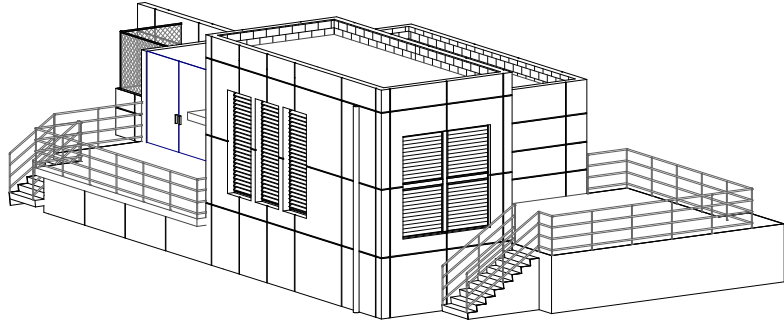




WASTEWATER PUMP STATION NO.10
AND BELLE ISLES WATER BOOSTER
PUMP STATION

SHEET NUMBER	SHEET NAME
1 - CIVIL	
C-01	GENERAL NOTES
C-02	PROPOSED BYPASS
2 - MECHANICAL	
M-01	EXISTING CONDITIONS
M-02	PROPOSED MECHANICAL DEMOLIT
M-03	PROPOSED MECHANICAL PLAN & SECTI
2 - SWPPP	
SWPPP-01	SWPPP- GENERAL NOTES
SWPPP-03	SWPPP
3 - ARCHITECTURAL	
A-000	COVER
A-001	LOCATION & SITE PLAN
A-002	EXISTING PICTURES
A-003	EXISTING WATER BOOSTER PUMP STATION
A-004	DEMOLITION PLAN
A-005	EXISTING WATER BOOSTER PUMP STATION RENOVATION
A-006	PUMP STATION NO.10 - SITE PLAN
A-007	PUMP STATION NO.10 - DEMOLITION
A-101	PUMP STATION NO.10 - FLOOR PLAN
A-300	PUMP STATION NO.10 - ELEVATIONS
A-400	PUMP STATION NO.10 - SECTION & LOUVER SCHEDULE
A-800	WATERPROOFING
5 - ELECTRICAL	
E2	SITE PLAN
E-03	SITE PLAN
E-04	PS-10 POWER PLAN - DEMOLITION
6 -HVAC	
H-1	HVAC SYMBOLS, ABBREVIATIONS AND NOTES
H-2	BOOSTER STATION DEMOLITION AND PROPOSED HVAC
H-3	PUMP STATION 10 DEMOLITION AND PROPOSED HVAC
H-4	ELECTRICAL GENERATOR BUILDING HVAC DEMOLITION
H-5	ELECTRICAL GENERATOR BUILDING PROPOSED HVAC
H-6	HVAC EQUIPMENT SCHEDULES
H-7	HVAC STANDARD DETAILS
H-8	HVAC STANDARD DETAILS

NOTES:

SCOPE OF WORK

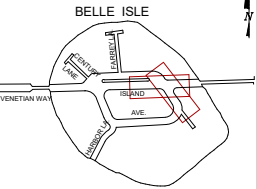
PUMP STATION NO. 10 (WITHIN BUILDING ENCLOSURE)

1. REMOVE EXISTING LOUVERS.
2. CUT SLAB PROJECTIONS AT LOUVER AREA AS INDICATED IN DRAWINGS.
3. REMOVE EXISTING GENERATOR.
4. ADD TEMPORARY GENERATOR
5. REMOVE EXISTING RAILING AND HANDRAIL AT STAIR AS INDICATED IN DRAWINGS.
6. PROVIDE AND INSTALL NEW GENERATOR.
7. PROVIDE AND INSTALL NEW LOUVERS.
8. PROVIDE AND INSTALL NEW RAILINGS AND HANDRAILS AT STAIR.
9. PROVIDE DEMOLITION PLANS.
10. REMOVE EXISTING FUEL TANK & PIPING & FURNISH AND INSTALL NEW TANK.

WATER BOOSTER PUMP STATION (AT GRADE AND BELOW GRADE)

1. REMOVE EXISTING ACCESS METAL HATCH.
2. REPAIR AND WATERPROOF EXISTING SLABS.
3. NEW LIGHTWEIGHT CONCRETE TOPPING SLAB WITH WATERPROOFING AT EXISTING BELOW GRADE CONCRETE SLAB.
4. PROVIDE NEW STEEL ACCESS HATCH.
5. WATERPROOFING AT GRADE SLAB & BELOW GRADE SLAB, ALL WALLS, CEILING, AND ALL PENETRATIONS.
6. PROVIDE NEW MECHANICAL EQUIPMENT AND METAL SUPPORTS ABOVE FLOOD ELEVATION LEVEL.
7. PROVIDE DEMOLITION PLANS.
8. REMOVE EXISTING SUMP PUMP & FURNISH AND INSTALL NEW PUMP WITH ALARM SYSTEM.

KEY PLAN (NOT TO SCALE):



P.E. SEAL:

90% SUBMITTAL - NOT FOR CONSTRUCTION

MIAMI BEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

CITY MANAGER: ERIC CARPENTER
DIRECTOR: JAY J. FINK, P.E.
CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.

NO.	DATE	REVISION	APPD. BY
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2			
1			



ENGINEER OF RECORD:
JOSE A. CARABALLO
PROFESSIONAL ENGINEER
P.E. NO. 73064

ENGINEER OF RECORD:
DESIGN ENGINEER:
DRAWN BY:
CHECKER:
SCALE: AS NOTED

NEIGHBORHOOD:

BELLE ISLE

TITLE:

COVER

File Name:

Survey Reference:

Field Book: N/A Page: N/A Work Order: N/A

Date: 2025.05.07 Sheet: of Drawing: A-000

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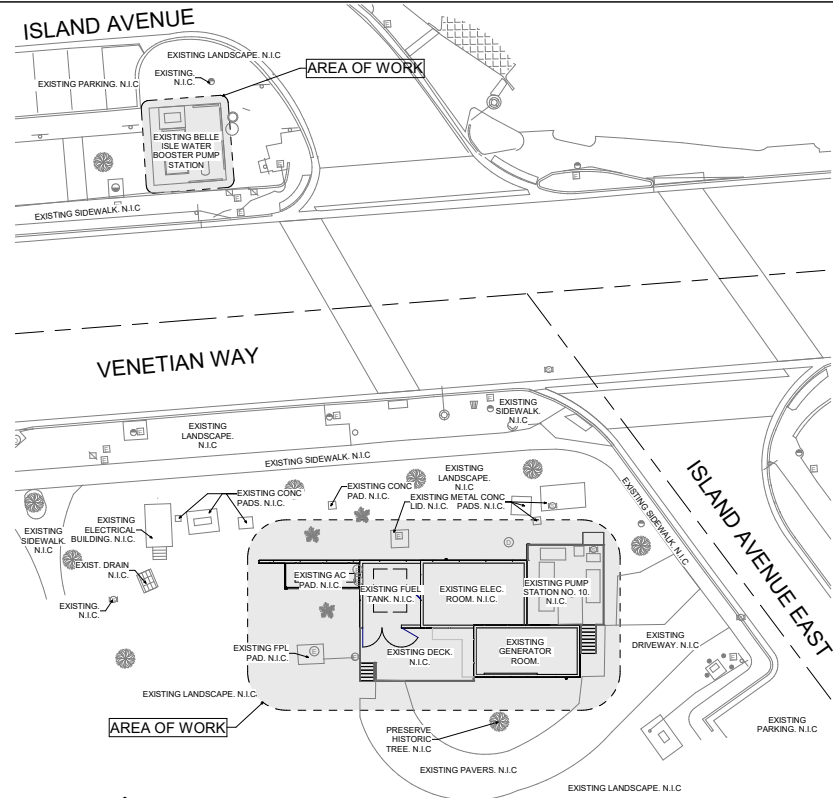
VICINITY MAP



LOCATION



KEYMAP OF EXISTING CONDITIONS

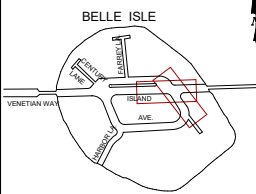


SITE PLAN



NOTES:

KEY PLAN (NOT TO SCALE):



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MIAMI BEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

CITY MANAGER: ERIC CARPENTER
DIRECTOR: JAY J. FINK, P.E.
CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.

NO.	DATE	REVISION	APPROD. BY
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ENGINEER OF RECORD:
JOSE A. CARABALLO
PROFESSIONAL ENGINEER
P.E. NO. 73064

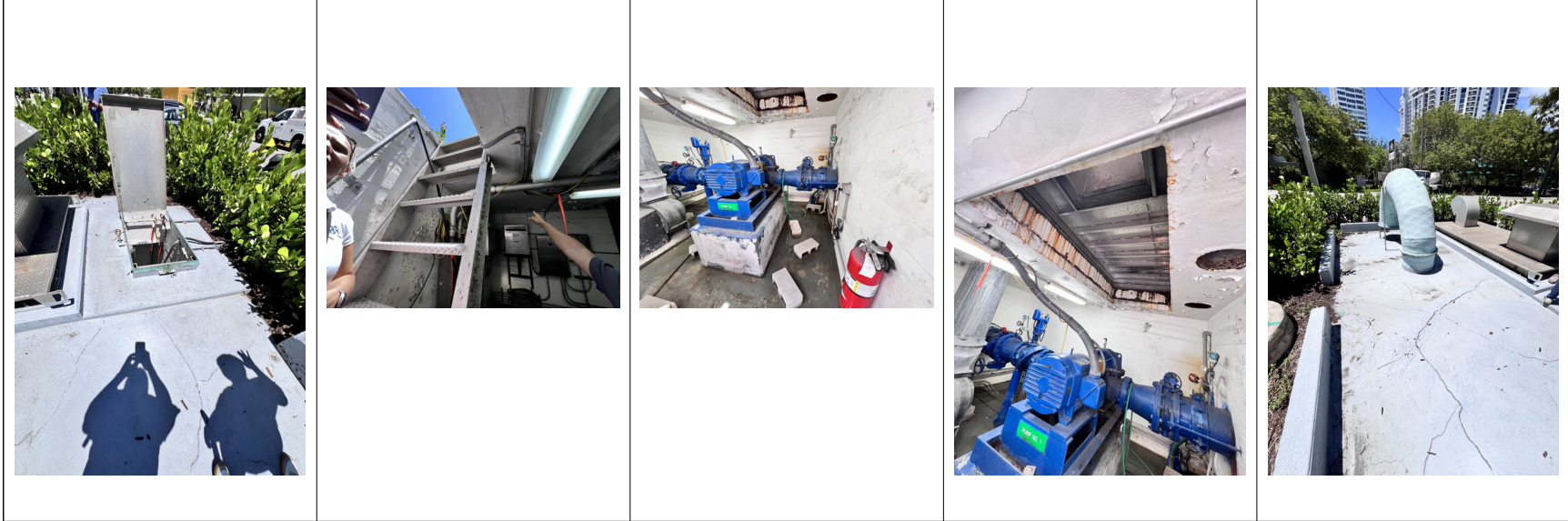
ENGINEER OF RECORD:
DESIGN ENGINEER:
DRAWN BY:
CHECKER:
SCALE: AS NOTED

NEIGHBORHOOD: BELLE ISLE
TITLE: LOCATION & SITE PLAN

File Name:
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 2025.05.07 Sheet: of Drawing: A-001

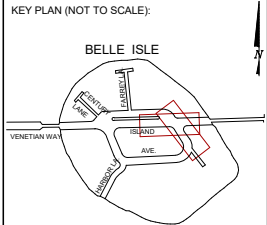
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WATER BOOSTER



NOTES:

PUMP STATION

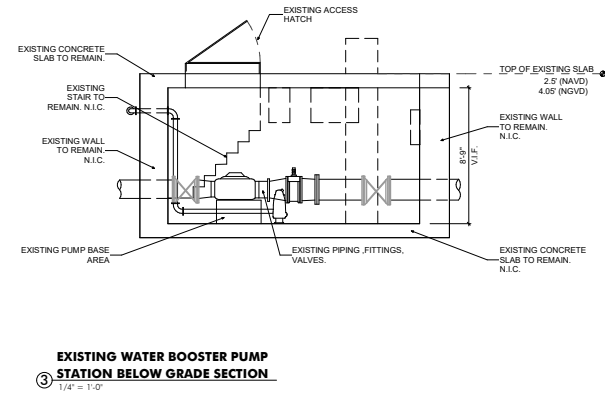
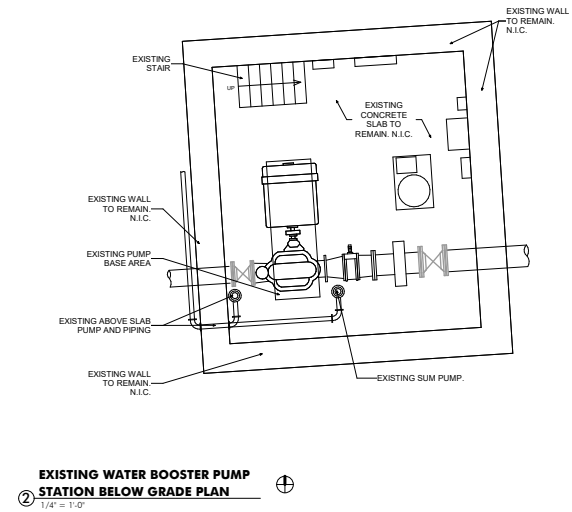


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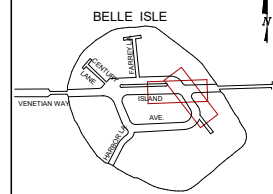
90% SUBMITTAL - NOT FOR CONSTRUCTION

MIAMI BEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER	5						ces CORPORATE 10000 SW 15TH AVE SUITE 100 MIAMI, FL 33157 TEL: 305-461-4000 WWW.CES-FL.COM CORPORATE ID: AUTHORIZATION NO.: 001	ENGINEER OF RECORD: JOSE A. CARABALLO PROFESSIONAL ENGINEER P.E. NO. 73064	ENGINEER OF RECORD: DESIGN ENGINEER: DRAWN BY: CHECKER: SCALE: AS NOTED	NEIGHBORHOOD: BELLE ISLE	FILE NAME: SURVEY REFERENCE: FIELD BOOK: N/A DATE: 2025.05.07	PAGE: N/A WORK ORDER: N/A SHEET: of DRAWING: A-002
	DIRECTOR: JAY J. FINK, P.E.	4											
	CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.	3											
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KEY PLAN (NOT TO SCALE):

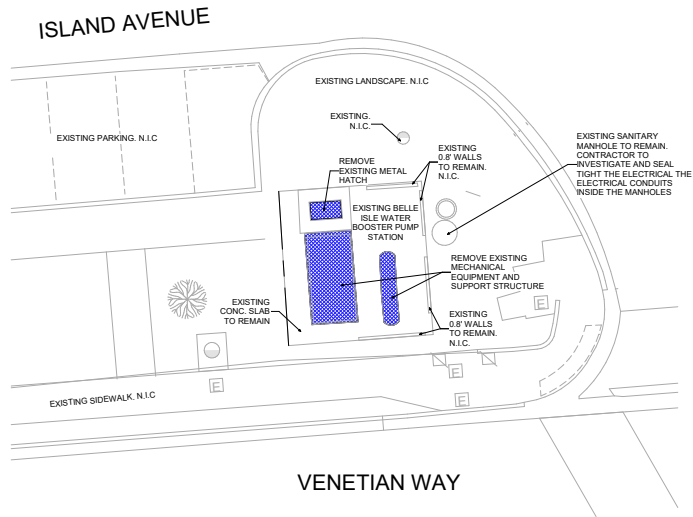


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MIAMI BEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER	5		 9800 SW 142ND AVE SUITE 100 PLUMMER, FL FL 33057 PHONE: 305-443-4323 FAX: 305-443-4323 E-MAIL: info@ces-consultants.com WWW: www.ces-consultants.com	ENGINEER OF RECORD: _____	ENGINEER OF RECORD: _____	NEIGHBORHOOD: _____	File Name: _____
	DIRECTOR: JAY J. FINK, P.E.	4			DESIGN ENGINEER: _____	DESIGN ENGINEER: _____	Survey Reference: _____	Field Book: <u>N/A</u> Page: <u>N/A</u> Work Order: <u>N/A</u>
	CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.	3			DRAWN BY: _____	DRAWN BY: _____		
		2			CHECKER: _____	CHECKER: _____		
		1			SCALE: _____ AS NOTED	SCALE: _____ AS NOTED	TITLE: EXISTING WATER BOOSTER PUMP STATION	Date: 2025.05.07 Sheet: _____ of _____ Drawing: A-003
	NO	DATE	REVISION	APPRO. BY				



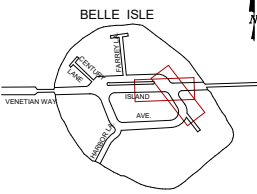
**DEMO PLAN – EXISTING BELLE ISLE
WATER BOOSTER PUMP STATION**
① 1/8" = 1'-0"

DEMOLITION NOTES

1. CONTRACTOR SHALL SUBMIT A SCHEDULE INDICATING PROPOSED SEQUENCE OF OPERATIONS FOR SELECTIVE DEMOLITION WORK TO OWNER'S REPRESENTATIVE AND ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO START OF WORK, INCLUDING COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED, TOGETHER WITH DETAILS FOR DUST CONTROL PROTECTION.
2. DAMAGES: PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION WORK.
3. MAINTAIN EXISTING BUILDING SYSTEMS/UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS. MAINTAIN FIRE PROTECTION SERVICES DURING SELECTIVE DEMOLITION OPERATIONS.
4. IF UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE BOTH NATURE AND EXTENT OF THE CONFLICT. SUBMIT REPORT TO OWNER'S REPRESENTATIVE IN WRITTEN, ACCURATE DETAIL. PENDING RECEIPT OF DIRECTIVE FROM OWNER'S REPRESENTATIVE, REARRANGE SELECTIVE DEMOLITION SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT UNDUE DELAY.
5. REMOVE FROM THE PROJECT SITE ON A REGULAR BASIS ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. TRANSPORT AND LEGALLY DISPOSE OFF-SITE.
6. ALL DEMOLISHED MATERIAL TO BE REMOVED DAILY FROM CONSTRUCTION AREA IN CLOSED CONTAINERS, OR CLOSED TRASH CHUTES TO DUMPSTER.
7. ALL ITEMS NOT MARKED TO BE DEMOLISHED ARE EXISTING TO REMAIN. CONTRACTOR RESPONSIBLE FOR PRESERVING THE EXISTING CONDITIONS OF THESE ITEMS.
8. WHERE EXISTING DOORS AND HARDWARE ARE IDENTIFIED TO BE REMOVED, COORDINATE WITH THE CITY FOR DISPOSITION OF THESE ITEMS.
9. REFER TO ELECTRICAL, PLUMBING AND FIRE PROTECTION PLANS FOR ADDITIONAL DEMOLITION NOTES.

NOTES:

KEY PLAN (NOT TO SCALE):



P.E. SEAL:

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MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER DIRECTOR: JAY J. FINK, P.E. CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.	5				 1800 SW 140TH AVE SUITE 100 MIAMI, FL 33187 TEL: 305-441-4000 WWW.CES-CORP.COM CORPORATE ID: 0001 JOSE A. CARABALLO PROFESSIONAL ENGINEER P.E. NO. 73064	ENGINEER OF RECORD: ENGINEER OF RECORD: _____ DESIGN ENGINEER: _____ DRAWN BY: _____ CHECKER: _____ SCALE: <u>AS NOTED</u>	NEIGHBORHOOD: BELLE ISLE TITLE: DEMOLITION PLAN	File Name: _____ Survey Reference: _____ Field Book: <u>N/A</u> Page: <u>N/A</u> Work Order: <u>N/A</u> Date: <u>2025.05.07</u> Sheet: <u> </u> of <u> </u> Drawing: <u>A-004</u>
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Reference: N/A Page: N/A Work Order: N/A

25.05.07 Sheet: of Drawing: A-006

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MIAMI BEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

CITY MANAGER:	ERIC CARPENTER
DIRECTOR:	JAY J. FINK, P.E.
CITY ENGINEER:	CRISTINA ORTEGA CASTINEIRAS, P.E.

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NO.	DATE	REVISION	APP'D. BY



880 SW 145TH AVE
SUITE 106
PEMBROKE PINES,
FL 33027
PHONE:
954-613-4353
www.cesconsult.com
CERTIFICATE OF
AUTHORIZATION No.
R811

ENGINEER OF RECORD:

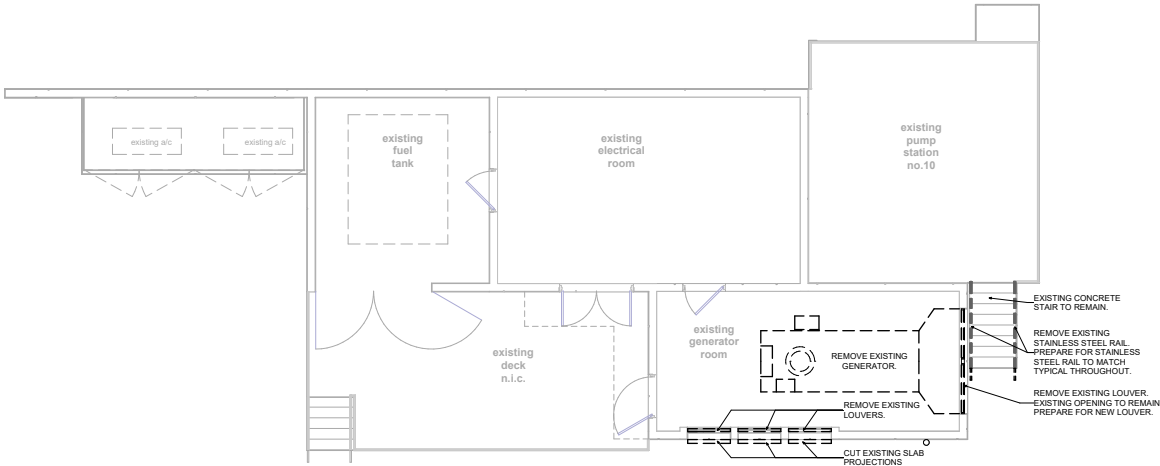
JOSE A. CARABALLO
PROFESSIONAL ENGINEER
P.E. NO. 73064

ENGINEER OF RECORD: _____
DESIGN ENGINEER: _____
DRAWN BY: _____
CHECKER: _____
SCALE: _____ AS NOTED

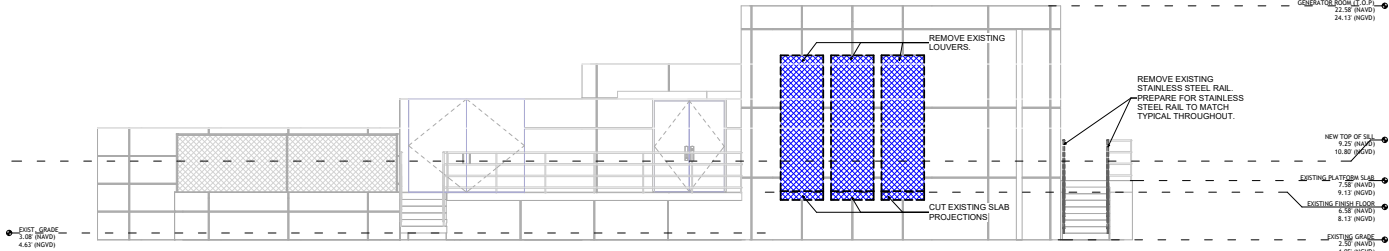
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TITLE:	PUMP STATION NO.10 - SITE PLAN

File Name:		
Survey Reference:		
Field Book: <u>N/A</u>	Page: <u>N/A</u>	Work Order: <u>N/A</u>
Date: 2025.05.07	Sheet: of	Drawing: A-006

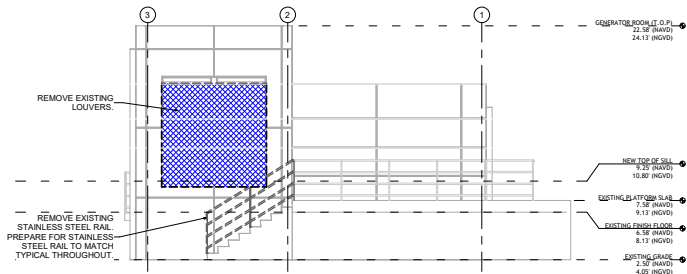
1 DEMOLITION PLAN
3/16" = 1'-0"



2 DEMOLITION - SOUTH ELEVATION
3/16" = 1'-0"



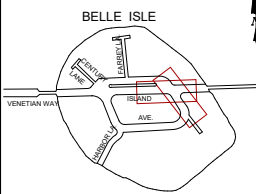
3 DEMOLITION - EAST ELEVATION
3/16" = 1'-0"



NOTES:
SECTION 3303
DEMOLITION

- 3303.1 Construction documents
Construction documents and a schedule for demolition shall be submitted where required by the building official. When such information is required, no work shall be done until such construction documents or schedule, as such, are approved.
- 3303.2 Pre-demolition protection
The act of demolishing any building shall not be commenced until pre-demolition protection is in place as required by this chapter.
- 3303.3 Water accumulation
Provision shall be made to prevent the accumulation of water or damage to any foundations on the premises or the adjoining property.
- 3303.4 Safety during demolition
The safety during demolition shall comply with the applicable requirements of the code and the applicable provisions of the Florida Fire Prevention Code.
- 3303.5 Excavation and fit for buildings and structures
Excavation and fit for buildings and structures shall be constructed or protected as to not endanger life or property. Before and work shall be removed from the soil to a depth of not less than 12 inches (305 mm) below the surface of the ground in the area to be occupied by the building. Work forms that have been used in placing concrete, within the ground or between foundations and the ground, shall be removed before a building is occupied or used for any purpose. Before completion, loose or casual wood shall be removed from direct contact with the ground under the building.
- 3304.1.1 Slope limits
Slopes for permanent fit shall be not steeper than one unit vertical to ten units horizontal (20 percent slope). Cut slopes for permanent excavations shall be not steeper than one unit vertical to ten units horizontal (20 percent slope). Deviation from the foregoing limitations for cut slopes shall be permitted only upon the presentation of a soil investigation report acceptable to the building official.
- 3304.1.2 Slope limits for fit or other earthen backfills
Slopes shall be placed adjacent to any building or structure unless such building or structure is capable of offsetting the additional loads caused by the fit or backfills. Existing footings or foundations that can be affected by any excavation shall be underpinned adequately or otherwise protected against settlement and shall be protected against lateral movement.
- 3304.1.3 Footings on adjacent slopes
For footings on adjacent slopes, see Chapter 10.
- 3304.1.4 Fit supporting foundations
Fit to be used to support the foundations of any building or structure shall comply with Section 1604.4.
- 3305.1 Facilities required
Sanitary facilities shall be provided during construction, remodeling or demolition activities in accordance with the Florida Building Code, Plumbing.
3306. Protection required
Protection shall be provided during construction, remodeling and demolition activities as required by this chapter and Table 3306.1. Signs shall be provided for the protection of the subject property.
- 3307.2 Walkways
A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the applicable governing authority authorizes the site work to be limited or closed. A walkway shall be provided for pedestrian travel that leads from a building entrance or exit to an occupied structure to a public way. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than 4 feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be accessible in accordance with Chapter 11 and shall be designed to support all intended loads and in no case shall the design live load be less than 100 pounds per square foot (4.79 kN/m²).
- 3307.1 Protection required
Adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection shall be provided for buildings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person installing or using an excavation shall be made to provide written notice to the owner of adjoining buildings advising them that the excavation is to be made and that the adjoining buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.
- 3307.2 Excavation retention systems
Where a retention system is used to provide support of an excavation for protection of adjacent structures, the system shall conform to the requirements in Section 3307.2.1 through 3307.2.3.
- 3307.2.1 Excavation retention system design
Excavation retention systems shall be designed by a registered design professional to provide vertical and lateral support.
- 3307.2.2 Excavation retention system monitoring
The retention system design shall include requirements for monitoring of the system and adjacent structures for horizontal and vertical movement.
- 3307.2.3 Retention system removal
Elements of the system shall only be removed or discontinued when adequate replacement support is provided by the fit or new structure. Removal or discontinuance shall be performed by such a person that protects the subject property.

KEY PLAN (NOT TO SCALE):



P.E. SEAL:

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MIAMI BEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

CITY MANAGER: ERIC CARPENTER
DIRECTOR: JAY J. FINK, P.E.
CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.

NO.	DATE	REVISION	APPD. BY
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CONSULTANTS

PROF. OF ARCH. AND
INTERIOR DESIGN
FL 33027
TEL: 305-444-4444
WWW.CESCONSULTANTS.COM
AUTHORIZATION NO.
001

ENGINEER OF RECORD:
JOSE A. CARABALLO
PROFESSIONAL ENGINEER
P.E. NO. 73064

ENGINEER OF RECORD:
DESIGN ENGINEER:
DRAWN BY:
CHECKER:
SCALE: AS NOTED

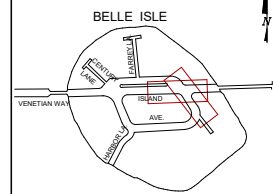
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TITLE: PUMP STATION NO. 10 - DEMOLITION

File Name:
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 2025.05.07 Sheet: of Drawing: A-007

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KEY PLAN (NOT TO SCALE):

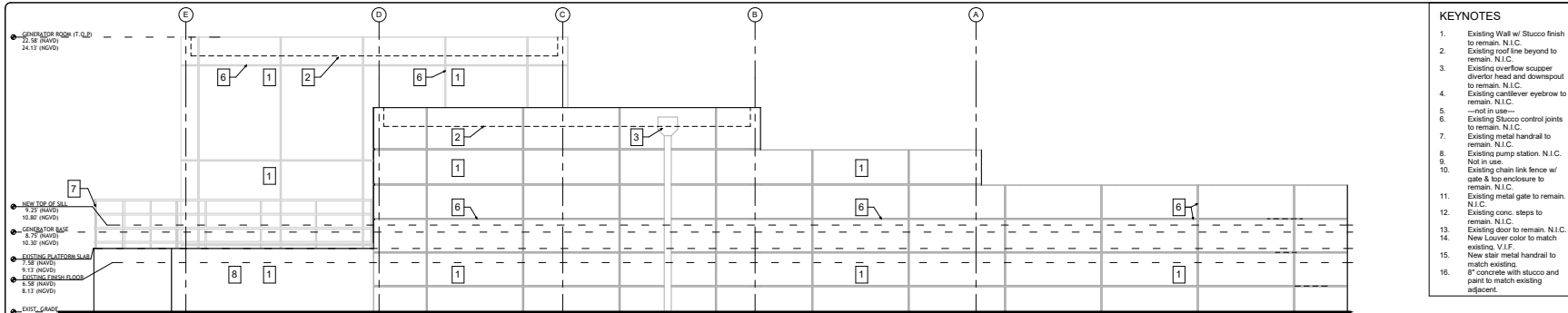


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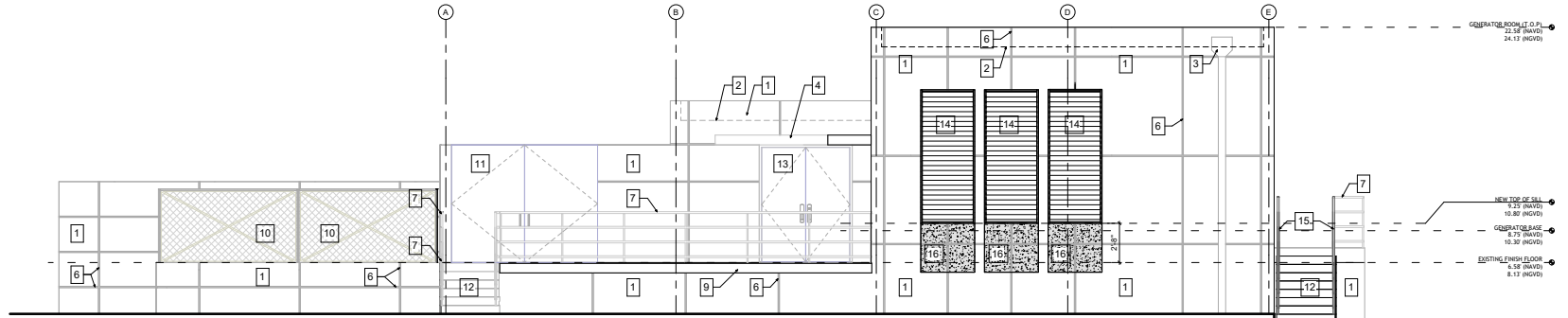
90% SUBMITTAL - NOT FOR CONSTRUCTION

 PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER	5				 8801 SW 1420th AVE SUITE 104 POMEROY PARK, FL 33027 Phone: 305-441-3333 354-413-4353 FAX: 305-441-3333 CERTIFICATE OF ADMINISTRATIVE NO. 8811	ENGINEER OF RECORD:	ENGINEER OF RECORD: _____	NEIGHBORHOOD:	BELLE ISLE	File Name: _____
	DIRECTOR: JAY J. FINK, P.E.	4					DESIGN ENGINEER: _____	DESIGN ENGINEER: _____	TITLE: PUMP STATION NO. 10 - FLOOR PLAN		Survey Reference: _____
		3					DRAWN BY: _____	DRAWN BY: _____			Field Book: <u>N/A</u> Page: <u>N/A</u> Work Order: <u>N/A</u>
	CITY ENGINEER: CRISTINA ORTEGA CASTAÑERAS, P.E.	2					CHECKER: _____	CHECKER: _____			Date: <u>2025.05.07</u> Sheet: <u>of</u> Drawing: <u>A-101</u>
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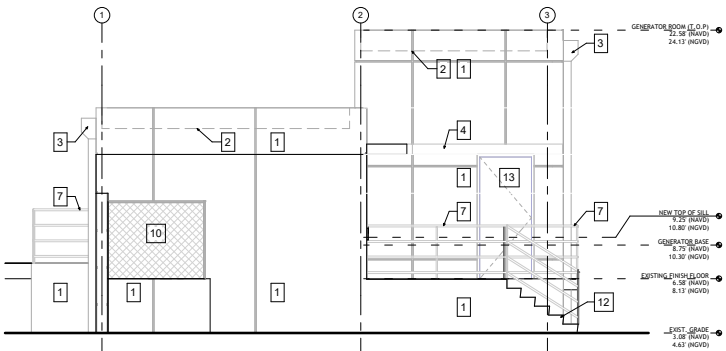
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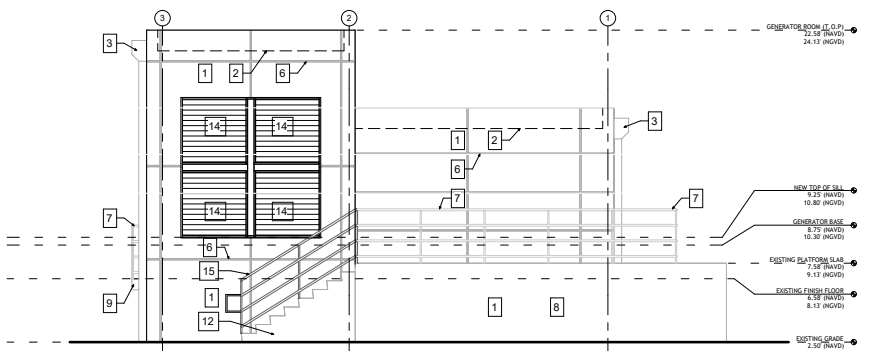
1 NORTH ELEVATION NOTE:
BASE FLOOD ELEVATION - AE 7 NAVD
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"



3 WEST ELEVATION NOTE:
BASE FLOOD ELEVATION - AE 7 NAVD
1/4" = 1'-0"

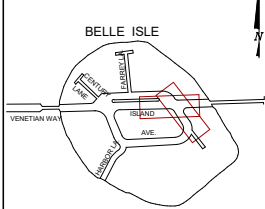


4 EAST ELEVATION NOTE:
BASE FLOOD ELEVATION - AE 7 NAVD
1/4" = 1'-0"

- KEYNOTES**
- Existing Wall w/ Stucco finish to remain. N.I.C.
 - Existing roof line beyond to remain. N.I.C.
 - Existing overflow scupper diverter head and downspout to remain. N.I.C.
 - Existing cantilever eyebrow to remain. N.I.C.
 - Not in use.
 - Existing Stucco control joints to remain. N.I.C.
 - Existing metal handrail to remain. N.I.C.
 - Existing pump station. N.I.C.
 - Not in use.
 - Existing chain link fence w/ gate & top enclosure to remain. N.I.C.
 - Existing metal gate to remain. N.I.C.
 - Existing conc. steps to remain. N.I.C.
 - Existing door to remain. N.I.C.
 - New Louver color to match existing. V.I.F.
 - New stair metal handrail to match existing.
 - 8" concrete with stucco and paint to match existing adjacent.

NOTES:

KEY PLAN (NOT TO SCALE):



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MIAMI BEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

CITY MANAGER: ERIC CARPENTER
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ces
CONSULTANTS
1001 N. MIAMI AVE.
SUITE 100
MIAMI, FL 33136
TEL: 305-441-1111
WWW.CESCONSULTANTS.COM

ENGINEER OF RECORD:
JOSE A. CARABALLO
PROFESSIONAL ENGINEER
P.E. NO. 73064

ENGINEER OF RECORD:
DESIGN ENGINEER:
DRAWN BY:
CHECKER:
SCALE: AS NOTED

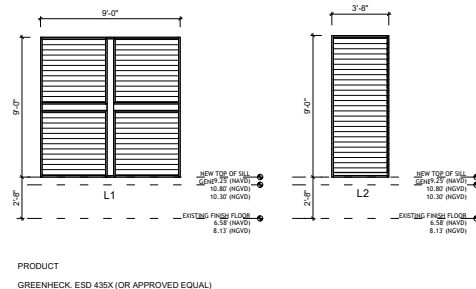
NEIGHBORHOOD: BELLE ISLE
TITLE: PUMP STATION NO. 10 - ELEVATIONS

File Name:
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 2025.05.07 Sheet: of Drawing: A-300

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P.E. SEAL:



LOUVER SCHEDULE					
LOUVER NO.	SASH OPERATION	WIDTH	HEIGHT	FRAME MATERIAL	REMARKS
L1	FIXED	9'-0"	9'-0"	EXTRUDED ALUMINUM	REMOVE EXISTING LOUVER AND REPLACE WITH IMPACT RESISTANT LOUVER
L2	FIXED	3'-8"	9'-0"	EXTRUDED ALUMINUM	REMOVE EXISTING LOUVER AND REPLACE WITH IMPACT RESISTANT LOUVER

LOUVER NOTES

1. LOUVERS SHALL BE FABRICATE WITH MINIMUM GAUGE No 14 ALUMINUM OR No 22 GALVANIZED STEEL, PAINTED AFTER FABRICATION.
2. ISOLATE ALUMINUM FROM CONCRETE AND OTHER METAL WITH SUITABLE INSULATING COMPOUND.
3. ADD A SUITABLE CENTER BRACE WHEN LOUVER VENT WIDTH IS GREATER THAN 3 FT.
4. LOUVERS SHALL INCLUDE AN AUTOMATIC CLOSING FIRE DAMPER THAT OPERATES IN RESPONSE TO A VAULT FIRE. DAMPERS SHALL PROVIDE MINIMUM 11
2 HOUR RATING. SEE ANSUL 555.

90% SUBMITTAL - NOT FOR CONSTRUCTION

 MIAMI BEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER DIRECTOR: JAY J. FINK, P.E. CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.	5					 800 39 44TH AV. SUITE 100 PALM BEACH, FL 33407 PHONE: 561-433-4353 www.cesconsultants.com CORPORATE OFFICE AUTORIZATION NO. 861	ENGINEER OF RECORD:	ENGINEER OF RECORD: _____	NEIGHBORHOOD: BELLE ISLE TITLE: PUMP STATION NO.10 - SECTION & LOUVER SCHEDULE	File Name: _____
		4						DESIGN ENGINEER: _____	Survey Reference: _____		
		3						DRAWN BY: _____	Field Book: <u>N/A</u> Page: <u>N/A</u> Work Order: <u>N/A</u>		
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		1						SCALE: AS NOTED			
		NO	DATE	REVISION		APPD. BY					

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TECHNICAL
DATA SHEET

Permaquik® 200
Crystalline Waterproofing
Capillary Waterproofing Formulation

PRODUCT DESCRIPTION

Permaquik® 200 Crystalline Waterproofing is a capillary waterproofing formulation of proprietary blends of chemicals, quartz sand, and cement. The chemicals contained in the crystalline waterproofing materials require the presence of moisture to set off a chemical reaction from within the matrix of the concrete. When combined with "free lime", these chemicals form long chained complexes, which crystallize and penetrate deeply into the capillaries of the concrete, eliminating the migration of water. Independent tests show penetration of up to 2" (51 mm) in 28 days.

The crystalline process is continuous as long as moisture is present in the concrete, significantly reducing the concrete's natural porosity by filling small voids and cracks caused by shrinkage. The concrete is still able to breathe as the crystalline does not create a vapor barrier. If no moisture is present, the crystals will lie dormant until moisture reappears and then will reactivate to seal the cause of the leakage. Permaquik 200 is applied as a slurry coat on vertical interior (CIP) concrete or (CMU) block structures to create a waterproofing barrier from within the substrate. It can be applied by "broadcasting" the dry powder onto horizontal concrete surfaces at the time of initial set and power- or hand- floating the powder to into the green concrete.

BASIC USES

Few products in the waterproofing industry offer the total protection to the concrete itself that Permaquik 200 provides. Where moisture is present, there is always the danger of damage not only to the concrete but also to the steel as well as interior finishes. No special below-grade protection is necessary.

Permaquik 200 is used for negative side waterproofing in conjunction with a positive side membrane. For positive side waterproofing, consult your local Tremco Sales Representative.

Permaquik 200 provides fast, economical waterproofing for foundation walls and floor slabs, suspended or in-ground pools, and protects against spalling due to oil, salt, and freeze/thaw action in parking garage floor applications.

FEATURES & BENEFITS

- When applied to inside surfaces, Permaquik 200 integrates and combines with the concrete from within, thus forming a barrier which cannot easily be damaged.
- The crystalline products tolerate water so there is no need to continually dry the surface before application, unlike most epishastic, bitumens, or solvent based resin systems.

AVAILABILITY

Immediately available from your local Tremco Sales Representative or Tremco Distributor. For distributor locations, visit www.tremco.com/sales

COVERAGE RATES

1.3 kg/M² or 2.4 lb/yd²
200 ft² (18.6 M²) per pail in 2 passes
Horizontal dry shake method: 1 kg/M² or 1.85 lb/yd²

PACKAGING

Permaquik 200: 55 lb (25 kg) packed in 5 gal (20 L) pails. Also available in drums.



TECHNICAL
DATA SHEET

VULKEM EWS® WITH
PUMA TECHNOLOGY
Waterproof Traffic Coating System
Pedestrian System

PRODUCT DESCRIPTION

Vulkem® EWS with PUMA Technology is designed to have tenacious adhesion and extreme abrasion resistance. It can be walked on in one hour, which will minimize operation disruption. Vulkem Extreme Wearing System (EWS) is a waterproof traffic deck coating system that utilizes polyurethane-methacrylate (PUMA) technology. Vulkem EWS pedestrian system is composed of a primer (Tremco PUMA Primer or TREMPRIME VB Plus Primer), a base coat (Tremco PUMA BC or BC LM), and a top coat (Tremco PUMA TC). All system components, except TREMPRIME VB Plus, are cured using Tremco PUMA Initiator®.

Tremco PUMA Primer is a polymethyl-methacrylate (PMMA), two-component primer for porous and non-porous substrates.

TREMPRIME VB Plus Primer is a two component, modified epoxy primer designed to seal concrete and reduce moisture vapor transmission on concrete slabs with elevated levels of moisture.

Tremco PUMA BC is a polyurethane-methacrylate (PUMA) base coat. Tremco PUMA BC bonds firmly to Tremco PUMA Primer. It retains its integrity even if substrate movement causes hair-line cracks of up to 1/16" (1.5 mm). If cut or damaged, Tremco PUMA BC will prevent water migration between itself and the substrate.

Tremco PUMA BC LM is a low-modulus version of Tremco PUMA BC waterproofing membrane that is used when dynamic movement and extreme service temperature ranges are anticipated.

Tremco PUMA TC is a polymethyl-methacrylate (PMMA) top coat. Inter/primary adhesion to Tremco PUMA BC is exceedingly strong. The top coat affords excellent abrasion resistance, UV stability and chemical resistance to complete the Vulkem EWS pedestrian system.

Tremco PUMA Initiator® is a reactive catalyst in the form of a white powder used to cure all PUMA/PMMA resins.

BASIC USES

Vulkem EWS is a cold-applied traffic deck coating system designed for waterproofing concrete slabs and protecting occupied areas underneath from water damage. Additionally, the system will protect the concrete from the damaging effects of chloride, deicing salts, chemicals, gasoline, oils and anti-freeze. The Pedestrian System is ideal for stadiums, balconies, pedestrian walkways, roof terraces, mechanical rooms, recreation decks, and similar applications requiring a waterproof coating system.

FEATURES & BENEFITS

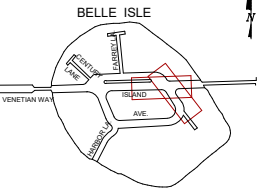
- PUMA technology delivers extreme durability while maintaining its crack-bridging characteristics, eliminating the need for reinforcing fabric.
- Rapid set-up times allow for quick overall installation, as well as the ability to open up to traffic one hour later.
- Can be applied at temperatures as low as 14°F (-10°C), which allows for continuation of projects in the colder months.
- Initiator adjustments allow for 30 to 45 min cure time between applications, even at temperatures below freezing.
- Extremely forgiving application allows users to apply additional coats long after the previous coat has cured.
- Unique chemistry allows for easy repair.
- Compatible with Tremco sealants, coatings and expansion joints, which is essential for tie-ins, detailing and penetrations.

AVAILABILITY

Immediately available from your local Tremco Sales Representative.

NOTES:

KEY PLAN (NOT TO SCALE):



P.E. SEAL:

90% SUBMITTAL - NOT FOR CONSTRUCTION

MIAMI BEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139	CITY MANAGER: ERIC CARPENTER	5						 AMERICAN CIVIL ENGINEERING SOCIETY FLORIDA DIVISION P.O. BOX 1000 TALLAHASSEE, FL 32302 TEL: 904-438-4333 WWW.ASCE.ORG/FLORIDA CERTIFICATE OF AUTHORIZATION NO. 001	ENGINEER OF RECORD: JOSE A. CARABALLO PROFESSIONAL ENGINEER P.E. NO. 73064	ENGINEER OF RECORD: DESIGN ENGINEER: DRAWN BY: CHECKER: SCALE: AS NOTED	NEIGHBORHOOD: BELLE ISLE	FILE NAME: SURVEY REFERENCE: FIELD BOOK: N/A DATE: 2025.05.07	PAGE: N/A WORK ORDER: N/A SHEET: of DRAWING: A-800
	DIRECTOR: JAY J. FINK, P.E.	4								TITLE: WATERPROOFING			
	CITY ENGINEER: CRISTINA ORTEGA CASTINEIRAS, P.E.	3											
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