# ADDENDUM
# AD #1

Project **West Point Dairy - Hyrum - Storage Warehouse**
Project No. **250429500**
Location **Hyrum, Utah**
Date **April 29, 2026**

This addendum to the contract documents is issued to modify, explain or correct the original documents and is hereby made part of the construction documents. All contractors shall read and become familiar with all items in this addendum.
**Primary scope of the addendum is to add the scope of work related to (2) cow water silos, a small silo alley building, and associated foundations and into the storage warehouse project. sheets not indicated were replotted for background changes and to clarify issued for bid in titleblock**

| | |
|---|---|
| T1.0 | Updated sheet index. |
| T1.1 | Update floor plan and square footage numbers for silo alley. |
| T1.1L | Added silo alley life safety plan |
| | Added Egress/Life Saftey Legend |
| T1.1PH | Updated phasing plan and note for silo alley. |
| | |
| A0.1 | Added Section 09 66 33 Resinous Flooring to Specifications |
| | Added High Performance Paint to Specifications |
| AD1.1 | Added demolition plan for Area 'B' |
| | Added keynotes for Area 'B' demolition items. |
| | Updated keyplan for added area to project. |
| AD1.3 | Updated sheet and view name. |
| | Updated keyplan for added area to project. |
| A1.0 | Updated silo alley to be part of this project |
| A1.1A | Updated sheet and view name and number to include Area 'A' |
| | Updated keyplan for added area to project. |
| A1.1B | Added sheet for silo alley. |
| A1.3 | Added silo alley roof plan. |
| | Updated roof specification to include silo alley information. |
| | Roof type updated on warehouse roof. |
| | Updated gutter and downspout spec to show sizes on roof plans. |
| | Added downspout to site drain detail. |
| | Updated keyplan for added area to project. |
| A2.0 | Added silo alley elevations and associated materials. |
| A3.0 | Added sections D & E for silo alley. |
| A4.0 | Added and shifted around details for silo alley. |
| A4.1 | Added and shifted around details for silo alley. |

| | |
|---|---|
| A4.2 | Added stair plan and section for silo alley. |
| | Added detail for silo alley stair. |
| A4.3 | Added sheet for ramp plan, sections, and details. |
| A4.4 | Added sheet for silo details. |
| A6.0 | Added Silo Alley to room finish schedule. |
| | Added materials to material legend for the silo alley. |
| | Added Urethane Wall Base Cove Detail. |
| | Added process keyplan to sheet. |
| | Added door e133D. |
| | Added door remark 1. |
| | |
| S0.1 | Added Structural Steel Framing to specifications. |
| | Updated sheet index. |
| S0.2 | Updated loading plans names to include Area 'A'. |
| | Updated design criteria for silo alley. |
| | Added process keyplan to sheet. |
| | Updated keyplan for added area to project. |
| S0.3 | Added sheet for silo alley. |
| S1.1A | Updated sheet and view name and number to include Area 'A' |
| | Updated keyplan for added area to project. |
| S1.1B | Added sheet for silo alley. |
| S1.1SAB | Updated sheet and view name and number to include Area 'A' & 'B' |
| | Added silo alley slab plan. |
| | Updated keyplan for added area to project. |
| S1.3B | Added sheet for silo alley. |
| S2.0 | Added Continuous Footing Schedule and Detail. |
| | Added concrete wall details and updated stepped footing detail. |
| S2.1 | Updated plan name to include Area 'A'. |
| | Added key plan. |
| S2.2 | Added New to Existing Slab Joint Detail |
| | Added Slab on grade Reinforcing at Doors/Openings Detail |
| S2.4 | Added sheet for silo alley. |
| S3.0 | Added sheet for silo alley. |
| | |
| FP0.1 | Modified Specifications, Schedules, and Key plan for additional scope of work. |
| FP1.1 | Modified floor plan for additoona scope of work.<br>Added Process Key plan and associated process details. |
| | |
| H0.1 | Updated specifications for silo alley equipment. |
| | Updated sheet index. |
| | Updated title block to include plot explanation. |
| HD1.1A | Updated sheet and view name and number to include Area 'A' |
| | Updated title block to include plot explanation. |
| | Added view for silo alley. |

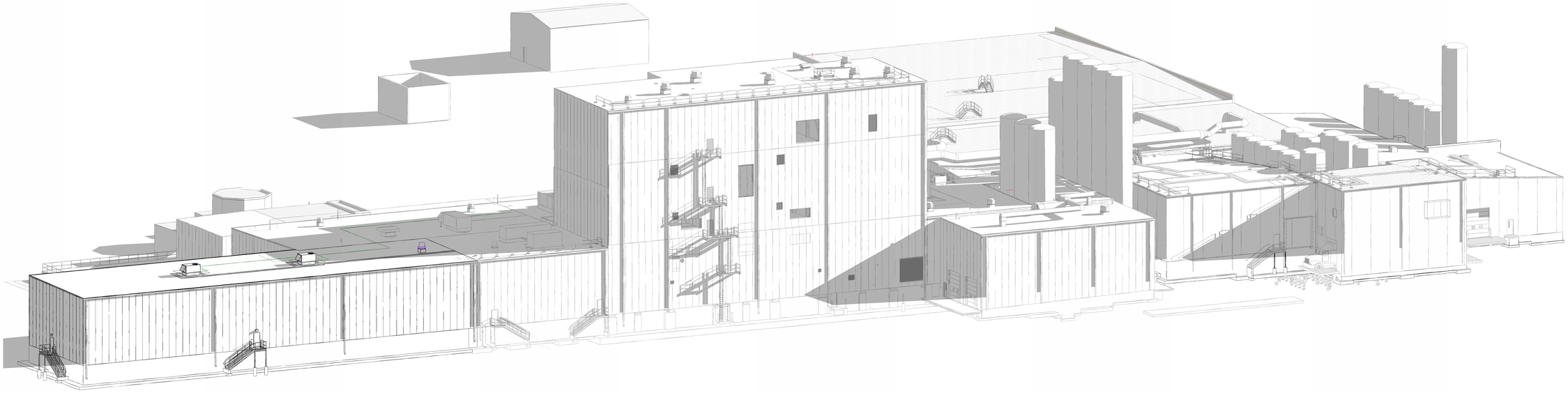
| | |
|---|---|
| H1.1 | Updated view name to include Area 'A'. |
| | Updated title block to include plot explanation. |
| H1.3A | Updated sheet and view name and number to include Area 'A' |
| | Removed equipment from Gas load summary. |
| | Updated title block to include plot explanation. |
| H3.0 | Updated title block to include plot explanation. |
| H4.0 | Added and updated schedules for silo alley equipment. |
| | Updated title block to include plot explanation. |
| | |
| E0.1 | Sheet index updated. |
| E1.1AL | Updated sheet number to include Area 'A' |
| | Added detail views. |
| E1.1AP | Updated sheet number to include Area 'A' |
| | Updated heat trace specifics. |
| | Added Rapid door power. |
| E1.1BL | Updated silo alley to be part of this project. |
| E1.1BP | Updated silo alley to be part of this project. |
| E3.0 | Added detail page. |
| E4.0 | Updated panel schedule. |

END OF ADDENDUM

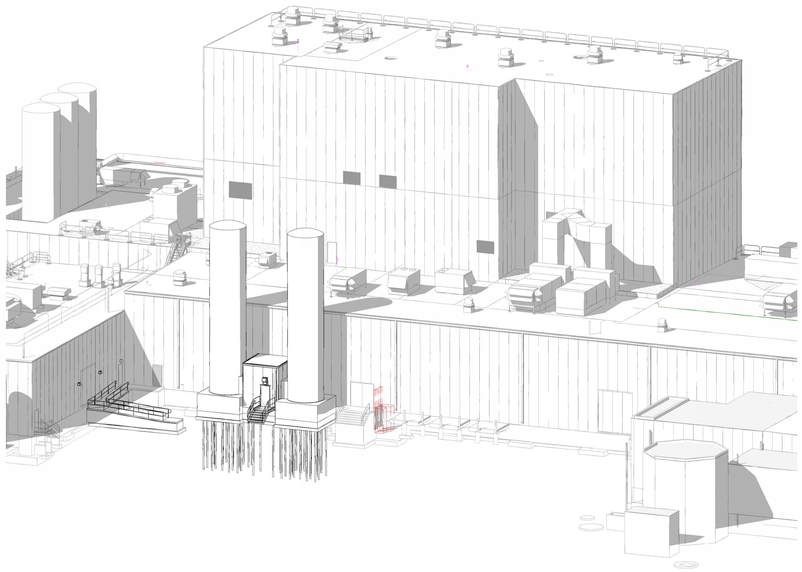
# STORAGE WAREHOUSE EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

## HYRUM, UTAH



## ISOMETRIC LOOKING SOUTHWEST



## SILO ALLEY ISOMETRIC LOOKING NORTHWEST

## PROJECT CONTACTS


OWNER INFORMATION:
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570 NORTH 500 WEST
HYRUM, UT 84319

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PLUMBING & FIRE PROTECTION:
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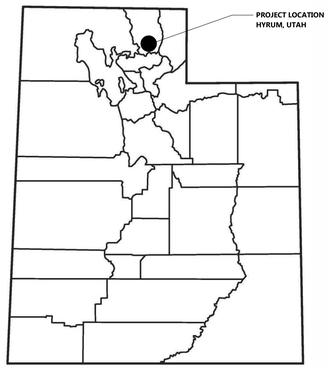
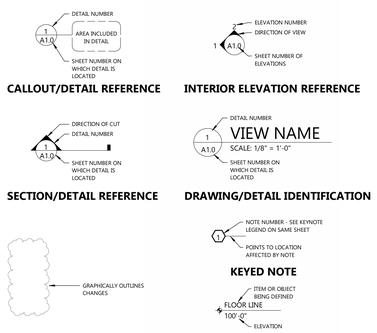
## LOCATION MAP




NORTH

## SYMBOLS LEGEND




## SHEET INDEX

**SHEETS BELOW INTENDED TO BE PRINTED IN: COLOR. REFER TO DIGITAL FORMAT DRAWINGS IF PRINTED GRAYSCALE TO ENSURE SCOPE CLARITY**

| NUMBER | SHEET NAME / DESCRIPTION | SHEET STATUS | LATEST SHEET ISSUE NUMBER | LATEST SHEET ISSUE DATE |
|---|---|---|---|---|
| GENERAL | | | | |
| T1.0 | TITLE SHEET | IFB | AD1 | APR. 29, 2026 |
| T1.1 | PROJECT INFORMATION | IFB | AD1 | APR. 29, 2026 |
| T1.1L | LIFE SAFETY PLAN | IFB | AD1 | APR. 29, 2026 |
| T1.1PH | PROJECT PHASING PLAN | IFB | AD1 | APR. 29, 2026 |
| T2.0 | SPECIAL INSPECTION REQUIREMENTS | IFB | IFB | APR. 17, 2026 |
| CIVIL | | | | |
| CIVIL | SEE EXCEL JOB# 250231400 | | | |
| ARCHITECTURAL | | | | |
| A0.1 | SPECIFICATIONS | IFB | AD1 | APR. 29, 2026 |
| AD1.1 | FIRST FLOOR DEMOLITION PLAN - AREA OF WORK | IFB | AD1 | APR. 29, 2026 |
| AD1.3 | ROOF DEMOLITION PLAN | IFB | AD1 | APR. 29, 2026 |
| A1.0 | OVERALL FIRST FLOOR PLAN | IFB | AD1 | APR. 29, 2026 |
| A1.1A | FIRST FLOOR PLAN - AREA 'A' | IFB | AD1 | APR. 29, 2026 |
| A1.1B | FIRST FLOOR PLAN - AREA 'B' | IFB | AD1 | APR. 29, 2026 |
| A1.3 | ROOF PLAN | IFB | AD1 | APR. 29, 2026 |
| A2.0 | EXTERIOR ELEVATIONS | IFB | AD1 | APR. 29, 2026 |
| A3.0 | BUILDING SECTIONS | IFB | AD1 | APR. 29, 2026 |
| A4.0 | WALL SECTIONS & DETAILS | IFB | AD1 | APR. 29, 2026 |
| A4.1 | DETAILS | IFB | AD1 | APR. 29, 2026 |
| A4.2 | STAIR SECTIONS & DETAILS | IFB | AD1 | APR. 29, 2026 |
| A4.3 | RAMP SECTIONS & DETAILS | IFB | AD1 | APR. 29, 2026 |
| A4.4 | SILO ALCOVE DETAILS | IFB | AD1 | APR. 29, 2026 |
| A6.0 | SCHEDULES | IFB | AD1 | APR. 29, 2026 |
| STRUCTURAL | | | | |
| S0.1 | SPECIFICATIONS | IFB | AD1 | APR. 29, 2026 |
| S0.2 | DESIGN CRITERIA | IFB | AD1 | APR. 29, 2026 |
| S0.3 | AREA 'B' LOADING PLANS | IFB | AD1 | APR. 29, 2026 |
| S1.1A | FOUNDATION PLAN - AREA 'A' | IFB | AD1 | APR. 29, 2026 |
| S1.1B | FOUNDATION PLAN - AREA 'B' | IFB | AD1 | APR. 29, 2026 |
| S1.1SAB | CONCRETE FLOOR SLAB PLAN - AREA 'A' & 'B' | IFB | AD1 | APR. 29, 2026 |
| S1.3B | ROOF FRAMING PLAN - AREA 'B' | IFB | AD1 | APR. 29, 2026 |
| S2.0 | FOUNDATION SCHEDULES | IFB | AD1 | APR. 29, 2026 |
| S2.1 | PEMB ANCHOR BOLT SETTING PLAN | IFB | AD1 | APR. 29, 2026 |
| S2.2 | SLAB ON GRADE SCHEDULES AND DETAILS | IFB | AD1 | APR. 29, 2026 |
| S2.3 | FOUNDATION DETAILS | IFB | IFB | APR. 17, 2026 |
| S2.4 | SILO PAD DETAILS | IFB | AD1 | APR. 29, 2026 |
| S3.0 | FRAMING SCHEDULES | IFB | AD1 | APR. 29, 2026 |
| FIRE PROTECTION | | | | |
| FP0.1 | LEGEND AND SPECIFICATIONS | IFB | AD1 | APR. 29, 2026 |
| FP1.1 | FIRST FLOOR PLAN - AREA OF WORK | IFB | AD1 | APR. 29, 2026 |
| HVAC | | | | |
| H0.1 | LEGEND AND SPECIFICATIONS | IFB | AD1 | APR. 29, 2026 |
| HD1.1A | FIRST FLOOR DEMOLITION PLAN - AREA 'A' | IFB | AD1 | APR. 29, 2026 |
| H1.1 | FIRST FLOOR PLAN | IFB | AD1 | APR. 29, 2026 |
| H1.3A | ROOF PLAN - AREA 'A' | IFB | AD1 | APR. 29, 2026 |
| H3.0 | DETAILS | IFB | AD1 | APR. 29, 2026 |
| H4.0 | SCHEDULES | IFB | AD1 | APR. 29, 2026 |
| ELECTRICAL | | | | |
| E0.1 | LEGEND AND SPECIFICATIONS | IFB | AD1 | APR. 29, 2026 |
| E0.2 | SPECIFICATIONS | IFB | IFB | APR. 17, 2026 |
| E1.1AL | FIRST FLOOR PLAN - AREA 'A' - LIGHTING | IFB | AD1 | APR. 29, 2026 |
| E1.1AP | FIRST FLOOR PLAN - AREA 'A' - POWER | IFB | AD1 | APR. 29, 2026 |
| E1.1AS | FIRST FLOOR PLAN - AREA 'A' - SYSTEMS | IFB | IFB | APR. 17, 2026 |
| E1.1BL | FIRST FLOOR PLAN - AREA 'B' - LIGHTING | IFB | AD1 | APR. 29, 2026 |
| E1.1BP | FIRST FLOOR PLAN - AREA 'B' - POWER | IFB | AD1 | APR. 29, 2026 |
| E1.3 | ROOF PLAN | IFB | IFB | APR. 17, 2026 |
| E3.0 | DETAILS | IFB | AD1 | APR. 29, 2026 |
| E4.0 | PANEL SCHEDULES | IFB | AD1 | APR. 29, 2026 |
| E4.1 | PANEL SCHEDULES | IFB | IFB | APR. 17, 2026 |
| E6.0 | LIGHT FIXTURE SCHEDULE | IFB | IFB | APR. 17, 2026 |

GENERAL TITLE SHEET


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**T1.0**

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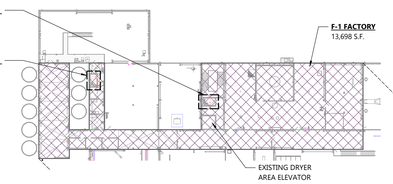
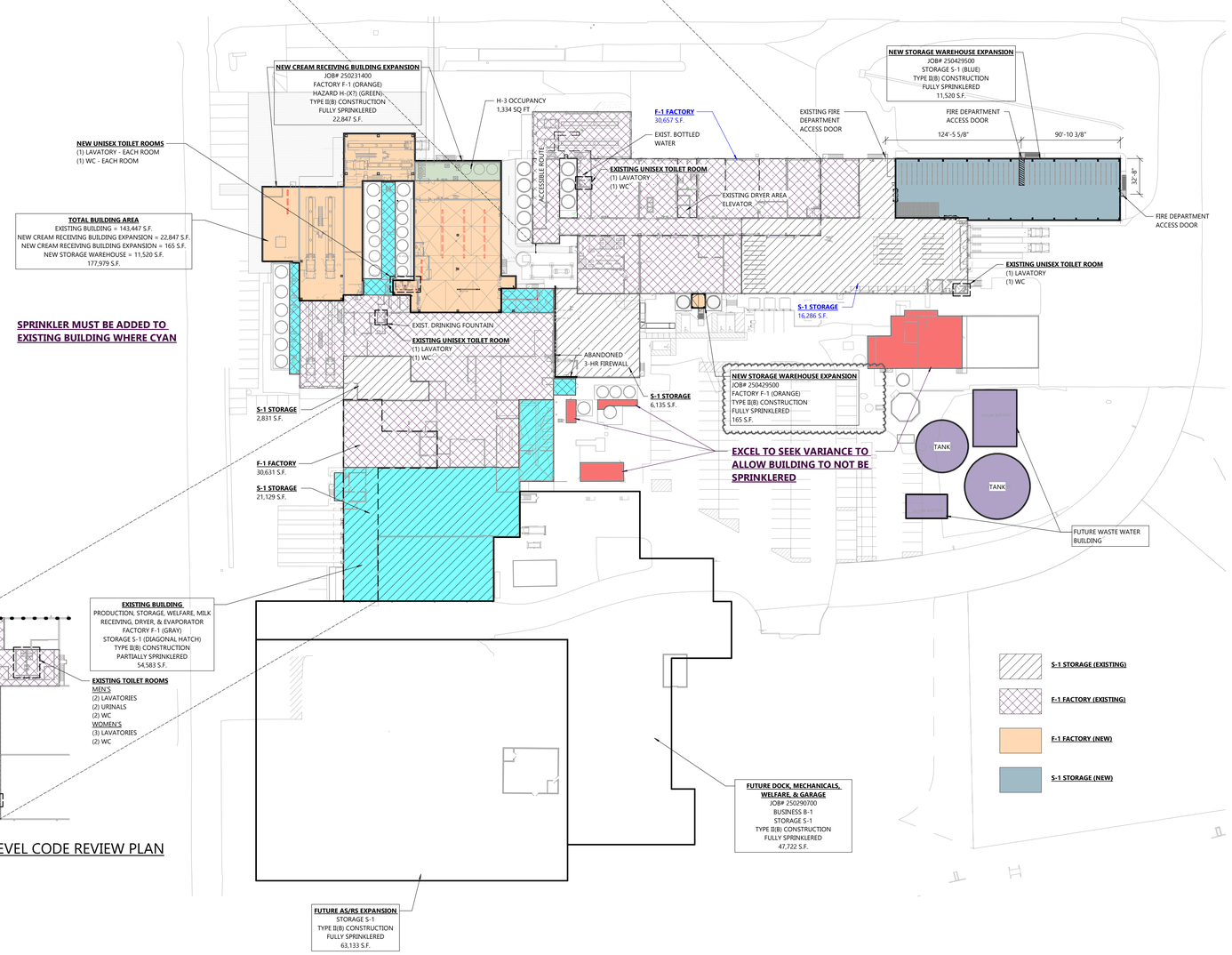



NORTH

## EXISTING SECOND LEVEL DRYER CODE REVIEW PLAN

SCALE: 1" = 50'-0"

0' 50' 100'

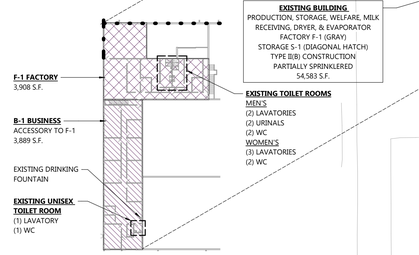



NORTH

## CODE REVIEW PLAN

SCALE: 1" = 50'-0"

0' 50' 100'




NORTH

## EXIST. SECOND LEVEL CODE REVIEW PLAN

SCALE: 1" = 50'-0"

0' 50' 100'

# PROJECT INFORMATION

## APPLICABLE BUILDING CODES

2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL EXISTING BUILDING CODE - LEVEL 2
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL FUEL GAS CODE
2021 INTERNATIONAL FIRE CODE
2020 NATIONAL ELECTRICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2017 ICC/ANSI A117.1 ACCESSIBILITY CODE

## BUILDING SCOPE AND SPECIAL NOTES

THE PURPOSE OF THIS BUILDING ADDITION IS TO EXPAND STORAGE CAPABILITIES AT THIS FACILITY.

## OCCUPANCY CLASSIFICATION AND USE

THE BUILDING ADDITION IS CLASSIFIED AS STORAGE GROUP S-1 - 2021 IBC SECTION 306.2 - STORAGE MODERATE HAZARD

OCCUPANCY CLASSIFICATIONS WITHIN BUILDING INCLUDE:

| | |
|---|---|
| BUSINESS GROUP B | 2021 IBC SECTION 304.1 - BUSINESS |
| FACTORY GROUP F-1 | 2021 IBC SECTION 306.2 - FACTORY INDUSTRIAL MODERATE HAZARD |
| STORAGE GROUP S-1 | 2021 IBC SECTION 311.2 - MODERATE HAZARD STORAGE |
| HIGH HAZARD GROUP H | 2021 IBC SECTION 307 - HIGH HAZARD |

2021 IBC SECTION 508
- NON-SEPARATED USES w/ MIXED OCCUPANCY
- BUILDING IS DESIGNED FOR F-1 OCCUPANCY (MOST RESTRICTIVE)

2021 IBC SECTION 508.2
- ACCESSORY OCCUPANCY CLASSIFICATIONS WITHIN BUILDING INCLUDE HIGH-HAZARD GROUPS H-3 & H-4

2021 IBC SECTIONS 307.1 & 508.4
- THE HIGH-HAZARD GROUPS H-3 & H-4 ARE SEPARATED FROM THE REMAINDER OF THE BUILDING WITH 2-HOUR FIRE BARRIERS.

## CONSTRUCTION CLASSIFICATION

2021 IBC SECTION 602.2 TYPE II(B) CONSTRUCTION

ENTIRE BUILDING IS FULLY EQUIPPED w/ AN AUTOMATIC SPRINKLER SYSTEM PER N.F.P.A.

## OCCUPANCY SEPARATION

2021 IBC SECTIONS 307.1 & 508.4
- THE HIGH-HAZARD GROUPS H-3 & H-4 ARE SEPARATED FROM THE REMAINDER OF THE BUILDING WITH A 2-HOUR FIRE BARRIER.

## FIRE PROTECTION AND LIFE SAFETY SYSTEMS

**PORTABLE FIRE EXTINGUISHERS**
2021 IBC SECTION 906
- PORTABLE FIRE EXTINGUISHERS PROVIDED IN OCCUPANCIES AND LOCATIONS AS REQUIRED - SEE CODE REVIEW FLOOR PLAN

## BUILDING SIZE

| | |
|---|---|
| EXIST. FIRST LEVEL FLOOR AREA | 128,504 S.F. |
| EXIST. SECOND LEVEL FLOOR AREA | 24,695 S.F. |
| EXIST. BUILDING AREA | 152,999 S.F. |
| PROPOSED FIRST LEVEL FLOOR AREA | 11,685 S.F. |
| PROPOSED SECOND LEVEL FLOOR AREA | 0 S.F. |
| PROPOSED BUILDING AREA | 164,684 S.F. |
| TOTAL FIRST LEVEL FLOOR AREA | 140,189 S.F. |
| TOTAL SECOND LEVEL FLOOR AREA | 24,695 S.F. |
| TOTAL BUILDING AREA | 164,684 S.F. |

## GENERAL BUILDING HEIGHTS AND AREAS

GENERAL HEIGHT AND AREA DETERMINED BASED ON TYPE OF CONSTRUCTION, OCCUPANCY CLASSIFICATION, AND THE PRESENCE OF A AUTOMATIC SPRINKLER SYSTEM.

**ALLOWABLE BUILDING HEIGHT IN FEET:**
2021 IBC TABLE 504.3 (75') MAX HEIGHT - SPRINKLERED

**ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE:**
2021 IBC TABLE 504.4 (3) STORIES - SPRINKLERED (BASED ON THE MOST RESTRICTIVE OCCUPANCY 'F1')

**ALLOWABLE AREA FACTOR IN SQUARE FEET:**
2021 IBC SECTION 507.5 THE AREA OF A GROUP B, F, M, OR S BUILDING NO MORE THAN TWO STORIES ABOVE GRADE PLANE SHALL NOT BE LIMITED WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 AND IS SURROUNDED AND ADJOINED BY PUBLIC WAYS OR YARDS NOT LESS THAN 60 FEET IN WIDTH.

**PROJECT HEIGHT & AREA :**
- PROVIDED BUILDING HEIGHT IN FEET = 31'
- PROVIDED STORIES ABOVE GRADE PLANE = (1)
- PROVIDED BUILDING AREA IN SQUARE FEET = 20,085

## FIRE AND SMOKE PROTECTION FEATURES

**FIRE WALLS:**
2021 IBC SECTION 706
- NO NEW FIREWALLS

**FIRE BARRIERS:**
2021 IBC SECTION 707
- SEE PLAN FOR LOCATION OF ELECTRICAL ROOMS, CHEM STORAGE ROOMS, ETC. REQUIRING SEPARATION BY FIRE BARRIERS IN ACCORDANCE WITH SECTION 707 AND TABLE 508.4

**FIRE PARTITIONS:**
2021 IBC SECTION 708

**PENETRATIONS:**
2021 IBC SECTION 714
- ALL PENETRATION OF HORIZONTAL AND WALL ASSEMBLIES SHALL COMPLY WITH THIS SECTION

**OPENING FIRE PROTECTION ASSEMBLY RATINGS AND MARKINGS:**
2021 IBC SECTION 716
- ALL OPENINGS COMPLY WITH THIS SECTION AND NFPA-80
- ALL OPENINGS COMPLY WITH TABLE 716.1 FOR OPENING FIRE PROTECTION ASSEMBLIES, RATINGS, AND MARKINGS - SEE DOOR SCHEDULE AND FIRE BARRIERS AS SHOWN ON PLAN

## HIGH PILE STORAGE

2021 INTERNATIONAL FIRE CODE
- IFC SECTION 102.6
- IFC SECTION 105.5.24
- IFC CHAPTERS 2 TO 4
- IFC SECTIONS 501 TO 502 AND 504 TO 510
- IFC SECTIONS 601 TO 605 AND 607 TO 609
- IFC CHAPTERS 7 AND 8
- IFC SECTIONS 901.1 TO 901.4.2, 901.4.4 TO 909.18.9, AND 909.20 TO 913
- IFC CHAPTERS 10 AND 12 TO 21
- IFC SECTION 2211.7
- IFC CHAPTERS 23 TO 29, 31 TO 33, 36, 37, AND 39 TO 47

**FIRE APPARATUS ACCESS LANES:**
THE WAREHOUSE PORTION OF THE ADDITION IS DESIGNED FOR AND INTENDED TO BE USED FOR HIGH PILE COMBUSTIBLE STORAGE OF FROZEN AND REFRIGERATED FOODS PACKAGED IN COMBUSTIBLE CONTAINERS

**FIRE APPARATUS ACCESS ROADS & ACCESS:**
ACCESS ROADS MUST EXTEND TO WITHIN 150 FEET OF ALL FIRE FIGHTING ACCESS DOORS

**INTERNATIONAL FIRE CODE:**
FIRE FIGHTING ACCESS DOORS ARE TO BE PLACED IN THE EXTERIOR WALLS OF THE STORAGE AREA AND SPACED A MAX. OF 100'-0" O.C.

**REQUIRED SIGNAGE:**
ACCESSIBILITY SIGNAGE IS TO BE DESIGNED AND INSTALLED AS PER ANSI A117.1, 2003
- SIGNAGE FOR DIRECTION OF ACCESIBLE EXIT DOORS
- ELECTRICAL ROOM AND CHEMICAL ROOM SIGNAGE REQUIREMENTS PER SECTION 605.3.1 OF THE FIRE CODE

## MEANS OF EGRESS

2021 IBC TABLE 1017.2
- 250 FT. EXIT ACCESS TRAVEL DISTANCE (SPRINKLERED)

**STAIRS:**
2021 IBC SECTION 1005.3.1
*(EXCEPTION #1)*
- STAIRWAY EGRESS WIDTH PER OCCUPANT SERVED = .2" (SPRINKLERED)
- (199) TOTAL OCCUPANTS x 0.2" = 39.8" EGRESS WIDTH REQUIRED
- PROVIDED STAIRWAY EGRESS WIDTH = 184" = (4) STAIRS OF VARYING WIDTH
- STAIR WIDTH CALCULATION ACCOUNTS FOR EACH AREA BEING EXITED BY STAIR

2021 IBC SECTION 1011.2
- NOTE THAT MINIMUM STAIR WIDTH IS 44"- THEREFORE PROJECT IS IN EXCESS OF CALCULATION
- SECTION 1011.2 EXCEPTION 1 ALLOWS FOR 36" MINIMUM STAIR WIDTH WHERE LESS THAN 50 OCCUPANTS WILL USE A GIVEN STAIR.

**OTHER EGRESS COMPONENTS:**
2021 IBC SECTION 1005.3.2
*EXCEPTION #1*
- EGRESS WIDTH PER OCCUPANT SERVED = 0.15" (SPRINKLERED)
- (329) TOTAL CALCULATED OCCUPANTS x 0.15" = 49.35" EGRESS WIDTH REQUIRED

- PROVIDED MINIMUM EGRESS WIDTH = 34" CLEAR AT EACH 36" DOOR
- PROVIDED CUMULATIVE EGRESS WIDTH = 170" = (5) 36" WIDE DOORS

- EGRESS WIDTH CALCULATION ACCOUNTS FOR NEW & EXISTING AREA DISCHARGING THROUGH THE NEW CONSTRUCTION AREAS.

**NUMBER OF DOORS AND EXIT ACCESS DOORWAYS:**
2021 IBC TABLE 1006.2.1
- SPACES WITH (1) EXIT OR EXIT ACCESS DOOR
- CALCULATED OCCUPANT LOAD IS LESS THAN 49
- MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE IS LESS THAN 100'

2021 IBC SECTION 1006.3.1
- MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY
- UPPER FLOORS ARE UNOCCUPIED EQUIPMENT ACCESS PLATFORMS. IN THE EVENT PERSONS ARE ON THE PLATFORM, THE EXISTING RATED STAIR TOWER IS AVAILABLE FOR EXITING.

**EXIT SIGNS:**
2021 IBC SECTION 1013
- EXITS AND EXIT ACCESS DOORS MARKED BY APPROVED EXIT SIGNAGE
- EXIT SIGN PLACEMENT SHALL BE SUCH THAT ANY POINT IN A EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS WITHIN 100' (SEE CODE REVIEW FLOOR PLAN FOR LOCATIONS)

**ACCESSIBLE MEANS OF EGRESS:**
2021 IBC SECTION 1009
- ALL MEANS OF EGRESS ARE AT GRADE.

**COMMON PATH OF EGRESS TRAVEL:**
2021 IBC SECTION 1006.2.1
- COMMON PATH OF EGRESS TRAVEL IS 100' BASED ON 'F' OCCUPANCY - SPRINKLERED.

**ELEVATORS:**
- AN EXISTING ELEVATOR IS PROVIDED IN THE DRYER AREA OF THIS FACILITY.

## EXTERIOR WALL OPENINGS

2021 IBC TABLE 705.8
- BUILDING PERMITTED TO HAVE UNLIMITED UNPROTECTED OPENINGS DUE TO FIRE SEPARATION DISTANCE TO PROPERTY LINE IS GREATER THAN 30 FT.

## HIGH PILE STORAGE REQUIREMENTS (IFC 2021)

THE WAREHOUSE PORTION OF THE ADDITION IS DESIGNED FOR AND INTENDED TO BE USED FOR HIGH PILE COMBUSTIBLE STORAGE OF REFRIGERATED FOODS PACKAGED IN CLASS III COMMODITIES PER SECTION 3203.8

THE BUILDING IS TO MEET THE HIGH PILE STORAGE REQUIREMENTS OF 2015-IFC CHAPTER 32
2021 IFC - TABLE 3206.2 (12,001 - 500,000 S.F. STORAGE AREA)
2021 INTERNATIONAL FIRE CODE (IFC)
- THE BUILDING IS FULLY SPRINKLERED
- FIRE DETECTION IS REQUIRED
- BUILDING ACCESS IS REQUIRED EVERY 125'-0" (2021 IFC - 3206.7.5)
- MAXIMUM STORAGE HEIGHT OF PRODUCT IS 40'-0"
- MAXIMUM PILE DIMENSION IS LIMITED TO 120'-0"
- MAXIMUM PILE VOLUME IS LIMITED TO 400,000 C.F.
- IFC 506.1 KEY BOX AT APPROVED LOCATIONS
- SMOKE AND HEAT REMOVAL IS NOT REQUIRED PER 3206.2 (EXCEPTION i) SMOKE & HEAT REMOVAL NOT REQUIRED WHERE STORAGE AREAS ARE PROTECTED BY EITHER EARLY SUPPRESSION FAST RESPONSE (ESFR) SPRINKLER SYSTEMS OR CONTROL MODE SPECIAL APPLICATION SPRINKLERS WITH A RESPONSE TIME INDEX OF 50 (METERS-SECONDS) OR LESS THAT ARE LISTED TO CONTROL A FIRE IN THE STORED COMMODITIES WITH 12 OR FEWER SPRINKLERS, INSTALLED IN ACCORDANCE WITH NFPA 13.

FIRE DEPARTMENT ACCESS DOORS ARE NOT REQUIRED IN AN EXTERIOR WALL THAT DOES NOT FACE A FIRE APPARATUS ACCESS ROAD PROVIDED THAT ALL OF THE FOLLOWING CONDITIONS OCCUR:
1. THE OPPOSITE EXTERIOR WALL FACES A FIRE APPARATUS ACCESS ROAD.
2. THE OPPOSITE EXTERIOR WALL IS PROVIDED WITH FIRE DEPARTMENT ACCESS DOORS.
3. THE ENTIRE INTERIOR SURFACE OF THE EXTERIOR WALL IS LESS THAN 150 FEET AWAY FROM A FIRE DEPARTMENT ACCESS DOOR.
4. THE BUILDING IS EQUIPPED THROUGHOUT WITH AN *AUTOMATIC SPRINKLER SYSTEM* IN ACCORDANCE WITH SECTION 903.3.1.1.

## OCCUPANT LOADS

OCCUPANT LOADS BASED ON 2021 IBC TABLE 1004.5 FOR NEW & EXISTING BUILDING.

| | ROOM OR SPACE DESIGNATION | CLASSIFICATION OF OCCUPANCY FOR USE | TABULAR DENSITY (SF/PERSON) | FLOOR AREA (S.F.) | CALCULATED OCCUPANT LOAD | TOTAL ACTUAL OCCUPANT LOAD | NOTES |
|---|---|---|---|---|---|---|---|
| EXISTING BUILDING | PRODUCTION | F-1 (FACTORY) | 100 GROSS | 49,534 | 496 | 247 | THIS IS BASED ON THREE SHIFTS PER DAY 7 DAYS PER WEEK. AS A RESULT, ACTUAL OCCUPANCY AT ANY ONE TIME IS HALF OF THIS VALUE OR 100 OCCUPANTS AT ONE TIME. |
| | BUSINESS | B (ACCESSORY BUSINESS USE) | 150 GROSS | 7,797 | 52 | | |
| | STORAGE | S-1 (STORAGE) | 500 GROSS | 23,739 | 47 | | |
| EXIST. MILK PLANT | OCCUPIED INDUSTRIAL AREA | F-1 (INDUSTRIAL) | 100 GROSS | 7,809 | 23 * | 23 * | THIS IS BASED ON THREE SHIFTS PER DAY 7 DAYS PER WEEK. AS A RESULT, ACTUAL OCCUPANCY AT ANY ONE TIME IS HALF OF THIS VALUE OR 12 OCCUPANTS AT ONE TIME. |
| | PROCESS EQUIPMENT ROOMS | ACCESSORY STORAGE AREA, MECHANICAL EQUIPMENT ROOMS | 300 GROSS | 51,316 | | | |
| | WAREHOUSE | S-1 (STORAGE) | 500 GROSS | 24,703 | | | |
| | BUSINESS | B (ACCESSORY TO F-1) | 150 GROSS | 686 | | | |
| NEW ADDITION | WAREHOUSE | S-1 (STORAGE) | 500 GROSS | 11,520 | 24 | 0 | THIS IS BASED ON THREE SHIFTS PER DAY 7 DAYS PER WEEK. AS A RESULT, ACTUAL OCCUPANCY AT ANY ONE TIME IS HALF OF THIS VALUE OR 24 OCCUPANTS AT ONE TIME. |
| | SILO ALLEY (PRODUCTION) | F-1 (INDUSTRIAL) | 100 GROSS | 165 | 2 | | |
| | TOTAL OCCUPANCY | | | | 643 | 270 | BASED ON COMMENTS ABOVE AT ANY ONE TIME IS ACTUALLY 136 OCCUPANTS |

* BUILDING OCCUPANT LOAD AS APPROVED BY AHJ - 2020 PROJECT

## SANITARY FIXTURES

PLUMBING FIXTURE FACTORS BASED ON 2021 IBC TABLE 2902.1

| OCCUPANCY | | | WATER CLOSETS | | | LAVATORIES | | | DRINK FOUNTAINS | |
|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | EXIST. CAPACITY | NEW CAPACITY | FACTORS | # M. FIX. | # F. FIX. | FACTORS | # M. FIX. | # F. FIX. | FACTORS | # FIX. |
| B GROUP (OFFICE) | 39 PERSONS | 0 | 1/25 (FIRST 50) 1/50 (AFTER) | .8 | .8 | 1/40 (FIRST 80) 1/80 (AFTER) | .5 | .5 | 1/100 | .4 |
| S GROUP (STORAGE) | 4 PERSONS | 0 | 1/100 | .02 | .02 | 1/100 | .02 | .02 | 1/1000 | .004 |
| F GROUP (FACTORY) | 180 PERSONS | 227 PERSONS | 1/100 | 1.14 | 1.14 | 1/100 | 1.14 | 1.14 | 1/400 | .57 |
| TOTAL | | 270 PERSONS | | 1.96 | 1.96 | | 1.66 | 1.66 | | .97 |
| PROVIDED FIXTURES | | | | 5 (WC) 2 (URINAL) | 8 | | 5 | 7 | | 6 (EXIST.) BOTTLED WATER DISPENSERS |

2021 IBC SECTION 2902.3.3
- THE PATH OF TRAVEL TO TOILET FACILITIES DOES NOT EXCEED 500'

GENERAL PROJECT INFORMATION


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
T1.1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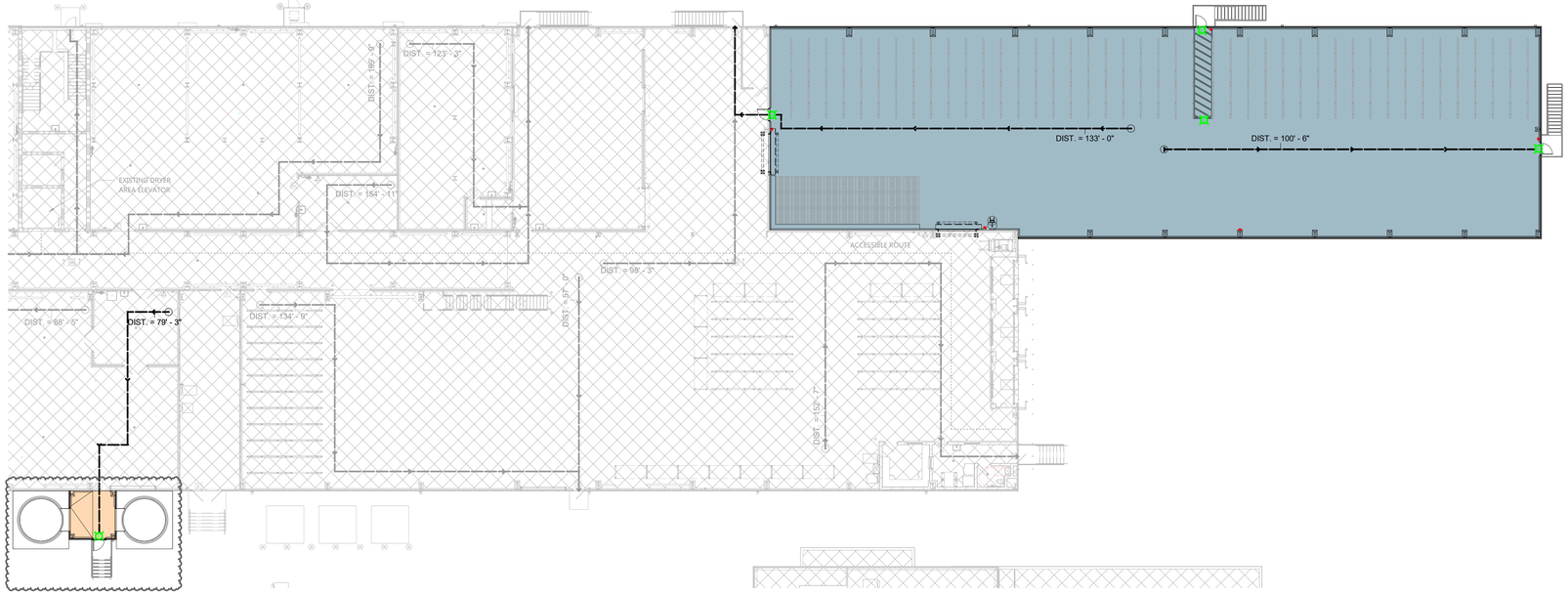


NORTH

## LIFE SAFETY PLAN

SCALE: 1/16" = 1'-0"

0' 16' 32'

## EGRESS/LIFE SAFETY LEGEND:

| | |
|---|---|
| DIST. = XX' - XX' | INDICATES EGRESS DISTANCE |
| | INDICATES ACCESSIBLE ROUTE |
| | EXIT LIGHT |
| | FIRE EXTINGUISHER |

GENERAL LIFE SAFETY PLAN

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**T1.1L**

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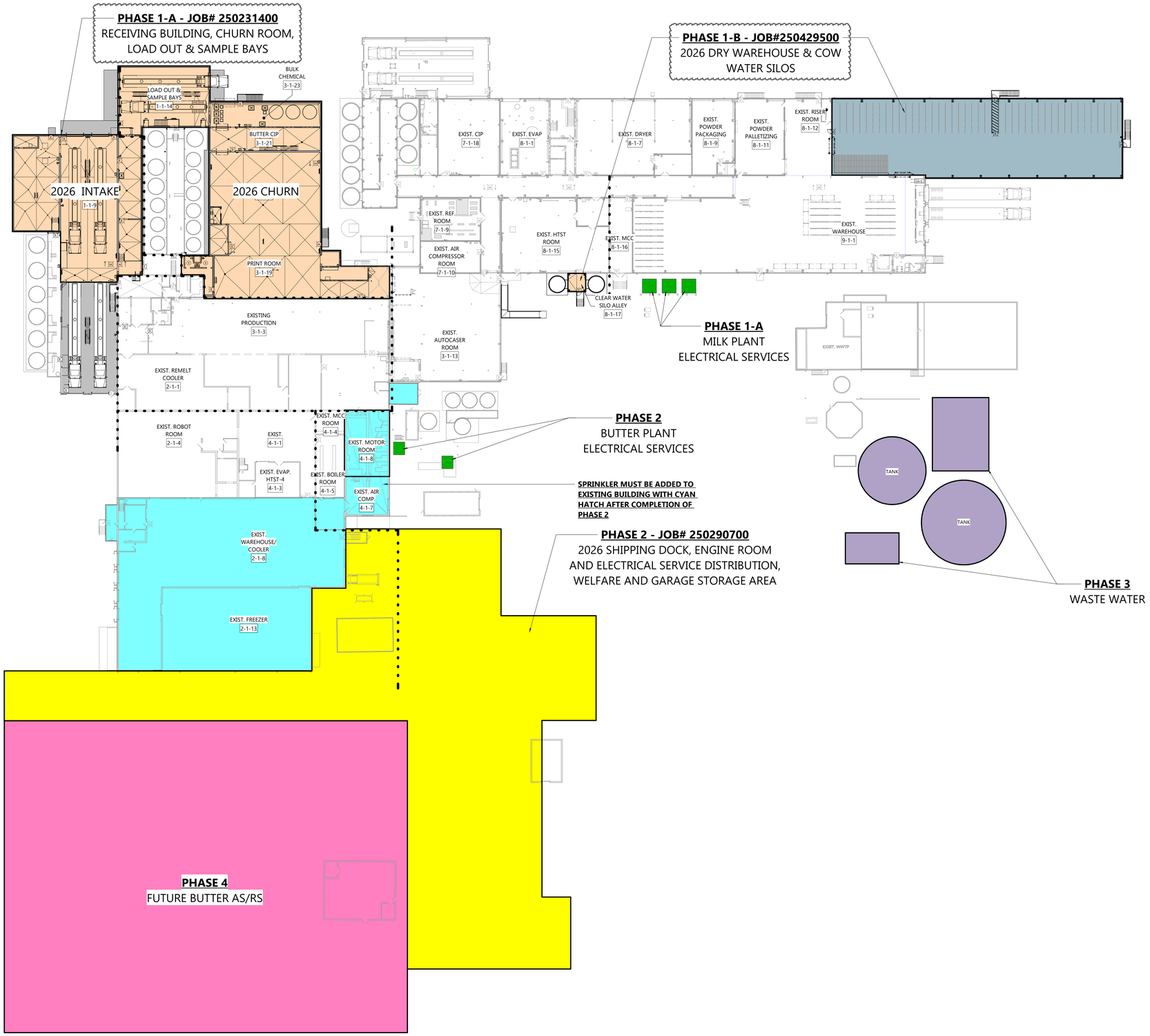


NORTH

OVERALL FACILITY PHASING PLAN

SCALE: 1" = 30'-0"

0' 30' 60'

## PHASING NOTES

**PHASE 1-A**: RECEIVING BUILDING AND CHURN ROOM ADDITIONS

**PHASE 1-B**:
- COW WATER SILOS
- DRY WAREHOUSE SPACE TO REPLACE SHRIMP BUILDING.

PRE-ENGINEERED METAL BUILDING WITH IMP WALLS AND TRADITIONAL RUBBER ROOF MEMBRANE SYSTEM. VERY LIMITED ELECTRICAL AND HVAC SCOPES. NO WATER OR PLUMBING SCOPE INSIDE THIS AREA.

**FIRE PROTECTION**:
- WILL NEED TO WORK WITH LOCAL AUTHORITY TO ALLOW PHASE 1 AND PHASE 1B TO BE OCCUPIED PRIOR TO COMPLETION OF PHASE 2.
- THIS WILL LEAVE A SMALL PORTION OF THE EXISTING FACILITY UNPROTECTED AS INDICATED (IN CYAN) ON THIS SHEET
- PHASE 1 AND PHASE 2 ARE TO BE FIRE PROTECTED FROM THE EXISTING SYSTEM.
- DUE TO WATER SUPPLY ISSUES WE CAN NOT ADDRESS SPACES WITHIN THE EXISTING BUILDING (IN CYAN) UNTIL PHASE 2 IS COMPLETE.
- FIRE PROTECTION IS THE PRIMARY AREA OF CONCERN TO BE DISCUSSED WITH CACHE COUNTY AHJ.

**PHASE 2**: SHIPPING DOCK, ENGINE ROOM AND ELECTRICAL SERVICE DISTRIBUTION, WELFARE AND GARAGE STORAGE AREA. THESE AREAS WILL BE A SINGLE PHASE OF CONSTRUCTION. AREA WILL INCLUDE A FIRE PUMP AND WATER RESERVOIR FOR SPRINKLER SYSTEMS OF THIS ADDITION, THE FUTURE AS/RS AND ABILITY TO BACK FEED SYSTEMS IN THE AREAS ALREADY WITH SPRINKLERS.

SHRIMP BUILDING WILL BE REMOVED DURING THIS PHASE.

**PHASE 3**: WASTE WATER

**PHASE 4**: FUTURE PHASE - BUTTER ASRS & DRY WAREHOUSE

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**T1.1PH**

GENERAL PROJECT PHASING PLAN

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# SPECIAL INSPECTIONS REQUIREMENTS

## IN PROGRESS - SCHEDULE OF SPECIAL INSPECTIONS SERVICES

| MATERIAL / ACTIVITY | SERVICE | APPLICABLE Y/N | APPLICABLE EXTENT |
|---|---|---|---|
| **1705.1.1 SPECIAL CASES** | | | |
| SPECIAL INSPECTIONS AND TESTS SHALL BE REQUIRED FOR ANY PROPOSED WORK THAT IS, IN THE OPINION OF THE BUILDING OFFICIAL, UNUSUAL IN ITS NATURE. | AS REQ'D BY BUILDING OFFICIAL | Y | AS REQ'D BY BUILDING OFFICIAL |
| **1705.2.1 STRUCTURAL STEEL CONSTRUCTION** | | | |
| 1. FABRICATOR AND ERECTOR DOCUMENTS (VERIFY REPORTS AND CERTIFICATES AS LISTED IN AISC 360, SECTION N 3.2 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS) | SUBMITTAL REVIEW | Y | EACH SUBMITTAL |
| 2. MATERIAL VERIFICATION OF STRUCTURAL STEEL | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 3. STRUCTURAL STEEL WELDING: | | | |
| A. INSPECTION TASKS PRIOR TO WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-1) | SHOP AND FIELD INSPECTION | Y | OBSERVE OR PERFORM AS NOTED |
| B. INSPECTION TASKS DURING WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-2) | SHOP AND FIELD INSPECTION | Y | OBSERVE OR PERFORM AS NOTED |
| C. INSPECTION TASKS AFTER WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-3) | SHOP AND FIELD INSPECTION | Y | OBSERVE OR PERFORM AS NOTED |
| D. NONDESTRUCTIVE TESTING (NDT) OF WELDED JOINTS: | | | |
| 1) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV | SHOP OR FIELD ULTRASONIC TESTING - 100% | Y | PERIODIC |
| 2) COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II | SHOP OR FIELD ULTRASONIC TESTING - 10% OF WELDS MINIMUM | Y | PERIODIC |
| 3) WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1 | SHOP OR FIELD RADIOGRAPHIC OR ULTRASONIC TESTING | Y | PERIODIC |
| 4) FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT | VERIFY REPORTS | Y | EACH SUBMITTAL |
| 4. STRUCTURAL STEEL BOLTING: | | | |
| A. INSPECTION TASKS PRIOR TO BOLTING (OBSERVE, OR PERFORM TASKS FOR EACH BOLTED CONNECTION, IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-1) | SHOP AND FIELD INSPECTION | Y | OBSERVE OR PERFORM AS NOTED |
| B. INSPECTION TASKS DURING BOLTING (OBSERVE THE QA TASKS LISTED IN AISC 360, TABLE N5.6-2) | SHOP AND FIELD INSPECTION | Y | OBSERVE |
| 1) PRE-TENSIONED AND SLIP-CRITICAL JOINTS | | | |
| A) TURN-OF-NUT WITH MATCHING MARKINGS | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| B) DIRECT TENSION INDICATOR | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| C) TWIST-OFF TYPE TENSION CONTROL BOLT | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| D) TURN-OF-NUT WITHOUT MATCHING MARKINGS | SHOP AND FIELD INSPECTION | Y | CONTINUOUS |
| E) CALIBRATED WRENCH | SHOP AND FIELD INSPECTION | Y | CONTINUOUS |
| 2) SNUG-TIGHT JOINTS | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| C. INSPECTION TASKS AFTER BOLTING (PERFORM TASKS FOR EACH BOLTED CONNECTION IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-3) | SHOP AND FIELD INSPECTION | Y | PERFORM |
| 5. VISUAL INSPECTION OF EXPOSED CUT SURFACES OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXPOSED CORNERS OF THE RECTANGULAR HSS FOR CRACKS SUBSEQUENT TO GALVANIZING | SHOP OR FIELD INSPECTION | Y | PERIODIC |
| 6. EMBEDMENTS (VERIFY DIAMETER, GRADE, TYPE, LENGTH, EMBEDMENT. SEE 1705.3 FOR ANCHORS) | FIELD INSPECTION | Y | PERIODIC |
| 7. VERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION DOCUMENTS | FIELD INSPECTION | Y | PERIODIC |
| **1705.2.2 COLD-FORMED STEEL DECK** | | | |
| 1. MANUFACTURER DOCUMENTS (VERIFY REPORTS AND CERTIFICATES AS LISTED IN SDI QA/QC, SECTION 2.2.1 AND 2.2 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS) | SUBMITTAL REVIEW | Y | EACH SUBMITTAL |
| 2. MATERIAL VERIFICATION OF STEEL DECK, MECHANICAL FASTENERS AND WELDING MATERIALS | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 3. COLD-FORMED STEEL DECK PLACEMENT: | | | |
| A. INSPECTION TASKS PRIOR TO DECK PLACEMENT (PERFORM THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.1) | SHOP AND FIELD INSPECTION | Y | PERFORM |
| B. INSPECTION TASKS AFTER DECK PLACEMENT (PERFORM THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.2) | SHOP AND FIELD INSPECTION | Y | PERFORM |
| 4. COLD-FORMED STEEL DECK WELDING: | | | |
| A. INSPECTION TASKS PRIOR TO WELDING (OBSERVE THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.3) | SHOP AND FIELD INSPECTION | Y | OBSERVE |
| B. INSPECTION TASKS DURING WELDING (OBSERVE THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.4) | SHOP AND FIELD INSPECTION | Y | OBSERVE |
| C. INSPECTION TASKS AFTER WELDING (PERFORM THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.5) | SHOP AND FIELD INSPECTION | Y | PERFORM |
| 5. COLD-FORMED STEEL DECK MECHANICAL FASTENING: | | | |
| A. INSPECTION TASKS PRIOR TO MECHANICAL FASTENING (OBSERVE THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.6) | SHOP AND FIELD INSPECTION | Y | OBSERVE |
| B. INSPECTION TASKS DURING MECHANICAL FASTENING (OBSERVE THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.7) | SHOP AND FIELD INSPECTION | Y | OBSERVE |
| C. INSPECTION TASKS AFTER MECHANICAL FASTENING (PERFORM THE QA TASKS LISTED IN SDI QA/QC, APPENDIX 1 TABLE 1.8) | SHOP AND FIELD INSPECTION | Y | PERFORM |
| **1705.2.3 OPEN-WEB STEEL JOISTS AND JOIST GIRDERS** | | | |
| 1. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS. | | | |
| A. END CONNECTIONS - WELDING OR BOLTED. | PER SJI CJ OR SJI 100 | Y | PERIODIC |
| B. BRIDGING - HORIZONTAL OR DIAGONAL. | | | |
| 1) STANDARD BRIDGING. | PER SJI CJ OR SJI 100 | Y | PERIODIC |
| 2) BRIDGING THAT DIFFERS FROM THE SPECIFICATIONS LISTED IN SJI CJ OR SJI 100. | | Y | PERIODIC |
| **1705.2.4 COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER** | | | **NOT APPLICABLE** |
| **1705.3 CONCRETE CONSTRUCTION** | | | |
| 1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT. | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 2. REINFORCING BAR WELDING: | | | |
| A. VERIFICATION OF WELDABILITY OF BARS OTHER THAN ASTM A706. | SHOP AND FIELD INSPECTION | N | PERIODIC |
| B. INSPECTION OF SINGLE-PASS FILLET WELDS 5/16 OR LESS IN SIZE. | SHOP AND FIELD INSPECTION | N | PERIODIC |
| C. INSPECTION OF ALL OTHER WELDS. | SHOP AND FIELD INSPECTION | N | CONTINUOUS |
| 3. INSPECTION OF ANCHORS CAST IN CONCRETE. | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS PER RESEARCH REPORTS, OR, IF NO SPECIFIC REQUIREMENTS ARE PROVIDED, REQUIREMENTS SHALL BE PROVIDED BY THE REGISTERED DESIGN PROFESSIONAL AND APPROVED BY THE BUILDING OFFICIAL, INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MINIMUM THICKNESS, ANCHOR EMBEDMENT AND TIGHTENING TORQUE | | | PERIODIC OR AS REQUIRED BY THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE |
| A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY-INCLINED ORIENTATION THAT RESIST SUSTAINED TENSION LOADS. | FIELD INSPECTION | Y | CONTINUOUS |
| B. MECHANICAL AND ADHESIVE ANCHORS NOT DEFINED IN 4A. | FIELD INSPECTION | Y | PERIODIC |
| 5. VERIFY USE OF APPROVED DESIGN MIX | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. | SHOP AND FIELD INSPECTION | Y | CONTINUOUS |
| 7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES | SHOP AND FIELD INSPECTION | Y | CONTINUOUS |
| 8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES | SHOP AND FIELD INSPECTION | Y | PERIODIC |
| 9. INSPECTION OF PRESTRESSED CONCRETE: | | | |
| A. APPLICATION OF PRESTRESSING FORCE | SHOP AND FIELD INSPECTION | N | CONTINUOUS |
| B. GROUTING OF BONDED PRESTRESSING TENDONS | SHOP AND FIELD INSPECTION | N | CONTINUOUS |
| 10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS | FIELD INSPECTION | N | PERIODIC |
| 11. FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR: | | | |
| A. INSTALLATION OF THE EMBEDDED PARTS. | FIELD INSPECTION | N | CONTINUOUS |
| B. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS. | FIELD INSPECTION | N | CONTINUOUS |
| C. COMPLETION OF CONNECTIONS IN THE FIELD. | FIELD INSPECTION | N | CONTINUOUS |
| 12. INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5. | FIELD INSPECTION | N | PERIODIC |
| 13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS | REVIEW FIELD TESTING AND LABORATORY REPORTS | N | PERIODIC |
| 14. INSPECTION OF FORMWORK FOR SHAPE, LINES, LOCATION AND DIMENSIONS | FIELD INSPECTION | Y | PERIODIC |
| 15. CONCRETE STRENGTH TESTING AND VERIFICATION OF COMPLIANCE WITH CONSTRUCTION DOCUMENTS | FIELD TESTING AND REVIEW OF LABORATORY REPORTS | Y | PERIODIC |
| **1705.4 MASONRY CONSTRUCTION** | | | **NOT APPLICABLE** |
| **1705.4.1 GLASS UNIT MASONRY AND MASONRY VENEER IN RISK CATEGORY IV.** | | | **NOT APPLICABLE** |
| **1705.5 WOOD CONSTRUCTION** | | | **NOT APPLICABLE** |
| **1705.5.3 MASS TIMBER CONSTRUCTION (TYPES IV-A, IV-B, AND IV-C CONSTRUCTION)** | | | **NOT APPLICABLE** |
| **1705.6 SOILS** | | | |
| 1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. | FIELD INSPECTION | Y | PERIODIC |
| 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. | FIELD INSPECTION | Y | PERIODIC |
| 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. | FIELD INSPECTION | Y | PERIODIC |
| 4. DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. | FIELD INSPECTION | Y | CONTINUOUS |
| 5. PRIOR TO PLACEMENT OF CONTROLLED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY. | FIELD INSPECTION | Y | PERIODIC |
| **1705.7 DRIVEN DEEP FOUNDATIONS** | | | **NOT APPLICABLE** |
| **1705.8 CAST-IN-PLACE DEEP FOUNDATIONS** | | | **NOT APPLICABLE** |
| **1705.9 HELICAL PILE FOUNDATIONS** | | | **NOT APPLICABLE** |
| **1705.10 STRUCTURAL INTEGRITY OF DEEP FOUNDATION ELEMENTS** | | | |
| WHENEVER THERE IS A REASONABLE DOUBT AS TO THE STRUCTURAL INTEGRITY OF A DEEP FOUNDATION ELEMENT, AN ENGINEERING ASSESSMENT SHALL BE REQUIRED. THE ENGINEERING ASSESSMENT SHALL INCLUDE TESTS FOR DEFECTS PERFORMED IN ACCORDANCE WITH ASTM D4945, ASTM D5882, ASTM D6760 OR ASTM D7949, OR OTHER APPROVED METHOD. | FIELD INSPECTION | Y | AS- REQUIRED |
| **1705.11 FABRICATED ITEMS** | | | **NOT APPLICABLE** |
| **1705.12.1 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR WIND RESISTANCE** | | | **NOT APPLICABLE** |
| **1705.12.2 COLD-FORMED STEEL SPECIAL INSPECTIONS FOR WIND RESISTANCE** | | | **NOT APPLICABLE** |
| **1705.12.3 WIND-RESISTING COMPONENTS** | | | **NOT APPLICABLE** |
| **1705.13.1 STRUCTURAL STEEL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | |
| 1. SEISMIC FORCE-RESISTING SYSTEMS IN SDC B, C, D, E, OR F. | SHOP AND FIELD INSPECTION | Y | IN ACCORDANCE WITH AISC 341 |
| 2. STRUCTURAL STEEL ELEMENTS IN SDC B, C, D, E, OR F OTHER THAN THOSE IN ITEM 1. INCLUDING STRUTS, COLLECTORS, CHORDS AND FOUNDATION ELEMENTS. | SHOP AND FIELD INSPECTION | Y | IN ACCORDANCE WITH AISC 341 |
| **1705.13.2 STRUCTURAL WOOD SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | **NOT APPLICABLE** |
| **1705.13.3 COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | **NOT APPLICABLE** |
| **1705.13.4 DESIGNATED SEISMIC SYSTEMS VERIFICATION SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | **NOT APPLICABLE** |
| **1705.13.5 ARCHITECTURAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | |
| 1. FOR SDC D, E OR F, INSPECTION DURING THE ERECTION AND FASTENING OF EXTERIOR CLADDING AND INTERIOR OR EXTERIOR VENEER MORE THAN 30 FEET ABOVE GRADE OR WALKING SURFACE AND WEIGHING MORE THAN 5 PSF. | FIELD INSPECTION | N | PERIODIC |
| 2. FOR SDC D, E OR F, INSPECTION DURING THE ERECTION AND FASTENING OF INTERIOR NONBEARING WALLS MORE THAN 30 FEET ABOVE GRADE OR WALKING SURFACE AND WEIGHING MORE THAN 15 PSF. | FIELD INSPECTION | N | PERIODIC |
| 3. FOR SDC D, E OR F, INSPECTION DURING THE ERECTION AND FASTENING OF EXTERIOR NONBEARING WALLS MORE THAN 30 FEET ABOVE GRADE OR WALKING SURFACE. | FIELD INSPECTION | Y | PERIODIC |
| 4. FOR SDC D, E OR F, INSPECTION DURING ANCHORAGE OF ACCESS FLOORS | FIELD INSPECTION | N | PERIODIC |
| **1705.13.6 PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | |
| 1. INSPECTION DURING THE ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS IN SDC C, D, E OR F | FIELD INSPECTION | Y | PERIODIC |
| 2. INSPECTION DURING THE ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT IN SDC E OR F | FIELD INSPECTION | N | PERIODIC |
| 3. INSPECTION DURING INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS DESIGNED TO CARRY HAZARDOUS MATERIALS, AND THEIR ASSOCIATED MECHANICAL UNITS IN SDC C, D, E OR F | FIELD INSPECTION | Y | PERIODIC |
| 4. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF HVAC DUCTWORK DESIGNED TO CONTAIN HAZARDOUS MATERIALS IN SDC C, D, E OR F | FIELD INSPECTION | Y | PERIODIC |
| 5. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF VIBRATION ISOLATION SYSTEMS IN SDC C, D, E OR F WHERE NOMINAL CLEARANCE OF 1/4 INCH OR LESS IS REQUIRED BY THE APPROVED CONSTRUCTION DOCUMENTS | FIELD INSPECTION | N | PERIODIC |
| 6. INSPECTION DURING INSTALLATION OF MECHANICAL AND ELECTRICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING SYSTEMS AND THEIR STRUCTURAL SUPPORTS, WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED IN STRUCTURES ASSIGNED TO SDC C, D, E, OR F TO VERIFY ONE OF THE FOLLOWING UNLESS FLEXIBLE SPRINKLER HOSE FITTINGS ARE USED: | | | |
| A. ASCE/SEI 7, SECTION 13.2.4 MINIMUM REQUIRED CLEARANCES HAVE BEEN PROVIDED. | FIELD INSPECTION | Y | PERIODIC |
| B. A THREE INCH OR GREATER NOMINAL CLEARANCE HAS BEEN PROVIDED BETWEEN FIRE PROTECTION SPRINKLER SYSTEM DROPS AND SPRIGS AND: STRUCTURAL MEMBERS NOT USED COLLECTIVELY OR INDEPENDENTLY TO SUPPORT THE SPRINKLERS; EQUIPMENT ATTACHED TO THE BUILDING STRUCTURE; AND OTHER SYSTEMS' PIPING. | FIELD INSPECTION | Y | PERIODIC |
| **1705.13.7 STORAGE RACKS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE** | | | |
| INSPECTION DURING THE ANCHORAGE OF STORAGE RACKS 8 FEET OR GREATER IN HEIGHT IN STRUCTURES ASSIGNED TO SDC D, E OR F. | | | |
| 1. MATERIALS USED, TO VERIFY COMPLIANCE WITH ONE OR MORE OF THE MATERIAL TEST REPORTS IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. | FIELD INSPECTION | Y | PERIODIC |
| 2. FABRICATED STORAGE RACK ELEMENTS. | FIELD INSPECTION | Y | PERIODIC |
| 3. STORAGE RACK ANCHORAGE INSTALLATION. | FIELD INSPECTION | Y | PERIODIC |
| 4. COMPLETED STORAGE RACK SYSTEM, TO INDICATE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. | FIELD INSPECTION | Y | PERIODIC |
| **1705.13.8 SEISMIC ISOLATION SYSTEMS** | | | **NOT APPLICABLE** |
| **1705.13.9 COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES** | | | **NOT APPLICABLE** |
| **1705.14.1 STRUCTURAL STEEL TESTING FOR SEISMIC RESISTANCE** | | | |
| 1. NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL IN THE SEISMIC FORCE-RESISTING SYSTEMS IN ACCORDANCE WITH AISC 341 IN STRUCTURES ASSIGNED TO SDC B, C, D, E, OR F. | FIELD TEST | Y | PERIODIC |
| 2. NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN THE SEISMIC FORCE-RESISTING SYSTEMS NOT COVERED IN ITEM 1 ABOVE, INCLUDING STRUTS, COLLECTORS, CHORDS, AND FOUNDATION ELEMENTS IN ACCORDANCE WITH AISC 341 IN STRUCTURES ASSIGNED TO SDC B, C, D, E, OR F. | FIELD TEST | Y | PERIODIC |
| **1705.14.2 SEISMIC CERTIFICATION OF NONSTRUCTURAL COMPONENTS** | | | |
| 1.REVIEW CERTIFICATE OF COMPLIANCE FOR NON-STRUCTURAL COMPONENTS IN STRUCTURES ASSIGNED TO SDC B, C, D, E, OR F. | CERTIFICATE OF COMPLIANCE REVIEW | Y | EACH SUBMITTAL |
| **1705.14.3 SEISMIC CERTIFICATION OF DESIGNATED SEISMIC SYSTEMS** | | | |
| REVIEW CERTIFICATE OF COMPLIANCE FOR DESIGNATED SEISMIC SYSTEM, SUBJECT TO THE REQUIREMENTS OF ASCE 7, SECTION 13.2.4, AS NOTED ON THE CONSTRUCTION DOCUMENTS, IN STRUCTURES ASSIGNED TO SDC C, D, E OR F | CERTIFICATE OF COMPLIANCE REVIEW | Y | EACH SUBMITTAL |
| **1705.14.4 SEISMIC ISOLATION SYSTEMS** | | | **NOT APPLICABLE** |
| **1705.15 SPRAYED FIRE-RESISTANT MATERIALS** | | | **NOT APPLICABLE** |
| **1705.16 MASTIC AND INTUMESCENT FIRE-RESISTIVE MATERIALS** | | | **NOT APPLICABLE** |
| **1705.17 EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)** | | | **NOT APPLICABLE** |
| **1705.18 FIRE-RESISTANT PENETRATIONS AND JOINTS** | | | |
| 1. INSPECT PENETRATION FIRESTOP SYSTEMS | FIELD TESTING | Y | PER ASTM E2174 |
| 2. INSPECT FIRE-RESISTANT JOINT SYSTEMS | FIELD TESTING | Y | PER ASTM E2393 |
| **1705.19 SMOKE CONTROL SYSTEMS** | | | **NOT APPLICABLE** |
| **1705.20 SEALING OF MASS TIMBER CONSTRUCTION** | | | **NOT APPLICABLE** |
| **END OF SCHEDULE** | | | |

### STATEMENT OF SPECIAL INSPECTION REQUIREMENTS FOR WIND RESISTANCE

SEE THE SCHEDULE OF SPECIAL INSPECTIONS FOR INSPECTION AND TESTING REQUIREMENTS.

**BASIC WIND SPEED, V:** 103 MPH

**WIND EXPOSURE CATEGORY:** C

**SPECIAL INSPECTION FOR WIND RESISTANCE REQUIRED:** NO
(REQUIRED IN WIND EXPOSURE CATEGORY B, WHERE THE BASIC WIND SPEED, V, IS 150 MILES PER HOUR OR GREATER. REQUIRED IN WIND EXPOSURE CATEGORY C OR D, WHERE THE BASIC WIND SPEED, V, IS 140 MILES PER HOUR OR GREATER)

**DESCRIPTION OF STRUCTURAL WOOD AND COLD-FORMED STEEL LIGHT FRAME CONSTRUCTION MAIN WINDFORCE-RESISTING SYSTEM SUBJECT TO SPECIAL INSPECTIONS FOR WIND RESISTANCE:**
(REQUIRED FOR SYSTEMS NOTED IN IBC SECTION 1705.12.1 AND 1705.12.2)

N/A

**DESCRIPTION OF WINDFORCE-RESISTING COMPONENTS SUBJECT TO SPECIAL INSPECTIONS FOR WIND RESISTANCE:**
(REQUIRED FOR SYSTEMS AND COMPONENTS NOTED IN IBC SECTION 1705.12.3)

N/A

**STATEMENT OF RESPONSIBILITY:**
EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A SYSTEM OR COMPONENT DESCRIBED ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY.

### STATEMENT OF SPECIAL INSPECTION REQUIREMENTS FOR SEISMIC RESISTANCE

SEE THE SCHEDULE OF SPECIAL INSPECTIONS FOR INSPECTION AND TESTING REQUIREMENTS.

**SEISMIC DESIGN CATEGORY:** D

**SPECIAL INSPECTION FOR SEISMIC RESISTANCE REQUIRED:** YES

**DESCRIPTION OF SEISMIC FORCE-RESISTING SYSTEM SUBJECT TO SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:**
(WHERE REQUIRED PER IBC SECTIONS 1705.13.1, 1705.13.2, AND 1705.13.3) (SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE OF STRUCTURAL STEEL, WHERE REQUIRED, SHALL BE IN ACCORDANCE WITH AISC 341)

PEMB FRAMES USING ORDINARY CONCENTRICALLY BRACED FRAMES AND ORDINARY MOMENT FRAMES.

**DESCRIPTION OF DESIGNATED SEISMIC SYSTEMS SUBJECT TO SPECIAL INSPECTION FOR SEISMIC RESISTANCE:**
(WHERE REQUIRED PER IBC SECTIONS 1705.13.4. REQUIRED FOR ARCHITECTURAL, ELECTRICAL AND MECHANICAL SYSTEMS AND THEIR COMPONENTS THAT REQUIRE DESIGN IN ACCORDANCE WITH CHAPTER 13.2.2 OF ASCE 7, HAVE A COMPONENT IMPORTANCE FACTOR, IP, GREATER THAN ONE AND ARE IN SEISMIC DESIGN CATEGORIES C...

N/A

**DESCRIPTION OF ADDITIONAL SEISMIC SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTIONS:**
(REQUIRED FOR SYSTEMS NOTED IN IBC SECTION 1705.13.5, 1705.13.6, 1705.13.7, 1705.13.8, AND 1705.13.9)

N/A

**DESCRIPTION OF SEISMIC SYSTEMS AND COMPONENTS REQUIRING TESTING:**
(REQUIRED FOR SYSTEMS NOTED IN IBC SECTION 1705.14.1, 1705.14.2, 1705.14.3, AND 1705.14.4)

N/A

**STATEMENT OF RESPONSIBILITY:**
EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A SYSTEM OR COMPONENT DESCRIBED ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY.

GENERAL SPECIAL INSPECTION REQUIREMENTS


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
IFB APR. 17, 2026

JOB NUMBER
250429500

SHEET NUMBER
T2.0


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# ARCHITECTURAL SPECIFICATIONS

## DIVISION 00 PROCUREMENT AND CONTRACTING

### 00 72 00 GENERAL CONDITIONS

A. THE AIA GENERAL CONDITIONS A201 LATEST EDITION IS A PART OF THESE DOCUMENTS. COPIES ARE ON FILE AT THE OFFICE OF EXCEL ENGINEERING, INC.

### 00 73 16 INSURANCE REQUIREMENTS

A. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATE OF INSURANCE FOR NOT LESS THAN THE FOLLOWING LIMITS:
   1. WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY:
      a. PER STATUTORY LIMITS
   2. COMMERCIAL GENERAL LIABILITY:
      a. GENERAL AGGREGATE: $2,000,000
      b. PRODUCTS AND COMPLETED OPERATIONS AGGREGATE: $2,000,000
      c. PERSONAL AND ADVERTISING INJURY: $1,000,000
      d. EACH OCCURRENCE: $1,000,000
      e. CONTRACTOR SHALL LIST EXCEL ENGINEERING, INC. AS ADDITIONAL INSURED.

## DIVISION 01 GENERAL REQUIREMENTS

### 01 11 00 SUMMARY OF WORK

A. THE PLANS AND SPECIFICATIONS ARE INTENDED TO GIVE A DESCRIPTION OF THE WORK. NO DEVIATION FROM THE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF EXCEL ENGINEERING, INC. THE CONTRACTOR IS TO CLARIFY ANY DISCREPANCIES WITH EXCEL ENGINEERING, INC. PRIOR TO BIDDING. THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS AND ACCESS TO THE WORK AREA.
B. REFERENCE TO "GENERAL CONTRACTOR" OR "GC" IN THE CONSTRUCTION DOCUMENTS IS INTENDED TO REPRESENT THE CONTRACTOR RESPONSIBLE FOR OVERALL CONSTRUCTION AND COORDINATION OF THE WORK. THE "GC" COULD BE A GENERAL CONTRACTOR, CONSTRUCTION MANAGER OR ANY OTHER CONTRACTOR RESPONSIBLE FOR THE OVERALL PROJECT. IT IS THE RESPONSIBILITY OF THE GC TO ASSIGN RESPONSIBILITY FOR ALL WORK.
C. THE FOLLOWING LIST IS INTENDED TO AID THE GC IN DIRECTING THE SUBCONTRACTORS REGARDING RESPONSIBILITY OF WORK. THE DRAWINGS MAY OR MAY NOT IDENTIFY RESPONSIBILITY FOR THESE SCOPES OF WORK. THIS LIST IS INTENDED TO PROVIDE THE GC AN AID TO ASSIGN THIS WORK SO SCOPE OF WORK IS PROPERLY BID. THE LIST IS NOT INTENDED TO BE ALL INCLUSIVE AND IT REMAINS THE RESPONSIBILITY OF THE GC TO ENSURE ALL SCOPES OF WORK ARE ASSIGNED AND PROVIDED.
   1. TEMPORARY ELECTRIC SERVICE
   2. TEMPORARY PHONE / INTERNET
   3. TEMPORARY HEATING
   4. TEMPORARY WATER
   5. TEMPORARY TOILETS.
   6. PERMITS AND SALES TAX
   7. DEMOLITION
   8. INTERIOR CONCRETE EQUIPMENT PADS
   9. EXTERIOR CONCRETE EQUIPMENT PADS AND POLE BASES
   10. OPENINGS IN EXISTING CONSTRUCTION
   11. REINFORCING STEEL JOISTS FOR HANGING LOADS
   12. LARGE OPENINGS IN METAL DECK
   13. SMALL OPENINGS IN METAL DECK
   14. BOX OUT OPENINGS IN POURED CONCRETE AND FOUNDATION WALLS.
   15. LARGE OPENINGS IN INSULATED METAL PANELS
   16. SMALL OPENINGS IN INSULATED METAL PANELS
   17. TRIM AROUND INSULATED METAL PANEL OPENINGS
   18. PATCHING OPENINGS IN FLOORS, WALLS, AND ROOF
   19. ROOFING, FLASHING, AND INSULATION AT ROOF CURBS
   20. EXCAVATION AND BACKFILL FOR MEP WORK.
   21. SAW CUTTING AND REMOVAL OF FLOOR FOR UTILITIES
   22. CONCRETE FLOOR REPLACEMENT WHERE SAWCUT
   23. INSTALLATION OF CEILING/WALL ACCESS PANELS
   24. INSTALLATION OF ROOF CURBS AND ASSOCIATED BLOCKING
   25. PAINTING
   26. SEALANTS

### 01 11 13 WORK COVERED BY THE CONSTRUCTION DOCUMENTS

A. THE FOLLOWING IS A GENERAL LIST OF WORK COVERED BY THE CONSTRUCTION DOCUMENTS. NOTE THAT THIS LISTING IS NOT ALL-INCLUSIVE OF THE WORK TO BE PERFORMED. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ALL WORK AS COVERED IN THE CONSTRUCTION DOCUMENTS.
   1. GENERAL REQUIREMENTS
   2. SITE:
      a. SITE DEMOLITION
      b. EARTHWORK
      c. SITE UTILITIES
      d. STORM DRAINAGE
      e. CONCRETE CURBS
      f. EXTERIOR CONCRETE
      g. ASPHALT PAVING/MARKINGS
      h. UNIT PAVERS
      i. RETAINING WALLS
      j. IRRIGATION SYSTEMS
      k. CHAIN-LINK FENCES AND GATES
      l. DUMPSTER ENCLOSURES
      m. LANDSCAPING
      n. SITE SIGNAGE
   3. CONCRETE:
      a. CAST-IN PLACE CONCRETE
   4. METALS:
      a. STRUCTURAL STEEL
      b. STEEL JOISTS
      c. METAL FABRICATIONS
   5. THERMAL AND MOISTURE PROTECTION:
      a. BUILDING INSULATION
      b. METAL WALL PANELS
      c. MEMBRANE ROOFING
      d. ROOF WALKWAYS
      e. JOINT SEALANTS
   6. DOORS AND WINDOWS:
      a. STEEL DOORS AND FRAMES
      b. OVERHEAD DOORS
   7. FINISHES:
      a. PAINTING
   8. SPECIAL CONSTRUCTION:
      a. METAL BUILDING SYSTEMS
   9. MECHANICAL
      a. PLUMBING
      b. FIRE PROTECTION
      c. HVAC
   10. ELECTRICAL

### 01 11 16 WORK BY OWNER

A. THE OWNER WILL BE RESPONSIBLE FOR THE FOLLOWING COSTS AND WORK WHICH ARE NOT PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL ASSIST THE OWNER IN COORDINATING THE SERVICE/WORK LISTED AS REQUIRED.
   1. BUILDER'S RISK INSURANCE
   2. GAS UTILITY SERVICE AND ASSESSMENTS
   3. ELECTRIC UTILITY SERVICE AND ASSESSMENTS
   4. TELEPHONE UTILITY SERVICE AND ASSESSMENTS
   5. CABLE UTILITY SERVICE AND ASSESSMENTS
   6. IMPACT FEES
   7. SURVEY RECERTIFICATION
   8. HAZARDOUS MATERIAL REMOVAL
   9. LANDSCAPING
   10. EXTERIOR SIGNAGE
   11. TELEPHONE SYSTEM
   12. SECURITY SYSTEM
   13. A/V EQUIPMENT
   14. INTERCOM
   15. SOUND SYSTEM
   16. DATA AND COMPUTER WIRING AND SYSTEMS
   17. UNINTERRUPTABLE POWER SUPPLY (UPS)
   18. PRODUCT SHELVING / RACKS
   19. SPECIAL INSPECTIONS: THE OWNER SHALL EMPLOY SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION AS REQUIRED PER CHAPTER 17 OF THE IBC. TESTS AND INSPECTIONS SHALL BE CONDUCTED BY TESTING AGENCIES APPROVED BY THE CODE ENFORCEMENT OFFICIAL. SEE SCHEDULE OF SPECIAL INSPECTIONS ON T2.0.

### 01 23 00 ALTERNATE BIDS

A. ALTERNATE BID A1: PROVIDE COST FOR GALVANIZED GOALPOST/GUARD POST IN LIEU OF THE STAINLESS STEEL GUARD POSTS CALLED OUT ON SHEET A6.0

### 01 25 13 PRODUCT SUBSTITUTION PROCEDURES

A. REFERENCE TO MATERIALS OR SYSTEMS HEREIN BY NAME, MAKE OR CATALOG NUMBER IS INTENDED TO ESTABLISH A QUALITY STANDARD, AND NOT TO LIMIT COMPETITION. THE WORDS "OR APPROVED EQUIVALENT" ARE IMPLIED FOLLOWING EACH BRAND NAME/MODEL NUMBER UNLESS STATED OTHERWISE "OR APPROVED EQUIVALENT" MATERIALS SHALL BE APPROVED BY EXCEL ENGINEERING, INC. PRIOR TO BIDS BEING ACCEPTED AND ACCEPTANCE FOR USE. PROVIDE A LETTER FROM THE MANUFACTURER CERTIFYING THAT THE PRODUCT MEETS OR EXCEEDS THE SPECIFIED PRODUCT.

### 01 31 00 PROJECT MANAGEMENT AND COORDINATION

A. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR AND SHALL HAVE CONTROL OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND SAFETY PRECAUTIONS AND PROCEDURES USED TO CONSTRUCT THE WORK.
B. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL (INCLUDING TAXES), AND EQUIPMENT AS NECESSARY TO COMPLETE THE WORK. PERMITS SHALL BE OBTAINED AND PAID FOR BY THE RESPECTIVE CONTRACTOR, INCLUDING TEMPORARY OCCUPANCY PERMIT IF REQUIRED.
C. REVIT / AUTOCAD FILES OF CONSTRUCTION DOCUMENTS MAY BE OBTAINED BY CONTACTING EXCEL ENGINEERING, INC. 3 DIMENSIONAL MODEL MAY BE PROVIDED TO CONVEY DESIGN INTENT. FILE REQUESTS SHALL BE EMAILED TO EXCEL PROJECT MANAGER AND PROJECT ASSISTANT AND SHALL INCLUDE THE FOLLOWING INFORMATION:
   1. EXCEL ENGINEERING PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. SHEET NUMBERS REQUESTED
D. REVIT / AUTOCAD FILES REQUEST SHALL BE MADE TO:
   1. PROJECT MANAGER: (DANIEL ST LOUIS AT DANIEL.STLOUIS@EXCELENGINEER.COM)
   2. PROJECT ASSISTANT: (LISA DICKMANN AT FOODGROUP@EXCELENGINEER.COM)
E. REVIT / AUTOCAD FILES WILL BE SENT BY METHOD OF EXCEL ENGINEERING, INC. CHOOSING AS SOON AS POSSIBLE.
F. REVIT / AUTOCAD FILES SHALL NOT BE USED FOR COMPONENT SUBMITTALS OR SHOP DRAWINGS. SUBMITTALS AND SHOP DRAWINGS USING EXCEL ENGINEERING, INC. CAD FILES WILL BE RETURNED REJECTED AND UN-REVIEWED.
G. ALL "REQUEST FOR INFORMATION" (RFI) SHALL BE MADE THROUGH THE GENERAL CONTRACTOR FOR LOGGING AND TRACKING PURPOSES. RFI'S SHALL BE SUBMITTED TO THE EXCEL ENGINEERING PROJECT ASSISTANT. RFI'S SHALL BE SUBMITTED ON AN ARCHITECT APPROVED FORM, NUMBER SEQUENCE AND INCLUDE THE FOLLOWING INFORMATION:
   1. EXCEL ENGINEERING PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. DIVISION OF CONSTRUCTION REFERENCED
   4. POTENTIAL SCHEDULE IMPACTS
   5. POTENTIAL COST IMPACTS OF ANY SUGGESTED ALTERNATES FROM THE CONSTRUCTION DOCUMENTS

### 01 32 00 SCHEDULING OF WORK

A. THE CONTRACTOR SHALL OBTAIN THE OWNER'S APPROVAL OF THE CONSTRUCTION SCHEDULE PRIOR TO PROCEEDING WITH THE WORK.

### 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

A. SUBMIT FOR APPROVAL ARCHITECTURAL, CIVIL, STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION AND ELECTRICAL SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLES INDICATED IN THE CONSTRUCTION ADMINISTRATION SUBMITTAL LIST (CASL). SEE DISCIPLINE SPECIFICATIONS FOR DISCIPLINE SPECIFIC CASL.
B. SHOP DRAWING SUBMITTALS SHALL BE MADE TO EXCEL ENGINEERING, INC. FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
C. SUBMITTALS SHALL BE MADE BY ELECTRONIC SUBMISSION IN PORTABLE DOCUMENT FORMAT (PDF) UNLESS NOTED OTHERWISE. WHEN HARD COPY SUBMISSIONS ARE REQUIRED, COORDINATE WITH EXCEL ENGINEERING, INC. PRIOR TO SUBMISSION.
D. SUBMITTALS SHALL BE MADE TO THE EXCEL ENGINEERING, INC. PROJECT ASSISTANT.
   1. LISA DICKMANN OR MICHELLE SCHAALMA AT FOODGROUP@EXCELENGINEER.COM
E. SUBMITTAL SHALL BE MADE USING APPROVED SUBMITTAL FORM CONTAINING AT MINIMUM THE FOLLOWING INFORMATION:
   1. EXCEL ENGINEERING PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. SUBMITTAL DIVISION OF CONSTRUCTION
   4. MATERIAL SUPPLIER / SUBCONTRACTOR
   5. SUBMITTAL DESCRIPTION (i.e. CONCRETE MIX DESIGN)
F. SUBMITTALS SHALL BE REVIEWED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMITTING FOR APPROVAL. CONTRACTOR SHALL COMPLETE ALL FIELD VERIFICATIONS PRIOR TO SUBMITTAL SUBMISSION.
G. SUBMITTALS MUST BE 100% COMPLETE AND IN ONE (1) PACKAGE FOR THE ITEM BEING SUBMITTED. NON-COMPLETE SUBMITTALS WILL BE RETURNED TO THE CONTRACTOR WITHOUT COMMENT AND STAMPED "REJECTED-RESUBMIT". CONTRACTORS WHO KNOWINGLY WANT TO SUBMIT NON-COMPLETE SUBMITTALS OR BREAK SINGLE SYSTEM SUBMITTALS INTO MULTIPLE SUBMITTALS WILL BE RESPONSIBLE TO ARRANGE WITH EXCEL ENGINEERING, PRIOR TO SUBMITTING THE SUBMITTAL(S), AND TO COMPENSATE EXCEL ENGINEERING FOR THE EXTRA WORK INVOLVED.
H. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
I. FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.
J. PHYSICAL SAMPLES FOR FINISHES ARE TO BE SUBMITTED TO EXCEL ENGINEERING, INC. FOR APPROVAL PRIOR TO INSTALLATION.
K. BUILDING COMPONENTS REQUIRING SUBMISSION "FOR RECORD" TO THE AUTHORITY HAVING JURISDICTION REQUIRE SEALED AND SIGN HARD COPIES, PROVIDE TWO (2) HARD COPIES WITH WET SEAL AND ORIGINAL SIGNATURE IN ADDITION TO THE ELECTRONIC SUBMISSION IN PORTABLE DOCUMENT FORMAT (PDF).
L. TEST RESULTS SHALL BE SUBMITTED FOR REVIEW WITHIN 24 HOURS OF COMPLETION OF TEST.
M. CONTRACTOR SHALL ALLOW 10 WORKING DAYS IN SCHEDULE FOR A/E TO REVIEW SUBMITTALS. IF SUBMITTALS REQUIRE AN EXPEDITED REVIEW PROCESS, CONTACT EXCEL ENGINEERING, INC. PRIOR TO SUBMITTING THE SUBMITTAL(S) TO MAKE THE APPROPRIATE ARRANGEMENT.
N. SUBMITTALS REQUIRING RESUBMISSION SHALL HAVE CHANGES MADE TO A PREVIOUSLY REVIEWED SUBMITTAL DENOTED WITH REVISION CLOUDS AND TAGS IDENTIFYING CHANGES.
O. ARCHITECTURAL CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
   1. INSULATION
   2. INSULATED METAL PANELS
   3. MEMBRANE ROOFING SYSTEMS
   4. ROOFING ACCESSORIES
   5. SEALANTS
   6. HOLLOW METAL DOORS AND FRAMES
   7. DOOR HARDWARE
   8. PAINTING SYSTEMS
   9. FIRE EXTINGUISHERS
   10. METAL BUILDING SYSTEMS (PROVIDE "PRELIMINARY" AND "FOR RECORD" SUBMITTALS)
P. STRUCTURAL AND ARCHITECTURAL PLANS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS. SHOP DRAWING DETAILERS AND SUPPLIERS ARE RESPONSIBLE FOR THE DETERMINATION OF ALL DIMENSIONS, PITCHES, ELEVATIONS, ETC., BEYOND THOSE NOTED AS NECESSARY TO THOROUGHLY DETAIL / FABRICATE THEIR WORK. CONTACT A/E WITH ANY DISCREPANCIES FOUND.
Q. IN NO CASE SHALL CHANGES BE MADE TO WORK SHOWN OR PROCEDURE SPECIFIED ON STRUCTURAL PLANS UNLESS FIRST APPROVED IN WRITING BY A/E. REVIEW OF SHOP DRAWINGS BY A/E DOES NOT CONSTITUTE ACCEPTANCE OF A DESIGN CHANGE. PROPOSED CHANGES BY CONTRACTOR MUST BE SUBMITTED IN RFI FORMAT AND MUST BE APPROVED IN THE SAME MANNER. CONTRACTOR REQUESTING CHANGE MAY BE BILLED ON A TIME AND EXPENSE BASIS BY A/E FOR ALL REDESIGN WORK, FOR ALL NEW SKETCHES PREPARED, AND FOR ALL ADDITIONAL REVIEW TIME RELATED TO THE CHANGES.

### 01 40 00 QUALITY REQUIREMENTS

A. IN AS MUCH AS THE SPECIFICATIONS ARE BRIEF, THE CONTRACTOR SHALL PROVIDE WORKMANSHIP THAT IS NEAT, SECURE AND OF THE BEST QUALITY WITH THE BEST POSSIBLE APPEARANCE AND UTILITY MEETING ALL APPLICABLE STANDARDS. FAULTY WORK SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. INDUSTRY STANDARDS SHALL BE USED AS THE GUIDE FOR QUALITY OF MATERIALS AND WORKMANSHIP.

### 01 41 00 REGULATORY REQUIREMENTS

A. ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS, INCLUDING THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT (A.D.A.) ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO WORK UNDER THIS CONTRACT.

### 01 45 00 QUALITY CONTROL

A. NOTIFY ARCHITECT ONE WEEK IN ADVANCE TO SCHEDULE FINAL COMPLIANCE WALK-THRU. PRIOR TO THIS WALK THRU, PROVIDE THE ARCHITECT WITH THE FIRE PROTECTION SYSTEM TEST REPORT AND A COPY OF THE ELEVATOR INSPECTION REPORT AS APPLICABLE. ALL COMPONENT SUBMITTALS SHOULD BE FILED AND AVAILABLE FOR REVIEW AT THE WALK THRU. THE BUILDING SHALL BE COMPLETE AND ALL SYSTEMS OPERATIONAL AT THE TIME OF THE WALK THRU. IF THE ARCHITECT IS REQUIRED TO MAKE ADDITIONAL VISITS DUE TO NON-COMPLIANCE, THEY WILL BE CHARGED TO THE REQUESTING CONTRACTOR.

### 01 45 33 SPECIAL INSPECTIONS

A. SPECIAL INSPECTIONS PER IBC CHAPTER 17 ARE REQUIRED FOR THE PROJECT.
B. REQUIRED SPECIAL INSPECTIONS FOR THE PROJECT ARE LISTED ON T2 SHEETS.
C. OWNER HAS CONTRACTED THE SPECIAL INSPECTION WORK.
D. GC SHALL
   1. HOLD A PRE-CONSTRUCTION MEETING WITH SPECIAL INSPECTOR TO REVIEW SCOPE OF SPECIAL INSPECTIONS.
   2. CREATE AND POST OR MAKE AVAILABLE THE SPECIAL INSPECTIONS TESTING SCHEDULE AT THE JOB SITE. PROVIDE ADEQUATE NOTIFICATION TO THOSE PARTIES DESIGNATED ON THE SCHEDULE SO THEY MAY PREPARE FOR AND SCHEDULE THEIR SERVICES. FAILURE TO SCHEDULE A SPECIAL INSPECTOR IN A TIMELY MANNER WILL NOT ALLOW FOR A CHANGE IN CONSTRUCTION SCHEDULE.
   3. PROVIDE THE SPECIAL INSPECTOR ACCESS TO THE APPROVED PLANS AND SPECS AT THE JOB SITE.
   4. PROVIDE THE SPECIAL INSPECTOR SAFE ACCESS TO THE WORK.
   5. REVIEW ALL REPORTS ISSUED BY SPECIAL INSPECTORS AND RETAIN AT THE JOB SITE FOR REVIEW BY THE BUILDING OFFICIAL.
   6. CORRECT IN A TIMELY MANNER DEFICIENCIES IDENTIFIED IN REPORTS.

### 01 52 00 CONSTRUCTION FACILITIES

A. THE CONTRACTOR SHALL FURNISH TEMPORARY OFFICE, TOILET FACILITIES, WORKING TELEPHONE, ELECTRICITY, HEAT, WATER AND FIRE EXTINGUISHERS AS REQUIRED FOR COMPLETION OF THE WORK UNLESS THE OWNER HAS AGREED IN WRITING TO FURNISH OR WAIVE ANY OF THE ABOVE ITEMS.

### 01 53 00 TEMPORARY CONSTRUCTION

A. THE CONTRACTOR SHALL FURNISH TEMPORARY BRACING OF ALL BUILDING ELEMENTS DURING CONSTRUCTION. TEMPORARY BRACING SYSTEMS SHALL BE DESIGNED TO WITHSTAND CODE DESIGN LOADS. CONTRACTOR SHALL RETAIN SERVICES OF A PROFESSIONAL ENGINEER TO DESIGN AND SUPERVISE BRACING INSTALLATION IF THEY DO NOT HAVE THE EXPERTISE REQUIRED.

### 01 71 00 FIELD ENGINEERING

A. THE CONTRACTOR SHALL PROVIDE ALL LAYOUT AS REQUIRED, COMPETENT FULLTIME ON SITE SUPERVISION, AND BROOM CLEANING OF CONSTRUCTION SITE INCLUDING DUMPSTERS FOR REFUSE DISPOSAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY ON SITE AND PROTECTION OF SITE PER LOCAL, STATE AND FEDERAL REQUIREMENTS.

### 01 78 00 CLOSEOUT SUBMITTALS

A. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS REFLECTING ALL CHANGES DURING CONSTRUCTION. PROVIDE TWO (2) COPIES OF OPERATING AND MAINTENANCE MANUALS TO OWNER FOR ALL FURNISHED EQUIPMENT.

### 01 78 36 WARRANTIES

A. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION OF THE PROJECT. FURNISH MANUFACTURER'S WRITTEN WARRANTIES FOR SPECIFIED EQUIPMENT STATING EFFECTIVE WARRANTY DATE.

### 01 91 13 GENERAL COMMISSIONING REQUIREMENTS

A. COMMISSIONING ENCOMPASSES THE VERIFICATION THAT THE OPERATION OF APPLICABLE EQUIPMENT AND SYSTEMS MEET THE DESIGN SPECIFICATIONS AS DOCUMENTED THROUGH FUNCTIONAL TESTING. COMMISSIONING ACTIVITIES WILL BE LED BY THE COMMISSIONING PROVIDER (CXP).
   1. SEE DIVISION 22 08 00 COMMISSIONING OF PLUMBING FOR ADDITIONAL REQUIREMENTS.
   2. SEE DIVISION 23 08 00 COMMISSIONING OF HVAC FOR ADDITIONAL REQUIREMENTS.
   3. SEE DIVISION 26 08 00 COMMISSIONING OF ELECTRICAL FOR ADDITIONAL REQUIREMENTS.
B. GENERAL CONTRACTOR SHALL HIRE COMMISSIONING PROVIDER TO MEET 2021 IECC SECTION C408 REQUIREMENTS.
   1. THE GENERAL CONTRACTOR SHALL SCHEDULE PROJECT AND CONTRACTORS TO COMPLETE SYSTEM INSTALLATIONS, BALANCING AND STARTUP TO INCLUDE TIME REQUIRED BY COMMISSIONING PROVIDER FOR FUNCTIONAL TESTING (CALLED "ONSITE FUNCTIONAL TESTING") BEFORE OWNER OCCUPANCY. THIS ACTIVITY SHALL NOT TAKE PLACE UNTIL ALL SUBMITTALS HAVE BEEN RECEIVED AND REVIEWED BY THE COMMISSIONING PROVIDER AND ALL SYSTEMS HAVE BEEN INSTALLED, STARTED UP AND ARE FULLY OPERATIONAL.
   2. GC SHALL SCHEDULE SUBCONTRACTORS TO PARTICIPATE IN AND PERFORM COMMISSIONING PROCESS ACTIVITIES AND COORDINATE THE SCHEDULE WITH OWNER AND COMMISSIONING PROVIDER.
   3. THE COMMISSIONING PROVIDER WILL DETERMINE THE COMMISSIONING TEAM. BUT WILL USUALLY INCLUDE THE DESIGN TEAM, GENERAL CONTRACTOR, SITE SUPERVISOR, HVAC, ELECTRICAL AND PLUMBING SUBCONTRACTORS.
   4. COMMISSIONING TEAM MEMBERS SHALL BE REQUIRED TO PARTICIPATE IN THE FOLLOWING TEAM MEETINGS WHICH MAY TAKE PLACE VIA CONFERENCE CALL OR VIRTUAL MEETING.
      a. PRECONSTRUCTION COMMISSIONING KICKOFF MEETING: AN OVERVIEW OF THE COMMISSIONING PROCESS SUBMITTALS AND SCHEDULE AND REVIEW OF THE ONSITE FUNCTIONAL TEST PROCESS PROCEDURE.
      b. FUNCTIONAL TESTING DEFICIENCIES MEETING: AN OVERVIEW OF ANY DEFICIENCIES FOUND DURING THE ON-SITE FUNCTIONAL TEST PROCESS. DEFICIENCIES WILL BE DOCUMENTED IN AN ISSUES LOG AND DISTRIBUTED TO ALL PARTIES.
C. COMMISSIONING TESTING AND SUBMITTALS:
   1. PREFUNCTIONAL CHECKLIST SHALL BE PROVIDED TO EACH SUBCONTRACTOR BY CXP FOR COMPLETION.
   2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND SIGN OFF THAT ALL PREFUNCTIONAL CHECKLISTS ARE COMPLETED AND SYSTEMS ARE TESTED BY EACH SUBCONTRACTOR BEFORE SCHEDULING COMMISSIONING. GC IS RESPONSIBLE FOR COST OF ADDITIONAL COMMISSIONING PROVIDER SITE VISITS DUE TO SYSTEMS NOT BEING READY.
   3. TEST AND BALANCE REPORT SHALL BE PROVIDED TO THE OWNER, ENGINEER, AND COMMISSIONING PROVIDER PRIOR TO THE FUNCTIONAL TESTING DATE.
   4. FUNCTIONAL TESTS SHALL BE COMPLETED UNDER THE OBSERVATION OF THE COMMISSIONING PROVIDER IN COLLABORATION WITH THE OTHER MEMBERS OF THE COMMISSIONING TEAM.
   5. TEST RESULTS ARE DOCUMENTED BY THE COMMISSIONING PROVIDER. FUNCTIONAL TESTS ARE DOCUMENTED TESTS OF THE DYNAMIC OPERATION OF THE EQUIPMENT AND SYSTEMS WITH THE GOAL OF VERIFYING THAT THE ACCEPTANCE CRITERIA ARE MET.
   6. COMMISSIONING PROVIDER WILL PROVIDE A PRELIMINARY COMMISSIONING REPORT TO THE OWNER AND INSPECTOR AND EXCEL ENGINEERING WHICH SHALL INCLUDE THE FOLLOWING:
      a. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
      b. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
      c. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
      d. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
      e. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.
   7. GENERAL CONTRACTOR SHALL COORDINATE AND MONITOR SUBCONTRACTORS TO CORRECT IDENTIFIED DEFICIENCIES AND COORDINATE WITH COMMISSIONING PROVIDER FOLLOW-UP SITE VISITS FOR FINAL COMMISSIONING.
   8. COMMISSIONING PROVIDER SHALL PROVIDE FINAL COMMISSIONING REPORT TO THE OWNER WITHIN 90 DAYS OF THE DATE OF RECEIPT OF CERTIFICATE OF OCCUPANCY.
      a. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
      b. DEFICIENCIES FOUND DURING TESTING AND DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.

## DIVISION 02 EXISTING CONDITIONS

### 02 41 19 SELECTIVE DEMOLITION

A. CONDUCT DEMOLITION AND DEBRIS REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
B. IT IS UNKNOWN WHETHER HAZARDOUS MATERIALS WILL BE ENCOUNTERED, DO NOT DISTURB. IMMEDIATELY NOTIFY ARCHITECT AND OWNER.
C. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS SHOWN ON THE DEMOLITION PLANS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.
D. EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED, REINSTALLED OR TO REMAIN OWNER'S PROPERTY, REMOVE DEMOLISHED MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA APPROVED LANDFILL.

## DIVISION 03 CONCRETE

### 03 30 00 CAST-IN-PLACE CONCRETE

A. SEE STRUCTURAL SPECIFICATIONS.

## DIVISION 05 METALS

### 05 12 00 STRUCTURAL STEEL FRAMING

A. SEE STRUCTURAL SPECIFICATIONS.

### 05 21 00 STEEL JOIST FRAMING

A. SEE STRUCTURAL SPECIFICATIONS.

### 05 31 00 STEEL DECKING

A. SEE STRUCTURAL SPECIFICATIONS.

## DIVISION 07 THERMAL AND MOISTURE PROTECTION

### 07 21 00 INSULATION

A. ALL INSULATION MATERIALS AND INSTALLATION SHALL COMPLY WITH LOCAL AND STATE CODES.
B. PERIMETER FOUNDATION INSULATION
   1. MANUFACTURER: DOW STYROFOAM SQUARE EDGE EXTRUDED POLYSTYRENE (XPS) INSULATION PANELS, 25 PSI MIN. VERTICAL COMPRESSIVE STRENGTH MEASURED AT 10% STRAIN DEFORMATION OR AT YIELD, WHICHEVER OCCURS FIRST. THERMAL VALUE "R" VALUE OF 5.0 PER INCH. 2 INCHES THICK, R=10.
   2. MANUFACTURER: PLYMOUTH FOAM GOLD-GUARD FOUNDATION PERIMETER INSULATION EXPANDED POLYSTYRENE (EPS) INSULATION, 25 PSI MIN. VERTICAL COMPRESSIVE STRENGTH MEASURED AT 10% STRAIN DEFORMATION, THERMAL VALUE "R" VALUE OF 4.35 PER INCH. 2.3 INCHES THICK, R=10.
C. SPRAY POLYURETHANE FOAM INSULATION
   1. MANUFACTURER: BASF WALLITE MAX
   2. DENSITY IN PLACE: 1.8 TO 2.0LB / CU FT.
   3. COMPRESSIVE STRENGTH: GREATER THAN 25 PSI
   4. CLOSED CELL CONTENT: >95%
   5. R-VALUE PER INCH: 7.4 PER 1"AT LESS THAN 3.5" — 7.1 PER 1" AT GREATER THAN 3.5"
   6. VAPOR PERMEANCE: 1.09 PERMS — LESS THAN 1.0 PERMS AT 1.25" (CLASS II VAPOR RETARDER)
   7. FLAME SPREAD INDEX: LESS THAN OR EQUAL TO 25
   8. SMOKE DEVELOPED INDEX: LESS THAN OR EQUAL TO 450
   9. AIR LEAKAGE: LESS THAN 0.02 AT 1" (AIR IMPERMEABLE INSULATION)
D. THERMAL BARRIER / IGNITION BARRIER INTUMESCENT COATING
   1. MANUFACTURER: NO-BURN PLUS THB
   2. THICKNESS AS REQUIRED BY MANUFACTURER TO MEET CODE.
   3. COLOR SELECTED BY OWNER (WHITE, GRAY, DARK CHARCOAL).
E. ROOF INSULATION
   1. SEE ROOF PLAN.

### 07 26 00 VAPOR RETARDERS

A. UNDER SLAB
   1. MANUFACTURER: STEGO WRAP VAPOR BARRIER.
   2. 15 MIL POLYOLEFIN-BASED RESIN. ASTM E1745 CLASS A MAX PERM 0.01.
   3. MINIMUM 2,200 GRAMS PUNCTURE RESISTANCE ASTM D 1709.
   4. SEAL ALL JOINTS WITH MFR APPROVED TAPE OR MASTIC PER MFR INSTRUCTIONS.
   5. CONTRACTOR SHALL VERIFY THICKNESS AND CLASS WITH CONCRETE PLACEMENT MEANS AND METHODS.

### 07 41 13 INSULATED METAL PANELS:

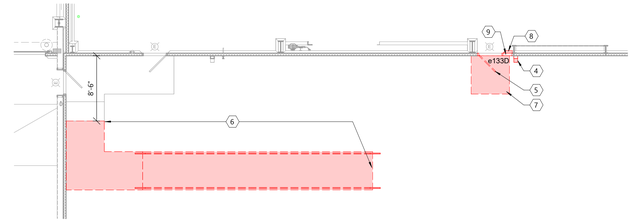
A. MANUFACTURER SHALL DETERMINE IF A THICKER SHEET STEEL FACE IS REQUIRED BASED ON PANEL SPANS SHOWN ON PLANS AND TEMPERATURE EXPOSURE. INSULATED PANELS SHALL BE CONSTRUCTED USING MINIMUM 26 GAGE (UNLESS DETERMINED BY MANUFACTURER FOR THICKER SHEET STEEL FACE OR NOTED OTHERWISE ON PLANS) GALVANIZED SHEET STEEL (STAINLESS WHERE STAINLESS FINISH) WITH A FOAMED-IN-PLACE URETHANE CORE.
B. THICKNESS OF INSULATED METAL PANEL SHALL BE AS NOTED ON THE DRAWINGS.
C. PROVIDE SEALANT AS SPECIFIED IN PANEL TO PANEL (BOTH JOINTS OF DOUBLE JOINT PANELS), PANEL TO BASE CHANNEL, PANEL TO WALL ANGLE, PANEL TO WALL PANEL, PANEL TO PANEL STANDING SEAM AND TRIM AND FACE JOINTS WHERE INDICATED OR RECOMMENDED BY INSULATED PANEL MANUFACTURER.
D. FIN

FIRST FLOOR DEMOLITION PLAN - AREA 'A'

NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'




FIRST FLOOR DEMOLITION PLAN - AREA 'B'

NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'

## SYMBOLS LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE DEMOLISHED
- (1) HOUR FIRE RATED
- (2) HOUR FIRE RATED
- (3) HOUR FIRE RATED
- (4) HOUR FIRE RATED

SEE PLAN FOR ALL WALL WIDTHS

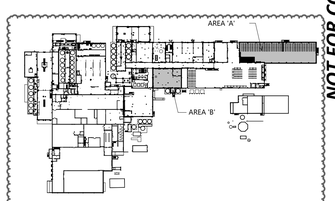
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE DEMOLISHED
- EXISTING DOOR TO BE RELOCATED - SEE FLOOR PLAN FOR NEW LOCATION

## GENERAL NOTES

- NOTIFY EXCEL ENGINEERING OF ANY DISCREPANCIES BETWEEN EXISTING PLANS AND FIELD CONDITIONS BEFORE REMOVAL.
- REVIEW WITH THE OWNER WHICH ITEMS ARE TO BE TURNED OVER TO THE OWNER BEFORE STARTING DEMOLITION WORK. REMOVE ANY ITEM NOT WANTED BY THE OWNER AND DISPOSE OF IN THE PROPER AND LEGAL MANNER.
- REMOVE ALL WALLS SHOWN RED. NOTIFY EXCEL ENGINEERING IF ANY OF THE WALLS ARE FOUND TO BE LOAD BEARING BEFORE REMOVAL.
- REMOVE ALL DOORS SHOWN RED INCLUDING FRAME AND ALL HARDWARE AND ACCESSORIES.
- REMOVE ALL WINDOWS SHOWN OR RED INCLUDING FRAME AND SILLS.
- REMOVE ALL MISC ITEMS SHOWN RED.
- CUT WALLS FOR INSTALLATION OF NEW ELECTRICAL RECEPTACLE AND SWITCH BOXES AND ASSOCIATED CONDUITS. SEE ELECTRICAL PLANS FOR LOCATIONS.
- CUT WALLS FOR INSTALLATION OF NEW BLOCKING OR BACKING IN EXISTING WALLS.
- NOT ALL NEW OPENINGS FOR MEP WORK ARE SHOWN IN WALLS AND FLOORS. PROVIDE ADDITIONAL OPENINGS NOT SHOWN FOR WORK.
- PROVIDE TEMPORARY ENCLOSURES FOR KEEPING THE FACILITY IN OPERATION DURING CONSTRUCTION. ENCLOSURE SHALL BE A WALLED-IN DUST BARRIER (WATERPROOF WHERE EXPOSED TO THE EXTERIOR). PROVIDE MEP WORK TO KEEP THE FACILITY OPERATIONAL. SPRINKLER CONTRACTOR SHALL REVIEW CONSTRUCTION SEQUENCING AND TEMPORARY WALLS WITH GENERAL CONTRACTOR AND MAINTAIN SPRINKLER COVERAGE IN EXISTING AREAS THROUGHOUT CONSTRUCTION. SEE PLAN FOR ENCLOSURE LOCATIONS.
- MAINTAIN REQUIRED EGRESS PATHS AND SAFETY PRECAUTIONS FOR CONSTRUCTION IN EXISTING OCCUPIED BUILDING.

## DEMO PLAN KEYNOTES

| # | |
|---|---|
| 1 | REMOVE EXISTING WALL PANEL & GIRTS AS REQUIRED FOR NEW OPENING - SEE FLOOR PLAN FOR SIZE & LOCATION |
| 2 | REMOVE EXISTING CONCRETE CURB AS REQUIRED FOR NEW CONSTRUCTION. |
| 4 | REMOVE EXISTING DOWNSPOUT AS REQUIRED TO TERMINATE ABOVE ROOF OF NEW SILO ALLEY ADDITION |
| 5 | REMOVE EXISTING DOOR. SALVAGE DOOR AND ALL EXISTING HARDWARE FOR RELOCATION. SEE DOOR SCHEDULE FOR LOCATION OF DOOR TO BE RELOCATED. |
| 6 | REMOVE EXISTING RAMP. RAMP FOUNDATIONS, AND RAILING. |
| 7 | REMOVE EXISTING CONCRETE STOOP AND FOUNDATIONS AS REQUIRED FOR NEW CONSTRUCTION. |
| 8 | REMOVE EXISTING CONCRETE CURB AS REQUIRED FOR NEW OPENING |
| 9 | REMOVE PORTION OF EXISTING WALL AS REQUIRED FOR NEW OPENING. |




KEY PLAN

ARCHITECTURAL FIRST FLOOR DEMOLITION PLAN - AREA OF WORK


EXCEL

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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

**AD1.1**

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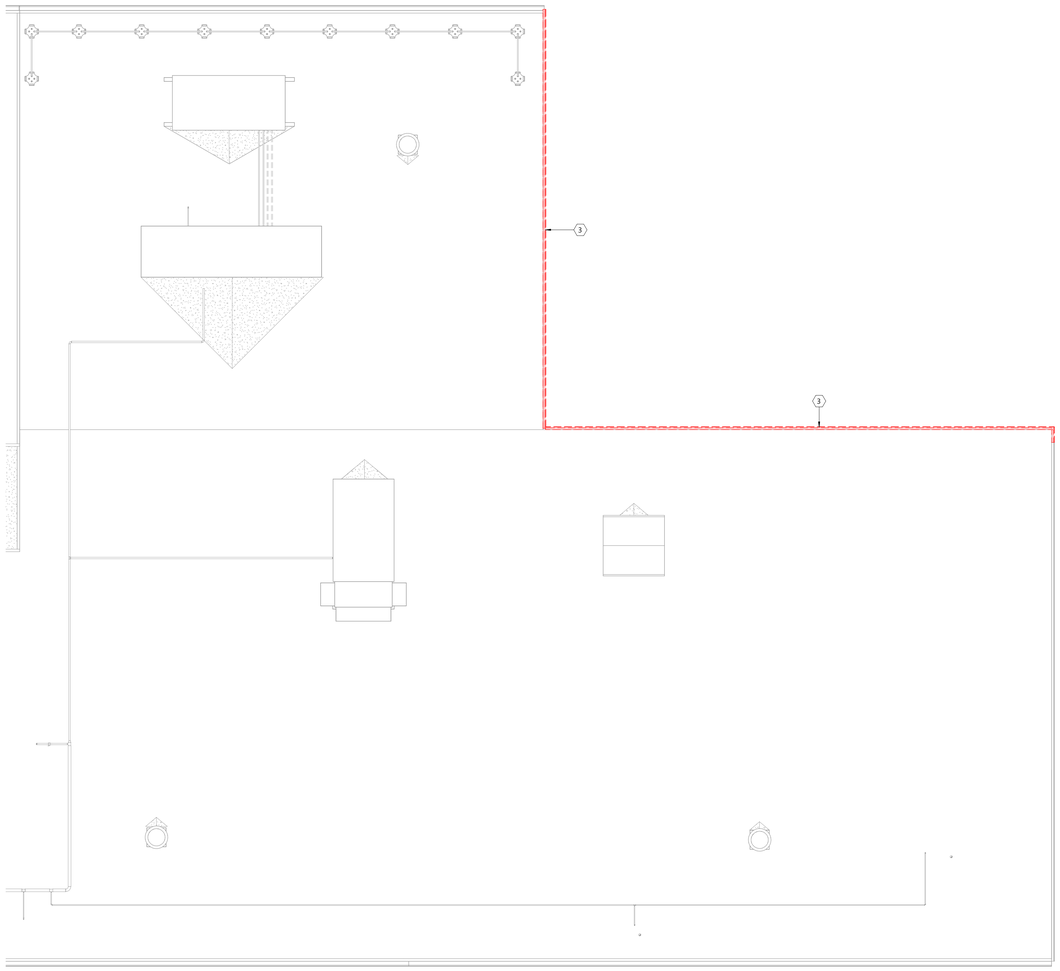


NORTH

ROOF DEMOLITION PLAN - AREA 'A'

SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- NOTIFY EXCEL ENGINEERING OF ANY DISCREPANCIES BETWEEN EXISTING PLANS AND FIELD CONDITIONS BEFORE REMOVAL.
- REVIEW WITH THE OWNER WHICH ITEMS ARE TO BE TURNED OVER TO THE OWNER BEFORE STARTING DEMOLITION WORK. REMOVE ANY ITEM NOT WANTED BY THE OWNER AND DISPOSE OF IN THE PROPER AND LEGAL MANNER.
- REMOVE ALL WALLS SHOWN RED. NOTIFY EXCEL ENGINEERING IF ANY OF THE WALLS ARE FOUND TO BE LOAD BEARING BEFORE REMOVAL.
- REMOVE ALL DOORS SHOWN RED INCLUDING FRAME AND ALL HARDWARE AND ACCESSORIES.
- REMOVE ALL WINDOWS SHOWN OR RED INCLUDING FRAME AND SILLS.
- REMOVE ALL MISC ITEMS SHOWN RED.
- CUT WALLS FOR INSTALLATION OF NEW ELECTRICAL RECEPTACLE AND SWITCH BOXES AND ASSOCIATED CONDUITS. SEE ELECTRICAL PLANS FOR LOCATIONS.
- CUT WALLS FOR INSTALLATION OF NEW BLOCKING OR BACKING IN EXISTING WALLS.
- NOT ALL NEW OPENINGS FOR MEP WORK ARE SHOWN IN WALLS AND FLOORS. PROVIDE ADDITIONAL OPENINGS NOT SHOWN FOR WORK.
- PROVIDE TEMPORARY ENCLOSURES FOR KEEPING THE FACILITY IN OPERATION DURING CONSTRUCTION. ENCLOSURE SHALL BE A WALLED-IN DUST BARRIER (WATERPROOF WHERE EXPOSED TO THE EXTERIOR). PROVIDE MEP WORK TO KEEP THE FACILITY OPERATIONAL. SPRINKLER CONTRACTOR SHALL REVIEW CONSTRUCTION SEQUENCING AND TEMPORARY WALLS WITH GENERAL CONTRACTOR AND MAINTAIN SPRINKLER COVERAGE IN EXISTING AREAS THROUGHOUT CONSTRUCTION. SEE PLAN FOR ENCLOSURE LOCATIONS.
- MAINTAIN REQUIRED EGRESS PATHS AND SAFETY PRECAUTIONS FOR CONSTRUCTION IN EXISTING OCCUPIED BUILDING.

## DEMO PLAN KEYNOTES

| # | |
|---|---|
| 3 | REMOVE EXISTING TRIM & MODIFY TOP OF WALL AS REQUIRED TO TIE THE NEW ROOF WITH THE EXISTING ROOF. |


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920-926-9800
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**PROJECT INFORMATION**

STORAGE WAREHOUSE EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

**PROFESSIONAL SEAL**

*NOT FOR CONSTRUCTION*

**SHEET DATES**

**ISSUED FOR BID**

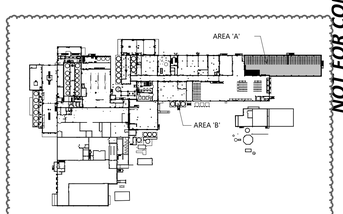
| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

**JOB NUMBER**

250429500

**SHEET NUMBER**

**AD1.3**




KEY PLAN

ARCHITECTURAL ROOF DEMOLITION PLAN

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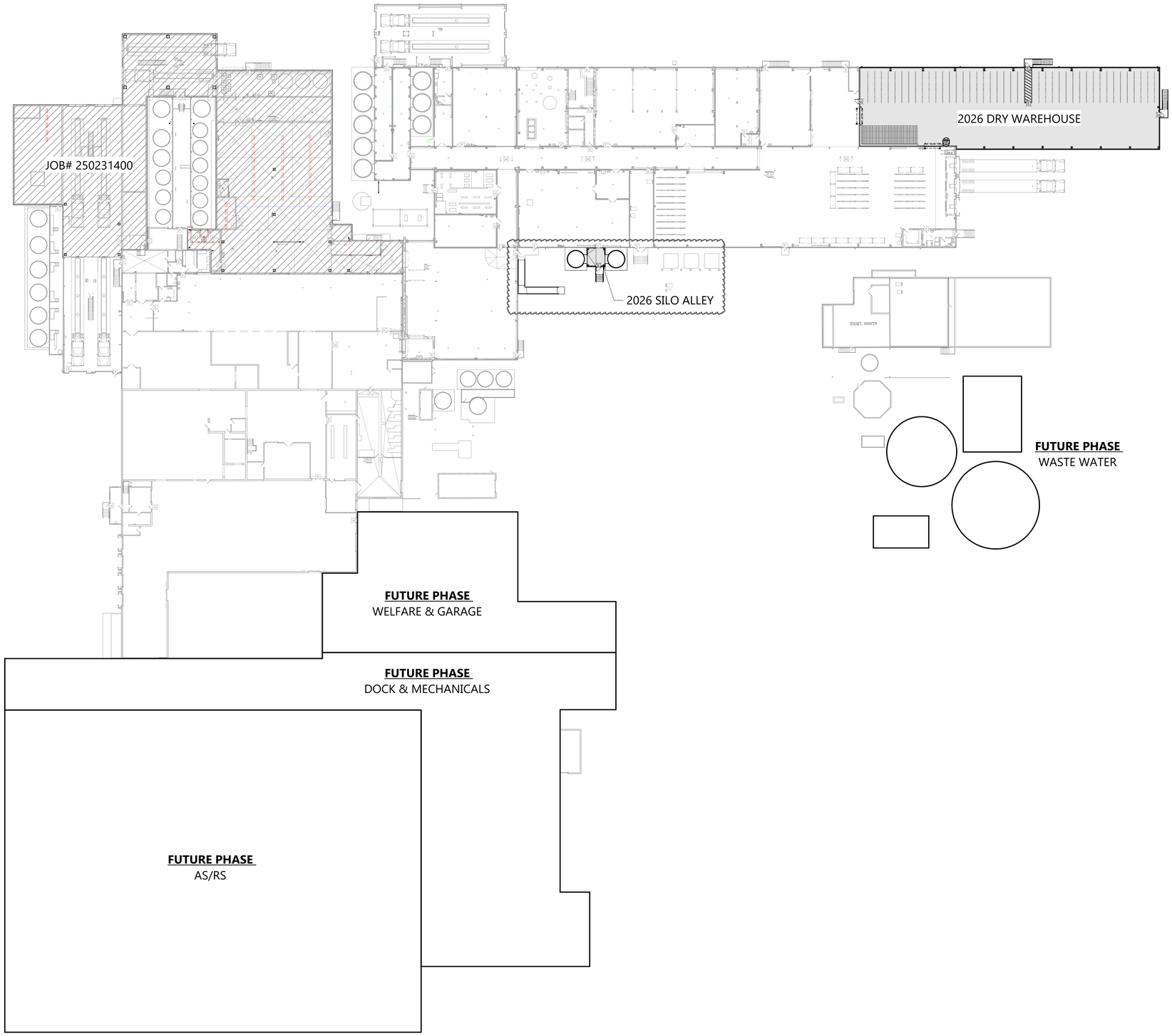


NORTH

OVERALL FACILITY FIRST FLOOR MASTER PLAN

SCALE: 1" = 30'-0"

0' 30' 60'

ARCHITECTURAL OVERALL FIRST FLOOR PLAN

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920-926-9800
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| IFB | APR. 17, 2026 |
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JOB NUMBER

250429500

SHEET NUMBER

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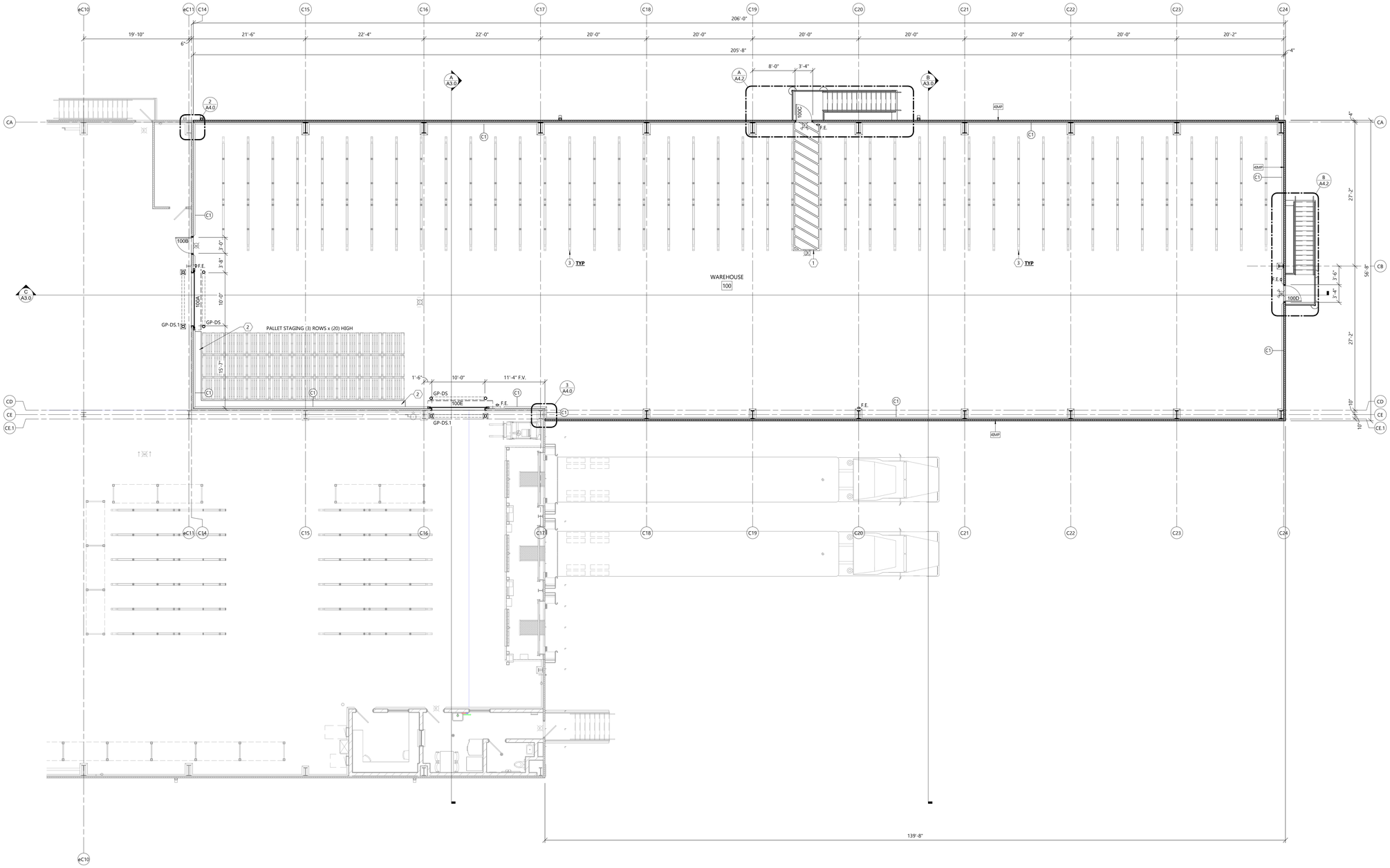


FIRST FLOOR PLAN - AREA 'A'

NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'

## SYMBOLS LEGEND

- EM1 — EXTERIOR WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 4W22 — INTERIOR WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 3+3+6P — PRECAST WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 6IMP — IMP WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 6M/3.2 FW — FIRE RATED WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- CX — SEE SHEET AX.X FOR CURB DETAILS
- EXIT SIGNAGE
- FIRE EXTINGUISHER -SEE A5 SHEETS
- FE — FIRE EXTINGUISHER w/ CABINET -SEE A5 SHEETS
- GP-X — GUARD POST/GOAL POST DESIGNATION -SEE SHEET A6.X FOR DETAILS
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE DEMOLISHED
- STUD WALL
- CONCRETE WALL
- MASONRY VENEER
- C.M.U. WALL
- (1) HOUR FIRE RATED
- (2) HOUR FIRE RATED
- (3) HOUR FIRE RATED
- (4) HOUR FIRE RATED

SEE PLAN FOR ALL WALL WIDTHS

- EXISTING DOOR TO REMAIN
- NEW DOOR

## GENERAL NOTES

- PATCH WALLS AT REMOVAL AND CONNECTION POINTS TO MATCH ADJACENT FINISHES.
- PATCH WALLS AND FLOOR TO MATCH EXISTING MATERIALS AND FINISHES WHERE REMOVAL OF EXISTING CONSTRUCTION OR FINISH LEAVES DAMAGED/UNFINISHED SURFACES.
- NOT ALL INFILL OF OPENINGS AND PATCHING ARE SHOWN. INFILL ALL WALL OPENINGS TO MATCH EXISTING WALL CONSTRUCTION, PATCH TO MATCH ADJACENT SURFACES AND FINISH WHERE PIPES, CONDUIT, DUCTWORK, RECEPTACLES, SWITCHES, ETC. ARE REMOVED.
- PATCH WALLS TO MATCH EXISTING MATERIALS AND FINISH WHERE NEW ELECTRICAL BOXES AND CONDUITS ARE RECESSED/CONCEALED IN EXISTING WALLS. SEE ELECTRICAL PLANS FOR LOCATIONS.
- PATCH WALLS TO MATCH EXISTING MATERIALS AND FINISH WHERE NEW BLOCKING OR BACKING IS INSTALLED IN EXISTING WALLS.
- COORDINATE SCHEDULING OF WORK IN EXISTING OCCUPIED AREAS WITH OWNER. ACCESS TO AREAS DURING WORK HOURS IS DEPENDENT ON OWNER'S SCHEDULE.
- SEE SPECIFICATIONS FOR WORK BY OWNER. WORK BY OWNER SHOWN ON PLANS IS SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE SPECIFIC INSTALLATION REQUIREMENTS WITH OWNER/OWNER'S VENDOR.

## FLOOR PLAN KEYNOTES

| # | |
|---|---|
| 1 | PAINT EPOXY YELLOW NO STORAGE STRIPE. VERIFY STRIPING MOCKUP AND LAYOUT WITH OWNER. |
| 2 | PAINT HEAVY DUTY EPOXY WHITE WALL OFFSET STRIPE AT PALLET STAGING. STRIPE SHALL BE 14" WIDE FROM FACE OF CURB. VERIFY STRIPING MOCKUP AND LAYOUT WITH OWNER. |
| 3 | RACKING PURCHASED AND INSTALLED BY OWNER. |


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PROJECT INFORMATION

# STORAGE WAREHOUSE EXPANSION FOR:
# WEST POINT DAIRY PRODUCTS
570 NORTH 500 WEST • HYRUM, UT 84319

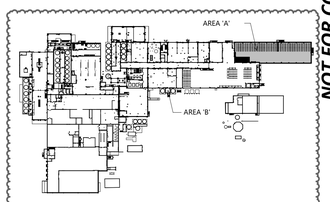
PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |




KEY PLAN

JOB NUMBER

250429500

SHEET NUMBER

A1.1A

ARCHITECTURAL FIRST FLOOR PLAN - AREA 'A'

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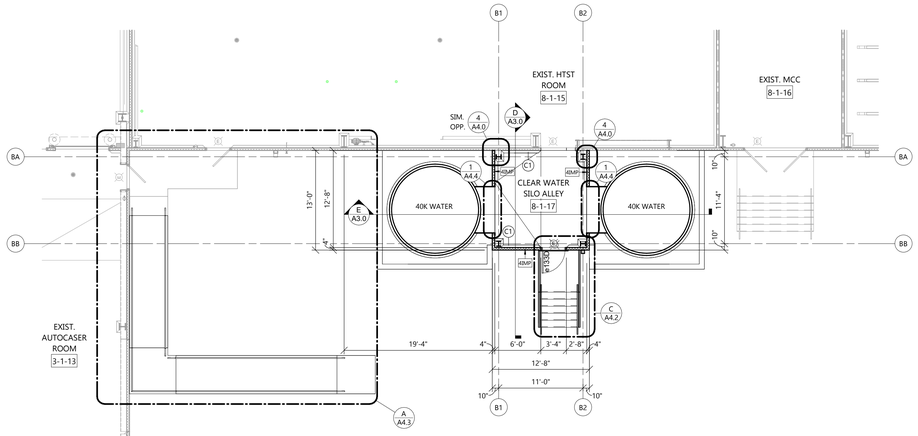


NORTH

## FIRST FLOOR PLAN - AREA 'B'

SCALE: 1/8" = 1'-0"

0' 8' 16'

## SYMBOLS LEGEND

- EM1 — EXTERIOR WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 4WI2 — INTERIOR WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 3+3+6P — PRECAST WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 6IMP — IMP WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- 6M/3.2 FW — FIRE RATED WALL TYPE • SEE A4 SHEETS FOR WALL TYPES
- CX — SEE SHEET AX.X FOR CURB DETAILS
- EXIT SIGNAGE
- FIRE EXTINGUISHER -SEE A5 SHEETS
- FE — FIRE EXTINGUISHER w/ CABINET -SEE A5 SHEETS
- GP-X — GUARD POST/GOAL POST DESIGNATION -SEE SHEET A6.X FOR DETAILS
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE DEMOLISHED
- STUD WALL
- CONCRETE WALL
- MASONRY VENEER
- C.M.U. WALL
- (1) HOUR FIRE RATED
- (2) HOUR FIRE RATED
- (3) HOUR FIRE RATED
- (4) HOUR FIRE RATED

SEE PLAN FOR ALL WALL WIDTHS

- EXISTING DOOR TO REMAIN
- NEW DOOR

## GENERAL NOTES

- PATCH WALLS AT REMOVAL AND CONNECTION POINTS TO MATCH ADJACENT FINISHES.
- PATCH WALLS AND FLOOR TO MATCH EXISTING MATERIALS AND FINISHES WHERE REMOVAL OF EXISTING CONSTRUCTION OR FINISH LEAVES DAMAGED/UNFINISHED SURFACES.
- NOT ALL INFILL OF OPENINGS AND PATCHING ARE SHOWN. INFILL ALL WALL OPENINGS TO MATCH EXISTING WALL CONSTRUCTION, PATCH TO MATCH ADJACENT SURFACES AND FINISH WHERE PIPES, CONDUIT, DUCTWORK, RECEPTACLES, SWITCHES, ETC. ARE REMOVED.
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- COORDINATE SCHEDULING OF WORK IN EXISTING OCCUPIED AREAS WITH OWNER. ACCESS TO AREAS DURING WORK HOURS IS DEPENDENT ON OWNER'S SCHEDULE.
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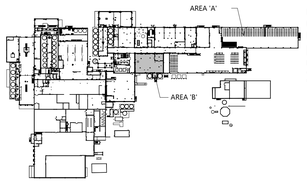


KEY PLAN

ARCHITECTURAL FIRST FLOOR PLAN - AREA 'B'

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PROJECT INFORMATION

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PROFESSIONAL SEAL

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|---|---|
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| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**A1.1B**

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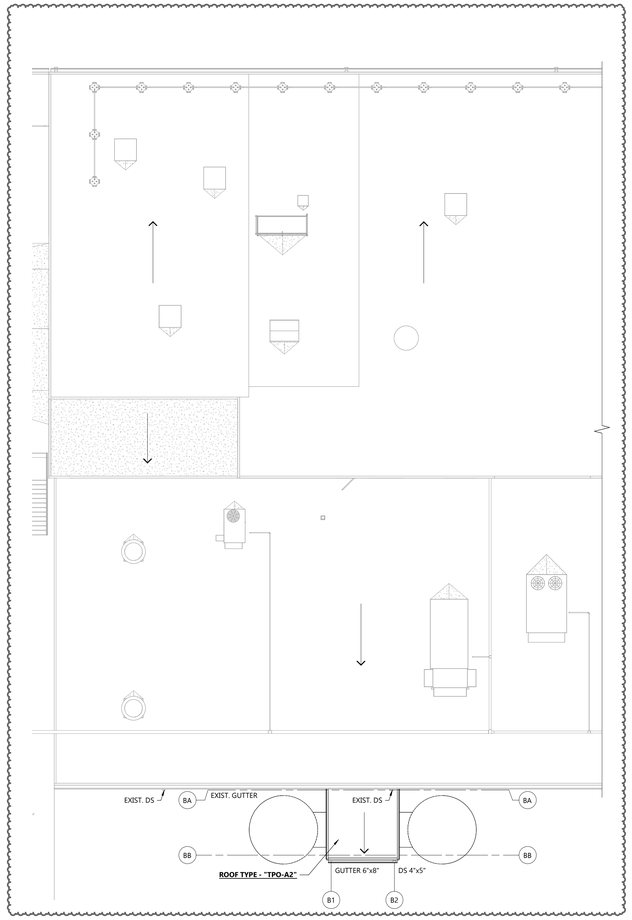
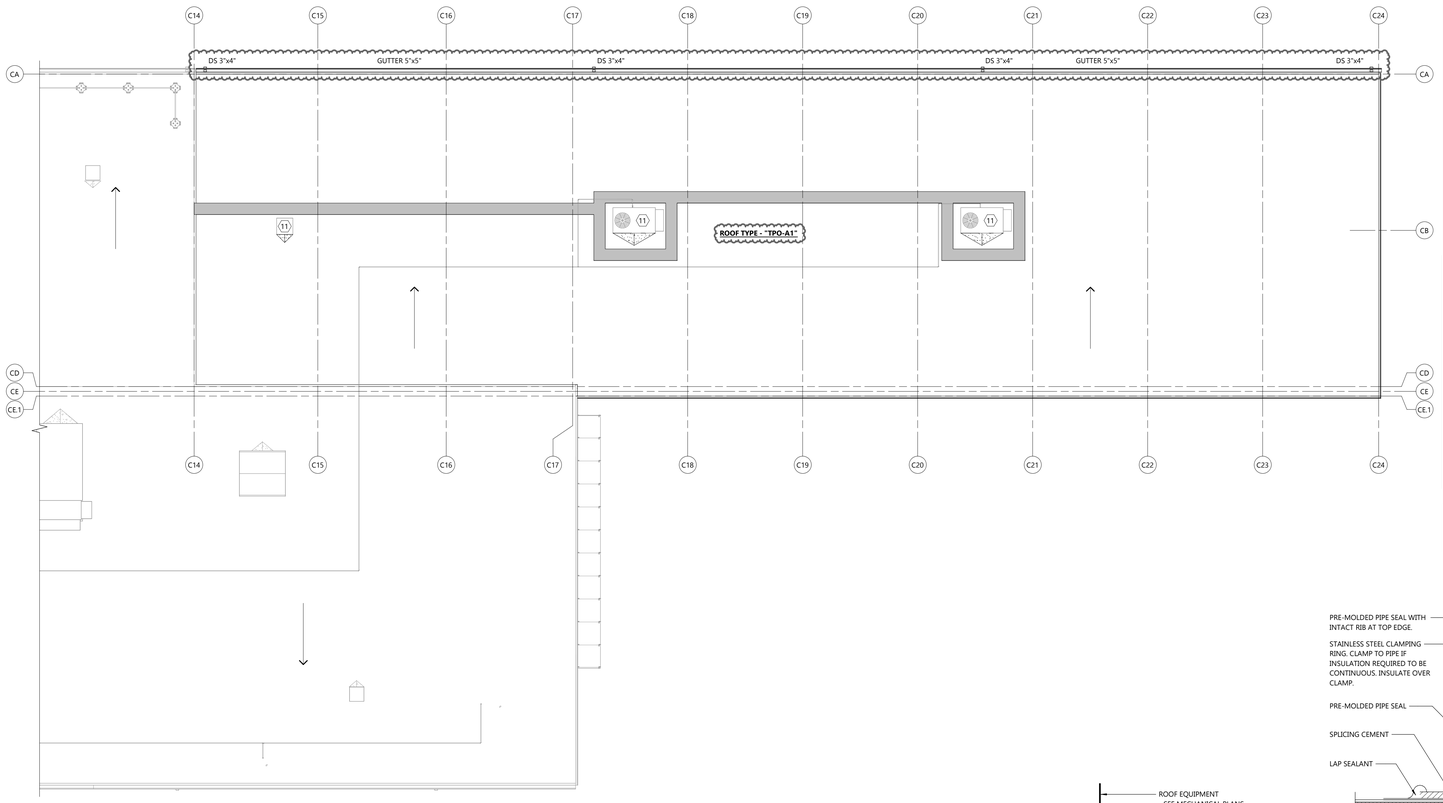



## ROOF PLAN - AREA OF WORK

NORTH

SCALE: 3/32" = 1'-0"

0' 8' 16'

## ROOF LEGEND

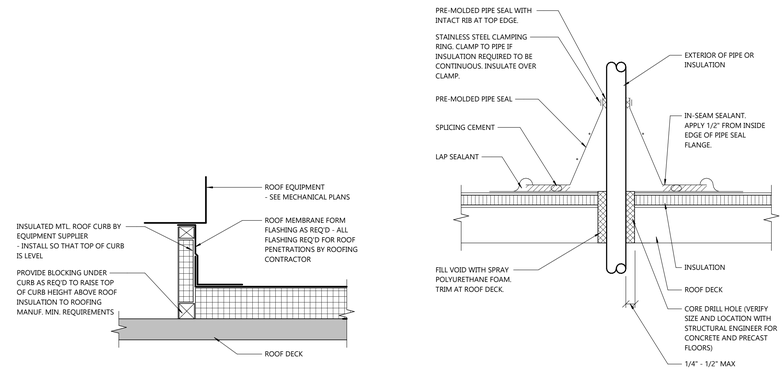
| | |
|---|---|
| RD | ROOF DRAIN |
| OFD | OVERFLOW DRAIN |
| DS | DOWNSPOUT |
| OFS | OVERFLOW SCUPPER |
| SB | SCUPPER BOX AND DOWNSPOUT |
| | ROOF SLOPE DIRECTION |
| | ROOF STRUCTURE IS PITCHED TO ACHIEVE SLOPE |
| | TAPERED INSULATION AT MIN. 1/4" PER FOOT SLOPE UNLESS INDICATED OTHERWISE |
| | CRICKET ON HIGH SIDE OF ROOF EQUIPMENT |
| | WALKPATH, FIELD VERIFY WITH OWNER AND INSTALLED EQUIPMENT. |
| | CHANGE IN ROOFING SPEC |
| | ROOF EXPANSION JOINT |

## GENERAL ROOF NOTES:

- ROOFING CONTRACTOR SHALL PROVIDE MEMBRANE FORM FLASHING FOR ALL ROOF PENETRATIONS PER ROOF MEMBRANE MANUFACTURER'S REQUIREMENTS.
- SEE MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF ALL ROOF PENETRATIONS AND CURBS REQUIRED FOR MECHANICAL EQUIPMENT.
- PIPE STANDS NOT INSTALLED ON CURBS SHALL BE INSTALLED ON SLEEPERS OR CONCRETE PADS 6" LARGER THAN EQUIPMENT.
- PROVIDE SINGLE PLY ROOFING MEMBRANE NOT ADHERED TO ROOF UNDER ALL FREE STANDING PIPE AND EQUIPMENT STANDS 6" LARGER THAN STANDS.
- PROVIDE WALKWAY FROM ROOF ACCESS TO ALL MOTORIZED EQUIPMENT AND SIDES OF EQUIPMENT REQUIRING ACCESS. PROVIDE PRICE PER FOOT. FIELD VERIFY.

## ROOF PLAN KEYNOTES

| # | |
|---|---|
| 11 | CURB MOUNTED MECHANICAL EQUIPMENT. SEE "ROOF TOP EQUIPMENT CURB DETAIL" ON SHEET A1.4 |



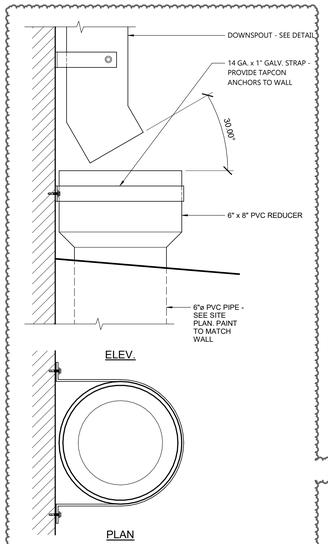

1 A1.3 ROOF PIPE PENETRATION DETAIL

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




2 A1.3 ROOF TOP EQUIPMENT CURB DETAIL

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




## DOWNSPOUT TO SITE DRAIN DETAIL

SCALE: 3" = 1'-0"

## GUTTER & DOWNSPOUT SPECIFICATION

**MANUFACTURER:**
- METAL-ERA, INC.

**PRODUCT:**
- SEAL TITE PRODUCT LINE

**GUTTER**
- MATERIAL - 22 GAUGE GALVANIZED STEEL
- SIZE: SEE ROOF PLAN
- STYLE: INDUSTRIAL GUTTER IG-3 OR INDUSTRIAL GUTTER IG-8
- GUTTER HANGERS, EXTERNAL GUTTER BRACKET PER MANUFACTURERS RECOMMENDATIONS.
- GUTTER ATTACHMENT SHALL MEET FM WIND UPLIFT PROTECTION.
- EXPANSION JOINTS TO BE FREE FLOW WITH COVER PLATE, SPACED AND INSTALLED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
- PROVIDE END CAPS AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION

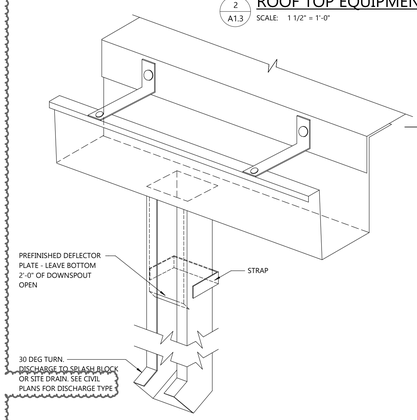
**DOWNSPOUT**
- MATERIAL - 24 GAUGE GALVANIZED STEEL
- SIZE: SEE ROOF PLAN IN 12'-0" LENGTHS
- ATTACHMENT 14 GA. STRAPS STYLE 1 WITH A MINIMUM OF 3 STRAPS PER 12'-0" SECTION OF DOWNSPOUT
- OPEN FACE WITH SPACER, MINIMUM OF 3 PER 12'-0" SECTION OF DOWNSPOUT
- PROVIDE COLOR MATCHED INSERT
- PROVIDE ELBOWS AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION

**WARRANTY:**
- 5 YEAR WARRANTY ON WORKSMANSHIP COVERING REPLACEMENT OR REPAIR OF PRODUCTS THAT ARE DEFECTIVE IN MATERIAL OR WORKMANSHIP.
- 20 YEAR TRANSFERABLE WARRANTY FOR PREFINISHED COIL-COATED STEEL COATED WITH KYNAR-500 STANDARD COLORS COVERING FADE, CHALK AND FILM INTEGRITY.
- STARTING WITH DATE OF FINAL INSPECTION AND ACCEPTANCE.

## ROOF SPECIFICATION
## TYPE "TPO - A"

| | |
|---|---|
| **DECK** | • METAL DECK |
| **THERMAL BARRIER** | • NONE |
| **VAPOR MEMBRANE** | • @ A1: ROOF MEMBRANE MFR'S SELF-ADHERED VAPOR BARRIER MEMBRANE<br>• @ A2: 6 MIL POLY VAPOR RETARDER LOOSE LAID OVER DECK. |
| **INSULATION** | • MINIMUM TWO LAYERS OF POLYISOCYANURATE (R=24) MOLD-RESISTANT PER ASTM D3273 / STAGGER JOINTS.<br>• TAPERED INSULATION IS ADDITION TO LISTED R VALUE.<br>• BASE LAYER MECH. FASTENED. SECOND LAYER FULLY ADHERED.<br>• METAL DECK SHALL BE FULLY CLEANED AND OIL FREE PRIOR TO INSULATION INSTALLATION. FOLLOW ALL ADHESIVE AND INSULATION MFR'S RECOMMENDATION FOR CLEANING AND PREPARING METAL DECK.<br>• ALL INSULATION JOINTS TO BE TIGHT. |
| **TAPERED INSULATION** | • WHERE SHOWN ON PLANS, 1/4" PER FOOT PERPENDICULAR TO VALLEY. POLYISOCYANURATE TO MATCH BASE INSULATION. |
| **COVERBOARD** | • NONE |
| **MEMBRANE** | • CARLISLE SURE-WELD, HOLCIM ELEVATE - ULTRAPLY, VERSICO - VERSIWELD<br>• 60 MIL ADHERED WHITE THERMOPLASTIC POLYOLEFIN (TPO)<br>• WELDED SEAMS.<br>• PROVIDE TPO WHITE WALKWAY ROLLS BY MEMBRANE MFR WITH RAISED TREAD PATTERN. WELD TO TPO ROOFING.<br>• INSTALL PER MFRS INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.<br>• PROVIDE 12" X 12" MEMBRANE SAMPLE WITH SHOP DRAWING SUBMITTAL<br>• AT CONTRACTOR OPTION, THE USE OF A FACTORY APPLIED ADHESIVE ACROSS ENTIRE SURFACE OF THE MEMBRANE ROLL IS ACCEPTABLE. |
| **WARRANTY** | • PROVIDE 15 YEAR TOTAL SYSTEM, LABOR AND MATERIAL WARRANTY, NO DOLLAR LIMIT FOR LEAKS, COMMENCING WITH THE DATE OF FINAL INSPECTION AND ACCEPTANCE BY ROOF MANUFACTURER. ALL PORTIONS OF ROOFING SYSTEM MUST MEET MFRS REQUIREMENTS FOR WARRANTY.<br>• PROVIDE 2 YEAR CONTRACTORS WARRANTY ON MATERIALS (EXCLUDING MEMBRANE) AND WORKMANSHIP. |

- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
- INSTALL MATERIALS IN ORDER OF LISTING FROM DECK TO MEMBRANE.

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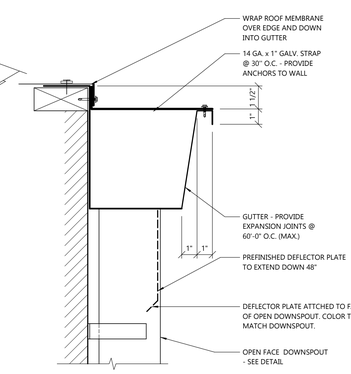
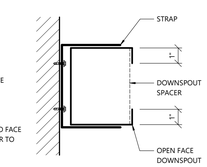


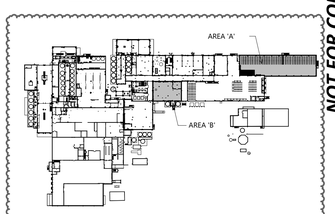

GUTTER SECTION




DOWNSPOUT SECTION

3 A1.3 GUTTER AND DOWNSPOUT DETAIL

SCALE: 3" = 1'-0"




KEY PLAN

ARCHITECTURAL ROOF PLAN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PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
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570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

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SHEET DATES

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| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

**A1.3**


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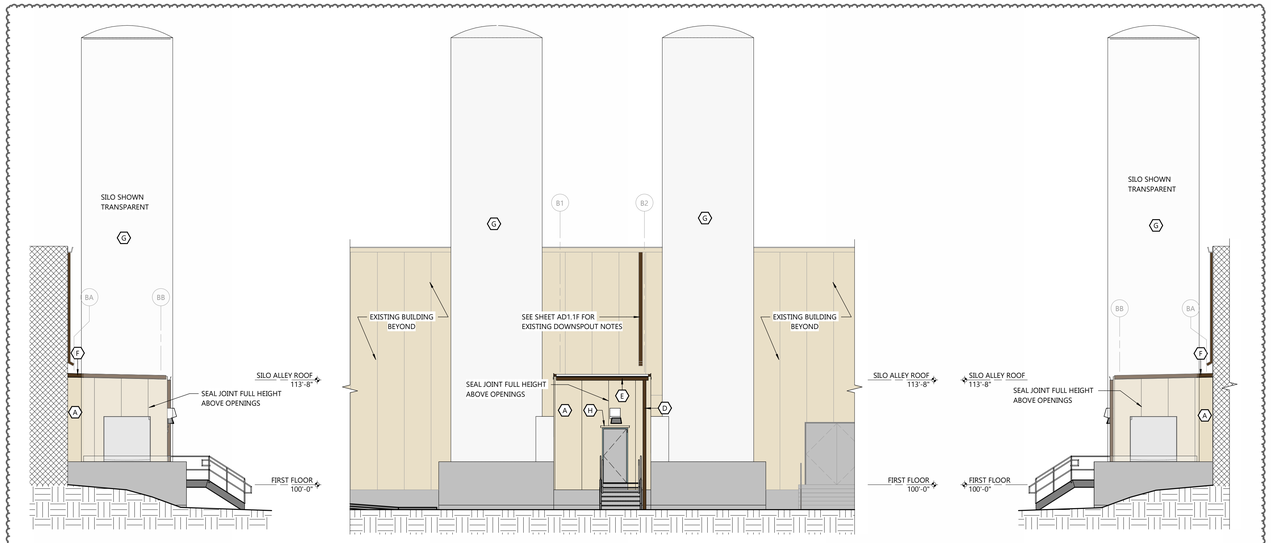



WEST SILO ALLEY ELEVATION

SCALE: 1/8" = 1'-0"

SOUTH SILO ALLEY ELEVATION

SCALE: 1/8" = 1'-0"

EAST SILO ALLEY ELEVATION

SCALE: 1/8" = 1'-0"

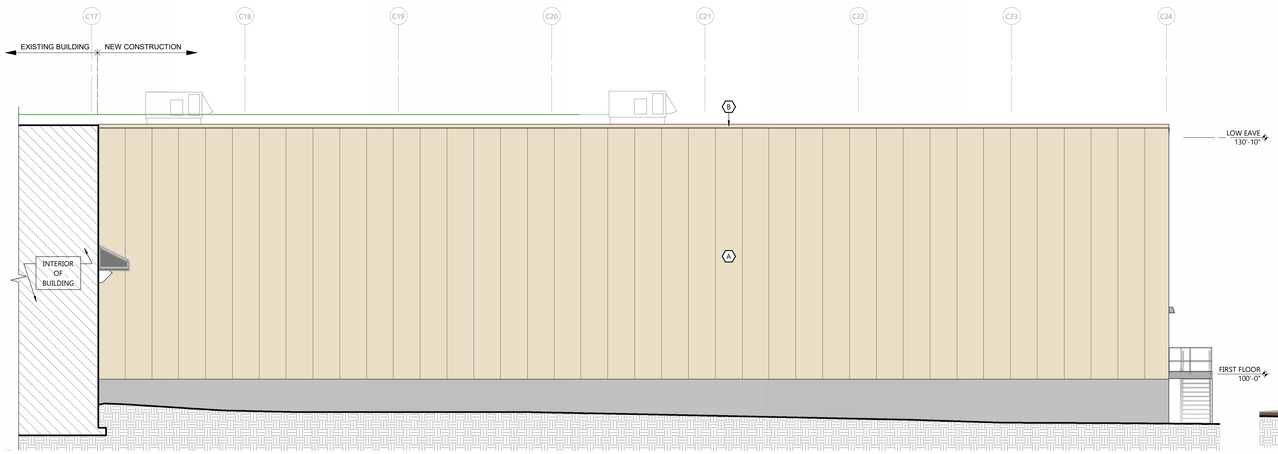
## GENERAL NOTES

12B1 — SEE WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION

- REFERENCE EXTERIOR ELEVATIONS FOR VENEER CONTROL JOINTS. SEE STRUCTURAL PLANS FOR CMU CONTROL JOINT LOCATIONS. VENEER CONTROL JOINTS AND CMU CONTROL JOINTS ARE NOT REQUIRED TO ALIGN.

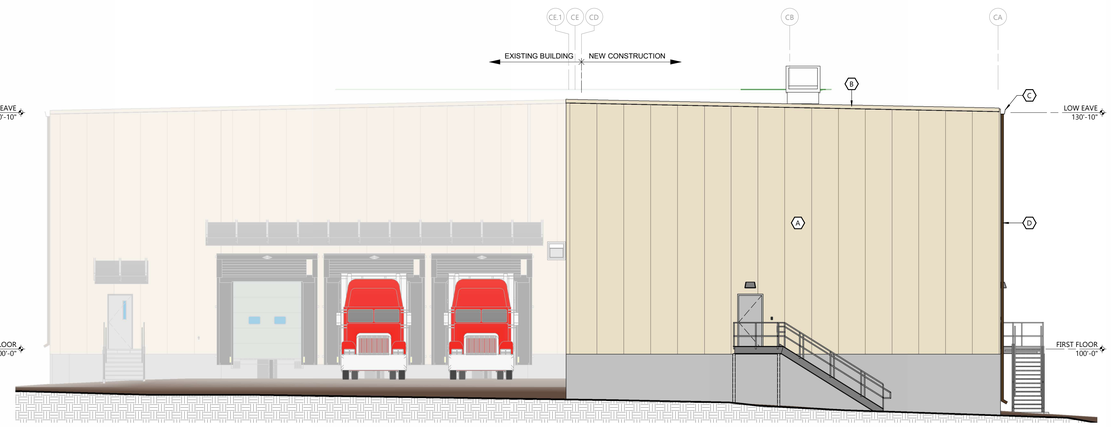
## EXTERIOR MATERIAL KEY

- A — **INSULATED METAL PANEL (CLADDING)** METL-SPAN CF MESA COLOR: MATCH EXISTING
- B — **PRE-FINISHED METAL TRIM** COLOF: MATCH EXISING
- C — **PRE-FINISHED METAL GUTTER** COLOR: MATCH EXISING
- D — **PRE-FINISHED METAL DOWNSPOUT** COLOR: MATCH EXISING
- E — **PRE-FINISHED METAL GUTTER** COLOR: DARK BRONZE
- F — **PRE-FINISHED METAL TRIM** COLOR: DARK BRONZE
- G — **SILO**
- H — **RAIN DRIP EDGE** COLOR: MATCH IMP COLOR



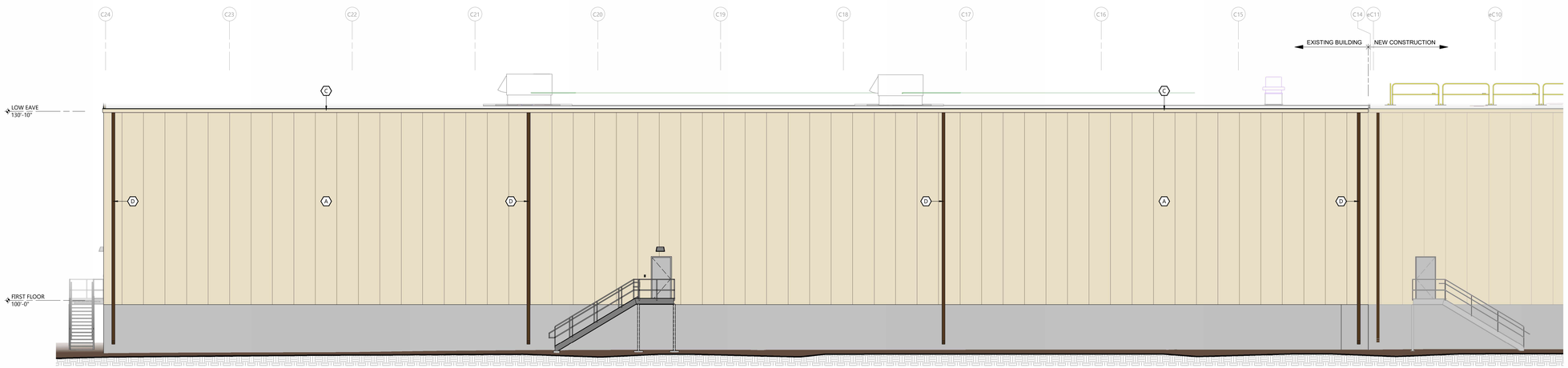

SOUTH ELEVATION

SCALE: 1/8" = 1'-0"




EAST ELEVATION

SCALE: 1/8" = 1'-0"




NORTH ELEVATION

SCALE: 1/8" = 1'-0"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JOB NUMBER

250429500

SHEET NUMBER

**A2.0**

ARCHITECTURAL EXTERIOR ELEVATIONS

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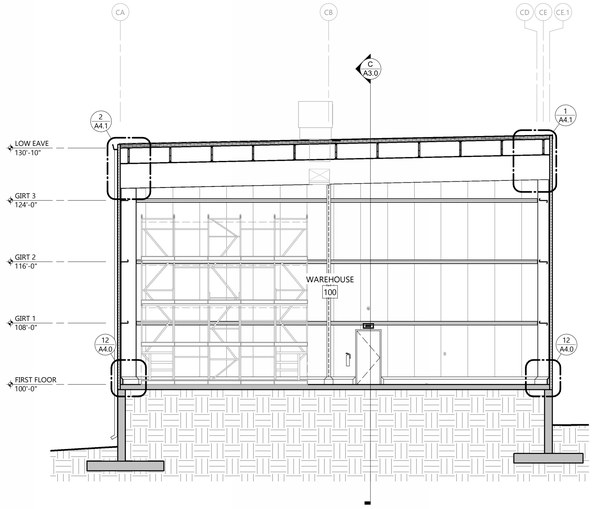


B A3.0 BUILDING SECTION
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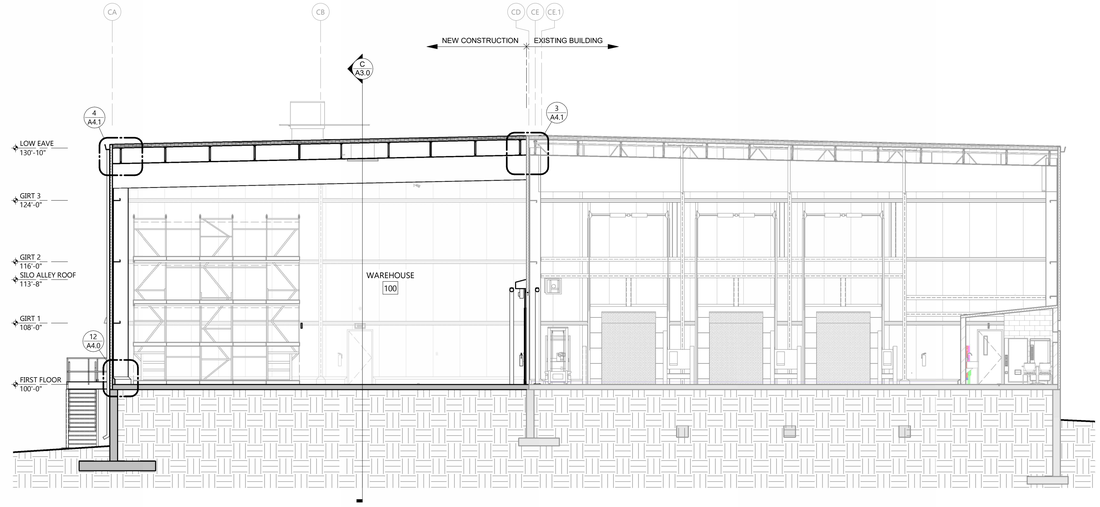


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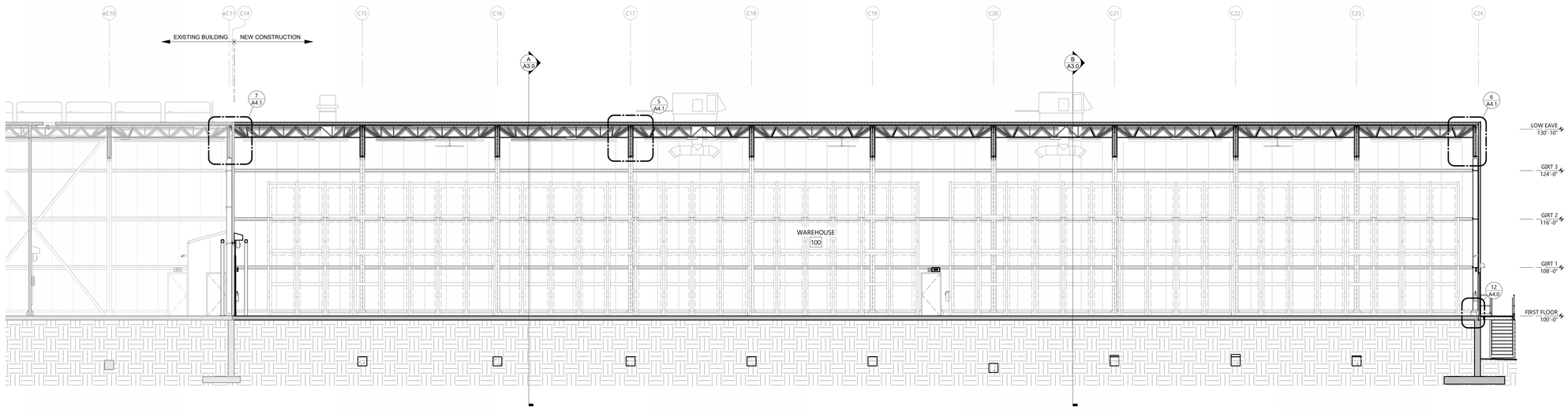


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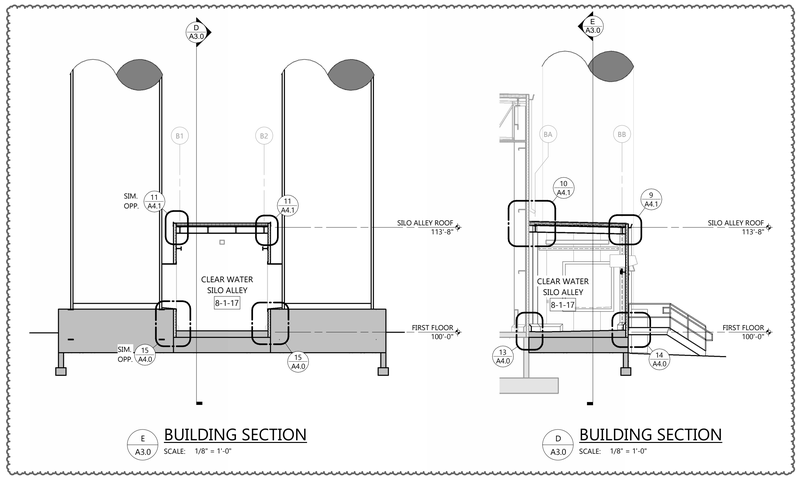


E A3.0 BUILDING SECTION
SCALE: 1/8" = 1'-0"

D A3.0 BUILDING SECTION
SCALE: 1/8" = 1'-0"

ARCHITECTURAL BUILDING SECTIONS

EXCEL
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Fond du Lac, WI 54935
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SHEET NUMBER
**A3.0**

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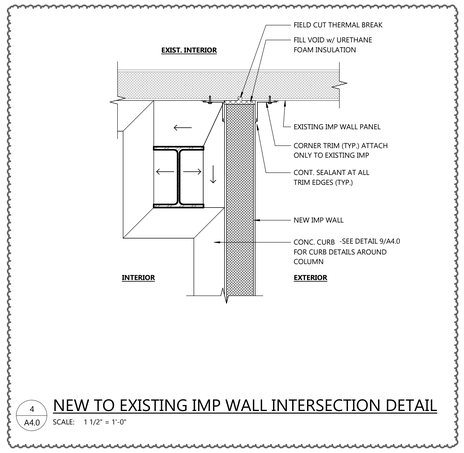
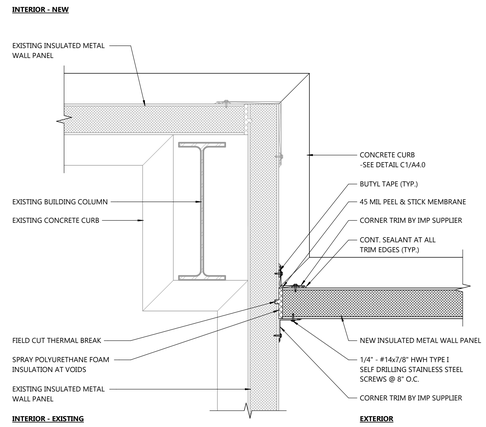
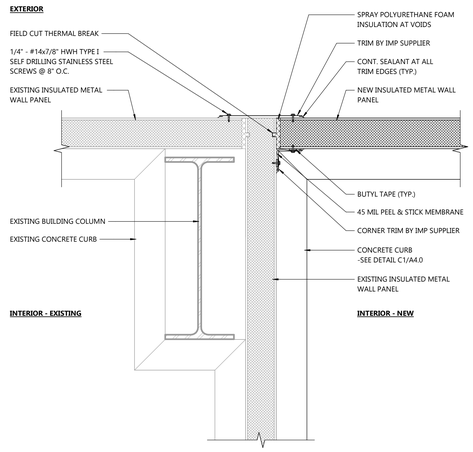


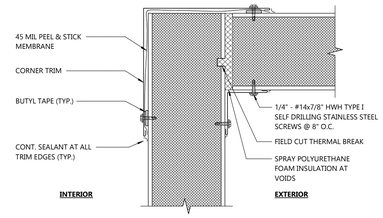

4 / A4.0 NEW TO EXISTING IMP WALL INTERSECTION DETAIL
SCALE: 1 1/2" = 1'-0"



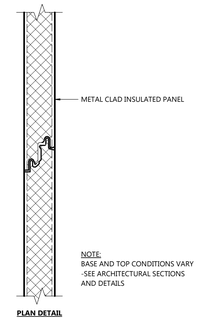

3 / A4.0 NEW TO EXISTING IMP WALL INTERSECTION DETAIL
SCALE: 1 1/2" = 1'-0"




2 / A4.0 NEW TO EXISTING IMP WALL INTERSECTION DETAIL
SCALE: 1 1/2" = 1'-0"



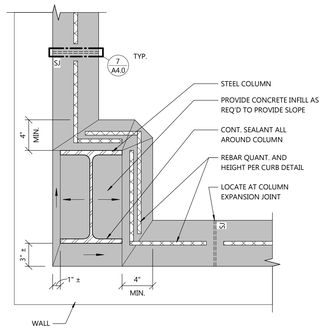

1 / A4.0 IMP WALL CORNER DETAIL
SCALE: 3" = 1'-0"



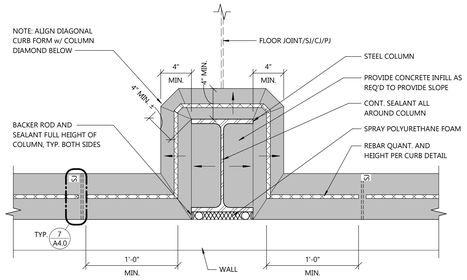

4IMP 4" INSULATED METAL PANEL

SEE A4 SHEETS FOR WALL TYPES NOT LISTED ABOVE

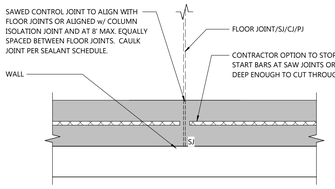
INTERIOR WALL TYPE - 4IMP



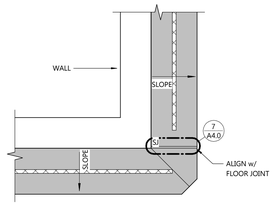

9 / A4.0 CURB AT COLUMN DETAIL
SCALE: 1 1/2" = 1'-0"



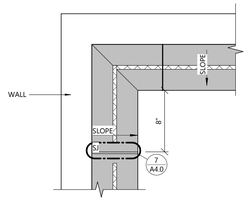

8 / A4.0 CURB AT COLUMN DETAIL
SCALE: 1 1/2" = 1'-0"



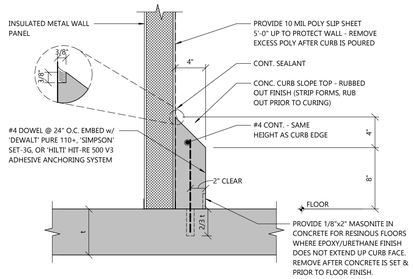

7 / A4.0 TYP. SAWED CONTROL JOINT
SCALE: 1 1/2" = 1'-0"



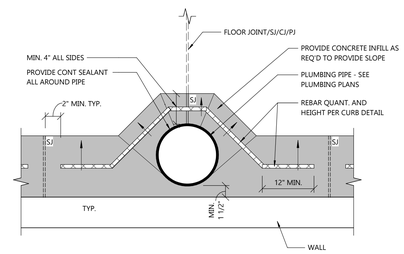

6 / A4.0 TYP. OUTSIDE CORNER
SCALE: 1 1/2" = 1'-0"



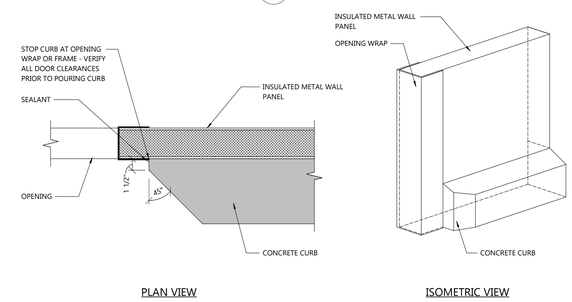

5 / A4.0 TYP. INSIDE CORNER
SCALE: 1 1/2" = 1'-0"




C1 / A4.0 CURB DETAIL
SCALE: 1 1/2" = 1'-0"



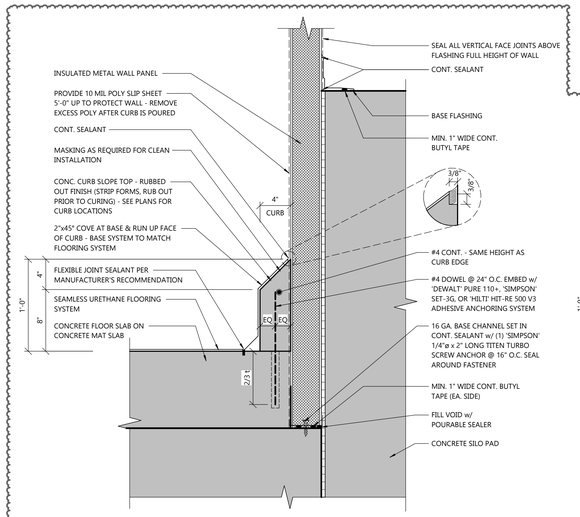

11 / A4.0 CURB AT PIPE DETAIL
SCALE: 1 1/2" = 1'-0"



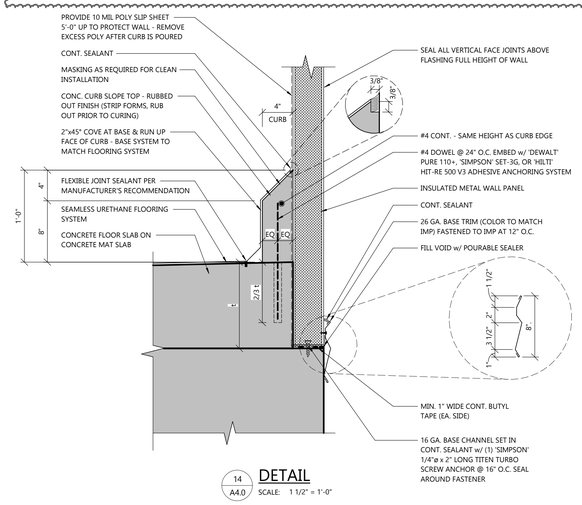

PLAN VIEW

ISOMETRIC VIEW

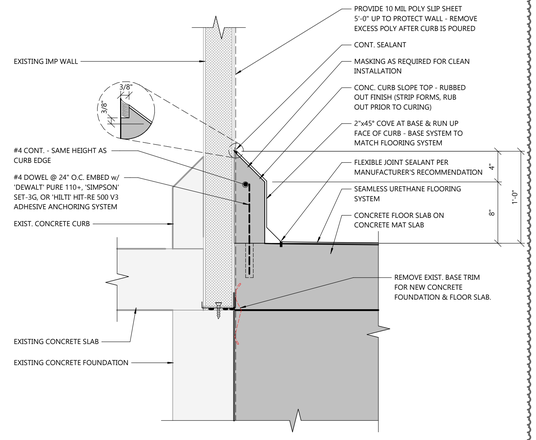
10 / A4.0 CURB RETURN AT IMP WALL OPENING DETAIL
SCALE: 1 1/2" = 1'-0"



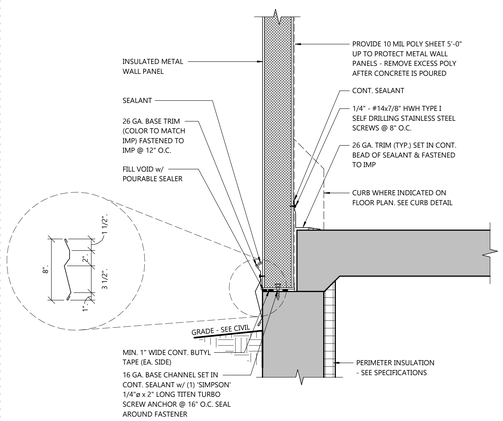

15 / A4.0 DETAIL
SCALE: 1 1/2" = 1'-0"




14 / A4.0 DETAIL
SCALE: 1 1/2" = 1'-0"




13 / A4.0 DETAIL
SCALE: 1 1/2" = 1'-0"




12 / A4.0 IMP BASE CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"

ARCHITECTURAL WALL SECTIONS & DETAILS


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

| ISSUED FOR BID | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**A4.0**

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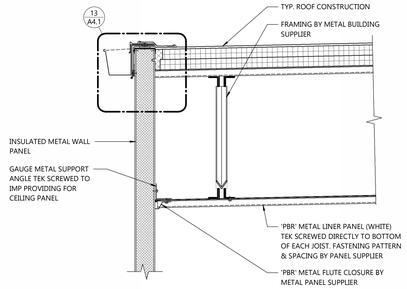
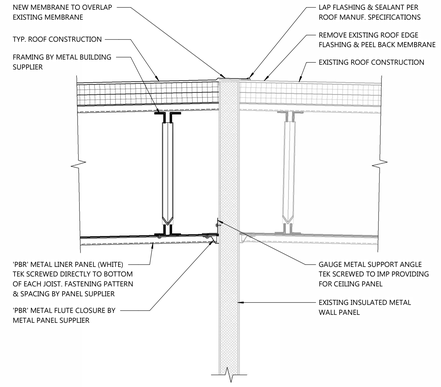



4 A4.1 DETAIL
SCALE: 1" = 1'-0"

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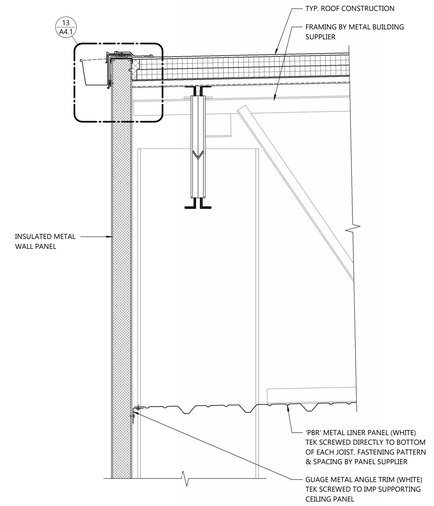


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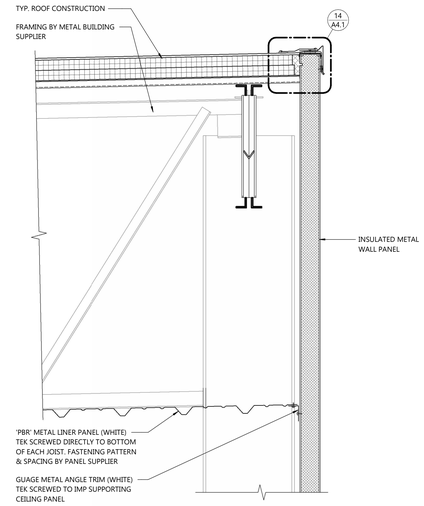


1 A4.1 DETAIL
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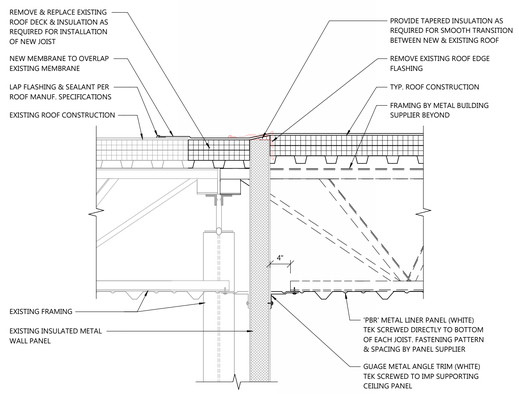
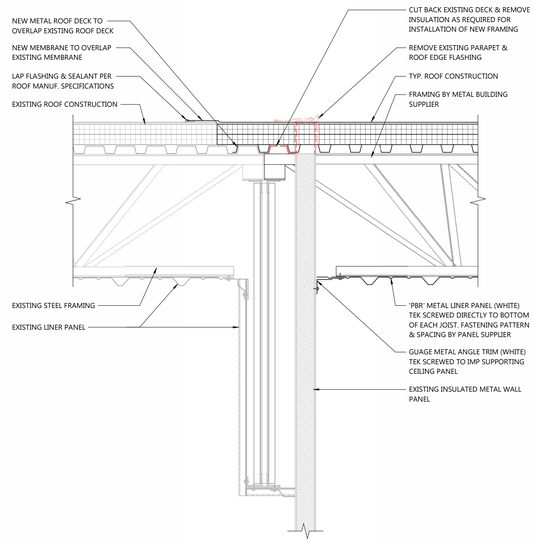
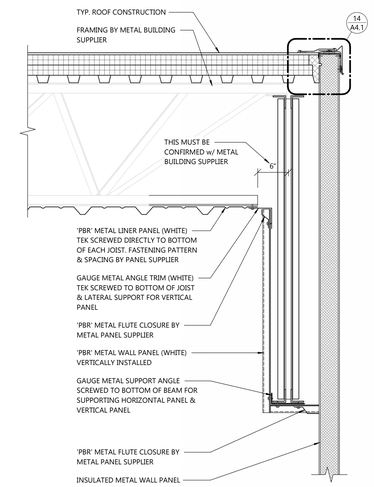


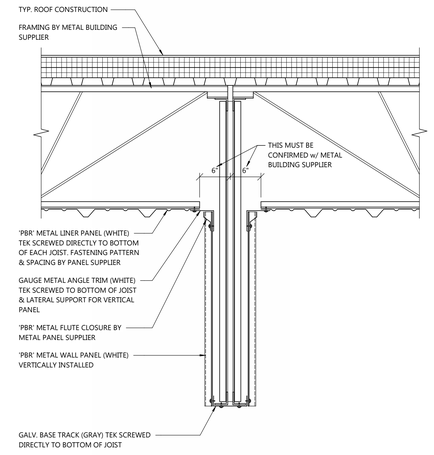

8 A4.1 DETAIL
SCALE: 1" = 1'-0"



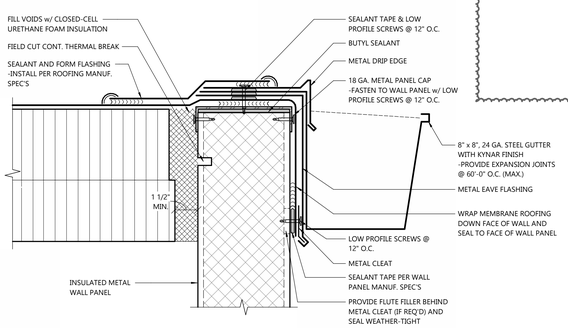

7 A4.1 DETAIL
SCALE: 1" = 1'-0"



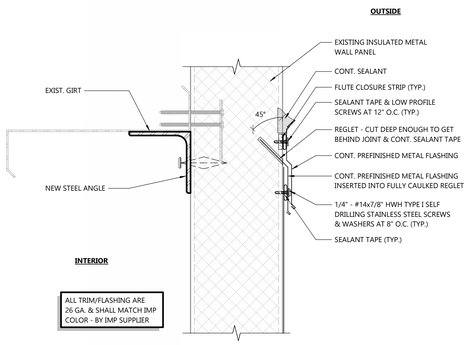

6 A4.1 DETAIL
SCALE: 1" = 1'-0"



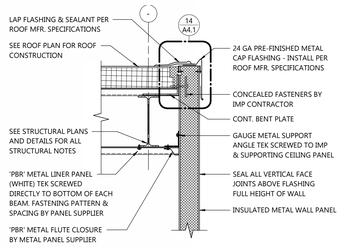

5 A4.1 DETAIL
SCALE: 1" = 1'-0"



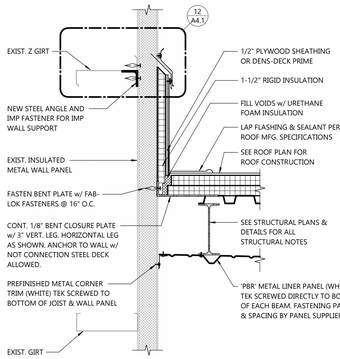

13 A4.1 IMP WALL DETAIL
SCALE: 3" = 1'-0"



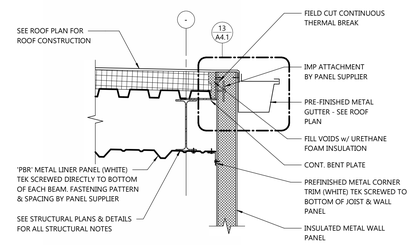

12 A4.1 HI/LO FLASHING DETAIL
SCALE: 3" = 1'-0"



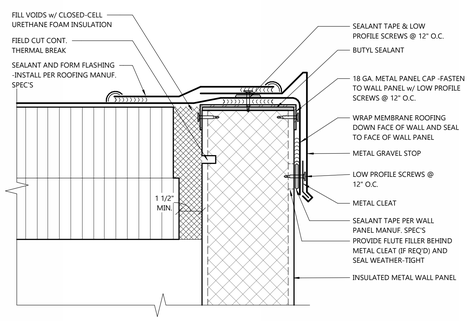

11 A4.1 DETAIL
SCALE: 1" = 1'-0"




10 A4.1 DETAIL
SCALE: 1" = 1'-0"




9 A4.1 DETAIL
SCALE: 1" = 1'-0"




14 A4.1 IMP WALL DETAIL
SCALE: 3" = 1'-0"

NOTE:
SEE PRE-ENGINEERED METAL BUILDING DRAWINGS FOR STEEL SIZE & LOCATIONS OF BRACE OBSTRUCTIONS

ARCHITECTURAL DETAILS


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

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|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
A4.1


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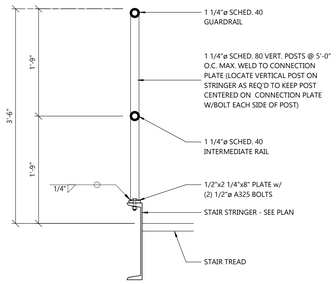
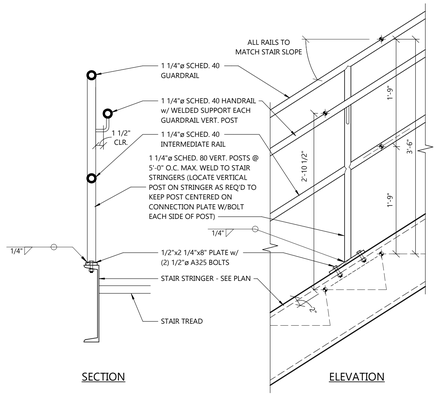
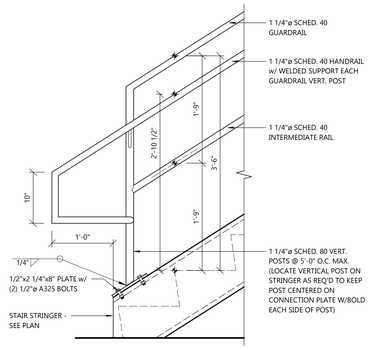



SECTION

2 A4.2 INDUSTRIAL STAIR GUARDRAIL DETAIL
SCALE: 1" = 1'-0"

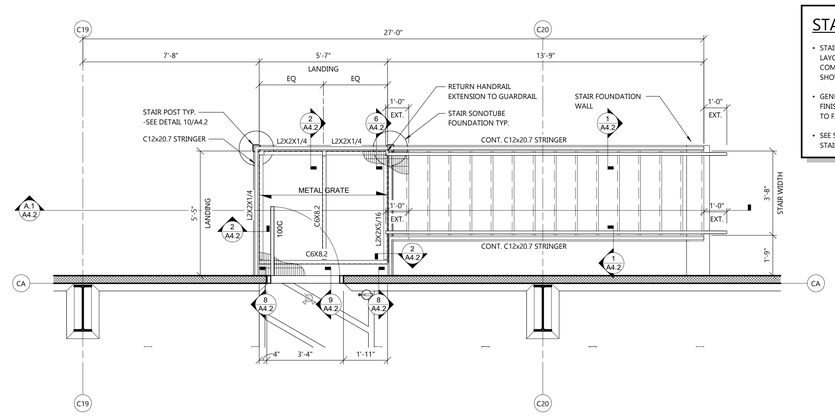



SECTION




ELEVATION

1 A4.2 INDUSTRIAL STAIR GUARDRAIL DETAIL
SCALE: 1" = 1'-0"




A A4.2 ENLARGED STAIR PLAN
SCALE: 3/8" = 1'-0"

0' 2' 4'

## STAIR NOTES:

- STAIRS AS SHOWN ARE FOR ARCHITECTURAL LAYOUT PURPOSES - FINAL DESIGN AND COMPONENTS BY STAIR SUPPLIER. SIZES SHOWN ARE MINIMUMS
- GENERAL CONTRACTOR SHALL FIELD VERIFY FINISH GRADES AT ALL EXTERIOR STAIRS PRIOR TO FABRICATING STEEL STAIRS
- SEE STRUCTURAL PLANS FOR METAL GRATE & STAIR TREAD SPECIFICATIONS


EXCEL
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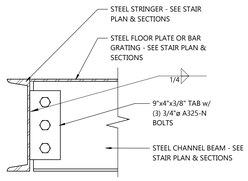
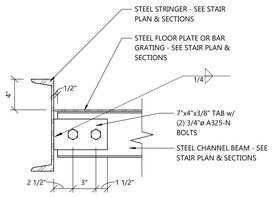
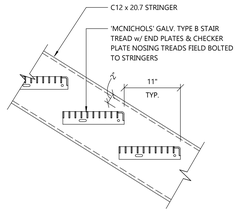
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

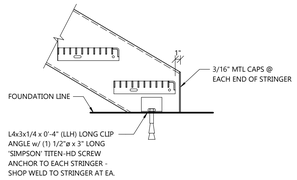

6 A4.2 STRINGER CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



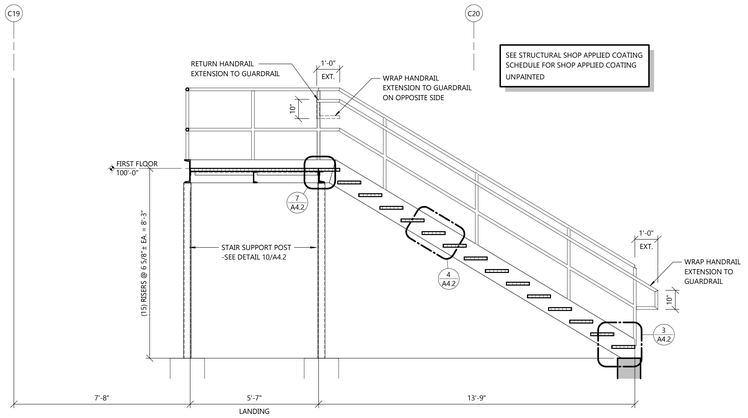

5 A4.2 STRINGER CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



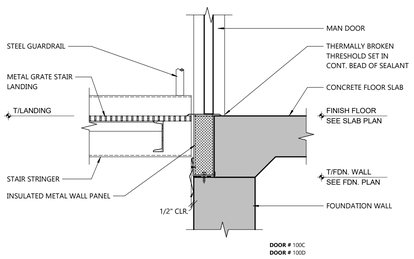

4 A4.2 STEEL GRATE STAIR DETAILS
SCALE: 1" = 1'-0"



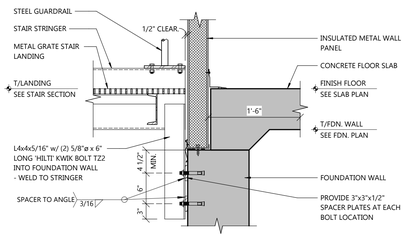

3 A4.2 STEEL GRATE STAIR DETAILS
SCALE: 1" = 1'-0"



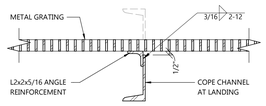

A.1 A4.2 STAIR SECTION
SCALE: 3/8" = 1'-0"



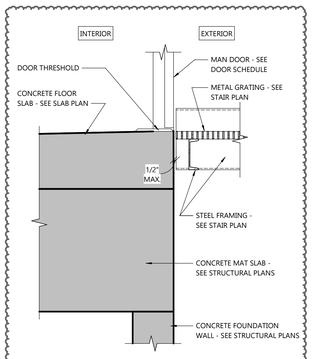

9 A4.2 MAN DOOR @ STAIR DETAIL
SCALE: 1" = 1'-0"




8 A4.2 STAIR TO FOUNDATION WALL CONNECTION
SCALE: 1" = 1'-0"




7 A4.2 COPED STRINGER REINFORCEMENT DETAIL
SCALE: 1 1/2" = 1'-0"

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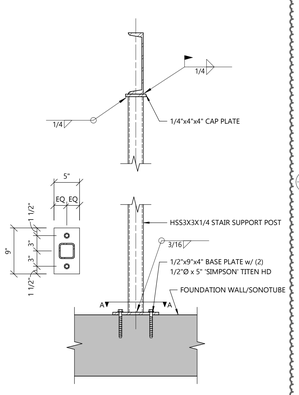


10 A4.2 STAIR POST DETAIL
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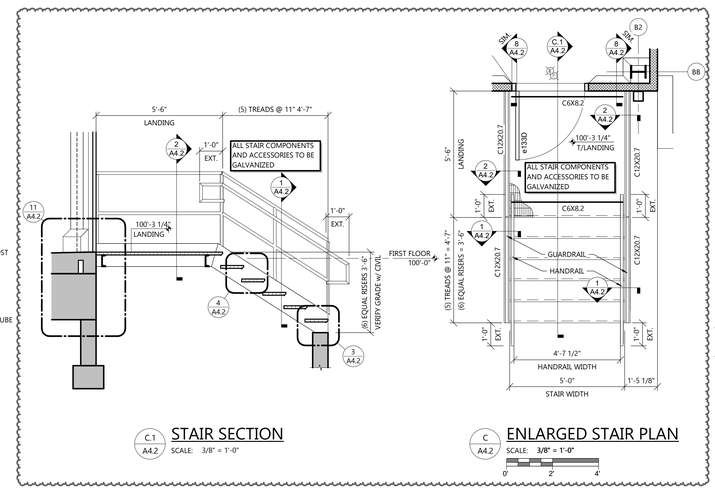
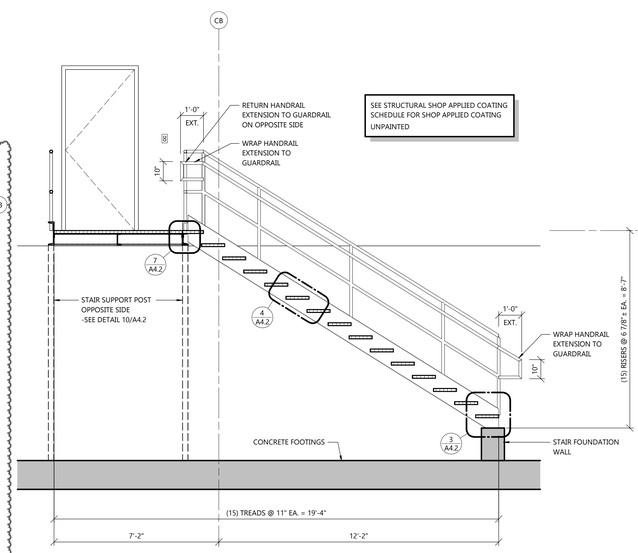


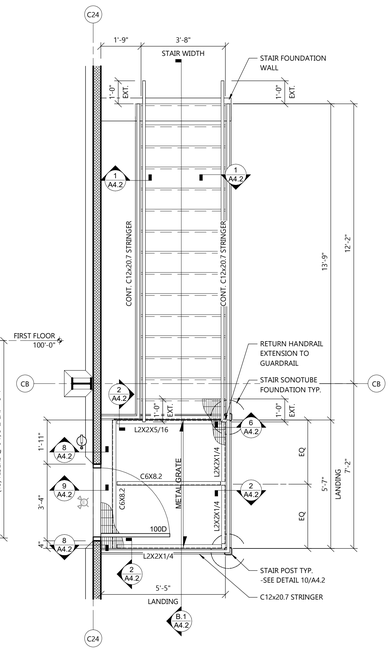

C.1 A4.2 STAIR SECTION
SCALE: 3/8" = 1'-0"

C A4.2 ENLARGED STAIR PLAN
SCALE: 3/8" = 1'-0"

0' 2' 4'




B.1 A4.2 STAIR SECTION
SCALE: 3/8" = 1'-0"




B A4.2 ENLARGED STAIR PLAN
SCALE: 3/8" = 1'-0"

0' 2' 4'

ARCHITECTURAL STAIR SECTIONS & DETAILS

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROJECT INFORMATION

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

| ISSUED FOR BID | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**A4.2**

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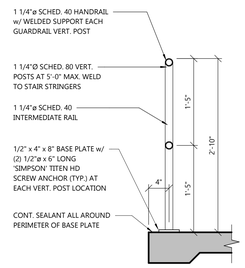
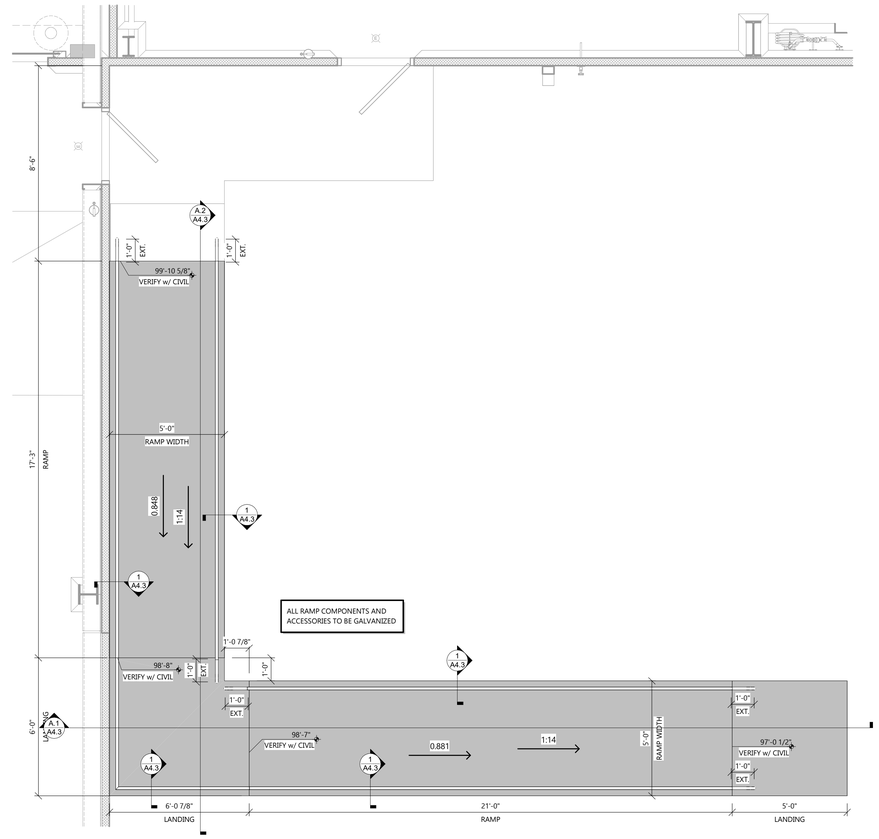
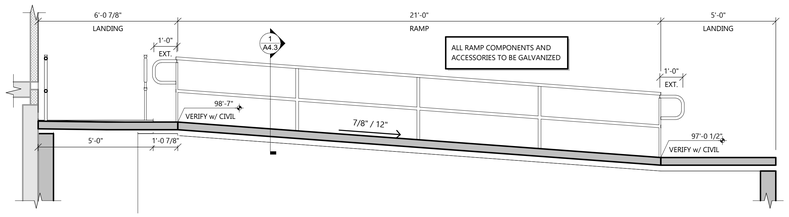



1 / A4.3 LANDING GUARDRAIL DETAIL
SCALE: 1" = 1'-0"




A / A4.3 ENLARGED RAMP PLAN
SCALE: 3/8" = 1'-0"




A.1 / A4.3 RAMP SECTION
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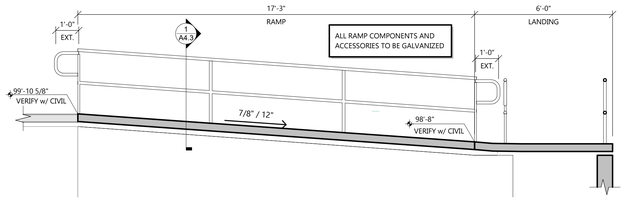


A.2 / A4.3 RAMP SECTION
SCALE: 3/8" = 1'-0"


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
AD1 APR. 29, 2026

JOB NUMBER
250429500

SHEET NUMBER
**A4.3**

ARCHITECTURAL RAMP SECTIONS & DETAILS

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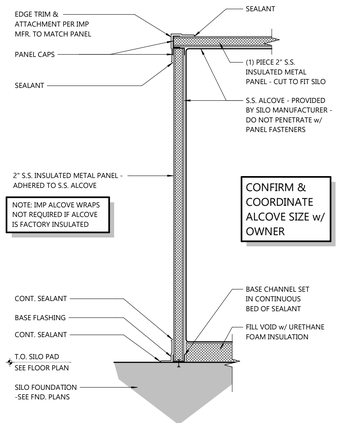
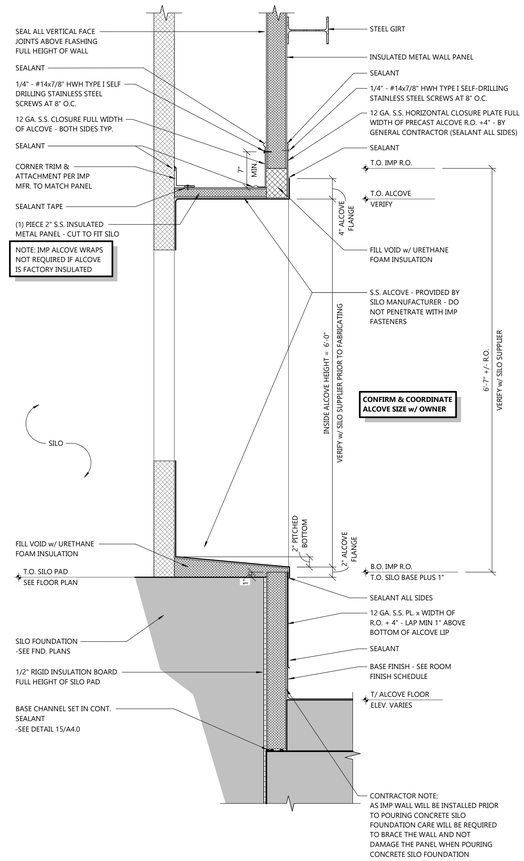



4 A4.4 SILO ALCOVE CROSS SECTION
SCALE: 1" = 1'-0"




3 A4.4 SILO ALCOVE SECTION
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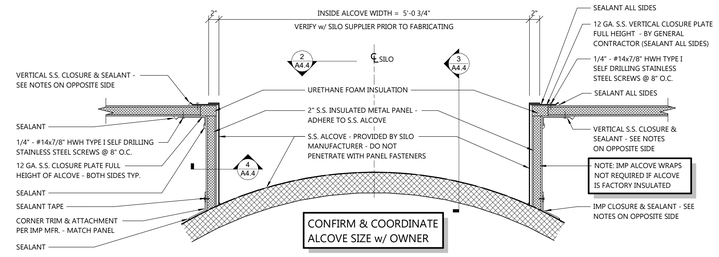
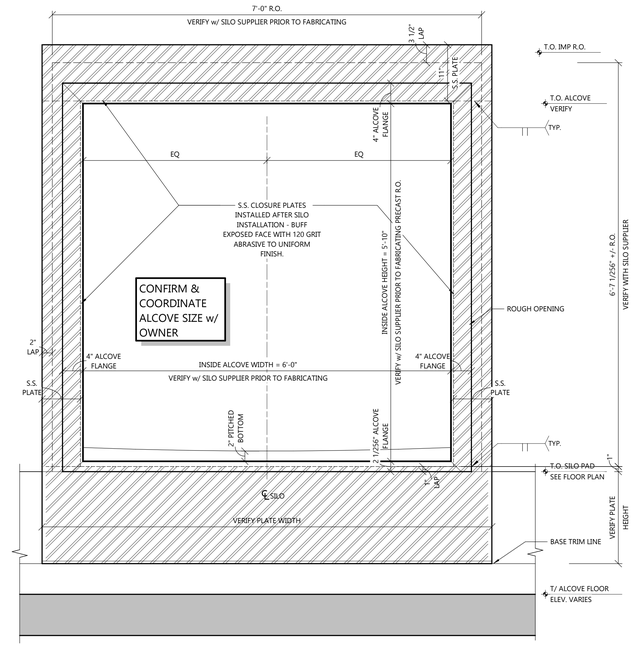



1 A4.4 SILO ALCOVE PLAN
SCALE: 1" = 1'-0"




2 A4.4 SILO ALCOVE ELEVATION
SCALE: 1" = 1'-0"

EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

| ISSUED FOR BID | |
|---|---|
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**A4.4**

ARCHITECTURAL SILO ALCOVE DETAILS

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# DOOR SCHEDULE

| DOOR NO. | DOOR SIZE WIDTH | DOOR SIZE HEIGHT | DOOR TYPE | FRAME TYPE | JAMB/HEAD WRAP | FIRE RATING | UNDERCUT OR GRILLE (W x H) | DOOR HARDWARE HINGE | LOCKSET | STOPS | CLOSER | EXIT DEVICE | PUSH-PULL / KICK | MISC. | W.S., SWEEP, THRESHOLD | DOOR OPTIONS OPERATION | LIFT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100A | 10'-0" | 12'-0" | RR1 | - | S.S. | - | - | - | - | - | - | - | - | - | - | - | - | (2) PULL CHORDS |
| 100B | 3'-0" | 7'-0" | MD1 | HM1 | GALV. | - | - | H2 | L9 | | C4 | - | - | - | - | - | - | |
| 100C | 3'-0" | 7'-0" | MD1E | HM1 | GALV. | - | - | H4 | L12 | - | C6 | E9 | - | - | T3,WS1,SW1 | - | - | |
| 100D | 3'-0" | 7'-0" | MD1E | HM1 | GALV. | - | - | H4 | L12 | - | C6 | E9 | - | - | T3,WS1,SW1 | - | - | |
| 100E | 10'-0" | 12'-0" | RR1 | - | S.S. | - | - | - | - | - | - | - | - | - | - | - | - | (2) PULL CHORDS |
| e133D | 3'-0" | 7'-0" | EXIST | EXIST. | - | - | - | EXIST. | | | EXIST. | EXIST. | | | | | | 1 |

**REMARKS:**
1. RELOCATED DOOR FROM EXTERIOR WALL OF EXIST. HTST ROOM 8-1-15. EXTERIOR LEVER TO BE REMOVED AND BLANK PLATE TO BE PROVIDED

# ROOM FINISH SCHEDULE

| ROOM # | ROOM NAME | FLOORS FLOOR | FLOORS BASE | FLOORS CURB | WALLS NORTH | WALLS SOUTH | WALLS EAST | WALLS WEST | CEILING | EXPOSED STRUCTURE ROOF, FLOOR FRAMING | EXPOSED STRUCTURE BELOW ROOF, FLOOR FRAMING | H.M. DOORS | H.M. FRAMES | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-1-17 | CLEAR WATER SILO ALLEY | URE-1 | URE-CANT-1 | | EXIST. | IMP-PL | IMP-PL | IMP-PL | LP | - | PA-URE-1 | | | 1 |
| 100 | WAREHOUSE | SC-3 | | | IMP-PL | IMP-PL/EXIST. | IMP-PL | EXIST. | LP | | | PA-1 | PA-1 | 1 |

**REMARKS:**
1. CUT & REMOVE LINER PANEL AS REQUIRED FOR MECHANICAL OPENINGS. PROVIDE LIGHT GAUGE FRAMING AS REQUIRED TO SUPPORT LINER PANEL AT OPENING. ALL EXPOSED FRAMING OR TRIM SHALL MATCH LINER PANEL COLOR & FINISH
2. VERIFY BACK SIDE OF BUILDING COLUMNS ARE PAINTED PRIOR TO INSTALLING WALL PANEL IF THEY CANNOT BE PROPERLY FINISHED WITH THE WALL PANELS IN PLACE.

**GENERAL NOTES:**
- ROOM FINISH SCHEDULE DESCRIBES FIELD APPLIED FINISHES ONLY, IT DOES NOT INCLUDE SHOP APPLIED COATINGS OR MANUFACTURER APPLIED FINISHES.
- EXPOSED STRUCTURE DEFINITION FOR "ROOF, FLOOR FRAMING": INCLUDES ALL DECK, JOISTS, BEAMS & COLUMNS THAT ARE IN FRAMING DEPTH.
- EXPOSED STRUCTURE DEFINITION FOR "BELOW ROOF, FLOOR FRAMING": INCLUDES ALL EXPOSED STRUCTURE BELOW FRAMING DEPTH (COLUMNS, WALL FRAMING).
- PATCH/REPAIR SMALL BLEMISHES OR MOUNTING HOLES PRIOR TO PAINTING EXISTING WALL SURFACES.
- EXPOSED CONDUIT UNPAINTED UNLESS NOTED OTHERWISE.

# MATERIAL LEGEND

| CODE | FINISH GROUP | MANUF | STYLE | COLOR | SIZE | NOTES |
|---|---|---|---|---|---|---|
| FLOOR FINISHES | | | | | | |
| SC-3 | SEALED CONCRETE | ASHFORD | ASHFORD FORMULA | -- | -- | CONCRETE DENSIFIER TO REDUCE CONCRETE DUSTING AND INCREASE HARDNESS. USE AT WAREHOUSE OR ROOMS THAT WILL NOT HAVE FLOORING INSTALLED. WET CURED CONCRETE OR DISSIPATING CURING COMPOUND IS REQUIRED. INSTALLED OVER CLEAN/BARE CONCRETE |
| URE-1 | RESINOUS FLOORING - URETHANE CEMENT | INDUE | INDUE-CRETE 'MT' SYSTEM CEMENTITIOUS URETHANE | BASALT GRAY VERIFY w/ OWNER | 3/8" TROWEL GRADE | TROWEL APPLIED BASE COAT FOLLOWED BY A 40 MESH SPHERICAL POLYMER COATED QUARTZ BROADCAST TO REJECTION FOLLOWED BY 'UTC' ALIPHATIC URETHANE TOPCOAT |
| FLOOR BASE | | | | | | |
| URE-CANT-1 | RESINOUS FLOORING - URETHANE CEMENT | INDUE | INDUE-CRETE 'MT' SYSTEM CEMENTITIOUS URETHANE | BASALT GRAY VERIFY w/ OWNER | SEE DETAILS THIS SHEET | TROWEL APPLIED BASE COAT FOLLOWED BY A 40 MESH SPHERICAL POLYMER COATED QUARTZ BROADCAST TO REJECTION FOLLOWED BY 'UTC' ALIPHATIC URETHANE TOPCOAT |
| WALL FINISHES | | | | | | |
| EXIST. | EXISTING WALL FINISH | -- | -- | -- | -- | |
| IMP-PL | INSULATED METAL PANEL | METL-SPAN | CF-LIGHT MESA, STUCCO EMBOSSED | (G90) PVC PLASTISOL - IGLOO WHITE | -- | |
| PA-URE-1 | HIGH PERFORMANCE PAINT | SHERWIN WILLIAMS | | | | HIGH HUMIDITY/MOISTURE, HEAVY ABRASION |
| CEILING FINISHES | | | | | | |
| LP | METAL LINER PANEL | -- | -- | MATCH IMP | -- | METAL ROOF DECK ABOVE SHALL BE STANDARD DECK; GREY PRIME PAINT ONLY. NO FINISH PAINT |
| OTHER | | | | | | |
| PA-1 | METAL DOOR FRAME | SHERWIN WILLIAMS | -- | MATCH EXISTING | -- | |

# DOOR HARDWARE KEY

HINGES

| | DESCRIPTION / FINISH | Ives | Hager | McKinney | Stanley |
|---|---|---|---|---|---|
| H1 | STANDARD (626) | 5BB1 | BB1279 | TA2714 | FBB179 |
| H2 | HEAVY (626) | 5BB1HW | BB1168 | TA4A786 | FBB168 |
| H3 | STANDARD (630) | 5BB1 SS | BB1191 | TA2314 | FBB191 |
| H4 | HEAVY (630) | 5BB1HW SS | BB1199 | T4A3386 | FBB199 |

LOCKSETS

| | DESCRIPTION / FINISH | Schlage ND Series (RHO) | Sargent 10X-Line (LL) | Best 9K (15D) |
|---|---|---|---|---|
| L1 | ENTRANCE (626) | ND53PD | 10XG05 | 9K AB |
| L2 | CLASSROOM (626) | ND70PD | 10XG37 | 9K R |
| L3 | PRIVACY (626) | ND40S | 10XJ65 | 9K L |
| L4 | STOREROOM (626) | ND80PD | 10XG04 | 9K D |
| L5 | RIM CYLINDER (626) | 20-022 | 34 SERIES | 1E-72 |
| L6 | INSTITUTION (626) | ND82PD | 10XG17 | 9K W |
| L7 | MORTISE CYLINDER (626) | 20-001 | 40 SERIES | 1E-74 |
| L8 | DEADBOLT (626) | B660P | 480 SERIES | 83T SERIES |
| L9 | PASSAGE (626) | ND10S | 10XU15 | 9K N |
| L10 | EXIT ONLY-BLANK (626) | ND25D | 10XG15-3 | 9K Y |
| L11 | EXIT ONLY-LEVER (626) | ND12D | 10XG13 | 9K NX |
| L12 | DUMMY TRIM (626) | ND170 | 10XU94-2 | 9K 1DT |
| | | Sargent 8200 (L) | | |
| L13 | MORTISE PRIVACY (626) | 66 PRIVACY + 49 OCC INDICATOR | | |

CLOSERS

| | DESCRIPTION / FINISH | LCN | Sargent | Norton |
|---|---|---|---|---|
| C1 | PULL SIDE REG. (689) | 4040 XP REG | 351 O | 7501 |
| C2 | PULL SIDE HOLD-OPEN (689) | 4040XP H | 351 H | 7501H |
| C3 | PUSH SIDE REG. (689) | 4040XP EDA | 351 P10 | P87501 |
| C4 | PUSH SIDE w/ STOP (689) | 4040XP CUSH | 351 PS | CLP7501 |
| C5 | PUSH SIDE HOLD-OPEN (689) | 4040XP HCUSH | 351 PSH | CLP7501H |
| C6 | PUSH SIDE EXT. DOORS (689) | 4040XP SCUSH | 351 CPS | UNI7501 |
| C7 | DROP PLATE (689) | 4040XP-18PA | 351-D | 7788 |

EXIT DEVICES

| | DESCRIPTION / FINISH | VonDuprin Med./Wide Stile | VonDuprin Narrow Stile | Sargent Med./Wide Stile | Sargent Narrow Stile | DETEX |
|---|---|---|---|---|---|---|
| E1 | RIM - EXIT ONLY (626) | 98/99EO | 33EO | 8810 | 8500 Series | - |
| E2 | RIM - LEVER (626) | 98/99Lx996L | 33Lx360L | 8813 ETL | 8500 Series | - |
| E3 | SURF. RODS - LEVER (626) | 98/9927Lx996L | 3327Lx360L | 8713 ETL | 8500 Series | - |
| E4 | CON. RODS - LEVER (626) | 98/9947Lx996L | 3347Lx360L | 8613 ETL | 8400 Series | - |
| E5 | RIM - EXIT ONLY (630) | 98EO | | 8810 | | - |
| E6 | RIM - LEVER (630) | 98Lx996L | | 8813 ETL | | - |
| E7 | SURF. RODS - LEVER (630) | 9827Lx996L | | 8713 ETL | | - |
| E8 | ELEC LATCH RETRACT (630) | QEL-LX-RX-98/99L | | 54-55-56-8800 | | |
| E9 | RIM EXIT ONLY - ALARM (630) | - | | - | | DETEX ECL-230X-W |

When a cylinder lockset is scheduled with an exit device, trim w/ cylinder should be provided. If no cylinder lockset is scheduled, trim shall be blank escutcheon (unless specified otherwise)

WEATHERSTRIP, SWEEPS, & THRESHOLDS

| | DESCRIPTION | National Guard | Reese | Pemko |
|---|---|---|---|---|
| T1 | ALUM. THERMAL THRESHOLD | 8424 | S282A | 252x2 FG |
| T2 | SS SADDLE THRESHOLD | - | 2125 | 154SS |
| T3 | SS THERMAL THRESHOLD | - | - | 252-355FG |
| T4 | THRESHOLD w/ SEAL | 950N | | - |
| SW1 | SWEEP | 200NA | 772 | 315N |
| WS1 | WEATHERSTRIP | 160VA | DS106C | 294AV |
| WS2 | SMOKE SEAL | 5050B | 797B | S88 |
| ADB | AUTO DOOR BOTTOM | 335N | - | - |

ACCESS CONTROL

| | DESCRIPTION | VonDuprin | HES | Securitron |
|---|---|---|---|---|
| ES1 | ELECT STRIKE AT RIM EXIT DEVICE (630) | 6300 (24VDC) | 9500/9600 Series (24VDC) | N/A |
| ES2 | ELECT STRIKE AT STD. LOCKSET (630) | 6211 (24VDC) | 1006 Series (24VDC) | UNL (24VDC) |
| ES3 | SPACER BRACKET (628) | 1/2" ALUM SPACER | 9000-ASB | - |
| PT1 | POWER TRANSFER (689) | EPT | - | - |
| PT2 | POWER TRANSFER (630) | CEPT | - | - |
| | | LCN | | |
| MH1 | MAG HOLD OPEN (630) | SEM7850 | | |
| CR | CARD READER | BY DOOR SECURITY CONTRACTOR - SEE ELECT. PLANS | | |
| DC | DOOR CONTACT | BY DOOR SECURITY CONTRACTOR - SEE ELECT. PLANS | | |
| RE | REQUEST TO EXIT | BY DOOR SECURITY CONTRACTOR - SEE ELECT. PLANS | | |
| ML | MAGNETIC LOCK | BY DOOR SECURITY CONTRACTOR - SEE ELECT. PLANS | | |
| PS | POWER SUPPLY | BY DOOR SECURITY CONTRACTOR - SEE ELECT. PLANS | | |

# GENERAL DOOR AND FRAME NOTES:

- ALL DOORS SHALL MEET A.D.A. REQUIREMENTS
- ALL DOOR THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT
- VERIFY FRAME DEPTHS W/ WALL THICKNESS. PROVIDE WRAP AROUND FRAMES AT STUD WALLS
- PROVIDE SEALANT BOTH SIDES OF DOOR FRAMES, WHERE DIFFERENT MATERIALS MEET AND FOR WEATHER TIGHTNESS
- GENERAL CONTRACTOR TO VERIFY SIZE OF ALL EQUIPMENT (ELECTRICAL, MECHANICAL, KITCHEN, LAUNDRY, ETC.) SELECTED FOR THE PROJECT TO DETERMINE THAT ALL DOORS (INCLUDING PATH OF TRAVEL) ARE OF ADEQUATE SIZE TO ACCOMMODATE INSTALLATION AND REPLACEMENT
- VERIFY ALL ROUGH OPENING REQUIREMENTS WITH MANUFACTURERS DRAWINGS
- SEE SHEET A0.1 FOR GENERAL BUILDING SPECIFICATIONS
- DOOR, FRAME AND HARDWARE SCHEDULE TO BE PROVIDED BY HARDWARE SUPPLIER FOR A/E REVIEW - NUMBERING SYSTEM AND NOMENCLATURE SHALL MATCH THOSE FOUND IN CONSTRUCTION DOCUMENTS
- HARDWARE SUPPLIER IS RESPONSIBLE FOR COORDINATING KEYING REQUIREMENTS WITH OWNER
- ALUMINUM SUPPLIER SHALL FURNISH AND INSTALL ALL HARDWARE FOR ALUMINUM DOORS AS NOTED ON PLANS - THE SAME MANUFACTURERS AND MODELS SHALL BE USED FOR BOTH ALUMINUM AND OTHER DOOR HARDWARE
- CONTRACTOR TO PROVIDE PRODUCTS AND SYSTEMS COMPLETE WITH ALL ACCESSORIES, TRIM, FINISH, FASTENERS AND OTHER ITEMS NEEDED FOR A COMPLETE INSTALLATION AND INTENDED USE AND EFFECT
- DOOR UNDERCUTS, WHERE NOTED, SHALL BE 1" FROM FINISHED FLOOR. AT RATED DOOR LOCATIONS THE MAXIMUM UNDERCUT IS 3/4" FROM FINISHED FLOOR. AT ALL OTHER LOCATIONS, PROVIDE 1/2" DOOR UNDERCUT FROM FINISHED FLOOR.
- SEE ELECTRICAL PLANS FOR DOOR CARD READER LOCATIONS
- SEE FLOOR PLANS & STRUCTURAL FOUNDATION PLANS FOR GUARD POST AND GOAL POST LOCATIONS

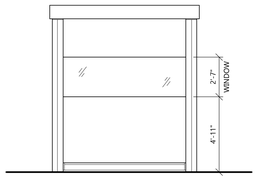
# RAPID ROLL DOOR SPECIFICATIONS:

**MANUFACTURER:**
- RITE-HITE

**MODEL:**
- FASTRAX CLEAN HIGH PERFORMANCE DOOR

**CONSTRUCTION:**
- DOORS:
  - TRAVEL SPEED = 100" PER SECOND
  - POLYPROPYLENE FABRIC DOOR PANEL (DURAMAX 100)
  - 20" HIGH VISION PANEL
  - SOFT-EDGE TECHNOLOGY w/ (2) PHOTO EYES
  - CONFIRM PANEL COLOR w/ OWNER
- FRAMES:
  - STAINLESS STEEL FRAME & BRACKETS, LEXAN TRACK w/ UHMW INSERTS
  - ONE PIECE RADIAL HEADER
- OPERATION:
  - STAINLESS STEEL DRIVE SYSTEM DESIGNED FOR HEAVY WASHDOWN
  - I-COMM II DIGITAL CONTROLLER, VARIABLE FREQUENCY DRIVE w/ COMPACT USER INTERFACE
  - STAINLESS STEEL NEMA 4X BOX
  - 2 HORSE POWER
  - SEE ELEC DRAWINGS FOR VOLT/ PHASE
  - ACTIVATION TO BE DUAL ELECTRIC PHOTOEYE UNLESS NOTED OTHERWISE
  - SEE DOOR SCHEDULE FOR REMARKS

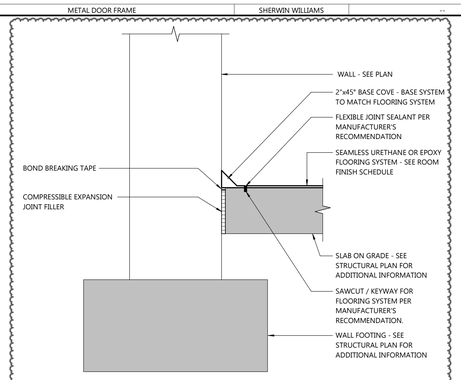
**WARRANTY:**
- 1 YEAR ON MATERIALS




RR1
RAPID ROLL DOOR
(WAREHOUSE/MANUFACTURING)

# RAPID ROLL DOOR ELEVATIONS

SCALE: 1/4" = 1'-0"

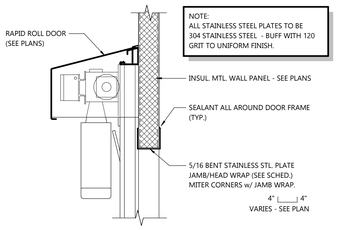



# URETHANE WALL BASE COVE DETAIL

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

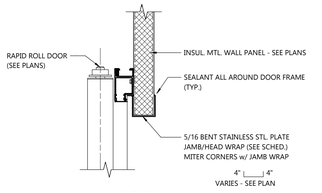
# SEALANT SCHEDULE

| LOCATION | MFR | PRODUCT | DESCRIPTION |
|---|---|---|---|
| **EXTERIOR** | | | |
| WINDOW, DOOR, LOUVER OPENINGS | TREMCO | DYMONIC FC | ONE PART HIGH PERFORMANCE POLYURETHANE SEALANT |
| DIFFERENT MATERIALS MEET | TREMCO | DYMONIC FC | ONE PART HIGH PERFORMANCE POLYURETHANE SEALANT |
| ROOF OPENINGS | TREMCO | GUTTER SEAL | SYNTHETIC RUBBER AND RESIN SEALANT |
| THRESHOLDS TO SUBSTRATE | TREMCO | BUTYL SEALANT | MULTI-COMPONENT SEALANT |
| VENEER & CMU CONTROL JOINTS | TREMCO | DYMONIC FC | ONE PART HIGH PERFORMANCE POLYURETHANE SEALANT |
| INSULATED METAL PANEL BASE CHANNEL TO FOUNDATION | TREMCO | BUTYL SEALANT | MULTI-COMPONENT SEALANT |
| | TREMCO | 440 TAPE | BUTYL SEALANT TAPE |
| INSULATED METAL PANEL TO BASE CHANNELS | SIKA | SIKALASTOMER - 511 | NON-SKINNING BUTYL SEALANT |
| INSULATED METAL PANEL TO PANEL JOINTS | SIKA | SIKALASTOMER - 511 | NON-SKINNING BUTYL SEALANT |
| TRAFFIC SURFACE JOINTS (I.E. CONCRETE PAVEMENT, SIDEWALKS & PADS) | TREMCO | VULKEM 45 SSL | ONE PART POURABLE SELF-LEVELING POLYURETHANE SEALANT |
| JOINTS IN TRAFFIC SURFACES SLOPING IN EXCESS OF 1/2" PER FOOT | TREMCO | DYMONIC FC | ONE PART HIGH PERFORMANCE POLYURETHANE SEALANT |
| **INTERIOR** | | | |
| INTERIOR DOOR AND WINDOW FRAMES | DAP | ALEX PLUS | PAINTABLE ACRYLIC LATEX - SILICONIZED SEALANT |
| WALL ANGLE AT SUSPENDED CEILINGS | DAP | ALEX PLUS | PAINTABLE ACRYLIC LATEX - SILICONIZED SEALANT |
| EXPOSED CONCRETE SAWCUT JOINTS | PPG | SL/85 | TWO PART SELF-LEVELING POLYUREA SEALANT |
| CONCRETE CONSTRUCTION AND POUR JOINTS | PPG | SL/60 | TWO PART SELF-LEVELING POLYUREA SEALANT |
| INSULATED METAL PANEL AND TOP OF CONCRETE CURB JOINT | TREMCO | DYMERIC 240FC | MULTI-COMPONENT CHEMICALLY CURING POLYURETHANE SEALANT |
| INSULATED METAL PANEL AND TRIM ELEMENTS JOINT | TREMCO | SPECTREM 2 | ONE PART SILICONE SEALANT |
| INSULATED METAL PANEL FACE JOINTS WHERE INDICATED | TREMCO | SPECTREM 2 | ONE PART SILICONE SEALANT |



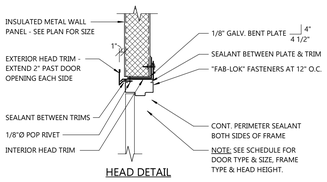

NOTE:
ALL STAINLESS STEEL PLATES TO BE 304 STAINLESS STEEL - BUFF WITH 120 GRIT TO UNIFORM FINISH.

HEAD DETAIL

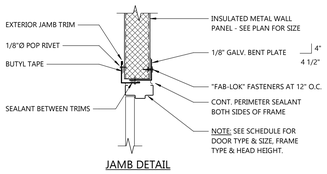



JAMB DETAIL

# RAPID ROLL - IMP WALL




HEAD DETAIL



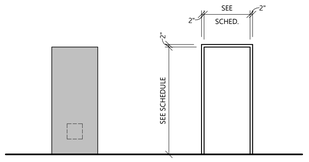

JAMB DETAIL

# METAL DOOR - IN EXT. IMP WALL

# HOLLOW METAL DOOR & FRAME SPECIFICATIONS:

**MANUFACTURER:**
- CURRIES (APPROVED EQUIVALENT: STEELCRAFT)

**CONSTRUCTION:**
- DOORS
  - INTERIOR: 707 SERIES, MIN. 18 GA. w/ POLYSTYRENE CORE.
  - EXTERIOR: 707 SERIES, MIN. 16 GA. w/ POLYSTYRENE CORE & FLUSH TOP CAP, ASTM C1363 OPERABLE R-VALUE = 2.1.
  - EXTERIOR (WHERE INDICATED BY AN "E" SUFFIX ON DOOR TAG; I.E., "MD1E"): 747 SERIES, MIN. 16 GA. w/ 22 GA. STIFFENERS @ 6" CENTERS w/ FIBERGLASS INSULATION AND FLUSH TOP CAP, ASTM C1363 OPERABLE R-VALUE = 1.8
- FRAMES
  - 'M' PROFILE w/ CONT. WELD FACE SEAMS AT FULL WIDTH OF JAMB
  - MIN. 16 ga. @ INTERIOR FRAMES
  - MIN. 14 ga. @ EXTERIOR FRAMES w/ URETHANE FOAM INSUL.
- GENERAL REQUIREMENTS
  - ALL EXTERIOR DOORS AND FRAMES TO BE GALVANIZED
  - ALL DOORS & FRAMES TO HAVE BAKED ON PRIMER FINISH
  - ALL DOORS & FRAMES TO BE REINFORCED AND PREPARED FOR HARDWARE
  - ALL REINFORCEMENT TO BE MIN. 12 ga.
  - PROVIDE WELDED-IN BASE ANCHORS
  - PROVIDE (3) SILENCERS PER JAMB @ ALL METAL DOOR FRAMES
  - PROVIDE BITUMINOUS COATING ON INT. FACE OF FRAMES IN MASONRY WALLS
  - PROVIDE METAL FRAME FOR LITES & GRILLES
  - PAINT LITE FRAMES TO MATCH DOOR FRAMES

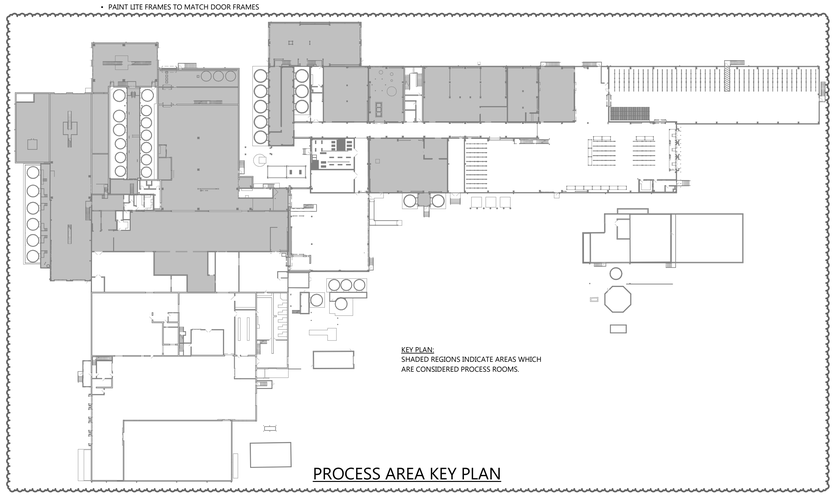



MD1E
EXTERIOR HOLLOW METAL DOOR

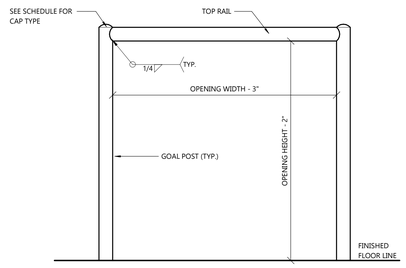
HM1
HOLLOW METAL DOOR FRAME

# METAL DOOR & FRAME ELEVATIONS

SCALE: 1/4" = 1'-0"




# PROCESS AREA KEY PLAN




GP ELEVATION D

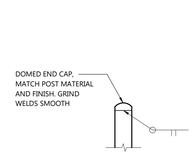
**GUARD POST/GOAL POST SCHEDULE**

| MARK | ELEVATION | CAP STYLE | BASE CONN. TYPE | PIPE MATL. | PIPE DIA. | FINISH | REMARKS |
|---|---|---|---|---|---|---|---|
| GP-DS | D | STYLE B | TYPE A | 304 SS | 6" | 1 | |
| GP-DS.1 | D | STYLE B | TYPE F | 304 SS | 6" | 1 | |

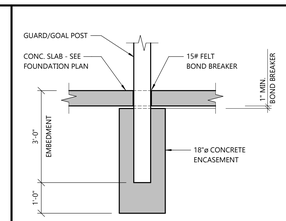
-POSTS SHALL BE SCHEDULE 10 PIPE.
-TOP RAILS SHALL BE SCHEDULE 40 PIPE.
FINISH:
(1) STAINLESS STEEL - #3 MILL FINISH. FIELD BUFF w/ 120 GRIT ABRASIVE TO UNIFORM FINISH.

## GUARD POST AND GOAL POST NOTES:

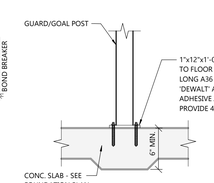
- SEE FLOOR PLAN FOR DOOR AND OPENING DIMENSIONS.
- ALL PENETRATION WELDS USED IN THE FABRICATION OF GUARD AND GOAL POSTS SHALL BE GROUND SMOOTH. STAINLESS WELDS SHALL BE POLISHED TO MATCH FINISH OF PIPE OR BETTER.
- FILLET WELDS SHALL BE UNIFORM IN SHAPE AND APPEARANCE. REMOVE ALL SLAG, SPATTER, RUST, LOOSE SCALE, OIL AND DIRT BEFORE PAINTING.



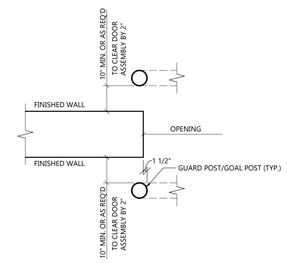

GP CAP STYLE B




GP BASE CONNECTION TYPE A




GP BASE CONNECTION TYPE F




GP PLACEMENT LOCATION PLAN DETAIL

3 / A6.0 GUARD POST/GOAL POST DETAIL TYPES

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

EXCEL

**Always a Better Plan**

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

**PROJECT INFORMATION**

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

**PROFESSIONAL SEAL**

*NOT FOR CONSTRUCTION*

**SHEET DATES**

**ISSUED FOR BID**

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

**JOB NUMBER**
250429500

**SHEET NUMBER**
**A6.0**

ARCHITECTURAL SCHEDULES

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# STRUCTURAL SPECIFICATIONS

### BASIC STRUCTURAL REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. SUBSTITUTIONS
1. SEE DIVISION 01 25 13 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
C. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS, PROJECT CLOSEOUT DOCUMENTS:
1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES ON ARCHITECTURAL PLANS FOR ADDITIONAL REQUIREMENTS.
2. DESIGN DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS.
3. THE CONTRACTOR SHALL PREPARE A SCHEDULE OF ALL ITEMS TO BE SUBMITTED FOR A/E REVIEW. SCHEDULE SHALL SHOW ITEMS TO BE SUBMITTED AND ANTICIPATED DATE OF SUBMISSION. THIS SUBMITTAL SCHEDULE SHALL BE GIVEN TO THE A/E WITHIN 20 DAYS OF AWARD OF CONTRACT.
4. IF SHOP DRAWINGS REQUIRE AN EXPEDITED REVIEW PROCESS, CONTACT A/E PRIOR TO SUBMITTING THE SHOP DRAWINGS TO MAKE THE APPROPRIATE ARRANGEMENT.
5. STRUCTURAL AND ARCHITECTURAL PLANS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS. SHOP DRAWING DETAILERS AND SUPPLIERS ARE RESPONSIBLE FOR THE DETERMINATION OF ALL DIMENSIONS, PITCHES, ELEVATIONS, ETC., BEYOND THOSE NOTED ABOVE AS NECESSARY TO THOROUGHLY DETAIL/FABRICATE THEIR WORK. CONTACT A/E WITH ANY DISCREPANCIES FOUND.
6. IN NO CASE SHALL CHANGES BE MADE TO WORK SHOWN OR PROCEDURE SPECIFIED ON STRUCTURAL PLANS UNLESS FIRST APPROVED IN WRITING BY A/E. REVIEW OF SHOP DRAWINGS BY A/E DOES NOT CONSTITUTE ACCEPTANCE OF A DESIGN CHANGE. PROPOSED CHANGES BY CONTRACTOR MUST BE SUBMITTED IN RFI FORMAT AND MUST BE APPROVED IN THE SAME MANNER. CONTRACTOR REQUESTING CHANGE MAY BE BILLED ON A TIME AND EXPENSE BASIS BY A/E FOR ALL REDESIGN WORK, FOR ALL NEW SKETCHES PREPARED, AND FOR ALL ADDITIONAL REVIEW TIME RELATED TO THE CHANGES.
7. CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
a. SOILS AND SUBGRADE:
i. GEOTECHNICAL REPORT
ii. COMPACTION TEST REPORTS
**b.** SOIL IMPROVEMENT:
i. RAMMED AGGREGATE PIERS
c. CONCRETE:
i. MIX DESIGNS
ii. TEST REPORTS FOR SLUMP, AIR ENTRAINMENT AND COMPRESSIVE STRENGTH
iii. FOUNDATION POUR SCHEDULE, INCLUDING YARDS TO BE PLACED
iv. SLAB ON GRADE POUR SCHEDULE, INCLUDING YARDS TO BE PLACED AND JOINT LAYOUT PLAN,
v. REINFORCING FOR FOUNDATIONS
vi. REINFORCING FOR SLAB ON GRADE, INCLUDING SUPPLEMENTAL REINFORCING AT REENTRANT CORNERS, OBSTRUCTIONS, AND DOORS/OPENINGS
vii. FLOOR FLATNESS / LEVELNESS REPORTS
d. COLUMN ANCHOR BOLTS
e. POST INSTALLED ANCHORS
f. STEEL:
i. STRUCTURAL STEEL
ii. MISCELLANEOUS STEEL AT CURB MOUNTED ROOF TOP UNITS, AND H-FRAMED PENETRATIONS (SUBMIT ONLY AFTER QUANTITIES, LOCATIONS, AND DIMENSIONS HAVE BEEN COORDINATED AND VERIFIED WITH CONTRACTOR REQUIRING PENETRATIONS)
iii. MISCELLANEOUS STEEL FABRICATIONS
g. STEEL STAIRS, HANDRAILS, AND GUARDRAILS AND CONNECTIONS TO STRUCTURE
h. OPEN-WEB STEEL BAR JOISTS AND GIRDERS
i. STEEL DECK
j. INSULATED METAL PANEL AND CONNECTIONS
k. PRE-ENGINEERED METAL BUILDING:
i. PRELIMINARY REACTIONS AND BASE CONDITIONS
ii. FINAL BUILDING REACTIONS AND DRAWINGS
D. DELEGATED DESIGN SUBMITTALS:
1. CONTRACTOR SHALL FURNISH COMPLETE AND DETAILED SHOP DRAWINGS AND SUBMITTALS FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD.
2. COMPONENTS AND SYSTEMS DESIGNED AS A DELEGATED DESIGN SUBMITTAL MUST INCLUDE A CALCULATION PACKAGE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE THE PROJECT WILL BE CONSTRUCTED PRIOR TO SUBMITTAL FOR APPROVAL TO THE ENGINEER OF RECORD.
3. THE FOLLOWING ITEMS ARE DESIGNATED AS DELEGATED DESIGN SUBMITTALS. DELEGATED DESIGN SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE A/E FOR REVIEW. IN NO CASE SHALL ANY OF THE DELEGATED DESIGN SUBMITTAL ITEMS BE INSTALLED PRIOR TO REVIEW BY A/E AND APPLICABLE BUILDING OFFICIALS.
a. SOIL IMPROVEMENT:
ii. RAMMED AGGREGATE PIERS
b. PRE-ENGINEERED METAL BUILDING:
i. PRELIMINARY REACTIONS AND BASE CONDITIONS
ii. FINAL BUILDING REACTIONS AND DRAWINGS
E. FINISHING AND PAINTING
1. SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
F. GENERAL STRUCTURAL NOTES:
1. IN THE FOLLOWING NOTES, THE TERM "CONTRACTOR" REFERS TO ALL CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS ENGAGED IN THE EXECUTION OF WORK SHOWN ON THESE PLANS. THE TERM "A/E" REFERS TO EXCEL ENGINEERING, INC.
2. CONTRACTOR SHALL CROSS CHECK WITH ARCHITECTURAL, HVAC AND PLUMBING PLANS FOR ADDITIONAL DETAILS, DIMENSIONS, ELEVATIONS, OPENINGS, INSERTS, BRICK LEDGES, ETC. NOTIFY A/E OF ANY CONFLICTS BEFORE BEGINNING WORK.
3. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE IN ORDER TO ENSURE THE SAFETY OF THE BUILDING, WORKMEN, AND OCCUPANTS DURING CONSTRUCTION (MEANS & METHODS OF CONSTRUCTION). THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF SHORING, UNDERPINNING, AND TEMPORARY BRACING, AS NECESSARY. A/E MAY BILL CONTRACTOR ON A TIME AND EXPENSE BASIS FOR ADDITIONAL WORK, FOR ALL NEW SKETCHES, AND FOR ALL ADDITIONAL REVIEW TIME RELATED TO MEANS & METHODS.
4. WHERE DETAILS ARE CALLED FOR IN ONE AREA OF THE BUILDING THEY SHALL BE DUPLICATED AT SIMILAR CONDITIONS, UNLESS SHOWN OTHERWISE.
5. IN THE EVENT OF ANY CONFLICT BETWEEN PLANS, DETAILS, STRUCTURAL NOTES, STRUCTURAL AND ARCHITECTURAL DRAWINGS, AND SPECIFICATIONS, CONTRACTOR SHALL BRING THE CONFLICT TO THE A/E'S ATTENTION. CONTRACTOR SHALL BID THE MOST EXPENSIVE INSTALLATION CALLED OUT.
6. CONTRACTOR SHALL SURVEY THE EXISTING BUILDING FOR ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS NEEDED TO PERFORM THE WORK SHOWN ON THESE PLANS. THIS INCLUDES VERIFYING DIMENSIONS, ELEVATIONS, & CONDITIONS SHOWN ON THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL REPORT ANY NON-CONFORMANCE WITH DESIGN DRAWINGS TO THE A/E IMMEDIATELY.
7. ALL MEMBERS/WORK SHOWN ARE NEW UNLESS SPECIFICALLY NOTED "EXISTING".
8. REMOVE AND REPLACE AND/OR MODIFY ALL EXISTING CONSTRUCTION (ELECTRICAL, MECHANICAL, HVAC, STRUCTURAL, ARCHITECTURAL) AS REQUIRED IN ORDER TO PLACE NEW STRUCTURAL WORK SHOWN ON THESE DRAWINGS.
9. THESE STRUCTURAL PLANS DEPICT A STRUCTURAL FRAMING SYSTEM AND THE MAJOR COMPONENTS OF THAT SYSTEM. MINOR ITEMS SUCH AS POURSTOPS, DECK SUPPORT ANGLES AT COLUMNS, FRAMES AT FLOOR AND ROOF DECK OPENINGS, ETC, SHALL BE SUPPLIED BY THE CONTRACTOR AS NEEDED TO PROVIDE A COMPLETE SYSTEM.
10. BOTTOM OF FOOTING ELEVATION SHALL BE A MINIMUM OF 3'-0" BELOW ADJACENT EXTERIOR GRADE. NOTIFY A/E OF ANY FOOTING ELEVATION CHANGE REQUIRED IN ORDER TO PROVIDE 3'-0" FROST PROTECTION BEFORE PLACING FOOTINGS.
11. FOUNDATION SHORING AND/OR UNDERPINNING SHALL BE DESIGNED BY THE CONTRACTOR TO LIMIT HORIZONTAL AND VERTICAL MOVEMENT OF EXISTING CONSTRUCTION TO 3/16".
G. POST-INSTALLED ANCHORS:
1. CONTRACTOR SHALL PROVIDE EXCEL ENGINEERING WITH SPECIFICATIONS AND DESIGN INFORMATION FOR ALL ALTERNATE ANCHORS. CONTRACTOR SHALL MAKE ARRANGEMENTS TO COMPENSATE EXCEL ENGINEERING FOR THE EXTRA WORK INVOLVED.
2. CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION. PREPARE SURFACES USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULTS FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS.
3. DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED. IF SUBSTRATE PREPARATION IS THE RESPONSIBILITY OF ANOTHER INSTALLER, NOTIFY CONTRACTOR OF UNSATISFACTORY PREPARATION BEFORE PROCEEDING.
4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS AND AS REQUIRED BY APPLICABLE CODE.
5. APPLY ANCHOR ITEMS NEATLY, WITH ANCHORS MOUNTED PLUMB AND LEVEL UNLESS OTHERWISE INDICATED.
6. EXCEL ENGINEERING RESERVES THE RIGHT TO REQUIRE THE ANCHOR MANUFACTURER'S REPRESENTATIVE TO DEMONSTRATE PROPER INSTALLATION PROCEDURES FOR POST-INSTALLED ANCHORS AND TO OBSERVE CONTRACTOR'S INSTALLATION PROCEDURES, AT NO EXTRA COST TO OWNER.
7. EXCEL ENGINEERING RESERVES THE RIGHT TO REQUIRE PULLOUT OR SHEAR TESTS TO DETERMINE ADEQUACY OF ANCHORS, AT NO EXTRA COST TO OWNER.

## DIVISION 03 CONCRETE

### 03 30 00 CAST-IN-PLACE CONCRETE

A. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE AND CRSI MANUAL OF STANDARD PRACTICE.
B. PREPARATION OF THE SUBGRADE AND BASE COURSE/DRAINAGE LAYER FOR CONCRETE SLAB ON GRADE CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.
C. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94.
1. SEE CONCRETE MIX DESIGN SCHEDULE ON PLANS.
2. SEE SPECIFICATIONS ON CIVIL PLANS FOR DESIGN MIXES ASSOCIATED WITH EXTERIOR CONCRETE FLATWORK SHOWN ON THE CIVIL PLANS.
D. PLACE SLABS ON GRADE WITH POUR JOINT, CONSTRUCTION JOINT, OR SAW JOINT AS INDICATED ON THE PLANS. SAW CUT TO BE DONE WITH EARLY ENTRY SAW AND WITHIN 1 TO 4 HOURS AFTER CONCRETE IS PLACED.
E. EXTERIOR SLABS ON GRADE SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 1/2" FIBER EXPANSION JOINT AND/OR 1/4" FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS. INTERIOR SLABS SHALL BE SEPARATED FROM FOUNDATION WALLS AND PIERS WITH FORM RELEASE AGENT, 15 LB. FELT OR AS DETAILED ON PLANS.
F. MAINTAIN FLOOR LEVEL AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS UNLESS INDICATED OTHERWISE ON PLANS.
G. THE SLAB-ON-GRADE FLOOR FLATNESS/LEVELNESS SHALL MEET TO THE FOLLOWING CRITERIA:
1. TOP OF FLOOR ELEVATION SHALL BE WITHIN 3/4" OF DESIGN ELEVATION IN ACCORDANCE TO ACI
H. CONCRETE CURING.
1. ALL CONCRETE IS TO BE CURED A MINIMUM OF 7 DAYS BY ONE OF THE FOLLOWING METHODS:
a. CURE AND SEAL— SEE ARCHITECTURAL ROOM FINISH SCHEDULE FOR LOCATIONS
i. SOLVENT BASED — PROVIDE EUCLID CHEMICAL SOLVENT BASED CURE AND & SEAL, DIAMOND CLEAR.
ii. WATER BASED (VERY LOW ODOR, VOC CONTENT OF 88 g/l OR LESS) — PROVIDE EUCLID CHEMICAL WATER BASED CURE AND & SEAL, SUPER DIAMOND CLEAR VOX.
I. CONCRETE FLOOR FINISHING: DO NOT PLACE ANY MATERIALS ON THE CONCRETE SURFACE THAT MAY CAUSE STAINING, ETCHING OR
1. TROWEL FINISH: APPLY TO ALL INTERIOR MONOLITHIC SLAB SURFACES THAT ARE EXPOSED TO VIEW AND SLAB SURFACES TO BE COVERED WITH RESILIENT FLOORING, CARPET, PAINT, OR OTHER THIN FILM-FINISH COATING SYSTEM.
2. BROOM FINISH: APPLY TO ALL EXTERIOR STOOPS, LANDINGS, STEPS, AND RAMPS.
J. CONCRETE WALLS SHALL HAVE JOINTS AS DETAILED ON PLANS.
K. CONCRETE WALL FINISHING.
1. ALL EXPOSED FOUNDATION WALLS TO HAVE TIES AND FINS REMOVED AND RECEIVE THE FOLLOWING FINISHES PER ACI 301-20, 5.3.3.3 AND 5.3.3.4.
**a.** AS-CAST FINISHES - USE FORM-FACING MATERIALS MEETING THE REQUIREMENTS OF 4.2.1.1. UNLESS OTHERWISE SPECIFIED, PRODUCE AS-CAST FORMED FINISHES TO COMPLY WITH THE FOLLOWING:
i. SURFACE FINISH- 3.0 (SF- 3.0):
(A). PATCH VOIDS LARGER THAN 3/4 IN. WIDE OR 1/2 IN. DEEP
(B). REMOVE PROJECTIONS LARGER THAN 1/8 IN.
(C). PATCH TIE HOLES
(D). SURFACE TOLERANCE CLASS A AS SPECIFIED IN ACI 117
L. BACKFILLING OF FOUNDATIONS:
1. BACKFILLING OF OPPOSITE SIDES OF UNBRACED FOUNDATION WALLS SHALL MAINTAIN A MAXIMUM 2 FOOT DIFFERENTIAL IN ELEVATION PRIOR TO ACHIEVING FINAL SPECIFIED GRADE.
2. TEMPORARY CONSTRUCTION BRACING DURING BACKFILLING.
a. FOUNDATION WALLS WITH PERMANENT TOP LATERAL SUPPORTS SHALL BE TEMPORARILY BRACED UNTIL TOP SUPPORT SYSTEMS ARE INSTALLED. TEMPORARY CONSTRUCTION BRACING SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
b. THE BOTTOM OF THE BASEMENT WALLS SHALL BE TEMPORARILY BRACED UNTIL THE BASEMENT FLOOR SLAB IS IN PLACE. TEMPORARY CONSTRUCTION BRACING SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
M. ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3" WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND WITHOUT THE USE OF FORMS AND NOT LESS THAN 1 1/2" FOR UP TO #5, 2" FOR #6 TO #10 IN ALL OTHER LOCATIONS. ALL REINFORCING SHALL BE LAPPED 48 DIAMETERS FOR UP TO #6 BARS, 62 DIAMETERS FOR #7 TO #9 BARS, 68 DIAMETERS FOR #10 BARS OR AS NOTED ON THE DRAWINGS AND EXTENDED AROUND CORNERS WITH CORNER BARS. PLACING AND DETAILING OF STEEL REINFORCING REQUIRE AN EXPEDITED REVIEW PROCESS, CONTACT A/E PRIOR TO SUBMITTING THE SHOP DRAWINGS TO MAKE THE APPROPRIATE ARRANGEMENT.
THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED IN THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A1064. WELDED WIRE FABRIC SHALL BE PLACED 2" FROM TOP OF SLAB, UNLESS INDICATED OTHERWISE.
**N.** COORDINATE INTERIOR CONCRETE HOUSEKEEPING PAD SIZES WITH RESPECTIVE CONTRACTORS. THE TOP OF PAD SHALL BE LEVEL UNLESS SPECIFIED OTHERWISE ON PLANS. THE THICKNESS INDICATED ON PLANS SHALL BE AT HIGHEST FLOOR ELEVATION FOR PADS ON TOP OF SLOPED FLOORS. PADS INSTALLED ON PRECAST DECK WITH TOPPING, TO BE PLACED AFTER PRECAST TOPPING HAS BEEN POURED.
O. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION-CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS AFTER SCREEDING AND BULL FLOATING, BUT BEFORE POWER FLOATING AND TROWELING.
P. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ACI 301-20. CAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX UP TO 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. PERFORM COMPRESSIVE-STRENGTH TESTS ACCORDING TO ASTM C 39. TEST TWO SPECIMENS AT 7 DAYS AND TWO SPECIMENS AT 28 DAYS. PERFORM SLUMP TESTING ACCORDING TO ASTM C 143. PROVIDE ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIX. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
Q. TEST RESULTS WILL BE REPORTED IN WRITING TO ARCHITECT, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 24 HOURS AFTER TESTS. REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.

### 03 60 00 GROUT

A. NONMETALLIC, SHRINKAGE-RESISTANT GROUT SHALL BE ASTM C1107/C1107M, FACTORY-PACKAGED, NONMETALLIC AGGREGATE GROUT, NONCORROSIVE AND NONSTAINING, MIXED WITH WATER TO A CONSISTENCY SUITABLE FOR APPLICATION.
B. GROUT TO BE USED UNDER BEARING PLATES AND COLUMN BASE PLATES. PACK GROUT SOLIDLY BETWEEN BEARING SURFACES AND PLATES SO NO VOIDS REMAIN. NEATLY FINISH EXPOSED SURFACES, PROTECT GROUT AND ALLOW TO CURE. COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR GROUTING.
C. MINIMUM COMPRESSIVE STRENGTH: 8000 PSI AT 28 DAYS.
D. FOR GROUT USED TO FILL MASONRY CORES SEE DIVISION 04 MASONRY.

## DIVISION 05 METALS

### 05 12 00 STRUCTURAL STEEL FRAMING

A. SCOPE — THIS SECTION IS APPLICABLE TO ALL STRUCTURAL STEEL UNLESS SPECIFICALLY DEFINED ELSEWHERE IN DIVISION 05 METALS.
B. STRUCTURAL STEEL FRAMING SHALL BE OF MATERIAL AS LISTED BELOW AND SHALL BE DETAILED, FABRICATED AND ERECTED TO COMPLY WITH AISC MANUAL, CURRENT EDITION. WELDERS SHOULD HAVE ALL LOCAL AND STATE CERTIFICATIONS WHERE APPLICABLE. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6/D1.6M BY AN AWS CERTIFIED WELDER USING E70XX ELECTRODE. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO REQUIREMENTS OF ASTM F3125 GRADE A325-N, INSTALLED IN SNUG-TIGHT CONDITION, U.N.O. ALL WORK PER THE AISC CODE OF STANDARD PRACTICE IN ACCORDANCE WITH LOCAL AND STATE CODES.
C. STEEL GRADES SHALL BE AS LISTED BELOW UNLESS INDICATED OTHERWISE:
1. STEEL W-SHAPES: ASTM A992, Fy = 50 KSI MIN.
2. STEEL C-SHAPES, MC-SHAPES, AND L-SHAPES: ASTM A36, Fy = 36 KSI MIN.
3. STEEL HSS-RECTANGULAR: ASTM A500 Gr. C, Fy = 50 KSI MIN.
4. STEEL HSS-ROUND: ASTM A500 Gr. C, Fy = 46 KSI MIN.
5. STEEL PIPE: ASTM A53 Gr. B, Fy = 35 KSI MIN.
6. STEEL PLATES AND BARS: ASTM A572 Gr. 50, Fy = 50 KSI MIN.
D. SHOP APPLIED COATINGS (SEE SHOP APPLIED COATING AND AESS REQUIREMENT SCHEDULE ON PLANS):
1. STANDARD: SHOP PREPARE STEEL TO SSPC-SP-2 OR 3 (HAND OR POWER TOOL CLEANING). ONE COAT OF ALKYD UNIVERSAL GRAY PRIMER. ALL FIELD WELDS TO BE CLEANED AND PRIMED TO MATCH.
2. GALVANIZED: MINIMUM G60 HOT-DIP GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A123 FOR SHAPES, PLATES, AND BARS; ASTM A153 FOR BOLTS, NUTS, AND WASHERS. ALL LOCATIONS WHERE THE SHOP APPLIED COATING HAS BEEN REMOVED/DAMAGED IN THE FIELD TO BE REPAIRED WITH ZRC GALVILITE GALVANIZING REPAIR COMPOUND PER THE MANUFACTURER'S APPLICATION INSTRUCTIONS. ALL FIELD WELDS TO BE GROUND TO BARE METAL PRIOR TO APPLYING REPAIR COMPOUND.
3. EPOXY: SHOP PREPARE STEEL TO SSPC-SP-10 (NEAR WHITE METAL BLAST CLEANING). SHOP APPLY ONE COAT OF SHERWIN WILLIAMS MACROPOXY 646 FAST CURE EPOXY. ALL FIELD WELDS TO BE GROUND TO BARE METAL, CLEANED, AND COATED TO MATCH.
E. STAINLESS STEEL GRADES SHALL ADHERE TO SPECIFICATIONS IN TABLE A3.1 OF AISC 370 AND BE OF S30400 ALLOY UNLESS NOTED OTHERWISE. WELDERS SHOULD HAVE ALL LOCAL AND STATE CERTIFICATIONS WHERE APPLICABLE. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6/D1.6M BY AN AWS CERTIFIED WELDER. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO REQUIREMENTS OF ASTM F593 & ASTM F594 MATCHING ALLOY LISTED ABOVE, INSTALLED IN SNUG-TIGHT CONDITION, UNLESS NOTED OTHERWISE.
F. STAINLESS STEEL SHAPES SHALL MATCH THE ASTM STANDARDS AS LISTED BELOW AND HAVE STANDARD MILL FINISH UNLESS NOTED OTHERWISE:
1. STAINLESS STEEL W-SHAPES, S-SHAPES, AND L-SHAPES: ASTM A276, Fy = 30/25 KSI MIN.
2. STAINLESS STEEL HSS-RECTANGULAR AND PIPE: ASTM A554, Fy = 30/25 KSI MIN.
3. STAINLESS STEEL PLATES: ASTM A240, Fy = 30/25 KSI MIN.
4. STAINLESS STEEL RODS: ASTM A193, Fy = 30/25 KSI MIN.

### 05 50 00 MISCELLANEOUS STEEL FABRICATIONS (INCLUDING STAIRS AND RAILINGS)

A. SCOPE — THIS SECTION IS APPLICABLE ONLY TO THE FOLLOWING:
a. STAIR STRINGERS
b. STAIR LANDINGS, TREADS, AND RISERS (PAN, PLATE AND GRATING)
c. FLOOR PLATES AND GRATINGS
d. HANDRAILS AND GUARDRAILS
e. ACCESS LADDERS
f. GUARD POSTS AND GOAL POSTS
g. DOOR WRAPS
h. NON-STRUCTURAL STEEL COMPONENTS SPECIFIED BY OTHER DISCIPLINES U.N.O.
B. MISCELLANEOUS STEEL FABRICATIONS SHALL BE OF MATERIAL AS LISTED BELOW AND SHALL BE DETAILED, FABRICATED AND ERECTED TO COMPLY WITH AISC MANUAL, CURRENT EDITION. WELDERS SHOULD HAVE ALL LOCAL AND STATE CERTIFICATIONS WHERE APPLICABLE. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6/D1.6M BY AN AWS CERTIFIED WELDER USING E70XX ELECTRODE. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO REQUIREMENTS OF ASTM F3125 GRADE A325-N, INSTALLED IN SNUG-TIGHT CONDITION, U.N.O. ALL WORK PER THE AISC CODE OF STANDARD PRACTICE IN ACCORDANCE WITH LOCAL AND STATE CODES.
C. MISCELLANEOUS STEEL
1. STEEL GRADES SHALL BE AS LISTED BELOW UNLESS INDICATED OTHERWISE:
a. STEEL W-SHAPES: ASTM A992, Fy = 50 KSI MIN.
b. STEEL M-SHAPES, S-SHAPES, C-SHAPES, MC-SHAPES, AND L-SHAPES: ASTM A36, Fy = 36 KSI MIN.
c. STEEL HSS-RECTANGULAR: ASTM A500 Gr. C, Fy = 50 KSI MIN.
**d.** STEEL PLATES AND BARS: ASTM A572 Gr. 50, Fy = 50 KSI MIN.
2. SHOP APPLIED COATINGS (SEE SHOP APPLIED COATING AND AESS REQUIREMENT SCHEDULE ON PLANS):
a. STANDARD: ONE COAT OF MANUFACTURE'S STANDARD GRAY PRIMER. ALL FIELD WELDS TO BE CLEANED AND PRIMED TO MATCH.
b. GALVANIZED: MINIMUM G60 HOT-DIP GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A123 FOR SHAPES, PLATES, AND BARS; ASTM A153 FOR BOLTS, NUTS, AND WASHERS. ALL LOCATIONS WHERE THE SHOP APPLIED COATING HAS BEEN REMOVED/DAMAGED IN THE FIELD TO BE REPAIRED WITH ZRC GALVILITE GALVANIZING REPAIR COMPOUND PER THE MANUFACTURER'S APPLICATION INSTRUCTIONS. ALL FIELD WELDS TO BE GROUND TO BARE METAL PRIOR TO APPLYING REPAIR COMPOUND.
3. STAINLESS STEEL GRADES SHALL ADHERE TO SPECIFICATIONS IN TABLE A3.1 OF AISC 370 AND BE OF S30400 ALLOY UNLESS NOTED OTHERWISE. WELDERS SHOULD HAVE ALL LOCAL AND STATE CERTIFICATIONS WHERE APPLICABLE. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6/D1.6M BY AN AWS CERTIFIED WELDER. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO REQUIREMENTS OF ASTM F593 & ASTM F594 MATCHING ALLOY LISTED ABOVE, INSTALLED IN SNUG-TIGHT CONDITION, UNLESS NOTED OTHERWISE.
4. STAINLESS STEEL SHAPES SHALL MATCH THE ASTM STANDARDS AS LISTED BELOW AND HAVE STANDARD MILL FINISH UNLESS NOTED OTHERWISE:
a. STAINLESS STEEL HSS-RECTANGULAR AND PIPE: ASTM A554, Fy = 30 KSI MIN.
b. STAINLESS STEEL PLATES: ASTM A240, Fy = 30 KSI MIN.
c. STAINLESS STEEL RODS: ASTM A193, Fy = 30 KSI MIN.
D. STEEL BAR GRATING AND STAIR TREADS
1. STEEL BAR GRATING AND STAIR TREADS TO BE McNICHOLS WELDED RECTANGULAR BAR GRATING WITH SMOOTH SURFACE. SEE PLANS FOR BAR DEPTH AND THICKNESS.
a. TYPICAL, UNLESS NOTED OTHERWISE: CARBON STEEL GW SERIES 19-W-4 SPACING.
b. ADA ACCESSIBLE ROUTES AS SHOWN ON ARCHITECTURAL PLANS: CARBON STEEL CMW-4 SERIES 11-W-4 SPACING.
2. ALL GRATING ENDS TO BE BANDED.
3. GRATING TO BE FASTENED TO EACH SUPPORTING ELEMENT BY McNICHOLS CB SADDLE TYPE CLIPS PER MANUFACTURER RECOMMENDATIONS.
4. STAIR TREADS TO BE PREFABRICATED COMPLETE WITH END CARRIER PLATES AND CHECKER PLATE NOSING. FASTEN TO STRINGERS PER MANUFACTURER RECOMMENDATIONS.
5. SHOP APPLIED COATINGS (SEE SHOP APPLIED COATING AND AESS REQUIREMENT SCHEDULE ON PLANS):
a. GALVANIZED: MINIMUM G60 HOT-DIP GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A653. ALL LOCATIONS WHERE THE SHOP APPLIED COATING HAS BEEN REMOVED/DAMAGED IN THE FIELD TO BE REPAIRED WITH ZRC GALVILITE GALVANIZING REPAIR COMPOUND PER THE MANUFACTURER'S APPLICATION INSTRUCTIONS. All FIELD WELDS TO BE GROUND TO BARE METAL PRIOR TO APPLYING REPAIR COMPOUND.

## DIVISION 07 THERMAL AND MOISTURE PROTECTION

### 07 41 13 INSULATED METAL PANELS:

A. SEE ARCHITECTURAL SPECIFICATIONS.

## DIVISION 13 SPECIAL CONSTRUCTION

### 13 34 19 PRE-ENGINEERED METAL BUILDING (DESIGN BUILD)

B. SEE ARCHITECTURAL SPECIFICATIONS.

### 13 34 19 PRE-ENGINEERED METAL BUILDING (BID SPEC)

A. SEE ARCHITECTURAL SPECIFICATIONS.

### DIVISION 05 - SHOP APPLIED COATING AND AESS REQUIREMENT SCHEDULE

**05 12 00 STRUCTURAL STEEL FRAMING**

| ITEM | SHOP APPLIED COATING: PRIME TO MATCH EXISTING | GALVANIZED | EPOXY | SEE SHOP APPLIED COATING PLANS |
|---|---|---|---|---|
| **INTERIOR** | | | | |
| COLUMNS | X | | | |
| BEAMS/GIRDERS | X | | | |
| BRACES/STRUTS | X | | | |
| GIRTS/PURLINS | X | | | |
| EDGE ANGLES | X | | | |
| WALL LINTELS | X | | | |

**05 21 00 STEEL JOIST FRAMING**

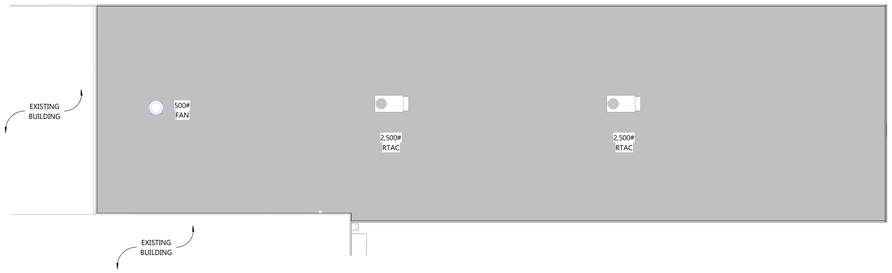
| ITEM | SHOP APPLIED COATING: PRIME TO MATCH EXISTING | GALVANIZED | EPOXY | SEE SHOP APPLIED COATING PLANS |
|---|---|---|---|---|
| **INTERIOR** | | | | |
| JOISTS/GIRDERS/BRIDGING | X | | | |

**05 31 00 STEEL DECKING**

| ITEM | SHOP APPLIED COATING: PRIME TO MATCH EXISTING | GALVANIZED | EPOXY | SEE SHOP APPLIED COATING PLANS |
|---|---|---|---|---|
| **INTERIOR ROOF DECKING** | | | | |
| TOP SURFACE | X | | | |
| BOTTOM SURFACE | X | | | |

**05 50 00 MISCELLANEOUS METAL FABRICATIONS**

| ITEM | SHOP APPLIED COATING: PRIME TO MATCH EXISTING | GALVANIZED | EPOXY | SEE SHOP APPLIED COATING PLANS |
|---|---|---|---|---|
| **INTERIOR MISCELLANEOUS METALS** | | | | |
| GUARD POST/GOAL POST | SEE GUARD POST/ GOAL POST SCHEDULE | | | |
| DOOR WRAPS | SEE DOOR SCHEDULE | | | |
| **EXPOSED EXTERIOR MISCELLANEOUS METALS** | | | | |
| ALL EXTERIOR MISCELLANEOUS... | | X | | |

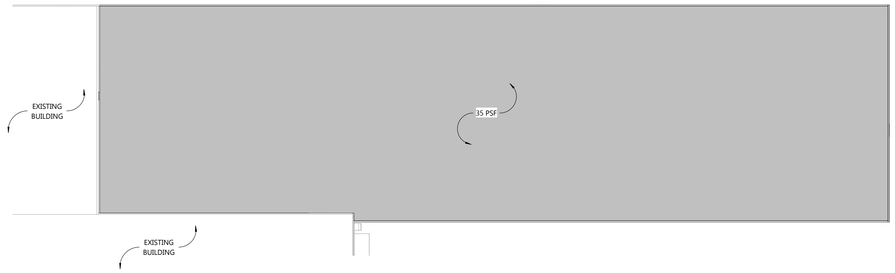



NORTH

## ROOF RTU LOAD PLAN - AREA 'A'

SCALE: 1/16" = 1'-0"

0' 16' 32'

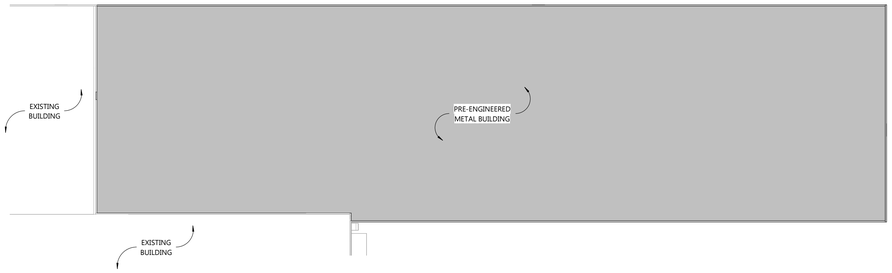



NORTH

## SNOW DRIFT LOAD PLAN - AREA 'A'

SCALE: 1/16" = 1'-0"

0' 16' 32'

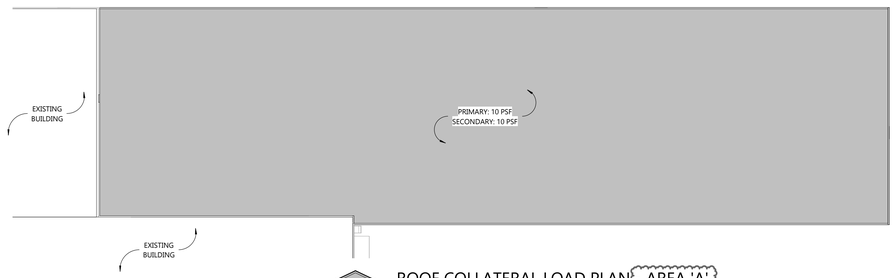



NORTH

## ROOF DEAD LOAD PLAN - AREA 'A'

SCALE: 1/16" = 1'-0"

0' 16' 32'




NORTH

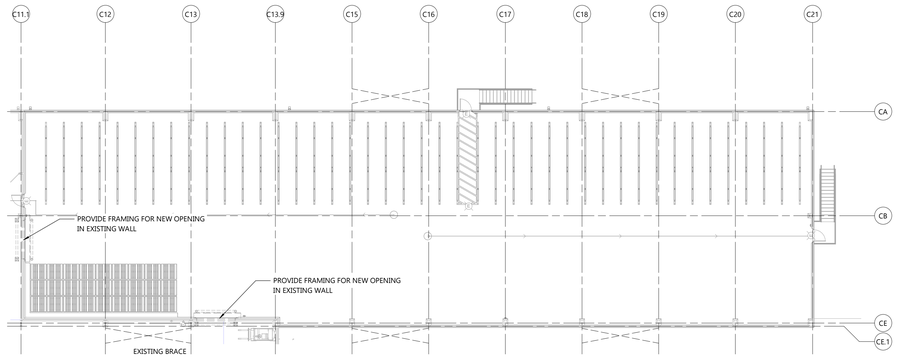
## ROOF COLLATERAL LOAD PLAN - AREA 'A'

SCALE: 1/16" = 1'-0"

0' 16' 32'

## PEMB BUILDING NOTES

- ALL BRACING SHOWN REPRESENTS ACCEPTABLE LOCATIONS FOR BRACING PLACEMENT. ACTUAL QUANTITY OF BRACING REQUIRED NEED NOT INCLUDE BRACING AT EACH LOCATION SHOWN ON THIS PLAN.
- FOR REQUIRED GIRT ELEVATIONS AND FRAMING AROUND OPENINGS, SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR ALL MAN DOORS, OVERHEAD DOORS, AND KNOCK OUT PANELS.
- ALL GIRTS TO BE INBOARD OF COLUMNS AT SIDEWALLS (PERPENDICULAR TO MF) AND OUTBOARD AT ENDWALLS (PARALLEL TO MF).
- T/PIER = 99'-4"
- FOR MECHANICAL UNITS SUSPENDED FROM ROOF, SEE ARCHITECTURAL REFLECTED CEILING PLANS.




NORTH

## PRE-ENGINEERED METAL BUILDING ALLOWABLE BRACE LOCATIONS AND DESIGN INFORMATION

SCALE: 1/16" = 1'-0"

0' 16' 32'

# STRUCTURAL DESIGN CRITERIA

| GOVERNING CODES: |
|---|
| 2021 INTERNATIONAL BUILDING CODE (IBC) |
| ALL LOADS SHOWN ON PLANS ARE UNFACTORED |
| LOAD COMBINATION UTILIZED IN DESIGN ARE FROM ASCE 7-16 |

| ROOF SNOW LOAD (PER SECTION 1608 AND ASCE 7-16 SECTION 7) | |
|---|---|
| GROUND SNOW LOAD (Pg) (PER FIGURE 1608.2) | 50 PSF |
| FLAT ROOF SNOW LOAD (Pf) | 35 PSF |
| MINIMUM SNOW LOAD (Pm) | 20 PSF |
| SLOPED ROOF SNOW LOAD (Ps) | 35 PSF |
| SNOW EXPOSURE FACTOR (Ce) | 1.0 |
| SNOW IMPORTANCE FACTOR (Is) | 1.0 (RISK CATEGORY II) |
| THERMAL FACTOR (Ct) | 1.0 |
| UNBALANCED ROOF SNOW LOADS PER ASCE 7-16 (SECTION 7.6) | |
| SNOW DRIFT PER ASCE 7-16, (SECTIONS 7.7 AND 7.8) | |
| SLIDING SNOW PER ASCE 7-16, (SECTION 7.9) | |
| RAIN-ON-SNOW SURCHARGE LOAD PER ASCE 7-16, (SECTION 7.10) | |

| ROOF RAIN LOAD (PER SECTION 1611 AND ASCE 7-16 SECTION 8) | |
|---|---|
| DESIGN RAINFALL INTENSITY FOR 100YR - 1 HR STORM (i) | 3.58 IN/HR |

| ROOF LIVE LOAD | |
|---|---|
| MINIMUM ROOF LIVE LOAD PER SECTION 1607.14 | 20 PSF |

| ROOF DEAD LOADS AND DEFLECTION REQUIREMENTS | | |
|---|---|---|
| METAL DECK ON STEEL BEAM | DEAD LOAD (UNBALLASTED) | 12 PSF |
| | COLLATERAL | 7 PSF |
| | R.T.U. LOADS PER FRAMING PLANS ON STRUCTURAL SHEETS | |
| | ROOF DEFLECTION REQUIREMENTS | L/240 LL L/180 TL |
| PRE-ENGINEERED METAL BUILDING | DEAD LOAD PER MANUFACTURER REQUIREMENTS | |
| | COLLATERAL - PRIMARY | 10 PSF |
| | COLLATERAL - SECONDARY | 10 PSF |
| | ROOF DEFLECTION REQUIREMENTS | L/240 LL L/180 TL |

| FLOORS AND MEZZANINES | | | UNIFORM (See Note 1 for LL > 50 PSF) | CONCENTRATED |
|---|---|---|---|---|
| SLAB ON GRADE | | STORAGE | SEE FOUNDATION PLAN | |
| | LIVE LOAD | OFFICE - LIVE LOAD + 20 PSF PARTITION | 70 PSF | 2,000 LBS |
| | | EQUIPMENT | 75 PSF | 40 PSF + ACT. EQUIP. WT. |
| | | WALKWAYS AND ELEVATED PLATFORMS | 60 PSF | - |
| | | LOBBIES AND FIRST FLOOR CORRIDORS | 100 PSF | 2,000 LBS |
| | | ASSEMBLY AREAS WITH FIXED SEATS | 60 PSF | - |

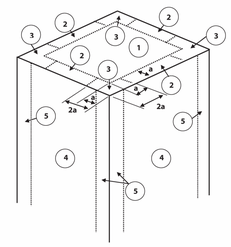
| STAIRS AND EXITS | | |
|---|---|---|
| LIVE LOAD | 100 PSF | 300 LBS AT TREAD |
| DEAD LOAD | 25, 50 PSF | - |
| DEFLECTION REQUIREMENTS (MIN.) | L/360 LL, L/240 TL | - |

| RAILINGS AND LADDERS | | |
|---|---|---|
| LIVE LOAD ON GUARD RAILINGS PER ASCE 7-16 SECTION 4.5.1 (PUBLIC AREAS) | 50 PLF (ANY DIRECTION) | 200 LBS (ANY DIRECTION) |
| LIVE LOAD ON HAND RAILINGS PER ASCE 7-16 SECTION 4.5.1 (PUBLIC AREAS) | 50 PLF (ANY DIRECTION) | 200 LBS (ANY DIRECTION) |
| LIVE LOAD ON BALUSTERS, PANEL FILLERS, AND GUARDRAIL INFILL | - | 50 LBS (ANY DIRECTION) |
| LIVE LOAD ON GRAB BAR SYSTEMS PER ASCE 7-16 SECTION 4.5.2 | - | 250 LBS (ANY DIRECTION) |
| NOTE: UNIFORM AND CONCENTRATED LOADS/HANDRAIL AND GUARDRAIL LOADS ARE NOT REQUIRED TO ACT CONCURRENTLY. | | |
| LIVE LOAD ON LADDERS PER ASCE 7-16 SECTION 4.5.4 | - | 300 LBS FOR EVERY 10 FT. OF LADDER<br>100 LBS AT EXTENSIONS (ANY DIRECTION) |

| LATERAL | | | |
|---|---|---|---|
| WIND LOADS AND DESIGN DATA | ULTIMATE WIND SPEED = 103 MPH (RISK CATEGORY II) | | |
| | WIND EXPOSURE = "C" | | |
| | ANALYSIS PROCEDURE: DIRECTIONAL PROCEDURE PER ASCE 7-16 CHAPTER 27 | | |
| | INTERNAL PRESSURE COEFFICIENT = ± 0.18 | | |
| | ~~COMPONENT AND CLADDING PRESSURE/SUCTIONS FOR EFFECTIVE AREAS = 10 S.F. AS FOLLOWS:~~ | | |
| | AREA 'A' PEMB | EDGE STRIPS - ROOF: (0.2h) = 8.1 FT., (0.6h) = 24.3 FT., WALL: (a) = 5.7 FT. | |
| | | ROOF ZONE 1' PRESSURE = 16.0 PSF, SUCTION = -22.1 PSF | |
| | | ROOF ZONE 1 PRESSURE = 16.0 PSF, SUCTION = -38.5 PSF | |
| | | ROOF ZONE 2 PRESSURE = 16.0 PSF, SUCTION = -50.8 PSF | |
| | | ROOF ZONE 3 PRESSURE = 16.0 PSF, SUCTION = -69.2 PSF | |
| | | WALL ZONE 4 PRESSURE = 22.1 PSF, SUCTION = -23.9 PSF | |
| | | WALL ZONE 5 PRESSURE = 22.1 PSF, SUCTION = -29.5 PSF | |
| | AREA 'B' SILO ALLEY | EDGE STRIPS - ROOF: (0.2h) = 2.7 FT., (0.6h) = 8.1 FT., WALL: (a) = 3.0 FT. | |
| | | ROOF ZONE 1' PRESSURE = 16.0 PSF, SUCTION = -17.9 PSF | |
| | | ROOF ZONE 1 PRESSURE = 16.0 PSF, SUCTION = -31.2 PSF | |
| | | ROOF ZONE 2 PRESSURE = 16.0 PSF, SUCTION = -41.2 PSF | |
| | | ROOF ZONE 3 PRESSURE = 16.0 PSF, SUCTION = -46.1 PSF | |
| | | WALL ZONE 4 PRESSURE = 17.9 PSF, SUCTION = -19.4 PSF | |
| | | WALL ZONE 5 PRESSURE = 17.9 PSF, SUCTION = -23.9 PSF | |
| | PRESSURE/SUCTIONS MAY BE REDUCED FOR AREAS > 10 S.F. PER ASCE 7-16. | | |
| | MINIMUM WIND LOADS PER ASCE 7-16. | | |
| | MWFRS: 16.0 PSF ON HORIZONTAL AND VERTICAL PROJECTION | | |
| | COMPONENT AND CLADDING: ± 16.0 PSF NORMAL TO SURFACE. | | |
| SEISMIC LOADS AND DESIGN DATA | SEISMIC IMPORTANCE FACTOR, Ie = 1.0 (RISK CATEGORY = II). | | |
| | MAPPED RESPONSE COEFFICIENTS = | S(S) = 1.076 | S(1) = 0.364 |
| | SPECTRAL RESPONSE COEFFICIENTS = | S(DS) = 0.861 | S(D1) = N/A |
| | SITE CLASS = E (ASSUMED) | | |
| | SEISMIC DESIGN CATEGORY = D | | |
| | ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PER ASCE 7-16 SECTION 12.8 | | |
| | RECOMMENDED SEISMIC FORCE RESISTING SYSTEM AND SEISMIC DESIGN COEFFICIENTS (PER ASCE 7-16 TABLE 12.2-1) AS FOLLOWS: | | |
| | AREA 'A' PEMB EAST-WEST DIRECTION | SEISMIC FORCE RESISTING SYSTEM = B3. STEEL ORDINARY CONCENTRICALLY BRACED FRAMES | |
| | | RESPONSE MODIFICATION COEFFICIENT R = 3.25 | |
| | | OVERSTRENGTH FACTOR Ω0 = 2 | |
| | | DEFLECTION AMPLIFICATION FACTOR Cd = 3.25 | |
| | AREA 'A' PEMB NORTH-SOUTH DIRECTION | SEISMIC FORCE RESISTING SYSTEM = C4. STEEL ORDINARY MOMENT FRAMES | |
| | | RESPONSE MODIFICATION COEFFICIENT R = 3.5 | |
| | | OVERSTRENGTH FACTOR Ω0 = 3 (REDUCTION OF Ω0 BY 0.5 ALLOWED WITH FLEXIBLE DIAPHRAGM) | |
| | | DEFLECTION AMPLIFICATION FACTOR Cd = 3 | |
| | AREA 'B' SILO ALLEY | SEISMIC FORCE RESISTING SYSTEM = G2. CANTILEVERED COLUMN SYSTEMS DETAILED TO CONFORM TO THE REQUIREMENTS FOR: | |
| | | STEEL ORDINARY CANTILEVER COLUMN SYSTEMS | |
| | | RESPONSE MODIFICATION COEFFICIENT R = 1.25 | |
| | | OVERSTRENGTH FACTOR Ω0 = 1.25 | |
| | | DEFLECTION AMPLIFICATION FACTOR Cd = 1.25 | |
| | | DESIGN BASE SHEAR (V) = 4,100 LBS.(N/S), 4,100 LBS.(E/W) | |
| STABILITY LOADS | INTERIOR PARTITIONS 5 PSF | | |
| | INTERIOR FREESTANDING MEZZ / STRUCTURE 2%, 5% OF TOTAL DL + LL | | |

| ALLOWABLE SOIL BEARING PRESSURE |
|---|
| THE VERIFIED SOIL BEARING CAPACITY IS 5,000 PSF AS DETERMINED BY THE GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, INC (REPORT #611195071). RAMMED AGGREGATE PIERS ARE REQUIRED TO IMPROVE SOILS TO DESIRED BEARING CAPACITY. |

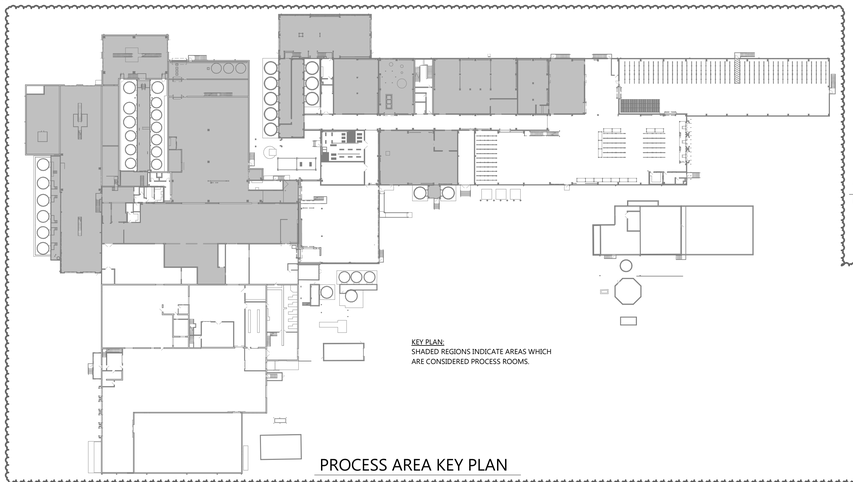
| NOTE 1 - REQUIREMENT FOR POSTED LIVE LOADS EXCEEDING 50 PSF |
|---|
| IBC SECTION 106.1 REQUIRES SIGNS TO BE POSTED BY THE OWNER IN AREAS DESIGNED TO SUPPORT UNIFORM LIVE LOADS EXCEEDING 50 PSF. SEE DETAILS ON S0 SHEETS FOR SIGN. SIGNAGE NOT REQUIRED FOR SLAB-ON-GRADE AREAS. |




**FLAT/HIP/GABLE/MANSARD ROOF <7°**

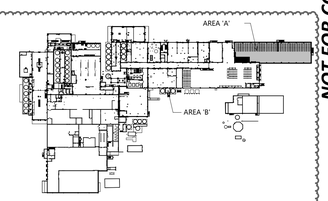
## COMPONENTS AND CLADDING WIND ZONES

NOT TO SCALE



KEY PLAN:
SHADED REGIONS INDICATE AREAS WHICH ARE CONSIDERED PROCESS ROOMS.

## PROCESS AREA KEY PLAN




## KEY PLAN

## STRUCTURAL DESIGN CRITERIA


EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

**S0.2**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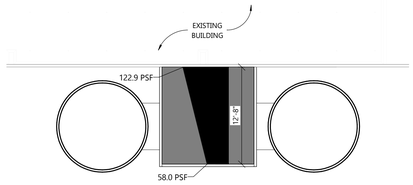
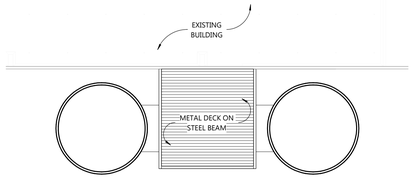



NORTH

SNOW DRIFT LOAD PLAN - AREA 'B' SILO ALLEY

SCALE: 1/8" = 1'-0"

0' 8' 16'

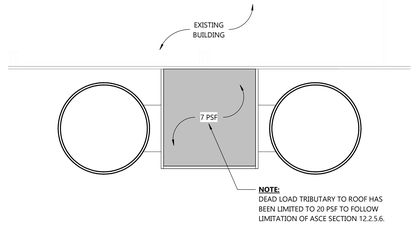



NORTH

ROOF DEAD LOAD PLAN - AREA 'B' SILO ALLEY

SCALE: 1/8" = 1'-0"

0' 8' 16'

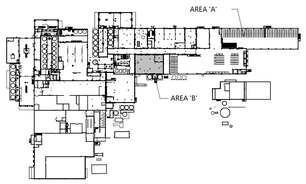



NORTH

ROOF COLLATERAL LOAD PLAN - AREA 'B' SILO ALLEY

SCALE: 1/8" = 1'-0"

0' 8' 16'




KEY PLAN

STRUCTURAL AREA 'B' LOADING PLANS

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920-926-9800
excelengineer.com

PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

**S0.3**

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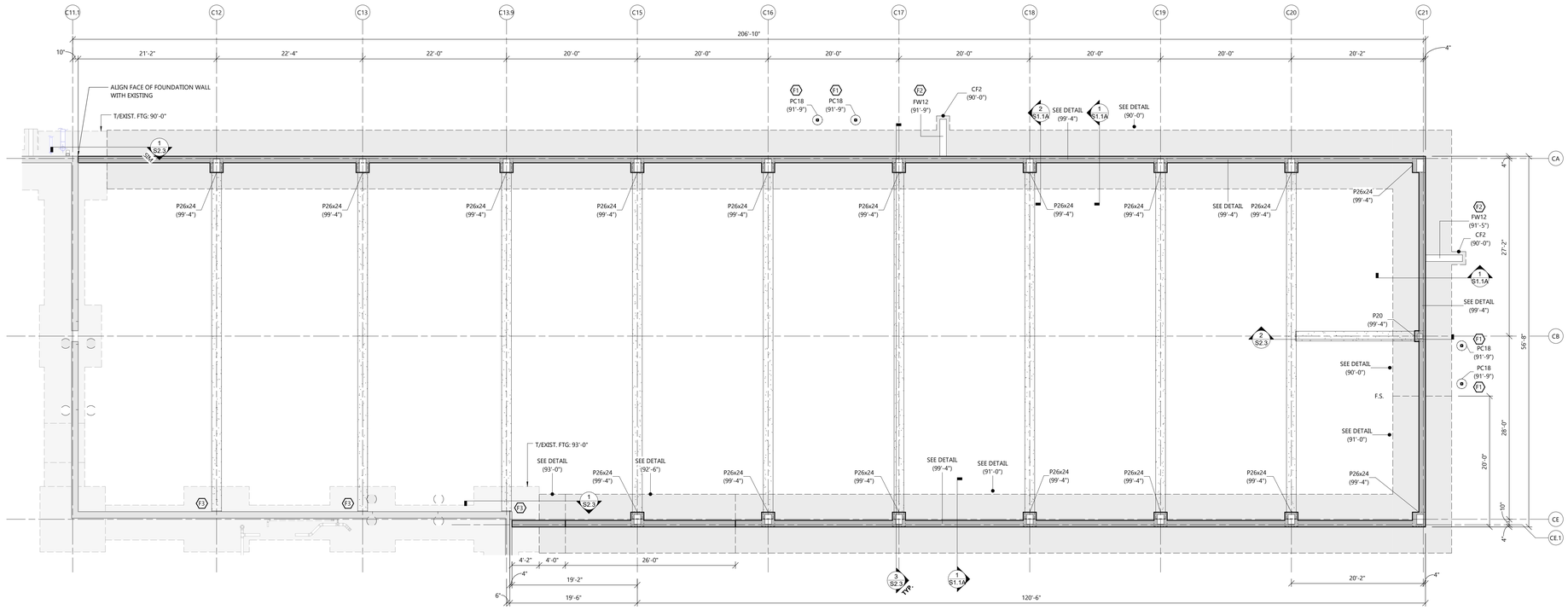
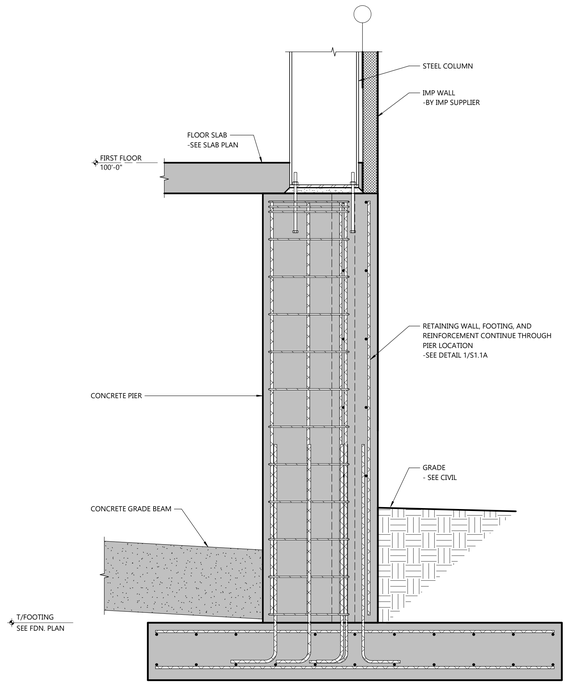



NORTH

## FOUNDATION PLAN - AREA 'A'

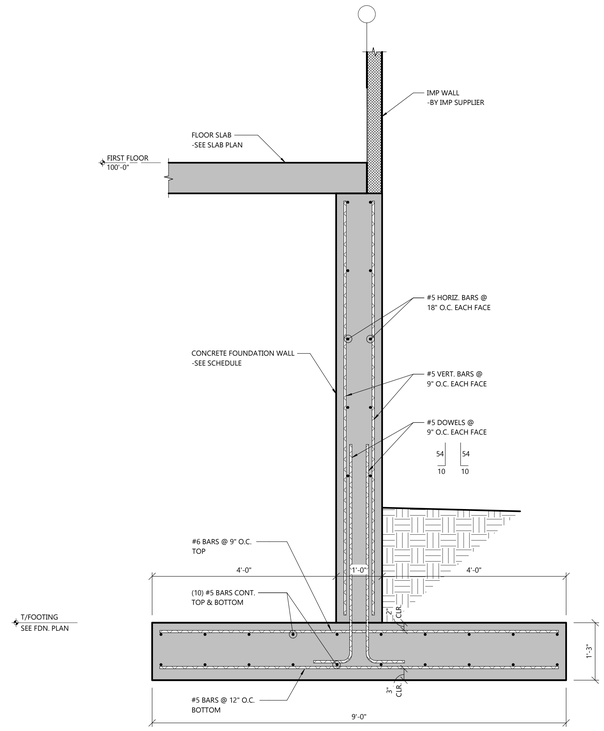
SCALE: 1/8" = 1'-0"

0' 8' 16'




2 S1.1A **FOUNDATION SECTION**

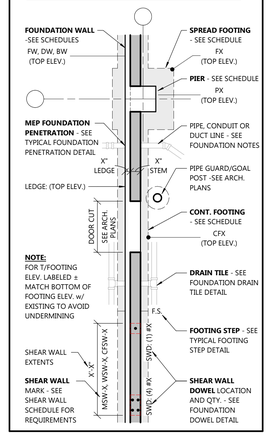
SCALE: 3/4" = 1'-0"




1 S1.1A **FOUNDATION SECTION**

SCALE: 3/4" = 1'-0"

## FOUNDATION PLAN LEGEND




## FOUNDATION NOTES

- SEE DESIGN LOADS ON S0 SHEETS FOR ALL DESIGN LOADS NOT SHOWN ON PLANS.
- SEE GENERAL BUILDING SPECIFICATIONS ON A0 SHEETS AND STRUCTURAL SPECIFICATIONS ON S0 SHEETS FOR MATERIAL SPECIFICATIONS NOT SHOWN ON PLANS.

GEOTECHNICAL REPORT REQUIREMENTS:

- CONTRACTOR TO READ, REVIEW AND FOLLOW ALL RECOMMENDATIONS LISTED IN GEOTECHNICAL REPORT (U.N.O.). SEE STRUCTURAL DESIGN CRITERIA FOR GEOTECHNICAL REPORT REFERENCE.
- FOUNDATION/SLAB SUBGRADE MATERIALS AND PREPARATION SHALL BE PER RECOMMENDATIONS OF GEOTECHNICAL REPORT (U.N.O.). RAMMED-AGGREGATE PIERS, OR SIMILAR PRODUCT, ARE REQUIRED TO IMPROVE EXISTING SOILS FOR SUPPORT OF NEW STRUCTURE. SEE GEOTECH REPORT FOR ADDITIONAL INFORMATION.
- FOUNDATION BACKFILL AND PREPARATION SHALL BE COMPACTED GRANULAR MATERIAL PER RECOMMENDATIONS OF GEOTECHNICAL REPORT (U.N.O.).
- CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS BELOW FOOTINGS/FOUNDATIONS TO VERIFY THE NET ALLOWABLE SOIL BEARING CAPACITY MEETS OR EXCEEDS THE SPECIFIED VALUE IN THE STRUCTURAL DESIGN CRITERIA. CONTRACTOR SHALL PROVIDE DOCUMENTATION OF PASSING SOIL BEARING TESTING TO ENGINEER UPON COMPLETION. IT IS RECOMMENDED THAT THE GEOTECHNICAL FIRM USED TO PERFORM THE SUBSURFACE SOIL INVESTIGATION BE ENGAGED FOR THE FIELD QUALITY CONTROL TESTS.
- FOUNDATION WALL CONTRACTION AND CONSTRUCTION JOINTS ARE NOT SHOWN ON PLAN. SEE S2 SHEETS FOR JOINT REQUIREMENTS.
- SEE S2 SHEETS FOR ADDITIONAL FOUNDATION DETAILS NOT REFERENCED ON FOUNDATION PLANS.
- SEE SPECIFICATIONS FOR PERIMETER FOUNDATION INSULATION AND FOUNDATION DRAINAGE PANEL THICKNESS.
- COORDINATE AND VERIFY ALL UNDERGROUND WORK PRIOR TO POURING CONCRETE FLOOR SLAB.
- SEE CIVIL PLANS AND SPECIFICATIONS ON CIVIL PLANS FOR ALL EXTERIOR CONCRETE FLATWORK NOT SPECIFICALLY SHOWN/DETAILED ON THE STRUCTURAL PLANS.
- SEE S2 SHEETS FOR TOP OF PIER/FOOTING AND CONTROL JOINT AT COLUMN LOCATIONS.
- VERIFY EXISTING FOUNDATIONS AND INFORM EXCEL ENGINEERING IF DIFFERENT THAN SHOWN.
- PROVIDE DOWELS WHERE NEW FOOTING/FOUNDATION INTERSECTS EXISTING FOOTING/FOUNDATION. SEE STANDARD DETAILS ON S2 SHEETS.
- SEE ARCHITECTURAL FLOOR PLANS FOR TAGS OF ALL GUARDPOSTS & GOALPOSTS. GUARDPOST & GOALPOST SCHEDULE & DETAILS LOCATED ON A6 SHEETS.
- PIPE, CONDUIT AND DUCT LINES SHOWN ON THIS PLAN ARE FOR GENERAL LAYOUT INTENT PURPOSES ONLY. REFER TO THE CIVIL/MEP PLANS FOR SPECIFIC INFORMATION.

**PRE-ENGINEERED METAL BUILDING NOTES**

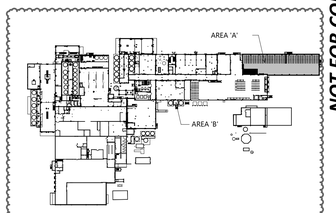
- ARCHITECT/ENGINEER TO APPROVE FOUNDATION DETAILS w/ FINAL METAL BUILDING REACTIONS AND BASE PLATE LAYOUTS PRIOR TO POURING BUILDING FOUNDATIONS.
- METAL BUILDING ANCHOR BOLTS TO BE LOCATED PER METAL BUILDING ANCHOR BOLT PLAN IN CONJUNCTION w/ STRUCTURAL FOUNDATION. SEE S2 SHEETS.

## # FOUNDATION KEYNOTES

F1 SONOTUBE PIER STAIR FOUNDATION. COORDINATE LOCATION & TOP OF WALL ELEVATION w/ DETAILS ON ARCHITECTURAL PLANS & FINAL STAIR SHOP DRAWINGS PRIOR TO INSTALLING. COORDINATE w/ CIVIL PLANS & FINAL GRADE ELEVATION TO PROVIDE MINIMUM 3'-0" FROST PROTECTION.

F2 STAIR FOUNDATION. COORDINATE LOCATION & TOP OF WALL ELEVATION w/ DETAILS ON ARCHITECTURAL PLANS & FINAL STAIR SHOP DRAWINGS PRIOR TO INSTALLING. COORDINATE w/ CIVIL PLANS & FINAL GRADE ELEVATION TO PROVIDE MINIMUM 3'-0" FROST PROTECTION.

F3 DOWEL GRADE BEAM INTO EXISTING PIER. SEE DETAIL 1/S2.3.




KEY PLAN

## STRUCTURAL FOUNDATION PLAN - AREA 'A'


EXCEL

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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


**PROJECT INFORMATION**

STORAGE WAREHOUSE EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

**PROFESSIONAL SEAL**

*NOT FOR CONSTRUCTION*

**SHEET DATES**

**ISSUED FOR BID**

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

**JOB NUMBER**

250429500

**SHEET NUMBER**

S1.1A

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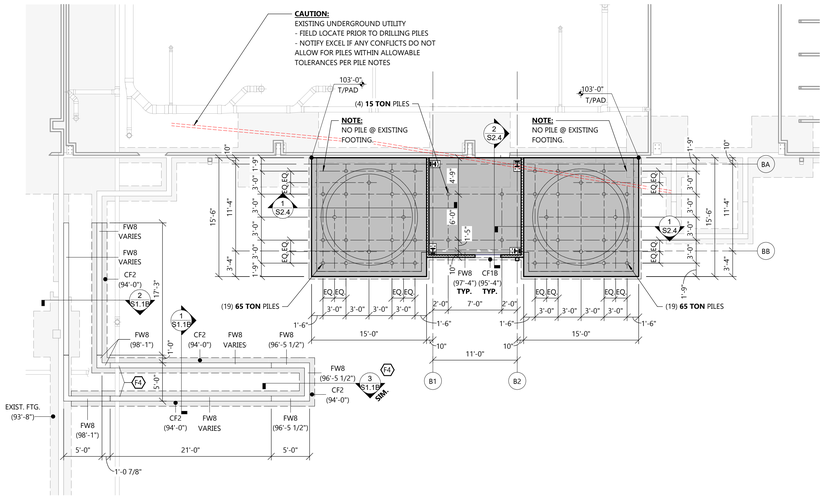



## FOUNDATION PLAN - AREA "B"

NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'

## FOUNDATION PILE NOTES

- REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

GEOTECHNICAL REPORT REQUIREMENTS:

VERIFY WITH GEOTECHNICAL REPORT

- CONTRACTOR TO HIRE THE SERVICES OF A LICENSED GEOTECHNICAL ENGINEERING FIRM TO PERFORM A GEOTECHNICAL ANALYSIS OF THE SOIL FOR DEEP FOUNDATIONS. THE REPORT MUST BE SUBMITTED TO EXCEL ENGINEERING PRIOR TO ANY WORK BEING PERFORMED ON SITE.
- THE GEOTECHNICAL REPORT LISTED IN THE STRUCTURAL DESIGN CRITERIA ON THE S0 SHEETS IS FOR THE BUILDING FOUNDATIONS AND IS **NOT** TO BE USED FOR PILE DESIGN AS NO DEEP FOUNDATION ANALYSIS WAS PERFORMED.

PILE TYPE:

- CONTRACTOR SHALL DETERMINE THE TYPE OF PILE USED (STEEL DRIVEN PILE w/ CONCRETE, HOLLOW STEEL PILE, MICROPILE, ETC.) AND INFORM EXCEL ENGINEERING OF THE TYPE USED AND PROVIDE THE RELEVANT TESTING INFORMATION FOR THE CHOSEN PILE.

PILE CAPACITY:

VERIFY LOADINGS WITH FINAL PILE LAYOUT

- PILE CAPACITIES BASED ON A PILE COMPRESSIVE STIFFNESS OF 1,832 KIP/IN AND 1,315 KIP/IN TENSILE STIFFNESS. PILE DESIGNER TO PROVIDE STIFFNESS VALUES OF DESIGNED PILES FOR REANALYSIS OF PILES TO UPDATE REQUIRED PILE CAPACITY.
- CONTRACTOR SHALL DESIGN THE **65 TON** PILES FOR A WORKING CAPACITY OF **130,000#** OF COMPRESSIVE FORCE, **70,000#** OF TENSION FORCE, AND **6,500#** OF SHEAR FORCE **AT EACH PILE**.
- CONTRACTOR SHALL DESIGN THE **15 TON** PILES FOR A WORKING CAPACITY OF **30,000#** OF COMPRESSIVE FORCE, **5,000#** OF TENSION FORCE, AND **2,000#** OF SHEAR FORCE **AT EACH PILE**.
- PILES SHALL BE DESIGNED WITH A FACTOR OF SAFETY OF 2.0 FOR ALL LOADINGS.

PILE LENGTH:

- CONTRACTOR SHALL DETERMINE THE PILE LENGTH BASED ON THE CHOSEN PILE TYPE AND PILE CAPACITY.

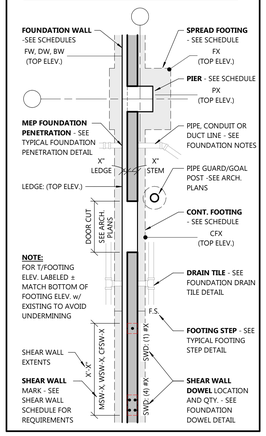
PILE LOCATION:

- PILES SHALL BE CENTERED ON THE PROVIDED DIMENSION LINES UNLESS NOTED OTHERWISE.
- PILES PLACED IN EXCESS OF 6" FROM THE FOUNDATION PLAN REQUIRE NOTIFICATION TO THE STRUCTURAL ENGINEER OF RECORD FOR SILO PAD REDESIGN. DO NOT POUR PILE CAPS UNTIL LOCATIONS ARE VERIFIED BY SURVEYOR AND RECORD IS REVIEWED BY STRUCTURAL ENGINEER OF RECORD.
- EDGE DISTANCE OF SILO PAD TO CENTER LINE OF PILE SHALL NOT BE LESS THAN 1'-6" UNLESS NOTED OTHERWISE.

TO BE VERIFIED

- TENSION SPLICES:
- PILE SUPPLIER/INSTALLER TO SUBMIT PREFERRED SPLICE DETAIL TO STRUCTURAL ENGINEER OF RECORD FOR APPROVAL IF SPLICES ARE REQUIRED.
- SPLICES SHALL BE DESIGNED FOR THE ULTIMATE TENSION AT THE SPLICE LOCATION.

## FOUNDATION PLAN LEGEND




## FOUNDATION NOTES

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- PIPE, CONDUIT AND DUCT LINES SHOWN ON THIS PLAN ARE FOR GENERAL LAYOUT INTENT PURPOSES ONLY. REFER TO THE CIVIL/MEP PLANS FOR SPECIFIC INFORMATION.

**PRE-ENGINEERED METAL BUILDING NOTES**

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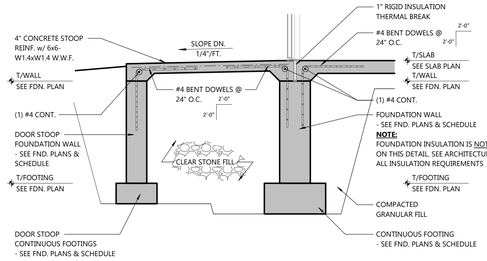
- METAL BUILDING ANCHOR BOLTS TO BE LOCATED PER METAL BUILDING ANCHOR BOLT PLAN IN CONJUNCTION w/ STRUCTURAL FOUNDATION. SEE S2 SHEETS.

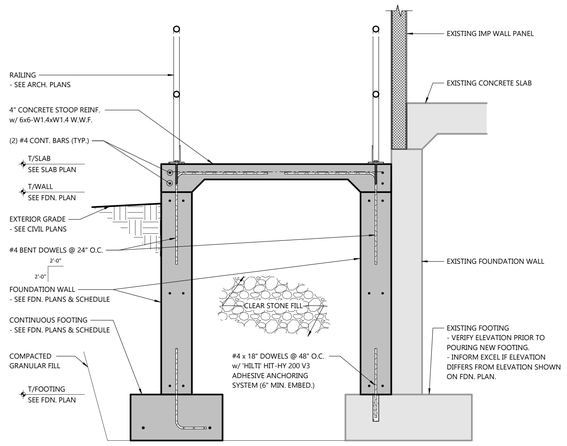
## FOUNDATION KEYNOTES

F4 PLUMBING PENETRATION THROUGH FOUNDATION WALL. SEE FDN. WALL AT PLUMBING PENETRATIONS DETAIL. FIELD VERIFY EXISTING PLUMBING PIPE FOR ELEVATION.



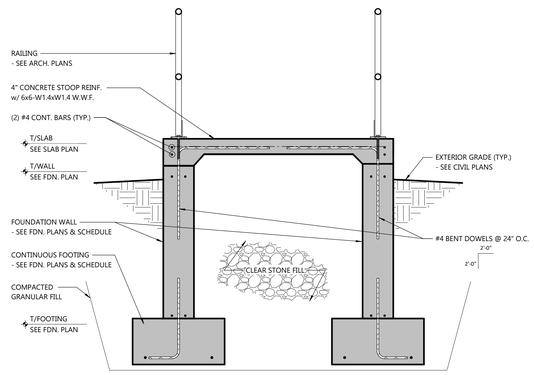

3 S1.1B DOOR STOOP DETAIL

NOT TO SCALE



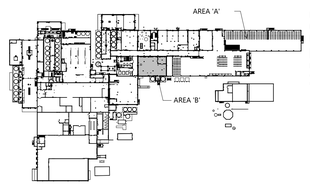

2 S1.1B RAMP REINFORCING DETAIL AT EXISTING

SCALE: 3/4" = 1'-0"




1 S1.1B RAMP REINFORCING DETAIL

SCALE: 3/4" = 1'-0"




KEY PLAN

STRUCTURAL FOUNDATION PLAN - AREA 'B'


EXCEL

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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

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PROFESSIONAL SEAL

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SHEET DATES

ISSUED FOR BID

AD1 APR. 29, 2026

JOB NUMBER

250429500

SHEET NUMBER

**S1.1B**

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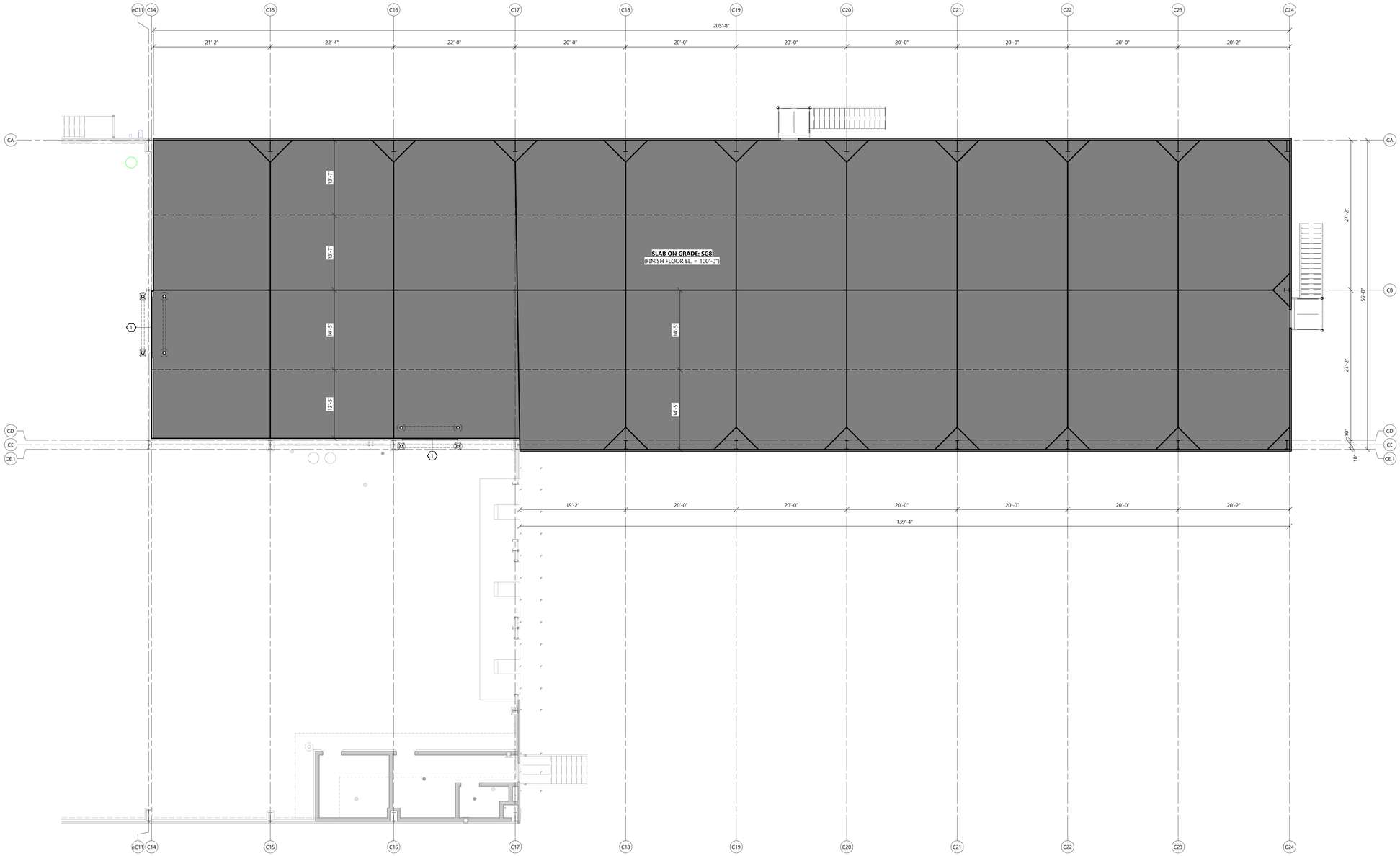
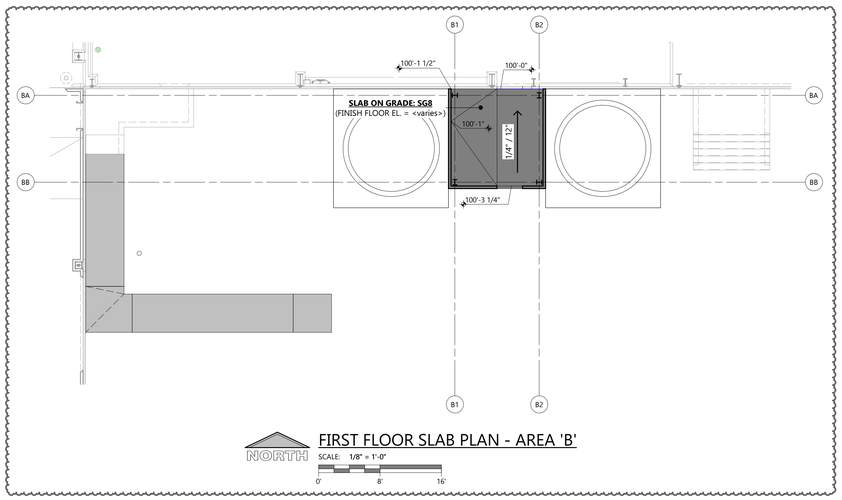



FIRST FLOOR SLAB PLAN - AREA 'A'

NORTH SCALE: 1/8" = 1'-0"

0' 8' 16'




FIRST FLOOR SLAB PLAN - AREA 'B'

NORTH SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- SEE DESIGN LOADS ON S0 SHEETS FOR ALL DESIGN LOADS NOT SHOWN ON PLANS.
- SEE GENERAL BUILDING SPECIFICATIONS ON A0 SHEETS AND STRUCTURAL SPECIFICATIONS ON S0 SHEETS FOR MATERIAL SPECIFICATIONS NOT SHOWN ON PLANS.
- G.C. TO HOLD PRECONSTRUCTION MEETING PRIOR TO POURING ALL SLOPED FLOOR AREAS TO DISCUSS WITH OWNER/ARCHITECT.
- SEE CIVIL PLANS AND SPECIFICATIONS FOR ALL EXTERIOR CONCRETE FLATWORK NOT SPECIFICALLY SHOWN/DETAILED ON THE STRUCTURAL PLANS.
- SEE CONCRETE SLAB ON GRADE SCHEDULE ON S2 SHEETS FOR SLAB REQUIREMENTS.
- SEE SLAB ON GRADE REINFORCING AT DOORS/OPENINGS DETAIL ON S2 SHEETS FOR ADDITIONAL SLAB REINFORCING.
- SEE SUPPLEMENTAL REINFORCING DETAIL ON S2 SHEETS FOR ADDITIONAL SLAB REINFORCING.
- SEE CONCRETE SLAB ON GRADE SCHEDULE AND DETAILS FOR SLAB JOINT REQUIREMENTS.
- CONSTRUCTION JOINTS (C.J.) SHOWN ON PLAN MAY BE CHANGED TO POUR JOINTS (P.J) AT CONTRACTORS DISCRETION.
- TOP OF FLOOR SLAB IS TOP OF FINISHED SURFACE. OFFSET THE TOP OF CONCRETE AS REQUIRED TO SUIT FLOOR FINISH MATERIAL.
- COORDINATE PLAN WITH ARCHITECTURAL FLOOR PLANS FOR WALL AND DOOR LOCATIONS.
- AT ALL HIGH POINTS IN FLOOR, PROVIDE EASED EDGE. SEE FLOOR SCREED DETAIL ON S2 SHEETS.
- DO NOT TERMINATE A SAWCUT JOINT INTO ANOTHER SAWCUT JOINT (CREATING A "T" CONDITION). SAWCUT JOINTS MUST CONTINUE THRU OTHER SAWCUT JOINTS UNTIL THEY TERMINATE INTO A POUR JOINT OR SLAB EDGE.

## SLAB-ON-GRADE KEYNOTES

1 PROVIDE ARMOR JOINT AT DOOR/OPENING FLOOR JOINT - SEE S2 SHEETS ARMOR JOINT DETAIL

## SLAB-ON-GRADE JOINT LEGEND

SAWCUT JOINT (S.J.)

CONSTRUCTION JOINT (C.J.)

POUR JOINT (P.J.)


EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

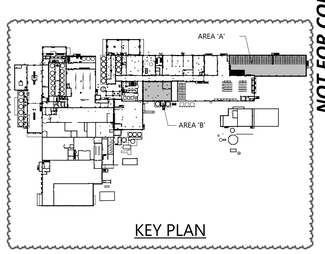
| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

S1.1SAB




KEY PLAN

STRUCTURAL CONCRETE FLOOR SLAB PLAN - AREA 'A' & 'B'

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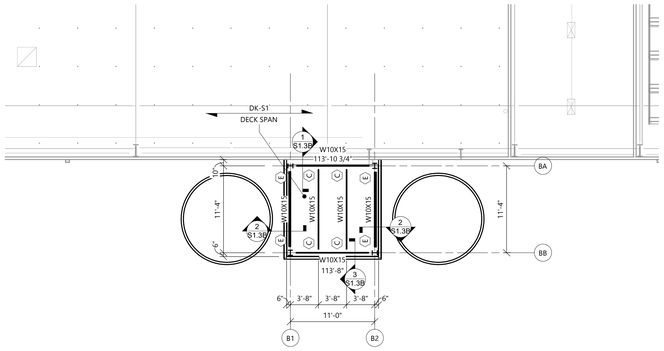
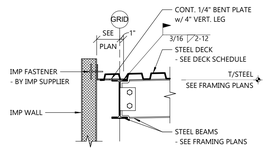



## SILO ALLEY ROOF - AREA 'B'

NORTH

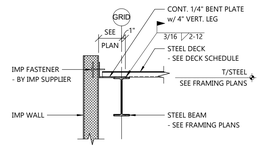
SCALE: 1/8" = 1'-0"

0' 8' 16'



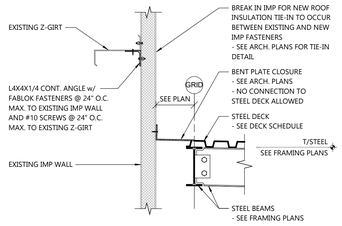

3 S1.3B SILO ALLEY DETAIL AT DECK NON-BRG

SCALE: 3/4" = 1'-0"



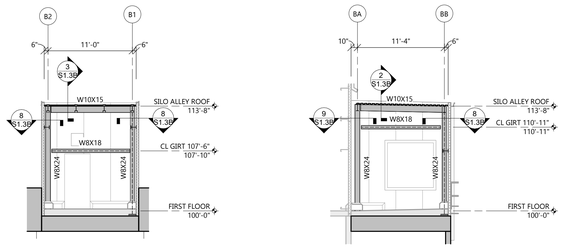

2 S1.3B SILO ALLEY DETAIL AT DECK BRG.

SCALE: 3/4" = 1'-0"




1 S1.3B SILO ALLEY DETAIL AT EXISTING

SCALE: 3/4" = 1'-0"




6 S1.3B FRAMING ELEVATION - GRID 'BB'

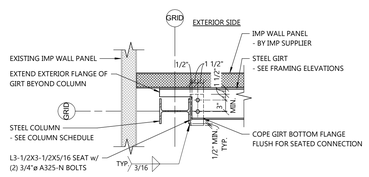
SCALE: 1/8" = 1'-0"

5 S1.3B FRAMING ELEVATION - GRID 'B2'

SCALE: 1/8" = 1'-0"

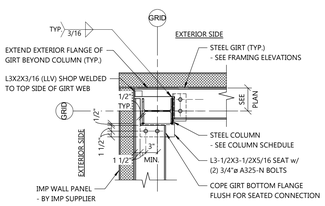
4 S1.3B FRAMING ELEVATION - GRID 'B1'

SCALE: 1/8" = 1'-0"



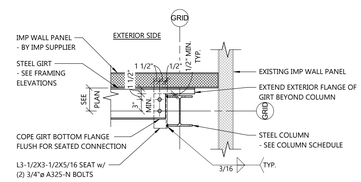

9 S1.3B SILO GIRT CONNECTION AT WF COLUMN FLANGE

SCALE: 3/4" = 1'-0"




8 S1.3B SILO GIRT CONNECTION AT WF COLUMN CORNER

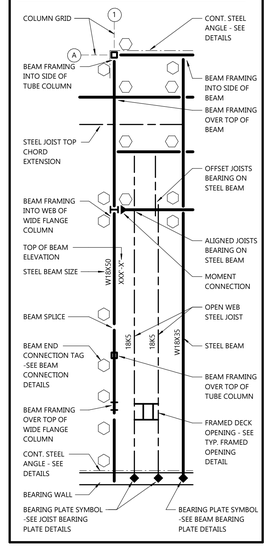
SCALE: 3/4" = 1'-0"




7 S1.3B SILO GIRT COLUMN AT WF COLUMN WEB

SCALE: 3/4" = 1'-0"

## STEEL FRAMING PLAN LEGEND




## WALL MATERIAL LEGEND

| | | |
|---|---|---|
| CFS/WOOD STUD WALL | (TYPICAL) | (FIRE RATED) |
| MASONRY WALL | (TYPICAL) | (FIRE RATED) |
| CONCRETE/SOLID PRECAST WALL | (TYPICAL) | (FIRE RATED) |
| INSULATED PRECAST WALL | (TYPICAL) | (FIRE RATED) |

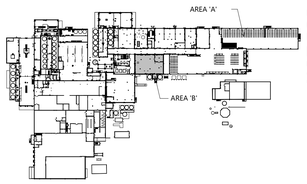
**NOTE:** RATING SHOWN FOR REFERENCE ONLY - SEE ARCH. PLANS FOR ALL REQUIREMENTS OF FIRE RATED WALL ASSEMBLIES.

## STEEL ROOF FRAMING NOTES

- SEE DESIGN LOADS ON S0 SHEETS FOR ALL DESIGN LOADS NOT SHOWN ON PLANS.
- SEE GENERAL BUILDING SPECIFICATIONS ON A0 SHEETS AND STRUCTURAL SPECIFICATIONS ON S0 SHEETS FOR MATERIAL SPECIFICATIONS NOT SHOWN ON PLANS.
- SPLICES IN PERIMETER CHORD ANGLES OR BENT PLATES SHALL BE MADE WITH FULL-PENETRATION BUTT WELDS, U.N.O.
- SEE MECHANICAL DRAWINGS FOR OPENINGS IN METAL DECK. VERIFY OPENINGS WITH MECHANICAL CONTRACTOR. SEE S3 SHEETS FOR TYPICAL FRAMING AT DECK OPENING DETAIL. **NOTE:** PENETRATION/H-FRAME QUANTITIES/LOCATIONS ARE SHOWN FOR GENERAL LAYOUT PURPOSES ONLY. FINAL QUANTITY, LOCATIONS, AND DIMENSIONS SHALL BE COORDINATED WITH THE MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR.

## FRAMING ELEVATION NOTES

- SEE DESIGN LOADS ON S0 SHEETS FOR ALL DESIGN LOADS NOT SHOWN ON PLANS.
- SEE GENERAL BUILDING SPECIFICATIONS ON A0 SHEETS AND STRUCTURAL SPECIFICATIONS ON S0 SHEETS FOR MATERIAL SPECIFICATIONS NOT SHOWN ON PLANS.
- ALL BRACING RELATED CONNECTIONS INCLUDING GUSSET PLATES, EMBED PLATES, ETC. SHALL MATCH BRACE MATERIAL.
- ALL STRUCTURAL CONNECTIONS AT THE JAMBS & HEADS OF DOORS & KNOCK-OUT PANELS & ALL ASSOCIATED CONNECTIONS INCLUDING P.C EMBEDS SHALL MATCH THE JAMB & HEAD MATERIAL.
- IMP SUPPLIER / INSTALLER TO PROVIDE ADEQUATE CONNECTIONS OF PANELS ABOVE DOORS TO ADJACENT FULL HEIGHT JAMB PANELS OR STRUCTURAL MEMBERS AS REQ'D. TO SUFFICIENTLY BRACE OPENINGS. INCLUDE ANY REQUIREMENTS IN BIDDING & NECESSARY DETAILS IN SHOP DRAWING SUBMITTAL.
- SHORE ALL GIRTS AS REQ'D. TO PREVENT VERTICAL DEFLECTION UNTIL WALL PANEL IS COMPLETELY FASTENED.
- CONTRACTOR TO VERIFY DOOR, WINDOW, MEP EQUIPMENT, ETC. ROUGH OPENINGS SIZES AND COORDINATE WITH JAMBS, HEADS, AND SILLS FOR FINAL LOCATIONS. DIMENSIONS ARE INTENTIONALLY NOT SHOWN ON THIS PLAN.




KEY PLAN

STRUCTURAL ROOF FRAMING PLAN - AREA 'B'


EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

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PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

AD1 APR. 29, 2026

JOB NUMBER

250429500

SHEET NUMBER

**S1.3B**

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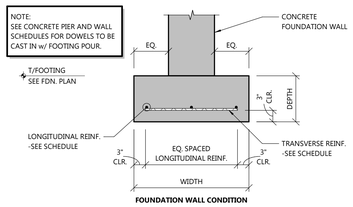
## CONTINUOUS FOOTING SCHEDULE

**NOTES:**
- ALL FOOTINGS ARE CENTERED ON FOUNDATION WALLS UNLESS DIMENSIONED OTHERWISE.
- SEE TYPICAL CONTINUOUS FOOTING DETAIL FOR TYPICAL CONSTRUCTION & NOTES.
- SEE FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
- SEE STRUCTURAL SPECIFICATIONS FOR CONSTRUCTION MATERIAL REQUIREMENTS.

| | FOOTING SIZE | | REINFORCING | | |
|---|---|---|---|---|---|
| MARK | WIDTH | DEPTH | LONGITUDINAL | TRANSVERSE | REMARKS |
| CF18 | 1'-4" | 12" | (2) #4 BARS | - | |
| CF2 | 2'-0" | 12" | (2) #5 BARS | - | |

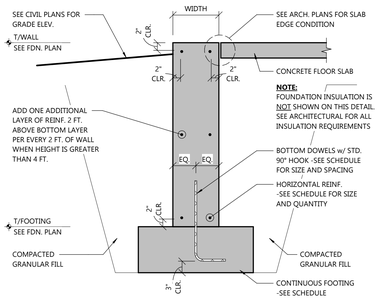



### TYPICAL CONTINUOUS FOOTING DETAIL
NOT TO SCALE

## FROST WALL SCHEDULE

**NOTES:**
- SEE TYPICAL FROST WALL DETAIL FOR TYPICAL CONSTRUCTION & NOTES.
- SEE FOUNDATION PLAN FOR TOP OF WALL & LEDGE (IF APPLICABLE) ELEVATIONS.
- SEE STRUCTURAL SPECIFICATIONS FOR CONSTRUCTION MATERIAL REQUIREMENTS.

| MARK | WIDTH | HORIZONTAL REINFORCING | BOTTOM DOWEL | REMARKS |
|---|---|---|---|---|
| FW8 | 8" | (2) #4 TOP & BOT. | #4 x 21" + HOOK @ 18" O.C. | |
| FW12 | 12" | (2) #5 TOP & BOT. | #4 x 21" + HOOK @ 18" O.C. | |

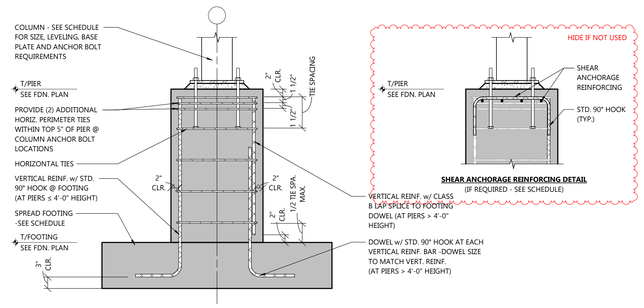



### TYPICAL FROST WALL DETAIL
NOT TO SCALE

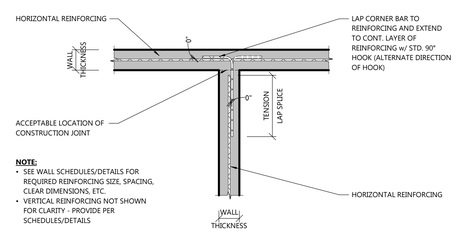
## PIER SCHEDULE (PRELIMINARY)

**NOTES:**
- ALL PIERS ARE CENTERED ON COLUMN GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWISE.
- SEE TYPICAL PIER DETAIL FOR TYPICAL CONSTRUCTION & NOTES.
- SEE FOUNDATION PLAN FOR TOP OF PIER ELEVATIONS.
- SEE FOUNDATION PLAN FOR PIER ORIENTATION.
- SEE COLUMN SCHEDULE FOR COLUMN ANCHOR BOLT INFORMATION.
- VERTICAL REINF. BARS SHALL BE EQUALLY SPACED, U.N.O.
- SEE REINFORCING TOP VIEW DETAILS FOR ORIENTATION OF VERITCAL REINFORCING.
- HORIZONTAL TIES SHALL MEET REQ'S OF ACI 318-7.10.5.3 FOR LATERAL SUPPORT OF VERTICAL REINFORCING.
- SEE STRUCTURAL SPECIFICATIONS FOR CONSTRUCTION MATERIAL REQUIREMENTS.

| | SIZE | | | |
|---|---|---|---|---|
| MARK | LENGTH | WIDTH | DIAMETER | REMARKS |
| RECTANGULAR | | | | |
| P20 | 20" | 20" | | |
| P26x24 | 26" | 24" | | |
| CIRCULAR | | | | |
| PC18 | | | 1'-6" | |

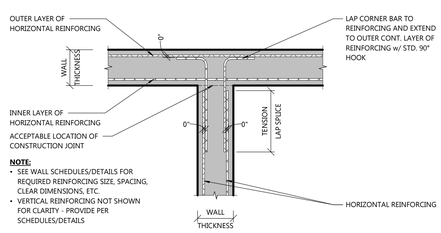



### TYPICAL PIER DETAIL
NOT TO SCALE



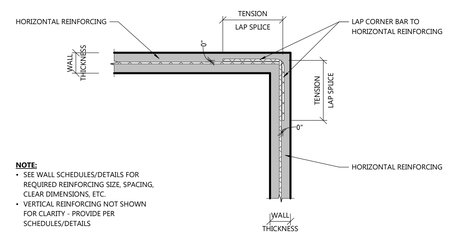

**NOTE:**
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- VERTICAL REINFORCING NOT SHOWN FOR CLARITY - PROVIDE PER SCHEDULES/DETAILS

WALL INTERSECTION w/ SINGLE LAYER OF HORIZONTAL REINFORCING



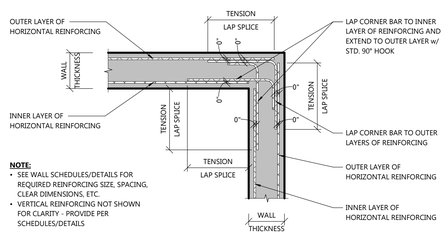

**NOTE:**
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- VERTICAL REINFORCING NOT SHOWN FOR CLARITY - PROVIDE PER SCHEDULES/DETAILS

WALLS INTERSECTION w/ DOUBLE LAYER OF HORIZONTAL REINFORCING




**NOTE:**
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- VERTICAL REINFORCING NOT SHOWN FOR CLARITY - PROVIDE PER SCHEDULES/DETAILS

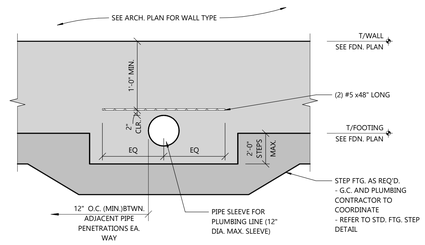
WALL CORNER w/ SINGLE LAYER OF HORIZONTAL REINFORCING



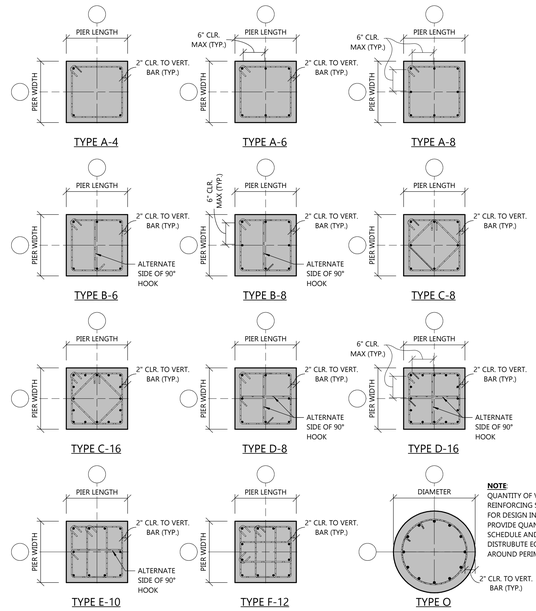

**NOTE:**
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- VERTICAL REINFORCING NOT SHOWN FOR CLARITY - PROVIDE PER SCHEDULES/DETAILS

WALL CORNER w/ DOUBLE LAYER OF HORIZONTAL REINFORCING

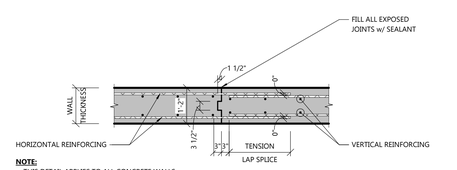
### TYPICAL CONCRETE WALL CORNER/INTERSECTION REINFORCING DETAILS
NOT TO SCALE




### FDN. WALL AT PLUMBING PENETRATIONS
NOT TO SCALE

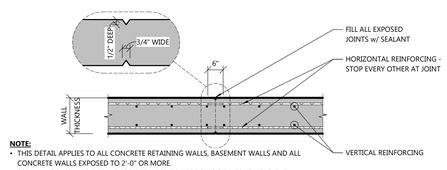



### PIER REINFORCING TYPES
NOT TO SCALE




**NOTE:**
- THIS DETAIL APPLIES TO ALL CONCRETE WALLS
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- JOINT LOCATIONS ARE NOT SHOWN ON PLANS. PROVIDE JOINTS AT:
  - 120'-0" O.C. MAXIMUM
  - ADDITIONAL JOINTS AS REQUIRED BY CONTRACTOR

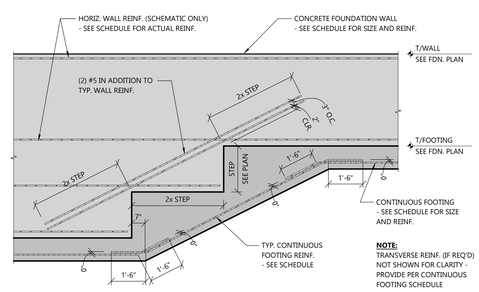
WALL CONSTRUCTION JOINT



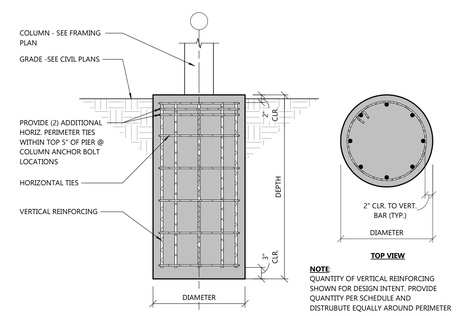

**NOTE:**
- THIS DETAIL APPLIES TO ALL CONCRETE RETAINING WALLS, BASEMENT WALLS AND ALL CONCRETE WALLS EXPOSED TO 2'-0" OR MORE.
- SEE WALL SCHEDULES/DETAILS FOR REQUIRED REINFORCING SIZE, SPACING, CLEAR DIMENSIONS, ETC.
- JOINT LOCATIONS ARE NOT SHOWN ON PLANS. PROVIDE JOINTS AT:
  - 25'-0" O.C. MAXIMUM
  - 15'-0" MAXIMUM FROM EACH CORNER/INTERSECTION
  - MATCH CONCRETE CONTROL JOINT w/ STRUCTURAL MASONRY WALL CONTROL JOINTS ABOVE (IF APPLICABLE). NOT REQUIRED AT MASONRY VENEER JOINTS

WALL CONTRACTION JOINT

### TYPICAL CONCRETE WALL JOINTS
NOT TO SCALE




### STEPPED FOOTING DETAIL
NOT TO SCALE




### TYPICAL SONOTUBE DETAIL
NOT TO SCALE

STRUCTURAL FOUNDATION SCHEDULES


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

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| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**S2.0**


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## PEMB COLUMN BASE SCHEDULE

**NOTES:**
- BASE PLATE CONFIGURATION PER PEMB SUPPLIER.
- ALL ANCHOR BOLTS SHALL BE INSTALLED FREE OF DIRT, OIL, OR ANY OTHER CONTAMINANTS WHICH MAY DESTROY OR REDUCE BOND TO CONCRETE PER SSPC-SP1.
- ANCHOR BOLTS SHALL BE PLACED IN FORMS PRIOR TO POURING CONCRETE TO ENSURE PROPER CONSOLIDATION OF CONCRETE AROUND ANCHOR BOLTS. ANCHOR BOLT MUST NOT BE PUSHED INTO ALREADY POURED CONCRETE.

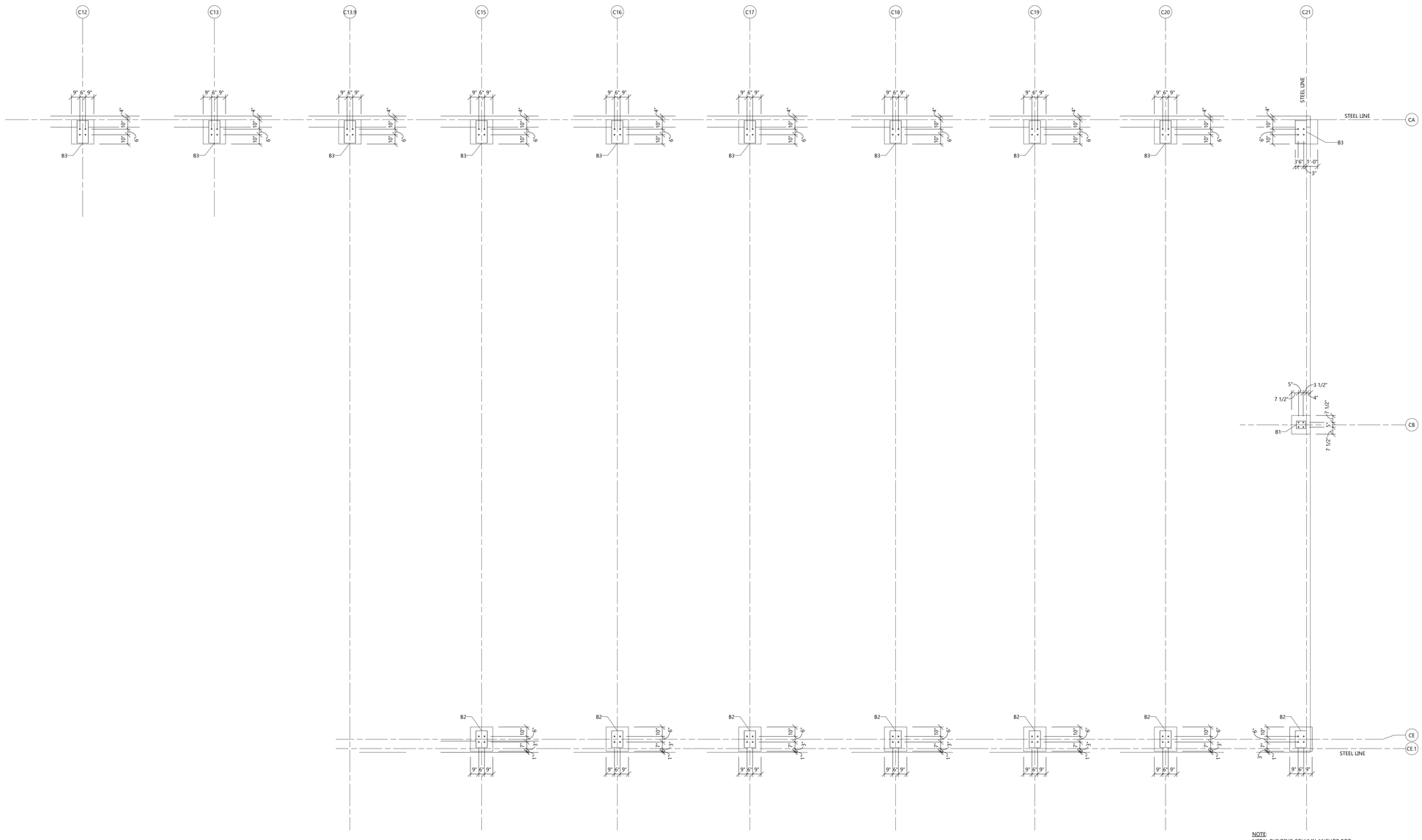
| | BASE CONDITION | | | BASE PLATE (PER PEMB DWG.) | | | BASE ANCHOR | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GROUT | | TYPE | SIZE | | | SIZE | | |
| MARK | TYPE | REQ'D | THICK. | (SEE PEMB) | W | L | TYPE | DIA. | EMBED. | REMARKS |
| B1 | 1 | No | | 1 | 8" | 10" | 1 | 1" | 24" | |
| B2 | 1 | No | | 1 | 12" | 18" | 1 | 1" | 24" | |
| B3 | 1 | No | | 1 | 12" | 24" | 1 | 1" | 24" | |

## PEMB FOUNDATION NOTES

- PRE-ENGINEERED METAL BUILDING (PEMB) ANCHOR BOLTS TO BE LOCATED PER METAL BUILDING ANCHOR BOLT PLAN IN CONJUNCTION w/ STRUCTURAL FOUNDATION PLAN.
- HAIRPIN REINFORCING AT COLUMNS NOTED ON PLANS IS REQUIRED TO MAINTAIN THE STRUCTURAL STABILITY OF THE BUILDING. THESE HAIRPINS SHALL NOT BE CUT OR REMOVED.
- CROSS TIE REINFORCING BETWEEN COLUMNS NOTED ON PLANS IS REQUIRED TO MAINTAIN THE STRUCTURAL STABILITY OF THE BUILDING. THESE CROSS TIES SHALL NOT BE CUT OR REMOVED.
- ARCHITECT/ENGINEER TO APPROVE FOUNDATION DETAILS w/ FINAL METAL BUILDING REACTIONS AND BASE PLATE LAYOUTS PRIOR TO POURING BUILDING FOUNDATIONS.
- **FOUNDATION DESIGN IS ON HOLD PENDING FINAL PEMB SHOP DRAWINGS AND BASE REACTIONS. DO NOT PRODUCE SHOP DRAWINGS, FABRICATE REBAR, OR INSTALL FOUNDATIONS UNTIL FINAL DESIGN IS COMPLETE.**

## PEMB ANCHOR BOLT NOTES

- ANCHOR BOLT LAYOUT AND SCHEDULE IS BASED ON DRAWINGS/REACTIONS PROVIDED TO EXCEL BY PEMB SUPPLIER DATED FEB. XX, 202X. ANY UPDATES AFTER THIS DATE HAVE NOT BEEN ACCOUNTED FOR IN ANCHOR BOLT/FOUNDATION DESIGN AND MUST BE VERIFED BY EXCEL PRIOR TO ANY WORK.
- PEMB SUPPLIER TO DESIGN PEMB STRUCTURE FOR LATERAL AND GRAVITY LOADS PROVIDED:
  - **NOTE:** DESIGN FOR ALL LOADS SHOWN ON FRAMING PLANS AND SO SHEETS. SEE SPECIFICATIONS FOR REQUIREMENTS OF DELEGATED DESIGN SUBMITTALS. STAMPED PLANS AND CALCULATIONS TO BE SUBMITTED TO EXCEL ENGINEERING FOR REVIEW PRIOR TO FABRICATION.
- ALL PEMB ANCHOR BOLTS MUST BE CAST-IN-PLACE. POST INSTALLED ANCHORS WILL NOT BE ACCEPTED.
- PEMB BASE PLATE DETAIL REFERS TO BUILDING SUPPLIER ANCHOR BOLT PLANS & DETAILS.
- VERIFY BOLT PROJECTION WITH PEMB SUPPLIER.
- PIER OUTLINES & ANCHOR BOLT LOCATIONS ARE FOR GENERAL REFERENCE. SEE FOUNDATION PLAN & PEMB DRAWINGS FOR FINAL DIMENSIONAL INFORMATION.



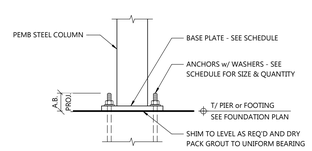

NOTE:
METAL BUILDING COLUMN ANCHOR ROD DIAMETERS & LOCATIONS ARE TO BE PER METAL BUILDING SUPPLIER'S COLUMN ANCHOR BOLT PLAN IN CONJUNCTION WITH THE FOUNDATION PLAN.

NORTH

## PEMB ANCHOR BOLT SETTING PLATE - AREA 'A'

SCALE: 1/8" = 1'-0"

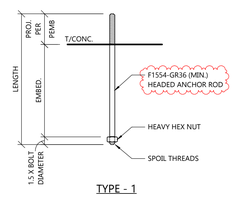
0' 8' 16'




TYPE - 1

## PEMB COLUMN BASE CONDITION TYPES

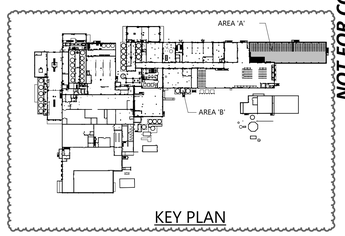
NOT TO SCALE




TYPE - 1

## PEMB COLUMN ANCHOR TYPES

NOT TO SCALE




KEY PLAN

## STRUCTURAL PEMB ANCHOR BOLT SETTING PLAN


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


**PROJECT INFORMATION**

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

**PROFESSIONAL SEAL**

*NOT FOR CONSTRUCTION*

**SHEET DATES**

**ISSUED FOR BID**

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

**JOB NUMBER**
250429500

**SHEET NUMBER**
**S2.1**

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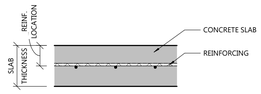
# CONCRETE SLAB ON GRADE SCHEDULE

**NOTES:**
- SEE STRUCTURAL SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
- "EARLY-ENTRY" SAWCUT JOINTS ARE DEFINED AS SAWCUTTING 1 TO 4 HOURS AFTER PLACMENT USING A DRY-CUT SAW WITH A SKID PLATE (1 HOUR IN HOT WEATHER & 4 HOURS IN COLD WEATHER).
- "WET-CUT" SAWCUT JOINTS ARE NOT PERMITTED.
- MICRO FIBER REINFORCING = FRC - BI BLEND 300 FIBRILATED MICRO FIBERS (ASTM C116 TYPE III)
- MACRO FIBER REINFORCING = FORTA FERRO MACRO FIBERS (ASTM 116 TYPE III). FINAL FIBER DOSAGE MUST BE VERIFED w/ FIBER REINFORCING & CONSULTING, LLC' AND INCLUDED IN CONCRETE MIX SUBMITTAL - CONTACT: DAN LARGE AT 262-685-7749 OR DAN.LARGE@FRCLLC.US

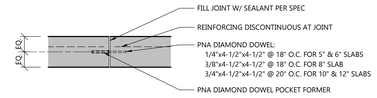
| | | CONCRETE | | | | | | SLAB JOINTING | | | | | BELOW SLAB INSULATION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | REINFORCING | | | | | SAWCUT JOINT (SJ) | | CONSTRUCTION JOINT (CJ) | | POUR JOINT (PJ) | | | | |
| | | | STEEL | | | FIBER | | | | | | | | | | |
| MARK | DESCRIPTION | THICKNESS | REINFORCING | LOCATION | - | TYPE | DOSAGE | TYPE | MAX. JOINT SPACING | TYPE | MAX. JOINT SPACING | TYPE | MAX. JOINT SPACING | TOTAL THICKNESS | MIN. COMP. STRENGTH | REQUIRED FINISH FLOOR ELEVATION COORDINATION | REMARKS |
| SG8 | 8" HEAVY DUTY | 8" | #5 @ 16" O.C. EA. WAY | CENTERED | AND | MICRO | 1.5 LBS/CU. YD. | SJ-B | 16'-0" | CJ-A | 60'-0" | PJ-A | 60'-0" | - | - | - | |




SINGLE LAYER OF REBAR

## REINFORCING DETAIL

NOT TO SCALE

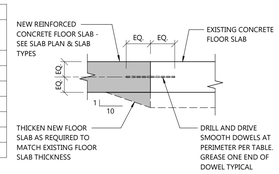



TYPE PJ-A

## POUR JOINT TYPES

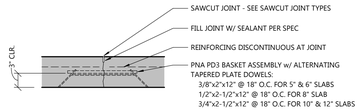
NOT TO SCALE

| SMOOTH DOWEL SIZE & SPACING (PER ACI 302) | | | |
|---|---|---|---|
| SLAB DEPTH (IN.) | DIAMETER (IN.) | TOTAL LENGTH (IN.) | SPACING (IN.) |
| 4 | 1/2 | 12 | 12 |
| 5 | 5/8 | 12 | 12 |
| 6 | 3/4 | 16 | 12 |
| 7 | 7/8 | 16 | 12 |
| 8 | 1 | 18 | 12 |
| 9 | 1 1/8 | 18 | 12 |
| >/=10 | 1 1/4 | 20 | 12 |




## NEW TO EXISTING SLAB JOINT DETAIL

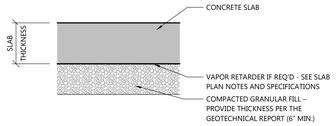
NOT TO SCALE




TYPE CJ-A

## CONSTRUCTION JOINT TYPES

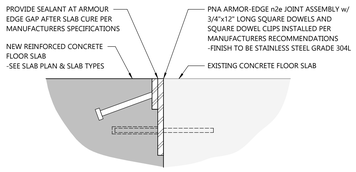
NOT TO SCALE




TYPICAL CONCRETE SLAB ON GRADE

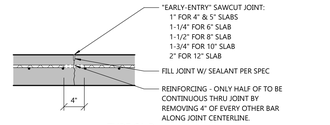
## CONCRETE SLAB ON GRADE DETAIL

NOT TO SCALE




## ARMOR JOINT AT EXISTING SLAB DETAIL

NOT TO SCALE




TYPE SJ-B

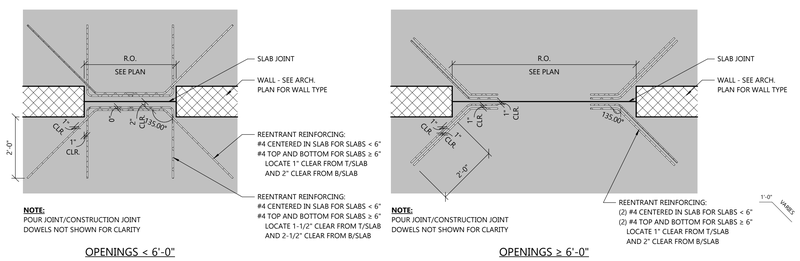
## SAWCUT JOINT TYPES

NOT TO SCALE

# CONCRETE S.O.G. DESIGN CAPACITY SCHEDULE

**NOTES:**
- AXLE LOAD CAPACITY BASED ON WHEEL SPACING OF 3 FT AND TIRE INFLATION PRESSURE OF 110 PSI.
- RACKING LEG LOAD CAPACITIES BASED ON LEG SPACING OF 4 FT x 4 FT AND MIN. PLATE SIZE OF 3 IN x 5 IN.
- RACKING LEG LOAD PLATE DIMENSIONS PROVIDED FOR GENERAL USE. CONTACT EXCEL ENGINEERING FOR ALTERNATE PLATE CONDITIONS PRIOR TO APPLICATION OF LOAD.
- TABLE LOADS ARE GIVEN AS ALLOWABLE LOADS (ASD) FOR MAXIMUM COMBINED LOADING.

| | SLAB DESIGN CAPACITIES | | | |
|---|---|---|---|---|
| MARK | MAX. UNIFORM LOAD | MAX. AXLE LOAD | MAX. RACKING LEG LOAD | REMARKS |
| SG8 | 1,200 PSF | 20,000# | 12,000# | |

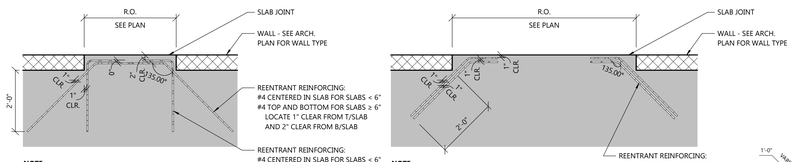



**NOTE:**
POUR JOINT/CONSTRUCTION JOINT DOWELS NOT SHOWN FOR CLARITY

OPENINGS < 6'-0"

OPENINGS ≥ 6'-0"

**DOOR/OPENING CONDITIONS WITH SLAB JOINT LOCATED BETWEEN WALL**




**NOTE:**
POUR JOINT/CONSTRUCTION JOINT DOWELS NOT SHOWN FOR CLARITY

OPENINGS < 6'-0"

OPENINGS ≥ 6'-0"

**DOOR/OPENING CONDITIONS WITH SLAB JOINT LOCATED FLUSH TO ONE SIDE OF WALL**

## SLAB ON GRADE REINFORCING AT DOORS/OPENINGS DETAIL

NOT TO SCALE


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**S2.2**

STRUCTURAL SLAB ON GRADE SCHEDULES AND DETAILS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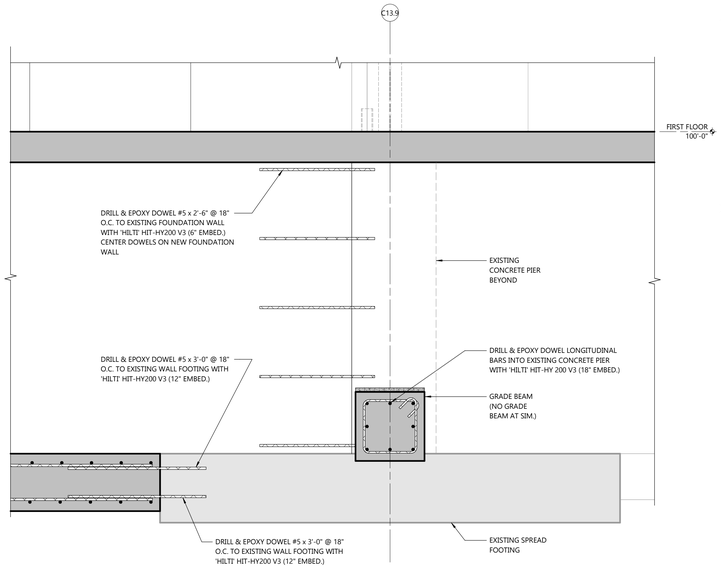
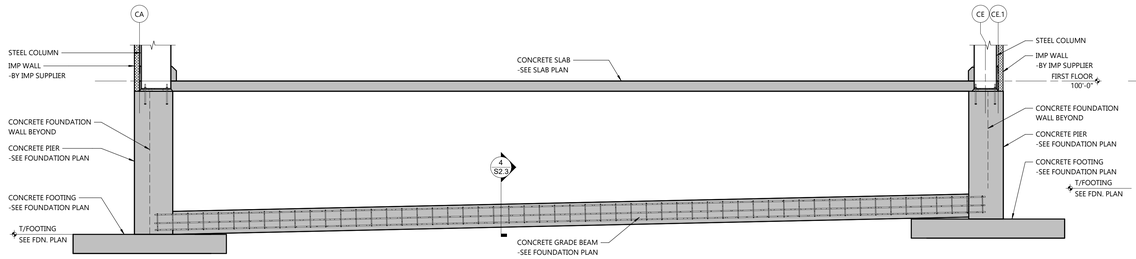
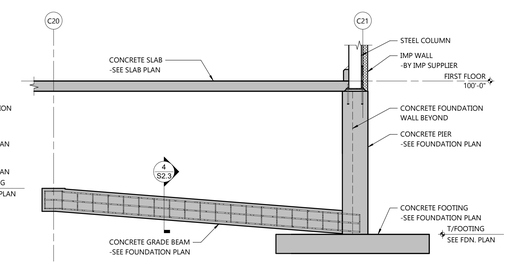


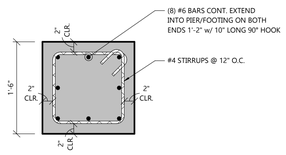

1 / S2.3 FOUNDATION SECTION
SCALE: 3/4" = 1'-0"




3 / S2.3 FOUNDATION SECTION
SCALE: 1/4" = 1'-0"




2 / S2.3 FOUNDATION SECTION
SCALE: 1/4" = 1'-0"




4 / S2.3 GRADE BEAM DETAIL
SCALE: 1" = 1'-0"

STRUCTURAL FOUNDATION DETAILS

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
IFB APR. 17, 2026

JOB NUMBER
250429500

SHEET NUMBER
**S2.3**

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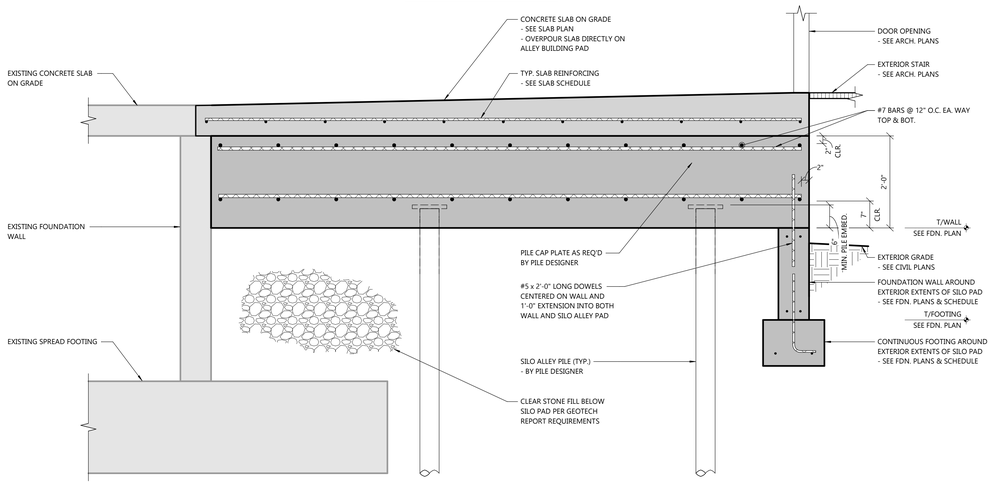
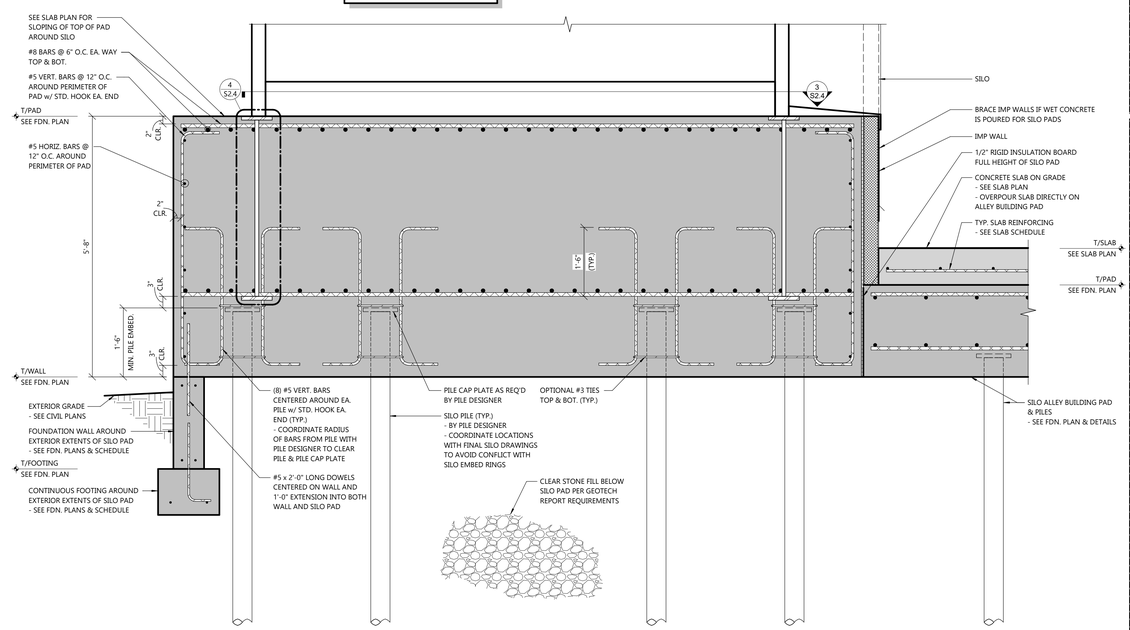
**NOTE:**
PILE DESIGN & ANCHORAGE TO SILO ALLEY PAD IS DELEGATED DESIGN.
- SEE SPECIFICATIONS & PILE NOTES




2 / S2.4 SILO ALLEY PAD FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

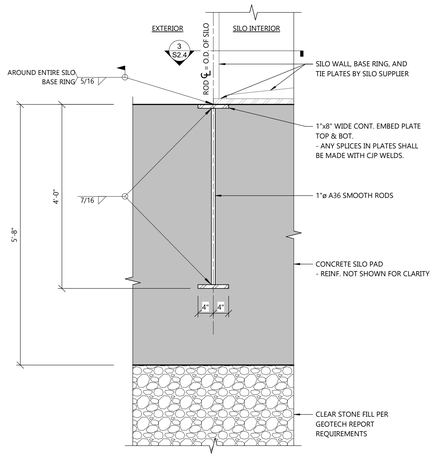
**NOTE:**
PILE DESIGN & ANCHORAGE TO SILO PAD IS DELEGATED DESIGN.
- SEE SPECIFICATIONS & PILE NOTES

**NOTE:**
SILO PAD DESIGNED FOR 40K GALLON (WATER FILLED) SILO WITH 143" DIAMETER.

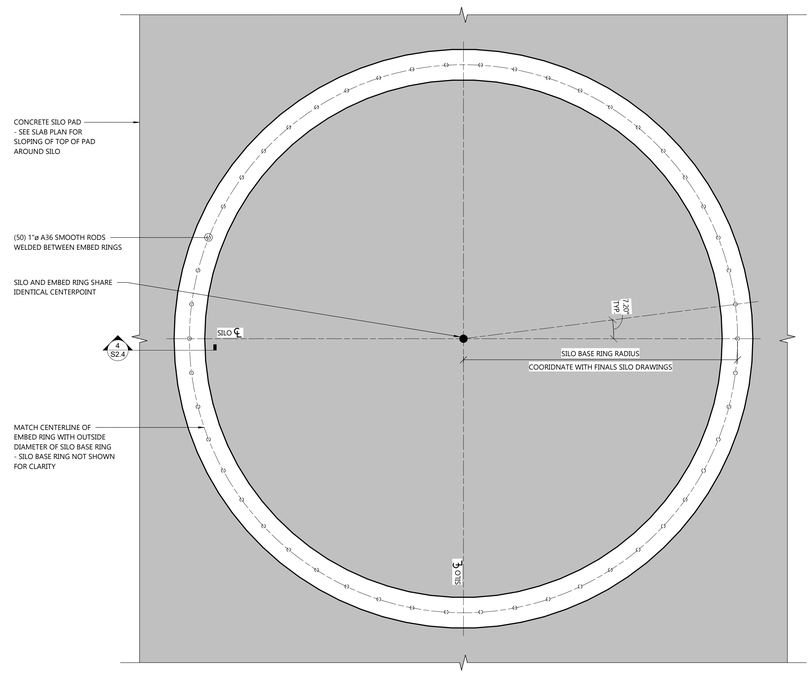



1 / S2.4 SILO PAD FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

**NOTE:**
CONFIRM FINAL SILO DRAWING DIMENSIONS PRIOR TO POURING FOUNDATIONS. CONTACT EXCEL ENGINEERING IF CONFLICTS ARISE.




4 / S2.4 SILO EMBED RING SECTION
SCALE: 3/4" = 1'-0"




3 / S2.4 SILO EMBED RING PLAN
SCALE: 3/4" = 1'-0"

STRUCTURAL SILO PAD DETAILS


EXCEL
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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
AD1 APR. 29, 2026

JOB NUMBER
250429500

SHEET NUMBER
**S2.4**


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# STEEL COLUMN SCHEDULE

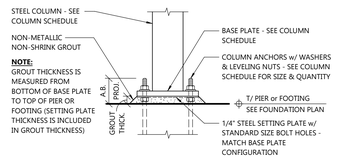
**NOTES:**

- SEE COLUMN BASE EMBED PLATE SCHEDULE FOR REQUIRED CAST-IN-PLACE EMBED WHEN PLATE/ANCHOR PATTERN = "EMBED PLATE".
- SEE COLUMN BASE LUG SCHEDULE FOR REQUIRED FORMED FOUNDATION RECESS AND ATTACHED STEEL LUG WHEN BASE LUG IS REQUIRED.
- PROVIDE OVERSIZED HOLES IN BASEPLATES FOR ALL ANCHOR BOLTS AS NOTED BELOW. PROVIDE WASHERS FOR ALL ANCHOR BOLTS AS NOTED BELOW. PLATE WASHERS TO HAVE STANDARD SIZE HOLE (ANCHOR BOLT Ø + 1/16") AND MAY BE CIRCULAR OR SQUARE:
  1/2" TO 5/8" ø AB = 9/16" ø TO 11/16" ø HOLE WITH ASTM F844 STANDARD WASHER
  3/4" ø AB = 1 1/16" ø HOLE WITH ASTM F844 STANDARD WASHER (FOR BASE PLATES LESS THAN 1 1/4" THICK) OR 3/4" ø AB = 1 5/16" ø HOLE WITH PLATE WASHER
  7/8" ø AB = 1 9/16" ø HOLE WITH PLATE WASHER; 1" ø AB = 1 13/16" ø HOLE WITH PLATE WASHER; 1 1/4" ø AB = 2 1/16" ø HOLE WITH PLATE WASHER; 1 1/2" ø AB = 2 5/16" ø HOLE WITH PLATE WASHER;
  1 3/4" ø AB = 2 3/4" ø HOLE WITH A36 PLATE WASHER; 2" ø AB = 3 1/4" ø HOLE WITH PLATE WASHER; 2 1/4" ø AB = 3 1/2" ø HOLE WITH PLATE WASHER; 2 1/2" ø AB = 3 3/4" ø HOLE WITH PLATE WASHER
- ALL PLATE WASHERS TO BE A36 UNLESS NOTED OTHERWISE
- ALL ANCHOR BOLTS SHALL BE INSTALLED FREE OF DIRT, OIL, OR ANY OTHER CONTAMINANTS WHICH MAY DESTROY OR REDUCE BOND TO CONCRETE PER SSPC-SP1....

**REMARKS:**

1. COLUMN TO BASE PLATE WELDS ARE DEMAND CRITICAL.

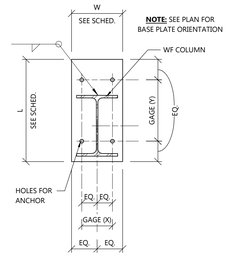
| COLUMN | | BASE CONDITION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | TOP CONDITION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | BASE SUPPORT | | | | | BASE PLATE | | | | | | | | | | | BASE ANCHORAGE | | | | | | | | | | BASE LUG | | | | CAP PLATE | | | | | | CAP ANCHORAGE | | | | |
| | | | GROUT | | INSULATION | | | PLATE/ANCHOR PATTERN | | SIZE | | | ECCENTRICITY | | ANCHOR DIMENSIONS | | | ANCHOR | | | | | WASHER | | | | | | | | | PLATE/ANCHOR PATTERN | | | | | | | | | | |
| LOCATION MARK | SIZE | TYPE | REQ'D | THICK. | REQ'D | THICK. | REQ'D | (QTY.) LAYOUT | TYPE | T | W | L | E (X) | E (Y) | EDGE. | GAGE (X) | GAGE (Y) | WELD | REQ'D | SYSTEM | TYPE | DIA. | PROJ. | EMBED. | REQ'D | THICK. | SIZE | WELD | REQ'D | NOTE | SHEAR EMBED PLATE | TENSION EMBED PLATE | REQ'D | (QTY.) LAYOUT | TYPE | T | W | L | WELD | REQ'D | SYSTEM | TYPE | DIA. | REMARKS |
| AREA 'F' SILO ALLEY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1-BA | W8X24 | A | Yes | 2" | No | | Yes | (4) INSET | B | 1" | 11" | 17" | 0" | 3" | | 6" | 9" | 5/16 | Yes | CIP | B | 1" | 5" | 18" | Yes | 3/8" | 3" | 3/16 | No | | - | - | No | | | | | | - | No | | | | |
| B1-BB | W8X24 | A | Yes | 2" | No | | Yes | (4) INSET | B | 1" | 11" | 17" | 0" | 3" | | 6" | 9" | 5/16 | Yes | CIP | B | 1" | 5" | 18" | Yes | 3/8" | 3" | 3/16 | No | | - | - | No | | | | | | - | No | | | | |
| B2-BA | W8X24 | A | Yes | 2" | No | | Yes | (4) INSET | B | 1" | 11" | 17" | 0" | 3" | | 6" | 9" | 5/16 | Yes | CIP | B | 1" | 5" | 18" | Yes | 3/8" | 3" | 3/16 | No | | - | - | No | | | | | | - | No | | | | |
| B2-BB | W8X24 | A | Yes | 2" | No | | Yes | (4) INSET | B | 1" | 11" | 17" | 0" | 3" | | 6" | 9" | 5/16 | Yes | CIP | B | 1" | 5" | 18" | Yes | 3/8" | 3" | 3/16 | No | | - | - | No | | | | | | - | No | | | | |




TYPE - A

COLUMN BASE CONDITION TYPES

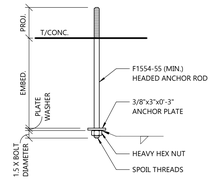
NOT TO SCALE




(4) INSET - B

STANDARD BASE PLATE TYPES

NOT TO SCALE

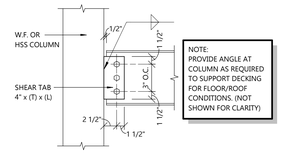



TYPE - B

COLUMN ANCHOR TYPES

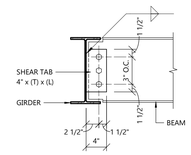
NOT TO SCALE

# STANDARD WIDE FLANGE CONNECTION DETAILS




| BEAM SIZE | BOLT DIA. | NO. OF BOLT ROWS | HOLE TYPE | 'T' THICKNESS (MIN.) | 'L' LENGTH (MIN.) | WELD (MIN.) | REMARKS |
|---|---|---|---|---|---|---|---|
| W8, W10 | 3/4" | 2 | STD/SSLT | 3/8" | 6" | 1/4" | NO 8" BEAMS LARGER THAN W8X24 |
| W12, W14 | 3/4" | 3 | STD/SSLT | 3/8" | 9" | 1/4" | |
| W16 | 3/4" | 4 | STD/SSLT | 3/8" | 12" | 1/4" | |
| W18, W21 | 3/4" | 5 | STD/SSLT | 3/8" | 15" | 1/4" | |
| W24 | 3/4" | 6 | SSLT | 3/8" | 18" | 1/4" | |
| W27, W30, W33, W36 | 3/4" | 7 | SSLT | 3/8" | 21" | 1/4" | |

E WF BEAM/COLUMN SHEAR TAB

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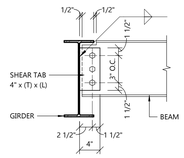


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| BEAM SIZE | BOLT DIA. | NO. OF BOLT ROWS | 'T' THICKNESS (MIN.) | 'L' LENGTH (MIN.) | WELD (MIN.) | REMARKS |
|---|---|---|---|---|---|---|
| W8, W10 | 3/4" | 2 | 1/4" | 6" | 3/16" | NO 8" BEAMS LARGER THAN W8X24 |
| W12, W14 | 3/4" | 3 | 1/4" | 9" | 3/16" | |
| W16 | 3/4" | 4 | 1/4" | 12" | 3/16" | |
| W18, W21 | 3/4" | 5 | 1/4" | 15" | 3/16" | |
| W24 | 3/4" | 6 | 5/16" | 18" | 1/4" | |
| W27, W30, W33, W36 | 3/4" | 7 | 5/16" | 21" | 1/4" | |

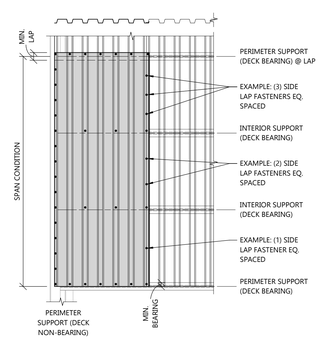
C WF BEAM/BEAM SHEAR TAB

# STEEL DECK SCHEDULE

**NOTES:**

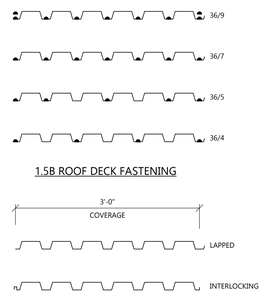
- SEE STRUCTURAL SPECIFICATIONS FOR SHOP APPLIED FINISH REQUIREMENTS.
- MODIFIERS:
  A (ACOUSTIC), I (INTERLOCKING), IA (INTERLOCKING AND ACOUSTIC), P (PAN), PA (PAN AND ACOUSTIC), PL (PUNCH LOCK), R (REVERSE), V (VENTED)
- SUPPORT FASTENERS (U.N.O):
  HILTI: X-HSN24 (SUPPORT THICKNESS < 1/4"), X-ENP19 (SUPPORT THICKNESS ≥ 1/4"). ALTERNATE: 5/8" DIAMETER PUDDLE WELD
  WELD: 5/8" DIAMETER PUDDLE WELD
- SIDE LAP FASTENERS (U.N.O):
  TEK: #10 TEK SCREW
  HILTI: S-SLC 01 M HWH
  PUNCHLOK: PUNCHLOK II VSC2
- SPAN CONDITION PER SCHEDULE IS MINIMUM. SUPPLIER TO LAYOUT DECK TO MEET SPAN REQUIREMENTS UNLESS APPROVED OTHERWISE IN DECK SHOP DRAWING

| | DECK DESIGNATION | | | | PERIMETER SUPPORT (DECK BEARING) | | | INTERIOR SUPPORT (DECK BEARING) | | | PERIMETER SUPPORT (DECK NON-BEARING) | | SIDE LAP | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MARK | TYPE | MODIFIER | THICKNESS (GAGE) | SPAN CONDITION | PATTERN | FASTENER | MIN. BEARING | PATTERN | FASTENER | MIN. LAP | SPACING | FASTENER | QTY. PER SPAN | FASTENER | REMARKS |
| DK-S1 | 1.5B | - | 22 | 3-SPAN | 36/4 | HILTI | 1-1/2" | 36/4 | HILTI | 2" | 6" O.C. | HILTI | 1 | HILTI | |




TYPICAL STEEL DECK DETAIL

NOT TO SCALE




1.5B ROOF DECK FASTENING

1.5B ROOF DECK PROFILE

ROOF DECK PROFILE AND FASTENING DETAIL

NOT TO SCALE

STRUCTURAL FRAMING SCHEDULES


EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

AD1 APR. 29, 2026

JOB NUMBER

250429500

SHEET NUMBER

**S3.0**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# FIRE PROTECTION SPECIFICATIONS

## DIVISION 21 FIRE PROTECTION

### 21 05 00 BASIC FIRE PROTECTION REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS AND DIVISION OF WORK DESCRIPTION.
B. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
   1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS.
   2. FIRE PROTECTION CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
      a. ALL SCHEDULED EQUIPMENT
      b. SPRINKLER SYSTEM/FIRE PROTECTION PLANS
      c. HANGERS
      d. PIPE IDENTIFICATION
   3. AS-BUILT DRAWINGS SHALL BE MARKED ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
C. FINISHING AND PAINTING
   1. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE PIPING OR EQUIPMENT TO THE SATISFACTION OF THE OWNER.
D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
E. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
F. FULLY COOPERATE WITH OTHER TRADES AND FURNISH ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED WITH LEAST POSSIBLE INTERFERENCE OR DELAY.
G. COORDINATE WORK WITH OTHER CONTRACTORS AND MAKE ADJUSTMENTS TO THE FIRE PROTECTION SYSTEM INSTALLATION WHERE IT WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES.
H. IF THE FPC INSTALLS WORK BEFORE COORDINATING IT WITH OTHER TRADES SO AS TO CAUSE INTERFERENCE WITH WORK OF OTHER TRADES, THE FPC SHALL MAKE NECESSARY CHANGES IN THE WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGES.
I. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR FIRE PROTECTION WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES.
J. FIRE RATED INTERIOR WALL AND FLOOR PIPE PENETRATIONS
   1. SLEEVE REQUIRED FOR PENETRATION OF CONCRETE AND MASONRY WALLS AND FLOORS.
   2. SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
   3. FIRE-RESISTIVE JOINT SYSTEM PRODUCTS BY THE SAME MANUFACTURER AS BEING USED ON THE REMAINDER OF THE PROJECT.
   4. PROVIDE UL ASSEMBLY PENETRATION NUMBER TO AHJ COMPLIANT WITH BUILDING UL ASSEMBLY 30 DAYS PRIOR TO INSTALLATION IF REQUIRED BY AHJ.
K. SEE PLANS FOR ADDITIONAL WALL AND FLOOR PENETRATION DETAILS.
L. ESCUTCHEONS
   1. INSTALL ONE-PIECE (TWO PIECE FOR EXISTING PIPING) POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS (ROOMS WHICH DON'T HAVE UNFINISHED CONCRETE FLOORS).
   2. ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.
   3. ID TO CLOSELY FIT AROUND PIPE/INSULATION, OD THAT COMPLETELY COVERS THE OPENING.
   4. SEE DETAILS FOR ESCUTCHEONS IN PROCESS ROOMS.
M. PROVIDE A COMPLETE DESIGN BUILD FIRE PROTECTION SYSTEM FOR THE PROPOSED PROJECT.
N. THE REQUIREMENTS OF MUNICIPAL AND STATE CODES, LAWS, ORDINANCES AND REGULATIONS, AND NFPA ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO THE WORK.
O. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND SIZING THE DISTRIBUTION SYSTEMS BY HYDRAULIC CALCULATION, AND SHALL PROVIDE THE NECESSARY ENGINEERING DRAWINGS AND CALCULATIONS TO OBTAIN ACCEPTANCE OF ALL AUTHORITIES HAVING JURISDICTION.
P. DESIGN COORDINATION
   1. REVIEW DESIGN AND PROJECT SCOPE AND INFORM EXCEL ENGINEERING INC OF ANY SPRINKLER SYSTEM IMPACTS ON BUILDING DESIGN WITHIN 7 DAYS OF CONTRACTOR SELECTION.
   2. IF FIRE PROTECTION DESIGN REQUIRES ANY MODIFICATIONS OR ADDITIONS TO THE BUILDING AFTER CONSTRUCTION BEGINS, IN ORDER TO MEET THE SPRINKLER SYSTEM REQUIREMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF MODIFICATIONS OR ADDITIONS OR SHALL SPECIFICALLY NOTE IN THE BID THE WORK REQUIRED.
Q. RACK STORAGE
   1. INCLUDE WITH BID THE FOLLOWING INFORMATION:
      a. LIST OF ITEMS REQUIRING ELECTRICAL CONNECTION, AND THE ASSOCIATED LOAD.
      b. DESCRIPTION OF SPRINKLER SYSTEM PROPOSED FOR RACK STORAGE AREAS INCLUDING:
         1). ASSUMED FLUE SPACE
         2). NUMBER OF HORIZONTAL BARRIERS REQUIRED, IF ANY, AND LEVELS.
         3). NUMBER OF ROWS OF IN-RACK SPRINKLERS, AND LEVELS.
         4). SPRINKLER LOCATIONS.
         5). MEANS OF ACHIEVING SPRINKLER/PIPE PROTECTION IN RACKS.
      c. AREA REQUIRED FOR SPRINKLER RISER AND EQUIPMENT.
   2. PARTICIPATE IN ANY PRE-BID MEETINGS OR WALK-THROUGHS WITH GC AND OWNER TO VERIFY STORAGE REQUIREMENTS.
   3. DOCUMENT IN BID ALL ASSUMPTIONS RELATED TO STORAGE OCCUPANCIES.
   4. INFORMATION PROVIDED IS INTENDED TO PROVIDE A BASIS OF DESIGN WITH INFORMATION AVAILABLE AT TIME OF SCOPE DRAWING ISSUE.
      a. CONTRACTOR SHALL VERIFY DESIGN CRITERIA PRIOR TO BEGINNING OF DESIGN.
      b. FAILURE TO DO SO IS CONTRACTOR'S RESPONSIBILITY AS THE LICENSED DESIGN PROFESSIONAL, NOT OWNER'S OR EXCEL'S.
   5. IN-RACK SPRINKLERS.
      a. COORDINATE PIPE ROUTING, SPRINKLER PLACEMENT, REQUIRED FLUE SPACES, REQUIRED HORIZONTAL BARRIERS AND RACK HEIGHTS TO ACHIEVE REQUIRED CLEARANCES WITH RACK SUPPLIER. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM RACK SUPPLIER THAT PIPES AND SPRINKLERS DO NOT INTERFERE WITH PALLET PLACEMENT AND THAT PIPE ROUTING DOES NOT CAUSE ANY CONFLICTS WITH THE RACKS.
      b. REVIEW PIPE ROUTING AND SPRINKLER PLACEMENT WITH OWNER PRIOR TO INSTALLATION FOR ACCEPTABILITY OF PIPE AND SPRINKLER PLACEMENT. PROVIDE MEETING MINUTES OF THE MEETING.
      c. VERIFY AND DOCUMENT TOP OF PRODUCT HEIGHTS AND REQUIRED CLEARANCES NEEDED FOR PALLET PLACEMENT AT EACH RACK LEVEL WITH OWNER AND RACK SUPPLIER. CONTRACTOR TO OBTAIN OWNER SIGNOFF BEFORE INSTALLING ANY PIPING.
      d. IN-RACK SPRINKLER PIPING AND SPRINKLERS SHALL NOT BE INSTALLED ABOVE PALLET LOAD AREA UNLESS SPECIFICALLY IDENTIFIED BY CONTRACTOR AND SIGNED OFF BY OWNER. ALL PIPING AND SPRINKLERS SHALL BE LOCATED OUT OF HARMS WAY. PROVIDE PROTECTION WHEN NEEDED TO PREVENT ACCIDENTAL DAMAGE.
R. COMPLETE DESIGN AND SUBMIT FOR APPROVAL TO AUTHORITIES HAVING JURISDICTION WITHIN 60 DAYS OF CONTRACT AWARD. CONSTRUCTION REWORK COSTS INCURRED BY OTHER CONTRACTORS DUE TO FAILURE BY FPC TO OBTAIN APPROVAL IN A TIMELY MANNER SHALL BE BORNE BY THE FIRE PROTECTION CONTRACTOR.
S. DRAWINGS INDICATING NEW FIRE PROTECTION SYSTEMS TO BE INSTALLED WITH PIPE SIZES, ETC., AND COPY OF SYSTEMS HYDRAULIC CALCULATIONS SHALL BE SUBMITTED TO THE FOLLOWING FOR REVIEW:
   1. EXCEL ENGINEERING
   2. NUMBER OF PRINTS AS REQUIRED TO LOCAL FIRE DEPARTMENT AUTHORITY.
   3. NUMBER OF PRINTS AS REQUIRED TO OWNER'S INSURING AUTHORITY.
   4. PROVIDE A COPY OF ALL REVIEW COMMENTS FROM LOCAL FIRE DEPARTMENT AUTHORITY AND OWNER'S INSURING AUTHORITY, ALONG WITH ANY RESPONSE TO SAID COMMENTS, TO EXCEL ENGINEERING FOR THEIR RECORDS.
T. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR STATE OF UTAH AND/OR LOCAL SUBMITTAL AND PLAN REVIEW FEES.
U. FIRE PROTECTION CONTRACTOR SHALL BE LICENSED BY THE STATE OF UTAH TO FURNISH AND INSTALL FIRE PROTECTION SYSTEMS.
V. LEAVE SYSTEM IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
   1. FURNISH THE NECESSARY SKILLED, QUALIFIED PERSONNEL FOR OPERATING THE SYSTEM FOR A TOTAL OF ONE HALF HOUR (0.5) UPON COMPLETION OF ALL WORK AND TESTS.
   2. INSTRUCT THE OWNER'S REPRESENTATIVE FULLY IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF EQUIPMENT FURNISHED.
   3. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS, DOCUMENTING THE DATE, TIME INVOLVED, PEOPLE IN ATTENDANCE AND HAVE THE OWNER'S REPRESENTATIVE ATTEST IN WRITING FOR EACH SESSION HELD.
W. AVAILABLE WATER FLOW DATA
   1. FIRE FLOW TEST:
      a. TEST TAKEN BY: CITY OF HYRUM.
      b. DATE TAKEN: SEPTEMBER, 25, 2025.
      c. STATIC PRESSURE: 110 PSIG.
      d. RESIDUAL PRESSURE: 65 PSIG.
      e. GPM FLOWING: 1,300 GPM.
   2. WATER TEST DATA IS PRELIMINARY FOR BIDDING PURPOSES. FPC IS RESPONSIBLE TO VERIFY AND OBTAIN ANY ADDITIONAL TEST DATA REQUIRED FOR DESIGN. TESTS TO BE REPRESENTATIVE OF HIGH WATER USE PERIODS.
X. TESTS AND INSPECTIONS
   1. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND CERTIFICATION OF SYSTEMS AND ORDERING INSPECTIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
   2. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF AND TO THE SATISFACTION OF THE OWNER OR AN AUTHORIZED REPRESENTATIVE.
   3. INSPECTIONS SHALL BE MADE BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND INSPECTORS HAVING JURISDICTION.

### 21 05 13 ELECTRICAL WORK

A. FURNISH AND INSTALL ALL ALARM, FLOW AND TAMPER SWITCHES, AND THE INTERFACE WIRING BETWEEN THEM. ALL DEVICES SHALL BE 110 VAC. PROVIDE TRANSFORMERS AS REQUIRED IF VOLTAGE REQUIREMENT IS LOWER THAN 110 VAC.
B. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO WIRE FROM THE AUTOMATIC SPRINKLER SYSTEM COMPONENTS TO THE BUILDING FIRE ALARM SYSTEM.

### 21 05 29 SUPPORTS AND HANGERS

A. PROVIDE PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH NFPA 13
B. ALL HANGERS AND COMPONENTS SHALL BE GALVANIZED UNLESS NOTED OTHERWISE.
C. PROCESS ROOMS
   1. THE FOLLOWING SPECIFICATIONS FOR PROCESS ROOMS SHALL TAKE PRECEDENCE OVER OTHER SPECIFICATIONS FOR SIMILAR ITEMS. WHERE OTHER SPECIFICATIONS LIST ADDITIONAL DETAIL, THOSE ADDITIONAL DETAILS SHALL ALSO APPLY TO PROCESS ROOM ITEMS.
   2. SEE PROCESS ROOM HANGER DETAILS.
   3. STRUT SYSTEMS ARE NOT PERMITTED.
   4. ALL MATERIALS SHALL BE STAINLESS STEEL.
   5. USE OF THREADS SHALL BE MINIMIZED.
D. PROVIDE SEISMIC-RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.
   1. SEISMIC DESIGN RESPONSIBILITIES FOR EQUIPMENT SUPPLIER:
   2. THE EQUIPMENT SUPPLIER IS RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THE PROVIDED EQUIPMENT INCLUDING ALL SUPPORTING ELEMENTS SUCH AS LEGS, SKIDS, CURBS, AND ANCHORAGE.
   3. DESIGN MUST INCORPORATE THE SEISMIC LOADS SPECIFIED IN THESE CONSTRUCTION DOCUMENTS AND ALL APPLICABLE BUILDING CODES AS WELL AS ALL RELATED SEISMIC DETAILING REQUIREMENTS.
   4. SEE STRUCTURAL SPECIFICATIONS AND DESIGN CRITERIA ON THE S0 SHEETS FOR LIST OF SUBMITTALS AND DESIGN VALUES.
E. HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.
F. ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:
   1. MAXIMUM HANGER LOAD OF 50 LBS.
   2. ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.
   3. ANCHOR LENGTH SHALL EXCEED DECK DEPTH.

### 21 05 53 IDENTIFICATION

A. PROCESS ROOMS
   1. THE FOLLOWING SPECIFICATIONS FOR PROCESS ROOMS SHALL TAKE PRECEDENCE OVER OTHER SPECIFICATIONS FOR SIMILAR ITEMS. WHERE OTHER SPECIFICATIONS LIST ADDITIONAL DETAIL, THOSE ADDITIONAL DETAILS SHALL ALSO APPLY TO PROCESS ROOM ITEMS.
   2. PIPE IDENTIFICATION
      a. PIPE MARKERS
         1). MANUFACTURERS: MARKING SERVICES MS-995 MAXILAR, BRADY B-689, SETON ULTRA-MARK WRAP AROUND.
         2). LAYER OF POLYESTER FILM AND PROTECTIVE FILM WITH PRINTED GRAPHICS LAMINATED BETWEEN THE TWO LAYERS. TOP LAYER TO PROVIDE UV AND FADE PROTECTION.
         3). MARKERS MECHANICALLY APPLIED BY WRAPPING COMPLETELY AROUND THE PIPE AND SEALING IN PLACE WITH AN ADHESIVE SEALING STRIP, OR STRAPPING ONTO THE PIPE SURFACE WITH MARKING SERVICES NO. 15710, 15711 OR 15712 STAINLESS STEEL STRAPS.
         4). GLUE EDGES TO PIPE.
   3. PROVIDE IDENTIFICATION PER NFPA 13

### 21 13 13 PIPING

A. DESIGN REQUIREMENTS: ALL SYSTEM COMPONENTS SHALL BE RATED FOR THE MAXIMUM WORKING PRESSURE TO WHICH THEY ARE EXPOSED BUT NOT LESS THAN 175 PSIG.
B. PIPE AND FITTINGS PROVIDE PER NFPA 13
C. PROCESS ROOMS:
   1. ALL PIPING IN PROCESS ROOMS SHALL BE BUTT WELDED SCHEDULE 10 STAINLESS STEEL.
   2. WELDS SHALL BE:
      a. SMOOTH (SMOOTH, CROWN AND SOME SLIGHT RIPPLES PRESENT, WELD IS NOT FLUSH WITH PARENT MATERIAL, DISCOLORATION GONE).
      b. FULL PENETRATION NOT REQUIRED.
   3. EVERY STAINLESS STEEL WELDER ON THE PROJECT SHALL PROVIDE SAMPLE WELD FOR APPROVAL BY OWNER PRIOR TO PERFORMING ANY SS WELDS ON THE PROJECT. ALL FINAL WELDS WILL BE SUBJECT TO REVIEW TO MEET SAMPLE WELD QUALITY.
D. RUBBER GASKETED GROOVED FITTINGS ONLY PERMITTED WHERE CONNECTING TO EXISTING PIPE SYSTEM.
E. COORDINATION
   1. COORDINATE LOCATIONS OF PIPING WITH PIPING, DUCTWORK, CONDUIT AND EQUIPMENT OF OTHER CONTRACTORS.
   2. REVIEW DRAWINGS FOR EXACT LOCATION OF PIPE SPACES, CEILING HEIGHTS, CEILING GRID, LIGHT FIXTURES AND GRILLES BEFORE INSTALLING PIPING.
   3. INSTALL WITH SUFFICIENT CLEARANCES FOR INSTALLATION OF OTHER CONTRACTOR'S WORK.
   4. PIPING SHALL NOT OBSTRUCT SERVICE CLEARANCES REQUIRED FOR EQUIPMENT AND VALVES.
   5. PIPING SHALL NOT BE INSTALLED BELOW OR WITHIN 45 DEG OF LIGHT EDGE.
   6. DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, MOTOR CONTROL CENTERS, SWITCHBOARDS OR OTHER ELECTRICAL DISTRIBUTION EQUIPMENT.
F. PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES NOT PREFINISHED, READY FOR FINISH PAINTING.
G. INSTALLATION
   1. INSTALL PIPE AND FITTINGS IN ACCORDANCE WITH NFPA 13, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES.
   2. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE. CONCEAL PIPING WITHIN WALLS AND CHASES OR ABOVE CEILINGS.
   3. INSTALL PIPING PARALLEL TO WALLS AND CEILINGS AND AT HEIGHTS WHICH DO NOT OBSTRUCT WINDOWS, DOORWAYS, STAIRWAYS, OR PASSAGEWAYS. OFFSET OR REROUTE PIPING TO CLEAR INTERFERENCES WHICH DEVELOP IN THE FIELD.
   4. INSTALL PIPING LEVEL, TAKING INTO ACCOUNT DRAINAGE REQUIREMENTS. PIPING SHALL NOT FOLLOW ROOF PITCH WHERE PITCH CHANGES.
   5. INSTALL SPRINKLERS TO MISS ALL LIGHTS, GRILLES AND ANY OTHER CEILING OBSTRUCTIONS.
   6. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
   7. LOCATE SPRINKLERS AND PIPING PARALLEL TO STRUCTURAL MEMBERS IN AREAS OF EXPOSED STRUCTURE.
   8. OPEN ENDS OF ALL PIPES SHALL BE KEPT CLOSED DURING CONSTRUCTION.
   9. PROVIDE MOUNTABLE METAL BOX OF SPARE HEADS WITH PROPER WRENCH FOR HEAD REPLACEMENT.
   10. PROVIDE WIRE GUARDS ON SPRINKLERS LOCATED BELOW 84 INCHES AFF.
   11. PROVIDE PRESSURE GAUGE AT SPRINKLER MAIN AND AT TOP OF SYSTEM.
   12. PROVIDE CLEARANCE FOR ACCESS TO VALVES AND PIPING SPECIALTIES.
H. PIPING SYSTEM LEAK TESTS
   1. CONDUCT PRESSURE TEST WITH WATER. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST.
   2. TEST PIPING IN SECTIONS OR ENTIRE SYSTEM AS REQUIRED BY SEQUENCE OF CONSTRUCTION. DO NOT CONCEAL PIPE UNTIL IT HAS BEEN SUCCESSFULLY TESTED. PROVIDE TEMPORARY RESTRAINTS AT FITTINGS OR EXPANSION JOINTS IF REQUIRED FOR THE ADDITIONAL PRESSURE LOAD UNDER TEST. ENTIRE TEST MUST BE WITNESSED BY THE DIVISION'S REPRESENTATIVE.
   3. USE CLEAN WATER AND REMOVE AIR FROM THE PIPING BEING TESTED WHERE POSSIBLE. MEASURE AND RECORD TEST PRESSURE AT THE HIGH POINT IN THE SYSTEM.
   4. ALL PRESSURE TESTS ARE TO BE DOCUMENTED ON NFPA CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FORMS.
   5. TEST SYSTEM AT 175 PSI FOR 2 HOURS SHOWING NO LEAKAGE.

### 21 13 15 SPECIALTIES

A. ZONE CONTROL VALVES
   1. MANUFACTURERS: NIBCO, KENNEDY, MILWAUKEE.
   2. 2" AND UNDER: NIBCO KT-585-70-UL & KT-580-70-UL. TWO-PIECE BRONZE BALL VALVE WITH CHROME PLATED BALL, BLOWOUT PROOF STEM, REINFORCED TFE SEATS, UL LISTED, 175 PSI WWP.
   3. 2-1/2" AND OVER: NIBCO F-607-RW, GATE VALVE, IRON BODY, BRONZE TRIM, RISING STEM, HANDWHEEL OS & Y, DUCTILE IRON RESILIENT WEDGE, FLANGED ENDS, UL LISTED, 175 PSI WWP.
B. DRAIN (BALL) VALVES
   1. MANUFACTURERS: NIBCO, APOLLO, CRANE, HAMMOND, WATTS.
   2. NIBCO 585-70HC OR EQUIVALENT BRONZE TWO PIECE BODY, STAINLESS STEEL BALL AND TRIM, FULL PORT, LEVER HANDLE, THREADED ENDS.
   3. PROVIDE DRAIN VALVES AT ALL LOW AND TRAPPED AREAS OF SYSTEM AND WHERE REQUIRED TO DRAIN RISERS. PROVIDE 3/4" HOSE CONNECTION WITH CAP AT EACH DRAIN CONNECTION.
C. VALVE TAMPER SWITCHES
   1. MANUFACTURERS: POTTER MODEL OSYSU-2, NOTIFIER, GRINNELL.
   2. OUTSIDE SCREW AND YOKE VALVE, SUPERVISORY SWITCH WITH DIE CAST ALUMINUM COVER, TAMPER RESISTANT SCREWS AND TWO SETS OF CONTACTS, 120V AC, UL LISTED.
   3. CONTACTS TO BE NORMALLY OPEN, CLOSED WHEN VALVE IS CLOSED.
D. FLOW SWITCH
   1. MANUFACTURER: POTTER MODEL VSR-F, NOTIFIER, GRINNELL.
   2. VANE TYPE WATER FLOW ALARM SWITCH WITH ADJUSTABLE RETARD, TWO SETS OF CONTACTS, CAST ALUMINUM HOUSING, 120V AC, UL LISTED.
   3. PROVIDE EACH FLOW SWITCH WITH A MEANS OF TESTING FLOW THRU IT.
   4. PROVIDE A VALVE UPSTREAM OF EACH FLOW SWITCH IN THE SAME BRANCH AS THE FLOW SWITCH.
   5. AUDIBLE / VISUAL ALARM AT FIRE DEPARTMENT CONNECTION BY FIRE ALARM SUPPLIER.
E. PRESSURE GAUGES
   1. MANUFACTURERS: TRERICE, U.S. GAUGE, ASHCROFT, MARSH, WEISS, WEKSLER.
   2. PRESSURE GAUGES
      a. GENERAL PURPOSE: TRERICE 600CB PBF CERTIFIED LEAD FREE CAST ALUMINUM CASE, PHOSPHOR BRONZE BOURDON TUBE, 4-1/2" DIAMETER; TRERICE 872-1PBF LEAD FREE BRASS PRESSURE SNUBBER.
         1). GAUGE COCK: APOLLO 77FLF-100 LEAD FREE FULL PORT THREADED BRASS VALVE, 150 PSI SWP, 400 DEG F MAXIMUM TEMPERATURE.
F. INSPECTOR'S TEST CONNECTION
   1. COMPLETE WITH TEST AND DRAIN VALVES, SIGHT GLASS, 3/4" HOSE CONNECTION, AND SMOOTH BORE CORROSION RESISTANT ORIFICE GIVING A FLOW EQUIVALENT TO ONE SPRINKLER.
   2. PROVIDE INSPECTOR'S TEST CONNECTION FROM MOST REMOTE END OF SYSTEM.

### 21 13 17 AUTOMATIC SPRINKLER SYSTEMS

A. SYSTEM DESCRIPTION
   1. PROVIDE AUTOMATIC SPRINKLER SYSTEM TO PROTECT BUILDING AREA INDICATED.
   2. SYSTEM DESIGN SHALL CONFORM TO SYSTEM SCHEDULE ON THE DRAWINGS, AND COMPLY WITH NFPA 13 AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
      a. DEVIATIONS FROM THESE DOCUMENTS SHALL BE COMMUNICATED IN WRITING AT TIME OF BID SUBMITTAL.
   3. UL LISTED AND LABELED SYSTEM COMPONENTS RATED FOR 175 PSIG MINIMUM OPERATING PRESSURE.
   4. INCLUDE INSIDE AND OUTSIDE HOSE STREAMS IN THE DESIGN OF THE HYDRAULICALLY CALCULATED SPRINKLER SYSTEMS.
   5. SIMILAR COMPONENT ITEMS SHALL BE BY THE SAME MANUFACTURER.
   6. VALVE CLOSURE TIME SHALL NOT EXCEED LIMITATIONS SET BY NFPA 13
B. SPRINKLERS
   1. MANUFACTURERS: VIKING, CENTRAL, TYCO.
   2. SEE SCHEDULE ON PLANS.
   3. MAY USE FLEXIBLE PENDENT SYSTEM AS LISTED FOR THE OCCUPANCY HAZARD OF THE SPACE BEING PROTECTED.

## ELECTRICAL / FIRE ALARM COORDINATION SCHEDULE

| EQUIPMENT/DEVICE | LOCATION | HP | VOLT | PH. | STARTER | | | | DISCONNECT | | FIRE ALARM MONITORING | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TYPE | LOCATION | MIN. SCCR RATING | FURN. BY | DIS-CONNECT | FURN. BY | QUANT. (2) | NOTES | |
| FLOW SWITCH | 106 | - | - | - | - | - | - | - | - | - | 2 | - | - |
| TAMPER SWITCH | 106 | - | - | - | - | - | - | - | - | - | 2 | (1) | - |
| | | | | | | | | | | | | | |

(1) FIRE PROTECTION CONTRACTOR TO DETERMINE IF TAMPER SWITCHES ARE REQUIRED.
(2) QUANTITY IS ESTIMATED. FPC TO PROVIDE QUANTITY AS REQUIRED BY SYSTEM. PROVIDE ANY ADDITIONAL DEVICES RELATED TO THE WORK NOT SHOWN ON THE DRAWINGS. FPC SHALL PROVIDE POWER AND CONTROL WIRING INSTALLED PER ELECTRICAL SPECIFICATIONS FOR ANY DEVICES NOT LISTED.

## DESIGN CRITERIA

| DESIGNATION | SYSTEM TYPE | HAZARD/ COMMODITY | MINIMUM DENSITY (3) | REMOTE AREA | HOSE ALLOWANCE | AISLE WIDTH | ENCAP-SULATED | STORAGE HEIGHT | STORAGE IN RACKS | CARTONED | PLASTIC | TOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OG1 | WET | ORDINARY GROUP 1 (1) | 0.15 GPM/S.F. | 1,500 S.F. (2) | 250 GPM | NA | NA | NA | NO | NO | NA | NA |
| R1 | WET | CLASS III | - | - | 500 GPM | SEE PLAN | NO | 21'-2" | (8) | NO | NA | NA |
| S1 | WET | (5) | - | - | - | NA | NO | 9'-0" | NO | NO | NA | NA |

- CONTRACTOR SHALL VERIFY DESIGN CRITERIA.
- SEE SPECIFICATION SECTION 21 05 00 FOR ADDITIONAL REQUIREMENTS REGARDING RACK STORAGE.
(1) QUSG4 ARRANGEMENT
(2) REDUCE REMOTE AREA BY NFPA 13 FOR AREAS WITH QUICK RESPONSE SPRINKLERS. SEE REFLECTED ARCH PLAN FOR CEILING HEIGHTS.
(3) INCREASE AREA OF OPERATION BY 30% FOR AREAS WITH SLOPED CEILING GREATER THAN 1 IN 6.
(4) NOT USED
(5) SEE PLAN FOR HAZARD
(8) IN-RACK SPRINKLER SYSTEM, PER CHAPTER 25 OF NFPA 13-2019

## SPRINKLER REQUIREMENTS

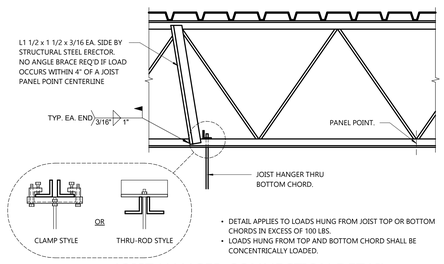
| TAG | APPLICATION | SYSTEM TYPE | MOUNTING | BODY MAT'L | ELEMENT | SPRINKLER FINISH | ESCUTCHEON | | TEMPERATURE CLASSIFICATION | CENTER OF TILE |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | TYPE | MAT'L/COLOR | | |
| A | WAREHOSE WITH CEILING | WET | PENDANT | BRASS | FUSIBLE LINK | NONE | FULL PENDANT | WHITE | ORDINARY | N/A |
| B | IN-RACK SPRINKLER | WET | (4) | BRASS | FUSIBLE LINK | NONE | N/A | N/A | ORDINARY | N/A |
| C | WASHDOWN AREAS | WET | UPRIGHT | BRASS | FUSIBLE LINK | ENT | NA | N/A | HIGH | N/A |
| | | | | | | | | | | |

- ALL TEMPERATURES AS LISTED UNLESS OTHERWISE REQUIRED BY NFPA.
(1) AS REQUIRED BY RACKING DESIGN.

## LEGEND

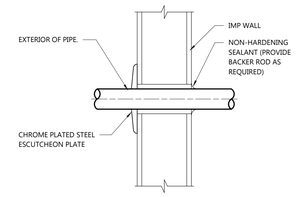
NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

| SYM. | ABBR. | IDENTIFICATION | SYM. | ABBR. | IDENTIFICATION |
|---|---|---|---|---|---|
| MISCELLANEOUS | | | | | |
| | ELEV | ELEVATION | | | CONNECT TO EXISTING |
| | | EQUIPMENT BY OTHERS. CONNECTION BY FPC. | | | DETAIL OR SECTION NUMBER / SHEET NUMBER |
| ABBREVIATIONS | | | | | |
| | AFF | ABOVE FINISHED FLOOR | | IE | INVERT ELEVATION |
| | AFG | ABOVE FINISHED GRADE | | IMP | INSULATED METAL PANEL |
| | ALT | ALTERNATE | | NIC | NOT IN CONTRACT |
| | BJ | BETWEEN JOISTS | | NTS | NOT TO SCALE |
| | DN | DOWN | | OC | ON CENTER |
| | EC | ELECTRICAL CONTRACTOR | | PC | PLUMBING CONTRACTOR |
| | EX | EXISTING | | RC | REFRIGERATION CONTRACTOR |
| | FDC | FIRE DEPARTMENT CONNECTION | | SS | STAINLESS STEEL |
| | FPC | FIRE PROTECTION CONTRACTOR | | TJ | THRU JOISTS |
| | FUT | FUTURE | | TTS | TIGHT TO STRUCTURE |
| | GC | GENERAL CONTRACTOR / CONSTRUCTION MANAGER | | TYP | TYPICAL |
| | HC | HVAC CONTRACTOR | | WP | WEATHER PROOF |
| FIRE RATED WALLS | | | | | |
| | | FIRE - 1 HOUR | | | FIRE - 3 HOUR |
| | | FIRE - 2 HOUR | | | FIRE - 4 HOUR |




- DETAIL APPLIES TO LOADS HUNG FROM JOIST TOP OR BOTTOM CHORDS IN EXCESS OF 100 LBS.
- LOADS HUNG FROM TOP AND BOTTOM CHORD SHALL BE CONCENTRICALLY LOADED.

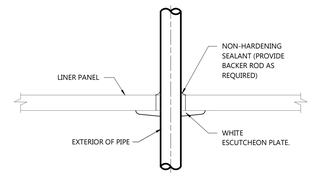
2 FP0.1 JOIST HANGER CONNECTION DETAIL
NOT TO SCALE



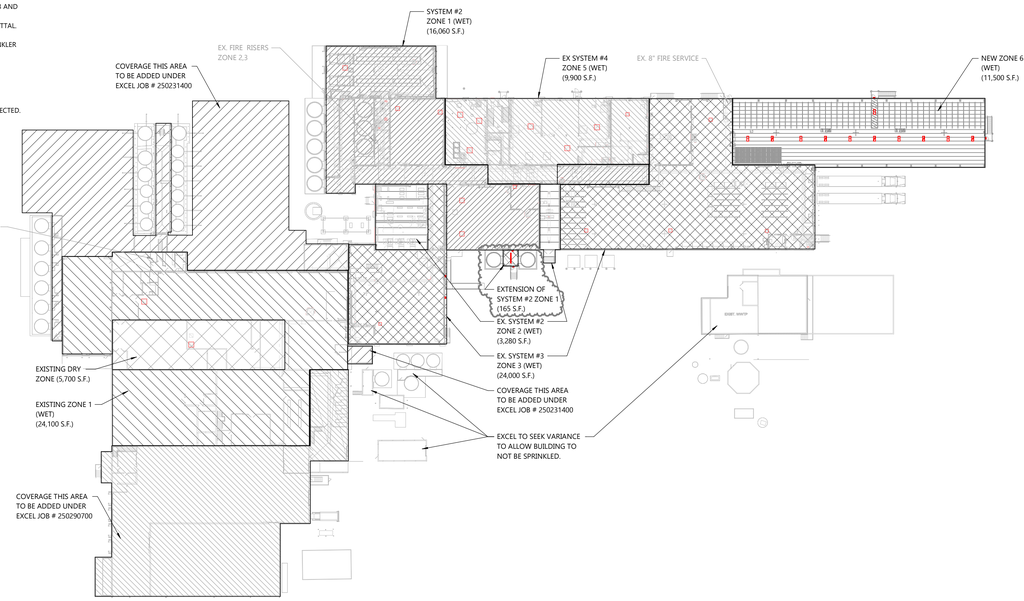

EXPOSED IN FINISHED ROOMS

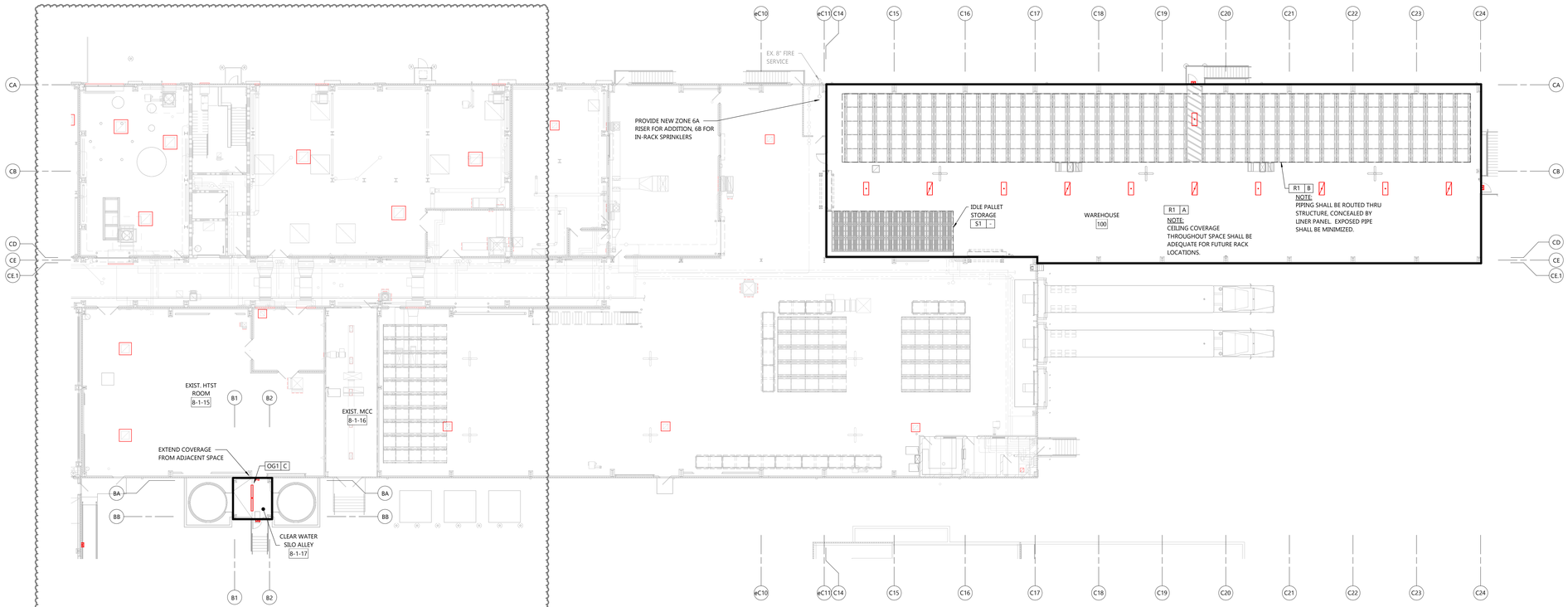
CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

1 FP0.1 PIPE PENETRATION THRU IMP WALL
NOT TO SCALE




3 FP0.1 PIPE PENETRATION THRU LINER PANEL
NOT TO SCALE


SYSTEM #2 ZONE 1 (WET) (16,060 S.F.)
EX. FIRE RISERS ZONE 2,3
COVERAGE THIS AREA TO BE ADDED UNDER EXCEL JOB # 250231400
EX SYSTEM #4 ZONE 5 (WET) (9,900 S.F.)
EX. 8" FIRE SERVICE
NEW ZONE 6 (WET) (11,500 S.F.)
EX. FIRE RISER
EXTENSION OF SYSTEM #2 ZONE 1 (165 S.F.)
EX. SYSTEM #2 ZONE 2 (WET) (3,280 S.F.)
EX. SYSTEM #3 ZONE 3 (WET) (24,000 S.F.)
COVERAGE THIS AREA TO BE ADDED UNDER EXCEL JOB # 250231400
EXCEL TO SEEK VARIANCE TO ALLOW BUILDING TO NOT BE SPRINKLED.
EXISTING DRY ZONE (5,700 S.F.)
EXISTING 

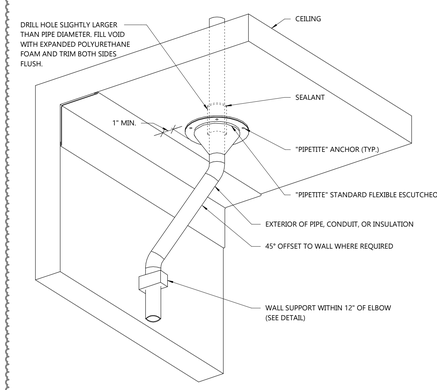



NORTH

## FIRST FLOOR PLAN - AREA OF WORK

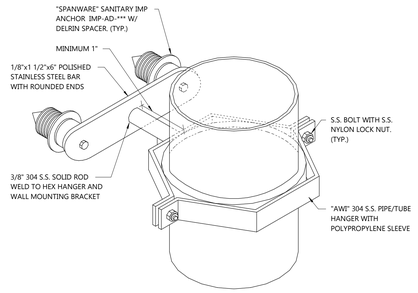
SCALE: 1/16" = 1'-0"

0' 16' 32'




## PROCESS ROOM CEILING PENETRATION DETAIL

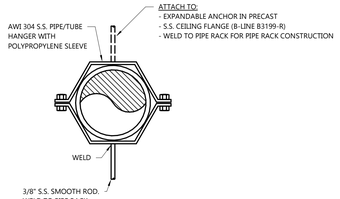
8 / FP1.1 NOT TO SCALE




APPLICATIONS:
- UNINSULATED PIPE/TUBE

## PROCESS ROOM IMP WALL PIPE/TUBE SUPPORT DETAIL

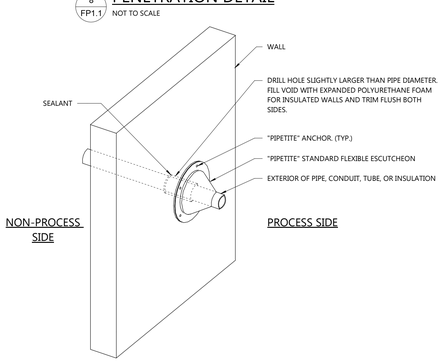
7 / FP1.1 NOT TO SCALE




APPLICATIONS:
- UNINSULATED PIPE/TUBE

## PROCESS ROOM PIPE HANGER AND SUPPORT DETAIL

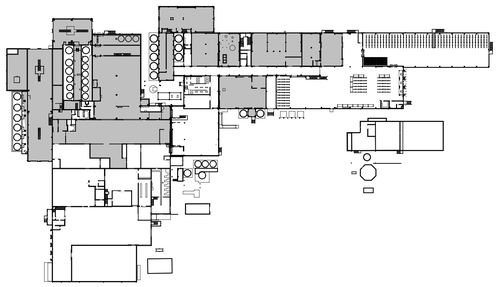
6 / FP1.1 NOT TO SCALE




## PROCESS ROOM WALL PENETRATION DETAIL

5 / FP1.1 NOT TO SCALE

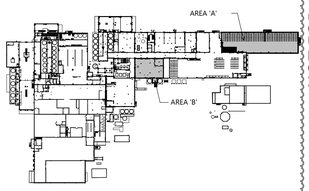
**GENERAL NOTES:**
- PROCESS ROOM DETAILS OTHER THAN SHOWN SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.
- CLEAN WALLS WHERE CORE DRILLING IS DONE FOR INSTALLATION OF THIS WORK.
- PROVIDE A MOCKUP OF ALL HANGER, SUPPORT AND PENETRATION DETAILS FOR APPROVAL BEFORE ANY INSTALLATION.
- ALL PIPE, TUBE AND CONDUIT SUPPORTS SHALL BE INSTALLED AT THE SAME HEIGHT. COORDINATE WITH ALL CONTRACTORS.
- SEALANT IN PROCESS ROOMS SHALL BE AN INDUSTRIAL GRADE SILICONE SEALANT MEETING FDA REG. NO. 21 CFR 177.2600 AND USDA FOR FEDERALLY INSPECTED MEAT AND POULTRY PLANTS EQUIVALENT TO SIL-BOND RTV 4500 ACETOXY.
- USE OF THREADS SHALL BE MINIMIZED.



## PROCESS KEY PLAN

NOT TO SCALE

KEY PLAN:
SHADED AREAS INDICATE AREAS WHICH ARE CONSIDERED PROCESS ROOMS.




## KEY PLAN

## FIRE PROTECTION FIRST FLOOR PLAN - AREA OF WORK

## GENERAL NOTES:

- SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- FPC SHALL REVIEW CONSTRUCTION SEQUENCING AND TEMPORARY WALLS WITH GENERAL CONTRACTOR AND MAINTAIN SPRINKLER COVERAGE IN EXISTING AREAS THROUGHOUT CONSTRUCTION.
- PIPING SHALL BE CONCEALED WHEREVER POSSIBLE. WHERE NOT POSSIBLE, LOCATIONS AND ROUTING SHALL BE APPROVED BY ARCHITECT/OWNER PRIOR TO INSTALLATION.
- VERIFY EQUIPMENT/DUCTWORK LOCATIONS WITH ARCHITECTURAL AND HVAC PLANS. PROVIDE SPRINKLERS AT THESE LOCATIONS PER NFPA 13.
- PENETRATE MASONRY WALLS PER STRUCTURAL DRAWINGS. PENETRATIONS NOT PERMITTED THROUGH MARKED GROUTED/REINFORCED MASONRY.
- OPENINGS THROUGH BEAMS OR COLUMNS OR ANY OTHER STRUCTURAL MEMBER ARE NOT PERMITTED UNLESS APPROVED BY STRUCTURAL ENGINEER.
- EXISTING FIRE PROTECTION PLANS MAY BE OBTAINED FROM EXCEL ENGINEERING. CONTACT FOODGROUP@EXCELENGINEER.COM TO RECEIVE A PDF COPY OF THE PLANS.

X — INDICATES DESIGN CRITERIA DESIGNATION (SEE SCHEDULE)
X — INDICATES SPRINKLER DESIGNATION (SEE SCHEDULE)


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

FIRE PROTECTION DRAWINGS ARE SCOPE IN NATURE. FIRE PROTECTION CONTRACTOR SHALL SUBMIT AND STAMP FINAL DESIGN DRAWINGS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**FP1.1**

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# HVAC SPECIFICATIONS

## DIVISION 23 HVAC

### 23 05 00 BASIC HVAC REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. SUBSTITUTIONS
1. SEE DIVISION 01 25 13 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
3. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ENGINEER.
4. CONTRACTOR SHALL ASSUME ALL COORDINATION RESPONSIBILITIES FOR SUBSTITUTE EQUIPMENT INCLUDING COORDINATION ACROSS TRADES AND COORDINATION OF PREVIOUSLY REVIEWED AND APPROVED SHOP DRAWING SUBMITTALS, SHOULD THESE SHOP DRAWINGS BE AFFECTED BY THE SUBSTITUTED EQUIPMENT.
C. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS, PROJECT CLOSEOUT DOCUMENTS:
1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS
2. CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
a. DUCTWORK
b. DUCTWORK ACCESSORIES
c. INSULATION
d. PIPING
e. VALVES AND STRAINERS
f. CASE 3
g. ROOF EXHAUSTERS
h. GAS PRESSURE REGULATORS
i. ROOFTOP AIR CONDITIONING UNITS.
j. DESTRATIFICATION FANS
k. TEMPERATURE CONTROLS
l. TEST AND BALANCE REPORT
3. PROJECT CLOSEOUT
a. DOCUMENTATION: PROVIDE VENTILATION SYSTEM DOCUMENTATION PER ASHRAE 62.1-2007, SECTION 7.2.6.
b. AS-BUILT DRAWINGS SHALL BE MARKED ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
c. PROVIDE HVAC EQUIPMENT OPERATING AND MAINTENANCE MANUALS TO THE OWNER PER IECC C408.1.1 AND C408.3.2.2.
D. FINISHING AND PAINTING
1. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
E. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
F. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
G. COORDINATE INSTALLATION OF HVAC WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
H. VERIFY CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.
I. STRUCTURAL PENETRATIONS
1. OPENINGS THRU BEAMS OR COLUMNS OR ANY OTHER STRUCTURAL MEMBER ARE NOT PERMITTED UNLESS APPROVED BY STRUCTURAL ENGINEER.
J. PROJECT COMPLETION
1. INSTALL CLEAN SET OF FILTERS IN ALL UNITS AT TIME OF TESTING AND BALANCING.
2. CLEAN EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
3. PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS AND OBTAIN OWNER SIGNOFF THAT INSTRUCTIONS HAVE BEEN COMPLETED.

### 23 05 13 MOTORS AND ELECTRICAL WORK

A. MOTORS
1. MANUFACTURERS: GENERAL ELECTRIC, LOUIS ALLIS, MARATHON, AND BALDOR.
2. MOTORS LESS THAN 250 WATTS: EQUIPMENT MANUFACTURER'S STANDARD AND NEED NOT CONFORM TO THESE SPECIFICATIONS.
3. OPEN DRIP-PROOF TYPE EXCEPT TOTALLY ENCLOSED FAN COOLED FOR THE FOLLOWING MOTORS:
a. EXTERIOR LOCATIONS
b. WHERE NOTED ON EQUIPMENT SCHEDULES
4. DESIGN FOR CONTINUOUS OPERATION IN 40 DEGREES C ENVIRONMENT AND FOR TEMPERATURE RISE IN ACCORDANCE WITH NEMA MG 1 LIMITS.
5. SINGLE PHASE POWER (PERMANENT-SPLIT CAPACITOR MOTORS) WITH STARTING TORQUE EXCEEDING ONE FOURTH OF FULL LOAD TORQUE AND STARTING CURRENT UP TO SIX TIMES FULL LOAD CURRENT. CLASS A (50 DEGREES C TEMPERATURE RISE) INSULATION, MINIMUM 1.0 SERVICE FACTOR, PRELUBRICATED SLEEVE OR BALL BEARINGS, AUTOMATIC RESET OVERLOAD PROTECTOR.
6. THREE PHASE POWER (SQUIRREL CAGE MOTORS) WITH STARTING TORQUE BETWEEN 1 AND 1-1/2 TIMES FULL LOAD TORQUE AND STARTING CURRENT SIX TIMES FULL LOAD CURRENT. NEMA DESIGN B MOTOR AND INSULATION SYSTEM. MINIMUM 1.15 SERVICE FACTOR FOR OPEN DRIP-PROOF MOTORS, 1.0 (MINIMUM) FOR OTHER TYPES. MINIMUM 85% NOMINAL POWER FACTOR UNDER RATED LOAD CONDITIONS. GREASE LUBRICATED ANTI-FRICTION BALL BEARINGS, RATED FOR MINIMUM AFBMA 9, L-10 LIFE OF 200,000 HOURS.
7. MINIMUM NOMINAL EFFICIENCY: COMPLY WITH 2021 IECC C405.8. MOTORS THAT ARE PART OF EQUIPMENT NOT REQUIRED TO COMPLY.
B. STARTERS
1. SEE ELECTRICAL STARTER DISCONNECT SCHEDULE ON PLANS.

### 23 05 29 PIPE AND EQUIPMENT HANGERS AND SUPPORTS

A. MANUFACTURERS: B-LINE, EMPIRE INDUSTRIES, GLOBAL PIPE HANGER PRODUCTS, GRINNELL, NATIONAL PIPE HANGER, UNISTRUT.
B. HOT DIP GALVANIZED HANGERS, RODS, AND ACCESSORIES AFTER FABRICATION WHICH ARE EXPOSED TO WEATHER.
C. PROVIDE SEISMIC-RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.
D. PROVIDE ATTACHMENT OF ROOFTOP EQUIPMENT IN COMPLIANCE WITH APPLICABLE ASCE7 FOR WIND LOADING AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.
E. ANGLES, CHANNELS, AND BEAMS: ASTM A36 AND A572 AS REQUIRED.
F. HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.
G. ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:
a. MAXIMUM HANGER LOAD OF 50 LBS.
b. ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.
c. ANCHOR LENGTH SHALL NOT EXCEED DECK DEPTH.
H. FASTENER SYSTEM
1. PULL-OUT TENSION AND SHEAR CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS.
2. POWDER-ACTUATED FASTENERS: THREADED-STEEL STUD, FOR USE IN CONCRETE.
3. MECHANICAL-EXPANSION ANCHORS: INSERT-WEDGE TYPE, ZINC-COATED STEEL (STAINLESS IN PROCESS ROOMS), FOR USE IN CONCRETE. MINIMUM 1 1/2" EMBEDMENT.
4. INSTALL SUPPORTS SO PIPING LIVE AND DEAD LOADS AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT.
I. STRUT SYSTEM
1. COMPLY WITH THE LATEST REVISION OF MFMA STANDARDS PUBLICATION NUMBER MFMA-3, "METAL FRAMING STANDARDS PUBLICATION".
2. INSTALL STRUT IN ACCORDANCE WITH MFMA-102 "GUIDELINES FOR THE USE OF METAL FRAMING"; IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, AND WITH RECOGNIZED INDUSTRY PRACTICES.
3. COLD FORMED LOW CARBON STEEL METAL FRAMING CHANNEL STRUT: B-LINE TYPE B CHANNEL.
4. MANUFACTURER'S STANDARD FINISH OR PLAIN FINISH UNLESS INSTALLED OUTDOORS, OR IN WET LOCATIONS.
5. FRAMING INSTALLED OUTDOORS OR WET LOCATIONS SHALL BE ONE OF THE FOLLOWING:
a. EXTRUDED ALUMINUM ALLOY,6063 T6, ALL FITTINGS AND HARDWARE SHALL BE TYPE 304 STAINLESS STEEL.
b. PRE-GALVANIZED STEEL MILL GALVANIZED TO G90. ALL FITTINGS AND HARDWARE SHALL BE ZINC PLATED TO ASTM B633.
c. EPOXY PAINTED STEEL. WATER BORN EPOXY APPLIED BY A CATHODIC ELECTRO DEPOSITION PROCESS. FITTINGS AND HARDWARE SHALL BE ZINC PLATED STEEL.
d. TYPE 304 STAINLESS STEEL STRUT, FITTINGS AND HARDWARE.
6. 1-5/8 INCHES WIDE IN VARYING HEIGHTS AND WELDED COMBINATIONS AS REQUIRED TO MEET LOAD CAPACITIES.
J. EQUIPMENT PIPE STANDS: CONTRACTOR FABRICATED STAND CONSISTING OF STRUCTURAL STEEL MEMBERS SUPPORTED BY PIPE SUPPORTS. HOT DIP GALVANIZE AFTER FABRICATION WHERE EXPOSED TO WEATHER.

### 23 05 53 MECHANICAL IDENTIFICATION

A. NAMEPLATES
1. MANUFACTURERS: MARKING SERVICES, BRADY B-1, AND SETON SETONFLEX.
2. 3/4" HIGH, 1/16" THICK PLASTIC WITH ENGRAVED WHITE LETTERS ON BLACK BACKGROUND COLOR, SCREW OR ADHESIVE MOUNTING.
3. PROVIDE AT CONTROL PANELS, STARTERS, AND MAJOR CONTROL COMPONENTS OUTSIDE PANELS.

### 23 07 00 INSULATION

A. GENERAL
1. SEE INSULATION SCHEDULES ON PLANS FOR ADDITIONAL INFORMATION.
2. INSULATION: INSULATION SYSTEM AND JACKETS SHALL MEET UL-723/ASTM E84 REQUIREMENTS OF MAX. FIRE HAZARD CLASSIFICATIONS OF 25, AND MAX. FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED OF 50 WHEN INSTALLED IN A RETURN AIR PLENUM.
3. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND MICA PUBLICATION "NATIONAL COMMERCIAL AND INDUSTRIAL STANDARDS", LATEST EDITION.
4. CONTINUE INSULATION WITHOUT INTERRUPTIONS THROUGH WALLS AND HOLES PENETRATIONS AND HANGERS.
B. FIBERGLASS (F.G.) INSULATION
1. RIGID F.G:
a. GLASS FIBER INSULATION WITH FACTORY APPLIED FRK VAPOR RETARDER.
b. R=3.7 / NOMINAL INCH AT 75 DEG F.
c. MAX 450 DEG F, JACKET MAX 150 DEG F, 0.02 PERM.
d. INDOOR DUCTWORK:
1). O.C. TYPE 703, CERTAINTEED CERTAPRO CB 300, JOHNS MANVILLE 814
2). 3 LB./CU.FT., COMPRESSIVE STRENGTH AT 10% DEFORMATION 25 LB./S.F.
C. DUCT INSULATION REQUIREMENTS
1. INSULATE FITTINGS, JOINTS, FLANGES, FLEXIBLE CONNECTIONS, DAMPERS, AND IN-LINE ACCESSORIES WITHOUT INTERNAL LINING/INSULATION WITH SAME MATERIAL AND THICKNESS AS SPECIFIED FOR THE DUCT SYSTEM. STOP AND POINT INSULATION AROUND ACCESS DOORS AND DAMPER OPERATORS TO ALLOW OPERATION WITHOUT DISTURBING WRAPPING.

### 23 11 23 NATURAL GAS PIPING AND ACCESSORIES

A. PIPING
1. INSTALL INSPECT, TEST, AND PURGE GAS PIPING IN CONFORMANCE WITH NFPA 54, UTILITY COMPANY AND ALL OTHER GOVERNING CODES.
2. MAKE BRANCH CONNECTIONS TO THE MAIN FROM THE TOP OR SIDE.
3. PAINTING PER SPECIFICATION **09 91 00 PAINTING.**
B. GAS VALVES
1. UL LISTED FOR USE AS NATURAL GAS SHUTOFF.
2. BALL VALVES (MANUFACTURERS: NIBCO 585/580-70UL, WATTS B6000UL): BRONZE BODY, THREADED ENDS, CHROME PLATED BRONZE BALL, FULL/CONVENTIONAL PORT, TEFLON SEAT, BLOWOUT-PROOF STEM, TWO-PIECE CONSTRUCTION, 150 PSIG WORKING PRESSURE.
3. PLUG VALVES (MANUFACTURERS: DEZURIK PEC, HOMESTEAD SERIES 612): CAST IRON BODY, FLANGED ENDS, BRONZE BEARINGS, ELECTROLESS NICKEL PLATED CAST IRON PLUG WITH HYCAR RESILIENT PLUG SEAL, BUNA-N STEM SEAL PACKING, LEVER ACTUATOR, 175 PSIG WOG.
C. GAS PRESSURE REGULATORS
1. CAST IRON BODY, ALUMINUM SPRING CASE, ALUMINUM ORIFICE, BUNA-N DIAPHRAGM, INTERNAL RELIEF VALVE SET TO RELIEVE AT 7-10" W.C. ABOVE NORMAL OUTLET PRESSURE SETTING OF 7" WC., TOPCOAT ENAMEL.
2. SENSUS MODELS 496, 6182, 143-80, 243
3. FOR REGULATORS INSTALLED OUTDOORS, POSITION THE REGULATOR SO THE RELIEF VALVE VENT IS FACING DOWN OR INSTALL ELBOW FACING DOWN A MINIMUM 10 FEET FROM AN OUTSIDE AIR INTAKE AND 5 FEET FROM A GAS FLUE DISCHARGE.
4. IF GAS PRESSURE IS GREATER THAN 2PSI, PROVIDE OVERPRESSURE PROTECTION DEVICES PER IFGC 416.

### 23 31 13 DUCTWORK

A. PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA - HVAC DUCT CONSTRUCTION STANDARDS, NFPA 90A.
B. GENERAL
1. CERTAIN VERTICAL AND HORIZONTAL OFFSETS ARE INDICATED IN DUCTS TO INDICATE THE GENERAL POSITION RELATIONSHIP OF THE DUCTWORK SYSTEMS; PROVIDE ADDITIONAL OFFSETS AS REQUIRED TO COORDINATE WITH THE INSTALLATION OF OTHER SYSTEMS, CEILINGS AND STRUCTURE. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION OF DUCTWORK.
2. PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM.
3. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES WHENEVER POSSIBLE. 30 DEGREE MAXIMUM.
C. DUCTWORK SEALANTS
1. MANUFACTURERS: HARDCAST SURE-GRIP 404 SOLVENT BASED DUCT SEALANT OR EQUIVALENT.
a. SYNTHETIC RUBBER RESIN BASE.
b. -20 TO 200 DEG F.
c. PRESSURE CLASSES UP TO 10" W.C., MEETING SEAL CLASS A.
d. MAXIMUM FLAME SPREAD OF 25, SMOKE DEVELOPED OF 50.
e. APPLY MINIMUM 20-MIL THICK WET FILM AT TEMPERATURES BETWEEN 35-100 DEG F.
2. HARDCAST ALUMA-GRIP 701 OR EQUIVALENT PRESSURE SENSITIVE DUCT JOINT ROLLED SEALANT MAY BE USED IN PLACE OF MASTIC. SEALANT SHALL COMPLY WITH THE FOLLOWING:
a. MILL FINISH ALUMINUM SUSTRATE WITH GRAY ADHESIVE.
b. MINIMUM 30 MIL THICK
c. MIN. 17 LB PER LINEAR INCH PEEL STRENGTH
d. MAX FLAME SPREAD OF 25, MAX SMOKE DEVELOPED OF 50 WHEN TESTED IN ACCORDANCE WITH ASTM G-53.
e. VOC: 0 G/L, COMPLIANT WITH LEED SCAQMD RULE 1168.
f. PRESSURE CLASSES UP TO 10" W.C.
D. DUCT CLEANING
1. PROTECT DUCTWORK AGAINST ENTRY OF FOREIGN MATTER DURING CONSTRUCTION. PROVIDE TEMPORARY END CAPS AND SEALS. PROVIDE TEMPORARY FILTERS OVER RETURN OR EXHAUST AIR INLETS IF DUCTWORK IS USED DURING CONSTRUCTION.
2. REMOVE ALL DIRT AND FOREIGN MATTER AND CLEAN DIFFUSERS, REGISTERS, AND GRILLES BEFORE OPERATING FANS.

### 23 33 00 DUCTWORK ACCESSORIES

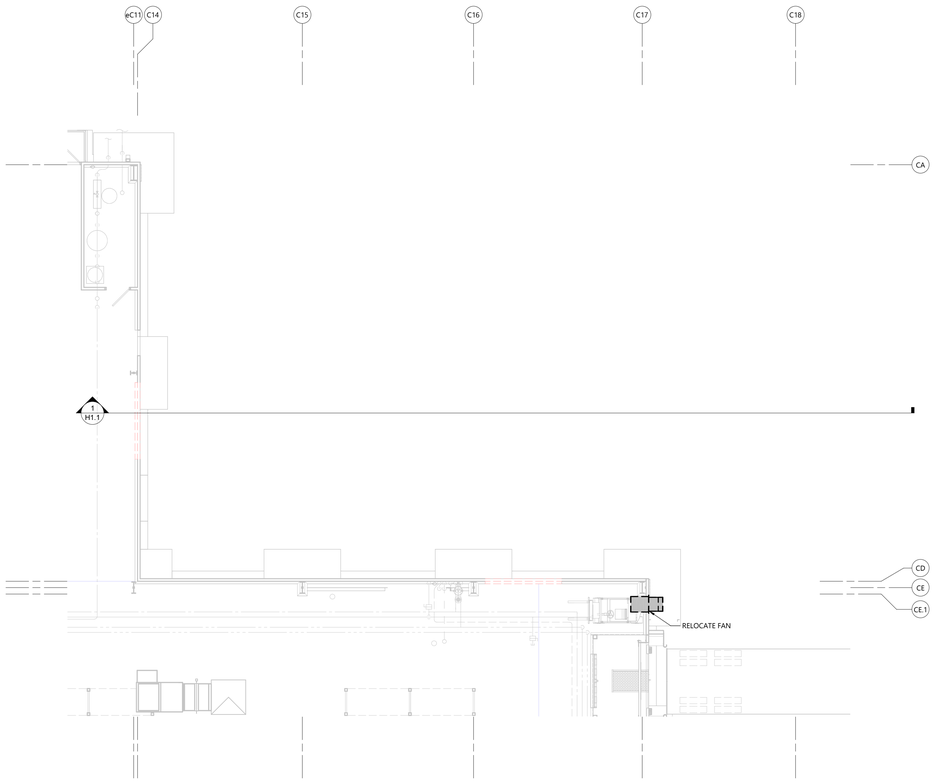
A. GENERAL - ALL DUCT ACCESSORIES SHALL BE CONSTRUCTED OF SAME MATERIAL AS DUCTWORK BEING INSTALLED IN.
B. TURNING VANES
1. MANUFACTURERS: AERO/DYNE CO. H.E.P., HART & COOLEY, UNITED MCGILL, SEMCO.
2. RECTANGULAR DUCTWORK: TURNING VANES IN ACCORDANCE WITH SMACNA FIG. 2-3 AND 2-4. VANE RADIUS 4 INCHES WITH A 3-1/4 INCH SPACING.
3. ROUND DUCTWORK: TWO-PIECE MITERED, MINIMUM 20 GAUGE.
C. FLEXIBLE CONNECTIONS
1. MANUFACTURERS: VENTFABRICS, DURO-DYNE.
2. MATERIAL BOLTED SECURELY TO THE EQUIPMENT AND CONNECTING DUCTWORK WITH #16 GAUGE GALVANIZED IRON BAND (LOOP) CLAMPS BOLTED TIGHT TO MAKE AN AIRTIGHT CONNECTION, MINIMUM 6" WIDE.
3. PROVIDE AT INLET AND OUTLET OF ALL AIR HANDLING UNITS AND FANS IN ACCORDANCE WITH SMACNA FIGURE 2-17.
4. CONVENTIONAL INTERIOR: VENTGLAS, -20 TO 200 DEG F., 30 OZ. PER SQUARE YARD GLASS FABRIC DOUBLE COATED WITH NEOPRENE, UL 214 APPROVED.

### 23 90 00 TEMPERATURE CONTROLS

A. THE CONTROL SYSTEM SHALL BE AN EXTENSION OF THE EXISTING TRANE CONTROL SYSTEM
B. INSTALLER QUALIFICATIONS: AUTOMATIC CONTROL SYSTEM MANUFACTURER'S AUTHORIZED REPRESENTATIVE WHO IS TRAINED AND APPROVED FOR INSTALLATION OF SYSTEM COMPONENTS REQUIRED FOR THIS PROJECT.
C. THE CONTROL SYSTEM SHALL CONSIST OF A HIGH-SPEED, PEER-TO-PEER NETWORK OF DDC CONTROLLERS RESIDING AND COMMUNICATING ON A BACNET INTRANETWORK.
D. ALL PRODUCTS USED IN THIS INSTALLATION SHALL BE NEW, CURRENTLY UNDER MANUFACTURE, AND SHALL BE APPLIED IN STANDARD OFF THE SHELF PRODUCTS. THIS INSTALLATION SHALL NOT BE USED AS A TEST SITE FOR ANY NEW PRODUCTS UNLESS EXPLICITLY APPROVED BY THE ENGINEER IN WRITING. SPARE PARTS SHALL BE AVAILABLE FOR AT LEAST 5 YEARS AFTER COMPLETION OF THIS CONTRACT.
E. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
F. LABOR AND MATERIALS FOR THE CONTROL SYSTEM SPECIFIED SHALL BE WARRANTED FREE FROM DEFECTS FOR A PERIOD OF 12 MONTHS AFTER FINAL COMPLETION AND ACCEPTANCE. CONTROL SYSTEM FAILURES DURING THE WARRANTY PERIOD SHALL BE ADJUSTED, REPAIRED, OR REPLACED AT NO ADDITIONAL COST OR REDUCTION IN SERVICE TO THE OWNER.
G. INSTALL SOFTWARE IN CONTROL UNITS AND OPERATOR WORKSTATION(S). IMPLEMENT ALL FEATURES OF PROGRAMS TO SPECIFIED REQUIREMENTS AND AS APPROPRIATE TO SEQUENCE OF OPERATION. LICENSE ALL SOFTWARE AND PROGRAMS IN THE OWNER'S NAME AND GIVE ALL ACCESS TO THE OWNER.
H. CONNECT AND CONFIGURE EQUIPMENT AND SOFTWARE TO ACHIEVE SEQUENCE OF OPERATION SPECIFIED.
I. CONTROLLER HARDWARE USED OUTDOORS AND/OR IN WET AMBIENT CONDITIONS SHALL BE MOUNTED WITHIN NEMA 3R ENCLOSURES, AND RATED FOR OPERATION AT -40 DEG F TO 150 DEG F AND 10 TO 90% RH. HARDWARE USED IN CONDITIONED SPACE SHALL BE MOUNTED IN AN ENCLOSURE AND BE RATED FOR OPERATION AT 32 DEG F TO 120 DEG F.
J. CONTROLLERS (APPLIES TO ALL CONTROLLERS)
1. PROVIDE A SEPARATE CONTROLLER FOR EACH HVAC SYSTEM. A DDC CONTROLLER MAY CONTROL MORE THAN ONE SYSTEM PROVIDED THAT ALL POINTS/OBJECTS ASSOCIATED WITH THE SYSTEM ARE ASSIGNED TO THE SAME DDC CONTROLLER. POINTS/OBJECTS USED FOR CONTROL LOOP RESET SUCH AS OUTSIDE AIR OR SPACE TEMPERATURE ARE EXEMPT FROM THIS REQUIREMENT.
2. SELECT BUILDING CONTROLLERS AND CUSTOM APPLICATION CONTROLLERS TO PROVIDE A MINIMUM OF 15% SPARE I/O POINT/OBJECT CAPACITY FOR EACH POINT/OBJECT TYPE FOUND AT EACH LOCATION. IF INPUT /OBJECTS ARE NOT UNIVERSAL, 15% OF EACH TYPE IS REQUIRED. IF OUTPUTS ARE NOT UNIVERSAL, 15% OF EACH TYPE IS REQUIRED. A MINIMUM OF ONE SPARE IS REQUIRED FOR EACH TYPE OF POINT/OBJECT USED.
K. BUILDING CONTROLLERS
1. PROVIDE AN ADEQUATE NUMBER OF INDEPENDENT, STANDALONE, MICROPROCESSOR-BASED BUILDING CONTROLLERS TO ACHIEVE THE PERFORMANCE SPECIFIED. PANELS SHALL HAVE SUFFICIENT MEMORY TO SUPPORT ITS OPERATING SYSTEM, DATABASE, AND PROGRAMMING REQUIREMENTS. THE BUILDING CONTROLLER SHALL SHARE REAL AND VIRTUAL OBJECT INFORMATION, AND ALLOW CENTRAL MONITORING AND ALARMS. CONTROLLERS THAT PERFORM SCHEDULING SHALL HAVE A REAL-TIME CLOCK.
2. EACH BUILDING CONTROLLER SHALL FULLY SUPPORT DIRECT ETHERNET OR A COMMUNICATIONS CARD, AND PROVIDE A SERVICE COMMUNICATION PORT TO A HAND-HELD WORKSTATION/ AND/OR MODEM.
3. PROVIDE DIAGNOSTIC LEDS FOR POWER, COMMUNICATION, AND PROCESSOR. ALL WIRING CONNECTIONS SHALL BE MADE TO FIELD- REMOVABLE, MODULAR TERMINAL STRIPS - OR TO A TERMINATION CARD CONNECTED BY A RIBBON CABLE.
4. OPERATE AT 90% TO 110% OF NOMINAL VOLTAGE RATING AND PERFORM AN ORDERLY SHUTDOWN BELOW 80% NOMINAL VOLTAGE. MAINTAIN ALL DATABASE INFORMATION INCLUDING BIOS AND PROGRAMMING INFORMATION IN THE EVENT OF A POWER LOSS FOR AT LEAST 72 HOURS. OPERATION SHALL BE PROTECTED AGAINST ELECTRICAL NOISE OF 5 TO 120 HZ AND FROM KEYED RADIOS UP TO 5 W AT 3 FT.
L. APPLICATION SPECIFIC CONTROLLERS (ASC)
1. MICROPROCESSOR-BASED PEER TO PEER FULLY USER-PROGRAMMABLE DDC CONTROLLERS
2. EACH ASC SHALL BE CAPABLE OF STANDALONE OPERATION AND SHALL CONTINUE TO PROVIDE CONTROL FUNCTIONS WITHOUT BEING CONNECTED TO THE NETWORK. FIRMWARE AND CONTROLLER DATABASE SHALL BE LOADABLE OVER THE NETWORK.
3. THE CONTROLLER SHALL RESIDE ON A BACNET NETWORK USING THE MS/TP DATA LINK/ PHYSICAL LAYER PROTOCOL. EACH CONTROLLER SHALL HAVE A BACNET DATA LINK/ PHYSICAL LAYER COMPATIBLE CONNECTION FOR A LAPTOP COMPUTER OR A PORTABLE OPERATOR'S TOOL.
4. PROVIDE DIAGNOSTIC LEDS FOR POWER, COMMUNICATION, AND PROCESSOR. ALL WIRING CONNECTIONS SHALL BE TO FIELD-REMOVABLE, MODULAR TERMINAL STRIPS.
5. USE NON-VOLATILE MEMORY AND MAINTAIN ALL BIOS AND PROGRAMMING INFORMATION IN THE EVENT OF A POWER LOSS.
6. OPERATE AT 90% TO 110% OF NOMINAL VOLTAGE RATING AND SHALL PERFORM AN ORDERLY SHUTDOWN BELOW 80%. OPERATION SHALL BE PROTECTED AGAINST ELECTRICAL NOISE OF 5-120 HZ AND FROM KEYED RADIOS UP TO 5 W AT 3 FT.
7. POWER SUPPLY FOR THE ASC MUST BE RATED AT MINIMUM OF 125% OF ASC POWER CONSUMPTION, AND SHALL BE FUSED OR CURRENT LIMITING TYPE.
8. THE SYSTEM SIZE SHALL BE EXPANDABLE TO AT LEAST 120% THE NUMBER OF INPUT/OUTPUT OBJECTS REQUIRED FOR THIS PROJECT. ADDITIONAL CONTROLLERS SHALL BE ALL THAT IS NECESSARY TO ACHIEVE THIS CAPACITY REQUIREMENT. THE OPERATOR INTERFACES INSTALLED FOR THIS PROJECT SHALL NOT REQUIRE ANY HARDWARE ADDITIONS OR SOFTWARE REVISIONS IN ORDER TO EXPAND THE SYSTEM.
M. UNITARY CONTROLLERS: UNITIZED, CAPABLE OF STAND-ALONE OPERATION WITH SUFFICIENT MEMORY TO SUPPORT ITS OPERATING SYSTEM, DATABASE, AND PROGRAMMING REQUIREMENTS, AND WITH SUFFICIENT I/O CAPACITY FOR THE APPLICATION.
1. DIAGNOSTIC LEDS FOR POWER, COMMUNICATION, AND PROCESSOR; WIRING TERMINATION TO TERMINAL STRIP OR CARD CONNECTED WITH RIBBON CABLE; MEMORY WITH BIOS; AND 72 HOUR BATTERY BACKUP.
2. OPERATING SYSTEM: MANAGE I/O COMMUNICATION TO ALLOW DISTRIBUTED CONTROLLERS TO SHARE REAL AND VIRTUAL OBJECT INFORMATION AND ALLOW CENTRAL MONITORING AND ALARMS.
a. ASHRAE 135 COMPLIANCE: COMMUNICATE USING READ (EXECUTE AND INITIATE) AND WRITE (EXECUTE AND INITIATE) PROPERTY SERVICES DEFINED IN ASHRAE 135. RESIDE ON NETWORK USING MS/TP DATALINK/PHYSICAL LAYER PROTOCOL AND HAVE SERVICE COMMUNICATION PORT FOR CONNECTION TO DIAGNOSTIC TERMINAL UNIT.
N. I/O INTERFACE: HARDWIRED INPUTS/OUTPUTS TIE INTO SYSTEM THROUGH CONTROLLERS.
1. BINARY INPUTS: MONITORING OF ON-OFF SIGNALS WITHOUT EXTERNAL POWER.
2. PULSE ACCUMULATION INPUTS: ACCEPT UP TO 10 PULSES PER SECOND.
3. ANALOG INPUTS: MONITORING OF 0 TO 10 V DC, 4 TO 20 MA OR RESISTANCE SIGNALS.
4. BINARY OUTPUTS: ON-OFF OR PULSED LOW-VOLTAGE SIGNAL SELECTABLE FOR NORMALLY OPEN OR CLOSED.
5. ANALOG OUTPUTS: MODULATING SIGNAL, EITHER 0 TO 10 V DC OR 4 TO 20 MA.
6. TRI-STATE OUTPUTS: TWO COORDINATED BINARY OUTPUTS FOR CONTROL OF THREE-POINT, FLOATING-TYPE ELECTRONIC ACTUATORS. USE OF THREE-POINT FLOATING DEVICES LIMITED TO ZONE AND TERMINAL UNIT CONTROL APPLICATIONS (VAV TERMINAL UNITS, DUCT MOUNTED HEATING COILS, ZONE DAMPERS, RADIATION, ETC.)
7. UNIVERSAL I/OS: SOFTWARE SELECTABLE BINARY OR ANALOG INPUTS AND OUTPUTS.
O. POWER SUPPLIES: UL LISTED TRANSFORMERS WITH CLASS 2 CURRENT-LIMITING TYPE OR OVERCURRENT PROTECTION; LIMIT CONNECTED LOADS TO 80 PERCENT OF RATED CAPACITY. DC POWER SUPPLY SHALL MATCH OUTPUT CURRENT AND VOLTAGE REQUIREMENTS AND BE FULL-WAVE RECTIFIER TYPE.
P. POWER LINE FILTERING: INTERNAL OR EXTERNAL TRANSIENT VOLTAGE AND SURGE SUPPRESSION.
Q. COMMUNICATION
1. PROVIDE ALL COMMUNICATION MEDIA, CONNECTORS, REPEATERS, BRIDGES, HUBS, AND ROUTERS NECESSARY FOR THE INTRANETWORK.
2. CONNECTION OF AN OPERATOR INTERFACE DEVICE TO ANY ONE CONTROLLER ON THE INTRANETWORK WILL ALLOW THE OPERATOR TO INTERFACE WITH ALL OTHER CONTROLLERS AS IF THAT INTERFACE WERE DIRECTLY CONNECTED TO THE OTHER CONTROLLERS.
R. ELECTRONIC SENSORS/TRANSMITTERS
1. INSTALLATION
a. INSTALL ALL SENSORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
b. ROOM TEMPERATURE SENSORS SHALL BE INSTALLED ON CONCEALED JUNCTION BOXES PROPERLY SUPPORTED BY THE WALL FRAMING WITH CONDUIT STUB TO ABOVE THE CEILING.
c. INSTALL DEVICES WHICH HAVE ADJUSTMENT 48 INCHES ABOVE THE FLOOR OR COMPLY WITH CURRENT ADA REQUIREMENTS. INSTALL NON-ADJUSTABLE CONTROL SENSORS AT 60 INCHES ABOVE THE FLOOR.
d. COORDINATE LOCATION OF THERMOSTATS AND OTHER EXPOSED CONTROL SENSORS WITH PLANS AND ROOM DETAILS BEFORE INSTALLATION.
e. ALL WIRES ATTACHED TO SENSORS SHALL BE AIR SEALED IN THEIR RACEWAYS OR IN THE WALL TO STOP AIR TRANSMITTED FROM OTHER AREAS AFFECTING SENSOR READINGS.
2. ROOM TEMPERATURE SENSOR.
a. MANUFACTURER'S STANDARD COVER.
b. SEE SEQUENCE OF OPERATION FOR ADDITIONAL TEMPERATURE SENSOR FEATURES.
3. HUMIDITY SENSORS: BULK POLYMER SENSOR ELEMENT.
a. ACCURACY: 3 PERCENT FULL RANGE WITH LINEAR OUTPUT.
b. ROOM SENSOR RANGE: 20 TO 80 PERCENT RELATIVE HUMIDITY.
c. ROOM SENSOR: MANUFACTURER'S STANDARD LOCKING COVER
d. DRIFT SHALL NOT EXCEED 3% OF FULL SCALE PER YEAR.
e. SEE SEQUENCE OF OPERATION FOR ADDITIONAL HUMIDITY SENSOR FEATURES.
4. AIR PRESSURE TRANSMITTER
a. HONEYWELL P7640 SERIES, VERIS PX SERIES, PANEL DUCT OR UNIVERSAL MOUNT AS REQUIRED.
b. 32 TO 140 DEG F OPERATING TEMPERATURE RANGE.
c. 4-20 MA, 0-5 VDC OR 0-10 VDC SELECTABLE.
d. PLUS OR MINUS 1% FULL SCALE ACCURACY.
e. RANGES
1). ROOM PRESSURE: 0-0.1" W.C.
5. POWER MONITOR: 3-PHASE TYPE WITH DISCONNECT/SHORTING SWITCH ASSEMBLY, LISTED VOLTAGE AND CURRENT TRANSFORMERS, WITH PULSE KILOWATT HOUR OUTPUT AND 4 TO 20 MA KW OUTPUT, WITH MAXIMUM 2.5 PERCENT ERROR.
6. CURRENT SWITCHES: SELF-POWERED, SOLID-STATE WITH ADJUSTABLE TRIP CURRENT, SELECTED TO MATCH CURRENT AND SYSTEM OUTPUT REQUIREMENTS.
a. VERIS H608 OR EQUIVALENT FOR FIXED MOTOR HP MOTOR LOAD.
b. VERIS H934 OR EQUIVALENT FOR MOTORS DRIVEN BY A VARIABLE FREQUENCY DRIVE IF OUTPUT IS NOT AVAILABLE FROM VFD.
c. SWITCHES SET FOR MOTOR AMP DRAW WHEN MOTOR IS RUNNING.
7. DIFFERENTIAL PRESSURE INSTALLATION
a. BUILDING STATIC PRESSURE: PIPE THE LOW-PRESSURE PORT OF THE PRESSURE SENSOR TO THE STATIC PRESSURE PORT LOCATED ON THE OUTSIDE OF THE BUILDING THROUGH A HIGH-VOLUME ACCUMULATOR. PIPE THE HIGH-PRESSURE PORT TO A KELE RPS PICKUP AND PLATE
b. THE PIPING TO THE PRESSURE PORTS ON ALL PRESSURE TRANSDUCERS SHALL CONTAIN A CAPPED TEST PORT LOCATED ADJACENT TO THE TR

## DEMOLITION PLAN NOTES

- ALL EQUIPMENT, DUCTWORK AND PIPING SHOWN "RED AND DASHED" SHALL BE REMOVED.
- ALL EQUIPMENT, DUCTWORK AND PIPING SHOWN "LIGHTER" ARE EXISTING TO REMAIN.




NORTH

FIRST FLOOR DEMOLITION PLAN - AREA 'A'

SCALE: 1/8" = 1'-0"

0' 8' 16'


EXCEL

**Always a Better Plan**

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


**PROJECT INFORMATION**

STORAGE WAREHOUSE EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

**PROFESSIONAL SEAL**

***NOT FOR CONSTRUCTION***

**SHEET DATES**

**ISSUED FOR BID**

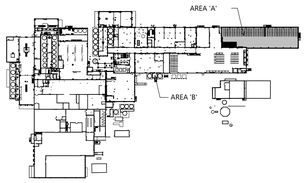
| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

**JOB NUMBER**

250429500

**SHEET NUMBER**

**HD1.1A**




KEY PLAN

HVAC FIRST FLOOR DEMOLITION PLAN - AREA 'A'

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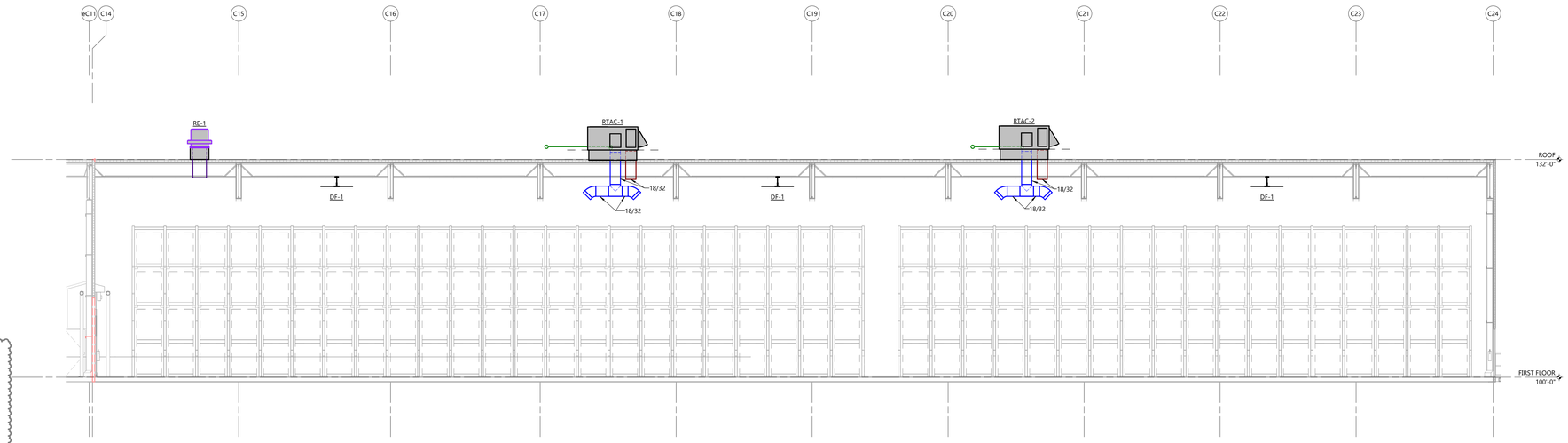
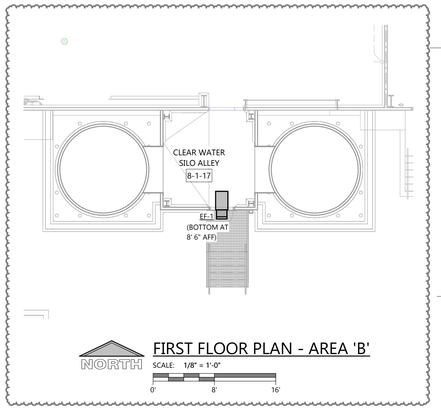
## GENERAL NOTES

- DUCT FITTINGS SHALL BE TYPE SHOWN ON PLAN OR CALLED OUT BY KEYNOTE. SEE DETAIL 1/H3.0 FOR ADDITIONAL FITTING DETAIL.
- VERIFY BUILDING OPENING AND CURB SIZES LISTED ON PLANS WITH ACTUAL EQUIPMENT SCHEDULED AND SUPPLIED. COORDINATE REQUIRED OPENING SIZES AND LOCATIONS WITH CONTRACTORS PROVIDING OPENING. SCHEDULES AND ACTUAL EQUIPMENT SIZES SHALL TAKE PRECEDENCE OVER SIZES SHOWN ON PLANS.
- DETAIL REFERENCES ON PLANS ARE TO AID THE CONTRACTOR IN IDENTIFYING THE APPLICABLE DETAIL. NOT ALL DETAILS, OR INSTANCES OF DETAILS, ARE REFERENCED ON PLANS. CONTRACTOR IS RESPONSIBLE TO REVIEW AND COMPLY WITH ALL APPLICABLE DETAILS WHETHER OR NOT REFERENCED ON PLANS.
- COORDINATE LOCATION OF ALL EXPOSED PIPING AND DUCTWORK WITH OWNER PRIOR TO INSTALLATION.
- IF DUCT SYSTEMS ARE USED FOR TEMPORARY HEAT, PROVIDE TEMPORARY FILTERS AT RETURN AIR OPENINGS AND INSTALL FILTERS IN THE UNITS EQUIVALENT TO THE EFFICIENCY OF THE SPECIFIED FILTERS FOR THE UNIT. IF PROPER EFFICIENCY FILTERS ARE NOT INSTALLED IN UNIT, UNIT AND ALL DUCTWORK DOWNSTREAM OF UNIT SHALL BE CLEANED BEFORE TEST AND BALANCE.



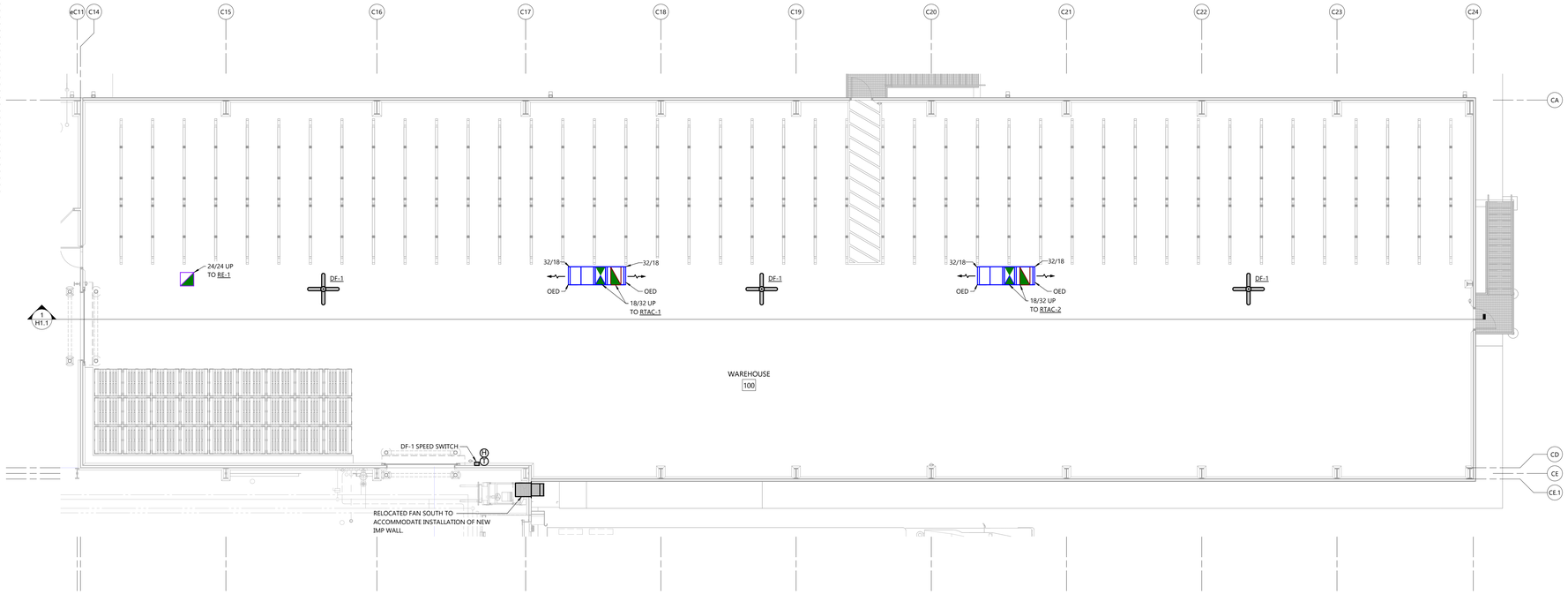

1 / H1.1 EQUIPMENT SECTION

SCALE: 1/8" = 1'-0"



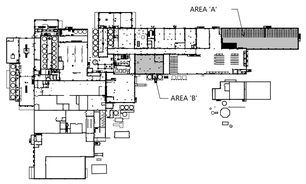

FIRST FLOOR PLAN - AREA 'B'

SCALE: 1/8" = 1'-0"




FIRST FLOOR PLAN - AREA 'A'

SCALE: 1/8" = 1'-0"




KEY PLAN

HVAC FIRST FLOOR PLAN


EXCEL

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250429500

SHEET NUMBER

H1.1

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## EXISTING GAS LOAD SUMMARY

| ITEM | MBH INPUT | REQUIRED PRESSURE |
|---|---|---|
| BOILER-1 | 33,000 | 3 PSIG |
| BOILER-2 | 33,000 | 3 PSIG |
| RTAC-1 | 124 | 7" W.C. |
| RTAC-3 | 82 | 7" W.C. |
| RTAC-5 | 205 | 7" W.C. |
| GUH-1 | 400 | 5" W.C. |
| GUH-2 | 400 | 5" W.C. |
| GUH-3 | 200 | 5" W.C. |
| GUH-4 | 200 | 5" W.C. |
| GUH-5 | 200 | 5" W.C. |
| GUH-6 | 200 | 5" W.C. |
| GUH-7 | 200 | 5" W.C. |
| GUH-8 | 200 | 5" W.C. |
| GUH-9 | 200 | 5" W.C. |
| MAU-1 | 933 | 1 PSIG |
| MAU-2 | 1,696 | 1 PSIG |
| MAU-3 | 2,290 | 1 PSIG |
| MAU-4 | 3,000 | 1 PSIG |
| AHU-1 | 2,255 | 1 PSIG |
| AHU-2 | 690 | 1 PSIG |
| DRYER | 22,976 | 12 PSIG |
| BOILER-3 | 199 | 7" WC |
| EXISTING TOTAL | 102,650 | |

## GAS LOAD SUMMARY

| ITEM | MBH INPUT | REQUIRED PRESSURE (1) |
|---|---|---|
| **250429500 STORAGE WAREHOUSE** | | |
| RTAC-1 | 99 | 7" W.C. |
| RTAC-2 | 99 | 7" W.C. |
| PROJECT TOTAL | 197 | |
| **250231400 CREAM RECEIVING (FUTURE)** | | |
| FAHU-1 | 2,963 | 8"-14" W.C. |
| GUH-1 | 150 | 5" W.C. |
| MAU-1 | 1,211 | 7.5" W.C. |
| MAU-2 | 2,625 | 15" W.C. |
| MAU-3 | 636 | 8.5" W.C. |
| MAU-4 | 158 | 6" W.C. |
| MAU-5 | 1,716 | 10.5" W.C. |
| FUTURE TOTAL | 9,459 | |
| GRAND TOTAL | 112,306 | |

- GAS PRESSURE AT METER = 15 PSIG
- PROVIDE GAS PRESSURE REGULATOR AT EACH PIECE OF EQUIPMENT LISTED ABOVE.
- CONNECT TO EACH PIECE OF EQUIPMENT LISTED ABOVE.

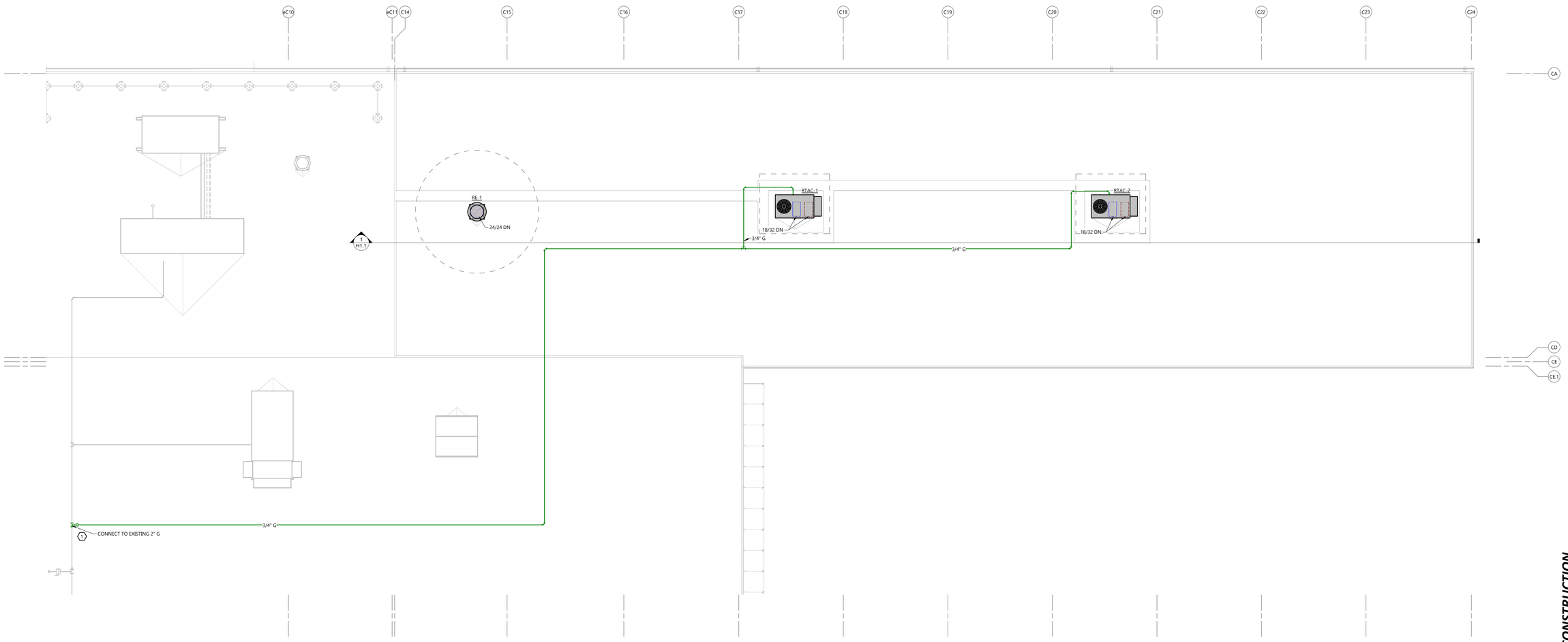
(1) VERIFY PRESSURE REQUIRED WITH ACTUAL EQUIPMENT INSTALLED ON PROJECT BEFORE SIZING REGULATOR.

## GENERAL NOTES

- VERIFY BUILDING OPENING AND CURB SIZES LISTED ON PLANS WITH ACTUAL EQUIPMENT SCHEDULED AND SUPPLIED. COORDINATE REQUIRED OPENING SIZES AND LOCATIONS WITH CONTRACTORS PROVIDING OPENING. SCHEDULES AND ACTUAL EQUIPMENT SIZES SHALL TAKE PRECEDENCE OVER SIZES SHOWN ON PLANS.
- DETAIL REFERENCES ON PLANS ARE TO AID THE CONTRACTOR IN IDENTIFYING THE APPLICABLE DETAIL. NOT ALL DETAILS, OR INSTANCES OF DETAILS, ARE REFERENCED ON PLANS. CONTRACTOR IS RESPONSIBLE TO REVIEW AND COMPLY WITH ALL APPLICABLE DETAILS WHETHER OR NOT REFERENCED ON PLANS.
- TERMINATE ALL GAS REGULATOR VENTS MINIMUM 10'-0" FROM EDGE OF ROOF. VENTS SHALL NOT BE TERMINATED OUT EXTERIOR WALLS
- DASHED LINES AROUND EXHAUST TERMINATIONS INDICATE 10'-0" REQUIRED CLEARANCE TO OUTSIDE AIR INTAKES.

## KEYNOTES

1. CONNECT TO EXISTING

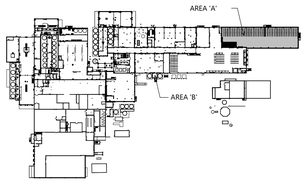



NORTH

ROOF PLAN - AREA 'A'

SCALE: 1/8" = 1'-0"

0' 8' 16'




KEY PLAN

HVAC ROOF PLAN - AREA 'A'


EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250429500

SHEET NUMBER

H1.3A

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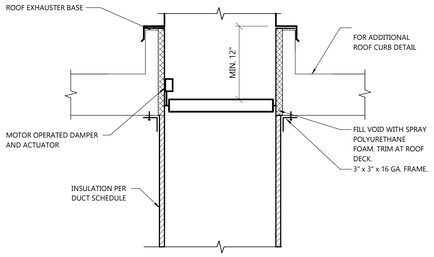
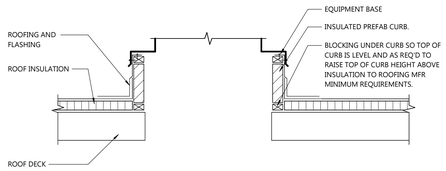
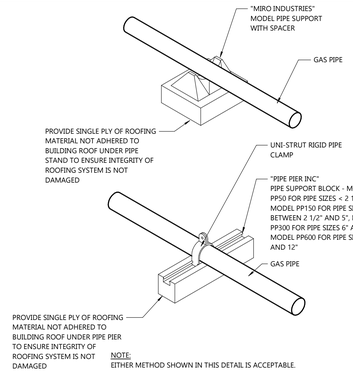



5 / H3.0 ROOF EXHAUSTER DETAIL
NOT TO SCALE

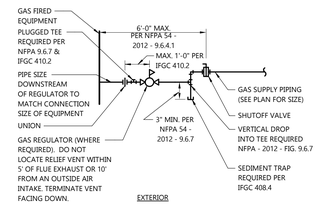



4 / H3.0 TYPICAL ROOF CURB DETAIL
NOT TO SCALE

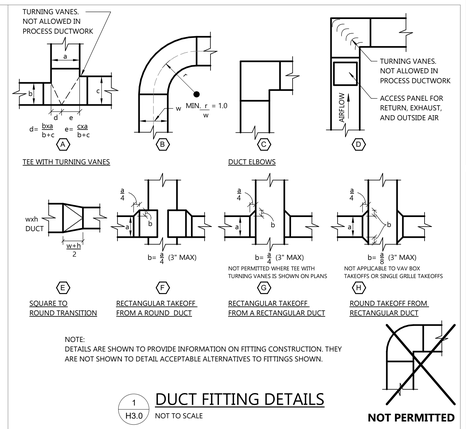



NOTE:
EITHER METHOD SHOWN IN THIS DETAIL IS ACCEPTABLE.

3 / H3.0 GAS PIPE SUPPORT ON ROOF DETAIL
NOT TO SCALE

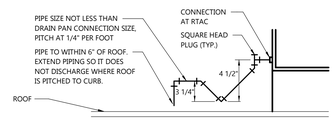



2 / H3.0 GAS PIPE CONNECTION DETAIL
NOT TO SCALE



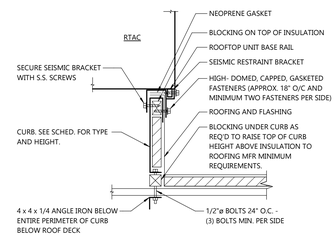

NOTE:
DETAILS ARE SHOWN TO PROVIDE INFORMATION ON FITTING CONSTRUCTION. THEY ARE NOT SHOWN TO DETAIL ACCEPTABLE ALTERNATIVES TO FITTINGS SHOWN.

1 / H3.0 DUCT FITTING DETAILS
NOT TO SCALE

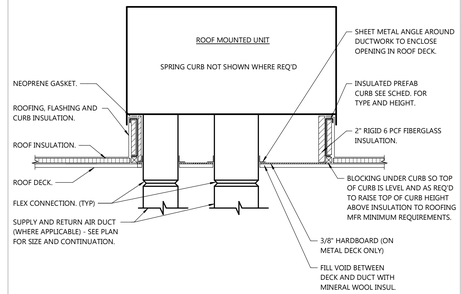



NOTES:
- MANUALLY FILL TRAP ON INITIAL START-UP.

8 / H3.0 RTAC CONDENSATE DRAIN TRAP PIPING DETAIL
NOT TO SCALE

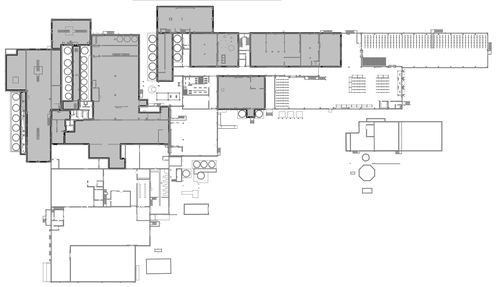



7 / H3.0 SEISMIC ROOF CURB DETAIL
NOT TO SCALE




6 / H3.0 ROOF MOUNTED UNIT DETAIL
NOT TO SCALE

KEY PLAN
- SHADED AREAS INDICATE AREAS WHICH ARE CONSIDERED PROCESS ROOMS.



PROCESS KEY PLAN

HVAC DETAILS

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
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|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
H3.0

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## ROOFTOP AIR CONDITIONING UNIT SCHEDULE (R.T.A.C.)

| NO. | NOM. TONS | SUPPLY FAN CFM | SUPPLY FAN MIN. OA CFM | SUPPLY FAN EXT. SP | SUPPLY FAN DRIVE TYPE | SUPPLY FAN MOTOR HP | RELIEF | CONTROLS OUTSIDE AIR | CONTROLS SMOKE DETECTOR | CONTROLS UNIT CONTROL | CONTROLS DAT SENSOR | CONTROLS FAN AIRFLOW | COOLING DUCT SP SENSOR | COOLING EAT DB / WB | COOLING MBH CAP. | COOLING AMB. TEMP F | COOLING NO. COMPR. | COOLING NO. STAGES | HEATING KW | HEATING MBH IN | HEATING MBH OUT | HEATING NO. STAGES | CURB HEIGHT BY MFR. | CURB TYPE (7) | ELECTRICAL MCA | ELECTRICAL MOP | ELECTRICAL VOLT/ PHASE | ELECTRICAL NEMA 3R DISC | EFFICIENCY MIN. CODE | EFFICIENCY UNIT RATING | EFFICIENCY TEST PROC. | WEIGHT (LBS.) | MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.5 | 2,500 | 340 | 0.75 | DIRECT (2) | 3 | BAR. | (10) | NO | (12) | NO | MODULATING (14) | NO | 78.6/60.2 | 78.3 | 95 | 2 | 3 | - | 99 | 80 | 2 | 18" | STANDARD | 22 | 25 | 460/3 | YES | 14.6 IEER, 11.0 EER | 14.6 IEER,11.0 EER | ARI 340/360 | 1,500 | YSK090 | TRANE |
| 2 | 7.5 | 2,500 | 340 | 0.75 | DIRECT (2) | 3 | BAR. | (10) | NO | (12) | NO | MODULATING (14) | NO | 78.6/60.2 | 78.3 | 95 | 2 | 3 | - | 99 | 80 | 2 | 18" | STANDARD | 22 | 25 | 460/3 | YES | 14.6 IEER, 11.0 EER | 14.6 IEER,11.0 EER | ARI 340/360 | 1,500 | YSK090 | TRANE |

- ACCEPTABLE MANUFACTURERS: TRANE, CARRIER, DAIKIN, AAON, LENNOX. USE OF MANUFACTURER OR MODEL OTHER THAN LISTED IN SCHEDULE ABOVE SHALL BE CONSIDERED A SUBSTITUTION.
  DRAWINGS SHOWING REVISED DUCT ROUTING, ROOF OPENINGS, STRUCTURAL STEEL, ETC. WILL BE REQUIRED AT TIME OF RTAC SHOP DRAWINGS SUBMITTAL.
- SEE MOTOR SPECIFICATIONS FOR MOTOR REQUIREMENTS. FOR MOTORS DRIVEN BY VFD, PROVIDE NEMA MG1 PART 31 PREMIUM EFFICIENCY MOTOR SUITTABLE FOR VFD APPLICATION WITH FACTORY INSTALLED AEGIS SHAFT GROUNDING RING.
- PROVIDE 2" ASHRAE STD 52.2 MERV 8 T.A. FILTERS, HAIL GUARD FOR CONDENSING COILS.
- RTAC DESIGNED TO PREVENT RAIN INTRUSION INTO THE AIRSTREAM WHEN TESTED AT DESIGN AND NO AIRFLOW PER SECTION 58 OF UL 1995.
- PROVIDE UNIT WITH INTEGRAL MANUFACTURER INSTALLED WATER-LEVEL MONITORING DEVICE IN THE PRIMARY DRAIN PAN TO SHUT OFF THE EQUIPMENT PER IMC 307.2.3.1.
- PROVIDE FACTORY RECOMMENDED FLUE EXTENSION. EXTENSION SHALL TAKE FLUE GASES TO 6" ABOVE TOP OF CABINET.
- PROVIDE FACTORY INSTALLED UN-POWERED CONVENIENCE RECEPTACLE.
- UNITS SHALL BE RATED FOR SEISMIC D LOCATION
- PROVIDE PRE-INSULATED ROOF CURB RATED FOR SEISMIC D.

(2) DIRECT DRIVE FANS WITH ECM MOTOR OR VFD FOR BALANCING.
(7) SEE DETAIL FOR INSULATION REQUIREMENTS

**CONTROLS**

(10) PROVIDE MODULATING ECONOMIZER DAMPERS AND ACTUATOR WITH DIFFERENTIAL ENTHALPY CONTROL. CONTROL SHALL INCLUDE FAULT DETECTION AND DIAGNOSTICS SYSTEM COMPLYING WITH 2021 IECC C403.5.5.
(12) PROVIDE INTEGRAL UNIT CONTROL WITH BACNET OR LON COMPATIBLE INTEROPERABILITY WITH BUILDING MANAGEMENT SYSTEM. VERIFY REQUIREMENTS WITH TEMPERATURE CONTROL CONTRACTOR. SEE SEQUENCE OF OPERATION SPECIFICATIONS FOR RTAC CONTROL REQUIREMENTS.
(14) FAN AIRFLOW VARIED BY ECM MOTOR OR VFD. ROOFTOP UNIT CONTROLS TO CONTROL.

## ROOF EXHAUSTER SCHEDULE (RE)

| NO. | SERVICE | CFM | SP " WC | MAX. BHP | MOTOR HP | FAN RPM | MOTOR RPM | DRIVE | VFD | DISC. | DAMPER DAMPER | DAMPER LOC. | DAMPER ACTUATOR | MAX. SONES | CURB (16) | WEIGHT LBS. | MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WAREHOUSE | 4,000 | 0.20 | 0.54 | 3/4 | 546 | 1,725 | BELT | YES (2) | (4) | M.O.D. (6) | (9) | (13) | 7.9 | 18" | 180 | GB-240 | GREENHECK |

- ACCEPTABLE MANUFACTURERS: GREENHECK, COOK, CARNES, PENN-BARRY, ACME, TWIN CITY.
- PERMANENTLY LUBRICATED SEALED BALL BEARING MOTORS MOUNTED ON VIBRATION ISOLATORS OUT OF THE AIRSTREAM. SEE MOTOR SPEC FOR ADDITIONAL REQUIREMENTS.
- PROVIDE GREASABLE BEARINGS WITH MINIMUM L10 LIFE IN EXCESS OF 100,000 HOURS (EQUIVALENT TO L50 AVERAGE LIFE OF 500,000 HOURS).
- PROVIDE WITH 1/2" MESH BIRD SCREEN AND CURB SEAL.
- PROVIDE WITH TOOL-LESS TOP CAP REMOVAL.
- BELT DRIVE FANS WITH AUTOMATIC BELT TENSIONERS.

**MOTOR**

(2) PROVIDE NEMA DESIGN B MOTOR BUILT TO NEMA MG1 PART 31 SUITABLE FOR VFD APPLICATION. PROVIDE FACTORY INSTALLED AEGIS SHAFT GROUNDING RING.

**DISCONNECT**

(4) PROVIDE PREWIRED DISCONNECT WITH AUXILIARY CONTACTS. LEVITON POWER SWITCH DS-AX OR HUBBELL HBLDS. IF DISCONNECT
  DOESN'T FIT UNDER FAN HOOD, PROVIDE NEMA 4X DISC, WELD BRACKET TO CORNER OF FAN BASE, FACTORY MOUNT DISC ON BRACKET AND RUN LIQUIDTIGHT FROM DISC TO MOTOR.

**DAMPER**

(6) PROVIDE WITH GREENHECK VCD-23 DAMPER, 16 GA. GALV. FRAME AND BLADES, TPE BLADE SEALS, SS COMPRESSION JAMB SEAL
  PLATED STEEL LINKAGE AND AXLES, SYNTHETIC BEARINGS. MAXIMUM 4 CFM PER SF LEAKAGE AT 1.0" W.G.

**DAMPER LOCATION**

(9) DAMPER MOUNTED IN ROOF CURB, INTERNAL MOUNT ACTUATOR, HINGED FAN BASE. DAMPER SHELF NOT PERMITTED. DUCTWORK CONTINUOUS THRU CURB.

**ACTUATOR**

(13) 24 VAC.

**MISC**

(16) DUCTWORK SHALL BE CONTINUOUS THRU CURB. IF NO DUCTWORK SHOWN, CURB SHALL HAVE INTERIOR LINER TO CONCEAL INSULATION

## EXHAUST FAN SCHEDULE (E.F.)

| NO. | AREA SERVED | CFM | S.P. " W.C. | MAX BHP | MOTOR HP | FAN RPM | DRIVE | VFD | DAMPER | DISC. | MAX. SONES | MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SILO ALLEY | 500 | 0.25 | 0.10 | 1/12 | 1,350 | DIRECT (1C) | NO | BDD | (4) | 12 | SE1-12 (8)(9)(10) | GREENHECK |

- ACCEPTABLE MANUFACTURERS: GREENHECK, ACME, COOK, PENN, CARNES, TWIN CITY.
- SEE MOTOR SPECIFICATIONS FOR MOTOR REQUIREMENTS.
- SEISMIC RATED

(1C) PROVIDE DIRECT DRIVE FANS WITH PREWIRED SPEED SWITCH.
(4) PROVIDE NEMA 4X DISCONNECT SWITCH.
(8) PROVIDE GALVANIZED STEEL WALL HOUSING WITH COATED WELDED STEEL WIRE INLET GUARD, CLOSURE ANGLES, BACKDRAFT DAMPER
  AND GALVANIZED STEEL. 45 DEG DOWNTURN WEATHERHOOD WITH BIRD SCREEN. WALL HOUSING FOR INTERIOR FAN
  INSTALLATION, AND FLUSH EXTERIOR MOUNTING (FOR ATTACHING HOOD FLUSH TO EXTERIOR WALL).
(9) PROVIDE HI-PRO POLYESTER COATING ON FAN AND ALL ACCESSORIES.
(10) PROVIDE TEFC MOTOR.

## DESTRATIFICATION FAN SCHEDULE (D.F.)

| NO. | CFM | FAN DIA. | BLADE HEIGHT | RPM | MAX. AMPS | HP | WATTS | PROTECTIVE CAGE | SECONDARY SUPPORT CABLE | WEIGHT (LBS.) | MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7,269 | 56" | 28'-0" | 302 | 0.59 | - | 71 | NO | YES | 18 | 60F9 WH | "ENVIRO-FAN" (1) |

- ACCEPTABLE MANUFACTURERS: ENVIRO-FAN, LEADING EDGE.
- PROVIDE WITH DOWNROD LENGTH AS REQUIRED TO MEET SCHEDULED BLADE HEIGHT.

(1) PROVIDE SOLID STATE SPEED CONTROL FOR 3 FANS IN ROOM 100.

## DUCTWORK AND DUCTWORK INSULATION SCHEDULE

| SERVICE | LOCATION | DUCT MAT'L | SMACNA PRESS. CLASS | INSULATION RECTANGULAR DUCT | INSULATION ROUND DUCT | INSUL. JACKET |
|---|---|---|---|---|---|---|
| SUPPLY RTAC-1,2 | EXPOSED IN ROOM SERVED | GALV. ST. | +1" | N.R. | N.R. | N.R. |
| SUPPLY RTAC-1,2 | CONCEALED | GALV. ST. | +1" | 1.5" RIGID F.G. | - | N.R. |
| RETURN RTAC-1,2 | CONCEALED AND EXPOSED | GALV. ST. | -1" | N.R. | N.R. | N.R. |
| EXHAUST RE-1 | EXPOSED | GALV. ST. | -1" | 1.5" RIGID F.G. (2) | - | LAMINATED |

N.R. = NOT REQUIRED
EXPOSED = VISIBLE FROM OCCUPIED SPACE. DOES NOT INCLUDE DUCTWORK ABOVE WALK-ON CEILINGS AND IN MECHANICAL ROOMS. DUCTWORK IN ROOMS WITH CLOUD CEILINGS ARE CLASSIFIED AS EXPOSED.
CONCEALED = HIDDEN FROM VIEW BY WALLS AND CEILINGS. INCLUDES DUCTWORK ABOVE WALK-ON CEILINGS AND IN MECHANICAL ROOMS.
MATERIALS:
  GALV. STEEL: ASTM A653, LOCK FORMING QUALITY, 1.25 OUNCES/ S.F. ZINC COATING (G90 IN ACCORDANCE WITH ASTM A90 BOTH SIDES).
- ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE SEALED PER 2021 IECC 403.12.1.

(2) INSULATE FROM 18" UPSTREAM OF THE BACKDRAFT OR MOTOR OPERATED DAMPER TO THE POINT WHERE THE DUCT EXITS THE BUILDING.

## PIPE SCHEDULE

| SERVICE | PIPE SIZE | STEEL PIPE BLACK STEEL | STEEL PIPE GALVANIZED | STEEL PIPE ASTM GR. B A53 F | STEEL PIPE ASTM GR. B A53 E | STEEL PIPE ASTM GR. B A106 S | STEEL FITTINGS SCHEDULE | STEEL FITTINGS CAST IRON THREADED ASTM A126/ ANSI B16.4 | STEEL FITTINGS MALLEABLE IRON THREADED ASME/ANSI B16.3 | STEEL FITTINGS FORGED STEEL THREADED OR WELDED ASTM A105 GRADE B/ ANSI B16.11 | STEEL FITTINGS SEAMLESS CARBON STEEL WELDED ASTM A234, GR. WPB/ ANSI B16.9 | STEEL FITTINGS COLD PRESS MECHANICAL JOINT | STEEL FITTINGS COUPLING JOINT | STEEL CLASS | COPPER PIPE ASTM B88 TYPE L HARD DRAWN | COPPER PIPE PRECHARGED LINE SET | COPPER FITTINGS ASME B16.22 WROUGHT COPPER | COPPER FITTINGS SOLDER / BRAZING | COPPER FITTINGS COLD PRESS MECHANICAL JOINT | COUPLING JOINT | PRESSURE RATED | NON-PRESSURE RATED | PLASTIC PIPE SCHEDULE | PLASTIC PIPE PVC, ASTM D1785, D2672 | PLASTIC PIPE CPVC ASTM D1784, F441 | PLASTIC FITTINGS PVC ASTM D2464, D2467, D1784 | PLASTIC FITTINGS CPVC ASTM F437, F439, D1784 | STAINLESS STEEL PIPE ASTM A312 304 316 | STAINLESS STEEL PIPE SCHEDULE | STAINLESS STEEL TUBE 16 GAUGE 304 | STAINLESS STEEL FITTINGS ASTM A403, GR. WP304 BUTT WELDED | STAINLESS STEEL FITTINGS THREADED | STAINLESS STEEL FITTINGS COLD PRESS MECHANICAL JOINT | PEX | PE | MISC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS (> 5 PSIG) | ALL SIZES | X | | X | X | X | 40 | | | | X | | | 150 | | | | | | | | | | | | | | | | | | | | | | | | |
| GAS (≤ 5 PSIG) | 1/2" - 2" | X | | X | X | X | 40 | X | X | X | X | (6) | | 125/150 | | | | | | | | | | | | | | | | | | | | | | | | |
| COOLING COIL COND. DRAIN | ALL | | X | X | X | X | 40 | X | X | | | | | 125 | | | | | | | | | X | 40 | X | X | (3) | (19) | | | | | | | | | |

(3) ASTM F656 SOLVENT WELD WITH ASTM D2564 CLEAR SOLVENT CEMENT.
(6) VIEGA MEGAPRESS FITTING COMPLYING WITH ASTM A420 OR ASME B16.3. EPDM SEAL FOR WATER APPLICATIONS, HNBR SEAL FOR GAS.
  10 YEAR WARRANTY IN MATERIAL AND WORKMANSHIP. INSTALL PER MFR INSTALLATION INSTRUCTIONS.
(19) ASTM F656 SOLVENT WELD WITH ASTM F493 CLEAR SOLVENT CEMENT.

## ELECTRICAL/STARTER/DISCONNECT SCHEDULE

| SYM. | ELECTRICAL DATA HP | KW | FLA | MCA | MOP | VOLT | PH. | STARTER TYPE | LOCATION | FURN. BY | AUX. CONTACT | ACCESS-ORIES | SMOKE DETECTOR | DISCONNECT DIS-CONNECT | DISCONNECT FURN. BY | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTAC-1 | - | - | 22 | 25 | 460 | 3 | INTEG. | INTEGRAL | EM | - | - | - | - | R | EM (2) | - |
| RTAC-1 CONVENIENCE RECEPTACLE | - | - | - | - | 120 | 1 | - | IN RTAC-1 | EM | - | - | - | - | NR | - | - |
| RTAC-2 | - | - | 22 | 25 | 460 | 3 | INTEG. | INTEGRAL | EM | - | - | - | - | R | EM (2) | - |
| RTAC-2 CONVENIENCE RECEPTACLE | - | - | - | - | 120 | 1 | - | IN RTAC-2 | EM | - | - | - | - | NR | | |
| RE-1 | 3/4 | - | - | - | 460 | 3 | VFD | MCC | EC | - | - | - | - | R | EM (2) | (21) |
| EF-1 | 1/12 | - | - | - | 120 | 1 | MAN | ELEC RM | EC | - | - | HOA | - | R | EM (2) | |
| DF-1 (3 FANS) | - | 0.1 | - | - | 120 | 1 | MAN | SEE DWG | EM | - | - | - | - | NR | | |

STARTER TYPE:
INTEG.= INTEGRAL; PROVIDED INTEGRAL WITH EQUIPMENT.
RELAY= UL LISTED MOTOR RATED RELAY WITH SEPARATE ENTRANCES FOR INPUT AND OUTPUT CONTACTS (RIBT SERIES), OVERRIDE SWITCH AND LED STATUS INDICATOR.
  CONTACT RATING, CONFIGURATION, AND COIL VOLTAGE SUITABLE FOR APPLICATION.
MAN= MANUAL; NEMA ICS 2, AC GENERAL PURPOSE CLASS A MANUALLY OPERATED, FULL-VOLTAGE CONTROLLER WITH QUICK MAKE AND BREAK TOGGLE
  ACTION AND DOUBLE BREAK SILVER ALLOY CONTACTS. BIMETALLIC OR MELTING ALLOY TYPE THERMAL OVERLOAD UNITS. NEMA ICS 6 GENERAL
  PURPOSE FLUSH MOUNTED ENCLOSURE WITH STAINLESS STEEL COVER PLATE IN FINISHED AREAS AND TYPE 1 SURFACE MOUNTED IN UNFINISHED AREAS.
MAG= MAGNETIC: NEMA ICS 2, AC GENERAL PURPOSE CLASS A MAGNETIC ACROSS-THE-LINE CONTROLLER. DOUBLE BREAK SILVER ALLOY CONTACTS. NEMA SOLID
  STATE OVERLOAD RELAY WITH USER SELECTABLE SETTINGS, CLASS 10, 20, AND 30; BUILT-IN MEMORY TO PREVENT HOT MOTOR RESTART. OPERATING
  TEMPERATURE: -20 DEGREE C TO +70 DEGREE C. PHASE CURRENT LOSS PROTECTION. PHASE CURRENT UNBALANCE PROTECTION (ADJUSTABLE 20-50%).
  PROVIDE NEMA ICS 6, TYPE 1 ENCLOSURE AUXILIARY CONTACT(S) AS REQUIRED FOR CONTROL. PROVIDE 120V, 60 HZ, SECONDARY, 100VA FUSED MINIMUM,
  TRANSFORMER IN EACH STARTER. FUSED PRIMARY AND SECONDARY, BOND UNFUSED LEG OF SECONDARY TO ENCLOSURE.
COMB= COMBINATION: COMBINE MAGNETIC STARTER AND NON-FUSED DISCONNECT SWITCH IN COMMON ENCLOSURE. LOCKABLE IN OPEN POSITION,
  MOLDED CAST TYPE MOTOR CIRCUIT PROTECTOR (MAGNETIC PROTECTION ONLY).
VFD= VARIABLE FREQUENCY DRIVE- SEE SPECS.

FURNISHED BY:
EM = EQUIPMENT MANUFACTURER
HC = HEATING CONTRACTOR
EC = ELECTRICAL CONTRACTOR

ACCESSORIES:
HOA = HAND-OFF-AUTO
PL =LED PILOT LIGHT
PB = PUSH BUTTON

DISCONNECT:
NR= NOT REQUIRED
R = REQUIRED
F = FUSED

REMARKS:
REC =RECEPTACLE

- ACCEPTABLE MANUFACTURERS: ALLEN BRADLEY, CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.
- VERIFY VOLTAGE AND PHASE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
- FURNISH MOTOR STARTERS TO E.C. FOR INSTALLATION AND WIRING WHEN THE STARTER SCHEDULE CALLS FOR H.C. TO FURNISH.
- NEMA RATINGS OF COMPONENTS SHALL BE SUITABLE FOR THE ENVIROMENT THEY ARE MOUNTED IN (NEMA 3R FOR OUTDOORS, NEMA 4X FOR WASHDOWN, ETC)

(2) DISCONNECT FACTORY MOUNTED AND PREWIRED BY EQUIPMENT MANUFACTURER.
(21) EC SHALL WIRE FROM AUX CONTACT AT DISC TO SHUT DOWN VFD WHEN DISC IS ENGAGED. EC TO PROVIDE AUX CONTACT AT DISCONNECT IF EC IS PROVIDING DISCONNECT.


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

STORAGE WAREHOUSE EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250429500

SHEET NUMBER
**H4.0**

HVAC SCHEDULES


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# ELECTRICAL SPECIFICATIONS

## DIVISION 26 ELECTRICAL

### 26 05 00 BASIC ELECTRICAL REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. ELECTRICAL CONTRACTOR SHALL VERIFY REQUIREMENTS FOR TEMPORARY LIGHTING AND POWER WITH GENERAL CONTRACTOR AND INCLUDE IN HIS SCOPE OF WORK WHEN DIRECTED BY G.C. INSTALL IN ACCORDANCE WITH ALL CODE AND OSHA REQUIREMENTS FOR CONSTRUCTION PROJECTS.
C. SUBSTITUTIONS
1. SEE DIVISION 01 25 00 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
3. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ENGINEER.
D. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS.
2. ELECTRICAL CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
a. PANELBOARD CIRCUIT BREAKERS
b. LIGHT FIXTURES
c. ALL DIVISION 27
d. ALL DIVISION 28
3. INCLUDE OUTLINE AND GENERAL ARRANGEMENT DRAWINGS, DATA SHEETS AND WIRING DIAGRAMS.
4. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
5. LIGHT FIXTURE SHOP DRAWINGS SHALL CLEARLY INDICATE INDENTIFICATION TAG AS INDICATED IN LIGHT FIXTURE SCHEDULE. ALL OPTIONS, ACCESSORIES AND FINISHES BEING PROVIDED SHALL BE CLEARLY INDICATED.
6. SYSTEM WIRING RISER DIAGRAMS SHALL INDICATE ALL COMPONENTS SHOWN ON THE FLOOR PLANS, TYPE AND TERMINATION POINT OF CABLE TO EACH COMPONENT.
7. PROJECT CLOSEOUT
a. MARK RECORD DRAWINGS ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
E. FINISHING AND PAINTING
1. SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
2. PREPARE EXPOSED CONDUIT, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
3. E.C. SHALL PROVIDE A FACTORY OR FIELD APPLIED PRIME AND FINISH COAT OF COLOR SELECTED BY THE OWNER'S REPRESENTATIVE TO ALL ROOF MOUNTED EQUIPMENT AND OTHER EXTERIOR MATERIALS, INCLUDING SUPPORT HARDWARE.
4. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. E.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
5. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
6. WHERE THE ELECTRICAL CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.
F. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
G. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
H. COORDINATE INSTALLATION OF ELECTRICAL WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
I. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
J. COMPLY WITH THE REQUIREMENTS OF NFPA; NATIONAL, STATE AND LOCAL ELECTRICAL CODES AND LOCAL UTILITY REGULATIONS.
K. MATERIAL SHALL BEAR U.L. AND/OR OTHER APPROVED AGENCY LISTING.
L. INSTALL MOTOR STARTERS/VFDS FURNISHED BY HVAC AND PLUMBING CONTRACTORS, AND WIRE FROM THE POWER SOURCE TO THE STARTER/VFD AND FROM THE STARTER/VFD TO THE MOTOR.
M. VERIFY ELECTRICAL SIZE AND CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.
N. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATING SERVICE AND CONDUCT A PRIVATE UTILITY LOCATE TO ENSURE THAT ALL ELECTRICAL FEEDERS, BRANCH CIRCUITS, LOW VOLTAGE CABLES AND FIBER OPTIC HAVE BEEN LOCATED BEFORE STARTING SITE DEMOLITION. DESIGN ENGINEER AND GENERAL CONTRACTOR SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
O. SCHEDULE REQUIRED POWER, TELEPHONE OR DATA OUTAGES IN OCCUPIED AREAS OF THE BUILDING WITH THE OWNER. CONTRACTOR SHALL WORK UNTIL SERVICE IS RESTORED. OUTAGE WORK SHALL BE PERFORMED DURING NON-WORKING HOURS, WEEKENDS, OR HOLIDAYS.
P. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR ELECTRICAL WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES.
Q. PROJECT COMPLETION
1. CLEAN FIXTURES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
R. PROVIDE OPERATING INSTRUCTIONS AS FOLLOWS:
1. TWO (2) HOURS FOR BUILDING GENERAL ELECTRICAL SYSTEM.
2. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS.
S. LOCATION
1. THE ARCHITECT SHALL RESERVE THE RIGHT TO MAKE OUTLET POSITION CHANGES UP TO 10' BEFORE INSTALLATION WITHOUT ANY ADDITIONAL COST TO PROJECT.
2. DO NOT LOCATE OUTLETS OR EQUIPMENT WHERE THE USEFULNESS AND/OR OPERATION WILL BE AFFECTED BY THE WORK OF OTHER TRADES, DOOR SWING, COUNTER, EQUIPMENT, ETC.
T. ACCESS
1. INSTALL EQUIPMENT, JUNCTION BOXES, PULL BOXES AND ACCESSORIES TO PERMIT ACCESS WITHOUT RELOCATING INSTALLED OR YET TO BE INSTALLED EQUIPMENT.
2. ACCESS PANELS
a. FURNISH ACCESS PANELS OF ADEQUATE SIZE TO PERMIT SERVICE OF CONCEALED DEVICES. PANELS SHALL BE SUITABLE FOR INSTALLATION IN THE MATERIAL FORMING THE FINISHED SURFACE, WITH FLUSH METAL FRAME, FLUSH HINGED STEEL DOOR, FLUSH SCREWDRIVER OPERATED LATCH.
b. PANELS UL LISTED TO CONFORM TO THE FIRE RATING OF THE SURFACE INSTALLED IN.
c. TURN ACCESS PANEL OVER TO CONTRACTOR SKILLED IN THE CONSTRUCTION OF THE SURFACES INVOLVED FOR INSTALLATION.
d. ARCHITECT TO APPROVE ACCESS PANEL LOCATION PRIOR TO INSTALLATION OF EQUIPMENT REQUIRING ACCESS.
e. COORDINATE WITH THE OTHER CONTRACTORS AND WHEREVER PRACTICAL, GROUP DEVICES IN SUCH A MANNER SO AS TO MINIMIZE PANELS.

### 26 05 19 LOW VOLTAGE POWER CONDUCTORS AND CABLES (600V AND LESS)

A. TYPE AND SIZE
1. NO. 10 & 12: SOLID OR STRANDED COPPER, 600V, THHN/THWN.
2. NO. 8 TO 3: STRANDED COPPER, 600V, THHN/THWN.
3. NO. 2 TO 4/0: STRANDED COPPER, 600V, THHN/THWN.
4. MINIMUM BRANCH CIRCUIT WIRE SIZE NO. 12.
5. CONTROL WIRING: STRANDED COPPER, MINIMUM NO. 14.
6. GREEN INSULATION. COPPER STRANDED EQUIPMENT GROUND.
B. NEUTRALS AND GROUNDS SHALL BE COLOR CODED PER NEC.
C. WIRE COLORS
1. 120/208-VOLT AND 120/240-VOLT SYSTEM: PHASE-A (BLACK), PHASE-B (RED), PHASE-C (BLUE).
2. 277/480-VOLT SYSTEMS: PHASE-A (BROWN), PHASE-B (ORANGE), PHASE-C (YELLOW).
D. VOLTAGE DROP
1. AT NO POINT IN THE ELECTRICAL SYSTEM SHALL THERE BE MORE THAN 5 PERCENT TOTAL VOLTAGE DROP.
2. THE CONTRACTOR SHALL APPROPRIATELY INCREASE THE SIZE OF ALL CIRCUIT CONDUCTORS TO LIMIT VOLTAGE DROP TO 2 PERCENT OR LESS FOR FEEDERS, AND 3 PERCENT OR LESS FOR BRANCH CIRCUITS.
3. VOLTAGE DROP ON BRANCH CIRCUITS FOR LIGHTING OR RECEPTACLES SHALL BE CALCULATED USING 80 PERCENT AMPACITY OF THE BRANCH CIRCUITS OVERCURRENT PROTECTION DEVICE.
E. PROVIDE GROUND CONDUCTOR(S) WITH EVERY BRANCH CIRCUIT AND EVERY FEEDER.
F. PROVIDE A SEPARATE GROUND CONDUCTOR AND A SEPARATE NEUTRAL CONDUCTOR WHEN AN INDIVIDUAL RECEPTACLE OR PIECE OF EQUIPMENT IS SHOWN WITH AN INDIVIDUAL HOMERUN.
G. PROVIDE A SEPARATE GROUND CONDUCTOR AND SEPARATE NEUTRAL CONDUCTOR FOR EVERY RECEPTACLE BRANCH CIRCUIT FED FROM A PANELBOARD WITH SURGE PROTECTION.
H. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH LIGHTING BRANCH CIRCUIT THAT SERVES SOLID-STATE LED DRIVERS OR PROVIDE A NEUTRAL CONDUCTOR ONE SIZE LARGER THAN THE LARGEST SOURCE CONDUCTOR WHEN THE NEUTRAL IS SHARED.
I. TESTING: ALL CIRCUITS SHALL BE TESTED FOR PROPER OPERATION AND FUNCTION. REPAIR ALL NON-WORKING, NEWLY INSTALLED, CIRCUITS.
J. VERIFY LUG SIZES AND TERMINATION LOCATION PRIOR TO INSTALLING FEEDERS.

### 26 05 26 GROUNDING AND BONDING

A. GROUNDING AND BONDING PRODUCTS
1. GOVERNING REQUIREMENTS: WHERE TYPES, SIZES, RATINGS, AND QUANTITIES INDICATED ARE IN EXCESS OF NEC REQUIREMENTS, MORE STRINGENT REQUIREMENTS AND GREATER SIZE, RATING, AND QUANTITY INDICATIONS GOVERN.
B. WIRE AND CABLE GROUNDING CONDUCTORS
1. CONFORM TO NEC TABLE 8, EXCEPT AS OTHERWISE INDICATED FOR CONDUCTOR PROPERTIES, INCLUDING STRANDING.
a. MATERIAL: COPPER.
2. EQUIPMENT GROUNDING CONDUCTORS: INSULATED WITH GREEN COLOR INSULATION.
C. APPLICATION
1. EQUIPMENT GROUNDING CONDUCTORS: COMPLY WITH NEC ARTICLE 250 FOR TYPES, SIZES, AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, EXCEPT WHERE SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY NEC ARE INDICATED.
a. INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH CIRCUIT CONDUCTORS FOR ITEMS BELOW IN ADDITION TO THOSE REQUIRED BY CODE:
1). FEEDERS AND BRANCH CIRCUITS.
2). LIGHTING CIRCUITS.
3). RECEPTACLE CIRCUITS.
4). SINGLE-PHASE MOTOR OR APPLIANCE BRANCH CIRCUITS.
5). THREE-PHASE MOTOR OR APPLIANCE BRANCH CIRCUITS.
2. SIGNAL AND COMMUNICATION SYSTEMS: FOR TELEPHONE, ALARM, VOICE AND DATA, AND OTHER COMMUNICATION SYSTEMS, PROVIDE NO. 4 AWG MINIMUM INSULATED GROUNDING CONDUCTOR IN RACEWAY FROM GROUNDING-ELECTRODE SYSTEM TO EACH SERVICE LOCATION, TERMINAL CABINET, WIRING CLOSET, AND CENTRAL EQUIPMENT LOCATION.
a. SERVICE AND CENTRAL EQUIPMENT LOCATIONS AND WIRING CLOSETS: TERMINATE GROUNDING CONDUCTOR ON 1/4 BY 2 BY 12 INCHES (6 BY 50 BY 300 MILLIMETER) GROUNDING BUS.
b. TERMINAL CABINETS: TERMINATE GROUNDING CONDUCTOR ON CABINET GROUNDING TERMINAL.
3. SEPARATELY DERIVED SYSTEMS: WHERE NEC REQUIRES GROUNDING, GROUND ACCORDING TO NEC PARAGRAPH 250-30.
4. PIPING SYSTEMS AND OTHER EQUIPMENT: COMPLY WITH NEC ARTICLE 250 FOR BONDING REQUIREMENTS.
D. INSTALLATION
1. GROUND ELECTRICAL SYSTEMS AND EQUIPMENT ACCORDING TO NEC REQUIREMENTS, EXCEPT WHERE DRAWINGS OR SPECIFICATIONS EXCEED NEC REQUIREMENTS.
E. CONNECTIONS
1. EQUIPMENT GROUNDING-WIRE TERMINATIONS: FOR NO. 8 AWG AND LARGER, USE PRESSURE-TYPE GROUNDING LUGS. NO. 10 AWG AND SMALLER GROUNDING CONDUCTORS MAY BE TERMINATED WITH WINGED PRESSURE-TYPE CONNECTORS.
2. NONCONTACT METAL RACEWAY TERMINATIONS: WHERE METALLIC RACEWAYS TERMINATE AT METAL HOUSINGS WITHOUT MECHANICAL AND ELECTRICAL CONNECTION TO HOUSING, TERMINATE EACH CONDUIT WITH A GROUNDING BUSHING. CONNECT GROUNDING BUSHINGS WITH BARE GROUNDING CONDUCTOR TO GROUNDING BUS OR TERMINAL IN HOUSING. BOND ELECTRICALLY NONCONTINUOUS CONDUITS AT BOTH ENTRANCES AND EXITS WITH GROUNDING BUSHINGS AND BARE GROUNDING CONDUCTORS, EXCEPT AS OTHERWISE INDICATED.

### 26 05 29 HANGERS AND SUPPORTS

A. CONDUIT HANGERS, ATTACHMENTS, AND SUPPORTS
1. PROVIDE PROPER FITTINGS AND SUPPORT SUITABLE FOR AMBIENT/ENVIRONMENTAL CONDITIONS AND SERVICE DUTY.
2. ATTACH TO STRUCTURAL COMPONENTS TO NOT ,EOPARDIZE STRUCTURAL INTEGRITY.
3. PROVIDE ANGLES, CHANNELS, AND BEAMS AS REQUIRED.

### 26 05 30 CONDUIT

A. RMC
1. ALLOWED FOR ALL SIZES BELOW GRADE AND INSIDE ABOVE GRADE.
2. REQUIRED WHERE CALLED OUT ON PLANS.
3. REQUIRED FOR ALL SIZES OF OUTDOOR ABOVE GRADE CONDUIT.
4. GALVANIZED RIGID STEEL REQUIRED FOR ALL UNDERGROUND 90 DEGREE BENDS.
5. GALVANIZED RIGID STEEL WITH GALVANIZED RIGID STEEL FITTINGS, THREADED WATERTIGHT.
B. IMC
1. ALLOWED FOR ALL AREAS OF THE PLANT OTHER THAN PROCESS AREAS AND WASHDOWN AREAS.
C. EMT
1. ALLOWED FOR INSIDE ABOVE GRADE CONDUIT 2" AND SMALLER.
2. COMPRESSION TYPE FITTINGS WITH INSULATED THROAT.
3. CAST METAL SET SCREW FITINGS NOT ALLOWED.
D. FLEXIBLE
1. MINIMUM SIZE 1/2".
2. MAXIMUM LENGTH 36" FOR CONNECTION TO HVAC EQUIPMENT
3. MAXIMUM LENGTH 72" FOR CONNECTION TO FIXTURES IN TILE CEILINGS.
4. STEEL FITTINGS WITH INSULATED THROAT, UL LISTED.
E. FITTINGS
1. FITTING MATERIAL SHALL MATCH CONDUIT MATERIAL UNLESS OTHERWISE NOTED IN PLANS AND SPECIFICATIONS OR WITH WRITTEN APPROVAL BY ENGINEER.
F. INSTALLATION
1. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF CONDUIT. THE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR FIELD CONDITIONS. ROUTE CONDUIT IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE.
2. INSTALL UL APPROVED EXPANSION FITTINGS COMPLETE WITH GROUNDING JUMPERS WHERE CONDUITS CROSS BUILDINGS EXPANSION JOINTS AND IN LONG CONDUIT RUNS WHERE DIFFERENTIAL EXPANSION OR CONTRACTION WOULD CAUSE BENDING OR SEPARATION.
3. COMPLY WITH MANUFACTURERS PUBLISHED STANDARDS.
4. INSTALL NO MORE THAN EQUIVALENT OF THREE 90-DEGREE BENDS IN CONDUIT RUN. SUPPORT WITHIN TWELVE INCHES OF ANY CHANGE IN DIRECTION.
5. INSTALL CONDUIT CONCEALED IN EXISTING AND NEW STUD WALLS AND NEW MASONRY WALLS.
6. SURFACE MOUNT CONDUIT ON IMP, PRECAST AND EXISTING MASONRY WALLS. VERIFY CONDUIT/RACEWAY ROUTING WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
7. INSTALL CONDUIT WITH ADEQUATE DRAINAGE.
8. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.
9. WHEN REQUIRED BY STATE AND LOCAL CODES AND ORDINANCES, PROVIDE SEPARATE CONDUIT/RACEWAY FOR FIRE ALARM, EMERGENCY STAND-BY, REQUIRED STAND-BY, TELECOMMUNICATION SYSTEMS.
10. ROUTE CONDUIT ABOVE LAY-IN SUSPENDED CEILINGS SO AS NOT TO INTERFERE WITH TILE REMOVAL.
11. INSTALL FLEXIBLE STEEL CONDUIT DROPS FROM INDEPENDENT JUNCTION BOX MOUNTED ABOVE CEILING TO RECESSED LIGHT FIXTURES.
12. SECURE CONDUITS WITH AT LEAST ONE CORROSION PROOF MALLEABLE ALLOY STRAP OR HANGER EVERY 8 FT. DO NOT USE PERFORATED STRAPPING.
13. PROVIDE UL LISTED FIRE-WALL PENETRATIONS WHEN CONDUIT PASS THROUGH A FIRE RATED WALL.

### 26 05 33 BOXES

A. FLUSH INTERIOR 4" SQUARE STEEL BOXES WITH RAISED COVERS AND SQUARE CUT CORNERS. PROVIDE BOXES RATED FOR THROUGH FEED.
B. PROVIDE CAST BOXES FOR EXTERIOR USE DEVICES. PROVIDE COVERS WITH GASKETS.
C. JUNCTION AND SPLICE BOXES SHALL HAVE GALVANIZED SCREW COVERS AND BE NOT LESS THAN CODE DIMENSIONS. THROUGH-WALL AND BACK-TO-BACK BOXES NOT ALLOWED.
D. OUTLET AND JUNCTION BOXES USED AS SURFACE METAL RACEWAY SHALL BE MANUFACTURED BY THE SURFACE METAL RACEWAY MANUFACTURER TO BE COMPATIBLE WITH THE RACEWAY USED.
E. VERIFY LOCATION PRIOR TO ROUGH-IN. MATCH THE HEIGHT OF EXISTING DEVICES FOR INSTALLATIONS IN ADDITIONS TO EXISTING FACILITIES.

### 26 05 35 PENETRATIONS

A. SLEEVES
1. FURNISH RIGID CONDUIT SLEEVES FOR CABLES PASSING THROUGH MASONRY, CONCRETE, OR OTHER SIMILAR CONSTRUCTION.
2. FURNISH SLEEVE TO MASON FOR NEW MASONRY WALLS.
3. FURNISH, INSTALL, AND GROUT SLEEVE IN EXISTING MASONRY AND NEW CONCRETE WALLS.
4. SLEEVE NOT REQUIRED FOR DRYWALL WALLS OR CORE DRILLED HOLE IN CONCRETE WALL.
B. NON-FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: FILL VOID BETWEEN CONDUIT AND SLEEVE, CONCRETE, OR DRYWALL WITH EXPANDING POLYURETHANE FOAM. CAULK BETWEEN CONDUIT AND SLEEVE OR WALL WITH NON-HARDENING CAULK.
C. FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
D. SMOKE WALL PENETRATIONS: CONDUITS OR CABLES PENETRATING PENETRATION SHALL NOT DESTROY THE BARRIER'S INTEGRITY.
E. CONTRACTOR SHALL USE CAUTION PRIOR TO MAKING PENETRATIONS AS TO NOT DISTURB ANY EXISTING UTILITIES THAT MIGHT BE PRESENT IN EXISTING WALLS, CEILINGS OR FLOORS. THIS CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES IN EXISTING WALLS, CEILINGS OR FLOORS.
F. SEAL ALL RACEWAY, CABLE AND CONDUIT PENETRATIONS THROUGH ALL WALLS IN THE ELECTRICAL ROOM(S).

### 26 05 53 IDENTIFICATION FOR ELECTRICAL SYSTEMS

A. ENGRAVED LABELS: ENGRAVED 3-LAYER PHENOLIC LABEL WITH BLACK LETTERS ON WHITE MATERIAL, UNLESS OTHER COLORS ARE CALLED OUT ON THE DRAWINGS OR DETAILS. LABELS MINIMUM 3/4" HIGH AND 3" LONG. LABELS MAY BE ATTACHED WITH DOUBLE BACKED ADHESIVE TAPE UNLESS INDICATED OTHERWISE. LABELS REQUIRED AT:
1. DISCONNECTS:
a. LABEL EQUIPMENT THAT IT SERVES.
b. "FED FROM" LABEL.
B. PROVIDE TYPEWRITTEN DIRECTORY ACCURATELY INDICATING ROOMS AND/OR EQUIPMENT BEING SERVED AT THE FOLLOWING LOCATIONS:
1. PANELBOARDS
2. PROVIDE TYPEWRITTEN DIRECTORY ELECTRONICALLY TO THE OWNER IN A FORMAT ACCEPTABLE TO THE OWNER.
C. PROVIDE TYPE-WRITTEN LABEL WITH 1/8" BLACK LETTERING ON CLEAR MATERIAL INDICATING CIRCUIT AND PANEL THAT THE DEVICE IS FED FROM FOR ALL RECEPTACLES AND SWITCHES.
D. PROVIDE ALL CODE REQUIRED LABELS. EXAMPLES OF CODE REQUIRED LABELS, BUT ARE NOT LIMITED TO, ARE THE 2021 NEC ARTICLE 110 AND FOR BUILDINGS WITH MULTIPLE SERVICES ARTICLE 230.2 (E)

### 26 27 26 WIRING DEVICES

A. MANUFACTURERS: COOPER, HUBBELL, LEVITON AND PASS & SEYMOUR.
B. COLOR
1. SWITCH AND RECEPTACLE COLORS SHALL "MATCH EXISTING".
2. COVER PLATE COLORS SHALL "MATCH EXISTING".
C. WALL SWITCHES:
1. 20-AMPERE HUBBELL 1221 SINGLE POLE, 1223 THREE-WAY AND 1224 FOUR-WAY.
2. SEE LEGEND FOR MOUNTING HEIGHTS.
3. PROVIDE PILOT LIGHT SWITCHES WHERE INDICATED.
D. RECEPTACLES:
1. DUPLEX GROUNDED RECEPTACLES, 20 AMPERE SPECIFICATION GRADE, HUBBELL 5362.
2. GFCI RECEPTACLES: 20-AMPERE HUBBELL SPECIFICATION GRADE WITH LOCK OUT CAPABILITY UPON GFCI FAILURE.
3. EXTERIOR RECEPTACLES SHALL BE MARKED "WEATHER-RESISTANT" PER NEC.
4. SEE LEGEND FOR MOUNTING HEIGHTS.
5. REVIEW RECEPTACLE LAYOUT WITH OWNER PRIOR TO ROUGH-IN.
6. VERIFY ACTUAL LOCATION OF EQUIPMENT WITH OWNER PRIOR TO ROUGH-IN.
7. MAKE CONNECTIONS THROUGH THE USE OF PIG-TAILS.
E. COVER PLATES
1. INTERIOR: SMOOTH NYLON MATERIAL.
2. MECHANICAL EQUIPMENT ROOM: STEEL.
3. DRY LOCATION INDUSTRIAL SPACES: STEEL
4. EXTERIOR: WEATHER-PROOF, GASKETED, LIFT COVER. RECEPTACLE COVER SHALL ALLOW CONTINUED USE WHEN COVER IS CLOSED.

### 26 27 27 OCCUPANCY SENSORS / VACANCY SENSORS

A. MANUFACTURERS: COOPER, HUBBELL, LEVITON, SENSOR SWITCH, & THE WATT STOPPER.
1. COLOR:
a. WALL MOUNTED SENSORS SHALL BE THE SAME COLOR AS WIRING DEVICES. REFERENCE SPECIFICATION SECTION 26 27 26.
b. CEILING MOUNTED SENSORS SHALL MATCH COLOR OF CEILING THEY'RE INSTALLED ON.
2. SHALL BE FROM THE SAME MANUFACTURER AS THE WIRING DEVICES.
B. SENSOR TECHNOLOGY
1. PASSIVE INFRARED (PIR).
a. WAREHOUSES
2. DUAL TECHNOLOGY (PASSIVE INFRARED & ULTRASONIC)
a. OTHER SPACES
C. SENSOR PERFORMANCE
1. INFRARED:
a. UTILIZE MULTIPLE SEGMENTED LENS, WITH INTERNAL GROOVES TO ELIMINATE DUST AND RESIDUE BUILD-UP.
2. ULTRASONIC:
a. UTILIZE AN OPERATING FREQUENCY OF 32 KHZ OR 40 KHZ THAT SHALL BE CRYSTAL CONTROLLED TO OPERATE WITHIN PLUS OR MINUS 0.005% TOLERANCE. UTILIZE DOPPLER SHIFT ULTRASONIC DETECTION TECHNOLOGY.
3. DUAL TECHNOLOGY:
a. UTILIZE MULTIPLE SEGMENTED LENS, WITH INTERNAL GROOVES TO ELIMINATE DUST AND RESIDUE BUILD-UP.
b. UTILIZE AN OPERATING FREQUENCY OF 32 KHZ OR 40 KHZ THAT SHALL BE CRYSTAL CONTROLLED TO OPERATE WITHIN PLUS OR MINUS 0.005% TOLERANCE.
c. INCORPORATE DOPPLER SHIFT ULTRASONIC AND PASSIVE INFRARED MOTION DETECTION TECHNOLOGIES. PRODUCTS THAT REACT TO NOISE OR AMBIENT SOUND SHALL NOT BE CONSIDERED.
4. SENSOR DEVICES SHALL HAVE EITHER INTEGRAL DUAL RELAYS OR CONTROL SEPARATE DUAL RELAY POWER PACKS TO ACHIEVE DUAL LEVEL LIGHTING WHEN DUAL LEVEL CONTROL IS INDICATED.
5. INTEGRAL ADJUSTABLE LIGHT LEVEL SENSOR WITH CAPACITY TO CONTROL ONE OR MORE RELAY WHEN THE SELECTED ADEQUATE DAYLIGHT IS PRESENT.
6. UTILIZE ZERO CROSSING CIRCUITRY WHICH INCREASES RELAY LIFE AND SENSORS LONGEVITY.
7. SHOULD POWER BE INTERRUPTED AND SUBSEQUENTLY RESTORED, SETTINGS AND PARAMETERS SAVED IN PROTECTED MEMORY SHALL NOT BE LOST.
8. SENSORS SHALL BE SIZED FOR THE ROOM THEY SERVE BY MANUFACTURER'S VENDOR OR COVER 1,500 SQUARE FEET WITH STANDARD LENS AND UP TO 90 LINEAR FEET WITH LONG RANGE LENS FOR WALKING MOTION WHEN MOUNTED AT A CEILING HEIGHT OF 12 FEET.
9. INDEPENDENT SENSITIVITY ADJUSTMENTS AND LED DISPLAY FOR EACH SENSING TECHNOLOGY.
10. SENSOR SHALL HAVE STANDARD 5 YEAR WARRANTY AND BE UL LISTED.
D. CONTROL STRATEGIES
1. AUTOMATIC CONTROLS SHALL BE MANUAL ON, OR SHALL TURN ON NOT MORE THAN 50% OF THE OF THE CONTROLLED LAMPS WITH THE REMAINING LAMPS BEING CONTROLLED MANUALLY.
a. EXCEPTION: PUBLIC CORRIDORS, STAIRWAYS, RESTROOMS, PRIMARY ENTRANCES AND LOBBIES SHALL HAVE FULL ON AUTOMATIC CONTROLS.
2. AUTOMATIC CONTROLS SHALL TURN LIGHTS OFF WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE.
3. RETRIGGER TIME DELAY: ONLY ONE MOTION IS NECESSARY TO TURN ON THE LIGHTS WITHIN 5 SECONDS AFTER TURNING OFF.
4. E.C. SHALL INCLUDE TIME IN HIS BID TO WORK WITH THE OWNER AND MANUFACTURER TO DETERMINE THE PROPER TIME AND SENSOR SETTINGS FOR EACH SENSOR IN THE SPACES IN WHICH THEY OPERATE. INCLUDE TIME IN BID TO HAVE THE MANUFACTURER'S REPRESENTATIVE ON SITE AND REVIEW THE JOB TO DETERMINE WHAT THE EXPECTED EQUIPMENT SETTINGS SHOULD BE.

### 26 28 16 ENCLOSED DISCONNECT SWITCHES

A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
B. NONFUSIBLE SWITCH: TYPE GD WITH LOCKABLE HANDLE.
C. FUSIBLE SWITCH: TYPE HD WITH CLIPS TO ACCOMMODATE FUSES. HANDLE LOCKABLE IN OPEN AND CLOSED POSITION. HANDLE INTERLOCKED WITH COVER IN CLOSED POSITION WITH INTERLOCK BYPASS.
D. ENCLOSURES: NEMA AB 1 AND NEMA KS 1 TO MEET ENVIRONMENTAL CONDITIONS OF INSTALLED LOCATION.
1. OUTDOOR LOCATIONS: NEMA 250 TYPE 3R.
2. KITCHEN AREAS: NEMA 250 TYPE 4X, STAINLESS STEEL
3. OTHER WET OR DAMP INDOOR LOCATIONS: NEMA 250 TYPE 4.
4. HAZARDOUS AREAS INDICATED ON DRAWINGS: NEMA 250 TYPE 7C
E. MANUFACTURER'S STANDARD PRIME-COAT FINISH READY FOR FIELD PAINTING.
F. LABEL EACH ENCLOSURE WITH ENGRAVED METAL OR LAMINATED-PLASTIC NAMEPLATE MOUNTED WITH CORROSION-RESISTANT SCREWS.
G. INSTALL EQUIPMENT GROUNDING CONNECTIONS FOR SWITCHES AND CIRCUIT BREAKERS WITH GROUND CONTINUITY TO MAIN ELECTRICAL GROUND BUS.
H. DEMONSTRATE PRODUCT CAPABILITY AND COMPLIANCE WITH REQUIREMENTS AFTER INSTALLATION AND AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED.
1. PERFORM VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST. CERTIFY COMPLIANCE WITH TEST PARAMETERS.
2. CORRECT MALFUNCTIONING UNITS, ON-SITE WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE.
I. FOR MOTORS THAT ARE FED WITH VARIABLE FREQUENCY DRIVES PROVIDE DISCONNECTS WITH AUXILIARY CONTACTS AS PART OF THE DISCONNECT FOR SAID MOTORS.
1. PROVIDE TWO CONTROL CONDUCTORS FROM THE AUXILIARY CONTACT IN THE DISCONNECT TO LOCAL I/O CABINET IN PROCESS ROOM (FOR PROCESS MOTORS) AND //FOR NON-PROCESS MOTORS ROUTE AUX CONTACTS BACK TO VARIABLE FREQUENCY DRIVE'S CONTACTS. CONTACT TO INFORM THE VARIABLE FREQUENCY DRIVE THAT DISCONNECT HAS BEEN OPENED.
2. PROVIDE RACEWAY FOR THE CONTROL CONDUCTORS THAT COMPLIES WITH THESE SPECIFICATIONS

### 26 29 13 MOTOR CONTROLLERS

A. MANUFACTURERS: ALLEN BRADLEY, CUTLER HAMMER SQUARE D. ALL STARTERS SHALL BE FROM THE SAME MANUFACTURER. (SAME AS THE MOTOR CONTROL CENTER MANUFACTURER).
B. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
C. COORDINATE FEATURES OF ENCLOSED CONTROLLERS AND ACCESSORY DEVICES WITH PILOT DEVICES AND CONTROL CIRCUITS TO WHICH THEY CONNECT. COORDINATE FEATURES, ACCESSORIES, AND FUNCTIONS OF EACH ENCLO

# ELECTRICAL SPECIFICATIONS (CONT.)

## DIVISION 27 COMMUNICATIONS

### 27 05 00 BASIC COMMUNICATION REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. SUBSTITUTIONS
1. SEE DIVISION 01 25 00 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
3. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ENGINEER.
C. GENERAL REQUIREMENTS
1. OWNER FURNISHED EQUIPMENT: CONTRACTOR SHALL ENSURE COMPLIANCE WITH THE SECTION SPECIFICATION AND NOTIFY OWNER IF EQUIPMENT IS INSUFFICIENT OR WILL NOT ALLOW COMPLIANCE.
2. CORPORATE NETWORK CONNECTIONS.
a. THE CORPORATE NETWORK UTILIZES A FIBER OPTIC BACKBONE BETWEEN MDF AND IDF ROOMS. INSTALLED NETWORK DEVICES SHALL HAVE THE PROPER CONVERTERS OR COORDINATE THE FURNISHING OF REQUIRED INFRASTRUCTURE WITH IT DEPARTMENT.
b. FOR SYSTEM INSTALLATIONS USING THE CORPORATE NETWORK, CONTRACTOR SHALL LIST ALL NETWORK ENABLED DEVICES, INCLUDING MAC ADDRESSES AND STATIC / DYNAMIC ADDRESS REQUIREMENTS TO THE IT DEPARTMENT BEFORE CONNECTING DEVICES TO THE NETWORK.
3. RELATED WORK BY OTHERS:
a. ELECTRICAL CONTRACTOR (EC) TO PROVIDE CONDUIT, BACK BOXES, RACEWAY AND POWER CIRCUITS PER DIVISION 26 THAT ARE NOT SPECIFICALLY INDICATED AS CONTRACTOR RESPONSIBILITY.
b. VERIFY AND COORDINATE ALL CONDUIT AND DEVICE LOCATIONS WITH ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE.
D. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS.
2. COMMUNICATION CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
a. DIVISION 27, ALL SECTIONS.
b. DIVISION 28, ALL SECTIONS.
3. SHOP DRAWINGS TO INCLUDE:
a. BILL OF MATERIALS
1). FIRST PAGE SHOULD LIST MATERIALS INCLUDED IN THE SUBMITTAL WITH COLUMNS FOR:
a). MANUFACTURER
b). MODEL/PART
c). ITEM DESCRIPTION.
d). PAGE NUMBER
b. EQUIPMENT:
1). MANUFACTURER'S PRODUCT DATA/INSTALLATION FOR EACH PRODUCT USED.
a). CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
b). USE: RED BOX OR YELLOW HIGHLIGHTER
2). MANUFACTURER'S STANDARD WARRANTY, INCLUDING LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE MATERIALS.
3). MANUFACTURER'S OPERATION AND MAINTENANCE DATA, OPERATING INSTRUCTIONS, SPARE PART'S LIST AND MAINTENANCE SCHEDULE.
4). OUTLINE AND GENERAL ARRANGEMENT DRAWINGS, DATA SHEETS AND WIRING DIAGRAMS.
5). DIMENSIONED PLAN AND ELEVATION VIEWS OF COMPONENTS.
6). ACCESS AND WORKSPACE REQUIREMENTS AND SYSTEM LABELING SCHEDULES.
7). COMPLETE FRONT ELEVATION DRAWING OF EQUIPMENT CABINETS, RACK AND EXACT COMPONENT LAYOUT WITHIN RACKS OR ENCLOSURES.
c. SYSTEM WIRING RISER DIAGRAMS SHALL INDICATE ALL COMPONENTS SHOWN ON THE FLOOR PLANS, TYPE AND TERMINATION POINT OF CABLE TO EACH COMPONENT.
d. INDEX LISTING EACH INSTALLED CABLE IN SPREADSHEET FORMAT SHOWING ROOM LOCATION, HEAD-END LOCATION AND LABELING ON EACH END OF EACH OUTLET.
e. REDUCED SIZE BUILDING FLOOR PLAN DRAWING (11"X17") SHOWING LOCATION OF ALL LOW-VOLTAGE CABLE TERMINATIONS AND CABLE OUTLET AND CABLE NUMBER LABELING.
f. BACKBONE CABLING
1). SYSTEM LABELING SCHEDULES: ELECTRONIC COPY OF LABELING SCHEDULES THAT ARE PART OF THE CABLING IDENTIFICATION SYSTEM SOFTWARE.
2). WIRING DIAGRAMS TO SHOW TYPICAL WIRING SCHEMATICS INCLUDING THE FOLLOWING: PATHWAYS, CROSS-CONNECTS AND PATCH PANELS.
3). CROSS-CONNECTS AND PATCH PANELS: DETAIL MOUNTING ASSEMBLIES AND SHOW ELEVATIONS AND PHYSICAL RELATIONSHIP BETWEEN THE INSTALLED COMPONENTS.
4. O&M MANUALS AS A SINGLE PDF FILE TO INCLUDE THE FOLLOWING:
a. MARK RECORD DRAWINGS ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
1). APPROXIMATE PATH OF THE J-HOOK SYSTEMS.
2). UPDATED POINT TO POINT SYSTEM RISER DIAGRAM
3). DRAWINGS INDICATING SPEAKER LOCATION, WATTAGE TAPS, SPEAKER CIRCUIT EOL RESISTOR LOCATIONS AND SYSTEM WIRING.
4). ALL INPUT/OUTPUT DEVICE LOCATIONS SHALL BE SHOWN.
b. FRONT ELEVATION DRAWING OF EQUIPMENT RACK AND COMPONENT LAYOUT WITHIN RACK.
c. PROVIDE AN INDEX LISTING FOR EACH INSTALLED CABLE. INDICATE IN SPREADSHEET FORMAT SHOWING ROOM LOCATION, HEAD-END LOCATION, AND LABELING PROVIDED ON EACH END OF EACH OUTLET.
d. TEST RESULTS.
e. PROVIDE A REDUCED SIZE 11"X17" BUILDING FLOOR PLAN DRAWING SHOWING LOCATION OF ALL LOW-VOLTAGE CABLE TERMINATIONS, AND CABLE OUTLET AND CABLE NUMBER LABELING PER THE RESPECTIVE IDENTIFICATION AND LABELING SPECIFICATION IN EACH SECTION.
f. FUNCTIONALITY MATRIX.
g. PROVIDE SYSTEM SOFTWARE BACK-UP FILES FOR HEAD-END EQUIPMENT AND MIXER PROGRAM SETTINGS FOLLOWING FINAL SYSTEM ACCEPTANCE TESTING.
h. CONTACT AND WARRANTY INFORMATION AND STATEMENTS.
i. OPERATING INSTRUCTIONS.
j. SHOP DRAWINGS
k. MANUFACTURERS' EQUIPMENT MANUALS.
E. FINISHING AND PAINTING
1. SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
2. PREPARE EXPOSED CONDUIT, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
3. PROVIDE A FACTORY OR FIELD APPLIED PRIME AND FINISH COAT OF COLOR SELECTED BY THE OWNER'S REPRESENTATIVE TO ALL ROOF MOUNTED EQUIPMENT AND OTHER EXTERIOR MATERIALS, INCLUDING SUPPORT HARDWARE.
4. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
5. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
6. WHERE THE COMMUNICATION CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.
F. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
G. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
H. COORDINATE INSTALLATION OF WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK. MAINTAIN SERVICE CLEARANCES.
I. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
J. COMPLY WITH THE REQUIREMENTS OF NFPA; NATIONAL, STATE AND LOCAL ELECTRICAL CODES AND LOCAL UTILITY REGULATIONS.
K. MATERIAL SHALL BEAR UL LISTING AND/OR OTHER APPROVED AGENCY LISTING.
L. PROJECT COMPLETION
1. CLEAN DEVICES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
2. PROVIDE OPERATING INSTRUCTIONS TO OWNER'S PERSONNEL FOR ALL SYSTEMS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS.
M. LOCATION
1. THE ARCHITECT SHALL RESERVE THE RIGHT TO MAKE DEVICE POSITION CHANGES UP TO 10' BEFORE INSTALLATION WITHOUT ANY ADDITIONAL COST TO PROJECT.
2. DO NOT LOCATE DEVICES OR EQUIPMENT WHERE THE USEFULNESS AND/OR OPERATION WILL BE AFFECTED BY THE WORK OF OTHER TRADES, DOOR SWING, COUNTER, EQUIPMENT, ETC.
3. REVIEW THE ARCHITECTURAL DRAWINGS TO VERIFY ALL WIRING DEVICE LOCATIONS PRIOR TO ROUGH-IN. LOCATE DEVICES AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
N. ACCESS
1. INSTALL EQUIPMENT, JUNCTION BOXES, PULL BOXES AND ACCESSORIES TO PERMIT ACCESS WITHOUT RELOCATING INSTALLED OR YET TO BE INSTALLED EQUIPMENT.
2. ACCESS PANELS
a. FURNISH ACCESS PANELS OF ADEQUATE SIZE TO PERMIT SERVICE OF CONCEALED DEVICES. PANELS SHALL BE SUITABLE FOR INSTALLATION IN THE MATERIAL FORMING THE FINISHED SURFACE, WITH FLUSH METAL FRAME, FLUSH HINGED STEEL DOOR, FLUSH SCREWDRIVER OPERATED LATCH.
b. PANELS UL LISTED TO CONFORM TO THE FIRE RATING OF THE SURFACE INSTALLED IN.
c. TURN ACCESS PANEL OVER TO CONTRACTOR SKILLED IN THE CONSTRUCTION OF THE SURFACES INVOLVED FOR INSTALLATION.
d. ARCHITECT TO APPROVE ACCESS PANEL LOCATION PRIOR TO INSTALLATION OF EQUIPMENT REQUIRING ACCESS.
e. COORDINATE WITH THE OTHER CONTRACTORS AND WHEREVER PRACTICAL, GROUP DEVICES IN SUCH A MANNER SO AS TO MINIMIZE PANELS.

### 27 05 35 PENETRATIONS

A. PROVIDE CORE DRILLING FOR EXISTING CONCRETE WALLS.
B. SLEEVES
1. FURNISH STEEL OR PVC SLEEVES FOR CABLES PASSING THROUGH MASONRY, CONCRETE, OR OTHER SIMILAR CONSTRUCTION. MINIMUM OF 6" FROM THE WALL WITH INSULATED CONNECTORS OR OTHER TYPE OF CABLE PROTECTION ON THE END
2. FURNISH SLEEVE TO MASON FOR NEW MASONRY WALLS.
3. FURNISH, INSTALL, AND GROUT SLEEVE IN EXISTING MASONRY AND NEW CONCRETE WALLS.
4. SLEEVE NOT REQUIRED FOR DRYWALL WALLS OR CORE DRILLED HOLE IN CONCRETE WALL.
5. SECURE SLEEVES ON BOTH SIDES OF THE PENETRATION TO PREVENT SHIFTING DURING CABLE INSTALLATION.
6. PLACE SLEEVES ABOVE THE CEILING THROUGH THE WALL WHERE CABLES ARE TO BE ROUTED.
C. NON-FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: FILL VOID BETWEEN CONDUIT AND SLEEVE, CONCRETE, OR DRYWALL WITH EXPANDING POLYURETHANE FOAM. CAULK BETWEEN CONDUIT AND SLEEVE OR WALL WITH NON-HARDENING CAULK.
D. FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
E. SMOKE WALL PENETRATIONS: CONDUITS OR CABLES PENETRATING PENETRATION SHALL NOT DESTROY THE BARRIER'S INTEGRITY.
F. CONTRACTOR SHALL USE CAUTION PRIOR TO MAKING PENETRATIONS AS TO NOT DISTURB ANY EXISTING UTILITIES THAT MIGHT BE PRESENT IN EXISTING WALLS, CEILINGS OR FLOORS. THIS CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES IN EXISTING WALLS, CEILINGS OR FLOORS.
G. SEAL ALL RACEWAY, CABLE AND CONDUIT PENETRATIONS THROUGH ALL WALLS IN THE ELECTRICAL ROOM(S)

### 27 05 26 GROUNDING AND BONDING

A. GENERAL REQUIREMENTS:
1. GROUNDING MUST CONFORM TO APPLICABLE BUILDING CODES AS WELL AS ANSI-J-STD-607-A AND THE NEC.
2. GROUND CABLE SHIELDS, DRAIN CONDUCTORS, AND EQUIPMENT TO ELIMINATE SHOCK HAZARD AND TO MINIMIZE GROUND LOOPS, COMMON-MODE RETURNS, NOISE PICKUP, CROSS TALK, AND OTHER IMPAIRMENTS.
3. BOND SHIELDS AND DRAIN CONDUCTORS TO GROUND AT ONLY ONE POINT IN EACH CIRCUIT.
4. SHORT METALLIC PATHWAYS (WALL AND FLOOR SLEEVES) ARE NOT REQUIRED TO BE BONDED.
5. THE CONDUIT SYSTEM SHALL NOT BE CONSIDERED SUITABLE FOR EQUIPMENT GROUNDING.
6. BONDING THE NEUTRAL TO EARTH GROUND SHALL NOT BE DONE ANYWHERE EXCEPT AT THE SECONDARY SIDE OF THE CONTROL TRANSFORMER WHERE IT MUST BE DONE (INCLUDING CONTROL VOLTAGE TRANSFORMERS).

### 27 05 53 IDENTIFICATION FOR COMMUNICATION SYSTEMS

A. GENERAL REQUIREMENTS:
1. ALL LABELS SHALL BE PERMANENT AND MACHINE GENERATED. NO HANDWRITTEN OR NON-PERMANENT LABELS ALLOWED.
2. LABELS SHALL BE PHYSICALLY AND CHEMICALLY RESISTANT TO DAMAGE THAT WOULD AFFECT READABILITY.
3. INSTALL LABELS AS RECOMMENDED BY MFG. INSTALL LABELS SQUARELY AND NEATLY ON ALL EQUIPMENT. POSITION LABELS AS TO BE VISIBLE AND NOT OBSCURED BY HARDWARE OR OTHER CABLING.
B. LABEL FORMAT:
1. 3A.A04-35:01
a. 3A-IDENTIFIER FOR IDF SERVICING THAT LOCATION.
b. A04-RACK/CABINET IDENTIFIER.
c. 35-THE RACK (RACK UNIT) LOCATION OF THE PATCH PANEL.
d. 01-PORT ID OF THE ASSOCIATED PATCH PANEL.
C. EQUIPMENT RACKS.
1. ENGRAVED 3-LAYER PHENOLIC LABEL WITH BLACK LETTERS ON WHITE MATERIAL, UNLESS OTHER COLORS ARE CALLED OUT ON THE DRAWINGS OR DETAILS. LABELS MINIMUM 1" HIGH AND 3" LONG.
2. POSITION LABELS AT TOP OF RACK, LEFT, RIGHT OR CENTER FOR BEST VISIBILITY.
D. HORIZONTAL CABLE AND TERMINATION HARDWARE.
1. LABEL ALL EQUIPMENT OUTLETS, PATCH PANELS, TERMINATIONS BLOCKS, AND CABLES.
2. THIS IS INCLUSIVE OF EACH VOICE, DATA, VIDEO, OR FIBER OPTIC OUTLET.
3. FLAG TYPE LABELS ARE NOT ALLOWED.
4. POSITION LABEL WITHIN 4 INCHES OF EACH CABLE END. CABLE ID SHALL REPEAT AROUND PERIMETER OF THE CABLE, 3 TIMES MINIMUM.
E. WORKSTATIONS/EQUIPMENT OUTLET.
1. LABELS THAT ARE PLACED IN RECESSED LABEL HOLDERS SHALL BE WHITE PAPER ON WHICH OUTLET INFORMATION IS ADDED.
2. LABELS SHALL BE WHITE BACKGROUND WITH BLACK LETTERING. LETTER SIZE SHALL BE AS LARGE AS PRACTICABLE, UP TO 16 POINT TO FITTING PROPERLY, NO LETTERING SHALL BE SMALLER THAN 12 POINT.
3. REFERENCE PLANS: SYSTEMS IDENTIFICATION DETAIL.
F. FIBER OPTIC AND MODULAR PATCH PANEL.
1. PAPER INSERTS INTEGRAL TO PATCH PANEL, ADHESIVE LABELS OR FACTORY SCREENED NUMBERING.
G. MISCELLANEOUS.
1. WHERE A EQUIPMENT OUTLET OR FIELD TERMINABLE PLUG IS CONCEALED ABOVE A SUSPENDED CEILING, PROVIDE A MARKING ON THE CEILING TO IDENTIFY SUCH LOCATION. COORDINATE WITH OWNER TO DETERMINE IDENTIFICATION METHOD.

### 27 10 00 STRUCTURED CABLING SYSTEM

A. ABBREVIATIONS
1. CABLE TYPES
a. UTP — UNSHIELDED TWISTED PAIR
b. F/UTP (FTP) -AN OVERALL FOIL SHIELD WITH UNSHIELDED TWISTED PAIRS (UTP)
c. S/UTP (STP) -AN OVERALL BRAIDED SCREEN WITH UNSHIELDED TWISTED PAIRS (UTP)
d. S/FTP - AN OVERALL FOIL SHIELD WITH INDIVIDUALLY SHIELDED TWISTED PAIRS
2. IDC — INSULATION DISPLACEMENT CONNECTOR
3. IDF — INTERMEDIATE DISTRIBUTION FACILITY
4. MDF — MAIN DISTRIBUTION FRAME
5. TIA — TELECOMMUNICATION INDUSTRY ASSOCIATION
6. TIA-FOCIS — FIBER OPTIC CONNECTOR INTERMATEABILITY STANDARD
B. CONDUIT
1. CONDUIT REQUIRED FOR CABLE IN THE FOLLOWING LOCATIONS:
a. ALL LOCATIONS.
2. SEE CONDUIT MATRIX ON ELECTRICAL DRAWINGS AND DIVISION 26 SPECIFICATIONS FOR ADDITIONAL CONDUIT AND SUPPORT REQUIREMENTS.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CONDUIT, BRACKETS AND ASSOCIATED HARDWARE.
4. PARALLEL RUNS OF EXPOSED LOW VOLTAGE CONDUIT SHALL BE RACKED TOGETHER ON COMMON SUPPORTS WITH A MINIMUM OF 1/2" BETWEEN CONDUITS. MAINTAIN PROPER SPACING FROM LINE VOLTAGE CONDUIT.
5. STUB CONDUITS INTO AN ACCESSIBLE CEILING SPACE.
6. SIZE
a. VOICE, DATA AND OTHER LV SYSTEM CONDUIT DROPS SHALL BE A MINIMUM 1" UNLESS NOTED OTHERWISE (MAX. 40% FILL).
b. TELEVISION, DISPLAY OR FLOOR BOXES CONTAINING AUDIO-VISUAL CABLES SHALL BE 1.25" ID UNLESS NOTED OTHERWISE (MAX. 40% FILL).
7. MAXIMUM LENGTH
a. MAX TWO 90-DEGREE BENDS IN CONDUIT BETWEEN PULL POINTS.
b. IF MORE THAN TWO BENDS OR IF CONDUIT RUN GREATER THAN 100 FEET IN LENGTH, INSERT PULL BOX.
1). IF FIELD CONDITIONS DOES NOT PERMIT, INCREASE CONDUIT SIZE TO THE NEXT TRADE SIZE FOR EACH ADDITIONAL 90-DEGREE BEND (OFFSETS ARE CONSIDERED EQUIVALENT TO A 90-DEGREE BEND).
8. DE-BUR AND BUSH ALL CONDUIT ENDS. PROVIDE CONDUITS WITH PLASTIC INSULATED BUSHING FOR CONDUITS TERMINATING INSIDE A RACK OR ENCLOSURE.
9. PROVIDE A PLY PULL-LINE IN EACH CONDUIT.
10. MAINTAIN AUDIO OR VIDEO SIGNAL CONDUITS A MINIMUM 4" SEPARATE FROM LINE VOLTAGE CONDUITS IF MORE THAN 10 FEET.
C. CERTIFICATION
1. PERFORM ALL TESTS IAW TIA/EIA-568-C.2 AND TIA/EIA-568-C.3 AND TELECOMMUNICATIONS STANDARDS FOR TWISTED PAIR AND OPTICAL FIBER CABLING REQUIREMENTS OF THIS SECTION.
2. PROVIDE DOCUMENTATION OF TESTING IAW TELECOMMUNICATIONS STANDARDS FOR TWISTED PAIR AND OPTICAL FIBER CABLING REQUIREMENTS OF THIS SECTION.

### 27 15 00 HORIZONTAL CABLING

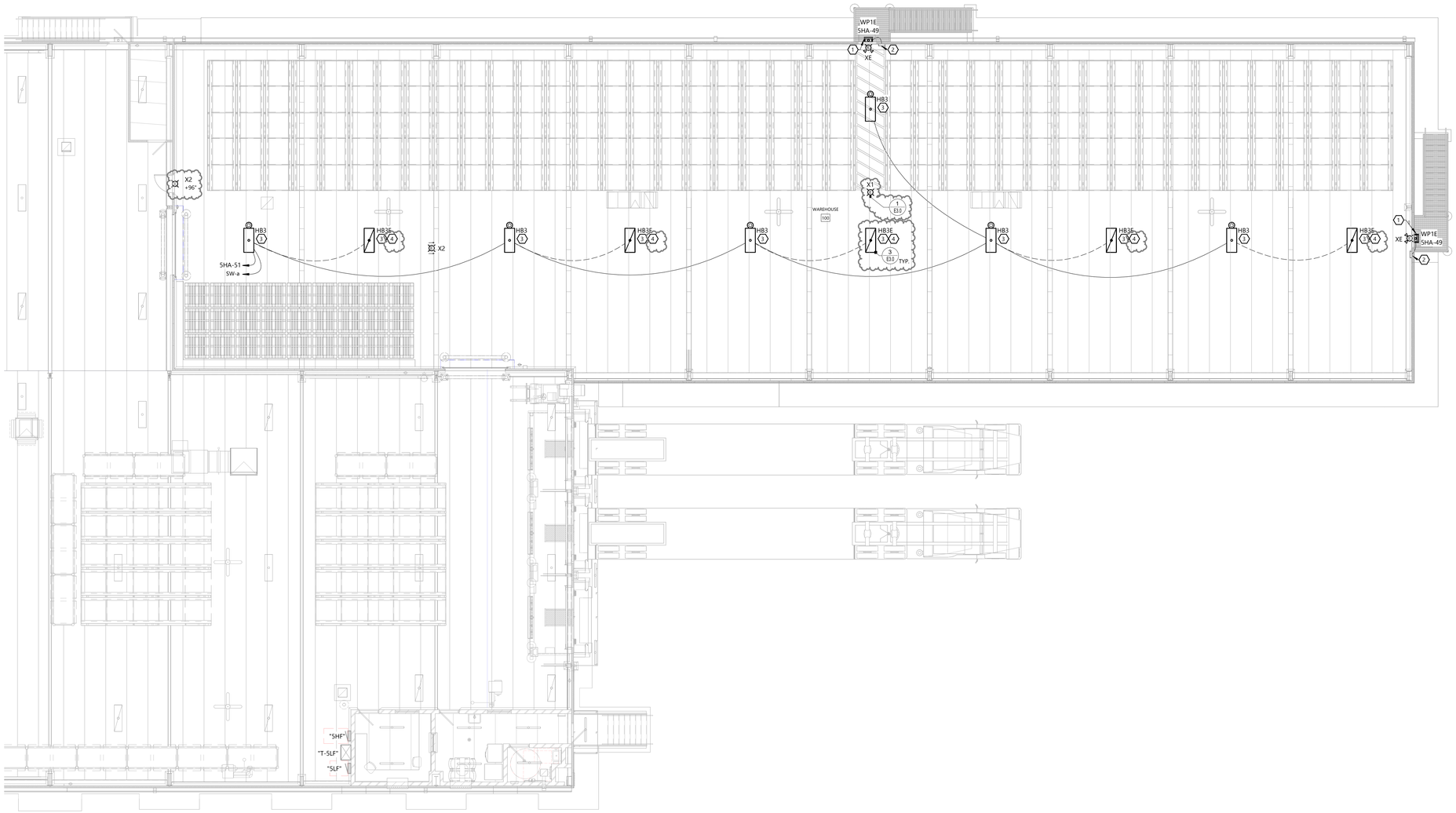
A. GENERAL
1. PROVIDE THE SAME MANUFACTURER FOR ALL CABLING AND CONNECTIVITY COMPONENTS THROUGHOUT THE PROJECT.
B. CABLING
1. MANUFACTURERS:
a. PANDUIT
b. COMMSCOPE
c. HUBBELL
d. LEVITON
2. CABLING SHALL HAVE A MINIMUM 10 FT SLACK LOOP MANAGED AT EACH IDF AND MDF ROOMS.
3. CABLE JACKET COLOR SHALL BE:
a. BLUE — OFFICE NETWORK
b. PURPLE — WIFI
c. GREEN — SECURITY CAMERAS / ACCESS CONTROLS
d. ORANGE — INDUSTRIAL NETWORK
e. PINK — PAGING SYSTEM
C. TYPICAL COPPER CABLING
1. CABLE SHALL BE TIA/EIA-568-B CATEGORY 6, 4-PAIR UTP
2. PROVIDE WATER BLOCKED CABLE FOR ANY SLAB-ON-GRADE FLOOR BOX APPLICATION OR DATA CABLE INSTALLED IN CONDUIT IN OR UNDER SLAB. NOTE: IF CABLE IS NOT PLENUM RATED IT MUST BE INSTALLED IN CONDUIT IF INSTALLED ABOVE THE CEILING IN A PLENUM SPACE. PVC CONDUIT MAY BE ROUTED UNDERGROUND DIRECTLY IN LIEU OF USING EMT ABOVE CEILINGS. CABLE SHALL BE APPROVED FOR WET LOCATIONS AND FLOODED FOR MOISTURE PROTECTION.
D. WIRELESS ACCESS POINT
1. CABLE SHALL BE TIA/EIA-568-B CATEGORY 6, 4-PAIR UTP.
2. ACCESS POINT DEVICES SHALL BE PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
E. SEPARATION FROM EMI SOURCES
1. COMPLY WITH BICSI TDMM AND TIA/EIA-569-B RECOMMENDATIONS FOR SEPARATING UNSHIELDED COPPER VOICE AND DATA COMMUNICATION CABLE FROM POTENTIAL EMI SOURCES, INCLUDING ELECTRICAL POWER LINES AND EQUIPMENT.
2. SEPARATION BETWEEN OPEN COMMUNICATIONS CABLES OR CABLES IN NON-METALLIC RACEWAYS AND UNSHIELDED POWER CONDUCTORS AND ELECTRICAL EQUIPMENT AS FOLLOWS:
a. ELECTRICAL EQUIPMENT RATING LESS THAN 2 KVA — MINIMUM 5 INCHES.
b. ELECTRICAL EQUIPMENT RATING BETWEEN 2 AND 5 KVA — MINIMUM 12 INCHES.
c. ELECTRICAL EQUIPMENT RATING LESS THAN 5 KVA — MINIMUM 24 INCHES.
3. SEPARATION BETWEEN COMMUNICATIONS CABLES AND ELECTRICAL MOTORS AND TRANSFORMERS, 5 KVA OR HP AND LARGER — MINIMUM 48 INCHES.
F. QUALITY ASSURANCE
1. VISUALLY INSPECT UTP CABLE JACKET MATERIALS FOR NRTL CERTIFICATION MARKINGS. INSPECT CABLING TERMINATIONS IN COMMUNICATIONS EQUIPMENT ROOMS FOR COMPLIANCE WITH COLOR CODING FOR PIN ASSIGNMENTS AND INSPECT CABLING CONNECTIONS FOR COMPLIANCE WITH TIA/EIA-568-B.1.
2. VISUALLY CONFIRM MARKINGS OF OUTLETS, COVER PLATES, OUTLET/CONNECTORS AND PATCH PANELS.
3. VISUALLY INSPECT CABLE PLACEMENT, CABLE TERMINATION, GROUNDING AND BONDING, EQUIPMENT, PATCH CORDS AND LABELING OF ALL COMPONENTS.
4. UTP PERFORMANCE: PERFORM THE FOLLOWING TESTS ACCORDING TO TIA/EIA-568-B.1 AND TIA/EIA-568-B.2.
a. WIRE MAP
b. LENGTH (PHYSICAL VS ELECTRICAL AND LENGTH REQUIREMENTS.
c. INSERTION LOSS.
d. NEAR-END CROSSTALK(NEXT) LOSS.
e. POWER SUM NEAR-END CROSSTALK (PSNEXT) LOSS.
f. EQUAL-LEVEL FAR-END CROSSTALK (ELFEXT).
g. POWER SUM EQUAL-LEVEL FAR-END CROSSTALK (PSELFEXT).
h. RETURN LOSS.
i. PROPAGATION DELAY.
j. DELAY SKEW.
5. REMOVE AND REPLACE CABLING WHERE TEST RESULTS INDICATE IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS. END-TO-END CABLING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.
6. PREPARE TEST AND INSPECTION REPORTS.
G. UTP PATCH PANEL
1. MODULAR PANEL HOUSING MULTIPLE NUMBERED JACK UNITS WITH IDC-TYPE CONNECTORS AT EACH OPENING.
2. 48 PORT OR 24 PORT HIGH DENSITY.
a. NUMBER OF PANELS AND PORTS AS REQUIRED.
b. PROVIDE SHIELDED BASED ON CABLE TYPE.
3. WHITE BACKGROUND DESIGNATION STRIPS WITH CLEAR PLASTIC COVER LABELING INTEGRAL TO PATCH PANEL.
4. REAR HORIZONTAL CABLE MANAGEMENT.
H. BOXES
1. BOXES SHALL BE RECESSED IN THE WALL IN EXISTING AND NEW STUD WALLS AND NEW MASONRY WALLS.
2. BOXES SHALL BE SURFACE MOUNTED ON IMP, PRECAST AND EXISTING MASONRY WALLS.
3. DEPTH TO BE GREATER THAN BEND OF RADIUS OF CABLE IN RESPECTIVE BOX.
I. FACEPLATES, JACKS, AND PLUGS:
1. FACEPLATES:
a. PROVIDE ABS PLASTIC OR STAINLESS STEEL VERTICAL FACEPLATES AS REQUIRED PER AREA INSTALLED.
b. PLATES SHALL ACCEPT IDC-TYPE JACK MODULES AND ALLOW A LABEL TO BE INSERTED INTO AN INTEGRAL LABEL POCKET WITH CLEAR COVER.
c. COLOR SHALL BE AS SPECIFIED IN DIVISION 26.
d. ALL FACEPLATE, JACK, PLUG AND CONNECTOR MANUFACTURERS SHALL BE CONSISTENT THROUGHOUT PROJECT.
2. WALL PHONE MOUNTING PLATES
a. STAINLESS STEEL WITH TWO MOUNTING STUDS.
b. PLATES SHALL ACCEPT IDC-TYPE JACK MODULE.
3. JACKS:
a. PROVIDE MODULAR COLOR-CODED IDC-TYPE FACEPLATE INSERT / RJ-45 RECEPTACLE UNITS FOR EACH CABLE WITHIN THE OUTLET AS SHOWN ON PLANS.
b. INSTALL DUST CAPS AND SECURE ALL JACKS PER MANUFACTURER'S RECOMMENDATIONS.
c. PATCH PANEL JACK COLOR SHALL FOLLOW CABLE JACKET COLOR CODE.
d. PROVIDE SHIELDED BASED ON CABLE TYPE.
4. PLUGS
a. UTP AND F/UTP CABLE PLUG CATEGORY LISTING SHALL MATCH THAT OF THE CABLE MINIMUM.
J. PARTITION COMMUNICATION OUTLETS
1. PROVIDE ADAPTORS, AS REQUIRED, TO MOUNT COMMUNICATION OUTLETS WITHIN PARTITIONS.
2. MANUFACTURER: LEVITON 49910 OR EQUAL. VERIFY ADAPTER IS COMPATIBLE WITH THE SPECIFIED MODULAR FURNITURE MANUFACTURER. ALL FACEPLATE, JACK, PLUG AND CONNECTOR MANUFACTURERS SHALL BE CONSISTENT THROUGHOUT PROJECT.
3. PLATES SHALL ACCEPT IDC-TYPE JACK MODULES AND ALLOW A LABEL TO BE INSERTED INTO AN INTEGRAL LABEL POCKET WITH CLEAR COVER.
4. COLOR SHALL BE AS SHOWN ON PLANS OR BY OWNER.
K. WORKSTATION COMMUNICATION BOXES AND OUTLETS:
1. USE 4" SQUARE, 2 1/8" DEEP (MINIMUM) OUTLET BOX WITH SINGLE GANG RING UNLESS OTHERWISE SHOWN ON PLAN. PROVIDE CONDUIT STUB INTO CEILING TOWARD CABLE TRAY OR CABLE SUPPORT PATHWAY.
2. PROVIDE COMBINATION TYPE FACEPLATE WITH 4-POSITION OPENINGS FOR IDC-TYPE OUTLETS.
3. FACEPLATES SHALL HAVE LABEL HOLDERS WITH A TYPED OVERLAY LABEL AFFIXED ABOVE / BELOW EACH OUTLET POSITION INDICATING THE OUTLET NUMBER.
4. PROVIDE THE APPROPRIATE COMMUNICATIONS DEVICE IN THE OPENINGS AS SHOWN ON THE PLANS. CLOSE ALL EMPTY OPENINGS WITH BLANK INSERTS.

### 27 16 00 COMMUNICATIONS PATCH CORDS

A. GENERAL
1. PROVIDE THE SAME MANUFACTURER OF HORIZONTAL CABLING FOR ALL PATCH CORDS.
2. JACKET COLOR TO MATCH HORIZONTAL CABLE COLOR SCHEME.
a. SEE 27 15 00 HORIZONTAL CABLING REQUIREMENTS.
3. PROVIDE (5) ATTIC STOCK OF EACH COLOR USED.
B. IDF UTP AND F/UTP PATCH CABLES: PATCH CABLES SHALL BE INSTALLED IN LENGTHS TO ALLOW FOR PROPER BEND RADIUS AND SHALL BE INSTALLED BY CONTRACTOR IN A NEAT, ORGANIZED MANNER USING INDUSTRY STANDARD MEANS AND METHODS.
C. WORKSTATION UTP AND F/UTP PATCH CABLES:
1. WORKSTATION PATCH CABLES SHALL BE PROVIDED IN LENGTHS TO ALLOW FOR PROPER BEND RADIUS AND SHALL BE INSTALLED BY CONTRACTOR IN A NEAT, ORGANIZED MANNER USING INDUSTRY STANDARD MEANS AND METHODS.
2. COLOR CODE CORDS TO KEEP DATA PATCH CABLES SEPARATE FROM VOICE PATCH CABLES PER GENERAL INSTRUCTION REQUIREMENTS IN THIS SECTION OR AS NOTED OTHERWISE. COLORS SHALL BE CONSISTENT THROUGHOUT THE PROJECT.

### 27 51 16 PUBLIC ADDRESS SYSTEM

A. SCOPE OF WORK — EXTEND THE EXISTING PUBLIC ADDRESS SYSTEM INCLUDING THE FOLLOWING FEATURES:
1. POWER AMPLIFIER
2. LOUD SPEAKERS
3. RACEWAYS
4. CONDUCTORS
B. PRODUCTS
1. POWER AMPLIFIER
a. MAUFACTURERS — MATCH EXISTING EQUIPMENT.
b. MOUNTING — RACK
c. OUTPUT POWER — 70V, 300WATT MINIMUM
d. THD: LESS THAN 3 PERCENT AT RATED POWER
e. MINIMUM SIGNAL TO NOICE RATIO: 80 DB AT RATED POWER
f. INPUT FOR CONNECTION TO OWNERS TELEPHONE SYSTEM.
g. INPUT FOR CONNECTION TO FIRE ALARM SYSTEM.
2. LOUDSPEAKERS
a. HORN TYPE SPEAKERS
1) SINGLE HORN UNIT, DOUBLE REENTERANT DESIGN, WITH MINIMUM FULL-RANGE POWER RATING OF 15 W.
2) MATCHING TRANSFORMER: FULL POWER RATED WITH FOUR STANDARD TAPS. MAXIMUM INSERTIONLOSS OF 0.5 DB.
3) MOUNTING: INTEGRAL BRACKET
4) WEATHER RATING: WET LOCATION
3. RACEWAYS:
a. NON PROCESS SPACES: REFERENCE SECTION 26 05 30 — CONDUIT
b. PROCESS SPACES: REFERENCE SECTION 26 06 00 — PROCESS ROOM SPECIFICATIONS
4. CONDUCTORS:
a. JACKETED, UNSHIELDED TWISTED MULTI-PAIR, UNTINNED SOLID COPPER.
b. REFERENCE SECTION 27 15 00 — COMMUNICATIONS HORIZONTAL CABLING.
C. EXECUTION
1. WIRING METHOD - INSTALL CABLES IN RACEWAYS.
2. GENERAL CABLE REQUIREMENTS
a. TERMINATE CONDUCTORS. NO CABLE SHALL CONTAIN UNTERMINATED ELEMENTS. MAKE TERMINATIONS ONLY AT OUTLETS AND TERMINALS.
b. SEPARATION OF WIRES — SEPARATE PAGING WIRING FROM ALL OTHER WIRING BY NOT LESS THAN 12 INCHES. WHERE MINIMUM SEPARATION CANNOT BE ACHIEVED, PROVIDE SHIELDED CABLES.
3. INSTALLATION
a. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
b. IDENTIFICATION: APPLY WIRE TAGS AT TERMINATION POINTS.
c. ADJUST SPEAK




FIRST FLOOR PLAN - AREA "A" - LIGHTING

NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL EQUIPMENT ROOMS WITH OTHER CONTRACTORS PRIOR TO ROUGH IN.
- WIRE EMERGENCY LIGHTS UNSWITCHED TO LIGHTING CIRCUIT SERVING SAME ROOM, OR TO "NIGHT LIGHT" CIRCUIT WHEN AVAILABLE.
- LOCATE EXTERIOR EGRESS LIGHT AT SINGLE WYTHE MASONRY CONSTRUCTION MIN. 12" ABOVE FLASHING AT DOOR HEAD.
- EXIT LIGHT CONDUIT AT SINGLE WYTHE MASONRY CONSTRUCTION SHALL NOT PENETRATE FLASHING ABOVE DOOR HEAD IF EXIT LIGHT IS WALL MOUNTED.
- PENETRATE MASONRY WALL PER STRUCTURAL DRAWINGS. PENETRATIONS NOT PERMITTED THROUGH MARKED GROUTED/REINFORCED MASONRY, AND SHALL NOT BE MODIFIED WITHOUT WRITTEN APPROVAL FROM STRUCTURAL ENGINEER.
- SEE HVAC PLANS FOR AREAS THAT ARE USED AS A RETURN AIR PLENUM. PROVIDE PLENUM RATED CONSTRUCTION.
- SEE ARCHITECTURAL REFLECTED CEILING AND ELEVATION PLANS FOR LOCATION OF ALL LIGHTING FIXTURES. LOCATE FIXTURES IN ACCORDANCE WITH CEILING AND ELEVATION PLANS.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATE DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- SEE LIGHTING FIXTURE LEGEND FOR FIXTURE WIRING INFORMATION.

## KEYNOTES

ALL KEYNOTES MAY NOT APPEAR ON THIS SHEET.

1. SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
2. PROVIDE REMOTE MOUNTED LED DRIVE IOTA-CP20 IN NEMA 1 ENCLOSURE IN NON-PROCESS AREAS AND NEMA 4X IN PROCESS AREAS. MOUNT ON WALL INSIDE BUILING. DRIVE TO PROVIDE EMERGENCY POWER TO EGRESS LIGHT FIXTURES.
3. LIGHT FIXTURE SHALL BE SURFACE MOUNTED TO METAL LINER PANEL. SEE DETAIL #9/E3.0 FOR MORE INFORMATION
4. PROVIDE UL924 RATED DIMMABLE GENERATOR TRANSFER DEVICE (GTD) MODEL 'MYERS' # EPC-2-D, OR APPROVED EQUIVALENT. FIXTURE SHALL ILLUMINATE TO FULL BRIGHTNESS IN THE EVEN T OF LOSS OF NORMAL POWER, REGARDLESS OF SWITCH POSITION.

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PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

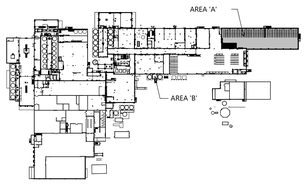
| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER

250231400

SHEET NUMBER

E1.1AL




KEY PLAN

ELECTRICAL FIRST FLOOR PLAN - AREA 'A' - LIGHTING

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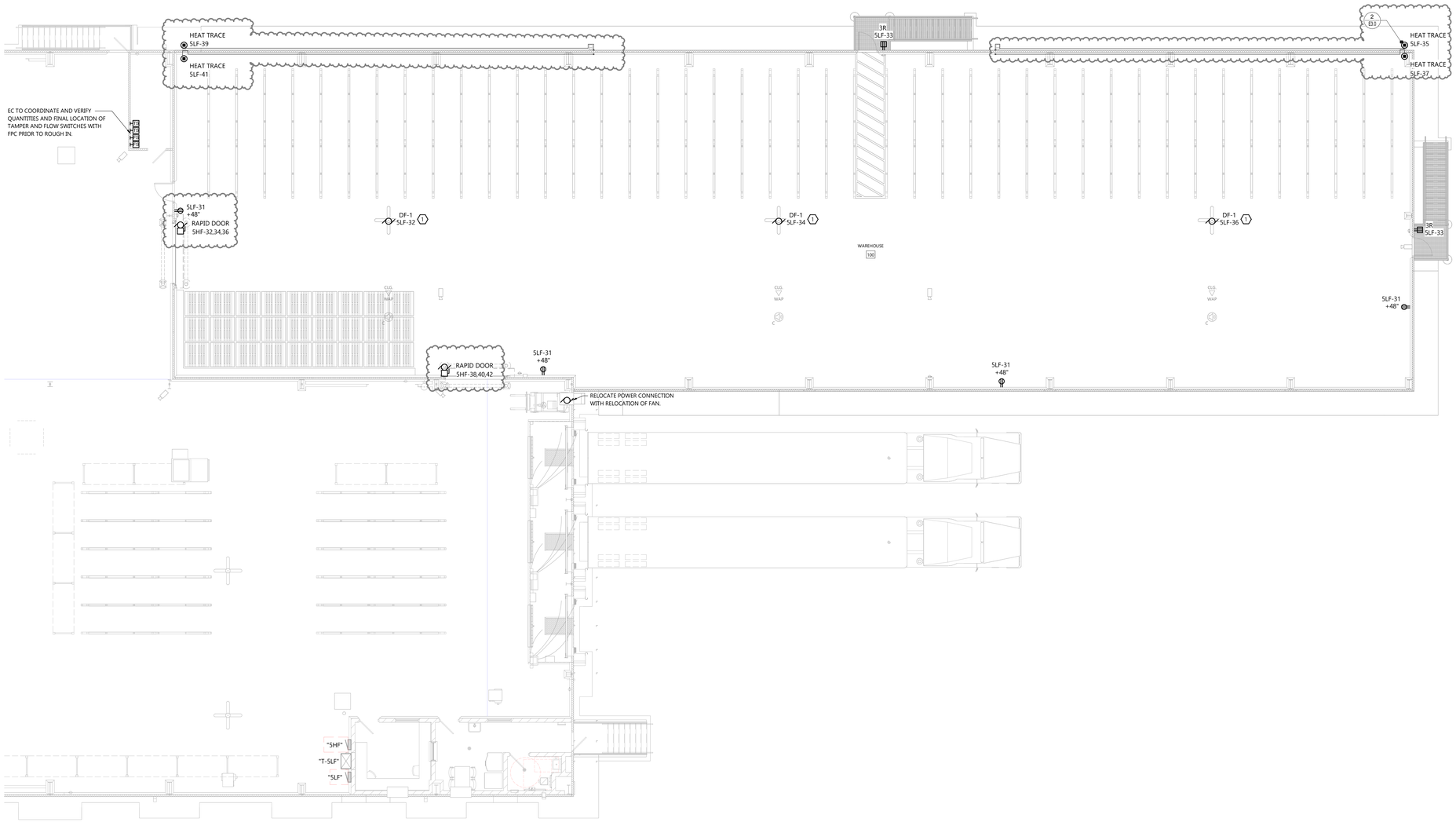


NORTH

FIRST FLOOR PLAN - AREA "A" - POWER

SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- DETAIL REFERENCES ON PLANS ARE TO AID THE CONTRACTOR IN IDENTIFYING THE APPLICABLE DETAIL. NOT ALL DETAILS, OR INSTANCES OF DETAILS, ARE REFERENCES ON PLANS. CONTRACTOR IS RESPONSIBLE TO REVIEW AND COMPLY WITH ALL APPLICABLE DETAILS WHETHER OR NOT REFERENCED ON PLANS.
- EXTERIOR RECEPTACLES SHALL BE GFI TYPE. PROVIDE PASS & SEYMOUR SERIES "WI UC" OR EQUIVALENT COVER. (PER NEC 406.8(B) AND AHJ). COLOR SHALL BE SELECTED BY ARCHITECT.
- SEE SHEET E4.0 FOR BRANCH CIRCUIT FEEDER SIZES.
- PENETRATE MASONRY WALL PER STRUCTURAL DRAWINGS. PENETRATIONS NOT PERMITTED THROUGH MARKED GROUTED/REINFORCED MASONRY, AND SHALL NOT BE MODIFIED WITHOUT WRITTEN APPROVAL FROM STRUCTURAL ENGINEER.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATE DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- SEE HVAC AND PLUMBING PLANS FOR LOCATIONS OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT. DO NOT REFERENCE ELECTRICAL DRAWINGS FOR EXACT LOCATION.

## KEYNOTES

1. EC SHALL MOUNT AND WIRE THE SPEED SWITCH FURNISHED BY THE EQUIPMENT MANUFACTURER.

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PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:

# WEST POINT DAIRY PRODUCTS

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

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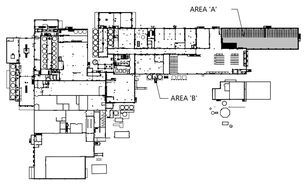


KEY PLAN

ELECTRICAL FIRST FLOOR PLAN - AREA 'A' - POWER

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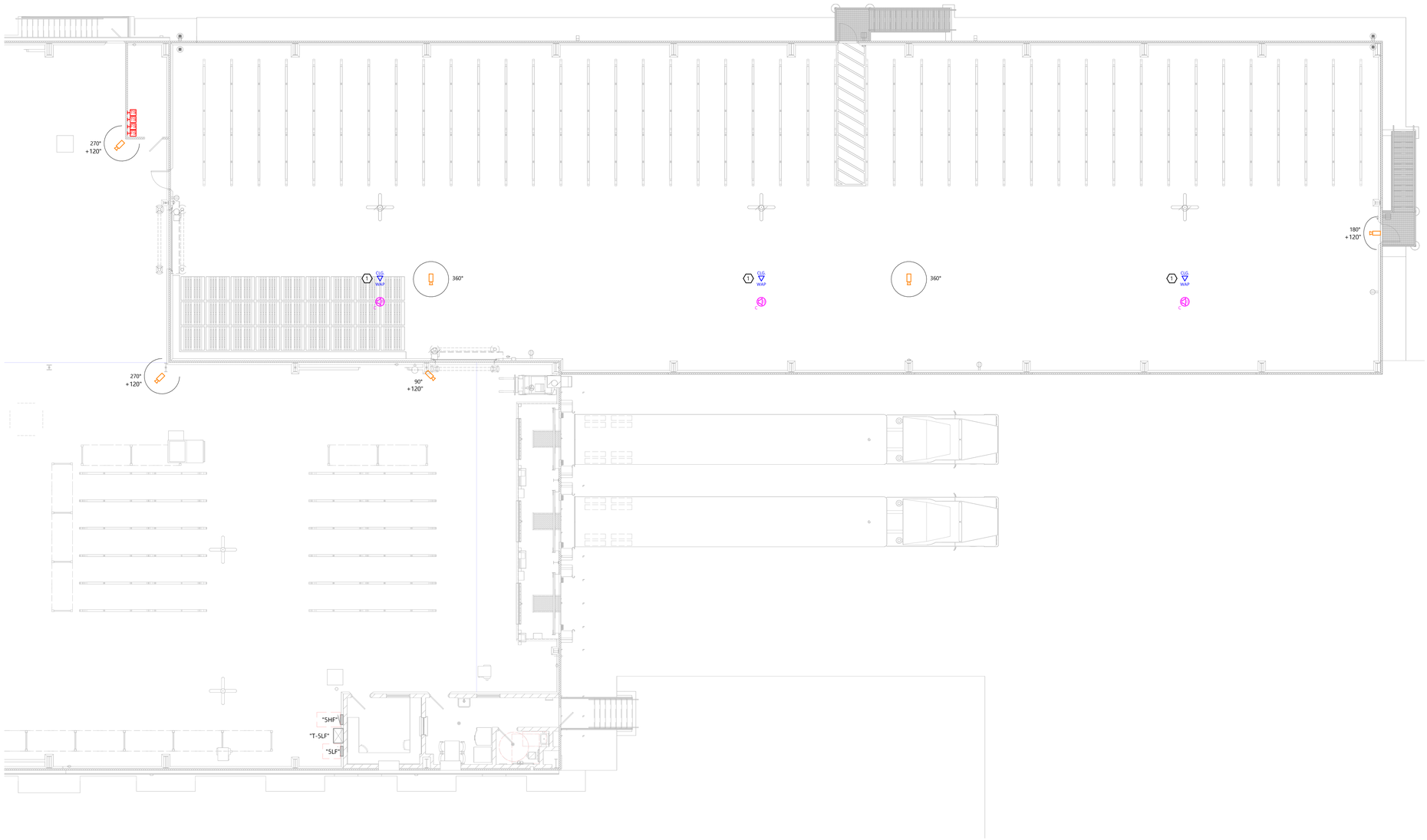


NORTH

## FIRST FLOOR PLAN - AREA "A" - SYSTEMS

SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- DETAIL REFERENCES ON PLANS ARE TO AID THE CONTRACTOR IN IDENTIFYING THE APPLICABLE DETAIL. NOT ALL DETAILS, OR INSTANCES OF DETAILS, ARE REFERENCES ON PLANS. CONTRACTOR IS RESPONSIBLE TO REVIEW AND COMPLY WITH ALL APPLICABLE DETAILS WHETHER OR NOT REFERENCED ON PLANS.
- ALL CONDUITS TO ISLAND CABINETRY AND TABLES SHALL BE UNDERGROUND.
- PENETRATE MASONRY WALL PER STRUCTURAL DRAWINGS. PENETRATIONS NOT PERMITTED THROUGH MARKED GROUTED/REINFORCED MASONRY, AND SHALL NOT BE MODIFIED WITHOUT WRITTEN APPROVAL FROM STRUCTURAL ENGINEER.
- ALL ITEMS OR DEVICES SHOWN "DARKER" ARE NEW LOW VOLTAGE DEVICES. ALL ITEMS OR DEVICES SHOWN "LIGHTER" ARE POWER DEVICES. POWER DEVICES ARE SHOWN FOR REFERENCE ONLY. REFER TO POWER SHEETS FOR MORE INFORMATION.

## KEYNOTES

ALL KEYNOTES MAY NOT APPEAR ON THIS SHEET.

1. PROVIDE DATA OUTLET WITH DEDICATED CAT 6 CABLE IN RACEWAY FROM LOCAL IDF FOR WIRELESS ACCESS POINT. COORDINATE WIRELESS ACCESS POINT LOCATION WITH OWNERS. EQUIPMENT PROVIDER FOR OPTIMAL PERFORMANCE.

## SYSTEMS COLOR LEGEND

- FIRE ALARM
- SECURITY/ACCESS CONTROL
- AUDIO/VIDEO
- NETWORK (IT)
- PROCESS NETWORK (OT)


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PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:

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570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

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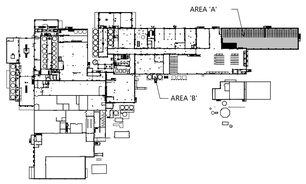


KEY PLAN

ELECTRICAL FIRST FLOOR PLAN - AREA 'A'- SYSTEMS

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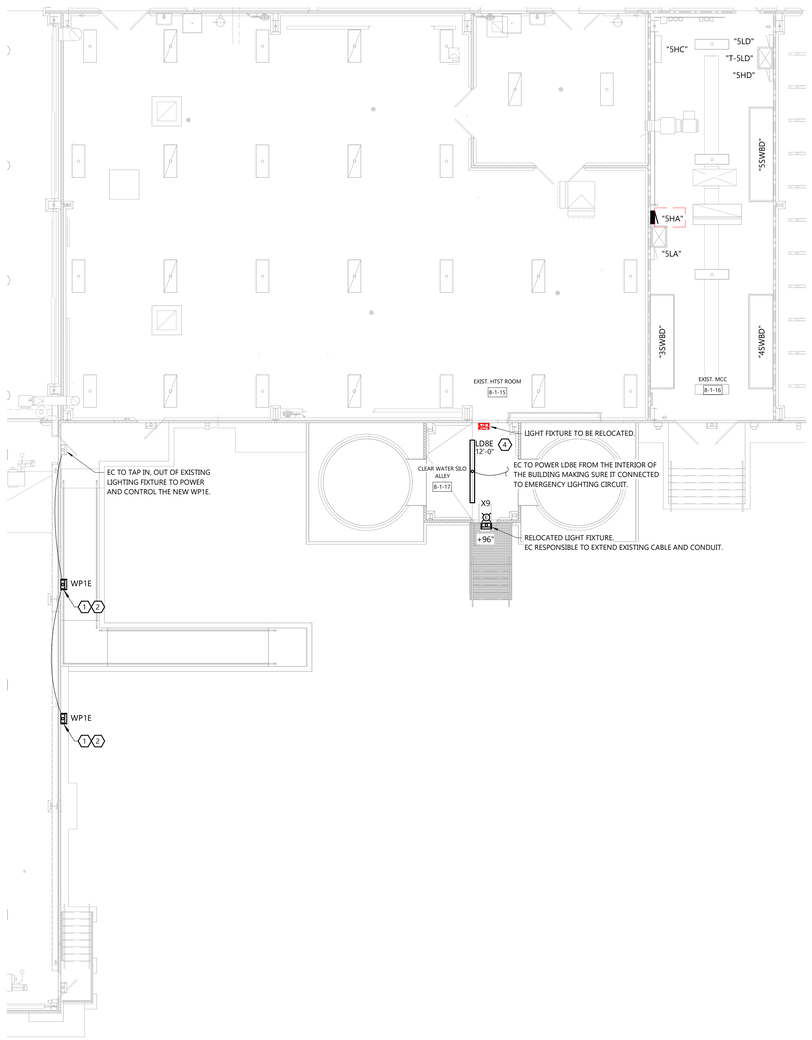


NORTH

SCALE: 1/8" = 1'-0"

0' 8' 16'

## FIRST FLOOR PLAN - AREA "B" - LIGHTING

## GENERAL NOTES

- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL EQUIPMENT ROOMS WITH OTHER CONTRACTORS PRIOR TO ROUGH IN.
- WIRE EMERGENCY LIGHTS UNSWITCHED TO LIGHTING CIRCUIT SERVING SAME ROOM, OR TO "NIGHT LIGHT" CIRCUIT WHEN AVAILABLE.
- LOCATE EXTERIOR EGRESS LIGHT AT SINGLE WYTHE MASONRY CONSTRUCTION MIN. 12" ABOVE FLASHING AT DOOR HEAD.
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- SEE HVAC PLANS FOR AREAS THAT ARE USED AS A RETURN AIR PLENUM. PROVIDE PLENUM RATED CONSTRUCTION.
- SEE ARCHITECTURAL REFLECTED CEILING AND ELEVATION PLANS FOR LOCATION OF ALL LIGHTING FIXTURES. LOCATE FIXTURES IN ACCORDANCE WITH CEILING AND ELEVATION PLANS.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATE DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- SEE LIGHTING FIXTURE LEGEND FOR FIXTURE WIRING INFORMATION.

## KEYNOTES

ALL KEYNOTES MAY NOT APPEAR ON THIS SHEET.

1. SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
2. PROVIDE REMOTE MOUNTED LED DRIVE IOTA-CP20 IN NEMA 1 ENCLOSURE IN NON-PROCESS AREAS AND NEMA 4X IN PROCESS AREAS. MOUNT ON WALL INSIDE BUILING. DRIVE TO PROVIDE EMERGENCY POWER TO EGRESS LIGHT FIXTURES.
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PROJECT INFORMATION

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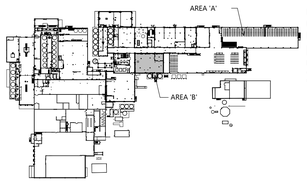


KEY PLAN

ELECTRICAL FIRST FLOOR PLAN - AREA 'B' - LIGHTING

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## GENERAL NOTES

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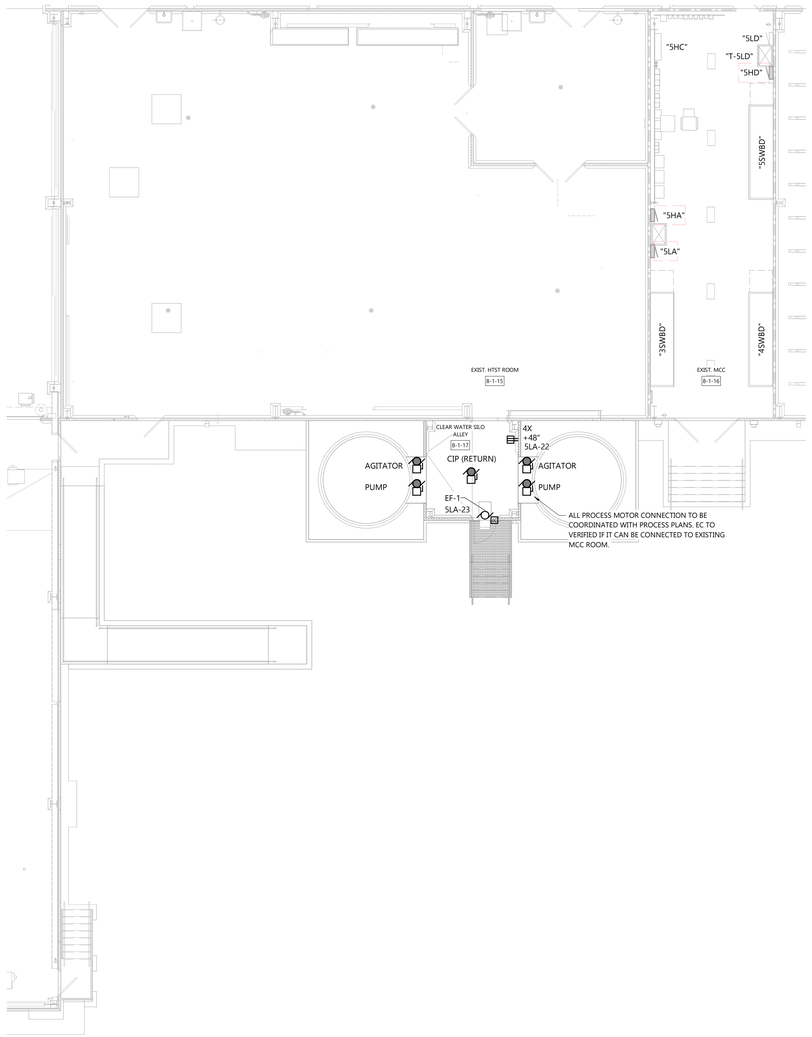
- SEE HVAC AND PLUMBING PLANS FOR LOCATIONS OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT. DO NOT REFERENCE ELECTRICAL DRAWINGS FOR EXACT LOCATION.

## KEYNOTES

1. EC SHALL MOUNT AND WIRE THE SPEED SWITCH FURNISHED BY THE EQUIPMENT MANUFACTURER.

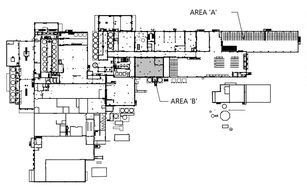



NORTH

FIRST FLOOR PLAN - AREA "B" - POWER

SCALE: 1/8" = 1'-0"

0' 8' 16'




KEY PLAN

ELECTRICAL FIRST FLOOR PLAN - AREA 'B' - POWER


EXCEL

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PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

| ISSUED FOR BID | |
|---|---|
| AD1 | APR. 29, 2026 |

JOB NUMBER

250231400

SHEET NUMBER

**E1.1BP**

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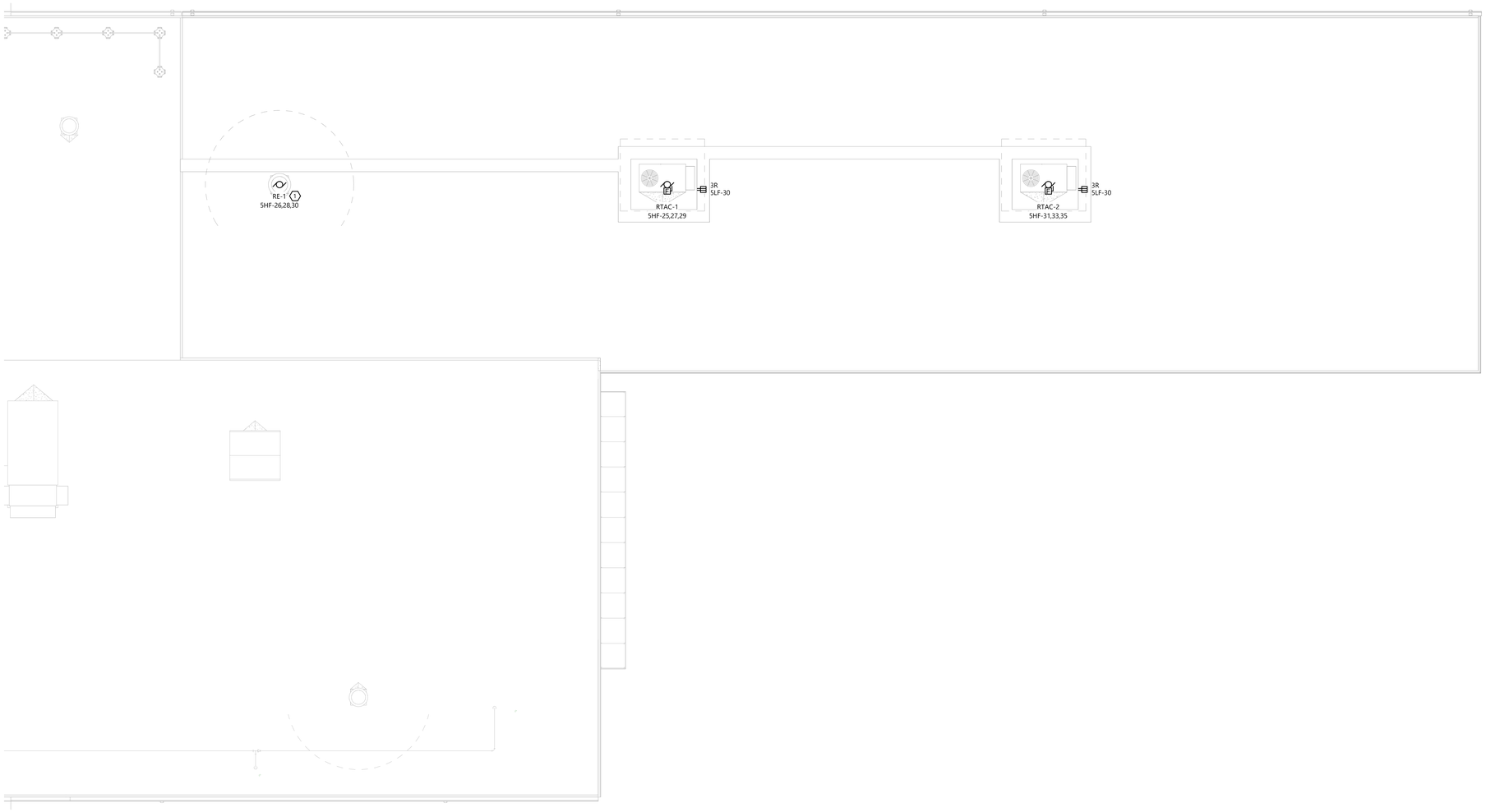
4/29/2026 3:03:23 PM




NORTH

ROOF PLAN - AREA "A" - POWER

SCALE: 1/8" = 1'-0"

0' 8' 16'

## GENERAL NOTES

- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- EXTERIOR RECEPTACLES SHALL BE GFI TYPE. PROVIDE PASS & SEYMOUR SERIES "WI UC" OR EQUIVALENT COVER. (PER NEC 406.8(B) AND AHJ). COLOR SHALL BE SELECTED BY ARCHITECT.
- SEE SHEET E4.0 FOR BRANCH CIRCUIT FEEDER SIZES.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATE DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- SEE HVAC AND PLUMBING PLANS FOR LOCATIONS OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT. DO NOT REFERENCE ELECTRICAL DRAWINGS FOR EXACT LOCATION.

## KEYNOTES

ALL KEYNOTES MAY NOT APPEAR ON THIS SHEET.

1. EC SHALL WIRE FROM AUXILIARY CONTACT AT DISCONNECT TO SHUT DOWN VFD WHEN DISCONNECT IS ENGAGED. EC SHALL PROVIDE AUX CONTACT AT DISCONNECT IF EC IS PROVIDING DISCONNECT.

EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:

**WEST POINT DAIRY PRODUCTS**

570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |

JOB NUMBER

250231400

SHEET NUMBER

**E1.3**

ELECTRICAL ROOF PLAN

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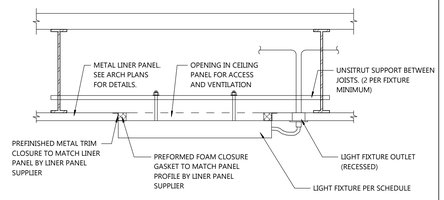
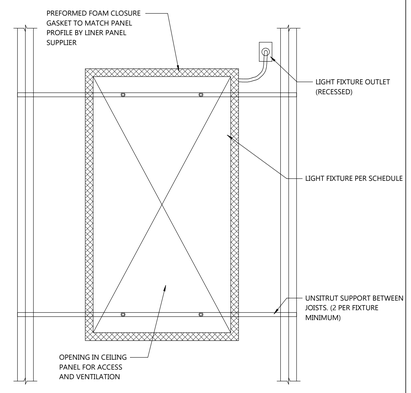
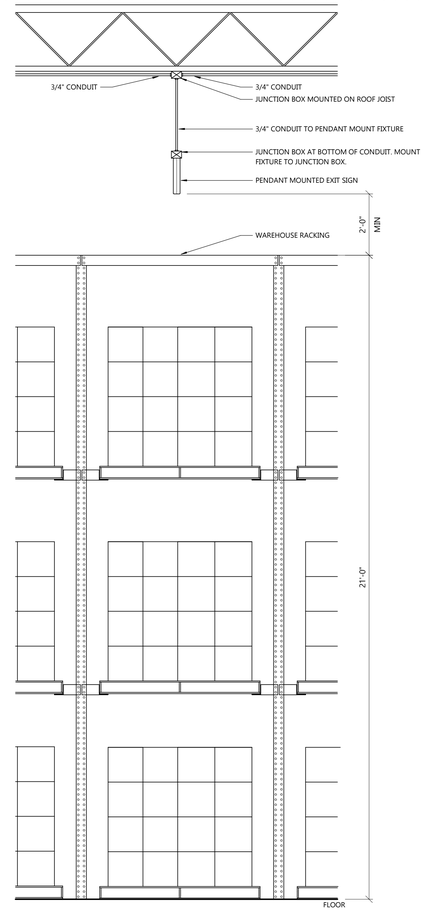


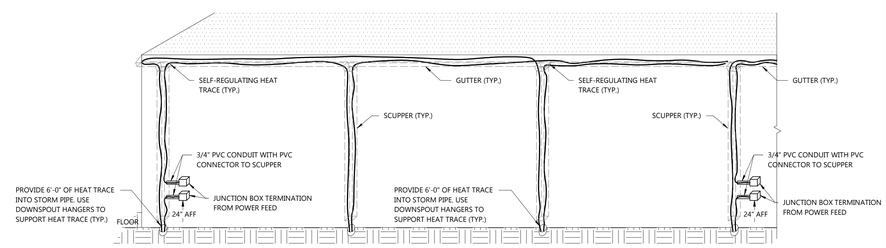




**NOTE:**
GENERAL CONTRACTOR MUST DEFINE THE REPSONSIBILITY FOR THE COMPONENTS OF THIS DETAIL INCLUDING BUT NOT LIMITED TO:
- HEAT DISSIPATION VENT HOLE CUT IN CEILING PANEL
- FOAM GASKET - PROVIDE AND/OR INSTALL
- PREFINISHED TRIM - PROVIDE AND/OR INSTALL

3 / E3.0 METAL CEILING PANEL LIGHT FIXTURE MOUNTING DETAIL
NOT TO SCALE




1 / E3.0 PENDANT EXIT LIGHT MOUNTING DETAIL
NOT TO SCALE




**NOTES:**
- STAGGER DOWNSPOUT HEAT TRACE LOOP BETWEEN (2) HEAT TRACE CIRCUIT UNLESS ONLY (1). WHEN THERE IS ONLY (1) HEAT TRACE CIRCUIT AVAILABLE, LOOP ALL DOWN SPOUTS USING THE CIRCUIT.
- VERIFY HEAT TRACE FUNCTIONALITY AND COMPLETE HEAT TRACE SYSTEM WITH HEAT TRACE SUPPLIER.

2 / E3.0 HEAT TRACE DETAIL
NOT TO SCALE

ELECTRICAL DETAILS


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

| ISSUED FOR BID | |
|---|---|
| AD1 | APR. 29, 2026 |

JOB NUMBER
250231400

SHEET NUMBER
**E3.0**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## PANELBOARD: 5HA (EXISTING)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** RECESSED
**ENCLOSURE:** NEMA 12

**VOLTS:** 480/277 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MLO
**BUS RATING:** 400A
**MCB RATING:** -

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T-3LA | -- -- | 3 | | | | 3 | -- -- | MOTOR - RTAC-1 | 2 |
| 3 | -- | -- -- | -- | | | | -- | -- -- | -- | 4 |
| 5 | -- | -- -- | -- | | | | -- | -- -- | -- | 6 |
| 7 | LTG - STAIR TOWER | -- -- | 1 | | | | 3 | -- -- | MOTOR - RTAC-2 | 8 |
| 9 | LTG - SOUTH WALL PACKS | -- -- | 1 | | | | -- | -- -- | -- | 10 |
| 11 | LTG - MILK INTAKE 100 | -- -- | 1 | | | | -- | -- -- | -- | 12 |
| 13 | LTG - MILK INTAKE EXTERIOR WALL PACK | -- -- | 1 | | | | 1 | -- -- | MOTOR - RTAC-3 | 14 |
| 15 | LTG - RAW ALCOVE/PTS | -- -- | 1 | | | | 1 | -- -- | SPACE | 16 |
| 17 | LTG - CIP 107 | -- -- | 1 | | | | 1 | -- -- | SPACE | 18 |
| 19 | LTG - REF. 108/ AIR COMPRESSOR 109 | -- -- | 1 | | | | 1 | -- -- | SPACE | 20 |
| 21 | LTG - HALLWAY 133 | -- -- | 1 | | | | 1 | -- -- | SPACE | 22 |
| 23 | LTG - HTST 133 | -- -- | 1 | | | | 1 | -- -- | SPACE | 24 |
| 25 | LTG - EVAP 120 | -- -- | 1 | | | | 1 | -- -- | SPACE | 26 |
| 27 | LTG - POWDER PACKAGING 128 | -- -- | 1 | | | | 1 | -- -- | SPACE | 28 |
| 29 | LTG - DYER B 126 | -- -- | 1 | | | | 1 | -- -- | SPACE | 30 |
| 31 | LTG - DYER B 126 | -- -- | 1 | | | | 1 | -- -- | SPACE | 32 |
| 33 | LTG -WAREHOUSE 140 | -- -- | 1 | | | | 1 | -- -- | SPACE | 34 |
| 35 | LTG - HALLWAY 122 | -- -- | 1 | | | | 1 | -- -- | SPACE | 36 |
| 37 | LTG - NORTH EXTERIOR WALL PACK | -- -- | 1 | | | | 1 | -- -- | SPACE | 38 |
| 39 | LTG - ELEVATOR EQUIPMENT RM/ ELEVATOR | -- -- | 1 | | | | 1 | -- -- | SPACE | 40 |
| 41 | LTG - POWDER PALLETIZING 130 | -- -- | 1 | | | | 1 | -- -- | SPACE | 42 |
| 43 | LTG - DOCK 141 | -- -- | 1 | | | | 1 | -- -- | LTG - CORRIDOR 209, LAB, OFFICE | 44 |
| 45 | LTG - WAREHOUSE 160 / RED LINES 161 | -- -- | 1 | | | | 1 | -- -- | LTG - MDX VALVE | 46 |
| 47 | LTG - TRUCKERS LOUNGE / SHIPPING | -- -- | 1 | | | | 3 | -- -- | OTHER - DRY2-CP-3170 | 48 |
| 49 | SPACE | -- -- | 1 | | | | -- | -- -- | -- | 50 |
| 51 | SPACE | -- -- | 1 | | | | -- | -- -- | -- | 52 |
| 53 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 54 |
| 55 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 56 |
| 57 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 58 |
| 59 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 60 |
| 61 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 62 |
| 63 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 64 |
| 65 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 66 |
| 67 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 68 |
| 69 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 70 |
| 71 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 72 |
| 73 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 74 |
| 75 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 76 |
| 77 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 78 |
| 79 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 80 |
| 81 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 82 |
| 83 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 84 |

## PANELBOARD: 5LF (EXISTING)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 12

**VOLTS:** 120/208 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 10,000
**MAINS TYPE:** MCB
**BUS RATING:** 225A
**MCB RATING:** 225A

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REC - BATTERY CHARGER 145 | -- -- | 2 | | | | 1 | -- -- | REC - DOCK 141 | 2 |
| 3 | -- | -- -- | -- | | | | 1 | -- -- | REC - SP-1 | 4 |
| 5 | REC - SHIP 142 | -- -- | 1 | | | | 1 | -- -- | REC - DOCK 141 | 6 |
| 7 | REC - TRUCKERS 143 | -- -- | 1 | | | | 1 | -- -- | REC - SHIP 142 | 8 |
| 9 | REC - TRUCKERS 143 VENDING MACHINE | -- -- | 1 | | | | 1 | -- -- | REC - EAST EXTERIOR | 10 |
| 11 | REC - HALLWAY | -- -- | 1 | | | | 1 | -- -- | REC - TRUCKER 143 VENDING MACHINE | 12 |
| 13 | REC - SP-1 | -- -- | 1 | | | | 1 | -- -- | REC - 2HR ELEVATOR 121 | 14 |
| 15 | MOTOR - GUH -6 | -- -- | 1 | | | | 1 | -- -- | MOTOR - IF-2 | 16 |
| 17 | ELECTRIC HEAT - EWH-1 | -- -- | 2 | | | | 1 | -- -- | MOTOR - GUH-7 | 18 |
| 19 | -- | -- -- | -- | | | | 2 | -- -- | ELECTRIC HEAT - PTAC -1 | 20 |
| 21 | ELETRIC HEAT - PTAC -1 | -- -- | 1 | | | | -- | -- -- | -- | 22 |
| 23 | SPACE | -- -- | 1 | | | | 2 | -- -- | ELECTRIC HEAT -EWH-2 | 24 |
| 25 | MOTOR - DF-1 | -- -- | 2 | | | | -- | -- -- | -- | 26 |
| 27 | -- | -- -- | -- | | | | 2 | -- -- | MOTOR - DF-1 | 28 |
| 29 | MOTOR - EF-3 | -- -- | 1 | | | | -- | -- -- | -- | 30 |
| 31 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 32 |
| 33 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 34 |
| 35 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 36 |
| 37 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 38 |
| 39 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 40 |
| 41 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 42 |
| 43 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 44 |
| 45 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 46 |
| 47 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 48 |
| 49 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 50 |
| 51 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 52 |
| 53 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 54 |
| 55 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 56 |
| 57 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 58 |
| 59 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 60 |
| 61 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 62 |
| 63 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 64 |
| 65 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 66 |
| 67 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 68 |
| 69 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 70 |
| 71 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 72 |
| 73 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 74 |
| 75 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 76 |
| 77 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 78 |
| 79 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 80 |
| 81 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 82 |
| 83 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 84 |

## PANELBOARD: 5HF (EXISTING)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 12

**VOLTS:** 480/277 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MLO
**BUS RATING:** 400A
**MCB RATING:** -

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 2 |
| 3 | -- | -- -- | -- | | | | -- | -- -- | -- | 4 |
| 5 | -- | -- -- | -- | | | | -- | -- -- | -- | 6 |
| 7 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 8 |
| 9 | -- | -- -- | -- | | | | -- | -- -- | -- | 10 |
| 11 | -- | -- -- | -- | | | | -- | -- -- | -- | 12 |
| 13 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 14 |
| 15 | -- | -- -- | -- | | | | -- | -- -- | -- | 16 |
| 17 | -- | -- -- | -- | | | | -- | -- -- | -- | 18 |
| 19 | T-5LF | -- -- | 3 | | | | 1 | -- -- | LTG- EXTERIOR DOCK LTG | 20 |
| 21 | -- | -- -- | -- | | | | 1 | -- -- | LTG - SOUTH SITE LIGHT | 22 |
| 23 | -- | -- -- | -- | | | | 1 | -- -- | LTG - SOUTH EAST SITE LIGHTING | 24 |
| 25 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 26 |
| 27 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 28 |
| 29 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 30 |
| 31 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 32 |
| 33 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 34 |
| 35 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 36 |
| 37 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 38 |
| 39 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 40 |
| 41 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 42 |

## PANELBOARD: 5HA (MODIFIES)

**LOCATION:** EXIST. MCC 8-1-16
**SUPPLY FROM:**
**MOUNTING:** RECESSED
**ENCLOSURE:** NEMA 12

**VOLTS:** 480/277 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MLO
**BUS RATING:** 400A
**MCB RATING:** -

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T-3LA | -- -- | 3 | | | | 3 | -- -- | MOTOR - RTAC-1 | 2 |
| 3 | -- | -- -- | -- | | | | -- | -- -- | -- | 4 |
| 5 | -- | -- -- | -- | | | | -- | -- -- | -- | 6 |
| 7 | LTG - STAIR TOWER | -- -- | 1 | | | | 3 | -- -- | MOTOR - RTAC-2 | 8 |
| 9 | LTG - SOUTH WALL PACKS | -- -- | 1 | | | | -- | -- -- | -- | 10 |
| 11 | LTG - MILK INTAKE 100 | -- -- | 1 | | | | -- | -- -- | -- | 12 |
| 13 | LTG - MILK INTAKE EXTERIOR WALL PACK | -- -- | 1 | | | | 3 | -- -- | MOTOR - RTAC-3 | 14 |
| 15 | LTG - RAW ALCOVE/PTS | -- -- | 1 | | | | -- | -- -- | -- | 16 |
| 17 | LTG - CIP 107 | -- -- | 1 | | | | -- | -- -- | -- | 18 |
| 19 | LTG - REF. 108/ AIR COMPRESSOR 109 | -- -- | 1 | | | | 1 | -- -- | SPACE | 20 |
| 21 | LTG - HALLWAY 133 | -- -- | 1 | | | | 1 | -- -- | SPACE | 22 |
| 23 | LTG - HTST 133 | -- -- | 1 | | | | 1 | -- -- | SPACE | 24 |
| 25 | LTG - EVAP 120 | -- -- | 1 | | | | 1 | -- -- | SPACE | 26 |
| 27 | LTG - POWDER PACKAGING 128 | -- -- | 1 | | | | 1 | -- -- | SPACE | 28 |
| 29 | LTG - DYER B 126 | -- -- | 1 | | | | 1 | -- -- | SPACE | 30 |
| 31 | LTG - DYER B 126 | -- -- | 1 | | | | 1 | -- -- | SPACE | 32 |
| 33 | LTG -WAREHOUSE 140 | -- -- | 1 | | | | 1 | -- -- | SPACE | 34 |
| 35 | LTG - HALLWAY 122 | -- -- | 1 | | | | 1 | -- -- | SPACE | 36 |
| 37 | LTG - NORTH EXTERIOR WALL PACK | -- -- | 1 | | | | 1 | -- -- | SPACE | 38 |
| 39 | LTG - ELEVATOR EQUIPMENT RM/ ELEVATOR | -- -- | 1 | | | | 1 | -- -- | SPACE | 40 |
| 41 | LTG - POWDER PALLETIZING 130 | -- -- | 1 | | | | 1 | -- -- | SPACE | 42 |
| 43 | LTG - DOCK 141 | -- -- | 1 | | | | 1 | -- -- | LTG - CORRIDOR 209, LAB, OFFICE | 44 |
| 45 | LTG - WAREHOUSE 160 / RED LINES 161 | -- -- | 1 | | | | 1 | -- -- | LTG - MDX VALVE | 46 |
| 47 | LTG - TRUCKERS LOUNGE / SHIPPING | -- -- | 1 | | | | 3 | -- -- | OTHER - DRY2-CP-3170 | 48 |
| **49** | **LTG - WALL PACK WAREHOUSE (2)** | **20 A** | **1** | | | | -- | -- -- | -- | 50 |
| **51** | **LTG - HIGH BAY WAREHOUSE (2)** | **20 A** | **1** | | | | -- | -- -- | -- | 52 |
| 53 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 54 |
| 55 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 56 |
| 57 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 58 |
| 59 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 60 |
| 61 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 62 |
| 63 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 64 |
| 65 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 66 |
| 67 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 68 |
| 69 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 70 |
| 71 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 72 |
| 73 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 74 |
| 75 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 76 |
| 77 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 78 |
| 79 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 80 |
| 81 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 82 |
| 83 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 84 |

## PANELBOARD: 5LF (MODIFIES)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 12

**VOLTS:** 120/208 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 10,000
**MAINS TYPE:** MCB
**BUS RATING:** 225A
**MCB RATING:** 225A

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REC - BATTERY CHARGER 145 | -- -- | 2 | | | | 1 | -- -- | REC - DOCK 141 | 2 |
| 3 | -- | -- -- | -- | | | | 1 | -- -- | REC - SP-1 | 4 |
| 5 | REC - SHIP 142 | -- -- | 1 | | | | 1 | -- -- | REC - DOCK 141 | 6 |
| 7 | REC - TRUCKERS 143 | -- -- | 1 | | | | 1 | -- -- | REC - SHIP 142 | 8 |
| 9 | REC - TRUCKERS 143 VENDING MACHINE | -- -- | 1 | | | | 1 | -- -- | REC - EAST EXTERIOR | 10 |
| 11 | REC - HALLWAY | -- -- | 1 | | | | 1 | -- -- | REC - TRUCKER 143 VENDING MACHINE | 12 |
| 13 | REC - SP-1 | -- -- | 1 | | | | 1 | -- -- | REC - 2HR ELEVATOR 121 | 14 |
| 15 | MOTOR - GUH -6 | -- -- | 1 | | | | 1 | -- -- | MOTOR - IF-2 | 16 |
| 17 | ELECTRIC HEAT - EWH-1 | -- -- | 2 | | | | 1 | -- -- | MOTOR - GUH-7 | 18 |
| 19 | -- | -- -- | -- | | | | 2 | -- -- | ELECTRIC HEAT - PTAC -1 | 20 |
| 21 | ELETRIC HEAT - PTAC -1 | -- -- | 2 | | | | -- | -- -- | -- | 22 |
| 23 | -- | -- -- | -- | | | | 2 | -- -- | ELECTRIC HEAT -EWH-2 | 24 |
| 25 | MOTOR - DF-1 | -- -- | 1 | | | | -- | -- -- | -- | 26 |
| 27 | SPACE | -- -- | 1 | | | | 1 | -- -- | MOTOR - DF-1 | 28 |
| 29 | MOTOR - EF-3 | -- -- | 1 | | | | **1** | **20 A** | **REC - ROOF RECEPTACLE (2)** | **30** |
| **31** | **REC - SOUTH WALL (WAREHOUSE) (2)** | **20 A** | **1** | | | | **1** | **20 A** | **MOTOR - CEILING FAN (LEFT) (2)** | **32** |
| **33** | **REC - OUTSIDE (WAREHOUSE) (2)** | **20 A** | **1** | | | | **1** | **20 A** | **MOTOR - CEILING FAN (CENTER) (2)** | **34** |
| **35** | **ELEC HEAT - WAREHOUSE (EAST SIDE) (2)** | **GE 20 A** | **1** | | | | **1** | **20 A** | **MOTOR - CEILING FAN (RIGHT) (2)** | **36** |
| **37** | **ELEC HEAT - WAREHOUSE (EAST SIDE) (2)** | **GE 20 A** | **1** | | | | 1 | -- -- | SPACE | 38 |
| **39** | **ELEC HEAT - WAREHOUSE (WEST SIDE) (2)** | **GE 20 A** | **1** | | | | 1 | -- -- | SPACE | 40 |
| **41** | **ELEC HEAT - WAREHOUSE (WEST SIDE) (2)** | **GE 20 A** | **1** | | | | 1 | -- -- | SPACE | 42 |
| 43 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 44 |
| 45 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 46 |
| 47 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 48 |
| 49 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 50 |
| 51 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 52 |
| 53 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 54 |
| 55 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 56 |
| 57 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 58 |
| 59 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 60 |
| 61 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 62 |
| 63 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 64 |
| 65 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 66 |
| 67 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 68 |
| 69 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 70 |
| 71 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 72 |
| 73 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 74 |
| 75 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 76 |
| 77 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 78 |
| 79 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 80 |
| 81 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 82 |
| 83 | SPACE | -- -- | 1 | | | | 1 | -- -- | SPACE | 84 |

## PANELBOARD: 5HF (MODIFIES)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 12

**VOLTS:** 480/277 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MLO
**BUS RATING:** 400A
**MCB RATING:** -

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | POLES | A | B | C | POLES | TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 2 |
| 3 | -- | -- -- | -- | | | | -- | -- -- | -- | 4 |
| 5 | -- | -- -- | -- | | | | -- | -- -- | -- | 6 |
| 7 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 8 |
| 9 | -- | -- -- | -- | | | | -- | -- -- | -- | 10 |
| 11 | -- | -- -- | -- | | | | -- | -- -- | -- | 12 |
| 13 | MOTOR - DOCK 141 DOCK EQUIPMENT | -- -- | 3 | | | | 3 | -- -- | MOTOR - DOCK 141 OHD | 14 |
| 15 | -- | -- -- | -- | | | | -- | -- -- | -- | 16 |
| 17 | -- | -- -- | -- | | | | -- | -- -- | -- | 18 |
| 19 | T-5LF | -- -- | 3 | | | | 1 | -- -- | LTG- EXTERIOR DOCK LTG | 20 |
| 21 | -- | -- -- | -- | | | | 1 | -- -- | LTG - SOUTH SITE LIGHT | 22 |
| 23 | -- | -- -- | -- | | | | 1 | -- -- | LTG - SOUTH EAST SITE LIGHTING | 24 |
| **25** | **MOTOR - RTAC-1 (2)** | **25 A** | **3** | | | | **3** | **15 A** | **MOTOR - ROOF EXHAUST (RE-1) (2)** | **26** |
| **27** | **--** | **-- --** | **--** | | | | **--** | **-- --** | **--** | **28** |
| **29** | **--** | **-- --** | **--** | | | | **--** | **-- --** | **--** | **30** |
| **31** | **MOTOR - RTAC-2 (2)** | **25 A** | **3** | | | | **3** | **20 A** | **MOTOR - RAPID DOOR (WEST WALL) (2)** | **32** |
| **33** | **--** | **-- --** | **--** | | | | **--** | **-- --** | **--** | **34** |
| **35** | **--** | **-- --** | **--** | | | | **--** | **-- --** | **--** | **36** |
| 37 | SPACE | -- -- | 1 | | | | **3** | **20 A** | **MOTOR - RAPID DOOR (SOUTH WALL) (2)** | **38** |
| 39 | SPACE | -- -- | 1 | | | | **--** | **-- --** | **--** | **40** |
| 41 | SPACE | -- -- | 1 | | | | **--** | **-- --** | **--** | **42** |

### BRANCH CIRCUIT FEEDER SCHEDULE

| AMP / POLE | CONDUIT SIZE | CONDUCTORS & GROUNDING CONDUCTOR SIZES |
|---|---|---|
| 15A/1P OR 15A/2P | 1/2" | (2) #12 & #12 GND |
| 20A/1P OR 20A/2P | 1/2" | (2) #12 & #12 GND |
| 15A/3P OR 20A/3P | 1/2" | (3) #12 & #12 GND |
| 25A/1P OR 25A/2P | 3/4" | (2) #10 & #10 GND |
| 30A/1P OR 30A/2P | 3/4" | (2) #10 & #10 GND |
| 25A/3P OR 30A/3P | 3/4" | (3) #10 & #10 GND |
| 35A/1P OR 35A/2P | 3/4" | (2) # 8 & #10 GND |
| 40A/1P OR 40A/2P | 3/4" | (2) # 8 & #10 GND |
| 35A/3P OR 40A/3P | 3/4" | (3) #8 & #10 GND |
| 45A/1P OR 45A/2P | 1" | (2) #6 & #10 GND |
| 45A/3P OR 50A/3P | 1" | (3) #6 & #10 GND |
| 50A/1P OR 50A/2P | 1" | (2) #6 & #10 GND |
| 60A/1P OR 60A/2P | 1" | (2) #4 & #8 GND |
| 60A/3P | 1-1/4" | (3) #4 & #8 GND |
| 70A/3P OR 80A/3P | 1-1/4" | (3) #4 & #8 GND |
| 90A/3P | 1-1/4" | (3) #3 & #8 GND |
| 100A/3P OR 110A/3P | 1-1/2" | (3) #2 & #6 GND |
| 125A/3P | 1-1/2" | (3) #1 & #6 GND |

- PROVIDE BRANCH CIRCUIT FEEDERS AS NOTED ABOVE, UNLESS NOTED OTHERWISE.

### PANEL SCHEDULE KEY

| CIRCUIT NUMBER | DESCRIPTION | SUFFIX | BREAKER AMP. | POLES | A | B | C |
|---|---|---|---|---|---|---|---|
| 37 | RECEPTACLE - LOBBY AREA - WEST | x | 20A | 1 | | | |
| 39 | MOTOR - ROOM AIR CONDITIONER | x | 30A | 2 | | | |
| 41 | -- | -- | -- | -- | | | |

### PANEL SCHEDULE SUFFIX LEGEND

| | |
|---|---|
| A | ARC-FAULT BREAKER |
| G | 5mA GFCI BREAKER (PERSONAL PROTECTION) |
| GE | 30mA GFCI BREAKER (EQUIPMENT PROTECTION) |
| A/G | COMBINATION 5mA GFCI AND ARC-FAULT BREAKER |
| ST | SHUNT TRIP BREAKER |
| R | RELAY CONTROLLED CIRCUIT |

**EXISTING PANEL SCHEDULE NOTES:**
- ALL CIRCUITS SHOWN "LIGHTER" ARE EXISTING TO REMAIN.

**MODIFIED PANEL SCHEDULE NOTES:**
(1) UTILIZE EXISTING CIRCUIT BREAKER TO SERVE NEW LOAD.
(2) PROVIDE NEW CIRCUIT BREAKER TO SERVE NEW LOAD.
NEW BREAKER SHALL MATCH EXISTING PANEL STYLE AND AIC RATING.

ELECTRICAL PANEL SCHEDULES


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES

ISSUED FOR BID

| | |
|---|---|
| IFB | APR. 17, 2026 |
| AD1 | APR. 29, 2026 |

JOB NUMBER
250231400

SHEET NUMBER
**E4.0**


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4/29/2026 3:50:33 PM

## PANELBOARD: 5LA (EXISTING)

**LOCATION:**
**SUPPLY FROM:**
**MOUNTING:** RECESSED
**ENCLOSURE:** NEMA 12

**VOLTS:** 120/208 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MCB
**BUS RATING:** 225A
**MCB RATING:** 225A

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | | POLES | A | B | C | POLES | TRIP | | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REC - HTST 133 | -- | -- | 1 | | | | 2 | -- | -- | PANEL - "EP1" | 2 |
| 3 | REC - HTST 133 | -- | -- | 1 | | | | -- | -- | -- | -- | 4 |
| 5 | REC - HALLWAY 103 | -- | -- | 1 | | | | 1 | -- | -- | REC - 1HR. ELECT 134 | 6 |
| 7 | REC - DRYER B 126 | -- | -- | 1 | | | | 1 | -- | -- | REC - SOUTH SIDE EXTERIOR | 8 |
| 9 | MOTOR - GUH-4 | -- | -- | 1 | | | | 1 | -- | -- | REC - DYER B 126 | 10 |
| 11 | OTHER - CP-220 | -- | -- | 1 | | | | 1 | -- | -- | MOTOR - IP-3 | 12 |
| 13 | OTHER - CP-215 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-219 | 14 |
| 15 | OTHER - CP-216 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-217 | 16 |
| 17 | OTHER - CP-223 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-218 | 18 |
| 19 | PANEL - FACP | -- | -- | 1 | | | | 1 | -- | -- | REC - HTST LIFT BEAM | 20 |
| 21 | REC - HTST LIFT BEAM | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 22 |
| 23 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 24 |
| 25 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 26 |
| 27 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 28 |
| 29 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 30 |
| 31 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 32 |
| 33 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 34 |
| 35 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 36 |
| 37 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 38 |
| 39 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 40 |
| 41 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 42 |
| 43 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 44 |
| 45 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 46 |
| 47 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 48 |
| 49 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 50 |
| 51 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 52 |
| 53 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 54 |
| 55 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 56 |
| 57 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 58 |
| 59 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 60 |
| 61 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 62 |
| 63 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 64 |
| 65 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 66 |
| 67 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 68 |
| 69 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 70 |
| 71 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 72 |
| 73 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 74 |
| 75 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 76 |
| 77 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 78 |
| 79 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 80 |
| 81 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 82 |
| 83 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 84 |

## PANELBOARD: 5LA (MODIFIES)

**LOCATION:** EXIST. MCC 8-1-16
**SUPPLY FROM:**
**MOUNTING:** RECESSED
**ENCLOSURE:** NEMA 12

**VOLTS:** 120/208 WYE
**PHASES:** 3
**WIRES:** 4

**A.I.C. RATING:** 65,000
**MAINS TYPE:** MLO
**BUS RATING:** 400A
**MCB RATING:** -

**NOTES:**
SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.

| CKT | CIRCUIT DESCRIPTION | TRIP | | POLES | A | B | C | POLES | TRIP | | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REC - HTST 133 | -- | -- | 1 | | | | 2 | -- | -- | PANEL - "EP1" | 2 |
| 3 | REC - HTST 133 | -- | -- | 1 | | | | -- | -- | -- | -- | 4 |
| 5 | REC - HALLWAY 103 | -- | -- | 1 | | | | 1 | -- | -- | REC - 1HR. ELECT 134 | 6 |
| 7 | REC - DRYER B 126 | -- | -- | 1 | | | | 1 | -- | -- | REC - SOUTH SIDE EXTERIOR | 8 |
| 9 | MOTOR - GUH-4 | -- | -- | 1 | | | | 1 | -- | -- | REC - DYER B 126 | 10 |
| 11 | OTHER - CP-220 | -- | -- | 1 | | | | 1 | -- | -- | MOTOR - IP-3 | 12 |
| 13 | OTHER - CP-215 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-219 | 14 |
| 15 | OTHER - CP-216 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-217 | 16 |
| 17 | OTHER - CP-223 | -- | -- | 1 | | | | 1 | -- | -- | OTHER - CP-218 | 18 |
| 19 | PANEL - FACP | -- | -- | 1 | | | | 1 | -- | -- | REC - HTST LIFT BEAM | 20 |
| 21 | REC - HTST LIFT BEAM | -- | -- | 1 | | | | **1** | **20 A** | | **REC - CLEAN WATER SILO (2)** | **22** |
| **23** | **MOTOR - EXSAUST FAN (EF-1) (2)** | **20 A** | | **1** | | | | 1 | -- | -- | SPACE | 24 |
| 25 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 26 |
| 27 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 28 |
| 29 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 30 |
| 31 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 32 |
| 33 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 34 |
| 35 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 36 |
| 37 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 38 |
| 39 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 40 |
| 41 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 42 |
| 43 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 44 |
| 45 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 46 |
| 47 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 48 |
| 49 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 50 |
| 51 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 52 |
| 53 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 54 |
| 55 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 56 |
| 57 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 58 |
| 59 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 60 |
| 61 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 62 |
| 63 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 64 |
| 65 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 66 |
| 67 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 68 |
| 69 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 70 |
| 71 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 72 |
| 73 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 74 |
| 75 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 76 |
| 77 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 78 |
| 79 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 80 |
| 81 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 82 |
| 83 | SPACE | -- | -- | 1 | | | | 1 | -- | -- | SPACE | 84 |

### BRANCH CIRCUIT FEEDER SCHEDULE

| AMP / POLE | CONDUIT SIZE | CONDUCTORS & GROUNDING CONDUCTOR SIZES |
|---|---|---|
| 15A/1P OR 15A/2P | 1/2" | (2) #12 & #12 GND |
| 20A/1P OR 20A/2P | 1/2" | (2) #12 & #12 GND |
| 15A/3P OR 20A/3P | 1/2" | (3) #12 & #12 GND |
| 25A/1P OR 25A/2P | 3/4" | (2) #10 & #10 GND |
| 30A/1P OR 30A/2P | 3/4" | (2) #10 & #10 GND |
| 25A/3P OR 30A/3P | 3/4" | (3) #10 & #10 GND |
| 35A/1P OR 35A/2P | 3/4" | (2) # 8 & #10 GND |
| 40A/1P OR 40A/2P | 3/4" | (2) # 8 & #10 GND |
| 35A/3P OR 40A/3P | 3/4" | (3) #8 & #10 GND |
| 45A/1P OR 45A/2P | 1" | (2) #6 & #10 GND |
| 45A/3P OR 50A/3P | 1" | (3) #6 & #10 GND |
| 50A/1P OR 50A/2P | 1" | (2) #6 & #10 GND |
| 60A/1P OR 60A/2P | 1" | (2) #4 & #8 GND |
| 60A/3P | 1-1/4" | (3) #4 & #8 GND |
| 70A/3P OR 80A/3P | 1-1/4" | (3) #4 & #8 GND |
| 90A/3P | 1-1/4" | (3) #3 & #8 GND |
| 100A/3P OR 110A/3P | 1-1/2" | (3) #2 & #6 GND |
| 125A/3P | 1-1/2" | (3) #1 & #6 GND |

- PROVIDE BRANCH CIRCUIT FEEDERS AS NOTED ABOVE, UNLESS NOTED OTHERWISE.

### PANEL SCHEDULE KEY

| CIRCUIT NUMBER | DESCRIPTION | SUFFIX | BREAKER AMP. | POLES |
|---|---|---|---|---|
| 37 | RECEPTACLE - LOBBY AREA - WEST | x | 20A | 1 |
| 39 | MOTOR - ROOM AIR CONDITIONER | x | 30A | 2 |
| 41 | -- | -- | -- | -- |

**PANEL SCHEDULE SUFFIX LEGEND**

| | |
|---|---|
| A | ARC-FAULT BREAKER |
| G | 5mA GFCI BREAKER (PERSONAL PROTECTION) |
| GE | 30mA GFCI BREAKER (EQUIPMENT PROTECTION) |
| A/G | COMBINATION 5mA GFCI AND ARC-FAULT BREAKER |
| ST | SHUNT TRIP BREAKER |
| R | RELAY CONTROLLED CIRCUIT |

**EXISTING PANEL SCHEDULE NOTES:**
- ALL CIRCUITS SHOWN "LIGHTER" ARE EXISTING TO REMAIN.

**MODIFIED PANEL SCHEDULE NOTES:**
(1) UTILIZE EXISTING CIRCUIT BREAKER TO SERVE NEW LOAD.
(2) PROVIDE NEW CIRCUIT BREAKER TO SERVE NEW LOAD.
NEW BREAKER SHALL MATCH EXISTING PANEL STYLE AND AIC RATING.

ELECTRICAL PANEL SCHEDULES


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
IFB APR. 17, 2026

JOB NUMBER
250231400

SHEET NUMBER
E4.1


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# LIGHTING FIXTURE SCHEDULE

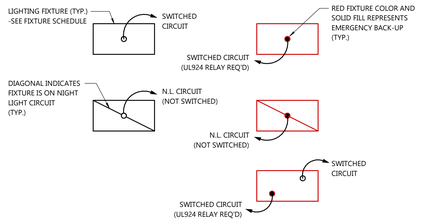
**NOTES:**
- FIXTURE MODEL NUMBER MAY NOT REFLECT ALL MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY MOUNTING EQUIPMENT, LENSES, STEMS,
- REFER TO PANEL SCHEDULE SHEETS FOR EMERGENCY LIGHTING BATTERY INVERTER REQUIREMENTS.

**LED REQUIREMENTS:**

**REMARKS:**
(1) PROVIDE UL924 LISTED EMERGENCY DRIVER TO LIGHT LED FIXTURE DURING LOSS OF NORMAL POWER.

| TYPE | DESCRIPTION | VOLTAGE | LIGHT SOURCE | CCT | FIXTURE WATTS | MIN. LUMENS | MANUFACTURER SERIES - BASIS OF DESIGN | REMARKS |
|---|---|---|---|---|---|---|---|---|
| INTERIOR | | | | | | | | |
| HB3 | HIGHBAY LED - WIDE DISTRIBUTION - DIMMABLE FROSTED LENS | 277 V | LED | 4,000K | 193 VA | 30,000 | METALUX / HBLED SERIES | |
| HB3E | HIGHBAY LED - WIDE DISTRIBUTION - DIMMABLE FROSTED LENS - 14W 120V-277V EMERGENCY BATTERY PACK INSTALLED | 277 V | LED | 4,000K | 193 VA | 30,000 | METALUX / HBLED SERIES | |
| LD8E | 8' SURFACE MOUNT LED STRIP - VAPOR TIGHT - RIBBED ACRYLIC FROSTED LENS - STAINLESS LATCHES | 120 V | LED | 4,000K | 60 VA | 9,100 | ILP / WTZ SERIES | |
| EXTERIOR | | | | | | | | |
| WP1E | EXTERIOR LED FULL CUT-OFF WALL PACK - BRONZE - 277 INTEGRAL PHOTOCELL | 277 V | LED | 4,000K | 15 VA | 2,000 | ILP / SLIM PROFILE WALL PACK | 1 |
| EMERGENCY | | | | | | | | |
| X1 | SINGLE FACE POLYCARBONATE EXIT - W/ BATTERY - RED LETTERS - SELF-DIAGNOSTICS | 277 V | LED | - | 5 VA | - | SURE-LITES / LPX SERIES | |
| X2 | DOUBLE FACE POLYCARBONATE EXIT - W/ BATTERY - RED LETTERS - SELF-DIAGNOSTICS | 277 V | LED | - | 5 VA | - | SURE-LITES / LPX SERIES | |
| X9 | NEMA 4X SINGLE FACE EXIT - W/ BATTERY - RED LETTERS - WHITE HOUSING - SELF-DIAGNOSTICS | 120 V | LED | - | 5 VA | - | SURE-LITES / UX SERIES | |
| XE | NEMA 4X SINGLE FACE EXIT - W/ BATTERY - RED LETTERS - WHITE HOUSING - SELF-DIAGNOSTICS | 277 V | LED | - | 5 VA | - | SURE-LITES / UX SERIES | |

## LIGHTING FIXTURE LEGEND




**NOTE:**
ADDITIONAL DRIVERS SHALL NOT BE NEEDED FOR EMERGENCY FIXTURES.
REFER TO "EMERGENCY LIGHTING CONTROL DETAIL" FOR MORE INFORMATION.

ELECTRICAL LIGHT FIXTURE SCHEDULE


EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com


PROJECT INFORMATION

CREAM RECEIVING BUILDING EXPANSION FOR:
**WEST POINT DAIRY PRODUCTS**
570 NORTH 500 WEST • HYRUM, UT 84319

PROFESSIONAL SEAL

NOT FOR CONSTRUCTION

SHEET DATES
ISSUED FOR BID
IFB APR. 17, 2026

JOB NUMBER
250231400

SHEET NUMBER
**E6.0**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