



**Oregon State  
University**

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Contracts & Materials  
Management (PCMM)**  
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10 December 2018

Oregon State University  
Construction Contracts Administration  
Sports Performance Center Renovation Phase 1 Design

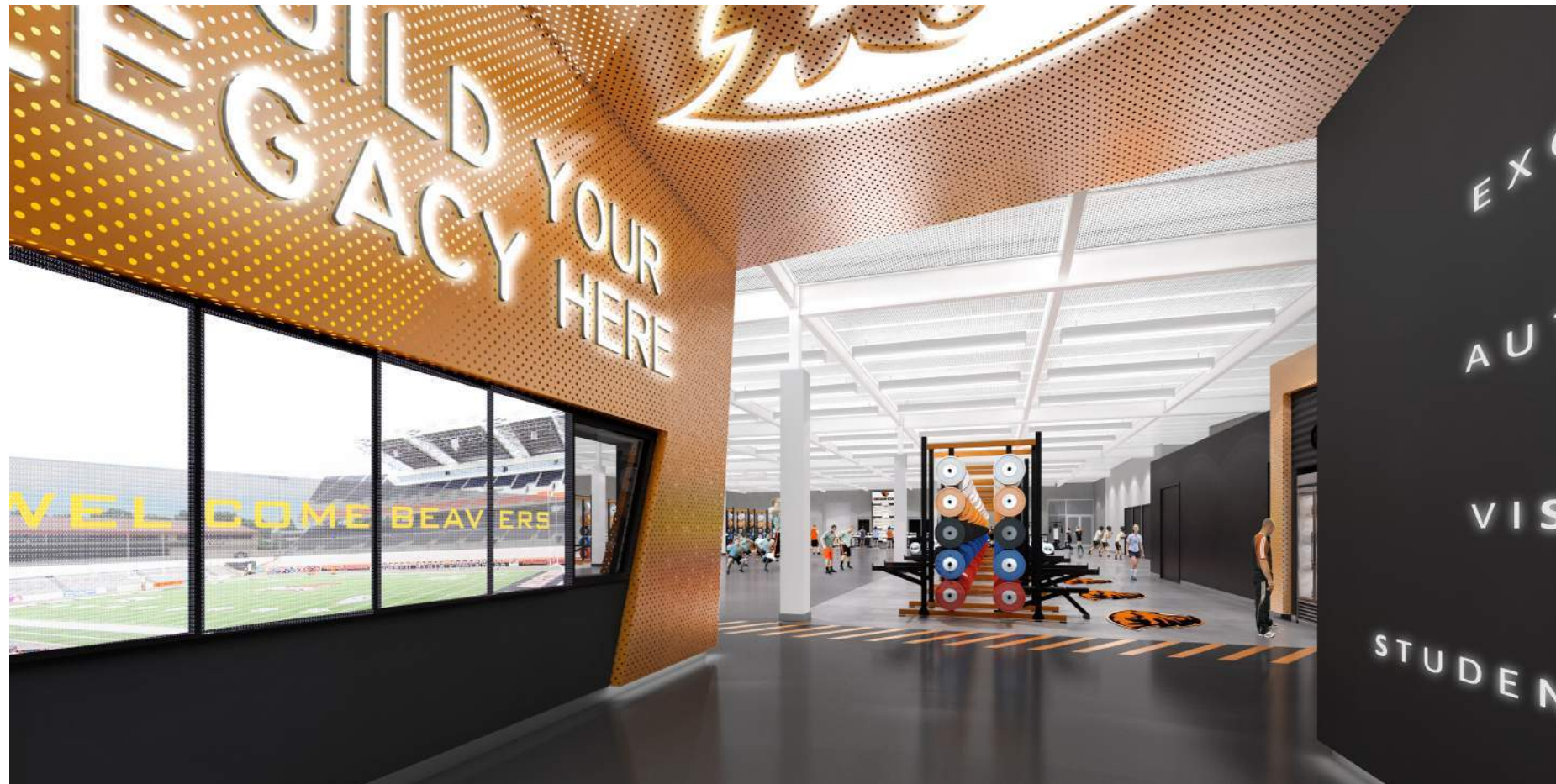
ADDENDUM NO. 1

THIS ADDENDUM IS BEING ISSUED for clarification and/or revisions of the drawings and specifications as noted. This document is hereby made a part of the RFQ to the extent as though it was originally included herein.

Item 1                      ADD the schematic design package attached to this addendum.

END OF ADDENDUM NO. 1

# OSU: SPORTS PERFORMANCE CENTER WEIGHT ROOM REFRESH



## SCHEMATIC DESIGN PRICING PACKAGE

OCTOBER 30, 2018

PROJECT NUMBER: 005.2096.200

### DRAWING LIST

- S1.1 SITE UTILITIES PLAN
- D1.1 DEMOLITION PLAN
- A2.1 CONSTRUCTION PLAN
- A2.2 DIMENSION PLAN
- A2.3 REFLECTED CEILING PLAN
- A2.4 FINISH PLAN
- A2.5 EQUIPMENT PLAN
- A3.1 FINISH SCHEDULE
- A4.1 BUILDING SECTIONS
- A5.1 INTERIOR ELEVATIONS
- A5.2 INTERIOR ELEVATIONS
- A6.1 WALL SECTION & DETAILS
- A6.2 WALL SECTION & DETAILS
- A7.1 RENDERING
- A7.2 RENDERING

### GATORADE FUEL BAR DESIGN PACKAGE - V1

### ARCHITECTURAL NARRATIVE

### STRUCTURAL NARRATIVE\*

\*STRUCTURAL NARRATIVE FOR PHASE 2 IS A STUDY AND IS PROVIDED FOR REFERENCE ONLY. LEADERSHIP BUILDING ADDITION IS NOT PART OF THE WEIGHT ROOM REFRESH PRICING SCOPE.

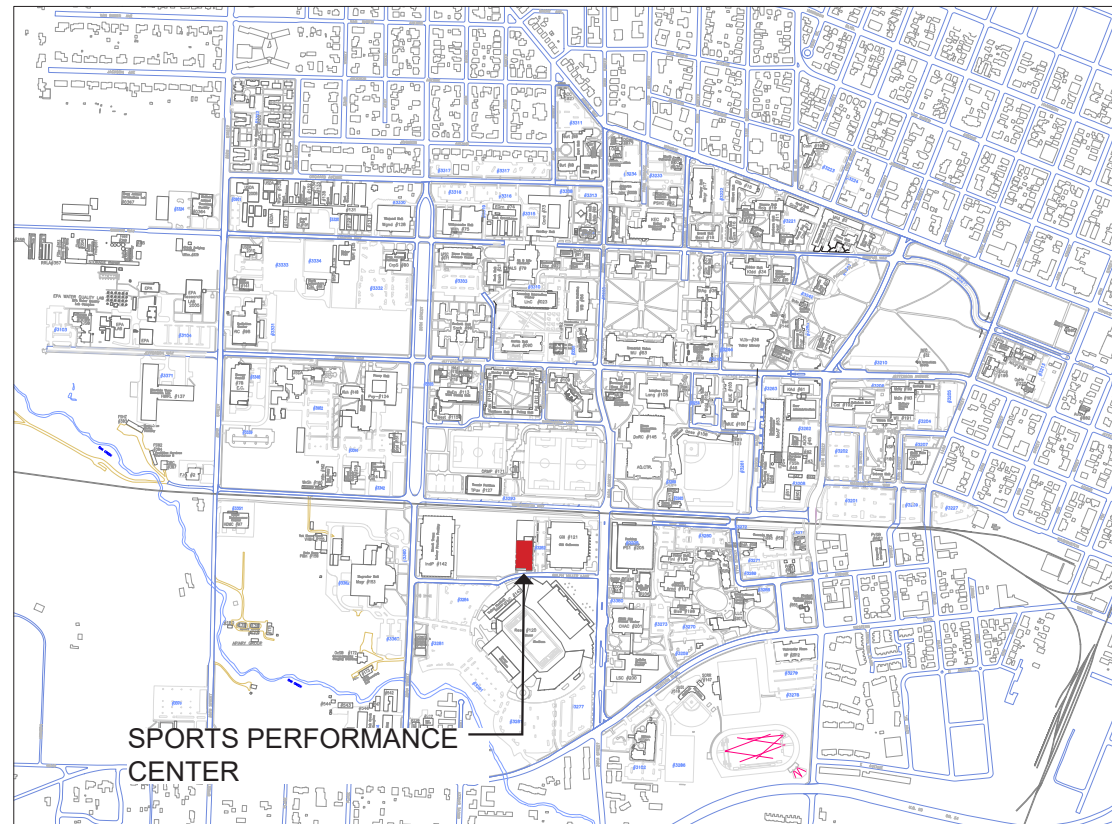
### CUT SHEETS & SPECIFICATIONS

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SPORTS PERFORMANCE CENTER  
CORVALLIS, OREGON

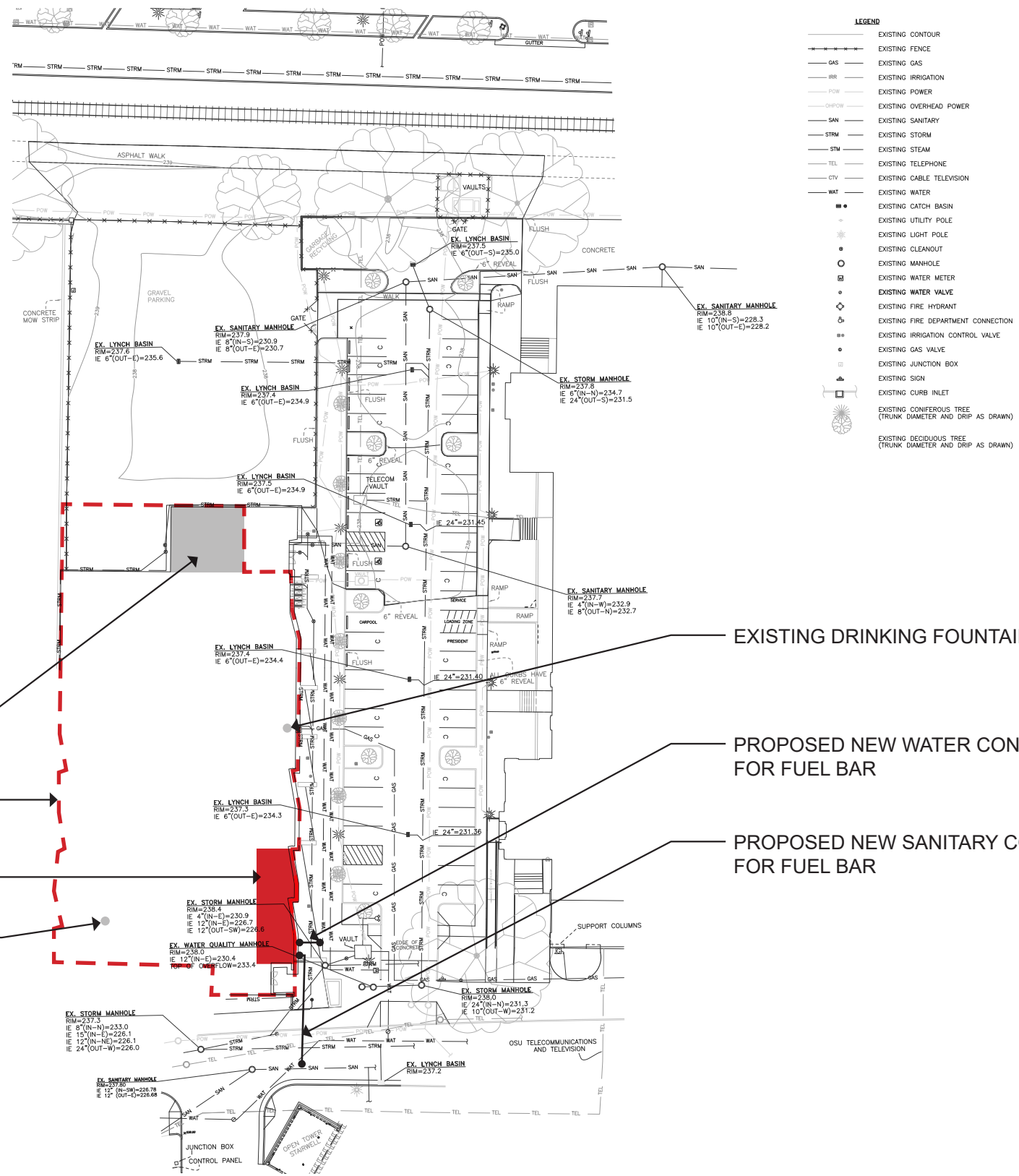


SPORTS PERFORMANCE CENTER

**VICINITY PLAN**

NTS

- EXISTING RESTROOM
- SPORTS PERFORMANCE CENTER PROJECT OUTLINE
- PROPOSED NEW FUEL BAR
- EXISTING DRINKING FOUNTAIN TO BE RELOCATED



- EXISTING DRINKING FOUNTAIN REMAIN
- PROPOSED NEW WATER CONNECTION FOR FUEL BAR
- PROPOSED NEW SANITARY CONNECTION FOR FUEL BAR

**UTILITIES PLAN**

NTS



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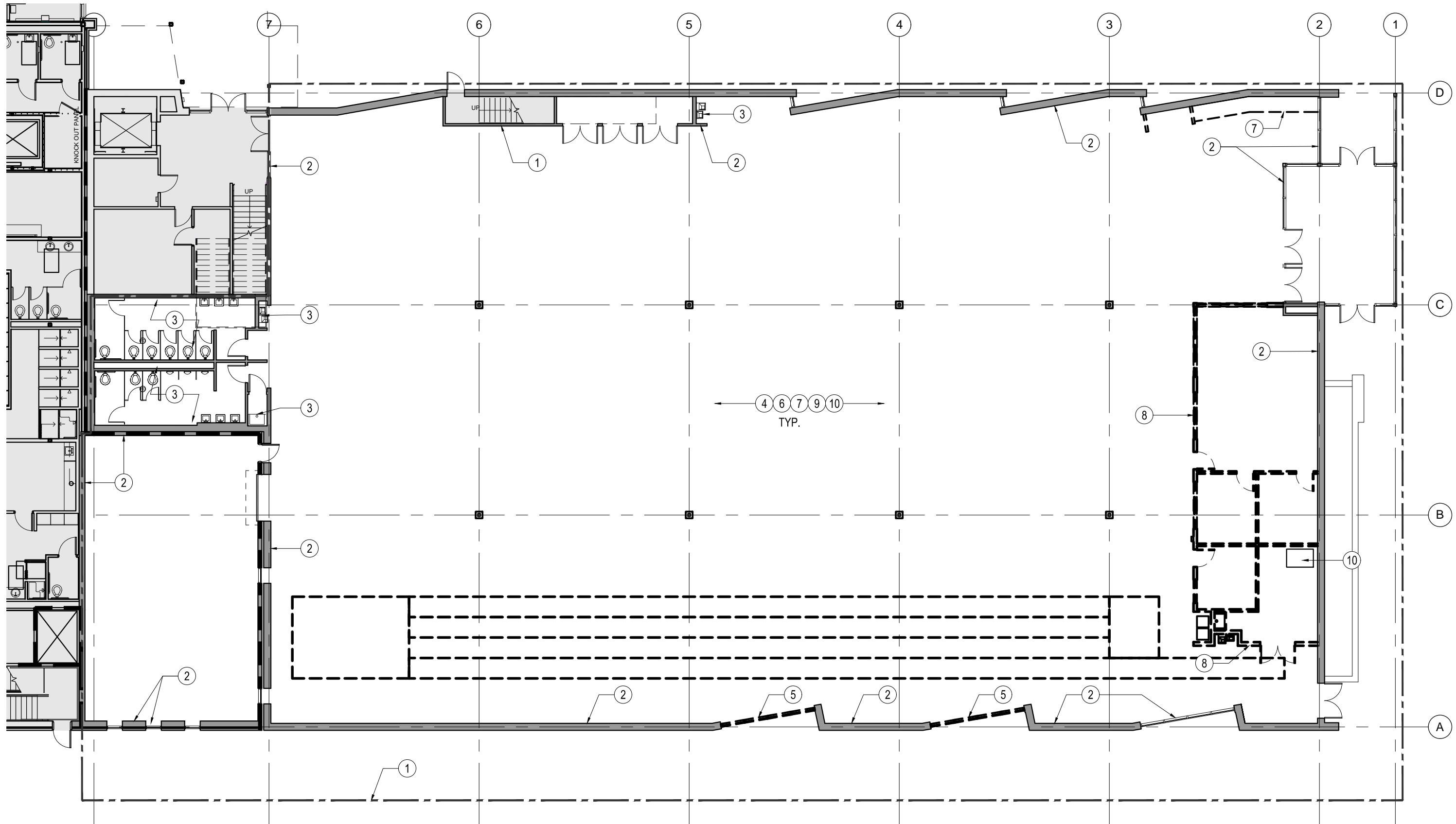
S1.1

SITE UTILITIES PLAN

Ref. North







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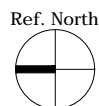
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- ① PROJECT LINE
- ② EXISTING WALL AND CURTAIN WALL TO REMAIN
- ③ EXISTING RESTROOM PARTITIONS, FIXTURES, MOP SINK AND WATER FOUNTAINS TO REMAIN
- ④ EXISTING COLUMN TO REMAIN, REMOVE EXISTING FINISHES, FURRING OR SHEATHING. MAINTAIN EXISTING FIRE RATING
- ⑤ REMOVE EXISTING CURTAIN WALL

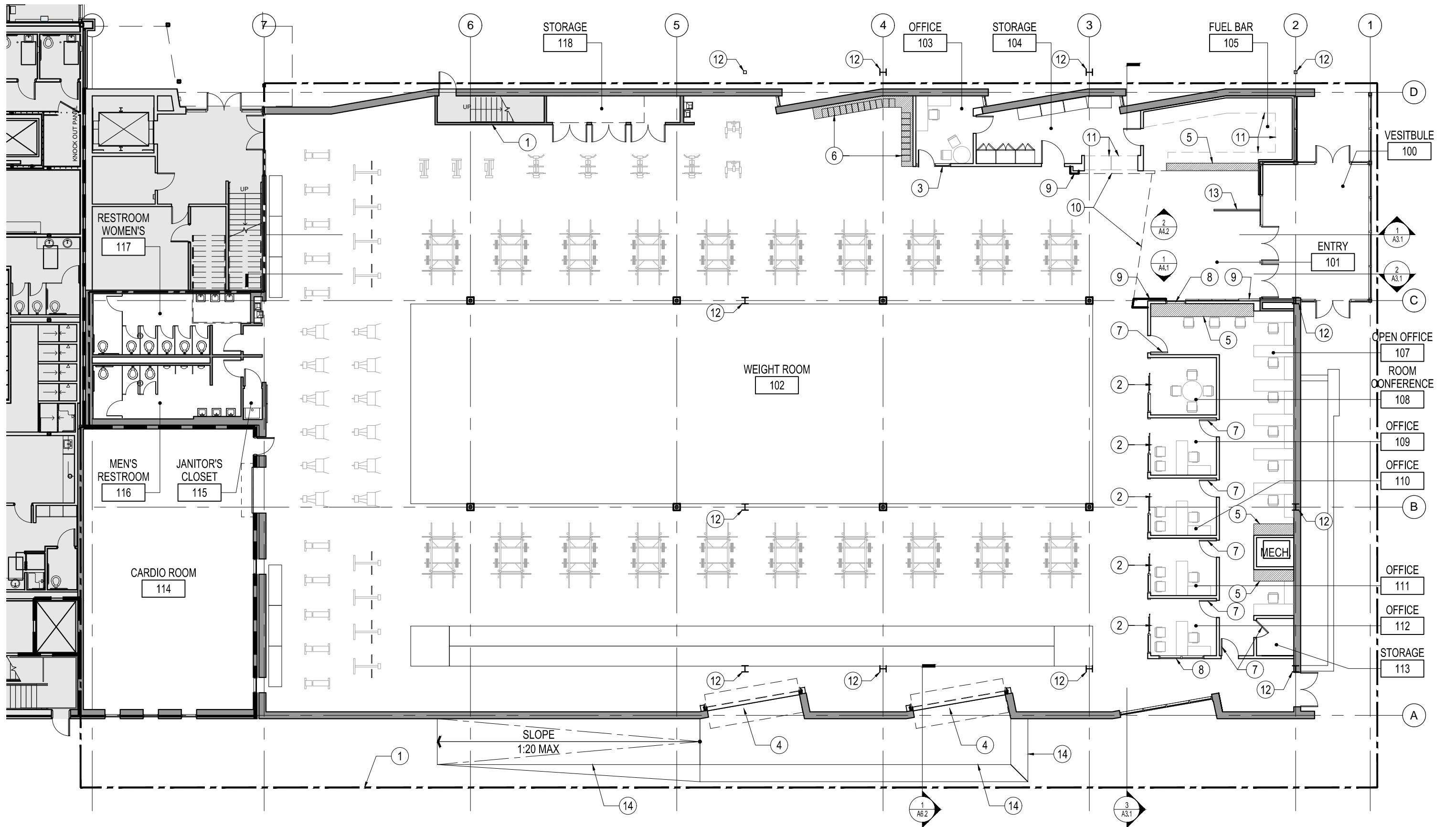
- ⑥ REMOVE AND DISCARD ALL EXISTING CEILING ASSEMBLIES AND LIGHT FIXTURES
- ⑦ REMOVE AND DISCARD ALL EXISTING MILLWORK
- ⑧ REMOVE AND DISCARD INTERIOR PARTITIONS, COUNTERS & ASSOCIATED ELECTRICAL EQUIPMENT
- ⑨ REMOVE EXISTING FLOOR FINISH TO FLOOR SLAB. CLEAN EXISTING CONCRETE SLAB TO ACCEPT NEW FINISH FLOORING.
- ⑩ EXISTING MECHANICAL EQUIPMENT TO REMAIN



D1.1

DEMOLITION PLAN





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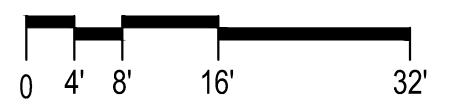
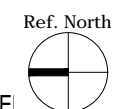
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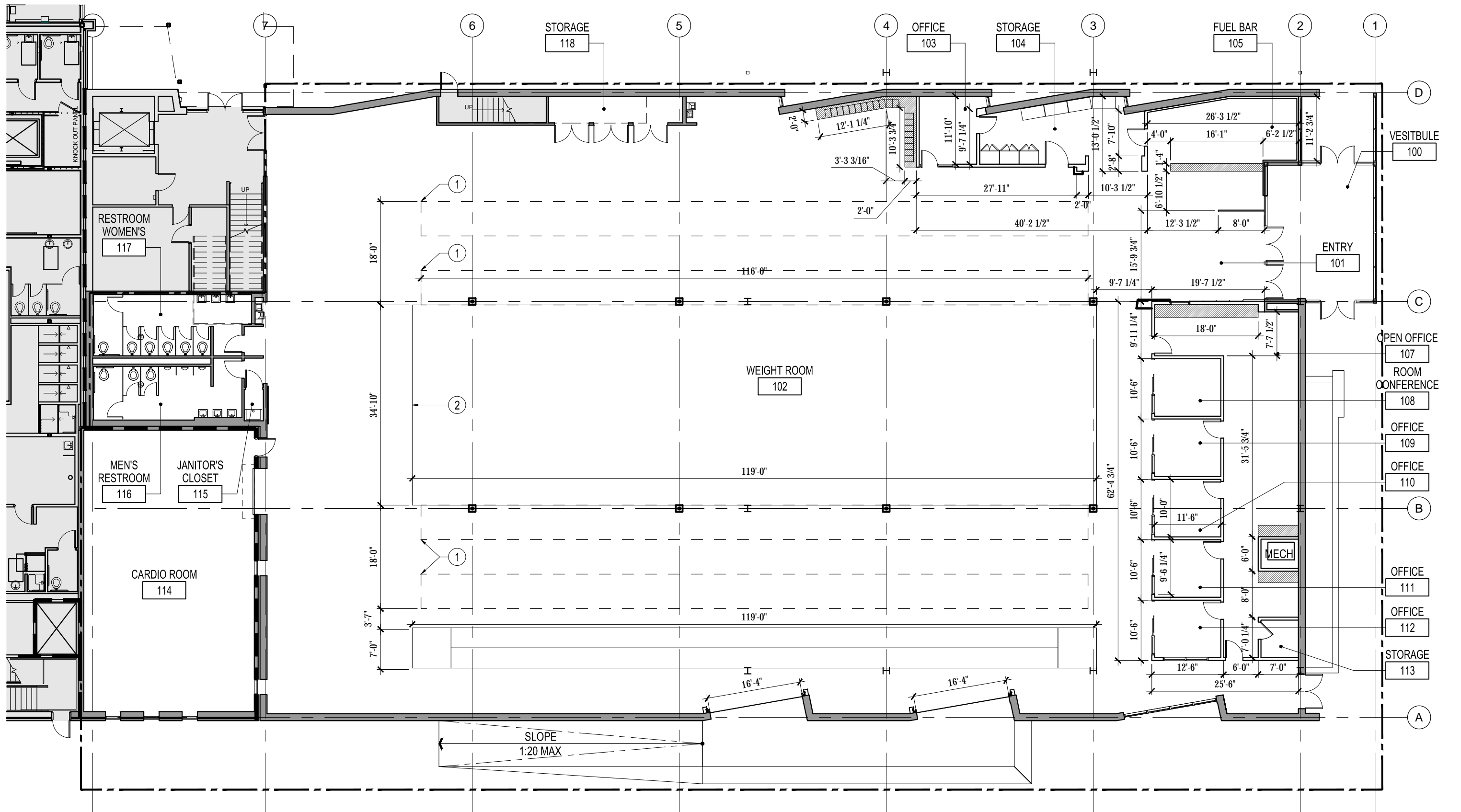
- ① PROJECT LINE
- ② 8'-0" SLIDING GLASS DOOR WITH FULL SIDELITE
- ③ 8'-0" GLASS DOOR WITH FULL SIDELITE
- ④ VERTICAL BI-FOLD DOOR
- ⑤ BUILT-IN MILLWORK
- ⑥ BUILT-IN CUBBIES
- ⑦ PAINTED STEEL DOOR

- ⑧ INTERIOR WINDOW
- ⑨ CUSTOM PERFORATED WALL PANEL
- ⑩ CUSTOM PERFORATED CEILING PANEL ABOVE
- ⑪ EQUIPMENT BY OTHERS
- ⑫ STRUCTURAL OPTION 1 FOR PHASE 2 ADDITION
- ⑬ CUSTOM MANUFACTURED CERAMIC FRIT GLASS PANE
- ⑭ CONCRETE LANDING AND RAMP WITH TURF BERM

A2.1

CONSTRUCTION PLAN





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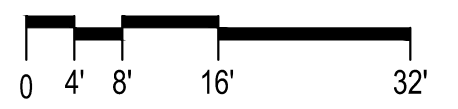
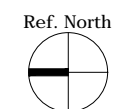
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Scale	1/16" = 1'-0"

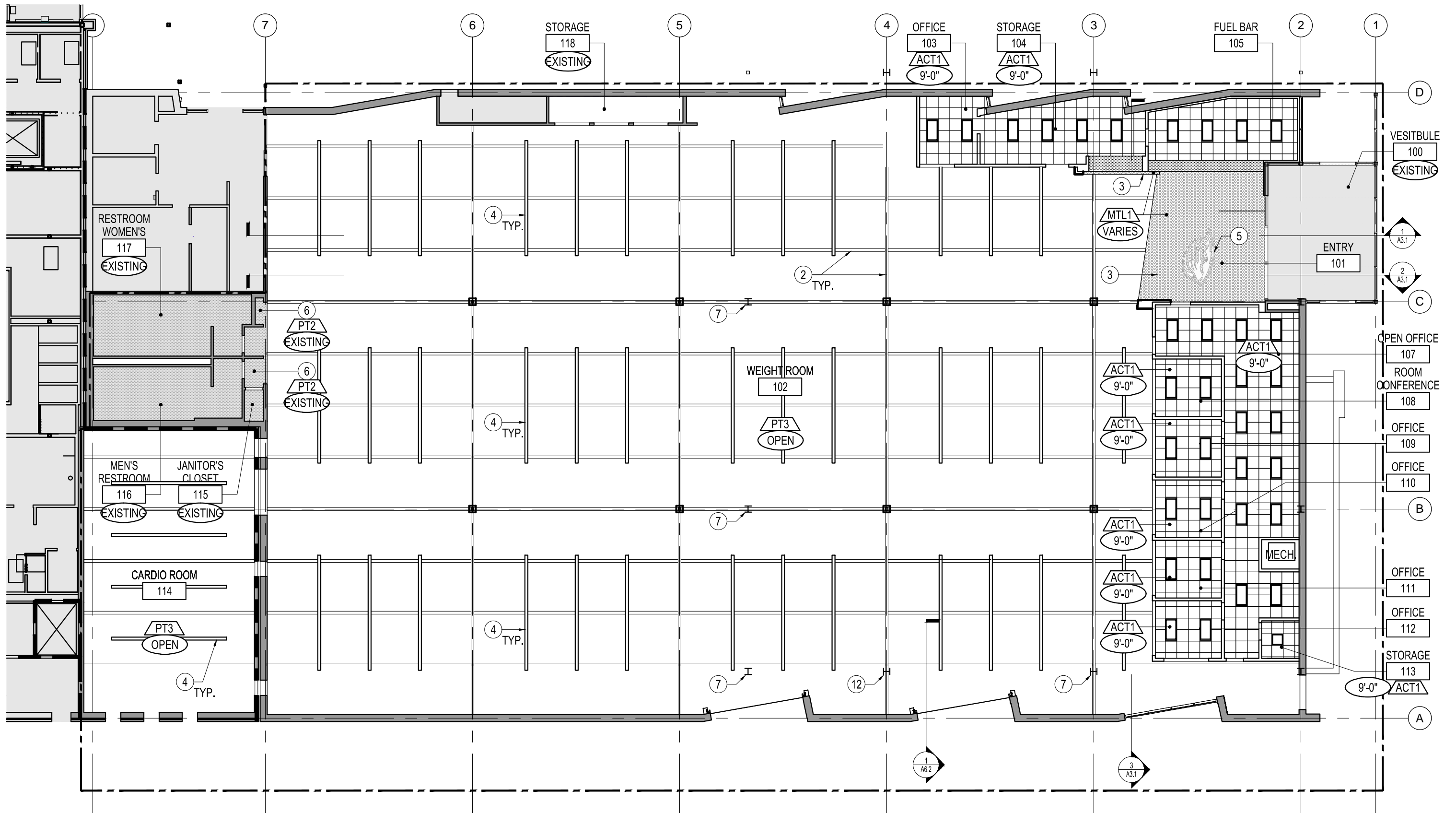
- ① DROP ZONE AREA
- ② TURF AREA

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A2.2

DIMENSION PLAN





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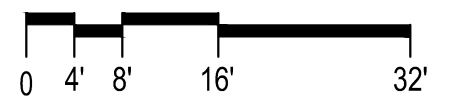
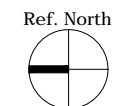
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- ① PROJECT LINE
- ② EXISTING BEAMS AND COLUMNS TO BE PAINTED
- ③ CUSTOM PERFORATED CEILING PANEL
- ④ SUSPENDED LINEAR LED LIGHT FIXTURE, TO BE COORDINATED WITH EXISTING CEILING POWER LOCATIONS. SEAMLESS CONTINUOUS RUNS TO MATCH EXISTING LIGHT FIXTURE LENGTHS.

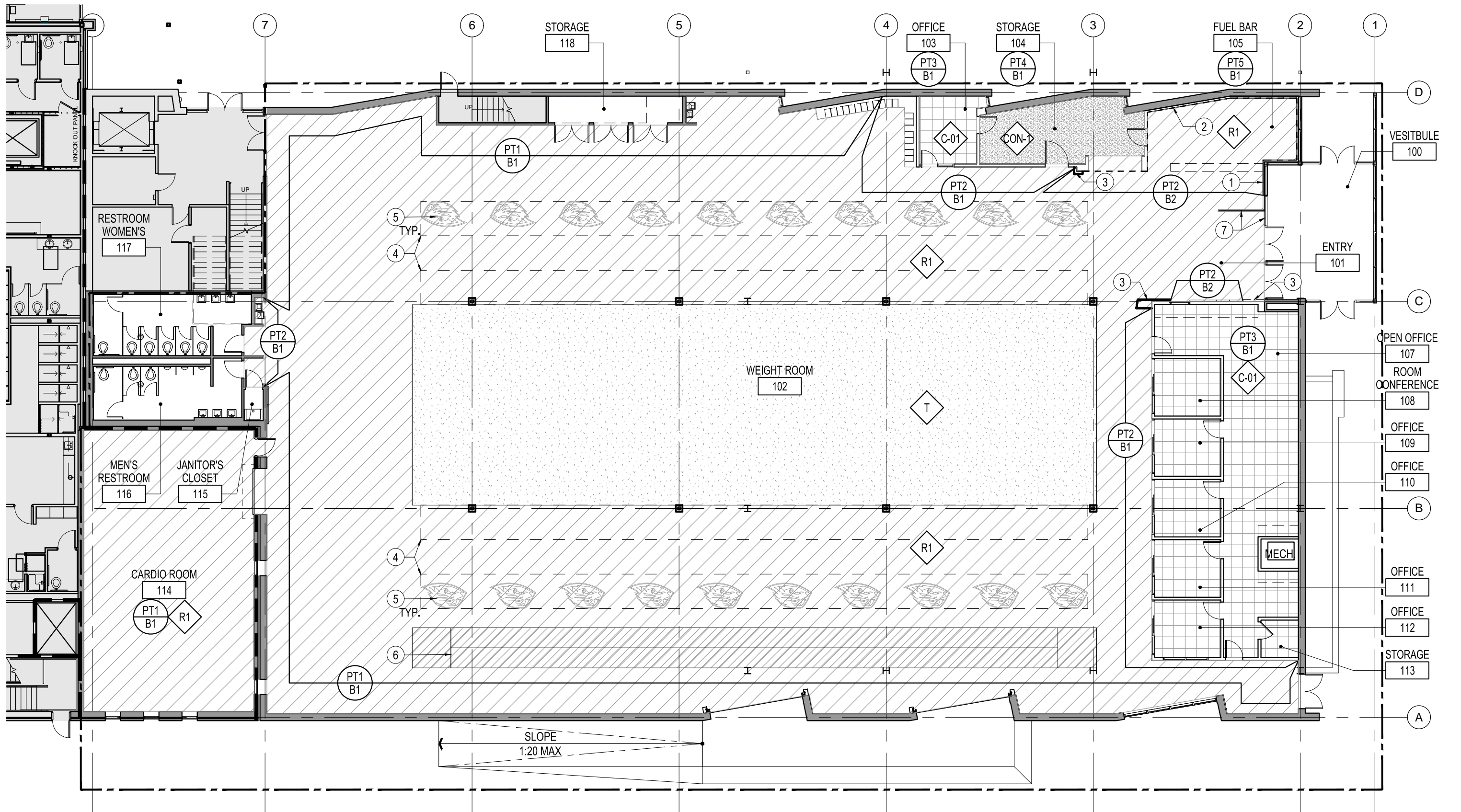
- ⑤ CUSTOM BACK-LIT LOGO CUT IN CUSTOM PERFORATED METAL PANEL WITH INSET ACRYLIC.
- ⑥ PAINT EXISTING CEILING / SOFFIT
- ⑦ STRUCTURAL OPTION 1 FOR PHASE 2 ADDITION
- ⑧ WALL MOUNTED ILLUMINATED GATORADE LOGO

A2.3

REFLECTED CEILING PLAN







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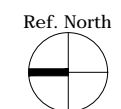
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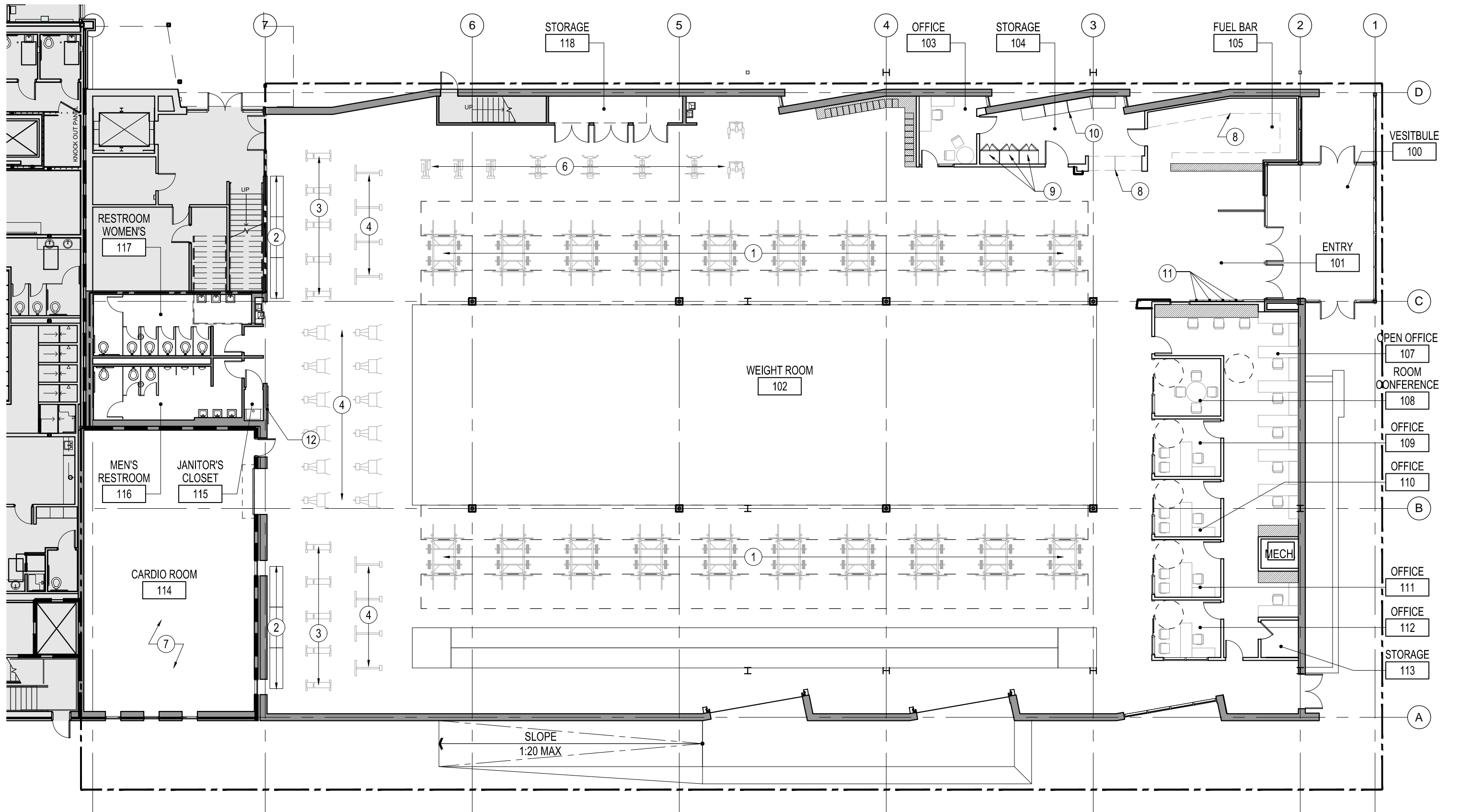
- ① CUSTOM VINYL APPLIED GRAPHIC, WALL TO BE LEVEL 5 FINISH
- ② FUEL BAR FINISHES TO BE COORDINATED WITH GATORADE
- ③ CUSTOM PERFORATED WALL PANEL
- ④ DROP ZONE AREA

- ⑤ INLAY LOGO ON FLOORING
- ⑥ INLAY TRACK ON FLOORING
- ⑦ CUSTOM MANUFACTURED CERAMIC FRIT GLASS PANEL

A2.4

FINISH PLAN





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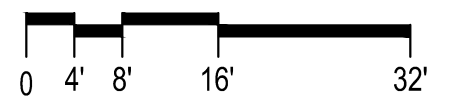
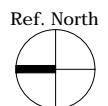
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- ① BACK TO BACK HALF RACKS
- ② DUMBBELL RACKS
- ③ BENCHES
- ④ LAT PULLDOWN / LOW ROW MACHINES
- ⑤ GLUTE HAM MACHINES
- ⑥ MISCELLANEOUS EQUIPMENT
- ⑦ EXISTING CARDIO ROOM EQUIPMENT

- ⑧ EQUIPMENT BY OTHERS
- ⑨ FULL SIZE REFRIGERATOR/FREEZER
- ⑩ STEEL STORAGE SHELVING
- ⑪ VERTICAL TV DISPLAY
- ⑫ DIGITAL STAT BOARD



A2.5

EQUIPMENT PLAN

# FINISH SCHEDULE

KEY	MATERIAL	MFR.	TYPE	COLOR	SIZE	FINISH	REMARKS
ACT1	ACOUSTIC CEILING TILE			WHITE	2' X 2' X 1"		
C1	CARPET TILE			DARK GRAY	12" X 48"		
CONC-1	CONCRETE SEALER			CLEAR	-	-	STORAGE, FUEL BAR, SMOOTHIE PREP
B1	VINYL BASE			DARK GRAY	4" HIGH		
B2	METAL BASE			DARK GRAY	4" HIGH		
GL1	GLASS		LOW IRON TEMPERED	GRAY TINT			
MTL1	PERFORATED METAL PANEL		PERFORATED	ORANGE		HIGH GLOSS	
MTL2	STAINLESS STEEL		#6 BRUSHED	-		BRUSHED	FOOD PREP COUNTERTOP
PT1	PAINT		PAINT	LIGHT GRAY	-	SEMI-GLOSS	WEIGHT AND CARDIO ROOM CMU WALLS AND GYP PARTITIONS
PT2	PAINT		PAINT	DARK GRAY	-	SEMI-GLOSS	WEIGHT ROOM WALLS AND DOORS
PT3	PAINT		PAINT	WHITE	-	EGGSHELL	OFFICES; WEIGHT ROOM CEILING
PT4	PAINT		PAINT	WHITE	-	SEMI-GLOSS	STORAGE AND FOOD PREP
PT5	PAINT		PAINT	DARK GRAY	-	SEMI-GLOSS	FUEL BAR
PL1	PLASTIC LAMINATE		PLASTIC LAMINATE	LIGHT GRAY	-	-	BACK OF HOUSE MILLWORK, NO BROWN EDGES VISIBLE
R1	RESILIENT ATHLETIC FLOORING	MONDO	MONDO ARMOR	LIGHT GRAY, DARK GRAY, CUSTOM ORANGE			COLOR LAYOUT TBD
T1	TURF	ECORE	TURF X	CUSTOM MEDIUM GRAY	-	-	WEIGHT ROOM

## REFER TO CUT SHEETS & SPECIFICATIONS FOR THE FOLLOWING PRODUCTS:

Linkable seamless continuous linear LED lighting fixtures

Mondo Armor flooring

Turf flooring

Vertical bi-fold door

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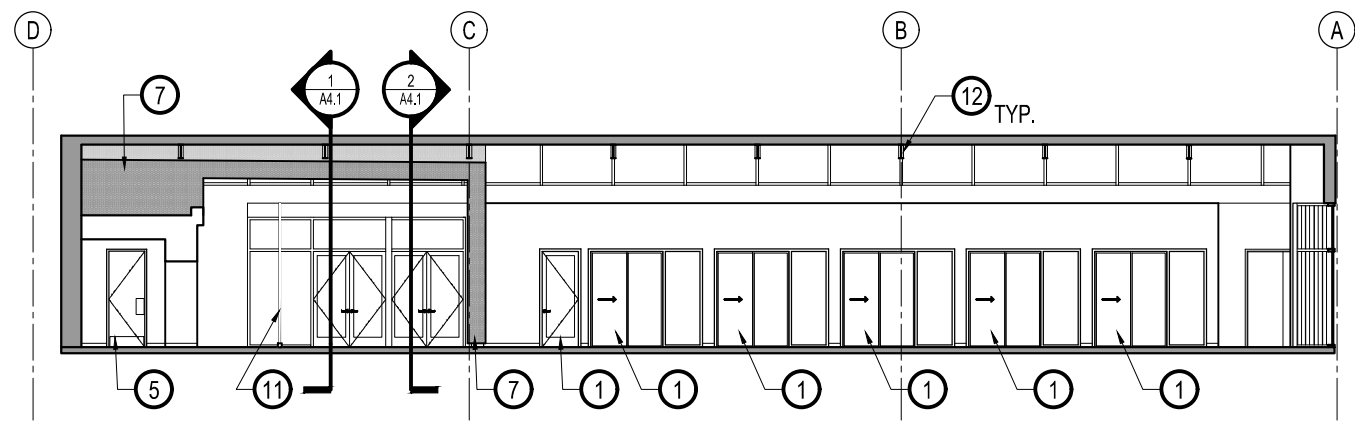
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**A3.1**  
FINISH SCHEDULE

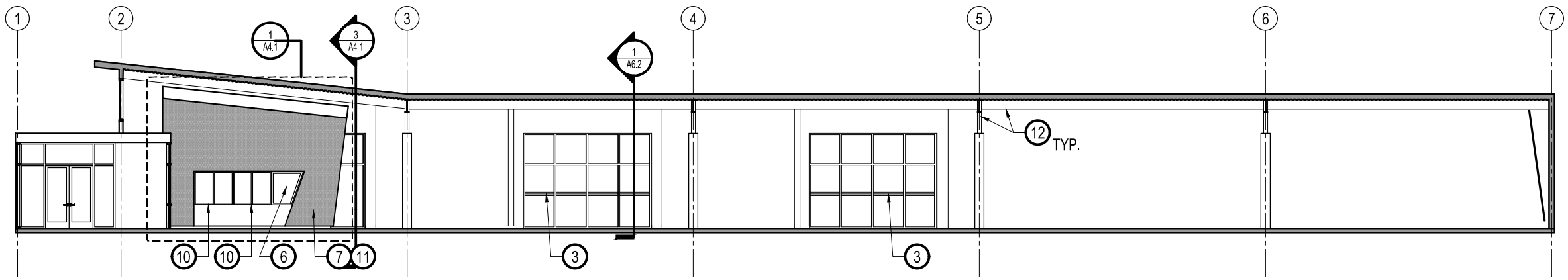




CROSS SECTION - SOUTH  
SCALE: 1/16" = 1'-0"

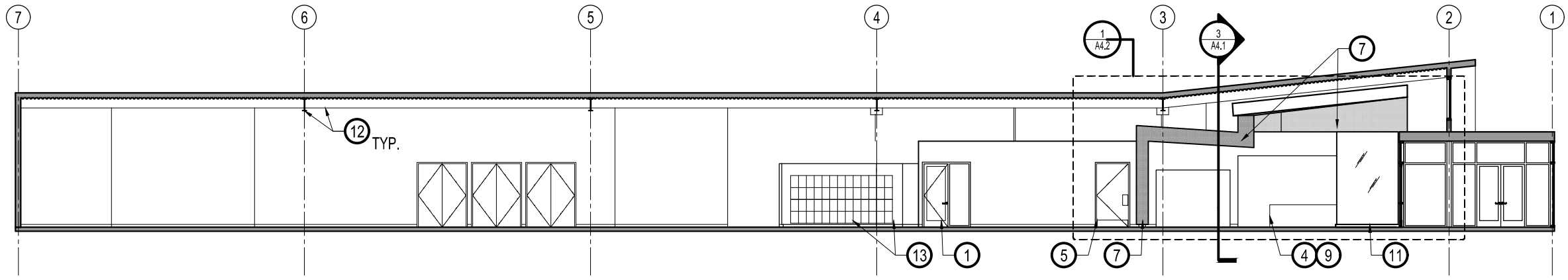
3

- ① 8'-0" SLIDING GLASS DOOR WITH FULL SIDELITE
- ② 8'-0" GLASS DOOR WITH FULL SIDELITE
- ③ VERTICAL BI-FOLD DOOR
- ④ BUILT-IN MILLWORK
- ⑤ PAINTED STEEL DOOR
- ⑥ INTERIOR WINDOW
- ⑦ PERFORATED WALL PANEL
- ⑧ CUSTOM VINYL APPLIED GRAPHIC, WALL TO BE LEVEL 5 FINISH
- ⑨ FUEL BAR FINISHES, LIGHTING AND EQUIPMENT TO BE COORDINATED WITH GATORADE
- ⑩ VERTICAL TV DISPLAY
- ⑪ CUSTOM MANUFACTURED CERAMIC FRIT GLASS PAN
- ⑫ EXISTING BEAMS AND COLUMNS PAINTED TO MATCH CEILING
- ⑬ BUILT-IN CUBBIES
- ⑭ FULL HEIGHT BACK PAINTED GLASS



LONGITUDINAL SECTION - WEST  
SCALE: 1/16" = 1'-0"

2



LONGITUDINAL SECTION - EAST  
SCALE: 1/16" = 1'-0"

1

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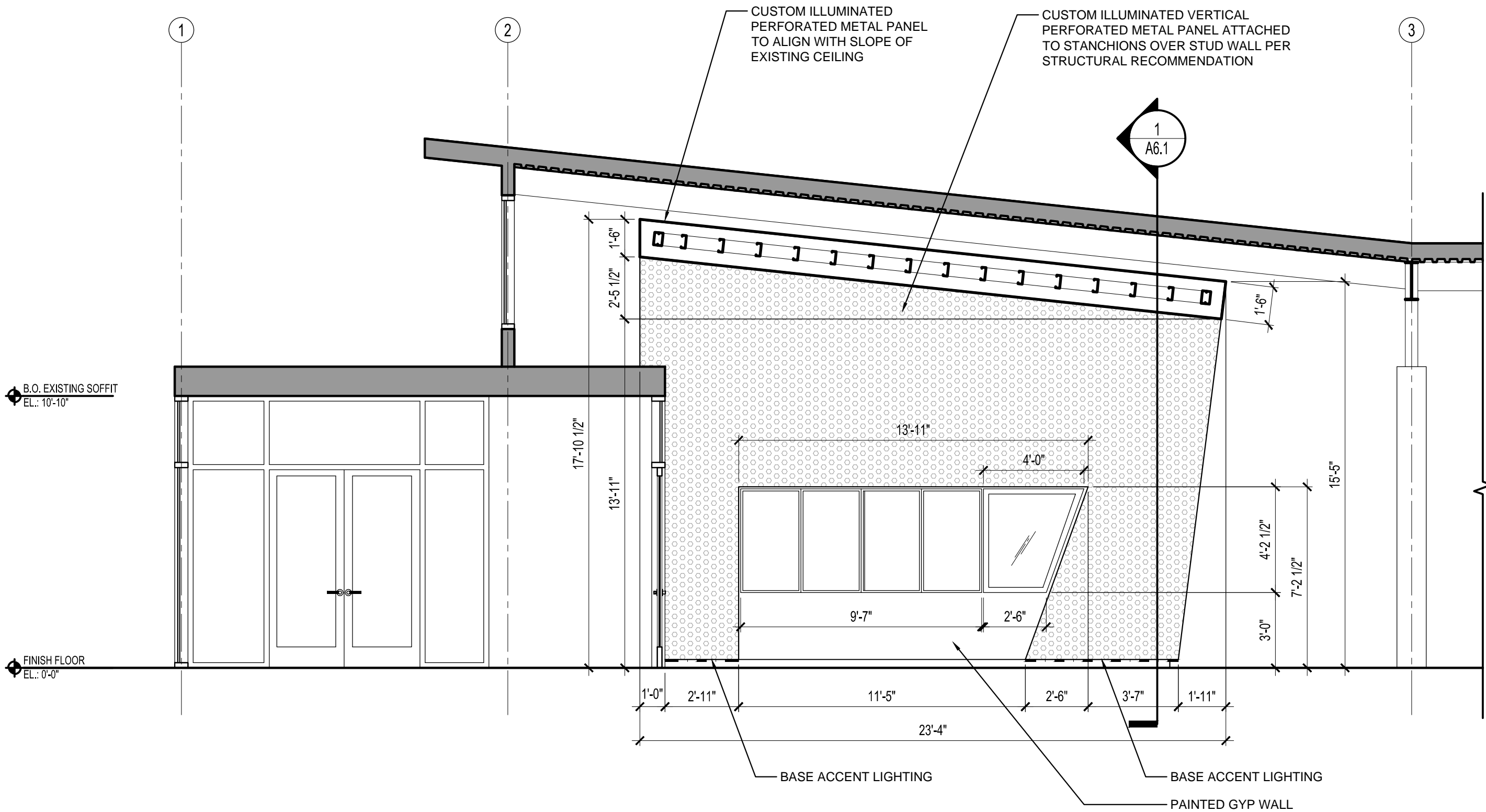
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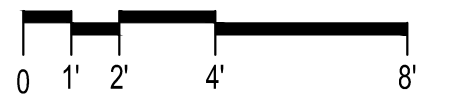
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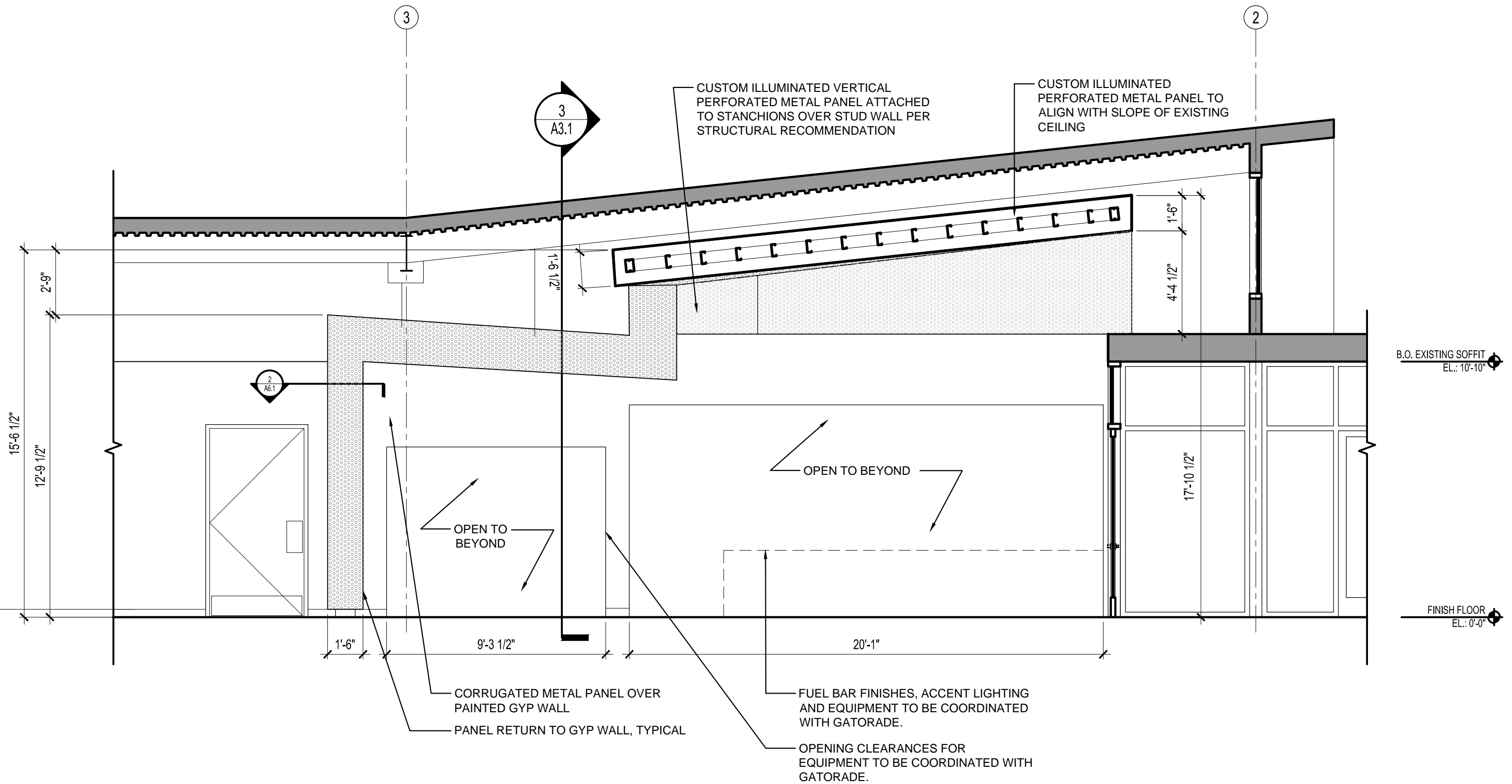
A4.1  
BUILDING SECTIONS





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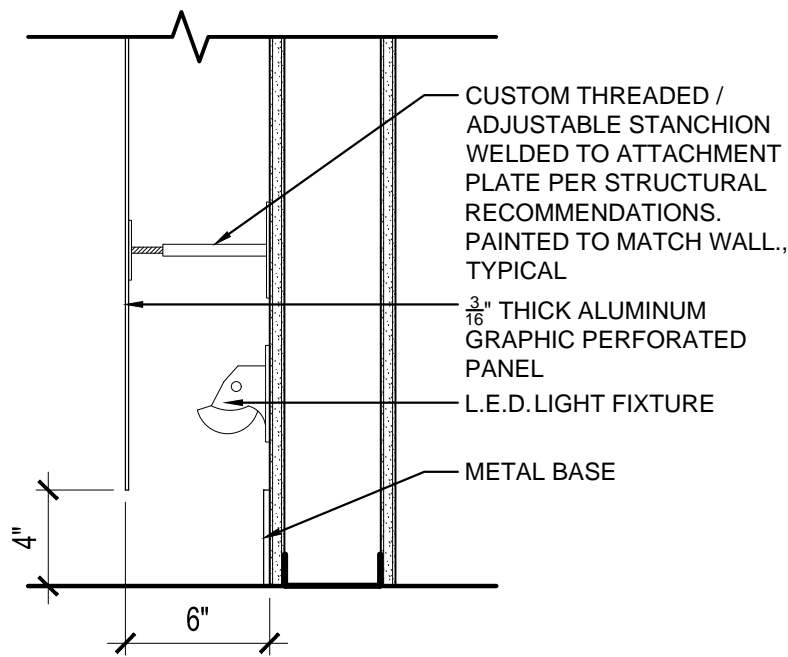
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**A5.2**  
 INTERIOR ELEVATIONS







**METAL PANEL DETAIL - BASE**

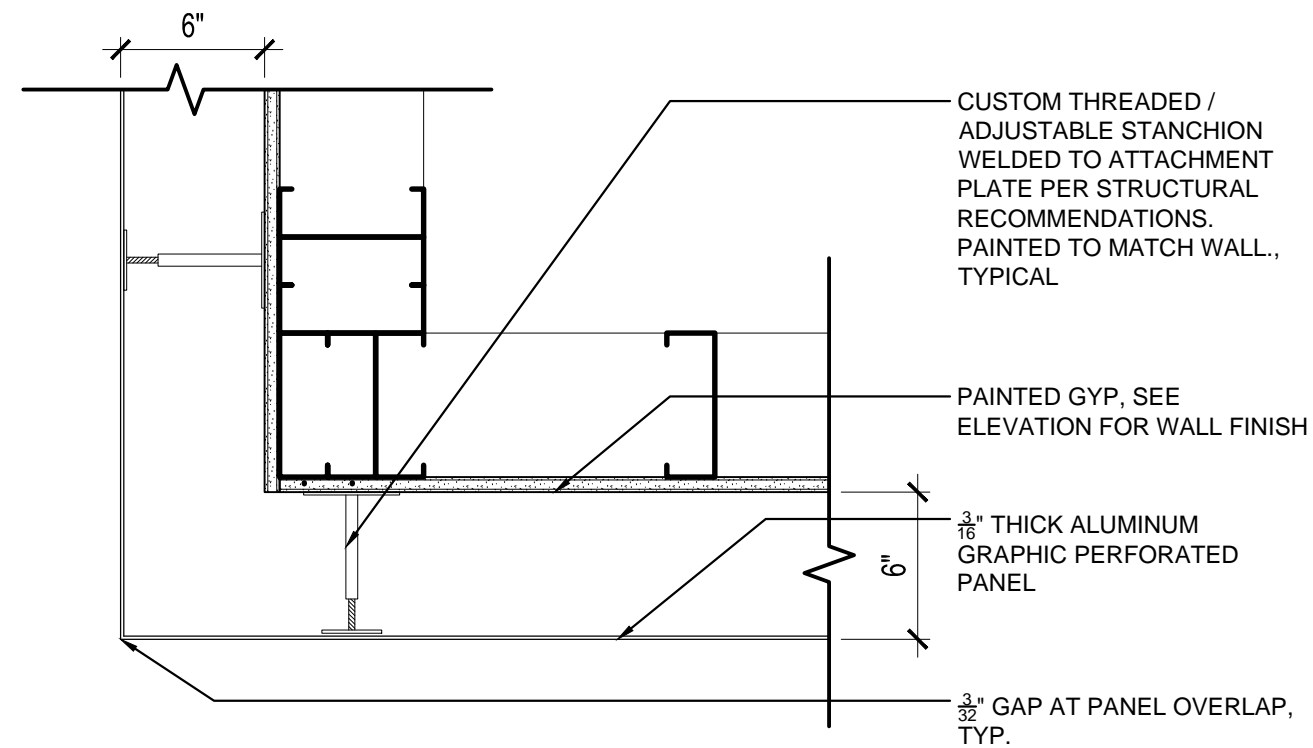
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**4**

**METAL PANEL DETAIL - PANEL CLOSURE**

SCALE: 1/2" = 1'-0"

**3**



**METAL PANEL DETAIL - PANEL CLOSURE**

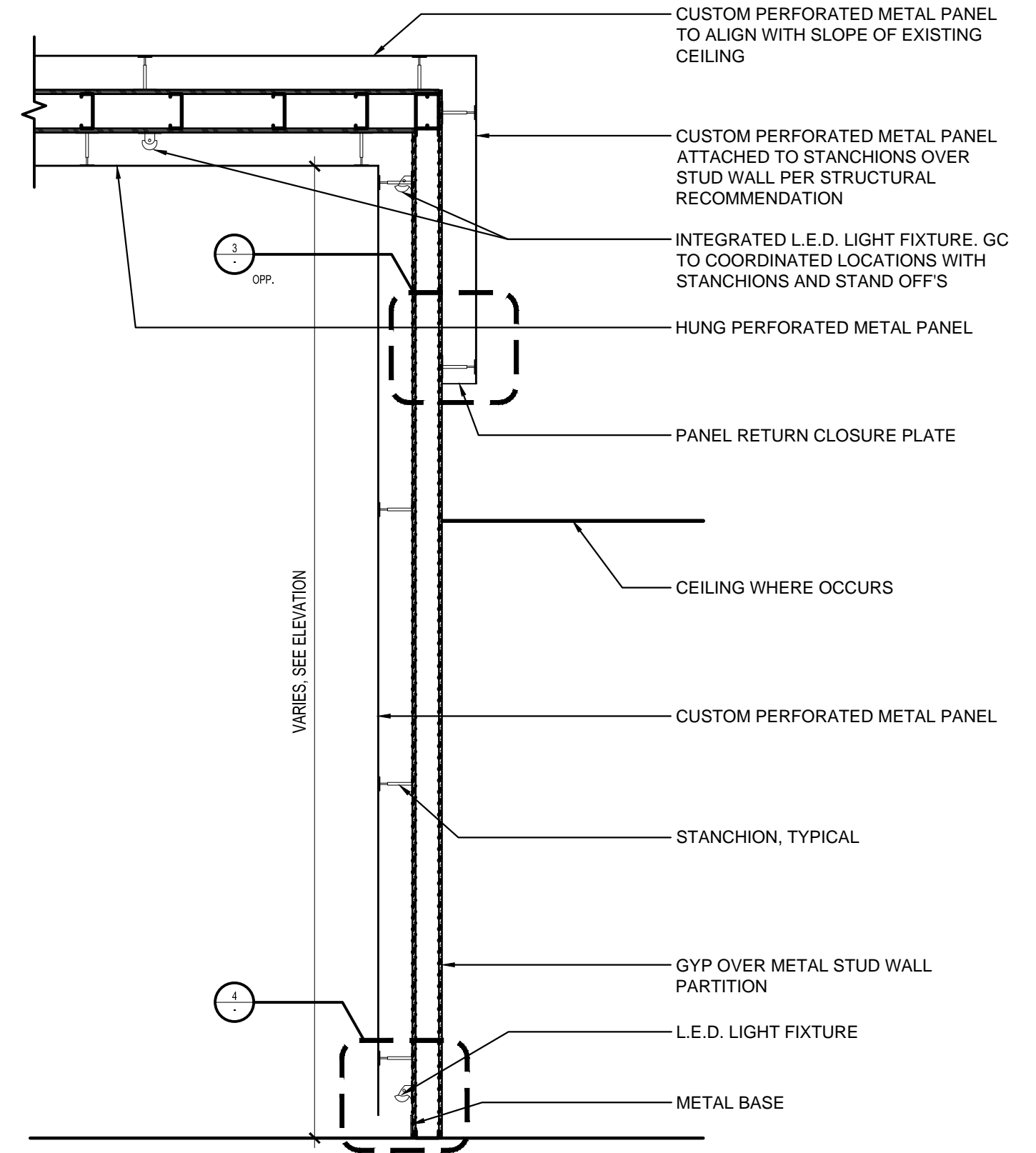
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**2**

**METAL PANEL WALL SECTION**

SCALE: 1/2" = 1'-0"

**1**



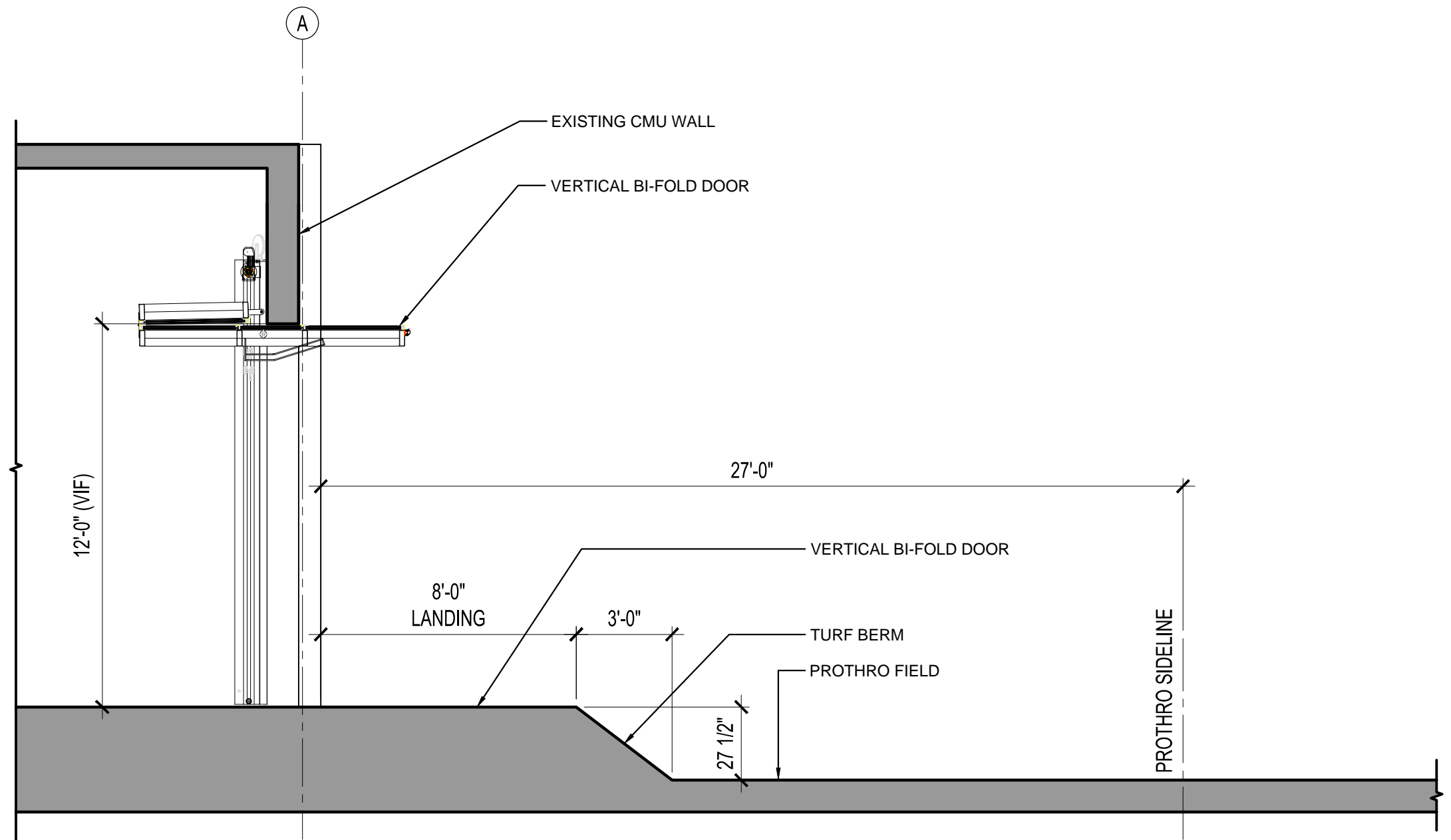
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**A6.1**

PERFORATED WALL PANEL DETAILS



VERTICAL BI-FOLD DOOR WALL SECTION  
SCALE: 1/4" = 1'-0"

1

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A6.2

VERTICAL BI-FOLD DOOR AND BERM DETAILS





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A7.1  
 ENTRY RENDERING





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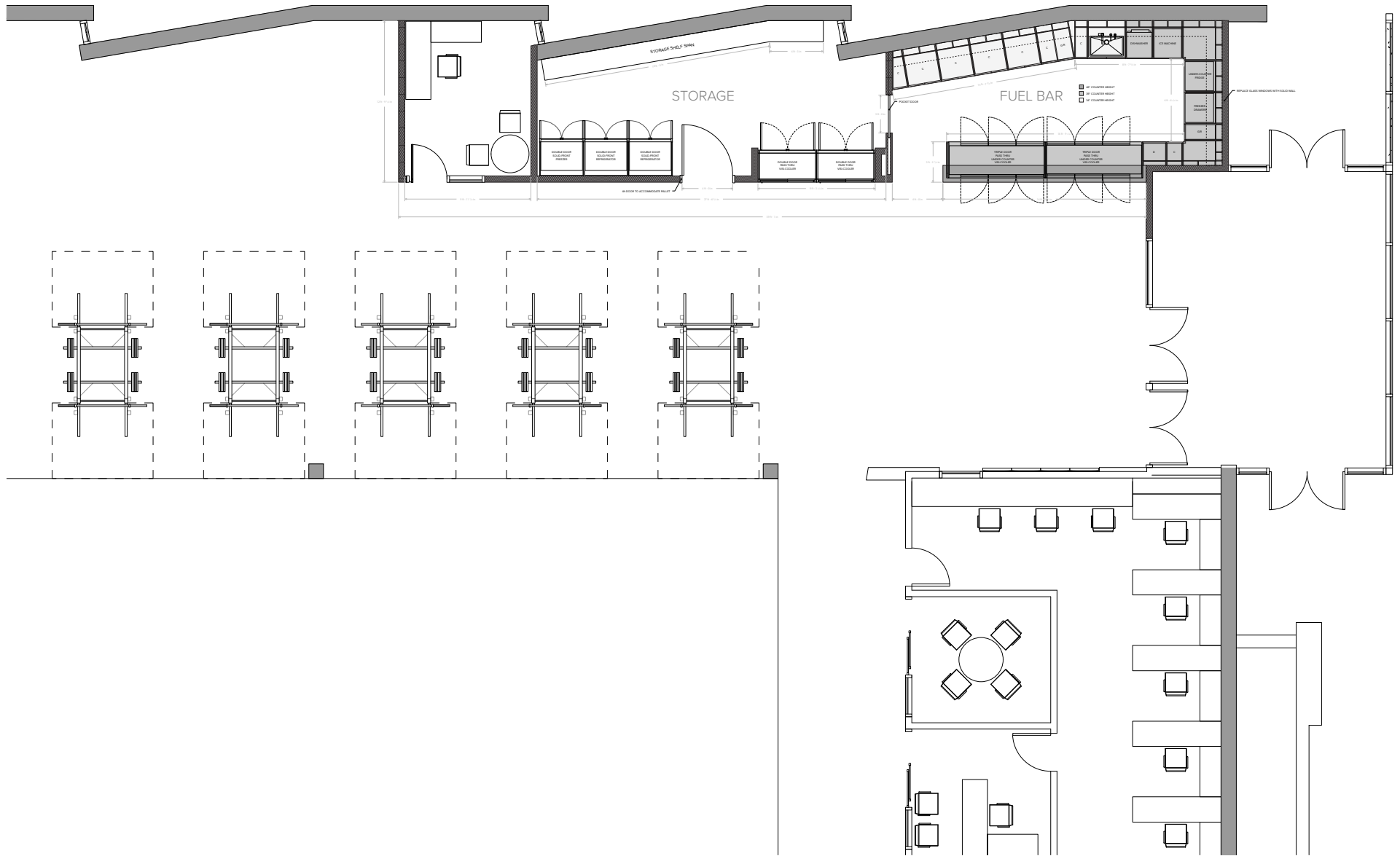
# GATORADE FUEL BAR

OCTOBER 12TH, 2018

# GATORADE FUEL BAR

OREGON STATE SPC FUEL BAR LOCATION - REVISED DESIGN

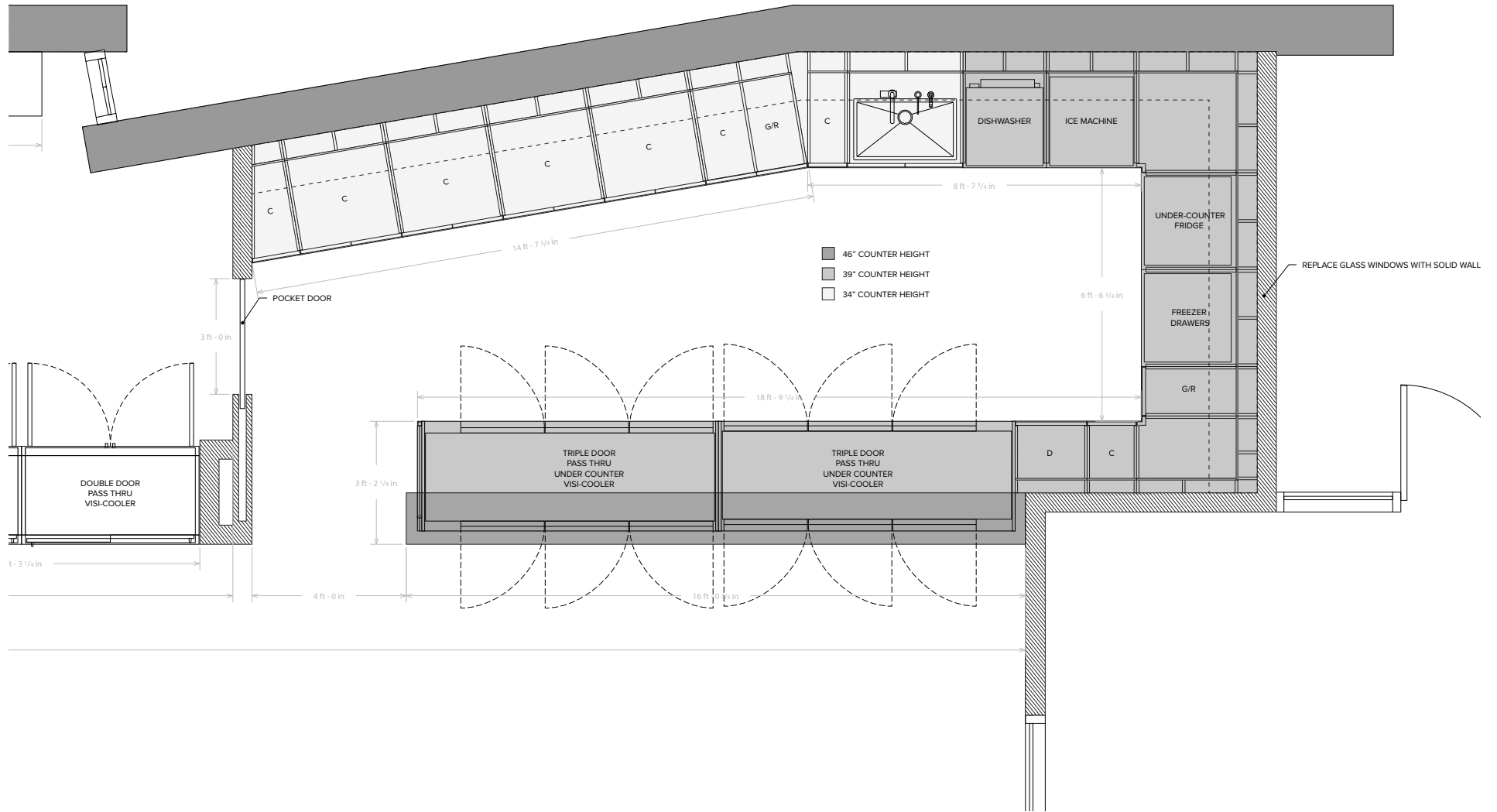
V1



# GATORADE FUEL BAR

OREGON STATE SPC FUEL BAR LOCATION - FUEL BAR AREA

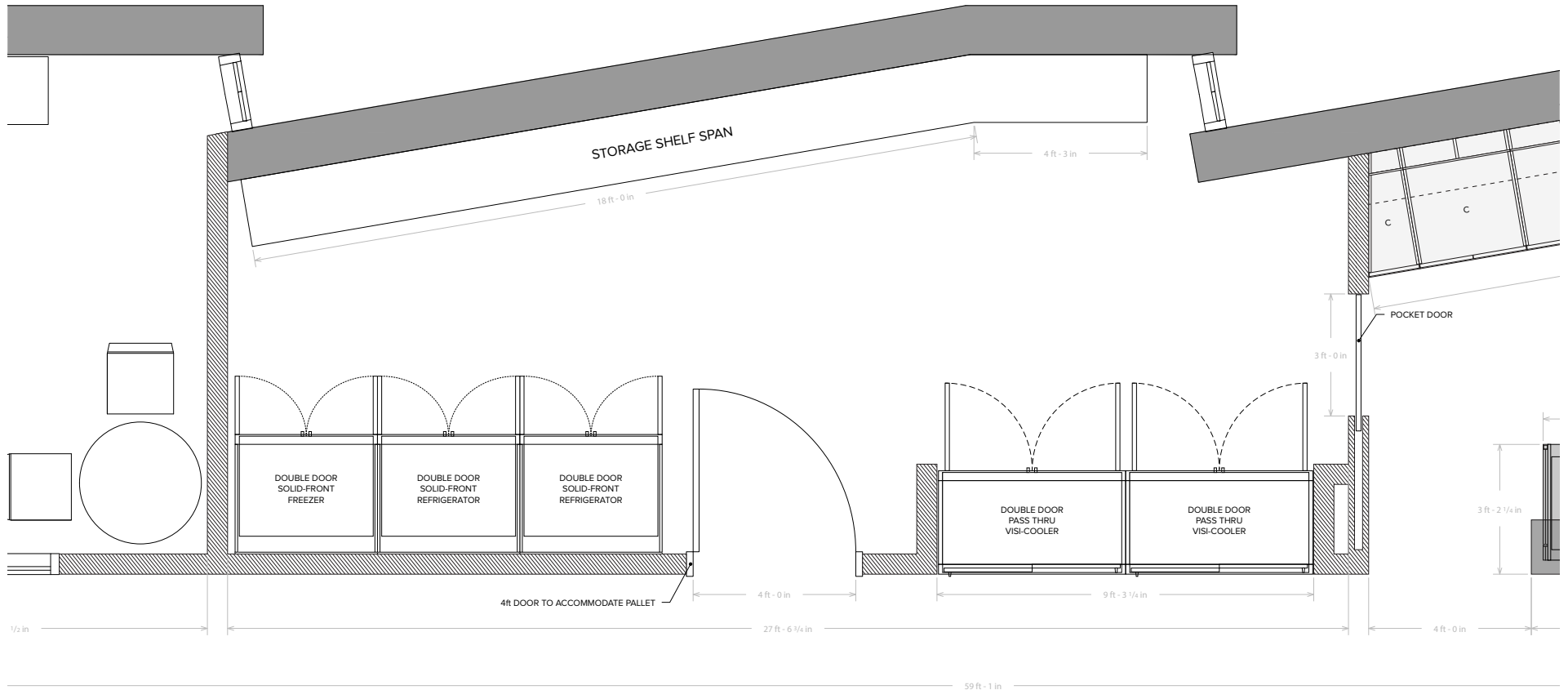
V1



# GATORADE FUEL BAR

OREGON STATE SPC FUEL BAR LOCATION - STORAGE AREA

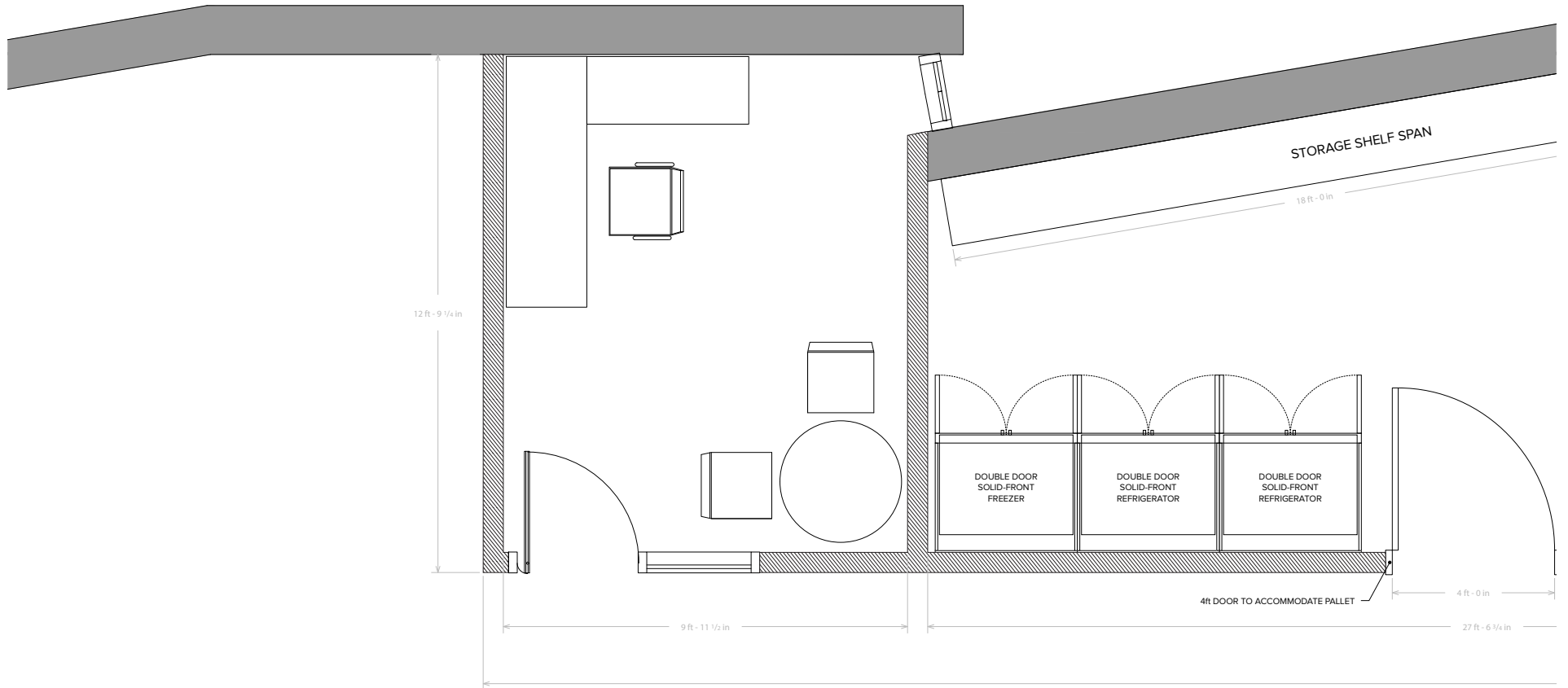
V1



# GATORADE FUEL BAR

OREGON STATE SPC FUEL BAR LOCATION - DIETICIAN OFFICE AREA

V1

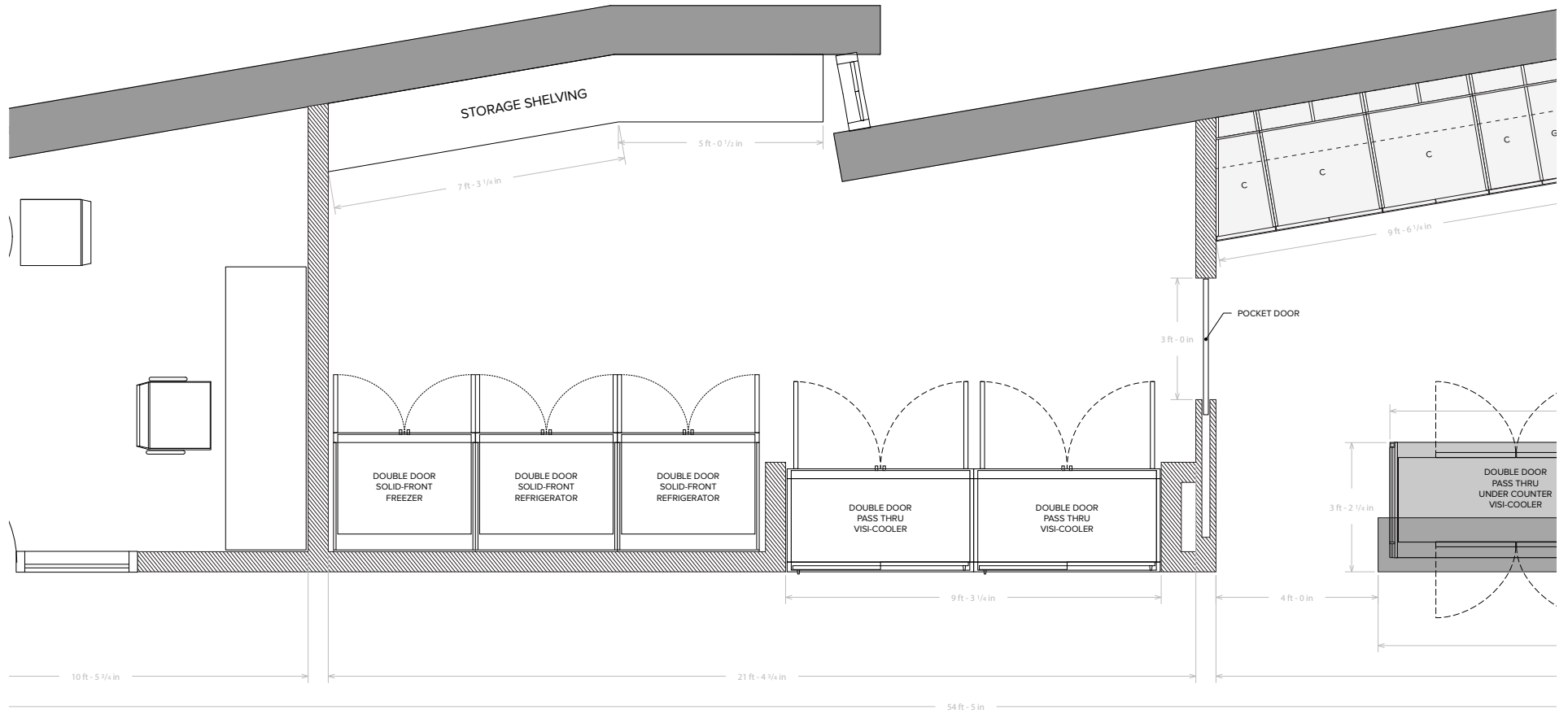




# GATORADE FUEL BAR

OREGON STATE SPC FUEL BAR LOCATION - STORAGE AREA

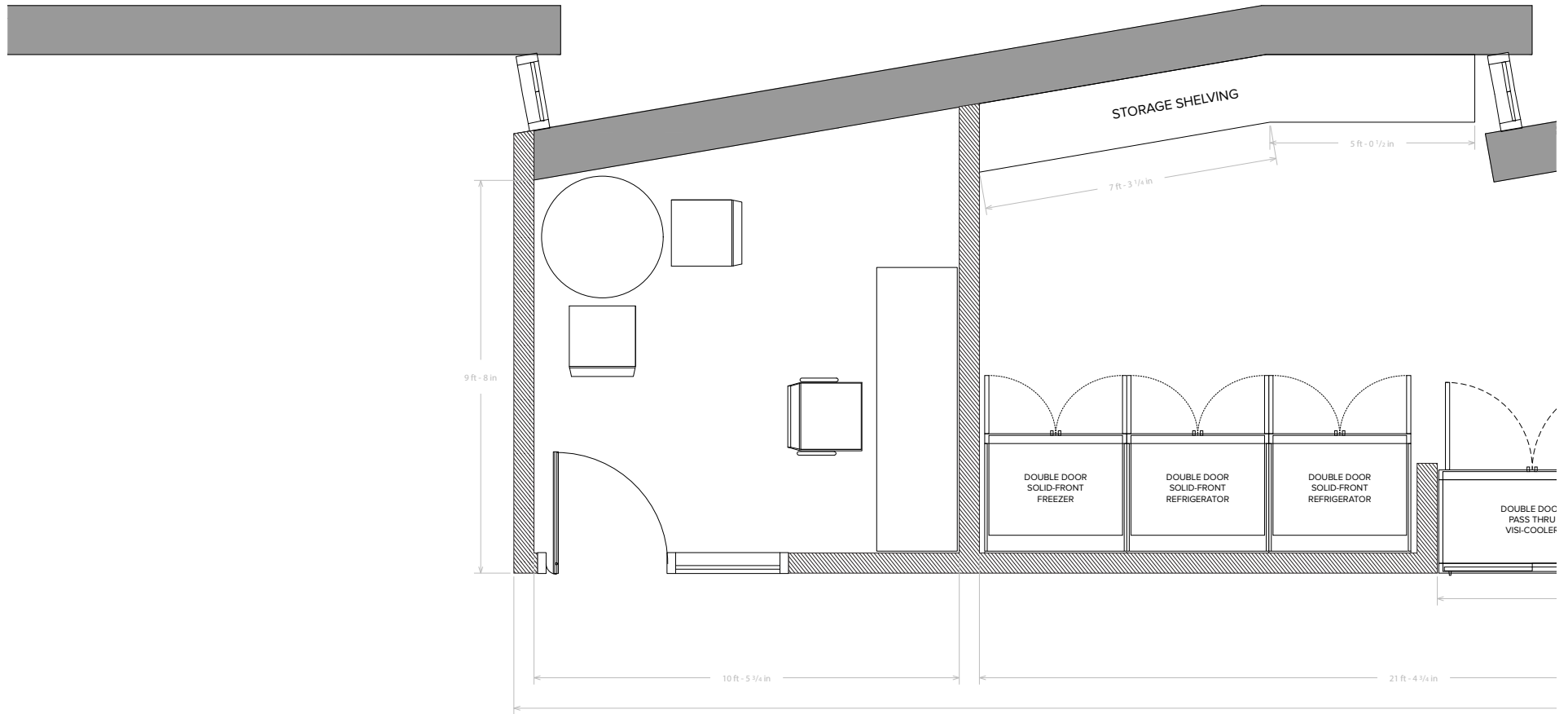
V3



# GATORADE FUEL BAR

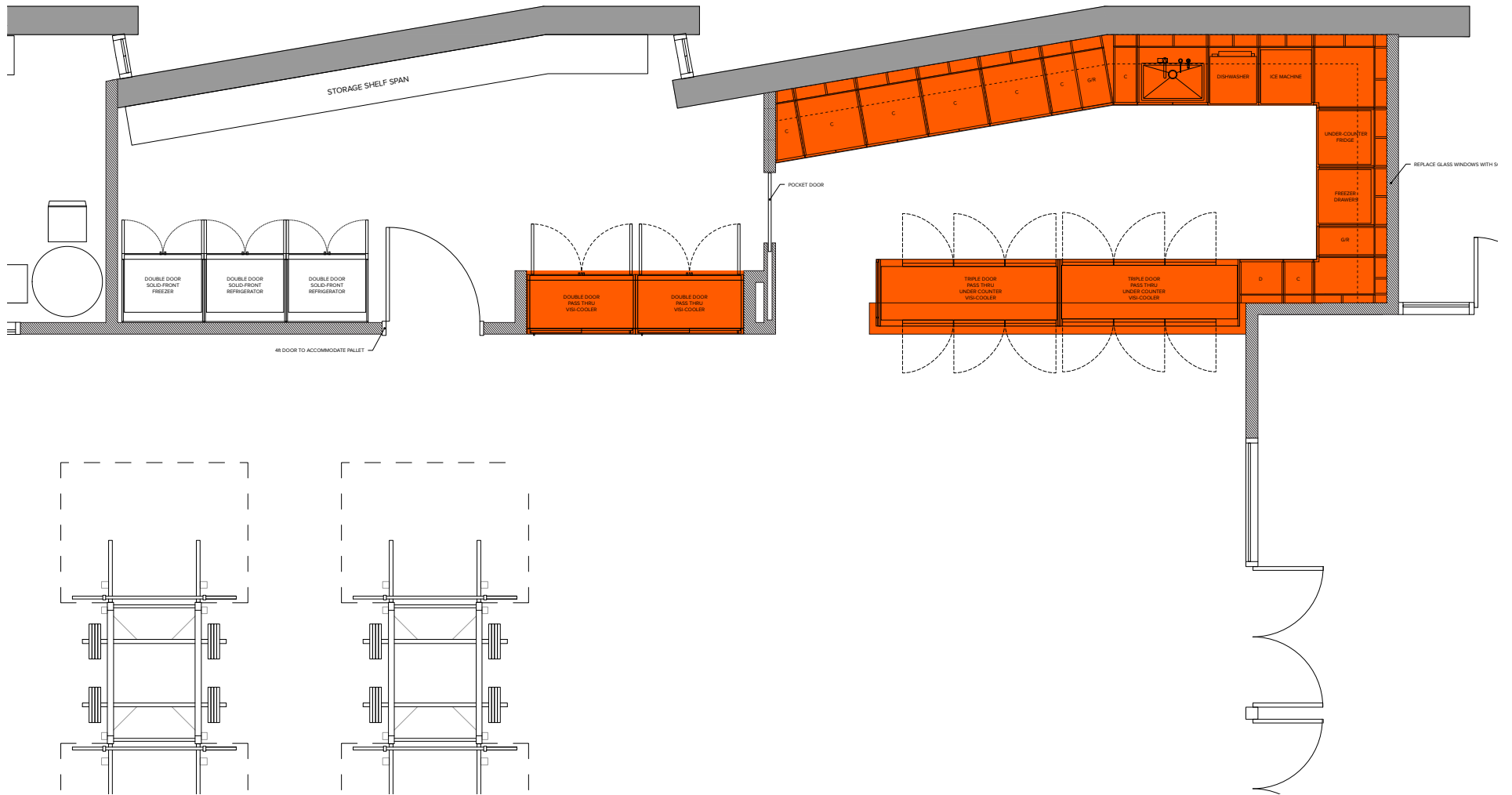
OREGON STATE SPC FUEL BAR LOCATION - DIETICIAN OFFICE AREA

V3



# GATORADE FUEL BAR

GATORADE TO PROVIDE EQUIPMENT IN THE HIGHLIGHTED AREAS



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# **OSU: Sports Performance Center**

## **Weight Room Refresh**

### **Program Narrative**

Table of Contents:

**Project Description**

**Guiding Principles**

**Program:**

- 1. Student Athlete Facilities**
- 2. Staff Facilities**
- 3. MEP / Technology / Audio Visual / Lighting**
- 4. Structural**



## Project Description:

The Sports Performance Center refresh includes the enhancement of the existing weight room equipment layout, branding integration and the expansion of the coaches' workplace. In addition, a new Gatorade Fuel Bar will be the link between the existing weight room and the future Training Table program.

The weight room will have 20 new Olympic back to back half racks flanking an open turf area. Dumbbells, glute ham machines and other equipment will be organized to maintain the flexibility and fluidity of the space. Two large bi-fold doors along the west wall will open the space and create a visual and physical access to Prothro Field.

A new powerful branded entry will create a unique experience when entering the building. The incorporation of a large digital component will not only display stats and demos for the student athletes but will impact recruits when touring the facility.

Adding more offices for the coaches will help facilitate the expansion of the full-time staff. These offices will be organized to promote connectivity to the weight room and allow them to collaborate and advise efficiently.

With an integrated vision for the weight room, branding and coaches space, the Sports Performance Center will be a vital recruiting tool for OSU Athletics.

## Guiding Principles:

- Build on the core values of OSU culture by bringing together the day to day lives of student-athletes, coaches and administrators.

## 1. Student Athlete Facilities:

### A. Entry

- A new portal at the entry will create a powerful branded moment when entering the building. The portal will be constructed of perforated metal panels will be backlit in the vertical and horizontal surface.
- A custom LED logo light fixtures will be cut in the ceiling perforated metal panels and inset with acrylic.
- The portal entry will have an accent base light and closure panels at the ends. The upper portion of the portal will align with the existing slop of the ceiling to maximize the existing daylight from the south clearstory windows.
- A custom perforation will be developed to reinforce the powerful branding moment when entering the building.
- The east entry wall will be finished to accept a full height custom applied graphic with accent lighting at the base.
- The west entry wall will contain a window from the open office for security.
- The entry will have 4 vertical TVs to display digital content controlled from the open office.

### B. Fuel Bar

- A new Gatorade Fuel Bar to be located adjacent to entry.
- The perforated metal panel entry will integrated into the design of the fuel bar.
- Fuel Bar finishes will be consistent with the overall weight room design and be coordinated with Gatorade.
- The Fuel Bar will contain a front counter, product display, 2 back loaded Visi-coolers, 1 front loaded visi-cooler, and an illuminated Gatorade logo light fixtures.

### **C. Weight Room & Cardio Room**

- New half racks per OSU's specifications will be coordinated with weight room design.
- New dumbbell & benches, lat pulldown / row machines, glute ham machines and miscellaneous equipment per OSU's specifications will be coordinated with weight room design.
- Existing Cardio Room equipment to remain.
- Existing beams, columns and CMU walls to be painted.
- Existing ceiling acoustic material to be evaluated to see if it is reusable.
- New column cover furring, power and data will be provided at existing columns
- Replace existing flooring with new Mondo Flooring in the Entry, Weight Room and Cardio Room.
- Approximately 2,800 SF of the existing concrete slab will be depressed for the rack drop zones.
- Approximately 4,150 SF of new turf to be located in the center of the Weight Room.
- Final recess depth into existing concrete slab for drop zones and turf to be evaluated and confirmed based on final flooring product selection.
- New suspended linear LED light fixtures in weight room and cardio room. Fixtures to be coordinated with existing ceiling power locations. Light fixtures to be seamless continuous runs to match existing light fixture lengths.
- Weight Room to have a full height digital stat boards at north wall.
- Weight Room to have custom built-in cubbies at east wall. 4 rows with 20 individual cubbies each for a total of 80 cubbies.

### **A. Vertical Bi-Fold Doors**

- 2 new vertical bi-fold doors to replace 2 existing west curtain walls in the weight room to create access to Prothro Field. Doors to be coordinated with existing wall openings.
- Support for vertical bi-fold door system per structural requirements.
- Frame and glazing finishes to match existing curtain wall systems in building.

### **B. Exterior Ramp**

- New exterior concrete ramp connecting access from the West side of the weight room to Prothro Field +/- 27" level change.
- A turf berm to slope up to concrete landing from field

### **C. Smoothie Prep**

- A smoothie prep room will be provided for the preparation of smoothies for the student athletes.
- The space will contain built-in millwork, storage and countertop space for 3 blenders.
- The space will be designed to meet local health department requirements and the program provided by campus nutritionists
- The space will have washable flooring per local health department requirements.
- The space will be adjacent to the Fuel Bar counter but isolated from the weight room to reduce noise infiltration

### **D. Storage**

- Storage will be provided for support to the Fuel Bar and smoothie prep.
- The space will contain built-in millwork, storage and countertop, a hand sink, refrigerators, freezers and a dishwasher.
- The space will be designed to meet local health department requirements and the program provided by campus nutritionists
- The space will have washable flooring per local health department requirements.

## **2. Staff Facilities:**

### **A. Operations Staff Offices**

- 5 private offices and 1 conference room will be provided for the head staff.
- 4 offices to have a sliding glass door with side lite on one side and 1 solid swing door each. 1 conference room to have a sliding glass door. 1 office to have a swing glass door with a side lite and 1 solid swing door
- 1 open office are with 7 cubicles and bench seating for 3 will be provided for support staff. Built-in millwork and storage will be provided.
- Offices will be located on the south side of the building and will have a view of the weight room or fuel bar.
- Conference room with video presentation capabilities.
- A storage room for office supplies will also be provided.

## **3. MEP / Technology / Audio Visual:**

### **A. Weight Room and Offices**

- Existing MEP will be reused when possible pending.
- A specific program will be developed when more information is available at a later date.

## **4. Structural**

### **A. Structural Narrative**

- See attached structural narrative.



# OSU SPORTS PERFORMANCE CENTER LEADERSHIP BUILDING ADDITION

## STRUCTURAL NARRATIVE

AUGUST 28, 2018

### INTRODUCTION

The purpose of this narrative is to describe the structural impacts of the Leadership Building addition to the existing Sports Performance Center (SPC) at Oregon State University. Based on the conceptual plans, the Leadership Building addition will include two stories added on top of the roof at the south half of the SPC, with a three-story addition directly adjacent to the east side of the SPC. Because the existing SPC was not designed for a future addition and areas of the roof are sloping, we have developed two different options to add two stories to the existing building. The first option is to re-use the existing roof structure and strengthen it as required to act as a new floor. The second option is to build a new steel framed floor above the existing roof with new steel columns on the interior and exterior of the SPC.

### OPTION 1

The existing roof has W18x35 beams at 9 feet on center supported by W24x55 girders at 36 feet on center. The steel framing supports a 1½" 18 gage metal roof deck. At the south end of the roof, the framing slopes up 4'-6". To create a floor, 4½" of concrete topping would be added to the 1½" deck for a total thickness of 6". The decking would need to be shored when the concrete is poured, and reinforcing would be added so the concrete can span the 9-foot beam spacing. At the existing slope in the roof, rigid polystyrene geofoam would be added over the concrete and a 3" concrete topping slab would be poured to create a flat floor with a 4'-6" step at the roof transition. Headed studs would be added to the existing W18x35 beams so they will act compositely with the slab and will be adequate to support the new floor loads. The W24x55 girders will need a steel WT welded to the bottom and headed studs added on top to have the capacity to support the new floor loads. The existing beams and girders would also have to be shored while the concrete is poured to limit their deflections.

The existing columns and footings would have to be strengthened for the addition of two new floors. The existing 6"x6" steel tube columns would need new steel angles and plates welded to them full height. Alternatively, it may be more cost effective to just replace the columns since the steel framing will be shored or possibly encase the columns in concrete. At the footings, new micro piles will have to be added at the existing footings. These will likely be 6" to 8" in diameter and approximately 40 to 60 feet deep. New steel framing will have to be added on top of the footing to transfer the column loads to the piles.

The lateral system is the most significant issue for the new addition. Due to the size and weight of the addition, a new lateral system will need to be added. Because of the configuration and programming of the addition and the existing weight room, steel moment frames appear to be the best solution. New steel moment frames would be added to all four sides of the addition. At the south wall, the existing CMU wall and rod cross bracing would need to be removed and replaced by a moment frame. The moment frames would be continuous, full height, from the new roof down to new foundations at the ground floor. Reference attached plans S-1 and S-2 for proposed locations.

## **OPTION 2**

For this option, a new steel framed floor would be added directly above the existing roof. Because of the slope of the existing roof at the south end, the new floor would be built approximately 6 feet above the main elevation of existing roof. The new floor would consist of steel beams and girders supporting a composite slab of 3" of concrete topping over a 3" metal floor deck. The floor framing would be supported by new steel columns that would be located in between the existing columns. New concrete spread footings would be located at these columns which would also support the additional floor and roof above. This new void space between the existing roof and new floor could provide acoustic separation between the spaces above and below.

The lateral system for this option would also be steel moment frames. However, the moment frames would be located just outside the existing building on the east, west, and south sides. The north moment frame would be located at the same location as Option 1 which aligns with the exterior wall of the addition above. Reference attached plans S-3 and S-4 for proposed locations.

## **EAST ADDITION**

The east addition will be steel framed with wide flanged beams and girders supporting composite floor slabs of 3" of concrete topping over 3" metal floor deck. The roof will consist of a 1½" metal roof deck. The east addition will tie into the addition over the south half of the SPC. However, the upper floors and roof of the addition will be seismically isolated from the existing second floor (wrestling room) and roof of the SPC building.

The east addition will also utilize steel moment frames combined with frames at the addition over the SPC to resist lateral loads. Foundations for the east addition will be conventional concrete spread footings.

## **CONSTRUCTION ISSUES**

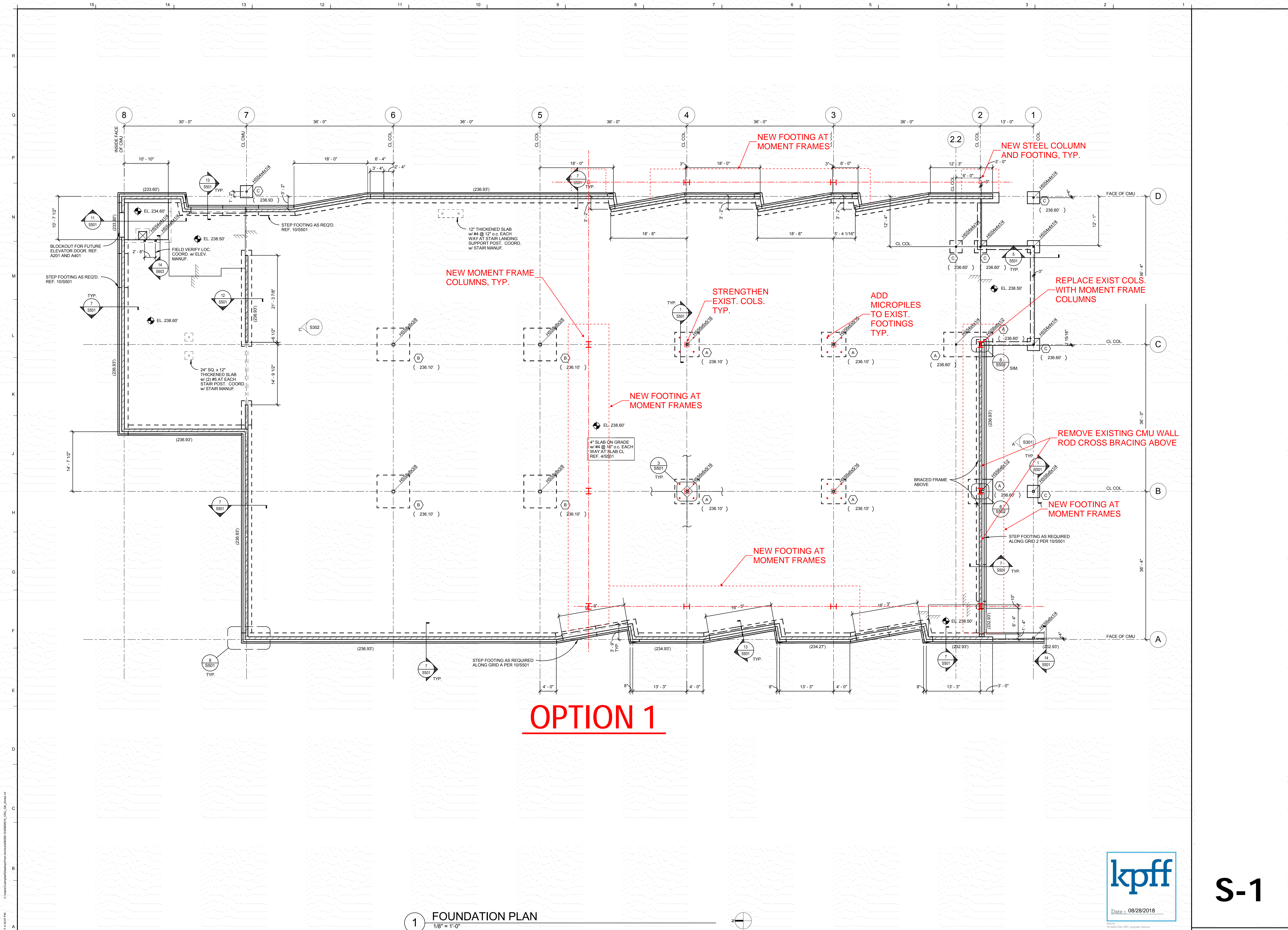
For both options 1 and 2, we do not feel that the south half of the SPC can be occupied during construction. There will be significant construction work in the existing weight room and erecting steel above the roof would be a safety concern. From a scheduling standpoint, we do not feel there is a significant construction time difference between Options 1 and 2. Option 1 may be slightly shorter since all of the steel is in place, however, due to the micro piles and modifications to the existing steel we feel the difference will be minor to the overall construction schedule.



## CONCLUSIONS

Because the existing Sports Performance Center was not designed for future floors, significant structural modifications will be required to support the Leadership Building addition. The slope of the existing roof at the south end poses additional programmatic challenges, as the elevation for the future second floor would either be quite high or have a significant step in it. A possible hybrid solution to Option 1 would be to remove the existing sloped roof portion and replace it with new floor framing. Modifications to existing MEP systems as well as the proposed remodel work in Phase 1 will also have an impact on which option is the best overall solution. While it is feasible to add on to the existing SPC, there are many variables, such as cost, schedule, program, etc., that will have to be considered by the University.

JLA:kw



**OPTION 1**

**1 FOUNDATION PLAN**  
1/8" = 1'-0"



Date: 08/28/2018

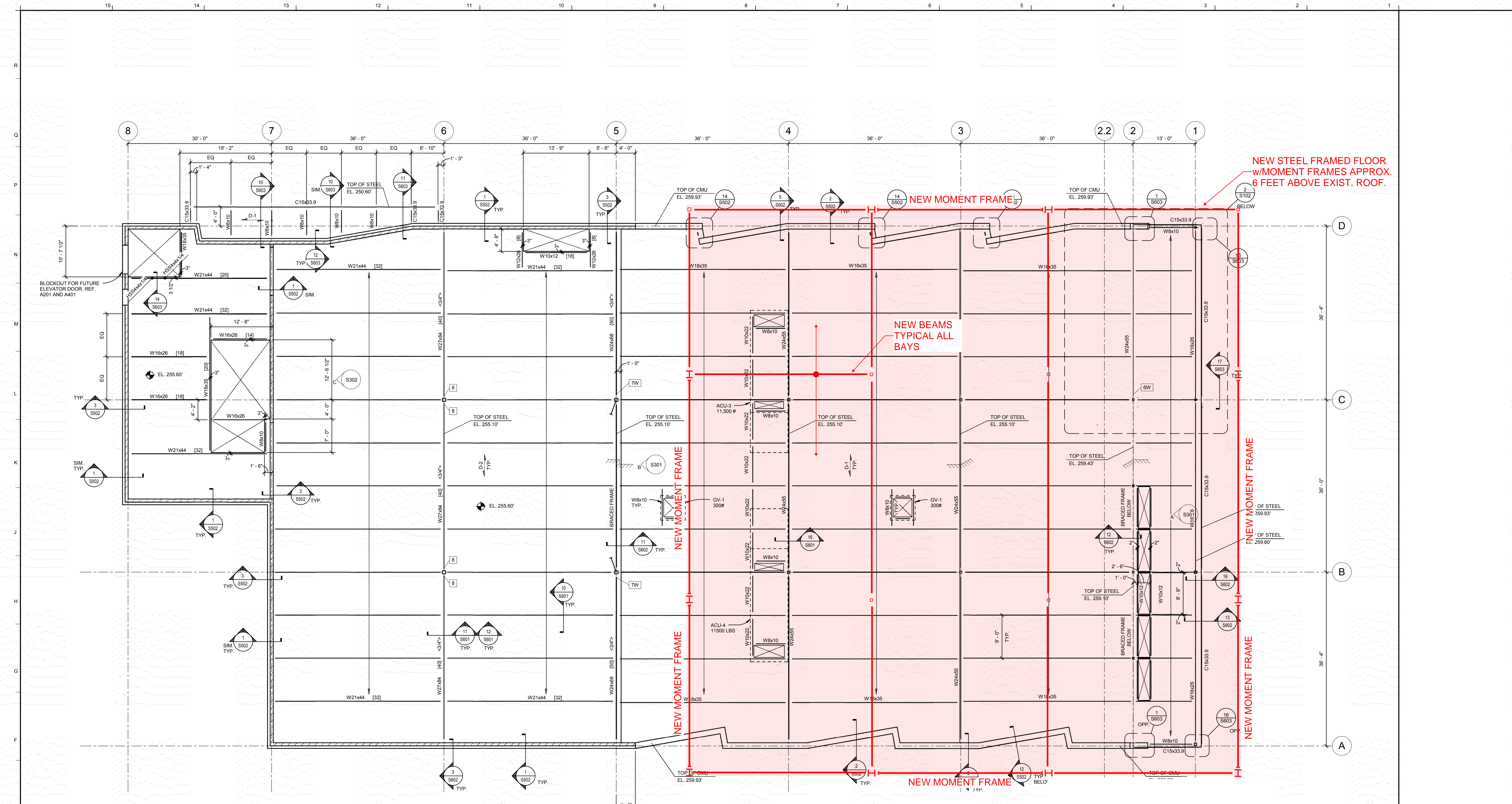












**OPTION 2**

NEW STEEL FRAMED FLOOR  
w/MOMENT FRAMES APPROX.  
6 FEET ABOVE EXIST. ROOF.

NEW BEAMS  
TYPICAL ALL BAYS

NEW MOMENT FRAME

NEW MOMENT FRAME

NEW MOMENT FRAME

NEW MOMENT FRAME

NEW MOMENT FRAME

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Our 2" x 3" Suspended Linear LED Fixture is one of our most popular suspended linear fixture types. Use our 2" x 3" fixture to illuminate residential or commercial spaces. Linear design makes them compatible with almost any look or space. These fixtures are suitable for residential, commercial, industrial, and office-space applications. They can be suspended/cable/pendant mounted from any ceiling or surface type. These fixtures can also be **surface**, or **recess** mounted. Contact-Us for more information.

### LVLBP23 Overview

- Available as individual piece in **2ft, 4ft, 6ft, 8ft, 12ft, and 16ft** sizes!
- **Linkable** Option for longer, **seamless continuous runs** with **no break in light**
- 2 Light Output Levels: **605 Lumens/foot**, or **High-Output 1,100 Lumens/foot**
- Premium **Philips®** Components Inside!
- **American Engineering and Build!**
- **Fully Dimmable to 1% | Standard!**
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- 3000K, 4000K, and 5000K Color Temperature Options
- Low Power Consumption! with Unrivaled **Lifetime** and **Durability**
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8ft | 2" x 3" Linear High Output LED Light Fixture  
8,800 Lumens

**Most Popular**

**High Output 1,100 Lumens/ft**

**Our Price: \$550.00**



8ft | 2" x 3" Linear LED Light Fixture 4,840 Lumens

**Most Popular**

**605 Lumens/ft**

**Our Price: \$399.00**

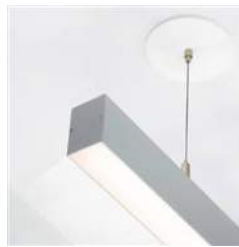


4ft | 2" x 3" Linear High Output LED Light Fixture  
4,400 Lumens

**Most Popular**

**High Output 1,100 Lumens/ft**

**Our Price: \$299.00**



4ft | 2" x 3" Linear LED Light Fixture 2,420 Lumens

**Most Popular**

**605 Lumens/ft**

**Our Price: \$269.00**



6ft | 2" x 3" Linear High Output LED Light Fixture  
6,600 Lumens

**High Output 1,100 Lumens/ft**

**Our Price: \$390.00**



6ft | 2" x 3" Linear LED Light Fixture 3,630 Lumens

**605 Lumens/ft**

**Our Price: \$328.00**



2ft | 2" x 3" Linear High Output LED Light Fixture  
2,200 Lumens

**High Output 1,100 Lumens/ft**



2ft | 2" x 3" Linear LED Light Fixture 1,210 Lumens

**605 Lumens/ft**

*Specifier Note: This Specification has been created to assist in preparing a Project or Master Specification. In accordance with Construction Specifications Institute (CSI)'s MasterFormat®, this Specification can be used with most Master Specifications following simple editing.*

*Specifier Note: **The enclosed requirements are intended for indoor installations over concrete** (or in some cases wood). If the provisions described herein are adopted for installations outdoors or over asphalt, Mondo's Warranty will be null and void and the Specifier will be held liable.*

*Specifier Note: This Specification describes the resilient athletic flooring to be installed. The number and title of the section may be changed, if the Specifier deems necessary, but in any circumstance it will belong to the general CSI Section 09 65 00: Resilient Flooring.*

## **SECTION 09 65 66**

### **Resilient Athletic Flooring**

## **1 PART 1 – GENERAL**

### **1.1 SUMMARY**

#### **1.1.1 Products Supplied**

- A. Resilient athletic flooring.
- B. Accessories required for installation, maintenance and repair.

#### **1.1.2 Related Requirements**

*Specifier Note: The following CSI sections serve as a guide to what is essential information needed to determine the acceptability of the site conditions required for the installation of resilient athletic flooring. The Specifier may choose to include other sections he/she deems necessary.*

- A. Section 02 25 00 – Existing Material Assessment
- B. Section 03 05 00 – Common Work Results for Concrete
- C. Section 06 05 00 – Common Work Results for Wood, Plastics, and Composites
- D. Section 07 05 00 – Common Work Results for Thermal and Moisture Protection
- E. Section 07 10 00 – Dampproofing and Waterproofing

### **1.2 REFERENCES**

#### **1.2.1 ASTM International (ASTM)**

- A. ASTM D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
- B. ASTM D2047: Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as measured by the James Machine.
- C. ASTM D2240: Standard Test Method for Rubber Property (Durometer Hardness).
- D. ASTM D3389: Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader).
- E. ASTM E648: Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- F. ASTM E662: Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.

- G. ASTM E1643: Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- H. ASTM E1745: Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- I. ASTM E2179: Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors.
- J. ASTM F386: Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
- K. ASTM F710: Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- L. ASTM F925: Standard Test Method for Resistance to Chemicals of Resilient Flooring.
- M. ASTM F1514: Standard Test method for Measuring Heat Stability of Resilient Flooring by Color Change.
- N. ASTM F1515: Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
- O. ASTM F1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- P. ASTM F2170: Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
- Q. ASTM F2772: Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems.

### **1.2.2 International Organization for Standardization (ISO)**

- A. ISO 9001: Requirements for Quality Management Systems.

## **1.3 SUBMITTALS**

*Specifier Note: The following are typical submittals. The Specifier may choose to include other submittals he/she deems necessary.*

### **1.3.1 Action Submittals**

- A. Provide current printed data sheets for all Products Supplied.
- B. Provide samples, 6 inches x 6 inches, for verification of such characteristics as color and surface texture of each specified resilient athletic flooring product.
- C. As necessary, provide shop drawings prepared for project illustrating layouts, details, dimensions and other data.

### **1.3.2 Informational Submittals**

- A. Provide Manufacturer's current printed subfloor preparation guidelines.
- B. Provide Manufacturer's current printed installation guidelines for Products Supplied.

### **1.3.3 Closeout Submittals**

- A. Provide Manufacturer's current printed maintenance guidelines for resilient athletic flooring.
- B. Provide Manufacturer's current printed standard warranty for resilient athletic flooring.

### **1.3.4 Maintenance Material Submittals**

- A. Provide extra stock materials from original dye lots, for use in facility operations and maintenance (approximately 2% of the total floor surface for each color, surface texture and format of Manufactured Product).

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer must be certified ISO 9001.
- B. Manufacturer must have a minimum of fifteen (15) years of experience in the manufacturing of prefabricated resilient athletic flooring.
- C. Installer must have performed installations of the same scale in the last three (3) years.
- D. Installer to be recognized and approved by the Manufacturer.

*Specifier Note: Specify mock-up dimensions as instructed by Owner or Architect.*

- E. Installation of mock-up is highly recommended and must be deemed acceptable by Owner and Architect. Mock-up is to be installed following the same procedures and utilizing the same specified materials that will be used for the actual project.

- Mock-up size: [XXin x XXin (XXcm x XXcm)].

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Products Supplied must be delivered in Manufacturer's original, unopened and undamaged packaging with identification labels intact.
- B. Products Supplied must be protected from exposure to harmful weather conditions and must be safely stored on a clean, dry, flat surface. Store rolls of resilient athletic flooring upright.
- C. Climate controlled storage is recommended. Storage temperature must not be below 55°F (13°C) and must not exceed 100°F (38°C).
- D. Avoid storing Manufactured Product for extended periods of time or additional material trimming may be required.
- E. Products Supplied need not suffer damage during handling (i.e. dents/scratches, edge chipping, excessive warping, etc.).

#### 1.6 SITE CONDITIONS

- A. The General Contractor or Construction Manager shall be responsible for ensuring all site conditions meet the requirements of the Manufacturer, as referenced herein at sections 3.2 and 3.3.
- B. Concrete subfloors, on or below grade, must be installed over a permanent effective vapor retarder, respecting current versions of the standard practice ASTM E1643 and the standard specification ASTM E1745. The vapor retarder must be placed directly underneath the concrete slab, above the granular fill, as per Manufacturer's instructions. The vapor retarder must have a perm rating of 0.1 or less and must have a minimum thickness of 10 mil (0.010in).
- C. No concrete sealers or curing compounds are applied or mixed with the subfloors (refer to Section 03 05 00 – Common Work Results for Concrete of Division 3).
- D. Installation of the resilient athletic flooring to be carried out no sooner than the specified curing time of concrete subfloor (normal density concrete curing time is approximately 28 days for development of design strength). Refer to current version of ASTM F710.
- E. The subfloor surface must be free of any paint, wax, oil, grease, sealer, curing compound, solvent or any other contaminants that may inhibit bond. All contaminants must be removed from the surface via mechanical abatement. Use of abatement chemicals is not recommended.
- F. Concrete to have smooth, dense finish, and be highly compacted with a tolerance of 1/8" in a 10ft radius (3.2mm in 3.05m radius). Floor Flatness (FF) and Floor Levelness (FL) numbers are not recognized.
- G. Moisture and alkalinity tests must be performed on all concrete substrates, under in-service conditions. It is recommended to turn on the HVAC unit prior to performing moisture testing, in order to ensure stable testing conditions and accurate results. The concrete's surface pH should be between 7 and 10. Relative humidity of the concrete slab must not exceed 85%, in accordance



with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride).

- H. If installing over wood subfloors, ensure exterior grade plywood with at least one good side, such as: APA (Engineered Wood Association) Exterior grade plywood (A-A Exterior, A-B Exterior or A-C Exterior) and CANPLY (Canadian Plywood Association) Exterior certified plywood (Canada: Grade G2S A-A or G1S A-C. USA: G2S A-A, A-B, B-B, or G1S A-C, B-C). There must be proper underfloor ventilation, plywood must be dry and should have a moisture content ranging between 6 and 12%, when measured with a quality wood moisture meter (electronic hygrometer).
- I. Maintain a stable room and subfloor temperature within the recommended range of 65°F to 86°F (18°C to 30°C), 48 hours prior to installation, during the installation, and 48 hours after the installation. Recommended ambient humidity control level is between 35 to 55%.
- J. Installation of resilient athletic flooring will not commence until the building is enclosed and all other trades have completed their work. It is the General Contractor or Construction Manager's responsibility to maintain a secure and clean working area before, during and after the installation of the resilient athletic flooring.

## 1.7 WARRANTY

- A. The resilient athletic flooring is warranted to be free from manufacturing defects for a period of one (1) year from the date of shipment from the Manufacturer.
- B. The resilient athletic flooring is warranted against excessive wear under normal usage for a period of ten (10) years from the date of shipment from the Manufacturer.
- C. Refer to current copy of Manufactured Product's Limited Warranty for all terms and conditions.

## 2 PART 2 – PRODUCTS

### 2.1 MANUFACTURED PRODUCT

#### 2.1.1 Manufacturer

- A. Mondo S.p.A.: Piazzale E. Stroppiana, 1, 12051 Alba, Fraz. Gallo - Italia.

#### 2.1.2 Description

*Specifier Note: Specify required color.*

- A. MondoArmor performance layer is prefabricated resilient virgin rubber athletic flooring, calendered and vulcanized, with a base of natural and synthetic rubbers, stabilizing agents and pigmentation, as manufactured by Mondo S.p.A or approved equal. MondoArmor shock absorption layer is prefabricated synthetic rubber honeycomb (elongated hexagon-shaped) designed and engineered for superior biomechanical properties and heavy impact resistance, calendered and vulcanized, with a particular closed cell structure, based on special isoprenic rubbers, mineral fillers, stabilizing agents and pigmentation, as manufactured by Mondo S.p.A. or approved equal.
- B. MondoArmor is phthalate-free, halogen-free, heavy metal-free, formaldehyde-free, isocyanate-free and BPA-free.
- C. Thickness: 0.709" (18mm).
- D. Colors: Provided in standard, solid background colors with random colored flecks dispersed throughout material.
- E. Surface Texture: Sealskin.

- F. Triple durometer construction. The shore hardness of the performance layer will be greater than that of the remaining layers. Shore hardness of layers to be recommended by the Manufacturer and to respect limits specified.
- G. Format: Available in sheets that are 6'1" (1.86m) wide and 39'4" (12m) long [min. 19'8" (6m)/max. 55'9" (17m)].

**2.1.3 Performance**

- A. Manufactured Product tested following standard specification ASTM F2772 (Athletic Performance Properties).
- B. Performance of the Manufactured Product to conform to the following criteria:

Performance Criterion	Test Method	Requirement	Result
Elongation at Break	ASTM D412	-	≥200%
Tensile Strength	ASTM D412	-	≥160psi
Static Coefficient of Friction	ASTM D2047	≥0.50	≥0.80
Hardness (Shore A)	ASTM D2240	-	75 ±5 (wear layer) 55 ±5 (backing)
Abrasion Resistance	ASTM D3389	≤1.0	<0.45g
Critical Radiant Flux (Performance Layer)	ASTM E648	≥0.45	≥0.45W/cm <sup>2</sup> (Class 1)
Optical Density of Smoke	ASTM E662	<450	<450
Reduction of Impact Sound Transmission	ASTM E2179	-	25dB (ΔIIC)
Thickness	ASTM F386	-	18mm (±0.3mm)
Chemical Resistance	ASTM F925	-	Compliant
Heat Resistance	ASTM F1514	ΔE ≤8.0	Compliant
Light Resistance	ASTM F1515	ΔE ≤8.0	Compliant
Athletic Performance Properties: Force Reduction	ASTM F2772	-	Class 2, >28%
Vertical Deformation	ASTM F2772	-	2.55mm
Surface Finish Effect	ASTM F2772	-	89 BPV
Ball Rebound	ASTM F2772	-	98.6%

**2.1.4 Limitations**

- A. For areas subject to surface impacts, such as designated “free weight” sections in fitness facilities, it is recommended to install the resilient athletic flooring directly over concrete for optimal performance. Whenever possible, avoid installing over weaker surfaces that may offer less resistance to continuous impacts.

**2.1.5 Materials**

- A. Provide MondoArmor resilient athletic flooring manufactured by Mondo S.p.A or approved equal.
- B. Provide resilient athletic flooring as specified in section 2.1.2 Description.

**2.2 ACCESSORIES**

*Specifier Note: Accessories should be specified in accordance with the project requirements.*

- A. Provide adhesive certified by Manufacturer: Mondo PU 105 (polyurethane). For suitability, recommendations and use please refer to Manufacturer’s current printed adhesive guidelines. In some cases, Mondo EP 55 (epoxy) may be used in areas that have not been specified to receive Everlay, and that will not be subject to surface impacts (such as falling free weights) or heavier dynamic loads (such as bleachers).

- B. Patching or leveling compound to be supplied or recommended/approved by Manufacturer.

### 3 PART 3 – EXECUTION

#### 3.1 INSTALLERS

- A. Refer to section 1.4 of this document for information on installers.

#### 3.2 EXAMINATION

*Specifier Note: The following must be ensured prior to installation of resilient athletic flooring.*

- A. Ensure that concrete subfloors, on or below grade, are installed over a permanent effective vapor retarder, respecting current versions of the standard practice ASTM E1643 and the standard specification ASTM E1745. The vapor retarder must be placed directly underneath the concrete slab, above the granular fill, as per Manufacturer's instructions. The vapor retarder must have a perm rating of 0.1 or less and must have a minimum thickness of 10 mil (0.010in).
- B. Installation of the resilient athletic flooring to be carried out no sooner than the specified curing time of concrete subfloor (normal density concrete curing time is approximately 28 days for development of design strength). Refer to current version of ASTM F710.
- C. Ensure that no concrete sealers or curing compounds have been applied to or mixed into the concrete (refer to Section 03 05 00 – Common Work Results for Concrete of Division 3).
- D. Subfloor surface must be free of any paint, wax, oil, grease, sealer, curing compound, solvent or any other contaminants that may inhibit bond. All contaminants must be removed from the surface via mechanical abatement. Use of abatement chemicals is not recommended.
- E. Confirm concrete has smooth, dense finish, and is highly compacted with a tolerance of 1/8" in a 10ft radius (3.2mm in 3.05m radius). Floor Flatness (FF) and Floor Levelness (FL) numbers are not recognized.
- F. Moisture and alkalinity tests must be performed on all concrete substrates, under in-service conditions. It is recommended to turn on the HVAC unit prior to performing moisture testing, in order to ensure stable testing conditions and accurate results. The concrete's surface pH should be between 7 and 10. Relative humidity of the concrete slab must not exceed 85%, in accordance with ASTM F2170 (in situ probes). Moisture vapor emissions from the concrete slab must not exceed the tolerance of the adhesive specified, in accordance with ASTM F1869 (anhydrous calcium chloride).
- G. If installing over wood subfloors, ensure exterior grade plywood with at least one good side, such as: APA (Engineered Wood Association) Exterior grade plywood (A-A Exterior, A-B Exterior or A-C Exterior) and CANPLY (Canadian Plywood Association) Exterior certified plywood (Canada: Grade G2S A-A or G1S A-C. USA: G2S A-A, A-B, B-B, or G1S A-C, B-C). There must be proper underfloor ventilation, plywood must be dry and should have a moisture content ranging between 6 and 12%, when measured with a quality wood moisture meter (electronic hygrometer).
- H. Maintain a stable room and subfloor temperature within the recommended range of 65°F to 86°F (18°C to 30°C), 48 hours prior to installation, during the installation, and 48 hours after the installation. Recommended ambient humidity control level is between 35 to 55%.
- I. Installation of resilient athletic flooring will not commence until the building is enclosed and all other trades have completed their work. Ensure a secure and clean working area before, during and after the installation of the resilient athletic flooring.

#### 3.3 PREPARATION

*Specifier Note: Subfloors are to be prepared according to Manufacturer's current printed guidelines; it is recommended that the Specifier review said guidelines. A copy of the subfloor preparation guidelines can be obtained from the Technical Department at Mondo America, Inc. The following are considered*

*common practice for the preparation and verification of subfloor surfaces that will receive resilient athletic flooring, and as such should not be omitted or altered in any case.*

- A. Prepare subfloor in accordance with Manufacturer's current printed guidelines.

### **3.4 INSTALLATION**

*Specifier Note: Products Supplied are to be installed following their current printed guidelines; it is recommended that the Specifier review said guidelines. Copies of all installation guidelines for Products Supplied can be obtained from the Technical Department at Mondo America, Inc. Installation procedures may be altered to accommodate special project needs, as deemed necessary by the Specifier and after he/she has consulted the Technical Department at Mondo America, Inc. to ensure suitability.*

- A. Install rolls of resilient athletic flooring following Manufacturer's current printed guidelines.
- B. Install all accessories following Manufacturer's current printed guidelines.

### **3.5 REPAIR**

- A. Refer to section 1.3.4 for extra stock materials.
- B. Repair material must come from the same original dye lot as the Manufactured Product initially installed.
- C. Repairs are to be performed by qualified installers/technicians only.

### **3.6 CLEANING**

- A. Always wait at least a minimum of 72 hours after the resilient athletic flooring has been completely installed before performing initial maintenance.
- B. Always maintain the resilient athletic flooring following Manufacturer's current printed guidelines.

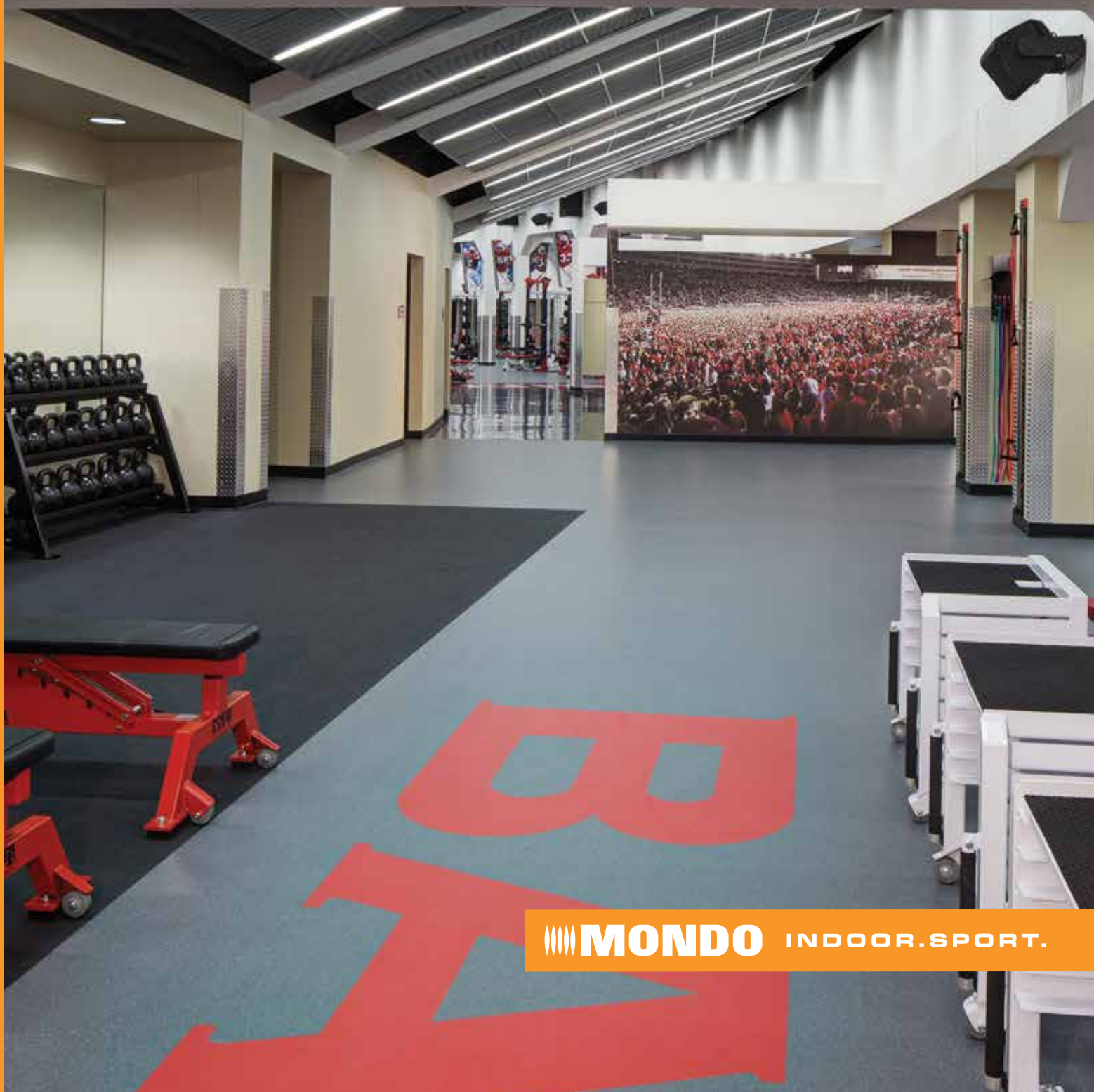
### **3.7 PROTECTION**

- A. As needed, protect resilient athletic flooring with 1/8" Masonite during and after the installation, prior to acceptance by the Owner.



# M O N D O A R M O R

EXCEPTIONAL WEIGHT RESISTANT RUBBER FLOORING



**MONDO** INDOOR.SPORT.



# MONDOARMOR

**EXCEPTIONAL WEIGHT RESISTANT RUBBER FLOORING**

Unique 18mm vulcanized system (6mm wear layer combined with 12mm underlayment) with 100% virgin rubber strike layer which is engineered to withstand the weight and abuse of sport equipment in strength and conditioning areas. Designed for free weight platforms for use in intensive weight and conditioning activity. Provides outstanding comfort and foot stability. Triple durometer construction (3 layer structure) provides excellent resistance to impact, cutting or ripping, due to a total thickness of 18mm.



## STRIKE LAYER

- Solid 3mm homogeneous virgin rubber wear layer
- Engineered to withstand intensive and repetitive impact from strength and conditioning drills and equipment
- Antibacterial and antimicrobial throughout
- Non porous surface provides ease of maintenance and antibacterial protection against:
  - MRSA
  - Odors
  - Allergic reaction from harmful off-gassing
- Highly slip resistant

## COMFORT LAYER

- The unique honeycomb-shaped backing texture is protected under industrial design law
- Optimum stability and comfort to perform for long intensive training sessions
- Unique construction provides superior protection against heavy impact

## MONDOARMOR ADVANTAGES

- Triple durometer construction
- 100% recyclable
- High sound absorption characteristics (IIC 48)
- >28% shock absorption (ASTM F2772)
- 2.5mm deformation



ME 14 Gold



ME 12 Lime Green



ME 07 Beige



ME 21 Bright Red



ME 04 Dark Grey



ME 17 Burgundy



ME 10 Blue



ME 16 Black

Texture: Sealskin

I 1/4" (6 mm)\*  
 1/2" (12 mm)\*\*  
 3/4" (18 mm)\*\*

| 6' (1.83 m)  
 6' 2" (1.90 m)

\*Some application restrictions may apply. This product thickness is not recommended in free weight areas. Custom colors available on order. Minimum quantity required. \*\*Available in rolls only.

[WWW.MONDOINDOORSPOORTUSA.COM](http://WWW.MONDOINDOORSPOORTUSA.COM)

8 0 0 3 6 1 3 7 4 7

mondo@mondousa.com

Sales Data Sheet

# Training Ground with Nike Grind TurfX

Train in style with this extremely durable turf system featuring SmashPad. The high pile turf is customizable, with options for logos, agility drills, or other designs, and is available in seven different colors. The thatch support system of this product eliminates the need for infill, making it the perfect indoor training turf.

## Applications

Turf/Fields

Functional Training

Extreme Functional Training

## Product Options

**Sizes:** TurfX is a 35mm system comprised of a 25mm turf wear layer field united to a 10mm Nike Grind SmashPad (25mm/10mm). SmashPad is an underlayment featuring performance rubber and Nike Grind. Nike Grind is a high functioning raw material harvested from recycled athletic shoes and Nike's manufacturing footwear by-product.



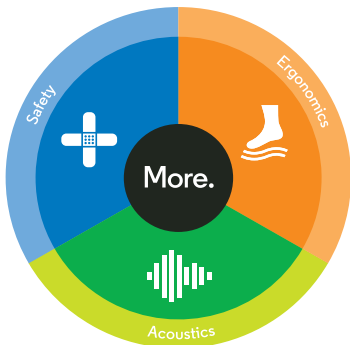
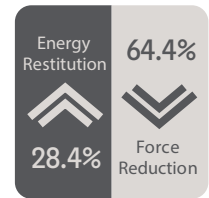
Turf: 25mm x 15' wide x custom cut length rolls  
SmashPad: 10mm x 48" wide x custom cut length rolls





## Technical Details

Performance Criteria	ASTM Standard	Typical Results
Turf Bind	D1335	>8 lbs.
Tear Strength Average	D5034	>200 lbs.
Lead Content	F2765	<50 ppm
Total Yarn Linear Density	D1577	12,240 Denier
Yarn Breaking Strength	D2256	>19 lbs.
Yarn Melting Point	D7138	248 °F
Flammability	D2859	Pass
Coefficient of Friction	D2047	0.35
V.O.C. Compliant	D5116	Pass
Chemical Resistance	F925	Pass
Resistance to Heat	F1514	$\Delta E < 0.8$
G-Max	Clegg	.63 G-Max
Vertical Deflection/Defomation	F2772	8.38mm
Surface Effect Slip Resistance	F2772	Pass 91 BPV
Force Reduction	F2772	61.4%



## Can a floor do more? Yes.

At Ecore, we are building our company and the products we offer based on the simple notion that floors should elevate beyond current expectations. Our energy is focused on the interaction between people and the surface. We engineer performance well beyond industry standards related to

acoustics, ergonomics and safety. Harvesting the unique power from a myriad of waste streams, Ecore creates products that align—substantial force reduction with a balanced amount of energy return to create dynamic surfaces that are catered to the individual and the application.



# Colors



White

1000

 Order Sample

Standard: 35MM

Red

5300

 Order Sample

Standard: 35MM

Clay Red

5500

 Order Sample

Standard: 35MM

Florida Blue

7400

 Order Sample

Standard: 35MM



Navy

7750

 Order Sample

Standard: 35MM

Field Green

8200

 Order Sample

Standard: 35MM

Black

9999

 Order Sample

Standard: 35MM

Minimum yields, additional lead time, and specific pricing will apply to custom options.

Please contact your local agent for more details regarding these options.

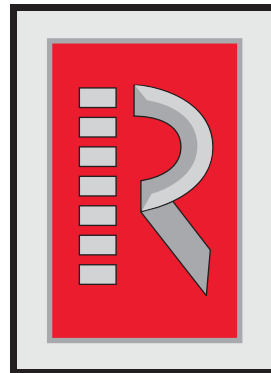


Max Size: 30' W x 20' H  
 Minimum Internal Projection  
 Standard Photo Eye Sensor  
 Standard Safety Brake  
 No Head Structure Required  
 Manual or Motorized  
 Maximum Clear Opening  
 Turn Key / Single Source  
 Made in the USA



[www.renlitadoors.com](http://www.renlitadoors.com)

Ph: 903-583-7500 • Email: [sales@renlitadoors.com](mailto:sales@renlitadoors.com)



**RENLITA**  
 Custom Opening Solutions

PLEASE VISIT [WWW.RENLITADOORS.COM](http://WWW.RENLITADOORS.COM)

Contact your local Distributor!

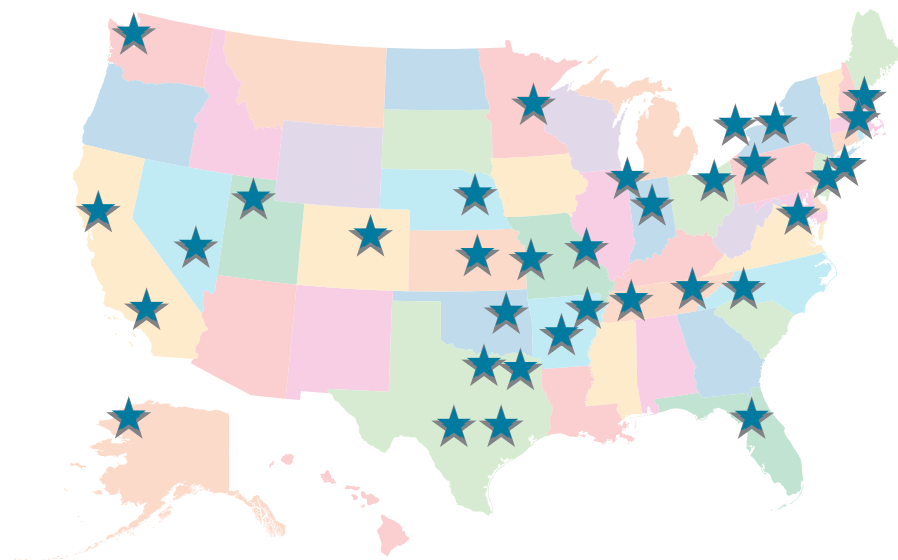
Renlita Systems

Renlita Safety Device

Design Center (BIM / Revit Drawings)

Renlita Photo Gallery

Contact Info and MORE!



**BUILT TO  
 YOUR DESIGN  
 OBJECTIVES**

**SINGLE SOURCE**  
 GLASS  
 FINISH  
 INSTALLATION

**SAFETY**  
 OBSTRUCTION SENSING  
 PHOTO EYES  
 FAIL SAFE DEVICE



**RENLITA**  
 Custom Opening Solutions

**S-2000 HINGEWAY**  
 MADE IN THE USA

*Custom is the Renlita Standard.*

The Renlita S-2000 Hingeway utilizes counterweight balance technology to ensure smooth operation and durability. Constructed from structural steel sections and suitable for Residential, Industrial, and Commercial applications.

When opening, the S-2000 Hingeway system folds along a horizontal hinge line and moves upward. Flush mount bottom panel opens until horizontal and creates an awning effect when open.

The S-2000 Hingeway comes equipped with the standard safety features that you expect including obstruction sensing motor, safety photo eyes, and a patented failsafe device.







# Features



# Specifications

## S-2000 HINGEWAY

The Renlita S-2000 Hingeway utilizes counterweight balanced technology to ensure smooth operation for a luxurious, elegant, and durable opening solution from structural steel sections and designed to withstand 30 psf high wind loads with minimal deflection.

From concept to completion, Renlita provides turnkey services that include specified finish, glass or cladding, installation, and service. Single source provides customers with confidence that all aspects of the project are properly coordinated and designed while providing a single warranty for the entire system.

Renlita is the industry leading provider of vertical custom opening solutions utilizing patented safety devices, complete system thermal certification, in-house engineering services, and architectural grade finishes and components.

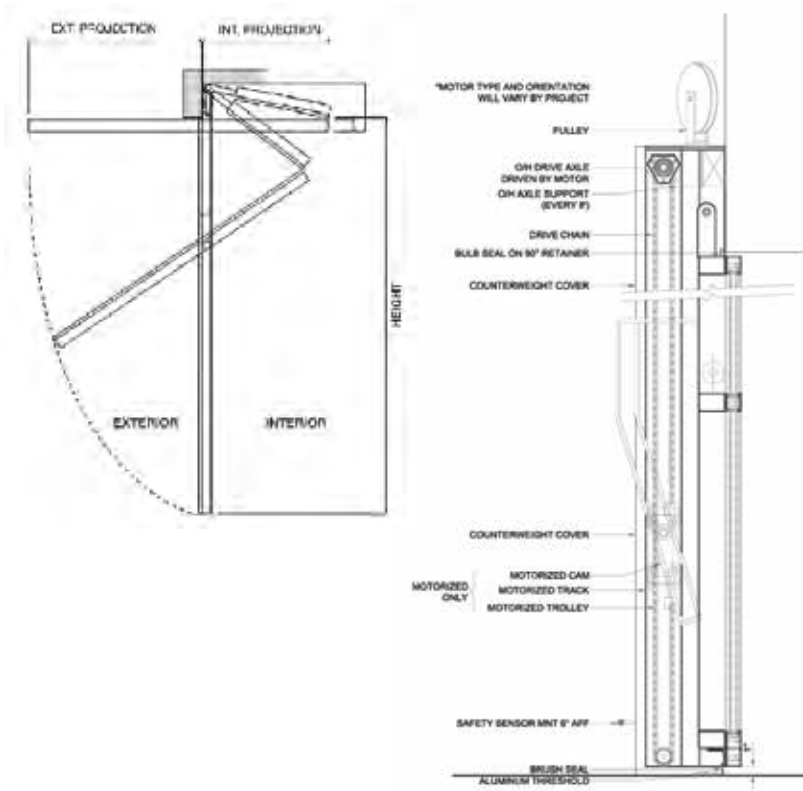
*Contact one of Renlita's local distributors to begin designing your next customized system.*



[www.renlitadoors.com](http://www.renlitadoors.com)  
Ph: 903-583-7500  
Email: [sales@renlitadoors.com](mailto:sales@renlitadoors.com)



The Renlita S-2000 Hingeway counterweight balanced system is designed for industrial, commercial, and residential applications where minimum internal projection is required. Little headroom is necessary for this type of system. The system will accept a wide range of cladding and/or glazing materials and comes in many colors to suit your design.



### Size:

Maximum width: 30'  
Maximum height: 20'

Wind loading can be a critical factor especially in hurricane prone areas. Unless otherwise specified the systems are designed to withstand wind loading of 30psf.

### Cladding:

Wood - Glass - Metal - Stone  
Customer specified  
\*2" thick  
\*15psf

### Finishes:

Powder coated to AAMA 2604 standard color options  
RAL Colors  
IFS Architectural Colors  
Custom color matches upon special request

### Installations:

Installations provided by Distributor with factory trained & certified technicians.

### No Structural at the head required

Attaches to the jamb only  
Requires no structural member at head

### Motorized or Manual

Motorizes by 110 volt / 8 amps motor system  
Obstruction sensing technology  
Controls / Touch Screen Control Station  
Manual  
Operated by hand without special cranks or tools.

### Concept to Completion / Turn Key

*Designed, manufactured, and fabricated in the USA*





SECTION 08360

SECTIONAL OVERHEAD DOORS

1. GENERAL

1.1. SECTION INCLUDES

- A. Overhead doors.
- B. Bi-fold doors.

1.2. RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Prepared opening in concrete. Execution requirements for placement of anchors in concrete wall construction.
- B. Section 04810 - Unit Masonry Assemblies: Prepared opening in masonry. Execution requirements for placement of anchors in masonry wall construction.
- C. Section 05500 - Metal Fabrications: Steel frame and supports.
- D. Section 06114 - Wood Blocking and Curbing: Rough wood framing and blocking for door opening.
- E. Section 07900 - Joint Sealers: Perimeter sealant and backup materials.
- F. Section 08710 - Door Hardware: Cylinder locks.
- G. Section 09900 - Paints and Coatings: Field painting.
- H. Section 16150 - Wiring Connections: Electrical service to door operator.

1.3. REFERENCES

- A. ASTM - C1048 Glass Tempered
- B. AA-6063-T6 - Standards for Aluminum Alloy and Temper.
- C. ASTM A513, Type 1 – Steel Tubes.
- D. ASTM A1008 – Sheet Steel for Covers.
- E. ASTM A36 – Steel Bars.
- F. ASTM A36 – Sheet Steel for Tracks/Channels.

1.4. PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Design pressure of \_\_\_\_\_ lb/sq ft (\_\_\_\_\_ kPa).
  - 2. Maximum deflection of 1/300 of opening width.

- B. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

#### 1.5. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation manuals.
  - 4. Owners Manual with service information
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, accessories and anchors, jamb details, connection details, anchorage spacing, hardware locations, and installation details.
- D. Selection Samples: For each finish product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 3 inches (150 mm) square, representing actual product, color, and patterns.
- F. Operation and Maintenance Data.
- G. Submit written agreement in manufacturer's standard form signed by manufacturer and installer agreeing to repair or replace defective doors that are warped, twisted, bowed or damaged as a result of defective product.

#### 1.6. QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience and/or be a factory trained and authorized installation company.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

#### 1.7. DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Store materials in a clean, dry, ventilated, weathertight, secure location.
- C. Protect materials from soiling, abuse, loss and moisture damage.

#### 1.8. PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.
- B. Environmental Conditions: Prior to and during installation, environmental conditions shall be in accordance with door manufacturers latest published recommendations

for temperature, rain, wind, humidity, ventilation, and illumination.

- C. Opening shall be free and clear of debris, stored materials, scaffolding, and temporary walls as necessary for installers to perform the installation.

## 1.9. WARRANTY

- A. Manufacturer warrants to the original purchaser within two years from date of installation, if a product sold under this warranty proves to be defective in material or workmanship through normal use and service according to maintenance and operations instructions, as verified by inspection by persons authorized by Renlita Overhead Doors, Renlita Overhead Doors will replace or repair (at Renlita Overhead Doors option) the defective product.
- B. Manufacturer warrants the steel frame against rust, in painted non-damaged condition for a period of two years from original purchase. This warranty does not apply to scratched, dented, damaged or corroded areas of the frame.

## 2. PRODUCTS

### 2.1. MANUFACTURERS

- A. Acceptable Manufacturer: This Section is based on the products of Renlita Doors North America, LLC, which is located at [2430 Albert Broadfoot St Bonham, TX 75418](#). ASD. Tel: [903-583-7500](#). Fax: [903-583-7544](#). Web: [www.renlitadoors.com](http://www.renlitadoors.com).
- B. Substitutions: Not permitted.

### 2.2. OVERHEAD DOORS

- A. Two Leaf Hinged Counterbalanced Overhead Doors: Two horizontal panels hinged together, weather lapped at horizontal joint; rising vertically on roller and track system fixed to building structure to stack in a folded position under lintel.
  - 1. Approved Product: S-2000, Hingeway Doors.
- B. Framework: Welded construction fabricated from rolled hollow section steel members with minimum wall thickness of 0.125 inch (3.1 mm). Beams shall be designed for maximum dead load deflection of 1/300th part of the span.
- C. Counter Balancing: Counterweight system with enclosed counterweights suspended by 7/19 flexible multi-strand steel cables with minimum safety factor of 6:1. Cable shall be guided in steel sheaves with a minimum sheave to cable diameter ratio of 19:1. Sheaves shall be capable of carrying design loads.
- D. Load is contained in the jambs and does not require a load bearing header or any additional lateral supports
- E. Mechanical pin lock fail-safe device that prevents door movement automatically in the event of a counterbalance or lifting device failure. Safety brake shall automatically reset once repairs are completed and be capable of repeated engagement without replacement of brake or components.
- F. Construct steel door sections from carbon steel hot rolled tube complying with ASTM A-500 Grade B and ASTM A-36.
- G. Counterweight Covers: Counterweights shall be protected and covered with a removable pressed sheet (aluminum or steel).
- H. Manual Operation: As indicated on the Drawings and Door Schedule.
  - 1. Provide a manual operating handle and safety device to be used to manually

open/close the door and to be stored in operating channel when door is in open position acting as a safety device preventing accidental closure of the door.

2. Any door that cannot be easily manually operated is unacceptable.
3. Door shall be equipped with keyed slide bar locking device located at lower panel adjacent to operating channel.

I. Size:

1. As indicated on Drawings.
2. Height: \_\_\_\_\_ feet (\_\_\_\_\_ meters).
3. Width: \_\_\_\_\_ feet (\_\_\_\_\_ meters).

J. Locking:

1. Internal slide locks, unless otherwise specified.

K. Escape and Access Doors: Outward opening doors with night latch.

### 2.3. GLAZING AND CLADDING

A. Glazing: Glazed in accordance with AS1288.

1. Glass: 1/4 inch (6.35 mm) laminated safety glass.
2. Glass: 3/8 inch (9.5 mm) laminated safety glass.
3. Glass: 1 inch (25 mm) dual pane insulated glass.
4. Tempered Glass: 1/8 inch (3 mm).
5. Tempered Glass: 1/4 inch (6.35 mm).
6. Acrylic Polycarbonate: 1/8 inch (3 mm).
7. Acrylic Polycarbonate: 3/16 inch (4.76 mm).
8. Acrylic Polycarbonate: 1/4 inch (6.35 mm).
9. Glazing Wedges: Co-extrusions, fitted between aluminum panels.
10. Glazing Beads: PVC extrusions.

B. Panels:

1. Panels: Wood.
2. Panels: Plywood.
3. Panels: Metal.
4. Panels: Galvanized steel sheet.
5. Panels: Perforated sheet metal.
6. Panels: Mesh.
7. Panels: Woven wire.
8. Panels: Composite.
9. Panels: Acrylic.
10. Panels: Insulated.
11. Panels: \_\_\_\_\_.

C. Thermal Ratings/Performance

1. Rating is dependent on glazing. Example simulations below:

MODEL	GLAZING	LOW-E COATING	U-FACTOR	SHGC	VT
S-2000	DUAL PANE 1" IG	SOLARBAN 50 ON SURFACE #2	.53	.31	.53
S-2000	DUAL PANE 1" IG	SOLARBAN 70XL ON SURFACE #2	.51	.22	.49
S-2000	DUAL PANE 1" IG	CARDINAL 27C ON SURFACE #2	.47	.25	.52
S-2000	DUAL PANE 1" IG	CARDINAL 366 ON SURFACE #2	.47	.22	.48
S-2000	TRIPLE PANE 1" IG	CARDINAL 356 ON SURFACE #2 AND CARDINAL 18C ON SURFACE #4	.41	.20	.43

## 2.4. FINISHES

- A. Finish, Ferrous Metals: All surfaces except working machine parts shall receive the following factory applied finish:
  - 1. Powder coating.
  - 2. Abrasive clean to SSP-SP5
  
- B. Finish, Aluminum: Provide the following factory applied finish:
  - 1. Clear anodized aluminum.
  - 2. Powder coating.
  
- C. Finish, Color:
  - 1. As designated in Door Schedule
  - 2. As selected from manufacturer's full range of available colors.
  - 3. Custom color.
  - 4. Manufacturer/Color:\_\_\_\_\_.

## 2.5. MOTORS\*\* NOTE TO SPECIFIER \*\* Retain one of the following two paragraphs. Delete this Article if no motorized doors. Coordinate with Division 11 for control systems and Division 16 for electrical work.

- A. Approved Product: Chamberlain Liftmaster 3900 Series Jackshaft Operator.
  - 1. On board logic controllers. Force memory and automatic obstruction sensing.
  - 2. Motor: 24 volt DC.
  - 3. Sealed motor system.
  - 4. No railings or trolleys; ultra quiet.
  - 5. Battery backup – available option
  - 6. Mounts beside door or remote mount with additional adapter kit
  - 7. LED wall controls with keypad security option
  - 8. Warranty: 5 years.
  
- B. Industrial Jackshaft Operator: Chamberlain Liftmaster Series J Industrial Jackshaft Operator.
  - 1. Maintenance warning system notifies users when scheduled maintenance is due.
  - 2. Motor: 1/2 HP switchless motor with the following:
    - a. 115 volt. (please select either A or B)
    - b. 208/230 volt.
    - c. Single phase. (Please select either option C or D)
    - d. Three phase.
    - e. Separated high voltage wiring.
    - f. Diagnostic LEDs.
  - 3. Photo eye safety sensors.
  - 4. Touchscreen wall controls with optional keypad security
  - 5. Warranty: 2 years.
  
- C. Commercial Jackshaft Operator – ZAP 8825D - Superdrive
  - 1. Maintenance warning system notifies users when scheduled maintenance is due.

2. Motor: switchless DC motor with the following:
  - a. 120 volt.
  - b. Single phase.
  - c. Separate 8800 series 3 control panel.
  - d. Diagnostic LEDs.
  - e. Adjustable force memory, motor power settings.
  - f. Automatic self-adjusting up/down stop system.
  - g. Battery Backup available upon request.
3. Photo eye safety sensors.
4. Automatic obstruction sensing; motor reverses if door bottom contacts an obstruction.
5. Touchscreen wall controls with optional keypad security
6. Warranty: 2 years.

D. Doors shall be electronically operated with control systems as specified in Section 11150.

E. Provide electrical service and wiring connection as specified in Division 16 for future electric operation.

## 2. EXECUTION

### 2.5. EXAMINATION

- A. Do not begin installation until openings have been properly prepared.
- B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- C. Verify electric power is available and of correct characteristics.
- D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 2.6. PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 2.7. INSTALLATION

- A. Inserts and Anchorages: Furnish inserts and anchoring devices suitable for the installation of the units and consistent with the manufacturer's installation requirements. Coordinate delivery with other work to avoid delay.
- B. Install overhead doors, operating equipment, hardware, seals, stops, anchors, inserts, supports and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- C. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.



- D. Anchor assembly to wall construction and building framing without distortion or stress.
- E. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- F. Fit and align door assembly including hardware.
- G. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

#### 2.8. CLEANING AND ADJUSTING

- A. Lubricate, test and adjust door assembly to smooth operation free from warp twist or distortion and in full contact with weather-stripping.
- B. Clean doors, frames and glass.
- C. Remove temporary labels and visible markings.

#### 2.9. PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

#### 2.10. MAINTENANCE

- A. Post Installation Maintenance:
  - 1. Contractor and installer shall provide Owner with complete company name, address phone number, fax number and assigned contact for emergency repairs and scheduled maintenance for the installed door(s).
- B. Training/Instruction for Owner for Operation and System Maintenance:
  - 1. Manufacturer shall instruct Owner's representative in regular tenant provided maintenance and operation of installed doors.

END OF SECTION