Mr. Barth provided structural engineering services for the design of an 85-meter long pier and an emergent offshore breakwater overlook structure and technical support during construction.

Eagle Lake Park Evaluation | Kansasville, Wisconsin | Racine County | 2015-Present

Project Manager providing field investigation, permitting, and final design services for the replacement of a failing sheet pile retaining wall and the expansion of a boat launch. Additionally, Baird will provide bidding and construction observation services when the project advances into construction.

Fish Creek Beach Improvements | Fish Creek, Wisconsin, Lake Michigan | Short, Elliot, Hendrickson, Inc | 2018

Project Manager and Technical Lead for coastal and structural engineering services for the development of alternatives to improve and expand the existing beach and for the addition of a public viewing pier at the public beach. In addition, Mr. Barth facilitated public board meetings to establish aesthetic and functional criteria.

Lyon Square Riverfront Park | Grand Rapids, Michigan, Grand River | Bishop Land Design, LCC | 2017-2018

Baird provided marine and structural engineering services for the preliminary design of the redevelopment of the waterfront on the Grand River. As lead engineer, Mr. Barth assisted with the development of concepts for a tiered floating promenade to facilitate public access to the river and proposed kayak/rafting class 3 rapids. Services provided included regulatory input and a class 3 opinion of probable construction cost.

East Chicago Marina | East Chicago, Indiana, Lake Michigan | City of East Chicago | 2016-2017

Baird provided engineering services for the replacement of a 292-slip marina on the southern end of Lake Michigan. Mr. Barth was the structural engineer and developed the performance specifications for the total dockage system replacement.

Whitebridge Hill Beach House Lakefront Improvements | Winnetka, Illinois, Lake Michigan | Northworks, Architects and Planners, LLC | 2015-2017

Baird provided engineering, permitting, and construction phase services for the design of a stone beach retention groin, steel sheet pile pier structure, and backshore bluff protection soldier pile wall. Mr. Barth provided structural design services for the steel sheet pile pier and backshore soldier pile wall structures and construction observation services for the construction of the stone groin.

Bay Moorings | Penetanguishene, Ontario, Georgian Bay, Lake Huron | Parkbridge Lifestyle Communities Inc. | 2016-2017

Baird provided an evaluation of the existing breakwater at a marina and provided concept designs and costs for an upgraded structure. Mr. Barth provided conceptual structural design services and developed preliminary opinions of construction cost for each alternative.

Coastal Risk Assessment and Management Program | Barbados, West Indies | Coastal Zone Management Unit | 2016-2017

The Coastal Risk Assessment and Management Program (CRMP) was established to help the government of Barbados understand the island's exposure and resiliency to hurricanes, sea level rise, storm surge, terrestrial loads and water quality. As lead structural engineer, developed designs for a waterfront project which consists of 1,000 meters of boardwalk, piers, and shore protection along the island's southern coast.

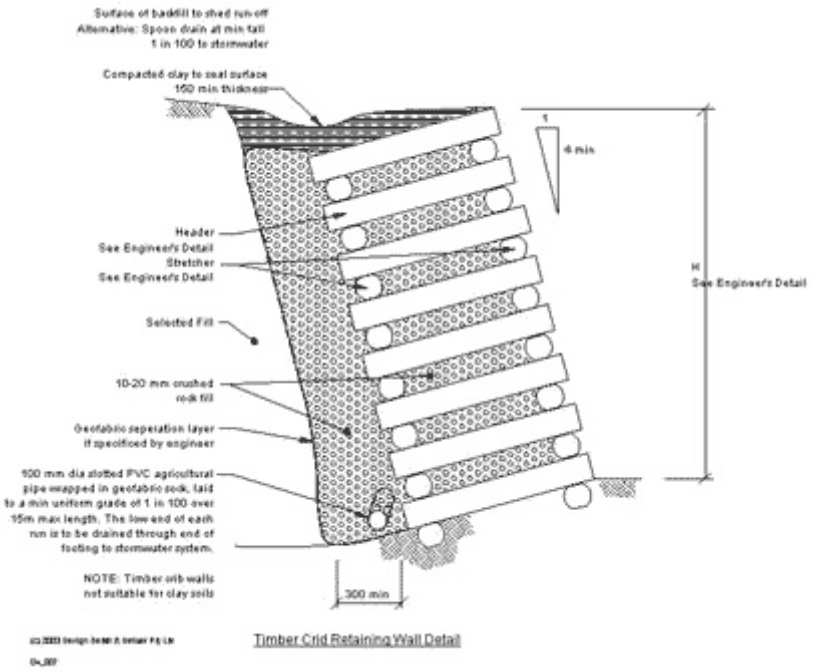
Bluff Crib Wall Replacement and Drainage Improvements

Altamanu Inc.
landscape architecture + urban design + planning

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

GLENCOE PARK DISTRICT

Over 220 ft of crib wall replacement, improved entryway at water plant and drainage solutions for the bluff and Hazel



Timber Crid Retaining Wall Detail

Crib walls are one of the oldest gravity wall systems. A series of stacked members create hollow cells that are filled with soil or rock

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landscape architecture + urban design + planning

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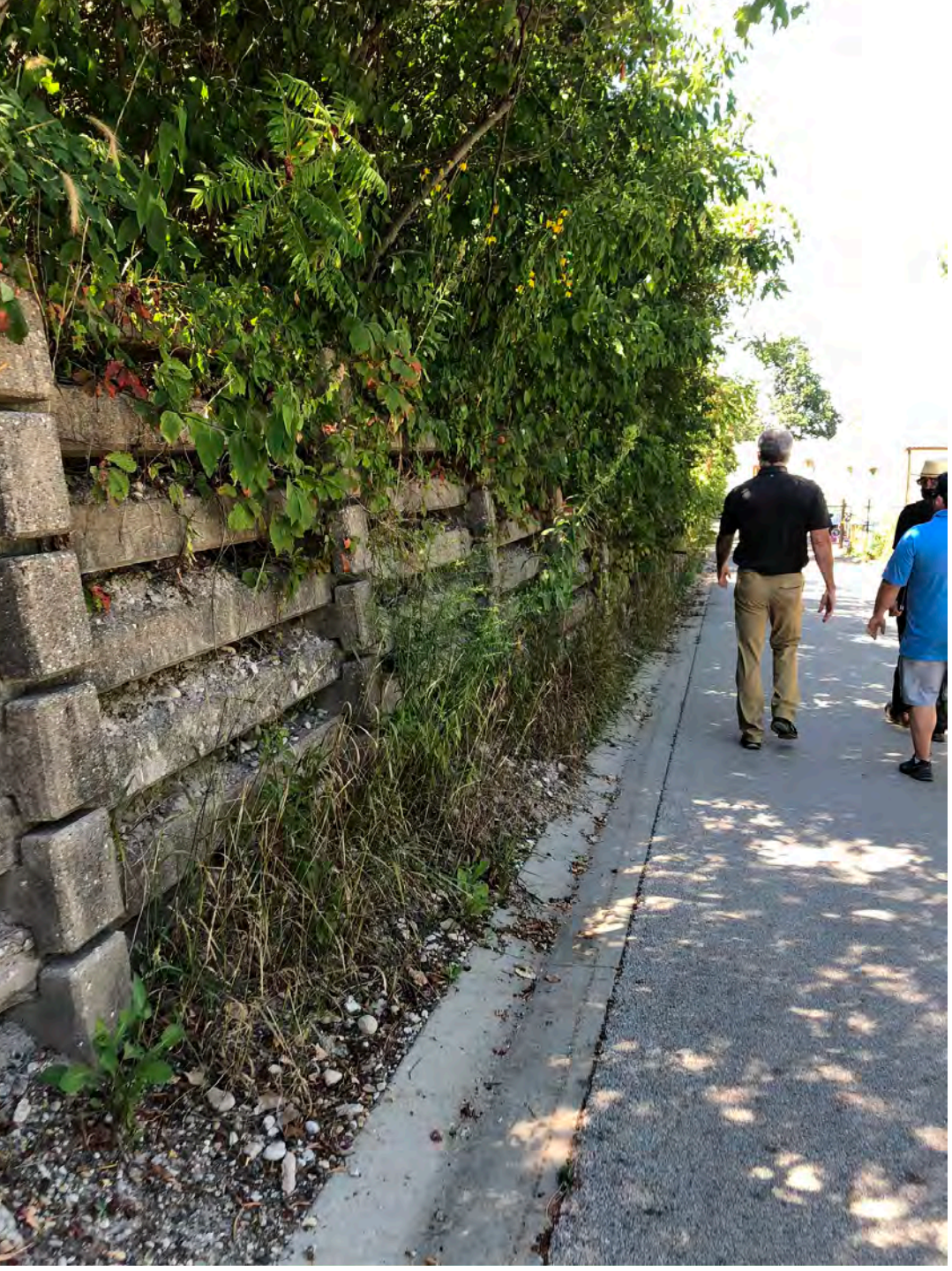
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

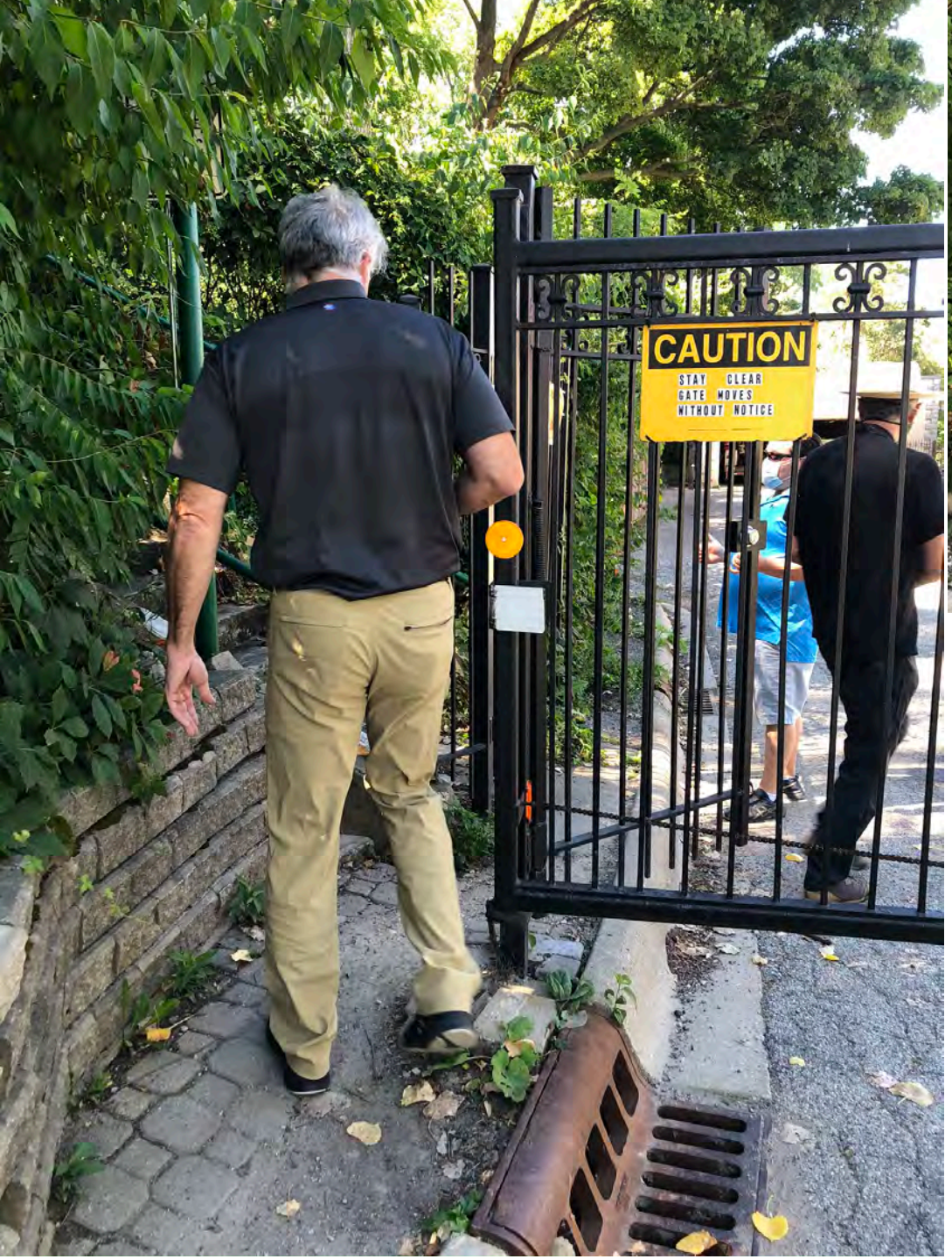
GLENCOE PARK DISTRICT

This what ours looks like



It ranges in height from 2 ft approx. to over 10 ft holding back the entire northeastern bluff


CAUTION
NOTICE
AUTHORIZED
VISITORS ONLY



Approach and Entry to Water Plant

A mixture of systems and materials at the entry gate to Water Plant