RS-RFQ-007-2023

Request for Quotation

Animal Pound Renovations

Addendum No. 1
(to the Request for Quotation Document)

The Request for Quotation (RFQ) is modified as set forth in this Addendum. The original RFQ Documents and any previously issued addenda remain in full force and effect, except as modified by this Addendum, which is hereby made part of the RFQ. Respondents shall take this Addendum into consideration when preparing and submitting its response.

1. Design Documents

Appendix 02 of the RFQ document is to be replaced by Appendix 01 of Addendum 01. Appendix 01 of Addendum 01 includes revised design drawings and information for the proposed scope of work and should be reviewed carefully. Wherever discrepancies arise between Appendix 02 of RS-RFQ-007-2023 and Appendix 01 of Addendum 01, Appendix 01 shall prevail.

2. Questions Received

Q	Site Meeting – Can you confirm the date and time of the site meeting? On the RFQ it says Monday November 22nd at 1pm. November 22nd is a Wednesday.
A	The site meeting will take place on Wednesday November 22nd at 1pm.

Q	Regarding the window to be closed in the Animal Bath Room, is there any associated work outside the building to complete this?
A	No exterior work is required to completed this portion of the scope of work.

Q	Reviewing the RFP Document, Item 7 – Site Meeting, a site meeting is scheduled to take place on November 22nd at 1pm for above reference project. Please confirm if recommended or mandatory.

A	The site meeting is recommended but not mandatory. The bidder is responsible to ensure they understand the current state of the building and the scope of the project before submitting a bid.

Q	Reviewing the RFP Document, Item 6 – Scope of Work, notes that successful proponent to acquire permit. Please confirm what's expected from GC; will application be completed and submitted Francis Rivard Drafting and Design?
A	General contractor is to complete the permit with assistance from the City.

Q	Reviewing the RFP Document, Item 6 – Scope of Work, notes to install cabinets. Please clarify – unable to located in drawings. Are these owner supply item?
A	Installation of cabinets is no longer part of the scope of work.

Q	Reviewing the RFP Document, Item 6 – Scope of Work, notes "move door"; however, A2.0 Note #4 notes "new door". Please confirm if replacing or re-using? If new, please confirm HM door and frame acceptable?
A	Door schedule on Page A4.0 in the updated design drawings provide clarity on the door required to be moved. Additional notes have been included in the updated door schedule.

Q	2" Concrete overpour at Dog Area – please confirm methodology including required prep works, bonding agents and mix design.
A	The concrete overpour has been modified to be a 1/4" cement skim coat followed by an epoxy finish. A required product for this has been identified in the new design documents and product specification sheets have been included in Appendix 01 of this addendum. Updated floor assemblies are detailed on page A2.0.

Q	Dog Crates – Drawing A2.0 notes P2, P3 and P4 Partitions (Wood Framing with FRP); however renderings and elevations illustrate cages. Please confirm. If cages, please confirm product.
A	As indicated on P4 note on A2.0 the P4 Partition is to be 1-1/4" steel tubing frame with 2" by 4", 6 gauge wire mesh consistent with all images and renderings.

Q	Drawing A2.0 - Please confirm FL1 Assembly only within “Animal Bath” Room. No floor finishes noted for Reception, Red Staff, Bath, & Cat Areas.
A	FL1 to be in the Animal Bath room and Dog Area. No floor finish changes required for reception area, Rec staff area or cat area.

Q	Drawing A2.0 – Shower; please confirm wall finishes & base material.
A	Shower to be acrylic surround with base provided by owner.

Q	Drawing A4.0 – Notes that “All fixtures to be supplied by owner and installed by contractor”. Please confirm all fixtures to be supplied by client.
A	Owner to provide: • Shower surround and base • Shower head • Shower lever/spout • Exhaust fan • Light fixture for animal bath room Contractor to provide: • Door hardware • All doors • Any other items to complete scope of work

Q	Please confirm electrical limited to 220v Dryer Outlet and Combo GFCI Receptacle at laundry.
A	Contractor will be required to move the electrical outlet within the new cat room located where D/04 is scheduled to be installed. Contractor will also be required to install new light fixture (supplied by owner) in animal bath room.

Q	Please confirm FRP scope; P1 partition on A2.0 notes no FRP, however, A4.0 scope of work notes FRP.
A	FRP is not required on P1 partition. Note for FRP within scope of work on page A4.0 has been removed.

Q	Drawing A4.0 – Scope of Work – All areas, notes make good of existing walls and ceilings. Please confirm expectations, trim and drywall wall and ceilings appear to be in very poor condition.
A	All walls and ceilings within the Cat area, reception area, animal bath area and dog area to have all holes within drywall filled/repaired, sanded and painted. P1 within reception area to be painted.

Q	Drawing A2.0 – Note #7; Please confirm if also applicable at exterior man door and garage door?
A	This note has been removed from the updated design drawings due to the changed thickness of the desired floor finish.

Issued: ***November 16, 2023***

_____

Matt Bahm
Director of Recreation

CITY OF TEMISKAMING SHORES
P.O. Box 2050
Haileybury, ON
P0J 1K0

RS-RFQ-007-2023

Request for Quotation

Animal Pound Renovations

APPENDIX 01

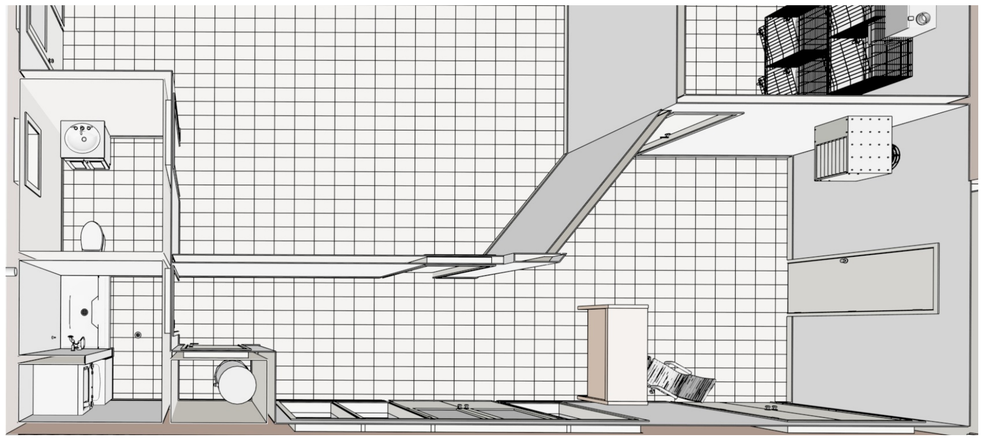
Marina Renovation

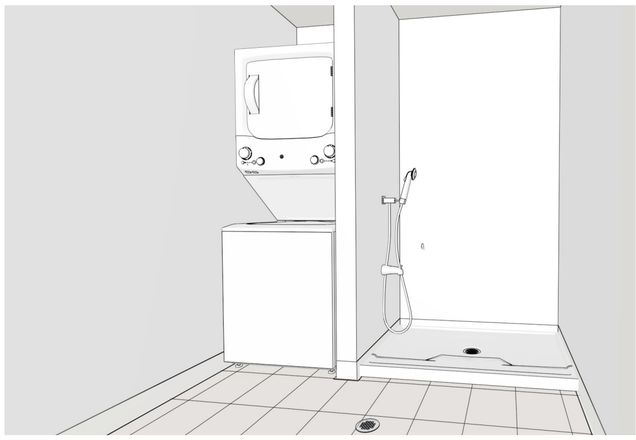
Job No. 22034
305 Farr Dr.,
Temiskaming Shores, ON.

DRAWING LIST

NO.	TITLE
A1.0	COVER PAGE
A2.0	GROUND FLOOR LAYOUT
A3.0	PLUMBING PLAN
A4.0	DETAILS / ELEVATIONS / NOTES

Animal Wash Area 40 sq/ft
Dog Area 532 sq/ft
Cat / Storage Area 164 sq/ft





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Plan Orientation

Rev.	Description	Date
0	Issued for Client Preliminary	23.03.21
0	Issued for Client Review	23.08.29
0	Issued for Tender	23.09.18
0	Issued for Construction / Permit	23.10.24
1	Issued for Construction / Permit	23.11.16

FOR CONSTRUCTION

Client
City of Temiskaming Shores
325 Farr Drive,
Haileybury, Ontario
P0J 1K0

Drawing Title
Cover Page

Project Title
Haileybury Marina Renovation

Professional Stamp
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Francis Rivard Drafting & Design BCIN # 122341
Francis Rivard BCIN # 103936
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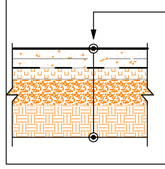
Scale	As Indicated
Sheet Size	18" X 24"
Revision	1
Drawn By	FR
Project No.	23010
Date	23.11.16
Drawing No.	A1.0

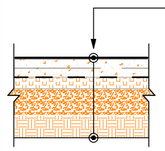
FLOOR ASSEMBLY - FL1



- EPOXY FINISH FROM SIKA
- 1/4" CEMENT SKIM COAT BY SIKA
- EXISTING CONCRETE SLAB

See supporting documents from Sika

FLOOR ASSEMBLY - FL2



- EPOXY / URETHANE FINISH FROM SIKA
- 1/4" CEMENT SKIM COAT BY SIKA
- REPAIR ALL CRACKS / SUMP / HOLES
- EXISTING CONCRETE SLAB

See supporting documents from Sika

ALL MEASUREMENTS TO FACE OF EXISTING WALLS, EDGE OF FRAMING OR CENTER OR EDGE OF ROUGH OPENING UNLESS OTHERWISE INDICATED

Notes:

1- Install new 48"x32" shower base and surround c/w handheld shower head, faucet, tap hook to tie animals supplie by owner.
2- Erect new partition wall as per detail height to match existing wall.
3- Remove and reuse for D05 location and close in opening to match existing wall.
4- Create new opening to accommodate new door as per door schedule, match existing door/hardware if possible.
5- Provide laundry hookups and install stackable washer/ dryer unit supplied by owner.
6- Provide new floor drain complete with trap, primer and clean out.
7- Install existing door removed from the Cat Area wall.

PARTITION TYPE - P1
- 1/2" DRYWALL*
- 2X4 STUDS AT 16" o.c.
- 1/2" DRYWALL*

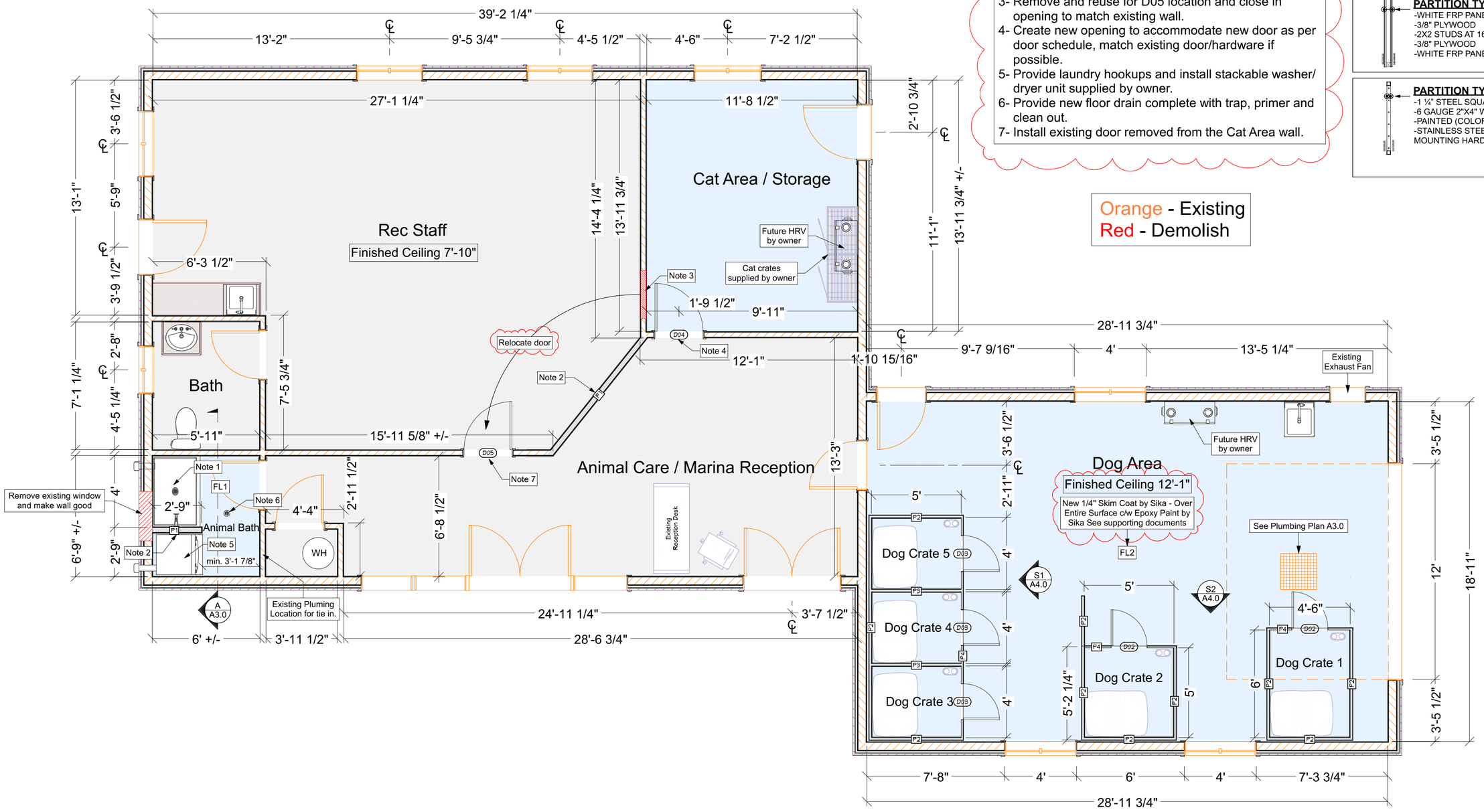
INSTALL MOISTURE RESISTANT DRYWALL IN ALL WET AREAS

PARTITION TYPE - P2
-WHITE FRP PANEL
-3/8" PLYWOOD
-2X2 STUDS AT 16" o.c.
-3/8" PLYWOOD

PARTITION TYPE - P3
-WHITE FRP PANEL
-3/8" PLYWOOD
-2X2 STUDS AT 16" o.c.
-3/8" PLYWOOD
-WHITE FRP PANEL

PARTITION TYPE - P4
-1 ¼" STEEL SQUARE TUBING FRAME
-6 GAUGE 2"X4" WELDED WIRE MESH
-PAINTED (COLOR AS PER OWNER)
-STAINLESS STEEL DOOR HANDLES AND MOUNTING HARDWARE.

Orange - Existing
Red - Demolish



1
A2.0

FLOOR PLAN

SCALE: 1/4" = 1'0"

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FOR CONSTRUCTION

Client
City of Temiskaming Shores
325 Farr Drive,
Haileybury, Ontario
P0J 1K0

Drawing Title
Floor Plan

Project Title
Haileybury Marina Renovation

Professional Stamp
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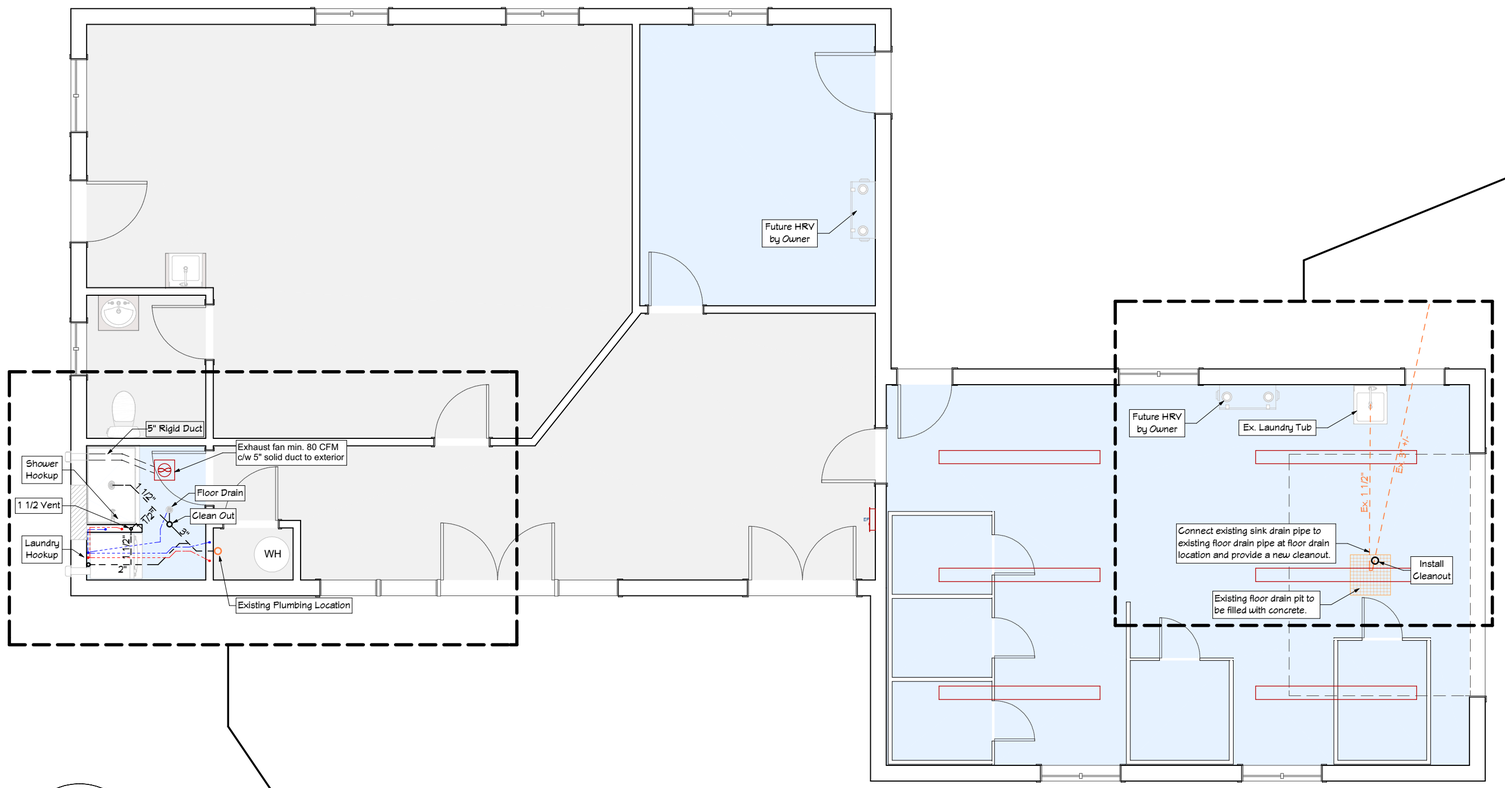
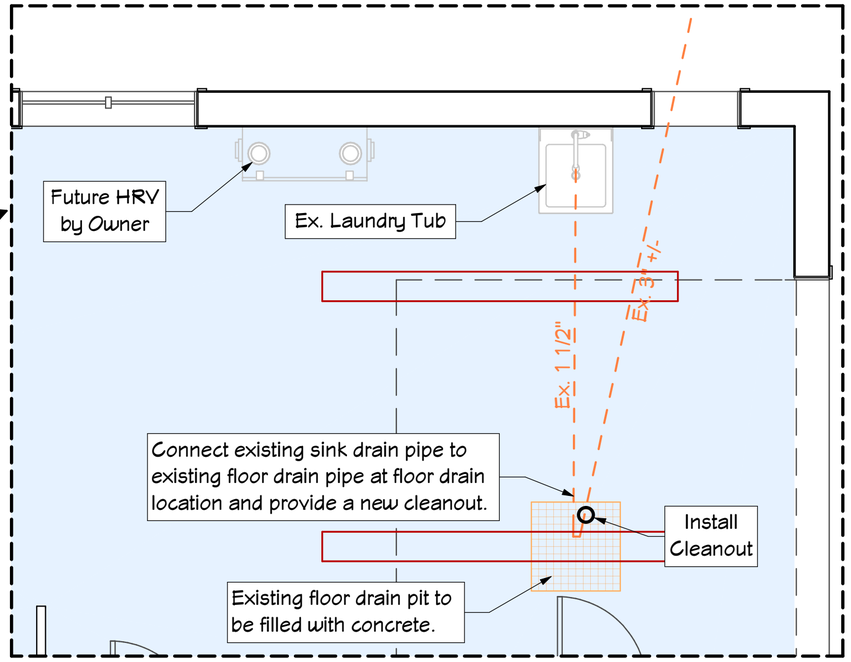
Sheet Size	18" X 24"	**Date**	23.11.16
Revision	1	**Drawing No.**	A2.0
Drawn By	FR		



PLUMBING PLAN

SCALE: 3/16" = 1'0"



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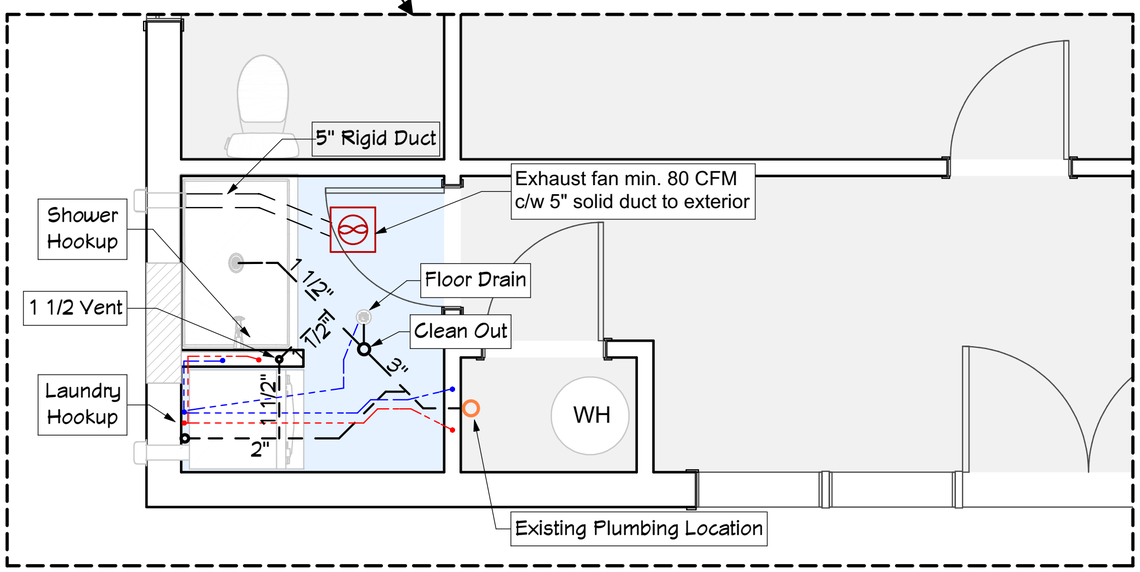
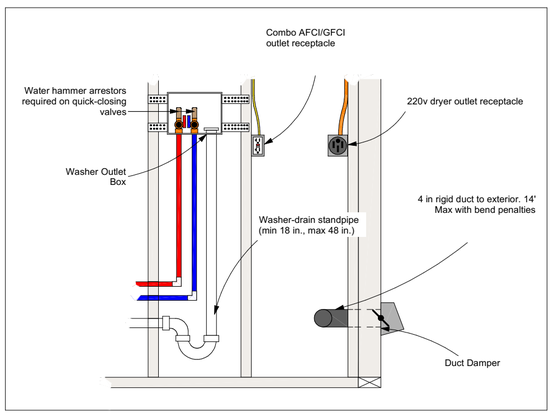
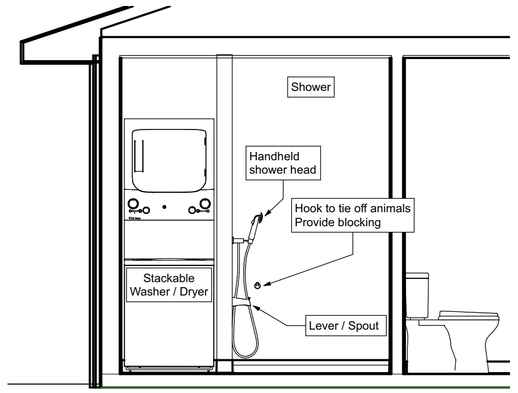
A3.0







A
A3.0

SECTION
Animal Wash Station

SCALE: 3/8" = 1'0"

PLUMBING NOTES:

- Drainage Piping 3" Or Less Min Slope 1/4" Per Ft.
- Drainage Piping 4" Min Slope 1/8" Per Ft
- 4" Vent Pipe To Extend Through Roof to Open Air
- DWV Piping - ABS - B181.1 or PVC - B181.2
- Water Service Pipe -CSA B-137.1 (Series 160) Or Copper ASTM B88
- Water Supply Pipe - CSA B-137.5 PEX

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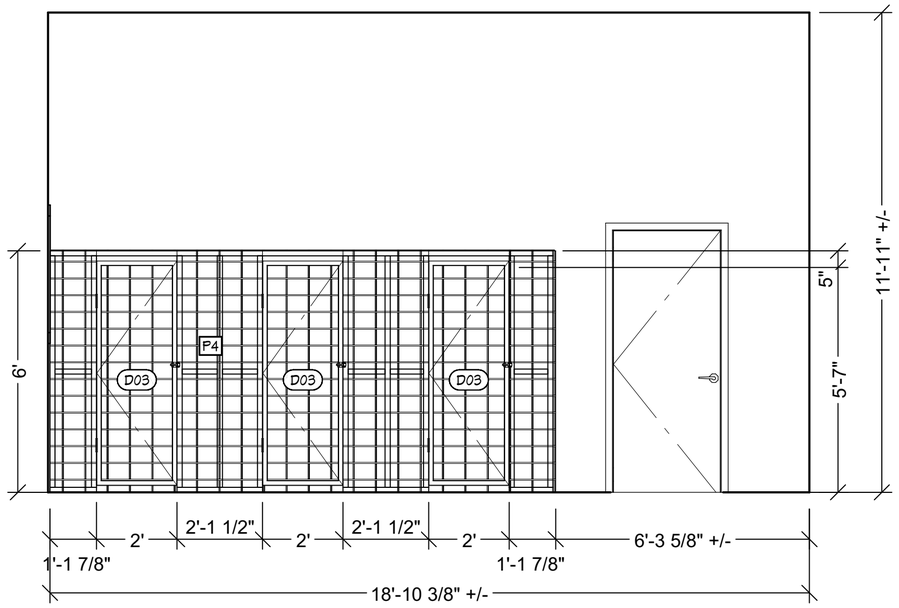
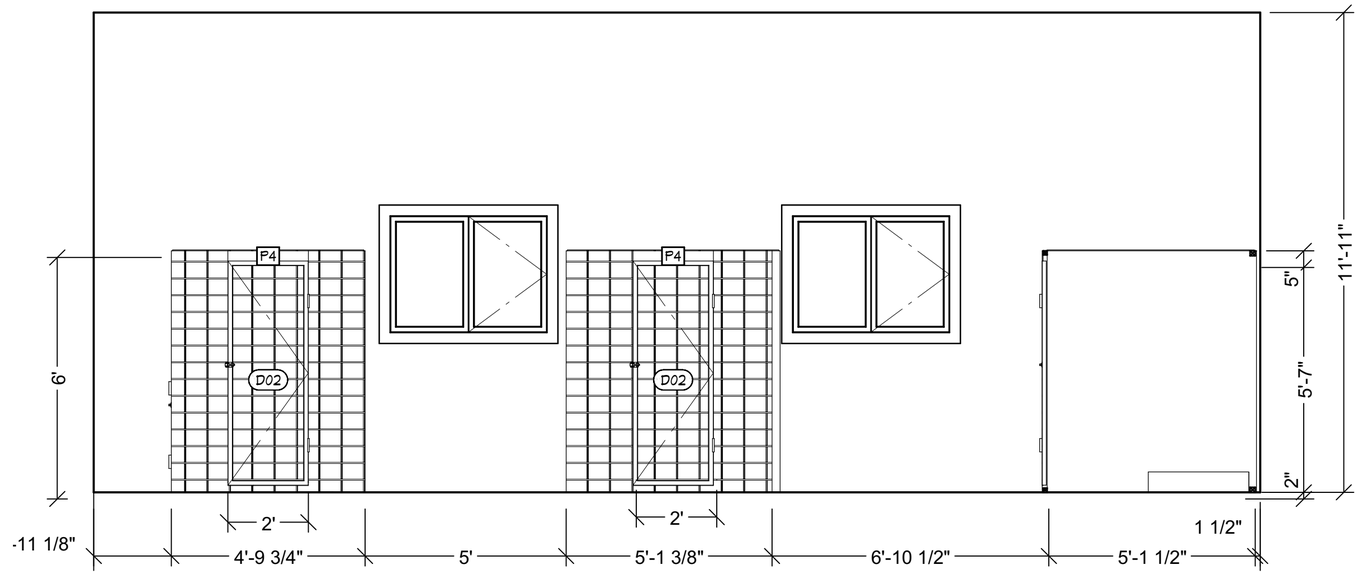


S1
A4.0

Dog Crate Elevation
SCALE: 5/16" = 1'0"



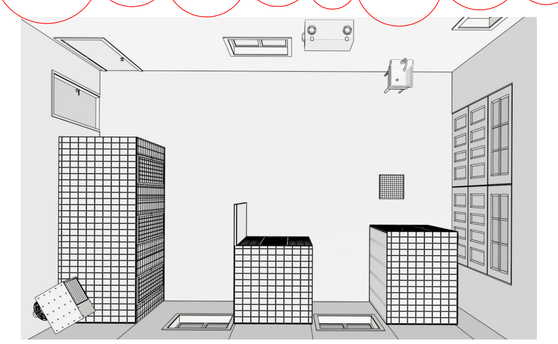
S2
A4.0

Dog Crate Elevation
SCALE: 5/16" = 1'0"

DOOR SCHEDULE							
DESCRIPTION	FLOOR	NUMBER	QTY	DIMENSIONS	HEADER	HEADER TYPE	COMMENTS
METAL FRAME HINGED	1	D02	2	24"X67"X1 1/4" L IN			CUSTOM STEEL FRAMED & MESH DOOR MATCH P4 WALL. BY OTHERS
METAL FRAME HINGED	1	D03	3	24"X67"X1 1/4" R IN			CUSTOM STEEL FRAMED & MESH DOOR MATCH P4 WALL. BY OTHERS
NEW HW HINGED	1	D04	1	32"X80"X1 3/8" L IN			
EXIST. HW HINGED	1	D05	1	32"X80"X1 3/8" R IN			EXISTING DOOR RELOCATED

Scope of Work:

- Animal Bath Room - Remove existing window, make all existing walls good by removing or relocating existing surface plumbing and electrical to meet all applicable codes. Install 48"x32" shower base / enclosure,and new plumbing as per drawings. Install tie off anchor and proper backing. Install new 1/2" gypsum board, tape and mud, prime and paint. Prep floor as required and apply Sika 1/4" skim and epoxy finish as per manufacturer specifications (same as dog area floor finish). Install new ceiling exhaust fan and light. Install new gypsum board on ceiling tape and mud, prime & paint as per owner.
- Cat Area / Storage Room - remove and frame in existing door, install new door as per drawing A2.0, make all walls good and provide a new coat of primer & paint (color as per owner)
- Dog Area - Connect laundry tub to existing floor drain and add a clean out. Fill existing floor drain hole with concrete and prep Sika instructions in supporting documents, make floor good and apply Sikafloor Morritex Trowel System and Sikafloor Fastflor CR as per manufacturer specifications. Make all walls good and provide new coat of paint. Supply / fabricate new dog crates as per details, cap top and end of walls with FRP and corner trim or aluminum flashing, seal FRP to floor throughout w/ caulk. Provide a custom built cover over crate, constructed same as front dog crate walls (P4). Remove existing shelving throughout and store as per owner for future use. Make walls good prime & paint. (color as per owner)
- All fixtures to be supplied by owner & installed by contractor unless otherwise noted.



GENERAL NOTES:

A. PROJECT SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, (LATEST REVISIONS INCLUDED), ALL LOCAL BY-LAWS, ACTS AND ORDINANCES.
B. PERFORM ALL WORK IN ACCORDANCE WITH THE ONTARIO BUILDING CODE AS A MINIMUM STANDARD, REFER TO APPROPRIATE CSA STANDARDS FOR ADDITIONAL REQUIREMENTS COVERING WORKMANSHIP AND MATERIALS.
C. ALL WORK SHALL CONFORM TO ALL APPLICABLE BY-LAWS AND OTHER CODES AND BODIES HAVING JURISDICTION.
D. ALL WORKMANSHIP SHALL BE IN COMPLIANCE WITH GOOD TRADE PRACTICES.
E. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE BUILDING DURING ALL PHASES OF THE CONSTRUCTION.
F. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH THE CONSTRUCTION.
G. CONTRACTOR TO ASSUME THAT DETAILS ARE TYPICAL FOR ALL LIKE AND/OR SIMILAR CONDITIONS THROUGHOUT AREA OF THE WORK.
H. ALL MATERIALS AND/OR ASSEMBLIES LISTED ON THIS PROJECT SHALL BE IN COMPLIANCE WITH THE PERFORMANCE RATINGS OF THE ONTARIO BUILDING CODE AND/OR APPLICABLE REQUIREMENTS OF ALL APPROVAL AGENCIES.
I. ALL NECESSARY CONTRACT HARDWARE AND ANY OTHER INCIDENTAL ITEMS NECESSARY FOR A COMPLETE JOB SHALL BE OF ACCEPTABLE QUALITY, STRENGTH, FINISH, SIZE AND DURABILITY.
J. ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY.
K. ALL FINISHES (TYPE AND COLOR) TO BE SELECTED BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER.
L. DETAILED LAYOUT OF ALL CABINETRY DESIGNED BY OTHERS.
M. ELECTRICAL, HVAC, PLUMBING, SEPTIC SYSTEM AND LANDSCAPING DESIGNS BY OTHERS (IF APPLICABLE).
N. LOCATION OF ALL ELECTRICAL, PLUMBING, MECHANICAL AND HVAC EQUIPMENT TO BE COORDINATED BY CONTRACTORS.

CONCRETE NOTES:

A. WORK IN THIS SECTION SHALL COMPLY WITH THE REQUIREMENTS OF CSA A23.1-94 AND CSA A23.2-94 AS MINIMUM STANDARDS.
B. CONSTRUCT FORM WORK STRONG, TIGHT, BRACED AND TRUE SO AS TO MAINTAIN SHAPE AND POSITION. USE ONLY NEW MATERIALS.
C. ALL REINFORCING STEEL TO BE CLEAN AND SECURED IN PLACE BY THE USE OF CHAIRS, SPACERS, OR HANGERS.

MATERIALS:

A. CONCRETE:
1. COMPRESSIVE STRENGTH:
FOOTING = 32 MPa
GARAGE & EXTERIOR SLABS = 32 MPa
INTERIOR SLABS = 20 MPa
FLOOR TOPPING = 20 MPa
2. AIR ENTRAINMENT: 5-8% FOR GARAGE AND EXTERIOR SLABS
B. REINFORCING BARS:
1. BILLET STEEL BARS, GRADE 400 TO CAN/CSA 30.12.

CARPENTRY NOTES:

A. WOOD FRAMING SHALL CONFORM TO THE REQUIREMENTS OF PART 9 OF THE ONTARIO BUILDING CODE AND SHALL BE RIGIDLY AND SECURELY CONNECTED, REFER SPECIFICALLY TO TABLE 9.23.3.A FOR NAILING PRACTICE IN GENERAL.
B. MISCELLANEOUS FRAMING LUMBER SHALL BE NO. 2 GRADE OR BETTER SPRUCE, PINE OR FIR SPECIES TO C.S.A. STANDARD 0141-1970.
C. ALL LUMBER EXPOSED TO THE ELEMENTS SHALL BE PRESSURE TREATED AND ALL CUTS SHALL BE TREATED WITH A WATERPROOFING SEALANT.
D. SHEATHING MATERIAL SHALL BE FIR PLY, OSB OR EQUIVALENT AND TO THICKNESSES AS NOTED ON DRAWINGS.
E. SUPPORT ALL WINDOW AND DOOR LINTELS WITH A SPAN MORE THAN 5' WITH (2x) JACK STUDS ON BOTH SIDES OF OPENING (UNLESS NOTED OTHERWISE).
F. THE WIDTH OF COLUMNS AND STUD POSTS SHALL BE NOT LESS THAN THE WIDTH OF THE GIRDER TRUSS OR BEAM THAT IT SUPPORTS.
G. ALL COLUMNS AND STUD POSTS SHALL EXTEND DOWN TO FOUNDATION FOR SUFFICIENT BEARING. PROVIDE SOLID WOOD BLOCKING WHERE REQUIRED TO ENSURE A CONTINUOUS TRANSFER OF THE SUPPORTED LOADS.
H. ALL FASTENERS EXPOSED TO THE ELEMENTS SHALL BE CORROSION RESISTANT.
I. ALL EXTERIOR WALL SILL PLATES SHALL BE INSTALLED ON A FOAM GASKET. ALL INTERIOR PARTITION SILL PLATES INSTALLED ON CONCRETE SHALL BE INSTALLED ON A 2 mil POLYETHYLENE FILM (or) TYPE S ROLL ROOFING.

ALL MEASUREMENTS TO FACE OF EXISTING WALLS, EDGE OF FRAMING OR CENTER OR EDGE OF ROUGH OPENING UNLESS OTHERWISE INDICATED

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— Drafting & Design —
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FOR CONSTRUCTION

Client
City of Temiskaming Shores
325 Farr Drive,
Haileybury, Ontario
P0J 1K0

Drawing Title
Foundation Plan

Project Title
Haileybury Marina Renovation

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Francis Rivard Drafting & Design BCIN # 122341
Francis Rivard BCIN # 103936
SIGNATURE

Scale	As Indicated	**Project No.**	23010
Sheet Size	18" X 24"	**Date**	23.11.16
Revision	1	**Drawing No.**	A4.0
Drawn By	FR		

BUILDING TRUST
CONSTRUIRE LA CONFIANCE

CSC FORMAT SAMPLE SPECIFICATION

Sikafloor® Morritex 6mm Trowel System with Fastfloor CR grout and topcoats

High Abrasion and Impact Resistant Epoxy Surfacing / System Thickness: 3- 6 mm (1/8 – 1/4 in)

General

1.1 SUMMARY

.1 Provide labour, materials, tools and equipment required to install complete resinous flooring system specified in this Section including surface preparation.

1.2 RELATED REQUIREMENTS

.1 [Section 03 01 00 - Concrete Rehabilitation.]

.2 [Section 03 31 00 - Structural Concrete] [Section 03 33 00 - Cast-in-Place Concrete].

.3 [Section 03 35 00 - Concrete Finishing.]

.4 [Section 03 39 00 - Concrete Curing.]

.5 [Section 09 05 58 – Mechanical Preparation of Flooring Substrates]

1.3 ABBREVIATIONS AND ACRONYMS

.1 w.f.t.: Wet film thickness.

1.4 REFERENCE STANDARDS

.1 American Society for Testing and Materials (ASTM)

.1 ASTM C307-03 (2012) Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing's.

.2 ASTM C413-01(2012), Standard Test Method for Absorption of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes.

.3 ASTM C579-01 (2012), Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes.

.4 ASTM C580-02 (2012), Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing's, and Polymer Concretes.

.5 ASTM C884/C884M-98(2010) Standard Test Method for Thermal Compatibility Between Concrete and an Epoxy-Resin Overlay.

.6 ASTM D635-10, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.

.7 ASTM D638-10, Standard Test Method for Tensile Properties of Plastics.

.8 ASTM D695-10 Standard Test Method for Compressive Properties of Rigid Plastics.

.9 ASTM D696-08e1 Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between −30°C and 30°C with a Vitreous Silica Dilatometer.

.10 ASTM D2240- 05 (2010), Standard Test Method for Rubber Property-Durometer Hardness.

.11 ASTM D2369-10e1, Standard Test Method for Volatile Content of Coatings.

.12 ASTM D2794-93(2010) Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

.13 ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.

.14 ASTM D4060-10, Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.

.15 ASTM D4541-09e1, Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.

.16 ASTM F2170-11 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

.17 ASTM F2659-10, Standard Guide for Preliminary Evaluation of Comparative Moisture Condition of Concrete, Gypsum Cement and Other Floor Slabs and Screeds Using a Non-Destructive Electronic Moisture Meter.

.18 ASTM G21-13, Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

.2 Canadian Standards Association (CSA)

.1 CSA A23.1-14/A23.2-14 Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete.

.3 International Concrete Repair Institute (IRCI)

.1 ICRI Guideline No. 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, coatings and Polymer Overlays.

.4 United States Department Defence

.1 MIL-PRF-24613A (SH) 11-2007, Performance Specification: Deck Covering Materials, Interior, Cosmetic Polymeric

1.5 ADMINISTRATIVE REQUIREMENTS

.1 Pre-application Meeting:

.1 Convene a pre-application meeting two (2) weeks before commencing the Work of this Section in accordance with Section 01 31 19 – Project Meetings. Require attendance of parties directly affecting Work of this Section, including Owner, Contractor, Consultant, Applicator, Manufacturer's technical representative and other Subcontractors affected by the Work of this Section to review the following:

.1 Surface preparation.
.2 Priming.
.3 Application.
.4 Curing and protection.
.5 Coordination with other Work.

1.6 SUBMITTALS

.1 Make Submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data: Submit manufacturer's Product data, including physical properties and appearance options including: standard colours, variable surface textures and surface sheen.

.3 MSDS: Submit Manufacturer’s Safety Data Sheet for each Product being used.

.4 Samples for Initial Selection: Submit manufacturer's colour charts showing the full range of colours available for each type of finish coat material indicated for Consultant’s initial selection.

.5 Samples for Verification: Submit samples of each colour and material being applied, with texture to simulate actual conditions, on representative samples of the actual substrate and as follows for Consultant’s verification:

.1 Use representative colours when preparing samples for review; resubmit until required sheen, colour, and texture are achieved.
.2 List of material and application for each coat of each sample; label each sample for location and application.
.3 Submit samples on the following substrates for Consultant's review of colour and texture:

.1 Hardboard: Provide two (2) 100 mm square samples for each colour and finish.

.4 Obtain written acceptance of Samples in writing from the Consultant before commencing Work of this Section. Accepted Samples shall be the final standard of acceptance of the finish.

1.7 CLOSEOUT SUBMITTALS

.1 Make Closeout Submittals in accordance with Section 01 78 00 – Closeout Submittals 01 78 23 – Operation and Maintenance Data.

.2 Operations and Maintenance Data: Submit manufacturer's printed maintenance instructions for repair, cleaning and maintenance procedures; include name of original installer and contact information.

1.8 QUALITY ASSURANCE

.1 Manufacturer Qualifications:

.1 Manufacturer shall be certified under ISO 9001. All liquid materials, including primers, resins, curing agents, finish coats, and sealants are manufactured and tested under an ISO 9001 registered quality system.

.2 Applicator Qualifications:

.1 Applicators: Use experienced applicators having a record of successful in-service resinous flooring system applications similar in material and extent to those specified in this Section and as follows:

.1 Applicators must have completed flooring manufacturer’s training program for Products specified.
.2 Applicators must be licensed, certified or approved in writing by the flooring manufacturer for the Products specified.

.2 Applicator Experience: Minimum 5 years’ experience in the application of the type of system specified. Applicator shall submit a list of five (5) projects of similar size, scope and complexity.

.3 Mock-Up:

.1 Construct one 10 sq.m. (100 sq.ft.) mock-up of each type and colour of resinous flooring in location acceptable to Consultant to demonstrate quality of finished system, complying with manufacturer's installation instructions and requirements of this Section in accordance with Section 01 45 00 – Quality Control
.2 Arrange for Consultant’s review and acceptance, obtain written acceptance before proceeding with Work.
.3 Upon acceptance, mock-up shall serve as a minimum standard of quality for the balance of the Work of this Section. Mock-up shall be left in place for the duration of the Work.

1.9 DELIVERY, STORAGE AND HANDLING

.1 Delivery:

.1 Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, batch or lot number and date of manufacture.

.2 Material should be delivered to job site and checked for completeness and shipping damage prior to job start.

.2 Storage:

.1 Store materials in accordance with manufacturer's written instructions.
.2 Keep containers sealed until ready for use. Material should be stored in a dry, enclosed, protected area from the elements.
.3 Do not subject material to excessive heat or freezing.
.4 Shelf life: Established based on manufacturer's written recommendation for each material being used.

.3 Handling:

.1 Protect materials during handling and application to prevent damage or contamination.
.2 Condition materials for use accordingly to manufacturer's written instructions prior to application.
.3 Record material lot numbers and quantities delivered to jobsite/storage.

1.10 SITE CONDITIONS

.1 Do not install the Work of this Section outside of the following environmental ranges without Manufacturers' written acceptance:

.1 Material Temperature: Precondition material for at least 24 hours between 18°C and 30°C (65°F and 86°F).
.2 Ambient and Substrate Temperature: Minimum/Maximum 10˚/30˚C (50˚/86˚F).
.3 Substrate temperature must be at least 3˚C (5˚F) above measured Dew Point.
.4 Mixing and Application attempted at Material, Ambient and/or Substrate Temperature conditions less than 18˚C (65˚F) will result in a decrease in Product workability and slower cure rates.
.5 Relative Ambient Humidity: maximum ambient humidity 85% (during application and curing).
.6 Measure and confirm acceptable test results for Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point.

.2 Substrate Moisture:

.1 Moisture content of concrete substrate must be ≤ 4% by mass as measured with a Tramex® CME/CMExpert type concrete moisture meter.
.2 Additionally, internal concrete relative humidity tests may be conducted as per ASTM F2170 and values must be ≤ 85%.
.3 If moisture content of concrete substrate is higher than 4% by mass and / or if relative humidity test results exceed readings of 85% RH, Consultant will instruct on addition of moisture mitigation systems or moisture tolerant primers.

.3 Supply temporary utilities, including power, water, temporary ventilation and lighting for use by applicator.

.4 Maintain constant ambient room temperature for 48 hours before, during and after installation or until cured. Minimum temperature of 10°C (50°F) and maximum temperature of 30°C (85°F). Do not apply Product while ambient and substrate temperatures are rising.

.5 Erect suitable barriers and post legible signs at points of entry to prevent traffic and trades from entering the work area during application and curing period of the floor.

.6 Ensure adequate ventilation and air flow.

1.11 WARRANTY

.1 Submit Warranty information in accordance with Section 01 77 00 – Closeout Procedures

.2 Submit Applicator's written warranty, signed and issued in the name of Owner warranting the Work of this Section against defects in materials and workmanship for a period of one (1) year from the date of Substantial Performance of the Work.

Part 2 Products

2.1 MANUFACTURER

.1 Basis-of-Design Manufacturer: Sika Canada Inc. 601 Delmar Avenue, Pointe-Claire, Quebec, H9R 4A9 Phone (514) 697-2610, Fax (514) 697-3087 http://www.sika.ca.

.2 Substitutions: Consultant may consider additional manufacturers having similar Products to Basis-of-Design Manufacturer listed above during the construction period, provided they meet the performance and aesthetic requirements established by the named Products. Submit requests for substitution in accordance with Section 01 25 00 – Substitution Procedures before starting any Work of this Section:

2.2 SYSTEM

.1 Resinous Flooring System: solid colour, high gloss, resin-rich, trowel applied, epoxy floor screed system and as follows:

.1 Compressive Strength: 91 MPa (13,198 psi) at 28 days in accordance with ASTM C579.
.2 Tensile Strength: 6 MPa (870 psi) at 28 days in accordance with ASTM C307
.3 Flexural Strength: 28 MPa (4,061 psi) at 28 days in accordance with ASTM C580.
.4 Thermal Compatibility: Passes in accordance with ASTM C884.
.5 Indentation: 0.35% in accordance with MIL-PRF-24613.
.6 Impact Resistance: 2.8 joules in accordance with ASTM D2794.
.7 Abrasion Resistance: 0.17g in accordance with ASTM D4060. (CS17/1000cycles/1000g).
.8 Coefficient of Thermal Expansion: 0.39 x 10^{-4} mm/mm/°C (0.21 x 10^{-4} in/in/°F) in accordance with ASTM D696.
.9 Water Absorption: 0.3% in accordance with ASTM C413
.10 Pull-off Strength: > 2 MPa (>290 psi) with substrate failure in accordance with ASTM D4541.
.11 Flammability: 3 mm in accordance with ASTM D635.
.12 Resistance to Fungi Growth: Rated 1 in accordance with ASTM G21.

.13 Resistance to Mold Growth: Rated 10 in accordance with ASTM D3273.
.14 VOC Content: ≤ 50 g/L in accordance with ASTM D2369.
.15 System Thickness: 6 mm (1/4 in).
.16 Basis-of-Design System: Sika Canada Inc., Sikafloor® Morritex Trowel Medium-Duty-Heavy-Duty System.

2.3 COMPONENTS

.1 Primer, Screed Mortar Binder:

.1 Applied Thickness:

.1 Prime Coat: 254 µm (10 mils) w.f.t.
.2 Screed Mortar: 6mm (1/4 in)

.2 Compressive Strength: 41 MPa (5,946 psi) in accordance with ASTM D695.
.3 Tensile Strength: 36 MPa (5,221 psi) in accordance with ASTM D638.
.4 Pull-off Strength: >1.7 MPa (246 psi) in accordance with ASTM D4541.
.5 Hardness: 83 Shore D in accordance with ASTM D2240
.6 VOC Content: ≤ 25 g/L in accordance with ASTM D2369.
.7 Basis-of-Design Product: Sika Canada Inc., Sikafloor® 156.

.2 High Strength Trowel Screed Mortar Aggregate: in clear epoxy resin matrix

.1 Basis-of-Design Product: Sika® Aggregate PT

.3 Grout Coat and Top Coat: two component, solid colour, high solids, low odour, low VOC, high gloss Chemically resistant epoxy finish:

.1 Applied Thickness:

.1 Grout Coat: 254 µm (10 mils) w.f.t.
.2 Top Coat: 254 µm (15 mils) w.f.t.

.1 Compressive Strength: 56 MPa (8,122 psi) in accordance with ASTM D695.
.2 Tensile Strength: 7.4 MPa (1,073 psi) in accordance with ASTM D638.
.3 Pull-off Strength: >2 MPa (290 psi) in accordance with ASTM D4541.
.4 Hardness: 76 Shore D in accordance with ASTM D2240.
.5 VOC Content: ≤ 50 g/L in accordance with ASTM D2369.
.6 Impact Resistance: 5.88 joules in accordance with ASTM D2794.
.7 Abrasion Resistance: 0.11g loss in accordance with ASTM D4060 (CS17/1000cycles/1000g).
.8 Basis-of-Design Product: Sika Canada Inc., Sikafloor® Fastfloor CR.

2.4 ACCESSORIES

.1 Provide all cleaning agents, cleaning cloths, sanding materials, and clean-up materials required per manufacturer's specifications.

Part 3 Execution

3.1 EXAMINATION

.1 Examine surfaces to receive flooring system. Submit Notice in Writing to Consultant, Contractor, and Owner if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected. Do not apply flooring system to substrate treatments for moisture, repair, or levelling not of the same manufacturer.

.2 Surface must be clean, sound and dry.

.3 Pre-Installation Testing:

.1 Substrate moisture:

.1 Measure and confirm acceptable conditions for Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point.

.2 Confirm and record above values at least once every 3 hours during installation or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.).

.2 Concrete substrate to have a minimum compressive strength of 25 MPa (3,625 psi) at 28 days and a minimum of 1.5 MPa (218 psi) in tension at time of application.

.4 Ensure concrete substrate conforms to the minimum requirements of the flooring manufacturer.

.5 Do not apply flooring system to sand-cement setting beds. Remove sand-cement beds to structural concrete substrate. Re-level/slope as required to achieve grade and/or drainage in accordance with manufacturer's minimum requirements.

.6 Do not apply flooring system to asphaltic or bitumen membranes, soft wood, aluminum, copper or fiberglass reinforced polyester/vinyl ester composites.

.7 Apply to glazed or vitrified brick and tile, structural wood, and steel only with manufacturer's written recommendation for proper surface preparation.

3.2 SURFACE PREPARATION

.1 Prepare surface to receive flooring systems in accordance with manufacturer's written instructions.

.2 Remove dirt, oil, grease, wax, laitance, curing compounds, water-soluble concrete hardeners, and other surface contaminants.

.3 Remove sealers, finishes, and paints.

.4 All projections, rough spots, etc. should be removed and patched to achieve a level surface prior to the application.

.5 Remove unsound concrete by appropriate mechanical means.

.6 Concrete: Clean and prepare to achieve laitance-free and contaminant-free, open textured surface by shot blasting or equivalent mechanical means. Provide CSP level in accordance with ICRI Guideline No. 310-2R and manufacturer's written recommendation.

.7 Chemical Surface Preparation: Chemical surface preparation (acid etching) is unacceptable and will void manufacturer's warranty.

.8 Control Joints and Cracks: Repair and treat control joints and surface cracks utilizing manufacturer's standard materials and installation details.

3.3 APPLICATION

.1 Mix and apply material in accordance with manufacturer's written installation instructions and procedures. Apply to manufacturer's recommended coverage rates unless thicker coverage is specified in this Section.

.2 Follow manufacturer's written recommendations on terminations and connections to walls, drains, doorways, columns and floor-to-floor transitions.

.3 Do not apply while ambient and substrate temperatures are rising.

.4 Apply resinous flooring with care to ensure that no laps, voids, or other marks or irregularities are visible. Apply to achieve appearance of uniform colour, sheen and texture; all within limitations of materials and areas concerned.

.5 Match colours and textures of Consultant accepted samples.

.6 Install cove base 100 mm (4") high with 25 mm (1") radius in accordance with manufacturer's written instructions. Install cove base with a minimum 3 mm (1/8") thickness.

.7 Ensure the top of Cove base and the wall coating system are seamless

3.4 CLEAN UP

.1 Dispose of all waste from resinous flooring system installation in accordance with environmental legislation applicable to the Place of the Work and requirements of all authorities having jurisdiction.

.2 Dispose of empty containers at an approved waste handling facility for recycling or disposal.

3.5 PROTECTION

.1 Protect finished floor from damage by subsequent trades.

.2 Protect freshly applied Products from dampness, condensation and water for at least seventy-two (72) hours.

.3 Monitor air flow and changes in air flow. Protect against introduction of dust, debris, and particles, etc. that may result in surface imperfections and other defects.

.4 Follow manufacturer's written recommendations with respect to cure, wait time and return to service.

END OF SECTION

BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
Edition 12.2020/v1
CSC Master Format™ 09 67 00
FLUID-APPLIED FLOORING

Sikafloor® Morritex® Trowel System

SCREED MORTAR OF 3 - 6 MM (1/8 - 1/4 IN)

Description

Sikafloor® Morritex® Trowel System is a solid colour, high gloss, resin-rich, aggregate- filled, seamless, epoxy based floor resurfacer with high density and compressive strength for exceptional durability. Typically installed to protect new concrete or re-profile existing worn floors at a thickness range of 3 - 6 mm (1/8 - 1/4 in). This heavy duty, general service epoxy system demonstrates good chemical resistance as well as superior abrasion and impact resistance. Sikafloor® Morritex® Trowel System can be customized to meet aesthetic and slope correction requirements. Final surface appearance options include: unlimited colour selection, integral cove base, gloss, satin or matte surface sheen and variable surface texture to produce a range of slip-resistant improved traction finishes.

Where to Use

- Animal care facilities.
- Beverage processing.
- Commercial kitchens-wet and dry processing areas.
- Factories-light to heavy duty manufacturing areas.
- Health care facilities.
- High traffic aisles.
- Laboratories.
- Locker and shower rooms.
- Production lines.
- Garbage rooms.
- Garage service bays.
- Wash bays.

Screed Mortar

Advantages

- Superior mechanical resistance.
- High abrasion and impact resistance.
- Good chemical resistance.
- Aesthetic finish.
- Durable, impermeable and seamless.
- Easily cleaned, maintained and a more sanitary work environment.
- Does not support growth of bacteria or fungus.
- Low VOC content, neutral odour.
- Unlimited colours, no minimum required.
- Achieves high performance ratings according to ASTM G21 resistance to fungi and ASTM D3273 resistance to mold growth (special order grade).
- Conformity with LEED® v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations.
- Meets the requirements of CFIA and USDA for use in food plants.

Technical Data

Packaging

Sikafloor®-156^{CA}	10 L and 30 L (2.6 and 7.9 US gal.) units
Sikafloor®-261^{CA}	10 L and 30 L (2.6 and 7.9 US gal.) units

Colour

Sikafloor®-156^{CA}	Clear Amber
Sikafloor®-261^{CA}	

Refer to the Industrial Flooring and Coatings colour card.

RAL 7038 Agate Grey	RAL 5007 Brilliant Blue
RAL 7030 Stone Grey	RAL 6028 Pine Green
RAL 1001 Beige	RAL 7012 Basalt Grey
RAL 1018 Zinc Yellow	RAL 9003 Signal White
RAL 3010 Brick	

Custom colours available upon request. Refer to current price list for availability.

Yield			
Prime coat	Sikafloor®-156CA	4 m²/L (160 ft²/US gal.) (10 mils w.f.t.)	
		(Optional: thicken with Extender "T" or silica flour)	
Screed mortar	Sikafloor®-156CA	A+B+ Sika® Aggregate PT	
		(3.0:1.0 = 4.0 L) - 2 x 20 kg Sika® Aggregate PT	
		Yield = 2.8 m² @ 6 mm thick (30 ft² @ 1/4 in)	
Grout coat and top coat	Sikafloor®-261CA	2 - 4 m²/L (80 - 160 ft²/US gal.) (10 - 20 mils w.f.t.)	
	Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Allowance must be also made for variation in film thickness or number of coats required to achieve opacity with light (i.e. white) or bright colours (i.e. reds and yellows) on dark substrates. Test sections are recommended to establish correct coverage.		
Shelf Life	2 years in original unopened packaging. Store dry between 5 and 32°C (41 and 89°F). Condition at 18 to 30 °C (65 to 86 °F) before using.		
Mix Ratio	Sikafloor®-156CA	Sikafloor®-261CA	
A:B =	3:1 by volume	2:1 by volume	
Service Temperature	Min.		0 °C (32 °F)
	Max.		50 °C (122 °F)
	Short term exposure		100 °C (212 °F)

Open Time on Substrate (min)		**10 °C (50 °F)**	**20 °C (68 °F)**	**30 °C (86 °F)**
Sikafloor®-156CA		~ 70	~ 45	~ 40
Sikafloor®-261CA		~ 80	~ 50	~ 35
Waiting Time Between Coats (hrs)				
Prime coat/Screed mortar (max.)		~ 24	~ 8	~ 5
Screed mortar/Grout coat (min.)		~ 24	~ 12	~ 6
Grout coat/Top coat (min./max.)		~ 30/72	~ 8/48	~ 6/24
Curing Time				
Foot traffic (hrs)	Sikafloor®-156CA	~ 24	~ 12	~ 6
	Sikafloor®-261CA	~ 48	~ 24	~ 18
Light traffic (days)	Sikafloor®-156CA	~ 5	~ 3	~ 2
	Sikafloor®-261CA	~ 4	~ 2	~ 2
Normal traffic/Chem. exp. (days)		~ 10	~ 7	~ 5

Properties at 23 °C (73 °F) and 50 % R.H.

		Sikafloor®-156CA	Sikafloor®-261CA
Specific Gravity ASTM D1475	A:	~ 1.121 (9.34)	~ 1.52 (12.6)
kg/L (lb/US gal.)	B:	~ 1.017 (8.47)	~ 1.01 (8.39)
	A+B:	~ 1.097 (9.14)	~ 1.40 (11.6)
Viscosity	A+B:	~ 260 cps	~ 550 cps
Pot Life, 250 g (8.8 oz) (min)		~ 35 - 40	~ 40
Compressive Strength ASTM C579	~ 91 MPa (13 198 psi)		
Tensile Strength ASTM C307	~ 6 MPa (870 psi)		
% Elongation	~ 1.9%		
Bond Strength ASTM D4541	> 2 MPa (290 psi) (substrate failure)		
Thermal Compatibility ASTM C884	Passes		
Flexural Strength ASTM C580	~ 28 MPa (4061 psi)		
Modulus of Elasticity	~ 10.3 GPa (1 493 891 psi)		
Indentation MIL-PRF-24613	~ 0.35%		
Impact Resistance ASTM D2794	~ 2.8 joules (2.0 ft lb_f)		
Abrasion Resistance ASTM D4060 CS17/1000 cycles/1000 g (2.2 lb)	~ 0.17 g (0.0059 oz)		
Dynamic Coefficient of Friction (DCOF) ANSI A137.1 / ANSI A326.3 /BOT 3000e	~ 0.32 (wet) (Heavy-Duty Smooth)		
Flammability ASTM D635	~ 3 mm (1/8 in)		
Coefficient of Thermal Expansion ASTM D696	~ 0.39 x 10^{-4} mm/mm/°C (0.21 x 10^{-4} in/in/°F)		
Water Absorption ASTM C413	~ 0.3 %		
Resistance to Fungi Growth ASTM G21	Rated 1 (traces of growth)		
Resistance to Mold Growth ASTM D3273	Rated 10 (highest resistance)		
VOC Content	< 50 g/L		
Chemical Resistance	Consult Sika Canada		

Note: Physical properties test results based on heavy-duty system.

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

HOW TO USE

Surface Preparation

The concrete surface must be clean and sound. Remove any dust, laitance, grease, oil, dirt, curing agents, impregnations, wax, foreign matters, coatings and detritus from the surface by appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3-9. The compressive strength of the concrete substrate should be at least 25 MPa (3625 psi) at 28 days and at least 1.5 MPa (218 psi) in tension at the time of application of Sikafloor®-156CA primer.

Mixing	**(Prime Coat - Screed Mortar - Grout/Top coat)** Pre-mix each component separately. Empty component B in the correct mix ratio to component A. Mix the combined components for at least three (3) minutes, using a low-speed drill (300 - 450 rpm) to minimize entrapping air. Use an *Exomixer* type mixing paddle (recommended model) suited to the size of the mixing container. **Screed Mortar:** Transfer the mixed binder (A+B) into a suitable Kol type motor driven mixer. Gradually add aggregates (component C) to the binder to avoid excessive air entrapment. Once all ingredients are combined, mix continuously and thoroughly for 3 minutes to ensure complete mixing. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once (A+B and A+B+C) to ensure complete mixing. Mix only that quantity which can be used within its pot life.
Application	**Light to Medium Duty System: 3 - 6 mm (1/8 - 1/4 in)** **Prime Coat:** Apply the primer using a squeegee and backroll to provide uniform coverage. Note: Mortar must be placed on wet primer, if primer becomes tack-free, re-prime substrate. **Screed Mortar:** Maintain all control joints and expansion joints through the screed where movement is expected. Place mortar onto the wet primer surface and spread the mortar to the appropriate thickness using a large wood float, rake or screed box. Allow loose mortar to stand for a few minutes to permit entrapped air to escape. Using a float or stainless steel finishing trowel, uniformly compact and smooth the surface. Areas around drains, elevation changes or terminations must fold into a squared, keyed edge to maintain a minimum 3 mm (1/8 in) thickness. Do not feather edge. **Top Coat: (optional)** when the epoxy mortar screed has sufficiently cured to allow foot traffic, apply a top coat of Sikafloor®-261CA thickened with 1-2% by weight of Sikafloor® Extender T. Uniformly apply the top coat using a squeegee and backroll to the desired finish. A slip-resistant improved traction sand texture finish can be achieved by lightly seeding the wet top coat with selected mineral aggregates. Immediately backroll the seeded Sikafloor®-261CA surface to encapsulate the aggregate. Note: This system is not fully sealed throughout the entire screed matrix. Sika does not recommend this method of application for areas subject to high impact or chemical attack; use the heavy-duty, fully sealed system detailed below. **Heavy-Duty System: 6 mm (1/4 in)** **Prime Coat:** Apply the primer using a squeegee and backroll to provide uniform coverage. Note: Mortar must be placed on wet primer, if primer becomes tack-free, re-prime substrate. **Screed Mortar:** Maintain all control joints and expansion joints through the screed where movement is expected. Place mortar onto the wet primer surface and spread the mortar to the appropriate thickness using a large wood float, rake or screed box. Allow loose mortar to stand for a few minutes to permit entrapped air to escape. Using a float or stainless steel finishing trowel, uniformly compact and smooth the surface. Areas around drains, elevation changes or terminations must fold into a squared, keyed edge to maintain a minimum 6 mm (1/4 in) thickness. Do not feather edge. **Grout Coat: (mandatory)** when the epoxy mortar screed has sufficiently cured to allow foot traffic, apply a neat grout coat of Sikafloor®-261CA. Apply using a squeegee or trowel to force the epoxy into surface pores and backroll immediately to remove ridges. **Top Coat: (mandatory)** when the epoxy grout coat has sufficiently cured to allow foot traffic, apply a top coat of Sikafloor®-261CA. Uniformly apply the top coat using a squeegee and backroll to the desired finish. A slip-resistant improved traction sand texture finish can be achieved by lightly seeding the wet top coat with selected mineral aggregates. Immediately backroll the seeded Sikafloor®-261CA surface to encapsulate the aggregate.
Clean Up	Clean all tools and equipment with Sika® Epoxy Cleaner. Once hardened, product can only be removed mechanically.
Limitations	▪ Sikafloor® Morritex® Trowel is best installed by skilled and experienced applicators. Consult Sika Canada for advice and recommendations. ▪ Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every three (3) hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.) ▪ Moisture content of concrete substrate must be ≤ 4 % by mass (pbw – part by weight) as measured with a Tramex®CME/ CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 9). Do not apply to concrete substrate with moisture levels exceeding 4 % mass (pbw– part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4 % by mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA. ▪ ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME / CMExpert type concrete moisture meter as described above. ▪ When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values exceed 85 % according to ASTM F2170, use Sikafloor®-1610 or Sikafloor®-81 EpoCem®CA.

Limitations continued...

- Material temperature: Precondition material for at least 24 hours between 18 to 24 °C (65 to 75 °F)
- Ambient and substrate temperature - Minimum / Maximum: 10 / 30 °C (50 / 85 °F).
- Mixing and application attempted at material, ambient and/or substrate temperature conditions less than 18 °C (65°F) will result in a decrease in product workability and slower cure rates.
- Maximum ambient relative humidity: 85 % (during application and curing).
- Beware of condensation! The substrate must be at least 3 ˚C (5 ˚F) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or “blushing” on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.
- Do not hand mix Sikafloor® materials. Mechanically mix only.
- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapour
- drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapour drive.
- Freshly applied material should be protected from dampness, condensation and water for at least 24 hours.
- Will discolour over time when exposed to sunlight (UV) and under certain artificial lighting conditions.
- Do not apply Sikafloor® to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor® product after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.
- Any aggregate used with Sikafloor® systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Do not apply to substrates exposed to extreme thermal shock.
- Direct-fired gas or kerosene heaters produce by-products that can have adverse effects on curing. To avoid this occurrence, heaters must be exhausted to the exterior of the building to avoid defects such as amine blush, whitening, loss of adhesion or other surface deficiencies
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- Published Dynamic Coefficient of Friction (DCOF) wet and dry test results are approximate values based on laboratory test samples produced in a controlled environment following the application instructions published on the product data sheet. Resin flooring products are hand-applied finishes subject to minor variations in surface texture due to influences partly beyond Sika Canada’s control. Substrate profile, environmental conditions, variable regional aggregate size, shape and gradation, aggregate distribution, uniformity of applied resin mil thickness, and application technique can all affect the final DCOF test results achieved. Adequate provision should be made by the client throughout the selection and installation process to ensure the finished surface texture meets the end user’s traction requirements
- The influence of colour selection should be allowed for in material consumption/coverage. Light or bright colours may require higher wet film thicknesses or additional coats to achieve desired opacity. Consult Sika Canada for guidance at time of colour selection.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
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Certified ISO 14001 (CERT-0102791)

Construction

Sikafloor® Fastflor® CR

(Formerly Sika® Fastflor® CR / Supersedes Duochem 7100)

Solvent-Free, Chemical-Resistant, Fast-Cure, Epoxy Floor Coating

Description

Sikafloor® Fastflor® CR is a two-component, solvent-free and low-VOC containing, epoxy binder and coating available in unlimited colours. Sikafloor® Fastflor® CR provides extremely high chemical and mechanical resistance within a smooth or broadcast floor finish.

Where to Use

- Excellent protection for new or old concrete and properly prepared steel surfaces.
- For areas requiring resistance to severe chemical attack and abrasion.
- Suitable for use in direct exposure and secondary containment areas in manufacturing facilities, warehouses, laboratories, dairies, breweries, chemical plants, paper mills, food processing and pharmaceutical manufacturing (for specific chemical resistance refer to Sika's Chemical Resistance Guide).

Advantages

- Environmentally friendly: low-VOC contents and low odour.
- Easily applied material, usually in a 2 coat application.
- Available in unlimited colour range with no minimum quantities required.
- Versatile, offers either smooth or broadcast (slip resistant) finishes.
- Fast curing: ideal for quick turnaround projects.
- Provides dust-free surfaces.
- Excellent chemical and wear resistance.
- Easily cleaned and maintained.
- Canadian Food Inspection Agency acceptance/USDA acceptance.

Technical Data

Packaging	11 L (2.90 US gal.) and 30 L (7.9 US gal.) units	
Colour	Standard: RAL 7038 Agate Grey Custom colours available with no minimum quantities required.	
Yield	**Smooth Coating** (23 mils total thickness)	
	Prime coat (8 mils)	5 m²/L (203 ft²/US gal.)
	Top coat (15 mils)	2.6 m²/L (106 ft²/US gal.)
	Broadcast Coating (2 mm total thickness)	
	Prime coat (8 mils)	5 m²/L (203 ft²/US gal.)
	Broadcast coat (35 mils)	1.1 m²/L (45 ft²/US gal.)
	Aggregate	Silica sand # 32 (spherical) 0.3 - 0.85 mm
	Top coat (10 mils)	4 m²/L (163 ft²/US gal.)
	Actual coverage rates and material consumption will depend upon porosity and profile of substrates. Allowance must be also made for variation in film thickness or number of coats required to achieve opacity with light (i.e. white) or bright colours (i.e. reds and yellows) on dark substrates. Test sections are recommended to establish correct coverage.	
Shelf Life	2 years in original, unopened packaging. Store dry between 5 and 32°C (41 and 89°F).	
Mix Ratio	A:B = 2:1 by volume	
Open Working Time	20 min	
Pot Life (350 g)	30 to 35 min	
Application Temperatures	10 to 30°C (50 to 86°F)	

Properties at 23°C (73°F) and 50% R.H.

Viscosity (A+B) ASTM D2393	1400 cps
Curing Time	
Recoat	5 hrs
Foot traffic	8 hrs
Vehicular traffic	16 hrs
Full cure	5 days
Shore D Hardness ASTM D2240	85
Tensile Strength ASTM D638	45 MPa (6527 psi)
Elongation ASTM D638	6.5%
Abrasion Resistance ASTM D4060	
(Taber Abrader, Wheel CS-17/1000 g (2.2 lb)/1000 cycles)	120 mg (0.0042 oz)
Bond Strength ASTM D4541	2.7 MPa (392 psi) Concrete failure

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

Construction

How to Use

Surface Preparation

The surface must be clean, dry and sound. Remove dust, laitance, grease, oil, dirt, curing compounds, impregnations, waxes, foreign particles, coatings and disintegrated particles by any appropriate mechanical means, in order to achieve a profile equivalent to ICRI-CSP 3-4. Concrete compressive strength should be at least 25 MPa (3625 psi) at 28 days and at least 1.5 MPa (218 psi) in tension at the time of Sikafloor® Fastflor® CR application.

Mixing

Pre-stir both components separately to ensure complete distribution of solids and uniform consistencies of each. Empty Component A into a suitably sized and clean mixing container and add a Component B. Where part mixing a unit, ensure that correctly measured parts of Components A and B are mixed in the correct ratio.

Mix for 3 minutes using a low-speed drill (300 - 450 rpm) to minimize entrapping air and an Exomixer type mixing paddle (recommended model) suited to the volume of the mixing container. During the mixing operation, scrape down the sides and bottom of the pail with a flat or straight edge trowel at least once to ensure thorough mixing. When completely mixed, Sikafloor® Fastflor® CR should be uniform in colour and consistency. Mix only that quantity you can use within its pot life.

Application

Smooth Coating

Prime Coat: Apply the prime coat onto the substrate using a brush, roller or squeegee, at a uniform coverage without ponding.

Top Coat: Once the prime coat is tack free, apply the wear coat using a squeegee or roller and back roll to achieve even coverage. If time between coats exceeds 48 hours at 22°C (71°F), abrade surface and wipe clean with a solvent dampened cloth.

Broadcast Coating

Prime Coat: Apply the prime coat onto the substrate using a brush, roller or squeegee, at a uniform coverage without ponding.

Broadcast Coat: Once the prime coat is tack free, apply the broadcast coat onto the substrate using a notched squeegee or trowel. Level out and back roll to achieve an even coverage. Broadcast the selected aggregate (sand size selected for texture) into the broadcast coat to rejection.

Top Coat: Once the broadcast coat has sufficiently cured to allow foot traffic, sweep-up and remove by vacuum any and all loose or un-bonded sand. Apply the top coat using a squeegee, followed by back rolling to provide a uniform texture and finish.

Clean Up

Clean all tools and equipment immediately after use with Sika® Equipment Cleaner. Once hardened, the product can only be removed mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Minimum/Maximum substrate temperature 10°C/30°C (50°F/86°F).
- Maximum relative humidity during application and cure: 85%.
- Substrate temperature must be 3°C (5.5°F) above the measured dew point.
- Moisture content of the substrate must be < 4% when coating is applied or use Sikafloor® 81 EpoCem^{CA} as a temporary moisture barrier beneath the Sikafloor® Fastflor® CR.
- Do not apply to porous surfaces where moisture vapour transmission will occur during application.
- Not suitable for use on exterior, slab-on-grade concrete substrates.
- Protect from dampness, condensation and water contact during the initial 24 hour cure period.
- The influence of colour selection should be allowed for in material consumption/ coverage. Light or bright colours may require higher wet film thicknesses or additional coats to achieve desired opacity. Consult Sika Canada Technical Services for guidance at time of colour selection.
- Surface may discolour in areas exposed to ultraviolet light, use Sikafloor® Duochem 942 (Clear or Coloured) as a seal coat if required or contact Sika Canada prior to specification or application for advice.
- Do not hand-mix Sikafloor® materials; mechanical mix only.
- Do not dilute Sikafloor® Fastflor® CR with any solvents or its performance will be affected.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the **most recent Material Safety Data Sheet** containing physical, ecological, toxicological and other safety-related data.

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