Village of Somers
7511 12th Street
Somers, WI 53171

Village Plan Commission
Meeting Agenda
Monday, September 12, 2022
5:30 P.M.

1. Call to order

2. Pledge of Allegiance

3. Approve Minutes from August 8, 2022

4. Correspondence

5. Citizen Comments

6. **Comp. Plan Amendment:**
   Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests an amendment to the land use plan map for the Village of Somers (Map 80) as adopted in the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035 from "Medium-Density Residential" to "Governmental and Institutional"**, on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only, these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St., and 819 17th St.)*

7. **Rezone:**
   Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests a rezoning from R-5 Urban Single-Family Residential Dist. to I-1 Institutional Dist. & PUD Planned Unit Development Overlay Dist.**, on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only, these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St., and 819 17th St.)*

8. **Site Plan Review & Exterior Fenestration:**
   Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests site plan and exterior fenestration review** on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only,*

these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St., and 819 17th St.)

9. Adjourn

I hereby certify that as the designee of the chief elected official of the Village of Somers, I posted this notice of the August 8, 2022 Village Plan Commission Meeting in 1 public place & on the Village website.

Dated this 6th day of September 2022 Brandi Baker Clerk/Treasurer

Requests from person with disabilities who need assistance to participate in this meeting should be made to the Clerk's Office at 262-859-2822 with as much notice as possible. Notice is hereby given that members of the Plan Commission members may participate telephonically. Notice is hereby given that members of the Village & Town Board may be in attendance for the sole purpose of gathering information. A quorum may be present. However, no Board action will be taken.

Village of Somers
Proceeding from the Village Plan Commission Meeting
August 8, 2022

1. **Call to Order**

Chairman Stoner called the meeting to order at 5:30 p.m.

Present: Chairman George Stoner, as well as Commissioners Aiello, Boxx, Lee, and Grimes. Commissioners Fredrick and Gardinier had excused absences.

Staff Present in person: Assistant to the Administrator Cassandra Bodenbach and Administrator Jason Peters via Teams

Kenosha County Planners: Luke Godshall via Teams

2. **Pledge of Allegiance**

Chairman Stoner led everyone in stating the Pledge of Allegiance.

3. **Approve Minutes of July 11, 2022**

Commissioner Boxx moved to approve to the Minutes from the July 11th Meeting. Seconded by Commissioner Aiello. Motion carried. 5-0 vote.

4. **Correspondence**

None.

5. **Citizen Comments**

None.

6. **Conditional Use Permit:**

Public Hearing and Action on Request by: Somers USA, LLC, 1170 22nd Avenue, Kenosha, WI 53140 (Owner), Ted Gement, BP Kenosha Travel Plaza, 1170 22nd Avenue, Kenosha, WI 53140 (Agent); requesting an amendment to a previously approved Conditional Use Permit to allow alcohol consumption on the premises in the B-3 Highway Business District on Tax Parcel # 82-4-222-193-0202 located in the southwest quarter of Section 19, Township 2 North, Range 22 East, Village of Somers. For informational purposes only, this property is located on the northwest corner of the intersection of 120th Avenue (the east frontage road of I-94) and County Trunk Highway "S".

Public Hearing was opened at 5:31 p.m.

Public Comment:

None.

Public Hearing was closed at 5:31 p.m.

Commissioner Boxx moved to approve an amendment to a previously approved Conditional Use Permit to allow alcohol consumption on the premises in the B-3 Highway Business District. Seconded by Aiello.

Commissioner's Discussion:

The lights surrounding the building were mentioned as they are not shielded enough on the property and are blinding from the north. The owner of the property reassured the commission that it will be taken care of

He also wanted to point out that the serving of alcohol will not change the environment of the establishment. It will be low-key, have limited hours, and not a typical bar atmosphere.

Motion passed 5-0 vote.

7. **Site Plan Review & Exterior Fenestration:**

Action o request by: RCG SOMERS LLC, 3060 Peachtree Rd NW Ste 400, Atlanta, GA 30305 (owner), Jeana Kedrowski, ISG, Inc., 7900 International Drive, Ste 550, Bloomington, MN 55425 (Agent), requests approval of a site plan and exterior fenestration for a proposed car wash on Tax Parcel 82-4-222-271-0339, located in the NE ¼ of Section 27, T2N, R22E, Village of Somers.

Commissioner Boxx moved to approve site plan and exterior fenestration for a proposed car wash. Seconded by Aeillo.

Commissioner's Discussion:

All of the commissioners agreed there is concern for the traffic patterns and flow. However, Commissioner Boxx stated the development fits nicely in that area and is a good use of the property.

Commissioner Stoner and Administrator Peters pointed out the issues we have had in maintaining the roads and easements and they will not be an issue in the future. RCG must maintain the property.

Motion passed 5-0 vote.

8. **Adjourn**

Commissioner Boxx moved to adjourn at 5:43 p.m. Seconded by Aiello.

Motion carried. 5-0 vote.

Drafted this 9th day of August 2022. These minutes are not official until approved by the Plan Commission. Submitted by Cassandra Bodenbach, Assistant to the Village Administrator

COUNTY OF KENOSHA

Division of Planning & Development

Andy M. Buehler, Director
Division of Planning & Development
19600 75th Street, Suite 185-3
Bristol, WI 53104-9772
(262) 857-1895

TO: **Village of Somers Plan Commission**

FROM: **Luke Godshall, Kenosha County Planning & Development**

RPT DATE: **08-26-22**

MTG DATE: **09-12-22**

APP DATE: **08-02-22**

RE: **Carthage College Facilities Operations Building**

BACKGROUND:

1. Petitioner/Agent: Mark Molinaro, Jr., Partners in Design Architects, Inc.
2. Property Owners: Carthage College
3. Location/Address: 729-819 17th St.
4. Tax key Numbers: 83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710
5. Area: 1.03 acres
6. Existing Zoning: R-5 Urban Single-Family Residential Dist.
7. Proposed Zoning: I-1 Institutional Dist. w/ Planned Unit Development (PUD) Overlay Dist.
8. Current Land Use: Medium-Density Residential
9. Future Land Use: Governmental and Institutional

OVERVIEW:

The Petitioner is proposing to construct a new building for Carthage College's Facilities Operations. This project was first presented to the Plan Commission back in May 2022. The building site has been amended from the original proposal and no longer includes the three parcels along Sheridan Road owned by Adams Outdoor Advertising. The amended building site has been shifted eastward and consists of six (6) separate tax parcels owned by Carthage College, which are proposed to be rezoned into the I-1 Institutional District and combined into one parcel with the recordation of a Parcel Combination Affidavit. An amendment of the long-range comprehensive plan from "Medium-Density Residential" to "Governmental and Institutional" is being proposed to allow the necessary zoning change to I-1.

PLANNER COMMENTS:

The proposed new facilities operations building is proposed to be 17,632 square feet in size at an overall height of 23.25' (60' height maximum allowed in the I-1 zoning district). Access into the site will come from 17th Street through the existing property at 729 17th Street (current parcel #83-4-223-184-0685) and connect into Carthage's adjacent parking lot to the south. Development of the site will require the removal of four single-family residences and associated site improvements (accessory buildings, decks, driveways, paved walkways, etc.)

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The proposed building meets required street and side yard setback minimums for the I-1 zoning district (30' from 17th Street and 10' from the east and west (side) lot lines), but does not meet the required 25' rear yard setback minimum for the I-1 zoning district (10' proposed). The Petitioner is requesting approval of a reduced rear yard setback of 10' as part of a Planned Unit Development (PUD) overlay district.

Because the parking lot is adjacent to a residential use, Village ordinance requires a minimum parking lot setback of 20' from the lot line (the submitted site plan shows a 10' setback). The Petitioner is requesting approval of a Planned Unit Development (PUD) overlay district to allow a reduced 10' parking lot setback from the east lot line. The submitted plans does show a 6' tall solid wood privacy fence to be installed within 5 feet of the entire east lot line to provide an added level of screening between the proposed use and the residential neighbor to the east.

The submitted site plan shows a total of 7 surface parking spaces sized at 10'x20' (Village ordinance requires a minimum size of 9'x18'). Additional parking stalls for Carthage staff would be available in the existing adjacent Carthage parking lot immediately to the south of the development site.

A landscape plan (dated 6-28-22 prepared by Thomas Nordloh Associates) was included with the submitted applications. The submitted landscaping plan substantially complies with the Village zoning ordinance, except for the area bordering the parking lot along the east lot line which requires a total of six (6) evergreen trees to meet the requirement of providing one evergreen tree per 25 feet per Section ZN 3.19(8)(b) (Note: per Section ZN 3.19(8)(c), when abutting a residential district or use, deciduous and ornamental trees and/or shrubs are not permitted). A revised landscape plan should be submitted

A photometric plan was not submitted for review. The Petitioner will need to be submit a photometric plan to ensure compliance with Section ZN 3.18 (Exterior Lighting Standards) of the Village of Somers zoning ordinance. All site lighting (ground and building mounted fixtures) must be fully shielded, cut-off type fixtures and illumination intensity shall not exceed 0.5 footcandle at the property line.

STAFF RECOMMENDATION:
Should the Plan Commission choose to recommend approval of this project, staff would recommend the following conditions:

1. The six (6) existing tax parcels shall be combined into one (1) new tax parcel via the recordation of a Parcel Combination Affidavit in the Kenosha County Register of Deeds office, prior to the issuance of any permits.
2. Approval of a Planned Unit Development (PUD) overlay district shall include the following departures from Village ordinance standards as listed in the Petitioner's submitted letter dated August 23, 2022 (copy attached):
    a. To allow a principal building rear yard setback of **10 feet** (25 feet required by Section ZN 4.06(1)(g)4).
    b. To allow a parking lot setback of **10 feet** which abuts an existing or planned residential district (20 feet required by Section ZN 3.06(3)(j)).

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c. To allow the exterior of the building to have prefinished metal siding cladding that **extends closer than 4 feet to ground elevation**, and which may comprise **more than 10% of the façade of any side of the building** (metal façade materials to be at least 4 feet from ground elevation, and to comprise no more than 10% of the façade of any side of a building as required by Section 18.33(E)(3)(b))

(*note: per Section 18.33(F)(4), when it can be demonstrated by the builder/developer that a building having more than 10% of the building façade covered with metal panels is both attractive and provides a visual permanence within the community, the Village Plan Commission may recommend and the Village Board may approve reducing or waiving those standards*).

3. Subject to submitting a revised landscaping plan to include additional landscaping along the east lot line. Per ordinance a minimum of six (6) evergreen trees shall be provided along the east lot line.
4. Subject to submitting a site photometric plan.
5. Subject to submitting details of any proposed trash enclosure to ensure compliance with Chapter 18 of Village ordinance.
6. Subject to receiving any necessary stormwater plan approval by the Village of Somers engineer.
7. Subject to implementation of a Developer's Agreement between the Petitioner and the Village of Somers.

Attachment(s):

- Submitted PUD narrative letter, dated 8-23-22

Partners in Design Architects, Inc.

WISCONSIN
600 Fifty Second Street
Suite 220
Kenosha, WI 53140
262.652.2800

ILLINOIS
2610 Lake Cook Road
Suite 280
Riverwoods, IL 60015
847.940.0300

August 23, 2022

Village of Somers Plan Commission
Village of Somers Board of Trustees

Re: Carthage College Operations Building

Dear Commission Members and Trustees:

Carthage College requests your consideration to allow them to construct a new building to support the staff and equipment associated with the campus Operations group. The new building will be located at 809 17th Street and will be located on parcel numbers 83-4-223-184-0685; 0690; 0695; 0700; 0705; and 0710.

The College is requesting the commission and board consideration for approval of the project under a Planned Unit Development overlay. The project specifics are as follows:

- Operations Building is an approximately 18,000 rigid frame structure that will provide offices for the campus facilities staff.
- Total site development area comprises approximately 43,000 sf. of which 17,549 sf (39%) consists of open green space with 27,451 sf of total impervious surface.
- Total project cost is approximately $3.95M
- Subject parcels are currently zoned R-10 Multi-Family Residential and include 4 existing single-family residential structures. The razing of the residential structures is included in the project scope.
- Requesting rezoning from R-10 to I-1 Institutional District.
- Requesting combination of the six residential parcels into a single Institutional parcel
- Requesting a departure from Village Ordinance Section ZN 18.33(F)(4) and ZN 18.33(E)(3)(b) to allow the exterior of the building to be a prefinished metal siding cladding that extends from the eave to finished grade (cladding will be held a standard distance above the soil to prevent corroding)
- Requesting a departure from Village ordinance Section ZN 3.06(3)(i) for a parking lot setback of 10’ in lieu of 20’ as required adjacent to residential districts. The college will construct a 6’-0” tall wood fence to screen the parking from the residential property to the east.
- Requesting departure from the Village Ordinance Section ZN 4.06(1)(g)4 for a rear yard setback of 10’ in lieu of the 25’ as required.

We are confident the development, as proposed, will fit in well on the north end of the Carthage campus, will be a nice addition to the Village of Somers and will set the tone for future expansion of the campus.

Should you have any questions, please feel free to reach out. We look forward to presenting our project to the commission and full board in the near future.

Sincerely,

Mark A. Molinaro Jr., AIA, ALA

Principal – Partners in Design Architects

VILLAGE OF SOMERS

VILLAGE OF SOMERS COMPREHENSIVE PLAN MAP AMENDMENT APPLICATION

(a) Property Owner's Name:

Ted Fares x _____
Signature

Mailing Address:

2001 Alford Park Drive

City: Kenosha State: WI Zip: 53140

Phone Number: 262-551-5752 E-mail (optional): tfares@carthage.edu

Note: If the property owner's signature cannot be obtained in the above space, a "letter of agent status" signed by the property owner must be submitted if you are an applicant (tenant, leaseholder, or authorized agent representing the legal owner) acting on their behalf.

Applicant's Name (if applicable):

Mark Molinaro, Jr. x _____
Signature

Mailing Address:

600 52nd Street, Suite 220

City: Kenosha State: WI Zip: 53140

Phone Number: 262.652.2800 E-mail (optional): markm@pidarchitects.com

(b) Existing planned land use category as shown on Map 80 of the document entitled, "A Multi-Jurisdictional Comprehensive Plan For Kenosha County: 2035":

Medium-Density Residential

(c) Proposed land use category (must be a land use category included in the legend for Map 80 of the document entitled, "A Multi-Jurisdictional Comprehensive Plan For Kenosha County: 2035":

Governmental and Institutional

(d) Proposed use (a statement of intended use and/or the type, extent, area, etc. of any development project):
New office and operations space for Facilities Maintenance at Carthage College. The approximately 18,000 sf building will allow the college to free up space on campus for the construction of academic space to support the new engineering program.

(e) Compatibility with the Village of Somers Comprehensive Plan (address the following questions in detail):

(e-1) Is the proposed amendment consistent with the goals, objectives, policies, and programs of this plan? Explain:
This proposed amendment will serve as a natural extension of the Carthage College campus to the north. As an extension of the existing Governmental and Institutional use, it will only create a minor shift to the existing goals set forth in the Village of Somers Comprehensive Plan.

It has been long recognized that the college has been purchasing available residential properties to the north of campus with the intent of utilizing the additional land for the expansion of the campus. The college currently owns all but a few of the parcels on the south side of 17th Street as well as several of the parcels on the north side of 17th Street.

We are confident that the proposed development aligns with the long range plan of the college and further aligns with the Village's neighborhood plan.

(e-2) Is the proposed amendment compatible with surrounding land uses? Explain its compatibility with both existing and planned land uses:

The proposed amendment is a minor extension of the existing Governmental and Institutional use to the south. As such, we believe that the proposed amendment is compatible with the surrounding uses.

(e-3) Will the proposed amendment have any detrimental environmental effects? Explain:

No. The building will be constructed using typical construction materials. The building will be designed to meet or exceed the applicable energy codes. Planned site disturbance will be below an acre and will therefore cause minimal impact to the existing stormwater conditions of the site.

(e-4) Has a substantial public benefit been demonstrated by the proposed plan amendment? Explain:

The proposed building will create new facilities for the Carthage College operations staff. By relocating the operations staff and facilities, the college will gain valuable space in their existing building that will allow for additional classroom spaces for additional degree offerings and new students. As the college grows, the added student population will provide many benefits to the surrounding communities.

(e-5) Are public roads, services, and utilities available, or planned to be available in the near future, to serve the proposed development? Explain:

Yes, the proposed development will be able to make use of existing utilities without overburdening the systems.

(e-6) Are existing or planned facilities and services adequate to serve the type of development associated with the amendment? Explain:

Yes, the proposed development will be able to make use of existing facilities and services without overburdening the systems.

(e-7) Any additional data or information as requested by the Department of Planning and Development:

(f) Attach a legal description and provide the tax key number(s) below of property to be amended on the Village of Somers Comprehensive Plan:

CSM to be provided. Current tax key numbers are as follows (total of 6 parcels):

83-4-223-184-0685; 0690; 0695; 0700; 0705 and 0710

(g) Attach plot plan or survey plat of property to be amended on the comprehensive plan (showing location, dimensions, planned land use of adjacent properties, existing uses and buildings of adjacent properties—drawn to scale).

(h) The fee specified in Section 12.05-8 of this ordinance.
Request for Land Use Plan Map Amendment _____

IMPORTANT TELEPHONE NUMBERS

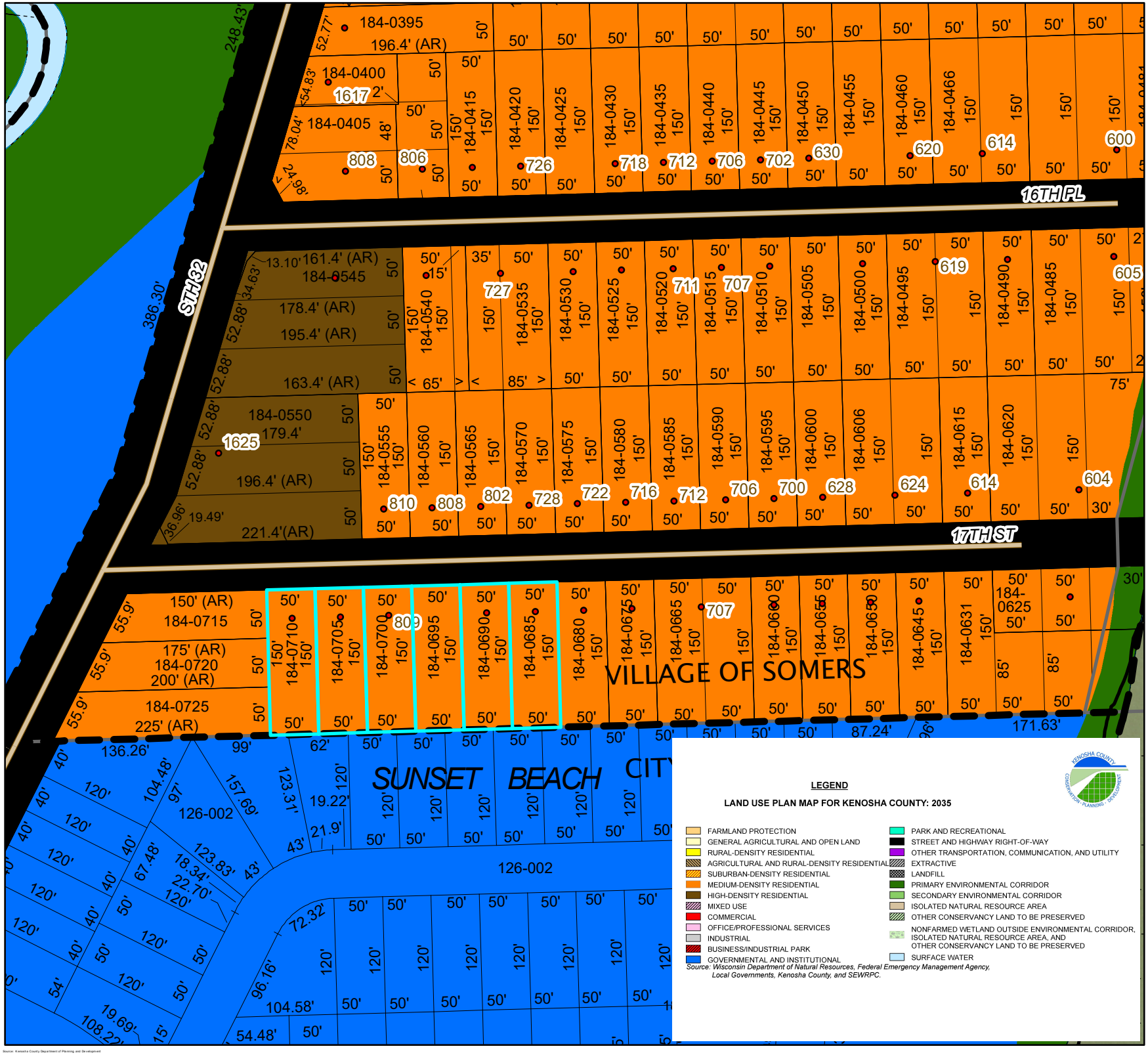
Kenosha County Center
Department of Planning & Development
19600 - 75th Street, Suite 185-3
Bristol, Wisconsin 53104

Division of County Development (including Sanitation & Land Conservation) **857-1895**
Facsimile # 857-1920

Public Works Division of Highways 857-1870

Administration Building
Division of Land Information 653-2622

Village of Somers 859-2822
Wisconsin Department of Natural Resources - Sturtevant Office 884-2300
Wisconsin Department of Transportation - Waukesha Office 548-8722



Kenosha County

EXISTING LAND USE

LEGEND

LAND USE PLAN MAP FOR KENOSHA COUNTY: 2035

- FARMLAND PROTECTION
- GENERAL AGRICULTURAL AND OPEN LAND
- RURAL-DENSITY RESIDENTIAL
- AGRICULTURAL AND RURAL-DENSITY RESIDENTIAL
- SUBURBAN-DENSITY RESIDENTIAL
- MEDIUM-DENSITY RESIDENTIAL
- HIGH-DENSITY RESIDENTIAL
- MIXED USE
- COMMERCIAL
- OFFICE/PROFESSIONAL SERVICES
- INDUSTRIAL
- BUSINESS/INDUSTRIAL PARK
- GOVERNMENTAL AND INSTITUTIONAL
- PARK AND RECREATIONAL
- STREET AND HIGHWAY RIGHT-OF-WAY
- OTHER TRANSPORTATION, COMMUNICATION, AND UTILITY
- EXTRACTIVE
- LANDFILL
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- OTHER CONSERVANCY LAND TO BE PRESERVED
- NONFARMED WETLAND OUTSIDE ENVIRONMENTAL CORRIDOR, ISOLATED NATURAL RESOURCE AREA, AND OTHER CONSERVANCY LAND TO BE PRESERVED
- SURFACE WATER

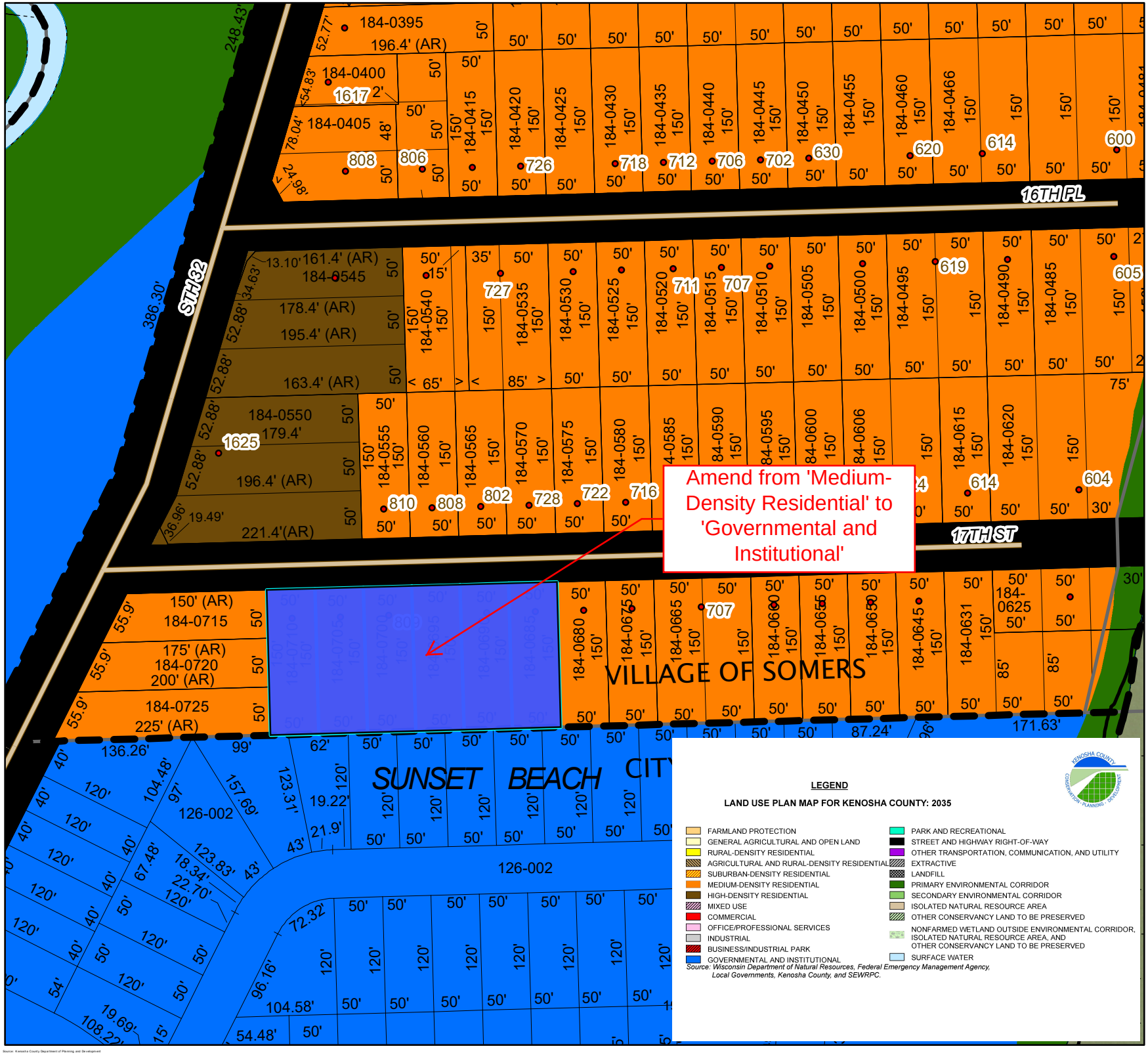
Source: Wisconsin Department of Natural Resources, Federal Emergency Management Agency, Local Governments, Kenosha County, and SEWRPC.

N
W E
S

1 inch = 130 feet

THIS MAP IS NEITHER A LEGALLY RECORDED MAP NOR A SURVEY AND IS NOT INTENDED TO BE USED AS ONE. THIS DRAWING IS A COMPILATION OF RECORDS, DATA AND INFORMATION LOCATED IN VARIOUS STATE, COUNTY AND MUNICIPAL OFFICES AND OTHER SOURCES AFFECTING THE AREA SHOWN AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. KENOSHA COUNTY IS NOT RESPONSIBLE FOR ANY INNACURACIES HEREIN CONTAINED. IF DISCREPANCIES ARE FOUND, PLEASE CONTACT KENOSHA COUNTY.

Source: Kenosha County Department of Planning and Development



Kenosha County

PROPOSED LAND USE

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1 inch = 130 feet

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Source: Kenosha County Department of Planning and Development

VILLAGE OF SOMERS
Department of Planning and Development

REZONING APPLICATION

(a) Property Owner's Name:

Ted Fares

Print Name: Ted Fares Signature: Ted Fares

Mailing Address: 2001 Alford Park Drive

City: Kenosha State: WI Zip: 53140

Phone Number: 262.551.5752 E-mail (optional): tfares@carthage.edu

Note: Unless the property owner's signature can be obtained in the above space, a letter of agent status **signed** by the legal property owner **must** be submitted if you are a tenant, leaseholder, or authorized agent representing the legal owner, allowing you to act on their behalf.

(b) Agent's Name (if applicable):

Print Name: Mark Molinaro Signature: Mark Molinaro

Business Name: Partners in Design Architects, Inc

Mailing Address: 600 52nd Street, Suite 220

City: Kenosha State: WI Zip: 53140

Phone Number: 262.652.2800 E-mail (optional): markm@pidarchitects.com

(c) Tax key number(s) of property to be rezoned:

83-4-223-184-0685	83-4-223-184-0700
83-4-223-184-0690	83-4-223-184-0705
83-4-223-184-0695	83-4-223-184-0710

Property Address of property to be rezoned:

729 17TH ST, 803 17TH ST, 809 17TH ST, 815 17TH ST,

(d) Proposed use (a statement of the type, extent, area, etc. of any development project):

New 18,140 s.f. single story institutional building for Carthage College facilities staff and operations.

(e) Check the box next to any and all of the **existing** zoning district classifications present on the subject property:

☐ A-1 Agricultural Preservation District	☐ B-1 Neighborhood Business District
☐ A-2 General Agricultural District	☐ B-2 Community Business District
☐ A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	☐ B-3 Highway Business District
☐ A-4 Agricultural Land Holding District	☐ B-4 Planned Business District
☐ AE-1 Agricultural Equestrian Cluster Single-Family District	☐ B-5 Wholesale Trade and Warehousing District
☐ R-1 Rural Residential District	☐ BP-1 Business Park District
☐ R-2 Suburban Single-Family Residential District	☐ B-94 Interstate Highway 94 Special Use Business District
☐ R-3 Urban Single-Family Residential District	☐ M-1 Limited Manufacturing District
☐ R-4 Urban Single-Family Residential District	☐ M-2 Heavy Manufacturing District
☐ R-4.5 Urban Single-Family Residential District	☐ M-3 Mineral Extraction District
☑ R-5 Urban Single-Family Residential District	☐ M-4 Sanitary Landfill and Hazardous Waste Disposal District
☐ R-6 Urban Single-Family Residential District	☐ I-1 Institutional District
☐ R-7 Suburban Two-Family and Three-Family Residential District	☐ PR-1 Park-Recreational District
☐ R-8 Urban Two-Family Residential District	☐ C-1 Lowland Resource Conservancy District
☐ R-9 Multiple-Family Residential District	☐ C-2 Upland Resource Conservancy District
☐ R-10 Multiple-Family Residential District	☐ FPO Floodplain Overlay District
☐ R-11 Multiple-Family Residential District	☐ PUD Planned Unit Development Overlay District
☐ R-12 Mobile Home/Manufactured Home Park-Subdivision District	☐ AO Airport Overlay District
	☐ RC Rural Cluster Development Overlay District

(f) Check the box next to any and all of the **proposed** zoning district classifications proposed for the subject property:

☐ A-1 Agricultural Preservation District	☐ B-1 Neighborhood Business District
☐ A-2 General Agricultural District	☐ B-2 Community Business District
☐ A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	☐ B-3 Highway Business District
☐ A-4 Agricultural Land Holding District	☐ B-4 Planned Business District
☐ AE-1 Agricultural Equestrian Cluster Single-Family District	☐ B-5 Wholesale Trade and Warehousing District
☐ R-1 Rural Residential District	☐ BP-1 Business Park District
☐ R-2 Suburban Single-Family Residential District	☐ B-94 Interstate Highway 94 Special Use Business District
☐ R-3 Urban Single-Family Residential District	☐ M-1 Limited Manufacturing District
☐ R-4 Urban Single-Family Residential District	☐ M-2 Heavy Manufacturing District
☐ R-4.5 Urban Single-Family Residential District	☐ M-3 Mineral Extraction District
☐ R-5 Urban Single-Family Residential District	☐ M-4 Sanitary Landfill and Hazardous Waste Disposal District
☐ R-6 Urban Single-Family Residential District	☑ I-1 Institutional District
☐ R-7 Suburban Two-Family and Three-Family Residential District	☐ PR-1 Park-Recreational District
☐ R-8 Urban Two-Family Residential District	☐ C-1 Lowland Resource Conservancy District
☐ R-9 Multiple-Family Residential District	☐ C-2 Upland Resource Conservancy District
☐ R-10 Multiple-Family Residential District	☐ FPO Floodplain Overlay District
☐ R-11 Multiple-Family Residential District	☑ PUD Planned Unit Development Overlay District
☐ R-12 Mobile Home/Manufactured Home Park-Subdivision District	☐ AO Airport Overlay District
	RC Rural Cluster Development Overlay District

(g) Your request must be consistent with the existing planned land use category as shown on Map 65 of the adopted "Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035".

Note: a corresponding application has been made to amend the land use category to 'Governmental and Institutional' on the subject parcels.

The existing planned land use category for the subject property is:

☐ Farmland Protection	☐ Governmental and Institutional
☐ General Agricultural and Open Land	☐ Park and Recreational
☐ Rural-Density Residential	☐ Street and Highway Right-of-Way
☐ Agricultural and Rural Density Residential	☐ Other Transportation, Communication, and Utility
☐ Suburban-Density Residential	☐ Extractive
☑ Medium-Density Residential	☐ Landfill
☐ High-Density Residential	☐ Primary Environmental Corridor
☐ Mixed Use	☐ Secondary Environmental Corridor
☐ Commercial	☐ Isolated Natural Resource Area
☐ Office/Professional Services	☐ Other Conservancy Land to be Preserved
☐ Industrial	☐ Nonfarmed Wetland
☐ Business/Industrial Park	☐ Surface Water

(h) Attach a plot plan or survey plat of property to be rezoned (showing location, dimensions, zoning of adjacent properties, existing uses and buildings of adjacent properties, floodways and floodplains)—drawn to scale.

(i) The Village of Somers Department of Planning and Development may ask for additional information.

(j) The name of the County Supervisor of the district wherein the property is located (District Map):

Supervisory District Number: 15 County Board Supervisor: Amy Maurer

(k) The fee specified in Section 12.05-8 of this ordinance.

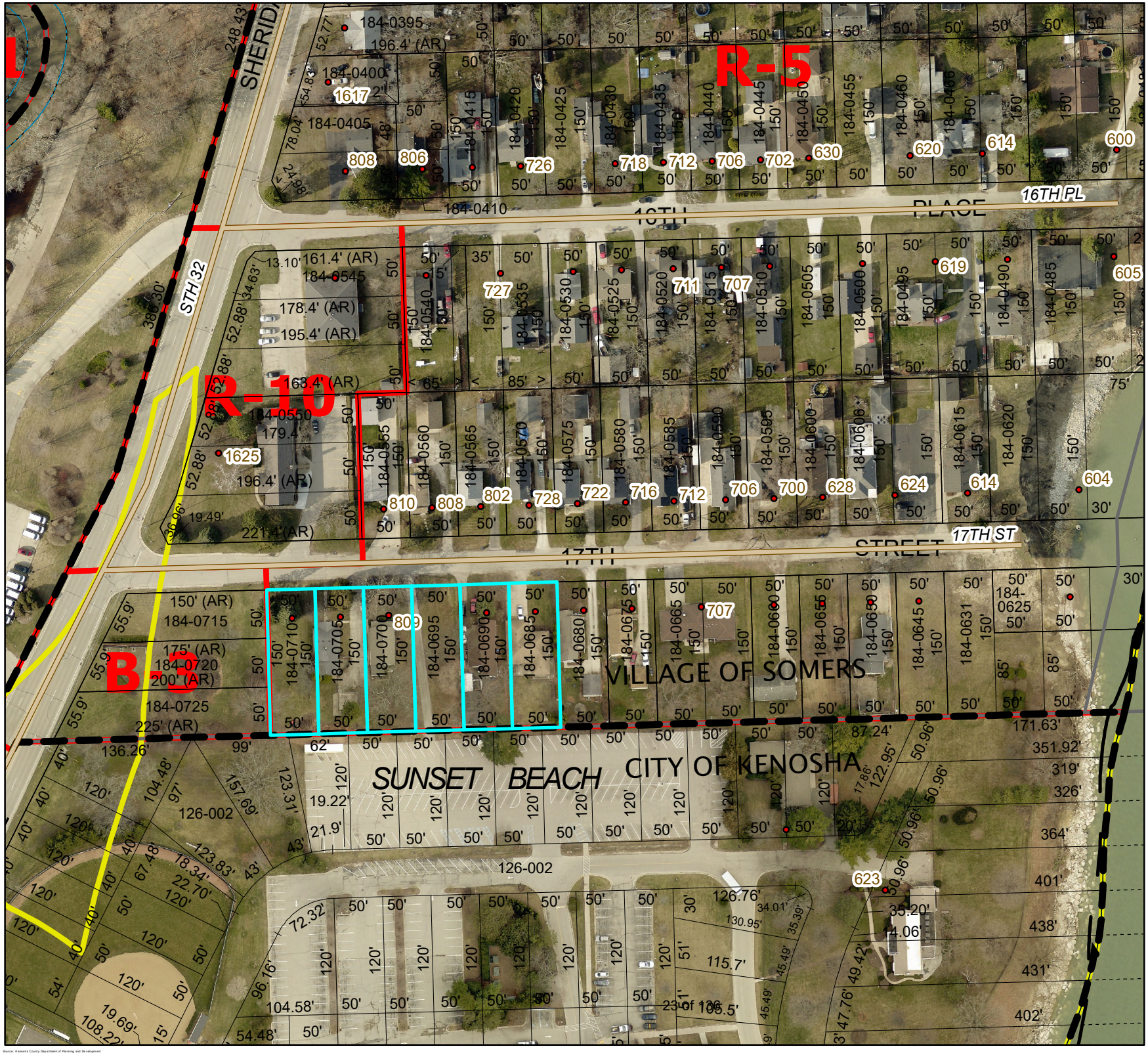
Request for Rezoning Petition (payable to "Kenosha County") _____

(For other fees see the Fee Schedule)

Note: Agricultural Use Conversion Charge

The use value assessment system values agricultural land based on the income that would be generated from its rental for agricultural use rather than its fair market value. When a person converts agricultural land to a non-agricultural use (e.g. residential or commercial development), that person may owe a conversion charge. To obtain more information about the use value law or conversion charge, contact the Wisconsin Department of Revenue's Equalization Section at 608-266-2149 or visit http://www.revenue.wi.gov/faqs/slf/useassmt.html.

Note that the act of rezoning property from an agricultural zoning district to a non-agricultural zoning district does not necessarily trigger the agricultural use conversion charge. It is when the use of the property changes from agricultural that the conversion charge is assessed.



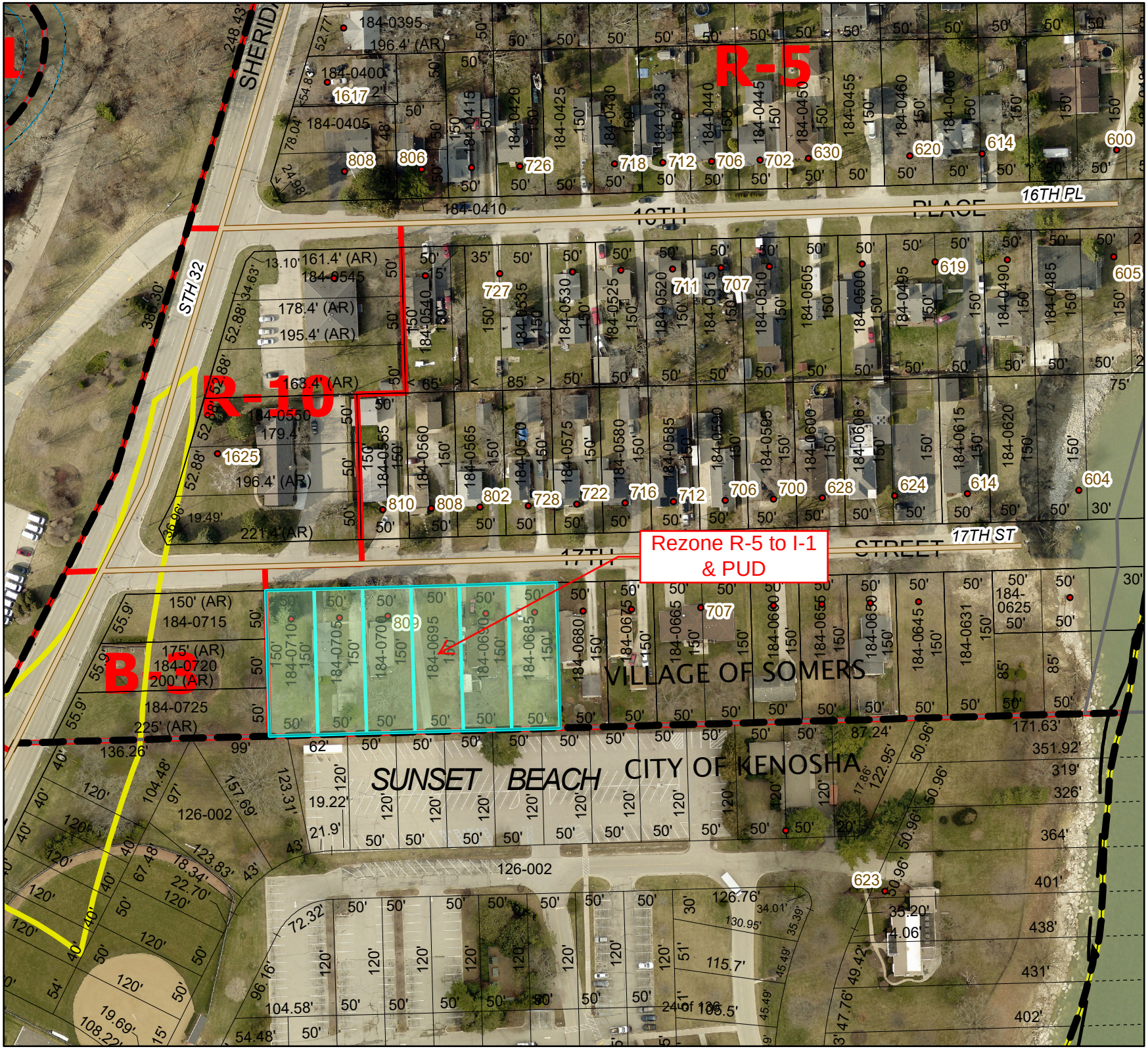
Kenosha County

EXISTING ZONING

1 inch = 130 feet

THIS MAP IS NEITHER A LEGALLY RECORDED MAP NOR A SURVEY AND IS NOT INTENDED TO BE USED AS ONE. THIS DRAWING IS A COMPILATION OF RECORDS, DATA AND INFORMATION LOCATED IN VARIOUS STATE, COUNTY AND MUNICIPAL OFFICES AND OTHER SOURCES AFFECTING THE AREA SHOWN AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. KENOSHA COUNTY IS NOT RESPONSIBLE FOR ANY INNACURACIES HEREIN CONTAINED. IF DISCREPANCIES ARE FOUND, PLEASE CONTACT KENOSHA COUNTY.

Source: Kenosha County Department of Planning and Development



Kenosha County

PROPOSED ZONING

1 inch = 130 feet

THIS MAP IS NEITHER A LEGALLY RECORDED MAP NOR A SURVEY AND IS NOT INTENDED TO BE USED AS ONE. THIS DRAWING IS A COMPILATION OF RECORDS, DATA AND INFORMATION LOCATED IN VARIOUS STATE, COUNTY AND MUNICIPAL OFFICES AND OTHER SOURCES AFFECTING THE AREA SHOWN AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. KENOSHA COUNTY IS NOT RESPONSIBLE FOR ANY INNACURACIES HEREIN CONTAINED. IF DISCREPANCIES ARE FOUND, PLEASE CONTACT KENOSHA COUNTY.

Source: Kenosha County Department of Planning and Development

CARTHAGE COLLEGE

Somers, Wisconsin

CARTHAGE FACILITIES BUILDING

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C2 DIMENSIONED SITE PLAN
C3 SITE DEMOLITION PLAN
C4 SITE UTILITY PLAN
C5 SITE GRADING & EROSION CONTROL PLAN
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C7 PAVEMENT MARKINGS & SIGNAGE PLAN
C8 TYPICAL SECTIONS & CONSTRUCTION DETAILS
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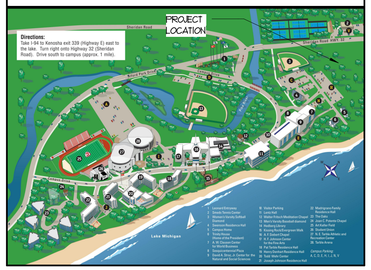
FP3.1 LEVEL 1 FIRE PROTECTION SPRINKLER PLAN
FP3.2 LEVEL 1 FIRE PROTECTION PLAN

LOCATION MAP

CAMPUS MAP



GENERAL NOTES

1. DO NOT SCALE DRAWINGS
2. CONTRACTOR SHALL FIELD VERIFY AND BECOME THROUGHLY FAMILIAR WITH ALL CONDITIONS AND DIMENSIONS.
3. EACH CONTRACTOR SHALL REVIEW COMPLETE PLANS FOR RELATED WORK.
4. ALL WORK SHALL BE IN COMPLIANCE WITH STATE AND LOCAL CODES FOR RESPECTIVE TRADES.
5. BUILDING AND ADJACENT BUILDINGS WILL REMAIN OPERATIONAL THROUGHOUT PROJECT DURATION.

ABBREVIATIONS

ALT	ALTERNATE	HDWR	HARDWARE
A/E	ARCHITECT/ENGINEER	HM	HOLLOW METAL
AFF	ABOVE FINISH FLOOR	HT	HEIGHT
ALUM	ALUMINUM	HW	HOT WATER
BD	BOARD	INT	INTERIOR
B/O	BOTTOM OF	INSUL	INSULATION
CPT	CARPET	JT	JOINT
℄	CENTER LINE	LAV	LAVATORY
CLG	CEILING	MFR	MANUFACTURER
CJ	CONTROL JOINT	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MO	MASONRY OPENING
CONC	CONCRETE	MTL	METAL
CONT	CONTINUOUS	NIC	NOT IN CONTRACT
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	OC	ON CENTER
CT	CERAMIC TILE	OFCI	OWNER FURNISHED, CONTRACTOR TO INSTALL
DBL	DOUBLE		
DF	DRINKING FOUNTAIN	OPP	OPPOSITE
DIA	DIAMETER	PLYWD	PLYWOOD
DIM	DIMENSION	PL	PLASTIC LAMINATE
DN	DOWN		PLATE
DR	DOOR	PT	PORCELAIN TILE
DS	DOWNSPOUT	QT	QUARRY TILE
DTL	DETAIL	REQ'D	REQUIRED
DWG	DRAWING	RO	ROUGH OPENING
EA	EACH	SHT	SHEET
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	SV	SHEET VINYL
		SIM	SIMILAR
EL	ELEVATION	SS	SOLID SURFACE
EJ	EXPANSION JOINT	SST	STAINLESS STEEL
EQ	EQUAL	STD	STANDARD
EQUIP	EQUIPMENT	SAT	SUSPENDED ACOUSTIC TILE CEILING
EXIST	EXISTING		
EXT	EXTERIOR	TBD	TO BE DETERMINED
EWC	ELECTRIC WATER COOLER	TEMP	TEMPORARY
FEC	FIRE EXTINGUISHER CABINET	T/O	TOP OF
		T&G	TONGUE AND GROOVE
FIN	FINISH	TYP	TYPICAL
FD	FLOOR DRAIN	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR	VCT	VINYL COMPOSITION TILE
FRP	FIBERGLASS REINFORCED PLASTIC	VB	VINYL BASE
		VIF	VERIFY IN FIELD
GA	GAUGE	WD	WOOD
GALV	GALVANIZED	WWF	WELDED WIRE FABRIC
GYP BD	GYPSUM BOARD		

CLIENT:
CARTHAGE COLLEGE
2001 ALFORD PARK DRIVE
KENOSHA, WISCONSIN 53140
PHONE: 262.551.6200
FAX: 262.552.5495
ATTN: TED FARES

ARCHITECT:
PARTNERS IN DESIGN ARCHITECTS
600 FIFTY SECOND STREET, SUITE 220
KENOSHA, WISCONSIN 53140
PHONE: 262.652.2800
ATTN: MARK MOLINARO, JR. AIA
ERIC MIGRIN, LEED AP

CIVIL ENGINEER
NIELSEN MADSEN & BARBER SC
1458 HORIZON BLVD., SUITE 200
RACINE, WISCONSIN 53406
PHONE: 262.634.5588
FAX: 262.634.5024
ATTN: MARK EBERLE

MECHANICAL, ELECTRICAL, PLUMBING ENGINEER
RTM ENGINEERING CONSULTANTS
650 E. IL-62, SUITE 250
SCHAMBURG, ILLINOIS 60173
PHONE: 847.756.4180
ATTN: ADAM MARKS

LANDSCAPE ARCHITECT
THOMAS NORDLOH ASSOCIATES
411 TAFT ROAD
KENOSHA, WISCONSIN 53142
PHONE: 262.496.9191
ATTN: THOMAS NORDLOH

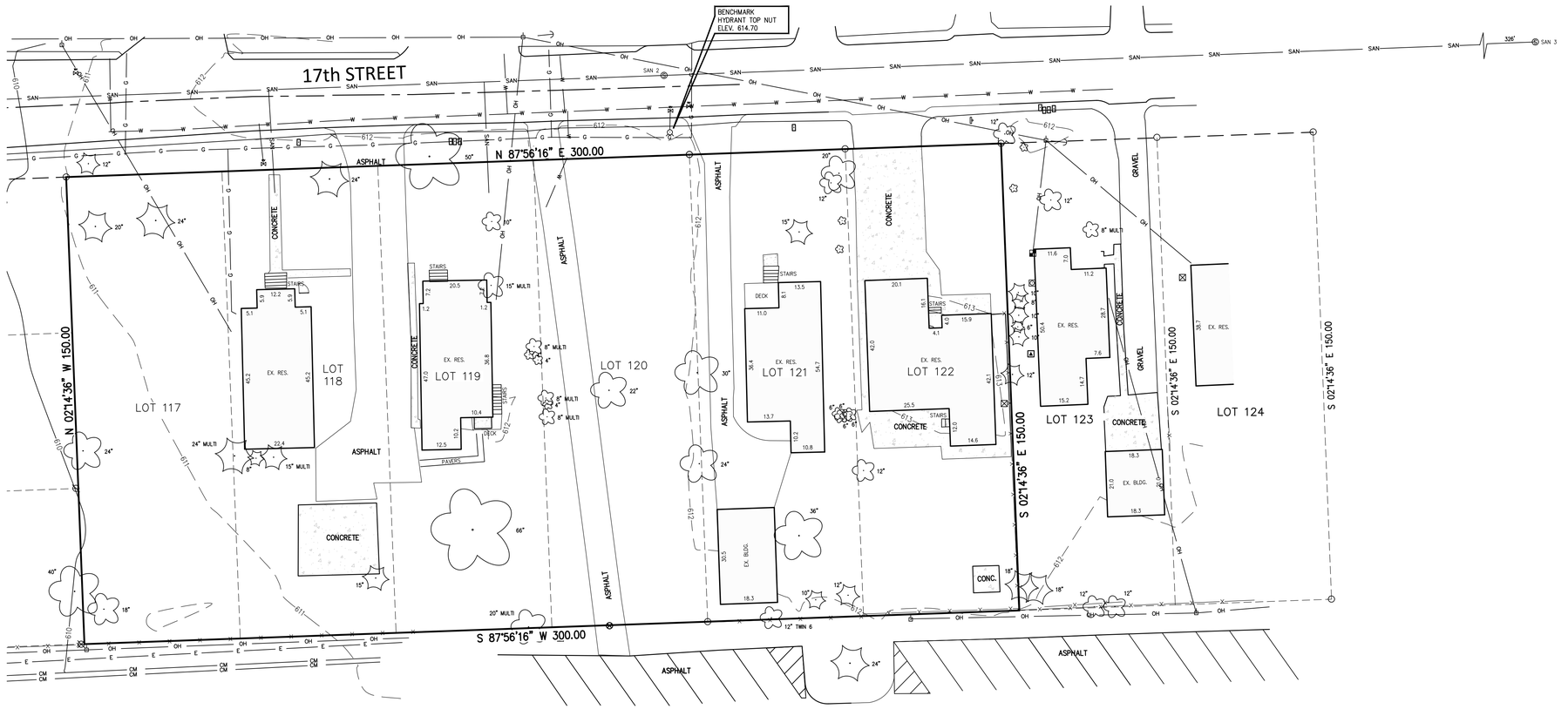
Partners in Design ARCHITECTS

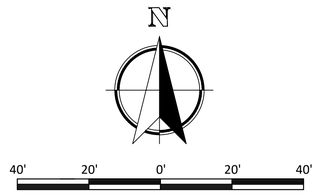
CARTHAGE COLLEGE

CARTHAGE FACILITIES BUILDING

DATE: 06.28.2022

NUMBER: 154.21.085





NOTES

BEARING BASE: GRID NORTH, WISCONSIN COORDINATE SYSTEM, SOUTH ZONE. BASED UPON NAD 1983 / 2011

ALL ELEVATIONS REFER TO NATIONAL GEODETIC DATUM OF 1929.

4

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

EXISTING UTILITY DATA

SAN 1
RIM 602.34
IE. 12" N/S 590.14
IE. 8" E 591.04
IE. 8" E 594.34 (ABANDONED)

SAN 2
RIM 612.66
IE. 8" E/W 601.11

SAN 3
RIM 612.57
IE. 8" E/W 602.47

LEGEND

- VENT PIPE
- CATCH BASIN
- MAILBOX
- BILLBOARD POST
- ELECTRIC PEDESTAL
- ELECTRIC METER
- E — ELECTRIC LINE
- SANITARY MANHOLE
- SAN — SANITARY SEWER
- HYDRANT
- WV — WATER VALVE
- W — WATER MAIN
- BUSH
- GUARD POST
- POWER POLE
- GUY WIRE
- PAD MOUNT TRANSFORMER
- COMMUNICATION BOX
- CM — COMMUNICATION LINE
- 6" DECIDUOUS TREE
- 6" CONIFEROUS TREE
- G — GAS MAIN
- GAS METER
- GV — GAS VALVE
- SIGN
- X — FENCE
- OH — OVERHEAD WIRES
- FOUND 1" IRON PIPE
- FOUND 1-3/4" IRON PIPE
- FOUND ROD IN CONCRETE

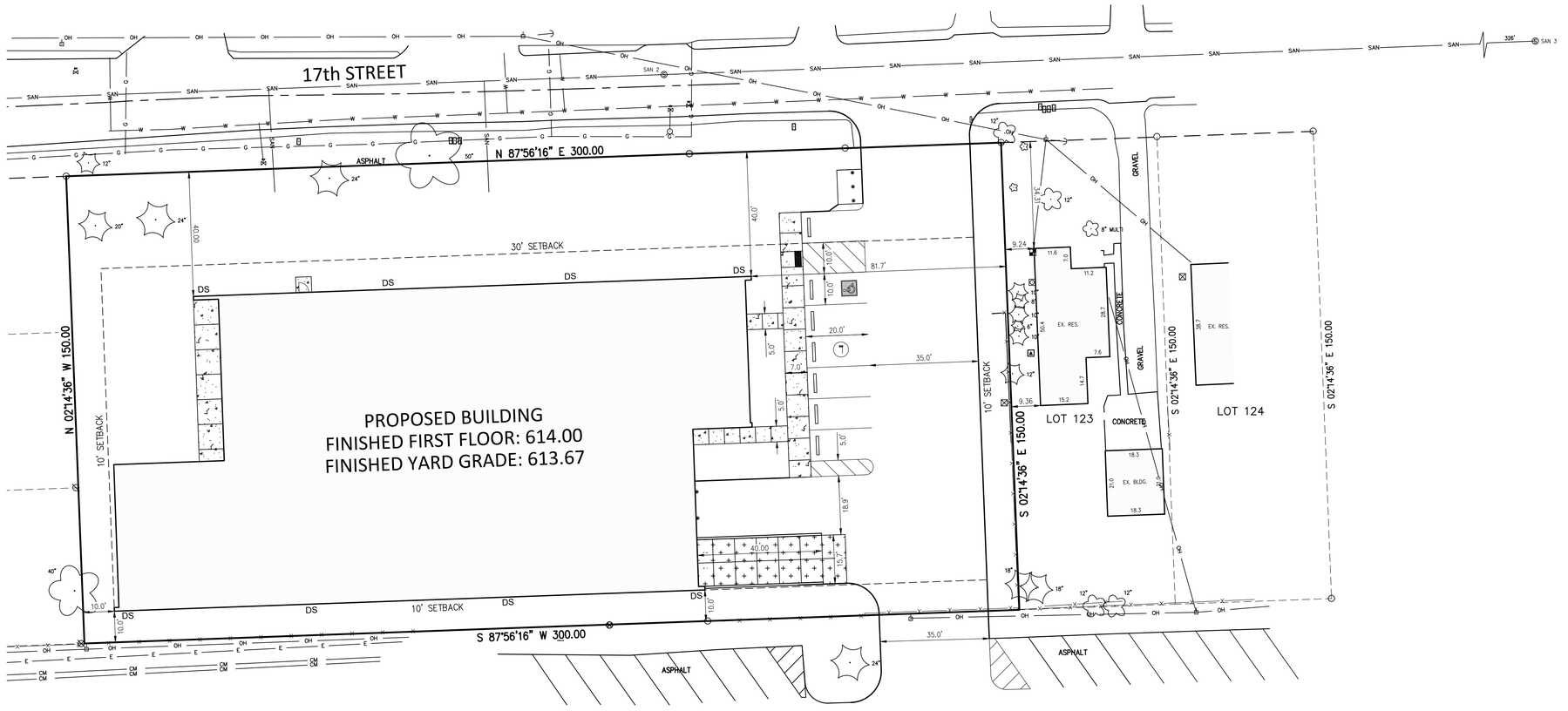
REVISIONS
1 12/8/22 - ADDENDUM NO. 4

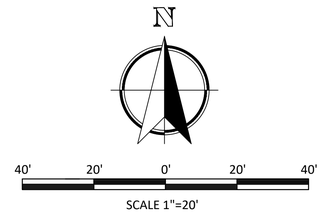
FACILITIES BUILDING
Carthage College – Somers, Wisconsin

EXISTING CONDITIONS

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C1





SITE DATA

PARCEL NUMBERS:	83-4-223-184-0685 83-4-223-184-0690 83-4-223-184-0695 83-4-223-184-0700 83-4-223-184-0705 83-4-223-184-0710
EXISTING LAND USE:	RESIDENTIAL
EXISTING FLOOD ZONE:	NOT IN A FLOOD ZONE
PROPOSED LAND USE:	INSTITUTIONAL
PROPOSED IMPERVIOUS SURFACE CALCULATIONS	
PROPOSED BUILDING AREA:	17,632 S.F.
PROPOSED PAVEMENT AREA:	9,819 S.F.
TOTAL IMPERVIOUS SURFACE AREA:	27,451 S.F. (61.0%)
TOTAL GREEN SPACE AREA:	17,549 S.F (39.0%)
TOTAL PARCEL AREA:	45,000 S.F (1.03 ACRES)

UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO, CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

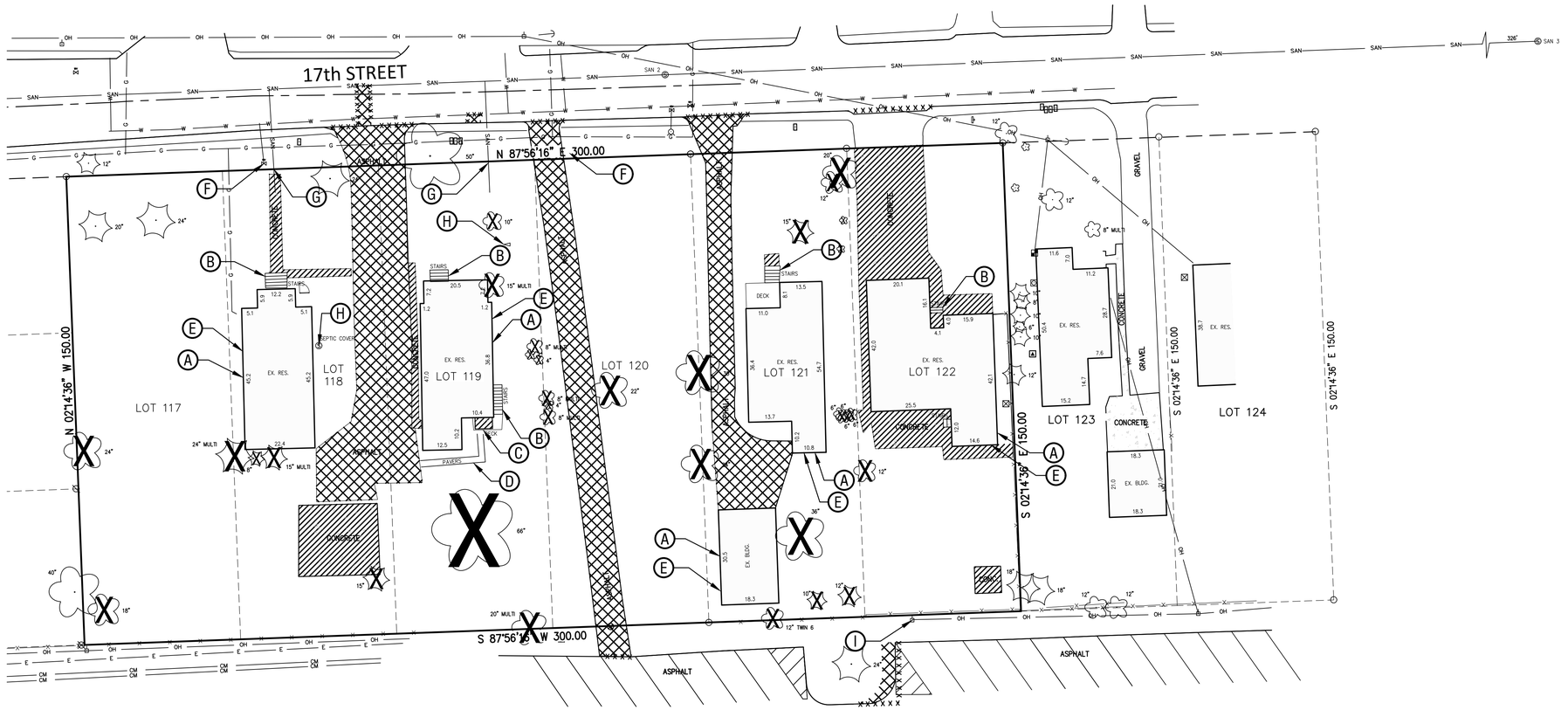
REVISIONS
1 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

DIMENSIONED SITE PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 2011009.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C2



N

40' 20' 0' 20' 40'

SCALE 1"=20'

DEMOLITION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL AT A LOCATION APPROVED (BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PAVEMENTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLY COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER AS WELL AS OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION, SITE CLEARING, AND DISPOSAL.

THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE LAND SURVEYOR AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.

ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CALL DIGGERS HOTLINE AT 1-800-242-8511 A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATION ACTIVITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HIRE A PRIVATE UTILITY LOCATING SERVICE TO LOCATE AND MARK ALL UNDERGROUND PRIVATE UTILITIES.

CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH SIGNS, FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. TEMPORARY CLOSURE OF ANY PUBLIC ROADWAY SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING THE COURSE OF WORK.

PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

EXISTING ITEMS TO REMAIN INCLUDING, BUT NOT LIMITED TO, FENCES, SIGNS, UTILITIES, BUILDINGS, TREES, PAVEMENTS, AND LIGHT POLES SHALL BE CAREFULLY PROTECTED DURING THE DEMOLITION PROCESS. ANY DAMAGE SUSTAINED TO ITEMS TO REMAIN IN PLACE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

PROPERTY CORNERS AND BENCHMARKS SHALL BE CAREFULLY PROTECTED UNTIL THEY HAVE BEEN REFERENCED BY A PROFESSIONAL LAND SURVEYOR. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL LIMIT PAVEMENT REMOVALS TO ONLY THOSE AREAS WHERE IT IS NECESSARY AS SHOWN ON THESE CONSTRUCTION PLANS. CONCRETE SIDEWALK AND CURB & GUTTER IS TO BE REMOVED TO NEAREST JOINT IN ORDER TO ACCOMMODATE PROPOSED IMPROVEMENTS. IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENTS AND OR OTHER IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPAIR OF DAMAGED PAVEMENT AND OTHER ITEMS AT NO ADDITIONAL COST TO THE OWNER.

IF PREVIOUSLY UNIDENTIFIED HAZARDOUS, CONTAMINATED MATERIALS, OR OTHER ENVIRONMENTAL RELATED CONDITIONS ARE DISCOVERED, STOP WORK IMMEDIATELY AND NOTIFY THE PROJECT CONSTRUCTION MANAGER FOR ACTION TO BE TAKEN. DO NOT RESUME WORK UNTIL SPECIFICALLY AUTHORIZED BY THE CONSTRUCTION MANAGER.

AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

LEGEND

- REMOVE ASPHALT PAVEMENT & BASE
- REMOVE CONCRETE PAVEMENT & BASE
- SAWCUT PAVEMENT (FULL DEPTH)
- REMOVE FENCE
- CLEAR & GRUB ISOLATED TREES

- (A) DEMOLISH BUILDINGS & FOUNDATIONS
- (B) REMOVE STAIRS & FOUNDATIONS
- (C) REMOVE DECK & FOUNDATIONS
- (D) REMOVE PAVERS
- (E) REMOVE ELECTRIC/GAS METER (COORDINATE WITH WE ENERGIES)
- (F) CAP WATER SERVICE AT RIGHT OF WAY AND ABANDON IN PLACE (ALL 4 HOMES)
- (G) CAP SANITARY LATERAL AT RIGHT OF WAY AND ABANDON IN PLACE (ALL 4 HOMES)
- (H) DEMOLISH SEPTIC TANKS (ALL 4 HOMES)
- (I) ELECTRIC POWER POLE TO BE RELOCATED (COORDINATE WITH WE ENERGIES)

UTILITY NOTE

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Call 811 or (800) 242-8511
www.DiggersHotline.com

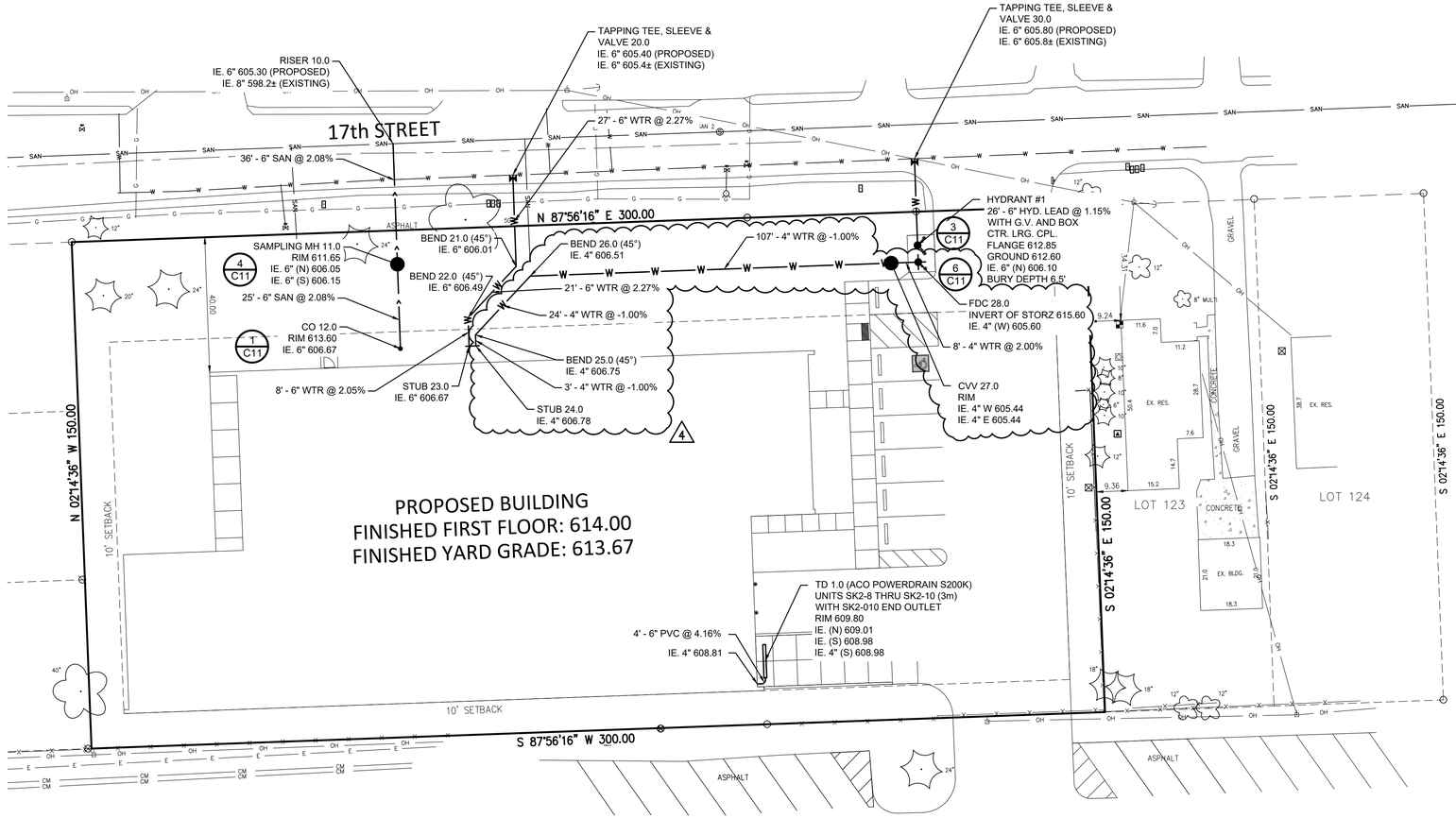
REVISIONS
1 12822 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE DEMOLITION PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C3



UTILITY CONSTRUCTION GENERAL NOTES

MATERIALS FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND VILLAGE OF SOMERS STANDARD MATERIAL SPECIFICATION CHECKLIST.

SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN", 6TH EDITION, DECEMBER 22, 2003 WITH ADDENDA NO. 1 AND NO. 2, HEREIN REFERRED TO AS THE "STANDARD SPECIFICATIONS" AS WELL AS THE "VILLAGE OF SOMERS DEVELOPMENT STANDARDS", HERIN REFERRED TO AS THE "DEVELOPMENT STANDARDS".

CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS AND SIZES OF EXISTING SANITARY AND STORM SEWERS, WATER MAINS, GAS & ELECTRIC LINES OR OTHER UTILITIES PRIOR TO STARTING CONSTRUCTION. AS-BUILT (FIELD) DATA SHALL BE USED TO CHECK ALL PROPOSED UTILITY CROSSINGS FOR CONFLICTS.

CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE A MINIMUM OF 72 HOURS BEFORE THE START OF CONSTRUCTION TO IDENTIFY ADJACENT UNDERGROUND UTILITIES. THE LOCATION OF EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLANS AND SHOULD BE LOCATED BY THE OWNER PRIOR TO CONSTRUCTION.

ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGE OFF-SITE. PUMPING OPERATIONS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061. PUMPED WATER CAN BE TREATED IN RETENTION BASINS, FILTER BAGS, STONE FILTERS OR BY OTHER WDNR APPROVED METHODS. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

THE EXACT LOCATION OF ALL BUILDING LATERALS, ROOF DRAIN RISERS AND DOWNSPOUTS (IF APPLICABLE) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

SANITARY SEWER & WATER MAIN SPECIFICATIONS

BEDDING AND COVER MATERIAL FOR SEWER AND WATER UTILITIES SHALL BE ¾" CRUSHED LIMESTONE CHIPS (PEA GRAVEL IS NOT ACCEPTABLE) CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

ALL SANITARY SEWER, WATER MAIN AND FIRE PROTECTION LATERALS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

ALL ROADWAY OPENINGS SHALL BE BACKFILLED WITH AGGREGATE SLURRY BACKFILL MATERIAL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL SEWER AND WATER UTILITIES PER SPS 382.40(8)(k). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A 2½" x 18" C.P. TEST SERVICES - VALVCO TERMINAL BOX. TRACER WIRE COLOR SHALL BE BLUE FOR WATER AND GREEN FOR SEWER.

SANITARY SEWER LATERAL PIPE MATERIAL SHALL BE 6" PVC CLASS SDR-26, CONFORMING TO THE REQUIREMENTS OF ASTM D3034 AND F-789/P546 WITH RUBBER GASKETS. LATERAL CLEAN-OUT RISERS SHALL BE 6" DIAMETER WITH 8" DIAMETER FROST SLEEVE CONSTRUCTED OF THE SAME MATERIAL.

WATER SERVICE PIPE MATERIAL SHALL BE EITHER POLY-ENCASED DUCTILE IRON PIPE CLASS 52 (AS SHOWN) MEETING THE REQUIREMENTS OF AWWA STANDARD C-151 / ANSI 21.51-91 OR POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF AWWA STNADARD C-900, CLASS 150, DR-18.

ALL VALVES AND VALVE BOXES SHALL BE IN ACCORDANCE WITH THE "DEVELOPMENT STANDARDS".

HYDRANTS SHALL BE CLOW MEDALLION OR APPROVED EQUAL IN ACCORDANCE THE "DEVELOPMENT STANDARDS".

PROVIDE FIVE AND ONE HALF FEET (5-1/2') OF COVER OVER ALL SANITARY SEWERS AND SIX AND ONE HALF FEET (6-1/2') OF COVER OVER ALL WATER MAINS. MINIMUM HORIZONTAL SEPARATION OF UTILITY MAINS IS EIGHT FEET (8'). PROVIDE VERTICAL SEPARATION OF UTILITIES PER CODE.

ANY AND ALL PAVEMENTS DISTURBED TO INSTALL UNDERGROUND UTILITIES SHALL BE SAWCUT AND REPLACED IN KIND PER VILLAGE OF SOMERS SPECIFICATIONS.

AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

UTILITY NOTES

1. SEE ELECTRICAL AND MEP PLANS FOR ADDITIONAL DETAILS
2. CONTRACTOR TO COORDINATE WITH WE-ENERGIES FOR GAS AND ELECTRICAL SERVICES.

SITE UTILITY LEGEND

- W — EXISTING WATER MAIN
- W — PROPOSED WATER MAIN
- SAN — EXISTING SANITARY MAIN
- > — PROPOSED SANITARY LATERAL
- STM — EXISTING STORM SEWER
-) — PROPOSED STORM SEWER

STORM SEWER SPECIFICATIONS

MATERIAL FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND VILLAGE OF SOMERS STANDARD MATERIAL SPECIFICATION CHECKLIST.

STORM SEWER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN", 6TH EDITION, DECEMBER 22, 2003 WITH ADDENDA NO. 1 AND NO. 2, HEREIN REFERRED TO AS THE "STANDARD SPECIFICATIONS" AS WELL AS THE "VILLAGE OF SOMERS DEVELOPMENT STANDARDS", HERIN REFERRED TO AS THE "DEVELOPMENT STANDARDS"

THE STORM SEWER SYSTEM WAS SIZED ACCORDING TO SPS TABLE 382.36-2 "MAXIMUM CAPACITY OF STORM WATER HORIZONTAL CONVEYANCE PIPING FOR PVC ASTM D3034". STORM SEWER PIPE AND TUBING MATERIALS SHALL CONFORM TO SPS 384.30 OF THE WISCONSIN ADMINISTRATIVE CODE. POLYVINYL CHLORIDE (PVC) MATERIALS SHALL BE SELECTED FROM TABLE 384.30-6. STORM SEWER SHALL BE 6" PVC, ASTM D3034, SDR-26.

ALL STORM SEWERS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL SEWER AND WATER UTILITIES PER SPS 382.40(8)(k). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A 2½" x 18" C.P. TEST SERVICES - VALVCO TERMINAL BOX. TRACER WIRE COLOR SHALL BE BROWN FOR STORM SEWER.

TRENCH DRAIN SHALL BE POWERDRAIN S200K WITH DUCTILE IRON SLOTTED GRATE AS MANUFACTURED BY ACO, INC. OR APPROVED EQUAL. ALL STORM SEWERS STRUCTURES SHALL BE CONSTRUCTED WITH WATER AND GAS TIGHT JOINTS IN CONFORMANCE WITH SPS 384.40.

AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO, CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

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REVISIONS
1 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE UTILITY PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
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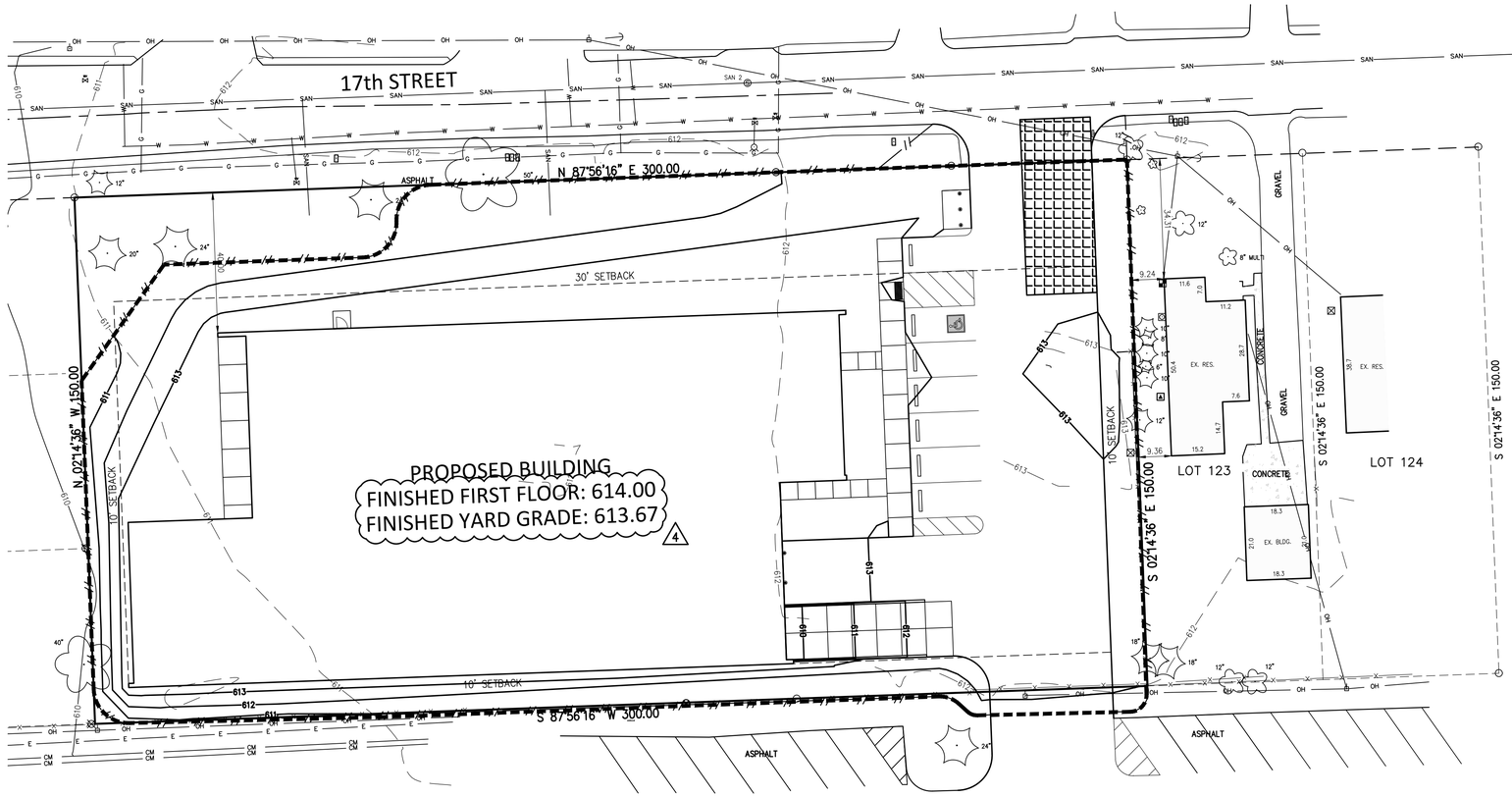
PROJECT NO.: 20110091.21
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C4



CONSTRUCTION SEQUENCING NOTES

1. OBTAIN ALL APPLICABLE PERMITS.
2. INSTALL PERIMETER EROSION CONTROL, CONSTRUCTION FENCING AND STONE TRACKING PAD.
3. REMOVE ITEMS SHOWN TO BE SALVAGED FOR RE-USE OR SALVAGED TO OWNER.
4. DEMOLISH EXISTING BUILDINGS AND ABOVE GROUND IMPROVEMENTS.
5. VERIFY LOCATIONS FOR TEMPORARY TOPSOIL STOCKPILE AND PERFORM TOPSOIL STRIPPING / STOCKPILING OPERATION.
6. CONSTRUCT BUILDING FOUNDATION.
7. INSTALL SANITARY SEWER, WATERMAIN AND STORM SEWER IMPROVEMENTS.
8. CONSTRUCT SUBGRADES FOR PAVEMENTS.
9. PERFORM REQUIRED SUBGRADE VERIFICATION TESTING AND INSTALL AGGREGATE BASES.
10. INSTALL SIDEWALKS AND PAVEMENTS.
11. FINE GRADE REMAINDER OF SITE AND COMPLETE RESTORATION OPERATION.
12. REMOVE CONSTRUCTION YARD AND TRACKING PAD.
13. REPAIR OR REINFORCE PERMANENT EROSION CONTROL DEVICES.

NOTES

1. ALL DISTURBED AREAS TO BE RESTORED WITH CLASS I TYPE B EROSION MAT. SEE LANDSCAPE PLAN FOR ADDITIONAL DETAILS.
2. ANY AND ALL PAVEMENTS, GRAVEL SHOULDERS, PARKWAY TREES OR OTHER EXISTING IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY DAMAGED DURING THE COURSE OF WORK SHALL BE REMOVED AND REPLACED IN KIND PER VILLAGE SPECIFICATIONS.

LEGEND

- 692 — EXISTING CONTOURS
- 702 — PROPOSED CONTOURS
- LIMITS OF DISTURBANCE (0.99 ACRES)
- 1 / C8 — SILT FENCE
- 2 / C8 — STONE TRACKING PAD
- 594.17 — FINISHED YARD GRADE

N

40' 20' 0' 20' 40'

SCALE 1"=20'

EROSION & SEDIMENT CONTROL NOTES

THE EROSION AND SEDIMENT CONTROL PROVISIONS DETAILED ON THE DRAWINGS AND SPECIFIED HEREIN ARE THE MINIMUM REQUIREMENTS FOR EROSION CONTROL.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE ANY REVISIONS, ADJUSTMENTS OR PROPOSED ALTERATIONS TO THE CONSTRUCTION SEQUENCING AND/OR EROSION CONTROL PLANS. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ENGINEER OF RECORD AND REGULATORY OFFICIALS OF ANY CHANGES TO THE EROSION CONTROL AND STORMWATER MANAGEMENT PLANS. MODIFICATIONS TO THE APPROVED EROSION CONTROL DESIGN IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS IS ALLOWED IF MODIFICATIONS CONFORM TO BEST MANAGEMENT PRACTICES (BMP'S).

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL OF ALL EROSION CONTROL DEVICES REQUIRED FOR THE PROJECT WHICH SHALL BE DONE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR) TECHNICAL STANDARDS (REFERRED TO AS BMP'S) AND VILLAGE OF SOMERS ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS. SEE VILLAGE OF SOMERS EROSION CONTROL PERMIT FOR ADDITIONAL DETAILS OR REQUIREMENTS.

ALL EROSION AND SEDIMENT CONTROL MEASURES AND DEVICES SHALL BE INSPECTED BY THE CONTRACTOR AS REQUIRED IN THE WISCONSIN ADMINISTRATIVE CODE (SPS 360.21) AND MAINTAINED PER SPS 360.22.

INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL CHECK THE EROSION AND SEDIMENT CONTROL PRACTICES FOR MAINTENANCE NEEDS AT ALL THE FOLLOWING INTERVALS UNTIL THE SITE IS STABILIZED:

A. AT LEAST WEEKLY.

B. WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. A RAINFALL EVENT SHALL BE CONSIDERED TO BE THE TOTAL AMOUNT OF RAINFALL RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE INSPECTED WITHIN 24 HOURS OF ALL RAIN EVENTS EXCEEDING 0.5 INCHES IMMEDIATELY REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.

EROSION AND SEDIMENT CONTROL INSPECTIONS AND ENFORCEMENT ACTIONS MAY BE CONDUCTED BY VILLAGE OF SOMERS OR THEIR AUTHORIZED AGENTS DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE OR LOCAL INSPECTORS AND/OR THE ENGINEER OF RECORD, SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.

ALL SEDIMENT AND EROSION CONTROL DEVICES, INCLUDING PERIMETER EROSION CONTROL MEASURES SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING CULVERT PROTECTION SHALL BE INSTALLED PRIOR TO COMMENCING EARTH DISTURBING ACTIVITIES. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE SITE HAS ESTABLISHED A VEGETATIVE COVER AND IS STABILIZED.

INSTALL SILT FENCE PER SECTION 628 OF THE "STATE SPECIFICATIONS" AND WDNR TECHNICAL STANDARD 1056 AT THE LOCATIONS SHOWN ON THE PLAN. ERECT SILT FENCE PRIOR TO STARTING A CONSTRUCTION OPERATION THAT MIGHT CAUSE SEDIMENTATION OR SILTATION AT THE SITE OF THE PROPOSED SILT FENCE. CONTRACTOR SHALL INSTALL SILT FENCING AT DOWNSLOPE SIDE OF STOCKPILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL REQUIRED SILT FENCE MATERIAL.

ALL PROPOSED STORM SEWER STRUCTURES AND ADJACENT EXISTING STORM INLETS SHALL HAVE A LAYER OF GEOTEXTILE FABRIC (TYPE "FF") INSTALLED BETWEEN THE FRAME & GRATE TO PREVENT SEDIMENT OR SILT FROM ENTERING THE SYSTEM. THE INLET PROTECTION SHALL BE INSPECTED BY THE CONTRACTOR AND REPLACED EVERY 14 DAYS AND AFTER EACH RAINFALL EVENT. FABRIC TO BE REPLACED AS NEEDED TO MEET FIELD CONDITIONS.

A MINIMUM 20' WIDE X 50' LONG TRACKING PAD (3-6 INCH STONE) SHALL BE INSTALLED AT THE ENTRANCE TO THE SITE (AS SHOWN) TO PREVENT SOIL FROM BEING TRACKED ONTO ADJACENT PAVEMENTS AND PUBLIC ROADWAYS. INSTALLATION AND MAINTENANCE OF THE TRACKING PAD SHALL BE PERFORMED ACCORDING TO WDNR TECHNICAL STANDARD 1057. ALL TRACKED SOIL FROM THE CONSTRUCTION SITE SHALL BE COLLECTED FROM PAVED STREETS AT THE END OF EACH WORKING DAY. PERIODIC STREET SWEEPING SHALL BE CONDUCTED BY THE CONTRACTOR TO KEEP THE PUBLIC AND/OR PRIVATE ROADWAYS FREE OF DUST AND DIRT.

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION (DUST) DURING CONSTRUCTION AT HIS/HER EXPENSE (WHEN NECESSARY OR AS REQUIRED BY LOCAL INSPECTORS).

UTILITY NOTE

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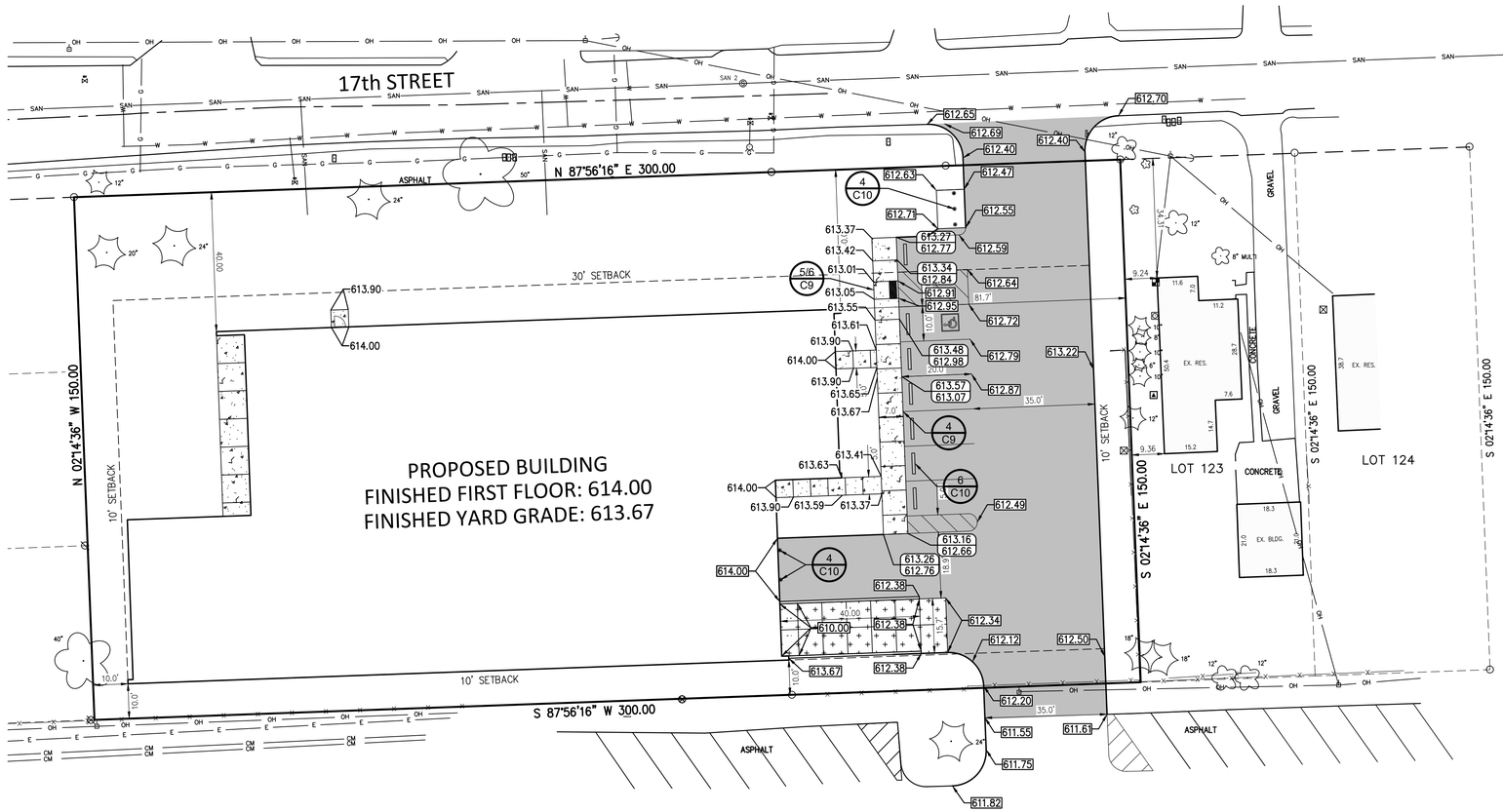
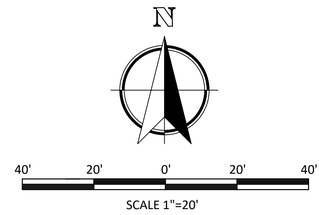
FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE GRADING & EROSION CONTROL PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C5





SITE GRADING & SUB-GRADE PREPARATION

TOPSOIL AND OTHER NON-STRUCTURAL MATERIAL WITHIN THE PROPOSED BUILDING PADS, PAVEMENT SECTIONS AND STRUCTURAL FILL AREAS SHALL BE STRIPPED AND STOCKPILED AT THE LOCATION SHOWN OR AS DIRECTED BY THE GENERAL CONTRACTOR.TEMPORARY SEEDING IS REQUIRED FOR ALL STOCKPILES AND OTHER EXPOSED LAND AREAS IF NOT ACTIVELY WORKED WITHIN 30 DAYS.

EXCAVATE, GRADE AND SHAPE SUBGRADE TO THE LINES AND GRADES SHOWN ON THE PLANS. SEE TYPICAL SECTIONS FOR PAVEMENT THICKNESS AND MATERIALS.

FOR STRUCTURAL FILL DEPTHS LESS THAN 20 FEET, THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM D-698) WITH THE EXCEPTION OF THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL HAVE A MINIMUM IN-SITU DENSITY OF 100 PERCENT OF MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS.

THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN -1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF THE OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY RECOMMENDED / APPROVED BY THE SOILS ENGINEER MONITORING THE PLACEMENT AND COMPACTION. COHESIVE SOILS WITH MODERATE TO HIGH EXPANSIVE POTENTIALS (PI>15) SHOULD, HOWEVER, BE PLACED, COMPACTED AND MAINTAINED PRIOR TO CONSTRUCTION AT A MOISTURE CONTENT OF 3±1 PERCENT ABOVE OPTIMUM MOISTURE CONTENT TO LIMIT FUTURE HEAVE.

THE FILL SHALL BE PLACED IN LAYERS WITH A MAXIMUM LOOSE THICKNESS OF 9 INCHES. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION.

UPON COMPLETION OF THE GRADING AND COMPACTION OF THE SUBGRADE, A PROOF ROLL SHALL BE CONDUCTED BY THE CONTRACTOR ON ALL SUBGRADES THAT RECEIVE DENSE AGGREGATE BASE COURSE. THE CONTRACTOR SHALL PROVIDE A FULLY LOADED QUAD-AXLE TRUCK (18 TON MINIMUM LOAD) TO PERFORM THE PROOF ROLL. CONTRACTOR SHALL COORDINATE THE PROOF ROLL WITH THE OWNER AND GEOTECHNICAL ENGINEER.

AT THE COMPLETION OF THE PAVEMENT WORK, RE-SPREAD SALVAGED TOPSOIL OR IMPORT TOPSOIL AS NECESSARY TO PROVIDE A MINIMUM SIX-INCH (6") LAYER IN ALL LANDSCAPE AND LAWN AREAS. ALL DISTURBED AREAS SHALL BE RESTORED PER THE LANDSCAPE PLAN.

EXCESS TOPSOIL NOT BEING USED FOR THE PROJECT SHALL BE HAULED OFF-SITE.

PAVEMENT SPECIFICATIONS

DENSE AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 305 OF THE "STATE SPECIFICATIONS". THE COMPLETED BASE SHALL BE IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET AND SHALL BE CONSTRUCTED IN FOUR-INCH (4") LIFTS AND COMPACTED ACCORDING TO SUBSECTION 305.3.2.2 OF THE "STATE SPECIFICATIONS".

ASPHALTIC CONCRETE PAVEMENT SHALL BE WISDOT LT 58-28 S MEETING THE REQUIREMENTS OF SECTION 460 OF THE "STATE SPECIFICATIONS". PAVEMENT SHALL BE INSTALLED IN TWO (2) LIFTS IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET. A TACK COAT SHALL BE INSTALLED BETWEEN THE LOWER AND UPPER COURSES IN ACCORDANCE WITH SECTION 455.3.2 OF THE "STATE SPECIFICATIONS".

CONCRETE FOR PAVEMENTS, CURB & GUTTER, AND APRONS SHALL BE GRADE A-FA, AIR-ENTRAINED, AS SPECIFIED IN SUBSECTION 501.3.1 OF THE "STATE SPECIFICATIONS". ALL EXTERIOR CONCRETE SHALL BE "READY-MIXED" AND RECEIVE A BROOM FINISH. ALL CONCRETE WORK SHALL BE CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBSECTION 415.2.4 OF THE "STATE SPECIFICATIONS".

CONTRACTION JOINTS FOR SIDEWALKS SHALL MATCH THE SIDEWALK WIDTH.

CONTRACTION JOINTS FOR LOADING DOCK APRON SHALL BE 8'X8'.

EXPANSION JOINTS SHALL BE PLACED AS OUTLINED IN SUBSECTION 601.3.6 OF THE "STATE SPECIFICATIONS". FILLER MATERIAL FOR EXPANSION JOINTS SHALL BE 1/2" FIBER MATERIAL.

CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLES, VALVE BOXES, ETC.) TO MATCH THE FINISHED GRADES OF THE AREA AFFECTED BY THE CONSTRUCTION.

PAVEMENT GRADING LEGEND

- 804.85 EXISTING SPOT GRADES
- 804.85 FINISHED PAVEMENT GRADES
- 804.85 FINISHED SIDEWALK GRADES
- 804.85 / 804.35 FINISHED SIDEWALK GRADES / FINISHED PAVEMENT GRADES
- PAVEMENT REPAIR PER LOCAL REQUIREMENTS
- 3 / C9 HEAVY–DUTY ASPHALT PAVEMENT (5")
- 1 / C9 LIGHT–DUTY CONCRETE PAVEMENT (4")
- 2 / C9 HEAVY–DUTY CONCRETE PAVEMENT (8")

UTILITY NOTE

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Carthage College – Somers, Wisconsin

PAVEMENT GRADING PLAN

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CIVIL ENGINEERS AND LAND SURVEYORS
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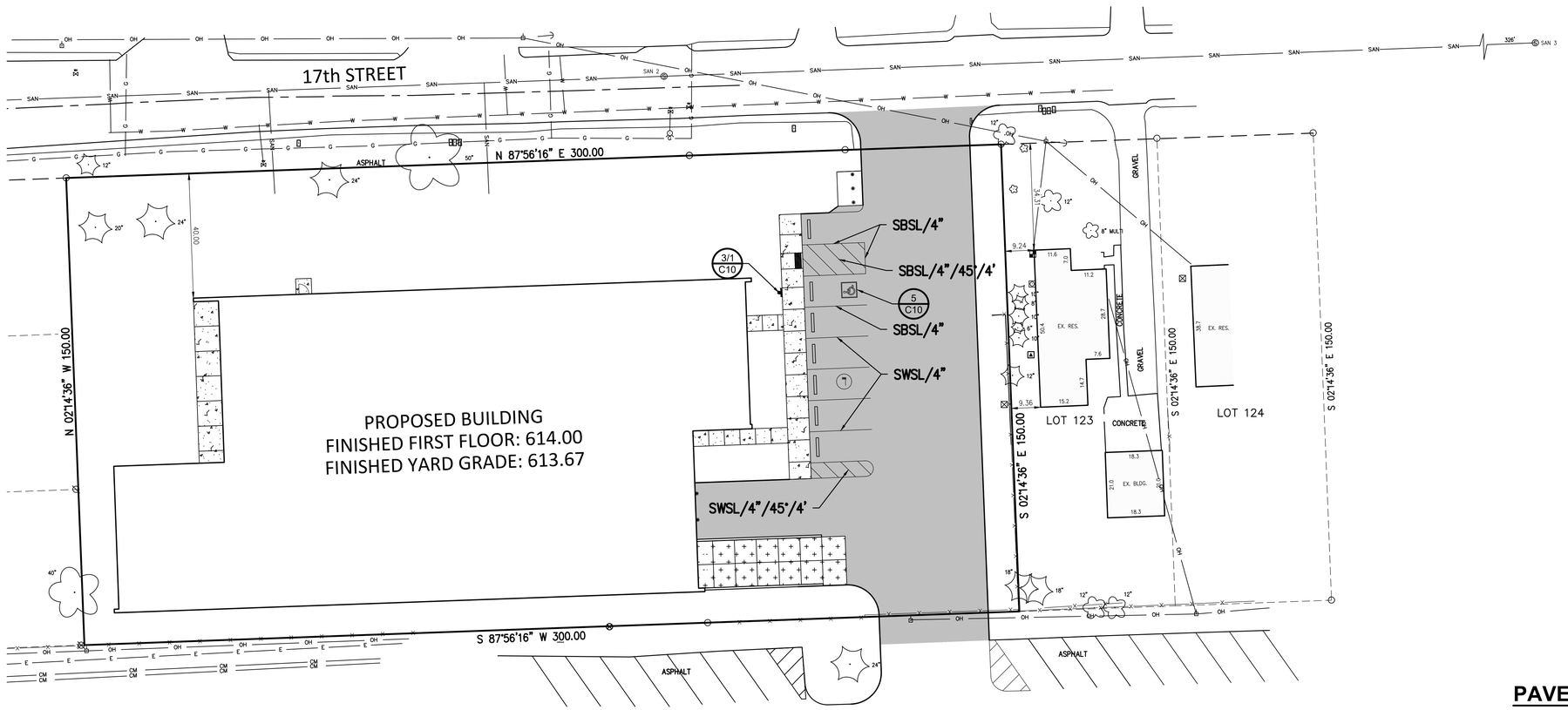
PROJECT NO.: 20110091.27
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C6



N

40' 20' 0' 20' 40'

SCALE 1"=20'

PAVEMENT MARKING LEGEND

(5 / C10) ISA-B – INTERNATIONAL SYMBOL FOR ACCESSIBILITY – BLUE

SWSL/4" – SINGLE WHITE SOLID LINE / 4" WIDE EACH

SWSL/4"/45°/4' – SINGLE WHITE SOLID LINE / 4" WIDE EACH, 45°, 4' O.C.

SBSL/4" – SINGLE BLUE SOLID LINE / 4" WIDE EACH

SBSL/4"/45°/4' – SINGLE BLUE SOLID LINE / 4" WIDE EACH, 45°, 4' O.C.

SIGN / POST LEGEND

(3/1 / C10) = SIGN (DETAIL 3) MOUNTED ON POST (DETAIL 1) AS SHOWN ON SHEET C10

PAVEMENT STRIPING NOTES

CONTRACTOR SHALL CONSULT STRIPING COLOR WITH OWNER PRIOR TO CONSTRUCTION.

PROVIDE CONTRACTOR GRADE ACRYLIC, STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT. ALL STRIPING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, OIL, AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE FOR INSPECTING PAVEMENT SURFACES AND CORRECTING CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF WORK.

DO NOT PLACE MARKING OVER UNSOUND PAVEMENTS. IF THESE AREAS EXIST, NOTIFY OWNER. STARTING INSTALLATION CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.

LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS. STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "FREE HAND" PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED. APPLY STRIPES STRAIGHT AND EVEN.

PROTECT ADJACENT CURBS, WALKS, FENCES, AND OTHER ITEMS FROM OVERSPRAY PAINT.

APPLY MARKING PAINT AS A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES (OR TO MANUFACTURERS SPECIFICATIONS).

BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.

ALL HANDICAPPED ACCESSIBLE PARKING SHALL BE LOCATED PER 2009 IBC 1106.6.

UTILITY NOTE

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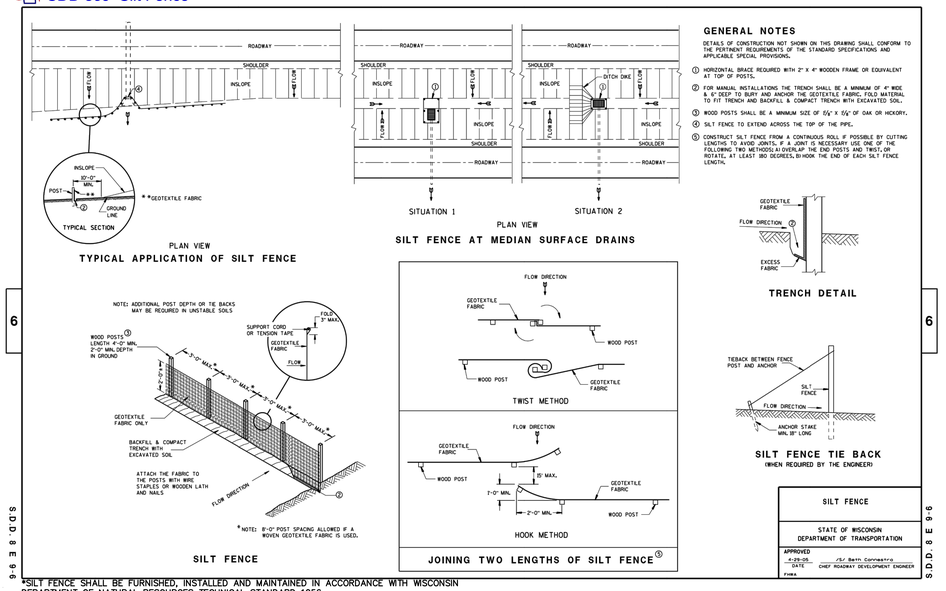
SHEET NO.: C7

SDD 8e9 Silt Fence



GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY, USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

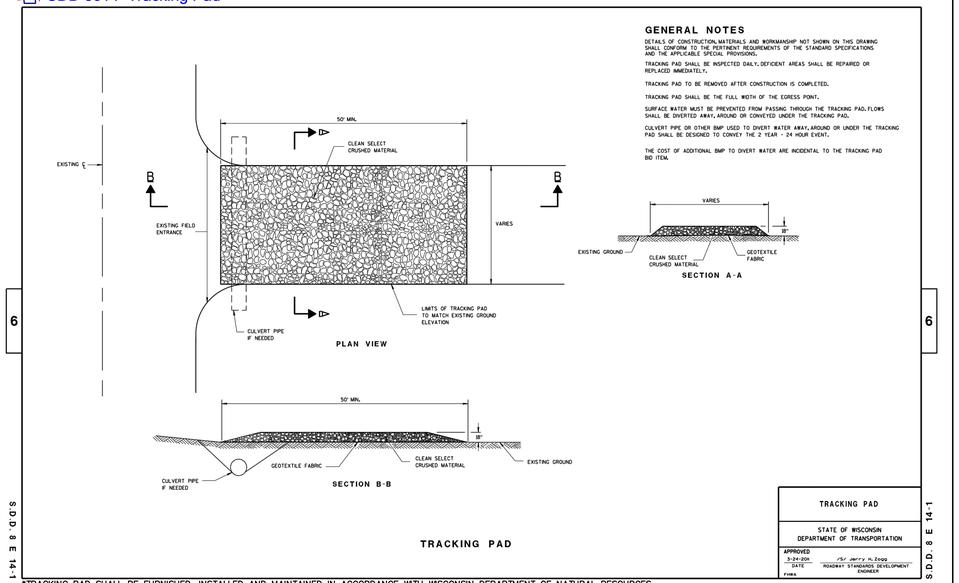
APPROVED
4-29-05 — DATE
/S/ Seth Connestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 9-6

*SILT FENCE SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1056.

1 SILT FENCE DETAIL — N.T.S.

SDD 8e14 Tracking Pad



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3-24-2014 — DATE
/S/ Jerry M. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 14-1

*TRACKING PAD SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1057 INCLUDING PAVEMENT CLEANING WHEN NECESSARY.

2 TRACKING PAD DETAIL — N.T.S.

4

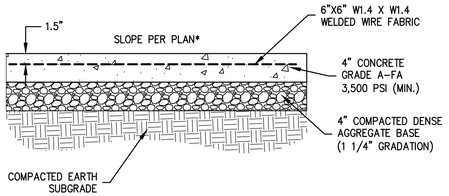
REVISIONS
4 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

TYPICAL SECTIONS & CONSTRUCTION DETAILS

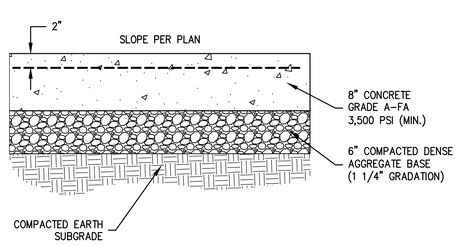
Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd, Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 2011009127
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C8

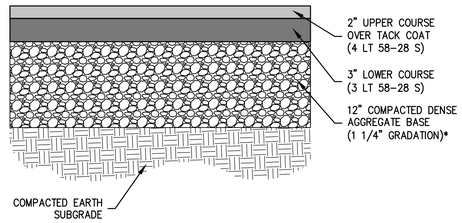


* SIDEWALKS: 1.5% CROSS-SLOPE (TYP.) 2.08% CROSS-SLOPE (MAX.)
PATIOS, PLAZAS, AND LANDINGS: 2.08% SLOPE IN ANY DIRECTION (MAX.)
ALL OTHER PAVEMENTS: SLOPE PER PLAN

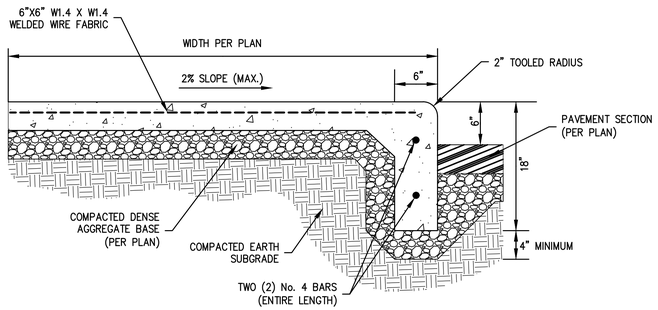
1 LIGHT-DUTY CONCRETE PAVEMENT (4") (TYPICAL SECTION) N.T.S.



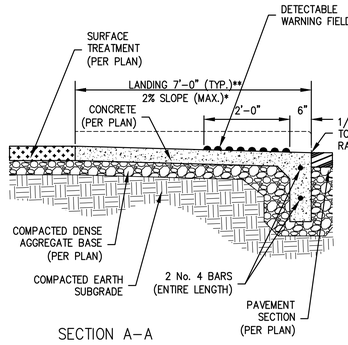
2 HEAVY-DUTY CONCRETE PAVEMENT (8") (TYPICAL SECTION) N.T.S



3 HEAVY-DUTY ASPHALT PAVEMENT (5") (TYPICAL SECTION) N.T.S. 4

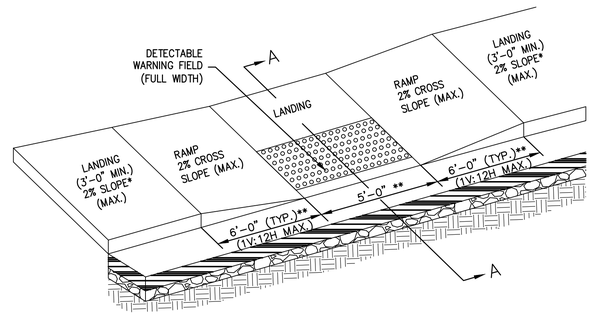


4 INTEGRAL CONCRETE SIDEWALK / BARRIER CURB DETAIL N.T.S.

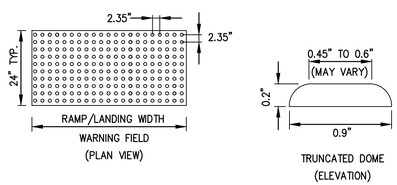


SECTION A-A

* IN ALL DIRECTIONS
** SEE PLAN FOR EXACT DIMENSIONS



5 INTEGRAL SIDEWALK (72" TAPER) ACCESSIBLE RAMP DETAIL N.T.S.



NOTES:

1. THIS WORK WILL CONSIST OF FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY FOR THE PLACEMENT OF DETECTABLE WARNING DEVICES, COMPLETE AND READY FOR SERVICE AT ALL NEW SIDEWALK CURB RAMPS OR WHERE SHOWN ON THE PLAN.
2. DETECTABLE WARNING FIELDS SHALL COMPLY WITH "THE DETECTABLE WARNINGS ON WALKING SURFACES" SECTION OF THE AMERICANS WITH DISABILITIES ACT (TITLE 49 CFR TRANSPORTATION, PART 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, APPENDIX A, SECTION 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES).
3. DETECTABLE WARNING FIELDS SHALL EXTEND 24 INCHES (610 MM) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP FLUSH SURFACE.
   A. THE DETECTABLE WARNING FIELD SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB OR EDGE OF PAVEMENT IS 6 INCHES (150 MM) MINIMUM AND 8 INCHES (205 MM) MAXIMUM FROM THE FACE OF THE CURB OR EDGE OF PAVEMENT.
   B. TRUNCATED DOMES SHALL BE ALIGNED ON A SQUARED GRID, ALIGNED IN ROWS PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. DOMES MUST NOT BE SKEWED DIAGONALLY TO THE DIRECT OF TRAVEL.
4. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED IN THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. CAST IN PLACE REPLACEABLE TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ADA SOLUTIONS, INC., CHELMSFORD, MA OR PRE-APPROVED EQUAL.
      i. COLOR OF THE DETECTABLE WARNING FIELD SHALL BE SELECTED BY THE OWNER.
5. SPECIFICATIONS FOR CONCRETE SEALANT AND OTHER RELATED MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE GUIDELINES SET BY THEIR RESPECTIVE MANUFACTURERS.

6 DETECTABLE WARNING FIELD DETAIL N.T.S.

4

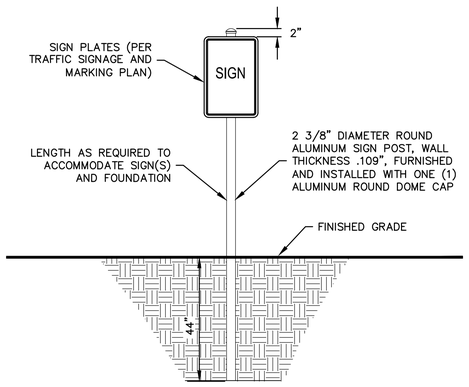
REVISIONS
4 12.12.22 - ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Somers, Wisconsin

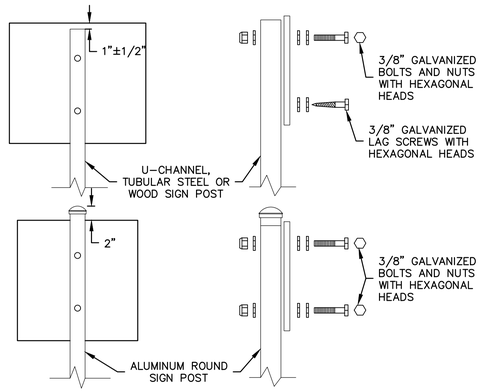
TYPICAL SECTIONS & CONSTRUCTION DETAILS

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

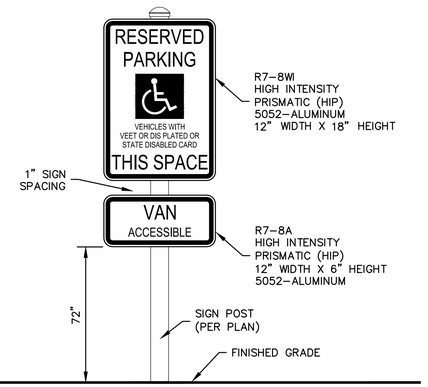
PROJECT NO.: 2011009127
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C9



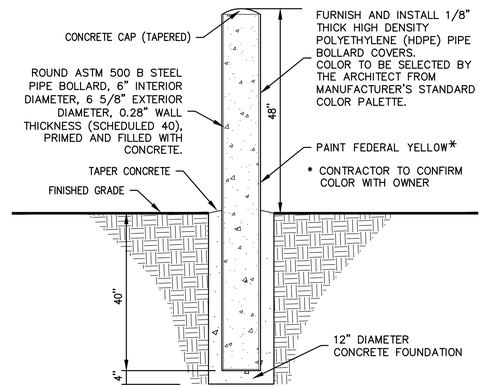
1 ALUMINUM ROUND SIGN POST DETAIL N.T.S.



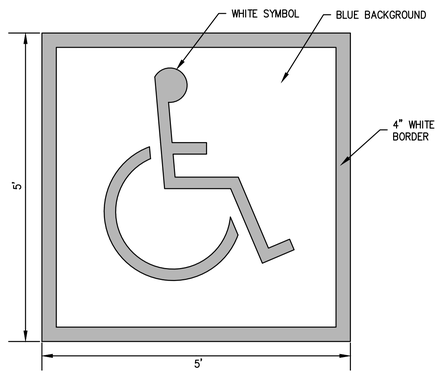
2 SIGN MOUNTING HARDWARE DETAIL N.T.S.



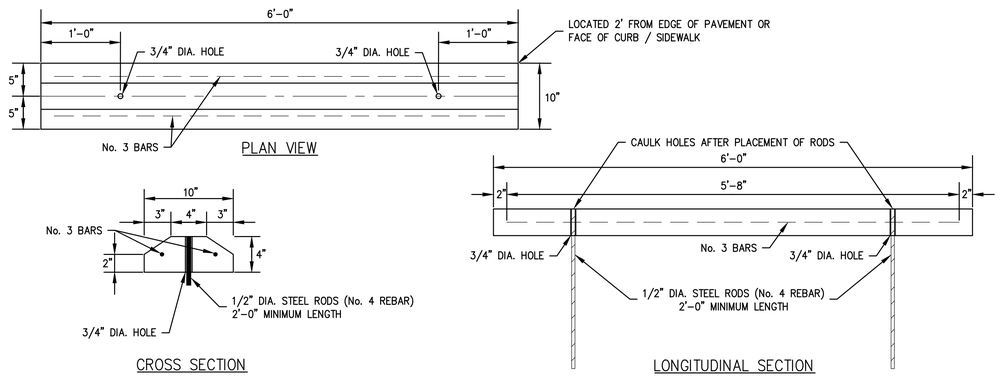
3 ADA "RESERVED PARKING VAN ACCESSIBLE" SIGN DETAIL N.T.S.



4 6" STEEL PIPE BOLLARD DETAIL N.T.S.



5 PAINTED INTERNATIONAL SYMBOL FOR ACCESSIBILITY DETAIL N.T.S.



6 CONCRETE WHEEL STOP DETAIL N.T.S.

REVISIONS
2 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College - Somers, Wisconsin

TYPICAL SECTIONS & CONSTRUCTION DETAILS

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
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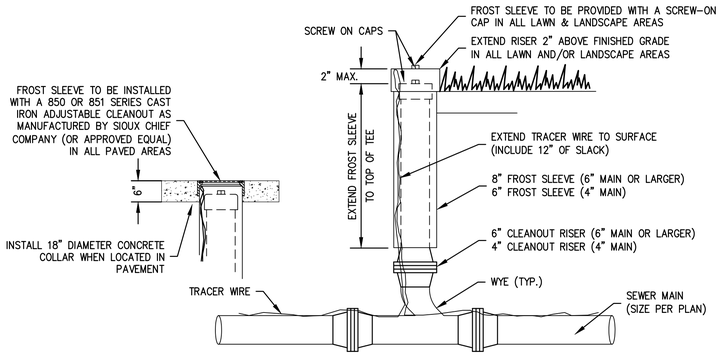
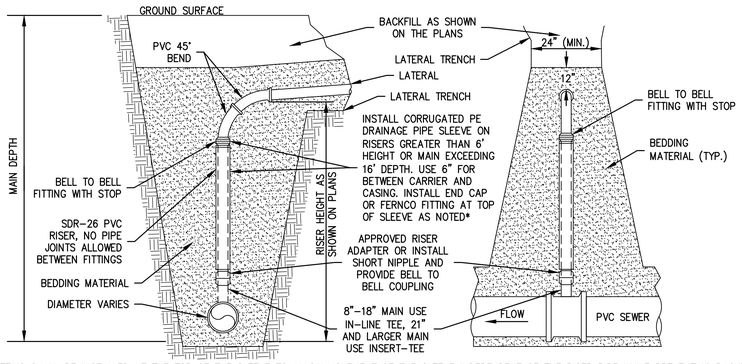
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C10



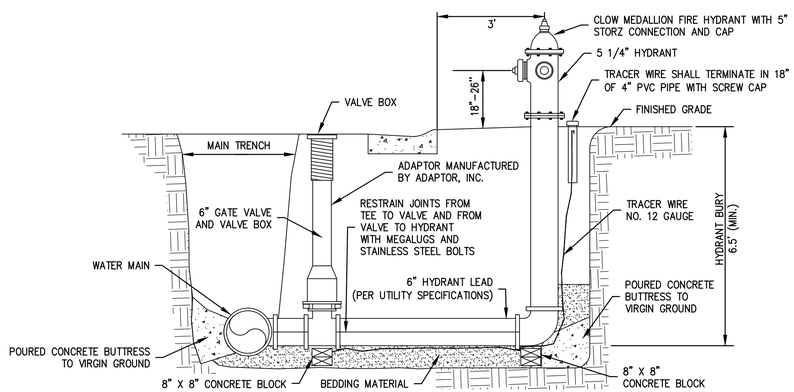
NOTE: SEWER CLEANOUTS TO BE LOCATED A MAXIMUM OF 5' OUTSIDE OF BUILDING WALL AND WHERE SHOWN ON PLAN

1 SEWER CLEANOUT (CO) RISER DETAIL — N.T.S.

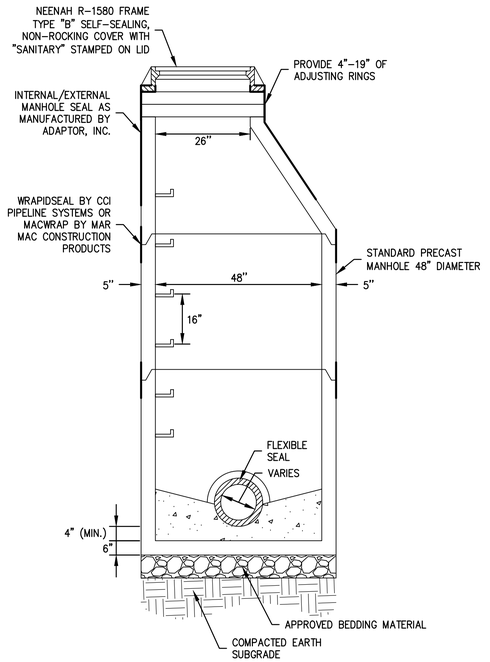


*NOTE:
A CAP OR FERNCO FITTING SHALL BE INSTALLED AT THE TOP OF THE SLEEVE TO ALLOW MOVEMENT OF THE SLEEVE INDEPENDENT OF THE RISER PIPE WHILE PREVENTING BACKFILL FROM ENTERING THE SLEEVE. FERNCO FITTING SHALL BE LEFT LOOSE ON THE RISER PIPE.

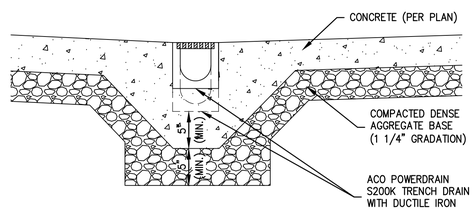
2 SANITARY RISER TYPE I DETAIL — N.T.S.



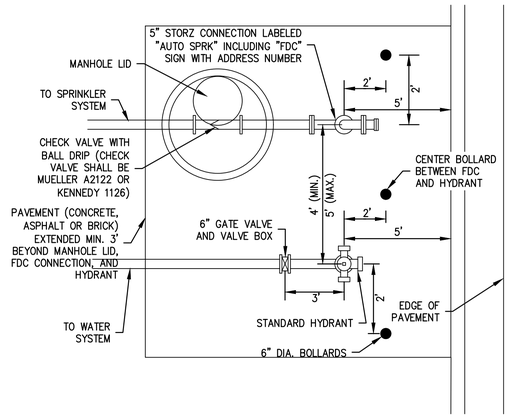
3 TYPICAL HYDRANT INSTALLATION DETAIL — N.T.S.

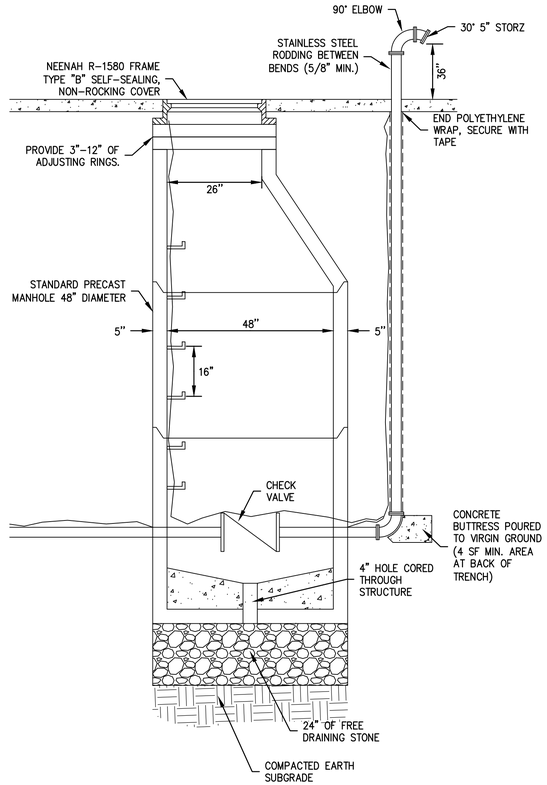


4 SANITARY SEWER MANHOLE DETAIL — N.T.S.



5 TRENCH DRAIN (POWERDRAIN S200K) DETAIL — N.T.S.





6 FIRE DEPARTMENT CONNECTION (FDC) DETAIL — N.T.S.

4

REVISIONS
4 ADDENDUM NO. 4 07.28.22

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

TYPICAL SECTIONS & CONSTRUCTION DETAILS

Nielsen Madsen + Barber
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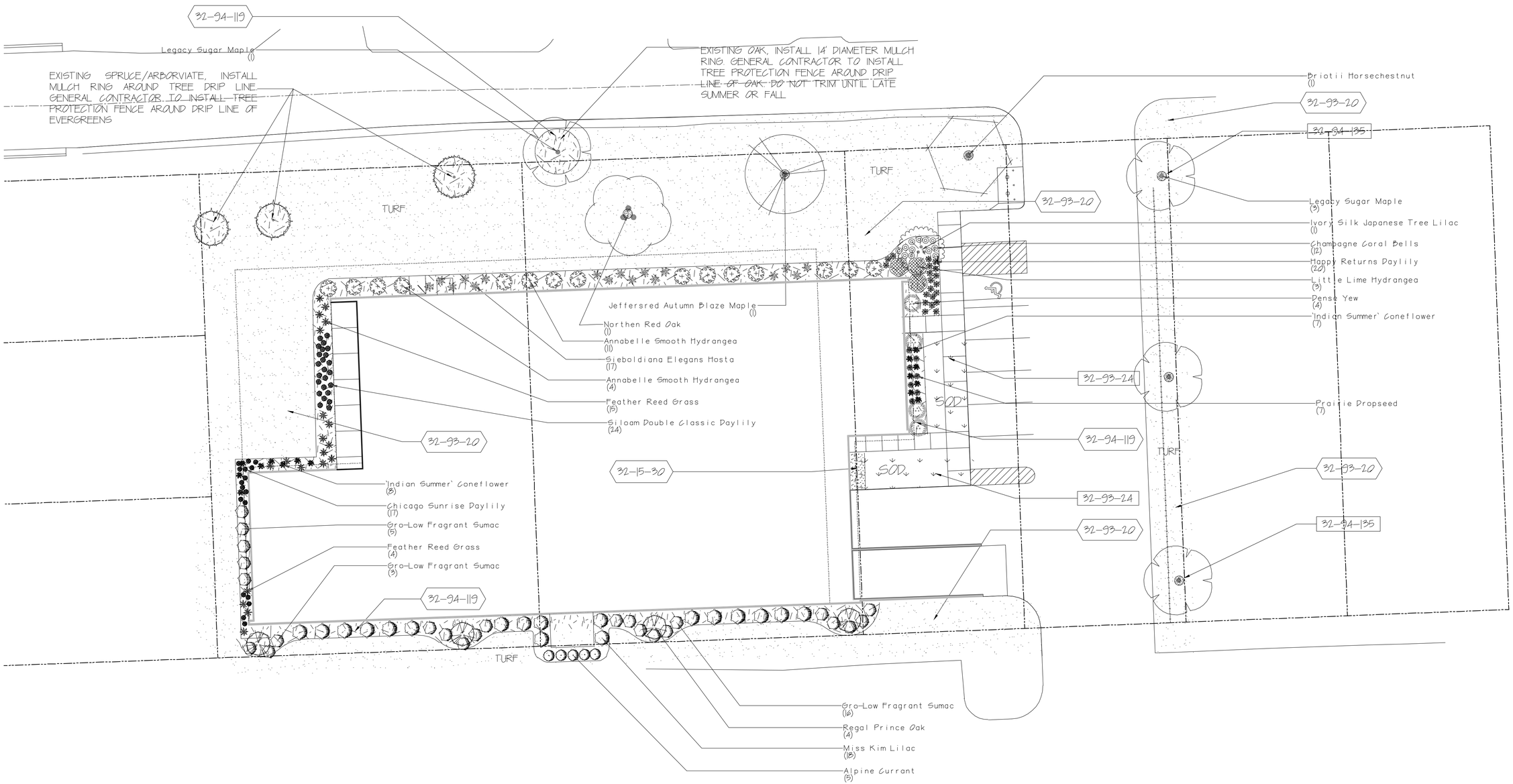
PROJECT NO.: 2011009127
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C11



NORTH

0 16 32 48 feet

SCALE: 1" = 16'

LANDSCAPE PLAN

REVISIONS:
7-28-22 ADDENDUM #4

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TNA Landscape Architecture Project Management

DIGGERS HOTLINE
Call 811 or (800) 242-8511
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Kenosha, Wisconsin 53142
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CARTHAGE COLLEGE OPERATIONS BUILDING
LANDSCAPE PLAN
FOR
CARTHAGE COLLEGE
CITY OF KENOSHA, KENOSHA COUNTY, WISCONSIN

PROJECT NO.:

DRAWN BY: THN
CHECKED BY:

DATE: 6-28-22

SHEET NO.:

L-1.0

REVISED

PLANT SCHEDULE

2022-07-21 17:52

TREES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Acer freemanii 'Jeffersred' TM	Jeffersred Autumn Blaze Maple	2" Cal.	B&B	1	Mature Size 50' x 35'
Acer saccharum 'Legacy'	Legacy Sugar Maple	2.5" Cal.	B&B	4	
Aesculus x carnea 'Briotii'	Briotii Horsechestnut	2.5" Cal.	B&B	1	30' x 25' Mature Size
Quercus borealis	Northen Red Oak	2" Cal.	B&B	1	50' x 40' Mature Size
Quercus x warei 'Regal Prince'	Regal Prince Oak	2.5" Cal.	B&B	4	10' x 35' Mature Size
Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	6'	B&B	1	25' x 15' Mature Size

SHRUBS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hydrangea arborescens 'Annabelle'	Annabelle Smooth Hydrangea	5 gal		15	Mature Size 5'x 5'
Hydrangea paniculata 'Little Lime'	Little Lime Hydrangea	3 gal		3	5' x 5' Mature Size
Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal		24	4' x 5' Mature Size
Ribes alpinum	Alpine Currant	24"		5	4' X 3' MATURE SIZE, HEDGE AS NEEDED
Syringa patula 'Miss Kim'	Miss Kim Lilac	24"		18	Mature Size 5' x 4'

ANNUALS/PERENNIALS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hemerocallis x 'Chicago Sunrise'	Chicago Sunrise Daylily	1 gal		17	
Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal		20	24" Mature Size
Hemerocallis x 'Siloam Double Classic' TM	Siloam Double Classic Daylily	1 gal		24	
Heuchera x 'Champagne'	Champagne Coral Bells	1 gal		12	18" Mature Size
Hosta sieboldiana 'Elegans'	Sieboldiana Elegans Hosta	1 gal		17	24" x 36" Mature Size
Rudbeckia fulgida 'Indian Summer'	'Indian Summer' Coneflower	1 gal		15	24-30" Mature Size

GRASSES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal		19	4'-5' Mature Size
Sporobolus heterolepis 'Tara'	Prairie Dropseed	1 gal		7	24-30" Mature Size

SHRUB EVERGREENS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Taxus x media 'Densiformis'	Dense Yew	24"	B&B	4	3' x 5' Mature Size

REVISED

REFERENCE NOTES SCHEDULE

2022-07-21 17:53

SYMBOL	AGGREGATE SURFACE DESCRIPTION	QTY
32-15-30	WASHED STONE, 4" DEPTH OVER FILTER/WEED FABRIC	49 s f
SYMBOL	**PLANTING DESCRIPTION**	**QTY**
32-93-20	REINDARS PREMIUM 60 TURF-SEED AND DN EROSION BLANKET	4,570 s f
32-93-24	BLUEGRASS SOD, MINERAL BASED ONLY, PEAT SOD IS NOT PERMITTED	824 s f
SYMBOL	**PLANTING ACCESSORIES DESCRIPTION**	**QTY**
32-94-04	EDGE, ALUMINUM EDGING, 16' LENGTH NON PAINTED	11 l f
32-94-119	SHREDDED BARK MULCH WITH PRE-EMERGENT HERBICIDE	2,830 s f
32-94-135	3' DIAMETER MULCH TREE RING	6
32-95-01	EDGE, SHOVEL CUT BED EDGE, 4" DEPTH-SEE DETAIL	836 l f

LANDSCAPE PLANT AND MATERIAL SCHEDULES ARE FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR TO VERIFY PLANT AND MATERIAL QUANTITIES. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE OR HELD LIABLE TO VERIFY FINAL PLANT AND MATERIAL QUANTITIES.

REVIEW CIVIL PLANS FOR AREA OF TURF DISTURBANCE

LANDSCAPE SPECIFICATIONS PER BID PLANS SHALL TAKE PRECEDENCE

PLANT SCHEDULE

2022-06-29 07:58

TREES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Acer freemanii 'Jeffersred' TM	Jeffersred Autumn Blaze Maple	2" Cal.	B&B	2	Mature Size 50' x 35'
Aesculus x carnea 'Briotii'	Briotii Horsechestnut	2.5" Cal.	B&B	1	30' x 25' Mature Size
Quercus borealis	Northen Red Oak	2" Cal.	B&B	1	50' x 40' Mature Size
Quercus x warei 'Regal Prince'	Regal Prince Oak	2.5" Cal.	B&B	4	10' x 35' Mature Size
Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	6'	B&B	1	25' x 15' Mature Size

SHRUBS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hydrangea arborescens 'Annabelle'	Annabelle Smooth Hydrangea	5 gal		15	Mature Size 5'x 5'
Hydrangea paniculata 'Little Lime'	Little Lime Hydrangea	3 gal		3	5' x 5' Mature Size
Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal		26	4' x 5' Mature Size
Ribes alpinum	Alpine Currant	24"		5	4' X 3' MATURE SIZE, HEDGE AS NEEDED
Syringa patula 'Miss Kim'	Miss Kim Lilac	24"		18	Mature Size 5' x 4'

ANNUALS/PERENNIALS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal		20	24" Mature Size
Heuchera x 'Champagne'	Champagne Coral Bells	1 gal		12	18" Mature Size
Hosta sieboldiana 'Elegans'	Sieboldiana Elegans Hosta	1 gal		17	24" x 36" Mature Size
Rudbeckia fulgida 'Indian Summer'	'Indian Summer' Coneflower	1 gal		7	24-30" Mature Size

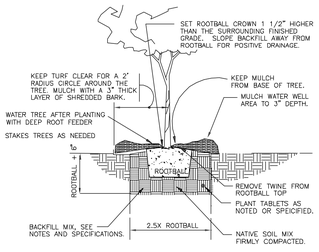
GRASSES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Sporobolus heterolepis 'Tara'	Prairie Dropseed	1 gal		7	24-30" Mature Size

SHRUB EVERGREENS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Taxus x media 'Densiformis'	Dense Yew	24"	B&B	4	3' x 5' Mature Size

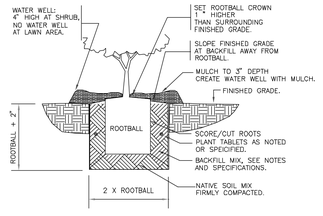
REFERENCE NOTES SCHEDULE

2022-06-29 07:58

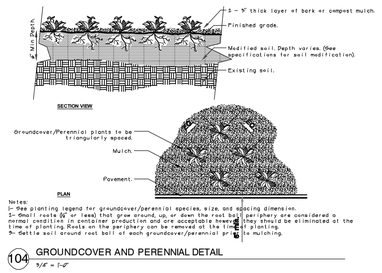
SYMBOL	AGGREGATE SURFACE DESCRIPTION	QTY
32-15-30	WASHED STONE, 4" DEPTH OVER FILTER/WEED FABRIC	672 s f
SYMBOL	**PLANTING DESCRIPTION**	**QTY**
32-93-20	REINDARS PREMIUM 60 TURF-SEED AND DN EROSION BLANKET	15,855 s f
32-93-24	BLUEGRASS SOD, MINERAL BASED ONLY, PEAT SOD IS NOT PERMITTED	824 s f
SYMBOL	**PLANTING ACCESSORIES DESCRIPTION**	**QTY**
32-94-04	EDGE, ALUMINUM EDGING, 16' LENGTH NON PAINTED	157 l f
32-94-119	SHREDDED BARK MULCH WITH PRE-EMERGENT HERBICIDE	2,476 s f
32-94-135	3' DIAMETER MULCH TREE RING	4
32-94-139	EROSION CONTROL MIX FOR MEDIUM SOILS by PRAIRIES NURSERY. SEEDING RATE AT 18 LBS PER ACRE. INSTALL DOUBLE NET EROSION CONTROL BLANKET	3,563 s f
32-95-01	EDGE, SHOVEL CUT BED EDGE, 4" DEPTH-SEE DETAIL	689 l f



100 TREE PLANTING DETAIL
1" = 1'-0"



103 SHRUB PLANTING
1" = 1'-0"



104 GROUNDCOVER AND PERENNIAL DETAIL
3/4" = 1'-0"

LANDSCAPE SCHEDULES AND DETAILS

REVISIONS: 7-28-22 ADDENDUM #4

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Kenosha, Wisconsin 53142
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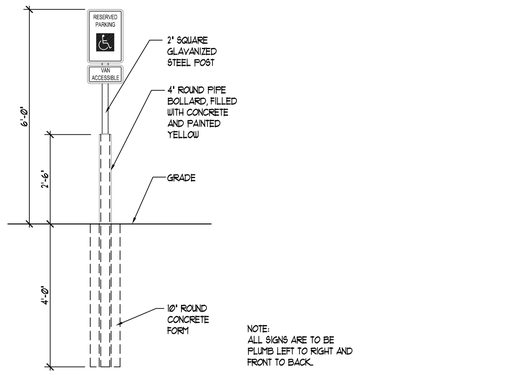
CARTHAGE COLLEGE OPERATIONS BUILDING
LANDSCAPE PLAN
FOR
CARTHAGE COLLEGE
CITY OF KENOSHA, KENOSHA COUNTY, WISCONSIN

PROJECT NO.:

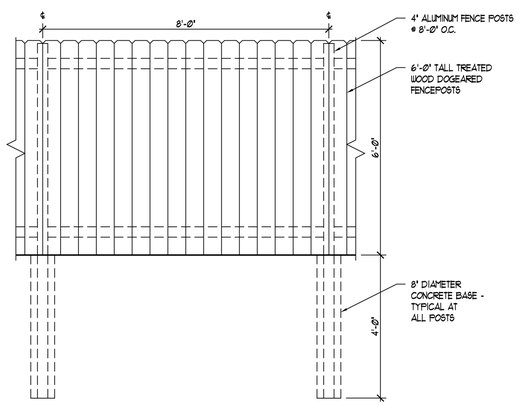
DRAWN BY: THN CHECKED BY:

DATE: 6-28-22

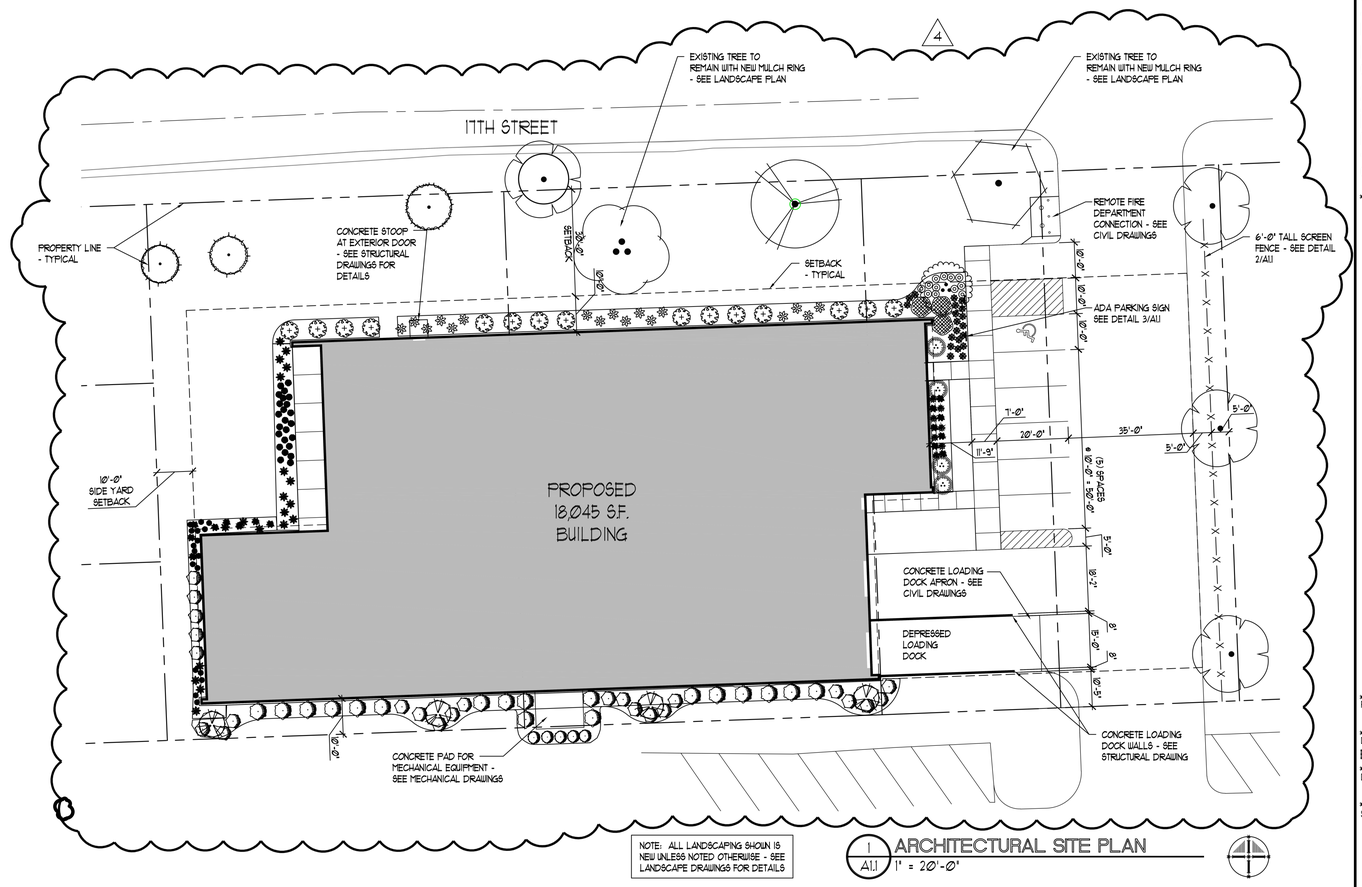
SHEET NO.: L-2.0



3 A1.1 ADA BOLLARD SIGN
SCALE: 1/2" = 1'-0"



2 A1.1 FENCE ELEVATION
1" = 20'-0"



NOTE: ALL LANDSCAPING SHOWN IS NEW UNLESS NOTED OTHERWISE - SEE LANDSCAPE DRAWINGS FOR DETAILS

1 A1.1 ARCHITECTURAL SITE PLAN
1" = 20'-0"

REVISIONS:
4 07.29.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

SITE PLAN

600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800
Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085
DRAWN BY: EMM
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A1.1

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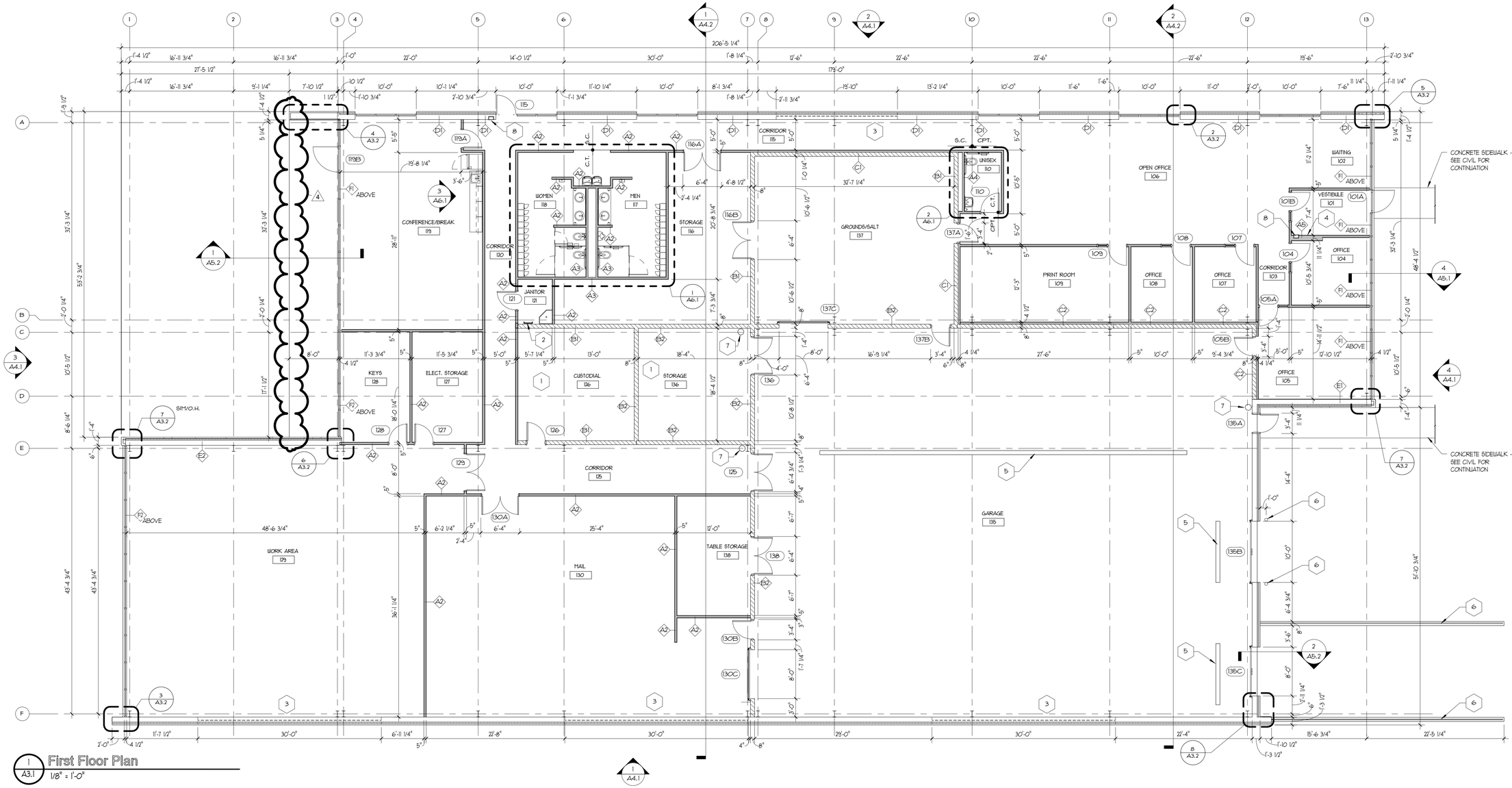
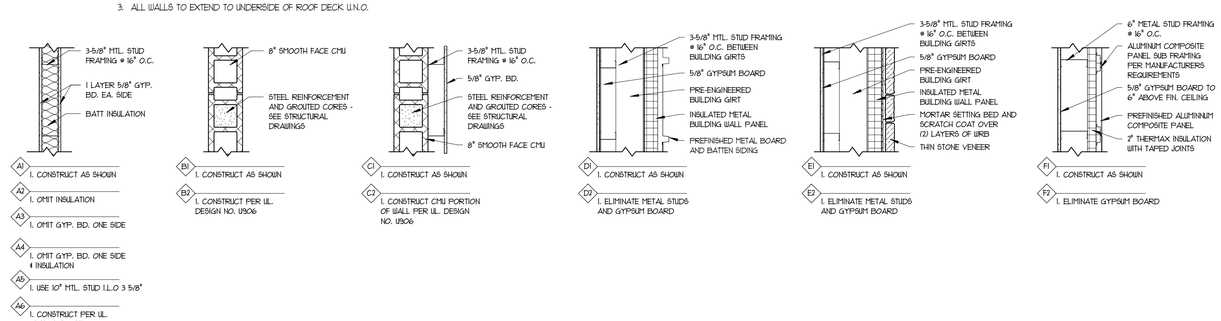


Wall Types

3/4" = 1'-0"

NOTES:
1. ALL INTERIOR WALLS TO BE TYP A1 U.N.O.
2. ALL EXTERIOR WALLS TO BE TYPE D2 U.N.O.
3. ALL WALLS TO EXTEND TO UNDERSIDE OF ROOF DECK U.N.O.



FLOOR PLAN KEY NOTES

1. MECHANICAL MEZZANINE OVERHEAD. SEE SHEET A3.2.
2. MEZZANINE ACCESS LADDER (ROOM #2U)
3. CLERESTORY WINDOW ABOVE - SEE ELEVATIONS AND WALL SECTIONS FOR DETAILS
4. RECESSED CABINET UNIT HEATER - SEE MECHANICAL DRAWINGS
5. TRENCH DRAIN - SLOPE FLOOR TO DRAIN - SEE PLUMBING DRAWINGS FOR DETAILS
6. 42" TALL X 1 1/2" DIAMETER PAINTED STEEL PIPE RAILING - MECHANICALLY FASTEN BASE PLATES TO RETAINING WALL.
7. WALL HUNG FIRE EXTINGUISHER
8. FULLY RECESSED FIRE EXTINGUISHER CABINET
9. 4" DIAMETER CONCRETE FILLED STEEL BOLLARD (PAINTED WHITE) SET IN 12" DIAMETER X 48" DEEP CONCRETE FOOTING

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REVISIONS
4 07.29.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

FLOOR PLAN

Partners in Design ARCHITECTS
600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800

PROJECT NO.: 154.21.085
DRAWN BY: EMM
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A3.1

ROOM FINISH SCHEDULE

ROOM NAME	NO.	FLOOR	BASE	WALLS				CEILING		PAINT		
				NORTH	EAST	SOUTH	WEST	MAT'L	HT.	WALLS	CLG	REMARKS
VESTIBULE	101	WALK OFF CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. W/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
WAITING	102	CARPET	VINYL	GYPSUM BOARD/GLAZING	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. W/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
CORRIDOR	103	CARPET	VINYL	OPEN	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	10'-0"	YES	NO	
OFFICE	104	CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. W/GYP. BOARD	VARIES	YES	NO	NOTES: 10
OFFICE	105	CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. W/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
OPEN OFFICE	106	CARPET	VINYL	GYPSUM BOARD/GLAZING	GYPSUM BOARD/OPEN	GYPSUM BOARD	GYPSUM BOARD/OPEN	S.A.T. 1	10'-0"	YES	NO	
OFFICE	107	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
OFFICE	108	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
PRINT ROOM	109	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
UNISEX	110	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD/C.T.	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD/C.T.	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2
CORRIDOR	115	SEALED CONCRETE	VINYL	METAL PANEL	OPEN	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	10'-0"	YES/NO	NO	NOTES: 3, 4
STORAGE	116	SEALED CONCRETE	VINYL	GYPSUM BOARD	CMU	CMU	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	NO	NO	NOTES: 4, 5, 6
MEN	117	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD/CERAMIC TILE	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2, 7, 8
WOMEN	118	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2, 7, 8
CONFERENCE/BREAK	119	SEALED CONCRETE	VINYL	METAL PANEL	GYPSUM BOARD	GYPSUM BOARD	GLAZING	S.A.T. 1	10'-0"	YES/NO	NO	NOTES: 3, 4
CORRIDOR	120	SEALED CONCRETE	VINYL	OPEN	GYPSUM BOARD	OPEN	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
JANITOR	121	SEALED CONCRETE	VINYL	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	EXPOSED STRUCTURE	VARIES	YES/NO	NO	NOTES: 9
CORRIDOR	125	SEALED CONCRETE	VINYL	CMU/OPEN	CMU	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
CUSTODIAL	126	SEALED CONCRETE	VINYL	CMU	CMU	CMU	GYPSUM BOARD	PRECAST CONCRETE	9'-4"	YES	YES	NOTES: 4
ELEC.T. STORAGE	127	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	
KEYS	128	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GLAZING	EXPOSED STRUCTURE	VARIES	YES	NO	
WORK AREA	129	SEALED CONCRETE	VINYL	METAL PANEL/GYPSUM BOARD	GYPSUM BOARD	METAL PANEL/GLAZING	GLAZING	EXPOSED STRUCTURE	VARIES	YES/NO	NO	NOTES: 3, 4
MAIL	130	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	METAL PANEL/GLAZING	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 3, 4
GARAGE	135	SEALED CONCRETE	NONE	CMU	METAL PANEL	METAL PANEL/GLAZING	CMU	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 3
STORAGE	136	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	PRECAST CONCRETE	9'-4"	YES	YES	
GROUNDS/SALT	137	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	EXPOSED STRUCTURE	VARIES	YES	NO	
TABLE STORAGE	138	SEALED CONCRETE	VINYL	GYPSUM BOARD	CMU	GYPSUM BOARD	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 4
MECHANICAL	201	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	EXPOSED STRUCTURE	VARIES	NO	NO	

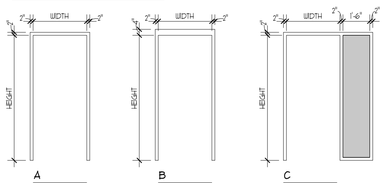
ROOM FINISH SCHEDULE NOTES:
1. PAINT GYPSUM BOARD WALL ABOVE CERAMIC TILE
2. INSTALL CERAMIC TILE TO 6'-0" A.F.F.
3. DO NOT PAINT METAL PANEL
4. VINYL BASE AT GYPSUM BOARD WALLS ONLY
5. GYPSUM BOARD WALLS TO RECIEVE PRIME PAINT FINISH ONLY
6. CMU WALLS TO REMAIN UNPAINTED
7. SIDE WALLS AT SINK AND TOILET ALCOVES TO RECIEVE CERAMIC TILE FINISH
8. PROVIDE SCHLUTER DILEX-AHK COVE BETWEEN FLOOR TILE AND WALL TILE
9. INSTALL FRP PANLES TO 8'-0". PAINT GYPSUM BOARD WALLS ABOVE.
10. PAINT GYPSUM BOARD SOFFIT AT WINDOWS

DOOR SCHEDULE

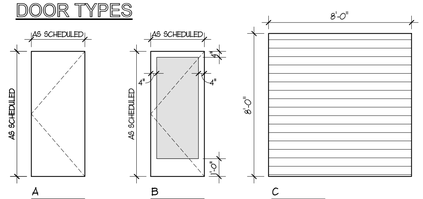
NO.	SIZE	MATERIAL		TYPE		HDW SET	REMARKS
		DOOR	FRAME	DOOR	FRAME		
101A	3' - 7 21/32" X 8' - 0" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
101B	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	B	C	SET 2	NOTES: 2
104	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
105A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
105B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 4	NOTES: 2, 3, 5
107	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
108	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
109	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
110	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 5	NOTES: 2
115	3' - 1 11/32" X 7' - 11" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
116A	6' - 0" X 7' - 0" X 1-3/4"	WOOD	HM	A	A	SET 6	NOTES: 2
116B	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 6	NOTES: 2, 3
119A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	B	A	SET 2	NOTES: 2
119B	4' - 1 21/32" X 7' - 10" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
121	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 4	NOTES: 2
125	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
126	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	B	SET 3	NOTES: 2
127	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 3	NOTES: 2, 3
128	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 3	NOTES: 2, 3
129	6' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 11	NOTES: 2
130A	6' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 11	NOTES: 2
130B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 9	NOTES: 2, 3, 5
130C	8' - 0" X 8' - 0" X 1-3/4"	STEEL	NONE	C	--	--	NOTES: 4, 5
135A	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 8	NOTES: 2, 3
135B	10' - 0" X 10' - 3" X 1-3/4"	INS. STEEL	NONE	D	--	--	NOTES: 4
135C	8' - 0" X 10' - 3" X 1-3/4"	INS. STEEL	NONE	I	--	--	NOTES: 4
136	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
137A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	B	SET 2	NOTES: 2
137B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 9	NOTES: 2, 3, 5
137C	8' - 0" X 8' - 0" X 1-3/4"	STEEL	NONE	C	--	--	NOTES: 4, 5
138	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
201	6' - 0" X 5' - 6" X 1-3/4"	H.M.	H.M.	J	B	SET 10	NOTES: 2, 3, 5

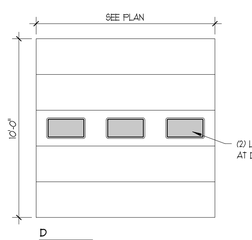
DOOR SCHEDULE NOTES:
1. DOOR PART OF ALUMINUM STOREFRONT SYSTEM. SEE EXTERIOR ELEVATIONS.
2. PAINT HOLLOW METAL FRAME.
3. PAINT HOLLOW METAL DOOR.
4. DOOR HARDWARE TO BE SUPPLIED AS PART OF OVERHEAD DOOR PACKAGE. SEE SPECIFICATIONS.
5. DOOR AND FRAME TO BE 1HOUR FIRE RATED.

FRAME TYPES



DOOR TYPES





HARDWARE SETS

SET 1
(1) CONTINUOUS HINGE
(1) KEYED CYLINDER WITH PUSH PADDLE
(1) PUSH/PULL SET
(1) SURFACE MOUNTED CLOSER WITH INTEGRAL STOP
(1) ALUMINUM THRESHOLD
(1) WEATHERSTRIPPING SET

SET 2
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LATCH (PASSAGE FUNCTION)
(1) WALL STOP
(1) SURFACE MOUNTED CLOSER

SET 3
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (OFFICE FUNCTION)
(1) WALL STOP

SET 4
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (STOREROOM FUNCTION)
(1) SURFACE MOUNTED CLOSER

SET 5
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (PRIVACY FUNCTION)
(1) WALL STOP

SET 6
(6) MORTISE HINGES
(1) CYLINDRICAL LEVERL LOCK (STORAGE FUNCTION)
(1) FLUSH BOLT
(2) WALL STOPS
(2) SURFACE MOUNTED CLOSERS

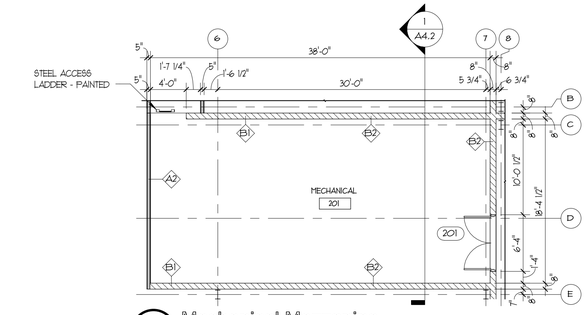
SET 7
(6) MORTISE HINGES
(2) SURFACE MOUNTED CLOSERS
(1) CYLINDRICAL LEVER LOCK (STORAGE FUNCTION)
(1) AUTOMATIC EXTENSION FLUSH BOLT
(1) COORDINATOR BAR
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

SET 8
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (ENTRANCE FUNCTION)
(1) SURFACE MOUNTED CLOSER WITH INTEGRAL STOP
(1) ALUMINUM THRESHOLD
(1) WEATHERSTRIPPING SET

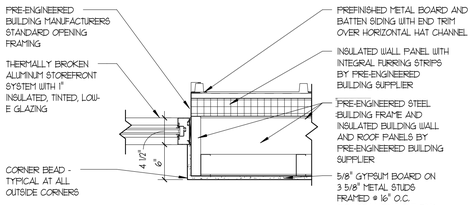
SET 9
(3) MORTISE HINGES
(1) SURFACE MOUNTED CLOSER
(1) CYLINDRICAL LEVER LOCK (OFFICE FUNCTION)
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

SET 10
(6) MORTISE HINGES
(2) SURFACE MOUNTED CLOSERS
(1) CYLINDRICAL LEVER LATCH (PASSAGE FUNCTION)
(1) AUTOMATIC EXTENSION FLUSH BOLT
(1) COORDINATOR BAR
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

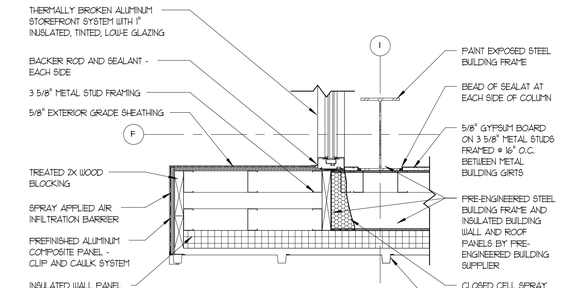
SET 11
(6) MORTISE HINGES
(1) CYLINDRICAL LEVERL LOCK (CLASSROOM FUNCTION)
(1) FLUSH BOLT
(2) WALL STOPS



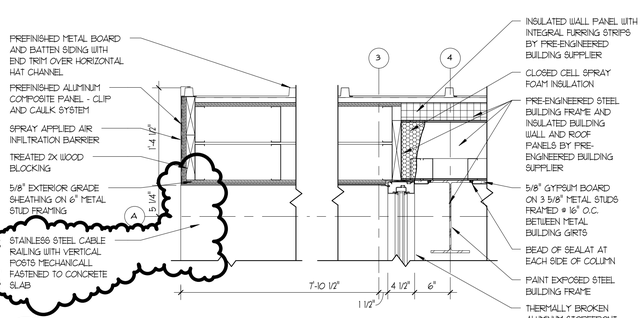
1 A3.2 **Mechanical Mezzanine**
1/8" = 1'-0"



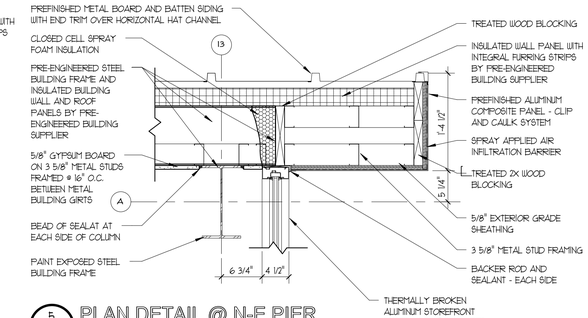
2 A3.2 **TYPICAL WINDOW JAMB**
1" = 1'-0"



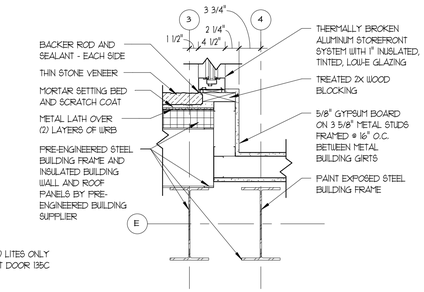
3 A3.2 **PLAN DETAIL @ S-W PIER**
1" = 1'-0"



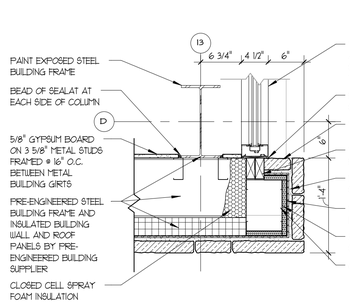
4 A3.2 **PLAN DETAIL @ N-W PIER**
1" = 1'-0"



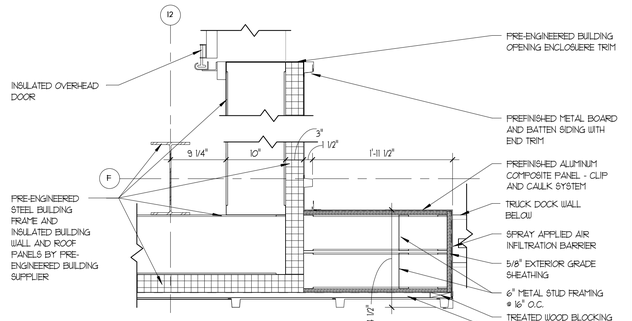
5 A3.2 **PLAN DETAIL @ N-E PIER**
1" = 1'-0"



6 A3.2 **PLAN DETAIL @ STOREFRONT**
1" = 1'-0"



7 A3.2 **PLAN DETAIL @ EAST PIER**
1" = 1'-0"



8 A3.2 **PLAN DETAIL @ S-E PIER**
1" = 1'-0"

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CARTHAGE FACILITIES BUILDING
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MEZZANINE PLAN, PLAN DETAILS, SCHEDULES & NOTES

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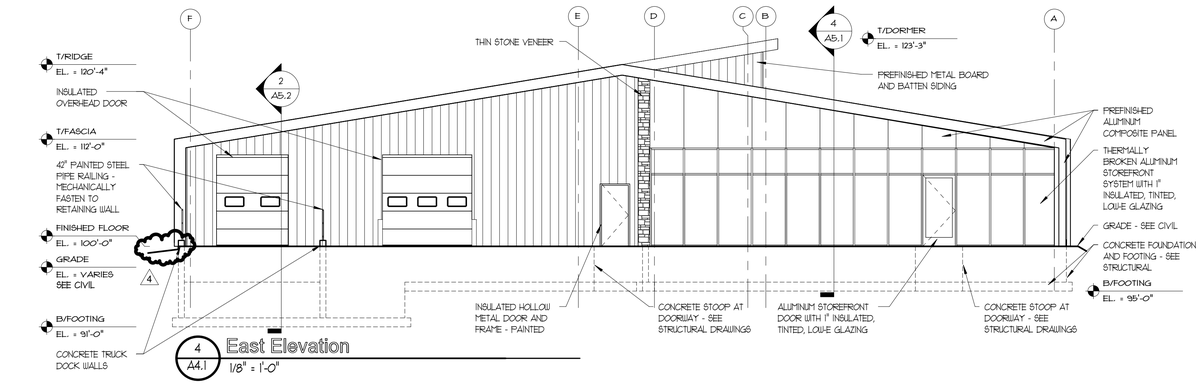
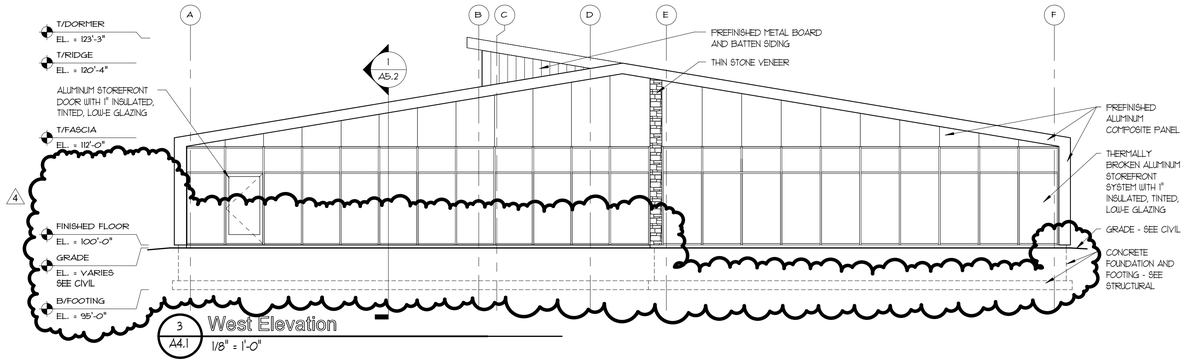
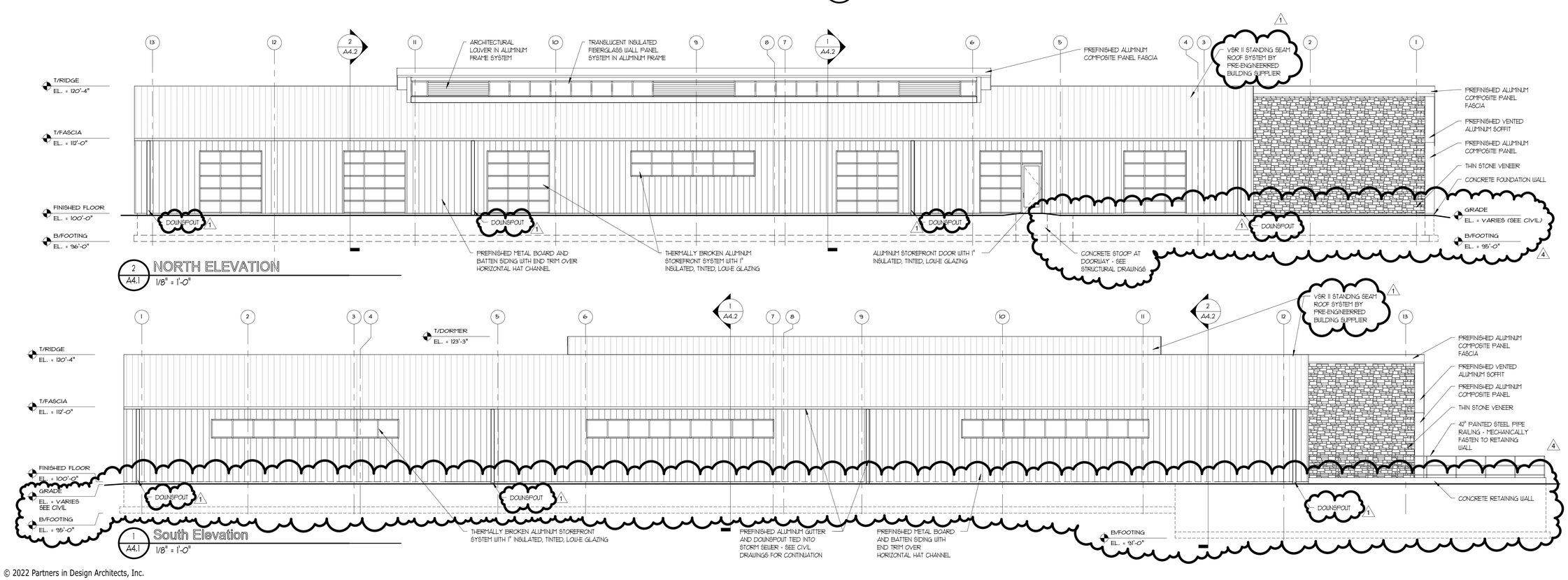
600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800

PROJECT NO.: 154.21.085
DRAWN BY: EMM CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A3.2







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EXTERIOR ELEVATIONS

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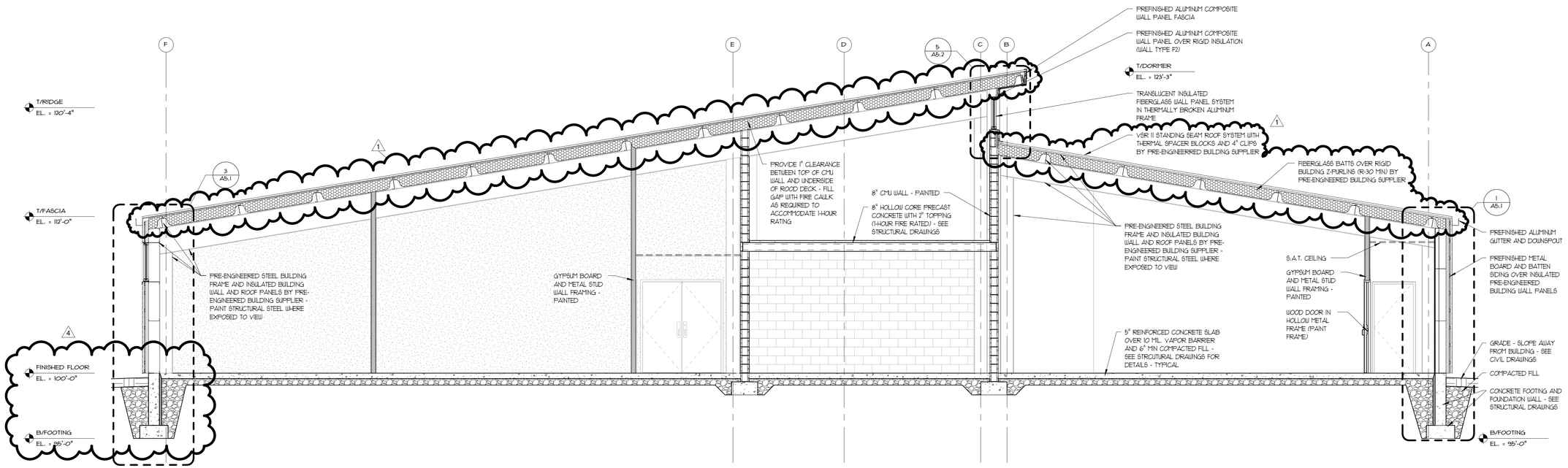
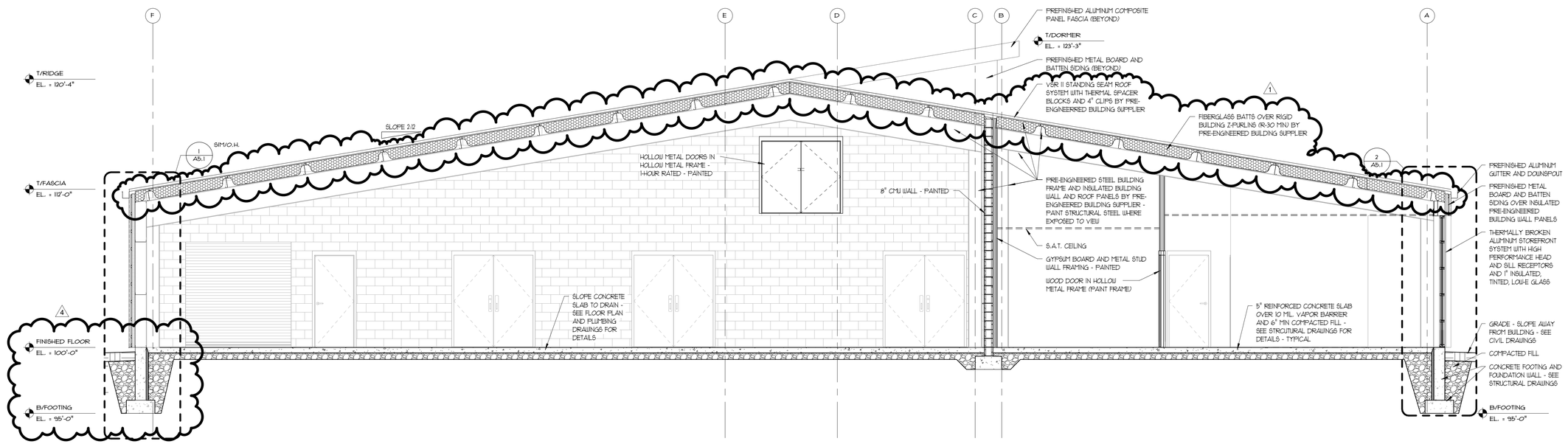
SHEET NO.: A4.1



1 A4.2 BUILDING SECTION
1/4" = 1'-0"



2 A4.2 BUILDING SECTION
1/4" = 1'-0"

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BUILDING SECTIONS

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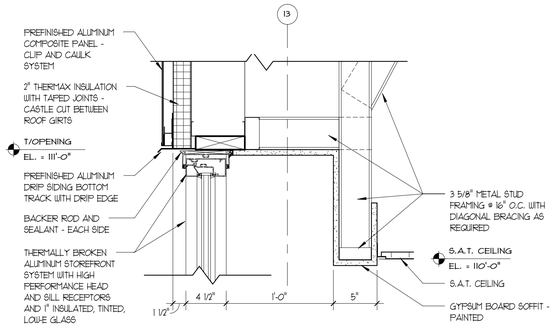
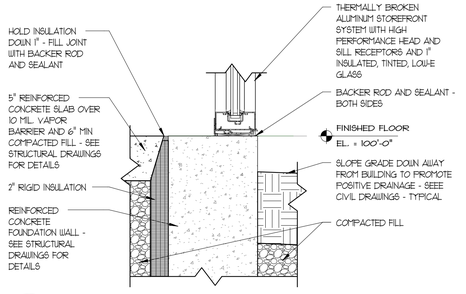
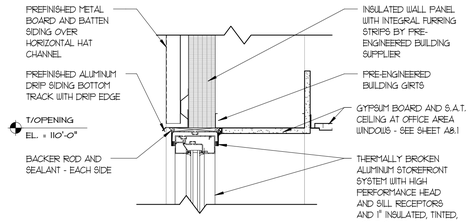
DRAWN BY: Author CHECKED BY: Checker
DATE: 06.28.22
SHEET NO.: A4.2



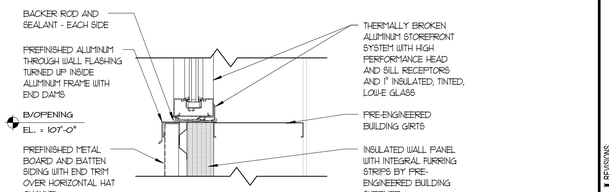
5 A5.1 **WINDOW HEAD/SOFFIT DETAIL**
1 1/2" = 1'-0"



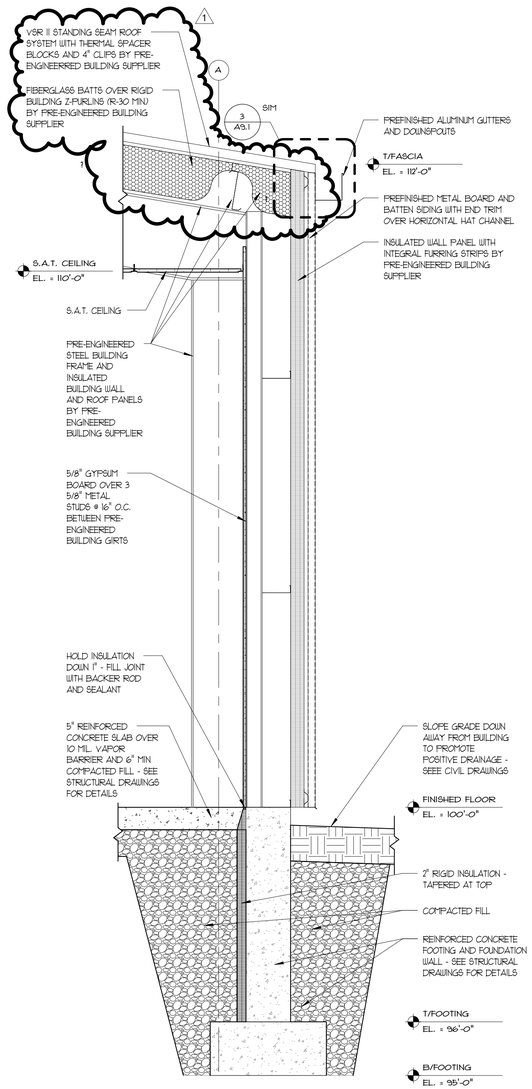
6 A5.1 **NORTH WALL SILL DETAIL**
1 1/2" = 1'-0"



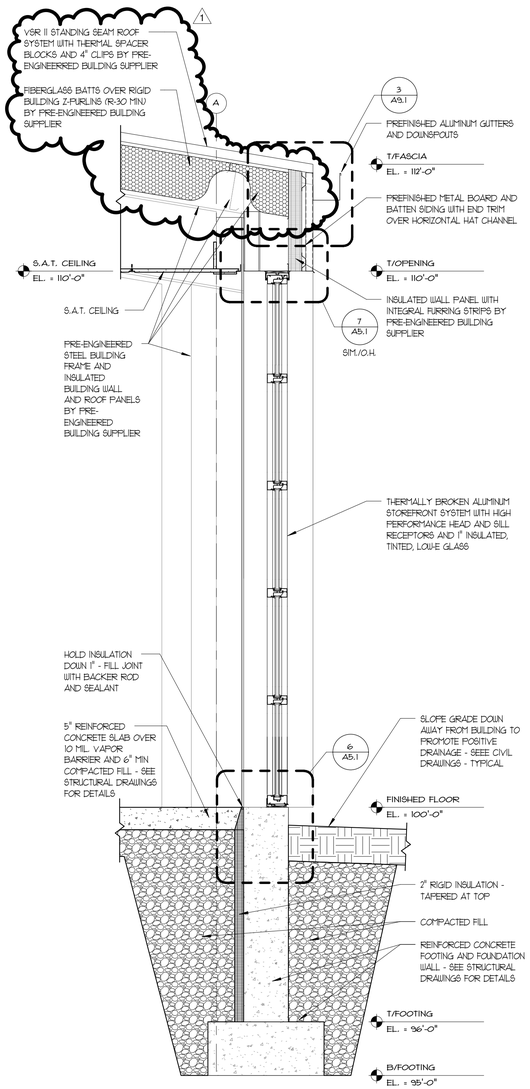
7 A5.1 **TYP. WINDOW HEAD @ N & S WALLS**
1 1/2" = 1'-0"



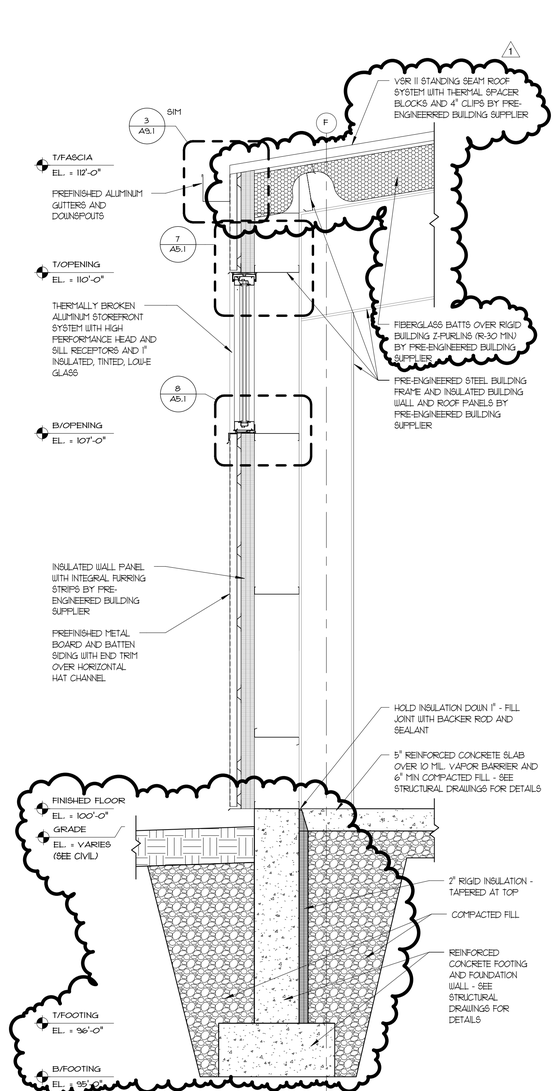
8 A5.1 **SILL DETAIL AT SOUTH WALL**
1 1/2" = 1'-0"



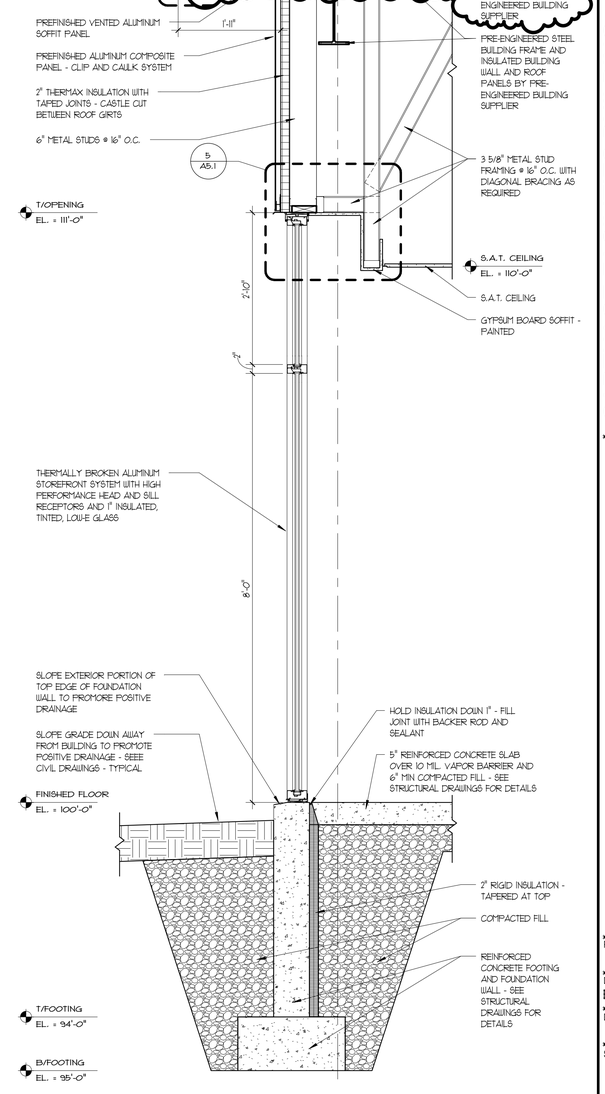
1 A5.1 **TYPICAL WALL SECTION**
3/4" = 1'-0"



2 A5.1 **NORTH WALL AT WINDOW**
3/4" = 1'-0"



3 A5.1 **SOUTH WALL AT WINDOW**
3/4" = 1'-0"



4 A5.1 **EAST CURTAIN WALL**
3/4" = 1'-0"

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CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

WALL SECTIONS & DETAILS

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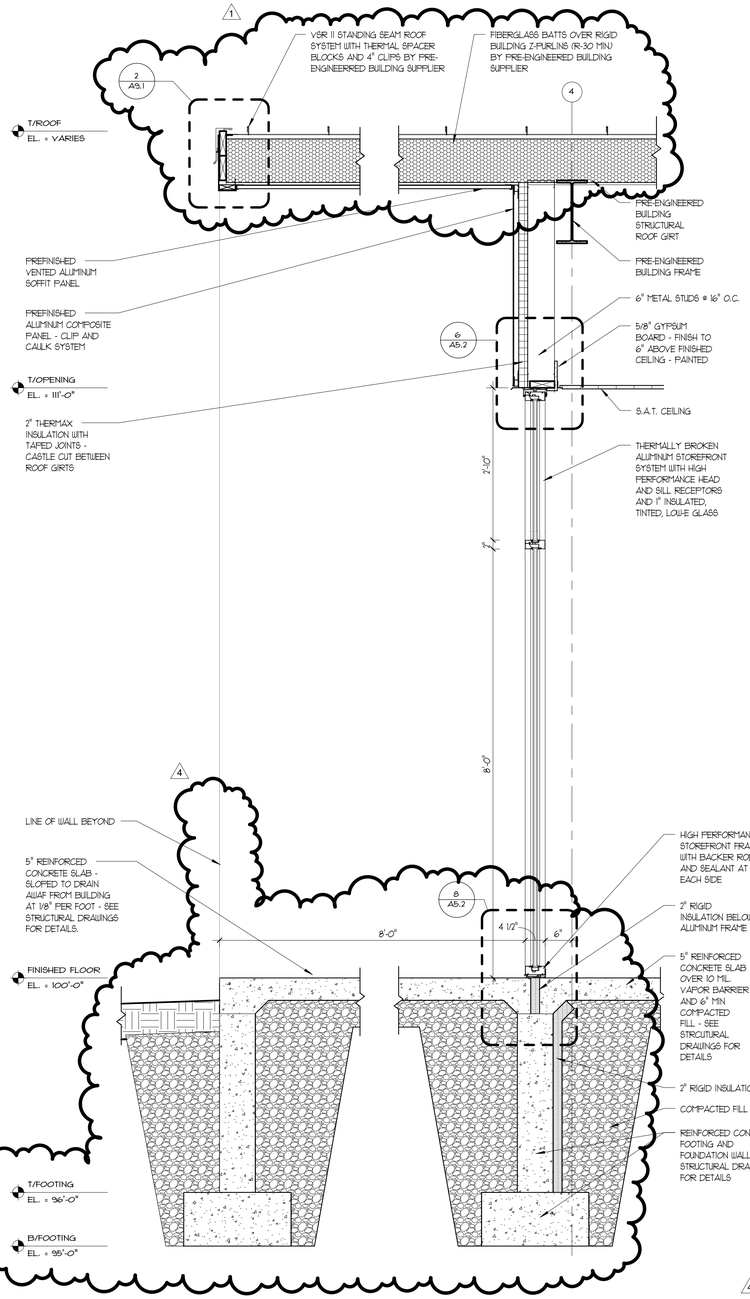
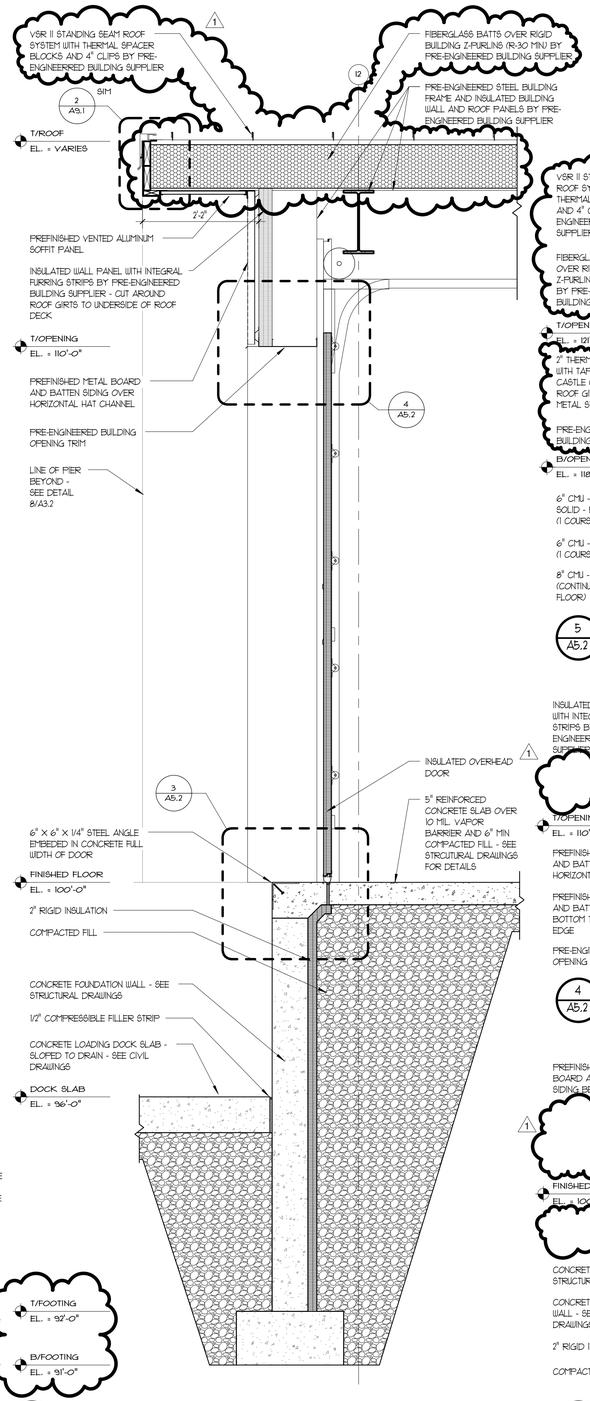
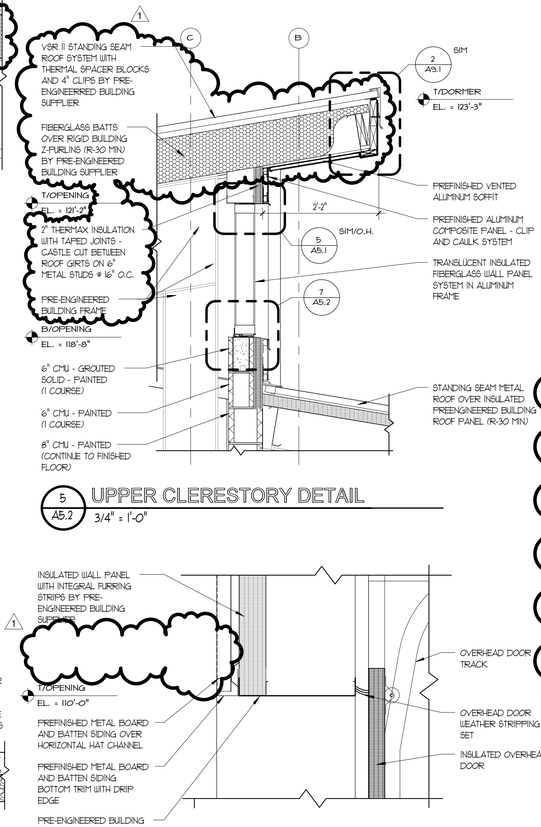
DATE: 06.28.22
SHEET NO.: A5.1



1 A5.2 SECTION AT PATIO
3/4" = 1'-0"

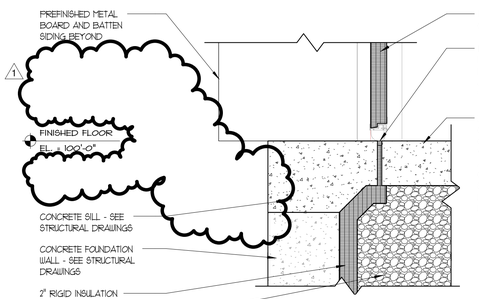


2 A5.2 SECTION AT TRUCK DOCK
3/4" = 1'-0"

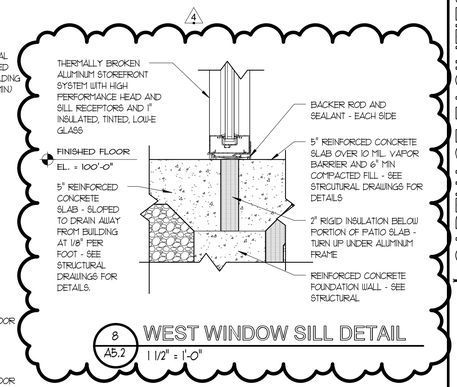


5 A5.2 UPPER CLERESTORY DETAIL
3/4" = 1'-0"

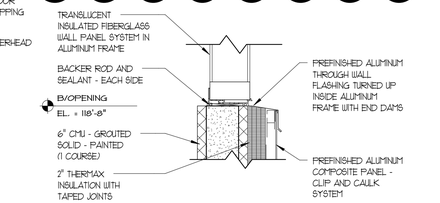
4 A5.2 OVERHEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"



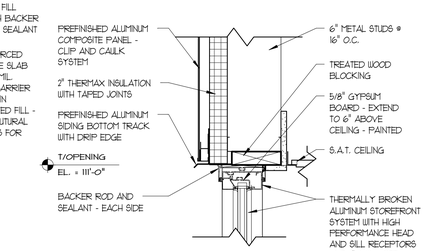
3 A5.2 TRUCK DOCK SILL DETAIL
1 1/2" = 1'-0"



8 A5.2 WEST WINDOW SILL DETAIL
1 1/2" = 1'-0"



7 A5.2 SILL DETAIL AT CLERESTORY
1 1/2" = 1'-0"



6 A5.2 WEST WINDOW HEAD DETAIL
1 1/2" = 1'-0"
SIMILAR AT EAST WINDOW

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CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

WALL SECTIONS & DETAILS

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Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085
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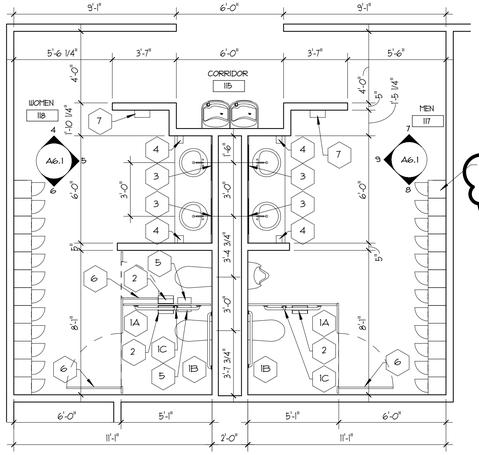
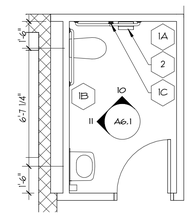
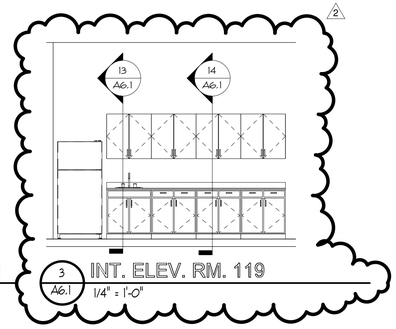
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A5.2



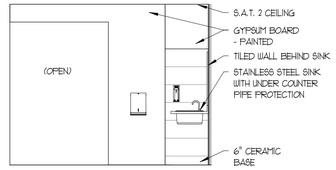
1 A6.1 ENLARGED RESTROOM PLAN
1/4" = 1'-0"



2 A6.1 ENLARGED RESTOOM PLAN
1/4" = 1'-0"



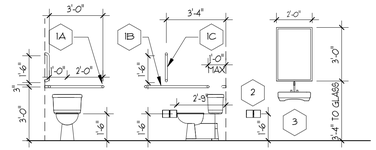
3 A6.1 INT. ELEV. RM. 119
1/4" = 1'-0"



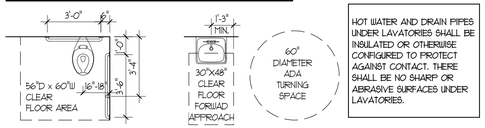
4 A6.1 INT. ELEV. RM. 118 NORTH
1/4" = 1'-0"

ACCESSORY MOUNTING HEIGHTS

ALL FIXTURES TO MEET ADA CLEARANCE AND HEIGHT REQUIREMENTS



FIXTURE CLEARANCES

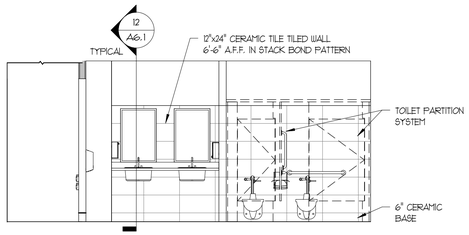


HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

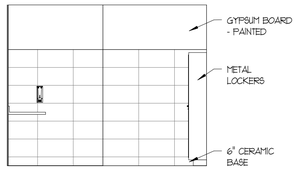
TOILET ACCESSORIES LEGEND

APPROVED ALTERNATE MANUFACTURES" ASI, BOBRICK

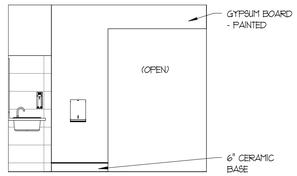
TAG	DESCRIPTION	MANUFACTURER	MODEL#
1A	36" GRAB BAR	BRADLEY	812 (42)
1B	42" GRAB BAR	BRADLEY	812 (36)
1C	18" GRAB BAR	BRADLEY	812 (18)
2	DUAL ROLL TOILET PAPER DISPENSER	BRADLEY	522
3	WALL MTD. FRAMELESS MIRRIOR (STANDARD SIZE)	BRADLEY	(36X60)
4	SOAP DISPENSER	BRADLEY	OWNER FURNISHED, CONTRACTOR INSTALLED
5	FEMININE NAPKIN DISPOSAL - SEMI RECESSED	BRADLEY	4722-1015
6	COAT HOOK	BRADLEY	PROVIDED AND INSTALLED BY PARTITION SUPPLIER
7	TOUEL DISPENSER	BRADLEY	OWNER FURNISHED, CONTRACTOR INSTALLED



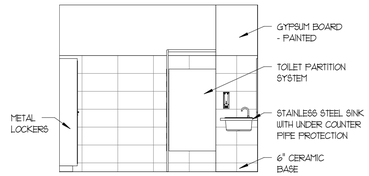
5 A6.1 INT. ELEV. RM. 118 EAST
1/4" = 1'-0"



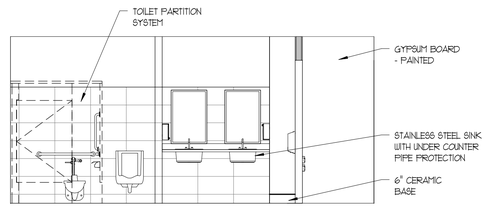
6 A6.1 INT. ELEV. RM. 118 SOUTH
1/4" = 1'-0"



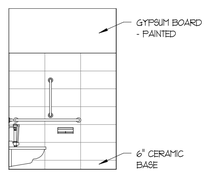
7 A6.1 INT. ELEV. RM. 117 NORTH
1/4" = 1'-0"



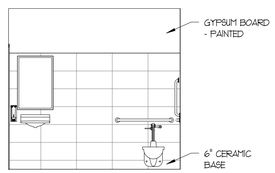
8 A6.1 INT. ELEV. RM. 117 SOUTH
1/4" = 1'-0"



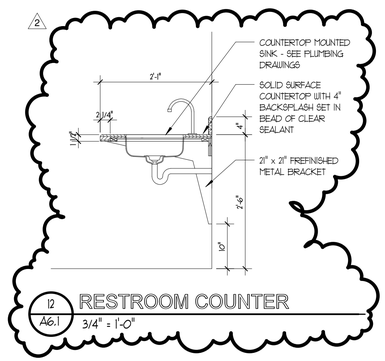
9 A6.1 INT. ELEV. RM. 117 WEST
1/4" = 1'-0"



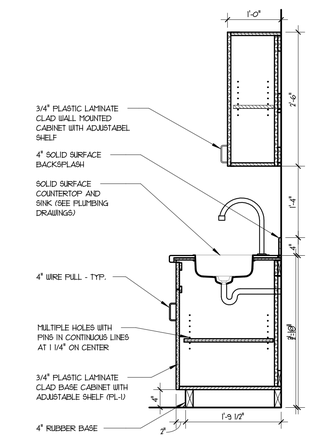
10 A6.1 INT. ELEV. RM. 110 NORTH
1/4" = 1'-0"



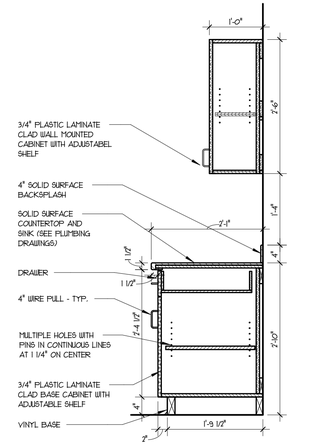
11 A6.1 INT. ELEV. RM. 110 WEST
1/4" = 1'-0"



12 A6.1 RESTROOM COUNTER
3/4" = 1'-0"



13 A6.1 MILLWORK SECTION
3/4" = 1'-0"



14 A6.1 MILLWORK SECTION
3/4" = 1'-0"

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1 07.13.22 Addendum No. 1
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CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

ENLARGED FLOOR PLANS

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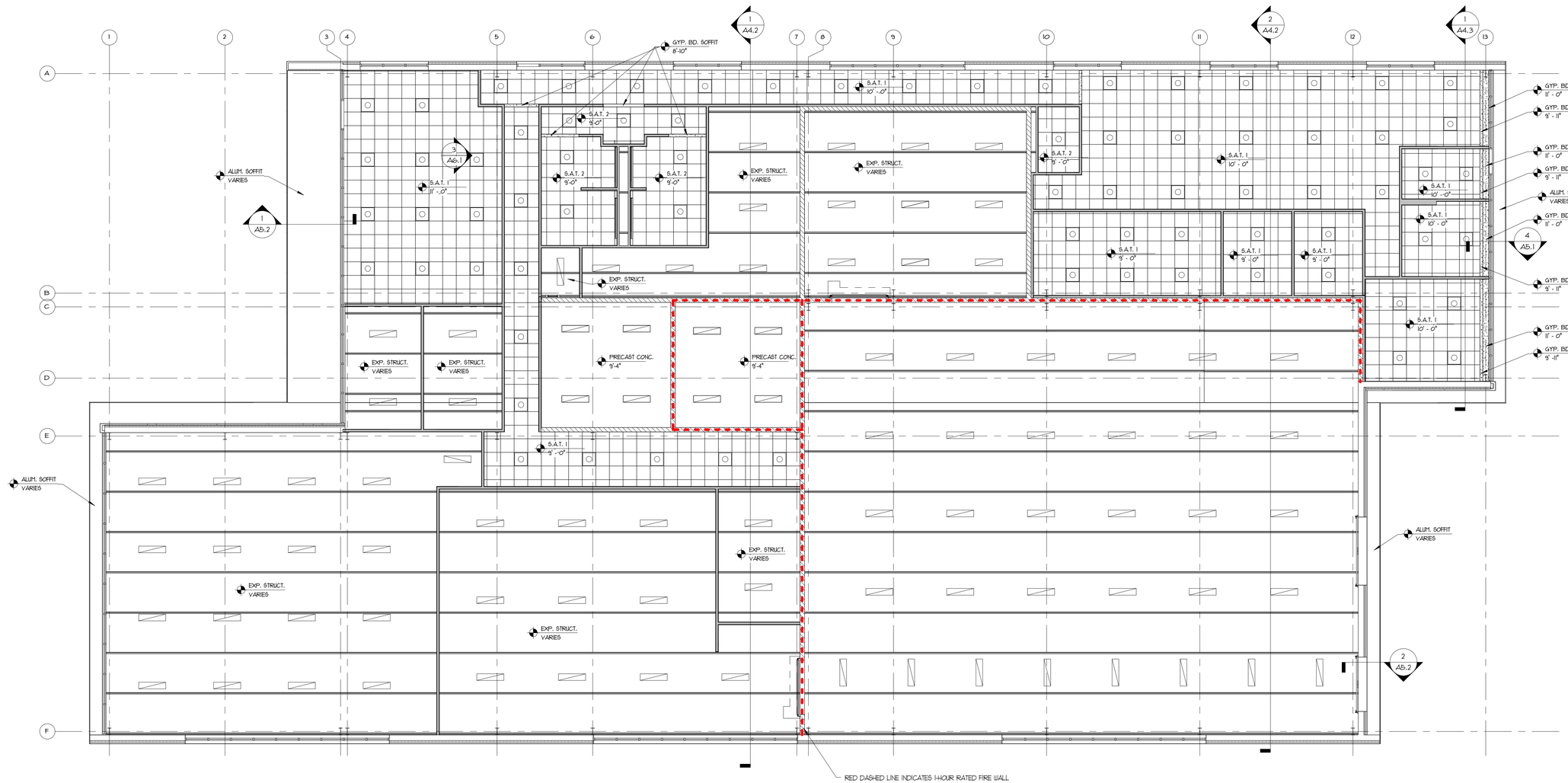
PROJECT NO.: 154.21.085
DRAWN BY: EMM CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A6.1



RED DASHED LINE INDICATES 1-HOUR RATED FIRE WALL CONSTRUCTION - SEE WALL TYPES FOR DETAILS. WALLS TO EXTEND TO UNDERSIDE OF ROOF DECK - PROVIDE FIRE CAULK AT TOP OF WALL AS REQUIRED

1 / A8.1 REFLECTED CEILING PLAN

1/8" = 1'-0"

REFLECTED CEILING PLAN LEGEND

GYPSUM BOARD EL. = 0'-0"	CEILING MATERIAL AND ELEVATION
	SAT 1
	GYPSUM BOARD SOFFIT
	2X4 LED LAY-IN FIXTURE
	1X4 LED SUSPENDED FIXTURE
	LED COVE LIGHT

REVISIONS

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

REFLECTED CEILING PLAN

600 Fifty-Second Street
Suite 220
Kenosha, Wisconsin 53140
Ph.: (262)652-2800

Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085

DRAWN BY: EMM | CHECKED BY: MAM

DATE: 06.28.22

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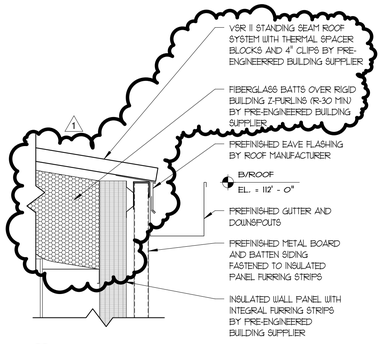
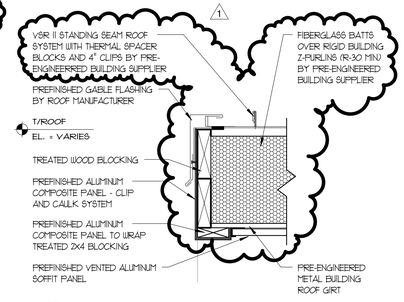


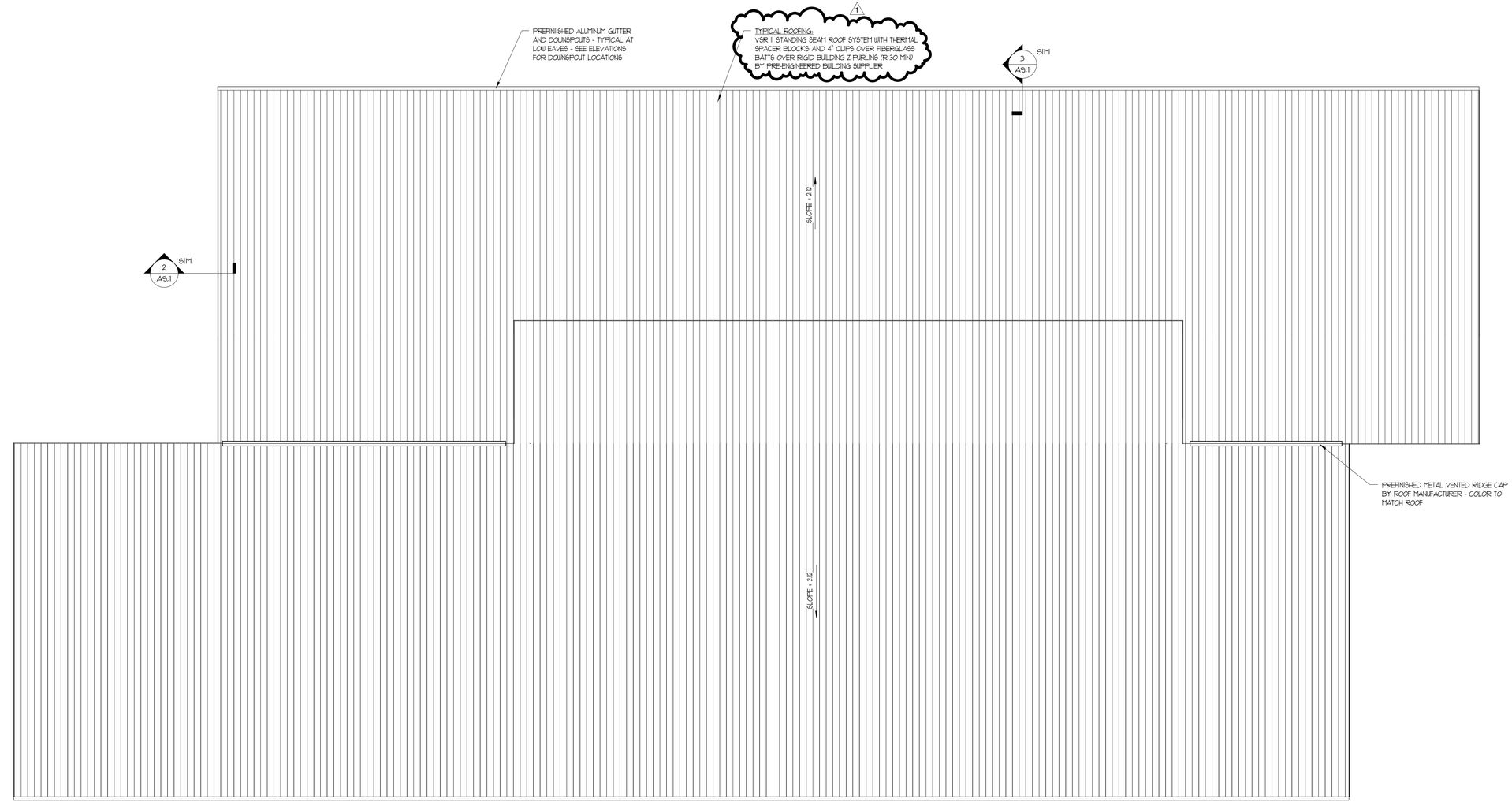
3 A9.1 TYPICAL EAVE DETAL

1 1/2" = 1'-0"



2 A9.1 TYPICAL FASCIA DETAIL

1 1/2" = 1'-0"



1 A9.1 Roof Plan

1/8" = 1'-0"

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REVISIONS:
1 07.13.22 Addendum No. 1

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

ROOF PLAN & DETAILS

600 Fifty-Second Street
Suite 220
Kenosha, Wisconsin 53140
Ph.: (262)652-2800

Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085

DRAWN BY: EMM
CHECKED BY: MAH

DATE: 06.28.22

SHEET NO.: A9.1

GENERAL NOTES:

1. ALL MATERIALS, CONSTRUCTION, AND DETAILS SHALL CONFORM WITH THE FOLLOWING:
   PLANS AND SPECIFICATIONS
   CODE AS SPECIFIED IN DESIGN DATA
2. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE FAMILIAR WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS (ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, ETC.) IN ORDER TO PROVIDE ALL CONSTRUCTION AND MATERIALS FOR THIS PROJECT.
3. THE CONTRACTOR SHALL REFER TO OTHER DRAWINGS CONTAINED IN THE CONSTRUCTION DOCUMENTS FOR ADDITIONAL SPECIFIED MEMBERS, DIMENSIONS, ELEVATIONS, DETAILS, OPENINGS, INSERTS, SLEEVES, DEPRESSIONS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS, REQUIRED TO CONSTRUCT THIS PROJECT.
4. DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PORTIONS OF THE CONTRACT DOCUMENTS UNLESS NOTED OTHERWISE.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
6. DO NOT SCALE PLANS.
7. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
8. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO: SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AS REQUIRED TO ENSURE THE SAFETY OF THE BUILDING AND WORKMEN ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE BASE BUILDING PRIMARY STRUCTURAL FRAME IS DESIGNED FOR THE FINAL, COMPLETED CONDITION AS INDICATED HEREIN. LOADS IMPOSED ON THE BUILDING STRUCTURE DURING THE COURSE OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS PART OF THE MEANS AND METHODS OF CONSTRUCTION. CARE SHALL BE GIVEN BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER TO CONSIDER THE PRESENT STATE OF THE STRUCTURE AT THE TIME OF LOADING, INCLUDING AGE-DEPENDENT STRENGTH OF THE STRUCTURAL ELEMENTS AND THE NATURE OF ALL LOADS IMPOSED.
9. CONSTRUCTION DOCUMENTS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS (COLUMN CENTERLINES, OUTSIDE FACE OF WALLS, TOP OF FRAMING MEMBERS, ETC.) MATERIAL SUPPLIERS AND DESIGNERS ARE RESPONSIBLE FOR ALL OTHER INFORMATION IN ORDER TO DETAIL/FABRICATE THEIR WORK. CONTACT THE ARCHITECT WITH ANY DISCREPANCIES.
10. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PLANS, THE CONTRACTOR SHALL BRING THE DISCREPANCY TO THE ARCHITECT'S ATTENTION IMMEDIATELY, IN WRITING.
11. NO PROVISIONS HAVE BEEN MADE IN THE DESIGN OF THIS STRUCTURE FOR FUTURE EXPANSION, UNLESS SPECIFICALLY NOTED ON PLAN.
12. ALL EXISTING STRUCTURES, INCLUDING EXISTING FOUNDATION SYSTEMS AND UNDERGROUND ELEMENTS, SHALL BE COMPLETELY REMOVED. EXISTING SUBSURFACE ELEMENTS MAY REMAIN IF APPROVED BY THE GEOTECHNICAL ENGINEER IN CONSULTATION WITH THE STRUCTURAL ENGINEER AND THE EXISTING MATERIALS ARE PREPARED AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO ACHIEVE THE PERFORMANCE CHARACTERISTICS INDICATED IN THE GEOTECHNICAL REPORT.

FOUNDATION AND EARTHWORK:

1. FOUNDATION AND SUBSURFACE DESIGN IS BASED ON THE SUBSURFACE EXPLORATION AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY:

   PROFFESIONAL SERVICE INDUSTRIES, INC.
   821 CORPORATE COURT
   WAUKESHA, WI 53189
   PROJECT No. 00522940
   DATED APRIL 18, 2022

   REFER TO DESIGN DATA FOR A SUMMARY OF KEY SOIL DESIGN VALUES. REFER TO REPORT FOR DESCRIPTION OF SUBSURFACE CONDITIONS, GEOTECHNICAL RECOMMENDATIONS, OTHER INFORMATION, AND ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR AND THE OWNER'S TESTING AGENT SHALL CONFIRM INSTALLATION AND CONSTRUCTION OF FOUNDATIONS IS COMPLETED IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
3. CENTER PIERS AND FOUNDATIONS UNDER COLUMN / WALL CENTERLINES UNLESS NOTED OTHERWISE.
4. BACKFILL AND DRAINAGE AT BASEMENT WALLS AND RETAINING WALLS SHALL BE PROVIDED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. DO NOT PLACE BACKFILL AGAINST BASEMENT OR RETAINING WALLS UNTIL THE WALLS AND ALL SLABS, BEAMS, AND SLABS-ON-GROUND FRAMING INTO THE WALL HAVE ATTAINED 100% OF THEIR DESIGN STRENGTH. BACKFILL SIMULTANEOUSLY ON BOTH SIDE OF FOUNDATION AND STEM WALLS.
5. EARTH RETENTION AND UNDERPINNING SYSTEMS, TEMPORARY OR PERMANENT, SHALL BE PROVIDED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS AN ELEMENT OF THE MEANS AND METHODS OF CONSTRUCTION.
6. SUBGRADES SHALL BE PREPARED PER THE GEOTECHNICAL RECOMMENDATIONS. TOP OF FOOTING ELEVATIONS SHOWN ON THESE CONSTRUCTION DOCUMENTS REPRESENT MINIMUM FOOTING DEPTHS FOR FROST PROTECTION AND ESTIMATES OF REQUIRED BEARING DEPTH BASED ON THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE ON-SITE GEOTECHNICAL ENGINEER SHALL ENSURE FOUNDATION AND SLAB-ON-GROUND SYSTEMS ARE FOUNDED ON COMPETENT MATERIAL TO ACHIEVE THE DESIGN VALUES INDICATED ON THESE CONSTRUCTION DOCUMENTS AND IN THE GEOTECHNICAL REPORT. AT THE GEOTECHNICAL ENGINEER'S DIRECTION, EXCAVATIONS MAY BE NEED TO BE EXTENDED TO FIND COMPETENT MATERIALS OR ADDITIONAL SUBGRADE PREPARATIONS MAY BE REQUIRED.
7. ALL EXTERIOR FOUNDATIONS SHALL BE CAST AT LEAST FROST DEPTH BELOW ADJACENT FINISH EXTERIOR GRADE. FOOTINGS SHALL BE CAST AT LEAST MINIMUM BEARING DEPTH BELOW ADJACENT FINAL GRADE OR FINISHED FLOOR ELEVATION. REFER TO SOIL DESIGN VALUES.
8. REFER TO GEOTECHNICAL AND/OR ENVIRONMENTAL REPORT FOR REMEDIATION OF SOILS THAT ARE NOT SUITABLE FOR BEARING BELOW FOOTINGS OR SLABS, OR SOILS THAT REQUIRE REMOVAL DUE TO CONTAMINATION.
9. ENGINEERED FILL MATERIALS OR LEAN CONCRETE SHALL BE PROVIDED AND INSTALLED PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
10. FOUNDATIONS SHALL NOT BE INSTALLED ON FROZEN SUBGRADE.

METAL BUILDING:

1. THE ENTIRE DESIGN OF THE METAL BUILDING SUPERSTRUCTURE SHALL BE THE RESPONSIBILITY OF THE METAL BUILDING SUPPLIER. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, FOR THE STATE IN WHICH THE PROJECT IS LOCATED.
2. THE CONTRACTOR SHALL COORDINATE WITH THE METAL BUILDING SUPPLIER ANCHOR BOLT SIZES, TYPE, AND LOCATIONS.
3. METAL BUILDING SHOP DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:
   A. THE NAME, ADDRESS, AND PHONE NUMBER OF THE SUPPLIER
   B. ALL DESIGN LOADS
   C. FRAMING PLANS SPECIFYING ALL MEMBER SIZES AND LOCATIONS
   D. ANCHOR BOLT SIZES, LENGTHS, AND ELEVATIONS
   E. ALL COLUMN FRAME VERTICAL AND HORIZONTAL REACTIONS TRANSMITTED TO THE FOUNDATION
4. CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE METAL BUILDING SUPPLIER ALL BUILDING DIMENSIONS AND ELEVATIONS FOR THE METAL BUILDING TO ENSURE THAT THE METAL BUILDING STRUCTURE WILL SUFFICIENTLY BEAR ON THE FOUNDATION PRIOR TO THE METAL BUILDING FABRICATION.

CAST IN PLACE REINFORCED CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO REFERENCED EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION".
2. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
3. REFER TO REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE FOR LAP SPLICES IN REINFORCING STEEL.
4. ALL LAPS IN REINFORCING STEEL SHALL BE CLASS "B" LAP SPLICES UNLESS OTHERWISE NOTED. AT CONSTRUCTION JOINTS, CONTINUOUS BARS SHALL BE LAP SPLICED WITH A CLASS "B" LAP. ALL OTHER BARS EXTENDING THRU THE JOINT SHALL BE FULLY DEVELOPED EACH SIDE OF JOINT, UNO.
5. ALL HOOKS IN REINFORCING STEEL SHALL BE STANDARD HOOKS, UNO.
6. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCEMENT IN CONCRETE UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 18 BARS	2"
NO. 5 BAR AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
WALLS, JOISTS: NO. 11 BAR AND SMALLER	1"
BEAMS AND COLUMNS	1 1/2"

7. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED IN ANY CONCRETE MIX.
8. CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. ANY CONCRETE SURFACE REPAIRS SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED. REPAIR AND PATCH DEFECTIVE AREAS WITH PROPRIETARY PATCHING COMPOUND IMMEDIATELY AFTER REMOVAL OF FORMS.
9. PROVIDE AN ALLOWANCE FOR 50 FEET OF CRACK REPAIR FOR EACH 10,000 SQUARE FEET OF SLAB AREA DURING AND AFTER CONSTRUCTION.
10. PROVIDE AN ADDITIONAL 200 lbs STOCK OF #5 BARS OF VARYING LENGTHS FOR EACH 10,000 SQUARE FEET OF SLAB AREA FOR PLACEMENT AS DIRECTED BY STRUCTURAL ENGINEER.
11. PROVIDE A 3/4" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE. TOP SURFACE OF WALLS SHALL BE FINISHED SMOOTH, UNLESS NOTED OTHERWISE.
12. CONTRACTOR SHALL PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION WHILE PLACING CONCRETE.
13. PROVIDE 1/2" EXPANSION JOINT MATERIAL AT INTERIOR LOCATIONS WHERE SLABS ABUT WALLS, COLUMNS, AND OTHER VERTICAL SURFACES UNLESS NOTED OTHERWISE.
14. TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94.
15. ADDITION OF JOBSITE WATER TO CONCRETE SHALL BE PER ASTM C94.
16. ALL CONCRETE SLABS SHALL BE CURED PER ACI 308.1 RECOMMENDATIONS.
17. CONTROL JOINTS SHALL BE PLACED IN CONVENTIONAL SLAB ON GROUND WITHIN 24 HOURS OF INITIAL POUR. REFER TO PLAN NOTES FOR ADDITIONAL INFO.
18. **DO NOT PLACE CONTROL JOINTS IN**: STRUCTURAL SLAB ON GROUND, POST TENSIONED SLAB ON GROUND, OR PILE SUPPORTED SLABS.
19. OWNER SHALL HIRE A MATERIALS TESTING LABORATORY TO CAST AND TEST CONCRETE CYLINDERS. ALL TESTING SHALL BE IN ACCORDANCE WITH ACI 318. RESULTS OF CYLINDER TESTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER. CONCRETE TEST REPORTS SHALL STATE THE FOLLOWING INFORMATION:
   A. LOCATION ON PROJECT WHERE THE CONCRETE IS USED
   B. 7 DAY COMPRESSIVE STRENGTH
   C. 28 DAY COMPRESSIVE STRENGTH
   D. AIR CONTENT
   E. SLUMP
   F. AMOUNT OF WATER ADDED ON JOB SITE
   G. MIX USED
20. CONCRETE TEST REPORTS SHALL DIRECTLY STATE WHETHER OR NOT THE TEST RESULT COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY IRREGULARITIES OR DEFECTS IN CONCRETE SLABS (CRACKS, BUMPS, FLOOR CURLING, ETC.) BEFORE ANY FLOOR FINISHES ARE APPLIED.
22. CONFORM TO ACI 117 FOR CONCRETE TOLERANCES.
23. CONFORM TO ACI 306.1 FOR COLD WEATHER CONCRETE PLACEMENT.
24. CONFORM TO ACI 305.1 FOR HOT WEATHER CONCRETE PLACEMENT.
25. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED FOR NONWELDABLE REBAR NOR WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER

PRECAST CONCRETE:

1. PRECAST CONCRETE SUPPLIER SHALL DESIGN ALL PRECAST ELEMENTS (HOLLOW CORE PLANK) AND CONNECTIONS TO RESIST ALL GRAVITY AND LATERAL LOADS SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
2. PRECAST CONCRETE SUPPLIER SHALL DESIGN ALL CONNECTIONS BETWEEN PRECAST ELEMENTS AND CONNECTIONS TO THE SUPERSTRUCTURE AND FOUNDATION TO RESIST ALL LOADS SPECIFIED.
3. PRECAST CONCRETE MEMBERS SHALL BE DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THIS INCLUDES LOADS FROM PERMANENT EQUIPMENT (FOLDING PARTITIONS, MECHANICAL UNITS, SURGICAL LIGHTS, ETC.).
4. PRECAST CONCRETE SUPPLIER SHALL DESIGN AND PROVIDE ALL LINTELS ACROSS OPENINGS IN NEW PRECAST CONCRETE WALL PANELS. THIS INCLUDES ANY HOT-ROLLED STEEL REQUIRED TO SUPPORT PRECAST CONCRETE MEMBERS.
5. PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED FOR FIRE RESISTANCE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
6. PRECAST CONCRETE SUPPLIER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, FOR THE STATE IN WHICH THE PROJECT IS LOCATED.
7. PRECASTER SHALL GROUT PRECAST PLANK SOLID AND ADD STEEL REINFORCEMENT TO PRECAST PLANK AS REQUIRED TO SUPPORT ALL LOADS STATED ON THESE CONSTRUCTION DOCUMENTS.
8. PLACE CONCRETE TOPPING ON TOP OF PRECAST CONCRETE PLANK BEFORE CONSTRUCTION OF ANY PARTITION WALLS.
9. FINISH CONCRETE TOPPING ON TOP OF PRECAST CONCRETE PLANK TO A LEVEL SURFACE.

POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY:

1. POST INSTALLED ANCHORS SHALL BE: EXPANSION, ADHESIVE, OR SCREW ANCHORS AS SPECIFIED, UNLESS NOTED OTHERWISE.
2. EXPANSION ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI KWIK BOLT TZ.
   B. FOR SOLID GROUTED CONCRETE MASONRY:
      a. HILTI KWIK BOLT TZ.
3. ADHESIVE ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI HIT RE 500 V3 EPOXY ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED
      b. HILTI HIT-HY 200 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED.
   B. SOLID GROUTED CONCRETE MASONRY:
      a. HILTI HIT-HY 270 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED.
   C. HOLLOW OR MULTI-WYTHE MASONRY:
      a. HILTI HIT-HY 70 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD OR THREADED ROD WITH SCREEN TUBES.
4. SCREW ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI KWIK HUS EZ
   B. SOLID GROUTED CONCRETE MASONRY:
      a. HILTI KWIK HUS EZ
5. WHEN INSTALLING POST INSTALLED ANCHORS:
   A. THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND CURRENT ICC-ES REPORT SHALL BE FOLLOWED.
   B. DO NOT DAMAGE EXISTING REINFORCING, POST TENSIONED CABLES OR OTHER EMBEDDED ITEMS.
   C. WHEN INSTALLING IN CONCRETE:
      a. THE MINIMUM CONCRETE DESIGN COMPRESSIVE STRENGTH SHALL MATCH THE COMPRESSIVE STRENGTHS NOTED IN THE CONCRETE NOTES SECTION.
      b. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE SHALL HAVE A MINIMUM AGE OF 21 DAYS AT THE TIME OF INSTALLATION. ANCHORS INSTALLED IN CONCRETE LESS THAN 21 DAYS OLD SHALL BE TESTED IN ACCORDANCE WITH ACI 355.4 TO VERIFY PERFORMANCE.
      c. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE AT LEAST 50-DEGREES FAHRENHEIT.
   D. ADHESIVE USED IN AN ADHESIVE ANCHOR SYSTEM SHALL BE STORED AT THE SERVICE TEMPERATURE RANGE RECOMMENDED BY THE MANUFACTURER.
   E. ANCHORS TO BE INSTALLED IN ADHESIVE SHALL BE CLEAN, OIL FREE AND FREE OF RUST, PAINT OR OTHER COATINGS.
   F. ADHESIVE ANCHORS SHALL BE SECURELY PLACED TO PREVENT DISPLACEMENT OR DISTURBANCE WHILE THE ADHESIVE CURES. IF AN ANCHOR IS DISPLACED OR DISTURBED BEFORE A FULL ADHESIVE CURE IT SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
   G. UNLESS NOTED OTHERWISE, ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE SUPPORTING SURFACE.
   H. INSTALL ANCHORS TO ACCOMMODATE THE STANDARD HOLE SIZE IN THE SUPPORTED STEEL MEMBER. THE HOLE DIAMETER THROUGH THE SUPPORTED STEEL MEMBER SHALL BE 1/16" LARGER THAN THE ANCHOR UNLESS NOTED OTHERWISE. USE PLATE WASHERS WITH A STANDARD SIZE HOLE WELDED TO STEEL MEMBERS WHERE OVERSIZED HOLES MUST BE USED THROUGH THE STEEL MEMBER. UNO.
   I. HOLES SHALL BE DRILLED AND INSTALLED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AS OUTLINED IN THE ICC-ES REPORT. WHERE APPLICABLE, INSTALLATION SHALL ALSO FOLLOW PROPER CLEANING PROCEDURE AS INDICATED IN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION AS OUTLINED IN THE ICC-ES REPORT. HOLES SHALL BE DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL, DO NOT CORE DRILL HOLES.
6. ALL PERSONNEL INSTALLING ANCHORS SHALL BE TRAINED AND CERTIFIED BY THE ANCHORING SYSTEM MANUFACTURER. CONTRACTOR SHALL SUBMIT VALID CERTIFICATION FROM THE MANUFACTURER ON ALL PERSONNEL. ALL PERSONNEL INSTALLING ADHESIVE ANCHORS IN A HORIZONTAL, OVERHEAD OR UPWARDLY INCLINED CONDITION SHALL BE TRAINED AND CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM FOR SUCH APPLICATIONS.
7. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST IN PLACE ANCHORS. ONLY USE SPECIFIC TYPE OF ANCHOR (EXPANSION, ADHESIVE, SCREW) WHERE INDICATED. DO NOT SUBSTITUTE ANCHOR TYPES WITHOUT WRITTEN APPROVAL FROM SEOR.
8. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED ABOVE SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED (PER THE DELEGATED DESIGN NOTES) SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE. THE PROPOSED SUBSTITUTION(S) SHALL MEET THE MOST RECENTLY PUBLISHED ACI 355.2 OR ACI 355.4.
9. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL POST INSTALLED ANCHORS AS REQUIRED BY THE BUILDING CODE AND/OR ICC-ES REPORT. WRITTEN SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE BY THE SPECIAL INSPECTOR. THE REPORTS SHALL RECORD AND REPORT THE FOLLOWING AS A MINIMUM:
   A. PRIOR TO AND DURING INSTALLATION OF ANCHORS, INSPECTION AND REPORT SHALL INCLUDE:
      a. INSTALLER SHALL HAVE REVIEWED THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND ESR REPORT AND HAVE BEEN CERTIFIED AS NOTED ABOVE.
      b. ALL HORIZONTAL, OVERHEAD AND UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE CONTINUOUSLY INSPECTED DURING THE INSTALLATION BY AN INSPECTOR SPECIALLY TRAINED AND APPROVED FOR THIS PURPOSE.
      c. GENERAL CONCRETE OR CMU BLOCK CONDITIONS (I.E. CRACKED OR UNCRACKED, WET OR DRY, FINISHED STATE).
      d. HOLE CONDITION AND PREPARATION PRIOR TO INSTALLATION OF ANCHOR. INDICATE IF MANUFACTURE'S WRITTEN PROCEDURES FOR PREPARATION OF HOLE WERE FOLLOWED.
      e. INSTALLATION OF ANCHOR FOLLOWED MANUFACTURES WRITTEN PROCEDURES. INDICATE IF MANUFACTURER'S WRITTEN PROCEDURES FOR ANCHOR INSTALLATION WERE FOLLOWED.
      f. EMBEDMENT DEPTH AND CONCRETE OR BLOCK THICKNESS.
      g. ANCHOR SIZE AND TYPE.

CONCRETE MASONRY UNIT (CMU):

1. MASONRY CONSTRUCTION TO CONFORM TO ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES).
2. ONLY LOAD BEARING MASONRY IS SHOWN ON THE STRUCTURAL PLANS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-LOAD BEARING MASONRY. REFER TO SCHEDULES AND DETAILS FOR NON-LOAD BEARING MASONRY INFORMATION.
3. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS WITH ELEVATIONS OF REINFORCED WALLS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
4. ALL MASONRY WALLS SHALL BE CONSTRUCTED IN A RUNNING BOND PATTERN AS DESCRIBED BY ACI 530 UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DOCUMENTS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTROL JOINTS IN EXTERIOR FACADE.
6. FOR LOAD BEARING WALLS, PROVIDE CONTROL JOINTS AS INDICATED ON PLAN. FOR ALL LOAD BEARING WALL CONTROL JOINTS NOT SPECIFIED AND AT ALL NON-LOAD BEARING WALLS, PROVIDE VERTICAL WALL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS:
   A. 10'-0" MAXIMUM FROM CORNERS OF WALLS
   B. 24'-0" o/c MAXIMUM
   C. AT CHANGES IN WALL HEIGHT AND THICKNESS
   D. AT WALLS ABUTTING COLUMNS
   E. DO NOT PROVIDE CONTROL JOINTS IN ELEVATOR AND STAIR SHAFT WALLS.
7. PROVIDE (1) VERTICAL BAR AT CORNERS AND ON EACH SIDE OF CONTROL JOINTS. MATCH SIZE OF SPECIFIED REINFORCEMENT. PROVIDE #5 IF NOT SPECIFIED.
8. LAP VERTICAL WALL REINFORCEMENT PER SCHEDULE.
9. LAP HORIZONTAL WALL REINFORCING PER SCHEDULE. STAGGER BOND BEAM LAP LOCATIONS MINIMUM 5'-0".
10. HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS SHALL BE LAPPED PER TYPICAL DETAILS.
11. PROVIDE STANDARD (W1.7) HORIZONTAL JOINT REINFORCING AT 16" o/c VERTICALLY (8" o/c IN PARAPET WALLS) UNLESS NOTED OTHERWISE. REINFORCING TO BE HOT-DIPPED GALVANIZED IN EXTERIOR WALLS AND MILL-GALVANIZED FOR INTERIOR WALLS. JOINT REINFORCING SHALL BE LADDER TYPE CONFORMING TO ASTM A951, WITH PREFABRICATED CORNER AND TEE UNITS AT CORNERS AND INTERSECTIONS. LAP JOINT REINFORCING 6" MINIMUM.
12. FACE SHELLS AND WEBS SHALL BE FULL-BEDDED IN ALL COURSES OF PIERS, AND THE STARTING COURSE OF ALL WALLS.
13. ALL VERTICAL MASONRY WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH BOND BEAMS AND EXTEND FULL HEIGHT OF THE WALL. GROUT CORES SOLID AT ALL VERTICAL REINFORCING.
14. COURSE AGGREGATE IN MASONRY GROUT SHALL BE PEA GRAVEL.
15. GALVANIZE ALL STEEL OUTSIDE OF BUILDING VAPOR BARRIER INCLUDING THE EXTERIOR LINTELS AND VENEER SUPPORT ANGLES AND ASSOCIATED ANCHORS, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
16. ALL PARTIAL HEIGHT BLOCKS LESS THAN 4" HIGH SHALL BE GROUTED SOLID IN LOAD BEARING WALLS.
17. SOLID OR SOLID-GROUTED CMU SHALL BE PROVIDED IN COURSES IMMEDIATELY ABOVE AND BELOW ANY CHANGES IN WYTHE THICKNESS.
18. SOLID GROUT ALL MASONRY BELOW GRADE.
19. CONTRACTOR SHALL GROUT MASONRY SOLID AT ALL POST-INSTALLED ANCHOR (EXPANSION, EPOXY, DRILLED) LOCATIONS. GROUT ON ALL SIDES OF EACH ANCHOR AT LEAST 4" OR THE SPECIFIED ANCHOR EMBEDMENT, WHICH EVER IS GREATER.
20. PROVIDE 8" HIGH BOND BEAM w/ (2) #5 x CONT AT TOP OF WALLS AND AT FLOOR LINES FOR MULTI-STORY WALLS. REFER TO TYPICAL DETAILS FOR TOP AND BOTTOM OF WALL DETAILS.
21. AT BEAM BEARING LOCATIONS, GROUT CMU SOLID A MINIMUM OF 16" WIDE x 3 COURSES DEEP UNLESS NOTED OTHERWISE.
22. MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.
23. ALL CMU BLOCK TO BE NORMAL WEIGHT UNLESS NOTED OTHERWISE.
24. PROVIDE A MINIMUM OF 1/2" CLEAR BETWEEN INTERIOR BLOCK FACE SHELL AND FACE OF REINFORCING BAR. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCING BARS AND TIES:

MASONRY NOT EXPOSED TO EARTH OR WEATHER:	1 1/2"
MASONRY EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 9 BARS	2"
NO. 5 BAR AND SMALLER	1 1/2"

25. REFER TO LOOSE VENEER LINTEL SCHEDULE FOR LINTEL SIZE AND REQUIREMENTS. VERIFY LINTEL QUANTITY, LOCATIONS, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

GENERAL NOTES

PIERCE ENGINEERS, INC.
181 N. Broadway Ave
Milwaukee, WI 53202
414.278.6060
www.pierceengineers.com
PE Project: 22247

PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S001

MATERIAL STRENGTHS:
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE USED. REFER TO MATERIAL NOTES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONCRETE MATERIALS SCHEDULE

TYPE OF CONSTRUCTION	COMPRESSIVE STRENGTH (psi) (ASTM C39)	EQUIL. DENSITY (pcf)	EXPOSURE CATEGORIES				MAXIMUM w/cm	AIR CONTENT
			F	S	W	C		
FOOTINGS	3,000	145					--	--
FROST WALLS	4,000	145	F1				0.55	5%
INTERIOR WALLS AND PIERS	4,000	145					--	--
EXTERIOR WALLS AND PIERS	4,500	145	F2				0.45	6%
INTERIOR NON-PARKING SLAB ON GROUND	4,000	145					--	--
INTERIOR PARKING SLAB ON GROUND	5,000	145				C2	0.4	--
EXTERIOR SLAB ON GROUND	5,000	145	F3			C2	0.4	6%
LEAN CONCRETE		145					--	--

CONCRETE MATERIALS SCHEDULE NOTES:

1. CORROSION EXPOSURE SHALL BE F0, S0, W0, AND C0 UNLESS NOTED OTHERWISE IN THE EXPOSURE CATEGORIES COLUMN.
2. MAXIMUM AGGREGATE SIZE FOR ALL MIXES TO BE 3/4 INCHES; FOOTINGS MAY BE 1 1/2 INCHES.
3. PROVIDE 5% AIR CONTENT AT ALL EXPOSED CONDITIONS NOT EXPLICITLY INDICATED ABOVE. TOLERANCE OF AIR CONTENT AS DELIVERED SHALL BE +/- 1.5%.
4. CONCRETE SUPPLIER AND FINISHER SHALL COORDINATE PROPERTIES OF PROPOSED MIX DESIGN UNDER VARIOUS WEATHER CONDITIONS TO COMPLETE PLACING AND FINISHING OF SLAB PER THE PROJECT REQUIREMENTS AND IN A TIMELY MANNER. APPROVED CHEMICAL ADMIXTURES MAY BE USED TO INCREASE WORKABILITY PROVIDED THE ADMIXTURE-TREATED CONCRETE HAS THE SAME OR LOWER WATER-CEMENT RATIO AND DOES NOT EXHIBIT SEGREGATION POTENTIAL OR EXCESSIVE BLEEDING. IF PROPOSED SLUMP WILL EXCEED 9", PROVIDE DOCUMENTATION OF PAST PERFORMANCE OF MIX DESIGN.
5. FOR CONCRETE FLOOR SLABS AND TOPPINGS, THE MINIMUM CEMENTITIOUS MATERIAL CONTENT SHALL BE 540 LBS/YD3 UNLESS APPROVED BY ENGINEER OF RECORD.
6. CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED AT 28 DAYS FOR STRENGTH EQUAL TO OR LESS THAN 6000 PSI, AND AT 56 DAYS FOR STRENGTH GREATER THAN 6000 PSI.
7. FOR LIGHTWEIGHT CONCRETE HAVING EQUILIBRIUM DENSITY LESS THAN 145 pcf, LAMBDA (λ) HAS BEEN TAKEN AS 0.75.
8. FOR EXPOSURE CATEGORY F3, MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY MASS AS FOLLOWS:
   A. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 – 25%
   B. SLAG CEMENT CONFORMING TO ASTM C989 – 50%
   C. SILICA FUME CONFORMING TO ASTM C1240 – 10%
   D. TOTAL OF FLY ASH OR OTHER POZZOLANS AND SILICA FUME – 35%
   E. TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT, AND SILICA FUME – 50%
9. FOR EXPOSURE CLASSES S1, S2, AND S3, MINERAL FILLERS DERIVED FROM CARBONATE AGGREGATE ARE PROHIBITED. FOR EXPOSURE CLASSES S2 AND S3, DO NOT USE CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE.
10. REFER TO MASS CONCRETE NOTES FOR ADDITIONAL REQUIREMENTS
11. CONCRETE SUPPLIER, IN CONCERT WITH THE GENERAL CONTRACTOR, TO PROVIDE CONCRETE MIX SUCH THAT THE MAXIMUM TEMPERATURE WILL NOT EXCEED 158 DEGREES FAHRENHEIT. LIKEWISE, A THERMAL GRADIENT (FROM THE CENTER TO THE EDGE OF THE CONCRETE PLACEMENT) THAT EXCEEDS 35 DEGREES FAHRENHEIT IS NOT PERMITTED.

MACROSYNTHETIC FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE SLABS
COMPLYING WITH ASTM C 1116, TYPE III, 1 1/2" TO 2 1/2" LONG

METAL / STEEL:
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE PROVIDED:

REINFORCING STEEL
- ASTM A615, DEFORMED, TYPICAL ..... GRADE 60
- ASTM A706, DEFORMED, WELDABLE ..... GRADE 60
- STEEL WELDED WIRE REINFORCEMENT, FLAT SHEETS ..... GRADE 60
- POST-TENSIONING TENDONS, ASTM A416 ..... GRADE 270
- STUD RAIL ASSEMBLIES, ASTM A1044
- HEADED WELDED STUDS, ASTM A108

STRUCTURAL STEEL
- ROLLED WIDE FLANGE SHAPES, ASTM A992 ..... GRADE 50
- CHANNELS, ANGLES, AND S-SHAPES, ASTM A36 ..... GRADE 36
- PLATES AND BARS, TYPICAL, ASTM A36 ..... GRADE 36
- PLATES AND BARS, WHERE NOTED, ASTM A572 ..... GRADE 50
- RECT. HSS SHAPES, ASTM A500, TYPICAL ..... GRADE C (Fy = 50 KSI)
- CIRCULAR HSS SHAPES, ASTM A500, TYPICAL ..... GRADE C (Fy = 46 KSI)
- ALL HSS SHAPES, ASTM A1085, WHERE NOTED ..... (Fy = 50 KSI)
- PIPE, ASTM A53, TYPE E OR S ..... GRADE B
- ALL OTHER ROLLED SHAPES, ASTM A36 ..... GRADE 36

COLD FORMED METAL FRAMING
- GAUGE STEEL (ALL STUDS AND TRACKS), ASTM A1003
  - 18 GAUGE AND LIGHTER ..... GRADE 33
  - 16 GAUGE AND HEAVIER ..... GRADE 55
- GALVANIZED COATING G60

STRUCTURAL CONNECTORS
- ANCHOR RODS, ASTM F1554, TYPICAL ..... GRADE 36
- ANCHOR RODS, ASTM F1554, WHERE NOTED ..... GRADE 55, S1
- HIGH STRENGTH BOLTS, ASTM F3125, TYPE 1, TYPICAL ..... GROUP A (120 KSI)
- HIGH STRENGTH BOLTS, ASTM F3125, TYPE 1, WHERE NOTED ..... GROUP B (150 KSI)
- NUTS, ASTM A563
- WASHERS, ASTM F436
- DTIs WASHERS, ASTM F959 ..... GRADE PER BOLT SPEC
- STEEL HEADED STUD ANCHORS, ASTM A108
- RODS, ASTM A36, TYPICAL ..... GRADE 36
- RODS, ASTM F1554, WHERE NOTED ..... GRADE 55, S1
- CLEVIS AND TURNBUCKLES, ASTM A108 ..... GRADE 1035
- EYEBOLTS AND NUTS, ASTM A108 ..... GRADE 1030

STAINLESS STEEL
- STAINLESS STEEL BOLTS, NUTS, AND WASHERS, ASTM F593
- STAINLESS STEEL ANGLES, ASTM A276, S304 ..... Fy = 30,000 PSI
- PLATE AND BAR, ASTM A276, S304 ..... Fy = 30,000 PSI
- TUBE SHAPES, ASTM A554, S304 ..... Fy = 30,000 PSI

WELDING ELECTRODES
- STRUCTURAL STEEL E70XX
- WELDABLE REINFORCING STEEL E80XX
- STAINLESS STEEL E75XX

MASONRY:
- ASSEMBLY ..... f'm = 2,500 PSI
- BLOCK ..... f'CMU = 3,250 PSI OR GREATER
- GROUT ..... f'c = 2,500 PSI OR GREATER
- MASONRY MORTAR ..... TYPE "M" MORTAR BELOW GRADE
  TYPE "M" OR "S" ABOVE GRADE
- GROUT BELOW BASE PLATES AND BEARING PLATES
  - NON-METALLIC, SHRINKAGE RESISTANT ..... ASTM C1107

DESIGN DATA:
APPLICABLE CODES / STANDARDS:
WISCONSIN COMMERCIAL BUILDING CODE, 2015 IBC AS MODIFIED BY CHAPTERS SPS 361-366, ADOPTED APRIL 1, 2018
ASCE 7-10 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI

STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE)
ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES)
ANSI/AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
AWS D1.1/D1.1M STRUCTURAL WELDING CODE - STEEL

BUILDING DESIGN LOADS / CRITERIA:
RISK CATEGORY II

DESIGN DEAD LOADS:
ROOF DEAD LOAD ..... AS SPECIFIED BY METAL BUILDING SUPPLIER

DESIGN LIVE LOADS:
LIGHT STORAGE ..... 125 PSF
INTERIOR PARTITION WALLS (UNIFORMLY DISTRIBUTED WEIGHT) ..... 15 PSF
INTERIOR PARTITION WALLS (HORIZONTAL DESIGN LOADS) ..... 5 PSF

HANDRAIL ASSEMBLIES AND GUARDS:
200 lb LOAD OR 50 plf LOAD APPLIED IN ANY DIRECTION AT TOP OF HANDRAIL ASSEMBLY OR GUARD AND TO TRANSFER THIS LOAD THROUGH SUPPORTS TO THE STRUCTURE

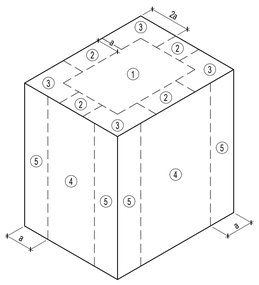
ROOF SNOW LOADS AND DESIGN DATA:
DESIGN ROOF SNOW LOAD ..... 21 PSF (BALANCED SNOW LOAD)
FLAT ROOF SNOW LOAD (Pf) = (0.7 × Ce × Ct × Is × Pg) ..... 21 PSF
SNOW EXPOSURE (Ce) 1.0
SNOW LOAD IMPORTANCE FACTOR (Is) 1.0
ROOF THERMAL FACTOR (Ct) 1.0
GROUND SNOW (Pg) ..... 30 PSF
RAIN ON SNOW SURCHARGE 0.0
SLOPED ROOF FACTOR (Cs) 1.0

WIND DESIGN DATA:
ULTIMATE WIND SPEED (3 SECOND GUST) ..... 115 MPH
NOMINAL WIND SPEED ..... 89.1 MPH
WIND DIRECTIONALITY FACTOR (Kd) 0.85
MEAN ROOF HEIGHT ..... 16.16 FT
WIND EXPOSURE CATEGORY C
WIND EXPOSURE CLASSIFICATION ..... ENCLOSED
INTERNAL PRESSURE COEFFICIENT ..... ±0.18
BUILDING LENGTH (L) ..... 200 FT
LEAST WIDTH (B) ..... 100 FT
VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 1) 0.734
VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 2) 0.734
TOPOGRAPHIC FACTOR (Kzt) 1.0
EDGE STRIP (a) ..... 6.5 FT
EDGE ZONE (2a) ..... 13 FT
DESIGN PROCEDURE ..... ENVELOPE PROCEDURE

ULTIMATE WIND LOADS COMPONENTS & CLADDING:

ROOF SURFACE PRESSURE			
AREA	10 SF	50 SF	100 SF
NEGATIVE ZONE 1	-27.0 PSF	-27.0 PSF	-27.0 PSF
NEGATIVE ZONE 2	-31.3 PSF	-30.6 PSF	-29.8 PSF
NEGATIVE ZONE 3	-41.8 PSF	-38.0 PSF	-33.0 PSF
POSITIVE ALL ZONES	16.0 PSF	16.0 PSF	16.0 PSF
NEGATIVE ZONE 2'	-37.6 PSF	-37.0 PSF	-36.1 PSF
NEGATIVE ZONE 3'	-58.7 PSF	-52.4 PSF	-43.9 PSF

WALL SURFACE PRESSURE			
AREA	10 SF	100 SF	500 SF
NEGATIVE ZONE 4	-24.7 PSF	-21.4 PSF	-20.3 PSF
NEGATIVE ZONE 5	-30.4 PSF	-23.7 PSF	-21.7 PSF
POSITIVE ZONE 4&5	22.8 PSF	19.5 PSF	18.4 PSF



WIND LOADS COMPONENTS AND CLADDING ZONE DIAGRAM (ASCE 7-10)

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR (Ie) 1.0
MAPPED SPECTRAL ACCELERATIONS AT SHORT PERIODS (Ss) 0.12
MAPPED SPECTRAL ACCELERATIONS AT (1) SECOND PERIODS (S1) 0.05
SITE CLASSIFICATION ..... D
DESIGN SPECTRAL RESPONSE COEFFICIENT AT SHORT PERIODS (Sds) 0.128
DESIGN SPECTRAL RESPONSE COEFFICIENT AT (1) SECOND PERIODS (Sd1) 0.080
SEISMIC DESIGN CATEGORY ..... B
BASIC SEISMIC-FORCE-RESISTING SYSTEM ..... SYSTEM NOT DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR ..... 0.043W KIPS
SEISMIC RESPONSE COEFFICIENT (Cs) 0.043
RESPONSE MODIFICATION COEFFICIENT (R) 3
ANALYSIS PROCEDURE FOR SEISMIC DESIGN ..... EQUIVALENT LATERAL-FORCE

SOIL DESIGN VALUES:
THE DESIGN VALUES BELOW HAVE BEEN USED AS THE BASIS OF THE FOUNDATION DESIGN. THESE VALUES SHALL BE CONFIRMED BY THE FOUNDATION CONTRACTOR AND THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION. NOTIFY THE SEOR IF THE FINAL DESIGN OR INSTALLED VALUES DIFFER FROM THE VALUES NOTED BELOW.
SOIL UNIT WEIGHT ..... 130 PCF
LATERAL EARTH PRESSURE
ACTIVE (RETAINING WALLS) ..... 40 psf / ft OF DEPTH
AT-REST (BASEMENT WALLS) ..... 65 psf / ft OF DEPTH
PASSIVE ..... 420 PSF
COEFFICIENT OF SLIDING FRICTION ..... 0.3 (UNCONFIRMED)
SUBGRADE MODULUS ..... 125 PCI
FROST DEPTH ..... 48" BELOW EXTERIOR FINISH GRADE
ALLOWABLE SOIL BEARING PRESSURE ..... 3000 PSF
MINIMUM BEARING DEPTH, EXTERIOR ..... 48" BELOW EXTERIOR FINISH GRADE
MINIMUM BEARING DEPTH, INTERIOR ..... 18" BELOW INTERIOR FINISH GRADE
MAXIMUM TOTAL FOUNDATION SETTLEMENT ..... 1" (UNCONFIRMED)
MAXIMUM DIFFERENTIAL SETTLEMENT BETWEEN ADJACENT FOUNDATIONS ..... 1/2" (UNCONFIRMED)

DELEGATED DESIGN NOTES:
1. ENGINEERING DESIGN, DETAILING, AND COORDINATION OF DELEGATED DESIGN ITEMS ARE DELEGATED TO THE CONTRACTOR PER THE SPECIFICATIONS AND CRITERIA INDICATED ON THE DRAWINGS. THE PRIMARY BASE BUILDING STRUCTURE HAS BEEN DESIGNED AS INDICATED HEREIN TO ACCEPT THE DELEGATED DESIGN ITEMS. THE CONTRACTOR SHALL COORDINATE THE WORK OF THE DELEGATED DESIGNERS WITH EACH OTHER AND THE PRIMARY BASE BUILDING STRUCTURE. IT IS SUGGESTED THAT DESIGN CRITERIA, LOAD PATHS, AND ATTACHMENT SCHEMES PROPOSED BY THE DELEGATED DESIGNER BE SUBMITTED FOR REVIEW BY THE ARCHITECT FOR COMPATIBILITY OF THE BASE BUILDING DESIGN PRIOR TO FINAL DESIGN AND DETAILING OF THE DELEGATED DESIGN PACKAGE.
2. DOCUMENTS FOR DELEGATED DESIGN ITEMS SHALL BE STAMPED BY A QUALIFIED, PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CONTRACTOR SHALL FORWARD THE REVIEWED DOCUMENTS TO THE ARCHITECT AND/OR ENGINEER OF RECORD WITH A NOTATION INDICATING THAT THE DELEGATED DESIGN DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.
3. DELEGATED DESIGN ITEMS INCLUDE ANY ITEMS NOT EXPLICITLY NOTED ON THE STRUCTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO:

   PRIMARY BASE BUILDING STRUCTURAL ELEMENTS
   - METAL BUILDING
   - PRECAST PLANK FLOOR SYSTEM

   OTHER ITEMS SUPPORTED BY PRIMARY STRUCTURE (SECONDARY MEMBERS)
   - NON-LOAD-BEARING COLD FORMED METAL FRAMING AND CONNECTIONS
   - STAIRS, RAILINGS, HANDRAILS, GUARDRAIL, LADDERS, ETC. – REFER TO STAIR DELEGATE DESIGN NOTES
   - CANOPIES AND AWNINGS
   - CLADDING SYSTEMS AND COMPONENTS, INCLUDING SUPPLEMENTAL SUPPORT, WHERE REQUIRED
   - SUPPORTS, BRACING, ATTACHMENTS, AND SUBFRAMING FOR SUPPORT OF OTHER TRADES AND BUILDING COMPONENTS. REFER TO MODIFICATIONS FOR COORDINATION WITH OTHER TRADES NOTES.
5. DELEGATED DESIGN SUBMITTALS PERTAINING TO FOUNDATIONS AND OTHER GEOTECHNICAL ELEMENTS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. ENGINEERING AND SYSTEMS REQUIRED BY THE CONTRACTOR TO SUPPORT CONSTRUCTION REMAIN THE PREROGATIVE AND RESPONSIBILITY OF THE CONTRACTOR. REFER TO GENERAL NOTES.

DELEGATED DESIGN STAIR NOTES:
1. STAIRS NOT DETAILED ON THE DRAWINGS ARE DELEGATED TO THE CONTRACTOR FOR DESIGN. SEE THE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR PERFORMANCE CRITERIA AND FINISHING REQUIREMENTS. THE BASE BUILDING STRUCTURE HAS BEEN DESIGNED FOR SUPPORT OF STAIR LOADING AS FOLLOWS:
2. STAIRS, HANDRAILS, AND GUARDRAILS SHALL BE DELEGATED DESIGN BY THE STEEL SUPPLIER. CONNECTIONS INTO SURROUNDING STRUCTURE SHALL BE APPROVED BY STRUCTURAL ENGINEER. CALCULATIONS OF ALL STAIR COMPONENTS MUST BE SUPPLIED WITH STAIR SHOP DRAWINGS AND STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, IN THE STATE IN WHICH THE PROJECT IS LOCATED.
3. THIS SUBMITTAL CONCERNS ITEMS THAT WERE NOT DESIGNED BY PIERCE ENGINEERS (PIERCE) AND ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. WE HAVE REVIEWED THE SUBMITTAL TO VERIFY THAT THE DESIGN WAS PERFORMED BY A REGISTERED PROFESSIONAL OR STRUCTURAL ENGINEER AND THE DESIGN FOLLOWED THE DESIGN CRITERIA SHOWN IN THE CONTRACT DOCUMENTS. BASED ON OUR REVIEW, WE RECOMMEND THE STATUS LISTED ABOVE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR STAIR FRAMING AND CONFIGURATION.
5. DESIGN LOADS:
   A. STAIR LIVE LOAD SHALL BE 100 PSF, NON-REDUCIBLE.
   B. STAIR CONSTRUCTION SHALL BE:
      a. CHECKER PLATE (NO CONCRETE FILL), HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 25 PSF.
      b. METAL PAN WITH 2" NORMAL WEIGHT CONCRETE FILL ON TREADS AND INTERMEDIATE LANDINGS, HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 50 PSF.
      c. METAL PAN WITH ARCHITECT-SPECIFIED FINISHES, HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 50 PSF.
6. CONNECTIONS TO BASE BUILDING STRUCTURE
   A. CONNECTIONS FOR INTERMEDIATE LANDINGS ARE ASSUMED TO BE MADE AT THE FAR END OF THE STAIR STRINGER OPPOSITE THE CONNECTION AT THE FLOOR LEVELS, UNLESS NOTED OTHERWISE. IT IS SUGGESTED THAT ALTERNATE SUPPORT LOCATIONS BE SUBMITTED FOR REVIEW PRIOR TO COMPLETION OF THE STAIR SHOP DRAWINGS.
   B. STEEL FRAMING:
      a. ALL LOADS APPLIED TO BASE BUILDING SHALL BE ATTACHED SUCH THAT ROTATION OF THE BASE BUILDING STEEL FRAMING IS RESTRAINED, UNLESS NOTED OTHERWISE. PROVIDE CONCENTRIC CONNECTIONS WHERE POSSIBLE, OR DESIGN AND PROVIDE KICKERS OR OTHER MEANS OF RESTRAINT IF NECESSARY.
      b. CONNECTION LOCATIONS AND LOADS SHALL BE PROVIDED BEFORE OR CONCURRENT TO THE REVIEW OF THE STRUCTURAL STEEL SHOP DRAWINGS.
   C. CONCRETE FRAMING:
      a. POST-INSTALLED ATTACHMENT TO POST-TENSIONED BEAMS AND SLABS SHALL BE AVOIDED.
      b. CONNECTION LOCATIONS AND LOADS SHALL BE PROVIDED BEFORE OR CONCURRENT TO THE REVIEW OF THE BEAM AND SLAB REINFORCEMENT SHOP DRAWINGS.

DELEGATED DESIGN PERFORMANCE CRITERIA DEFLECTION LIMITS			
MEMBERS	LIVE	SNOW OR WIND	DEAD + LIVE OR SNOW
ROOF MEMBERS			
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240
NOT SUPPORTING CEILINGS	L/240	L/240	L/180
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
FLOOR MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	N/A	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	N/A	L/240
LINTEL / HEADER / BEAM MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	L/360	L/240
EXTERIOR WALLS (LATERAL DEFLECTION)			
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/600	N/A
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A

COORDINATION WITH OTHER TRADES:
1. SUPPORT, SUBFRAMING, BRACING, AND ATTACHMENTS TO PRIMARY BASE BUILDING STRUCTURE FOR ALL NONSTRUCTURAL BUILDING COMPONENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ELEMENTS SHALL BE DESIGNED AND DETAILED BY THE MANUFACTURER, SUPPLIER, OR CONTRACTOR FURNISHING THOSE COMPONENTS. CONNECTIONS AND SUPPORTED LOADS TO STRUCTURAL MEMBERS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. RESPONSIBILITY FOR THE PERFORMANCE OF THE SUPPLIED SYSTEM AND ASSOCIATED CONNECTIONS SHALL REMAIN THAT OF THE PARTY FURNISHING THE DESIGN AND DETAILING.
2. SEISMIC SUPPORT, BRACING, AND ANCHORAGE OF NONSTRUCTURAL COMPONENTS SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR AS REQUIRED BY GOVERNING CODE.
3. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES CONNECTING TO, REQUESTING OPENINGS IN, PENETRATIONS THROUGH, OR ITEMS EMBEDDED WITHIN STRUCTURAL ELEMENTS, OR OTHERWISE IMPACTING THE BASE BUILDING STRUCTURE. UPON COMPLETION OF COORDINATION AND DESIGN, FULLY COORDINATED PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. THIS INCLUDES BUT IS NOT LIMITED TO SLEEVES, CONDUITS, CABLES, PIPES, ELECTRICAL BOXES, CAST-IN ATTACHMENTS, POST-INSTALLED ANCHORS, ETC. REFER TO TYPICAL DETAILS CONTAINED HEREIN FOR REINFORCEMENT REQUIRED TO ACCOMMODATE REQUESTED MODIFICATIONS TO THE PRIMARY BASE BUILDING STRUCTURE. UPON REVIEW, ADDITIONAL OR ALTERNATIVE MODIFICATIONS MAY BE REQUIRED AT THE DISCRETION AND DIRECTION OF THE STRUCTURAL ENGINEERING OF RECORD.
4. PENETRATIONS THROUGH, CONNECTIONS TO, AND ITEMS EMBEDDED WITHIN STRUCTURAL MEMBERS SHALL NOT NEGATIVELY IMPACT THE PERFORMANCE OF THE BASE BUILDING STRUCTURE.
5. CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES, INCLUDING AS-BUILT CONDITIONS IMPACTING DESIGN AND COORDINATION. ADJACENCIES OF ITEMS PLANNED OR INSTALLED IN OR ON STRUCTURE SHALL BE IDENTIFIED AND CONSIDERED BY EACH TRADE FOR THE IMPACT OF SUCH ADJACENCIES TO THEIR SYSTEMS. VERIFY ALL MECHANICAL EQUIPMENT, WEIGHTS, SIZES, AND LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS AND FABRICATING MATERIALS. COORDINATE ANY REQUIRED REVISIONS TO THE BASE BUILDING STRUCTURE WITH THE STRUCTURAL ENGINEER.
6. MISCELLANEOUS ELEMENTS SUCH AS SHELF ANGLES, LINTELS, SUPPORTS FOR CURTAIN WALLS OR MASONRY, AND EDGE ANGLES AT OPENINGS AND PERIMETER CONDITIONS ARE INTENDED TO SUPPORT AND BE COORDINATED WITH MATERIALS FURNISHED BY OTHER TRADES. THESE MATERIALS ARE INTENDED TO BE FIELD ATTACHED TO MEET THE TOLERANCES REQUIRED BY OTHER TRADES, WHICH MAY BE MORE STRINGENT THAN THE TOLERANCES SPECIFIED BY THE RELEVANT CODE OF STANDARD PRACTICE FOR THE SUPPORTING ELEMENTS. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND COORDINATE THE INSTALLATION OF SUPPORTING ELEMENTS TO COMPLY WITH THE TOLERANCE CRITERIA REQUIRED FOR INSTALLATION OF MATERIALS BY OTHER TRADES.
7. UNDERGROUND
   A. THE INFLUENCE AREA OF A FOOTING OR MAT SHALL BE DEFINED AS THE FRUSTRUM OF SOIL LOCATED BELOW THE FOOTING OR MAT HAVING A 2:1 (HORIZONTAL:VERTICAL) SLOPE EMANATING FROM THE FOOTING OR MAT EDGE, OR AS DEFINED BY THE GEOTECHNICAL ENGINEER OF RECORD.
   B. PIPES, CONDUITS, AND BURIED ITEMS SHALL NOT BE PLACED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS.
   C. ALL STRUCTURES (eg. TRIPLE BASINS, GREASE TRAPS, ETC.) SHALL NOT BE INSTALLED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS UNLESS THE STRUCTURE IS DESIGNED BY THE MANUFACTURER FOR INCREASED SURCHARGE LOAD APPLIED BY THE ADJACENT FOUNDATION AND HAS BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD OR THE GEOTECHNICAL ENGINEER OF RECORD.
   D. ITEMS TO BE BURIED IN IMPROVED SOILS SHALL BE REVIEWED AND APPROVED BY THE GROUND IMPROVEMENT DELEGATED DESIGN ENGINEER AND THE GEOTECHNICAL ENGINEER OF RECORD
8. STEEL ELEMENTS
   A. ALL PENETRATIONS INDICATED HEREIN SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH COORDINATION WITH THE SUBCONTRACTORS AND DELEGATED DESIGN ENGINEERS. SUBMIT ALL REQUIRED PENETRATIONS FOR REVIEW AND APPROVAL SUBSEQUENT TO FINAL COORDINATION OF BUILDING SYSTEMS.
   B. FIELD-CUTTING SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

ABBREVIATIONS

ALT ..... ALTERNATE	LLV ..... LONG LEG VERTICAL
ARCH ..... ARCHITECTURAL	LSH ..... LONG SIDE HORIZONTAL
BLDG ..... BUILDING	LSL ..... LAMINATED STRAND LUMBER
BOT ..... BOTTOM	LSLT ..... LONG SLOTTED
BRG ..... BEARING	LSV ..... LONG SIDE VERTICAL
CFMF ..... COLD FORMED METAL FRAMING	LVL ..... LAMINATED VENEER LUMBER
CIP ..... CAST IN PLACE	LW ..... LONG WAY
CL ..... CENTERLINE	MAX ..... MAXIMUM
CLR ..... CLEAR	MECH ..... MECHANICAL
CJ ..... CONTROL OR CONSTRUCTION JOINT	MIN ..... MINIMUM
CMU ..... CONCRETE MASONRY UNIT	MISC ..... MISCELLANEOUS
COL ..... COLUMN	NTS ..... NOT TO SCALE
CONT ..... CONTINUOUS	o/c ..... ON CENTER
DIA ..... DIAMETER	OFD ..... OVERFLOW DRAIN
DIM ..... DIMENSION	OPP ..... OPPOSITE
DL ..... DEAD LOAD	PC ..... PRECAST CONCRETE
DWG ..... DRAWING	PERP ..... PERPENDICULAR
E ..... MODULUS OF ELASTICITY	PSL ..... PARALLEL STRAND LUMBER
EA ..... EACH	PT ..... POST TENSIONED CONCRETE
EF ..... EACH FACE	PT ..... PRESERVATIVE TREATED
EL ..... ELEVATION	RD ..... ROOF DRAIN
EOD ..... EDGE OF DECK	REINF ..... REINFORCEMENT
EOS ..... EDGE OF SLAB	REQD ..... REQUIRED
EQ ..... EQUAL	RTU ..... ROOF TOP UNIT
EW ..... EACH WAY	SEOR ..... STRUCTURAL ENGINEER OF RECORD
EXT ..... EXTERIOR	SIM ..... SIMILAR
Fb ..... BENDING STRENGTH (WOOD)	SOG ..... SLAB-ON-GROUND
Fc ..... COMPRESSIVE STRENGTH (WOOD)	SPA ..... SPACING
fc ..... MINIMUM CONCRETE COMPRESSIVE STRENGTH	SPEC ..... SPECIFICATIONS
FD ..... FLOOR DRAIN	SSLT ..... SHORT SLOTTED
FF ..... FINISH FLOOR	STL ..... STEEL
FLR ..... FLOOR	SW ..... SHORT WAY
fm ..... MINIMUM MASONRY COMPRESSIVE STRENGTH	T/ ..... TOP OF
FRT ..... FIRE-RETARDANT-TREATED	T&B ..... TOP AND BOTTOM
FTG ..... FOOTING	T&G ..... TONGUE AND GROOVE
Fv ..... SHEAR STRENGTH (WOOD)	TRANS ..... TRANSVERSE
Fy ..... MINIMUM YIELD STRENGTH	TYP ..... TYPICAL
GA ..... GAUGE	UNO ..... UNLESS NOTED OTHERWISE
GALV ..... GALVANIZED	VERT ..... VERTICAL
GC ..... GENERAL CONTRACTOR	VIF ..... VERIFY IN FIELD
GT ..... GIRDER TRUSS	w/ ..... WITH
HORIZ ..... HORIZONTAL	w/o ..... WITHOUT
HVAC ..... HEATING, VENTILATION, AIR COND.	WP ..... WORKPOINT
HWS ..... HEADED WELDED STUD	WT ..... WEIGHT
LL ..... LIVE LOAD	WWF ..... WELDED WIRE FABRIC
LLH ..... LONG LEG HORIZONTAL	

REVISIONS

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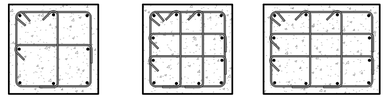
PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S002

CONCRETE PIER SCHEDULE

MARK	SIZE	VERTICAL REINFORCEMENT	PIER TIES	TIE TYPE	DOWELS	REMARKS
P1	16"x24"	(10) #6	#3 AT 12" o/c			REFER TO 1/S401
P2	20"x24"	(8) #6	#3 AT 12" o/c			REFER TO 2/S401
P3	22"x30"	(10) #6	#3 AT 12" o/c			REFER TO 3/S401
P4	24"x24"	(12) #6	#3 AT 12" o/c			REFER TO 4/S401
P5	16"x16"	(8) #6	#3 AT 12" o/c	TYPE I		

CONCRETE PIER SCHEDULE NOTES:
1. REFER TO PLAN FOR TOP OF CONCRETE PIER ELEVATION.
2. AT TOP OF CONCRETE PIER, PROVIDE (3) #3 TIES AT 3" o/c.
3. WHERE NO DOWELS ARE SHOWN FROM THE CONCRETE PIER TO THE CONCRETE FOOTING, EMBED VERTICAL PIER REINFORCEMENT TO BOTTOM OF FOOTING w/ 3" CONCRETE COVERAGE AND PROVIDE A STANDARD 90 DEGREE HOOK.
4. CENTER CONCRETE PIER BELOW COLUMN ABOVE UNLESS DETAILED OTHERWISE.
5. LAP VERTICAL REINFORCEMENT 30 BAR DIAMETERS OR 24", WHICH EVER IS GREATER.

CONCRETE PIER TIE TYPES:



TYPE I **TYPE II** **TYPE III**

CLASS 'B' TENSION LAP SPLICE LENGTHS (INCHES)

BAR SIZE	f'c = 3,000 psi		f'c = 4,000 psi		f'c = 5,000 psi		f'c = 6,000 psi		f'c = 8,000 psi	
	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP
#3	22	28	19	24	17	22	16	20	13	17
#4	29	37	25	32	22	29	21	27	18	23
#5	36	47	31	40	28	36	26	33	22	29
#6	43	56	37	48	33	43	31	40	26	34
#7	63	81	54	70	49	63	45	58	38	50
#8	72	93	62	80	55	72	51	66	44	57
#9	81	105	70	91	63	81	57	74	49	64
#10	91	118	79	102	70	91	64	84	56	72
#11	101	131	87	113	78	101	71	93	62	80

NOTES (d_b = BAR DIAMETER, C-C = CENTER TO CENTER):
1. ***THIS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS.***
2. SCHEDULE BASED ON NORMAL WEIGHT CONCRETE AND CLEAR COVER > 1 d_b AND C-C > 2 d_b.
3. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER CURRENT EDITION OF ACI-318.
4. TOP BARS ARE DEFINED AS HORIZONTAL BARS HAVING 12" OR MORE OF CONCRETE CAST BELOW THE BARS.
5. VALUES IN THIS SCHEDULE ARE BASED ON NON-EPOXY COATED BARS. FOR EPOXY COATED BARS, MULTIPLE VALUES IN THIS TABLE BY 1.5.
6. THESE LAPS ARE TO BE USED UNLESS ALTERNATIVE LENGTH LAPS SPECIFICALLY INDICATED ON PLANS OR IN DETAILS.

ISOLATED FOOTING SCHEDULE

MARK	DIMENSIONS			BOTTOM REINFORCING		TOP REINFORCING		REMARKS
	WIDTH	LENGTH	THICKNESS	LONG	SHORT	LONG	SHORT	
F36	3'-6"	3'-6"	1'-0"	(4) #4	(4) #4			
F40	4'-0"	4'-0"	1'-0"	(4) #5	(4) #5			
F50	5'-0"	5'-0"	1'-0"	(5) #5	(5) #5			
F56	5'-6"	5'-6"	1'-2"	(5) #5	(5) #5			

ISOLATED FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.
4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

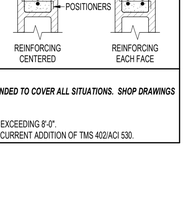
CONTINUOUS FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCEMENT		REMARKS
	WIDTH (xCONT)	THICKNESS	LONGITUDINAL	TRANSVERSE	
RW1	5'-0"	1'-0"	(7) #5	#5 AT 18" o/c	REFER TO 11/S400
W16	1'-6"	1'-0"	(2) #5		
W20	2'-0"	1'-0"	(2) #5		

CONTINUOUS FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.
4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

MASONRY (CMU) REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE

BAR SIZE	CENTERED						CLEAR COVER - EACH FACE - ALL BLOCK - ASD	
	6" BLOCK	8" BLOCK	10" BLOCK	12" BLOCK	14" BLOCK	16" BLOCK	1 1/2"	2"
#3	12"	12"	12"	12"	12"	12"	15"	12"
#4	16"	12"	12"	12"	12"	12"	26"	20"
#5	25"	18"	14"	12"	12"	12"	41"	31"
#6	47"	34"	26"	21"	18"	17"	77"	58"
#7	---	47"	36"	29"	25"	22"	104"	78"
#8	---	71"	55"	45"	38"	32"	156"	117"
#9	---	---	70"	57"	48"	41"	198"	149"

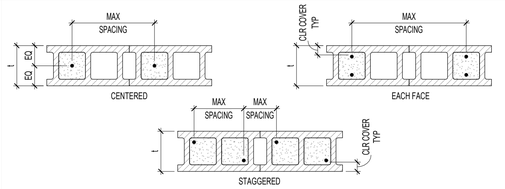


MASONRY (CMU) REINFORCING DEVELOPMENT AND LAP SPLICE SCHEDULE NOTES:
1. ***THIS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS.***
2. VALUES IN THIS SCHEDULE ARE BASED ON NORMAL WEIGHT MASONRY BLOCK. f'm = 2,500 psi.
3. LOCATE BAR POSITIONERS AT SPLICES, TOP AND BOTTOM OF WALLS, AND AT INTERVALS NOT EXCEEDING 8'-0".
4. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER CURRENT ADDITION OF TMS 402/ACI 530.

LOAD BEARING MASONRY WALL REINFORCING SCHEDULE

MARK	NOMINAL WALL THICKNESS (t)	BAR PER CELL	MAX SPACING	REINFORCEMENT LOCATION IN CELL	REMARKS
MW-1	8"	#5	48" o/c	CENTERED	

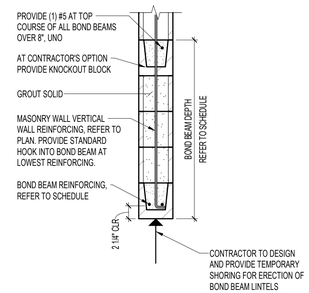
MASONRY WALL REINFORCEMENT SCHEDULE NOTES:
1. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT OF BUILDING AT REINFORCEMENT LOCATIONS.
2. UNLESS NOTED OTHERWISE, PROVIDE DOWELS INTO FOOTING TO MATCH VERTICAL WALL REINFORCEMENT.
3. FOR LAP SPLICE LENGTH REFER TO LAP SPLICE SCHEDULE.
4. LOCATE BAR POSITIONERS AT SPLICES, TOP AND BOTTOM OF WALLS, AND AT INTERVALS NOT EXCEEDING 8'-0".



LOAD BEARING MASONRY WALL LINTEL SCHEDULE

MARK	TYPE	BEAM SIZE OR BOND BEAM DEPTH	CONT PLATE THICKNESS	BOND BEAM BOTTOM REINF, UNO	STIRRUPS	BEARING PLATE SIZE	REMARKS
L1	A	8"	-	(2) #5	-		
L2	A	16"	-	(2) #5	-		

LOAD BEARING LINTEL SCHEDULE NOTES:
1. UNLESS STEEL LINTEL BEAM CONNECTS TO A COLUMN, PROVIDE 8" BEARING AT EACH END OF LINTEL.
2. EXTEND BOND BEAM REINFORCING 30" PAST OPENING EXTENTS. REINFORCING THAT CANNOT ACHIEVE 30" PAST OPENING SHALL TERMINATE IN A 180° HOOK AND EXTEND AT LEAST 18" PAST OPENING. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.
3. DO NOT INSTALL CONTROL JOINT WITHIN BOND BEAM REINFORCING EXTENTS.
4. EXTERIOR LINTELS TO BE HOT DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
5. REFER TO ARCH DRAWINGS FOR OPENING LOCATIONS, ELEVATIONS, AND SIZES.
6. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
7. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT AND LENGTH OF BOND BEAM LINTEL.



TYPE "A"

REVISIONS

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STRUCTURAL SCHEDULES

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PROJECT NO.: 154.21.085
DRAWN BY: DJK
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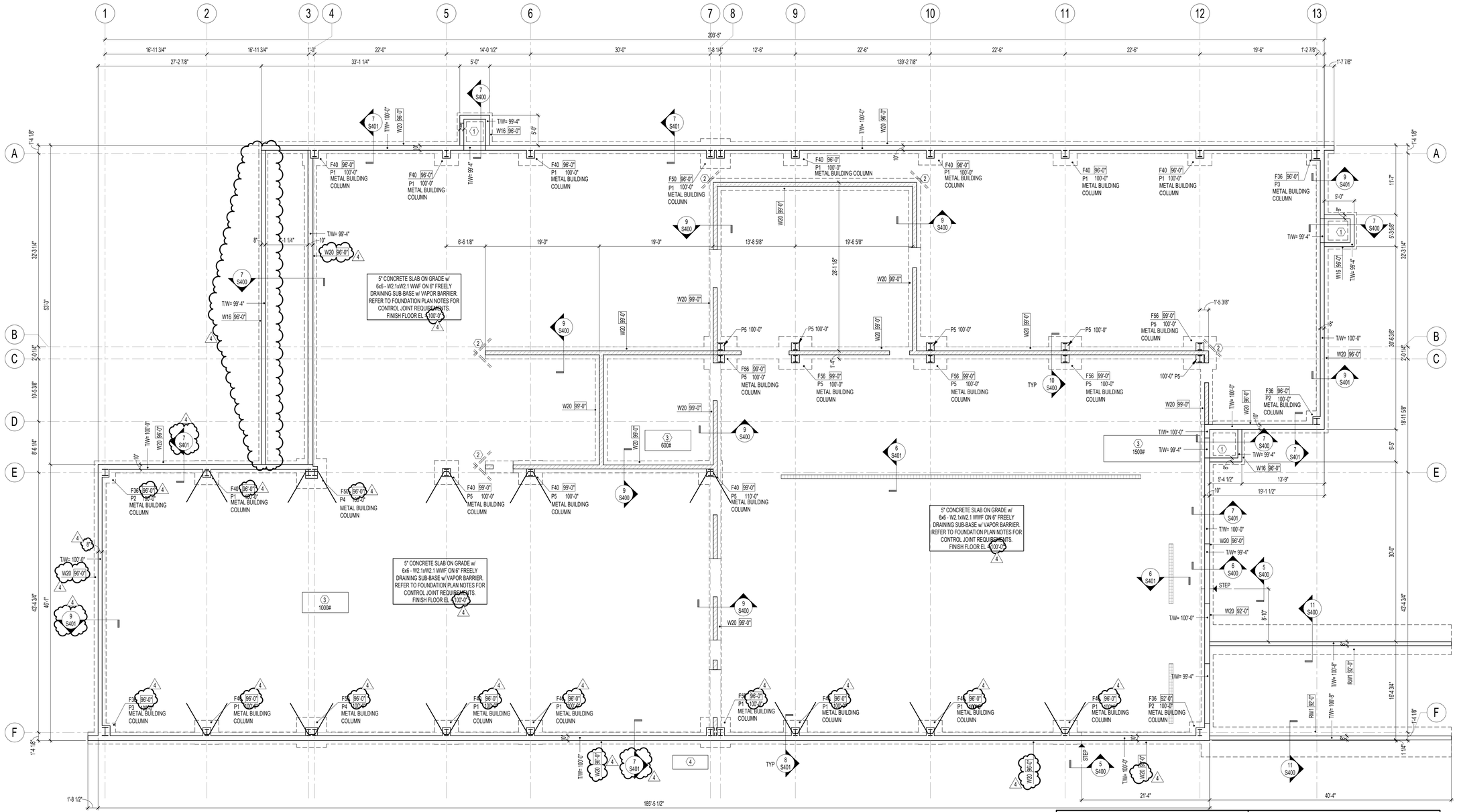
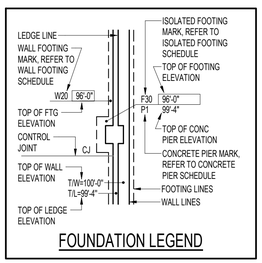
SHEET NO.: S003





FOUNDATION LEGEND

1 S100 FOUNDATION PLAN

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

1. METAL BUILDING SUPERSTRUCTURE TO BE DESIGN, ENGINEERED AND FABRICATED BY THE PRE-ENGINEERED BUILDING MANUFACTURER.
2. FOUNDATION DESIGN IS BASED UPON PRELIMINARY PRE-ENGINEERED BUILDING REACTION CALCULATIONS PROVIDED DURING DESIGN. FINAL BUILDING FRAME LOADS SHALL BE PROVIDED TO THE ENGINEER FOLLOWING AWARD OF BIDS. AT THAT TIME, THE ENGINEER OF RECORD WILL REVIEW THE FINAL LOADS AND MAKE ANY FOUNDATION MODIFICATIONS NECESSARY TO ACCOMMODATE THOSE LOADS.
3. LOADS, REACTIONS, REINFORCING, ANCHOR BOLT SIZES AND SPACING AND ALL OTHER INFORMATION FOR THE COMPLETION OR MODIFICATION OF THE FOUNDATION DRAWINGS SHALL BE PROVIDED TO THE GENERAL CONTRACTOR BY THE PRE-ENGINEERED BUILDING MANUFACTURER.
4. THE INITIAL BID BY THE GENERAL CONTRACTOR SHALL ANTICIPATE AND INCLUDE ALL OF THESE ITEMS AND COSTS.
5. PRE-ENGINEERED BUILDING MANUFACTURER SHALL CERTIFY THE ADEQUACY OF THE FOUNDATION DRAWING.
6. ANCHOR BOLT DATA TO BE PROVIDED BY PRE-ENGINEERED BUILDING CONTRACTOR. CONCRETE DIMENSIONS MAY BE REVISED DUE TO PEBC REQUIREMENTS.
7. PRE-ENGINEERED BUILDING CONTRACTOR TO PROVIDE ADDEQUATE SUPPORT FOR MECHANICAL EQUIPMENT HUNG FROM ROOF STRUCTURE.

FOUNDATION PLAN NOTES:

PLAN NOTES APPLY TO ALL FOUNDATION PLANS.
INDIVIDUAL NOTES DO NOT NECESSARILY APPLY TO ALL SHEETS.

1. REFER TO S00x SERIES SHEETS FOR GENERAL NOTES AND SCHEDULES.
2. REFER TO S40x SERIES SHEETS FOR TYPICAL FOUNDATION DETAILS NOT CUT ON PLAN.
3. ELEVATION 100'-0" ON STRUCTURAL DRAWINGS CORRESPONDS TO FF ELEVATION SHOWN ON SITE PLAN, TYPICAL.
4. SLAB ON GROUND CONTROL JOINTS:
   PROVIDE SAW CUT CONTROL JOINTS IN CONCRETE SLAB ON GROUND CONSTRUCTION WITHIN 24 HOURS OF INITIAL POUR. CONTROL JOINTS SHALL BE SPACED AT 36 TIMES THE SLAB THICKNESS, UP TO A MAXIMUM SPACING OF 18'-0". THE ASPECT RATIO OF SLAB PANELS SHALL BE A MAXIMUM OF 1.5 TO 1. CONTROL JOINTS SHALL BE PLACED ON COLUMN CENTERLINES, INTERIOR CORNERS, AND FLOOR DISCONTINUITIES (PITS, EQUIPMENT PADS, TRENCHES, DEPRESSED SLABS, ETC.). COORDINATE SLAB CONTROL JOINTS LAYOUT WITH ARCHITECT. SLAB ON GROUND CONSTRUCTION SHALL CONFORM TO ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". REFER TO TYPICAL DETAILS FOR SLAB ON GROUND CONSTRUCTION.
5. GC TO COORDINATE FOOTING ELEVATIONS w/ ALL UNDERGROUND UTILITY WORK. NOTIFY SEOR OF ANY CONFLICTS.

FOUNDATION PLAN KEYED NOTES:

KEYED NOTES APPLY TO ALL FOUNDATION PLANS.
ALL NOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS.

1. CONCRETE STOOP, REFER TO 7/S400.
2. (2) #4 x4'-0" CENTERED IN THICKNESS OF SLAB ON GROUND AND LOCATED AT RE-ENTRANT CORNERS. TYPICAL.
3. MECHANICAL EQUIPMENT HUNG BELOW ROOF STRUCTURE, COORDINATE LOCATION WITH MECHANICAL DRAWINGS, REFER RO PLAN FOR WEIGHTS.
4. 6" CONCRETE RTU PAD w/ 6x6 - W2.9xW2.9 WWF FLAT SHEET STOCK.

REVISIONS:
4 07.29.2022 Addendum No. 4

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FOUNDATION PLAN

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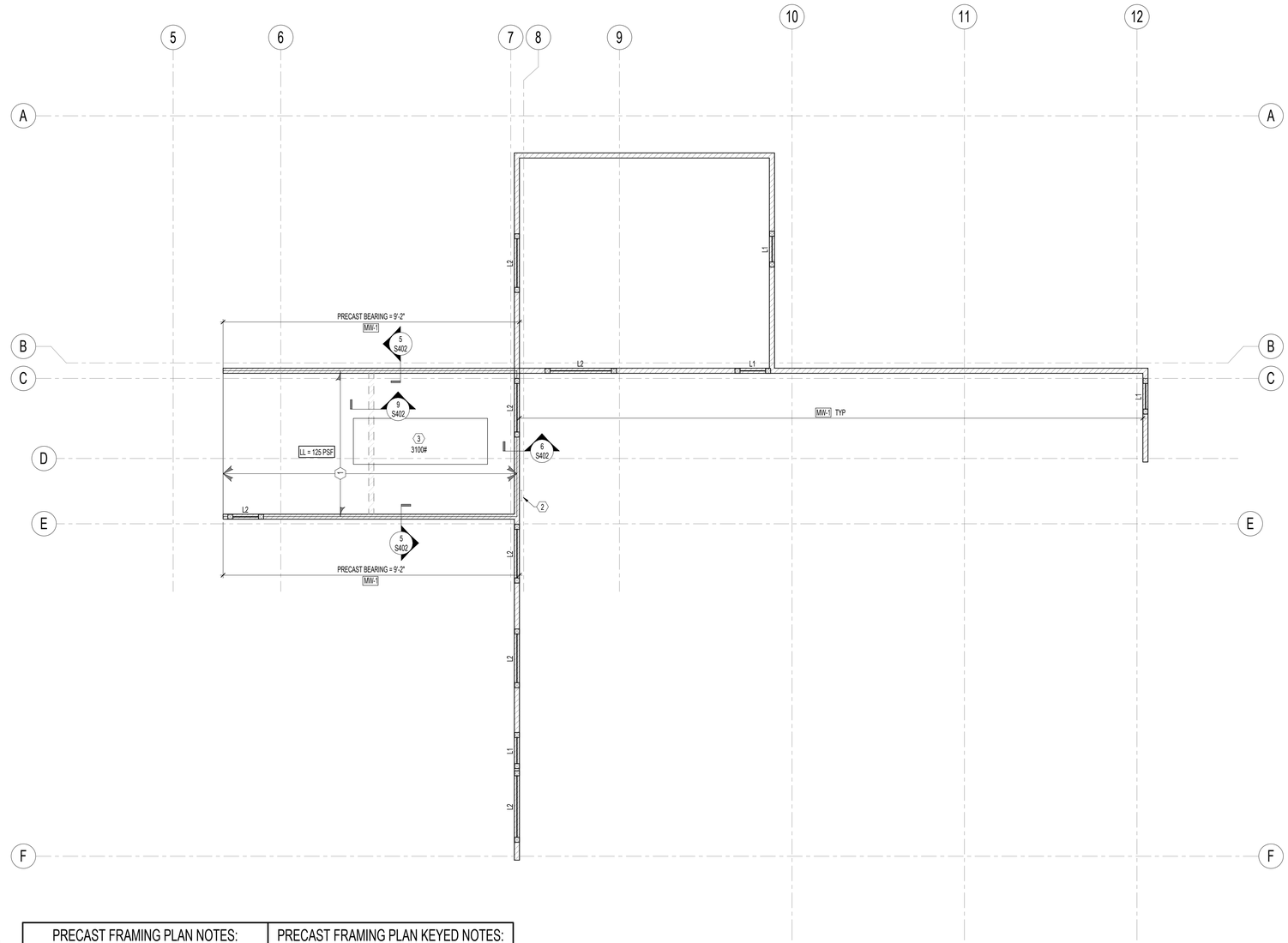
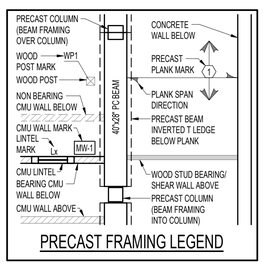




PRECAST FRAMING LEGEND

PRECAST FRAMING PLAN NOTES:

PLAN NOTES APPLY TO ALL PRECAST FLOOR FRAMING PLANS.
INDIVIDUAL NOTES DO NOT NECESSARILY APPLY TO ALL SHEETS.

1. ALL CONCRETE TOPPING ON PRECAST STRUCTURE TO BE BONDED. ALL PRECAST STRUCTURE TO RECEIVE CONCRETE TOPPING TO BE CLEAN AND SATURATED SURFACE DRY PRIOR TO PLACING TOPPING.
2. (XXX'-XX") INDICATES THE TOP OF STEEL ELEVATION. REFER TO PLAN FOR TOP OF STEEL ELEVATIONS.
3. ALL VERTICAL MASONRY WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH BOND BEAMS AND EXTEND FULL HEIGHT OF THE WALL. GROUT CORES SOLID AT ALL VERTICAL REINFORCING.
4. REFER TO LINTEL SCHEDULE FOR LINTEL SIZES AND REQUIREMENTS. VERIFY LINTEL ELEVATIONS w/ ARCHITECTURAL DRAWINGS.

PRECAST FRAMING PLAN KEYED NOTES:

KEYED NOTES APPLY TO ALL PRECAST FLOOR FRAMING PLANS.
ALL NOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS.

(1) 8" PRECAST CONCRETE PLANK w/ 2" CONCRETE TOPPING AT ENDS (LESS AT MIDSPAN) w/ 6x6-W1.4xW1.4 WWF FLAT SHEET STOCK. DESIGN PLANK FOR SUPERIMPOSED DEAD LOAD OF 10 PSF IN ADDITION TO TOPPING WEIGHT AND FOR ALL LIVE LOADS SPECIFIED IN DESIGN CRITERIA.

(2) STEEL FRAMED LADDER. DESIGN FOR LOADS SPECIFIED IN ASCE 7 SECTION 4.5.4. G.C. TO COORDINATE WALL CONSTRUCTION WITH LADDER SUPPLIER FOR CORRESPONDING ATTACHMENT.

(3) MECHANICAL UNIT w/ 4" CONCRETE RTU CURB w/ 6x6 - W1.4xW1.4 WWF FLAT SHEET STOCK ON TOP OF TOPPING. ADD ADDITIONAL WEIGHT OF RTU CURB TO PRECAST PLANK. REFER TO PLAN FOR UNIT WEIGHT.

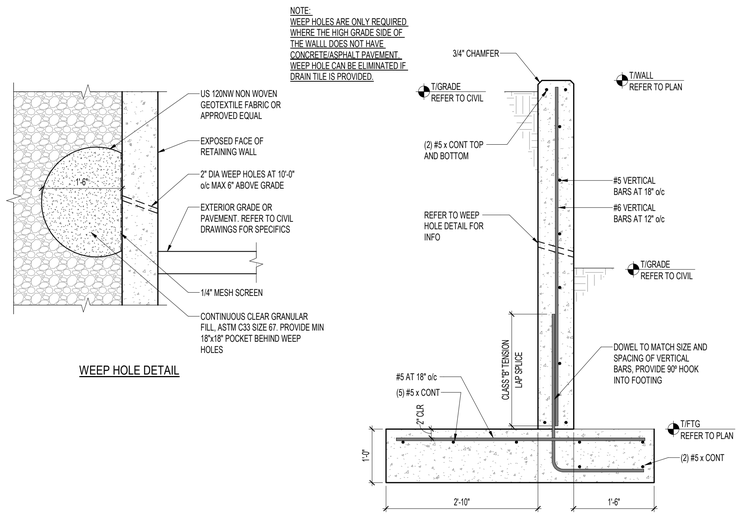
1/S200 MEZZANINE FLOOR FRAMING PLAN
SCALE: 1/8" = 1'-0"

REVISIONS:

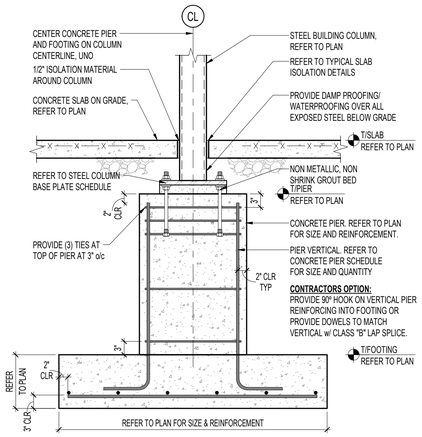
FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin
MEZZANINE FRAMING PLAN

PIERCE ENGINEERS, INC.
181 N. Broadway Ave
Milwaukee, WI 53202
414.278.6060
www.pierceengineers.com
PE Project: 22247

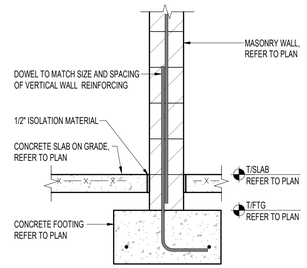
PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S200



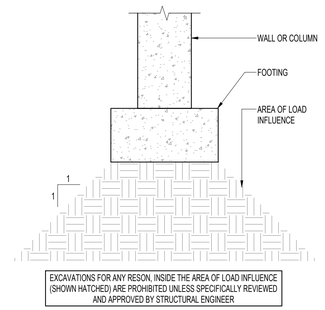
11 S400 RETAINING WALL SECTION



10 S400 STEEL COLUMN ON CONCRETE PIER

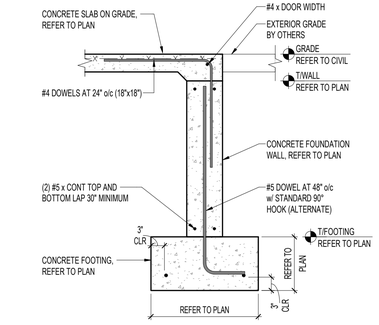


9 S400 INTERIOR MASONRY WALL ON STRIP FOOTING

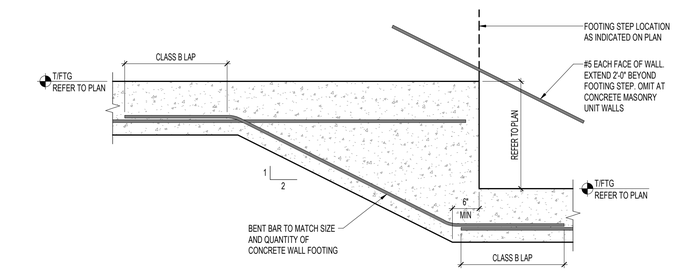


8 S400 TYPICAL PROHIBITED EXCAVATIONS AT FOUNDATIONS

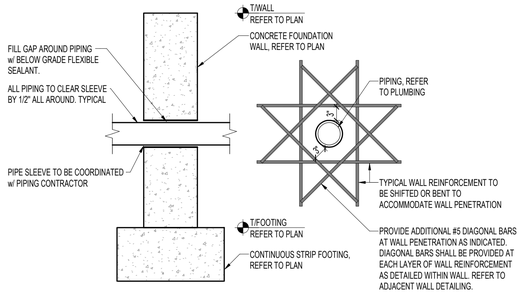
7 S400 REINFORCED CONCRETE STOOP



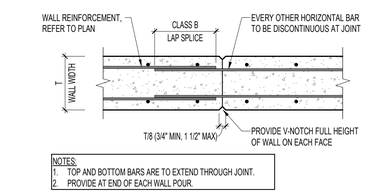
6 S400 SLAB OVERPOUR AT GARAGE DOOR



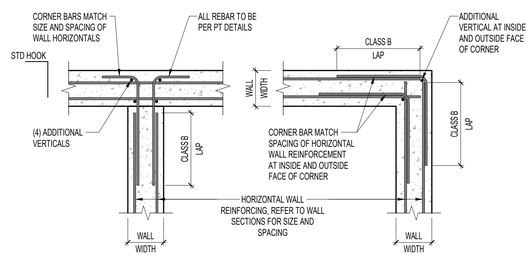
5 S400 FOOTING STEP DETAIL



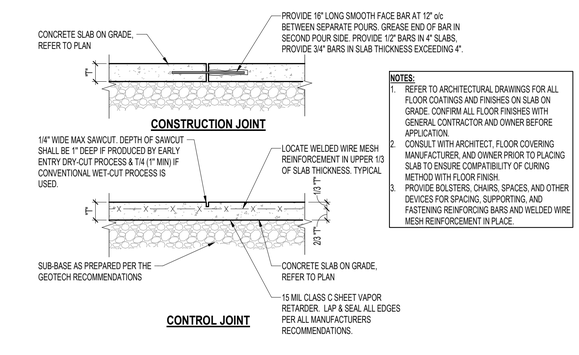
4 S400 PIPE PENETRATION AT FOUNDATION WALL



3 S400 WALL CONSTRUCTION JOINT



2 S400 CORNER AND WALL INTERSECTION REINFORCING



1 S400 SLAB ON GRADE CONSTRUCTION DETAILS

REVISIONS

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STRUCTURAL DETAILS

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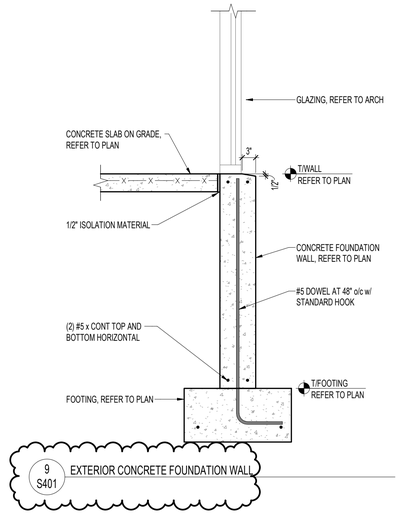
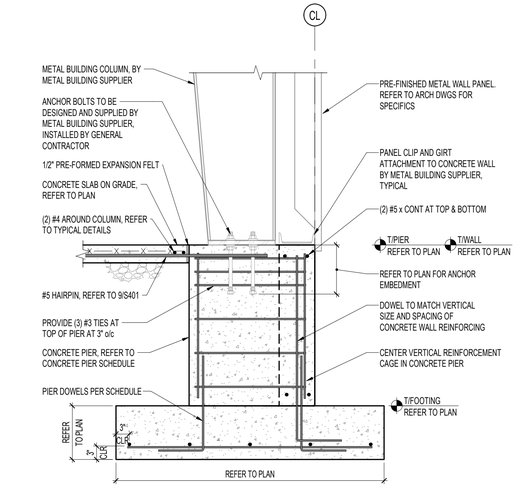
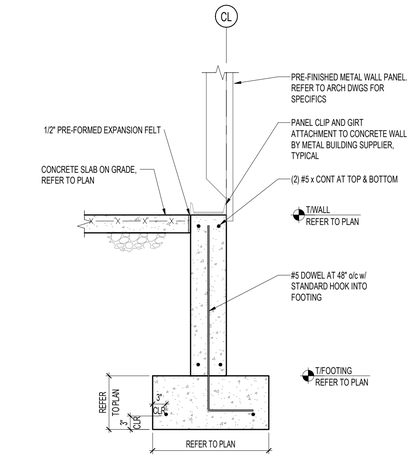
DATE: 06.29.22
SHEET NO.: S400



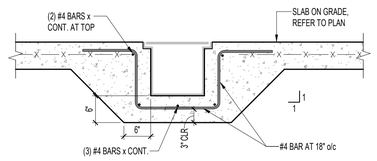
9 S401 EXTERIOR CONCRETE FOUNDATION WALL



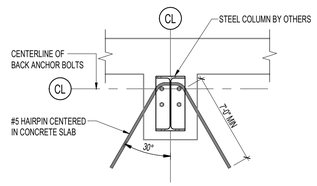
8 S401 METAL BUILDING COLUMN SITTING ON CONCRETE PIER AT EXTERIOR



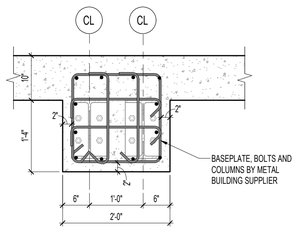
7 S401 METAL BUILDING AT FROST WALL



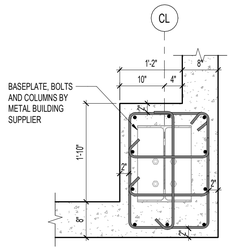
6 S401 TRENCH DRAIN DETAIL



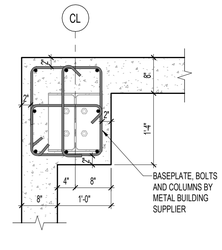
5 S401 HAIRPIN DETAIL #5 BARS



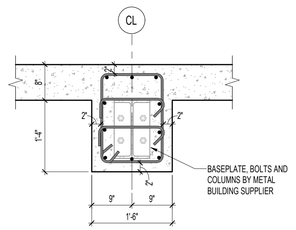
4 S401 PIER 4



3 S401 PIER 3



2 S401 PIER 2



1 S401 PIER 1

REVISIONS:
4 07.29.2022 Addendum No. 4

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Carthage College - Kenosha, Wisconsin
STRUCTURAL DETAILS

PIERCE ENGINEERS, INC.
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PE Project: 22247

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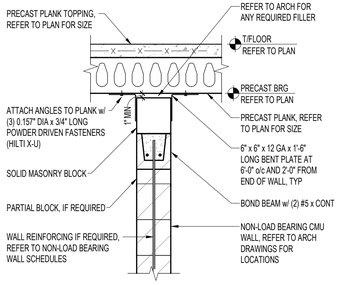
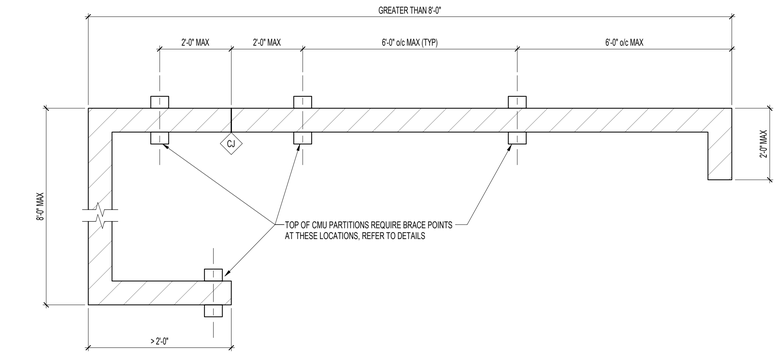
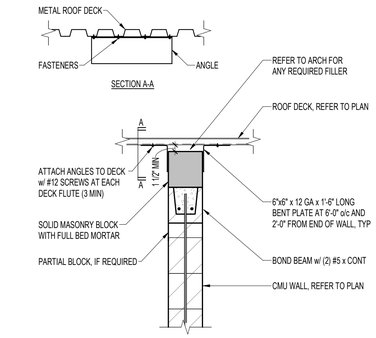


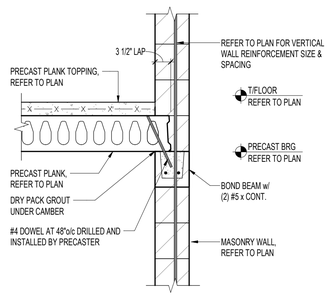
9 S402 PRECAST PLANK OVER NON-BEARING INTERIOR CMU WALL

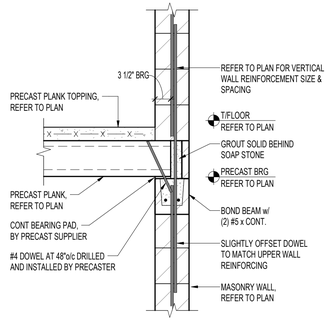


8 S402 TYPICAL DIAGRAMATIC PLAN OF CMU WALL TOP BRACING



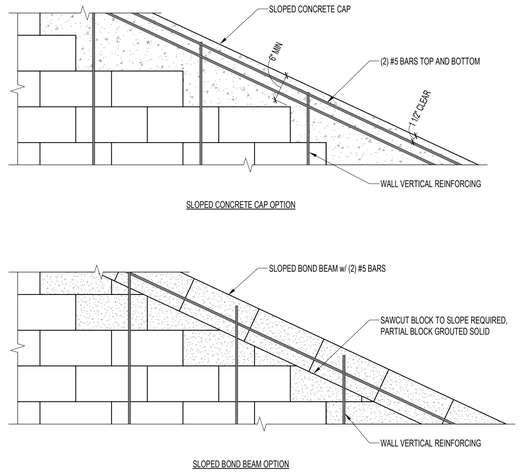
7 S402 PARTITION SUPPORT AT ROOF DECK



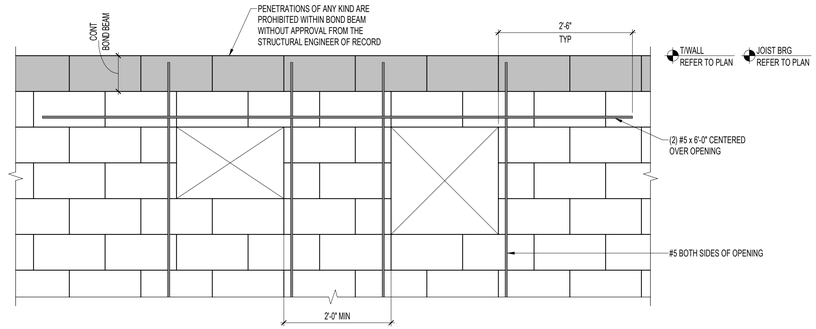


6 S402 PRECAST PLANK SIDE LAP ON CMU WALL

5 S402 PRECAST PLANK BEARING ON CMU WALL

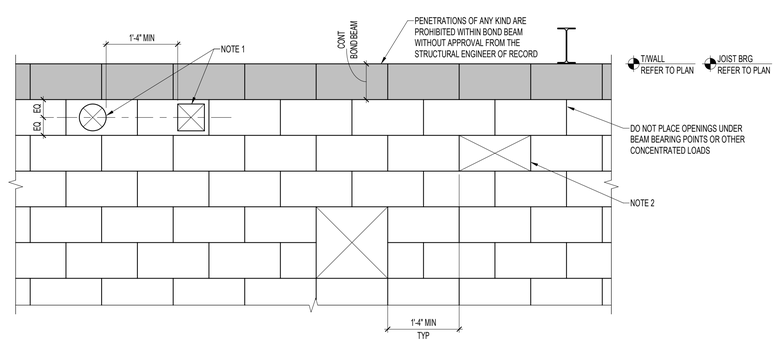


4 S402 TYPICAL SLOPE TOP OF CMU WALL DETAIL



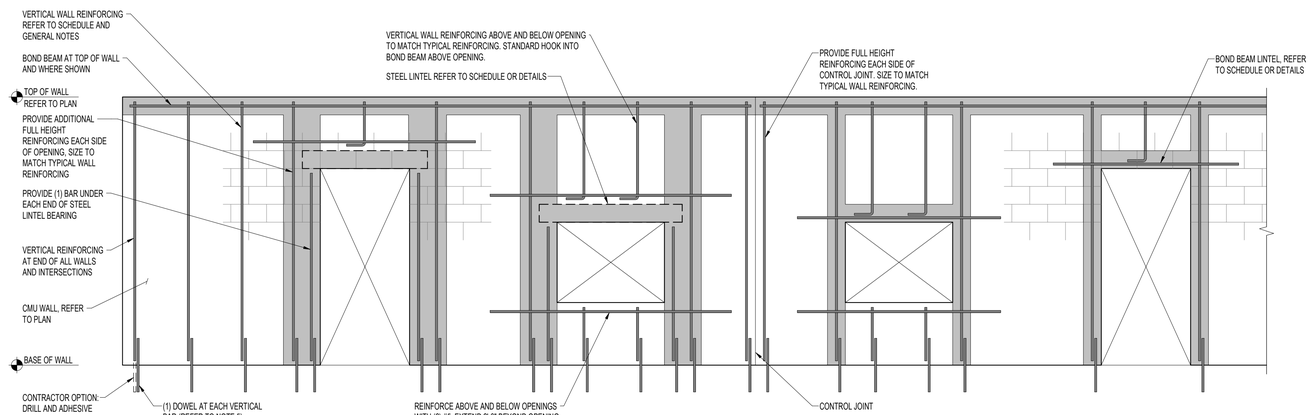
NOTES:
1. THIS DETAIL APPLIES TO MEP OPENINGS WITH A MAXIMUM DIMENSION OF RECTANGULAR, SQUARE, OR ROUND OPENING OF 32" AND LARGER THAN 16" UNLESS A SPECIFIC LINTEL IS CALLED OUT ON PLAN.
2. THIS DETAIL ONLY APPLIES TO NEW WALL CONSTRUCTION WHERE OPENING IS BUILT WITH WALL.
3. REFER TO MEP DRAWINGS FOR SIZE AND LOCATION OF ALL MEP WALL PENETRATIONS.
4. WHERE HORIZONTAL BARS ABOVE OPENING CANNOT BE EXTENDED AS SHOWN, PROVIDE HOOKED ENDS.

3 S402 TYPICAL CMU WALL OPENING 16" UP TO 32"



NOTES:
1. ROUND OR SQUARE HOLES NO GREATER THAN 6" MAY BE PLACED ANYWHERE IN UNREINFORCED CELLS AT MID-HEIGHT OF BLOCK. THESE OPENINGS SHALL NOT OCCUR THRU ENDS OF BLOCK AT HEAD JOINT NOR SHALL THEY INTERRUPT ANY VERTICAL OR HORIZONTAL WALL REBAR.
2. ONE FULL BLOCK MAY BE OMITTED FOR AN OPENING WITH NO ADDITIONAL REINFORCEMENT ABOVE. ANY VERTICAL OR HORIZONTAL REBAR INTERRUPTED SHALL BE PLACED IN ADJACENT CELLS.
3. REFER TO MEP DRAWINGS FOR SIZE AND LOCATION OF ALL MEP WALL PENETRATIONS.

2 S402 TYPICAL SMALL MEP PENETRATIONS UP TO 16" WIDE



NOTES:
1. LOCATE REINFORCING AS SHOWN ON TYPICAL CMU WALL REINFORCING DETAIL.
2. FOR HORIZONTAL JOINT REINFORCING AND SPLICES FOR VERTICAL REINFORCING REFER TO GENERAL NOTES AND SCHEDULES.
3. REFER TO ARCH PLANS FOR SIZE AND LOCATION OF WALLS NOT SHOWN ON STRUCTURAL DRAWINGS.
4. GROUT CELLS SOLID FULL HEIGHT AT ALL VERTICAL REINFORCING.
5. HOOK DOWELS INTO FOUNDATION IF AVAILABLE EMBEDMENT LENGTH IS LESS THAN STRAIGHT BAR DEVELOPMENT LENGTH
6. SHADED AREAS INDICATE LOCATIONS WHERE PENETRATIONS OF ANY KIND ARE PROHIBITED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
7. REFER TO TYPICAL DETAILS FOR LATERAL SUPPORT REQUIREMENTS AT TOPS OF ALL NON LOAD BEARING CMU WALLS.

1 S402 TYPICAL WALL ELEVATION

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

STRUCTURAL DETAILS

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PE Project: 22247

PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S402

DUCT SYSTEMS:

- BACKDRAFT DAMPER (BD-#)
- FIRE DAMPER (FD-#)
- SMOKE DAMPER (SD-#)
- COMBINATION FIRE SMOKE DAMPER (FSD-#)
- MOTORIZED DAMPER (MD-#)
- VOLUME DAMPER
- SIDEWALL GRILLE
- CEILING DIFFUSER, SUPPLY 4-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 3-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 2-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 1-WAY BLOW PATTERN
- CEILING DIFFUSER, RETURN
- CEILING DIFFUSER, EXHAUST
- DOOR UNDERCUT (UC)
- DUCT SECTION, SUPPLY
- DUCT SECTION, RETURN
- DUCT SECTION, EXHAUST
- FLEXIBLE DUCT
- DIRECTION OF AIR FLOW
- DUCT SIZE TRANSITION
- RECTANGULAR ELBOW DOWN - SINGLE LINE
- ROUND ELBOW DOWN - SINGLE LINE
- RECTANGULAR ELBOW UP - SUPPLY
- RECTANGULAR ELBOW DOWN - SUPPLY
- ROUND ELBOW UP - SUPPLY
- ROUND ELBOW DOWN - SUPPLY
- RECTANGULAR ELBOW UP - RETURN
- RECTANGULAR ELBOW DOWN - RETURN
- ROUND ELBOW UP - RETURN
- ROUND ELBOW DOWN - RETURN
- RECTANGULAR ELBOW UP - EXHAUST
- RECTANGULAR ELBOW DOWN - EXHAUST
- ROUND ELBOW UP - EXHAUST
- ROUND ELBOW DOWN - EXHAUST
- MITERED ELBOW
- MITERED ELBOW WITH TURNING VANES
- ACCESS DOOR - TOP/SIDE
- AIR FLOW MEASURING STATION
- SOUND ATTENUATOR
- FLEXIBLE CONNECTION

HYDRONIC VALVES:

- TWO-POSITION 2-WAY VALVE
- MODULATING 2-WAY VALVE
- TWO-POSITION 3-WAY VALVE
- MODULATING 3-WAY VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIFFERENTIAL PRESSURE VALVE
- FLOAT OPERATED VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE INDEPENDENT VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- TRIPLE DUTY VALVE
- BACKFLOW PREVENTER

HYDRONIC SPECIALTIES:

- FLOW SWITCH (FS)
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE GAUGE
- PRESSURE SWITCH (PS)
- PUMP SUCTION DIFFUSER (PSD)
- THERMOMETER
- STRAINER, BLOW DOWN
- STRAINER, HOSE CONNECTION
- STRAINER
- ANCHOR
- PIPING GUIDE
- EXPANSION LOOP
- EXPANSION JOINT
- FLOW METER (FM)

MECHANICAL EQUIPMENT:

PLAN / SYMBOL

- AIR SEPARATOR
- BASKET STRAINER
- EXPANSION TANK, FREE STANDING
- EXPANSION TANK, HANGING
- SIDE STREAM FILTER
- LOUVER
- HEAT EXCHANGER, PLATE AND FRAME
- HEAT EXCHANGER, SHELL AND TUBE
- STEAM TRAP (T)
- VARIABLE FREQUENCY DRIVE (VFD)
- CONTROL BOX (CB)
- ENERGY METER (M)
- NATURAL GAS METER (M)
- PUMP (SEE SCHEDULE FOR TYPE)
- VARIABLE AIR VOLUME BOX
- VAV BOX WITH ELECTRIC REHEAT
- VAV BOX WITH HYDRONIC REHEAT
- ROUND IN / ROUND OUT VAV BOX
- FAN POWERED BOX

HVAC SENSORS:

- CARBON DIOXIDE (CO2)
- CARBON MONOXIDE (CO)
- DEWPOINT (DS)
- GAS (G)
- HUMIDITY (H)
- NITROGEN OXIDE (NO)
- RELATIVE PRESSURE MONITOR (P)
- REFRIGERANT MONITOR (R)
- SMOKE DETECTOR (SD)
- STATIC PRESSURE (SP)
- THERMOSTAT (T)
- TEMPERATURE (TS)

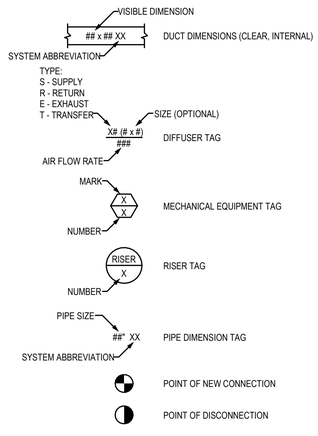
HYDRONIC FITTINGS:

- 45° ELBOW
- CAP
- 90° ELBOW
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DOWN
- TEE UP
- UNION
- FLEXIBLE CONNECTION
- PIPE CONTINUATION
- FLANGE

HYDRONIC SYSTEM ABBREVIATIONS:

— — — —	PIPE TO BE DEMOLISHED
——D——	DRAIN
——NG——	NATURAL GAS
——LP——	LIQUEFIED PETROLEUM
— — V — —	VENT
——CHWS——	CHILLED WATER SUPPLY
— —CHWR— —	CHILLED WATER RETURN
——CWS——	CONDENSER WATER SUPPLY
— —CWR— —	CONDENSER WATER RETURN
— — CD — —	CONDENSATE DRAIN
——HWS——	HEATING HOT WATER SUPPLY
— — HWR — —	HEATING HOT WATER RETURN
——GS——	GLYCOL SUPPLY
— — GR — —	GLYCOL RETURN
——MU——	MAKEUP WATER
——HPWS——	HEAT PUMP WATER SUPPLY
— —HPWR— —	HEAT PUMP WATER RETURN
——GWS——	GEOTHERMAL WATER SUPPLY
— —GWR— —	GEOTHERMAL WATER RETURN
— — RHG — —	REFRIGERANT HOT GAS
——RL——	REFRIGERANT LIQUID
——RS——	REFRIGERANT SUCTION
——HPS——	HIGH PRESSURE STEAM
——MPS——	MEDIUM PRESSURE STEAM
——LPS——	LOW PRESSURE STEAM
— —HPC— —	HIGH PRESSURE STEAM CONDENSATE
— —MPC— —	MEDIUM PRESSURE STEAM CONDENSATE
— —LPC— —	LOW PRESSURE STEAM CONDENSATE
— — CR — —	CONDENSATE RETURN
— — PC — —	PUMPED CONDENSATE
——VPD——	VACUUM PUMP DISCHARGE
——BBD——	BOILER BLOWDOWN
——FWS——	BOILER FEEDWATER SUPPLY
——H——	HUMIDIFICATION LINE
——FOF——	FUEL OIL FILL
— —FOR— —	FUEL OIL RETURN
——FOS——	FUEL OIL SUPPLY
— —FOV— —	FUEL OIL VENT
——A——	COMPRESSED AIR
——VAC——	VACUUM AIR

MECHANICAL TAGS:



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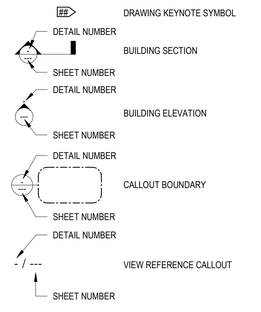

DUCT SYSTEM ABBREVIATIONS:

CA	COMBUSTION AIR
CV	COMBUSTION VENT
EA-AII	EXHAUST AIR - AIRBORNE INFECTIOUS ISOLATION
EA-CH	EXHAUST AIR - CHEMICAL
EA-D	EXHAUST AIR - DRYER
EA	EXHAUST AIR - ENVIRONMENTAL
EA-K1	TYPE 1 - KITCHEN EXHAUST
EA-K2	TYPE 2 - KITCHEN EXHAUST
OA	OUTDOOR AIR
RA	RETURN AIR
SA	SUPPLY AIR

GENERAL ABBREVIATIONS:

A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
ARCH	ARCHITECT
BFG	BELOW FINAL GRADE
BLDG	BUILDING
CLG	CEILING
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION REFERENCE
EM	EMERGENCY
EP	EXPLOSION PROOF
EWC	ELECTRIC WATER COOLER
F	FLUSH
FBO	FURNISHED BY OTHERS
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FS	FLOW SWITCH
GC	GENERAL CONTRACTOR
GRD	GROUND
GYP	GYPSUM BOARD
HC	HEATING CONTRACTOR
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HW	HEAVYWALL
ID	INDIRECT
IL	INTERLOCK
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PLBG	PLUMBING CONTRACTOR
RM	ROOM
SURF	SURFACE
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
VC	VENTILATION CONTRACTOR

MECHANICAL ABBREVIATIONS:

AC	AIR CONDITIONER
ACH	AIR CHANGES PER HOUR
AF	AIR FILTER
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CC	COOLING COIL
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT AIR VOLUME
DAT	DISCHARGE AIR TEMPERATURE
DB	DECIBEL OR DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DH	DUCT HEATER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FC	FAN COIL
FD	FIRE DAMPER
FH	FUME HOOD
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FREEZE STAT
FSD	COMBINATION FIRE/SMOKE DAMPER
GA	GAUGE
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDISTAT
HC	HEATING COIL
HD	HOOD OR HEAT DETECTOR
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER
HP	HORSEPOWER OR HEAT PUMP
HR	HOUR
HUM	HUMIDIFIER
HX	HEAT EXCHANGER
HZ	HERTZ
IN W.C.	INCHES WATER COLUMN
IN W.G.	INCHES WATER GAUGE
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
NC	NORMALLY CLOSED
NK	NECK
NO	NORMALLY OPEN
P	PUMP
PA	PASCAL
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQAURE INCH GAUGE
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RO	RELIEF OPENING
RPM	REVOLUTIONS PER MINUTE
SAT	SUPPLY AIR TEMPERATURE
SD	SMOKE DAMPER OR SMOKE DETECTOR
SF	SQUARE FEET OR SUPPLY FAN
SPS	STATIC PRESSURE SENSOR
T	THERMOSTAT
TD	TEMPERATURE DIFFERENCE
TO	TRANSFER OPENING
TYP	TYPICAL
UC	UNDERCUT (DOOR)
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF
W	WATT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

RENOVATION LEGEND:

<E>	EXISTING TO REMAIN
<ED>	EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE
<ER>	EXISTING TO BE RELOCATED
<EO>	EXISTING TO BE REMOVED
<EN>	EXISTING IN NEW LOCATION
<N>	NEW
<RAI>	REMAIN AS IS

REVISIONS:

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MECHANICAL GENERAL NOTES, SYMBOLS, & LEGENDS

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PROJECT NO.: 154.21.085

DRAWN BY: Author | CHECKED BY: Checker

DATE: 04.10.22

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SPLIT SYSTEM SCHEDULE - CONDENSING UNITS

TAG	CONNECTED AHU	DESIGN AMBIENT AIR TEMPERATURES		COOLING		ELECTRICAL			WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
		SUMMER		NOMINAL TONNAGE	TOTAL CAPACITY (MBH)	MCA	MOCP	V/PH/HZ				
		DB°F	WB°F									
ACCU-1	AHU-1	90.3	74.3	25	290.6	120.2	150	208/3/60	1,095	CARRIER	38APD0255H-22194	ALL

REMARKS:

1. FACTORY PROVIDED NON-FUSED DISCONNECT
2. LOW SOUND FANS AND COMPRESSORS.
3. PROVIDE LONG LINE LENGTH CHECK VALVES.
4. SINGLE POINT POWER.
5. PROVIDE SECURITY GRILLES AND HAIL GUARDS.
6. PROVIDE BACNET COMMUNICATION.
7. PROVIDE OUTSIDE AIR TEMPERATURE SENSOR.
8. UNIT SHALL BE GRADE MOUNTED INSTALLED ON CONCRETE PAD.
9. PROVIDE ONE-YEAR PARTS AND COMPLETE UNIT PARTS WARRANTY.
10. PROVIDE FIVE-YEAR COMPRESSOR PARTS WARRANTY.

SPLIT SYSTEM SCHEDULE - AIR HANDLING UNIT

TAG	CONNECTED ACCU	SERVICE	MOUNTING	DESIGN MAX AIRFLOWS		SUPPLY FAN			COOLING						GAS HEATING							ELECTRICAL-PER FAN			FILTER RATING PRE/FINAL	WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
				SUPPLY	OUTSIDE AIR	AIRFLOW (CFM)	ESP	BHP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT		LAT		EAT	LAT	INPUT (MBH)	OUTPUT (MBH)	HEATING STAGES	MAX GAS PRESSURE (IN....	MIN GAS PRESSURE (IN....	HP	FLA	V/PH/HZ					
				CFM	CFM						DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)	DB (DEG F)	DB (DEG F)													
AHU-1	ACCU-1	OFFICE SPACES	FLOOR MOUNTED	7,000	1,750	7,000	1.75	8.7	276.72	198.85	78.9	65.8	55	55	51.5	65	200	160	10:1	13.5	5.0	5.0	15.4	208/3/60	MERV 8/13	3,400	CARRIER	39M1402HPDL-D	ALL

REMARKS:

1. DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR.
2. FIELD INSTALLED AND WIRED, FULLY PROGRAMMABLE, DDC CONTROLS COMPLETE WITH ALL END-DEVICES, SENSORS, SWITCHES, CONTROL VALVES AND ACTUATORS. CONTROLS BY AUTOMATED LOGIC.
3. FILTER MAGNEHELIC GAUGE.
4. DIRECT DRIVE PLENUM FANS, MOTOR SHAFT GROUND RING, PIEZOMETER PLUS TRANSDUCER AND BLANK-OFF PLATE, ONE VFD FOR TWO FANS, INDIVIDUAL OVERLOAD PER MOTOR.
5. ONE FACTORY INSTALLED VFD FOR UNIT – 3 YEAR PARTS AND LABOR WARRANTY ON VFDS. START-UP BY MANUFACTURER.
6. FIELD PROVIDED AND INSTALLED OUTDOOR AIRFLOW MEASURING STATIONS.
7. 4" MERV 13 + 2" MERV 8 PLEATED MEDIA FILTERS
8. CASING LEAKGE RATE SHALL BE LESS THAN 1% AT 8" WG OF NOMINAL AIRFLOW OR 50 CFM, WHICHEVER IS GREATER.
9. R-13 DOUBLE WALL SEALED PANEL. LEVEL 1 THERMAL BREAK. GALVANIZED EXTERIOR AND INTERIOR PANELS.
10. PROVIDE PREMIUM PARALLEL BLADE DAMPERS FOR RETURN, PREMIUM OPPOSED BLADE DAMPERS FOR OUTSIDE AIR.
11. 6" INTEGRAL BASE RAIL
12. FACTORY PRESSURE TEST COILS TO 450PSIG
13. SS COOLING COIL DRAINPAN AND COIL CASING – NO EXCEPTIONS
14. HINGED, LOCKABLE DOUBLE-WALL ACCESS DOORS ON BOTH SIDES.
15. UL LISTING
16. OEM TWO YEAR PARTS AND LABOR WARRANTY – ENTIRE UNIT. FACTORY STARTUP.
17. SUBMIT SOUND DATA PER AHRI STD 430/431. NO EXCEPTIONS
18. 20 GAGE GALVANIZED STEEL GAS HEAT EXCHANGER CABINET, INDUCED DRAFT FAN, 1" THICK, MINIMUM 1-1/2 LB/CU FT DENSITY THERMAL INSULATION FOR HEAT EXCHANGER CABINET.
19. GAS HEATING SECTION TO HAVE SEPARATE 115 VOLT POWER CONNECTION.

EXHAUST FAN SCHEDULE

TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	DRIVE	BLOWER SECTION					SPEED CONTROL	CONTROLLED BY	V/PH/HZ	WEIGHT	REMARKS
							CFM	ESP	MOTOR HP	BHP	RPM					
EF-1	WORK AREA	SHOP EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-2	WORK AREA	SHOP EXHAUST	LOREN COOK	225SQNH17D (VF)	CENTRIFUGAL INLINE	DRIVE	2,050	0.5	1-1/4	0.302	669	VARIFLOW EC	BUILDING PRESSURE	208/3/60	271	1,2,3,4
EF-3	GARAGE	TOILET/LOCKER EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-4	GARAGE	SALT STORAGE EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-5	GARAGE	CO/NOX EXHAUST	LOREN COOK	245SQN17D (VF)	CENTRIFUGAL INLINE	DIRECT	3,700	0.5	1-1/4	0.58	594	VARIFLOW EC	CO/NOX	208/3/60	309	1,2,3
EF-6	GARAGE	CONSTANT GARAGE EXHAUST	LOREN COOK	100SQN12D	CENTRIFUGAL INLINE	DIRECT	300	0.5	1/6	104 WATTS	1,301	FSC	OCCUPANCY SCHEDULE	115/1/60	54	1,2,3
EF-7	MEZZANINE	AHU-1 GENERAL EXHAUST	LOREN COOK	225QMXHPD11	MIXED FLOW INLINE	DIRECT	5,600	0.5	3	0.837	868	VFD	BUILDING PRESSURE	208/3/60	542	1,2,3,4
EF-8	GARAGE	STORAGE EXHAUST	LOREN COOK	135SQN-B OR81	CENTRIFUGAL INLINE	BELT	350	0.5	1/4	0.121	1,156	NA	CONSTANT	115/1/60	66	1,3,5,6

REMARKS:

1. PROVIDE INTEGRAL DISCONNECT. DISCONNECT SHALL BE RATED FOR THE INSTALLED ENVIRONMENT.
2. PROVIDE MOTORIZED DAMPER POWERED FROM DDC.
3. PROVIDE VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
4. MANUFACTURER TO PROVIDE PRESSURE CONTROL PACKAGE.
5. PROVIDE GRAVITY BACKDRAFT DAMPER.
6. PROVIDE ALL ACCESSORIES AND COMPONENTS FOR SPARK-PROOF CONSTRUCTION.

DIRECT FIRED INDOOR AIR HANDLING UNIT SCHEDULE

TAG	BURNER TYPE	AMBIENT CONDITIONS	SUPPLY FAN				GAS HEATING COIL						ELECTRICAL			FILTER RATING	WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
		WINTER	AIRFLOW (CFM)	MAX OUTSIDE AIR (CFM)	ESP	BHP	EAT	LAT	INPUT (MBH)	OUTPUT (MBH)	MIN GAS PRESSURE (IN. WG)	MAX GAS PRESSURE (IN. WG)	MCA	MOCP	V/PH/HZ					
		DB°F					DB (DEG F)	DB (DEG F)												
MAU-1	SEPARATED COMBUSTION	-10	4,600	3,900	1	3.01	1.5	97.5	600	480	6.5	14.0	21.0	35	208/3/60	MERV 8	1,377	STERLING	MS60A6B01K4351AB1R1	1-11
AHU-2	SEPARATED COMBUSTION	-10	2,600	550	1	1.64	55	91.87	150	120	6.5	14.0	10.2	25	208/3/60	MERV 8	833	STERLING	MS20A2B01K41G4MA3B1	1-12

REMARKS:

1. INSTALL PER MANUFACTURER'S WITH VIBRATION ISOLATION HANGERS.
2. PROVIDE MANUFACTURER DISCONNECT SWITCH.
3. PROVIDE END OUTISE AIR INTAKE, BOTTOM RETURN, AND END DISCHARGE.
4. COORDINATE CONTROLS LOCATION WITH PLANS TO MAINTAIN REQUIRED CLEARANCES.
5. PROVIDE MOTORIZED DAMPERS ON OA AND RA OPENINGS.
6. STARTUP SHALL BE BY MANUFACTURER.
7. PROVIDE SEVEN DAY PROGRAMMABLE THERMOSTAT.
8. PROVIDE HINGED ACCESS DOORS.
9. PROVIDE STAINLESS STEEL NATURAL GAS BURNER AND EVAPORATOR COMPONENTS.
10. PROVIDE MANUFACTURER PROVIDED SUPPLY FAN VFD FOR FIELD BALANCING.
11. 2-YEAR PARTS WARRANTY, 5-YEAR LABOR WARRANTY.
12. PROVIDE THREE-WAY DISCHARGE HEAD.

REVISIONS:
1 7.13.2022 ADDENDUM NO.1
2 7.15.2022 ADDENDUM NO.2

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PROJECT NO.: 154.21.085
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FAN POWERED BOX SCHEDULE

TAG	MANUFACTURER	MODEL	UNIT SIZE	PRIMARY AIR			FAN			ELECTRIC HEAT					ELECTRICAL		REMARKS
				INLET SIZE (IN)	MAX CFM	MIN CFM	CFM	HP	V/PH/HZ	HEATING CFM	EAT (DEG F)	LAT (DEG F)	KW	V/PH/HZ	STAGES	MCA	MOCP	
FPB-1	TITUS	DTFS	D	12	1,300	350	1,300	0.5	208/1/60	1,300	64.5	90	10.5	208/3/60	SCR	42.7	45	ALL

REMARKS:

1. PROVIDE SINGLE POINT POWER AND DOOR INTERLOCK DISCONNECT.
2. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
3. PROVIDE EC MOTORS.
4. PROVIDE 1" ECOSHIELD LINER.
5. PROVIDE INDUCED AIR FILTER, DISPOSABLE TYPE.
6. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
7. PROVIDE DUST TIGHT CONSTRUCTION.

VARIABLE AIR VOLUME WITH ELECTRIC REHEAT BOX SCHEDULE

TAG	MANUFACTURER	MODEL	PRIMARY AIR			ELECTRIC HEAT					ELECTRICAL		REMARKS
			INLET SIZE (IN)	MAX CFM	MIN CFM	HEATING CFM	EAT (DEG F)	LAT (DEG F)	KW	V/PH/HZ	STAGES	MCA	MOCP	
VAVE-1	TITUS	DESV	8	820	820	820	55	72	5.5	208/3/60	SCR	19.1	20	ALL

REMARKS:

1. PROVIDE SINGLE POINT POWER AND DOOR INTERLOCK DISCONNECT.
2. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
3. PROVIDE 1" ECOSHIELD LINER.
4. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
5. PROVIDE DUST TIGHT CONSTRUCTION.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	STYLE	WATT DENSITY	HEATING CAPACITY (W)	LENGTH (IN)	V/PH/HZ	REMARKS
EBB-A	OULLET	OHB2108	BOTTOM INLET/PEDESTALS	STANDARD	1577	70-7/8	208/1/60	ALL
EBB-B	OULLET	OHB2808	BOTTOM INLET/PEDESTALS	STANDARD	2103	94-1/2	208/1/60	ALL

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.

VARIABLE AIR VOLUME BOX SCHEDULE

TAG	MANUFACTURER	MODEL	PRIMARY AIR			REMARKS
			INLET SIZE (IN)	MAX CFM	MIN CFM	
VAV-1	TITUS	DESV	12	1,300	300	ALL
VAV-2	TITUS	DESV	12	1,300	300	ALL
VAV-3	TITUS	DESV	10	1,100	200	ALL
VAV-4	TITUS	DESV	8	500	120	ALL
VAV-5	TITUS	DESV	6	400	8	ALL
VAV-6	TITUS	DESV	8	900	120	ALL
VAV-7	TITUS	DESV	8	500	120	ALL
VAV-8	TITUS	DESV	6	400	80	ALL
VAV-9	TITUS	DESV	8	600	120	ALL

1. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
2. PROVIDE 1" ECOSHIELD LINER.
3. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	HEATING CAPACITY (KW)	AIRFLOW	V/PH/HZ	AMPS	WEIGHT	REMARKS
EUH-3	QMARK	GUX300812	3	700	208/1/60	16.7	135	1,2,3,4
EUH-5	QMARK	MUH05-81	5	350	208/3/60	24	27	1,2,3

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT SET TO 60F.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.
4. PROVIDE EXPLOSION PROOF CONSTRUCTION.

ELECTRIC CABINET UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	HEATING CAPACITY (KW)	DIMENSIONS (HxWxD) (IN)	INSTALLATION	AIRFLOW	V/PH/HZ	AMPS	WEIGHT	REMARKS
ECUH-5	QMARK	CU935	5	35"x26-3/8"x9-3/4"	FULLY RECESSED	250	208/3/60	15	120	ALL

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT SET TO 65F.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.
4. COORDINATE FINISH WITH ARCHITECT.

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	SERVICE	MATERIAL	FACE SIZE	SLOT NUMBER	SLOT WIDTH (INCH)	SLOT LENGTH (INCH)	DAMPER	INSULATED PLENUM	REMARKS
A1	TITUS	OMNI	SQUARE PLAQUE	SUPPLY/RETURN/EXHAUST	STEEL	24X24	-	-	-	NO	NO	1,2,3
B1	TITUS	350RL	35 DEGREE DEFLECTION GRILLE	EXHAUST/RETURN	STEEL	INLET+2"	-	-	-	NO	NO	1,2,3
B2	TITUS	300RL	DOUBLE DEFLECTION SUPPLY GRILLE	SUPPLY	ST EEL	INLET+2"	-	-	-	NO	NO	1,2,3
C1	TITUS	TBDI-80	PLENUM SLOT DIFFUSER	SUPPLY	STEEL	-	2	1	48	NO	YES	1,2,3,4
C2	TITUS	TBDI-80	PLENUM SLOT DIFFUSER	SUPPLY	STEEL	-	3	1	48	NO	YES	1,2,3,4
D1	TITUS	S300FL	SPIRAL DUCT MOUNTED GRILLE	SUPPLY	ALUMINUM	INLET+2"	-	-	-	EXTRACTOR	NO	1,2,3
E1	TITUS	DL-SV	LONG THROW GRILLE	SUPPLY	ALUMINUM	INLET+2"	-	-	-	EXTRACTOR	NO	1,2,3

REMARKS:

1. COORDINATE FINISH WITH ARCHITECT.
2. COORDINATE FRAME STYLES WITH ARCHITECTURAL PLANS
3. PROVIDE ALL ACCESSORIES FOR HARD CEILING INSTALLATION WHERE REQUIRED.
4. IF LOCATED ALONG EXTERIOR. ADJUST FLOW PATTERN CONTROLLERS TO THROW TOWARD WINDOW. IF LOCATED IN INTERIOR OF SPACE, ADJUST FLOW PATTERN CONTROLLERS TO THROW HORIZONTALLY TOWARD CENTER OF ROOM.

REVISIONS

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PROJECT NO.: 154.21.085
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DATE: 04.10.22
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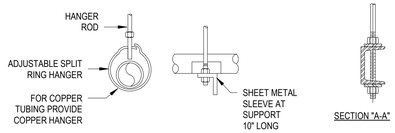
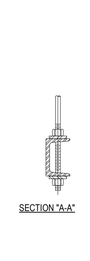
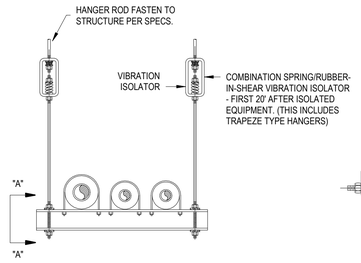
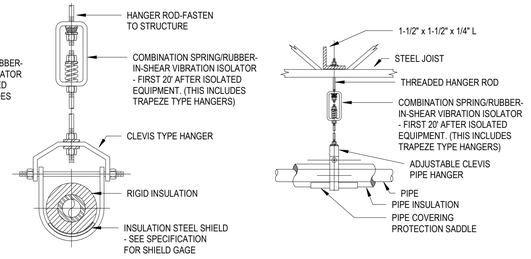


TYPICAL PIPING SUPPORT FOR ALL NON-INSULATED PIPING





TRAPEZE HANGER DETAIL

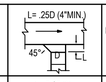
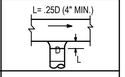
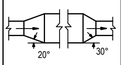
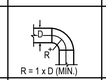
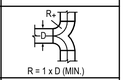
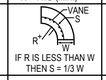
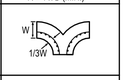
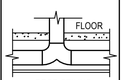


TYPICAL PIPING SUPPORT FOR ALL INSULATED PIPING

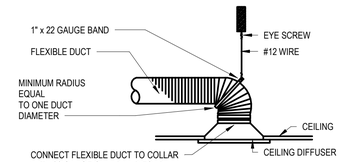
PIPE SUPPORT SCHEDULE												
PIPE SIZE (INCHES)		1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6-8
SPACING (FEET)	STEEL	5	6	7	8	9	10	11	12	12	12	12
	COPPER	6	6	6	6	10	10	10	10	10	10	10

NOTE: HANGER ROD SIZE - 3/8 INCH

3 TYPICAL PIPE SUPPORT DETAIL
NOT TO SCALE

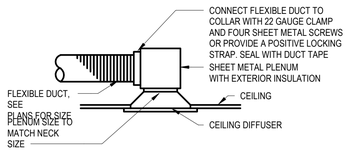
BRANCH TAKE-OFF RECTANGULAR TO RECTANGULAR		BRANCH TAKE-OFF RECTANGULAR TO ROUND	
BRANCH TAKE-OFF ROUND TO ROUND		TRANSITION FITTING	
STANDARD ELBOW		TEE	
SHORT ELBOW		SHORT TEE	
SINGLE DIRECTION TRANSITION USE SIMILAR TRANSITION WHEN FEEDING UP TO CEILING CAVITY		SPLIT DIRECTION TRANSITION USE SIMILAR TRANSITION WHEN FEEDING UP TO CEILING CAVITY	

1 TYPICAL DUCT TAKE-OFFS DETAIL
NOT TO SCALE



NOTE:
NORMALLY USED WHEN FULL RADIUS ELBOW IN FLEX DUCT CAN BE ACHIEVED.

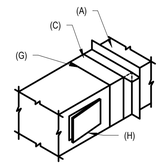
DIFFUSER DETAIL - OPTION #1

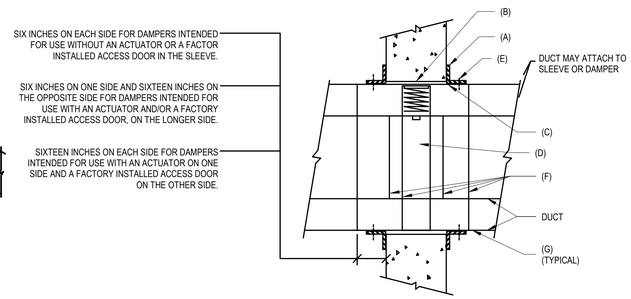


NOTE:
USED WHEN NORMAL RADIUS ELBOW CAN'T BE ATTACHED AS SHOWN IN OPTION #1.

DIFFUSER DETAIL - OPTION #2

4 TYPICAL DIFFUSER AND GRILLE CONNECTIONS
NOT TO SCALE





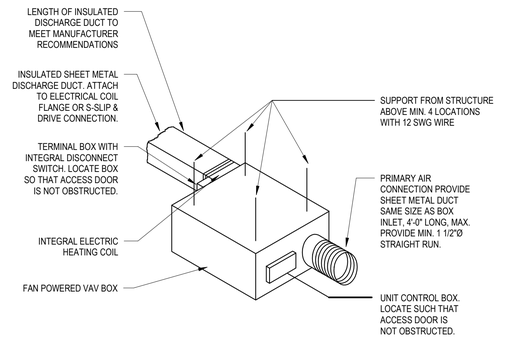
NOTES:
1. FIRE DAMPER ASSEMBLIES MUST BE UL 555 LISTED AND LABELED FOR THE APPLICATION. FIRE DAMPER ASSEMBLES MUST MEET NFPA 90A AND ALL LOCAL CODES.
2. PROVIDE FIRE DAMPERS THAT HAVE FIRE RATINGS COMPATIBLE WITH THE BUILDING SURFACE IN WHICH THE DAMPER IS INSTALLED.
3. REVIEW ARCHITECTURAL DRAWINGS, INCLUDING ANY LIFE SAFETY DRAWINGS, AND PROVIDE THE PROPER RATED DAMPERS. WHERE A CONFLICT EXISTS BETWEEN THE WALL RATINGS DEPICTED ON THE MECHANICAL DRAWINGS AND THE ARCHITECTURAL DRAWINGS, THE ARCHITECTURAL DRAWINGS SHALL PREVAIL.
4. ALL DAMPER BLADES MUST BE 100% OUT OF THE AIR STREAM. DAMPERS WITH BLADES IN THE AIR STREAM ARE NOT ACCEPTABLE.
5. ALL FUSIBLE LINKS SHALL BE 212 °F RATED.
6. FIRE DAMPER SLEEVE CLEARANCE WITHIN WALL OPENING:
7. CLEARANCE REQUIREMENTS FOR DAMPER SLEEVES WITHIN A WALL OPENINGS ARE BASED ON 1/8 INCH PER FOOT OF WIDTH (OR HEIGHT) UNLESS OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. THE SLEEVE MAY REST ON THE BOTTOM OF THE OPENING, AND NEED NOT BE CENTERED. (FRACTIONAL DIMENSIONS SHALL BE TAKEN AS THE NEXT LARGEST WHOLE FOOT.) THE SLEEVE IS RETAINED IN THE WALL OPENING BY THE USE OF STEEL RETAINING ANGLES (A). THESE MUST OVERLAP THE EDGE OF THE FRAMING BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE OPENING. THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING AFTER THE OPENING HAS BEEN FRAMED AND FIRE RESISTIVE MATERIALS PROVIDED WHERE REQUIRED. THE FIRE RESISTIVE MATERIAL SHALL BE EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIAL USED IN THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE WALL PENETRATION. THE CONTRACTOR ERECTING THE WALL IS RESPONSIBLE FOR PROVIDING THE FIRE RESISTIVE MATERIAL AND CORRECT SIZE OPENINGS TO ACHIEVE THE REQUIRED CLEARANCE.
8. MANUFACTURER'S INSTALLATION DETAILS:
9. THE FIRE DAMPER MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS AS TESTED AND APPROVED BY UL MAY BE USED IN LIEU OF THE ABOVE DETAILS WHERE APPLICABLE. PROVIDE SUPPLIER'S UL DETAILS IN SUBMITTALS IF THIS DETAIL IS NOT FOLLOWED.
10. MINIMUM STEEL SLEEVE THICKNESS:
FOR BREAKAWAY CONNECTIONS, RECTANGULAR OR ROUND DUCTWORK.

DUCT DIMENSIONS	SLEEVE GAUGE
12" DOWN	26
13"-30"	24
31"-54"	22
55"-84"	20
85" - UP	18

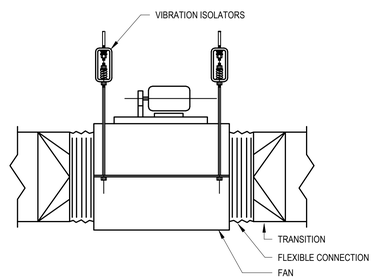
11. VERTICAL POSITION IS SHOWN:
HORIZONTAL INSTALLATION IS SIMILAR. FOLLOW INSTALLATION INSTRUCTION FOR FUSIBLE LINKS.

TYPICAL INSTALLATION DETAILS
A. RETAINING ANGLES
MINIMUM 1 1/2" x 1 1/2" x 0.054 (16 GA.)
RETAINING ANGLES MUST OVERLAP STRUCTURE OPENING 1"
MINIMUM AND COVER CORNERS OF OPENING AS SHOWN.
B. CLEARANCE: 1/8" PER LINEAR FOOT BOTH DIMENSIONS.
(SEE NOTE 1)
C. STEEL SLEEVE FOR BREAK AWAY CONNECTION. (SEE NOTE 8)
D. APPROVED FIRE DAMPER (CURTAIN OR BLADE TYPE)
E. SECURE RETAINING ANGLES TO SLEEVE ONLY, ON 8" CENTERS WITH:
1. 1/2" LONG WELDS OR
2. 1/4" BOLTS AND NUTS, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/16" STEEL RIVETS
F. SECURE DAMPER TO SLEEVE ON 8" CENTERS WITH:
1. 1/2" LONG WELDS OR
2. 1/4" BOLTS AND NUTS, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/4" STEEL RIVETS
G. CONNECT DUCT TO SLEEVE USING U.L. ACCEPTED DUCT SLEEVE BREAKAWAY CONNECTIONS.
H. ACCESS DOORS AND PANELS ARE TO BE LARGE ENOUGH TO PERMIT MAINTENANCE AND RESETTING OF DEVICES. DUCT ACCESS DOORS SHALL BE A MAXIMUM OF 24" x 24" AND A MINIMUM OF 6" x 6" UNLESS THE DUCT SIZE DOES NOT ALLOW INSTALLATION OF THE DOOR, IN WHICH CASE, A REMOVABLE SECTION OF DUCT SHALL BE PROVIDED FOR ACCESS.

2 FIRE DAMPER INSTALLATION DETAIL
NOT TO SCALE



6 TYPICAL FAN POWERED VAV BOX DETAIL
NOT TO SCALE



5 INLINE FAN SUPPORT DETAIL
NOT TO SCALE

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DRAWN BY: Author
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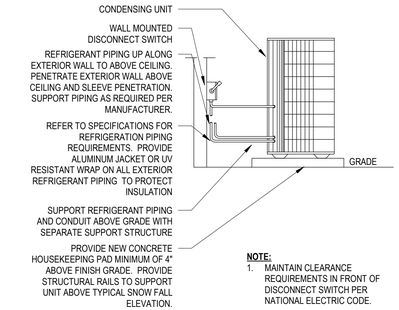
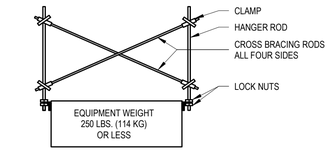
SHEET NO.: M0.4

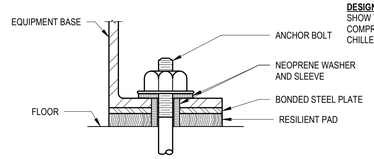


NOTE:
1. MAINTAIN CLEARANCE REQUIREMENTS IN FRONT OF DISCONNECT SWITCH PER NATIONAL ELECTRIC CODE.

6 GROUND MOUNTED CONDENSING UNIT
NOT TO SCALE



SEISMIC BRACING FOR LIGHT SUSPENDED EQUIPMENT

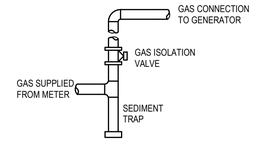


EQUIPMENT RESTRAINED BY RESILIENT PADS (TYPE DS)

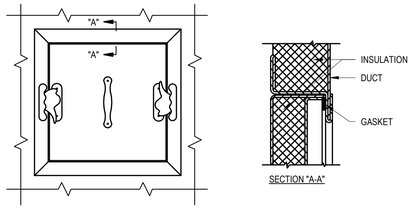
NOTE:
NOT REQUIRED FOR AIR TERMINAL UNITS.

DESIGNER'S NOTE:
SHOW THIS TYPE FOR CONTROL AIR COMPRESSORS AND FOR CENTRIFUGAL CHILLERS ON SLAB ON GRADE.

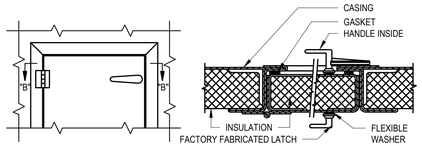
3 SUSPENDED EQUIPMENT DETAIL
NOT TO SCALE



1 GAS CONNECTOR DETAIL
NOT TO SCALE



ACCESS PANEL

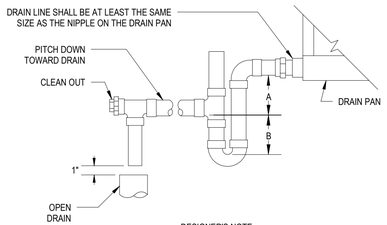


ACCESS DOOR

NOTES:
1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.

DESIGNERS NOTES:
1. USE ACCESS DOORS ON AIR HANDLING UNITS AND DUCTWORK INSTALLED IN EQUIPMENT ROOMS.
2. USE ACCESS PANELS ON ALL EQUIPMENT AND DUCTWORK INSTALLED ABOVE FINISHED CEILINGS.

7 ACCESS DOOR DETAIL
NOT TO SCALE

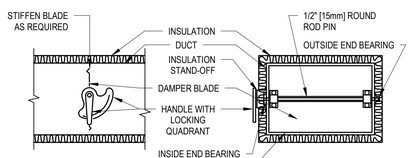


DESIGNER'S NOTE:

UNIT TYPE	A	B
DRAW THRU	2" [51mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

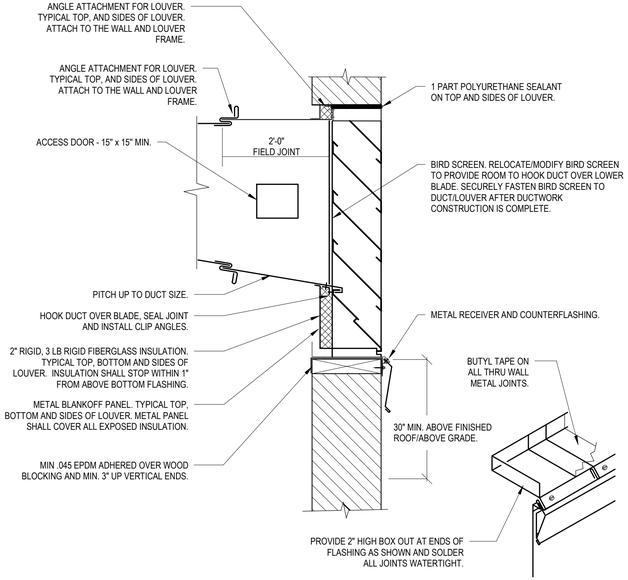
WHERE X = STATIC PRESSURE IN PAN

4 AIR HANDLING UNIT DRAIN TRAP
NOT TO SCALE



NOTE:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLAD DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

5 VOLUME DAMPER DETAIL
NOT TO SCALE



NOTES TO SPECIFIER:
COORDINATE ACCESS DOOR SIZES AND LOCATIONS FOR EACH INDIVIDUAL PROJECT. THE SIZE LISTED IS A MINIMUM SIZE INTENDED TO BE USED FOR SMALLER SIZE LOUVERS/DUCTS AND SHOULD NOT BE UTILIZED FOR ALL DESIGNS.

NOTES:
1. SEAL ALL DUCT JOINTS, CORNERS AND SEAMS WATERTIGHT USING SEALANT AND OR SOLDERING. REFER TO SPECIFICATION SECTION 23 31 00 FOR ACCEPTABLE SEALANTS TO BE UTILIZED IN DUCT SYSTEMS.

2 LOUVER INSTALLATION DETAIL
NOT TO SCALE

REVISIONS:

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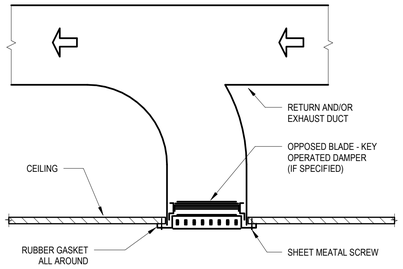
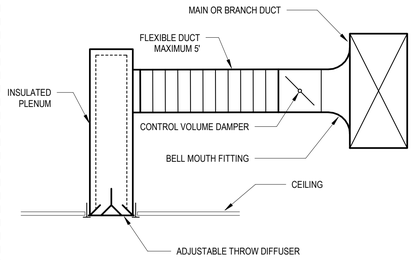
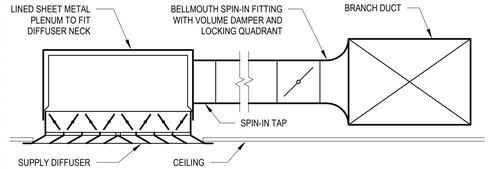
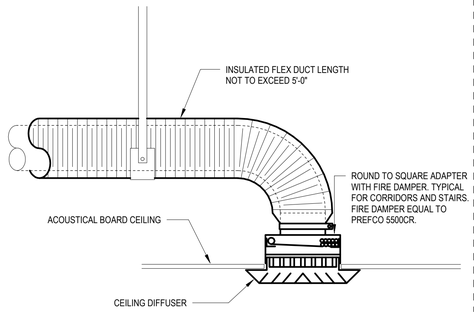
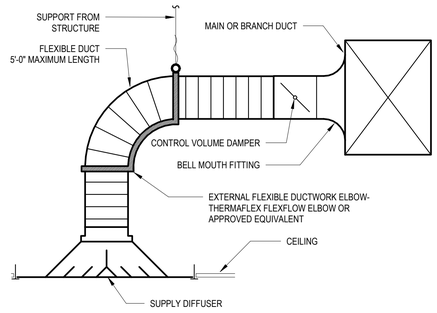


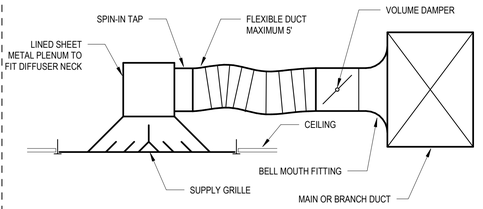




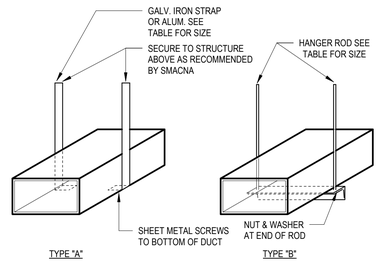
NOTE:
1. FLEXIBLE DUCT SHALL BE PERMITTED WHERE ALLOWED BY CODE.
2. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5'-0" IN LENGTH







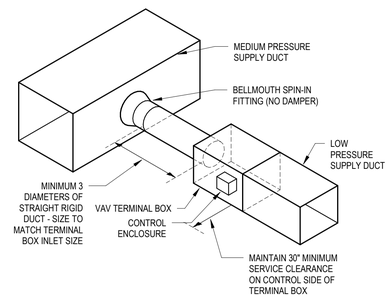
1 CEILING DIFFUSER DETAIL
NOT TO SCALE



DUCT HANGER SCHEDULE					
DUCT SIZE (INCH)	TYPE OF HANGER	HANGER SPACING (FT)	STRAP SIZE	ROD SIZE (INCH)	ANGLE FOR BRACING
UP TO 12	A	8'-0"	1"x16GA	N.A.	N.A.
13 TO 18	A	8'-0"	1"x16GA	N.A.	N.A.
19 TO 30	A/B	8'-0"	1"x16GA	1/4"	1-1/2"x1-1/2"x1/8"
31 TO 42	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
43 TO 54	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
55 TO 60	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
61 TO 84	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
85 TO 96	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
OVER 96	B	8'-0"	N.A.	3/8"	2"x2"x1/4"

NOTES:
1. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B" MAY BE USED. SIZE OF HANGER WILL BE SELECTED ON THE SUM OF DUCT WIDTHS EQUAL TO MAX WIDTH OF DUCT SCHEDULE.
2. ON TYPE "A" HANGER, PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.

3 DUCT SUPPORT DETAIL
NOT TO SCALE



2 VAV TERMINAL BOX INSTALLATION
NOT TO SCALE

REVISIONS

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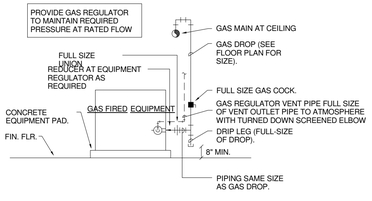
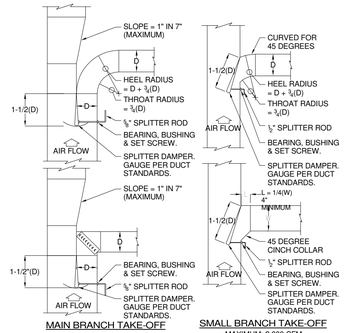


1 GAS CONNECTION DETAIL
N.T.S

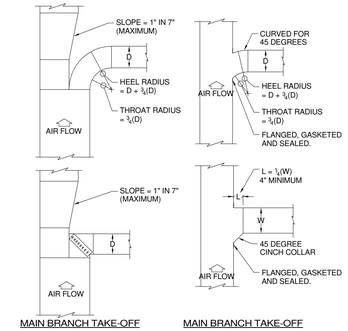
MECHANICAL



NOTE:
THESE APPLICATIONS APPLY TO SINGLE ZONE CONSTANT VOLUME AND SINGLE ZONE VAV SYSTEMS.

2 LOW PRESSURE DUCTS TAKEOFFS
SCALE: NTS

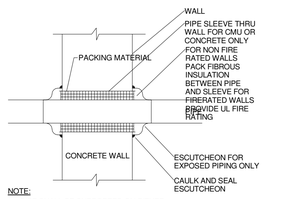
MECHANICAL



NOTE:
THESE APPLICATIONS APPLY TO FULL VARIABLE AIR VOLUME SYSTEMS, WITH VAV BOX IN EACH ZONE.

3 MEDIUM PRESSURE DUCTS TAKEOFFS
SCALE: NTS

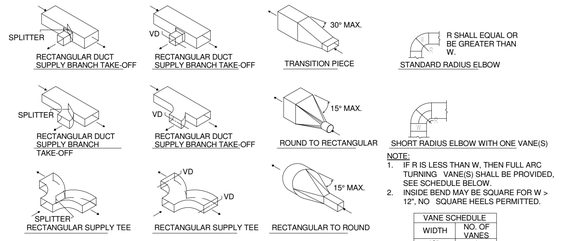
MECHANICAL



NOTE:
1. PIPE SHALL BE SUPPORTED ON EITHER SIDE OF WALL. PIPE SUPPORT SHALL BE COMPLETELY INDEPENDENT OF WALL.

4 PIPE THRU WALL DETAIL
N.T.S

MECHANICAL

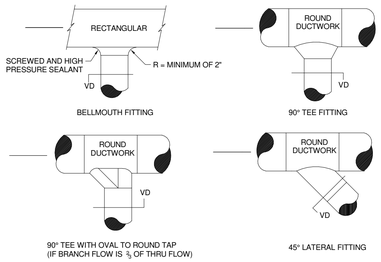


NOTE:
1. IF R IS LESS THAN W, THEN FULL ARC TURNING VANE(S) SHALL BE PROVIDED, SEE SCHEDULE BELOW.
2. INSIDE BEND MAY BE SQUARE FOR W > 12", NO SQUARE HEELS PERMITTED.

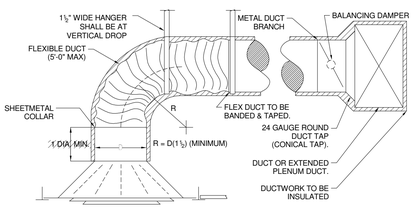
VANE SCHEDULE	
WIDTH	NO. OF VANES
< 12"	1
12"-24"	2
24"-36"	3
36"-60"	4
60"-84"	5
> 84"	6

NOTES:
1. PROVIDE STANDARD RADIUS ELBOWS WHEN POSSIBLE - SHORT RADIUS WHERE REQUIRED.
2. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED & FASTENED AS RECOMMENDED BY SMACNA.
3. NO SQUARE OR RECTANGULAR HEEL ELBOWS SHALL BE ALLOWED.

5 RECTANGULAR DUCTWORK TRANSITIONS AND FITTINGS
SCALE: NONE



6 ROUND DUCTWORK FITTINGS
SCALE: NONE

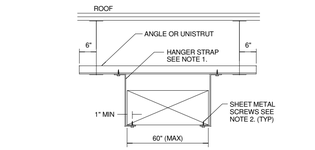


DIFFUSER BALANCING DAMPER

NOTES:
1. CEILING DIFFUSER SHALL BE SQUARE FACE, ROUND NECK & SIMILAR TO: TITUS TMS, CARNES SFTA, OR KRUEGAR 1400.
2. DIFFUSER FRAME WITH EXTENDED PANELS NOT ACCEPTED.
3. PROVIDE LAY-IN TYPE DIFFUSER FRAMES FOR INVERTED T-BAR CEILING.
4. PROVIDE SURFACE MOUNTING FLANGE FOR GYP BOARD CEILING AND OTHER SPECIAL CEILING.
5. FLEX DUCT SHALL BE BANDED AND TAPED. PROVIDE BEAD ON METAL COLLAR IF DUCT SIZE EXCEEDS 12" DIAMETER.
6. LOW PRESSURE DUCTWORK ONLY.
7. OMIT VOLUME DAMPER ABOVE GYP BOARD CEILING AND USE DAMPER BEHIND CEILING DIFFUSER FOR BALANCE.
8. THE HANGERS SUPPORTING FLEX DUCT SHALL BE NOT LESS THAN 1-1/2" WIDE IN DIRECT CONTACT WITH DUCT.

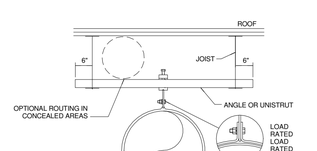
MINIMUM CONICAL TAP METAL GAUGE		
TAP DIA. (IN.)	GAUGE - GALV. STOCK	DAMPER GAUGE
8 AND BELOW	24	22
9 - 14	24	22
15 - 16	22	20
27" - 36	20	18
37 - 50	18	16

7 CEILING DIFFUSERS AND BRANCH DUCTS
SCALE: NONE



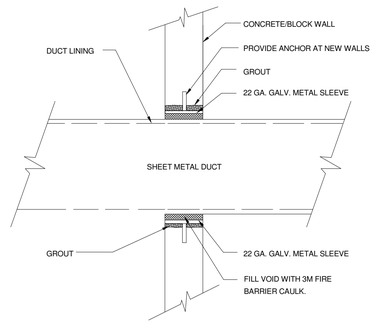
NOTE:
1. USE THREADED ROD FOR ALL DUCTS LARGER THAN 60"□ WIDE.
2. SHEET METAL SCREWS MAY BE OMITTED IF HANGER STRAP IS CONTINUOUS AND LOOPS UNDER ENTIRE DUCT.

8 RECTANGULAR DUCT SUPPORT DETAIL
SCALE: NONE



NOTE:
FOR DUCTS LARGER THAN 36"□, USE TWO HANGER RODS, WIRES OR STRAPS 1. TO SUPPORT DUCT FROM EACH SIDE.

9 ROUND DUCT SUPPORT DETAIL
SCALE: NONE



10 DUCT PASSING THROUGH WALL DETAIL
SCALE: NONE

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REVISIONS

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MECHANICAL DETAILS

PROJECT NO.: 154.21.085
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DATE: 04.10.22
SHEET NO.: M0.7

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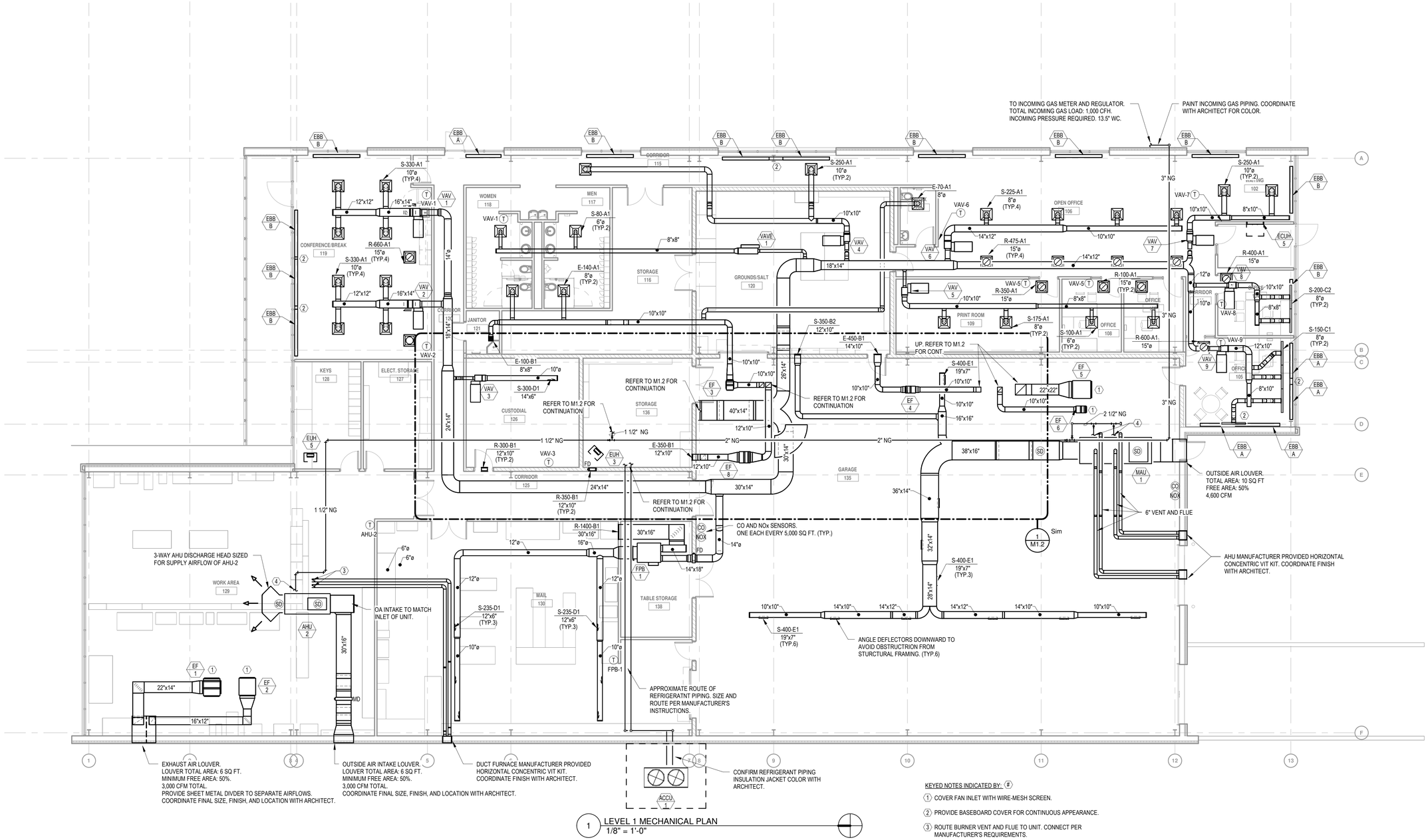

1 LEVEL 1 MECHANICAL PLAN
1/8" = 1'-0"

KEYED NOTES INDICATED BY: (#)

(1) COVER FAN INLET WITH WIRE-MESH SCREEN.

(2) PROVIDE BASEBOARD COVER FOR CONTINUOUS APPEARANCE.

(3) ROUTE BURNER VENT AND FLUE TO UNIT. CONNECT PER MANUFACTURER'S REQUIREMENTS.

(4) CONNECT GAS TO UNIT. PROVIDE ALL REQUIRED PIPING SPECIALTIES.

REVISIONS

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LEVEL 1 MECHANICAL PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: Author
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DATE: 04.10.22
SHEET NO.: M1.1

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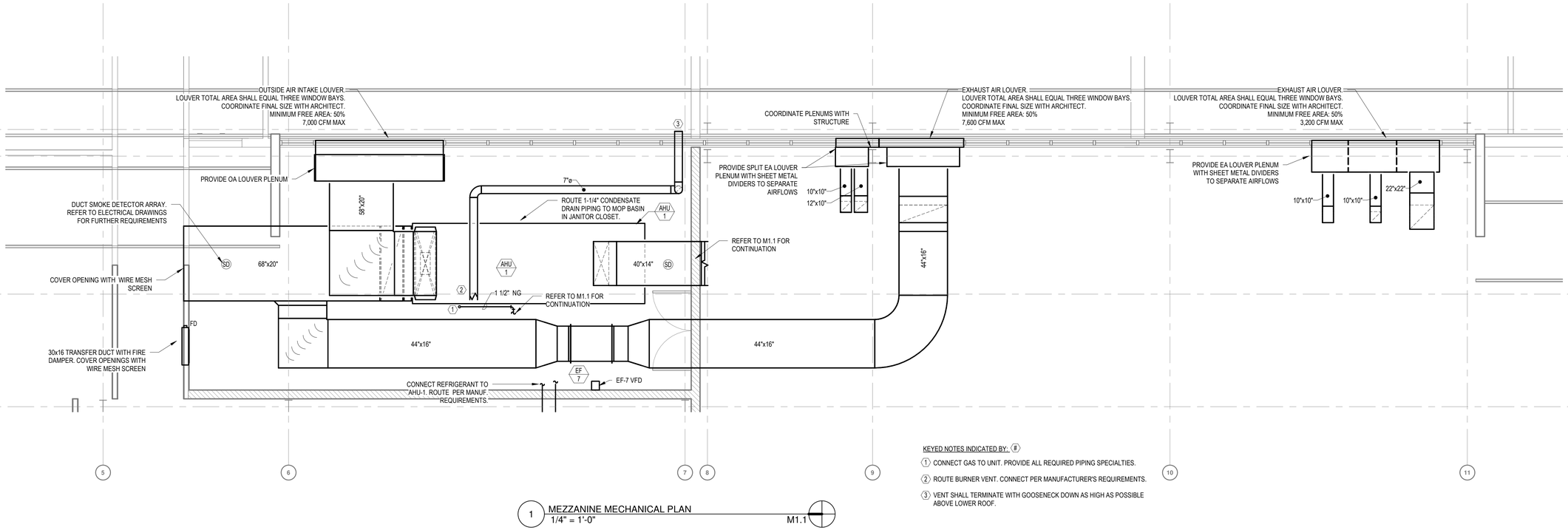

1 MEZZANINE MECHANICAL PLAN
1/4" = 1'-0"
M1.1

KEYED NOTES INDICATED BY: (#)

1. CONNECT GAS TO UNIT. PROVIDE ALL REQUIRED PIPING SPECIALTIES.
2. ROUTE BURNER VENT. CONNECT PER MANUFACTURER'S REQUIREMENTS.
3. VENT SHALL TERMINATE WITH GOOSENECK DOWN AS HIGH AS POSSIBLE ABOVE LOWER ROOF.

REVISIONS

B

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MEZZANINE MECHANICAL PLAN

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PROJECT NO.: 154.21.085

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DATE: 04.10.22

SHEET NO.: M1.2

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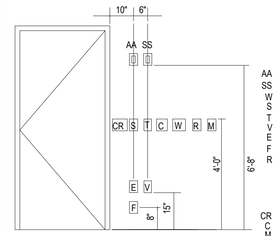
GENERAL NOTES

1. THIS INSTALLATION SHALL BE IN COMPLIANCE WITH THE 2017 NEC AND ALL APPLICABLE LOCAL CODES.
2. BEFORE COMMENCING WORK THE CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY INFORM HIMSELF OF ALL CONDITIONS THAT AFFECT THE WORK, EXAMINE THE DRAWINGS AND SPECIFICATIONS, AND SUBMIT ANY QUESTIONS IN WRITING TO THE ENGINEER.
3. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
4. THE CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THIS WORK SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SPECIFICATIONS BEFORE COMMENCING ANY WORK. THE PROJECT SPECIFICATIONS AND DRAWINGS FORM THE BASIS OF THIS CONTRACT REQUIREMENTS AND INCLUDE THE TYPE AND GRADE OF MATERIALS TO BE INSTALLED, EQUIPMENT TO BE FURNISHED, THE MANNER BY WHICH TO BE INSTALLED AND WHERE TO BE LOCATED. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND DRAWINGS, SPECIFICATIONS GOVERN UNLESS THE ARCHITECT/ENGINEER DIRECTS OTHERWISE.
5. THE ELECTRICAL CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO ENSURE THAT NO FIXTURE, OUTLET, ALARM STATION OR CONTROL AND POWER WIRING IS OMITTED. HE SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM THEM ALL DATA. IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AND PROVIDE THE WIRING AND CONTROL STATIONS REQUIRED FOR THE PROPER FUNCTION OF BUILDING EQUIPMENT. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.
6. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO INSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
7. INSTALL ELECTRICAL DEVICES AS INDICATED IN THIS SET OF DRAWINGS. ADJUST FINAL DEVICE LOCATIONS AS REQUIRED TO ACCOMMODATE WORK. COORDINATE WITH ALL TRADES INVOLVED AND WITH ARCHITECTURAL CASEWORK AND ELEVATIONS DRAWINGS. NOTIFY THE ENGINEER AND/OR THE ARCHITECT IF ANY CONFLICTS ARE FOUND PRIOR TO BIDDING PROJECT. INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
8. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE APPLICABLE CODES AND REGULATIONS.
9. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS.
10. CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. ALL CONDUITS SHALL RUN CONCEALED, EXCEPT IN EQUIPMENT ROOMS AND WHERE APPROVED BY ARCHITECT OR AS INDICATED ON DRAWINGS.
11. FURNISH AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS.
12. ADJACENT POWER AND DATA/TELE DEVICES SHALL BE SPACED NO MORE THAN 4" APART. PROVIDE JUNCTION BOX MOUNTING BRACKET BETWEEN STUDS AS NEEDED.
13. ALL RECEPTACLES, TELEPHONE, AND DATA OUTLETS SHALL BE MOUNTED PER MOUNTING HEIGHT LEGEND OR TO MATCH BUILDING STANDARD (WHEN APPLICABLE), UNLESS OTHERWISE NOTED. ALL DEVICES SHALL BE NEW UNLESS OTHERWISE NOTED.
14. ALL FIRE ALARM NOTIFICATION DEVICES SHALL BE MOUNTED AT 80" AFF IN ACCORDANCE WITH ADA, UNLESS OTHERWISE NOTED.
15. DETERMINE, IN ADVANCE OF PURCHASE, THAT ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL FIT INTO THE ROOM OR SPACE ALLOCATED, AS INDICATED ON THE DRAWINGS, ALLOWING SUFFICIENT CLEARANCE FOR THE SAFE SERVICE AND/OR MAINTENANCE OF RELATED EQUIPMENT, INCLUDING THAT OF OTHER TRADES.
16. ALL CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR INSTALLED. COLOR OF GROUNDING CONDUCTOR SHALL BE GREEN. SIZE OF GROUNDING CONDUCTOR SHALL BE AS REQUIRED PER LOCAL CODE.
17. ALL BRANCH CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR INSTALLED. COLOR OF NEUTRAL CONDUCTOR SHALL BE WHITE FOR 120/208V AND GREY FOR 480/277V CIRCUITS.
18. ALL CONDUCTORS SHALL BE MADE OF COPPER. MINIMUM WIRE SIZE SHALL BE #12AWG UNLESS OTHERWISE INDICATED. UTILIZE SOLID CONDUCTORS FOR WIRE GAUGES UP TO #12AWG AND STRANDED CONDUCTOR FOR GAUGES #10AWG AND LARGER.
19. SPECIAL RECEPTACLES PLUG CONFIGURATION REQUIREMENTS SHALL BE COORDINATED WITH EQUIPMENT PLUG REQUIREMENTS PRIOR TO INSTALLATION.
20. ALL FEEDER AND BRANCH CIRCUIT WIRING INSTALLED INDOORS SHALL USE THHN INSULATION. ALL WIRING INSTALLED OUTDOORS SHALL USE THWN INSULATION. REFER TO SPECIFICATION DOCUMENTS FOR COLOR CODED REQUIREMENTS.
21. ALL POWER WIRING SHALL BE INSTALLED IN A DEDICATED RACEWAY SYSTEM. MINIMUM RACEWAY SIZE SHALL BE 3/4"C UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL SIZE ALL CONDUITS SO AS TO NOT EXCEED 40% OF CONDUIT FILLING CAPACITY PER LOCAL CODE.
22. ALL PULL BOXES AND JUNCTION BOXES SHALL BE SIZED PER NEC. BASED ON THE AMOUNT OF CABLE AND CONDUITS ENTERING/LEAVING THE BOX.
23. ALL BREAKERS SERVING FIRE ALARM AND EXIT SIGNS EQUIPMENT SHALL BE KEY-LOCK STYLE.
24. SERVICE EQUIPMENT AND BRANCH CIRCUIT PANELBOARDS SHALL HAVE AN UPDATED PANEL DIRECTORY INSTALLED UPON PROJECT COMPLETION. UTILIZE TYPE WRITER AS A MINIMUM FOR COMPLIANCE. HAND WRITTEN CARD DIRECTORIES ARE NOT ACCEPTABLE.
25. ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT SHALL BE DONE WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT. INSTALL GREEN GROUNDING CONDUCTOR.
26. E.C. SHALL COORDINATE WITH HVAC CONTRACTOR EXACT POINT OF CONNECTION TO MECHANICAL UNIT PRIOR TO ROUGH-IN. E.C. SHALL ALSO VERIFY EXACT BREAKER SIZE AND WIRING WITH APPROVED MECHANICAL UNITS SHOP DRAWINGS PRIOR TO INSTALLATION.
27. SERVICE EQUIPMENT, BRANCH CIRCUIT PANELBOARDS, METER SOCKETS SHALL HAVE AN "ARC-FLASH HAZARD WARNING" LABEL INSTALLED. LABEL SHALL BE CLEARLY VISIBLE TO PERSONNEL.
28. SERVICE EQUIPMENT AND PANELBOARDS SHALL BE LABEL WITH A READILY VISIBLE LABEL PER NFPA STANDARD FOR SAFETY IN THE WORKPLACE, LABEL SHALL READ "CAUTION ARC FLASH HAZARD". SIZE AND COLOR OF TEXT SHALL BE PER STANDARD.
29. ALL EQUIPMENT INSTALLED OUTSIDE SHALL BE WEATHER PROOF RATED. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.
30. INSTALL CONDUIT FROM THE TOP OF THE BAR JOIST.
31. LABEL ALL J-BOX COVER PLATES AND RECEPTACLE COVER PLATES WITH CIRCUIT INFORMATION. PROVIDE A TYPED LABEL, MARKER IS NOT ACCEPTABLE.
32. E.C. SHALL FURNISH AND INSTALL J-BOX AND 1/2"C FOR MECHANICAL THERMOSTAT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
33. ALL NEW ELECTRICAL PANELS SHALL BE BOLT-ON TYPE CIRCUIT BREAKERS.
34. ALL CABLE LOCATED WITHIN CEILING SPACE USED FOR PLENUM AIR RETURN SHALL BE PLENUM RATED OR RUN IN CONDUIT.
35. LOW VOLTAGE WIRING (PHONE/DATA, LIGHTING CONTROLS, SECURITY, THERMOSTATS, ETC.) LOCATED IN NON-ACCESSIBLE WALLS, CEILING SPACES, AND IN OPEN CEILING AREAS PRONE TO DAMAGE SHALL BE IN CONDUIT.

ELECTRICAL SYMBOL LIST

	DUPLEX RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED, GROUNDING TYPE. WP: WEATHER PROOF TP: TAMPER PROOF
	DUPLEX RECEPTACLE, 20A, FLUSH WALL MOUNTED 4" ABOVE COUNTER, UNLESS OTHERWISE NOTED.
	FLUSH CEILING MOUNTED 20A DUPLEX RECEPTACLE.
	QUAD RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED, GROUNDING TYPE.
	FLOOR DUPLEX RECEPTACLE, 20A, MOUNT RECEPTACLE FLUSHED WITH THE SLAB.
	FLOOR QUAD RECEPTACLE, 20A, MOUNT RECEPTACLE FLUSHED WITH THE SLAB.
	GFCI DUPLEX RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED.
	GFCI DUPLEX RECEPTACLE, 20A, MOUNTED 4" CENTERED ABOVE BACK SPLASH OR COUNTER, U.O.N.
	SPECIAL PURPOSE RECEPTACLE AS INDICATED ON PLAN.
	ISOLATED GROUND DUPLEX RECEPTACLE, @+18"AFF UNLESS OTHERWISE NOTED.
	ISOLATED GROUND QUADRUPLEX RECEPTACLE, @+18"AFF UNLESS OTHERWISE NOTED.
J	JUNCTION BOX.
TV	TELEVISION BOX. PROVIDE (1) COAX DROP & (2) DATA DROPS.
	DATA OUTLET, INDICATES EMPTY 3/4"C, PULL STRING, & JUNCTION BOX
$	SINGLE POLE TOGGLE SWITCH, FLUSH MOUNTED @+4'-0" U.O.N.
$3W	SINGLE POLE THREE-WAY TOGGLE SWITCH, FLUSH MOUNTED @ 4'-0" U.O.N.
$M	MANUAL MOTOR STARTER SWITCH WITH TERMINAL OVERLOAD PROTECTION, 1 OR 2 POLE AS REQUIRED
	SINGLE POLE DIMMING TOGGLE SWITCH, FLUSH MOUNTED @+4'-0" U.O.N.
OS	OCCUPANCY WALL SENSOR SWITCH (DUAL TECH). MANUAL-ON, AUTO OFF.
OS	CEILING MOUNTED DUAL TECH OCCUPANCY SENSOR COMPLETE WITH RELAYS, POWER PACKS & CONNECTORS.
PP	POWER PACK.
	NON-FUSED SAFETY DISCONNECT SWITCH.
60/40/3	FUSED DISCONNECT SWITCH "60" DENOTES SWITCH SIZE, "40" DENOTES FUSE SIZE, "3" DENOTES POLES.
	COMBINATION MOTOR STARTER WITH FUSED DISCONNECT SWITCH.
	SURFACE MOUNTED ELECTRICAL PANELBOARD.
	CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALL.
	CONDUIT RUN CONCEALED IN OR BELOW FLOOR OR GRADE.
	HOMERUN TO DESIGNATED CIRCUIT.
	TELEPHONE/DATA TERMINAL BACKBOARD.

MOUNTING HEIGHTS



AA	AUDIBLE ALARM
SS	SAFETY STROBE
W	WALL PHONE
S	LIGHT SWITCH
T	T-STAT
V	VOICE/DATA
E	RECEPTACLE
F	WALL MOUNTED FURNITURE FEED
R	RECEPTACLE MOUNTED ABOVE MILLWORK OR 4.5" ABOVE COUNTER OR SINK/LAV. VERIFY COUNTER HEIGHTS WITH ARCHITECTURAL ELEVATION DRAWINGS
CR	CARD READER
C	CO2 SENSORS
M	FIRE ALARM PULL STATION

NOTES:
ALL HEIGHTS FOR OUTLETS ARE TO CENTER OF DEVICE (UNLESS OTHERWISE INDICATED). COORDINATE WITH ARCHITECTURAL DRAWINGS.
WHERE DIFFERENCES EXIST, USE ARCHITECTURAL MOUNTING HEIGHTS.

ELECTRICAL DRAWING LIST

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET NAME
E0.0	ELECTRICAL - GENERAL NOTES, SYMBOLS, & LEGENDS
E1.0	ELECTRICAL - POWER & DATA PLAN
E2.0	ELECTRICAL - LIGHTING PLAN
E3.0	SINGLE LINE DIAGRAM
E3.1	PANEL SCHEDULES
ES1.0	ELECTRICAL - SITE PLAN
FA1.0	FIRE ALARM - PLAN

ABBREVIATIONS

WP	WEATHER PROOF
W	WALL MOUNTED DEVICE
AC	ABOVE THE COUNTER
N	NEW
X	EXISTING TO REMAIN
C	CEILING MOUNTED DEVICE
NL	NIGHT LIGHT
WH	TANK GAS WATER HEATER
EWH	INSTANTANEOUS ELECTRIC WATER HEATER
EWC	ELECTRICAL WATER COOLER
HD	ELECTRIC HAND DRYER
AFF	ABOVE FINISH FLOOR

LEGEND

X	———	EXISTING FIXTURE TO REMAIN
XO	- - - - -	EXISTING TO BE REMOVED
XRL	- - - - -	EXISTING TO BE RELOCATED
XRC	———	EXISTING TO BE RE-CIRCUITED
XRP	- - - - -	EXISTING TO BE REPLACED WITH NEW
XRPC	- - - - -	EXISTING TO BE REPLACED WITH NEW & RE-CIRCUITED
XRLC	- - - - -	EXISTING TO BE RELOCATED & RE-CIRCUITED
N	———	NEW FIXTURE
XNL	———	EXISTING FIXTURE IN NEW LOCATION
XNC	———	EXISTING FIXTURE ON NEW CIRCUIT
XNP	———	EXISTING LOCATION WITH NEW FIXTURE
XNFC	———	EXISTING LOCATION WITH NEW FIXTURE & CIRCUIT
XNLC	———	EXISTING FIXTURE IN NEW LOCATION & ON NEW CIRCUIT

REVISIONS

FACILITIES BUILDING
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ELECTRICAL - GENERAL NOTES, SYMBOLS, & LEGENDS

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DATE: 04.10.22
SHEET NO.: **E0.0**

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A. GENERAL REQUIREMENTS

1. SCOPE OF WORK

   FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DRAWINGS. THE INSTALLATION SHALL BE COMPLETE IN EVERY DETAIL ESSENTIAL TO PROPER AND SATISFACTORY OPERATION, READY FOR USE AND IN CONDITION FOR SERVICE WHEN DELIVERED TO THE OWNER. ALL MANUFACTURED ITEMS SHALL BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS EXCEPT AS OTHERWISE SPECIFIED HEREIN.

2. APPROVALS

   OBTAIN APPROVALS FROM INSPECTION AUTHORITIES FOR ELECTRICAL INSTALLATIONS REQUIRING SPECIFIC APPROVAL. PRINTS OF THE ELECTRICAL DRAWINGS, FOR THIS PURPOSE, WILL BE FURNISHED UPON REQUEST. REQUIRED WIRING DIAGRAMS SHALL BE PROVIDED AND SUBMITTED FOR APPROVAL BY THE CONTRACTOR. COPIES OF THE FINAL APPROVALS SHALL BE OBTAINED BEFORE COMMENCEMENT OF RELATED WORK.

3. CODES AND STANDARDS

   a. THE WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, AND NATIONAL CODES. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN. HOWEVER, THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

   b. MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO LOCAL CODE AND STANDARDS, THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), UNDERWRITER'S LABORATORIES (UL), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND ALL LAWS AND ORDINANCES OF LOCAL, STATE AND FEDERAL GOVERNING AGENCIES.

4. FEES

   CONTRACTOR SHALL PAY ALL FEES AND OTHER CHARGES INCIDENTAL TO THE ELECTRICAL WORK. IN ADDITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED INSURANCE, PERMITS, LICENSES, ETC. RELATING TO THE ELECTRICAL WORK.

5. CONTRACTOR'S LIABILITY

   a. THE CONTRACTOR SHALL AGREE THAT THE OWNER, THE ARCHITECT, AND THE ENGINEER SHALL NOT IN ANY FORM OR MANNER BE ANSWERABLE OR ACCOUNTABLE FOR ANY VIOLATION OF ORDINANCES, CODES OR REGULATIONS OF ANY AUTHORITIES, UTILITIES, INSURANCE COMPANIES AND GOVERNMENT AGENCIES HAVING JURISDICTION, OR FOR ANY ACCIDENTS, INJURY, LOSS OR DAMAGE TO ANY PERSON OR PERSONS AND THEIR PROPERTIES ARISING FROM NEGLIGENCE OR CARELESSNESS ON THE PART OF THE CONTRACTOR (NOR ANYONE IN HIS EMPLOY), ANY OF HIS SUBCONTRACTORS, OR ANY OTHER PARTIES OR AGENTS TO THIS CONTRACT.

   b. THE CONTRACTOR SHALL AGREE TO MAKE GOOD TO SAID OWNER, ARCHITECT, AND ENGINEER ANY LOSS, DAMAGE OR EXPENSE SO INCURRED, TOGETHER WITH REASONABLE ATTORNEY'S FEES.

6. EXAMINATION OF DRAWINGS AND SITE

   a. THE ELECTRICAL CONTRACTOR SHALL OBTAIN A COMPLETE SET OF ARCHITECTURAL AND ENGINEERING DOCUMENTS AND COORDINATE WITH MECHANICAL, PLUMBING, ARCHITECTURAL, AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES, ROUGH-IN LOCATIONS, AND OTHER ADDITIONAL SCOPES OF WORK THAT MAY NOT BE SHOWN ON THE ELECTRICAL PLANS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE POWER TO OTHER TRADES EQUIPMENT AND HARDWARE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROLS, FIRE AND SECURITY SYSTEMS, MOTORIZED DOORS, DAMPERS, LIFTS, AND OTHER SYSTEMS. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ELECTRICAL PLANS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SAFETY DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT.

   b. BY THE ACT OF HAVING SUBMITTED A BID, THE CONTRACTOR SHALL DEEM TO HAVE MADE SUCH AN EXAMINATION AND SHALL HAVE ACCEPTED THE PREVAILING CONDITIONS. NO SUBSEQUENT ALLOWANCE WILL BE MADE TO CONTRACTOR BECAUSE OF HIS NEGLECT IN COMPLYING WITH THE FOREGOING.

7. DRAWINGS AND SPECIFICATIONS

   THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND COMPLYING WITH BOTH THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, OR CODES, THE REFERENCE WHICH PROVIDES THE MORE COMPLETE OR HIGHER STANDARD SHALL PREVAIL.

8. INTERPRETATION OF THE DOCUMENTS

   CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING MEASUREMENTS AND CONDITIONS UNDER WHICH THIS INSTALLATION IS TO BE MADE. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS, BETWEEN DRAWINGS OR SPECIFICATION, OR BETWEEN SECTIONS OF THE SPECIFICATION, THE MATTER SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS A COMPLETE, READY TO USE INSTALLATION. IF NOT STATED IN THE PROPOSAL, IT WILL NOT BE CONSIDERED EXTRA.

9. ELECTRICAL DRAWINGS

   THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL DOORS, WALLS, FURNITURE, EQUIPMENT, ETC. THE LOCATION OF RACEWAY SYSTEM COMPONENTS IS SCHEMATIC. THE EXACT LOCATION OF RACEWAY SYSTEM COMPONENTS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL CONFIRM THE DIMENSIONS OF THE ACTUAL EQUIPMENT TO BE SUPPLIED FOR THIS PROJECT, AND VERIFY CLEARANCES AND ROUGH-INS PRIOR TO STARTING
   WORK.

10. PERMITS, APPLICATIONS AND RELEASES

    THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS INSPECTIONS, APPLICATIONS, RELEASES AND FEES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES FOR THE EXECUTION OF THIS WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. CLOSE OUT DOCUMENTS

    THE CONTRACTOR SHALL PROVIDE AS-BUILT DOCUMENTATION UPON COMPLETION OF THE WORK. THE CONTRACTOR SHALL ALSO PROVIDE OWNER TRAINING FOR ALL EQUIPMENT, INCLUDING LIGHTING CONTROLS.

B. INSTALLATION

1. CUTTING AND PATCHING

   a. ALL CUTTING, DRILLING, PATCHING, ETC. NECESSARY FOR INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR.

   b. ALL DISTURBED CONSTRUCTION AND FINISHED SHALL BE RETURNED TO ITS ORIGINAL STATE. HOLES IN CONCRETE WALLS AND FLOORS SHALL BE CORE DRILLED AND SLEEVED. NO CUTTING OF STRUCTURAL MEMBERS WILL BE ALLOWED.

2. INSTALLATION OF WIRING

   WIRE SHALL BE INSTALLED CONTINUOUS BETWEEN DEVICES, WITH SPLICES LOCATED ONLY IN JUNCTION BOXES, PULL BOXES, OUTLET BOXES OR IN CABINETS. CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO REACH THE FARTHEST TERMINAL IN PANELS. A MINIMUM OF 6" LOOPS SHALL REMAIN WHERE CONNECTIONS OR TAPS ARE TO BE MADE IN BRANCH CIRCUIT WIRING.

3. GROUNDING

   CONTRACTOR SHALL INSTALL ENTIRE CONDUIT SYSTEM, INCLUDING BOXES, CABINETS, PANELS, ETC. SO AS TO INSURE PROPER GROUND CONTINUITY THROUGHOUT THE SYSTEM.

4. INSTALLATION OF WORK

   a. CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT LOCATION OF ALL EQUIPMENT AND IN CASE ANY OUTLETS DO NOT COME IN CORRECT LOCATION, HE SHALL MOVE SAME, DO NECESSARY CUTTING AND PATCHING.

   b. OWNER RESERVES THE RIGHT TO CHANGE LOCATION OF OUTLETS WITHIN 10'-0" RADIUS BEFORE WORK IS INSTALLED WITHOUT EXTRA COST.

   c. CHECK WITH HVAC CONTRACTOR AS TO LOCATION OF UNITS, DUCTS AND GRILLES AND PLUMBING CONTRACTOR AS TO LOCATION OF PIPING BEFORE INSTALLING THE WORK.

   d. CONTRACTOR SHALL CONSULT WITH THE ARCHITECT AND REVIEW THE PLANS TO VERIFY THE EXACT LOCATIONS OF ALL OUTLETS ARE ABOVE COUNTERS WHERE CABINET WORK OCCURS, AND VERIFY THAT SWITCHES ARE AT THE CORRECT SIDE OF DOOR SWINGS.

   e. THE CONTRACTOR SHALL CONSULT WITH THE EQUIPMENT SUPPLIERS FOR THE CORRECT SIZES OF ALL OUTLETS IN SUFFICIENT TIME BEFORE WALL CONSTRUCTION.

   f. FAILURE OF THE CONTRACTOR TO COMPLY WITH ALL OF THE ABOVE SHALL MAKE HIM RESPONSIBLE FOR ANY RELOCATIONS AT HIS EXPENSE DUE TO CONFLICT WITH OTHER EQUIPMENT.

5. BALANCING OF LOADS

   UPON CONNECTING ALL CIRCUITS TO PANELS, THE CONTRACTOR SHALL BALANCE THE LOAD IN AMPERES TO +/- 5% BETWEEN PHASES FOR EACH PANEL OR PER OWNERS SATISFACTION.

6. FIRE STOPPING

   ALL PENETRATIONS IN WALL, FLOOR OR CEILINGS SHALL BE SUITABLY CLOSED UP AND SEALED WITH AN INTUMESCENT FIRE STOPPING COMPOUND LISTED IN THE MOST RECENT FACTORY MUTUAL RESEARCH CORPORATION (FMRC) APPROVAL GUIDE. FIRE STOPPING PRODUCTS SHALL BE MANUFACTURED BY 3M CO.

7. EQUIPMENT

   ALL MATERIALS AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, AND HAVE THE APPROPRIATE UL LISTING AND LABEL.

8. MISCELLANEOUS SUPPORTING MEMBERS

   THE INSTALLATION OF ANGLES CHANNELS, AND OTHER MISCELLANEOUS STEEL, BOLTS, RODS, ETC. REQUIRED TO SUPPORT LIGHT FIXTURE, CONDUIT, RACEWAY, LADDER TRAY, OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE COORDINATED WITH THE G.C.

9. SAFETY

   THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE OWNERS EMPLOYEES, BUILDING EMPLOYEES AND GUESTS, AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CONDUCTORS, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

10. EQUIPMENT CONNECTIONS

    PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS AND FOR ALL OWNER FURNISHED EQUIPMENT. PROVIDE A FLEXIBLE LIQUID TIGHT CONNECTION TO ALL VIBRATION PRODUCING EQUIPMENT.

11. TEMPORARY LIGHTING, POWER, FIRE, AND SAFETY

    a. PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED IN AREAS UNDERGOING WORK DURING CONSTRUCTION.

    b. COMPLY WITH NFPA 241 FOR SAFEGUARDING DURING CONSTRUCTION AND ALTERATION OPERATIONS.

12. BRANCH CIRCUITS

    BRANCH CIRCUITS TO RECEPTACLES, LIGHTING AND MISC. SMALL LOADS (20 AMP CIRCUITS), UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE 2-#12, 1-#12G, 3/4" C.

C. MATERIAL AND EQUIPMENT

1. PROPOSALS SHALL BE BASED UPON THE FURNISHING OF ALL MATERIALS AND EQUIPMENT AS SPECIFIED, WHICH IN EVERY CASE SHALL BE NEW AND OF THE BEST GRADE AND QUALITY AVAILABLE.

2. EQUIPMENT AND MATERIALS SHALL BE WITHOUT BLEMISH OR DEFECT AND SHALL NOT BE USED FOR TEMPORARY POWER PURPOSES, WITHOUT THE ENGINEER'S PRIOR WRITTEN AUTHORIZATION.

3. ALL ITEMS OF EQUIPMENT OF ONE TYPE, EXCEPT CONDUIT, CONDUIT FITTINGS, OUTLET BOXES, WIRE, AND CABLE, SHALL BE THE PRODUCT OF ONE MANUFACTURER THROUGHOUT UNLESS OTHERWISE INDICATED OR ACCEPTED BY THE ENGINEER.

4. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.

5. CONDUITS

   a. THE CONTRACTOR SHALL PROVIDE ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONS, PLUMBING EQUIPMENT, TELEPHONE AND ELECTRICAL EQUIPMENT.

   b. ALL PANEL AND SERVICE FEEDERS SHALL BE IN RIGID GALVANIZED STEEL CONDUIT (RGSC). ALL CONDUIT SHALL BE UL LABELED. EMT SHALL BE ACCEPTABLE FOR BRANCH CIRCUITS RUN ABOVE SUSPENDED CEILINGS OR CONCEALED IN INTERIOR PARTITIONS. EMT CONNECTORS SHALL BE COMPRESSION TYPE. CONDUIT UNDER SLAB ON GRADE SHALL BE GALVANIZED RIGID STEEL.

   c. MINIMUM SIZES OF CONDUIT SHALL BE 3/4" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTION OR TO INDIVIDUAL LIGHT SWITCHES AND FOR ALL OTHER LOCATIONS. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE MINIMUM OF 1/2" SIZE, UNLESS NOTED OTHERWISE ON DRAWINGS. ALL IN/UNDER FLOOR SLAB CONDUIT SHALL BE OF MINIMUM 1"C SIZE.

   d. SUPPORT ALL CONDUIT.

   e. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY THE OWNER'S CONSTRUCTION MANAGER. PAINTING OF CONDUITS WILL BE BY GENERAL CONTRACTOR.

   f. FLEXIBLE METAL CONDUIT
      f.1. FLEXIBLE METAL CONDUIT AND THEIR ASSOCIATED FITTINGS ARE TO BE LISTED FOR GROUNDING. A GREEN GROUNDING CONDUCTOR SHALL BE PROVIDED. ALL CONNECTORS ARE TO BE OF A NEMA APPROVED TYPE.
      f.2. FLEXIBLE CONDUIT SHALL BE ACCEPTABLE FOR THE FOLLOWING APPLICATIONS AND SHALL NOT EXCEED 6 FEET IN LENGTH:
      f.2.1. FINAL CONNECTIONS TO OUTLETS ON VIBRATING EQUIPMENT.
      f.2.2. FINAL INTER-CONNECTIONS BETWEEN LIGHT FIXTURES.
      f.2.3. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.

   g. PROVIDE POLY PULL-STRING IN ALL EMPTY CONDUITS.

   h. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER CLEARANCE OF CEILING AND OTHER TRADES WORK.

   i. ALL CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO COLUMN LINES.

   j. ALL CONDUITS MUST BE SIZED PER THE CODE.

   k.COMPLETE CONDUIT WORK ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

6. OUTLET BOXES

   a. UNLESS OTHERWISE NOTED, OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL, KNOCKOUT TYPE, WITH SUITABLE PLASTER RINGS AND COVERS OR PLATES.

   b. UNUSED KNOCKOUT HOLES SHALL REMAIN CLOSED AND THOSE OPENED BY ERROR SHALL BE CLOSED WITH SNAP-IN BLANKS.

   c. OUTLET BOXES SHALL NOT BE SMALLER THAN REQUIRED BY CODE FOR THE NUMBER AND SIZE OF WIRES TO BE INSTALLED.

   d. OUTLET BOX AND COVE LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

   e. OUTLET BOX MANUFACTURERS SHALL BE APPLETON, GARVIN, RACO (HUBBELL) & STEEL CITY.

7. JUNCTION AND PULL BOXES

   a. PROVIDE JUNCTION BOXES, PULL BOXES, CABLE SUPPORTS, AND WIREWAYS AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS. COVERS SHALL BE ACCESSIBLE. SMALL JUNCTION BOXES SHALL BE SIMILAR TO OUTLET BOXES.

   b. PULL BOXES, CABLE SUPPORT BOXES, AND LARGE JUNCTION BOXES FOR INDOOR USE SHALL BE MADE OF CODE GAUGE STEEL. COVERS SHALL BE HELD IN PLACE WITH STAINLESS STEEL SCREWS. PAINT INTERIOR AND EXTERIOR SURFACES WITH RUST-INHIBITIVE PAINT.

   c. JUNCTION BOX AND PULL BOX LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

8. WIRING

   a. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS MINIMUM WIRE SIZE SHALL BE #12. THE CONDUCTORS SHALL HAVE 600 VOLT INSULATION, TYPE THWN OR THHN.

   b. MINIMUM WIRE SIZE - 20 AMP. BRANCH CIRCUIT SHALL BE AWG LISTED SIZE PER DISTANCE SHOWN BELOW. DISTANCE SHALL BE MEASURED FROM THE PANELBOARD CIRCUIT BREAKER TO THE FURTHEST OUTLET.
      b.1. #12 LESS THAN 80 FEET. (AT 120V)
      b.2. #10 OVER 80 FEET. (AT 120V)

   c. CONDUCTORS SHALL BE STRANDED FOR SIZES #10AWG AND LARGER.

   d. ALUMINUM CONDUCTORS ARE NOT PERMITTED.

   e. ALL WIRING SHALL BE IN CONDUIT.

   f. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #10 AWG WIRE AND SMALLER AND EQUAL TO T & B "LOCKTIGHT" FOR #6 AWG AND LARGER. EQUALS BY BUCHANAN OR IDEAL ARE ACCEPTABLE.

   g. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
NEUTRAL - WHITE	NEUTRAL - GRAY
PHASE A OR L1 - BLACK	PHASE A OR L1 - BROWN
PHASE B OR L2 - RED	PHASE B OR L2 - ORANGE
PHASE C OR L3 - BLUE	PHASE C OR L3 - YELLOW
GROUND - GREEN	GROUND - GREEN

9. GROUNDING

   PROVIDE COMPLETE WIRE GROUNDING CONDUCTOR SYSTEM, #12 AWG MINIMUM, SIZED AND INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CODE.

   a. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICES YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH GREEN GROUNDING CONDUCTOR.

   b. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO BE GROUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. ALL GROUND CLAMPS SHALL BE "PENN-UNION" OR EQUAL, SIMILAR TO "GPL" TYPE.

   c. NO OTHER CIRCUITS ARE TO BE RUN IN SAME CONDUIT FEEDING ISOLATED GROUND RECEPTACLES.

10. SLEEVES

    a. THE CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR.

    b. UNLESS OTHERWISE NOTED, ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THE FIRE RATING OF THE FLOOR OR WALL. CONFORM TO UL ASSEMBLY RATING OF FLOOR OR WALL.

    c. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT BLACK STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL CONDUIT. SLEEVES SHALL BE NO. 22.

11. TESTING AND INSPECTION

    a. THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY TEST THE ENTIRE ELECTRICAL SYSTEM FOR GROUNDS, SHORTS AND PROPER GROUNDING RESISTANCE. A MAXIMUM OF 25 OHMS RESISTANCE FROM NEUTRAL CONDUCTOR AND CONDUIT TO EARTH GROUND SHALL BE PERMITTED. ONLY A GROUND RESISTANCE MEASURING METER OF APPROVED TYPE SHALL BE USED. A COMMON OHM METER IS NOT ACCEPTABLE.

    b. THE ELECTRICAL CONTRACTOR SHALL SEE THAT LOCAL INSPECTION AUTHORITIES ARE NOTIFIED WHEN INSPECTIONS ARE REQUIRED BY CODE AND SHALL GIVE ALL NECESSARY ASSISTANCE TO THE INSPECTOR WHEN HE IS MAKING AN INSPECTION.

    c. THE ELECTRICAL CONTRACTOR WILL SATISFY ALL REGULATIONS HAVING JURISDICTION ON THIS PROJECT.

12. WIRING DEVICES

    a. THIS CONTRACTOR SHALL FURNISH AND INSTALL SWITCHES AND RECEPTACLES AS SHOWN ON THE DRAWINGS AND NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES AND PLATES SHALL BE AS DIRECTED BY ARCHITECT. THE DEVICES SHALL BE OF THE TYPES AND RATINGS LISTED, OR EQUALS BY PASS & SEYMOUR, HUBBELL OR LEVITON. WEATHERPROOF GFI RECEPTACLES SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY CODE.
       a.1. TOGGLE SWITCHES: 20A-120V COMMERCIAL SPECIFICATION GRADE.
       a.2. DUPLEX RECEPTACLES: 20A-125V COMMERCIAL SPECIFICATION GRADE
       a.3. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE: 20A-125V, 5MA. COMMERCIAL SPECIFICATION GRADE

13. WALL PLATES

    a. WALL PLATES SHALL BE AS SPECIFIED BY OWNER. WHERE STANDARD PLATES WILL NOT FIT WALL FINISH, UNPLASTERED BRICK OR SPECIAL FINISH WALLS, USE SPECIAL SIZE PLATES TO SUIT CONDITIONS. ALL WALL PLATES LINE UP AND FLUSH WITH MOUNTING SURFACE AND SECURELY ATTACHED IN PLACE.

    b. WHERE SWITCHES, RECEPTACLES OR COMBINATIONS THEREOF ARE GROUNDED, USE GANG PLATES AND OUTLET BOXES TO SUIT THE SPECIFIC ARRANGEMENTS.

    c. VERIFY MOUNTING HEIGHTS OF WIRING DEVICES WITH ARCHITECT/OWNER: IN GENERAL, RECEPTACLES 15" ABOVE FLOOR OR 4.5" ABOVE COUNTER TOP WHERE COUNTERS OCCUR, AND SWITCHES 4'-0" ABOVE FLOOR, EXCEPT WHERE SPECIFIC HEIGHTS ARE INDICATED. SPECIAL RECEPTACLE LOCATED AS DIRECTED BY ARCHITECT AND ENGINEER.

    d. WALL PLATES SHALL BE OF THE SAME MANUFACTURER AS WIRING DEVICE.

14. LIGHTING FIXTURES & LAMPS:

    a. THIS CONTRACTOR SHALL FURNISH ADDITIONAL AUXILIARY SUPPORTING STEEL HANGER WIRES ADEQUATELY SIZED TO SUPPORT THE WEIGHT OF THE FIXTURE AND FASTENED TO BUILDING STRUCTURE (MINIMUM TWO PER FIXTURE) FOR FIXTURES NOT MOUNTED ON BUILDING FRAMEWORK. FIXTURES SHALL NOT BE SUPPORTED SOLELY BY THE CEILING STRUCTURE.

    b. PROVIDE APPLICABLE FIRE RATED DRYWALL BOXES OVER RECESSED FIXTURES IN FIRE RATED CEILINGS AS REQUIRED BY CODES. FIELD COORDINATE AS REQUIRED TO AVOID CONFLICT.

    c. THIS CONTRACTOR SHALL PROVIDE ANY NECESSARY FITTINGS, ACCESSORIES, ETC. AS NECESSARY TO MAKE A COMPLETE INSTALLATION.

    d. REMOVE ALL DIRT, OIL OR GREASE FROM LIGHT FIXTURES. CLEAN ALL GLASS, LENSES, ETC. AND POLISH FIXTURES AND TRIM.

15. IDENTIFICATION
    a. PROVIDE TYPED DIRECTORIES IN PANELBOARDS TO DEPICT ACTUAL EQUIPMENT CONNECTED TO INDIVIDUAL BREAKERS/SWITCHES.

16. SHOP DRAWINGS AND SUBMITTALS:

    a. SUBMIT COMPLETE SHOP DRAWINGS FOR MANUFACTURED EQUIPMENT: CLEARLY MARK SUBMISSIONS FOR LIGHTING FIXTURES WITH THE TYPE LETTER OR LETTERS ASSIGNED TO EACH FIXTURE IN THE FIXTURES SCHEDULE AND INCLUDE A GRAPH SHOWING TYPICAL LIGHT DISTRIBUTION AND A TABLE OF CERTIFIED UTILIZATION FACTORS. ALL FIXTURE SUBMITTALS SHALL BE IN BROCHURE FORM.

    b. PROVIDE SUFFICIENT INFORMATION AND DATA REQUIRED FOR THE ARCHITECT TO REASONABLY DETERMINE PROPER COMPLIANCE WITH THE SPECIFICATIONS.

    c. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A COMPLETE LIST OF MATERIALS PROPOSED, GIVING THE MANUFACTURER'S NAME, CATALOG NUMBER, OR OTHER MEANS OF IDENTIFICATION TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS.

    d. REVIEW OF SHOP DRAWINGS IS RENDERED AS A SERVICE ONLY, AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS, NOR SHALL IT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF BASIC RESPONSIBILITY UNDER THE CONTRACT. SHOP DRAWINGS SHALL BE SUBMITTED ON, BUT NOT BE LIMITED TO THE FOLLOWING SYSTEMS: LIGHT FIXTURE BALLASTS AND ALL ASSOCIATED LIGHT FIXTURES HARDWARE, WIRING DEVICES, COVER PLATES, PANELS, BEAKERS, DATA/VOICE JACKS, CABLE, FIRE ALARM DEVICES, ETC.

17. INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS

    a. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, WIRE AND CABLE FURNISHED TO HIM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL INSTALLATION DRAWINGS AND WIRING DIAGRAMS FROM THE EQUIPMENT MANUFACTURER. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

    b. CONTRACTOR SHALL MAKE FINAL CONNECTIONS AND TERMINATIONS TO THE OWNER, MECHANICAL, AND PLUMBING CONTRACTOR'S FURNISHED EQUIPMENT.

18. SPECIAL SYSTEMS

    TELEPHONE/DATA SYSTEM: ELECTRICAL CONTRACTOR SHALL INSTALL CONDUITS, OUTLET BOXES, AND CABLE G.C. IS RESPONSIBLE FOR COORDINATION BETWEEN ALL SUB CONTRACTORS AND IS ULTIMATELY RESPONSIBLE FOR ACCURATELY DICTATING THE SCOPE BETWEEN SUB CONTRACTS.

19. OCCUPANCY SENSORS

    a. CONTRACTOR'S WORK TO INCLUDE ALL LABOR, MATERIALS, TOOLS, APPLIANCES, CONTROL HARDWARE, SENSOR, WIRE, JUNCTION BOXES AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE DELIVERY, INSTALLATION AND FURNISHING OF A COMPLETELY OPERATIONAL OCCUPANCY SENSOR LIGHTING CONTROL SYSTEM, AS DESCRIBED HEREIN.

    b. WALL SWITCH PRODUCTS MUST BE CAPABLE OF WITHSTANDING THE EFFECTS OF INRUSH CURRENT.

    c. WALL SWITCH SENSORS SHALL BE CAPABLE OF DETECTION OF OCCUPANCY AT DESKTOP LEVEL UP TO 300 SQUARE FEET, AND GROSS MOTION UP TO 1000 SQUARE FEET.

    d. WALL SWITCH SENSORS SHALL ACCOMMODATE LOADS FROM 0 TO 800 WATTS AT 120 VOLTS; 0 TO 1200 WATTS AT 277 VOLTS.

    e. ALL SENSORS SHALL BE CAPABLE OF OPERATING NORMALLY WITH ELECTRONIC BALLASTS, PL LAMP SYSTEMS AND RATED MOTOR LOADS.

20. VACANCY SENSORS
    a. CONTRACTOR'S WORK TO INCLUDE ALL LABOR, MATERIALS, TOOLS, APPLIANCES, CONTROL HARDWARE, SENSOR, WIRE, JUNCTION BOXES AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE DELIVERY, INSTALLATION AND FURNISHING OF A COMPLETELY OPERATIONAL OCCUPANCY SENSOR LIGHTING CONTROL SYSTEM, AS DESCRIBED HEREIN.

    b. WALL SWITCH PRODUCTS MUST BE CAPABLE OF WITHSTANDING THE EFFECTS OF INRUSH CURRENT.

    c. WALL SWITCH SENSORS SHALL BE CAPABLE OF DETECTION OF OCCUPANCY AT DESKTOP LEVEL UP TO 300 SQUARE FEET, AND GROSS MOTION UP TO 1000 SQUARE FEET.

    d. WALL SWITCH SENSORS SHALL ACCOMMODATE LOADS FROM 0 TO 600 WATTS AT 120 VOLTS; 0 TO 1200 WATTS AT 277 VOLTS.

    e. ALL SENSORS SHALL BE CAPABLE OF OPERATING NORMALLY WITH ELECTRONIC BALLASTS, PL LAMP SYSTEMS AND RATED MOTOR LOADS.

21. SHORT CIRCUIT RATED PROTECTION

    a. OVERCURRENT DEVICES SHALL BE RATED FOR THE FULL PROSPECTIVE SHORT-CIRCUIT CURRENT AT THEIR LINE SIDE TERMINALS THROUGHOUT THE SYSTEM COMPLYING WITH A FULLY RATED AND COORDINATED SYSTEM.

    b. THE SYSTEM SHALL BE RATED TO: 100K

    c. THE EMERGENCY DISTRIBUTION SHORT CIRCUIT SHALL BE FULLY RATED.

    d. THE NORMAL DISTRIBUTION SHORT CIRCUIT MAY BE SERIES RATED.

    e. IF SERIES RATED EQUIPMENT IS USED, CONTRACTOR SHALL PROVIDE BREAKER CHARTS TO SHOW COMPLIANCE WITH SERIES RATING.

22. SELECTIVE COORDINATION

    a. EMERGENCY DISTRIBUTION AND ELEVATOR DISTRIBUITON OVERCURRENT DEVICES SHALL BE SELECTIVELY COORDINATED.

    b. CONTRACTOR SHALL VERIFY SELECTIVELY COORDINATED OVERCURRENT DEVICES PRIOR TO BID.

    c. CONTRACTOR SHALL PROVIDE SUBMITTLAS OF EXACT BREAKER TYPES AND COORDINATION CURVES FOR APPROVAL AND VERIFICATION.

23. ARC FLASH

    a. CONTRACTOR SHALL PROVIDE ALL NE

GENERAL NOTES:

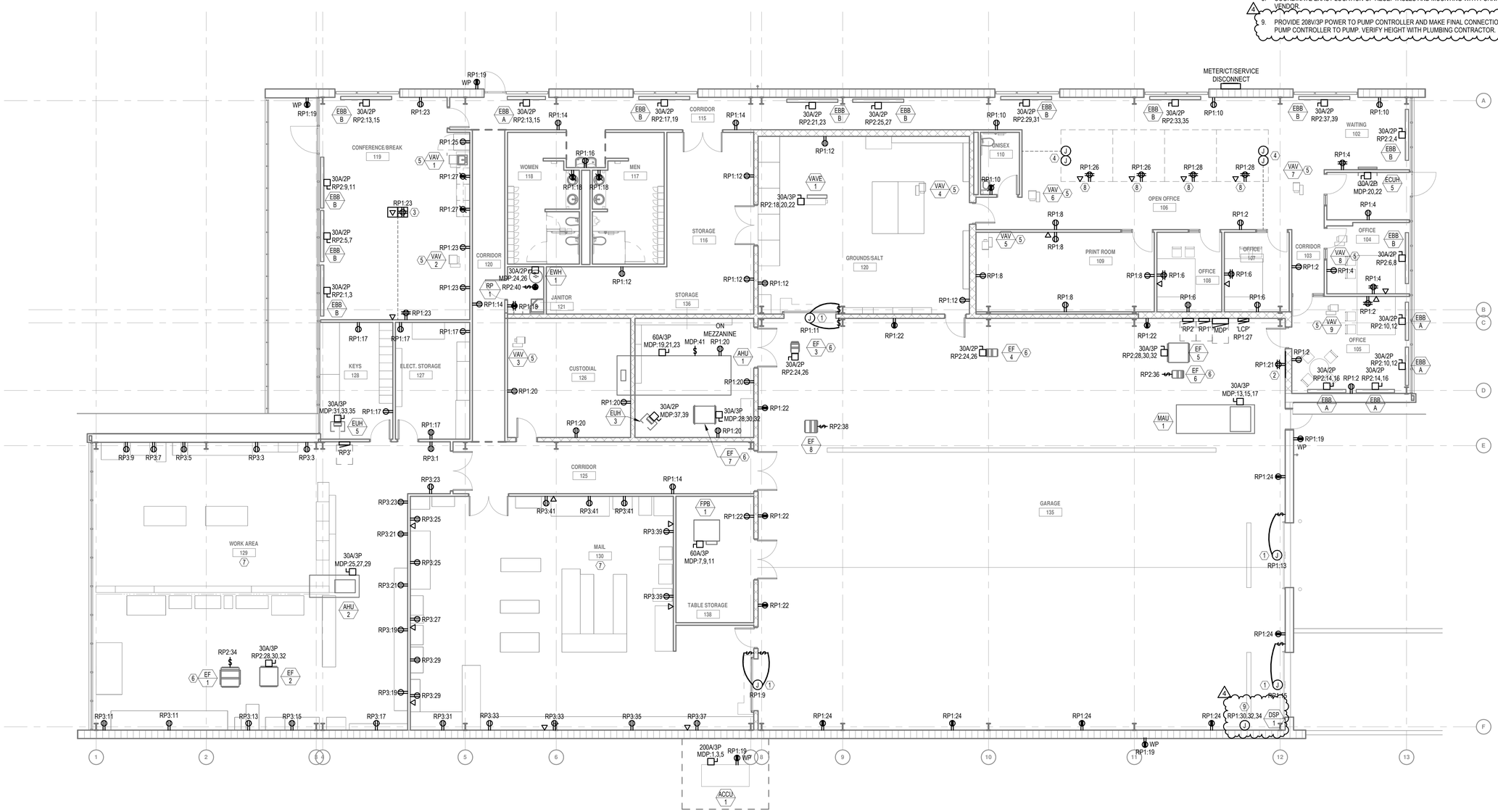
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. REFER TO ARCHITECTRAL PLANS FOR EXACT DIMENSIONS, ELEVATIONS, AND ADDITIONAL NOTES.
4. COORDINATE FINISHES FOR COVERPLATES, SWITCHES, RECEPTACLES, POKE-THRU'S, ETC. WITH ARCHITECT.
5. PROVIDE 3/4"C. TO ACCESSIBLE LOCATION ABOVE CEILING FOR ALL TELE/DATA.
6. DIMENSIONS SHOWN INDICATE HEIGHT ABOVE FINISHED FLOOR. COORDINATE FINAL LOCATION AND ORIENTATION OF ALL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE: IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.

KEYNOTES

1. PROVIDE 120V POWER TO OVERHEAD DOORS. PROVIDE OVERHEAD DOOR CONTROLLER. COORDINATE LOCATION AND CONNECTION REQUIREMENTS WITH OWNER AND MANUFACTURER.
2. PROVIDE A 48"X48"X3/4" FIRE RESISTANT PLYWOOD MOUNTED SECURLEY TO WALL. PAINT AS DIRECTED BY ARCHITECT. PROVIDE (2) 4"C STUBBED TO EXTERIOR FOR TELEPHONE SERVICE.
3. E.C. SHALL PROVIDE 3/4"C FOR POWER & 3/4"C FOR DATA TO RECESSED FLOORBOX. COORDINATE EXACT LOCATION WITH ARCHITECT.
4. PROVIDE (1) NEW JUNCTION BOX @+18"AFF WITH A 1-1/2" CONDUIT FOR POWER AND (1) NEW JUNCTION BOX @+18"AFF WITH A (2) 3/4" CONDUIT FOR VOICE/DATA TO FEED FURNITURE PARTITIONS. COORDINATE EXACT LOCATION WITH ARCHITECT. CONNECTIONS TO RECEPTACLES IN THE PARTITIONS SHALL BE BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY EXACT PARTITION REQUIREMENTS WITH THE FURNITURE VENDOR AND ADJUST ACCORDINGLY. ONE BRANCH CIRCUIT CAN BE USED FOR A MAXIMUM OF (3) WORKSTATIONS.
5. PROVIDE LINE VOLTAGE AS NECCESSARY TO VAV UNIT. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
6. EXHAUST FAN TO BE CONTROLLED BY LOCAL LIGHTING OCCUPANCY SENSOR.
7. FINAL LAYOUT TO BE DETERMINED IN THE FIELD BY OWNER. E.C. SHALL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM FOR ALL OWNER PROVIDED PIECES OF EQUIPEMENT.
8. COORDINATE EXACT LOCATION OF RECEPTACLES AND MOUNTING WITH FURNITURE VENDOR.
9. PROVIDE 208V/3P POWER TO PUMP CONTROLLER AND MAKE FINAL CONNECTION FROM PUMP CONTROLLER TO PUMP. VERIFY HEIGHT WITH PLUMBING CONTRACTOR.



3 ELECTRICAL - POWER & DATA PLAN
1/8" = 1'-0"

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REVISIONS:

1	7.13.2022	ADDENDUM NO.1
2	7.15.2022	ADDENDUM NO.2
4	7.29.2022	ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

ELECTRICAL - POWER & DATA PLAN

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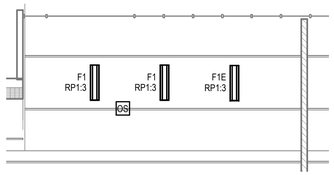
PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: E1.0



2 ELECTRICAL MEZZANINE LIGHTING PLAN
1/8" = 1'-0"

GENERAL NOTES:

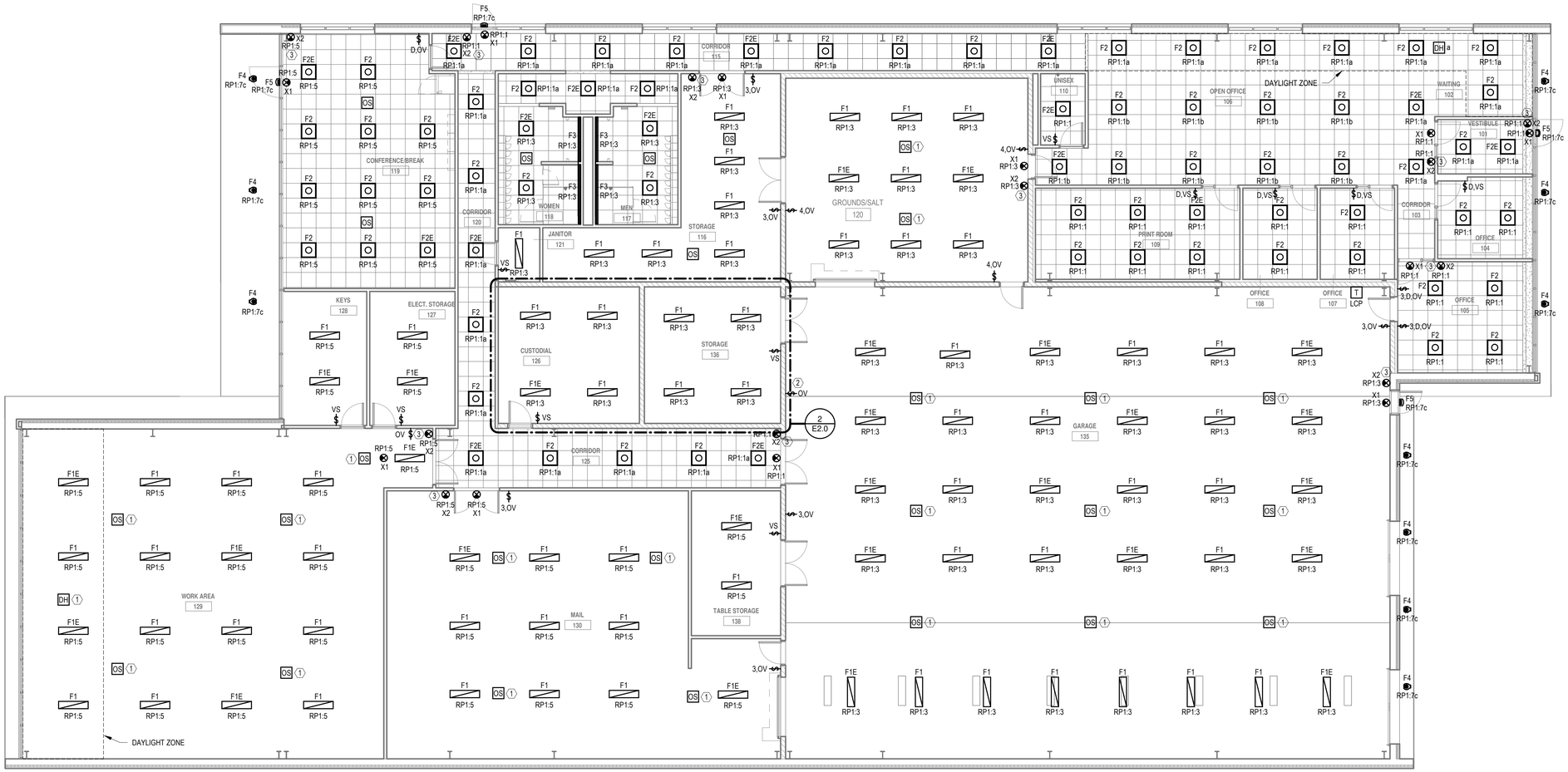
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. ALL EMERGENCY LIGHTING (DENOTED WITH "E" I.E. "F1E" OR "NL") SHALL ACT AS 24/7 NIGHT LIGHTING UNLESS NOTED OTHERWISE.
4. FOR ALL ROOMS WITH OCCUPANCY SENSORS, CONTRACTOR SHALL PROVIDE ALL REQUIRED SENSORS, POWERPACKS, RELAYS, OVERRIDE SWITCHES, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
5. EMERGENCY BATTERY PACKS, NIGHT LIGHTS, AND EMERGENCY FIXTURES SHALL BE CIRCUITED TO LOCAL CIRCUIT AHEAD OF SWITCHING AND CONTROLS.

KEYNOTES:

1. OCCUPANCY SENSOR SHALL BE MOUNTED TO UNISTRUT. BOTTOM OF SENSOR SHALL BE LEVEL WITH LIGHTING IN ROOM.
2. SWITCH SHALL CONTROL LIGHTS LOCATED ON MEZZANINE.
3. PROVIDE WALL MOUNTED EXIT SIGN MOUNTED NOT LESS THAN 6" AND NOT MORE THAN 8" ABOVE FINISHED FLOOR PER KENOSHA REQUIREMENT.

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE; IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.



1 ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"

REVISIONS:
1 7.13.2022 ADDENDUM NO.1

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

ELECTRICAL - LIGHTING PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: VM
CHECKED BY: AC
DATE: 04.10.22
SHEET NO.: E2.0

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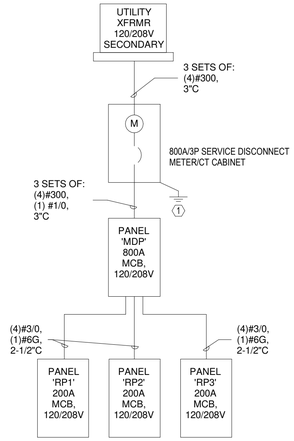
LIGHTING FIXTURE SCHEDULE

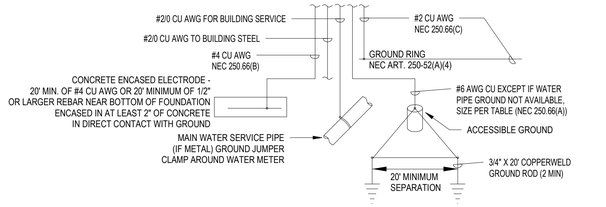
TYPE	FIXTURE	VOLTS	WATTAGE	MOUNTING	MANUFACTURER & CATALOG # OR APPROVED EQUAL	DESCRIPTION
F1	LED	UNV	25W	CHAIN HUNG	LITHONIA: ZLTN-L48-3000LM-FST-MVOLT-35K-80CRI-WH F1E: PROVIDE -E7W	4' LINEAR FIXTURE PROVIDE HANGER CHAIN, COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS
F2	LED	UNV	27W	CEILING	LITHONIA: 2BLT2-33L-ADP-EZ1-LP835 F2E: PROVIDE -EL7L	2X2 TROFFER FIXTURE
F3	LED	UNV	4.6W/FT	CEILING	FOCAL POINT: FWSL-FL-450LF-40K-1C-UNV-L11-U-WH-XX	LINEAR RECESSED COVE LIGHT COORDINATE EXACTS FIXTURE LENGTHS WITH ARCHITECT
F4	LED	UNV	18W	CEILING	LITHONIA: LDN4-30/15/LO4-AR-LSS-MVOLT-EZ10 F4E: PROVIDE -EL	4" RECESSED DOWNLIGHT
F5	LED	UNV	25W	WALL	LITHONIA: ARC1LED-P3-40K-MVOLT-E4WH-XX	EMERGENCY EGRESS LIGHTING
X1	LED	UNV	< 5W	WALL	LITHONIA: EDGR-X-R-EL PROVIDE -WM FOR WALL MOUNT	EXIT SIGN WITH EMERGENCY BATTERY BACKUP. RED LETTERING W/ CLEAR FACE
X2	LED	UNV	< 5W	WALL	LITHONIA: TLE-1-R-EL N	WALL FLUSH EXIT SIGN WITH EMERGENCY BATTERY BACKUP

LIGHTING FIXTURE SCHEDULE NOTES

1. INSTALLATION OF LIGHTING FIXTURES SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODE REQUIREMENTS.
2. ALL LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.



1 ELECTRICAL SINGLE LINE DIAGRAM



2 GROUNDING DETAIL

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

KEYNOTES:

1. PROVIDE NEUTRAL-GROUND BOND WITHIN SERVICE DISCONNECT. SEE GROUNDING DETAIL ON THIS PAGE FOR GROUNDING REQUIREMENTS.

EQUIPMENT CONNECTION SCHEDULE KEY NOTES

1. VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
2. SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
3. SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
4. PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
5. PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
6. VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
7. COORDINATE SHORT CIRCUIT OCD RATING WITH FINAL EQUIPMENT REQUIREMENTS.
8. EC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT.
9. NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

EQUIPMENT CONNECTION SCHEDULE GENERAL NOTES

1. PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
2. OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURER'S AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOT CONNECTION.

NEW EQUIPMENT CONNECTION SCHEDULE

TAG (1)	DESCRIPTION (2)	LOAD (3)	WIRE/CONDUIT (4)	STARTER/DISC./OCD (5)	VOLTAGE (6)	FEED (7)	LOCAL DISCONNECT (8)	REMARKS (9)
ACCU 1	CONDENSING UNIT	120.2 MCA 150 MOCP	3#1/0 AWG 1#6 AWG EQ. GND. 2"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
AHU 1	AIR HANDLING UNIT (2 POINTS OF CONNECTION)	2X 5 HP	3#8 AWG 1#8 AWG EQ. GND. 1"C.	☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
		5 MCA 15 MOCP	2#12 AWG 1#12 AWG EQ. GND. 3/4"C.	☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
AHU 2	AIR HANDLING UNIT	14 MCA 25 MOCP		☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
EBB A	ELECTRIC BASEBOARD HEATER	1577 W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EBB B	ELECTRIC BASEBOARD HEATER	2103 W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
ECUH 5	ELECTRIC CABINET UNIT HEATER	15 MCA	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EF 1	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 2	EXHAUST FAN	1-1/4 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY BUILDING PRESSURE
EF 3,4	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 5	EXHAUST FAN	1-1/4 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY CO/NOX
EF 6	EXHAUST FAN	1/6 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 7	EXHAUST FAN	3 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 8	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EUH 3	ELECTRIC UNIT HEATER	14.5 MCA	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EUH 5	ELECTRIC UNIT HEATER	24 MCA	3#10 AWG 1#10 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
FPB 1	FAN POWERED BOX	42.7 MCA 45 MOCP	3#8 AWG 1#10 AWG EQ. GND. 1"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
MUA 1	AIR HANDLING UNIT	20.7 MCA 35 MOCP	3#8 AWG 1#10 AWG EQ. GND. 1"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
VAVE 1	VARIABLE AIR VOLUME W/ ELEC. REHEAT	19.1 MCA 20 MOCP	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
EWH 1	ELECTRIC WATER HEATER	4.5KW	2#10 AWG 1#10 AWG EQ. GND. 3/4"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
RP 1	RE-CIRCULATION PUMP	45W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
4 DSP 1	DOCK SUMP PUMP	1/2 HP	4#12 AWG 1#12 EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-

NOTE: PROVIDE SEPARATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED FOR ALL HVAC UNITS.

LIGHTING CONTROL PANEL "LCP"

RELAY #	DESCRIPTION	CIRCUIT #	LOCAL L.V. SWITCH	DIMMING Y/N	RELAY #	DESCRIPTION	CIRCUIT #	LOCAL L.V. SWITCH	DIMMING Y/N
1	CORRIDOR LTG	RP1:1	a	Y	5	-	-	-	-
2	OPEN OFFICE LTG	RP1:1	b	Y	6	-	-	-	-
3	EXTERIOR LTG	RP1:7	c	N	7	-	-	-	-
4	-	-	-	-	8	-	-	-	-

LIGHTING CONTROL NOTES

CONTRACTOR SHALL PROVIDE NEW LIGHTING CONTROL PANEL.

1. THE BUILDING LIGHTING CONTROLS SHALL CONTROL THE FOLLOWING SWITCHLEGS TO TURN ON/OFF DURING NORMAL BUSINESS HOURS AS DETERMINED BY OWNER:

   SWITCHLEGS
   a,b,c

   THESE CIRCUITS SHALL BE CONTROLLED THROUGH THE LOW VOLTAGE LCP INTERFACE IN THE BOH OFFICE
2. ALL OTHER ROOMS ARE NOT CONNECTED TO THE BUILDING LIGHTING CONTROLS AND ARE CONTROLLED BY OCCUPANCY OR VACANCY SENSORS WHICH PROVIDE THE AUTOMATIC SHUT-OFF REQUIREMENT.
3. CONTRACTOR IS RESPONSIBLE FOR NECESSARY PROGRAMMING OF LIGHTING CONTROLS.

DETAILS OF OPERATION

THE LCP LIGHTING CONTROLS PROVIDE TIME OF DAY CONTROL FOR ALL OPEN AREAS. THE OWNER DEFINES NORMAL HOURS OF OPERATION, CONTROLLED BY THE ASTRONOMICAL TIMER.

THE OVERRIDE SWITCHES FUNCTION AS REGULAR SWITCHES DURING NORMAL HOURS, BUT ALLOW PERSONNEL WORKING DURING OFF-HOURS TO TEMPORARILY OVERRIDE THE LIGHTING CONTROL FOR A PERIOD OF UP TO 2-HOURS. THE OVERRIDE SWITCHES CAUSE THE LIGHTING FOR THE ZONE THEY ARE WIRED TO TO TURN ON FOR THE SPECIFIED TIME PERIOD.

EXTERIOR:

THESE LIGHT FIXTURES ARE CONFIGURED WITH THE LIGHTING CONTROL PANEL FOR AFTER HOURS OVERRIDE, AND WITH AUTOMATIC-ON/AUTOMATIC-OFF CONTROLS FROM ROOF MOUNTED PHOTOCELL.

CORRIDOR:

THESE LIGHT FIXTURES ARE CONFIGURED WITH THE LIGHTING CONTROL PANEL FOR AFTER HOURS OVERRIDE, AND WITH ON/OFF CONTROL DURING NORMAL HOURS. LOW-VOLTAGE MOMENTARY CONTACT SWITCHES ARE PROVIDED FOR AFTER HOURS OVERRIDE. SCENE CONTROL SHALL BE DEFINED BY OWNERSHIP.

VACANCY SENSORS AND OCCUPANCY SENSORS (NOT PART OF THE LCP):

WALL AND CEILING MOUNTED VACANCY AND OCCUPANCY SENSORS ARE USED IN ENCLOSED SPACES AND CONTROLLED WITH LOCAL OVERRIDE SWITCHES.

EXTERIOR LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE	VOLTS	WATTAGE	MOUNTING	MANUFACTURER & CATALOG # OR APPROVED EQUAL	DESCRIPTION
S1	LED	UNV	102W	POLE	LITHONIA: DSX1-LED-P3-30K-T4M-MVOLT PROVIDE POLE PER SITE PLAN	POLE MOUNTED EXTERIOR FIXTRE
S2	LED	UNV	38.8W	WALL	LITHONIA: DSXW1-LED-10C-1000-30K-TFTM-MVOLT	WALL MOUNTED EXTERIOR FIXTURE

LIGHTING FIXTURE SCHEDULE NOTES

1. INSTALLATION OF LIGHTING FIXTURES SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODE REQUIREMENTS.
2. ALL LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
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SINGLE LINE DIAGRAM

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: E3.0

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GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

Branch Panel: MDP

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 65,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 800 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 800 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1				14435...	8661 VA								2
3	ACCU-1 (120.2 MCA)	150 A	3			14435...	6850 VA			3	200 A	PANEL 'RP1'	4
5								14435...	8008 VA				6
7				5128 VA	16911...								8
9	FPB-1 (42.7 MCA)	45 A	3			5128 VA	16733...			3	200 A	PANEL 'RP2'	10
11								5128 VA	13851...				12
13				2486 VA	4260 VA								14
15	MUA-1 (20.7 MCA)	25 A	3			2486 VA	3300 VA			3	200 A	PANEL 'RP3'	16
17								2486 VA	2160 VA				18
19				4161 VA	1560 VA								20
21	AHU-1 (2 X 5 H.P.)	45 A	3			4161 VA	1560 VA			2	20 A	ECUH-5 (15 MCA)	22
23								4161 VA	2250 VA				24
25				1681 VA	2250 VA					2	30 A	EWH-1 (4.5 KW)	26
27	AHU-2 (14 MCA)	25 A	3			1681 VA	1272 VA						28
29								1681 VA	1272 VA	3	20 A	EF-7 (3 H.P.)	30
31				2882 VA	1272 VA								32
33	EUH-5 (24 MCA)	30 A	3			2882 VA	--			1	--	SPACE	34
35								2882 VA	--	1	--	SPACE	36
37				1508 VA	--								38
39	EUH-3 (14.5 MCA)	20 A	2			1508 VA	--			3	--	SPACE	40
41	AHU-1 (5 A)	15 A	1					600 VA	--				42
			Total Load:	67194 VA		61995 VA		58914 VA					
			Total Amps:	564 A		521 A		491 A					
			Total Amps:	521 A									

Branch Panel: RP1

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	OFFICE & CORRIDOR LIGHTING	20 A	1	1623 VA	900 VA					1	20 A	OFFICE 105 - RECS.	2
3	STORAGE & GARAGE LIGHTING	20 A	1			1605 VA	720 VA			1	20 A	OFFICE 104 & VESTIBLE - RECS.	4
5	MAIL, WORK, CONFERENCE LIGHTING	20 A	1					1140 VA	720 VA	1	20 A	OFFICE 107 - RECS.	6
7	EXTERIOR LIGHTING	20 A	1	530 VA	900 VA					1	20 A	OFFICE 108 & 109 - RECS.	8
9	GARAGE 135 - DOOR OPENER	20 A	1			500 VA	720 VA			1	20 A	WAITING 102 & 110 - RECS.	10
11	GARAGE 135 - DOOR OPENER	20 A	1					500 VA	1080 VA	1	20 A	STORAGE 116 - RECS.	12
13	GARAGE 135 - DOOR OPENER	20 A	1	500 VA	720 VA					1	20 A	CORRIDOR 120 - RECS.	14
15	GARAGE 135 - DOOR OPENER	20 A	1			500 VA	180 VA			1	20 A	ELECTRIC WATER COOLER	16
17	SHOP - CONV. RECS.	20 A	1					900 VA	720 VA	1	20 A	BATHROOM & JANITOR - RECS.	18
19	EXTERIOR RECEPTACLES	20 A	1	900 VA	1080 VA					1	20 A	STORAGE 126& 136 - RECS.	20
21	TELEPHONE BOARD	20 A	1			180 VA	1080 VA			1	20 A	GARAGE 135 - RECS.	22
23	CONFERENCE ROOM RECEPTACLES	20 A	1					1080 VA	1080 VA	1	20 A	GARAGE 135 - RECS.	24
25	CONFERENCE ROOM REFRIGERATOR	20 A	1	500 VA	720 VA					1	20 A	FURNITURE RECEPTACLES	26
27	CONFERENCE ROOM ABV COUNTER RECS	20 A	1			360 VA	720 VA			1	20 A	FURNITURE RECEPTACLES	28
29	LIGHTING CONTROL PANEL	20 A	1					500 VA	288 VA	1	20 A	SPARE	30
31	SPARE	20 A	1	0 VA	288 VA					3	15 A	DOCK SUMP PUMP (1/2HP)	32
33	SPARE	20 A	1			0 VA	288 VA						34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
			Total Load:	8661 VA		6850 VA		8008 VA					
			Total Amps:	74 A		57 A		68 A					
			Total Amps:	64 A									

4

Branch Panel: RP2

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EBB-B (2,103W)	20 A	2	1052 VA	1052 VA					2	20 A	EBB-B (2,103W)	2
3						1052 VA	1052 VA						4
5	EBB-B (2,103W)	20 A	2					1052 VA	1052 VA	2	20 A	EBB-B (2,103W)	6
7				1052 VA	1052 VA								8
9	EBB-B (2,103W)	20 A	2			1052 VA	1577 VA			2	20 A	(2) EBB-A (1,577W EACH)	10
11								1052 VA	1577 VA				12
13	EBB-B & EBB-A (2,103W & 1,577W)	20 A	2	1840 VA	1577 VA					2	20 A	(2) EBB-A (1,577W EACH)	14
15						1840 VA	1577 VA						16
17	EBB-B (2,103W)	20 A	2					1052 VA	2294 VA				18
19				1052 VA	2294 VA					3	20 A	VAVE-1 (19.1 MCA)	20
21	EBB-B (2,103W)	20 A	2			1052 VA	2294 VA						22
23								1052 VA	748 VA	2	20 A	EF-3,4 (1/4 H.P. EACH)	24
25	EBB-B (2,103W)	20 A	2	1052 VA	748 VA								26
27						1052 VA	1344 VA						28
29	EBB-B (2,103W)	20 A	2					1052 VA	1344 VA	3	20 A	EF-2,5 (1-1/4 H.P.)	30
31				1052 VA	1344 VA								32
33	EBB-B (2,103W)	20 A	2			1052 VA	696 VA			1	20 A	EF-1 (1/4 H.P.)	34
35								1052 VA	528 VA	1	20 A	EF-6 (1/6 H.P.)	36
37	EBB-B (2,103W)	20 A	2	1052 VA	696 VA					1	20 A	EF-8 (1/4 H.P.)	38
39						1052 VA	45 VA			1	20 A	RP-1 (45 W)	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
			Total Load:	16911 VA		16733 VA		13851 VA					
			Total Amps:	145 A		143 A		115 A					
			Total Amps:	132 A									

Branch Panel: RP3

Location: WORK AREA 129 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	2
3	WORK AREA 129 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	4
5	WORK AREA 129 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	6
7	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	8
9	WORK AREA 129 - RECS.	20 A	1			180 VA	0 VA			1	20 A	SPARE	10
11	WORK AREA 129 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	12
13	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	14
15	WORK AREA 129 - RECS.	20 A	1			180 VA	0 VA			1	20 A	SPARE	16
17	WORK AREA 129 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	18
19	WORK AREA 129 - RECS.	20 A	1	360 VA	0 VA					1	20 A	SPARE	20
21	WORK AREA 129 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	22
23	WORK AREA 129 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	24
25	MAIL 130 - RECS.	20 A	1	360 VA	0 VA					1	20 A	SPARE	26
27	MAIL 130 - RECS.	20 A	1			1500 VA	0 VA			1	20 A	SPARE	28
29	MAIL 130 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	30
31	MAIL 130 - RECS.	20 A	1	1500 VA	0 VA					1	20 A	SPARE	32
33	MAIL 130 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	34
35	MAIL 130 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	36
37	MAIL 130 - RECS.	20 A	1	1500 VA	0 VA					1	20 A	SPARE	38
39	MAIL 130 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	40
41	MAIL 130 - RECS.	20 A	1					540 VA	0 VA	1	20 A	SPARE	42
			Total Load:	4260 VA		3300 VA		2160 VA					
			Total Amps:	37 A		29 A		18 A					
			Total Amps:	27 A									

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

PANEL SCHEDULES

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PROJECT NO.: 154.21.085
DRAWN BY: Author | CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: **E3.1**

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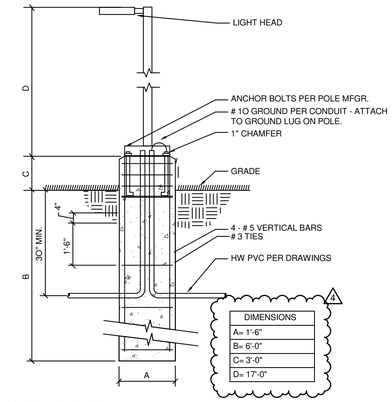
GENERAL NOTES:

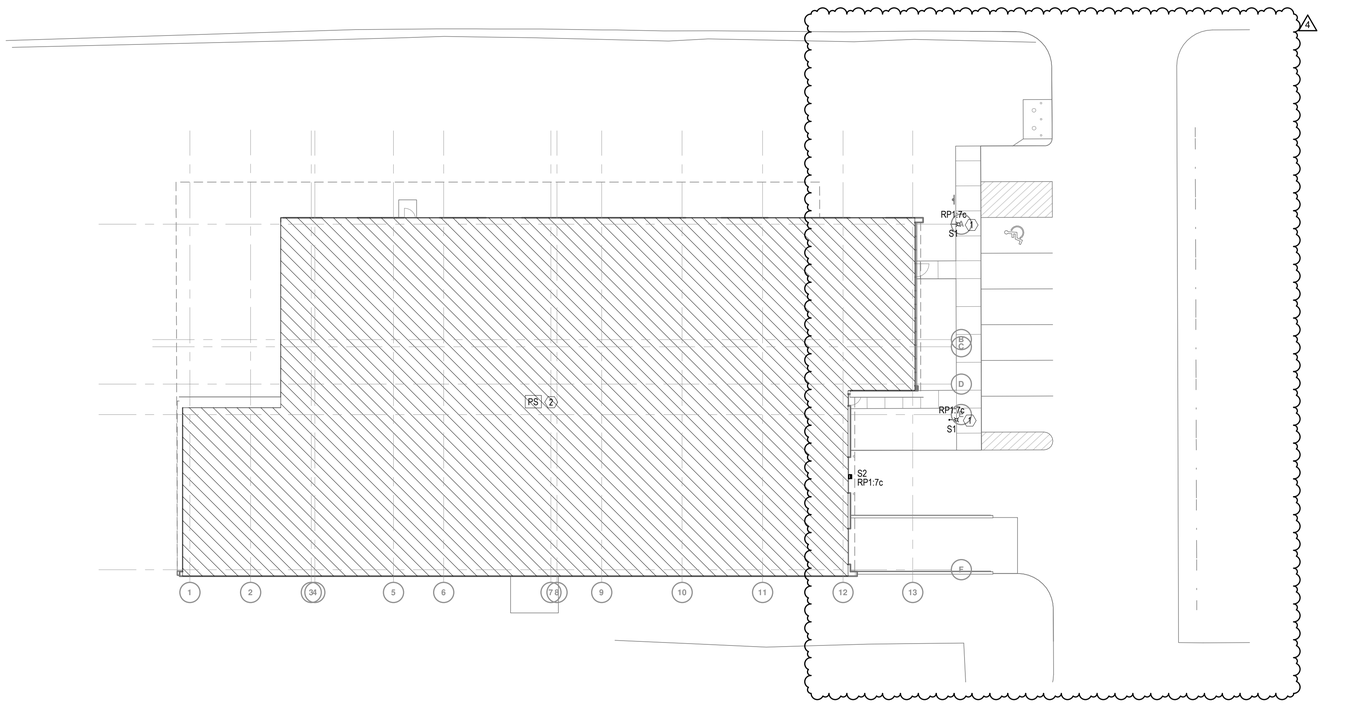
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

KEYNOTES

1. PROVIDE 1"C AND ASSOCIATED #10 AWG CONDUCTORS TO EXTERIOR POLE MOUNTED FIXTURES. CONDUIT IS FOR REFERENCE ONLY. COORDINATE EXACT ROUTING IN THE FIELD WITH CIVIL PLANS AND HOMERUN BACK TO ELECTRICAL PANEL. PROVIDE POLE BASE PER DETAIL 2/ES1.0
2. PROVIDE ROOF MOUNTED PHOTOCELL TO TURN EXTERIOR LIGHTING ON AT DUSK AND OFF AT DAWN. IN CONJUNCTION WITH LIGHTING CONTROL PANEL.



2 POLE BASE DETAIL



1 ELECTRICAL - SITE PLAN
1" = 20'-0"

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

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ELECTRICAL - SITE PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: ES1.0

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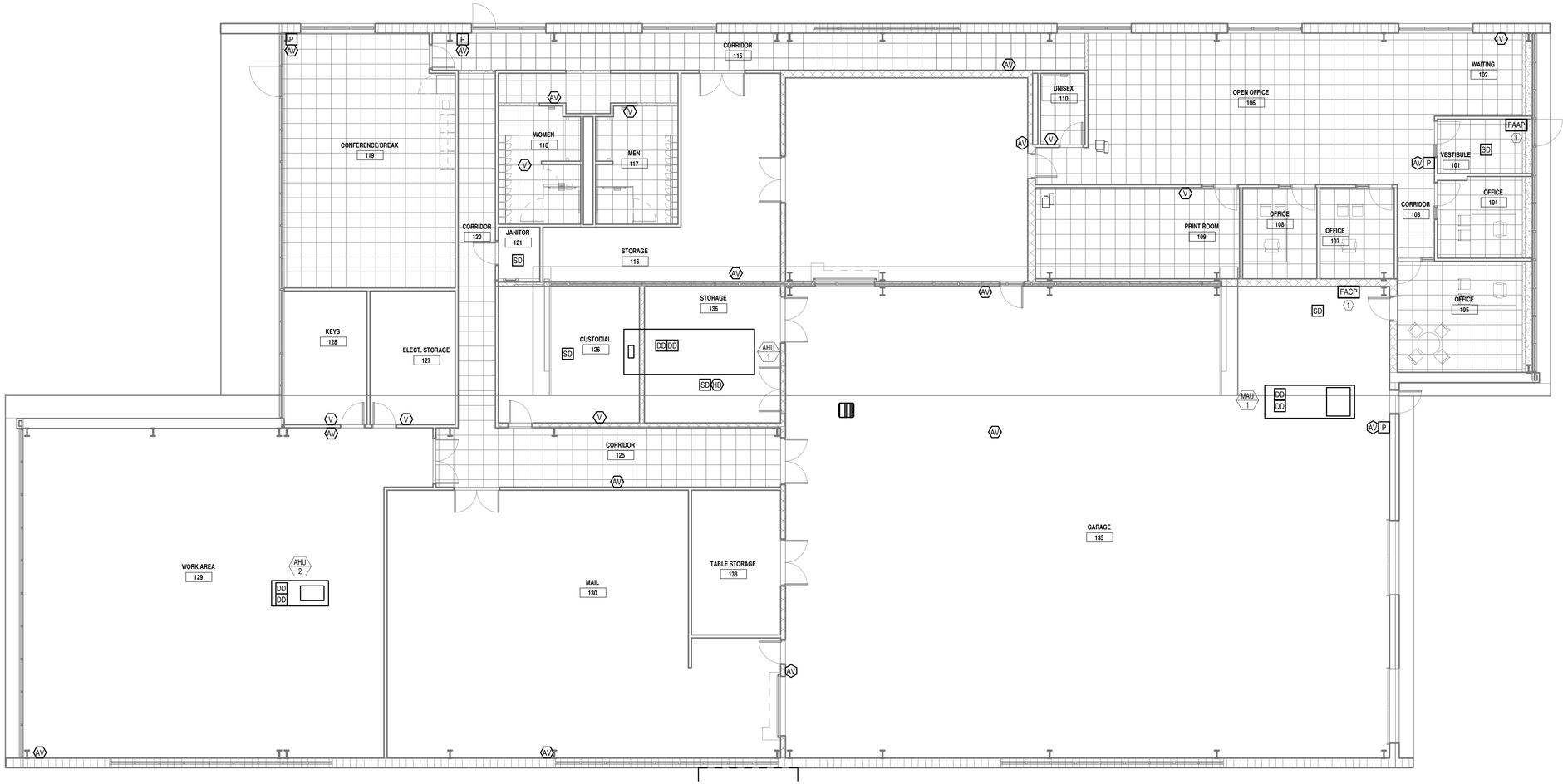
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. REFER TO FIRE ALARM SYMBOLS LEGEND ON SHEET E0.0.
4. ALL FIRE ALARM DEVICES ARE NEW.
5. ALL FIRE ALARM PANELS SHALL BE AN APPROVED ADDRESSABLE TYPE.
6. A MAP INDICATING THE LOCATION OF ALL FIRE ALARM DEVICES SHALL BE POSTED DIRECTLY ADJACENT TO THE FIRE ALARM PANEL OR IN A LOCATION ACCEPTABLE TO THE FIRE PREVENTION BUREAU.
7. COORDINATE ALL WORK WITH LOCAL FIRE MARSHALL PRIOR TO BID.
8. ALL AUDIO/VISUAL DEVICES MAY NOT BE SHOWN AS REQUIRED BY THE LOCAL JURISDICTION HAVING AUTHORITY. ALL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 72, ADA, STATE & LOCAL CODES. A COMPLETE FIRE ALARM DEVICE LAYOUT SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR.
9. CONDUIT & WIRING FOR ALL FIRE ALARM DEVICES TO BE RUN WITHIN COLUMNS OR WALLS WHERE APPLICABLE. ALL WIRING SHALL BE CONCEALED.
10. ALL FIRE ALARMS TO BE AUDIBLE & VISUAL, & COMPLY FULLY TO ICC/ANSI A117.1 SECTION 702. ALL VISUAL ALARMS TO BE SYNCHRONIZED THROUGHOUT.
11. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT. IT SHALL BE PERMITTED TO RUN CABLES OPEN THROUGHOUT CEILING WITH OWNER & AHJ APPROVAL. CONDUIT SHALL BE PROVIDED WITHIN WALLS AND INACCESSIBLE CEILINGS, AS WELL AS FOR ALL SURFACE MOUNTED DEVICES UP TO THE CEILING SPACE.

KEYNOTES:

1. COORDINATE LOCATION WITH AHJ.



1 FIRE ALARM PLAN
1/8" = 1'-0"

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE; IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.

FIRE ALARM SHALL BE DESIGN-BUILD BY ELECTRICAL CONTRACTOR. DEVICES ARE SHOWN FOR REFERENCE ONLY. IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO VERIFY ANY ADDITIONAL REQUIREMENTS WITH THE FIRE MARSHALL AS PART OF THE BASE BID.

RTM FIRE ALARM DRAWINGS ARE SCHEMATIC ONLY. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR BIDDING A COMPLETE & OPERATIONAL FIRE ALARM SYSTEM THAT MEETS LOCAL CODE. E.C. SHALL PROVIDE NEW DEVICES AS REQUIRED TO MEET LOCAL MINIMUM REQUIREMENTS & NFPA FIRE CODE.

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FIRE ALARM - PLAN

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PROJECT NO.: 154.21.085
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SHEET NO.: FA1.0

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PLUMBING CALCULATIONS

FIXTURE	FIXTURE MARK	QUANTITY	DFU EACH	DFU TOTAL	HWFU EACH	HWFU TOTAL	CWFU EACH	WSFU EACH	WSFU TOTAL
WATER CLOSET	WC-1	1	6	6	0	0	6.5	6.5	6.5
WATER CLOSET	WC-2	3	6	18	0	0	6.5	6.5	19.5
URINAL	UR-1	1	2	2	0	0	4	4	4
LAVATORY	L-1	4	2	8	0.5	2	0.5	1	4
LAVATORY	L-2	1	2	2	0.5	0.5	0.5	1	1
SINK	SK-1	1	2	2	2	2	2	3	3
FLOOR DRAIN	FD-1	7	4	28	0	0	0	0	0
TRENCH DRAIN	TD-1 AND TD-2	2	4	8	0	0	0	0	0
HOSE BIB	HB-1	2	0	0	0	0	1	1	2
DRINKING FOUNTAIN	EWC-1	1	0.5	0.5	0	0	0.25	0.25	0.25
MOP BASIN	MB-1	1	3	3	2	2	2	3	3
TOTALS	-	24	-	77.5	-	6.5	-	-	43.25
PIPE SIZE			SAN = 6"		HW = 3/4"			CW = 2"	

PLUMBING FIXTURE SCHEDULE

DESIG.	COMPONENT	MANUF./MODEL	REMARKS
WC-1	FLUSH VALVE WATER CLOSET	KOHLER / K-4325 "KINGSTON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE WATER CLOSET, HIGH EFFICIENCY,ELONGATED BOWL, MOUNT AT STANDARD HEIGHT A.F.F. PROVIDE BEMIS # 3155CT COMMERCIAL ANTIMICROBIAL GRADE OPEN FRONT TOILET SEAT , POLISHED BRASS TOILET SUPPLY, & FLOOR FLANGE WITH BRASS BOLTS AND RUBBER GASKET. PROVIDE W/ BATTERY POWERED FLUSH VALVE SLOAN #G2 8113-1.28. PROVIDE ZURN Z1201-N OR Z1201-ND WATER CLOSET CARRIER.
WC-2	FLUSH VALVE WATER CLOSET	KOHLER / K-4325 "KINGSTON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE WATER CLOSET, HIGH EFFICIENCY, ELONGATED BOWL, COMPLIANT HEIGHT, MOUNT AT ADA COMPLIANT HEIGHT A.F.F. PROVIDE BEMIS # 3155CT COMMERCIAL ANTIMICROBIAL GRADE OPEN FRONT TOILET SEAT , POLISHED BRASS TOILET SUPPLY, & FLOOR FLANGE WITH BRASS BOLTS AND RUBBER GASKET. PROVIDE W/ BATTERY POWERED FLUSH VALVE SLOAN #G2 8113-1.28. PROVIDE ZURN Z1201-N OR Z1201-ND WATER CLOSET CARRIER.
L-1	LAVATORY (UNDER MOUNT)	KOHLER / K-2209 "CAXTON"	20-1/4" X 18-1/8" WALL-MOUNT/CONCEALED ARM CARRIER BATHROOM SINK WITH 4" CENTERSET FAUCET HOLES, FRONT OVERFLOW, BARRIER FREE, ADA COMPLIANT (SEE ARCH. DRAWINGS FOR ADDITIONAL INFO). PROVIDE W/ BATTERY POWERED FAUCET, SLOAN "OPTIMA" #EBF-615. PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110°, TRUEBRO LAV GUARD 2 UNDERSINK PIPING COVERS, 1-1/2" CP, "P" TRAP AND 1/2" SUPPLIES WITH STOPS.
L-2	LAVATORY (WALL MOUNT)	KOHLER / K-2005-0 "KINGSTON"	17" x 14" UNDER-MOUNT BATHROOM SINK, 4" CENTERSET FAUCET HOLES, FRONT OVERFLOW, BARRIER FREE, ADA COMPLIANT (SEE ARCH. DRAWINGS FOR ADDITIONAL INFO). PROVIDE W/ BATTERY POWERED FAUCET, SLOAN "OPTIMA" #EBF-615. PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110°, TRUEBRO LAV GUARD 2 UNDERSINK PIPING COVERS, 1-1/2" CP, "P" TRAP, 1/2" SUPPLIES WITH STOPS AND LAVATORY SUPPORTS. PROVIDE WITH WALL CARRIER AS REQUIRED.
UR-1	WALL MOUNTED URINAL	KOHLER / K-4991-ET "BARDON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE URINAL, HIGH EFFICIENCY, ULTRA LOW-CONSUMPTION 0.5 GPF FLOW RATE, 3/4" TOP SPUD. PROVIDE WITH ZURN #Z1221 WALL CARRIER & BATTERY POWERED FLUSH VALVE SLOAN #G2 8186-0.5.
EWC-1	ELECTRIC WATER COOLER	ELKAY / EZSTLDDWSLK	WALL-MOUNT ADA COMPLIANT, BI-LEVEL 2-STATION, FILTERED, REFRIGERATED, STAINLESS STEEL WATER COOLER DRINKING FOUNTAIN WITH BOTTLE FILLING STATION. (ELECTRICAL: 115V/60HZ, 6.0 AMPS)
TD-1	TRENCH DRAIN 10'-0" LENGTH	SIOUX CHIEF	SIOUX CHIEF 865 GAST TRACK TRENCH DRAIN - 10'-0" TOTAL LENGTH - HIGH DENSITY POLYETHYLENE WITH HIGH DENSITY POLYETHYLENE SLOTTED GRATE HEEL-PROF AND ADA COMPLIANT
TD-2	TRENCH DRAIN 62'-0" LENGTH	SIOUX CHIEF	SIOUX CHIEF 865 GAST TRACK TRENCH DRAIN - 62'-0" TOTAL LENGTH - HIGH DENSITY POLYETHYLENE WITH HIGH DENSITY POLYETHYLENE SLOTTED GRATE HEEL-PROF AND ADA COMPLIANT
FD-1	FLOOR DRAIN	SIOUX CHIEF	5" ROUND FLOOR DRAIN W/ VANDAL PROOF SCREWS FOR 4" OUTLET PIPE, TRAP SEAL GUARD, & NICKEL BRONZE STRAINER. COORDINATE WITH FLOORING SPECS ON ARCHITECTURAL DRAWINGS.
WH-1	ELECTRIC WATER HEATER	BRADFORD WHITE #LE350S3-3	50 GALLON STORAGE CAPACITY - 4500 kW NON-SIMULTANEOUS OPERATION OF HEATING ELEMENTS - 18 GPH AT 100 DEGREE RISE PROVIDE EXPANSION TANK WATTS #PLT-5 2.1 TANK VOLUME 3/4" CONNECTION - NO VALVES BETWEEN WATER HEATER AND EXPANSION TANK.
RP-1	HOT WATER RECIRCULATION PUMP	BELL AND GOSSETT #NBF-33 - 103351LF	LEAD-FREE BRONZE CIRCULATOR - 3/4" FLANGE SIZE - 125 WATTS - 1 PHASE - 1.10 AMPS PROVIDE AQUA-STAT AND TIMER BELL AND GOSSETT AQS-3/4 AND TC-1
SK-1	BREAK ROOM SINK	ELKAY LRAD252155	SINGLE BOWL, STAINLESS STEEL, BOWL SIZE: 21"X15-3/4"X5-3/8", SINGLE HOLE, PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110 DEGREES, AND 1 1/2" CP "P" TRAP, 1/2" SUPPLIES WITH STOPS. PROVIDE KOHLER FORTE K-10415-CP SINGLE HOLE, 9-1/16" SPOUT, SINGLE LEVER, ADA COMPLIANT
MB-1	MOB BASIN	FIAT TSBC1610	TERRAZZO CORNER MOUNT MOP SERVICE BASIN - 12" DEPTH WITH 6" DROP FRONT PROVIDE CHICAGO FAUCETS 540-LD897SWXFABCP, WALL MOUNT DOUBLE LEVER HANDLE SERVICE SINK FAUCET, TOP-MOUNT WALL BRACE AND LOOSE-KEY STOPS
CATCH BASIN	CATCH BASIN	AK INDUSTRIES	36" DIAMETER X 48" DEEP HIGH DENSITY POLYETHYLENE PROVIDE CAST IRON FRAME AND GRATE - HEAVY DUTY TRAFFIC RATED

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS PREPARED BY THE ENGINEER-OF-RECORD AFTER FINAL INSPECTION OF INSTALLED PLUMBING SYSTEMS.
3. FURNISH TO THE OWNER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
4. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
5. REFER TO ARCHITECTURAL PLANS AND KITCHEN EQUIPMENT PLAN FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
6. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
7. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
8. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
9. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
10. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
11. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
12. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
13. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.
14. PAINT ALL EXPOSED GAS PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND/OR OWNER.
15. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING. ALL COLD WATER LINES SHALL BE INSULATED WITH MINIMUM OF 3/4" FIBERGLASS INSULATION WITH VAPOR BARRIER. ALL HOT WATER AND HOT WATER RECIRCULATING LINES SHALL BE INSULATED WITH MINIMUM OF 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER IN/HxSFx°F.
16. PROVIDE SHIELDED ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE DIVISION 15 SPECIFICATION SECTION "DRAINAGE AND VENT SYSTEMS" FOR MORE INFORMATION.
17. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
18. PROVIDE CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
19. EXPOSED HOT WATER PIPES AND DRAINPIPES UNDER HANDICAPPED ACCESSIBLE LAVATORIES SHALL BE CONFIGURED OR INSULATED TO PROTECT AGAINST CONTACT.
20. RPZ SHALL BE INSTALLED IN THE POTABLE WATER SUPPLY TO EACH LOCATION WHERE SANITIZING CHEMICALS OR DETERGENTS WILL BE ASPIRATED OR PUSHED BY WATER PRESSURE INTO CLEANSING/SANITIZING OPERATION.
21. DRAINAGE AND VENT SYSTEM SHALL BE PRESSURE TESTED WITH WATER OR AIR.
22. ALL RPZ ASSEMBLIES SHALL BE TESTED AND APPROVED BY A CROSS CONNECTION CONTROL DEVICE INSPECTOR BEFORE INITIAL OPERATION. RECORDS TO VERIFY THIS TESTING SHALL BE AVAILABLE ON SITE.
23. ALL PENETRATIONS OF FLOOR/CEILING ASSEMBLIES SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
24. ALL DRY VENTS SHALL RISE VERTICALLY TO A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM OF THE HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.
25. MATERIAL EXPOSED WITHIN A PLENUM CEILING SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 (IMC 602.2.1).
26. ALL ABANDONED AND/OR UNUSED COMPONENTS CREATED OR EXPOSED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HVAC, CABLES, PIPING WIRING, AND ASSOCIATED SUPPORTS AND/OR ATTACHMENTS SHALL BE REMOVED.

DSP-1 TRUCK DOCK SUMP PUMP SYSTEM

4

ITEM: DSP-1 TRUCK DOCK SUMP PUMP SYSTEM

PROVIDE A METROPOLITAN DUPLEX "VORTEX" PUMP SYSTEM, WHICH SHALL INCLUDE TWO (2) MODEL SEH50 HEAVY-DUTY SUBMERSIBLE "RECESSED IMPELLER VORTEX-TYPE" PUMPS, WITH PUMP-OUT VANES ON THE REAR SHROUD. PUMPS SHALL BE OF CAST IRON, STAINLESS-FITTED CONSTRUCTION. ALL SOLIDS MUST BE ABLE TO PASS THROUGH THE PUMP CASING, WITHOUT PASSING THROUGH THE IMPELLER. THE PUMPS SHALL HAVE CARBON-CERAMIC SHAFT-SEALS. THE UNITS SHALL BE RATED: 80-GPM AT 15-FEET TDH, WITH 2-INCH DISCHARGE, DESIGNED TO PASS 2-INCH DIAMETER SOLIDS. THE MOTORS SHALL BE CLOSE-COUPLED, OIL-FILLED, RATED 1/2-HP, 3450-RPM, 3-PHASE, 60-HZ, 208-VOLT, NON-OVERLOADING. THE LEVEL CONTROLS SHALL CONSIST OF FOUR (4) LEVEL-SWITCHES, SUSPENDED FROM THE STEEL BASIN COVER WITH A STAINLESS STEEL CHAIN AND ANCHOR FLOAT MOUNTING SYSTEM, AND A NEMA-1, U. L. LABELED DUPLEX CONTROL PANEL WITH A MAIN DOOR-INTERLOCKED DISCONNECT, CIRCUIT BREAKERS, STARTERS, O.L. BLOCKS, H-O-A SWITCHES, TRANSFORMER, AND AN "INTELLI-PUMP" MICROPROCESSOR-BASED PROCESS-CONTROLLER. IMPORTANT NOTE: IF ONE, TWO OR THREE OF THE LEVEL SWITCHES BECOME INOPERABLE, THE SELF-DIAGNOSTIC CONTROLLER SHALL BE DESIGNED TO CONTINUE UNINTERRUPTED AUTOMATIC OPERATION OF THE PUMPS, AND ALL ALARM FUNCTIONS.

THE CONTROLLER SHALL INCLUDE THE FOLLOWING FEATURES:
(1) POWER-ON LIGHT
(2) PUMP-RUN LIGHTS
(2) PUMP-FAIL LIGHTS
(2) CONTACTOR FEEDBACK STATUS LIGHTS
(4) LEVEL SWITCH STATUS LIGHTS
(3) FLASHING FAULT CODES
(1) FLASHING HIGH LIQUID LEVEL ALARM LIGHT
(2) SETS, PUMP-FAIL DRY REMOTE ALARM CONTACTS
(1) SET, HIGH LIQUID LEVEL DRY REMOTE ALARM CONTACT.

CONTROL SYSTEMS WITHOUT THE ESSENTIAL FUNCTIONS & INDICATORS LISTED ABOVE ARE NOT ACCEPTABLE. A 40-INCH O.D. GASKETED EPOXY-COATED STEEL BASIN COVER SHALL BE PROVIDED, DESIGNED TO MATE WITH A 36-INCH DIAMETER X 120 -INCH DEEP FIBERGLASS BASIN WITH ANTI-FLOATATION FLANGE. THE ENTIRE SYSTEM SHALL BE MANUFACTURED, SERVICED, AND WARRANTEED BY A "LOCAL" MANUFACTURER: METROPOLITAN INDUSTRIES, OF NEARBY ROMEOVILLE, ILLINOIS.

PLUMBING SYMBOLS

- DOMESTIC COLD WATER - EXISTING - X-CW
- DOMESTIC COLD WATER - DEMO
- DOMESTIC COLD WATER - NEW - CW
- DOMESTIC HOT WATER - EXISTING - X-HW
- DOMESTIC HOT WATER - DEMO
- DOMESTIC HOT WATER - NEW - HW
- DOMESTIC HOT WATER RETURN - EXISTING - X-HWR
- DOMESTIC HOT WATER RETURN - DEMO
- DOMESTIC HOT WATER RETURN - NEW - HWR
- SANITARY DRAIN BELOW GROUND - EXISTING - X-SS - X-SAN
- SANITARY DRAIN - DEMO
- SANITARY DRAIN - NEW - SS - SAN
- SANITARY DRAIN - EXISTING - X-S - X-SAN
- SANITARY DRAIN - DEMO
- SANITARY DRAIN - NEW - S - SAN
- VENT - EXISTING - X-V
- VENT - DEMO
- VENT - NEW - V
- FS — FLOOR SINK - FS
- FD — FLOOR DRAIN - FD
- FCO — FLOOR CLEANOUT FCO
- WCO — WALL CLEANOUT - WCO
- RD — ROOF DRAIN - RD
- OD — ROOF DRAIN OVER-FLOW - OD
- SHUT-OFF VALVE
- CIRCUIT SETTER - CS
- BACKFLOW PREVENTER - BFP
- WHA — WATER HAMMER ARRESTOR - WHA

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS, ETC. ARE NECESSARILY USED ON THE DRAWINGS.

PLUMBING MATERIALS

ALL PLUMBING INSTALLATION AND MATERIALS SHALL CONFORM TO THE WISCONSIN ADMINISTRATIVE CODE - SAFETY AND PROFESSIONAL SERVICES CHAPTER SPS 382

WATER DISTRIBUTION PIPE AND FITTINGS

COPPER - TYPE L

UNDERGROUND BUILDING DRAINAGE AND VENT PIPE AND FITTINGS

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
COPPER - TYPE L
PVC - SCHEDULE 40

ABOVE GROUND DRAINAGE AND VENT PIPE AND FITTINGS (NON-PLENUM CEILING SPACE)

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
CAST IRON HUBLESS - SERVICE WEIGHT
COPPER - TYPE L
PVC - SCHEDULE 40

ABOVE GROUND DRAINAGE AND VENT PIPE AND FITTINGS (PLENUM CEILING SPACE)

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
CAST IRON HUBLESS - SERVICE WEIGHT
COPPER - TYPE L

PLUMBING SHEET INDEX

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P3.2	PLUMBING FIRST FLOOR DOMESTIC WATER PLAN
P3.3	PLUMBING MEZZANINE FLOOR PLAN
P4.1	PLUMBING RISER DIAGRAMS

REVISIONS:

1	7.13.2022	ADDENDUM NO.1
3	7.19.2022	ADDENDUM NO.3
4	7.29.2022	ADDENDUM NO.4

FACILITIES BUILDING
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PLUMBING GENERAL NOTES, SYMBOLS, & LEGENDS

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PROJECT NO.: 154.21.085
DRAWN BY: Author
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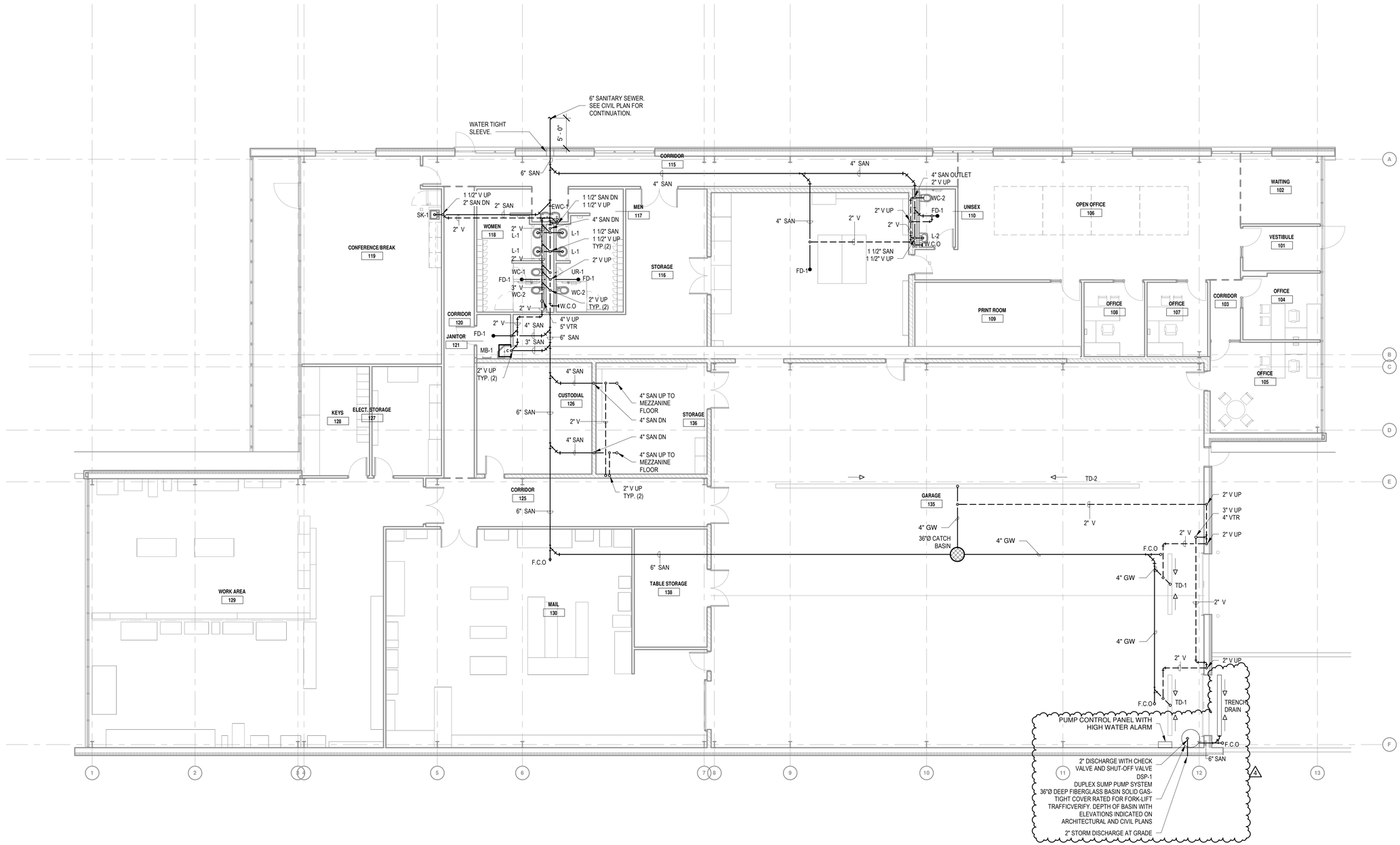

1 PLUMBING - SANITARY & VENT PLAN
1/8" = 1'-0"

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REVISIONS:
4 7.29.2022 ADDENDUM NO.4

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PLUMBING FIRST FLOOR SANITARY & VENT PLAN

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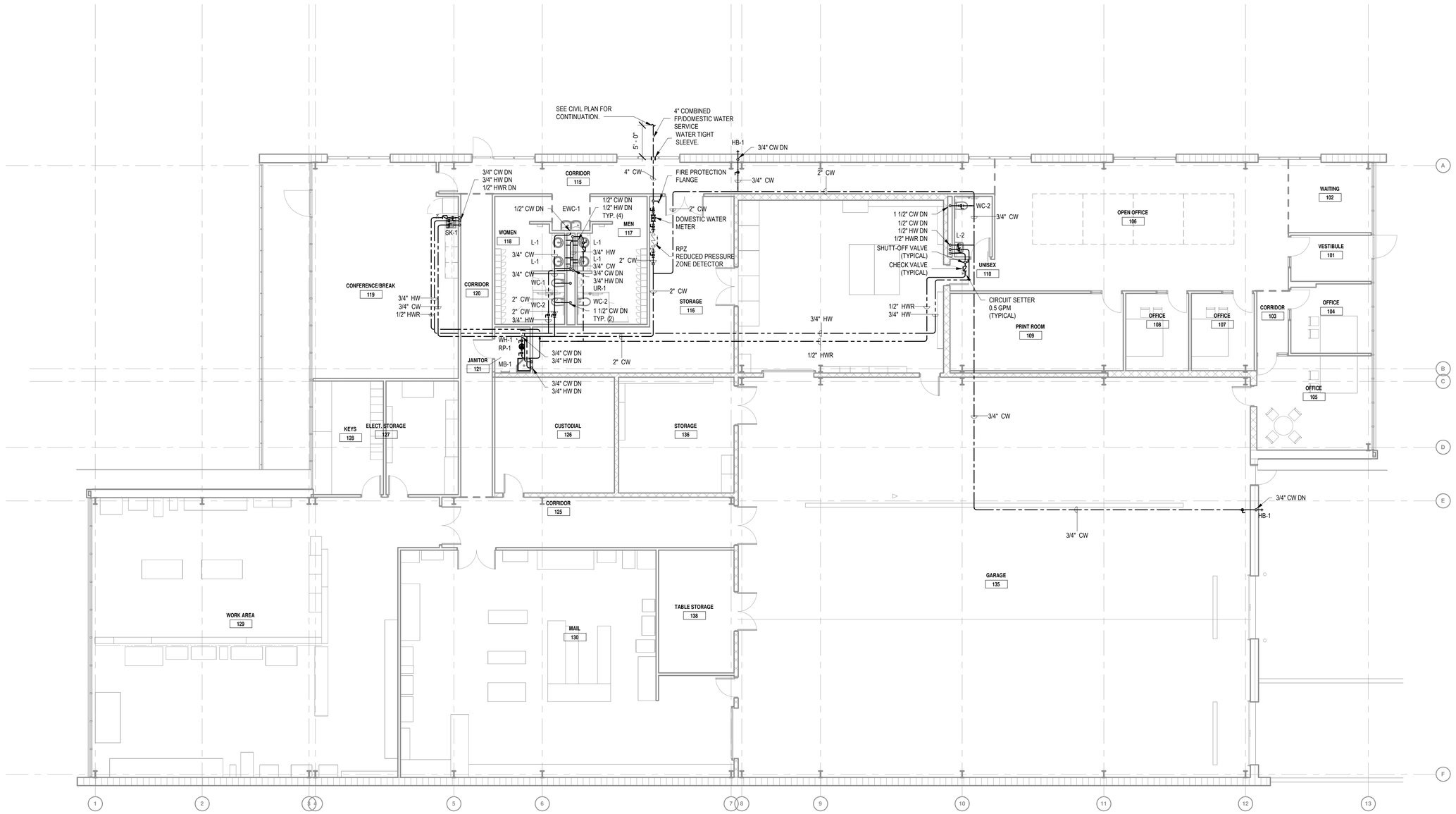
SHEET NO.: P3.1



1 PLUMBING - DOMESTIC WATER PLAN
1/8" = 1'-0"

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PLUMBING FIRST FLOOR DOMESTIC WATER PLAN

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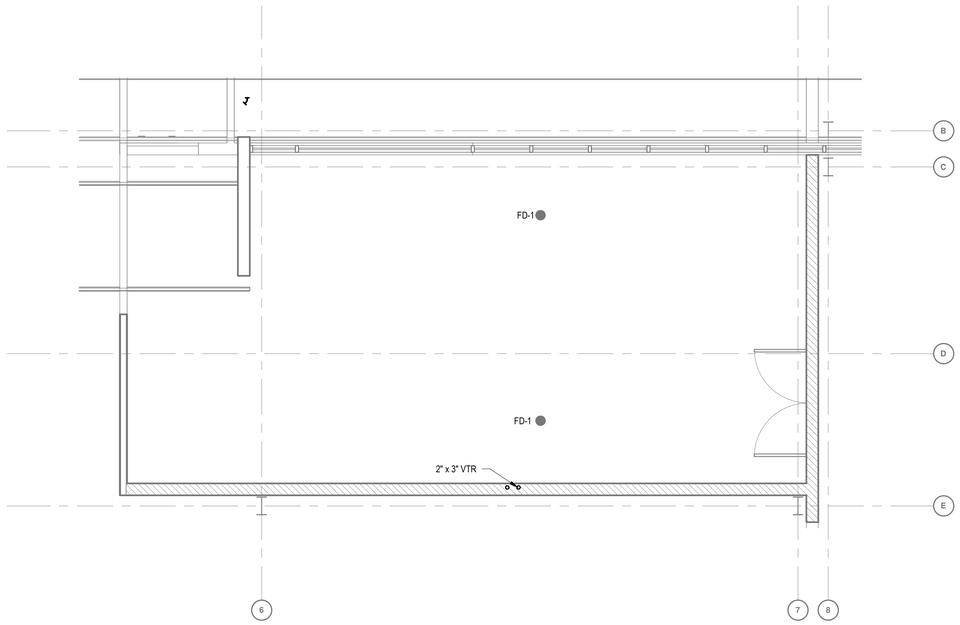
SHEET NO.: P3.2



1 MEZZANINE PLUMBING PLAN
1/4" = 1'-0"

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FACILITIES BUILDING
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PLUMBING MEZZANINE FLOOR PLAN

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SHEET NO.: **P3.3**

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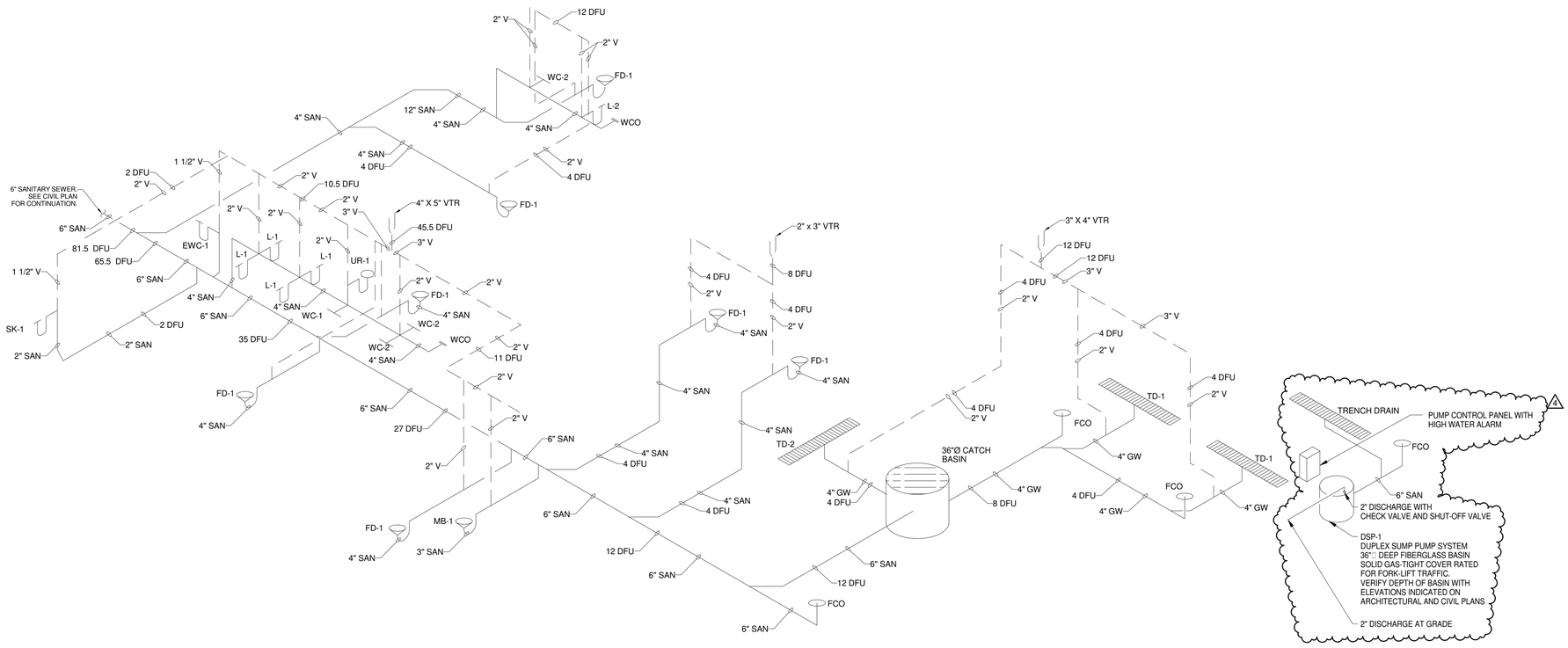
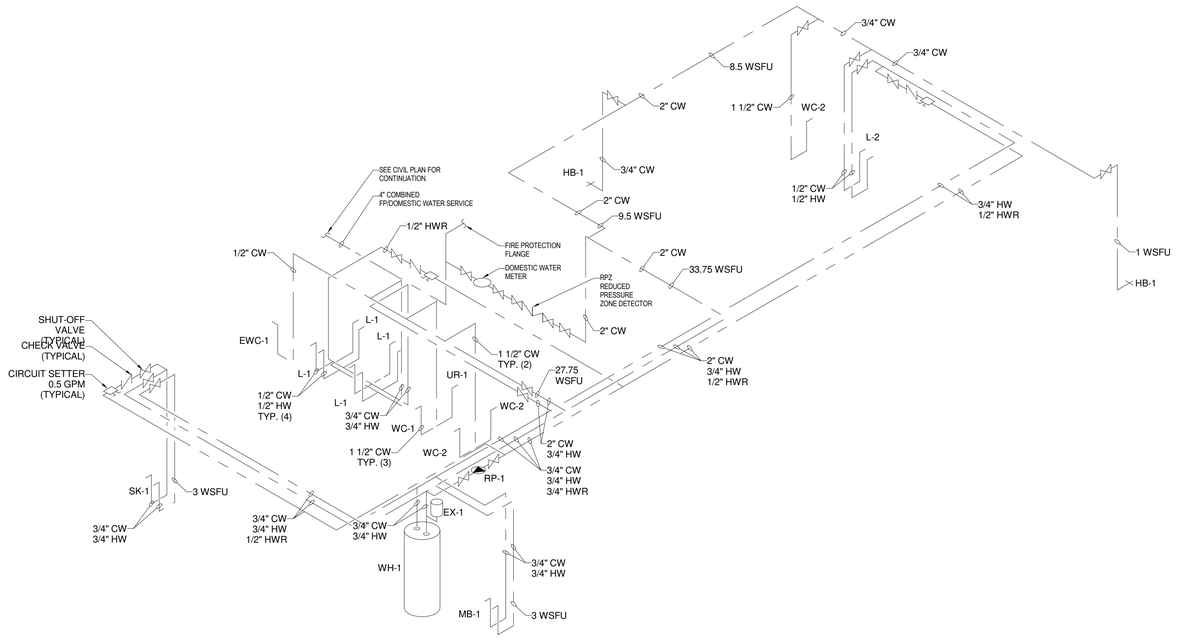


1 PLUMBING-SANITARY AND VENT RISER DIAGRAM
NOT TO SCALE



2 PLUMBING-DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE

REVISIONS:
1 7.29.2022 ADDENDUM NO.4

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PLUMBING RISER DIAGRAMS

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FIRE PROTECTION SCOPE SPECIFICATION

1. THE CONTRACTOR FOR THE FIRE PROTECTION WORK SHALL BE A RECOGNIZED, QUALIFIED AND LICENSED FIRE PROTECTION CONTRACTOR, PRIMARY ENGAGED IN THE PROTECTION SYSTEMS. THE FIRE PROTECTION WORKING DRAWINGS INCLUDING HYDRAULIC CALCULATIONS (BASED ON RECENT FLOW TEST DATA) & MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE STATE INSPECTION SERVICE, LOCAL GOVERNING AUTHORITIES HAVING JURISDICTION AND TO THE OWNER'S FIRE INSURANCE UNDER WRITER'S, OWNER'S ENGINEER OF RECORD FOR REVIEW, APPROVALS AND PERMITS.
2. THIS DRAWING IS FOR REFERENCES PURPOSE ONLY. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL DESIGN OF THE SPRINKLER SYSTEM AND ITS CONFORMANCE TO NFPA 13 AND ANY LOCAL CODE REQUIREMENTS. THE FIRE PROTECTION CONTRACTOR SHALL INCLUDE ALL NEEDED OFFSETS, CHANGES IN DIRECTION, TRANSITIONS, ETC. NEEDED FOR COMPLETE AND OPERATIONAL SYSTEMS.
3. THE CONTRACTOR WILL VISIT THE SITE AND BE FAMILIAR WITH SITE CONDITIONS. NO EQUIPMENT OR MATERIAL IS TO BE ORDERED OR FABRICATED PRIOR TO FIELD VERIFICATION OF ALL MEASUREMENTS, CLEARANCES, POTENTIAL CONFLICTS WITH EXISTING CONDITIONS OR THAT OF OTHER TRADES ON THE JOB.
4. PERFORM ALL WORK IN ACCORDANCE WITH THE, RULES & REGULATIONS OF THE APPROPRIATE STATE AND LOCAL BUILDING CODES AND SUBTITLES.
5. QUESTIONS REGARDING THESE DRAWINGS SHALL BE ADDRESSED TO THE ENGINEER PRIOR TO THE AWARDING OF THE CONTRACT. OTHERWISE THE ENGINEER'S INTERPRETATION OF THE MEANING AND INTENT OF THE DRAWINGS SHALL BE FINAL.
6. SPRINKLER CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CEILING TYPES, HEIGHTS, COLOR, ELEVATIONS, SOFFITS, DISPLAY WINDOWS, RACKING (TYPES, HEIGHTS, ETC...), ETC.
7. FIRE PROTECTION CONTRACTOR SHALL PROVIDE 1/8" SCALE PIPING DRAWING FOR COORDINATION WITH OTHER TRADES. DRAWINGS TO INDICATE DIMENSION AND CRITICAL ELEVATION OF PIPING.
8. ALL PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR NO LESS THAN 2 HOURS. THE FIRE DEPARTMENT BE NOTIFIED (NO LESS THAN 48 HOURS PRIOR) OF THE DATE AND TIME AND MAY WITNESS IT IF SO DESIRED OR REQUIRED.
9. CONTRACTOR SHALL PROVIDE WARRANTY FOR ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP FOR (1) ONE YEAR FROM SUBSTANTIAL COMPLETION OF WORK.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL INSPECTIONS WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
11. CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER HEADS ABOVE AND BELOW MECHANICAL/ELECTRICAL DUCTS AND EQUIPMENT WHICH EXCEEDS 48 INCHES IN WIDTH.
12. ALL INSTALLATIONS SHALL CONFORM TO NFPA 13, LATEST EDITION.
13. ALL FIRE PROTECTION PIPING SHALL BE SUSPENDED WITH APPROVED/LISTED PIPE HANGERS IN COMPLIANCE WITH NFPA STANDARDS. CUTTING STRUCTURAL MEMBERS TO RUN PIPING, OR TO FACILITATE HANGER FASTENING, IS NOT PERMITTED.
14. ALL PIPING PASSING THRU FLOOR CONSTRUCTION SHALL HAVE A SCHEDULE 40 PIPE SLEEVE INSTALLED AROUND PIPE ONLY. ALL PIPE PASSING THRU WALLS SHALL HAVE A GALVANIZED SHEET METAL OR SCHEDULE 40 PIPE SLEEVE INSTALLED AROUND THE PIPE. ALL EXPOSED PIPE WHICH PASSES THROUGH A WALL OR CEILING SHALL BE EQUIPPED WITH AN ESCUTCHEON PLATE.
15. FIRE PROTECTION PIPING SHALL BE AS FOLLOWS:
    A. (1"-6") STEEL PIPE: ASTM A795; SCHEDULE 40, BLACK. STEEL FITTINGS: ASME B16.5, STEEL FLANGES AND FITTINGS. CAST IRON FITTINGS: ASME 16.1, FLANGES AND FLANGED FITTINGS; OR AMSE B16.4, THREADED FITINGS. MALLEABLE IRON FITTINGS: ASME B16.3, THREADED FITTINGS.
    B. (1 1/4"-6") STEEL PIPE: ASTM A795; SCHEDULE 40, BLACK. MECHANICAL GROOVED COUPLINGS: MALLEABLE IRON HOUSING CLAMPS TO ENGAGE AND LOCK, "C" SHAPED ELECTROMETRIC SEALING GASKET, STEEL BOLTS, NUTS, AND WASHERS.
    C. (1 1/4"-6") STEEL PIPE: ASTM A135, SCHEDULE 40, BLACK. STEEL FITTINGS: ASME B16.5, STEEL FLANGES AND FITTINGS. MECHANICAL GROOVED COUPLINGS: MALLEABLE IRON HOUSING CLAMPS TO ENGAGE AND LOCK, "C" SHAPED ELECTROMETRIC SEALING GASKET, STEEL BOLTS, NUTS, AND WASHERS.
18. SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY OVER ANY ELECTRICAL EQUIPMENT PANELS.
19. ALL PIPE AND FITTINGS SHALL BE INSTALLED IN RUST-FREE CONDITION.
20. THE USE OF THREADED BUSHINGS WILL NOT BE PERMITTED IN ANY AREA OF THIS INSTALLATION.
21. ALL PIPING AND COMPONENTS NECESSARY FOR INSTALLATION MAY BE PREFABRICATED. HOWEVER, THE CONTRACTOR MUST BE WILLING TO REWORK THE PREFABRICATED PIPE, FITTINGS, AND THE LIKE, AS NECESSARY TO CONSTITUTE A PROPER APPROVED INSTALLATION, EXISTING SITE CONDITIONS NOTWITHSTANDING, AT NO ADDITIONAL COST TO THE OWNER.
22. THE CONTRACTOR SHALL BE RESPONSIBLE DURING AND TESTING PERIODS OF THE FIRE SPRINKLER SYSTEM WORK, FOR ANY MATERIAL DAMAGE TO THE WORK OF THE OWNER OR OTHERS, AND TO THE PROPERTY AND MATERIALS OF THE OWNER OR OTHERS, INCLUDING CEILING SPRINKLER TILES, AND INCLUDING DAMAGE CAUSED BY GREASE, OIL, OR LEAKS IN SPRINKLER EQUIPMENT, FITTINGS OR BY DISCONNECTED PIPES.
23. THE GENERAL CONDITIONS AND SUPPLEMENTAL GENERAL CONDITIONS ISSUED BY THE ARCHITECT SHALL GOVERN WHERE APPLICABLE.
24. ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL; ACCEPTANCE BY THE OWNER SHALL BE A CONDITION WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES, PRESERVE MAXIMUM HEADROOM AND AVOID OMISSIONS.
25. CONTRACTOR TO MAKE ALL NECESSARY TAPS, AS CALLED FOR ON THE DRAWINGS.
26. THIS CONTRACTOR SHALL REMOVE ALL DEBRIS ON COMPLETION OF THE JOB AND CLEAN ALL FIXTURES.
27. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, ENGINEER, OWNERS INSURANCE UNDERWRITER, AND LOCAL FIRE DEPARTMENT FOR APPROVAL COMPLETE INSTALLATION AND DESIGN DRAWINGS SHOWING THE SPRINKLER SYSTEM LAYOUTS. THE LAYOUT SHALL INDICATE ALL OF THE SPRINKLER PIPING, SPRINKLER HEAD LOCATIONS, EQUIPMENT AND DETAILS OF ANCHORS AND SUPPORTS AS REQUIRED.
28. FITTINGS SHALL BE NEW 125 LB. CAST IRON SCREWED OR FLANGED CONFORMING TO A.S.A. B16.4, MANUFACTURED IN THE U.S. AND APPROVED FOR FIRE PROTECTION SPRINKLER SYSTEMS.
29. THE SPRINKLER RISERS, MAINS AND BRANCH PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, USING APPROVED TYPE STEEL HANGERS, BRACKETS, ANCHORS AND STUDS, OF SIZE AND NUMBER IN ACCORDANCE WITH N.F.P.A. #13.
30. ALL PIPING ABOVE GRADE SHALL BE HYDROSTATICALLY TESTED AT 200 PSIG FOR A TWO-HOUR PERIOD IN ACCORDANCE WITH N.F.P.A. #24.
31. CONTRACTOR IS RESPONSIBLE FOR SPACING, PIPE SIZE, OFFSETS, CLEARANCES, VALVES, ELBOWS, HANGERS, ALL ACCESSORIES AND QUANTITIES FOR ALL.

SPRINKLER LEGEND

- ● DOWN-TURNED, QUICK RELEASE, CONCEALED TYPE SPRINKLER.
- ○ UPTURNED SPRINKLER

1 FIRE PROTECTION PLAN
1/8" = 1'-0"

REVISIONS

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Carthage College - Kenosha, Wisconsin

LEVEL 1 FIRE PROTECTION SPRINKLER PLAN

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DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: FP3.1

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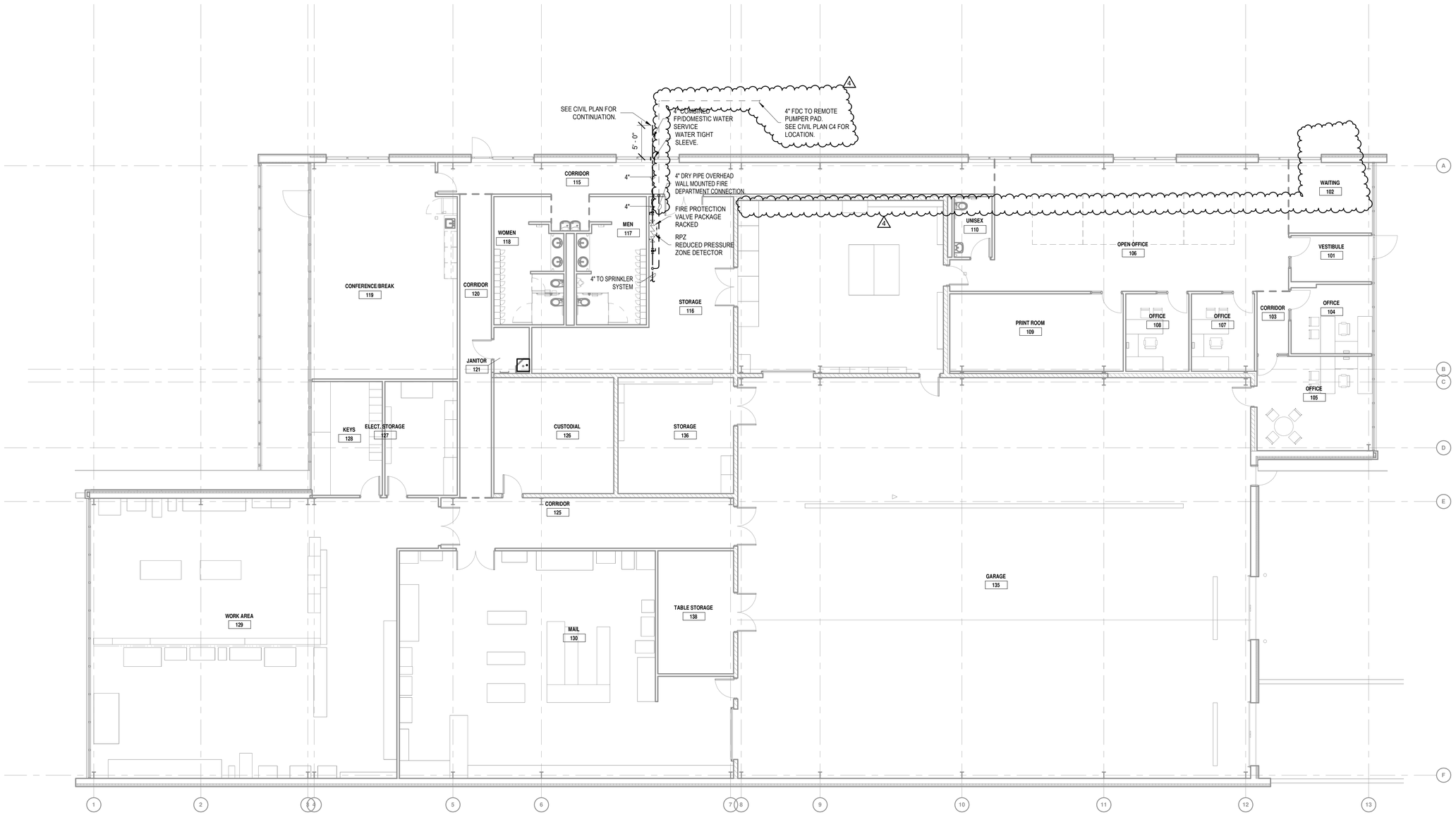

1 PLUMBING - FIRE PROTECTION PLAN
1/8" = 1'-0"

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REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

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LEVEL 1 FIRE PROTECTION PLAN

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CARTHAGE COLLEGE

Somers, Wisconsin

CARTHAGE FACILITIES BUILDING

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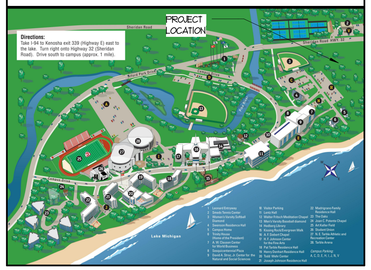
FIRE SPRINKLER
FP3.1 LEVEL 1 FIRE PROTECTION SPRINKLER PLAN
FP3.2 LEVEL 1 FIRE PROTECTION PLAN

LOCATION MAP

CAMPUS MAP



GENERAL NOTES

1. DO NOT SCALE DRAWINGS
2. CONTRACTOR SHALL FIELD VERIFY AND BECOME THROUGHLY FAMILIAR WITH ALL CONDITIONS AND DIMENSIONS.
3. EACH CONTRACTOR SHALL REVIEW COMPLETE PLANS FOR RELATED WORK.
4. ALL WORK SHALL BE IN COMPLIANCE WITH STATE AND LOCAL CODES FOR RESPECTIVE TRADES.
5. BUILDING AND ADJACENT BUILDINGS WILL REMAIN OPERATIONAL THROUGHOUT PROJECT DURATION.

ABBREVIATIONS

ALT	ALTERNATE	HDWR	HARDWARE
A/E	ARCHITECT/ENGINEER	HM	HOLLOW METAL
AFF	ABOVE FINISH FLOOR	HT	HEIGHT
ALUM	ALUMINUM	HW	HOT WATER
BD	BOARD	INT	INTERIOR
B/O	BOTTOM OF	INSUL	INSULATION
CPT	CARPET	JT	JOINT
℄	CENTER LINE	LAV	LAVATORY
CLG	CEILING	MFR	MANUFACTURER
CJ	CONTROL JOINT	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MO	MASONRY OPENING
CONC	CONCRETE	MTL	METAL
CONT	CONTINUOUS	NIC	NOT IN CONTRACT
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	OC	ON CENTER
CT	CERAMIC TILE	OFCI	OWNER FURNISHED, CONTRACTOR TO INSTALL
DBL	DOUBLE		
DF	DRINKING FOUNTAIN	OPP	OPPOSITE
DIA	DIAMETER	PLYWD	PLYWOOD
DIM	DIMENSION	PL	PLASTIC LAMINATE
DN	DOWN		PLATE
DR	DOOR	PT	PORCELAIN TILE
DS	DOWNSPOUT	QT	QUARRY TILE
DTL	DETAIL	REQ'D	REQUIRED
DWG	DRAWING	RO	ROUGH OPENING
EA	EACH	SHT	SHEET
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	SV	SHEET VINYL
		SIM	SIMILAR
EL	ELEVATION	SS	SOLID SURFACE
EJ	EXPANSION JOINT	SST	STAINLESS STEEL
EQ	EQUAL	STD	STANDARD
EQUIP	EQUIPMENT	SAT	SUSPENDED ACOUSTIC TILE CEILING
EXIST	EXISTING		
EXT	EXTERIOR	TBD	TO BE DETERMINED
EWC	ELECTRIC WATER COOLER	TEMP	TEMPORARY
FEC	FIRE EXTINGUISHER CABINET	T/O	TOP OF
		T&G	TONGUE AND GROOVE
FIN	FINISH	TYP	TYPICAL
FD	FLOOR DRAIN	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR	VCT	VINYL COMPOSITION TILE
FRP	FIBERGLASS REINFORCED PLASTIC	VB	VINYL BASE
		VIF	VERIFY IN FIELD
GA	GAUGE	WD	WOOD
GALV	GALVANIZED	WWF	WELDED WIRE FABRIC
GYP BD	GYPSUM BOARD		

CLIENT:
CARTHAGE COLLEGE
2001 ALFORD PARK DRIVE
KENOSHA, WISCONSIN 53140
PHONE: 262.551.6200
FAX: 262.552.5495
ATTN: TED FARES

ARCHITECT:
PARTNERS IN DESIGN ARCHITECTS
600 FIFTY SECOND STREET, SUITE 220
KENOSHA, WISCONSIN 53140
PHONE: 262.652.2800
ATTN: MARK MOLINARO, JR. AIA
ERIC MIGRIN, LEED AP

CIVIL ENGINEER
NIELSEN MADSEN & BARBER SC
1458 HORIZON BLVD., SUITE 200
RACINE, WISCONSIN 53406
PHONE: 262.634.5588
FAX: 262.634.5024
ATTN: MARK EBERLE

MECHANICAL, ELECTRICAL, PLUMBING ENGINEER
RTM ENGINEERING CONSULTANTS
650 E. IL-62, SUITE 250
SCHAMBURG, ILLINOIS 60173
PHONE: 847.756.4180
ATTN: ADAM MARKS

LANDSCAPE ARCHITECT
THOMAS NORDLOH ASSOCIATES
411 TAFT ROAD
KENOSHA, WISCONSIN 53142
PHONE: 262.496.9191
ATTN: THOMAS NORDLOH

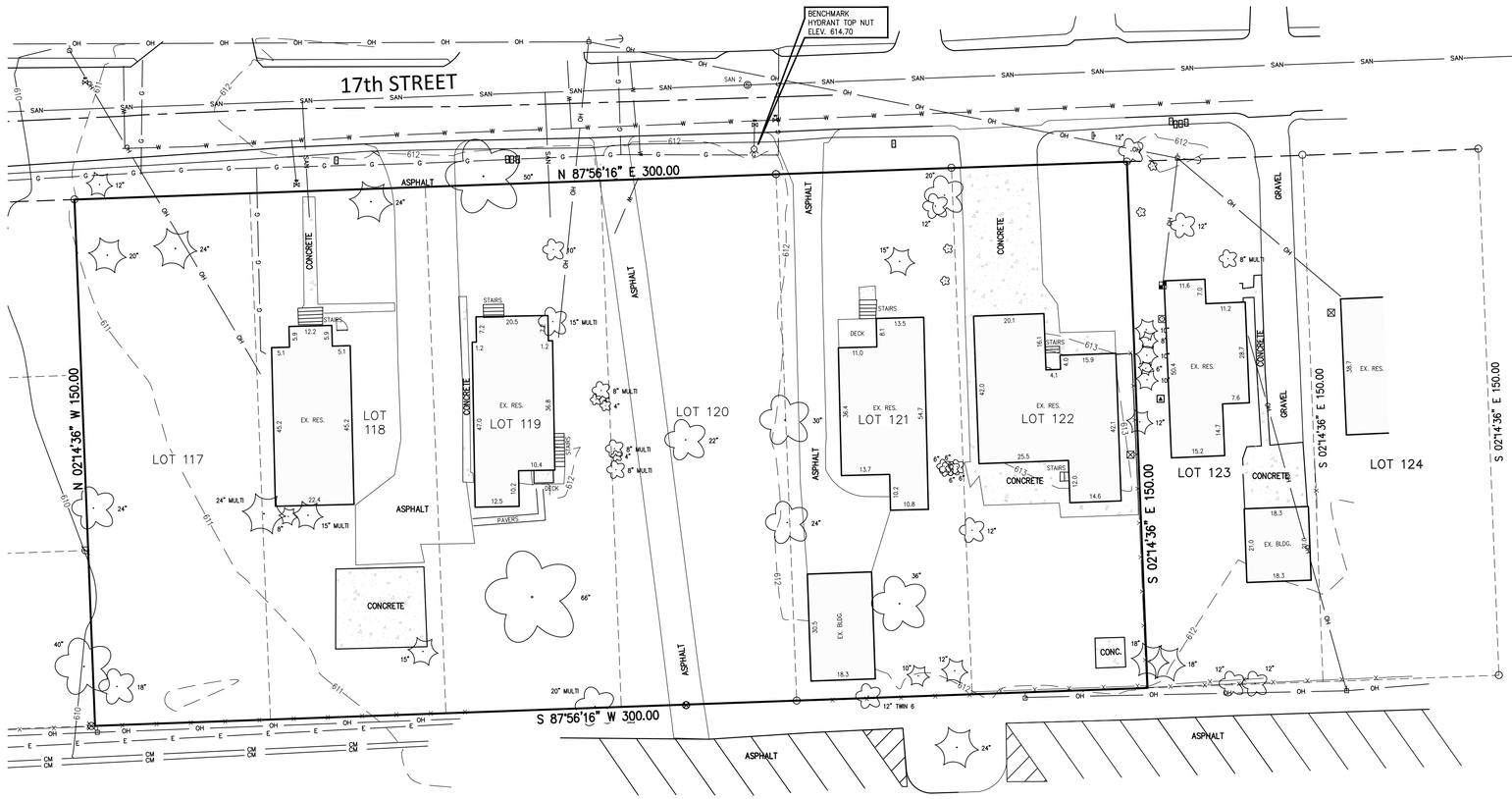
Partners in Design ARCHITECTS

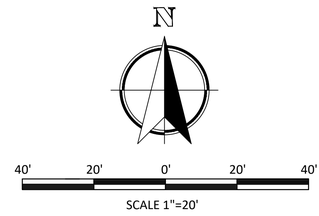
CARTHAGE COLLEGE

CARTHAGE FACILITIES BUILDING

DATE: 06.28.2022

NUMBER: 154.21.085





NOTES

BEARING BASE: GRID NORTH, WISCONSIN COORDINATE SYSTEM, SOUTH ZONE. BASED UPON NAD 1983 / 2011

ALL ELEVATIONS REFER TO NATIONAL GEODETIC DATUM OF 1929.

4

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

EXISTING UTILITY DATA

SAN 1
RIM 602.34
IE. 12" N/S 590.14
IE. 8" E 591.04
IE. 8" E 594.34 (ABANDONED)

SAN 2
RIM 612.66
IE. 8" E/W 601.11

SAN 3
RIM 612.57
IE. 8" E/W 602.47

LEGEND

- VENT PIPE
- CATCH BASIN
- MAILBOX
- BILLBOARD POST
- ELECTRIC PEDESTAL
- ELECTRIC METER
- E — ELECTRIC LINE
- SANITARY MANHOLE
- SAN — SANITARY SEWER
- HYDRANT
- WV — WATER VALVE
- W — WATER MAIN
- BUSH
- GUARD POST
- POWER POLE
- GUY WIRE
- PAD MOUNT TRANSFORMER
- COMMUNICATION BOX
- CM — COMMUNICATION LINE
- 6" DECIDUOUS TREE
- 6" CONIFEROUS TREE
- G — GAS MAIN
- GAS METER
- GV — GAS VALVE
- SIGN
- X — FENCE
- OH — OVERHEAD WIRES
- FOUND 1" IRON PIPE
- FOUND 1-3/4" IRON PIPE
- FOUND ROD IN CONCRETE

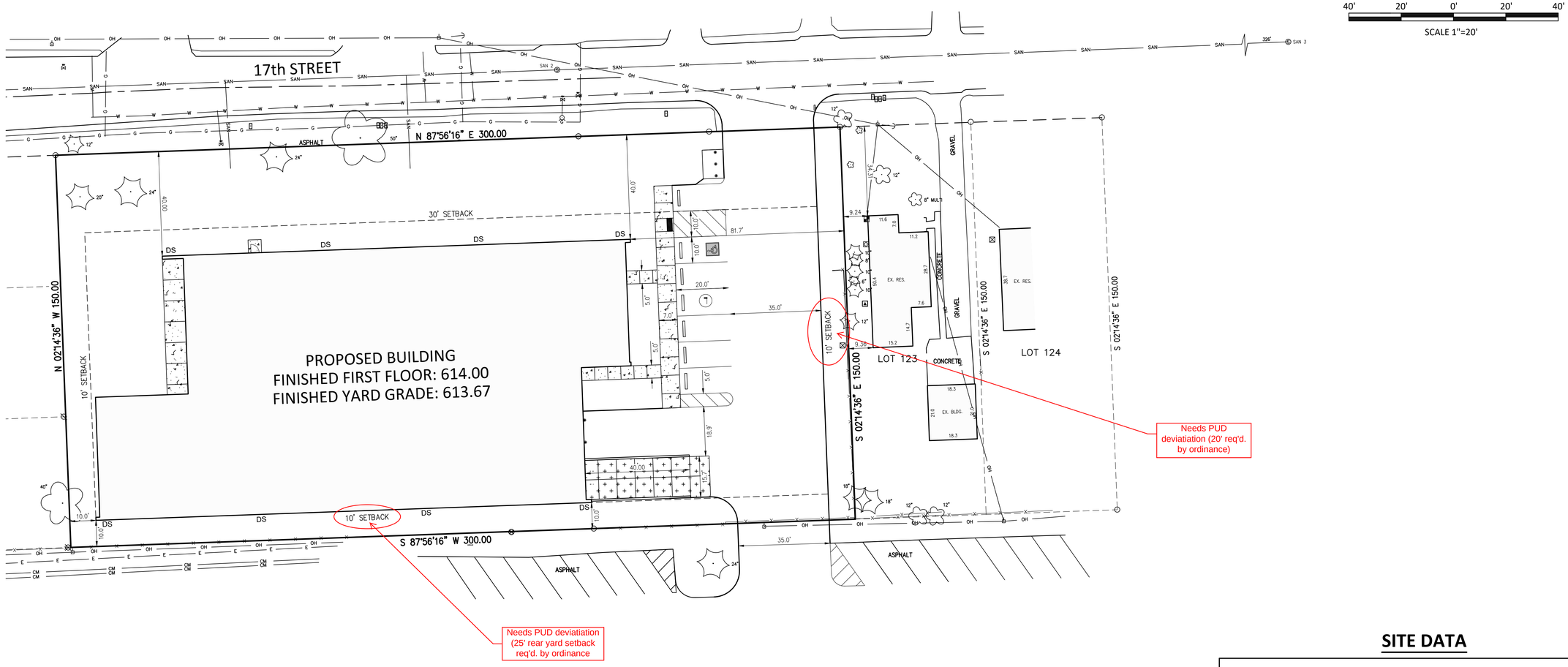
REVISIONS
1 12822 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

EXISTING CONDITIONS

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C1



N

40' 20' 0' 20' 40'

SCALE 1"=20'

SITE DATA

PARCEL NUMBERS:	83-4-223-184-0685 83-4-223-184-0690 83-4-223-184-0695 83-4-223-184-0700 83-4-223-184-0705 83-4-223-184-0710
EXISTING LAND USE:	RESIDENTIAL
EXISTING FLOOD ZONE:	NOT IN A FLOOD ZONE
PROPOSED LAND USE:	INSTITUTIONAL
PROPOSED IMPERVIOUS SURFACE CALCULATIONS	
PROPOSED BUILDING AREA:	17,632 S.F.
PROPOSED PAVEMENT AREA:	9,819 S.F.
TOTAL IMPERVIOUS SURFACE AREA:	27,451 S.F. (61.0%)
TOTAL GREEN SPACE AREA:	17,549 S.F (39.0%)
TOTAL PARCEL AREA:	45,000 S.F (1.03 ACRES)

UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO, CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

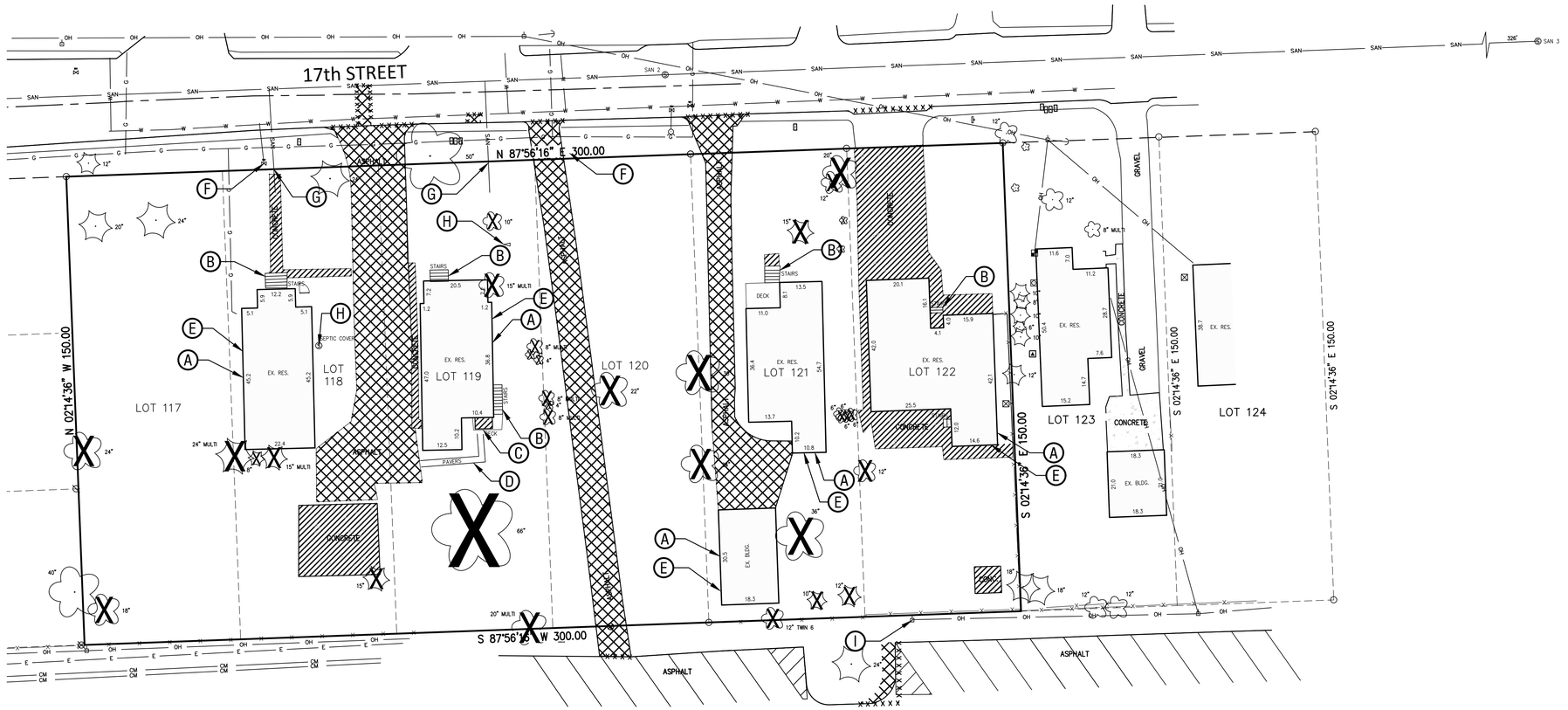
REVISIONS
Δ1 7.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

DIMENSIONED SITE PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 2011009127
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C2



N

40' 20' 0' 20' 40'

SCALE 1"=20'

DEMOLITION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL AT A LOCATION APPROVED (BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PAVEMENTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLY COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER AS WELL AS OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION, SITE CLEARING, AND DISPOSAL.

THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE LAND SURVEYOR AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.

ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CALL DIGGERS HOTLINE AT 1-800-242-8511 A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATION ACTIVITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HIRE A PRIVATE UTILITY LOCATING SERVICE TO LOCATE AND MARK ALL UNDERGROUND PRIVATE UTILITIES.

CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH SIGNS, FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. TEMPORARY CLOSURE OF ANY PUBLIC ROADWAY SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING THE COURSE OF WORK.

PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

EXISTING ITEMS TO REMAIN INCLUDING, BUT NOT LIMITED TO, FENCES, SIGNS, UTILITIES, BUILDINGS, TREES, PAVEMENTS, AND LIGHT POLES SHALL BE CAREFULLY PROTECTED DURING THE DEMOLITION PROCESS. ANY DAMAGE SUSTAINED TO ITEMS TO REMAIN IN PLACE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

PROPERTY CORNERS AND BENCHMARKS SHALL BE CAREFULLY PROTECTED UNTIL THEY HAVE BEEN REFERENCED BY A PROFESSIONAL LAND SURVEYOR. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL LIMIT PAVEMENT REMOVALS TO ONLY THOSE AREAS WHERE IT IS NECESSARY AS SHOWN ON THESE CONSTRUCTION PLANS. CONCRETE SIDEWALK AND CURB & GUTTER IS TO BE REMOVED TO NEAREST JOINT IN ORDER TO ACCOMMODATE PROPOSED IMPROVEMENTS. IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENTS AND OR OTHER IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPAIR OF DAMAGED PAVEMENT AND OTHER ITEMS AT NO ADDITIONAL COST TO THE OWNER.

IF PREVIOUSLY UNIDENTIFIED HAZARDOUS, CONTAMINATED MATERIALS, OR OTHER ENVIRONMENTAL RELATED CONDITIONS ARE DISCOVERED, STOP WORK IMMEDIATELY AND NOTIFY THE PROJECT CONSTRUCTION MANAGER FOR ACTION TO BE TAKEN. DO NOT RESUME WORK UNTIL SPECIFICALLY AUTHORIZED BY THE CONSTRUCTION MANAGER.

AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

LEGEND

- REMOVE ASPHALT PAVEMENT & BASE
- REMOVE CONCRETE PAVEMENT & BASE
- xxxxxxxxx SAWCUT PAVEMENT (FULL DEPTH)
- REMOVE FENCE
- CLEAR & GRUB ISOLATED TREES

- (A) DEMOLISH BUILDINGS & FOUNDATIONS
- (B) REMOVE STAIRS & FOUNDATIONS
- (C) REMOVE DECK & FOUNDATIONS
- (D) REMOVE PAVERS
- (E) REMOVE ELECTRIC/GAS METER (COORDINATE WITH WE ENERGIES)
- (F) CAP WATER SERVICE AT RIGHT OF WAY AND ABANDON IN PLACE (ALL 4 HOMES)
- (G) CAP SANITARY LATERAL AT RIGHT OF WAY AND ABANDON IN PLACE (ALL 4 HOMES)
- (H) DEMOLISH SEPTIC TANKS (ALL 4 HOMES)
- (I) ELECTRIC POWER POLE TO BE RELOCATED (COORDINATE WITH WE ENERGIES)

UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO, CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

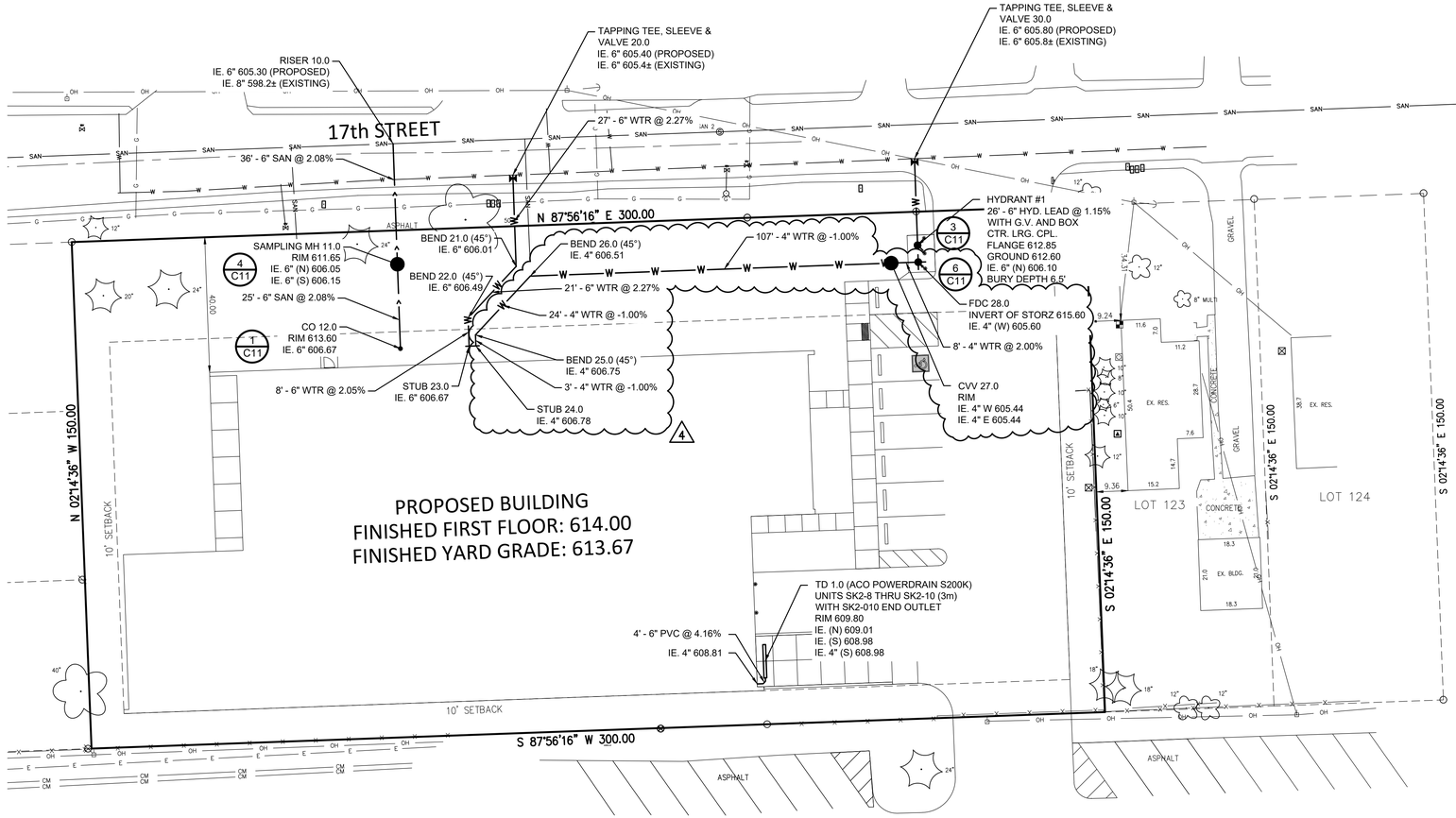
REVISIONS
1 12822 - ADDENDUM NO. 4

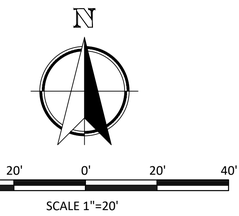
FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE DEMOLITION PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C3





UTILITY CONSTRUCTION GENERAL NOTES

MATERIALS FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND VILLAGE OF SOMERS STANDARD MATERIAL SPECIFICATION CHECKLIST.

SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN", 6TH EDITION, DECEMBER 22, 2003 WITH ADDENDA NO. 1 AND NO. 2, HEREIN REFERRED TO AS THE "STANDARD SPECIFICATIONS" AS WELL AS THE "VILLAGE OF SOMERS DEVELOPMENT STANDARDS", HERIN REFERRED TO AS THE "DEVELOPMENT STANDARDS".

CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS AND SIZES OF EXISTING SANITARY AND STORM SEWERS, WATER MAINS, GAS & ELECTRIC LINES OR OTHER UTILITIES PRIOR TO STARTING CONSTRUCTION. AS-BUILT (FIELD) DATA SHALL BE USED TO CHECK ALL PROPOSED UTILITY CROSSINGS FOR CONFLICTS.

CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE A MINIMUM OF 72 HOURS BEFORE THE START OF CONSTRUCTION TO IDENTIFY ADJACENT UNDERGROUND UTILITIES. THE LOCATION OF EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLANS AND SHOULD BE LOCATED BY THE OWNER PRIOR TO CONSTRUCTION.

ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGE OFF-SITE. PUMPING OPERATIONS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061. PUMPED WATER CAN BE TREATED IN RETENTION BASINS, FILTER BAGS, STONE FILTERS OR BY OTHER WDNR APPROVED METHODS. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

THE EXACT LOCATION OF ALL BUILDING LATERALS, ROOF DRAIN RISERS AND DOWNSPOUTS (IF APPLICABLE) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

SANITARY SEWER & WATER MAIN SPECIFICATIONS

BEDDING AND COVER MATERIAL FOR SEWER AND WATER UTILITIES SHALL BE ¾" CRUSHED LIMESTONE CHIPS (PEA GRAVEL IS NOT ACCEPTABLE) CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

ALL SANITARY SEWER, WATER MAIN AND FIRE PROTECTION LATERALS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

ALL ROADWAY OPENINGS SHALL BE BACKFILLED WITH AGGREGATE SLURRY BACKFILL MATERIAL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL SEWER AND WATER UTILITIES PER SPS 382.40(8)(k). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A 2½" x 18" C.P. TEST SERVICES - VALVCO TERMINAL BOX. TRACER WIRE COLOR SHALL BE BLUE FOR WATER AND GREEN FOR SEWER.

SANITARY SEWER LATERAL PIPE MATERIAL SHALL BE 6" PVC CLASS SDR-26, CONFORMING TO THE REQUIREMENTS OF ASTM D3034 AND F-789/P546 WITH RUBBER GASKETS. LATERAL CLEAN-OUT RISERS SHALL BE 6" DIAMETER WITH 8" DIAMETER FROST SLEEVE CONSTRUCTED OF THE SAME MATERIAL.

WATER SERVICE PIPE MATERIAL SHALL BE EITHER POLY-ENCASED DUCTILE IRON PIPE CLASS 52 (AS SHOWN) MEETING THE REQUIREMENTS OF AWWA STANDARD C-151 / ANSI 21.51-91 OR POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF AWWA STNADARD C-900, CLASS 150, DR-18.

ALL VALVES AND VALVE BOXES SHALL BE IN ACCORDANCE WITH THE "DEVELOPMENT STANDARDS".

HYDRANTS SHALL BE CLOW MEDALLION OR APPROVED EQUAL IN ACCORDANCE THE "DEVELOPMENT STANDARDS".

PROVIDE FIVE AND ONE HALF FEET (5-1/2') OF COVER OVER ALL SANITARY SEWERS AND SIX AND ONE HALF FEET (6-1/2') OF COVER OVER ALL WATER MAINS. MINIMUM HORIZONTAL SEPARATION OF UTILITY MAINS IS EIGHT FEET (8'). PROVIDE VERTICAL SEPARATION OF UTILITIES PER CODE.

ANY AND ALL PAVEMENTS DISTURBED TO INSTALL UNDERGROUND UTILITIES SHALL BE SAWCUT AND REPLACED IN KIND PER VILLAGE OF SOMERS SPECIFICATIONS.

AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

UTILITY NOTES

1. SEE ELECTRICAL AND MEP PLANS FOR ADDITIONAL DETAILS
2. CONTRACTOR TO COORDINATE WITH WE-ENERGIES FOR GAS AND ELECTRICAL SERVICES.

SITE UTILITY LEGEND

- W — EXISTING WATER MAIN
- W — PROPOSED WATER MAIN
- SAN — EXISTING SANITARY MAIN
- > — PROPOSED SANITARY LATERAL
- STM — EXISTING STORM SEWER
-) — PROPOSED STORM SEWER

STORM SEWER SPECIFICATIONS

MATERIAL FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND VILLAGE OF SOMERS STANDARD MATERIAL SPECIFICATION CHECKLIST.

STORM SEWER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN", 6TH EDITION, DECEMBER 22, 2003 WITH ADDENDA NO. 1 AND NO. 2, HEREIN REFERRED TO AS THE "STANDARD SPECIFICATIONS" AS WELL AS THE "VILLAGE OF SOMERS DEVELOPMENT STANDARDS", HERIN REFERRED TO AS THE "DEVELOPMENT STANDARDS"

THE STORM SEWER SYSTEM WAS SIZED ACCORDING TO SPS TABLE 382.36-2 "MAXIMUM CAPACITY OF STORM WATER HORIZONTAL CONVEYANCE PIPING FOR PVC ASTM D3034". STORM SEWER PIPE AND TUBING MATERIALS SHALL CONFORM TO SPS 384.30 OF THE WISCONSIN ADMINISTRATIVE CODE. POLYVINYL CHLORIDE (PVC) MATERIALS SHALL BE SELECTED FROM TABLE 384.30-6. STORM SEWER SHALL BE 6" PVC, ASTM D3034, SDR-26.

ALL STORM SEWERS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL SEWER AND WATER UTILITIES PER SPS 382.40(8)(k). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A 2½" x 18" C.P. TEST SERVICES - VALVCO TERMINAL BOX. TRACER WIRE COLOR SHALL BE BROWN FOR STORM SEWER.

TRENCH DRAIN SHALL BE POWERDRAIN S200K WITH DUCTILE IRON SLOTTED GRATE AS MANUFACTURED BY ACO, INC. OR APPROVED EQUAL. ALL STORM SEWERS STRUCTURES SHALL BE CONSTRUCTED WITH WATER AND GAS TIGHT JOINTS IN CONFORMANCE WITH SPS 384.40.

AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

UTILITY NOTE

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REVISIONS
1 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE UTILITY PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC CHECKED BY: MDE
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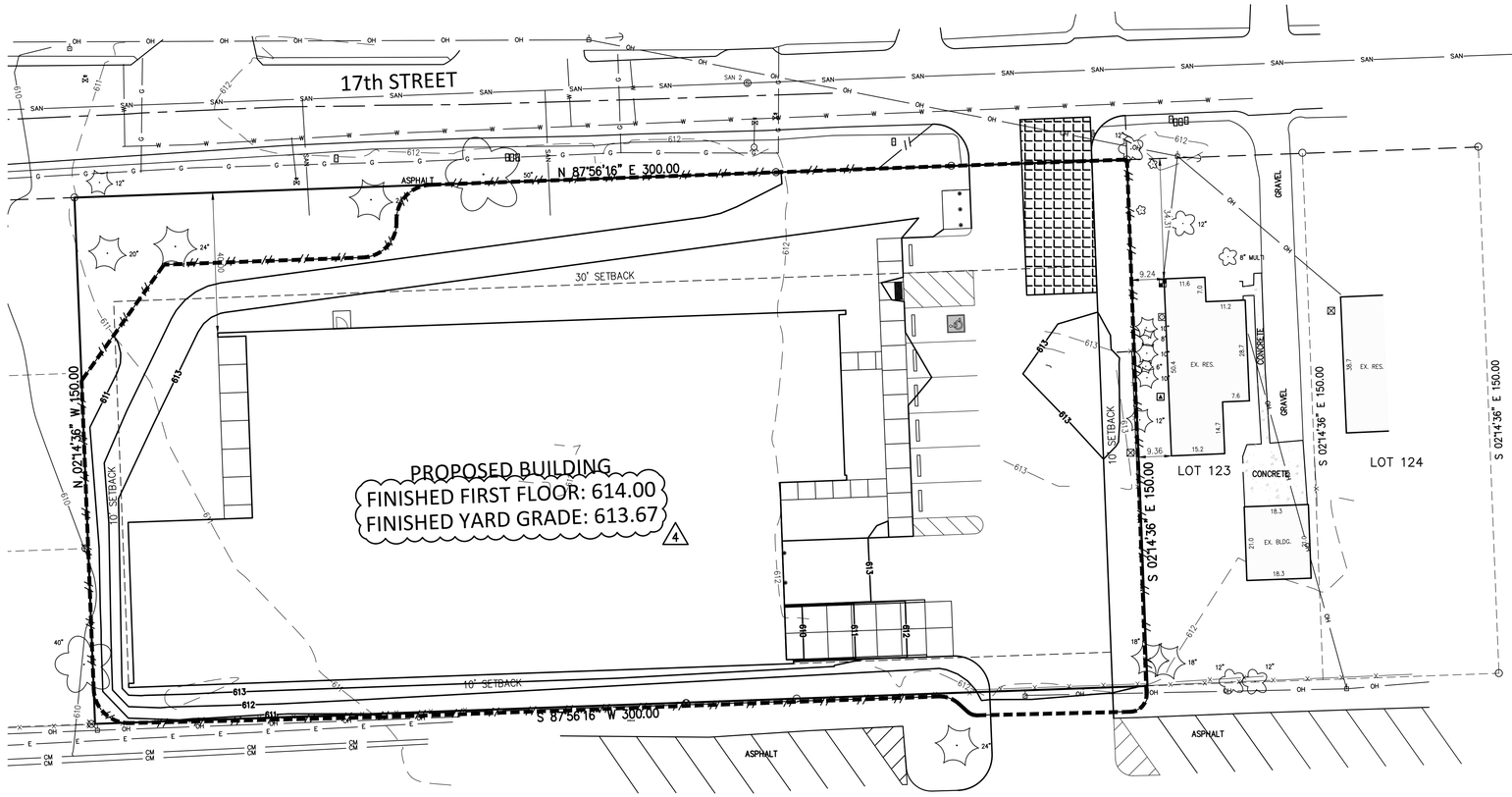
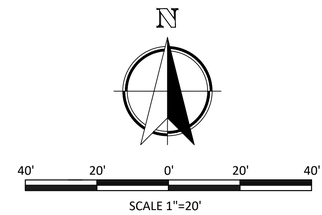
SHEET NO.: C4





EROSION & SEDIMENT CONTROL NOTES

THE EROSION AND SEDIMENT CONTROL PROVISIONS DETAILED ON THE DRAWINGS AND SPECIFIED HEREIN ARE THE MINIMUM REQUIREMENTS FOR EROSION CONTROL.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE ANY REVISIONS, ADJUSTMENTS OR PROPOSED ALTERATIONS TO THE CONSTRUCTION SEQUENCING AND/OR EROSION CONTROL PLANS. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ENGINEER OF RECORD AND REGULATORY OFFICIALS OF ANY CHANGES TO THE EROSION CONTROL AND STORMWATER MANAGEMENT PLANS. MODIFICATIONS TO THE APPROVED EROSION CONTROL DESIGN IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS IS ALLOWED IF MODIFICATIONS CONFORM TO BEST MANAGEMENT PRACTICES (BMP'S).

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL OF ALL EROSION CONTROL DEVICES REQUIRED FOR THE PROJECT WHICH SHALL BE DONE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR) TECHNICAL STANDARDS (REFERRED TO AS BMP'S) AND VILLAGE OF SOMERS ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS. SEE VILLAGE OF SOMERS EROSION CONTROL PERMIT FOR ADDITIONAL DETAILS OR REQUIREMENTS.

ALL EROSION AND SEDIMENT CONTROL MEASURES AND DEVICES SHALL BE INSPECTED BY THE CONTRACTOR AS REQUIRED IN THE WISCONSIN ADMINISTRATIVE CODE (SPS 360.21) AND MAINTAINED PER SPS 360.22.

INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL CHECK THE EROSION AND SEDIMENT CONTROL PRACTICES FOR MAINTENANCE NEEDS AT ALL THE FOLLOWING INTERVALS UNTIL THE SITE IS STABILIZED:

A. AT LEAST WEEKLY.

B. WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. A RAINFALL EVENT SHALL BE CONSIDERED TO BE THE TOTAL AMOUNT OF RAINFALL RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE INSPECTED WITHIN 24 HOURS OF ALL RAIN EVENTS EXCEEDING 0.5 INCHES IMMEDIATELY REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.

EROSION AND SEDIMENT CONTROL INSPECTIONS AND ENFORCEMENT ACTIONS MAY BE CONDUCTED BY VILLAGE OF SOMERS OR THEIR AUTHORIZED AGENTS DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE OR LOCAL INSPECTORS AND/OR THE ENGINEER OF RECORD, SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.

ALL SEDIMENT AND EROSION CONTROL DEVICES, INCLUDING PERIMETER EROSION CONTROL MEASURES SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING CULVERT PROTECTION SHALL BE INSTALLED PRIOR TO COMMENCING EARTH DISTURBING ACTIVITIES. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE SITE HAS ESTABLISHED A VEGETATIVE COVER AND IS STABILIZED.

INSTALL SILT FENCE PER SECTION 628 OF THE "STATE SPECIFICATIONS" AND WDNR TECHNICAL STANDARD 1056 AT THE LOCATIONS SHOWN ON THE PLAN. ERECT SILT FENCE PRIOR TO STARTING A CONSTRUCTION OPERATION THAT MIGHT CAUSE SEDIMENTATION OR SILTATION AT THE SITE OF THE PROPOSED SILT FENCE. CONTRACTOR SHALL INSTALL SILT FENCING AT DOWNSLOPE SIDE OF STOCKPILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL REQUIRED SILT FENCE MATERIAL.

ALL PROPOSED STORM SEWER STRUCTURES AND ADJACENT EXISTING STORM INLETS SHALL HAVE A LAYER OF GEOTEXTILE FABRIC (TYPE "FF") INSTALLED BETWEEN THE FRAME & GRATE TO PREVENT SEDIMENT OR SILT FROM ENTERING THE SYSTEM. THE INLET PROTECTION SHALL BE INSPECTED BY THE CONTRACTOR AND REPLACED EVERY 14 DAYS AND AFTER EACH RAINFALL EVENT. FABRIC TO BE REPLACED AS NEEDED TO MEET FIELD CONDITIONS.

A MINIMUM 20' WIDE X 50' LONG TRACKING PAD (3-6 INCH STONE) SHALL BE INSTALLED AT THE ENTRANCE TO THE SITE (AS SHOWN) TO PREVENT SOIL FROM BEING TRACKED ONTO ADJACENT PAVEMENTS AND PUBLIC ROADWAYS. INSTALLATION AND MAINTENANCE OF THE TRACKING PAD SHALL BE PERFORMED ACCORDING TO WDNR TECHNICAL STANDARD 1057. ALL TRACKED SOIL FROM THE CONSTRUCTION SITE SHALL BE COLLECTED FROM PAVED STREETS AT THE END OF EACH WORKING DAY. PERIODIC STREET SWEEPING SHALL BE CONDUCTED BY THE CONTRACTOR TO KEEP THE PUBLIC AND/OR PRIVATE ROADWAYS FREE OF DUST AND DIRT.

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION (DUST) DURING CONSTRUCTION AT HIS/HER EXPENSE (WHEN NECESSARY OR AS REQUIRED BY LOCAL INSPECTORS).

CONSTRUCTION SEQUENCING NOTES

1. OBTAIN ALL APPLICABLE PERMITS.
2. INSTALL PERIMETER EROSION CONTROL, CONSTRUCTION FENCING AND STONE TRACKING PAD.
3. REMOVE ITEMS SHOWN TO BE SALVAGED FOR RE-USE OR SALVAGED TO OWNER.
4. DEMOLISH EXISTING BUILDINGS AND ABOVE GROUND IMPROVEMENTS.
5. VERIFY LOCATIONS FOR TEMPORARY TOPSOIL STOCKPILE AND PERFORM TOPSOIL STRIPPING / STOCKPILING OPERATION.
6. CONSTRUCT BUILDING FOUNDATION.
7. INSTALL SANITARY SEWER, WATERMAIN AND STORM SEWER IMPROVEMENTS.
8. CONSTRUCT SUBGRADES FOR PAVEMENTS.
9. PERFORM REQUIRED SUBGRADE VERIFICATION TESTING AND INSTALL AGGREGATE BASES.
10. INSTALL SIDEWALKS AND PAVEMENTS.
11. FINE GRADE REMAINDER OF SITE AND COMPLETE RESTORATION OPERATION.
12. REMOVE CONSTRUCTION YARD AND TRACKING PAD.
13. REPAIR OR REINFORCE PERMANENT EROSION CONTROL DEVICES.

NOTES

1. ALL DISTURBED AREAS TO BE RESTORED WITH CLASS I TYPE B EROSION MAT. SEE LANDSCAPE PLAN FOR ADDITIONAL DETAILS.
2. ANY AND ALL PAVEMENTS, GRAVEL SHOULDERS, PARKWAY TREES OR OTHER EXISTING IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY DAMAGED DURING THE COURSE OF WORK SHALL BE REMOVED AND REPLACED IN KIND PER VILLAGE SPECIFICATIONS.

LEGEND

- 692 — EXISTING CONTOURS
- 702 — PROPOSED CONTOURS
- LIMITS OF DISTURBANCE (0.99 ACRES)
- 1 / C8 — SILT FENCE
- 2 / C8 — STONE TRACKING PAD
- 594.17 — FINISHED YARD GRADE

UTILITY NOTE

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DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

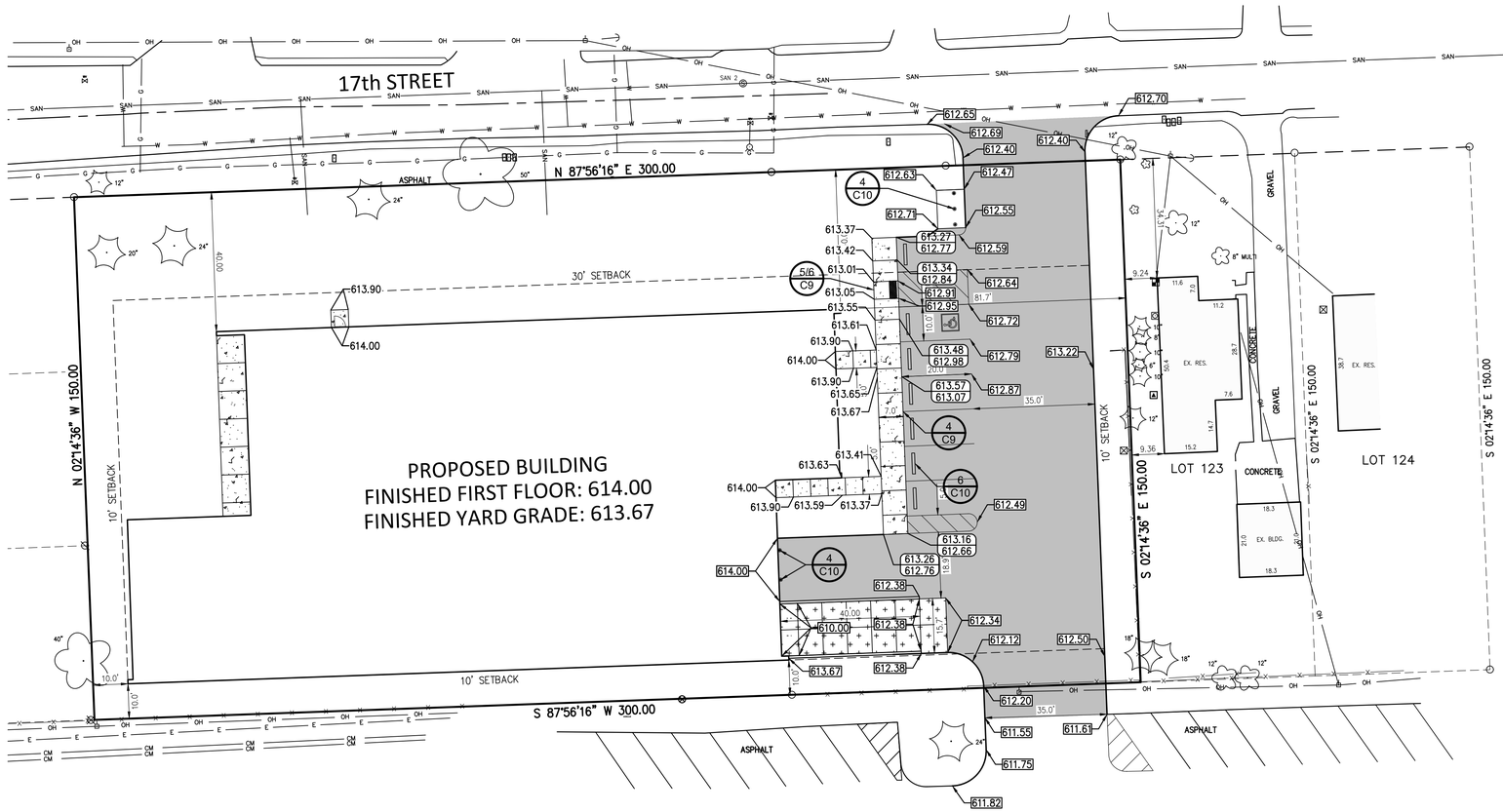
REVISIONS
1 12/8/22 - ADDENDUM NO. 4

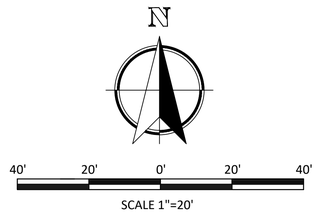
FACILITIES BUILDING
Carthage College – Somers, Wisconsin

SITE GRADING & EROSION CONTROL PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C5





SITE GRADING & SUB-GRADE PREPARATION

TOPSOIL AND OTHER NON-STRUCTURAL MATERIAL WITHIN THE PROPOSED BUILDING PADS, PAVEMENT SECTIONS AND STRUCTURAL FILL AREAS SHALL BE STRIPPED AND STOCKPILED AT THE LOCATION SHOWN OR AS DIRECTED BY THE GENERAL CONTRACTOR.TEMPORARY SEEDING IS REQUIRED FOR ALL STOCKPILES AND OTHER EXPOSED LAND AREAS IF NOT ACTIVELY WORKED WITHIN 30 DAYS.

EXCAVATE, GRADE AND SHAPE SUBGRADE TO THE LINES AND GRADES SHOWN ON THE PLANS. SEE TYPICAL SECTIONS FOR PAVEMENT THICKNESS AND MATERIALS.

FOR STRUCTURAL FILL DEPTHS LESS THAN 20 FEET, THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM D-698) WITH THE EXCEPTION OF THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL HAVE A MINIMUM IN-SITU DENSITY OF 100 PERCENT OF MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS.

THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN -1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF THE OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY RECOMMENDED / APPROVED BY THE SOILS ENGINEER MONITORING THE PLACEMENT AND COMPACTION. COHESIVE SOILS WITH MODERATE TO HIGH EXPANSIVE POTENTIALS (PI>15) SHOULD, HOWEVER, BE PLACED, COMPACTED AND MAINTAINED PRIOR TO CONSTRUCTION AT A MOISTURE CONTENT OF 3±1 PERCENT ABOVE OPTIMUM MOISTURE CONTENT TO LIMIT FUTURE HEAVE.

THE FILL SHALL BE PLACED IN LAYERS WITH A MAXIMUM LOOSE THICKNESS OF 9 INCHES. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION.

UPON COMPLETION OF THE GRADING AND COMPACTION OF THE SUBGRADE, A PROOF ROLL SHALL BE CONDUCTED BY THE CONTRACTOR ON ALL SUBGRADES THAT RECEIVE DENSE AGGREGATE BASE COURSE. THE CONTRACTOR SHALL PROVIDE A FULLY LOADED QUAD-AXLE TRUCK (18 TON MINIMUM LOAD) TO PERFORM THE PROOF ROLL. CONTRACTOR SHALL COORDINATE THE PROOF ROLL WITH THE OWNER AND GEOTECHNICAL ENGINEER.

AT THE COMPLETION OF THE PAVEMENT WORK, RE-SPREAD SALVAGED TOPSOIL OR IMPORT TOPSOIL AS NECESSARY TO PROVIDE A MINIMUM SIX-INCH (6") LAYER IN ALL LANDSCAPE AND LAWN AREAS. ALL DISTURBED AREAS SHALL BE RESTORED PER THE LANDSCAPE PLAN.

EXCESS TOPSOIL NOT BEING USED FOR THE PROJECT SHALL BE HAULED OFF-SITE.

PAVEMENT SPECIFICATIONS

DENSE AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 305 OF THE "STATE SPECIFICATIONS". THE COMPLETED BASE SHALL BE IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET AND SHALL BE CONSTRUCTED IN FOUR-INCH (4") LIFTS AND COMPACTED ACCORDING TO SUBSECTION 305.3.2.2 OF THE "STATE SPECIFICATIONS".

ASPHALTIC CONCRETE PAVEMENT SHALL BE WISDOT LT 58-28 S MEETING THE REQUIREMENTS OF SECTION 460 OF THE "STATE SPECIFICATIONS". PAVEMENT SHALL BE INSTALLED IN TWO (2) LIFTS IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET. A TACK COAT SHALL BE INSTALLED BETWEEN THE LOWER AND UPPER COURSES IN ACCORDANCE WITH SECTION 455.3.2 OF THE "STATE SPECIFICATIONS".

CONCRETE FOR PAVEMENTS, CURB & GUTTER, AND APRONS SHALL BE GRADE A-FA, AIR-ENTRAINED, AS SPECIFIED IN SUBSECTION 501.3.1 OF THE "STATE SPECIFICATIONS". ALL EXTERIOR CONCRETE SHALL BE "READY-MIXED" AND RECEIVE A BROOM FINISH. ALL CONCRETE WORK SHALL BE CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBSECTION 415.2.4 OF THE "STATE SPECIFICATIONS".

CONTRACTION JOINTS FOR SIDEWALKS SHALL MATCH THE SIDEWALK WIDTH.

CONTRACTION JOINTS FOR LOADING DOCK APRON SHALL BE 8'X8'.

EXPANSION JOINTS SHALL BE PLACED AS OUTLINED IN SUBSECTION 601.3.6 OF THE "STATE SPECIFICATIONS". FILLER MATERIAL FOR EXPANSION JOINTS SHALL BE 1/2" FIBER MATERIAL.

CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLES, VALVE BOXES, ETC.) TO MATCH THE FINISHED GRADES OF THE AREA AFFECTED BY THE CONSTRUCTION.

PAVEMENT GRADING LEGEND

- 804.85 EXISTING SPOT GRADES
- 804.85 FINISHED PAVEMENT GRADES
- 804.85 FINISHED SIDEWALK GRADES
- 804.85 / 804.35 FINISHED SIDEWALK GRADES / FINISHED PAVEMENT GRADES
- PAVEMENT REPAIR PER LOCAL REQUIREMENTS
- 3 / C9 HEAVY–DUTY ASPHALT PAVEMENT (5")
- 1 / C9 LIGHT–DUTY CONCRETE PAVEMENT (4")
- 2 / C9 HEAVY–DUTY CONCRETE PAVEMENT (8")

UTILITY NOTE

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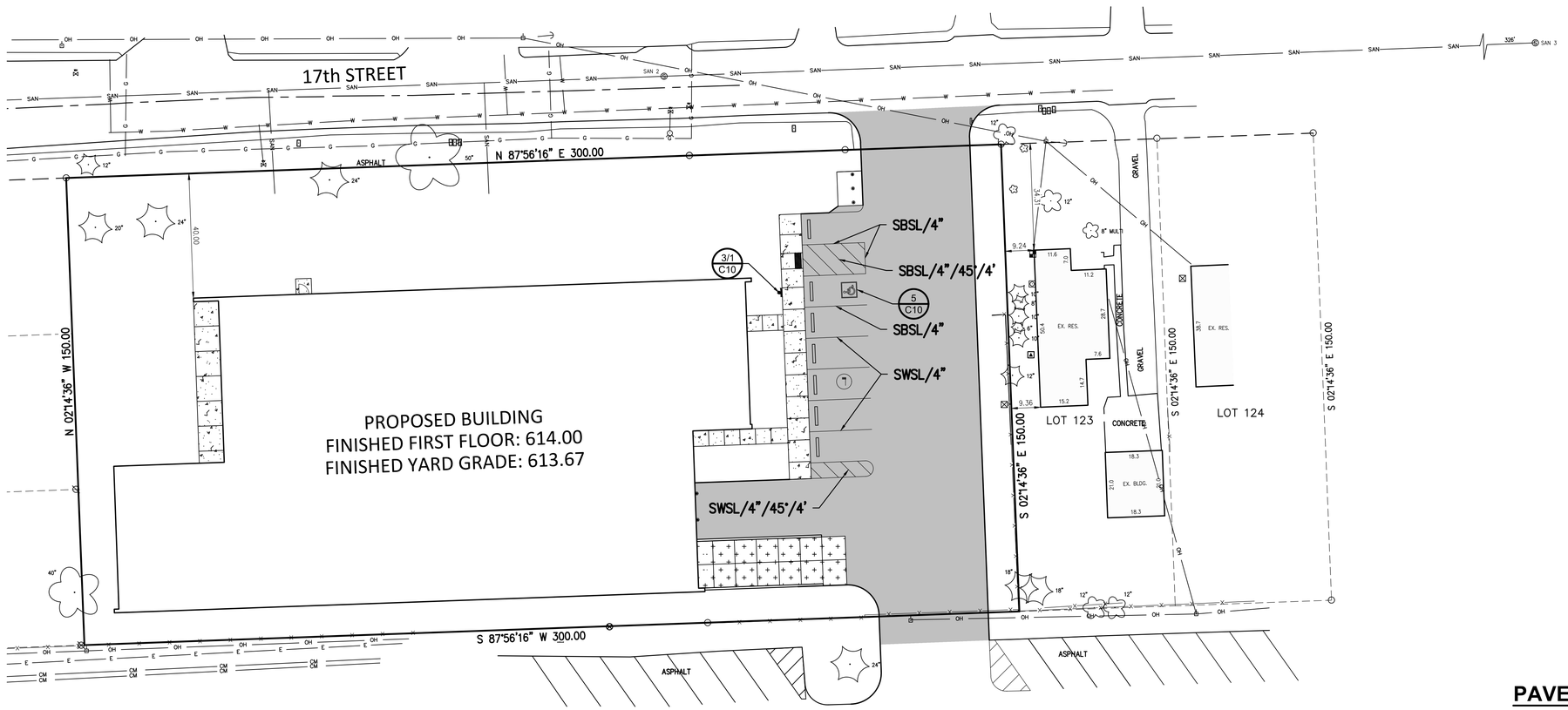
REVISIONS
1 12822 - ADDENDUM NO.4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

PAVEMENT GRADING PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C6



N

40' 20' 0' 20' 40'

SCALE 1"=20'

PAVEMENT MARKING LEGEND

(5 / C10) ISA-B – INTERNATIONAL SYMBOL FOR ACCESSIBILITY – BLUE

SWSL/4" – SINGLE WHITE SOLID LINE / 4" WIDE EACH

SWSL/4"/45°/4' – SINGLE WHITE SOLID LINE / 4" WIDE EACH, 45°, 4' O.C.

SBSL/4" – SINGLE BLUE SOLID LINE / 4" WIDE EACH

SBSL/4"/45°/4' – SINGLE BLUE SOLID LINE / 4" WIDE EACH, 45°, 4' O.C.

SIGN / POST LEGEND

(3/1 / C10) = SIGN (DETAIL 3) MOUNTED ON POST (DETAIL 1) AS SHOWN ON SHEET C10

PAVEMENT STRIPING NOTES

CONTRACTOR SHALL CONSULT STRIPING COLOR WITH OWNER PRIOR TO CONSTRUCTION.

PROVIDE CONTRACTOR GRADE ACRYLIC, STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT. ALL STRIPING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, OIL, AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE FOR INSPECTING PAVEMENT SURFACES AND CORRECTING CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF WORK.

DO NOT PLACE MARKING OVER UNSOUND PAVEMENTS. IF THESE AREAS EXIST, NOTIFY OWNER. STARTING INSTALLATION CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.

LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS. STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "FREE HAND" PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED. APPLY STRIPES STRAIGHT AND EVEN.

PROTECT ADJACENT CURBS, WALKS, FENCES, AND OTHER ITEMS FROM OVERSPRAY PAINT.

APPLY MARKING PAINT AS A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES (OR TO MANUFACTURERS SPECIFICATIONS).

BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.

ALL HANDICAPPED ACCESSIBLE PARKING SHALL BE LOCATED PER 2009 IBC 1106.6.

UTILITY NOTE

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REVISIONS
1 07.28.22 - ADDENDUM NO. 4

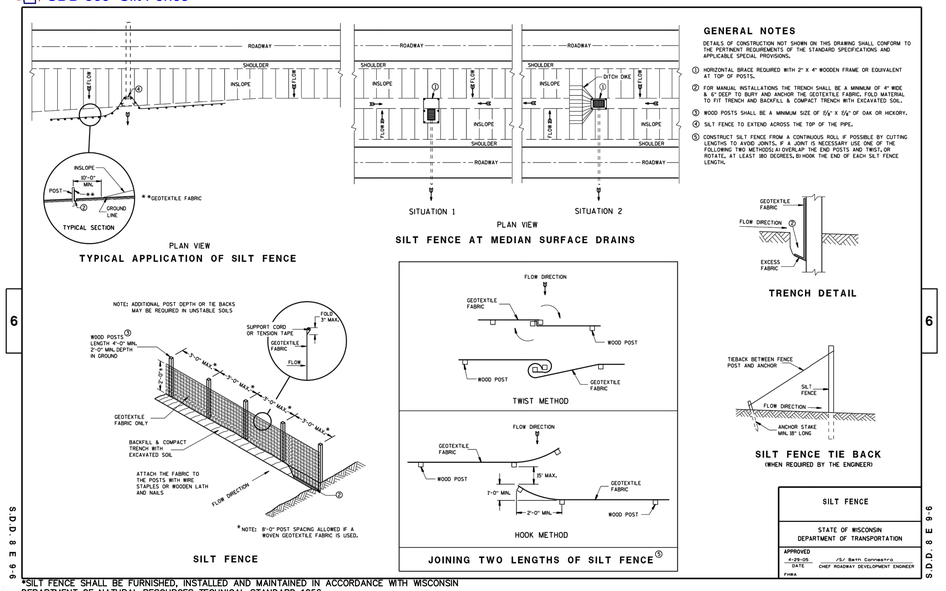
FACILITIES BUILDING
Carthage College – Somers, Wisconsin

PAVEMENT MARKING & SIGNAGE PLAN

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 20110091.27
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C7

SDD 8e9 Silt Fence



GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY, USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

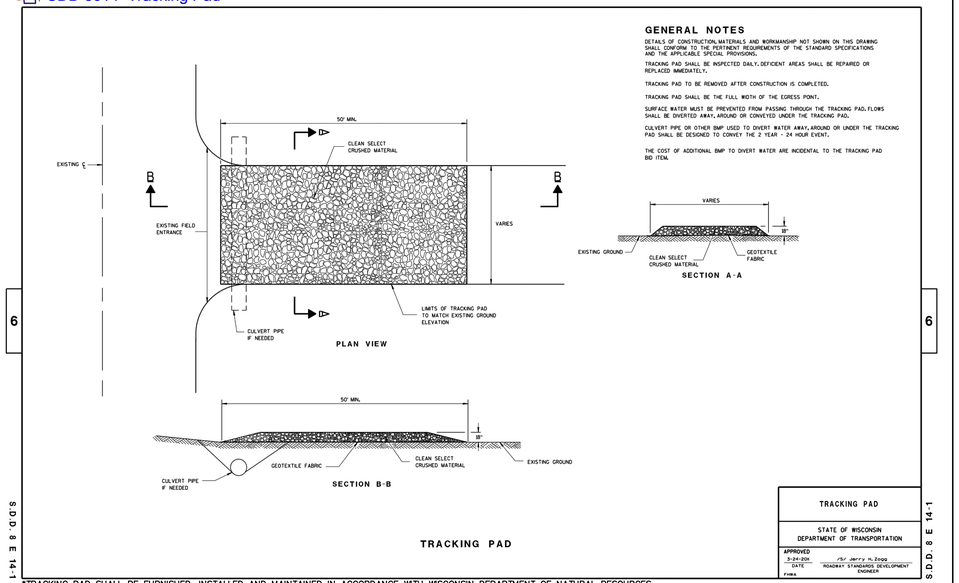
S.D.D. 8 E 9-6

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Seth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

*SILT FENCE SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1056.

1 SILT FENCE DETAIL N.T.S.

SDD 8e14 Tracking Pad



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

S.D.D. 8 E 14-1

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3-24-2014 DATE	/S/ Jerry M. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

*TRACKING PAD SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1057 INCLUDING PAVEMENT CLEANING WHEN NECESSARY.

2 TRACKING PAD DETAIL N.T.S.

4

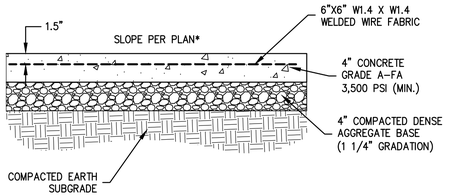
REVISIONS
4 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin

TYPICAL SECTIONS & CONSTRUCTION DETAILS

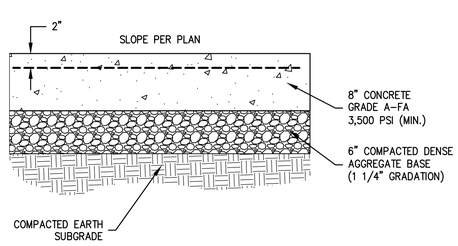
Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd, Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

PROJECT NO.: 2011009127
DRAWN BY: JJC
CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C8

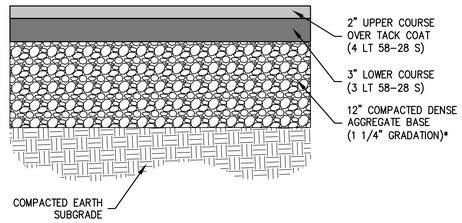


* SIDEWALKS: 1.5% CROSS-SLOPE (TYP.) 2.08% CROSS-SLOPE (MAX.)
PATIOS, PLAZAS, AND LANDINGS: 2.08% SLOPE IN ANY DIRECTION (MAX.)
ALL OTHER PAVEMENTS: SLOPE PER PLAN

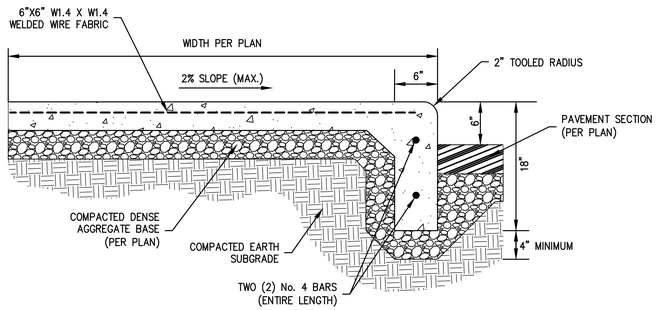
1 LIGHT-DUTY CONCRETE PAVEMENT (4") (TYPICAL SECTION) N.T.S.



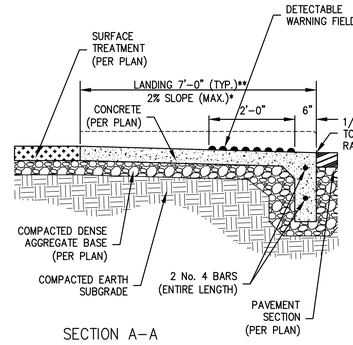
2 HEAVY-DUTY CONCRETE PAVEMENT (8") (TYPICAL SECTION) N.T.S



3 HEAVY-DUTY ASPHALT PAVEMENT (5") (TYPICAL SECTION) N.T.S.

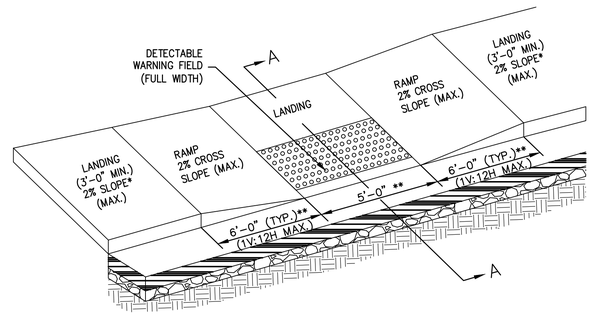


4 INTEGRAL CONCRETE SIDEWALK / BARRIER CURB DETAIL N.T.S.

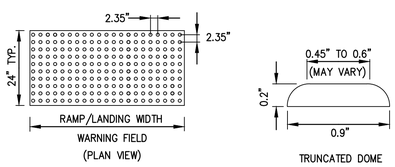


SECTION A-A

* IN ALL DIRECTIONS
** SEE PLAN FOR EXACT DIMENSIONS



5 INTEGRAL SIDEWALK (72" TAPER) ACCESSIBLE RAMP DETAIL N.T.S.



NOTES:

1. THIS WORK WILL CONSIST OF FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY FOR THE PLACEMENT OF DETECTABLE WARNING DEVICES, COMPLETE AND READY FOR SERVICE AT ALL NEW SIDEWALK CURB RAMPS OR WHERE SHOWN ON THE PLAN.
2. DETECTABLE WARNING FIELDS SHALL COMPLY WITH "THE DETECTABLE WARNINGS ON WALKING SURFACES" SECTION OF THE AMERICANS WITH DISABILITIES ACT (TITLE 49 CFR TRANSPORTATION, PART 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, APPENDIX A, SECTION 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES).
3. DETECTABLE WARNING FIELDS SHALL EXTEND 24 INCHES (610 MM) MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP FLUSH SURFACE.
   A. THE DETECTABLE WARNING FIELD SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB OR EDGE OF PAVEMENT IS 6 INCHES (150 MM) MINIMUM AND 8 INCHES (205 MM) MAXIMUM FROM THE FACE OF THE CURB OR EDGE OF PAVEMENT.
   B. TRUNCATED DOMES SHALL BE ALIGNED ON A SQUARED GRID, ALIGNED IN ROWS PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. DOMES MUST NOT BE SKEWED DIAGONALLY TO THE DIRECT OF TRAVEL.
4. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED IN THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. CAST IN PLACE REPLACEABLE TACTILE WARNING SURFACE TILES AS MANUFACTURED BY ADA SOLUTIONS, INC., CHELMSFORD, MA OR PRE-APPROVED EQUAL.
      i. COLOR OF THE DETECTABLE WARNING FIELD SHALL BE SELECTED BY THE OWNER.
5. SPECIFICATIONS FOR CONCRETE SEALANT AND OTHER RELATED MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE GUIDELINES SET BY THEIR RESPECTIVE MANUFACTURERS.

6 DETECTABLE WARNING FIELD DETAIL N.T.S.

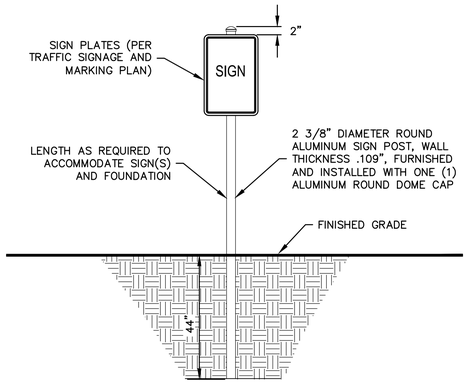
REVISIONS
4 ☐12822 - ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Somers, Wisconsin

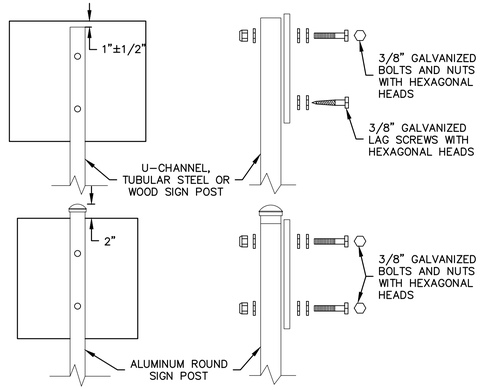
TYPICAL SECTIONS & CONSTRUCTION DETAILS

Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

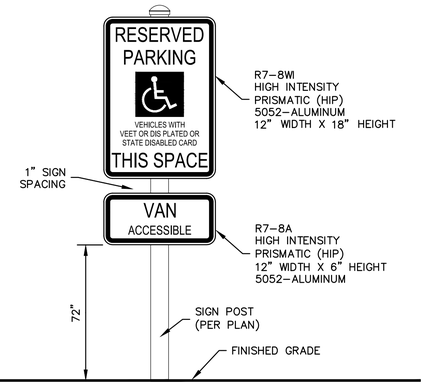
PROJECT NO.: 2011009127
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C9



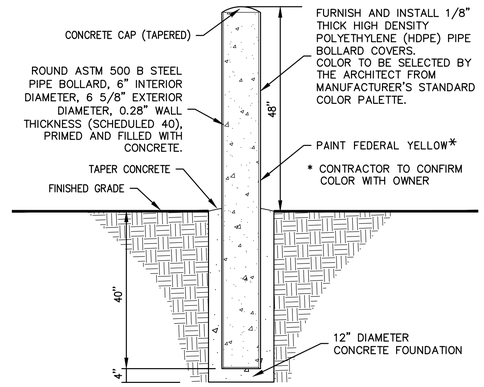
1 ALUMINUM ROUND SIGN POST DETAIL N.T.S.



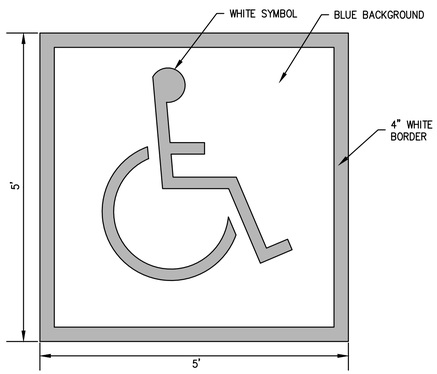
2 SIGN MOUNTING HARDWARE DETAIL N.T.S.



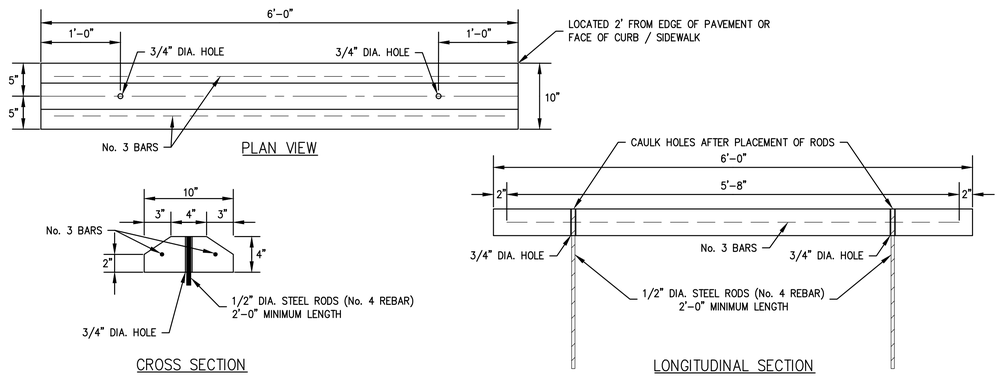
3 ADA "RESERVED PARKING VAN ACCESSIBLE" SIGN DETAIL N.T.S.



4 6" STEEL PIPE BOLLARD DETAIL N.T.S.



5 PAINTED INTERNATIONAL SYMBOL FOR ACCESSIBILITY DETAIL N.T.S.



6 CONCRETE WHEEL STOP DETAIL N.T.S.

REVISIONS
2 07.28.22 - ADDENDUM NO. 4

FACILITIES BUILDING
Carthage College - Somers, Wisconsin

TYPICAL SECTIONS & CONSTRUCTION DETAILS

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PROJECT NO.: 2011009.127
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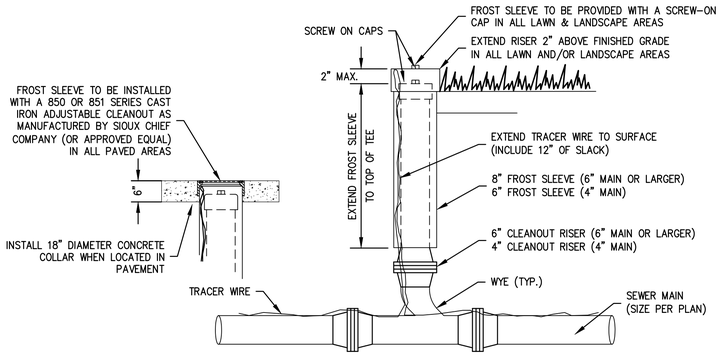
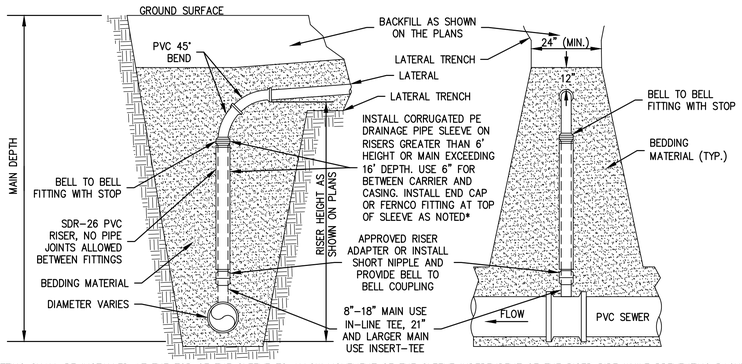
SHEET NO.: C10



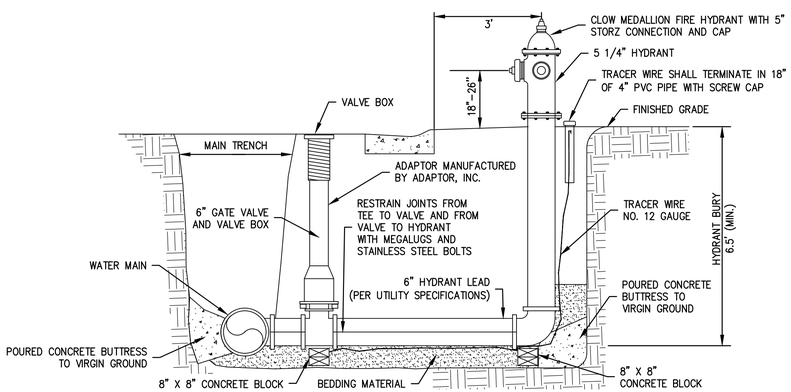
NOTE: SEWER CLEANOUTS TO BE LOCATED A MAXIMUM OF 5' OUTSIDE OF BUILDING WALL AND WHERE SHOWN ON PLAN

1 SEWER CLEANOUT (CO) RISER DETAIL — N.T.S.

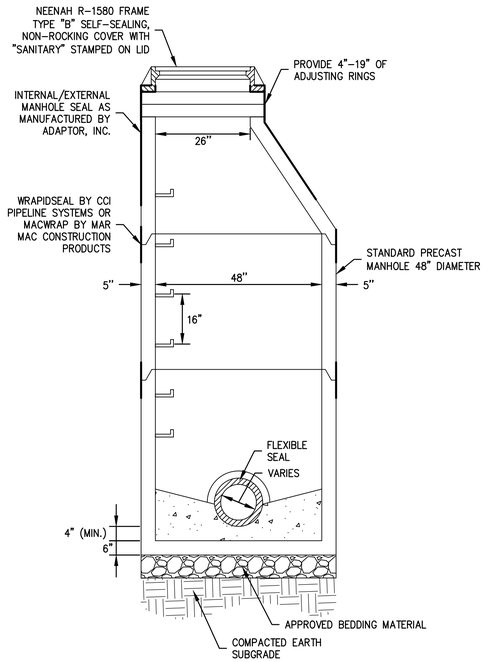


*NOTE:
A CAP OR FERNCO FITTING SHALL BE INSTALLED AT THE TOP OF THE SLEEVE TO ALLOW MOVEMENT OF THE SLEEVE INDEPENDENT OF THE RISER PIPE WHILE PREVENTING BACKFILL FROM ENTERING THE SLEEVE. FERNCO FITTING SHALL BE LEFT LOOSE ON THE RISER PIPE.

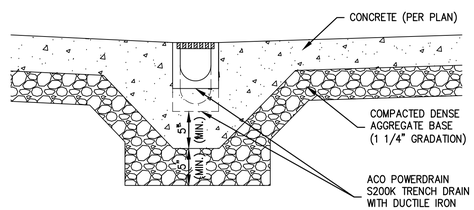
2 SANITARY RISER TYPE I DETAIL — N.T.S.



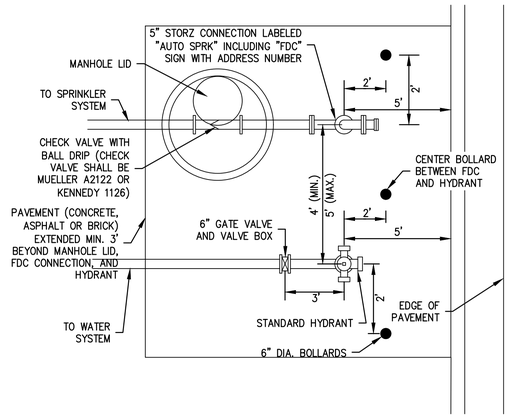
3 TYPICAL HYDRANT INSTALLATION DETAIL — N.T.S.

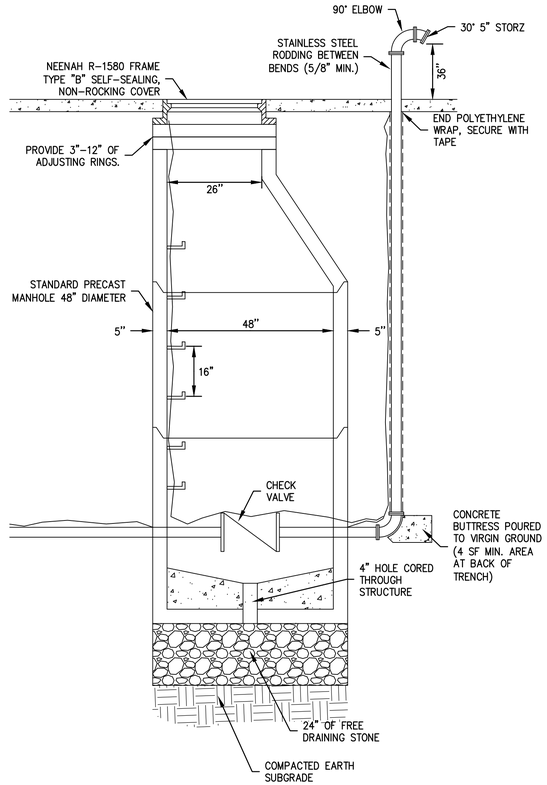


4 SANITARY SEWER MANHOLE DETAIL — N.T.S.



5 TRENCH DRAIN (POWERDRAIN S200K) DETAIL — N.T.S.





6 FIRE DEPARTMENT CONNECTION (FDC) DETAIL — N.T.S.

4

FACILITIES BUILDING
Carthage College – Somers, Wisconsin
TYPICAL SECTIONS & CONSTRUCTION DETAILS
REVISIONS
4 07.28.22 - ADDENDUM NO. 4
Nielsen Madsen + Barber
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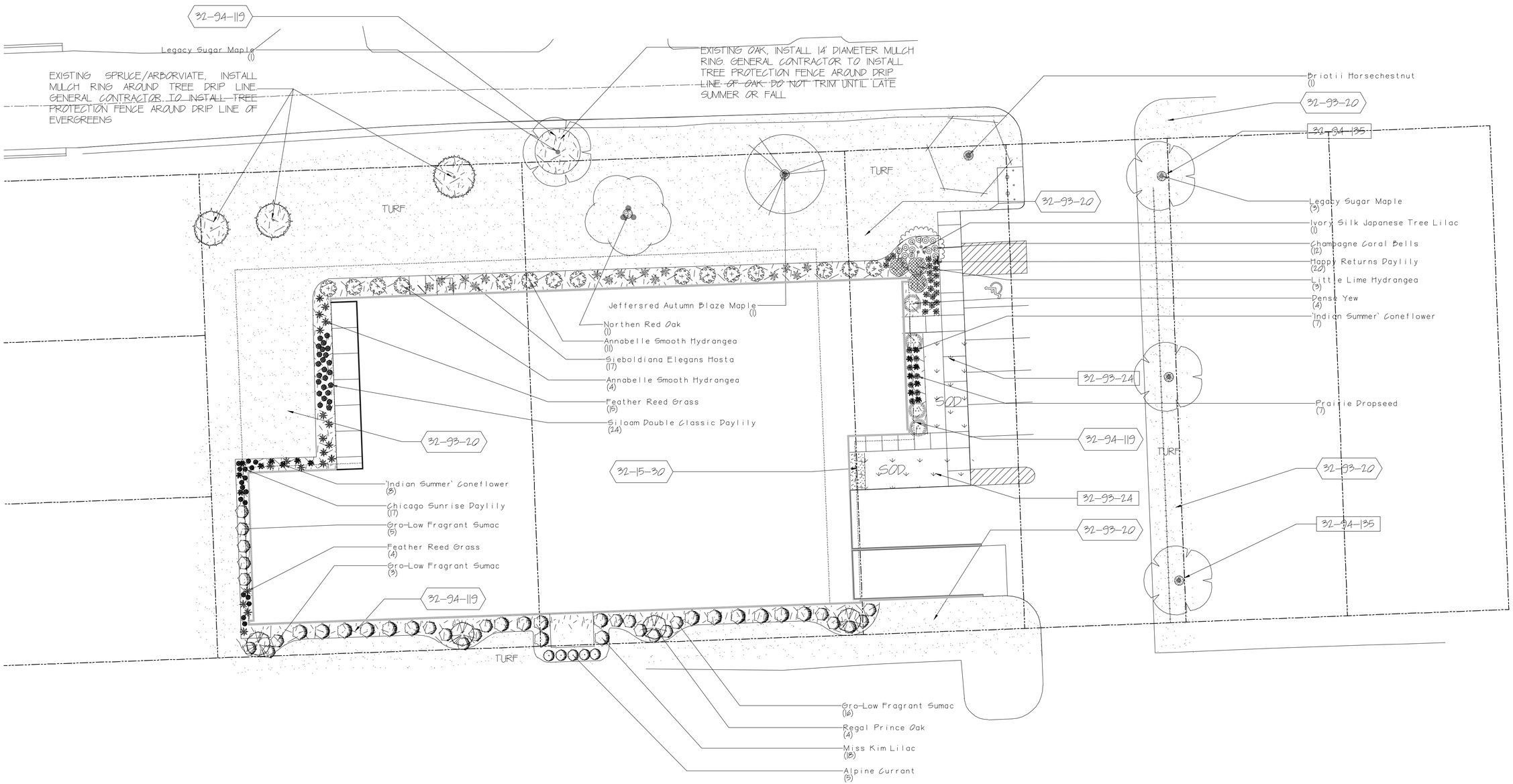
PROJECT NO.: 2011009127
DRAWN BY: JJC CHECKED BY: MDE
DATE: 07.28.22
SHEET NO.: C11



NORTH

0 16 32 48 feet

SCALE: 1" = 16'

LANDSCAPE PLAN

REVISIONS:
7-28-22 ADDENDUM #4

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Kenosha, Wisconsin 53142
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CARTHAGE COLLEGE OPERATIONS BUILDING
LANDSCAPE PLAN
FOR
CARTHAGE COLLEGE
CITY OF KENOSHA, KENOSHA COUNTY, WISCONSIN

PROJECT NO.:

DRAWN BY: THN
CHECKED BY:

DATE: 6-28-22

SHEET NO.:

L-1.0

REVISED

PLANT SCHEDULE

2022-07-21 17:52

TREES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Acer freemanii 'Jeffersred' TM	Jeffersred Autumn Blaze Maple	2" Cal.	B&B	1	Mature Size 50' x 35'
Acer saccharum 'Legacy'	Legacy Sugar Maple	2.5" Cal.	B&B	4	
Aesculus x carnea 'Briotii'	Briotii Horsechestnut	2.5" Cal.	B&B	1	30' x 25' Mature Size
Quercus borealis	Northen Red Oak	2" Cal.	B&B	1	50' x 40' Mature Size
Quercus x warei 'Regal Prince'	Regal Prince Oak	2.5" Cal.	B&B	4	10' x 35' Mature Size
Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	6'	B&B	1	25' x 15' Mature Size

SHRUBS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hydrangea arborescens 'Annabelle'	Annabelle Smooth Hydrangea	5 gal		15	Mature Size 5'x 5'
Hydrangea paniculata 'Little Lime'	Little Lime Hydrangea	3 gal		3	5' x 5' Mature Size
Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal		24	4' x 5' Mature Size
Ribes alpinum	Alpine Currant	24"		5	4' X 3' MATURE SIZE, HEDGE AS NEEDED
Syringa patula 'Miss Kim'	Miss Kim Lilac	24"		18	Mature Size 5' x 4'

ANNUALS/PERENNIALS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hemerocallis x 'Chicago Sunrise'	Chicago Sunrise Daylily	1 gal		17	
Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal		20	24" Mature Size
Hemerocallis x 'Siloam Double Classic' TM	Siloam Double Classic Daylily	1 gal		24	
Heuchera x 'Champagne'	Champagne Coral Bells	1 gal		12	18" Mature Size
Hosta sieboldiana 'Elegans'	Sieboldiana Elegans Hosta	1 gal		17	24" x 36" Mature Size
Rudbeckia fulgida 'Indian Summer'	'Indian Summer' Coneflower	1 gal		15	24-30" Mature Size

GRASSES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal		19	4'-5' Mature Size
Sporobolus heterolepis 'Tara'	Prairie Dropseed	1 gal		7	24-30" Mature Size

SHRUB EVERGREENS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Taxus x media 'Densiformis'	Dense Yew	24"	B&B	4	3' x 5' Mature Size

REVISED

REFERENCE NOTES SCHEDULE

2022-07-21 17:53

SYMBOL	AGGREGATE SURFACE DESCRIPTION	QTY
32-15-30	WASHED STONE, 4" DEPTH OVER FILTER/WEED FABRIC	49 s f
SYMBOL	**PLANTING DESCRIPTION**	**QTY**
32-93-20	REINDARS PREMIUM 60 TURF-SEED AND DN EROSION BLANKET	4,570 s f
32-93-24	BLUEGRASS SOD, MINERAL BASED ONLY, PEAT SOD IS NOT PERMITTED	824 s f
SYMBOL	**PLANTING ACCESSORIES DESCRIPTION**	**QTY**
32-94-04	EDGE, ALUMINUM EDGING, 16' LENGTH NON PAINTED	11 l f
32-94-119	SHREDDED BARK MULCH WITH PRE-EMERGENT HERBICIDE	2,830 s f
32-94-135	3' DIAMETER MULCH TREE RING	6
32-95-01	EDGE, SHOVEL CUT BED EDGE, 4" DEPTH-SEE DETAIL	836 l f

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REVIEW CIVIL PLANS FOR AREA OF TURF DISTURBANCE

LANDSCAPE SPECIFICATIONS PER BID PLANS SHALL TAKE PRECEDENCE

PLANT SCHEDULE

2022-06-29 07:58

TREES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Acer freemanii 'Jeffersred' TM	Jeffersred Autumn Blaze Maple	2" Cal.	B&B	2	Mature Size 50' x 35'
Aesculus x carnea 'Briotii'	Briotii Horsechestnut	2.5" Cal.	B&B	1	30' x 25' Mature Size
Quercus borealis	Northen Red Oak	2" Cal.	B&B	1	50' x 40' Mature Size
Quercus x warei 'Regal Prince'	Regal Prince Oak	2.5" Cal.	B&B	4	10' x 35' Mature Size
Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	6'	B&B	1	25' x 15' Mature Size

SHRUBS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hydrangea arborescens 'Annabelle'	Annabelle Smooth Hydrangea	5 gal		15	Mature Size 5'x 5'
Hydrangea paniculata 'Little Lime'	Little Lime Hydrangea	3 gal		3	5' x 5' Mature Size
Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal		26	4' x 5' Mature Size
Ribes alpinum	Alpine Currant	24"		5	4' X 3' MATURE SIZE, HEDGE AS NEEDED
Syringa patula 'Miss Kim'	Miss Kim Lilac	24"		18	Mature Size 5' x 4'

ANNUALS/PERENNIALS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal		20	24" Mature Size
Heuchera x 'Champagne'	Champagne Coral Bells	1 gal		12	18" Mature Size
Hosta sieboldiana 'Elegans'	Sieboldiana Elegans Hosta	1 gal		17	24" x 36" Mature Size
Rudbeckia fulgida 'Indian Summer'	'Indian Summer' Coneflower	1 gal		7	24-30" Mature Size

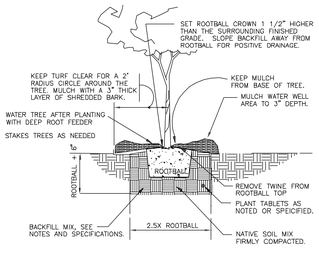
GRASSES	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Sporobolus heterolepis 'Tara'	Prairie Dropseed	1 gal		7	24-30" Mature Size

SHRUB EVERGREENS	COMMON NAME	SIZE	CONTAINER	QTY	REMARKS
Taxus x media 'Densiformis'	Dense Yew	24"	B&B	4	3' x 5' Mature Size

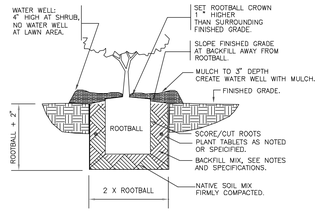
REFERENCE NOTES SCHEDULE

2022-06-29 07:58

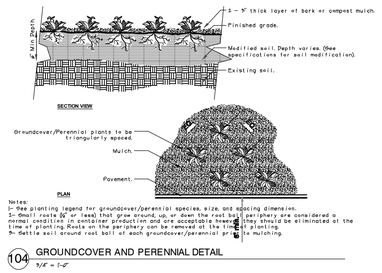
SYMBOL	AGGREGATE SURFACE DESCRIPTION	QTY
32-15-30	WASHED STONE, 4" DEPTH OVER FILTER/WEED FABRIC	672 s f
SYMBOL	**PLANTING DESCRIPTION**	**QTY**
32-93-20	REINDARS PREMIUM 60 TURF-SEED AND DN EROSION BLANKET	15,855 s f
32-93-24	BLUEGRASS SOD, MINERAL BASED ONLY, PEAT SOD IS NOT PERMITTED	824 s f
SYMBOL	**PLANTING ACCESSORIES DESCRIPTION**	**QTY**
32-94-04	EDGE, ALUMINUM EDGING, 16' LENGTH NON PAINTED	157 l f
32-94-119	SHREDDED BARK MULCH WITH PRE-EMERGENT HERBICIDE	2,476 s f
32-94-135	3' DIAMETER MULCH TREE RING	4
32-94-139	EROSION CONTROL MIX FOR MEDIUM SOILS by PRAIRIES NURSERY. SEEDING RATE AT 18 LBS PER ACRE. INSTALL DOUBLE NET EROSION CONTROL BLANKET	3,563 s f
32-95-01	EDGE, SHOVEL CUT BED EDGE, 4" DEPTH-SEE DETAIL	689 l f



100 TREE PLANTING DETAIL
1" = 1'-0"



103 SHRUB PLANTING
1" = 1'-0"



104 GROUNDCOVER AND PERENNIAL DETAIL
3/4" = 1'-0"

LANDSCAPE SCHEDULES AND DETAILS

REVISIONS: 7-28-22 ADDENDUM #4

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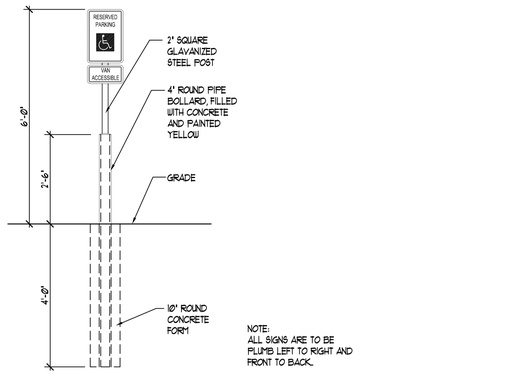
CARTHAGE COLLEGE OPERATIONS BUILDING
LANDSCAPE PLAN
FOR
CARTHAGE COLLEGE
CITY OF KENOSHA, KENOSHA COUNTY, WISCONSIN

PROJECT NO.:

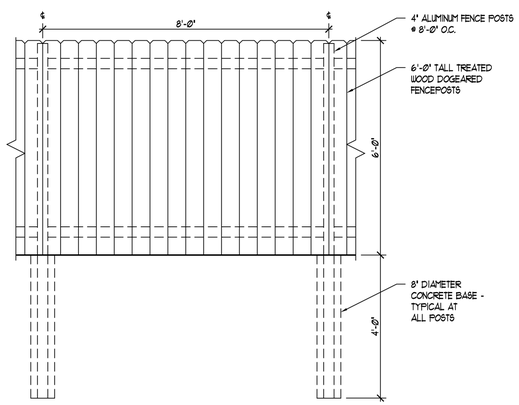
DRAWN BY: THN | CHECKED BY:

DATE: 6-28-22

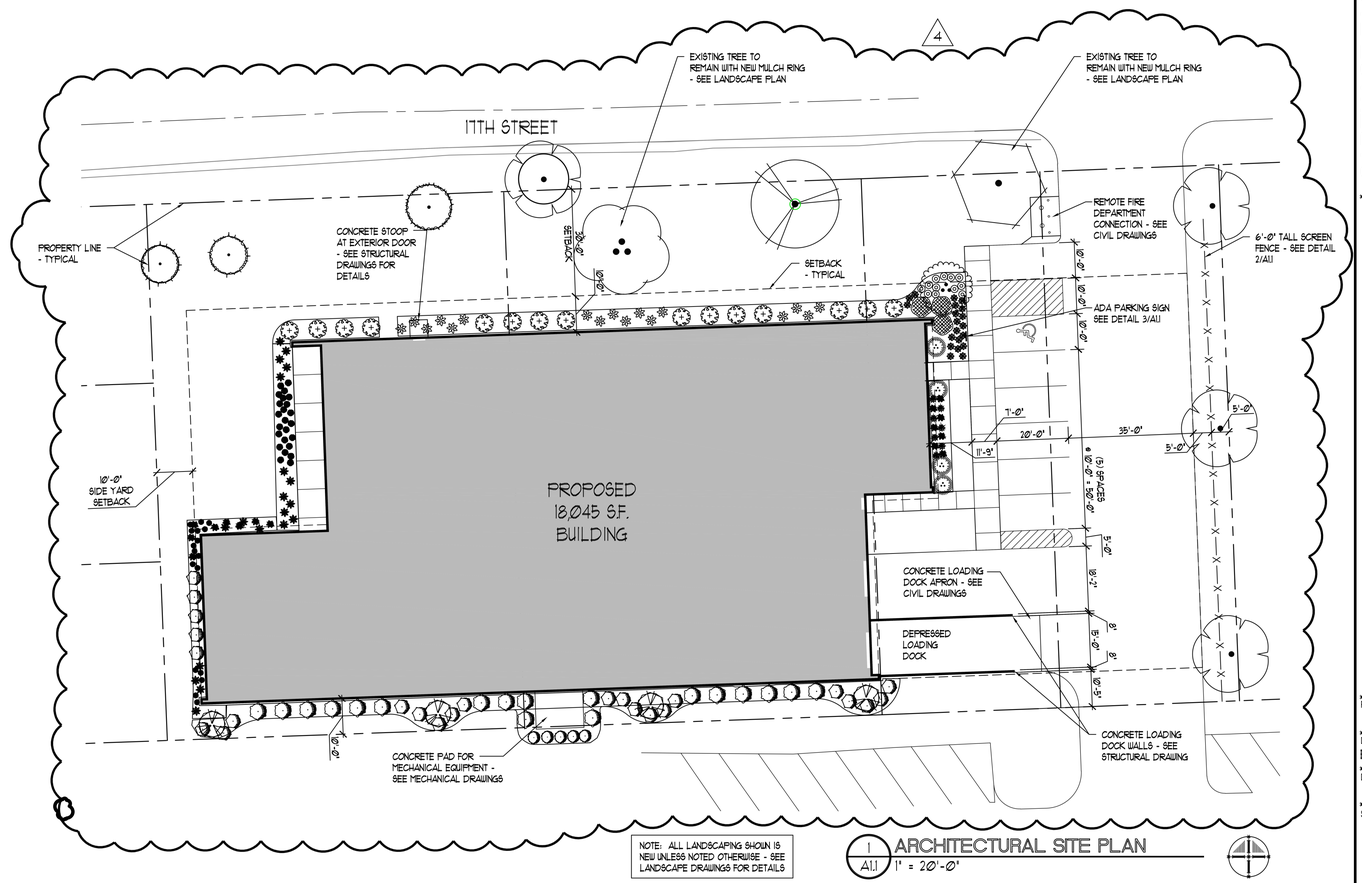
SHEET NO.: L-2.0



3 A1.1 **ADA BOLLARD SIGN**
SCALE: 1/2" = 1'-0"



2 A1.1 **FENCE ELEVATION**
1" = 20'-0"



NOTE: ALL LANDSCAPING SHOWN IS NEW UNLESS NOTED OTHERWISE - SEE LANDSCAPE DRAWINGS FOR DETAILS

1 A1.1 **ARCHITECTURAL SITE PLAN**
1" = 20'-0"

REVISIONS:
4 07.29.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

SITE PLAN

600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800
Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085
DRAWN BY: EMM
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A1.1

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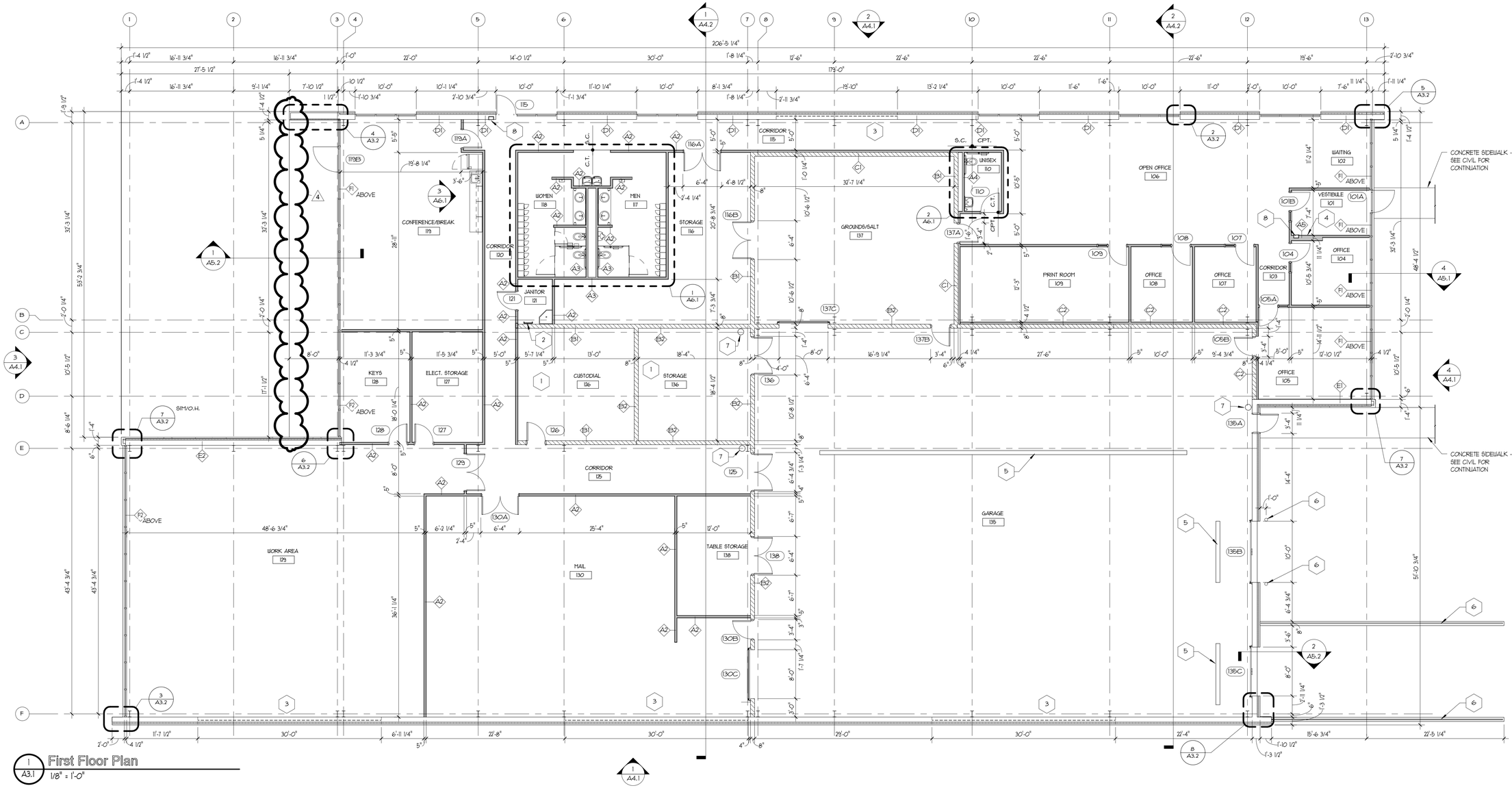
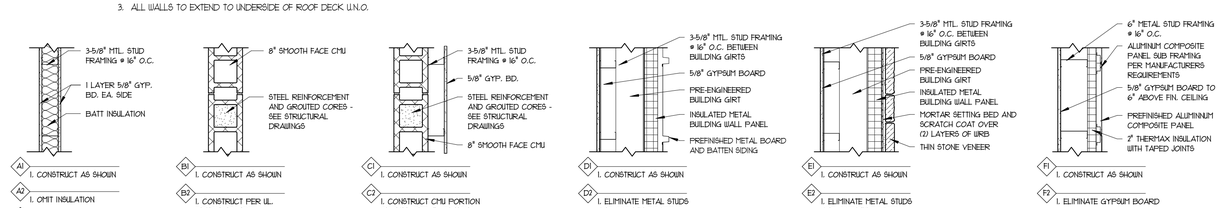


1 A3.1 **First Floor Plan**
1/8" = 1'-0"

Wall Types

3/4" = 1'-0"

NOTES:
1. ALL INTERIOR WALLS TO BE TYP A1 U.N.O.
2. ALL EXTERIOR WALLS TO BE TYPE D2 U.N.O.
3. ALL WALLS TO EXTEND TO UNDERSIDE OF ROOF DECK U.N.O.



FLOOR PLAN KEY NOTES

1. MECHANICAL MEZZANINE OVERHEAD. SEE SHEET A3.2.
2. MEZZANINE ACCESS LADDER (ROOM #121)
3. CLERESTORY WINDOW ABOVE - SEE ELEVATIONS AND WALL SECTIONS FOR DETAILS
4. RECESSED CABINET UNIT HEATER - SEE MECHANICAL DRAWINGS
5. TRENCH DRAIN - SLOPE FLOOR TO DRAIN - SEE PLUMBING DRAWINGS FOR DETAILS
6. 42" TALL X 1 1/2" DIAMETER PAINTED STEEL PIPE RAILING - MECHANICALLY FASTEN BASE PLATES TO RETAINING WALL.
7. WALL HUNG FIRE EXTINGUISHER
8. FULLY RECESSED FIRE EXTINGUISHER CABINET
9. 4" DIAMETER CONCRETE FILLED STEEL BOLLARD (PAINTED WHITE) SET IN 12" DIAMETER X 48" DEEP CONCRETE FOOTING

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REVISIONS
4 07.29.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

FLOOR PLAN

Partners in Design ARCHITECTS
600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800

PROJECT NO.: 154.21.085
DRAWN BY: EMM
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A3.1

ROOM FINISH SCHEDULE

ROOM NAME	NO.	FLOOR	BASE	WALLS				CEILING		PAINT		REMARKS
				NORTH	EAST	SOUTH	WEST	MAT'L	HT.	WALLS	CLG	
VESTIBULE	101	WALK OFF CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. |/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
WAITING	102	CARPET	VINYL	GYPSUM BOARD/GLAZING	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. |/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
CORRIDOR	103	CARPET	VINYL	OPEN	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	10'-0"	YES	NO	
OFFICE	104	CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. |/GYP. BOARD	VARIES	YES	NO	NOTES: 10
OFFICE	105	CARPET	VINYL	GYPSUM BOARD	GLAZING	GYPSUM BOARD	GYPSUM BOARD	S.A.T. |/GYP. BOARD	VARIES	YES	YES/NO	NOTES: 10
OPEN OFFICE	106	CARPET	VINYL	GYPSUM BOARD/GLAZING	GYPSUM BOARD/OPEN	GYPSUM BOARD	GYPSUM BOARD/OPEN	S.A.T. 1	10'-0"	YES	NO	
OFFICE	107	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
OFFICE	108	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
PRINT ROOM	109	CARPET	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
UNISEX	110	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD/C.T.	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD/C.T.	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2
CORRIDOR	115	SEALED CONCRETE	VINYL	METAL PANEL	OPEN	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	10'-0"	YES/NO	NO	NOTES: 3, 4
STORAGE	116	SEALED CONCRETE	VINYL	GYPSUM BOARD	CMU	CMU	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	NO	NO	NOTES: 4, 5, 6
MEN	117	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD/CERAMIC TILE	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2, 7, 8
WOMEN	118	CERAMIC TILE	CERAMIC TILE	GYPSUM BOARD	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD/CERAMIC TILE	GYPSUM BOARD	S.A.T. 2	9'-0"	YES/NO	NO	NOTES: 1, 2, 7, 8
CONFERENCE/BREAK	119	SEALED CONCRETE	VINYL	METAL PANEL	GYPSUM BOARD	GYPSUM BOARD	GLAZING	S.A.T. 1	10'-0"	YES/NO	NO	NOTES: 3, 4
CORRIDOR	120	SEALED CONCRETE	VINYL	OPEN	GYPSUM BOARD	OPEN	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
JANITOR	121	SEALED CONCRETE	VINYL	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	GYPSUM BOARD/FRP	EXPOSED STRUCTURE	VARIES	YES/NO	NO	NOTES: 9
CORRIDOR	125	SEALED CONCRETE	VINYL	CMU/OPEN	CMU	GYPSUM BOARD	GYPSUM BOARD	S.A.T. 1	9'-0"	YES	NO	
CUSTODIAL	126	SEALED CONCRETE	VINYL	CMU	CMU	CMU	GYPSUM BOARD	PRECAST CONCRETE	9'-4"	YES	YES	NOTES: 4
ELEC.T. STORAGE	127	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	
KEYS	128	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	GYPSUM BOARD	GLAZING	EXPOSED STRUCTURE	VARIES	YES	NO	
WORK AREA	129	SEALED CONCRETE	VINYL	METAL PANEL/GYPSUM BOARD	GYPSUM BOARD	METAL PANEL/GLAZING	GLAZING	EXPOSED STRUCTURE	VARIES	YES/NO	NO	NOTES: 3, 4
MAIL	130	SEALED CONCRETE	VINYL	GYPSUM BOARD	GYPSUM BOARD	METAL PANEL/GLAZING	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 3, 4
GARAGE	135	SEALED CONCRETE	NONE	CMU	METAL PANEL	METAL PANEL/GLAZING	CMU	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 3
STORAGE	136	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	PRECAST CONCRETE	9'-4"	YES	YES	
GROUNDS/SALT	137	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	EXPOSED STRUCTURE	VARIES	YES	NO	
TABLE STORAGE	138	SEALED CONCRETE	VINYL	GYPSUM BOARD	CMU	GYPSUM BOARD	GYPSUM BOARD	EXPOSED STRUCTURE	VARIES	YES	NO	NOTES: 4
MECHANICAL	201	SEALED CONCRETE	NONE	CMU	CMU	CMU	CMU	EXPOSED STRUCTURE	VARIES	NO	NO	

ROOM FINISH SCHEDULE NOTES:
1. PAINT GYPSUM BOARD WALL ABOVE CERAMIC TILE
2. INSTALL CERAMIC TILE TO 6'-0" A.F.F.
3. DO NOT PAINT METAL PANEL
4. VINYL BASE AT GYPSUM BOARD WALLS ONLY
5. GYPSUM BOARD WALLS TO RECIEVE PRIME PAINT FINISH ONLY
6. CMU WALLS TO REMAIN UNPAINTED
7. SIDE WALLS AT SINK AND TOILET ALCOVES TO RECIEVE CERAMIC TILE FINISH
8. PROVIDE SCHLUTER DILEX-AHK COVE BETWEEN FLOOR TILE AND WALL TILE
9. INSTALL FRP PANLES TO 8'-0". PAINT GYPSUM BOARD WALLS ABOVE.
10. PAINT GYPSUM BOARD SOFFIT AT WINDOWS

DOOR SCHEDULE

NO.	SIZE	MATERIAL		TYPE		HDW SET	REMARKS
		DOOR	FRAME	DOOR	FRAME		
101A	3' - 7 21/32" X 8' - 0" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
101B	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	B	C	SET 2	NOTES: 2
104	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
105A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
105B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 4	NOTES: 2, 3, 5
107	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
108	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
109	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	C	SET 3	NOTES: 2
110	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 5	NOTES: 2
115	3' - 1 11/32" X 7' - 11" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
116A	6' - 0" X 7' - 0" X 1-3/4"	WOOD	HM	A	A	SET 6	NOTES: 2
116B	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 6	NOTES: 2, 3
119A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	B	A	SET 2	NOTES: 2
119B	4' - 1 21/32" X 7' - 10" X 1-3/4"	ALUM.	ALUM.	B	--	SET 1	NOTES: 1
121	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 4	NOTES: 2
125	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
126	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	B	SET 3	NOTES: 2
127	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 3	NOTES: 2, 3
128	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 3	NOTES: 2, 3
129	6' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 11	NOTES: 2
130A	6' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	A	SET 11	NOTES: 2
130B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 9	NOTES: 2, 3, 5
130C	8' - 0" X 8' - 0" X 1-3/4"	STEEL	NONE	C	--	--	NOTES: 4, 5
135A	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	A	SET 8	NOTES: 2, 3
135B	10' - 0" X 10' - 3" X 1-3/4"	INS. STEEL	NONE	D	--	--	NOTES: 4
135C	8' - 0" X 10' - 3" X 1-3/4"	INS. STEEL	NONE	I	--	--	NOTES: 4
136	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
137A	3' - 0" X 7' - 0" X 1-3/4"	WOOD	H.M.	A	B	SET 2	NOTES: 2
137B	3' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 9	NOTES: 2, 3, 5
137C	8' - 0" X 8' - 0" X 1-3/4"	STEEL	NONE	C	--	--	NOTES: 4, 5
138	6' - 0" X 7' - 0" X 1-3/4"	H.M.	H.M.	A	B	SET 7	NOTES: 2, 3, 5
201	6' - 0" X 5' - 6" X 1-3/4"	H.M.	H.M.	J	B	SET 10	NOTES: 2, 3, 5

DOOR SCHEDULE NOTES:
1. DOOR PART OF ALUMINUM STOREFRONT SYSTEM. SEE EXTERIOR ELEVATIONS.
2. PAINT HOLLOW METAL FRAME.
3. PAINT HOLLOW METAL DOOR.
4. DOOR HARDWARE TO BE SUPPLIED AS PART OF OVERHEAD DOOR PACKAGE. SEE SPECIFICATIONS.
5. DOOR AND FRAME TO BE 1HOUR FIRE RATED.

HARDWARE SETS

SET 1
(1) CONTINUOUS HINGE
(1) KEYED CYLINDER WITH PUSH PADDLE
(1) PUSH/PULL SET
(1) SURFACE MOUNTED CLOSER WITH INTEGRAL STOP
(1) ALUMINUM THRESHOLD
(1) WEATHERSTRIPPING SET

SET 2
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LATCH (PASSAGE FUNCTION)
(1) WALL STOP
(1) SURFACE MOUNTED CLOSER

SET 3
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (OFFICE FUNCTION)
(1) WALL STOP

SET 4
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (STOREROOM FUNCTION)
(1) SURFACE MOUNTED CLOSER

SET 5
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (PRIVACY FUNCTION)
(1) WALL STOP

SET 6
(6) MORTISE HINGES
(1) CYLINDRICAL LEVERL LOCK (STORAGE FUNCTION)
(1) FLUSH BOLT
(2) WALL STOPS
(2) SURFACE MOUNTED CLOSERS

SET 7
(6) MORTISE HINGES
(2) SURFACE MOUNTED CLOSERS
(1) CYLINDRICAL LEVER LOCK (STORAGE FUNCTION)
(1) AUTOMATIC EXTENSION FLUSH BOLT
(1) COORDINATOR BAR
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

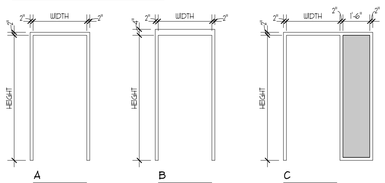
SET 8
(3) MORTISE HINGES
(1) CYLINDRICAL LEVER LOCK (ENTRANCE FUNCTION)
(1) SURFACE MOUNTED CLOSER WITH INTEGRAL STOP
(1) ALUMINUM THRESHOLD
(1) WEATHERSTRIPPING SET

SET 9
(3) MORTISE HINGES
(1) SURFACE MOUNTED CLOSER
(1) CYLINDRICAL LEVER LOCK (OFFICE FUNCTION)
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

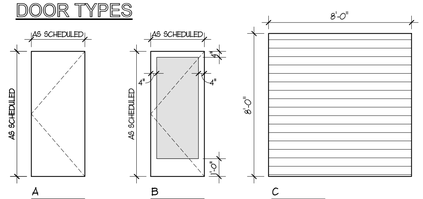
SET 10
(6) MORTISE HINGES
(2) SURFACE MOUNTED CLOSERS
(1) CYLINDRICAL LEVER LATCH (PASSAGE FUNCTION)
(1) AUTOMATIC EXTENSION FLUSH BOLT
(1) COORDINATOR BAR
(1) FIRE/SMOKE GASKETING
(2) WALL STOPS

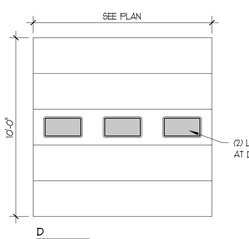
SET 11
(6) MORTISE HINGES
(1) CYLINDRICAL LEVERL LOCK (CLASSROOM FUNCTION)
(1) FLUSH BOLT
(2) WALL STOPS

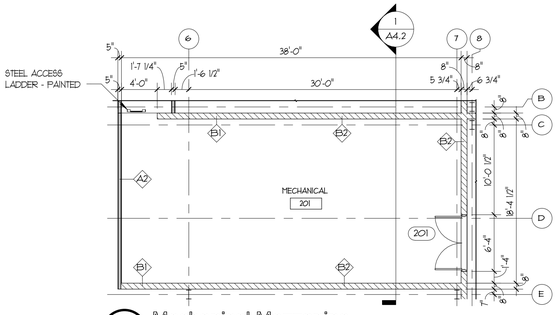
FRAME TYPES



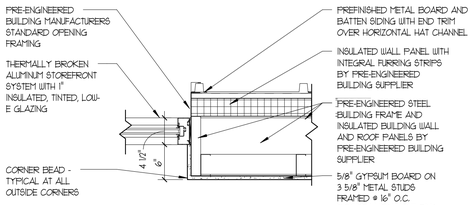
DOOR TYPES



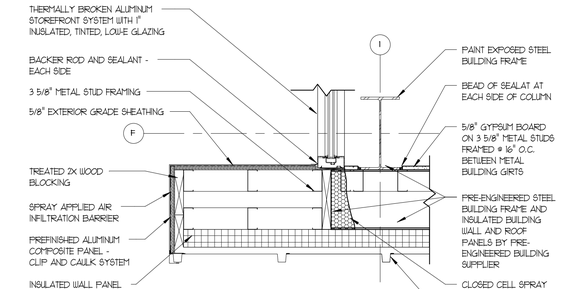




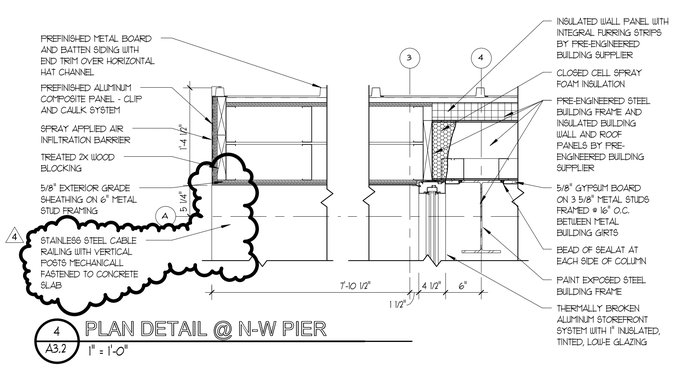
1 A3.2 **Mechanical Mezzanine**
1/8" = 1'-0"



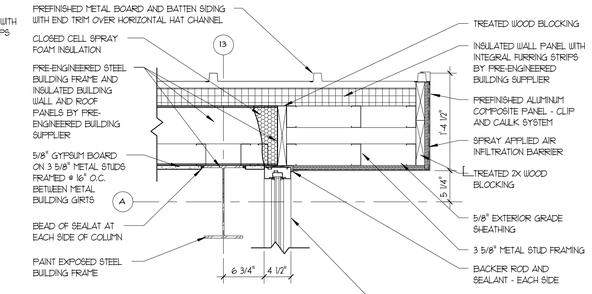
2 A3.2 **TYPICAL WINDOW JAMB**
1" = 1'-0"



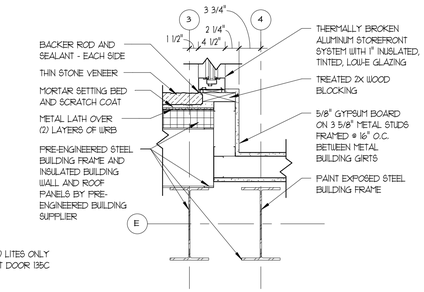
3 A3.2 **PLAN DETAIL @ S-W PIER**
1" = 1'-0"



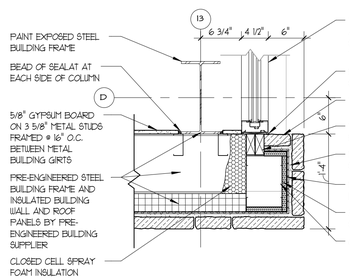
4 A3.2 **PLAN DETAIL @ N-W PIER**
1" = 1'-0"



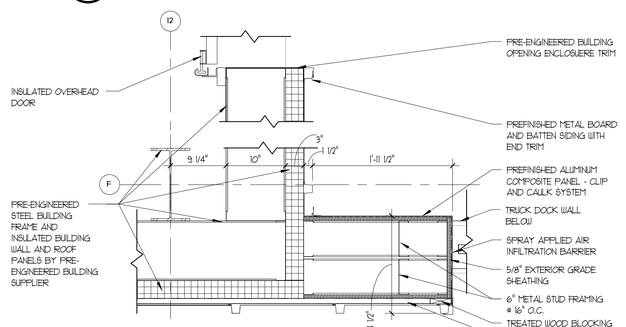
5 A3.2 **PLAN DETAIL @ N-E PIER**
1" = 1'-0"



6 A3.2 **PLAN DETAIL @ STOREFRONT**
1" = 1'-0"



7 A3.2 **PLAN DETAIL @ EAST PIER**
1" = 1'-0"



8 A3.2 **PLAN DETAIL @ S-E PIER**
1" = 1'-0"

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REVISIONS:
4 07.29.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

MEZZANINE PLAN, PLAN DETAILS, SCHEDULES & NOTES

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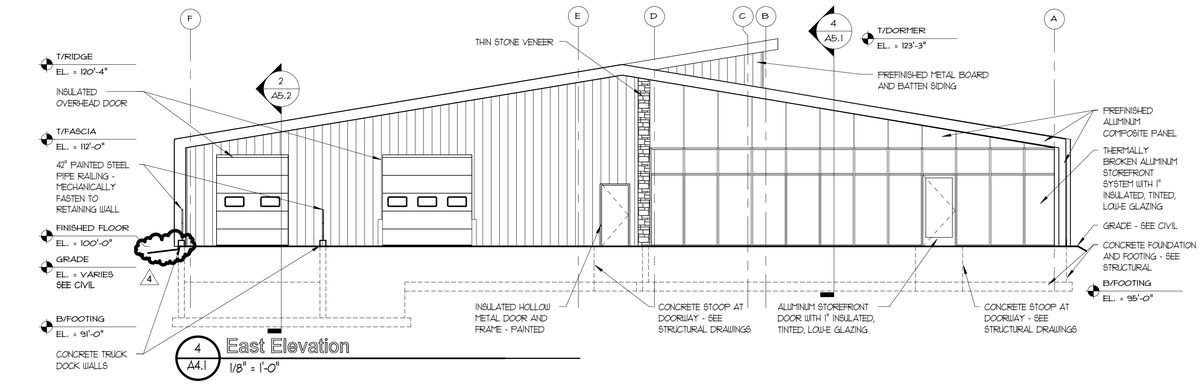
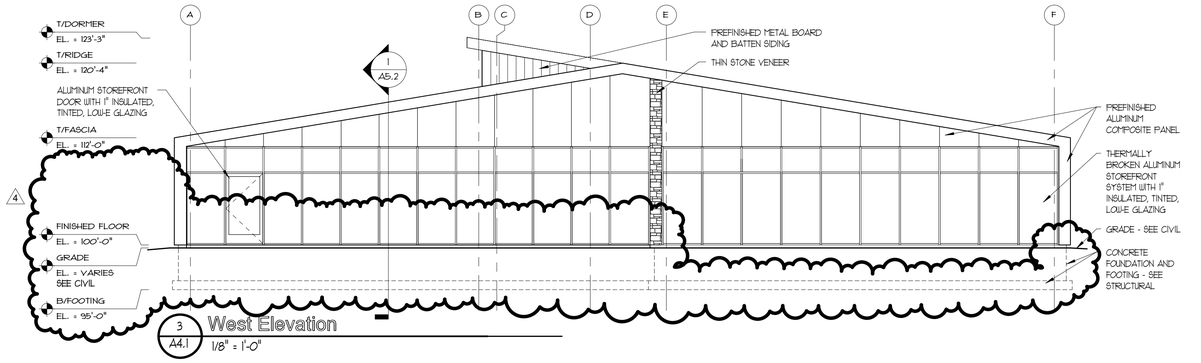
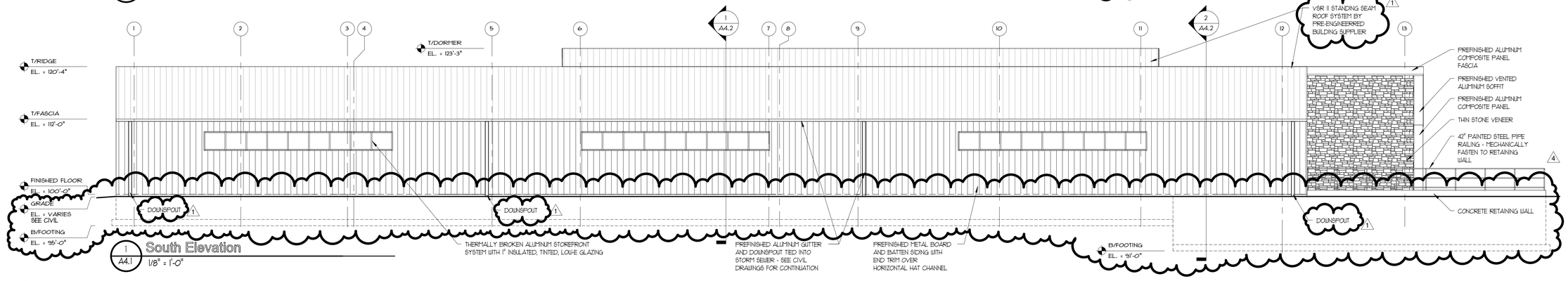
PROJECT NO.: 154.21.085
DRAWN BY: EMM CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A3.2







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REVISIONS
1 07.13.22 Addendum No. 1
4 07.28.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

EXTERIOR ELEVATIONS

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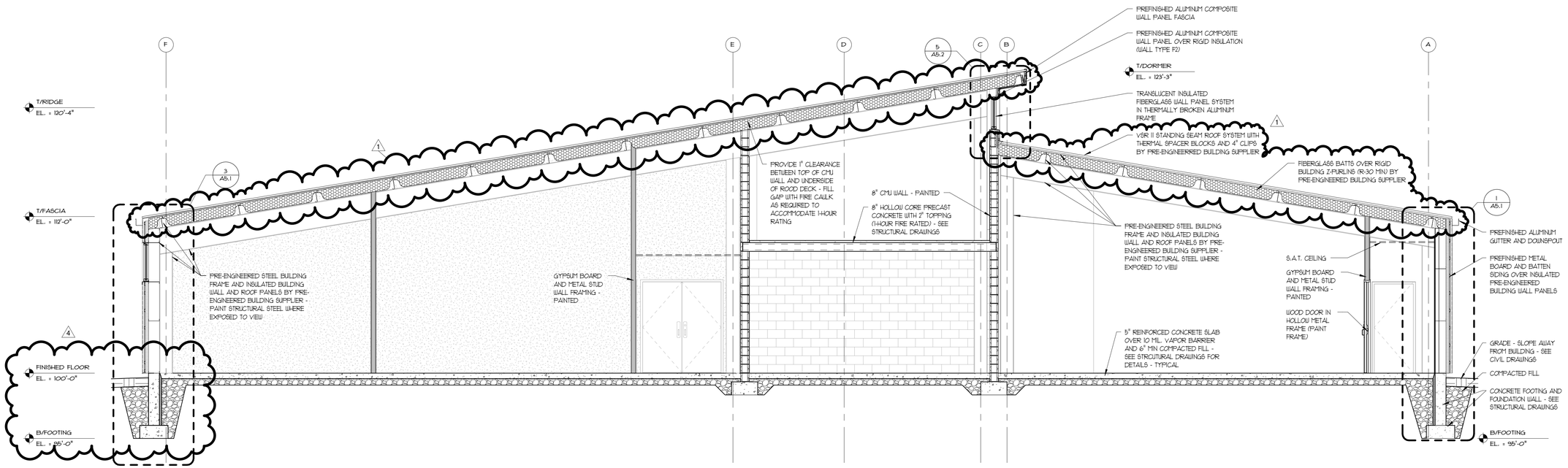
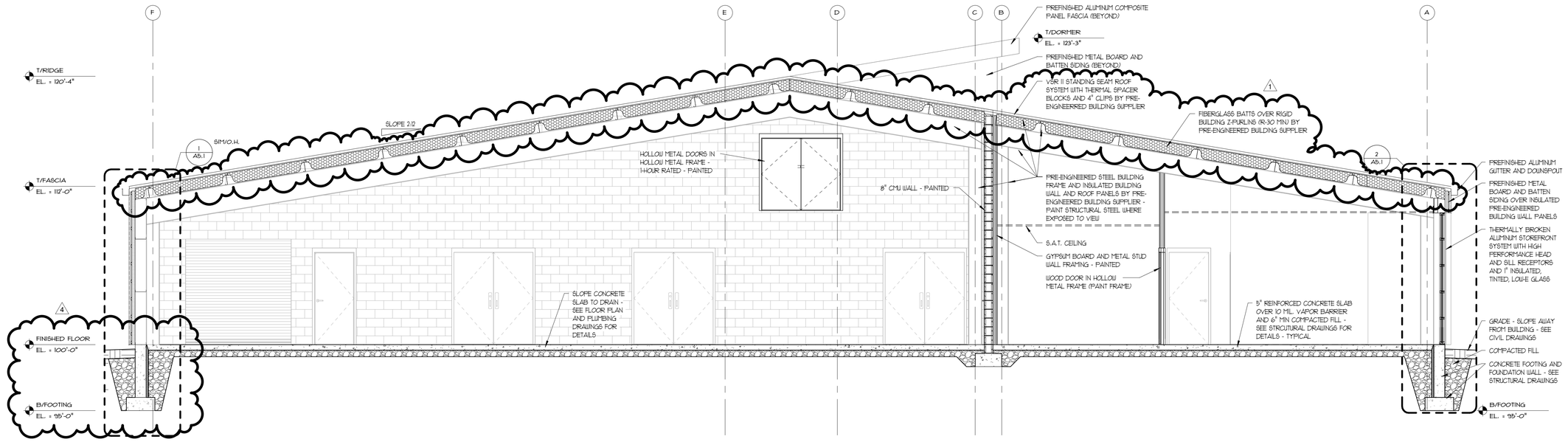
Partners in Design ARCHITECTS

PROJECT NO.: 154.21.085
DRAWN BY: EMM
CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A4.1



1 A4.2 **BUILDING SECTION**
1/4" = 1'-0"



2 A4.2 **BUILDING SECTION**
1/4" = 1'-0"

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1 07.13.22 Addendum No. 1
4 07.28.22 Addendum No. 4

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

BUILDING SECTIONS

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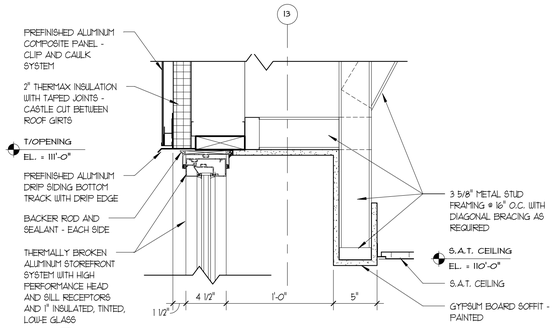
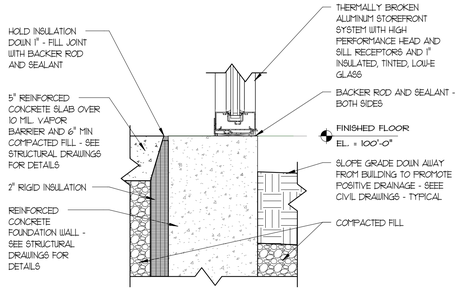
Partners in Design ARCHITECTS

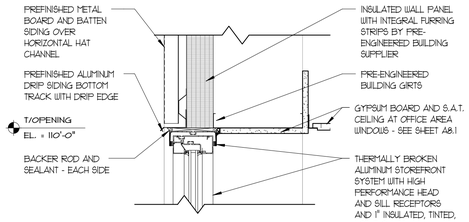
PROJECT NO.: 154.21.085
DRAWN BY: Author CHECKED BY: Checker
DATE: 06.28.22
SHEET NO.: A4.2



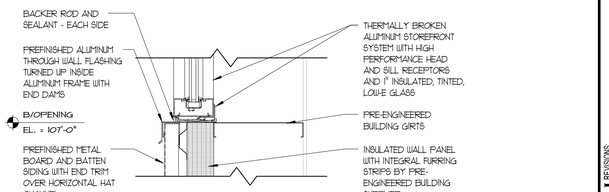
5 / A5.1 **WINDOW HEAD/SOFFIT DETAIL**
1 1/2" = 1'-0"



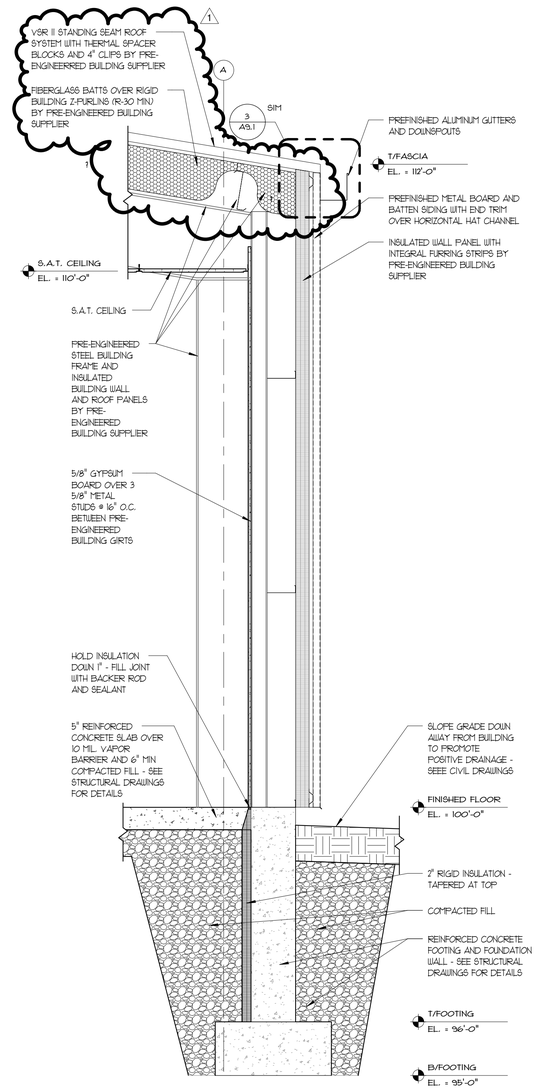
6 / A5.1 **NORTH WALL SILL DETAIL**
1 1/2" = 1'-0"



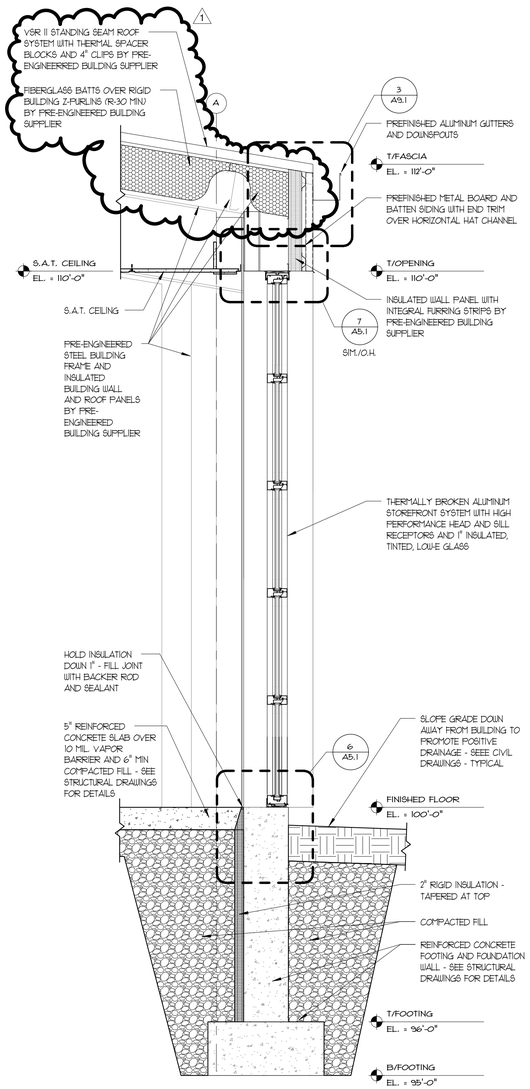
7 / A5.1 **TYP. WINDOW HEAD @ N & S WALLS**
1 1/2" = 1'-0"



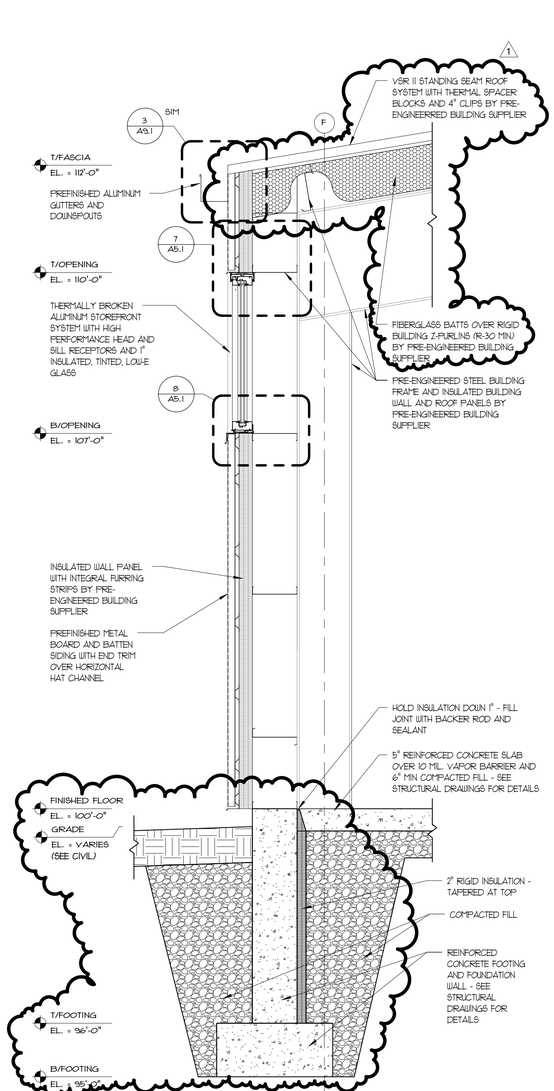
8 / A5.1 **SILL DETAIL AT SOUTH WALL**
1 1/2" = 1'-0"



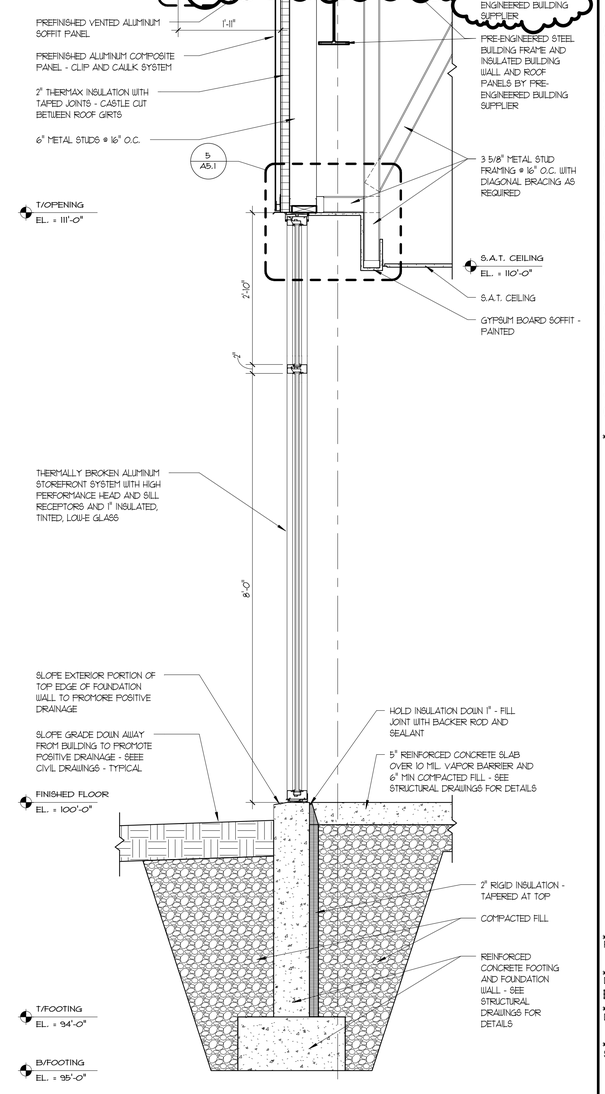
1 / A5.1 **TYPICAL WALL SECTION**
3/4" = 1'-0"



2 / A5.1 **NORTH WALL AT WINDOW**
3/4" = 1'-0"



3 / A5.1 **SOUTH WALL AT WINDOW**
3/4" = 1'-0"



4 / A5.1 **EAST CURTAIN WALL**
3/4" = 1'-0"

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CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

WALL SECTIONS & DETAILS

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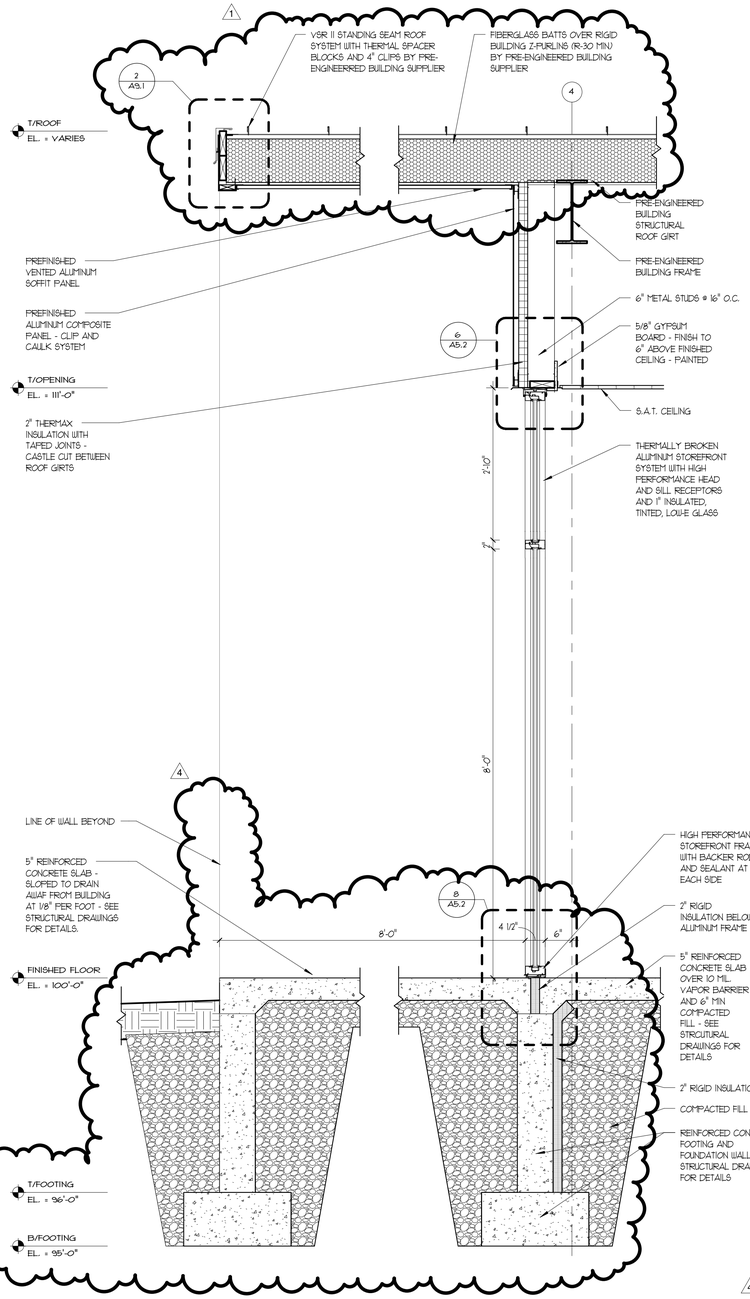
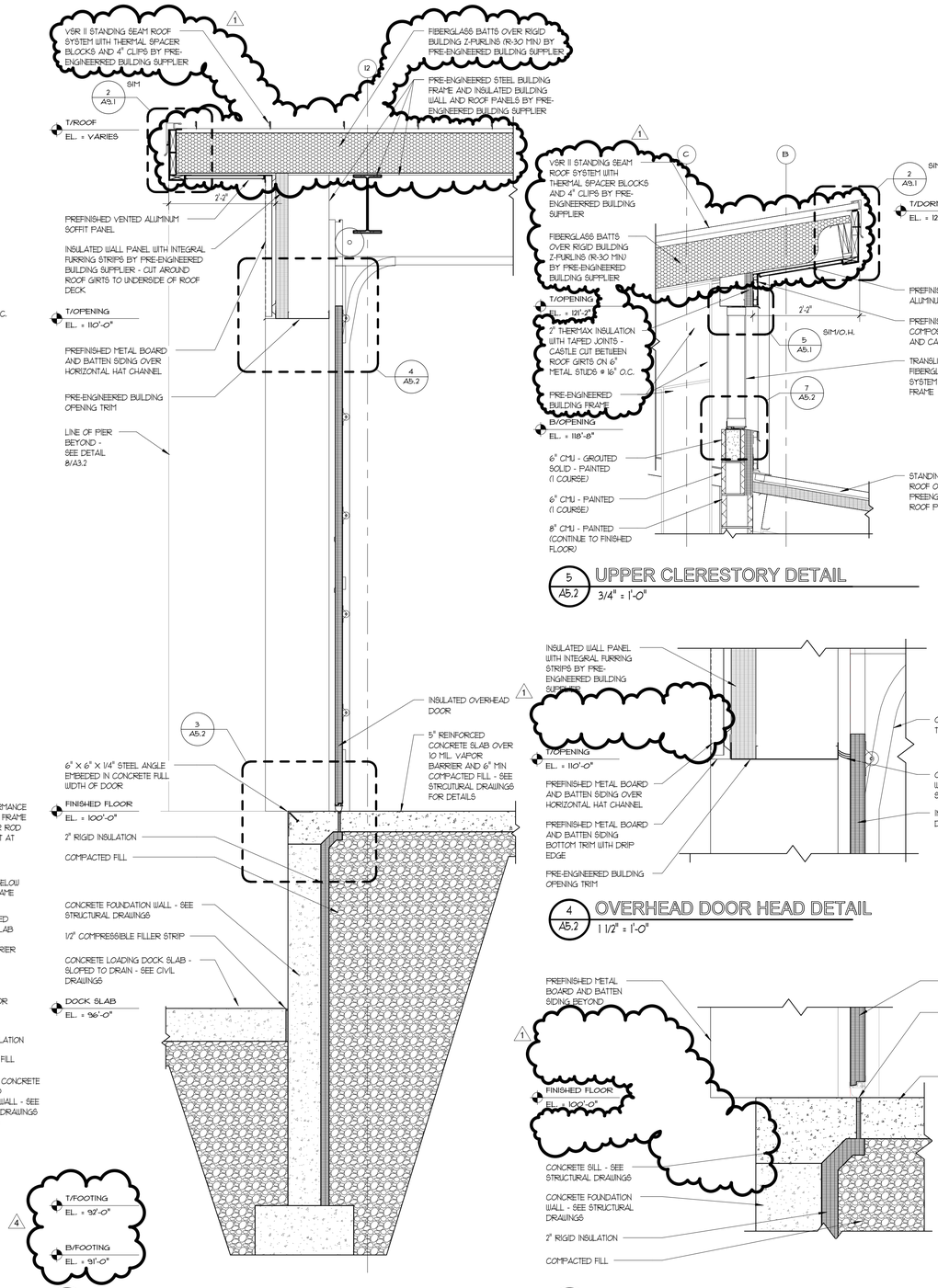
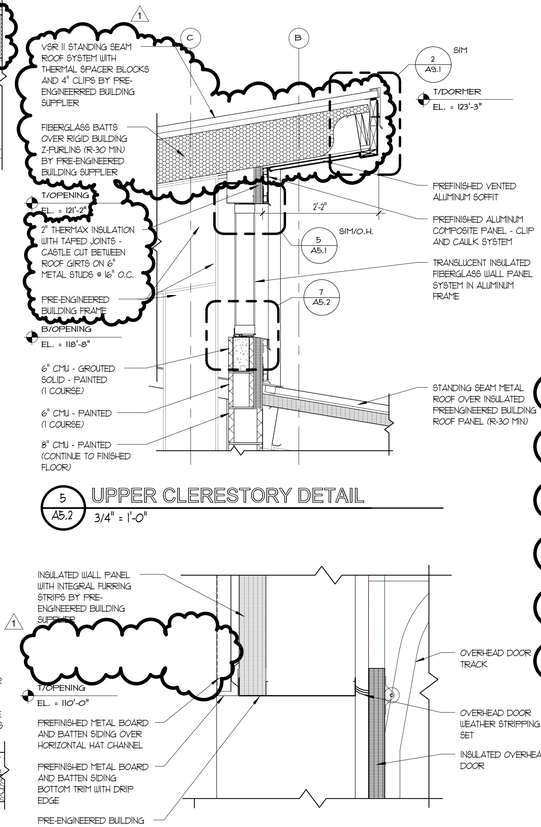
DATE: 06.28.22
SHEET NO.: A5.1



1 A5.2 SECTION AT PATIO
3/4" = 1'-0"



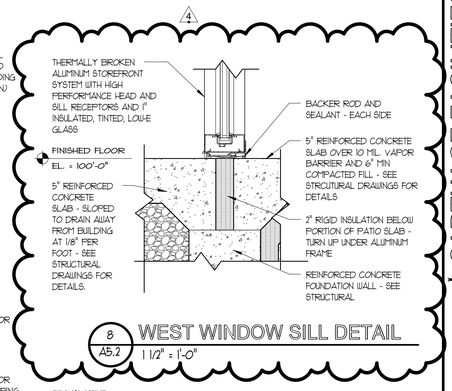
2 A5.2 SECTION AT TRUCK DOCK
3/4" = 1'-0"



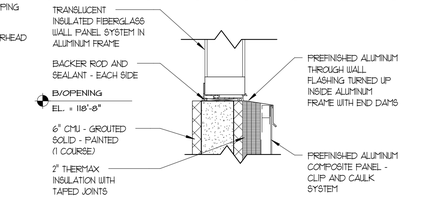
5 A5.2 UPPER CLERESTORY DETAIL
3/4" = 1'-0"

4 A5.2 OVERHEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"

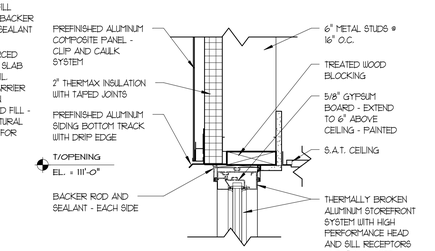
3 A5.2 TRUCK DOCK SILL DETAIL
1 1/2" = 1'-0"



8 A5.2 WEST WINDOW SILL DETAIL
1 1/2" = 1'-0"



7 A5.2 SILL DETAIL AT CLERESTORY
1 1/2" = 1'-0"



6 A5.2 WEST WINDOW HEAD DETAIL
1 1/2" = 1'-0"
SIMILAR AT EAST WINDOW

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CARTHAGE FACILITIES BUILDING
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WALL SECTIONS & DETAILS

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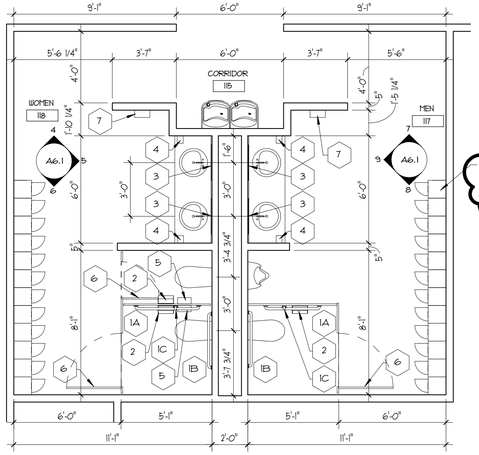
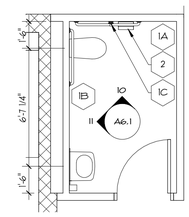
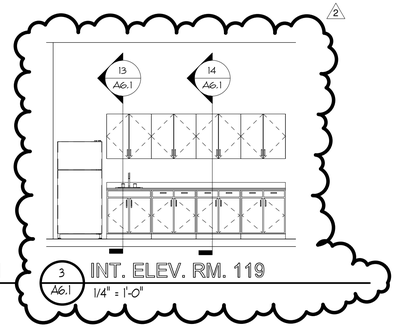


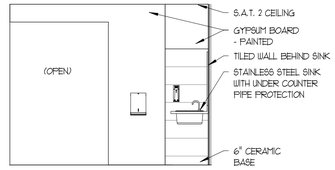
1 / A6.1 ENLARGED RESTROOM PLAN
1/4" = 1'-0"



2 / A6.1 ENLARGED RESTOOM PLAN
1/4" = 1'-0"



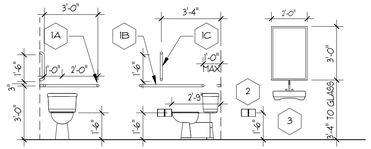
3 / A6.1 INT. ELEV. RM. 119
1/4" = 1'-0"



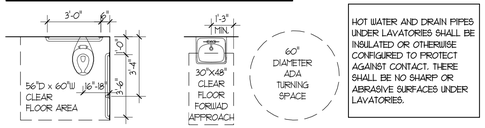
4 / A6.1 INT. ELEV. RM. 118 NORTH
1/4" = 1'-0"

ACCESSORY MOUNTING HEIGHTS

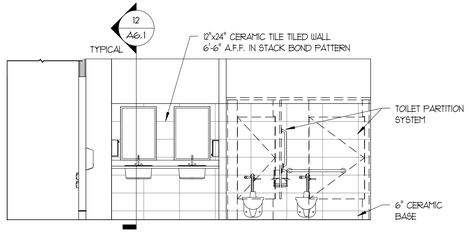
ALL FIXTURES TO MEET ADA CLEARANCE AND HEIGHT REQUIREMENTS



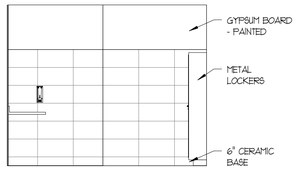
FIXTURE CLEARANCES



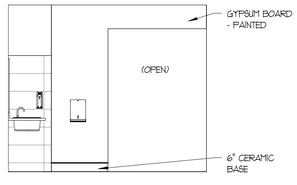
HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.



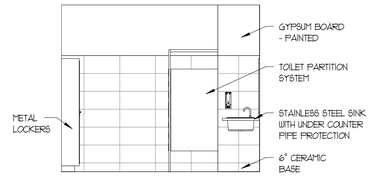
5 / A6.1 INT. ELEV. RM. 118 EAST
1/4" = 1'-0"



6 / A6.1 INT. ELEV. RM. 118 SOUTH
1/4" = 1'-0"



7 / A6.1 INT. ELEV. RM. 117 NORTH
1/4" = 1'-0"

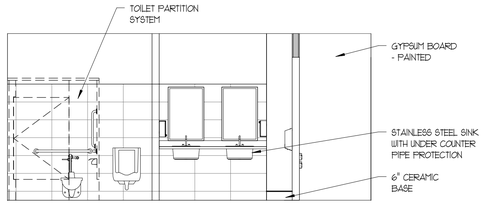


8 / A6.1 INT. ELEV. RM. 117 SOUTH
1/4" = 1'-0"

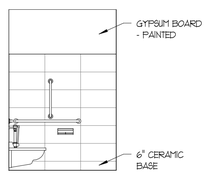
TOILET ACCESSORIES LEGEND

APPROVED ALTERNATE MANUFACTURES" ASI, BOBRICK

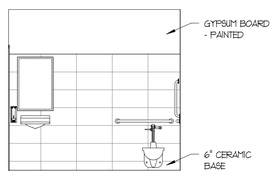
TAG	DESCRIPTION	MANUFACTURER	MODEL#
1A	36" GRAB BAR	BRADLEY	812 (42)
1B	42" GRAB BAR	BRADLEY	812 (36)
1C	18" GRAB BAR	BRADLEY	812 (18)
2	DUAL ROLL TOILET PAPER DISPENSER	BRADLEY	522
3	WALL MTD. FRAMELESS MIRRIOR (STANDARD SIZE)	BRADLEY	(36X60)
4	SOAP DISPENSER	BRADLEY	OWNER FURNISHED, CONTRACTOR INSTALLED
5	FEMININE NAPKIN DISPOSAL - SEMI RECESSED	BRADLEY	4722-1015
6	COAT HOOK	BRADLEY	PROVIDED AND INSTALLED BY PARTITION SUPPLIER
7	TOUEL DISPENSER	BRADLEY	OWNER FURNISHED, CONTRACTOR INSTALLED



9 / A6.1 INT. ELEV. RM. 117 WEST
1/4" = 1'-0"

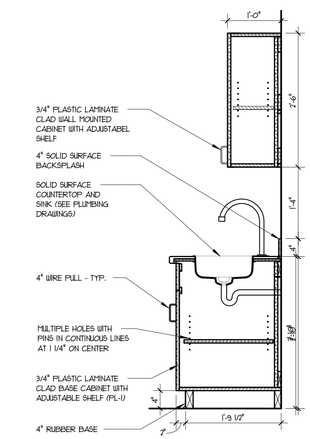


10 / A6.1 INT. ELEV. RM. 110 NORTH
1/4" = 1'-0"

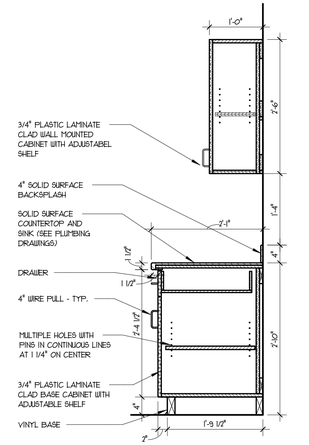


11 / A6.1 INT. ELEV. RM. 110 WEST
1/4" = 1'-0"

12 / A6.1 RESTROOM COUNTER
3/4" = 1'-0"



13 / A6.1 MILLWORK SECTION
3/4" = 1'-0"



14 / A6.1 MILLWORK SECTION
3/4" = 1'-0"

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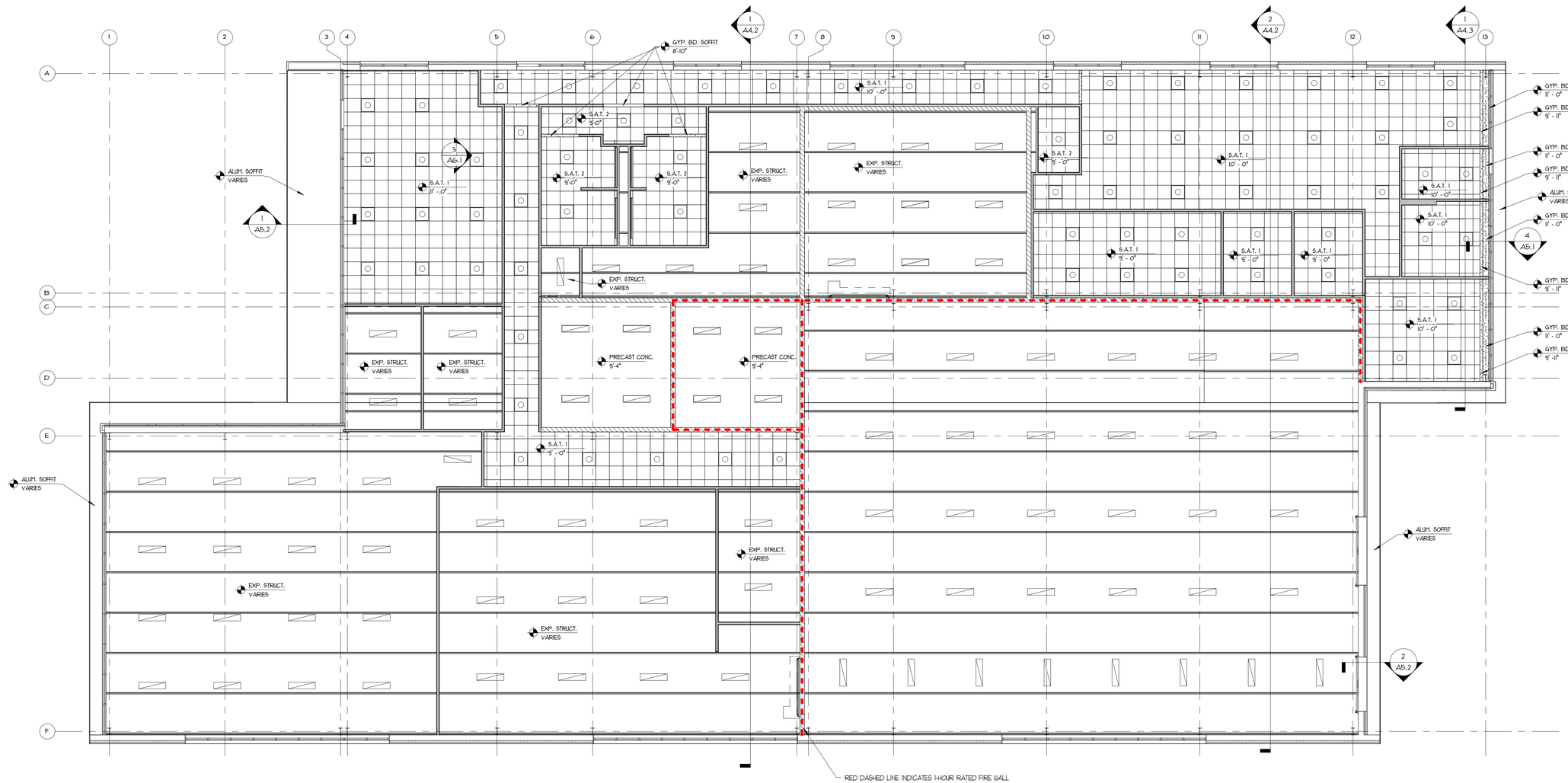
2 07.15.22 Addendum No. 2

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

ENLARGED FLOOR PLANS

Partners in Design ARCHITECTS
600 Fifty-Second Street Suite 220 Kenosha, Wisconsin 53140 Ph.: (262)652-2800

PROJECT NO.: 154.21.085
DRAWN BY: EMM CHECKED BY: MAM
DATE: 06.28.22
SHEET NO.: A6.1



RED DASHED LINE INDICATES 1-HOUR RATED FIRE WALL CONSTRUCTION - SEE WALL TYPES FOR DETAILS. WALLS TO EXTEND TO UNDERSIDE OF ROOF DECK - PROVIDE FIRE CAULK AT TOP OF WALL AS REQUIRED

1 A8.1 REFLECTED CEILING PLAN

1/8" = 1'-0"

REFLECTED CEILING PLAN LEGEND

GYPSUM BOARD EL. = 0'-0"	CEILING MATERIAL AND ELEVATION
	SAT 1
	GYPSUM BOARD SOFFIT
	2X4 LED LAY-IN FIXTURE
	1X4 LED SUSPENDED FIXTURE
	LED COVE LIGHT

REVISIONS

CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

REFLECTED CEILING PLAN

600 Fifty-Second Street
Suite 220
Kenosha, Wisconsin 53140
Ph.: (262)652-2800

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DATE: 06.28.22

SHEET NO.: A8.1

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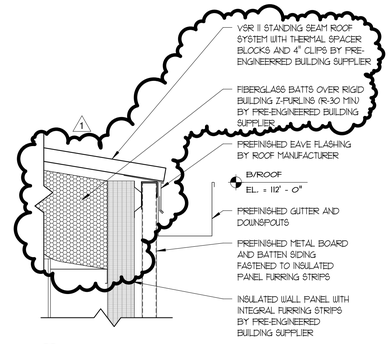
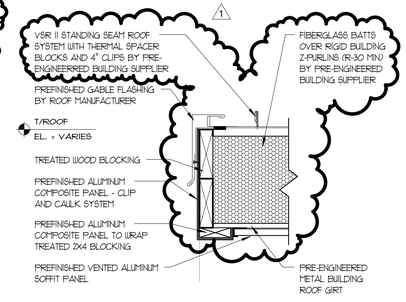


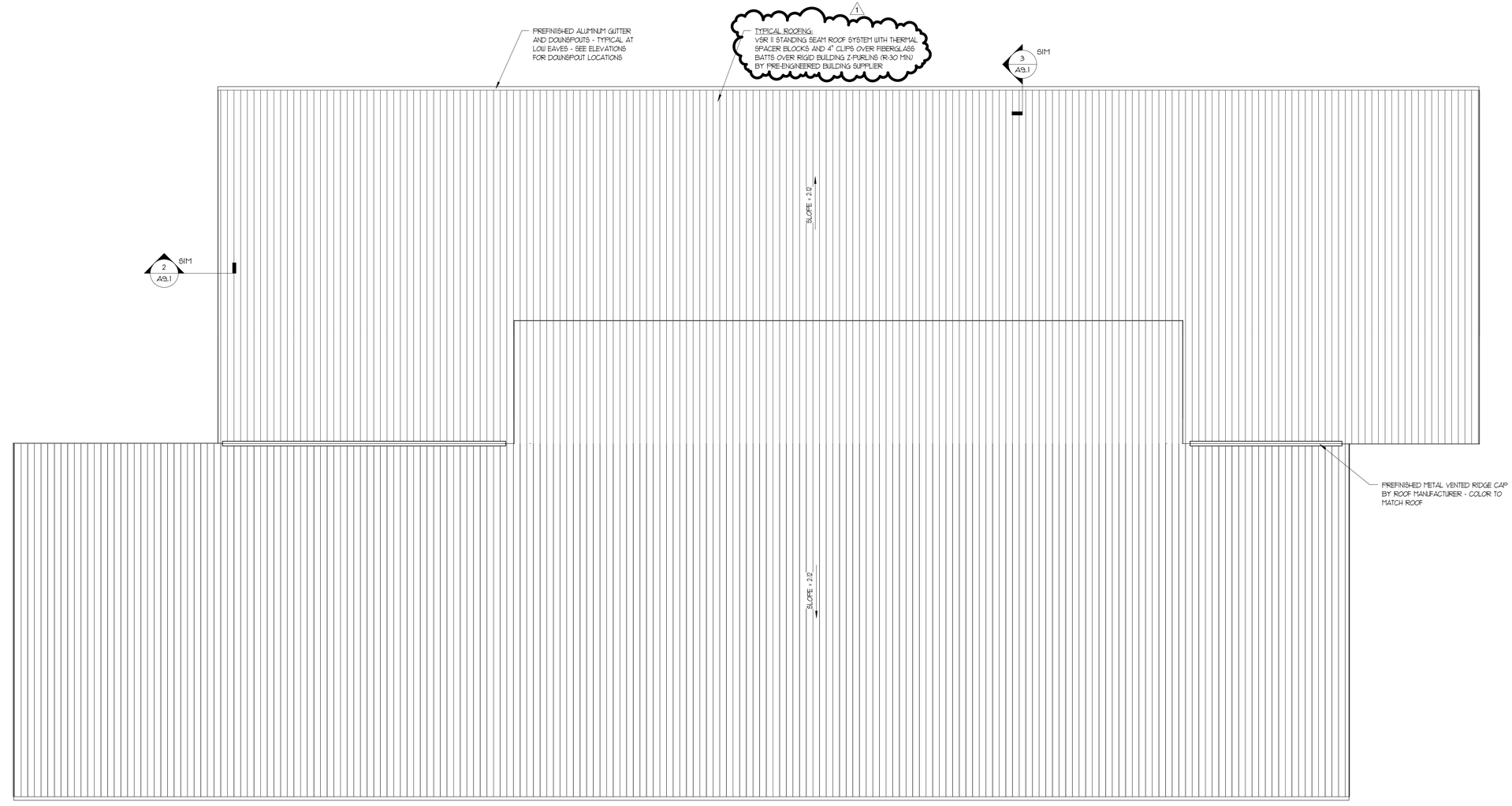
3 A9.1 TYPICAL EAVE DETAL

1 1/2" = 1'-0"



2 A9.1 TYPICAL FASCIA DETAIL

1 1/2" = 1'-0"



1 A9.1 Roof Plan

1/8" = 1'-0"

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CARTHAGE FACILITIES BUILDING
Somers, Wisconsin

ROOF PLAN & DETAILS

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Suite 220
Kenosha, Wisconsin 53140
Ph.: (262)652-2800

Partners in Design ARCHITECTS

PROJECT NO.:
154.21.085

DRAWN BY: EMM
CHECKED BY: MAH

DATE:
06.28.22

SHEET NO.:
A9.1

GENERAL NOTES:

1. ALL MATERIALS, CONSTRUCTION, AND DETAILS SHALL CONFORM WITH THE FOLLOWING:
   PLANS AND SPECIFICATIONS
   CODE AS SPECIFIED IN DESIGN DATA
2. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE FAMILIAR WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS (ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, ETC.) IN ORDER TO PROVIDE ALL CONSTRUCTION AND MATERIALS FOR THIS PROJECT.
3. THE CONTRACTOR SHALL REFER TO OTHER DRAWINGS CONTAINED IN THE CONSTRUCTION DOCUMENTS FOR ADDITIONAL SPECIFIED MEMBERS, DIMENSIONS, ELEVATIONS, DETAILS, OPENINGS, INSERTS, SLEEVES, DEPRESSIONS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS, REQUIRED TO CONSTRUCT THIS PROJECT.
4. DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PORTIONS OF THE CONTRACT DOCUMENTS UNLESS NOTED OTHERWISE.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
6. DO NOT SCALE PLANS.
7. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
8. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO: SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AS REQUIRED TO ENSURE THE SAFETY OF THE BUILDING AND WORKMEN ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE BASE BUILDING PRIMARY STRUCTURAL FRAME IS DESIGNED FOR THE FINAL, COMPLETED CONDITION AS INDICATED HEREIN. LOADS IMPOSED ON THE BUILDING STRUCTURE DURING THE COURSE OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS PART OF THE MEANS AND METHODS OF CONSTRUCTION. CARE SHALL BE GIVEN BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER TO CONSIDER THE PRESENT STATE OF THE STRUCTURE AT THE TIME OF LOADING, INCLUDING AGE-DEPENDENT STRENGTH OF THE STRUCTURAL ELEMENTS AND THE NATURE OF ALL LOADS IMPOSED.
9. CONSTRUCTION DOCUMENTS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS (COLUMN CENTERLINES, OUTSIDE FACE OF WALLS, TOP OF FRAMING MEMBERS, ETC.) MATERIAL SUPPLIERS AND DESIGNERS ARE RESPONSIBLE FOR ALL OTHER INFORMATION IN ORDER TO DETAIL/FABRICATE THEIR WORK. CONTACT THE ARCHITECT WITH ANY DISCREPANCIES.
10. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PLANS, THE CONTRACTOR SHALL BRING THE DISCREPANCY TO THE ARCHITECT'S ATTENTION IMMEDIATELY, IN WRITING.
11. NO PROVISIONS HAVE BEEN MADE IN THE DESIGN OF THIS STRUCTURE FOR FUTURE EXPANSION, UNLESS SPECIFICALLY NOTED ON PLAN.
12. ALL EXISTING STRUCTURES, INCLUDING EXISTING FOUNDATION SYSTEMS AND UNDERGROUND ELEMENTS, SHALL BE COMPLETELY REMOVED. EXISTING SUBSURFACE ELEMENTS MAY REMAIN IF APPROVED BY THE GEOTECHNICAL ENGINEER IN CONSULTATION WITH THE STRUCTURAL ENGINEER AND THE EXISTING MATERIALS ARE PREPARED AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO ACHIEVE THE PERFORMANCE CHARACTERISTICS INDICATED IN THE GEOTECHNICAL REPORT.

FOUNDATION AND EARTHWORK:

1. FOUNDATION AND SUBSURFACE DESIGN IS BASED ON THE SUBSURFACE EXPLORATION AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY:

   PROFFESIONAL SERVICE INDUSTRIES, INC.
   821 CORPORATE COURT
   WAUKESHA, WI 53189
   PROJECT No. 00522940
   DATED APRIL 18, 2022

   REFER TO DESIGN DATA FOR A SUMMARY OF KEY SOIL DESIGN VALUES. REFER TO REPORT FOR DESCRIPTION OF SUBSURFACE CONDITIONS, GEOTECHNICAL RECOMMENDATIONS, OTHER INFORMATION, AND ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR AND THE OWNER'S TESTING AGENT SHALL CONFIRM INSTALLATION AND CONSTRUCTION OF FOUNDATIONS IS COMPLETED IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
3. CENTER PIERS AND FOUNDATIONS UNDER COLUMN / WALL CENTERLINES UNLESS NOTED OTHERWISE.
4. BACKFILL AND DRAINAGE AT BASEMENT WALLS AND RETAINING WALLS SHALL BE PROVIDED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. DO NOT PLACE BACKFILL AGAINST BASEMENT OR RETAINING WALLS UNTIL THE WALLS AND ALL SLABS, BEAMS, AND SLABS-ON-GROUND FRAMING INTO THE WALL HAVE ATTAINED 100% OF THEIR DESIGN STRENGTH. BACKFILL SIMULTANEOUSLY ON BOTH SIDE OF FOUNDATION AND STEM WALLS.
5. EARTH RETENTION AND UNDERPINNING SYSTEMS, TEMPORARY OR PERMANENT, SHALL BE PROVIDED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS AN ELEMENT OF THE MEANS AND METHODS OF CONSTRUCTION.
6. SUBGRADES SHALL BE PREPARED PER THE GEOTECHNICAL RECOMMENDATIONS. TOP OF FOOTING ELEVATIONS SHOWN ON THESE CONSTRUCTION DOCUMENTS REPRESENT MINIMUM FOOTING DEPTHS FOR FROST PROTECTION AND ESTIMATES OF REQUIRED BEARING DEPTH BASED ON THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE ON-SITE GEOTECHNICAL ENGINEER SHALL ENSURE FOUNDATION AND SLAB-ON-GROUND SYSTEMS ARE FOUNDED ON COMPETENT MATERIAL TO ACHIEVE THE DESIGN VALUES INDICATED ON THESE CONSTRUCTION DOCUMENTS AND IN THE GEOTECHNICAL REPORT. AT THE GEOTECHNICAL ENGINEER'S DIRECTION, EXCAVATIONS MAY BE NEED TO BE EXTENDED TO FIND COMPETENT MATERIALS OR ADDITIONAL SUBGRADE PREPARATIONS MAY BE REQUIRED.
7. ALL EXTERIOR FOUNDATIONS SHALL BE CAST AT LEAST FROST DEPTH BELOW ADJACENT FINISH EXTERIOR GRADE. FOOTINGS SHALL BE CAST AT LEAST MINIMUM BEARING DEPTH BELOW ADJACENT FINAL GRADE OR FINISHED FLOOR ELEVATION. REFER TO SOIL DESIGN VALUES.
8. REFER TO GEOTECHNICAL AND/OR ENVIRONMENTAL REPORT FOR REMEDIATION OF SOILS THAT ARE NOT SUITABLE FOR BEARING BELOW FOOTINGS OR SLABS, OR SOILS THAT REQUIRE REMOVAL DUE TO CONTAMINATION.
9. ENGINEERED FILL MATERIALS OR LEAN CONCRETE SHALL BE PROVIDED AND INSTALLED PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
10. FOUNDATIONS SHALL NOT BE INSTALLED ON FROZEN SUBGRADE.

METAL BUILDING:

1. THE ENTIRE DESIGN OF THE METAL BUILDING SUPERSTRUCTURE SHALL BE THE RESPONSIBILITY OF THE METAL BUILDING SUPPLIER. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, FOR THE STATE IN WHICH THE PROJECT IS LOCATED.
2. THE CONTRACTOR SHALL COORDINATE WITH THE METAL BUILDING SUPPLIER ANCHOR BOLT SIZES, TYPE, AND LOCATIONS.
3. METAL BUILDING SHOP DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:
   A. THE NAME, ADDRESS, AND PHONE NUMBER OF THE SUPPLIER
   B. ALL DESIGN LOADS
   C. FRAMING PLANS SPECIFYING ALL MEMBER SIZES AND LOCATIONS
   D. ANCHOR BOLT SIZES, LENGTHS, AND ELEVATIONS
   E. ALL COLUMN FRAME VERTICAL AND HORIZONTAL REACTIONS TRANSMITTED TO THE FOUNDATION
4. CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE METAL BUILDING SUPPLIER ALL BUILDING DIMENSIONS AND ELEVATIONS FOR THE METAL BUILDING TO ENSURE THAT THE METAL BUILDING STRUCTURE WILL SUFFICIENTLY BEAR ON THE FOUNDATION PRIOR TO THE METAL BUILDING FABRICATION.

CAST IN PLACE REINFORCED CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO REFERENCED EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION".
2. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
3. REFER TO REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE FOR LAP SPLICES IN REINFORCING STEEL.
4. ALL LAPS IN REINFORCING STEEL SHALL BE CLASS "B" LAP SPLICES UNLESS OTHERWISE NOTED. AT CONSTRUCTION JOINTS, CONTINUOUS BARS SHALL BE LAP SPLICED WITH A CLASS "B" LAP. ALL OTHER BARS EXTENDING THRU THE JOINT SHALL BE FULLY DEVELOPED EACH SIDE OF JOINT, UNO.
5. ALL HOOKS IN REINFORCING STEEL SHALL BE STANDARD HOOKS, UNO.
6. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCEMENT IN CONCRETE UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 18 BARS	2"
NO. 5 BAR AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
WALLS, JOISTS: NO. 11 BAR AND SMALLER	1"
BEAMS AND COLUMNS	1 1/2"

7. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED IN ANY CONCRETE MIX.
8. CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. ANY CONCRETE SURFACE REPAIRS SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED. REPAIR AND PATCH DEFECTIVE AREAS WITH PROPRIETARY PATCHING COMPOUND IMMEDIATELY AFTER REMOVAL OF FORMS.
9. PROVIDE AN ALLOWANCE FOR 50 FEET OF CRACK REPAIR FOR EACH 10,000 SQUARE FEET OF SLAB AREA DURING AND AFTER CONSTRUCTION.
10. PROVIDE AN ADDITIONAL 200 lbs STOCK OF #5 BARS OF VARYING LENGTHS FOR EACH 10,000 SQUARE FEET OF SLAB AREA FOR PLACEMENT AS DIRECTED BY STRUCTURAL ENGINEER.
11. PROVIDE A 3/4" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE. TOP SURFACE OF WALLS SHALL BE FINISHED SMOOTH, UNLESS NOTED OTHERWISE.
12. CONTRACTOR SHALL PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION WHILE PLACING CONCRETE.
13. PROVIDE 1/2" EXPANSION JOINT MATERIAL AT INTERIOR LOCATIONS WHERE SLABS ABUT WALLS, COLUMNS, AND OTHER VERTICAL SURFACES UNLESS NOTED OTHERWISE.
14. TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94.
15. ADDITION OF JOBSITE WATER TO CONCRETE SHALL BE PER ASTM C94.
16. ALL CONCRETE SLABS SHALL BE CURED PER ACI 308.1 RECOMMENDATIONS.
17. CONTROL JOINTS SHALL BE PLACED IN CONVENTIONAL SLAB ON GROUND WITHIN 24 HOURS OF INITIAL POUR. REFER TO PLAN NOTES FOR ADDITIONAL INFO.
18. **DO NOT PLACE CONTROL JOINTS IN**: STRUCTURAL SLAB ON GROUND, POST TENSIONED SLAB ON GROUND, OR PILE SUPPORTED SLABS.
19. OWNER SHALL HIRE A MATERIALS TESTING LABORATORY TO CAST AND TEST CONCRETE CYLINDERS. ALL TESTING SHALL BE IN ACCORDANCE WITH ACI 318. RESULTS OF CYLINDER TESTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER. CONCRETE TEST REPORTS SHALL STATE THE FOLLOWING INFORMATION:
   A. LOCATION ON PROJECT WHERE THE CONCRETE IS USED
   B. 7 DAY COMPRESSIVE STRENGTH
   C. 28 DAY COMPRESSIVE STRENGTH
   D. AIR CONTENT
   E. SLUMP
   F. AMOUNT OF WATER ADDED ON JOB SITE
   G. MIX USED
20. CONCRETE TEST REPORTS SHALL DIRECTLY STATE WHETHER OR NOT THE TEST RESULT COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY IRREGULARITIES OR DEFECTS IN CONCRETE SLABS (CRACKS, BUMPS, FLOOR CURLING, ETC.) BEFORE ANY FLOOR FINISHES ARE APPLIED.
22. CONFORM TO ACI 117 FOR CONCRETE TOLERANCES.
23. CONFORM TO ACI 306.1 FOR COLD WEATHER CONCRETE PLACEMENT.
24. CONFORM TO ACI 305.1 FOR HOT WEATHER CONCRETE PLACEMENT.
25. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED FOR NONWELDABLE REBAR NOR WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER

PRECAST CONCRETE:

1. PRECAST CONCRETE SUPPLIER SHALL DESIGN ALL PRECAST ELEMENTS (HOLLOW CORE PLANK) AND CONNECTIONS TO RESIST ALL GRAVITY AND LATERAL LOADS SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
2. PRECAST CONCRETE SUPPLIER SHALL DESIGN ALL CONNECTIONS BETWEEN PRECAST ELEMENTS AND CONNECTIONS TO THE SUPERSTRUCTURE AND FOUNDATION TO RESIST ALL LOADS SPECIFIED.
3. PRECAST CONCRETE MEMBERS SHALL BE DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THIS INCLUDES LOADS FROM PERMANENT EQUIPMENT (FOLDING PARTITIONS, MECHANICAL UNITS, SURGICAL LIGHTS, ETC.).
4. PRECAST CONCRETE SUPPLIER SHALL DESIGN AND PROVIDE ALL LINTELS ACROSS OPENINGS IN NEW PRECAST CONCRETE WALL PANELS. THIS INCLUDES ANY HOT-ROLLED STEEL REQUIRED TO SUPPORT PRECAST CONCRETE MEMBERS.
5. PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED FOR FIRE RESISTANCE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
6. PRECAST CONCRETE SUPPLIER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, FOR THE STATE IN WHICH THE PROJECT IS LOCATED.
7. PRECASTER SHALL GROUT PRECAST PLANK SOLID AND ADD STEEL REINFORCEMENT TO PRECAST PLANK AS REQUIRED TO SUPPORT ALL LOADS STATED ON THESE CONSTRUCTION DOCUMENTS.
8. PLACE CONCRETE TOPPING ON TOP OF PRECAST CONCRETE PLANK BEFORE CONSTRUCTION OF ANY PARTITION WALLS.
9. FINISH CONCRETE TOPPING ON TOP OF PRECAST CONCRETE PLANK TO A LEVEL SURFACE.

POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY:

1. POST INSTALLED ANCHORS SHALL BE: EXPANSION, ADHESIVE, OR SCREW ANCHORS AS SPECIFIED, UNLESS NOTED OTHERWISE.
2. EXPANSION ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI KWIK BOLT TZ.
   B. FOR SOLID GROUTED CONCRETE MASONRY:
      a. HILTI KWIK BOLT TZ.
3. ADHESIVE ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI HIT RE 500 V3 EPOXY ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED
      b. HILTI HIT-HY 200 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED.
   B. SOLID GROUTED CONCRETE MASONRY:
      a. HILTI HIT-HY 270 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD, THREADED ROD OR REBAR WHERE SPECIFIED.
   C. HOLLOW OR MULTI-WYTHE MASONRY:
      a. HILTI HIT-HY 70 ADHESIVE ANCHOR SYSTEM WITH HAS THREADED ROD OR THREADED ROD WITH SCREEN TUBES.
4. SCREW ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
   A. FOR CONCRETE:
      a. HILTI KWIK HUS EZ
   B. SOLID GROUTED CONCRETE MASONRY:
      a. HILTI KWIK HUS EZ
5. WHEN INSTALLING POST INSTALLED ANCHORS:
   A. THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND CURRENT ICC-ES REPORT SHALL BE FOLLOWED.
   B. DO NOT DAMAGE EXISTING REINFORCING, POST TENSIONED CABLES OR OTHER EMBEDDED ITEMS.
   C. WHEN INSTALLING IN CONCRETE:
      a. THE MINIMUM CONCRETE DESIGN COMPRESSIVE STRENGTH SHALL MATCH THE COMPRESSIVE STRENGTHS NOTED IN THE CONCRETE NOTES SECTION.
      b. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE SHALL HAVE A MINIMUM AGE OF 21 DAYS AT THE TIME OF INSTALLATION. ANCHORS INSTALLED IN CONCRETE LESS THAN 21 DAYS OLD SHALL BE TESTED IN ACCORDANCE WITH ACI 355.4 TO VERIFY PERFORMANCE.
      c. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE AT LEAST 50-DEGREES FAHRENHEIT.
   D. ADHESIVE USED IN AN ADHESIVE ANCHOR SYSTEM SHALL BE STORED AT THE SERVICE TEMPERATURE RANGE RECOMMENDED BY THE MANUFACTURER.
   E. ANCHORS TO BE INSTALLED IN ADHESIVE SHALL BE CLEAN, OIL FREE AND FREE OF RUST, PAINT OR OTHER COATINGS.
   F. ADHESIVE ANCHORS SHALL BE SECURELY PLACED TO PREVENT DISPLACEMENT OR DISTURBANCE WHILE THE ADHESIVE CURES. IF AN ANCHOR IS DISPLACED OR DISTURBED BEFORE A FULL ADHESIVE CURE IT SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
   G. UNLESS NOTED OTHERWISE, ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE SUPPORTING SURFACE.
   H. INSTALL ANCHORS TO ACCOMMODATE THE STANDARD HOLE SIZE IN THE SUPPORTED STEEL MEMBER. THE HOLE DIAMETER THROUGH THE SUPPORTED STEEL MEMBER SHALL BE 1/16" LARGER THAN THE ANCHOR UNLESS NOTED OTHERWISE. USE PLATE WASHERS WITH A STANDARD SIZE HOLE WELDED TO STEEL MEMBERS WHERE OVERSIZED HOLES MUST BE USED THROUGH THE STEEL MEMBER. UNO.
   I. HOLES SHALL BE DRILLED AND INSTALLED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AS OUTLINED IN THE ICC-ES REPORT. WHERE APPLICABLE, INSTALLATION SHALL ALSO FOLLOW PROPER CLEANING PROCEDURE AS INDICATED IN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION AS OUTLINED IN THE ICC-ES REPORT. HOLES SHALL BE DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL, DO NOT CORE DRILL HOLES.
6. ALL PERSONNEL INSTALLING ANCHORS SHALL BE TRAINED AND CERTIFIED BY THE ANCHORING SYSTEM MANUFACTURER. CONTRACTOR SHALL SUBMIT VALID CERTIFICATION FROM THE MANUFACTURER ON ALL PERSONNEL. ALL PERSONNEL INSTALLING ADHESIVE ANCHORS IN A HORIZONTAL, OVERHEAD OR UPWARDLY INCLINED CONDITION SHALL BE TRAINED AND CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM FOR SUCH APPLICATIONS.
7. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST IN PLACE ANCHORS. ONLY USE SPECIFIC TYPE OF ANCHOR (EXPANSION, ADHESIVE, SCREW) WHERE INDICATED. DO NOT SUBSTITUTE ANCHOR TYPES WITHOUT WRITTEN APPROVAL FROM SEOR.
8. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED ABOVE SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED (PER THE DELEGATED DESIGN NOTES) SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE. THE PROPOSED SUBSTITUTION(S) SHALL MEET THE MOST RECENTLY PUBLISHED ACI 355.2 OR ACI 355.4.
9. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL POST INSTALLED ANCHORS AS REQUIRED BY THE BUILDING CODE AND/OR ICC-ES REPORT. WRITTEN SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE BY THE SPECIAL INSPECTOR. THE REPORTS SHALL RECORD AND REPORT THE FOLLOWING AS A MINIMUM:
   A. PRIOR TO AND DURING INSTALLATION OF ANCHORS, INSPECTION AND REPORT SHALL INCLUDE:
      a. INSTALLER SHALL HAVE REVIEWED THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND ESR REPORT AND HAVE BEEN CERTIFIED AS NOTED ABOVE.
      b. ALL HORIZONTAL, OVERHEAD AND UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE CONTINUOUSLY INSPECTED DURING THE INSTALLATION BY AN INSPECTOR SPECIALLY TRAINED AND APPROVED FOR THIS PURPOSE.
      c. GENERAL CONCRETE OR CMU BLOCK CONDITIONS (I.E. CRACKED OR UNCRACKED, WET OR DRY, FINISHED STATE).
      d. HOLE CONDITION AND PREPARATION PRIOR TO INSTALLATION OF ANCHOR. INDICATE IF MANUFACTURE'S WRITTEN PROCEDURES FOR PREPARATION OF HOLE WERE FOLLOWED.
      e. INSTALLATION OF ANCHOR FOLLOWED MANUFACTURES WRITTEN PROCEDURES. INDICATE IF MANUFACTURER'S WRITTEN PROCEDURES FOR ANCHOR INSTALLATION WERE FOLLOWED.
      f. EMBEDMENT DEPTH AND CONCRETE OR BLOCK THICKNESS.
      g. ANCHOR SIZE AND TYPE.

CONCRETE MASONRY UNIT (CMU):

1. MASONRY CONSTRUCTION TO CONFORM TO ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES).
2. ONLY LOAD BEARING MASONRY IS SHOWN ON THE STRUCTURAL PLANS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-LOAD BEARING MASONRY. REFER TO SCHEDULES AND DETAILS FOR NON-LOAD BEARING MASONRY INFORMATION.
3. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS WITH ELEVATIONS OF REINFORCED WALLS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
4. ALL MASONRY WALLS SHALL BE CONSTRUCTED IN A RUNNING BOND PATTERN AS DESCRIBED BY ACI 530 UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DOCUMENTS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTROL JOINTS IN EXTERIOR FACADE.
6. FOR LOAD BEARING WALLS, PROVIDE CONTROL JOINTS AS INDICATED ON PLAN. FOR ALL LOAD BEARING WALL CONTROL JOINTS NOT SPECIFIED AND AT ALL NON-LOAD BEARING WALLS, PROVIDE VERTICAL WALL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS:
   A. 10'-0" MAXIMUM FROM CORNERS OF WALLS
   B. 24'-0" o/c MAXIMUM
   C. AT CHANGES IN WALL HEIGHT AND THICKNESS
   D. AT WALLS ABUTTING COLUMNS
   E. DO NOT PROVIDE CONTROL JOINTS IN ELEVATOR AND STAIR SHAFT WALLS.
7. PROVIDE (1) VERTICAL BAR AT CORNERS AND ON EACH SIDE OF CONTROL JOINTS. MATCH SIZE OF SPECIFIED REINFORCEMENT. PROVIDE #5 IF NOT SPECIFIED.
8. LAP VERTICAL WALL REINFORCEMENT PER SCHEDULE.
9. LAP HORIZONTAL WALL REINFORCING PER SCHEDULE. STAGGER BOND BEAM LAP LOCATIONS MINIMUM 5'-0".
10. HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS SHALL BE LAPPED PER TYPICAL DETAILS.
11. PROVIDE STANDARD (W1.7) HORIZONTAL JOINT REINFORCING AT 16" o/c VERTICALLY (8" o/c IN PARAPET WALLS) UNLESS NOTED OTHERWISE. REINFORCING TO BE HOT-DIPPED GALVANIZED IN EXTERIOR WALLS AND MILL-GALVANIZED FOR INTERIOR WALLS. JOINT REINFORCING SHALL BE LADDER TYPE CONFORMING TO ASTM A951, WITH PREFABRICATED CORNER AND TEE UNITS AT CORNERS AND INTERSECTIONS. LAP JOINT REINFORCING 6" MINIMUM.
12. FACE SHELLS AND WEBS SHALL BE FULL-BEDDED IN ALL COURSES OF PIERS, AND THE STARTING COURSE OF ALL WALLS.
13. ALL VERTICAL MASONRY WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH BOND BEAMS AND EXTEND FULL HEIGHT OF THE WALL. GROUT CORES SOLID AT ALL VERTICAL REINFORCING.
14. COURSE AGGREGATE IN MASONRY GROUT SHALL BE PEA GRAVEL.
15. GALVANIZE ALL STEEL OUTSIDE OF BUILDING VAPOR BARRIER INCLUDING THE EXTERIOR LINTELS AND VENEER SUPPORT ANGLES AND ASSOCIATED ANCHORS, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
16. ALL PARTIAL HEIGHT BLOCKS LESS THAN 4" HIGH SHALL BE GROUTED SOLID IN LOAD BEARING WALLS.
17. SOLID OR SOLID-GROUTED CMU SHALL BE PROVIDED IN COURSES IMMEDIATELY ABOVE AND BELOW ANY CHANGES IN WYTHE THICKNESS.
18. SOLID GROUT ALL MASONRY BELOW GRADE.
19. CONTRACTOR SHALL GROUT MASONRY SOLID AT ALL POST-INSTALLED ANCHOR (EXPANSION, EPOXY, DRILLED) LOCATIONS. GROUT ON ALL SIDES OF EACH ANCHOR AT LEAST 4" OR THE SPECIFIED ANCHOR EMBEDMENT, WHICH EVER IS GREATER.
20. PROVIDE 8" HIGH BOND BEAM w/ (2) #5 x CONT AT TOP OF WALLS AND AT FLOOR LINES FOR MULTI-STORY WALLS. REFER TO TYPICAL DETAILS FOR TOP AND BOTTOM OF WALL DETAILS.
21. AT BEAM BEARING LOCATIONS, GROUT CMU SOLID A MINIMUM OF 16" WIDE x 3 COURSES DEEP UNLESS NOTED OTHERWISE.
22. MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.
23. ALL CMU BLOCK TO BE NORMAL WEIGHT UNLESS NOTED OTHERWISE.
24. PROVIDE A MINIMUM OF 1/2" CLEAR BETWEEN INTERIOR BLOCK FACE SHELL AND FACE OF REINFORCING BAR. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCING BARS AND TIES:

MASONRY NOT EXPOSED TO EARTH OR WEATHER:	1 1/2"
MASONRY EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 9 BARS	2"
NO. 5 BAR AND SMALLER	1 1/2"

25. REFER TO LOOSE VENEER LINTEL SCHEDULE FOR LINTEL SIZE AND REQUIREMENTS. VERIFY LINTEL QUANTITY, LOCATIONS, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

GENERAL NOTES

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PE Project: 22247

PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S001

MATERIAL STRENGTHS:
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE USED. REFER TO MATERIAL NOTES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONCRETE MATERIALS SCHEDULE

TYPE OF CONSTRUCTION	COMPRESSIVE STRENGTH (psi) (ASTM C39)	EQUIL. DENSITY (pcf)	EXPOSURE CATEGORIES				MAXIMUM w/cm	AIR CONTENT
			F	S	W	C		
FOOTINGS	3,000	145					--	--
FROST WALLS	4,000	145	F1				0.55	5%
INTERIOR WALLS AND PIERS	4,000	145					--	--
EXTERIOR WALLS AND PIERS	4,500	145	F2				0.45	6%
INTERIOR NON-PARKING SLAB ON GROUND	4,000	145					--	--
INTERIOR PARKING SLAB ON GROUND	5,000	145				C2	0.4	--
EXTERIOR SLAB ON GROUND	5,000	145	F3			C2	0.4	6%
LEAN CONCRETE		145					--	--

CONCRETE MATERIALS SCHEDULE NOTES:

1. CORROSION EXPOSURE SHALL BE F0, S0, W0, AND C0 UNLESS NOTED OTHERWISE IN THE EXPOSURE CATEGORIES COLUMN.
2. MAXIMUM AGGREGATE SIZE FOR ALL MIXES TO BE 3/4 INCHES; FOOTINGS MAY BE 1 1/2 INCHES.
3. PROVIDE 5% AIR CONTENT AT ALL EXPOSED CONDITIONS NOT EXPLICITLY INDICATED ABOVE. TOLERANCE OF AIR CONTENT AS DELIVERED SHALL BE +/- 1.5%.
4. CONCRETE SUPPLIER AND FINISHER SHALL COORDINATE PROPERTIES OF PROPOSED MIX DESIGN UNDER VARIOUS WEATHER CONDITIONS TO COMPLETE PLACING AND FINISHING OF SLAB PER THE PROJECT REQUIREMENTS AND IN A TIMELY MANNER. APPROVED CHEMICAL ADMIXTURES MAY BE USED TO INCREASE WORKABILITY PROVIDED THE ADMIXTURE-TREATED CONCRETE HAS THE SAME OR LOWER WATER-CEMENT RATIO AND DOES NOT EXHIBIT SEGREGATION POTENTIAL OR EXCESSIVE BLEEDING. IF PROPOSED SLUMP WILL EXCEED 9", PROVIDE DOCUMENTATION OF PAST PERFORMANCE OF MIX DESIGN.
5. FOR CONCRETE FLOOR SLABS AND TOPPINGS, THE MINIMUM CEMENTITIOUS MATERIAL CONTENT SHALL BE 540 LBS/YD3 UNLESS APPROVED BY ENGINEER OF RECORD.
6. CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED AT 28 DAYS FOR STRENGTH EQUAL TO OR LESS THAN 6000 PSI, AND AT 56 DAYS FOR STRENGTH GREATER THAN 6000 PSI.
7. FOR LIGHTWEIGHT CONCRETE HAVING EQUILIBRIUM DENSITY LESS THAN 145 pcf, LAMBDA (λ) HAS BEEN TAKEN AS 0.75.
8. FOR EXPOSURE CATEGORY F3, MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY MASS AS FOLLOWS:
   A. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 – 25%
   B. SLAG CEMENT CONFORMING TO ASTM C989 – 50%
   C. SILICA FUME CONFORMING TO ASTM C1240 – 10%
   D. TOTAL OF FLY ASH OR OTHER POZZOLANS AND SILICA FUME – 35%
   E. TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT, AND SILICA FUME – 50%
9. FOR EXPOSURE CLASSES S1, S2, AND S3, MINERAL FILLERS DERIVED FROM CARBONATE AGGREGATE ARE PROHIBITED. FOR EXPOSURE CLASSES S2 AND S3, DO NOT USE CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE.
10. REFER TO MASS CONCRETE NOTES FOR ADDITIONAL REQUIREMENTS
11. CONCRETE SUPPLIER, IN CONCERT WITH THE GENERAL CONTRACTOR, TO PROVIDE CONCRETE MIX SUCH THAT THE MAXIMUM TEMPERATURE WILL NOT EXCEED 158 DEGREES FAHRENHEIT. LIKEWISE, A THERMAL GRADIENT (FROM THE CENTER TO THE EDGE OF THE CONCRETE PLACEMENT) THAT EXCEEDS 35 DEGREES FAHRENHEIT IS NOT PERMITTED.

MACROSYNTHETIC FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE SLABS
COMPLYING WITH ASTM C 1116, TYPE III, 1 1/2" TO 2 1/2" LONG

METAL / STEEL:
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE PROVIDED:

REINFORCING STEEL
- ASTM A615, DEFORMED, TYPICAL ..... GRADE 60
- ASTM A706, DEFORMED, WELDABLE ..... GRADE 60
- STEEL WELDED WIRE REINFORCEMENT, FLAT SHEETS ..... GRADE 60
- POST-TENSIONING TENDONS, ASTM A416 ..... GRADE 270
- STUD RAIL ASSEMBLIES, ASTM A1044
- HEADED WELDED STUDS, ASTM A108

STRUCTURAL STEEL
- ROLLED WIDE FLANGE SHAPES, ASTM A992 ..... GRADE 50
- CHANNELS, ANGLES, AND S-SHAPES, ASTM A36 ..... GRADE 36
- PLATES AND BARS, TYPICAL, ASTM A36 ..... GRADE 36
- PLATES AND BARS, WHERE NOTED, ASTM A572 ..... GRADE 50
- RECT. HSS SHAPES, ASTM A500, TYPICAL ..... GRADE C (Fy = 50 KSI)
- CIRCULAR HSS SHAPES, ASTM A500, TYPICAL ..... GRADE C (Fy = 46 KSI)
- ALL HSS SHAPES, ASTM A1085, WHERE NOTED ..... (Fy = 50 KSI)
- PIPE, ASTM A53, TYPE E OR S ..... GRADE B
- ALL OTHER ROLLED SHAPES, ASTM A36 ..... GRADE 36

COLD FORMED METAL FRAMING
- GAUGE STEEL (ALL STUDS AND TRACKS), ASTM A1003
  - 18 GAUGE AND LIGHTER ..... GRADE 33
  - 16 GAUGE AND HEAVIER ..... GRADE 55
- GALVANIZED COATING G60

STRUCTURAL CONNECTORS
- ANCHOR RODS, ASTM F1554, TYPICAL ..... GRADE 36
- ANCHOR RODS, ASTM F1554, WHERE NOTED ..... GRADE 55, S1
- HIGH STRENGTH BOLTS, ASTM F3125, TYPE 1, TYPICAL ..... GROUP A (120 KSI)
- HIGH STRENGTH BOLTS, ASTM F3125, TYPE 1, WHERE NOTED ..... GROUP B (150 KSI)
- NUTS, ASTM A563
- WASHERS, ASTM F436
- DTIs WASHERS, ASTM F959 ..... GRADE PER BOLT SPEC
- STEEL HEADED STUD ANCHORS, ASTM A108
- RODS, ASTM A36, TYPICAL ..... GRADE 36
- RODS, ASTM F1554, WHERE NOTED ..... GRADE 55, S1
- CLEVIS AND TURNBUCKLES, ASTM A108 ..... GRADE 1035
- EYEBOLTS AND NUTS, ASTM A108 ..... GRADE 1030

STAINLESS STEEL
- STAINLESS STEEL BOLTS, NUTS, AND WASHERS, ASTM F593
- STAINLESS STEEL ANGLES, ASTM A276, S304 ..... Fy = 30,000 PSI
- PLATE AND BAR, ASTM A276, S304 ..... Fy = 30,000 PSI
- TUBE SHAPES, ASTM A554, S304 ..... Fy = 30,000 PSI

WELDING ELECTRODES
- STRUCTURAL STEEL E70XX
- WELDABLE REINFORCING STEEL E80XX
- STAINLESS STEEL E75XX

MASONRY:
- ASSEMBLY ..... f'm = 2,500 PSI
- BLOCK ..... f'CMU = 3,250 PSI OR GREATER
- GROUT ..... f'c = 2,500 PSI OR GREATER
- MASONRY MORTAR ..... TYPE "M" MORTAR BELOW GRADE TYPE "M" OR "S" ABOVE GRADE
- GROUT BELOW BASE PLATES AND BEARING PLATES
  - NON-METALLIC, SHRINKAGE RESISTANT ..... ASTM C1107

DESIGN DATA:
APPLICABLE CODES / STANDARDS:
WISCONSIN COMMERCIAL BUILDING CODE, 2015 IBC AS MODIFIED BY CHAPTERS SPS 361-366, ADOPTED APRIL 1, 2018
ASCE 7-10 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI

STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE)
ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES)
ANSI/AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
AWS D1.1/D1.1M STRUCTURAL WELDING CODE - STEEL

BUILDING DESIGN LOADS / CRITERIA:
RISK CATEGORY II

DESIGN DEAD LOADS:
ROOF DEAD LOAD ..... AS SPECIFIED BY METAL BUILDING SUPPLIER

DESIGN LIVE LOADS:
LIGHT STORAGE ..... 125 PSF
INTERIOR PARTITION WALLS (UNIFORMLY DISTRIBUTED WEIGHT) ..... 15 PSF
INTERIOR PARTITION WALLS (HORIZONTAL DESIGN LOADS) ..... 5 PSF

HANDRAIL ASSEMBLIES AND GUARDS:
200 lb LOAD OR 50 plf LOAD APPLIED IN ANY DIRECTION AT TOP OF HANDRAIL ASSEMBLY OR GUARD AND TO TRANSFER THIS LOAD THROUGH SUPPORTS TO THE STRUCTURE

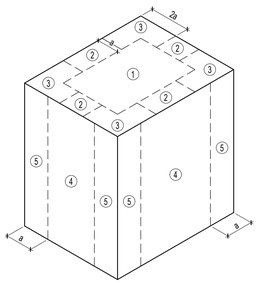
ROOF SNOW LOADS AND DESIGN DATA:
DESIGN ROOF SNOW LOAD ..... 21 PSF (BALANCED SNOW LOAD)
FLAT ROOF SNOW LOAD (Pf) = (0.7 × Ce × Ct × Is × Pg) ..... 21 PSF
SNOW EXPOSURE (Ce) 1.0
SNOW LOAD IMPORTANCE FACTOR (Is) 1.0
ROOF THERMAL FACTOR (Ct) 1.0
GROUND SNOW (Pg) ..... 30 PSF
RAIN ON SNOW SURCHARGE 0.0
SLOPED ROOF FACTOR (Cs) 1.0

WIND DESIGN DATA:
ULTIMATE WIND SPEED (3 SECOND GUST) ..... 115 MPH
NOMINAL WIND SPEED ..... 89.1 MPH
WIND DIRECTIONALITY FACTOR (Kd) 0.85
MEAN ROOF HEIGHT ..... 16.16 FT
WIND EXPOSURE CATEGORY C
WIND EXPOSURE CLASSIFICATION ..... ENCLOSED
INTERNAL PRESSURE COEFFICIENT ..... ±0.18
BUILDING LENGTH (L) ..... 200 FT
LEAST WIDTH (B) ..... 100 FT
VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 1) 0.734
VELOCITY PRESSURE EXPOSURE COEFFICIENT Kh (CASE 2) 0.734
TOPOGRAPHIC FACTOR (Kzt) 1.0
EDGE STRIP (a) ..... 6.5 FT
EDGE ZONE (2a) ..... 13 FT
DESIGN PROCEDURE ..... ENVELOPE PROCEDURE

ULTIMATE WIND LOADS COMPONENTS & CLADDING:

ROOF SURFACE PRESSURE			
AREA	10 SF	50 SF	100 SF
NEGATIVE ZONE 1	-27.0 PSF	-27.0 PSF	-27.0 PSF
NEGATIVE ZONE 2	-31.3 PSF	-30.6 PSF	-29.8 PSF
NEGATIVE ZONE 3	-41.8 PSF	-38.0 PSF	-33.0 PSF
POSITIVE ALL ZONES	16.0 PSF	16.0 PSF	16.0 PSF
NEGATIVE ZONE 2'	-37.6 PSF	-37.0 PSF	-36.1 PSF
NEGATIVE ZONE 3'	-58.7 PSF	-52.4 PSF	-43.9 PSF

WALL SURFACE PRESSURE			
AREA	10 SF	100 SF	500 SF
NEGATIVE ZONE 4	-24.7 PSF	-21.4 PSF	-20.3 PSF
NEGATIVE ZONE 5	-30.4 PSF	-23.7 PSF	-21.7 PSF
POSITIVE ZONE 4&5	22.8 PSF	19.5 PSF	18.4 PSF



WIND LOADS COMPONENTS AND CLADDING ZONE DIAGRAM (ASCE 7-10)

EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR (Ie) 1.0
MAPPED SPECTRAL ACCELERATIONS AT SHORT PERIODS (Ss) 0.12
MAPPED SPECTRAL ACCELERATIONS AT (1) SECOND PERIODS (S1) 0.05
SITE CLASSIFICATION ..... D
DESIGN SPECTRAL RESPONSE COEFFICIENT AT SHORT PERIODS (Sds) 0.128
DESIGN SPECTRAL RESPONSE COEFFICIENT AT (1) SECOND PERIODS (Sd1) 0.080
SEISMIC DESIGN CATEGORY ..... B
BASIC SEISMIC-FORCE-RESISTING SYSTEM ..... SYSTEM NOT DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR ..... 0.043W KIPS
SEISMIC RESPONSE COEFFICIENT (Cs) 0.043
RESPONSE MODIFICATION COEFFICIENT (R) 3
ANALYSIS PROCEDURE FOR SEISMIC DESIGN ..... EQUIVALENT LATERAL-FORCE

SOIL DESIGN VALUES:
THE DESIGN VALUES BELOW HAVE BEEN USED AS THE BASIS OF THE FOUNDATION DESIGN. THESE VALUES SHALL BE CONFIRMED BY THE FOUNDATION CONTRACTOR AND THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION. NOTIFY THE SEOR IF THE FINAL DESIGN OR INSTALLED VALUES DIFFER FROM THE VALUES NOTED BELOW.
SOIL UNIT WEIGHT ..... 130 PCF
LATERAL EARTH PRESSURE
ACTIVE (RETAINING WALLS) ..... 40 psf / ft OF DEPTH
AT-REST (BASEMENT WALLS) ..... 65 psf / ft OF DEPTH
PASSIVE ..... 420 PSF
COEFFICIENT OF SLIDING FRICTION ..... 0.3 (UNCONFIRMED)
SUBGRADE MODULUS ..... 125 PCI
FROST DEPTH ..... 48" BELOW EXTERIOR FINISH GRADE
ALLOWABLE SOIL BEARING PRESSURE ..... 3000 PSF
MINIMUM BEARING DEPTH, EXTERIOR ..... 48" BELOW EXTERIOR FINISH GRADE
MINIMUM BEARING DEPTH, INTERIOR ..... 18" BELOW INTERIOR FINISH GRADE
MAXIMUM TOTAL FOUNDATION SETTLEMENT ..... 1" (UNCONFIRMED)
MAXIMUM DIFFERENTIAL SETTLEMENT BETWEEN ADJACENT FOUNDATIONS ..... 1/2" (UNCONFIRMED)

DELEGATED DESIGN NOTES:
1. ENGINEERING DESIGN, DETAILING, AND COORDINATION OF DELEGATED DESIGN ITEMS ARE DELEGATED TO THE CONTRACTOR PER THE SPECIFICATIONS AND CRITERIA INDICATED ON THE DRAWINGS. THE PRIMARY BASE BUILDING STRUCTURE HAS BEEN DESIGNED AS INDICATED HEREIN TO ACCEPT THE DELEGATED DESIGN ITEMS. THE CONTRACTOR SHALL COORDINATE THE WORK OF THE DELEGATED DESIGNERS WITH EACH OTHER AND THE PRIMARY BASE BUILDING STRUCTURE. IT IS SUGGESTED THAT DESIGN CRITERIA, LOAD PATHS, AND ATTACHMENT SCHEMES PROPOSED BY THE DELEGATED DESIGNER BE SUBMITTED FOR REVIEW BY THE ARCHITECT FOR COMPATIBILITY OF THE BASE BUILDING DESIGN PRIOR TO FINAL DESIGN AND DETAILING OF THE DELEGATED DESIGN PACKAGE.
2. DOCUMENTS FOR DELEGATED DESIGN ITEMS SHALL BE STAMPED BY A QUALIFIED, PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CONTRACTOR SHALL FORWARD THE REVIEWED DOCUMENTS TO THE ARCHITECT AND/OR ENGINEER OF RECORD WITH A NOTATION INDICATING THAT THE DELEGATED DESIGN DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.
3. DELEGATED DESIGN ITEMS INCLUDE ANY ITEMS NOT EXPLICITLY NOTED ON THE STRUCTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO:

   PRIMARY BASE BUILDING STRUCTURAL ELEMENTS
   - METAL BUILDING
   - PRECAST PLANK FLOOR SYSTEM

   OTHER ITEMS SUPPORTED BY PRIMARY STRUCTURE (SECONDARY MEMBERS)
   - NON-LOAD-BEARING COLD FORMED METAL FRAMING AND CONNECTIONS
   - STAIRS, RAILINGS, HANDRAILS, GUARDRAIL, LADDERS, ETC. – REFER TO STAIR DELEGATE DESIGN NOTES
   - CANOPIES AND AWNINGS
   - CLADDING SYSTEMS AND COMPONENTS, INCLUDING SUPPLEMENTAL SUPPORT, WHERE REQUIRED
   - SUPPORTS, BRACING, ATTACHMENTS, AND SUBFRAMING FOR SUPPORT OF OTHER TRADES AND BUILDING COMPONENTS. REFER TO MODIFICATIONS FOR COORDINATION WITH OTHER TRADES NOTES.
5. DELEGATED DESIGN SUBMITTALS PERTAINING TO FOUNDATIONS AND OTHER GEOTECHNICAL ELEMENTS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. ENGINEERING AND SYSTEMS REQUIRED BY THE CONTRACTOR TO SUPPORT CONSTRUCTION REMAIN THE PREROGATIVE AND RESPONSIBILITY OF THE CONTRACTOR. REFER TO GENERAL NOTES.

DELEGATED DESIGN STAIR NOTES:
1. STAIRS NOT DETAILED ON THE DRAWINGS ARE DELEGATED TO THE CONTRACTOR FOR DESIGN. SEE THE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR PERFORMANCE CRITERIA AND FINISHING REQUIREMENTS. THE BASE BUILDING STRUCTURE HAS BEEN DESIGNED FOR SUPPORT OF STAIR LOADING AS FOLLOWS:
2. STAIRS, HANDRAILS, AND GUARDRAILS SHALL BE DELEGATED DESIGN BY THE STEEL SUPPLIER. CONNECTIONS INTO SURROUNDING STRUCTURE SHALL BE APPROVED BY STRUCTURAL ENGINEER. CALCULATIONS OF ALL STAIR COMPONENTS MUST BE SUPPLIED WITH STAIR SHOP DRAWINGS AND STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, IN THE STATE IN WHICH THE PROJECT IS LOCATED.
3. THIS SUBMITTAL CONCERNS ITEMS THAT WERE NOT DESIGNED BY PIERCE ENGINEERS (PIERCE) AND ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. WE HAVE REVIEWED THE SUBMITTAL TO VERIFY THAT THE DESIGN WAS PERFORMED BY A REGISTERED PROFESSIONAL OR STRUCTURAL ENGINEER AND THE DESIGN FOLLOWED THE DESIGN CRITERIA SHOWN IN THE CONTRACT DOCUMENTS. BASED ON OUR REVIEW, WE RECOMMEND THE STATUS LISTED ABOVE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR STAIR FRAMING AND CONFIGURATION.
5. DESIGN LOADS:
   A. STAIR LIVE LOAD SHALL BE 100 PSF, NON-REDUCIBLE.
   B. STAIR CONSTRUCTION SHALL BE:
      a. CHECKER PLATE (NO CONCRETE FILL), HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 25 PSF.
      b. METAL PAN WITH 2" NORMAL WEIGHT CONCRETE FILL ON TREADS AND INTERMEDIATE LANDINGS, HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 50 PSF.
      c. METAL PAN WITH ARCHITECT-SPECIFIED FINISHES, HAVING A TOTAL AVERAGE DEAD LOAD OF NOT MORE THAN 50 PSF.
6. CONNECTIONS TO BASE BUILDING STRUCTURE
   A. CONNECTIONS FOR INTERMEDIATE LANDINGS ARE ASSUMED TO BE MADE AT THE FAR END OF THE STAIR STRINGER OPPOSITE THE CONNECTION AT THE FLOOR LEVELS, UNLESS NOTED OTHERWISE. IT IS SUGGESTED THAT ALTERNATE SUPPORT LOCATIONS BE SUBMITTED FOR REVIEW PRIOR TO COMPLETION OF THE STAIR SHOP DRAWINGS.
   B. STEEL FRAMING:
      a. ALL LOADS APPLIED TO BASE BUILDING SHALL BE ATTACHED SUCH THAT ROTATION OF THE BASE BUILDING STEEL FRAMING IS RESTRAINED, UNLESS NOTED OTHERWISE. PROVIDE CONCENTRIC CONNECTIONS WHERE POSSIBLE, OR DESIGN AND PROVIDE KICKERS OR OTHER MEANS OF RESTRAINT IF NECESSARY.
      b. CONNECTION LOCATIONS AND LOADS SHALL BE PROVIDED BEFORE OR CONCURRENT TO THE REVIEW OF THE STRUCTURAL STEEL SHOP DRAWINGS.
   C. CONCRETE FRAMING:
      a. POST-INSTALLED ATTACHMENT TO POST-TENSIONED BEAMS AND SLABS SHALL BE AVOIDED.
      b. CONNECTION LOCATIONS AND LOADS SHALL BE PROVIDED BEFORE OR CONCURRENT TO THE REVIEW OF THE BEAM AND SLAB REINFORCEMENT SHOP DRAWINGS.

DELEGATED DESIGN PERFORMANCE CRITERIA DEFLECTION LIMITS			
MEMBERS	LIVE	SNOW OR WIND	DEAD + LIVE OR SNOW
ROOF MEMBERS			
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240
NOT SUPPORTING CEILINGS	L/240	L/240	L/180
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
FLOOR MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	N/A	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	N/A	L/240
LINTEL / HEADER / BEAM MEMBERS			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	L/360	L/240
EXTERIOR WALLS (LATERAL DEFLECTION)			
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/600	N/A
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A

COORDINATION WITH OTHER TRADES:
1. SUPPORT, SUBFRAMING, BRACING, AND ATTACHMENTS TO PRIMARY BASE BUILDING STRUCTURE FOR ALL NONSTRUCTURAL BUILDING COMPONENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ELEMENTS SHALL BE DESIGNED AND DETAILED BY THE MANUFACTURER, SUPPLIER, OR CONTRACTOR FURNISHING THOSE COMPONENTS. CONNECTIONS AND SUPPORTED LOADS TO STRUCTURAL MEMBERS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. RESPONSIBILITY FOR THE PERFORMANCE OF THE SUPPLIED SYSTEM AND ASSOCIATED CONNECTIONS SHALL REMAIN THAT OF THE PARTY FURNISHING THE DESIGN AND DETAILING.
2. SEISMIC SUPPORT, BRACING, AND ANCHORAGE OF NONSTRUCTURAL COMPONENTS SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR AS REQUIRED BY GOVERNING CODE.
3. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES CONNECTING TO, REQUESTING OPENINGS IN, PENETRATIONS THROUGH, OR ITEMS EMBEDDED WITHIN STRUCTURAL ELEMENTS, OR OTHERWISE IMPACTING THE BASE BUILDING STRUCTURE. UPON COMPLETION OF COORDINATION AND DESIGN, FULLY COORDINATED PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. THIS INCLUDES BUT IS NOT LIMITED TO SLEEVES, CONDUITS, CABLES, PIPES, ELECTRICAL BOXES, CAST-IN ATTACHMENTS, POST-INSTALLED ANCHORS, ETC. REFER TO TYPICAL DETAILS CONTAINED HEREIN FOR REINFORCEMENT REQUIRED TO ACCOMMODATE REQUESTED MODIFICATIONS TO THE PRIMARY BASE BUILDING STRUCTURE. UPON REVIEW, ADDITIONAL OR ALTERNATIVE MODIFICATIONS MAY BE REQUIRED AT THE DISCRETION AND DIRECTION OF THE STRUCTURAL ENGINEERING OF RECORD.
4. PENETRATIONS THROUGH, CONNECTIONS TO, AND ITEMS EMBEDDED WITHIN STRUCTURAL MEMBERS SHALL NOT NEGATIVELY IMPACT THE PERFORMANCE OF THE BASE BUILDING STRUCTURE.
5. CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES, INCLUDING AS-BUILT CONDITIONS IMPACTING DESIGN AND COORDINATION. ADJACENCIES OF ITEMS PLANNED OR INSTALLED IN OR ON STRUCTURE SHALL BE IDENTIFIED AND CONSIDERED BY EACH TRADE FOR THE IMPACT OF SUCH ADJACENCIES TO THEIR SYSTEMS. VERIFY ALL MECHANICAL EQUIPMENT, WEIGHTS, SIZES, AND LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS AND FABRICATING MATERIALS. COORDINATE ANY REQUIRED REVISIONS TO THE BASE BUILDING STRUCTURE WITH THE STRUCTURAL ENGINEER.
6. MISCELLANEOUS ELEMENTS SUCH AS SHELF ANGLES, LINTELS, SUPPORTS FOR CURTAIN WALLS OR MASONRY, AND EDGE ANGLES AT OPENINGS AND PERIMETER CONDITIONS ARE INTENDED TO SUPPORT AND BE COORDINATED WITH MATERIALS FURNISHED BY OTHER TRADES. THESE MATERIALS ARE INTENDED TO BE FIELD ATTACHED TO MEET THE TOLERANCES REQUIRED BY OTHER TRADES, WHICH MAY BE MORE STRINGENT THAN THE TOLERANCES SPECIFIED BY THE RELEVANT CODE OF STANDARD PRACTICE FOR THE SUPPORTING ELEMENTS. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND COORDINATE THE INSTALLATION OF SUPPORTING ELEMENTS TO COMPLY WITH THE TOLERANCE CRITERIA REQUIRED FOR INSTALLATION OF MATERIALS BY OTHER TRADES.
7. UNDERGROUND
   A. THE INFLUENCE AREA OF A FOOTING OR MAT SHALL BE DEFINED AS THE FRUSTRUM OF SOIL LOCATED BELOW THE FOOTING OR MAT HAVING A 2:1 (HORIZONTAL:VERTICAL) SLOPE EMANATING FROM THE FOOTING OR MAT EDGE, OR AS DEFINED BY THE GEOTECHNICAL ENGINEER OF RECORD.
   B. PIPES, CONDUITS, AND BURIED ITEMS SHALL NOT BE PLACED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS.
   C. ALL STRUCTURES (eg. TRIPLE BASINS, GREASE TRAPS, ETC.) SHALL NOT BE INSTALLED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS UNLESS THE STRUCTURE IS DESIGNED BY THE MANUFACTURER FOR INCREASED SURCHARGE LOAD APPLIED BY THE ADJACENT FOUNDATION AND HAS BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD OR THE GEOTECHNICAL ENGINEER OF RECORD.
   D. ITEMS TO BE BURIED IN IMPROVED SOILS SHALL BE REVIEWED AND APPROVED BY THE GROUND IMPROVEMENT DELEGATED DESIGN ENGINEER AND THE GEOTECHNICAL ENGINEER OF RECORD
8. STEEL ELEMENTS
   A. ALL PENETRATIONS INDICATED HEREIN SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH COORDINATION WITH THE SUBCONTRACTORS AND DELEGATED DESIGN ENGINEERS. SUBMIT ALL REQUIRED PENETRATIONS FOR REVIEW AND APPROVAL SUBSEQUENT TO FINAL COORDINATION OF BUILDING SYSTEMS.
   B. FIELD-CUTTING SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

ABBREVIATIONS

ALT ..... ALTERNATE	LLV ..... LONG LEG VERTICAL
ARCH ..... ARCHITECTURAL	LSH ..... LONG SIDE HORIZONTAL
BLDG ..... BUILDING	LSL ..... LAMINATED STRAND LUMBER
BOT ..... BOTTOM	LSLT ..... LONG SLOTTED
BRG ..... BEARING	LSV ..... LONG SIDE VERTICAL
CFMF ..... COLD FORMED METAL FRAMING	LVL ..... LAMINATED VENEER LUMBER
CIP ..... CAST IN PLACE	LW ..... LONG WAY
CL ..... CENTERLINE	MAX ..... MAXIMUM
CLR ..... CLEAR	MECH ..... MECHANICAL
CJ ..... CONTROL OR CONSTRUCTION JOINT	MIN ..... MINIMUM
CMU ..... CONCRETE MASONRY UNIT	MISC ..... MISCELLANEOUS
COL ..... COLUMN	NTS ..... NOT TO SCALE
CONT ..... CONTINUOUS	o/c ..... ON CENTER
DIA ..... DIAMETER	OFD ..... OVERFLOW DRAIN
DIM ..... DIMENSION	OPP ..... OPPOSITE
DL ..... DEAD LOAD	PC ..... PRECAST CONCRETE
DWG ..... DRAWING	PERP ..... PERPENDICULAR
E ..... MODULUS OF ELASTICITY	PSL ..... PARALLEL STRAND LUMBER
EA ..... EACH	PT ..... POST TENSIONED CONCRETE
EF ..... EACH FACE	PT ..... PRESERVATIVE TREATED
EL ..... ELEVATION	RD ..... ROOF DRAIN
EOD ..... EDGE OF DECK	REINF ..... REINFORCEMENT
EOS ..... EDGE OF SLAB	REQD ..... REQUIRED
EQ ..... EQUAL	RTU ..... ROOF TOP UNIT
EW ..... EACH WAY	SEOR ..... STRUCTURAL ENGINEER OF RECORD
EXT ..... EXTERIOR	SIM ..... SIMILAR
Fb ..... BENDING STRENGTH (WOOD)	SOG ..... SLAB-ON-GROUND
Fc ..... COMPRESSIVE STRENGTH (WOOD)	SPA ..... SPACING
fc ..... MINIMUM CONCRETE COMPRESSIVE STRENGTH	SPEC ..... SPECIFICATIONS
FD ..... FLOOR DRAIN	SSLT ..... SHORT SLOTTED
FF ..... FINISH FLOOR	STL ..... STEEL
FLR ..... FLOOR	SW ..... SHORT WAY
fm ..... MINIMUM MASONRY COMPRESSIVE STRENGTH	T/ ..... TOP OF
FRT ..... FIRE-RETARDANT-TREATED	T&B ..... TOP AND BOTTOM
FTG ..... FOOTING	T&G ..... TONGUE AND GROOVE
Fv ..... SHEAR STRENGTH (WOOD)	TRANS ..... TRANSVERSE
Fy ..... MINIMUM YIELD STRENGTH	TYP ..... TYPICAL
GA ..... GAUGE	UNO ..... UNLESS NOTED OTHERWISE
GALV ..... GALVANIZED	VERT ..... VERTICAL
GC ..... GENERAL CONTRACTOR	VIF ..... VERIFY IN FIELD
GT ..... GIRDER TRUSS	W/ ..... WITH
HORIZ ..... HORIZONTAL	w/o ..... WITHOUT
HVAC ..... HEATING, VENTILATION, AIR COND.	WP ..... WORKPOINT
HWS ..... HEADED WELDED STUD	WT ..... WEIGHT
LL ..... LIVE LOAD	WWF ..... WELDED WIRE FABRIC
LLH ..... LONG LEG HORIZONTAL	

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin
DESIGN CRITERIA

PIERCE ENGINEERS, INC.
CONSULTING STRUCTURAL ENGINEERS
181 N. Broadway Ave
Milwaukee, WI 53202
414.278.6060
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PE Project: 22247

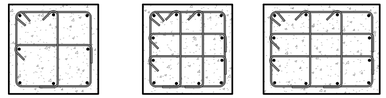
PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S002

CONCRETE PIER SCHEDULE

MARK	SIZE	VERTICAL REINFORCEMENT	PIER TIES	TIE TYPE	DOWELS	REMARKS
P1	16"x24"	(10) #6	#3 AT 12" o/c			REFER TO 1/S401
P2	20"x24"	(8) #6	#3 AT 12" o/c			REFER TO 2/S401
P3	22"x30"	(10) #6	#3 AT 12" o/c			REFER TO 3/S401
P4	24"x24"	(12) #6	#3 AT 12" o/c			REFER TO 4/S401
P5	16"x16"	(8) #6	#3 AT 12" o/c	TYPE I		

CONCRETE PIER SCHEDULE NOTES:
1. REFER TO PLAN FOR TOP OF CONCRETE PIER ELEVATION.
2. AT TOP OF CONCRETE PIER, PROVIDE (3) #3 TIES AT 3" o/c.
3. WHERE NO DOWELS ARE SHOWN FROM THE CONCRETE PIER TO THE CONCRETE FOOTING, EMBED VERTICAL PIER REINFORCEMENT TO BOTTOM OF FOOTING w/ 3" CONCRETE COVERAGE AND PROVIDE A STANDARD 90 DEGREE HOOK.
4. CENTER CONCRETE PIER BELOW COLUMN ABOVE UNLESS DETAILED OTHERWISE.
5. LAP VERTICAL REINFORCEMENT 30 BAR DIAMETERS OR 24", WHICH EVER IS GREATER.

CONCRETE PIER TIE TYPES:



TYPE I **TYPE II** **TYPE III**

CLASS 'B' TENSION LAP SPLICE LENGTHS (INCHES)

BAR SIZE	f'c = 3,000 psi		f'c = 4,000 psi		f'c = 5,000 psi		f'c = 6,000 psi		f'c = 8,000 psi	
	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP
#3	22	28	19	24	17	22	16	20	13	17
#4	29	37	25	32	22	29	21	27	18	23
#5	36	47	31	40	28	36	26	33	22	29
#6	43	56	37	48	33	43	31	40	26	34
#7	63	81	54	70	49	63	45	58	38	50
#8	72	93	62	80	55	72	51	66	44	57
#9	81	105	70	91	63	81	57	74	49	64
#10	91	118	79	102	70	91	64	84	56	72
#11	101	131	87	113	78	101	71	93	62	80

NOTES (d_b = BAR DIAMETER, C-C = CENTER TO CENTER):
1. ***THIS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS.***
2. SCHEDULE BASED ON NORMAL WEIGHT CONCRETE AND CLEAR COVER > 1 d_b AND C-C > 2 d_b.
3. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER CURRENT EDITION OF ACI-318.
4. TOP BARS ARE DEFINED AS HORIZONTAL BARS HAVING 12" OR MORE OF CONCRETE CAST BELOW THE BARS.
5. VALUES IN THIS SCHEDULE ARE BASED ON NON-EPOXY COATED BARS. FOR EPOXY COATED BARS, MULTIPLE VALUES IN THIS TABLE BY 1.5.
6. THESE LAPS ARE TO BE USED UNLESS ALTERNATIVE LENGTH LAPS SPECIFICALLY INDICATED ON PLANS OR IN DETAILS.

ISOLATED FOOTING SCHEDULE

MARK	DIMENSIONS			BOTTOM REINFORCING		TOP REINFORCING		REMARKS
	WIDTH	LENGTH	THICKNESS	LONG	SHORT	LONG	SHORT	
F36	3'-6"	3'-6"	1'-0"	(4) #4	(4) #4			
F40	4'-0"	4'-0"	1'-0"	(4) #5	(4) #5			
F50	5'-0"	5'-0"	1'-0"	(5) #5	(5) #5			
F56	5'-6"	5'-6"	1'-2"	(5) #5	(5) #5			

ISOLATED FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.
4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

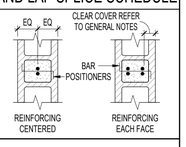
CONTINUOUS FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCEMENT		REMARKS
	WIDTH (xCONT)	THICKNESS	LONGITUDINAL	TRANSVERSE	
RW1	5'-0"	1'-0"	(7) #5	#5 AT 18" o/c	REFER TO 11/S400
W16	1'-6"	1'-0"	(2) #5		
W20	2'-0"	1'-0"	(2) #5		

CONTINUOUS FOOTING SCHEDULE NOTES:
1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.
2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.
3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.
4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS "B" LAP SPLICES UNLESS NOTED OTHERWISE.

MASONRY (CMU) REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE

BAR SIZE	CENTERED						CLEAR COVER - EACH FACE - ALL BLOCK - ASD	
	6" BLOCK	8" BLOCK	10" BLOCK	12" BLOCK	14" BLOCK	16" BLOCK	1 1/2"	2"
#3	12"	12"	12"	12"	12"	12"	15"	12"
#4	16"	12"	12"	12"	12"	12"	26"	20"
#5	25"	18"	14"	12"	12"	12"	41"	31"
#6	47"	34"	26"	21"	18"	17"	77"	58"
#7	---	47"	36"	29"	25"	22"	104"	78"
#8	---	71"	55"	45"	38"	32"	156"	117"
#9	---	---	70"	57"	48"	41"	198"	149"

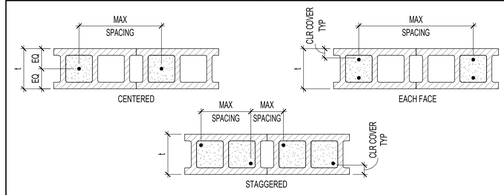


MASONRY (CMU) REINFORCING DEVELOPMENT AND LAP SPLICE SCHEDULE NOTES:
1. ***THIS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS.***
2. VALUES IN THIS SCHEDULE ARE BASED ON NORMAL WEIGHT MASONRY BLOCK. f'm = 2,500 psi.
3. LOCATE BAR POSITIONERS AT SPLICES, TOP AND BOTTOM OF WALLS, AND AT INTERVALS NOT EXCEEDING 8'-0".
4. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER CURRENT ADDITION OF TMS 402/ACI 530.

LOAD BEARING MASONRY WALL REINFORCING SCHEDULE

MARK	NOMINAL WALL THICKNESS (t)	BAR PER CELL	MAX SPACING	REINFORCEMENT LOCATION IN CELL	REMARKS
MW-1	8"	#5	48" o/c	CENTERED	

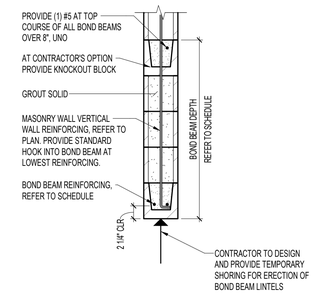
MASONRY WALL REINFORCEMENT SCHEDULE NOTES:
1. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT OF BUILDING AT REINFORCEMENT LOCATIONS.
2. UNLESS NOTED OTHERWISE, PROVIDE DOWELS INTO FOOTING TO MATCH VERTICAL WALL REINFORCEMENT.
3. FOR LAP SPLICE LENGTH REFER TO LAP SPLICE SCHEDULE.
4. LOCATE BAR POSITIONERS AT SPLICES, TOP AND BOTTOM OF WALLS, AND AT INTERVALS NOT EXCEEDING 8'-0".



LOAD BEARING MASONRY WALL LINTEL SCHEDULE

MARK	TYPE	BEAM SIZE OR BOND BEAM DEPTH	CONT PLATE THICKNESS	BOND BEAM BOTTOM REINF, UNO	STIRRUPS	BEARING PLATE SIZE	REMARKS
L1	A	8"	-	(2) #5	-		
L2	A	16"	-	(2) #5	-		

LOAD BEARING LINTEL SCHEDULE NOTES:
1. UNLESS STEEL LINTEL BEAM CONNECTS TO A COLUMN, PROVIDE 8" BEARING AT EACH END OF LINTEL.
2. EXTEND BOND BEAM REINFORCING 30" PAST OPENING EXTENTS. REINFORCING THAT CANNOT ACHIEVE 30" PAST OPENING SHALL TERMINATE IN A 180° HOOK AND EXTEND AT LEAST 18" PAST OPENING. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.
3. DO NOT INSTALL CONTROL JOINT WITHIN BOND BEAM REINFORCING EXTENTS.
4. EXTERIOR LINTELS TO BE HOT DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
5. REFER TO ARCH DRAWINGS FOR OPENING LOCATIONS, ELEVATIONS, AND SIZES.
6. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
7. GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT AND LENGTH OF BOND BEAM LINTEL.



TYPE "A"

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Carthage College - Kenosha, Wisconsin

STRUCTURAL SCHEDULES

PIERCE ENGINEERS, INC.
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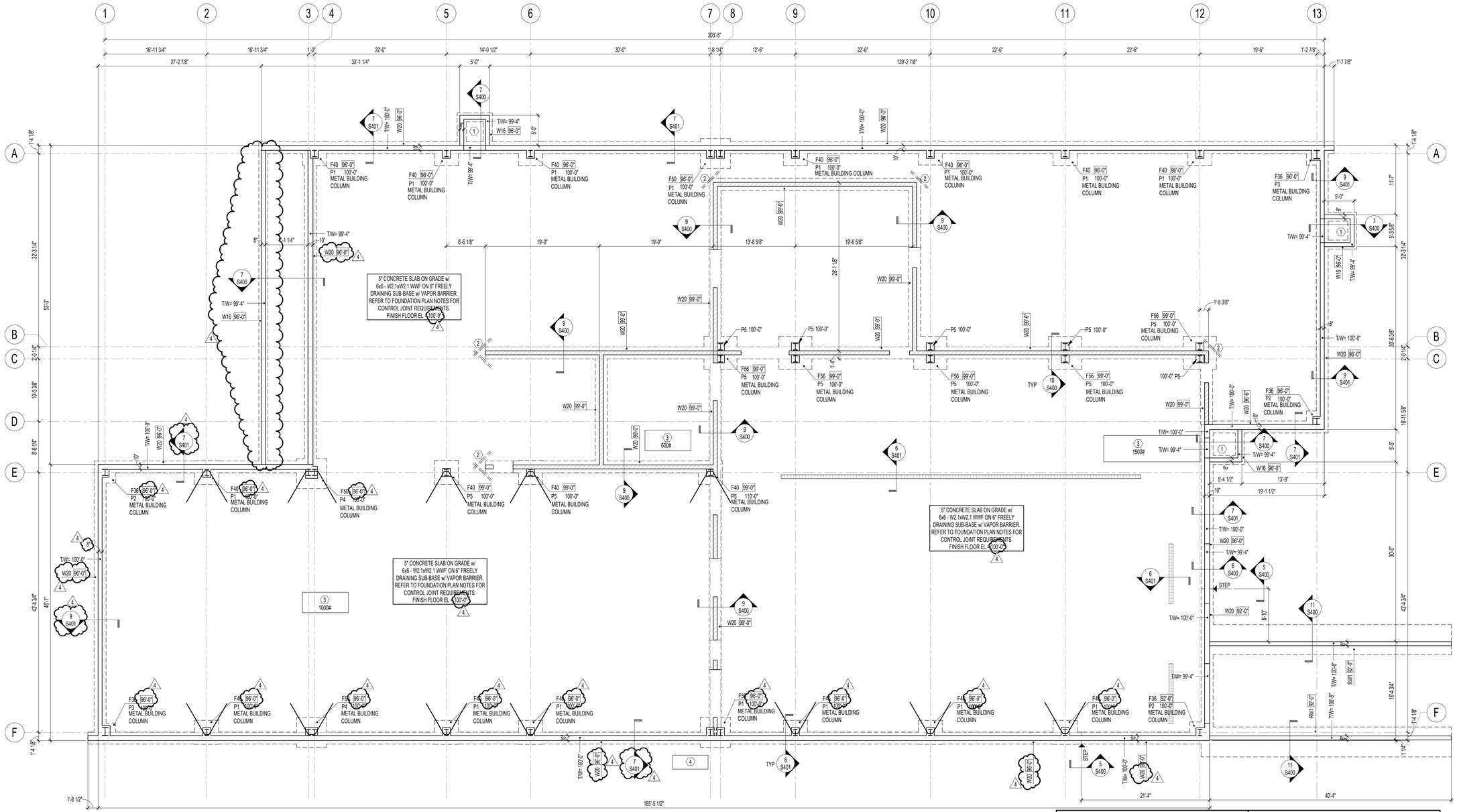
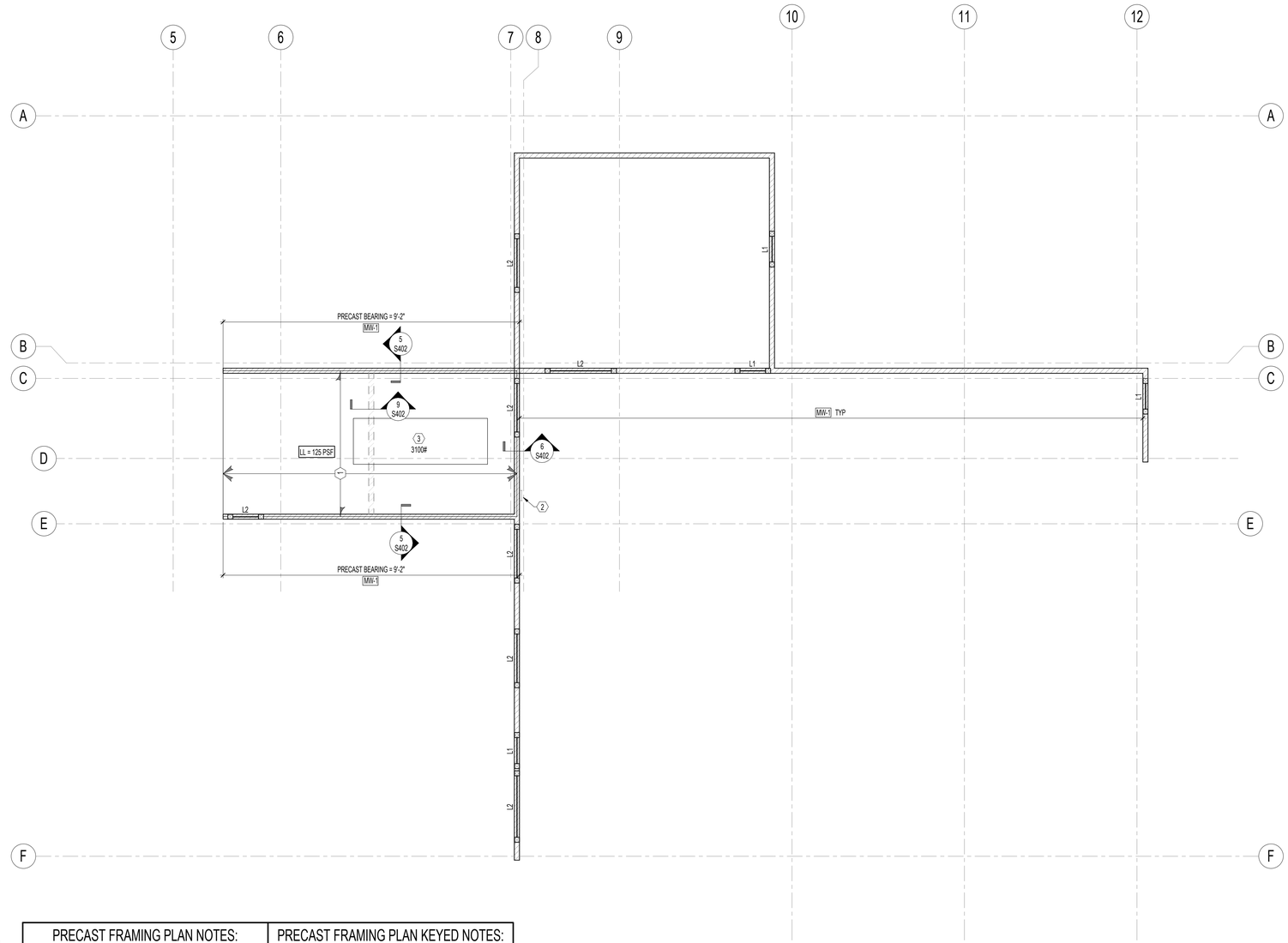
PROJECT NO.: 154.21.085

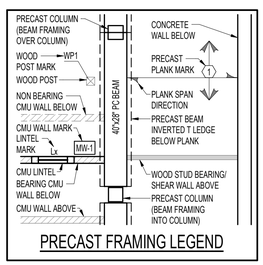
DRAWN BY: DJK | CHECKED BY: PE

DATE: 06.29.22

SHEET NO.: S003


1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F
203'-5"
16'-11 3/4" 16'-11 3/4" 1'-0" 22'-0" 14'-0 1/2" 30'-0" 1'-8 1/4" 12'-6" 22'-6" 22'-6" 22'-6" 19'-6" 1'-2 7/8"
27'-2 7/8" 33'-1 1/4" 5'-0" 139'-2 7/8" 1'-7 7/8"
1'-4 1/8"
32'-3 1/4"
53'-3"
2'-0 1/4"
10'-5 3/8"
8'-6 1/4"
43'-4 3/4"
46'-1"
F40 96'-0" P1 100'-0" METAL BUILDING COLUMN
F50 96'-0" P1 100'-0" METAL BUILDING COLUMN
F40 96'-0" P1 100'-0" METAL BUILDING COLUMN
F36 96'-0" P3 METAL BUILDING COLUMN
F36 96'-0" P2 100'-0" METAL BUILDING COLUMN
F56 99'-0" P5 100'-0" METAL BUILDING COLUMN
F50 96'-0" P4 100'-0" METAL BUILDING COLUMN
F40 99'-0" P5 100'-0" METAL BUILDING COLUMN
F40 99'-0" P5 110'-0" METAL BUILDING COLUMN
F36 92'-0" P2 100'-0" METAL BUILDING COLUMN
F36 92'-0" P3 100'-0" METAL BUILDING COLUMN
F40 96'-0" P1 100'-0" METAL BUILDING COLUMN
F50 96'-0" P1 100'-0" METAL BUILDING COLUMN
F40 96'-0" P1 100'-0" METAL BUILDING COLUMN
F56 99'-0" P5





PRECAST FRAMING LEGEND

PRECAST FRAMING PLAN NOTES:

PLAN NOTES APPLY TO ALL PRECAST FLOOR FRAMING PLANS.
INDIVIDUAL NOTES DO NOT NECESSARILY APPLY TO ALL SHEETS.

1. ALL CONCRETE TOPPING ON PRECAST STRUCTURE TO BE BONDED. ALL PRECAST STRUCTURE TO RECEIVE CONCRETE TOPPING TO BE CLEAN AND SATURATED SURFACE DRY PRIOR TO PLACING TOPPING.
2. (XXX'-XX") INDICATES THE TOP OF STEEL ELEVATION. REFER TO PLAN FOR TOP OF STEEL ELEVATIONS.
3. ALL VERTICAL MASONRY WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH BOND BEAMS AND EXTEND FULL HEIGHT OF THE WALL. GROUT CORES SOLID AT ALL VERTICAL REINFORCING.
4. REFER TO LINTEL SCHEDULE FOR LINTEL SIZES AND REQUIREMENTS. VERIFY LINTEL ELEVATIONS w/ ARCHITECTURAL DRAWINGS.

PRECAST FRAMING PLAN KEYED NOTES:

KEYED NOTES APPLY TO ALL PRECAST FLOOR FRAMING PLANS.
ALL NOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS.

(1) 8" PRECAST CONCRETE PLANK w/ 2" CONCRETE TOPPING AT ENDS (LESS AT MIDSPAN) w/ 6x6-W1.4xW1.4 WWF FLAT SHEET STOCK. DESIGN PLANK FOR SUPERIMPOSED DEAD LOAD OF 10 PSF IN ADDITION TO TOPPING WEIGHT AND FOR ALL LIVE LOADS SPECIFIED IN DESIGN CRITERIA.

(2) STEEL FRAMED LADDER. DESIGN FOR LOADS SPECIFIED IN ASCE 7 SECTION 4.5.4. G.C. TO COORDINATE WALL CONSTRUCTION WITH LADDER SUPPLIER FOR CORRESPONDING ATTACHMENT.

(3) MECHANICAL UNIT w/ 4" CONCRETE RTU CURB w/ 6x6 - W1.4xW1.4 WWF FLAT SHEET STOCK ON TOP OF TOPPING. ADD ADDITIONAL WEIGHT OF RTU CURB TO PRECAST PLANK. REFER TO PLAN FOR UNIT WEIGHT.

1/S200 MEZZANINE FLOOR FRAMING PLAN
SCALE: 1/8" = 1'-0"

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MEZZANINE FRAMING PLAN

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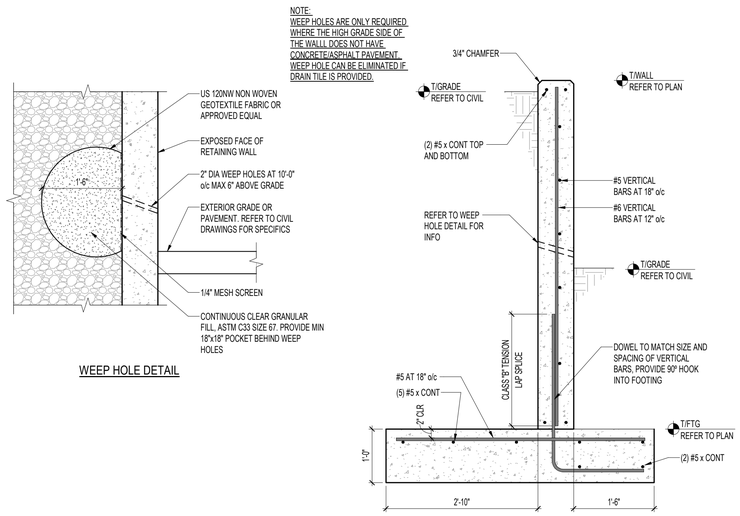
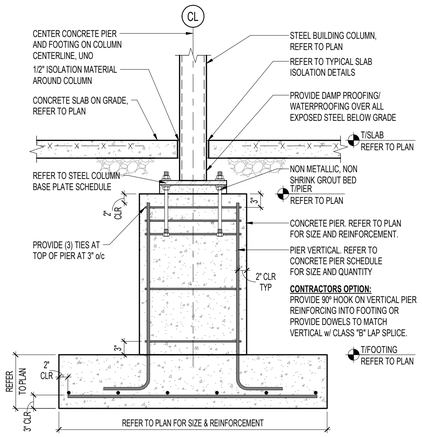
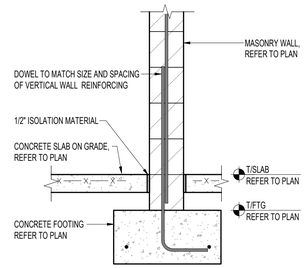


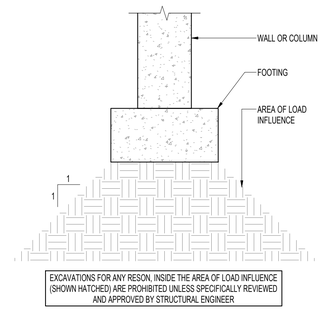
11 S400 RETAINING WALL SECTION



10 S400 STEEL COLUMN ON CONCRETE PIER

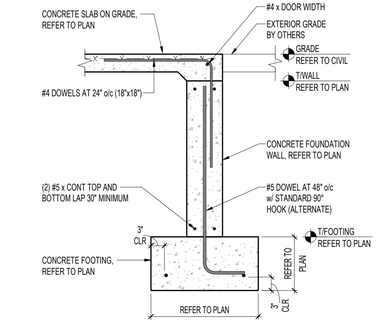


9 S400 INTERIOR MASONRY WALL ON STRIP FOOTING

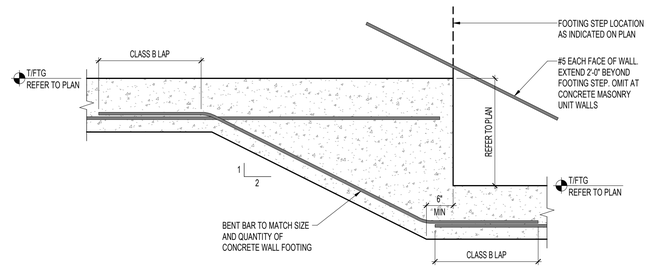


8 S400 TYPICAL PROHIBITED EXCAVATIONS AT FOUNDATIONS

7 S400 REINFORCED CONCRETE STOOP



6 S400 SLAB OVERPOUR AT GARAGE DOOR



5 S400 FOOTING STEP DETAIL

4 S400 PIPE PENETRATION AT FOUNDATION WALL

3 S400 WALL CONSTRUCTION JOINT

2 S400 CORNER AND WALL INTERSECTION REINFORCING

1 S400 SLAB ON GRADE CONSTRUCTION DETAILS

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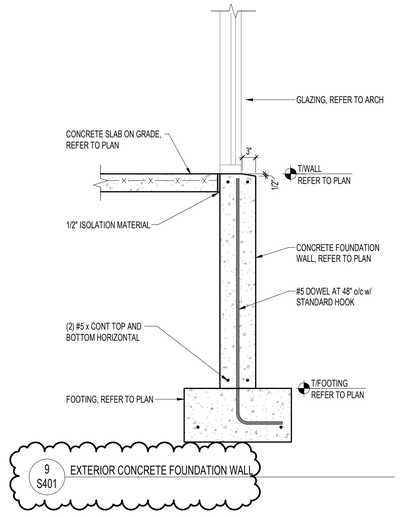
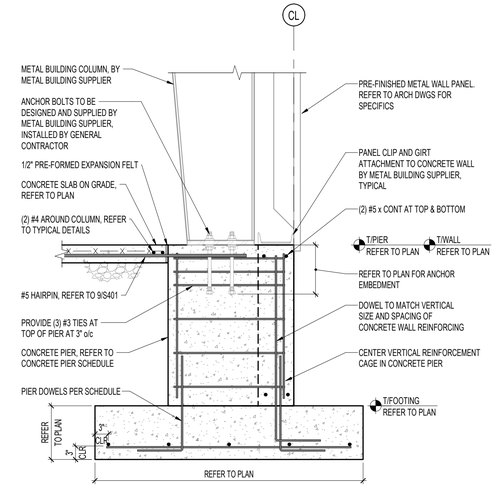
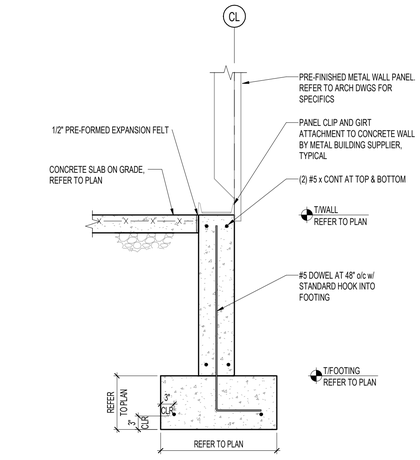


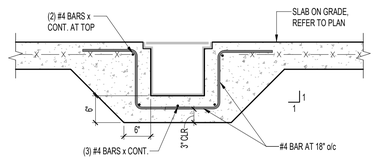
9 S401 EXTERIOR CONCRETE FOUNDATION WALL



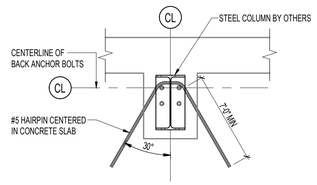
8 S401 METAL BUILDING COLUMN SITTING ON CONCRETE PIER AT EXTERIOR



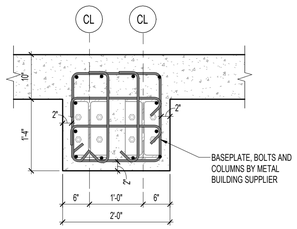
7 S401 METAL BUILDING AT FROST WALL



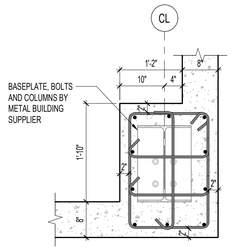
6 S401 TRENCH DRAIN DETAIL



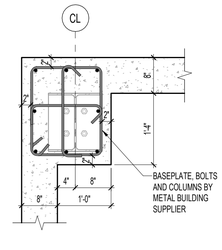
5 S401 HAIRPIN DETAIL #5 BARS



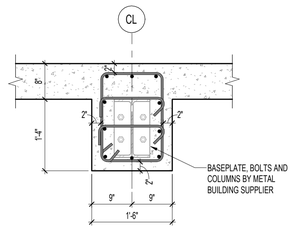
4 S401 PIER 4



3 S401 PIER 3



2 S401 PIER 2



1 S401 PIER 1

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4 07.29.2022 Addendum No. 4

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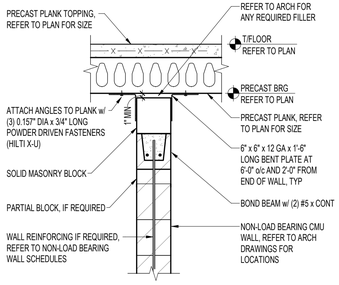
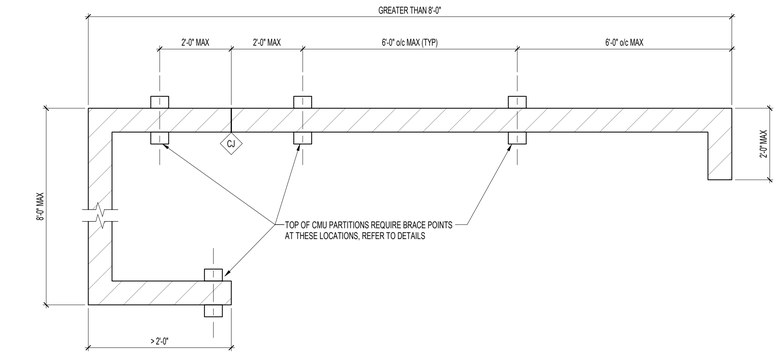
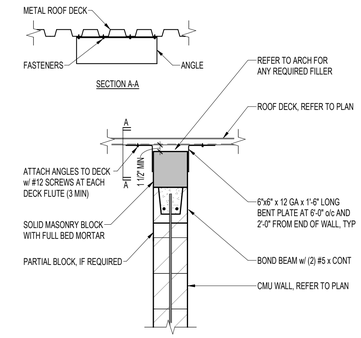


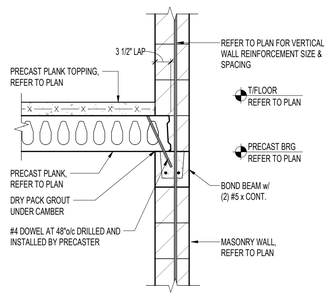
9 S402 PRECAST PLANK OVER NON-BEARING INTERIOR CMU WALL

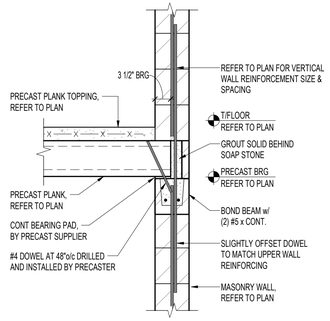


8 S402 TYPICAL DIAGRAMATIC PLAN OF CMU WALL TOP BRACING



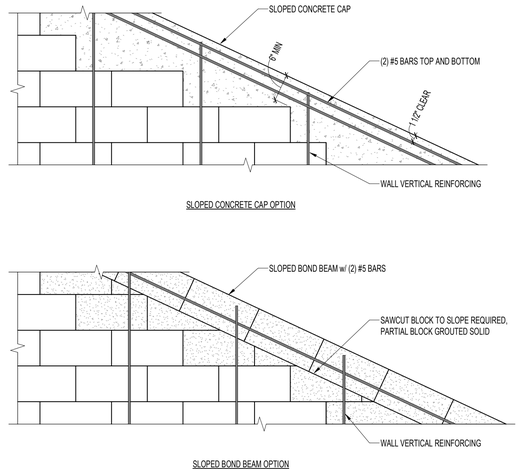
7 S402 PARTITION SUPPORT AT ROOF DECK



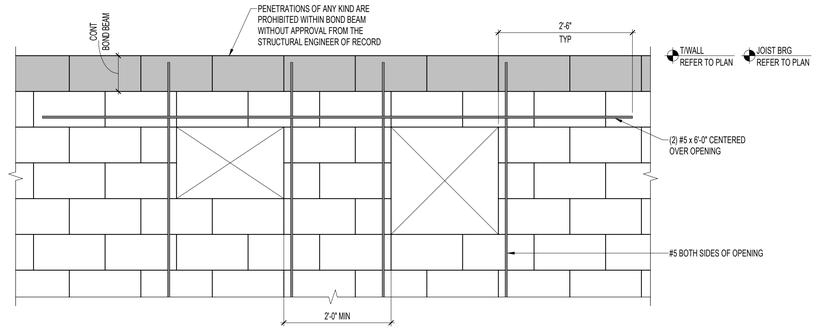


6 S402 PRECAST PLANK SIDE LAP ON CMU WALL

5 S402 PRECAST PLANK BEARING ON CMU WALL

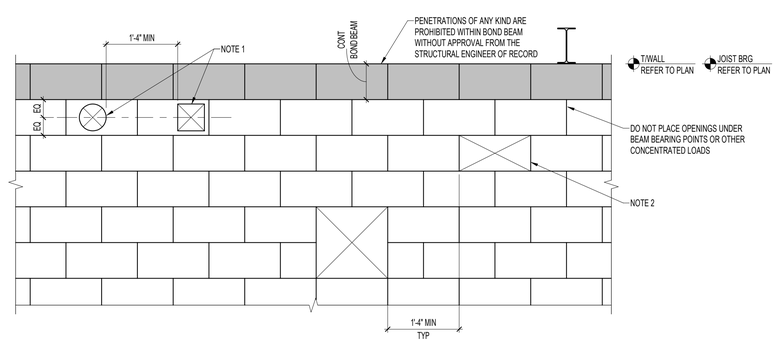


4 S402 TYPICAL SLOPE TOP OF CMU WALL DETAIL



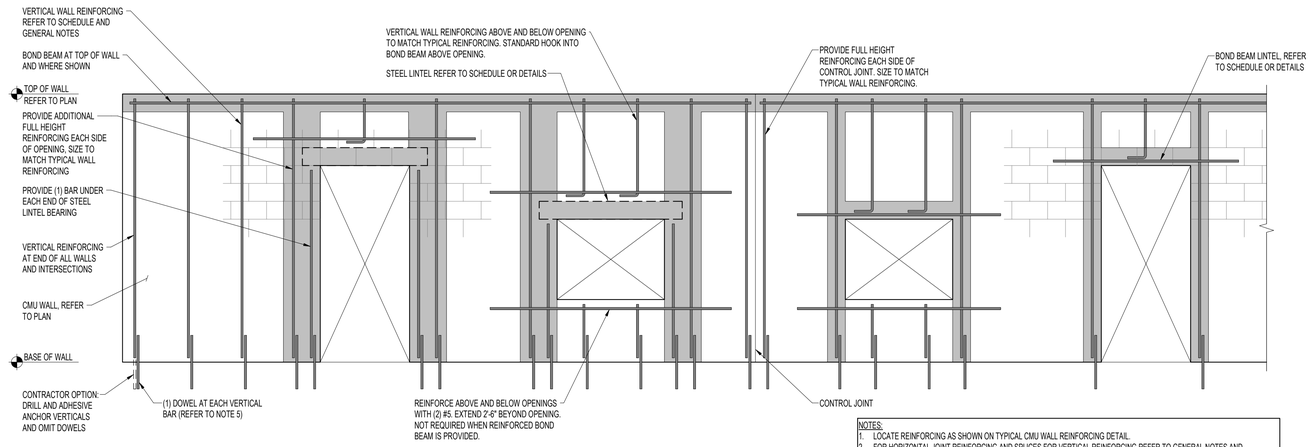
NOTES:
1. THIS DETAIL APPLIES TO MEP OPENINGS WITH A MAXIMUM DIMENSION OF RECTANGULAR, SQUARE, OR ROUND OPENING OF 32" AND LARGER THAN 16" UNLESS A SPECIFIC LINTEL IS CALLED OUT ON PLAN.
2. THIS DETAIL ONLY APPLIES TO NEW WALL CONSTRUCTION WHERE OPENING IS BUILT WITH WALL.
3. REFER TO MEP DRAWINGS FOR SIZE AND LOCATION OF ALL MEP WALL PENETRATIONS.
4. WHERE HORIZONTAL BARS ABOVE OPENING CANNOT BE EXTENDED AS SHOWN, PROVIDE HOOKED ENDS.

3 S402 TYPICAL CMU WALL OPENING 16" UP TO 32"



NOTES:
1. ROUND OR SQUARE HOLES NO GREATER THAN 6" MAY BE PLACED ANYWHERE IN UNREINFORCED CELLS AT MID-HEIGHT OF BLOCK. THESE OPENINGS SHALL NOT OCCUR THRU ENDS OF BLOCK AT HEAD JOINT NOR SHALL THEY INTERRUPT ANY VERTICAL OR HORIZONTAL WALL REBAR.
2. ONE FULL BLOCK MAY BE OMITTED FOR AN OPENING WITH NO ADDITIONAL REINFORCEMENT ABOVE. ANY VERTICAL OR HORIZONTAL REBAR INTERRUPTED SHALL BE PLACED IN ADJACENT CELLS.
3. REFER TO MEP DRAWINGS FOR SIZE AND LOCATION OF ALL MEP WALL PENETRATIONS.

2 S402 TYPICAL SMALL MEP PENETRATIONS UP TO 16" WIDE



NOTES:
1. LOCATE REINFORCING AS SHOWN ON TYPICAL CMU WALL REINFORCING DETAIL.
2. FOR HORIZONTAL JOINT REINFORCING AND SPLICES FOR VERTICAL REINFORCING REFER TO GENERAL NOTES AND SCHEDULES.
3. REFER TO ARCH PLANS FOR SIZE AND LOCATION OF WALLS NOT SHOWN ON STRUCTURAL DRAWINGS.
4. GROUT CELLS SOLID FULL HEIGHT AT ALL VERTICAL REINFORCING.
5. HOOK DOWELS INTO FOUNDATION IF AVAILABLE EMBEDMENT LENGTH IS LESS THAN STRAIGHT BAR DEVELOPMENT LENGTH
6. SHADED AREAS INDICATE LOCATIONS WHERE PENETRATIONS OF ANY KIND ARE PROHIBITED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
7. REFER TO TYPICAL DETAILS FOR LATERAL SUPPORT REQUIREMENTS AT TOPS OF ALL NON LOAD BEARING CMU WALLS.

1 S402 TYPICAL WALL ELEVATION

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

STRUCTURAL DETAILS

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www.pierceengineers.com
PE Project: 22247

PROJECT NO.: 154.21.085
DRAWN BY: DJK
CHECKED BY: PE
DATE: 06.29.22
SHEET NO.: S402

DUCT SYSTEMS:

- BACKDRAFT DAMPER (BD-#)
- FIRE DAMPER (FD-#)
- SMOKE DAMPER (SD-#)
- COMBINATION FIRE SMOKE DAMPER (FSD-#)
- MOTORIZED DAMPER (MD-#)
- VOLUME DAMPER
- SIDEWALL GRILLE
- CEILING DIFFUSER, SUPPLY 4-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 3-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 2-WAY BLOW PATTERN
- CEILING DIFFUSER, SUPPLY 1-WAY BLOW PATTERN
- CEILING DIFFUSER, RETURN
- CEILING DIFFUSER, EXHAUST
- DOOR UNDERCUT (UC)
- DUCT SECTION, SUPPLY
- DUCT SECTION, RETURN
- DUCT SECTION, EXHAUST
- FLEXIBLE DUCT
- DIRECTION OF AIR FLOW
- DUCT SIZE TRANSITION
- RECTANGULAR ELBOW DOWN - SINGLE LINE
- ROUND ELBOW DOWN - SINGLE LINE
- RECTANGULAR ELBOW UP - SUPPLY
- RECTANGULAR ELBOW DOWN - SUPPLY
- ROUND ELBOW UP - SUPPLY
- ROUND ELBOW DOWN - SUPPLY
- RECTANGULAR ELBOW UP - RETURN
- RECTANGULAR ELBOW DOWN - RETURN
- ROUND ELBOW UP - RETURN
- ROUND ELBOW DOWN - RETURN
- RECTANGULAR ELBOW UP - EXHAUST
- RECTANGULAR ELBOW DOWN - EXHAUST
- ROUND ELBOW UP - EXHAUST
- ROUND ELBOW DOWN - EXHAUST
- MITERED ELBOW
- MITERED ELBOW WITH TURNING VANES
- ACCESS DOOR - TOP/SIDE
- AIR FLOW MEASURING STATION
- SOUND ATTENUATOR
- FLEXIBLE CONNECTION

HYDRONIC VALVES:

- TWO-POSITION 2-WAY VALVE
- MODULATING 2-WAY VALVE
- TWO-POSITION 3-WAY VALVE
- MODULATING 3-WAY VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIFFERENTIAL PRESSURE VALVE
- FLOAT OPERATED VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PRESSURE INDEPENDENT VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- TRIPLE DUTY VALVE
- BACKFLOW PREVENTER

HYDRONIC SPECIALTIES:

- FS — FLOW SWITCH
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE GAUGE
- PS — PRESSURE SWITCH
- PSD — PUMP SUCTION DIFFUSER
- THERMOMETER
- STRAINER, BLOW DOWN
- STRAINER, HOSE CONNECTION
- STRAINER
- ANCHOR
- PIPING GUIDE
- EXPANSION LOOP
- EXPANSION JOINT
- FM — FLOW METER

MECHANICAL EQUIPMENT:

PLAN	SYMBOL	
		AIR SEPARATOR
		BASKET STRAINER
		EXPANSION TANK, FREE STANDING
		EXPANSION TANK, HANGING
		SIDE STREAM FILTER
		LOUVER
		HEAT EXCHANGER, PLATE AND FRAME
		HEAT EXCHANGER, SHELL AND TUBE
	T	STEAM TRAP
	VFD	VARIABLE FREQUENCY DRIVE
	CB	CONTROL BOX
	M	ENERGY METER
	M	NATURAL GAS METER
		PUMP (SEE SCHEDULE FOR TYPE)
		VARIABLE AIR VOLUME BOX
		VAV BOX WITH ELECTRIC REHEAT
		VAV BOX WITH HYDRONIC REHEAT
		ROUND IN / ROUND OUT VAV BOX
		FAN POWERED BOX

HVAC SENSORS:

- CO2 — CARBON DIOXIDE
- CO — CARBON MONOXIDE
- DS — DEWPOINT
- G — GAS
- H — HUMIDITY
- NO — NITROGEN OXIDE
- P — RELATIVE PRESSURE MONITOR
- R — REFRIGERANT MONITOR
- SD — SMOKE DETECTOR
- SP — STATIC PRESSURE
- T — THERMOSTAT
- TS — TEMPERATURE

HYDRONIC FITTINGS:

- 45° ELBOW
- CAP
- 90° ELBOW
- ELBOW DOWN
- ELBOW UP
- TEE
- TEE DOWN
- TEE UP
- UNION
- FLEXIBLE CONNECTION
- PIPE CONTINUATION
- FLANGE

HYDRONIC SYSTEM ABBREVIATIONS:

— — — —	PIPE TO BE DEMOLISHED
— D —	DRAIN
— NG —	NATURAL GAS
— LP —	LIQUEFIED PETROLEUM
— — V — —	VENT
— CHWS —	CHILLED WATER SUPPLY
— — CHWR — —	CHILLED WATER RETURN
— CWS —	CONDENSER WATER SUPPLY
— — CWR — —	CONDENSER WATER RETURN
— — CD — —	CONDENSATE DRAIN
— HWS —	HEATING HOT WATER SUPPLY
— — HWR — —	HEATING HOT WATER RETURN
— GS —	GLYCOL SUPPLY
— — GR — —	GLYCOL RETURN
— MU —	MAKEUP WATER
— HPWS —	HEAT PUMP WATER SUPPLY
— — HPWR — —	HEAT PUMP WATER RETURN
— GWS —	GEOTHERMAL WATER SUPPLY
— — GWR — —	GEOTHERMAL WATER RETURN
— — RHG — —	REFRIGERANT HOT GAS
— RL —	REFRIGERANT LIQUID
— RS —	REFRIGERANT SUCTION
— HPS —	HIGH PRESSURE STEAM
— MPS —	MEDIUM PRESSURE STEAM
— LPS —	LOW PRESSURE STEAM
— — HPC — —	HIGH PRESSURE STEAM CONDENSATE
— — MPC — —	MEDIUM PRESSURE STEAM CONDENSATE
— — LPC — —	LOW PRESSURE STEAM CONDENSATE
— — CR — —	CONDENSATE RETURN
— — PC — —	PUMPED CONDENSATE
— VPD —	VACUUM PUMP DISCHARGE
— BBD —	BOILER BLOWDOWN
— FWS —	BOILER FEEDWATER SUPPLY
— H —	HUMIDIFICATION LINE
— FOF —	FUEL OIL FILL
— — FOR — —	FUEL OIL RETURN
— FOS —	FUEL OIL SUPPLY
— — FOV — —	FUEL OIL VENT
— A —	COMPRESSED AIR
— VAC —	VACUUM AIR

MECHANICAL TAGS:

- ## x ## XX — VISIBLE DIMENSION; DUCT DIMENSIONS (CLEAR, INTERNAL)
- SYSTEM ABBREVIATION
- TYPE: S - SUPPLY; R - RETURN; E - EXHAUST; T - TRANSFER
- SIZE (OPTIONAL)
- X# (# x #) / ### — DIFFUSER TAG
- AIR FLOW RATE
- MARK / NUMBER — MECHANICAL EQUIPMENT TAG
- RISER X / NUMBER — RISER TAG
- PIPE SIZE; ##" XX; SYSTEM ABBREVIATION — PIPE DIMENSION TAG
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION

DUCT SYSTEM ABBREVIATIONS:

CA	COMBUSTION AIR
CV	COMBUSTION VENT
EA-AII	EXHAUST AIR - AIRBORNE INFECTIOUS ISOLATION
EA-CH	EXHAUST AIR - CHEMICAL
EA-D	EXHAUST AIR - DRYER
EA	EXHAUST AIR - ENVIRONMENTAL
EA-K1	TYPE 1 - KITCHEN EXHAUST
EA-K2	TYPE 2 - KITCHEN EXHAUST
OA	OUTDOOR AIR
RA	RETURN AIR
SA	SUPPLY AIR

GENERAL ABBREVIATIONS:

A/E	ARCHITECT/ENGINEER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
ARCH	ARCHITECT
BFG	BELOW FINAL GRADE
BLDG	BUILDING
CLG	CEILING
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION REFERENCE
EM	EMERGENCY
EP	EXPLOSION PROOF
EWC	ELECTRIC WATER COOLER
F	FLUSH
FBO	FURNISHED BY OTHERS
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FS	FLOW SWITCH
GC	GENERAL CONTRACTOR
GRD	GROUND
GYP	GYPSUM BOARD
HC	HEATING CONTRACTOR
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HW	HEAVYWALL
ID	INDIRECT
IL	INTERLOCK
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PLBG	PLUMBING CONTRACTOR
RM	ROOM
SURF	SURFACE
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
VC	VENTILATION CONTRACTOR

GENERAL:

- ## — DRAWING KEYNOTE SYMBOL
- DETAIL NUMBER / SHEET NUMBER — BUILDING SECTION
- DETAIL NUMBER / SHEET NUMBER — BUILDING ELEVATION
- DETAIL NUMBER / SHEET NUMBER — CALLOUT BOUNDARY
- DETAIL NUMBER / SHEET NUMBER — VIEW REFERENCE CALLOUT
- +X" - X" — MOUNTING HEIGHT DESIGNATION

MECHANICAL ABBREVIATIONS:

AC	AIR CONDITIONER
ACH	AIR CHANGES PER HOUR
AF	AIR FILTER
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CC	COOLING COIL
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT AIR VOLUME
DAT	DISCHARGE AIR TEMPERATURE
DB	DECIBEL OR DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DH	DUCT HEATER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FC	FAN COIL
FD	FIRE DAMPER
FH	FUME HOOD
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FREEZE STAT
FSD	COMBINATION FIRE/SMOKE DAMPER
GA	GAUGE
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDISTAT
HC	HEATING COIL
HD	HOOD OR HEAT DETECTOR
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER
HP	HORSEPOWER OR HEAT PUMP
HR	HOUR
HUM	HUMIDIFIER
HX	HEAT EXCHANGER
HZ	HERTZ
IN W.C.	INCHES WATER COLUMN
IN W.G.	INCHES WATER GAUGE
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
NC	NORMALLY CLOSED
NK	NECK
NO	NORMALLY OPEN
P	PUMP
PA	PASCAL
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQAURE INCH GAUGE
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RO	RELIEF OPENING
RPM	REVOLUTIONS PER MINUTE
SAT	SUPPLY AIR TEMPERATURE
SD	SMOKE DAMPER OR SMOKE DETECTOR
SF	SQUARE FEET OR SUPPLY FAN
SPS	STATIC PRESSURE SENSOR
T	THERMOSTAT
TD	TEMPERATURE DIFFERENCE
TO	TRANSFER OPENING
TYP	TYPICAL
UC	UNDERCUT (DOOR)
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF
W	WATT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

RENOVATION LEGEND:

<E>	EXISTING TO REMAIN
<ED>	EXISTING LOCATION, NEW DEVICE OR EQUIPMENT TO BE INSTALLED IN PLACE
<ER>	EXISTING TO BE RELOCATED
<EO>	EXISTING TO BE REMOVED
<EN>	EXISTING IN NEW LOCATION
<N>	NEW
<RAI>	REMAIN AS IS

REVISIONS:

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

MECHANICAL GENERAL NOTES, SYMBOLS, & LEGENDS

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PROJECT NO.: 154.21.085

DRAWN BY: Author | CHECKED BY: Checker

DATE: 04.10.22

SHEET NO.: M0.0

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SPLIT SYSTEM SCHEDULE - CONDENSING UNITS

TAG	CONNECTED AHU	DESIGN AMBIENT AIR TEMPERATURES		COOLING		ELECTRICAL			WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
		SUMMER		NOMINAL TONNAGE	TOTAL CAPACITY (MBH)	MCA	MOCP	V/PH/HZ				
		DB°F	WB°F									
ACCU-1	AHU-1	90.3	74.3	25	290.6	120.2	150	208/3/60	1,095	CARRIER	38APD0255H-22194	ALL

REMARKS:

1. FACTORY PROVIDED NON-FUSED DISCONNECT
2. LOW SOUND FANS AND COMPRESSORS.
3. PROVIDE LONG LINE LENGTH CHECK VALVES.
4. SINGLE POINT POWER.
5. PROVIDE SECURITY GRILLES AND HAIL GUARDS.
6. PROVIDE BACNET COMMUNICATION.
7. PROVIDE OUTSIDE AIR TEMPERATURE SENSOR.
8. UNIT SHALL BE GRADE MOUNTED INSTALLED ON CONCRETE PAD.
9. PROVIDE ONE-YEAR PARTS AND COMPLETE UNIT PARTS WARRANTY.
10. PROVIDE FIVE-YEAR COMPRESSOR PARTS WARRANTY.

SPLIT SYSTEM SCHEDULE - AIR HANDLING UNIT

TAG	CONNECTED ACCU	SERVICE	MOUNTING	DESIGN MAX AIRFLOWS		SUPPLY FAN			COOLING						GAS HEATING							ELECTRICAL-PER FAN			FILTER RATING PRE/FINAL	WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
				SUPPLY	OUTSIDE AIR	AIRFLOW (CFM)	ESP	BHP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT		LAT		EAT	LAT	INPUT (MBH)	OUTPUT (MBH)	HEATING STAGES	MAX GAS PRESSURE (IN....	MIN GAS PRESSURE (IN....	HP	FLA	V/PH/HZ					
				CFM	CFM						DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)	DB (DEG F)	DB (DEG F)													
AHU-1	ACCU-1	OFFICE SPACES	FLOOR MOUNTED	7,000	1,750	7,000	1.75	8.7	276.72	198.85	78.9	65.8	55	55	51.5	65	200	160	10:1	13.5	5.0	5.0	15.4	208/3/60	MERV 8/13	3,400	CARRIER	39M1402HPDL-D	ALL

REMARKS:

1. DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR.
2. FIELD INSTALLED AND WIRED, FULLY PROGRAMMABLE, DDC CONTROLS COMPLETE WITH ALL END-DEVICES, SENSORS, SWITCHES, CONTROL VALVES AND ACTUATORS. CONTROLS BY AUTOMATED LOGIC.
3. FILTER MAGNEHELIC GAUGE.
4. DIRECT DRIVE PLENUM FANS, MOTOR SHAFT GROUND RING, PIEZOMETER PLUS TRANSDUCER AND BLANK-OFF PLATE, ONE VFD FOR TWO FANS, INDIVIDUAL OVERLOAD PER MOTOR.
5. ONE FACTORY INSTALLED VFD FOR UNIT – 3 YEAR PARTS AND LABOR WARRANTY ON VFDS. START-UP BY MANUFACTURER.
6. FIELD PROVIDED AND INSTALLED OUTDOOR AIRFLOW MEASURING STATIONS.
7. 4" MERV 13 + 2" MERV 8 PLEATED MEDIA FILTERS
8. CASING LEAKGE RATE SHALL BE LESS THAN 1% AT 8" WG OF NOMINAL AIRFLOW OR 50 CFM, WHICHEVER IS GREATER.
9. R-13 DOUBLE WALL SEALED PANEL. LEVEL 1 THERMAL BREAK. GALVANIZED EXTERIOR AND INTERIOR PANELS.
10. PROVIDE PREMIUM PARALLEL BLADE DAMPERS FOR RETURN, PREMIUM OPPOSED BLADE DAMPERS FOR OUTSIDE AIR.
11. 6" INTEGRAL BASE RAIL
12. FACTORY PRESSURE TEST COILS TO 450PSIG
13. SS COOLING COIL DRAINPAN AND COIL CASING – NO EXCEPTIONS
14. HINGED, LOCKABLE DOUBLE-WALL ACCESS DOORS ON BOTH SIDES.
15. UL LISTING
16. OEM TWO YEAR PARTS AND LABOR WARRANTY – ENTIRE UNIT. FACTORY STARTUP.
17. SUBMIT SOUND DATA PER AHRI STD 430/431. NO EXCEPTIONS
18. 20 GAGE GALVANIZED STEEL GAS HEAT EXCHANGER CABINET, INDUCED DRAFT FAN, 1" THICK, MINIMUM 1-1/2 LB/CU FT DENSITY THERMAL INSULATION FOR HEAT EXCHANGER CABINET.
19. GAS HEATING SECTION TO HAVE SEPARATE 115 VOLT POWER CONNECTION.

EXHAUST FAN SCHEDULE

TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	DRIVE	BLOWER SECTION					SPEED CONTROL	CONTROLLED BY	V/PH/HZ	WEIGHT	REMARKS
							CFM	ESP	MOTOR HP	BHP	RPM					
EF-1	WORK AREA	SHOP EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-2	WORK AREA	SHOP EXHAUST	LOREN COOK	225SQNH17D (VF)	CENTRIFUGAL INLINE	DRIVE	2,050	0.5	1-1/4	0.302	669	VARIFLOW EC	BUILDING PRESSURE	208/3/60	271	1,2,3,4
EF-3	GARAGE	TOILET/LOCKER EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-4	GARAGE	SALT STORAGE EXHAUST	LOREN COOK	100SQN17DEC	CENTRIFUGAL INLINE	DIRECT	450	0.5	1/4	78 WATTS	1,466	FSC	OCCUPANCY SCHEDULE	115/1/60	60	1,2,3
EF-5	GARAGE	CO/NOX EXHAUST	LOREN COOK	245SQN17D (VF)	CENTRIFUGAL INLINE	DIRECT	3,700	0.5	1-1/4	0.58	594	VARIFLOW EC	CO/NOX	208/3/60	309	1,2,3
EF-6	GARAGE	CONSTANT GARAGE EXHAUST	LOREN COOK	100SQN12D	CENTRIFUGAL INLINE	DIRECT	300	0.5	1/6	104 WATTS	1,301	FSC	OCCUPANCY SCHEDULE	115/1/60	54	1,2,3
EF-7	MEZZANINE	AHU-1 GENERAL EXHAUST	LOREN COOK	225QMXHPD11	MIXED FLOW INLINE	DIRECT	5,600	0.5	3	0.837	868	VFD	BUILDING PRESSURE	208/3/60	542	1,2,3,4
EF-8	GARAGE	STORAGE EXHAUST	LOREN COOK	135SQN-B OR81	CENTRIFUGAL INLINE	BELT	350	0.5	1/4	0.121	1,156	NA	CONSTANT	115/1/60	66	1,3,5,6

REMARKS:

1. PROVIDE INTEGRAL DISCONNECT. DISCONNECT SHALL BE RATED FOR THE INSTALLED ENVIRONMENT.
2. PROVIDE MOTORIZED DAMPER POWERED FROM DDC.
3. PROVIDE VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
4. MANUFACTURER TO PROVIDE PRESSURE CONTROL PACKAGE.
5. PROVIDE GRAVITY BACKDRAFT DAMPER.
6. PROVIDE ALL ACCESSORIES AND COMPONENTS FOR SPARK-PROOF CONSTRUCTION.

DIRECT FIRED INDOOR AIR HANDLING UNIT SCHEDULE

TAG	BURNER TYPE	AMBIENT CONDITIONS	SUPPLY FAN				GAS HEATING COIL						ELECTRICAL			FILTER RATING	WEIGHT (LB)	MANUFACTURER	MODEL NO.	REMARKS
		WINTER	AIRFLOW (CFM)	MAX OUTSIDE AIR (CFM)	ESP	BHP	EAT	LAT	INPUT (MBH)	OUTPUT (MBH)	MIN GAS PRESSURE (IN. WG)	MAX GAS PRESSURE (IN. WG)	MCA	MOCP	V/PH/HZ					
		DB°F					DB (DEG F)	DB (DEG F)												
MAU-1	SEPARATED COMBUSTION	-10	4,600	3,900	1	3.01	1.5	97.5	600	480	6.5	14.0	21.0	35	208/3/60	MERV 8	1,377	STERLING	MS60A6B01K4351AB1R1	1-11
AHU-2	SEPARATED COMBUSTION	-10	2,600	550	1	1.64	55	91.87	150	120	6.5	14.0	10.2	25	208/3/60	MERV 8	833	STERLING	MS20A2B01K41G4MA3B1	1-12

REMARKS:

1. INSTALL PER MANUFACTURER'S WITH VIBRATION ISOLATION HANGERS.
2. PROVIDE MANUFACTURER DISCONNECT SWITCH.
3. PROVIDE END OUTISE AIR INTAKE, BOTTOM RETURN, AND END DISCHARGE.
4. COORDINATE CONTROLS LOCATION WITH PLANS TO MAINTAIN REQUIRED CLEARANCES.
5. PROVIDE MOTORIZED DAMPERS ON OA AND RA OPENINGS.
6. STARTUP SHALL BE BY MANUFACTURER.
7. PROVIDE SEVEN DAY PROGRAMMABLE THERMOSTAT.
8. PROVIDE HINGED ACCESS DOORS.
9. PROVIDE STAINLESS STEEL NATURAL GAS BURNER AND EVAPORATOR COMPONENTS.
10. PROVIDE MANUFACTURER PROVIDED SUPPLY FAN VFD FOR FIELD BALANCING.
11. 2-YEAR PARTS WARRANTY, 5-YEAR LABOR WARRANTY.
12. PROVIDE THREE-WAY DISCHARGE HEAD.

REVISIONS:
1 7.13.2022 ADDENDUM NO.1
2 7.15.2022 ADDENDUM NO.2

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FAN POWERED BOX SCHEDULE

TAG	MANUFACTURER	MODEL	UNIT SIZE	PRIMARY AIR			FAN			ELECTRIC HEAT						ELECTRICAL		REMARKS
				INLET SIZE (IN)	MAX CFM	MIN CFM	CFM	HP	V/PH/HZ	HEATING CFM	EAT (DEG F)	LAT (DEG F)	KW	V/PH/HZ	STAGES	MCA	MOCP	
FPB-1	TITUS	DTFS	D	12	1,300	350	1,300	0.5	208/1/60	1,300	64.5	90	10.5	208/3/60	SCR	42.7	45	ALL

REMARKS:

1. PROVIDE SINGLE POINT POWER AND DOOR INTERLOCK DISCONNECT.
2. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
3. PROVIDE EC MOTORS.
4. PROVIDE 1" ECOSHIELD LINER.
5. PROVIDE INDUCED AIR FILTER, DISPOSABLE TYPE.
6. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
7. PROVIDE DUST TIGHT CONSTRUCTION.

VARIABLE AIR VOLUME WITH ELECTRIC REHEAT BOX SCHEDULE

TAG	MANUFACTURER	MODEL	PRIMARY AIR			ELECTRIC HEAT						ELECTRICAL		REMARKS
			INLET SIZE (IN)	MAX CFM	MIN CFM	HEATING CFM	EAT (DEG F)	LAT (DEG F)	KW	V/PH/HZ	STAGES	MCA	MOCP	
VAVE-1	TITUS	DESV	8	820	820	820	55	72	5.5	208/3/60	SCR	19.1	20	ALL

REMARKS:

1. PROVIDE SINGLE POINT POWER AND DOOR INTERLOCK DISCONNECT.
2. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
3. PROVIDE 1" ECOSHIELD LINER.
4. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.
5. PROVIDE DUST TIGHT CONSTRUCTION.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	STYLE	WATT DENSITY	HEATING CAPACITY (W)	LENGTH (IN)	V/PH/HZ	REMARKS
EBB-A	OULLET	OHB2108	BOTTOM INLET/PEDESTALS	STANDARD	1577	70-7/8	208/1/60	ALL
EBB-B	OULLET	OHB2808	BOTTOM INLET/PEDESTALS	STANDARD	2103	94-1/2	208/1/60	ALL

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.

VARIABLE AIR VOLUME BOX SCHEDULE

TAG	MANUFACTURER	MODEL	PRIMARY AIR			REMARKS
			INLET SIZE (IN)	MAX CFM	MIN CFM	
VAV-1	TITUS	DESV	12	1,300	300	ALL
VAV-2	TITUS	DESV	12	1,300	300	ALL
VAV-3	TITUS	DESV	10	1,100	200	ALL
VAV-4	TITUS	DESV	8	500	120	ALL
VAV-5	TITUS	DESV	6	400	8	ALL
VAV-6	TITUS	DESV	8	900	120	ALL
VAV-7	TITUS	DESV	8	500	120	ALL
VAV-8	TITUS	DESV	6	400	80	ALL
VAV-9	TITUS	DESV	8	600	120	ALL

1. COORDINATE UNIT ORIENTATION WITH FLOOR PLANS AND FIELD CONDITIONS TO MAINTAIN PROPER CLEARANCE.
2. PROVIDE 1" ECOSHIELD LINER.
3. PROVIDE HANGERS AND VIBRATION ISOLATION AS REQUIRED BY SPECIFICATIONS.

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	HEATING CAPACITY (KW)	AIRFLOW	V/PH/HZ	AMPS	WEIGHT	REMARKS
EUH-3	QMARK	GUX300812	3	700	208/1/60	16.7	135	1,2,3,4
EUH-5	QMARK	MUH05-81	5	350	208/3/60	24	27	1,2,3

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT SET TO 60F.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.
4. PROVIDE EXPLOSION PROOF CONSTRUCTION.

ELECTRIC CABINET UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	HEATING CAPACITY (KW)	DIMENSIONS (HxWxD) (IN)	INSTALLATION	AIRFLOW	V/PH/HZ	AMPS	WEIGHT	REMARKS
ECUH-5	QMARK	CU935	5	35"x26-3/8"x9-3/4"	FULLY RECESSED	250	208/3/60	15	120	ALL

REMARKS:

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PRVOVIDE BUILT-IN THERMOSTAT SET TO 65F.
3. PROVIDE NON-FUSED DISCONNECT SWITCH.
4. COORDINATE FINISH WITH ARCHITECT.

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	SERVICE	MATERIAL	FACE SIZE	SLOT NUMBER	SLOT WIDTH (INCH)	SLOT LENGTH (INCH)	DAMPER	INSULATED PLENUM	REMARKS
A1	TITUS	OMNI	SQUARE PLAQUE	SUPPLY/RETURN/EXHAUST	STEEL	24X24	-	-	-	NO	NO	1,2,3
B1	TITUS	350RL	35 DEGREE DEFLECTION GRILLE	EXHAUST/RETURN	STEEL	INLET+2"	-	-	-	NO	NO	1,2,3
B2	TITUS	300RL	DOUBLE DEFLECTION SUPPLY GRILLE	SUPPLY	ST EEL	INLET+2"	-	-	-	NO	NO	1,2,3
C1	TITUS	TBDI-80	PLENUM SLOT DIFFUSER	SUPPLY	STEEL	-	2	1	48	NO	YES	1,2,3,4
C2	TITUS	TBDI-80	PLENUM SLOT DIFFUSER	SUPPLY	STEEL	-	3	1	48	NO	YES	1,2,3,4
D1	TITUS	S300FL	SPIRAL DUCT MOUNTED GRILLE	SUPPLY	ALUMINUM	INLET+2"	-	-	-	EXTRACTOR	NO	1,2,3
E1	TITUS	DL-SV	LONG THROW GRILLE	SUPPLY	ALUMINUM	INLET+2"	-	-	-	EXTRACTOR	NO	1,2,3

REMARKS:

1. COORDINATE FINISH WITH ARCHITECT.
2. COORDINATE FRAME STYLES WITH ARCHITECTURAL PLANS
3. PROVIDE ALL ACCESSORIES FOR HARD CEILING INSTALLATION WHERE REQUIRED.
4. IF LOCATED ALONG EXTERIOR. ADJUST FLOW PATTERN CONTROLLERS TO THROW TOWARD WINDOW. IF LOCATED IN INTERIOR OF SPACE, ADJUST FLOW PATTERN CONTROLLERS TO THROW HORIZONTALLY TOWARD CENTER OF ROOM.

REVISIONS

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DATE: 04.10.22

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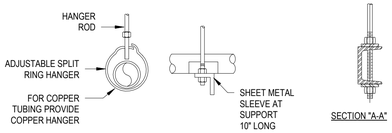
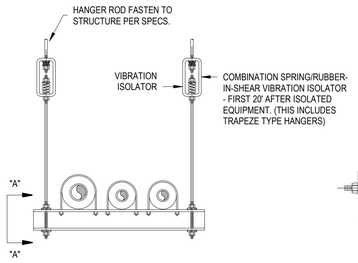
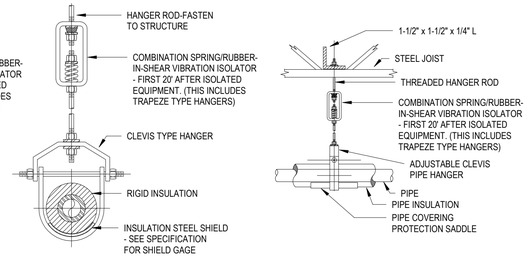


TYPICAL PIPING SUPPORT FOR ALL NON-INSULATED PIPING



TRAPEZE HANGER DETAIL

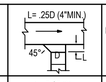
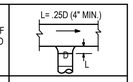
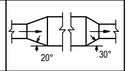
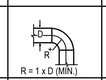
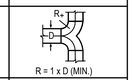
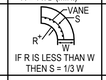
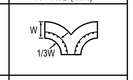
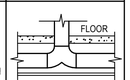


TYPICAL PIPING SUPPORT FOR ALL INSULATED PIPING

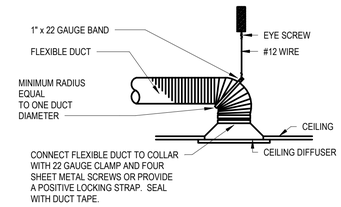
PIPE SUPPORT SCHEDULE												
PIPE SIZE (INCHES)		1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6-8
SPACING (FEET)	STEEL	5	6	7	8	9	10	11	12	12	12	12
	COPPER	6	6	6	6	10	10	10	10	10	10	10

NOTE: HANGER ROD SIZE - 3/8 INCH

3 TYPICAL PIPE SUPPORT DETAIL
NOT TO SCALE

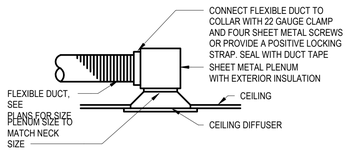
BRANCH TAKE-OFF RECTANGULAR TO RECTANGULAR		BRANCH TAKE-OFF RECTANGULAR TO ROUND	
BRANCH TAKE-OFF ROUND TO ROUND		TRANSITION FITTING	
STANDARD ELBOW		TEE	
SHORT ELBOW		SHORT TEE	
SINGLE DIRECTION TRANSITION USE SIMILAR TRANSITION WHEN FEEDING UP TO CEILING CAVITY		SPLIT DIRECTION TRANSITION USE SIMILAR TRANSITION WHEN FEEDING UP TO CEILING CAVITY	

1 TYPICAL DUCT TAKE-OFFS DETAIL
NOT TO SCALE



NOTE:
NORMALLY USED WHEN FULL RADIUS ELBOW IN FLEX DUCT CAN BE ACHIEVED.

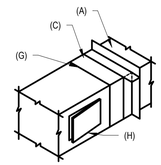
DIFFUSER DETAIL - OPTION #1

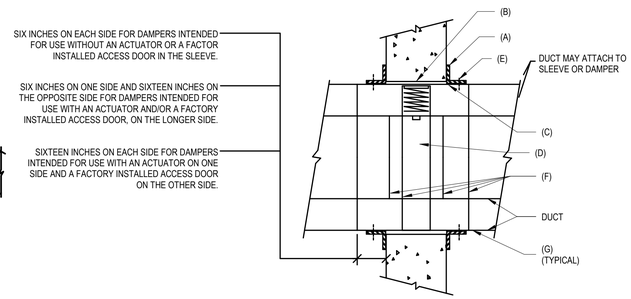


NOTE:
USED WHEN NORMAL RADIUS ELBOW CAN'T BE ATTACHED AS SHOWN IN OPTION #1.

DIFFUSER DETAIL - OPTION #2

4 TYPICAL DIFFUSER AND GRILLE CONNECTIONS
NOT TO SCALE





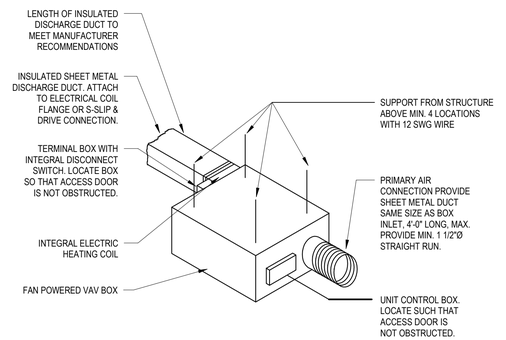
NOTES:
1. FIRE DAMPER ASSEMBLIES MUST BE UL 555 LISTED AND LABELED FOR THE APPLICATION. FIRE DAMPER ASSEMBLES MUST MEET NFPA 90A AND ALL LOCAL CODES.
2. PROVIDE FIRE DAMPERS THAT HAVE FIRE RATINGS COMPATIBLE WITH THE BUILDING SURFACE IN WHICH THE DAMPER IS INSTALLED.
3. REVIEW ARCHITECTURAL DRAWINGS, INCLUDING ANY LIFE SAFETY DRAWINGS, AND PROVIDE THE PROPER RATED DAMPERS. WHERE A CONFLICT EXISTS BETWEEN THE WALL RATINGS DEPICTED ON THE MECHANICAL DRAWINGS AND THE ARCHITECTURAL DRAWINGS, THE ARCHITECTURAL DRAWINGS SHALL PREVAIL.
4. ALL DAMPER BLADES MUST BE 100% OUT OF THE AIR STREAM. DAMPERS WITH BLADES IN THE AIR STREAM ARE NOT ACCEPTABLE.
5. ALL FUSIBLE LINKS SHALL BE 212 °F RATED.
6. FIRE DAMPER SLEEVE CLEARANCE WITHIN WALL OPENING:
7. CLEARANCE REQUIREMENTS FOR DAMPER SLEEVES WITHIN A WALL OPENINGS ARE BASED ON 1/8 INCH PER FOOT OF WIDTH (OR HEIGHT) UNLESS OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. THE SLEEVE MAY REST ON THE BOTTOM OF THE OPENING, AND NEED NOT BE CENTERED. (FRACTIONAL DIMENSIONS SHALL BE TAKEN AS THE NEXT LARGEST WHOLE FOOT.) THE SLEEVE IS RETAINED IN THE WALL OPENING BY THE USE OF STEEL RETAINING ANGLES (A). THESE MUST OVERLAP THE EDGE OF THE FRAMING BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE OPENING. THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING AFTER THE OPENING HAS BEEN FRAMED AND FIRE RESISTIVE MATERIALS PROVIDED WHERE REQUIRED. THE FIRE RESISTIVE MATERIAL SHALL BE EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIAL USED IN THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE WALL PENETRATION. THE CONTRACTOR ERECTING THE WALL IS RESPONSIBLE FOR PROVIDING THE FIRE RESISTIVE MATERIAL AND CORRECT SIZE OPENINGS TO ACHIEVE THE REQUIRED CLEARANCE.
8. MANUFACTURER'S INSTALLATION DETAILS:
9. THE FIRE DAMPER MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS AS TESTED AND APPROVED BY UL MAY BE USED IN LIEU OF THE ABOVE DETAILS WHERE APPLICABLE. PROVIDE SUPPLIER'S UL DETAILS IN SUBMITTALS IF THIS DETAIL IS NOT FOLLOWED.
10. MINIMUM STEEL SLEEVE THICKNESS:
FOR BREAKAWAY CONNECTIONS, RECTANGULAR OR ROUND DUCTWORK.

DUCT DIMENSIONS	SLEEVE GAUGE
12" DOWN	26
13"-30"	24
31"-54"	22
55"-84"	20
85" - UP	18

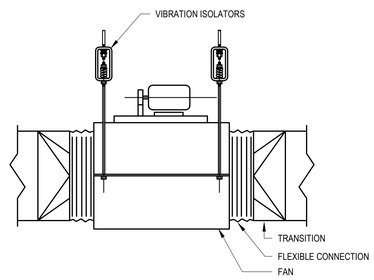
11. VERTICAL POSITION IS SHOWN:
HORIZONTAL INSTALLATION IS SIMILAR. FOLLOW INSTALLATION INSTRUCTION FOR FUSIBLE LINKS.

TYPICAL INSTALLATION DETAILS
A. RETAINING ANGLES
MINIMUM 1 1/2" x 1 1/2" x 0.054 (16 GA.)
RETAINING ANGLES MUST OVERLAP STRUCTURE OPENING 1"
MINIMUM AND COVER CORNERS OF OPENING AS SHOWN.
B. CLEARANCE: 1/8" PER LINEAR FOOT BOTH DIMENSIONS.
(SEE NOTE 1)
C. STEEL SLEEVE FOR BREAK AWAY CONNECTION. (SEE NOTE 8)
D. APPROVED FIRE DAMPER (CURTAIN OR BLADE TYPE)
E. SECURE RETAINING ANGLES TO SLEEVE ONLY, ON 8" CENTERS WITH:
1. 1/2" LONG WELDS OR
2. 1/4" BOLTS AND NUTS, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/16" STEEL RIVETS
F. SECURE DAMPER TO SLEEVE ON 8" CENTERS WITH:
1. 1/2" LONG WELDS OR
2. 1/4" BOLTS AND NUTS, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/4" STEEL RIVETS
G. CONNECT DUCT TO SLEEVE USING U.L. ACCEPTED DUCT SLEEVE BREAKAWAY CONNECTIONS.
H. ACCESS DOORS AND PANELS ARE TO BE LARGE ENOUGH TO PERMIT MAINTENANCE AND RESETTING OF DEVICES. DUCT ACCESS DOORS SHALL BE A MAXIMUM OF 24" x 24" AND A MINIMUM OF 6" x 6" UNLESS THE DUCT SIZE DOES NOT ALLOW INSTALLATION OF THE DOOR, IN WHICH CASE, A REMOVABLE SECTION OF DUCT SHALL BE PROVIDED FOR ACCESS.

2 FIRE DAMPER INSTALLATION DETAIL
NOT TO SCALE



6 TYPICAL FAN POWERED VAV BOX DETAIL
NOT TO SCALE



5 INLINE FAN SUPPORT DETAIL
NOT TO SCALE

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REVISIONS

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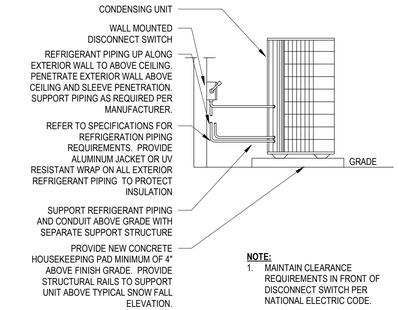
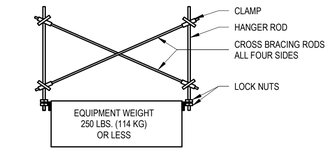
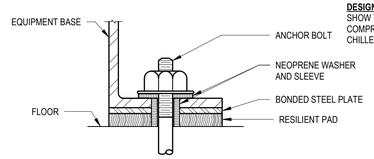


NOTE:
1. MAINTAIN CLEARANCE REQUIREMENTS IN FRONT OF DISCONNECT SWITCH PER NATIONAL ELECTRIC CODE.

6 GROUND MOUNTED CONDENSING UNIT
NOT TO SCALE



SEISMIC BRACING FOR LIGHT SUSPENDED EQUIPMENT

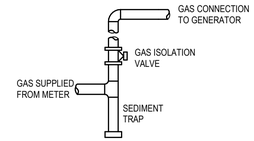


EQUIPMENT RESTRAINED BY RESILIENT PADS (TYPE DS)

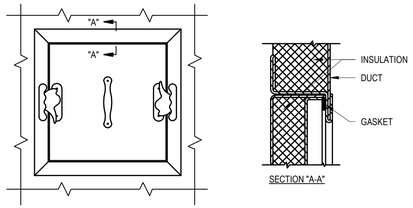
NOTE:
NOT REQUIRED FOR AIR TERMINAL UNITS.

DESIGNER'S NOTE:
SHOW THIS TYPE FOR CONTROL AIR COMPRESSORS AND FOR CENTRIFUGAL CHILLERS ON SLAB ON GRADE.

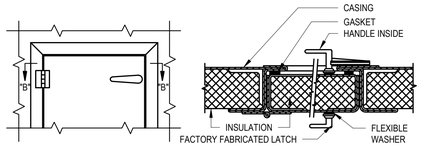
3 SUSPENDED EQUIPMENT DETAIL
NOT TO SCALE



1 GAS CONNECTOR DETAIL
NOT TO SCALE



ACCESS PANEL

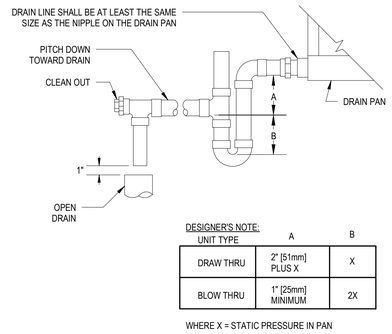


ACCESS DOOR

NOTES:
1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.

DESIGNERS NOTES:
1. USE ACCESS DOORS ON AIR HANDLING UNITS AND DUCTWORK INSTALLED IN EQUIPMENT ROOMS.
2. USE ACCESS PANELS ON ALL EQUIPMENT AND DUCTWORK INSTALLED ABOVE FINISHED CEILINGS.

7 ACCESS DOOR DETAIL
NOT TO SCALE

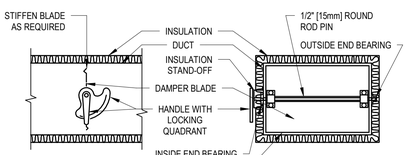


DESIGNER'S NOTE:

UNIT TYPE	A	B
DRAW THRU	2" [51mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

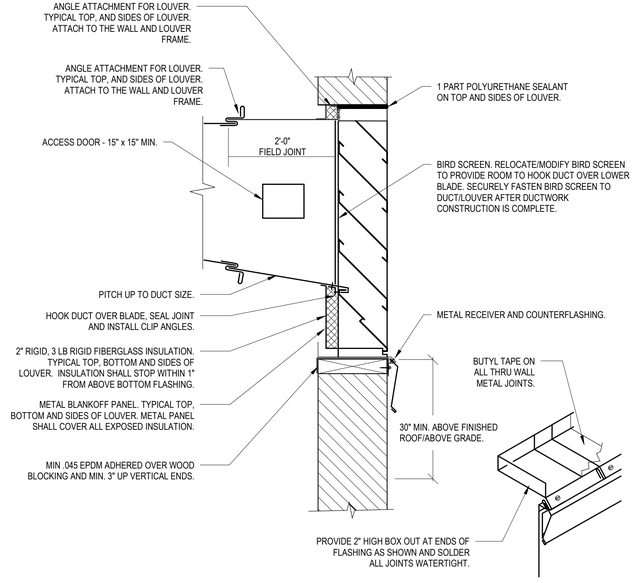
WHERE X = STATIC PRESSURE IN PAN

4 AIR HANDLING UNIT DRAIN TRAP
NOT TO SCALE



NOTE:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLAD DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

5 VOLUME DAMPER DETAIL
NOT TO SCALE



NOTES TO SPECIFIER:
COORDINATE ACCESS DOOR SIZES AND LOCATIONS FOR EACH INDIVIDUAL PROJECT. THE SIZE LISTED IS A MINIMUM SIZE INTENDED TO BE USED FOR SMALLER SIZE LOUVERS/DUCTS AND SHOULD NOT BE UTILIZED FOR ALL DESIGNS.

NOTES:
1. SEAL ALL DUCT JOINTS, CORNERS AND SEAMS WATERTIGHT USING SEALANT AND OR SOLDERING. REFER TO SPECIFICATION SECTION 23 31 00 FOR ACCEPTABLE SEALANTS TO BE UTILIZED IN DUCT SYSTEMS.

2 LOUVER INSTALLATION DETAIL
NOT TO SCALE

REVISIONS:

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: M0.5

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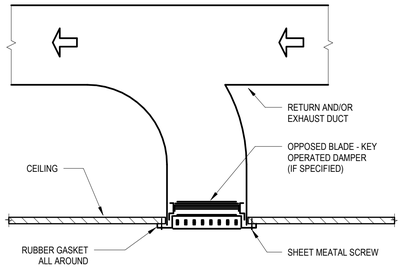
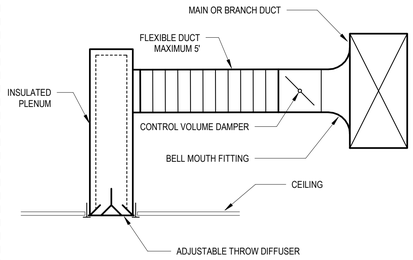
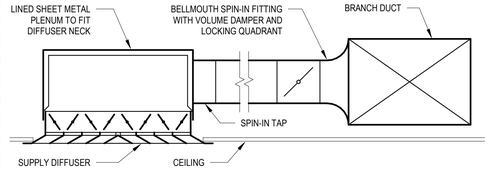
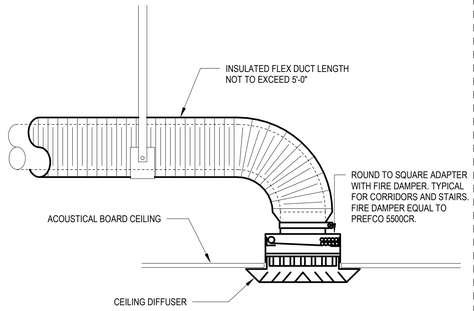
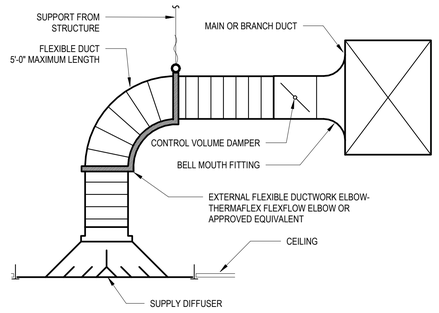


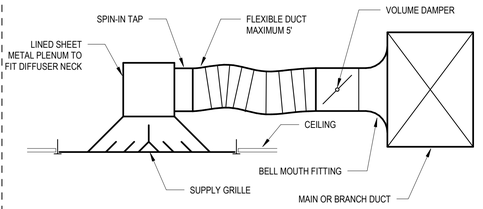




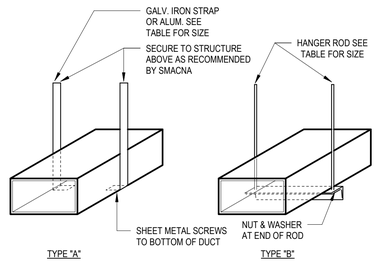
NOTE:
1. FLEXIBLE DUCT SHALL BE PERMITTED WHERE ALLOWED BY CODE.
2. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5'-0" IN LENGTH







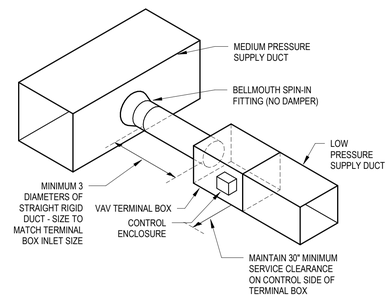
1 CEILING DIFFUSER DETAIL
NOT TO SCALE



DUCT HANGER SCHEDULE					
DUCT SIZE (INCH)	TYPE OF HANGER	HANGER SPACING (FT)	STRAP SIZE	ROD SIZE (INCH)	ANGLE FOR BRACING
UP TO 12	A	8'-0"	1"x16GA	N.A.	N.A.
13 TO 18	A	8'-0"	1"x16GA	N.A.	N.A.
19 TO 30	A/B	8'-0"	1"x16GA	1/4"	1-1/2"x1-1/2"x1/8"
31 TO 42	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
43 TO 54	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
55 TO 60	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x1/8"
61 TO 84	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
85 TO 96	B	8'-0"	N.A.	1/4"	1-1/2"x1-1/2"x3/16"
OVER 96	B	8'-0"	N.A.	3/8"	2"x2"x1/4"

NOTES:
1. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B" MAY BE USED. SIZE OF HANGER WILL BE SELECTED ON THE SUM OF DUCT WIDTHS EQUAL TO MAX WIDTH OF DUCT SCHEDULE.
2. ON TYPE "A" HANGER, PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.

3 DUCT SUPPORT DETAIL
NOT TO SCALE



2 VAV TERMINAL BOX INSTALLATION
NOT TO SCALE

REVISIONS

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: **M0.6**

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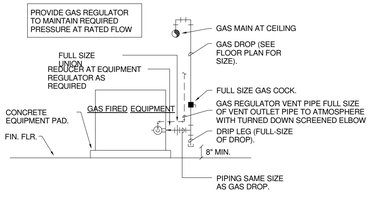
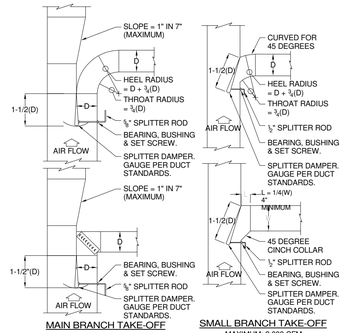


1 GAS CONNECTION DETAIL

N.T.S

MECHANICAL

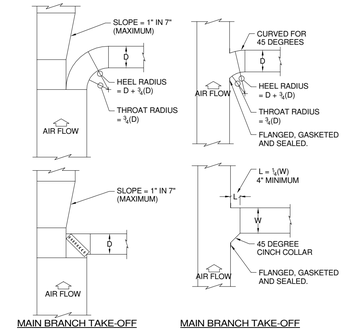


NOTE:
THESE APPLICATIONS APPLY TO SINGLE ZONE CONSTANT VOLUME AND SINGLE ZONE VAV SYSTEMS.

2 LOW PRESSURE DUCTS TAKEOFFS

SCALE: NTS

MECHANICAL

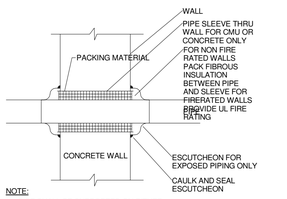


NOTE:
THESE APPLICATIONS APPLY TO FULL VARIABLE AIR VOLUME SYSTEMS, WITH VAV BOX IN EACH ZONE.

3 MEDIUM PRESSURE DUCTS TAKEOFFS

SCALE: NTS

MECHANICAL

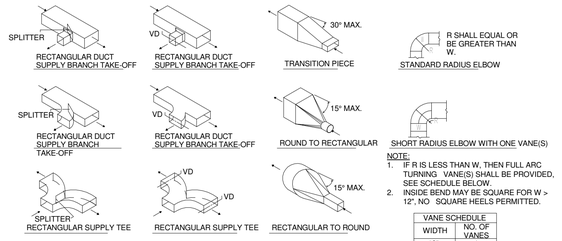


NOTE:
1. PIPE SHALL BE SUPPORTED ON EITHER SIDE OF WALL. PIPE SUPPORT SHALL BE COMPLETELY INDEPENDENT OF WALL.

4 PIPE THRU WALL DETAIL

N.T.S

MECHANICAL



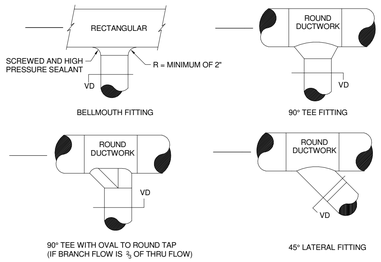
NOTE:
1. IF R IS LESS THAN W, THEN FULL ARC TURNING VANE(S) SHALL BE PROVIDED, SEE SCHEDULE BELOW.
2. INSIDE BEND MAY BE SQUARE FOR W > 12", NO SQUARE HEELS PERMITTED.

VANE SCHEDULE	
WIDTH	NO. OF VANES
< 12"	1
12"-24"	2
24"-36"	3
36"-60"	4
60"-84"	5
> 84"	6

NOTES:
1. PROVIDE STANDARD RADIUS ELBOWS WHEN POSSIBLE - SHORT RADIUS WHERE REQUIRED.
2. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED & FASTENED AS RECOMMENDED BY SMACNA.
3. NO SQUARE OR RECTANGULAR HEEL ELBOWS SHALL BE ALLOWED.

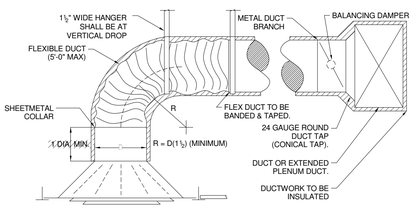
5 RECTANGULAR DUCTWORK TRANSITIONS AND FITTINGS

SCALE: NONE



6 ROUND DUCTWORK FITTINGS

SCALE: NONE



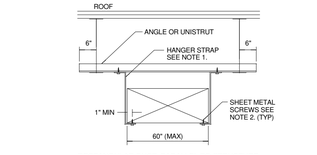
DIFFUSER BALANCING DAMPER

NOTES:
1. CEILING DIFFUSER SHALL BE SQUARE FACE, ROUND NECK & SIMILAR TO: TITUS TMS, CARNES SFTA, OR KRUEGAR 1400.
2. DIFFUSER FRAME WITH EXTENDED PANELS NOT ACCEPTED.
3. PROVIDE LAY-IN TYPE DIFFUSER FRAMES FOR INVERTED T-BAR CEILING.
4. PROVIDE SURFACE MOUNTING FLANGE FOR GYP BOARD CEILING AND OTHER SPECIAL CEILING.
5. FLEX DUCT SHALL BE BANDED AND TAPED. PROVIDE BEAD ON METAL COLLAR IF DUCT SIZE EXCEEDS 12" DIAMETER.
6. LOW PRESSURE DUCTWORK ONLY.
7. OMIT VOLUME DAMPER ABOVE GYP BOARD CEILING AND USE DAMPER BEHIND CEILING DIFFUSER FOR BALANCE.
8. THE HANGERS SUPPORTING FLEX DUCT SHALL BE NOT LESS THAN 1-1/2" WIDE IN DIRECT CONTACT WITH DUCT.

MINIMUM CONICAL TAP METAL GAUGE		
TAP DIA. (IN.)	GAUGE - GALV. STOCK	DAMPER GAUGE
8 AND BELOW	24	22
9 - 14	24	22
15 - 16	22	20
27" - 36	20	18
37 - 50	18	16

7 CEILING DIFFUSERS AND BRANCH DUCTS

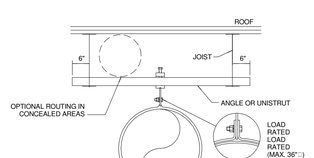
SCALE: NONE



NOTE:
1. USE THREADED ROD FOR ALL DUCTS LARGER THAN 60"□ WIDE.
2. SHEET METAL SCREWS MAY BE OMITTED IF HANGER STRAP IS CONTINUOUS AND LOOPS UNDER ENTIRE DUCT.

8 RECTANGULAR DUCT SUPPORT DETAIL

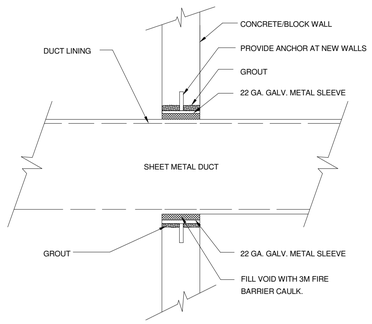
SCALE: NONE



NOTE:
FOR DUCTS LARGER THAN 36"□, USE TWO HANGER RODS, WIRES OR STRAPS 1. TO SUPPORT DUCT FROM EACH SIDE.

9 ROUND DUCT SUPPORT DETAIL

SCALE: NONE



10 DUCT PASSING THROUGH WALL DETAIL

SCALE: NONE

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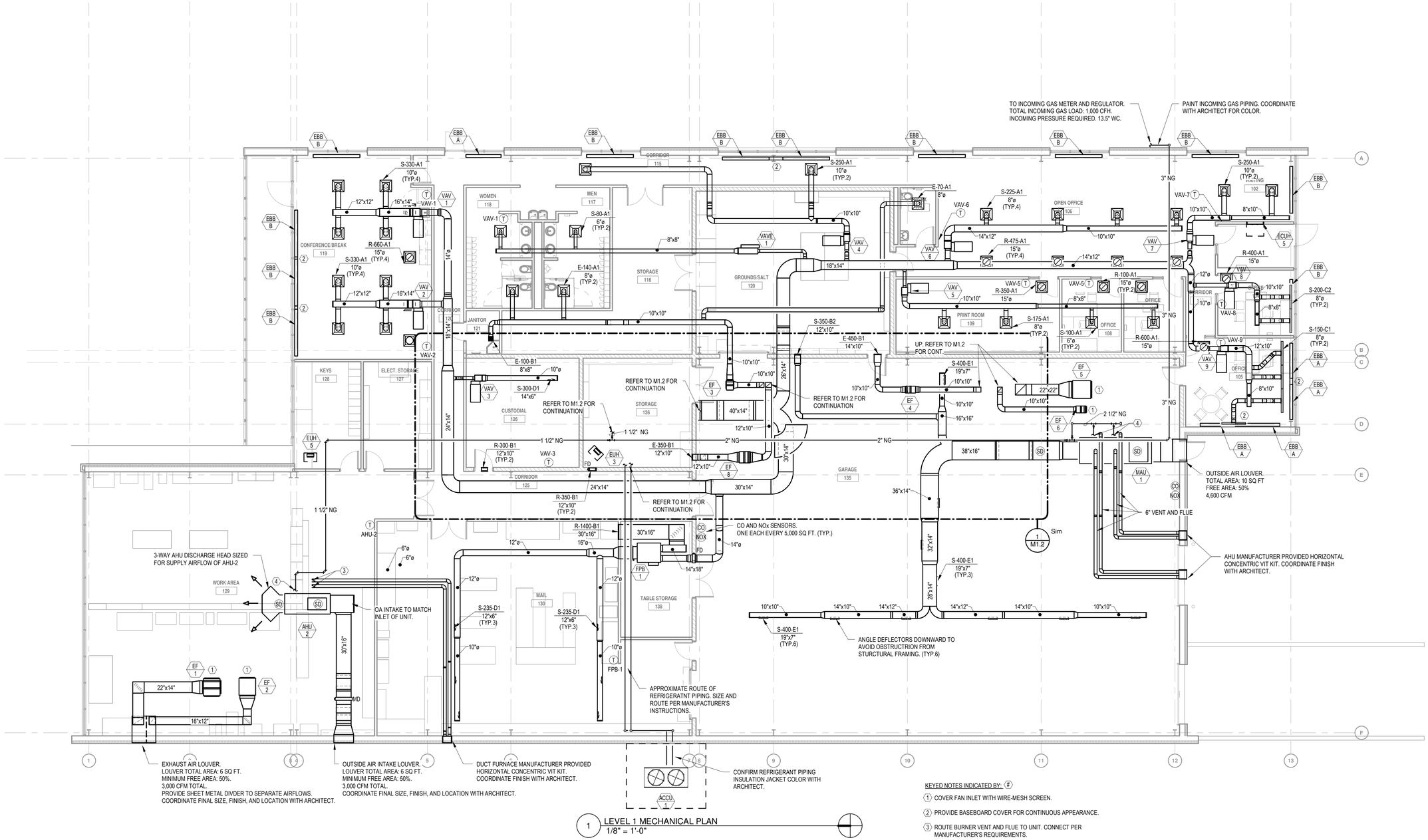
DRAWN BY: Author | CHECKED BY: Checker

DATE: 04.10.22

SHEET NO.: M0.7



1 LEVEL 1 MECHANICAL PLAN
1/8" = 1'-0"

KEYED NOTES INDICATED BY: (#)

1. COVER FAN INLET WITH WIRE-MESH SCREEN.
2. PROVIDE BASEBOARD COVER FOR CONTINUOUS APPEARANCE.
3. ROUTE BURNER VENT AND FLUE TO UNIT. CONNECT PER MANUFACTURER'S REQUIREMENTS.
4. CONNECT GAS TO UNIT. PROVIDE ALL REQUIRED PIPING SPECIALTIES.

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LEVEL 1 MECHANICAL PLAN

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DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: M1.1

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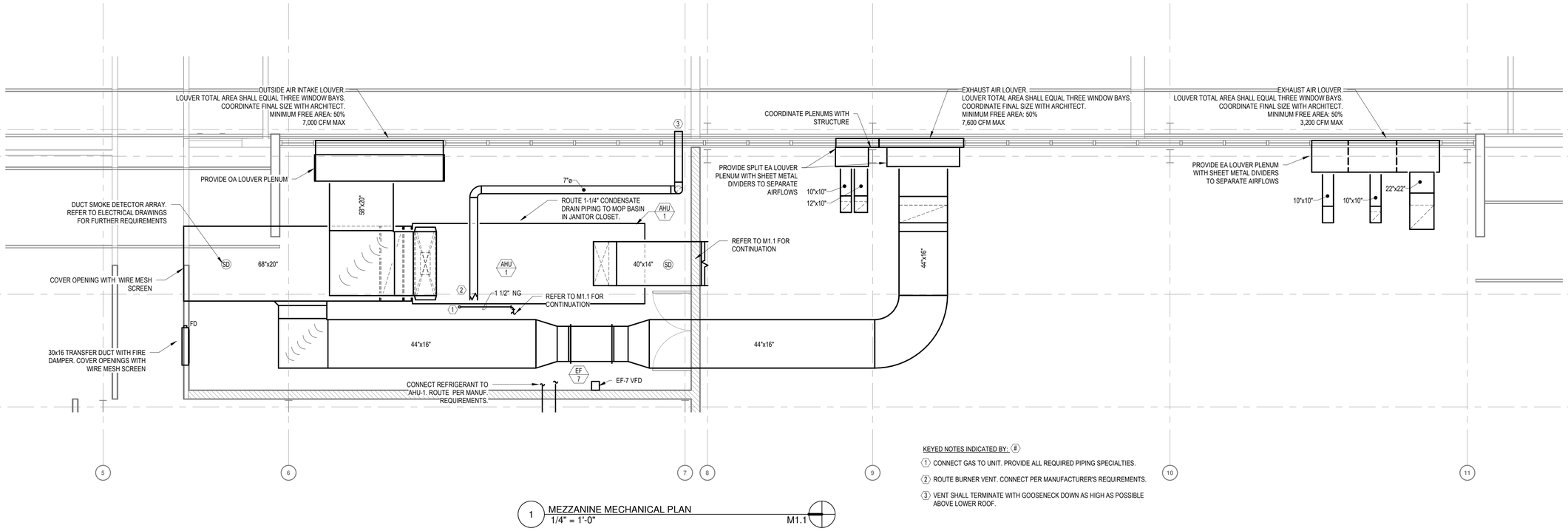

1 MEZZANINE MECHANICAL PLAN
1/4" = 1'-0"
M1.1

KEYED NOTES INDICATED BY: (#)

1. CONNECT GAS TO UNIT. PROVIDE ALL REQUIRED PIPING SPECIALTIES.
2. ROUTE BURNER VENT. CONNECT PER MANUFACTURER'S REQUIREMENTS.
3. VENT SHALL TERMINATE WITH GOOSENECK DOWN AS HIGH AS POSSIBLE ABOVE LOWER ROOF.

REVISIONS

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MEZZANINE MECHANICAL PLAN

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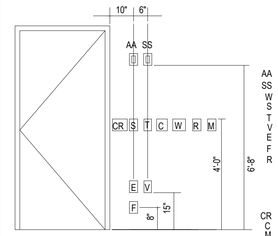
GENERAL NOTES

1. THIS INSTALLATION SHALL BE IN COMPLIANCE WITH THE 2017 NEC AND ALL APPLICABLE LOCAL CODES.
2. BEFORE COMMENCING WORK THE CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY INFORM HIMSELF OF ALL CONDITIONS THAT AFFECT THE WORK, EXAMINE THE DRAWINGS AND SPECIFICATIONS, AND SUBMIT ANY QUESTIONS IN WRITING TO THE ENGINEER.
3. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
4. THE CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THIS WORK SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SPECIFICATIONS BEFORE COMMENCING ANY WORK. THE PROJECT SPECIFICATIONS AND DRAWINGS FORM THE BASIS OF THIS CONTRACT REQUIREMENTS AND INCLUDE THE TYPE AND GRADE OF MATERIALS TO BE INSTALLED, EQUIPMENT TO BE FURNISHED, THE MANNER BY WHICH TO BE INSTALLED AND WHERE TO BE LOCATED. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND DRAWINGS, SPECIFICATIONS GOVERN UNLESS THE ARCHITECT/ENGINEER DIRECTS OTHERWISE.
5. THE ELECTRICAL CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO ENSURE THAT NO FIXTURE, OUTLET, ALARM STATION OR CONTROL AND POWER WIRING IS OMITTED. HE SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM THEM ALL DATA. IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AND PROVIDE THE WIRING AND CONTROL STATIONS REQUIRED FOR THE PROPER FUNCTION OF BUILDING EQUIPMENT. NO EXTRA CHARGES SHALL BE ACCEPTED BY OWNER AFTER BIDDING FOR SUCH EQUIPMENT AND LABOR.
6. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO INSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
7. INSTALL ELECTRICAL DEVICES AS INDICATED IN THIS SET OF DRAWINGS. ADJUST FINAL DEVICE LOCATIONS AS REQUIRED TO ACCOMMODATE WORK. COORDINATE WITH ALL TRADES INVOLVED AND WITH ARCHITECTURAL CASEWORK AND ELEVATIONS DRAWINGS. NOTIFY THE ENGINEER AND/OR THE ARCHITECT IF ANY CONFLICTS ARE FOUND PRIOR TO BIDDING PROJECT. INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
8. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE APPLICABLE CODES AND REGULATIONS.
9. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS.
10. CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. ALL CONDUITS SHALL RUN CONCEALED, EXCEPT IN EQUIPMENT ROOMS AND WHERE APPROVED BY ARCHITECT OR AS INDICATED ON DRAWINGS.
11. FURNISH AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS.
12. ADJACENT POWER AND DATA/TELE DEVICES SHALL BE SPACED NO MORE THAN 4" APART. PROVIDE JUNCTION BOX MOUNTING BRACKET BETWEEN STUDS AS NEEDED.
13. ALL RECEPTACLES, TELEPHONE, AND DATA OUTLETS SHALL BE MOUNTED PER MOUNTING HEIGHT LEGEND OR TO MATCH BUILDING STANDARD (WHEN APPLICABLE), UNLESS OTHERWISE NOTED. ALL DEVICES SHALL BE NEW UNLESS OTHERWISE NOTED.
14. ALL FIRE ALARM NOTIFICATION DEVICES SHALL BE MOUNTED AT 80" AFF IN ACCORDANCE WITH ADA, UNLESS OTHERWISE NOTED.
15. DETERMINE, IN ADVANCE OF PURCHASE, THAT ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL FIT INTO THE ROOM OR SPACE ALLOCATED, AS INDICATED ON THE DRAWINGS, ALLOWING SUFFICIENT CLEARANCE FOR THE SAFE SERVICE AND/OR MAINTENANCE OF RELATED EQUIPMENT, INCLUDING THAT OF OTHER TRADES.
16. ALL CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR INSTALLED. COLOR OF GROUNDING CONDUCTOR SHALL BE GREEN. SIZE OF GROUNDING CONDUCTOR SHALL BE AS REQUIRED PER LOCAL CODE.
17. ALL BRANCH CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR INSTALLED. COLOR OF NEUTRAL CONDUCTOR SHALL BE WHITE FOR 120/208V AND GREY FOR 480/277V CIRCUITS.
18. ALL CONDUCTORS SHALL BE MADE OF COPPER. MINIMUM WIRE SIZE SHALL BE #12AWG UNLESS OTHERWISE INDICATED. UTILIZE SOLID CONDUCTORS FOR WIRE GAUGES UP TO #12AWG AND STRANDED CONDUCTOR FOR GAUGES #10AWG AND LARGER.
19. SPECIAL RECEPTACLES PLUG CONFIGURATION REQUIREMENTS SHALL BE COORDINATED WITH EQUIPMENT PLUG REQUIREMENTS PRIOR TO INSTALLATION.
20. ALL FEEDER AND BRANCH CIRCUIT WIRING INSTALLED INDOORS SHALL USE THHN INSULATION. ALL WIRING INSTALLED OUTDOORS SHALL USE THWN INSULATION. REFER TO SPECIFICATION DOCUMENTS FOR COLOR CODED REQUIREMENTS.
21. ALL POWER WIRING SHALL BE INSTALLED IN A DEDICATED RACEWAY SYSTEM. MINIMUM RACEWAY SIZE SHALL BE 3/4"C UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL SIZE ALL CONDUITS SO AS TO NOT EXCEED 40% OF CONDUIT FILLING CAPACITY PER LOCAL CODE.
22. ALL PULL BOXES AND JUNCTION BOXES SHALL BE SIZED PER NEC. BASED ON THE AMOUNT OF CABLE AND CONDUITS ENTERING/LEAVING THE BOX.
23. ALL BREAKERS SERVING FIRE ALARM AND EXIT SIGNS EQUIPMENT SHALL BE KEY-LOCK STYLE.
24. SERVICE EQUIPMENT AND BRANCH CIRCUIT PANELBOARDS SHALL HAVE AN UPDATED PANEL DIRECTORY INSTALLED UPON PROJECT COMPLETION. UTILIZE TYPE WRITER AS A MINIMUM FOR COMPLIANCE. HAND WRITTEN CARD DIRECTORIES ARE NOT ACCEPTABLE.
25. ALL FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT SHALL BE DONE WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT. INSTALL GREEN GROUNDING CONDUCTOR.
26. E.C. SHALL COORDINATE WITH HVAC CONTRACTOR EXACT POINT OF CONNECTION TO MECHANICAL UNIT PRIOR TO ROUGH-IN. E.C. SHALL ALSO VERIFY EXACT BREAKER SIZE AND WIRING WITH APPROVED MECHANICAL UNITS SHOP DRAWINGS PRIOR TO INSTALLATION.
27. SERVICE EQUIPMENT, BRANCH CIRCUIT PANELBOARDS, METER SOCKETS SHALL HAVE AN "ARC-FLASH HAZARD WARNING" LABEL INSTALLED. LABEL SHALL BE CLEARLY VISIBLE TO PERSONNEL.
28. SERVICE EQUIPMENT AND PANELBOARDS SHALL BE LABEL WITH A READILY VISIBLE LABEL PER NFPA STANDARD FOR SAFETY IN THE WORKPLACE, LABEL SHALL READ "CAUTION ARC FLASH HAZARD". SIZE AND COLOR OF TEXT SHALL BE PER STANDARD.
29. ALL EQUIPMENT INSTALLED OUTSIDE SHALL BE WEATHER PROOF RATED. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.
30. INSTALL CONDUIT FROM THE TOP OF THE BAR JOIST.
31. LABEL ALL J-BOX COVER PLATES AND RECEPTACLE COVER PLATES WITH CIRCUIT INFORMATION. PROVIDE A TYPED LABEL, MARKER IS NOT ACCEPTABLE.
32. E.C. SHALL FURNISH AND INSTALL J-BOX AND 1/2"C FOR MECHANICAL THERMOSTAT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
33. ALL NEW ELECTRICAL PANELS SHALL BE BOLT-ON TYPE CIRCUIT BREAKERS.
34. ALL CABLE LOCATED WITHIN CEILING SPACE USED FOR PLENUM AIR RETURN SHALL BE PLENUM RATED OR RUN IN CONDUIT.
35. LOW VOLTAGE WIRING (PHONE/DATA, LIGHTING CONTROLS, SECURITY, THERMOSTATS, ETC.) LOCATED IN NON-ACCESSIBLE WALLS, CEILING SPACES, AND IN OPEN CEILING AREAS PRONE TO DAMAGE SHALL BE IN CONDUIT.

ELECTRICAL SYMBOL LIST

	DUPLEX RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED, GROUNDING TYPE. WP: WEATHER PROOF TP: TAMPER PROOF
	DUPLEX RECEPTACLE, 20A, FLUSH WALL MOUNTED 4" ABOVE COUNTER, UNLESS OTHERWISE NOTED.
	FLUSH CEILING MOUNTED 20A DUPLEX RECEPTACLE.
	QUAD RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED, GROUNDING TYPE.
	FLOOR DUPLEX RECEPTACLE, 20A, MOUNT RECEPTACLE FLUSHED WITH THE SLAB.
	FLOOR QUAD RECEPTACLE, 20A, MOUNT RECEPTACLE FLUSHED WITH THE SLAB.
	GFCI DUPLEX RECEPTACLE, 20A, @+18"AFF UNLESS OTHERWISE NOTED.
	GFCI DUPLEX RECEPTACLE, 20A, MOUNTED 4" CENTERED ABOVE BACK SPLASH OR COUNTER, U.O.N.
	SPECIAL PURPOSE RECEPTACLE AS INDICATED ON PLAN.
	ISOLATED GROUND DUPLEX RECEPTACLE, @+18"AFF UNLESS OTHERWISE NOTED.
	ISOLATED GROUND QUADRUPLEX RECEPTACLE, @+18"AFF UNLESS OTHERWISE NOTED.
J	JUNCTION BOX.
TV	TELEVISION BOX. PROVIDE (1) COAX DROP & (2) DATA DROPS.
	DATA OUTLET, INDICATES EMPTY 3/4"C, PULL STRING, & JUNCTION BOX
$	SINGLE POLE TOGGLE SWITCH, FLUSH MOUNTED @+4'-0" U.O.N.
$3W	SINGLE POLE THREE-WAY TOGGLE SWITCH, FLUSH MOUNTED @ 4'-0" U.O.N.
$M	MANUAL MOTOR STARTER SWITCH WITH TERMINAL OVERLOAD PROTECTION, 1 OR 2 POLE AS REQUIRED
	SINGLE POLE DIMMING TOGGLE SWITCH, FLUSH MOUNTED @+4'-0" U.O.N.
OS	OCCUPANCY WALL SENSOR SWITCH (DUAL TECH). MANUAL-ON, AUTO OFF.
OS	CEILING MOUNTED DUAL TECH OCCUPANCY SENSOR COMPLETE WITH RELAYS, POWER PACKS & CONNECTORS.
PP	POWER PACK.
	NON-FUSED SAFETY DISCONNECT SWITCH.
60/40/3	FUSED DISCONNECT SWITCH "60" DENOTES SWITCH SIZE, "40" DENOTES FUSE SIZE, "3" DENOTES POLES.
	COMBINATION MOTOR STARTER WITH FUSED DISCONNECT SWITCH.
	SURFACE MOUNTED ELECTRICAL PANELBOARD.
	CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALL.
	CONDUIT RUN CONCEALED IN OR BELOW FLOOR OR GRADE.
	HOMERUN TO DESIGNATED CIRCUIT.
	TELEPHONE/DATA TERMINAL BACKBOARD.

MOUNTING HEIGHTS



AA	AUDIBLE ALARM
SS	SAFETY STROBE
W	WALL PHONE
S	LIGHT SWITCH
T	T-STAT
V	VOICE/DATA
E	RECEPTACLE
F	WALL MOUNTED FURNITURE FEED
R	RECEPTACLE MOUNTED ABOVE MILLWORK OR 4.5" ABOVE COUNTER OR SINK/LAV. VERIFY COUNTER HEIGHTS WITH ARCHITECTURAL ELEVATION DRAWINGS
CR	CARD READER
C	CO2 SENSORS
M	FIRE ALARM PULL STATION

NOTES:
ALL HEIGHTS FOR OUTLETS ARE TO CENTER OF DEVICE (UNLESS OTHERWISE INDICATED). COORDINATE WITH ARCHITECTURAL DRAWINGS.
WHERE DIFFERENCES EXIST, USE ARCHITECTURAL MOUNTING HEIGHTS.

ELECTRICAL DRAWING LIST

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET NAME
E0.0	ELECTRICAL - GENERAL NOTES, SYMBOLS, & LEGENDS
E1.0	ELECTRICAL - POWER & DATA PLAN
E2.0	ELECTRICAL - LIGHTING PLAN
E3.0	SINGLE LINE DIAGRAM
E3.1	PANEL SCHEDULES
ES1.0	ELECTRICAL - SITE PLAN
FA1.0	FIRE ALARM - PLAN

ABBREVIATIONS

WP	WEATHER PROOF
W	WALL MOUNTED DEVICE
AC	ABOVE THE COUNTER
N	NEW
X	EXISTING TO REMAIN
C	CEILING MOUNTED DEVICE
NL	NIGHT LIGHT
WH	TANK GAS WATER HEATER
EWH	INSTANTANEOUS ELECTRIC WATER HEATER
EWC	ELECTRICAL WATER COOLER
HD	ELECTRIC HAND DRYER
AFF	ABOVE FINISH FLOOR

LEGEND

X	———	EXISTING FIXTURE TO REMAIN
XO	- - - - -	EXISTING TO BE REMOVED
XRL	- - - - -	EXISTING TO BE RELOCATED
XRC	———	EXISTING TO BE RE-CIRCUITED
XRP	- - - - -	EXISTING TO BE REPLACED WITH NEW
XRPC	- - - - -	EXISTING TO BE REPLACED WITH NEW & RE-CIRCUITED
XRLC	- - - - -	EXISTING TO BE RELOCATED & RE-CIRCUITED
N	———	NEW FIXTURE
XNL	———	EXISTING FIXTURE IN NEW LOCATION
XNC	———	EXISTING FIXTURE ON NEW CIRCUIT
XNP	———	EXISTING LOCATION WITH NEW FIXTURE
XNFC	———	EXISTING LOCATION WITH NEW FIXTURE & CIRCUIT
XNLC	———	EXISTING FIXTURE IN NEW LOCATION & ON NEW CIRCUIT

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

ELECTRICAL - GENERAL NOTES, SYMBOLS, & LEGENDS

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PROJECT NO.: 154.21.085
DRAWN BY: RK
CHECKED BY: TD
DATE: 04.10.22
SHEET NO.: **E0.0**

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A. GENERAL REQUIREMENTS

1. SCOPE OF WORK

   FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DRAWINGS. THE INSTALLATION SHALL BE COMPLETE IN EVERY DETAIL ESSENTIAL TO PROPER AND SATISFACTORY OPERATION, READY FOR USE AND IN CONDITION FOR SERVICE WHEN DELIVERED TO THE OWNER. ALL MANUFACTURED ITEMS SHALL BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS EXCEPT AS OTHERWISE SPECIFIED HEREIN.

2. APPROVALS

   OBTAIN APPROVALS FROM INSPECTION AUTHORITIES FOR ELECTRICAL INSTALLATIONS REQUIRING SPECIFIC APPROVAL. PRINTS OF THE ELECTRICAL DRAWINGS, FOR THIS PURPOSE, WILL BE FURNISHED UPON REQUEST. REQUIRED WIRING DIAGRAMS SHALL BE PROVIDED AND SUBMITTED FOR APPROVAL BY THE CONTRACTOR. COPIES OF THE FINAL APPROVALS SHALL BE OBTAINED BEFORE COMMENCEMENT OF RELATED WORK.

3. CODES AND STANDARDS

   a. THE WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, AND NATIONAL CODES. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN. HOWEVER, THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

   b. MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO LOCAL CODE AND STANDARDS, THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), UNDERWRITER'S LABORATORIES (UL), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND ALL LAWS AND ORDINANCES OF LOCAL, STATE AND FEDERAL GOVERNING AGENCIES.

4. FEES

   CONTRACTOR SHALL PAY ALL FEES AND OTHER CHARGES INCIDENTAL TO THE ELECTRICAL WORK. IN ADDITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED INSURANCE, PERMITS, LICENSES, ETC. RELATING TO THE ELECTRICAL WORK.

5. CONTRACTOR'S LIABILITY

   a. THE CONTRACTOR SHALL AGREE THAT THE OWNER, THE ARCHITECT, AND THE ENGINEER SHALL NOT IN ANY FORM OR MANNER BE ANSWERABLE OR ACCOUNTABLE FOR ANY VIOLATION OF ORDINANCES, CODES OR REGULATIONS OF ANY AUTHORITIES, UTILITIES, INSURANCE COMPANIES AND GOVERNMENT AGENCIES HAVING JURISDICTION, OR FOR ANY ACCIDENTS, INJURY, LOSS OR DAMAGE TO ANY PERSON OR PERSONS AND THEIR PROPERTIES ARISING FROM NEGLIGENCE OR CARELESSNESS ON THE PART OF THE CONTRACTOR (NOR ANYONE IN HIS EMPLOY), ANY OF HIS SUBCONTRACTORS, OR ANY OTHER PARTIES OR AGENTS TO THIS CONTRACT.

   b. THE CONTRACTOR SHALL AGREE TO MAKE GOOD TO SAID OWNER, ARCHITECT, AND ENGINEER ANY LOSS, DAMAGE OR EXPENSE SO INCURRED, TOGETHER WITH REASONABLE ATTORNEY'S FEES.

6. EXAMINATION OF DRAWINGS AND SITE

   a. THE ELECTRICAL CONTRACTOR SHALL OBTAIN A COMPLETE SET OF ARCHITECTURAL AND ENGINEERING DOCUMENTS AND COORDINATE WITH MECHANICAL, PLUMBING, ARCHITECTURAL, AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES, ROUGH-IN LOCATIONS, AND OTHER ADDITIONAL SCOPES OF WORK THAT MAY NOT BE SHOWN ON THE ELECTRICAL PLANS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE POWER TO OTHER TRADES EQUIPMENT AND HARDWARE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROLS, FIRE AND SECURITY SYSTEMS, MOTORIZED DOORS, DAMPERS, LIFTS, AND OTHER SYSTEMS. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ELECTRICAL PLANS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SAFETY DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT.

   b. BY THE ACT OF HAVING SUBMITTED A BID, THE CONTRACTOR SHALL DEEM TO HAVE MADE SUCH AN EXAMINATION AND SHALL HAVE ACCEPTED THE PREVAILING CONDITIONS. NO SUBSEQUENT ALLOWANCE WILL BE MADE TO CONTRACTOR BECAUSE OF HIS NEGLECT IN COMPLYING WITH THE FOREGOING.

7. DRAWINGS AND SPECIFICATIONS

   THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND COMPLYING WITH BOTH THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, OR CODES, THE REFERENCE WHICH PROVIDES THE MORE COMPLETE OR HIGHER STANDARD SHALL PREVAIL.

8. INTERPRETATION OF THE DOCUMENTS

   CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING MEASUREMENTS AND CONDITIONS UNDER WHICH THIS INSTALLATION IS TO BE MADE. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS, BETWEEN DRAWINGS OR SPECIFICATION, OR BETWEEN SECTIONS OF THE SPECIFICATION, THE MATTER SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS A COMPLETE, READY TO USE INSTALLATION. IF NOT STATED IN THE PROPOSAL, IT WILL NOT BE CONSIDERED EXTRA.

9. ELECTRICAL DRAWINGS

   THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL DOORS, WALLS, FURNITURE, EQUIPMENT, ETC. THE LOCATION OF RACEWAY SYSTEM COMPONENTS IS SCHEMATIC. THE EXACT LOCATION OF RACEWAY SYSTEM COMPONENTS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL CONFIRM THE DIMENSIONS OF THE ACTUAL EQUIPMENT TO BE SUPPLIED FOR THIS PROJECT, AND VERIFY CLEARANCES AND ROUGH-INS PRIOR TO STARTING
   WORK.

10. PERMITS, APPLICATIONS AND RELEASES

    THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS INSPECTIONS, APPLICATIONS, RELEASES AND FEES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES FOR THE EXECUTION OF THIS WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. CLOSE OUT DOCUMENTS

    THE CONTRACTOR SHALL PROVIDE AS-BUILT DOCUMENTATION UPON COMPLETION OF THE WORK. THE CONTRACTOR SHALL ALSO PROVIDE OWNER TRAINING FOR ALL EQUIPMENT, INCLUDING LIGHTING CONTROLS.

B. INSTALLATION

1. CUTTING AND PATCHING

   a. ALL CUTTING, DRILLING, PATCHING, ETC. NECESSARY FOR INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR.

   b. ALL DISTURBED CONSTRUCTION AND FINISHED SHALL BE RETURNED TO ITS ORIGINAL STATE. HOLES IN CONCRETE WALLS AND FLOORS SHALL BE CORE DRILLED AND SLEEVED. NO CUTTING OF STRUCTURAL MEMBERS WILL BE ALLOWED.

2. INSTALLATION OF WIRING

   WIRE SHALL BE INSTALLED CONTINUOUS BETWEEN DEVICES, WITH SPLICES LOCATED ONLY IN JUNCTION BOXES, PULL BOXES, OUTLET BOXES OR IN CABINETS. CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO REACH THE FARTHEST TERMINAL IN PANELS. A MINIMUM OF 6" LOOPS SHALL REMAIN WHERE CONNECTIONS OR TAPS ARE TO BE MADE IN BRANCH CIRCUIT WIRING.

3. GROUNDING

   CONTRACTOR SHALL INSTALL ENTIRE CONDUIT SYSTEM, INCLUDING BOXES, CABINETS, PANELS, ETC. SO AS TO INSURE PROPER GROUND CONTINUITY THROUGHOUT THE SYSTEM.

4. INSTALLATION OF WORK

   a. CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT LOCATION OF ALL EQUIPMENT AND IN CASE ANY OUTLETS DO NOT COME IN CORRECT LOCATION, HE SHALL MOVE SAME, DO NECESSARY CUTTING AND PATCHING.

   b. OWNER RESERVES THE RIGHT TO CHANGE LOCATION OF OUTLETS WITHIN 10'-0" RADIUS BEFORE WORK IS INSTALLED WITHOUT EXTRA COST.

   c. CHECK WITH HVAC CONTRACTOR AS TO LOCATION OF UNITS, DUCTS AND GRILLES AND PLUMBING CONTRACTOR AS TO LOCATION OF PIPING BEFORE INSTALLING THE WORK.

   d. CONTRACTOR SHALL CONSULT WITH THE ARCHITECT AND REVIEW THE PLANS TO VERIFY THE EXACT LOCATIONS OF ALL OUTLETS ARE ABOVE COUNTERS WHERE CABINET WORK OCCURS, AND VERIFY THAT SWITCHES ARE AT THE CORRECT SIDE OF DOOR SWINGS.

   e. THE CONTRACTOR SHALL CONSULT WITH THE EQUIPMENT SUPPLIERS FOR THE CORRECT SIZES OF ALL OUTLETS IN SUFFICIENT TIME BEFORE WALL CONSTRUCTION.

   f. FAILURE OF THE CONTRACTOR TO COMPLY WITH ALL OF THE ABOVE SHALL MAKE HIM RESPONSIBLE FOR ANY RELOCATIONS AT HIS EXPENSE DUE TO CONFLICT WITH OTHER EQUIPMENT.

5. BALANCING OF LOADS

   UPON CONNECTING ALL CIRCUITS TO PANELS, THE CONTRACTOR SHALL BALANCE THE LOAD IN AMPERES TO +/- 5% BETWEEN PHASES FOR EACH PANEL OR PER OWNERS SATISFACTION.

6. FIRE STOPPING

   ALL PENETRATIONS IN WALL, FLOOR OR CEILINGS SHALL BE SUITABLY CLOSED UP AND SEALED WITH AN INTUMESCENT FIRE STOPPING COMPOUND LISTED IN THE MOST RECENT FACTORY MUTUAL RESEARCH CORPORATION (FMRC) APPROVAL GUIDE. FIRE STOPPING PRODUCTS SHALL BE MANUFACTURED BY 3M CO.

7. EQUIPMENT

   ALL MATERIALS AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, AND HAVE THE APPROPRIATE UL LISTING AND LABEL.

8. MISCELLANEOUS SUPPORTING MEMBERS

   THE INSTALLATION OF ANGLES CHANNELS, AND OTHER MISCELLANEOUS STEEL, BOLTS, RODS, ETC. REQUIRED TO SUPPORT LIGHT FIXTURE, CONDUIT, RACEWAY, LADDER TRAY, OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE COORDINATED WITH THE G.C.

9. SAFETY

   THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE OWNERS EMPLOYEES, BUILDING EMPLOYEES AND GUESTS, AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CONDUCTORS, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

10. EQUIPMENT CONNECTIONS

    PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS AND FOR ALL OWNER FURNISHED EQUIPMENT. PROVIDE A FLEXIBLE LIQUID TIGHT CONNECTION TO ALL VIBRATION PRODUCING EQUIPMENT.

11. TEMPORARY LIGHTING, POWER, FIRE, AND SAFETY

    a. PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED IN AREAS UNDERGOING WORK DURING CONSTRUCTION.

    b. COMPLY WITH NFPA 241 FOR SAFEGUARDING DURING CONSTRUCTION AND ALTERATION OPERATIONS.

12. BRANCH CIRCUITS

    BRANCH CIRCUITS TO RECEPTACLES, LIGHTING AND MISC. SMALL LOADS (20 AMP CIRCUITS), UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE 2-#12, 1-#12G, 3/4" C.

C. MATERIAL AND EQUIPMENT

1. PROPOSALS SHALL BE BASED UPON THE FURNISHING OF ALL MATERIALS AND EQUIPMENT AS SPECIFIED, WHICH IN EVERY CASE SHALL BE NEW AND OF THE BEST GRADE AND QUALITY AVAILABLE.

2. EQUIPMENT AND MATERIALS SHALL BE WITHOUT BLEMISH OR DEFECT AND SHALL NOT BE USED FOR TEMPORARY POWER PURPOSES, WITHOUT THE ENGINEER'S PRIOR WRITTEN AUTHORIZATION.

3. ALL ITEMS OF EQUIPMENT OF ONE TYPE, EXCEPT CONDUIT, CONDUIT FITTINGS, OUTLET BOXES, WIRE, AND CABLE, SHALL BE THE PRODUCT OF ONE MANUFACTURER THROUGHOUT UNLESS OTHERWISE INDICATED OR ACCEPTED BY THE ENGINEER.

4. THE USE OF ROMEX, BX, ETC. IS NOT PERMITTED.

5. CONDUITS

   a. THE CONTRACTOR SHALL PROVIDE ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONS, PLUMBING EQUIPMENT, TELEPHONE AND ELECTRICAL EQUIPMENT.

   b. ALL PANEL AND SERVICE FEEDERS SHALL BE IN RIGID GALVANIZED STEEL CONDUIT (RGSC). ALL CONDUIT SHALL BE UL LABELED. EMT SHALL BE ACCEPTABLE FOR BRANCH CIRCUITS RUN ABOVE SUSPENDED CEILINGS OR CONCEALED IN INTERIOR PARTITIONS. EMT CONNECTORS SHALL BE COMPRESSION TYPE. CONDUIT UNDER SLAB ON GRADE SHALL BE GALVANIZED RIGID STEEL.

   c. MINIMUM SIZES OF CONDUIT SHALL BE 3/4" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTION OR TO INDIVIDUAL LIGHT SWITCHES AND FOR ALL OTHER LOCATIONS. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE MINIMUM OF 1/2" SIZE, UNLESS NOTED OTHERWISE ON DRAWINGS. ALL IN/UNDER FLOOR SLAB CONDUIT SHALL BE OF MINIMUM 1"C SIZE.

   d. SUPPORT ALL CONDUIT.

   e. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY THE OWNER'S CONSTRUCTION MANAGER. PAINTING OF CONDUITS WILL BE BY GENERAL CONTRACTOR.

   f. FLEXIBLE METAL CONDUIT
      f.1. FLEXIBLE METAL CONDUIT AND THEIR ASSOCIATED FITTINGS ARE TO BE LISTED FOR GROUNDING. A GREEN GROUNDING CONDUCTOR SHALL BE PROVIDED. ALL CONNECTORS ARE TO BE OF A NEMA APPROVED TYPE.
      f.2. FLEXIBLE CONDUIT SHALL BE ACCEPTABLE FOR THE FOLLOWING APPLICATIONS AND SHALL NOT EXCEED 6 FEET IN LENGTH:
      f.2.1. FINAL CONNECTIONS TO OUTLETS ON VIBRATING EQUIPMENT.
      f.2.2. FINAL INTER-CONNECTIONS BETWEEN LIGHT FIXTURES.
      f.2.3. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.

   g. PROVIDE POLY PULL-STRING IN ALL EMPTY CONDUITS.

   h. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER CLEARANCE OF CEILING AND OTHER TRADES WORK.

   i. ALL CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO COLUMN LINES.

   j. ALL CONDUITS MUST BE SIZED PER THE CODE.

   k.COMPLETE CONDUIT WORK ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

6. OUTLET BOXES

   a. UNLESS OTHERWISE NOTED, OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL, KNOCKOUT TYPE, WITH SUITABLE PLASTER RINGS AND COVERS OR PLATES.

   b. UNUSED KNOCKOUT HOLES SHALL REMAIN CLOSED AND THOSE OPENED BY ERROR SHALL BE CLOSED WITH SNAP-IN BLANKS.

   c. OUTLET BOXES SHALL NOT BE SMALLER THAN REQUIRED BY CODE FOR THE NUMBER AND SIZE OF WIRES TO BE INSTALLED.

   d. OUTLET BOX AND COVE LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

   e. OUTLET BOX MANUFACTURERS SHALL BE APPLETON, GARVIN, RACO (HUBBELL) & STEEL CITY.

7. JUNCTION AND PULL BOXES

   a. PROVIDE JUNCTION BOXES, PULL BOXES, CABLE SUPPORTS, AND WIREWAYS AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS. COVERS SHALL BE ACCESSIBLE. SMALL JUNCTION BOXES SHALL BE SIMILAR TO OUTLET BOXES.

   b. PULL BOXES, CABLE SUPPORT BOXES, AND LARGE JUNCTION BOXES FOR INDOOR USE SHALL BE MADE OF CODE GAUGE STEEL. COVERS SHALL BE HELD IN PLACE WITH STAINLESS STEEL SCREWS. PAINT INTERIOR AND EXTERIOR SURFACES WITH RUST-INHIBITIVE PAINT.

   c. JUNCTION BOX AND PULL BOX LOCATED ABOVE SUSPENDED CEILING SHALL BE PLENUM RATED.

8. WIRING

   a. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS MINIMUM WIRE SIZE SHALL BE #12. THE CONDUCTORS SHALL HAVE 600 VOLT INSULATION, TYPE THWN OR THHN.

   b. MINIMUM WIRE SIZE - 20 AMP. BRANCH CIRCUIT SHALL BE AWG LISTED SIZE PER DISTANCE SHOWN BELOW. DISTANCE SHALL BE MEASURED FROM THE PANELBOARD CIRCUIT BREAKER TO THE FURTHEST OUTLET.
      b.1. #12 LESS THAN 80 FEET. (AT 120V)
      b.2. #10 OVER 80 FEET. (AT 120V)

   c. CONDUCTORS SHALL BE STRANDED FOR SIZES #10AWG AND LARGER.

   d. ALUMINUM CONDUCTORS ARE NOT PERMITTED.

   e. ALL WIRING SHALL BE IN CONDUIT.

   f. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #10 AWG WIRE AND SMALLER AND EQUAL TO T & B "LOCKTIGHT" FOR #6 AWG AND LARGER. EQUALS BY BUCHANAN OR IDEAL ARE ACCEPTABLE.

   g. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
NEUTRAL - WHITE	NEUTRAL - GRAY
PHASE A OR L1 - BLACK	PHASE A OR L1 - BROWN
PHASE B OR L2 - RED	PHASE B OR L2 - ORANGE
PHASE C OR L3 - BLUE	PHASE C OR L3 - YELLOW
GROUND - GREEN	GROUND - GREEN

9. GROUNDING

   PROVIDE COMPLETE WIRE GROUNDING CONDUCTOR SYSTEM, #12 AWG MINIMUM, SIZED AND INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CODE.

   a. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL-TO-METAL CONTACT BETWEEN THE DEVICES YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM. ALL CONDUIT, INCLUDING FLEXIBLE CONDUIT, SHALL BE GROUNDED WITH GREEN GROUNDING CONDUCTOR.

   b. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO BE GROUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. ALL GROUND CLAMPS SHALL BE "PENN-UNION" OR EQUAL, SIMILAR TO "GPL" TYPE.

   c. NO OTHER CIRCUITS ARE TO BE RUN IN SAME CONDUIT FEEDING ISOLATED GROUND RECEPTACLES.

10. SLEEVES

    a. THE CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR.

    b. UNLESS OTHERWISE NOTED, ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THE FIRE RATING OF THE FLOOR OR WALL, CONFORM TO UL ASSEMBLY RATING OF FLOOR OR WALL.

    c. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS AND PARTITIONS SHALL BE STANDARD WEIGHT BLACK STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL CONDUIT. SLEEVES SHALL BE NO. 22.

11. TESTING AND INSPECTION

    a. THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY TEST THE ENTIRE ELECTRICAL SYSTEM FOR GROUNDS, SHORTS AND PROPER GROUNDING RESISTANCE. A MAXIMUM OF 25 OHMS RESISTANCE FROM NEUTRAL CONDUCTOR AND CONDUIT TO EARTH GROUND SHALL BE PERMITTED. ONLY A GROUND RESISTANCE MEASURING METER OF APPROVED TYPE SHALL BE USED. A COMMON OHM METER IS NOT ACCEPTABLE.

    b. THE ELECTRICAL CONTRACTOR SHALL SEE THAT LOCAL INSPECTION AUTHORITIES ARE NOTIFIED WHEN INSPECTIONS ARE REQUIRED BY CODE AND SHALL GIVE ALL NECESSARY ASSISTANCE TO THE INSPECTOR WHEN HE IS MAKING AN INSPECTION.

    c. THE ELECTRICAL CONTRACTOR WILL SATISFY ALL REGULATIONS HAVING JURISDICTION ON THIS PROJECT.

12. WIRING DEVICES

    a. THIS CONTRACTOR SHALL FURNISH AND INSTALL SWITCHES AND RECEPTACLES AS SHOWN ON THE DRAWINGS AND NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES AND PLATES SHALL BE AS DIRECTED BY ARCHITECT. THE DEVICES SHALL BE OF THE TYPES AND RATINGS LISTED, OR EQUALS BY PASS & SEYMOUR, HUBBELL OR LEVITON. WEATHERPROOF GFI RECEPTACLES SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS OR AS REQUIRED BY CODE.
       a.1. TOGGLE SWITCHES: 20A-120V COMMERCIAL SPECIFICATION GRADE.
       a.2. DUPLEX RECEPTACLES: 20A-125V COMMERCIAL SPECIFICATION GRADE
       a.3. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE: 20A-125V, 5MA. COMMERCIAL SPECIFICATION GRADE

13. WALL PLATES

    a. WALL PLATES SHALL BE AS SPECIFIED BY OWNER. WHERE STANDARD PLATES WILL NOT FIT WALL FINISH, UNPLASTERED BRICK OR SPECIAL FINISH WALLS, USE SPECIAL SIZE PLATES TO SUIT CONDITIONS. ALL WALL PLATES LINE UP AND FLUSH WITH MOUNTING SURFACE AND SECURELY ATTACHED IN PLACE.

    b. WHERE SWITCHES, RECEPTACLES OR COMBINATIONS THEREOF ARE GROUNDED, USE GANG PLATES AND OUTLET BOXES TO SUIT THE SPECIFIC ARRANGEMENTS.

    c. VERIFY MOUNTING HEIGHTS OF WIRING DEVICES WITH ARCHITECT/OWNER: IN GENERAL, RECEPTACLES 15" ABOVE FLOOR OR 4.5" ABOVE COUNTER TOP WHERE COUNTERS OCCUR, AND SWITCHES 4'-0" ABOVE FLOOR, EXCEPT WHERE SPECIFIC HEIGHTS ARE INDICATED. SPECIAL RECEPTACLE LOCATED AS DIRECTED BY ARCHITECT AND ENGINEER.

    d. WALL PLATES SHALL BE OF THE SAME MANUFACTURER AS WIRING DEVICE.

14. LIGHTING FIXTURES & LAMPS:

    a. THIS CONTRACTOR SHALL FURNISH ADDITIONAL AUXILIARY SUPPORTING STEEL HANGER WIRES ADEQUATELY SIZED TO SUPPORT THE WEIGHT OF THE FIXTURE AND FASTENED TO BUILDING STRUCTURE (MINIMUM TWO PER FIXTURE) FOR FIXTURES NOT MOUNTED ON BUILDING FRAMEWORK. FIXTURES SHALL NOT BE SUPPORTED SOLELY BY THE CEILING STRUCTURE.

    b. PROVIDE APPLICABLE FIRE RATED DRYWALL BOXES OVER RECESSED FIXTURES IN FIRE RATED CEILINGS AS REQUIRED BY CODES. FIELD COORDINATE AS REQUIRED TO AVOID CONFLICT.

    c. THIS CONTRACTOR SHALL PROVIDE ANY NECESSARY FITTINGS, ACCESSORIES, ETC. AS NECESSARY TO MAKE A COMPLETE INSTALLATION.

    d. REMOVE ALL DIRT, OIL OR GREASE FROM LIGHT FIXTURES. CLEAN ALL GLASS, LENSES, ETC. AND POLISH FIXTURES AND TRIM.

15. IDENTIFICATION
    a. PROVIDE TYPED DIRECTORIES IN PANELBOARDS TO DEPICT ACTUAL EQUIPMENT CONNECTED TO INDIVIDUAL BREAKERS/SWITCHES.

16. SHOP DRAWINGS AND SUBMITTALS:

    a. SUBMIT COMPLETE SHOP DRAWINGS FOR MANUFACTURED EQUIPMENT: CLEARLY MARK SUBMISSIONS FOR LIGHTING FIXTURES WITH THE TYPE LETTER OR LETTERS ASSIGNED TO EACH FIXTURE IN THE FIXTURES SCHEDULE AND INCLUDE A GRAPH SHOWING TYPICAL LIGHT DISTRIBUTION AND A TABLE OF CERTIFIED UTILIZATION FACTORS. ALL FIXTURE SUBMITTALS SHALL BE IN BROCHURE FORM.

    b. PROVIDE SUFFICIENT INFORMATION AND DATA REQUIRED FOR THE ARCHITECT TO REASONABLY DETERMINE PROPER COMPLIANCE WITH THE SPECIFICATIONS.

    c. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A COMPLETE LIST OF MATERIALS PROPOSED, GIVING THE MANUFACTURER'S NAME, CATALOG NUMBER, OR OTHER MEANS OF IDENTIFICATION TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS.

    d. REVIEW OF SHOP DRAWINGS IS RENDERED AS A SERVICE ONLY, AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS, NOR SHALL IT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF BASIC RESPONSIBILITY UNDER THE CONTRACT. SHOP DRAWINGS SHALL BE SUBMITTED ON, BUT NOT BE LIMITED TO THE FOLLOWING SYSTEMS: LIGHT FIXTURE BALLASTS AND ALL ASSOCIATED LIGHT FIXTURES HARDWARE, WIRING DEVICES, COVER PLATES, PANELS, BEAKERS, DATA/VOICE JACKS, CABLE, FIRE ALARM DEVICES, ETC.

17. INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS

    a. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, WIRE AND CABLE FURNISHED TO HIM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL INSTALLATION DRAWINGS AND WIRING DIAGRAMS FROM THE EQUIPMENT MANUFACTURER. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

    b. CONTRACTOR SHALL MAKE FINAL CONNECTIONS AND TERMINATIONS TO THE OWNER, MECHANICAL, AND PLUMBING CONTRACTOR'S FURNISHED EQUIPMENT.

18. SPECIAL SYSTEMS

    TELEPHONE/DATA SYSTEM: ELECTRICAL CONTRACTOR SHALL INSTALL CONDUITS, OUTLET BOXES, AND CABLE G.C. IS RESPONSIBLE FOR COORDINATION BETWEEN ALL SUB CONTRACTORS AND IS ULTIMATELY RESPONSIBLE FOR ACCURATELY DICTATING THE SCOPE BETWEEN SUB CONTRACTS.

19. OCCUPANCY SENSORS

    a. CONTRACTOR'S WORK TO INCLUDE ALL LABOR, MATERIALS, TOOLS, APPLIANCES, CONTROL HARDWARE, SENSOR, WIRE, JUNCTION BOXES AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE DELIVERY, INSTALLATION AND FURNISHING OF A COMPLETELY OPERATIONAL OCCUPANCY SENSOR LIGHTING CONTROL SYSTEM, AS DESCRIBED HEREIN.

    b. WALL SWITCH PRODUCTS MUST BE CAPABLE OF WITHSTANDING THE EFFECTS OF INRUSH CURRENT.

    c. WALL SWITCH SENSORS SHALL BE CAPABLE OF DETECTION OF OCCUPANCY AT DESKTOP LEVEL UP TO 300 SQUARE FEET, AND GROSS MOTION UP TO 1000 SQUARE FEET.

    d. WALL SWITCH SENSORS SHALL ACCOMMODATE LOADS FROM 0 TO 800 WATTS AT 120 VOLTS; 0 TO 1200 WATTS AT 277 VOLTS.

    e. ALL SENSORS SHALL BE CAPABLE OF OPERATING NORMALLY WITH ELECTRONIC BALLASTS, PL LAMP SYSTEMS AND RATED MOTOR LOADS.

20. VACANCY SENSORS
    a. CONTRACTOR'S WORK TO INCLUDE ALL LABOR, MATERIALS, TOOLS, APPLIANCES, CONTROL HARDWARE, SENSOR, WIRE, JUNCTION BOXES AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE DELIVERY, INSTALLATION AND FURNISHING OF A COMPLETELY OPERATIONAL OCCUPANCY SENSOR LIGHTING CONTROL SYSTEM, AS DESCRIBED HEREIN.

    b. WALL SWITCH PRODUCTS MUST BE CAPABLE OF WITHSTANDING THE EFFECTS OF INRUSH CURRENT.

    c. WALL SWITCH SENSORS SHALL BE CAPABLE OF DETECTION OF OCCUPANCY AT DESKTOP LEVEL UP TO 300 SQUARE FEET, AND GROSS MOTION UP TO 1000 SQUARE FEET.

    d. WALL SWITCH SENSORS SHALL ACCOMMODATE LOADS FROM 0 TO 600 WATTS AT 120 VOLTS; 0 TO 1200 WATTS AT 277 VOLTS.

    e. ALL SENSORS SHALL BE CAPABLE OF OPERATING NORMALLY WITH ELECTRONIC BALLASTS, PL LAMP SYSTEMS AND RATED MOTOR LOADS.

21. SHORT CIRCUIT RATED PROTECTION

    a. OVERCURRENT DEVICES SHALL BE RATED FOR THE FULL PROSPECTIVE SHORT-CIRCUIT CURRENT AT THEIR LINE SIDE TERMINALS THROUGHOUT THE SYSTEM COMPLYING WITH A FULLY RATED AND COORDINATED SYSTEM.

    b. THE SYSTEM SHALL BE RATED TO: 100K

    c. THE EMERGENCY DISTRIBUTION SHORT CIRCUIT SHALL BE FULLY RATED.

    d. THE NORMAL DISTRIBUTION SHORT CIRCUIT MAY BE SERIES RATED.

    e. IF SERIES RATED EQUIPMENT IS USED, CONTRACTOR SHALL PROVIDE BREAKER CHARTS TO SHOW COMPLIANCE WITH SERIES RATING.

22. SELECTIVE COORDINATION

    a. EMERGENCY DISTRIBUTION AND ELEVATOR DISTRIBUITON OVERCURRENT DEVICES SHALL BE SELECTIVELY COORDINATED.

    b. CONTRACTOR SHALL VERIFY SELECTIVELY COORDINATED OVERCURRENT DEVICES PRIOR TO BID.

    c. CONTRACTOR SHALL PROVIDE SUBMITTLAS OF EXACT BREAKER TYPES AND COORDINATION CURVES FOR APPROVAL AND VERIFICATION.

23. ARC FLASH

    a. CONTRACTOR SHALL PROVIDE ALL NE

GENERAL NOTES:

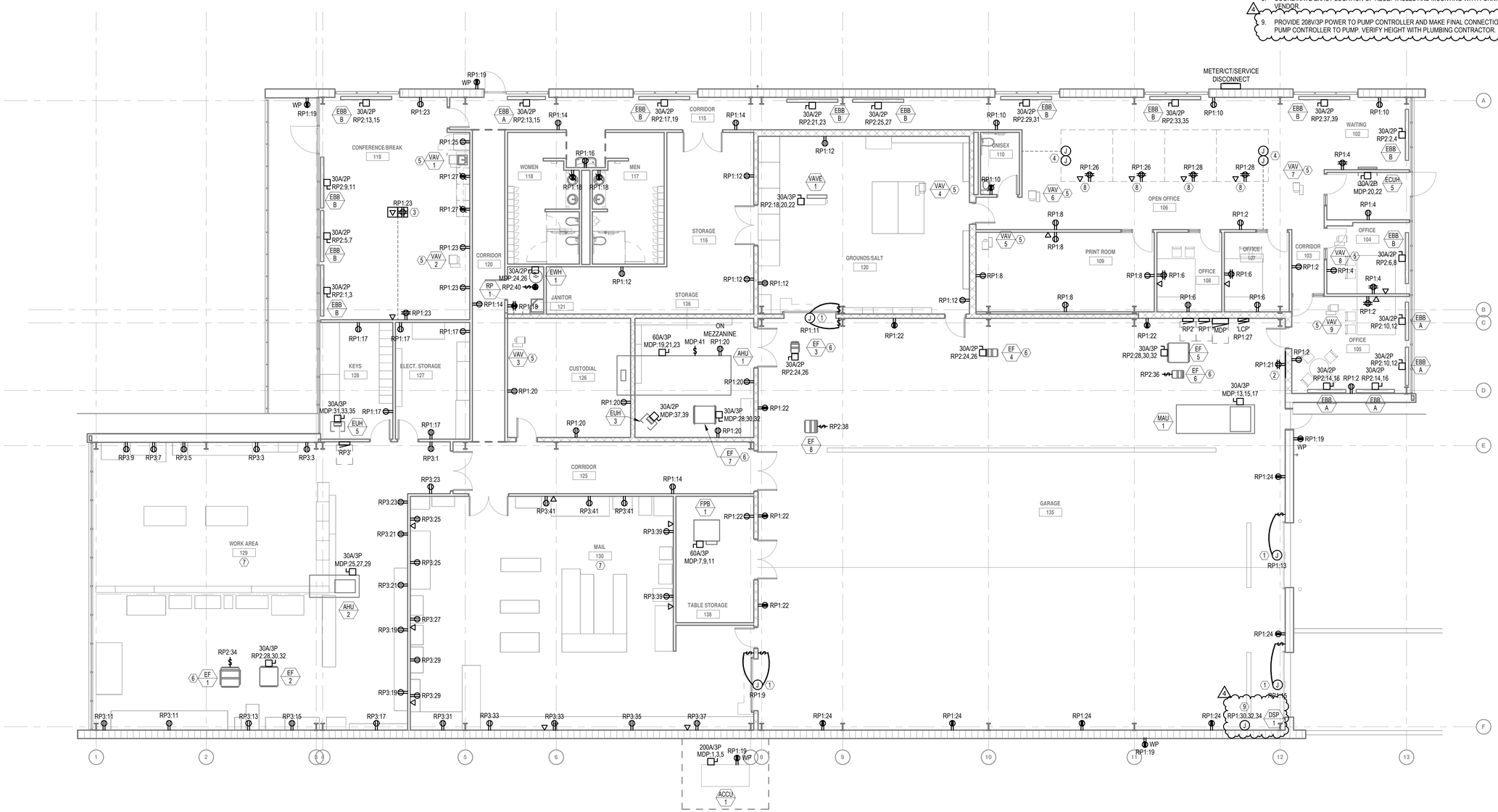
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. REFER TO ARCHITECTRAL PLANS FOR EXACT DIMENSIONS, ELEVATIONS, AND ADDITIONAL NOTES.
4. COORDINATE FINISHES FOR COVERPLATES, SWITCHES, RECEPTACLES, POKE-THRU'S, ETC. WITH ARCHITECT.
5. PROVIDE 3/4"C. TO ACCESSIBLE LOCATION ABOVE CEILING FOR ALL TELE/DATA.
6. DIMENSIONS SHOWN INDICATE HEIGHT ABOVE FINISHED FLOOR. COORDINATE FINAL LOCATION AND ORIENTATION OF ALL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE: IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.

KEYNOTES

1. PROVIDE 120V POWER TO OVERHEAD DOORS. PROVIDE OVERHEAD DOOR CONTROLLER. COORDINATE LOCATION AND CONNECTION REQUIREMENTS WITH OWNER AND MANUFACTURER.
2. PROVIDE A 48"X48"X3/4" FIRE RESISTANT PLYWOOD MOUNTED SECURLEY TO WALL. PAINT AS DIRECTED BY ARCHITECT. PROVIDE (2) 4"C STUBBED TO EXTERIOR FOR TELEPHONE SERVICE.
3. E.C. SHALL PROVIDE 3/4"C FOR POWER & 3/4"C FOR DATA TO RECESSED FLOORBOX. COORDINATE EXACT LOCATION WITH ARCHITECT.
4. PROVIDE (1) NEW JUNCTION BOX @+18"AFF WITH A 1-1/2" CONDUIT FOR POWER AND (1) NEW JUNCTION BOX @+18"AFF WITH A (2) 3/4" CONDUIT FOR VOICE/DATA TO FEED FURNITURE PARTITIONS. COORDINATE EXACT LOCATION WITH ARCHITECT. CONNECTIONS TO RECEPTACLES IN THE PARTITIONS SHALL BE BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY EXACT PARTITION REQUIREMENTS WITH THE FURNITURE VENDOR AND ADJUST ACCORDINGLY. ONE BRANCH CIRCUIT CAN BE USED FOR A MAXIMUM OF (3) WORKSTATIONS.
5. PROVIDE LINE VOLTAGE AS NECCESSARY TO VAV UNIT. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
6. EXHAUST FAN TO BE CONTROLLED BY LOCAL LIGHTING OCCUPANCY SENSOR.
7. FINAL LAYOUT TO BE DETERMINED IN THE FIELD BY OWNER. E.C. SHALL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM FOR ALL OWNER PROVIDED PIECES OF EQUIPEMENT.
8. COORDINATE EXACT LOCATION OF RECEPTACLES AND MOUNTING WITH FURNITURE VENDOR.
9. PROVIDE 208V/3P POWER TO PUMP CONTROLLER AND MAKE FINAL CONNECTION FROM PUMP CONTROLLER TO PUMP. VERIFY HEIGHT WITH PLUMBING CONTRACTOR.



3 ELECTRICAL - POWER & DATA PLAN
1/8" = 1'-0"

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REVISIONS:

1	7.13.2022	ADDENDUM NO.1
2	7.15.2022	ADDENDUM NO.2
4	7.29.2022	ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

ELECTRICAL - POWER & DATA PLAN

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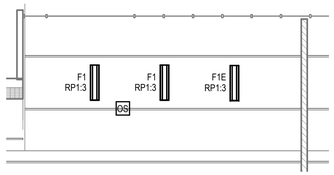
PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: E1.0



2 ELECTRICAL MEZZANINE LIGHTING PLAN
1/8" = 1'-0"

GENERAL NOTES:

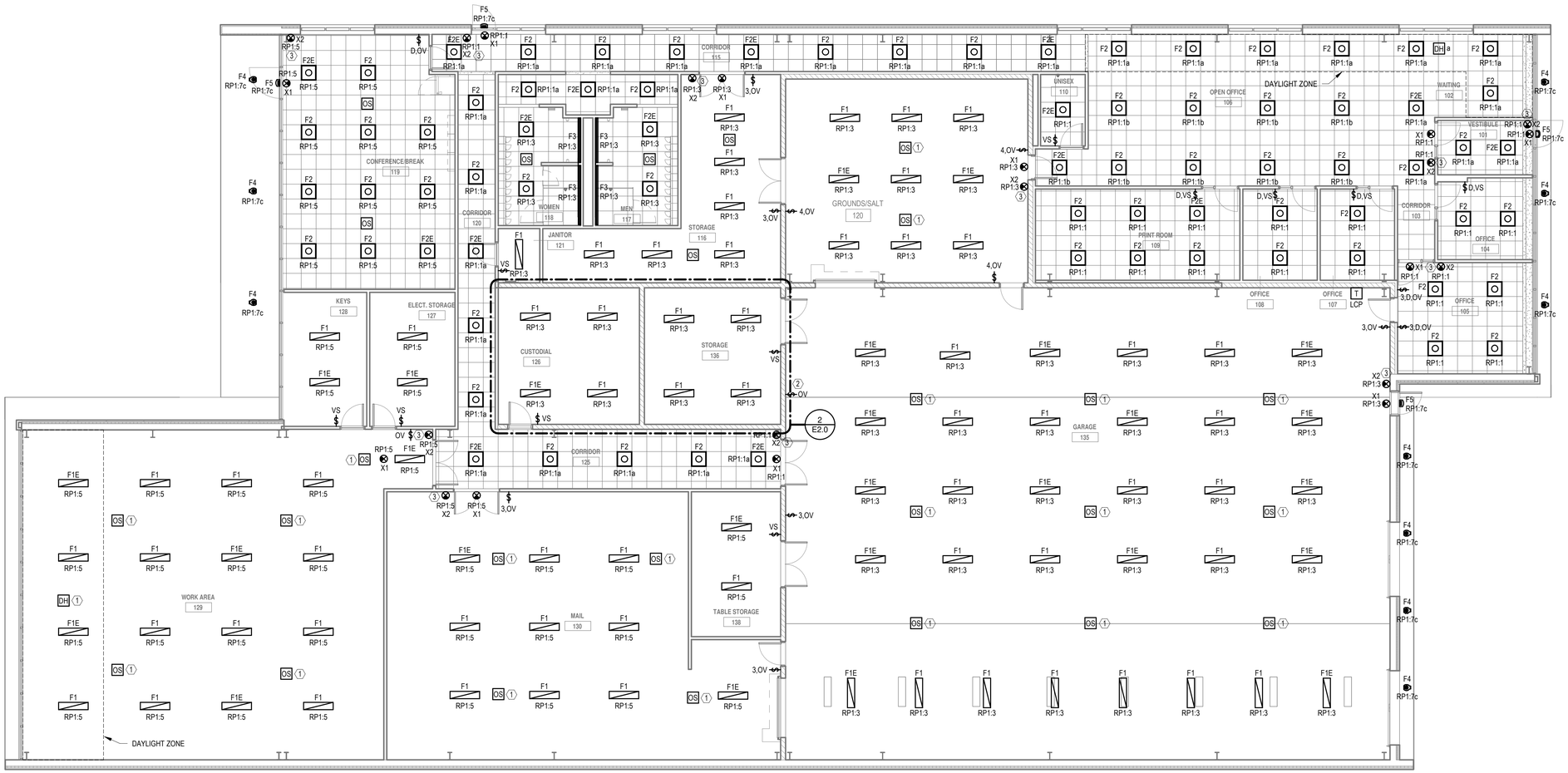
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. ALL EMERGENCY LIGHTING (DENOTED WITH "E" I.E. "F1E" OR "NL") SHALL ACT AS 24/7 NIGHT LIGHTING UNLESS NOTED OTHERWISE.
4. FOR ALL ROOMS WITH OCCUPANCY SENSORS, CONTRACTOR SHALL PROVIDE ALL REQUIRED SENSORS, POWERPACKS, RELAYS, OVERRIDE SWITCHES, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
5. EMERGENCY BATTERY PACKS, NIGHT LIGHTS, AND EMERGENCY FIXTURES SHALL BE CIRCUITED TO LOCAL CIRCUIT AHEAD OF SWITCHING AND CONTROLS.

KEYNOTES:

1. OCCUPANCY SENSOR SHALL BE MOUNTED TO UNISTRUT. BOTTOM OF SENSOR SHALL BE LEVEL WITH LIGHTING IN ROOM.
2. SWITCH SHALL CONTROL LIGHTS LOCATED ON MEZZANINE.
3. PROVIDE WALL MOUNTED EXIT SIGN MOUNTED NOT LESS THAN 6" AND NOT MORE THAN 8" ABOVE FINISHED FLOOR PER KENOSHA REQUIREMENT.

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE; IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.



1 ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"

REVISIONS:
1 7.13.2022 ADDENDUM NO.1

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

ELECTRICAL - LIGHTING PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: VM
CHECKED BY: AC
DATE: 04.10.22
SHEET NO.: E2.0

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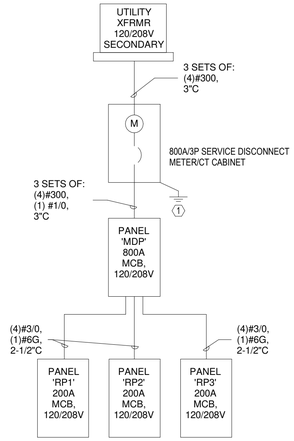
LIGHTING FIXTURE SCHEDULE

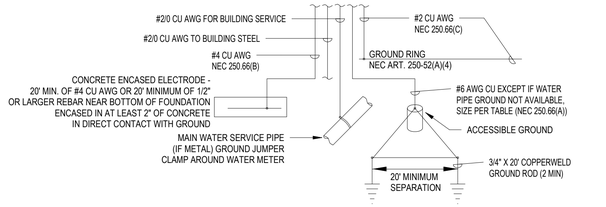
TYPE	FIXTURE	VOLTS	WATTAGE	MOUNTING	MANUFACTURER & CATALOG # OR APPROVED EQUAL	DESCRIPTION
F1	LED	UNV	25W	CHAIN HUNG	LITHONIA: ZLTN-L48-3000LM-FST-MVOLT-35K-80CRI-WH F1E: PROVIDE -E7W	4' LINEAR FIXTURE PROVIDE HANGER CHAIN, COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS
F2	LED	UNV	27W	CEILING	LITHONIA: 2BLT2-33L-ADP-EZ1-LP835 F2E: PROVIDE -EL7L	2X2 TROFFER FIXTURE
F3	LED	UNV	4.6W/FT	CEILING	FOCAL POINT: FWSL-FL-450LF-40K-1C-UNV-L11-U-WH-XX	LINEAR RECESSED COVE LIGHT COORDINATE EXACTS FIXTURE LENGTHS WITH ARCHITECT
F4	LED	UNV	18W	CEILING	LITHONIA: LDN4-30/15/LO4-AR-LSS-MVOLT-EZ10 F4E: PROVIDE -EL	4" RECESSED DOWNLIGHT
F5	LED	UNV	25W	WALL	LITHONIA: ARC1LED-P3-40K-MVOLT-E4WH-XX	EMERGENCY EGRESS LIGHTING
X1	LED	UNV	< 5W	WALL	LITHONIA: EDGR-X-R-EL PROVIDE -WM FOR WALL MOUNT	EXIT SIGN WITH EMERGENCY BATTERY BACKUP. RED LETTERING W/ CLEAR FACE
X2	LED	UNV	< 5W	WALL	LITHONIA: TLE-1-R-EL N	WALL FLUSH EXIT SIGN WITH EMERGENCY BATTERY BACKUP

LIGHTING FIXTURE SCHEDULE NOTES

1. INSTALLATION OF LIGHTING FIXTURES SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODE REQUIREMENTS.
2. ALL LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.



1 ELECTRICAL SINGLE LINE DIAGRAM



2 GROUNDING DETAIL

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

KEYNOTES:

1. PROVIDE NEUTRAL-GROUND BOND WITHIN SERVICE DISCONNECT. SEE GROUNDING DETAIL ON THIS PAGE FOR GROUNDING REQUIREMENTS.

EQUIPMENT CONNECTION SCHEDULE KEY NOTES

1. VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
2. SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
3. SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
4. PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
5. PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
6. VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
7. COORDINATE SHORT CIRCUIT OCD RATING WITH FINAL EQUIPMENT REQUIREMENTS.
8. EC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT.
9. NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

EQUIPMENT CONNECTION SCHEDULE GENERAL NOTES

1. PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
2. OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURER'S AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOT CONNECTION.

NEW EQUIPMENT CONNECTION SCHEDULE

TAG (1)	DESCRIPTION (2)	LOAD (3)	WIRE/CONDUIT (4)	STARTER/DISC./OCD (5)	VOLTAGE (6)	FEED (7)	LOCAL DISCONNECT (8)	REMARKS (9)
ACCU 1	CONDENSING UNIT	120.2 MCA 150 MOCP	3#1/0 AWG 1#6 AWG EQ. GND. 2"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
AHU 1	AIR HANDLING UNIT (2 POINTS OF CONNECTION)	2X 5 HP	3#8 AWG 1#8 AWG EQ. GND. 1"C.	☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
		5 MCA 15 MOCP	2#12 AWG 1#12 AWG EQ. GND. 3/4"C.	☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
AHU 2	AIR HANDLING UNIT	14 MCA 25 MOCP		☐ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
EBB A	ELECTRIC BASEBOARD HEATER	1577 W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EBB B	ELECTRIC BASEBOARD HEATER	2103 W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
ECUH 5	ELECTRIC CABINET UNIT HEATER	15 MCA	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EF 1	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 2	EXHAUST FAN	1-1/4 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY BUILDING PRESSURE
EF 3,4	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 5	EXHAUST FAN	1-1/4 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY CO/NOX
EF 6	EXHAUST FAN	1/6 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 7	EXHAUST FAN	3 H.P.	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	CONTROLLED BY OCCUPANCY SCHEDULE
EF 8	EXHAUST FAN	1/4 H.P.	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EUH 3	ELECTRIC UNIT HEATER	14.5 MCA	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
EUH 5	ELECTRIC UNIT HEATER	24 MCA	3#10 AWG 1#10 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
FPB 1	FAN POWERED BOX	42.7 MCA 45 MOCP	3#8 AWG 1#10 AWG EQ. GND. 1"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
MUA 1	AIR HANDLING UNIT	20.7 MCA 35 MOCP	3#8 AWG 1#10 AWG EQ. GND. 1"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-
VAVE 1	VARIABLE AIR VOLUME W/ ELEC. REHEAT	19.1 MCA 20 MOCP	3#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
EWH 1	ELECTRIC WATER HEATER	4.5KW	2#10 AWG 1#10 AWG EQ. GND. 3/4"C.	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 1P	MDP	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
RP 1	RE-CIRCULATION PUMP	45W	2#12 AWG 1#12 AWG EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	120V 1P	RP2	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	E.C. TO PROVIDE DISCONNECT
4 DSP 1	DOCK SUMP PUMP	1/2 HP	4#12 AWG 1#12 EQ. GND. 3/4"C	☒ INTEGRAL TO EQUIPMENT ☐ IN MCC NEMA SIZE ☐ TYPE	208V 3P	RP1	☐ FUSED A FUSE ☒ NON-FUSED A SWITCH ☐ THERMAL SWITCH, 120V,1P	-

NOTE: PROVIDE SEPARATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED FOR ALL HVAC UNITS.

LIGHTING CONTROL PANEL "LCP"

RELAY #	DESCRIPTION	CIRCUIT #	LOCAL L.V. SWITCH	DIMMING Y/N	RELAY #	DESCRIPTION	CIRCUIT #	LOCAL L.V. SWITCH	DIMMING Y/N
1	CORRIDOR LTG	RP1:1	a	Y	5	-	-	-	-
2	OPEN OFFICE LTG	RP1:1	b	Y	6	-	-	-	-
3	EXTERIOR LTG	RP1:7	c	N	7	-	-	-	-
4	-	-	-	-	8	-	-	-	-

LIGHTING CONTROL NOTES

CONTRACTOR SHALL PROVIDE NEW LIGHTING CONTROL PANEL.

1. THE BUILDING LIGHTING CONTROLS SHALL CONTROL THE FOLLOWING SWITCHLEGS TO TURN ON/OFF DURING NORMAL BUSINESS HOURS AS DETERMINED BY OWNER:

   SWITCHLEGS
   a,b,c

   THESE CIRCUITS SHALL BE CONTROLLED THROUGH THE LOW VOLTAGE LCP INTERFACE IN THE BOH OFFICE
2. ALL OTHER ROOMS ARE NOT CONNECTED TO THE BUILDING LIGHTING CONTROLS AND ARE CONTROLLED BY OCCUPANCY OR VACANCY SENSORS WHICH PROVIDE THE AUTOMATIC SHUT-OFF REQUIREMENT.
3. CONTRACTOR IS RESPONSIBLE FOR NECESSARY PROGRAMMING OF LIGHTING CONTROLS.

DETAILS OF OPERATION

THE LCP LIGHTING CONTROLS PROVIDE TIME OF DAY CONTROL FOR ALL OPEN AREAS. THE OWNER DEFINES NORMAL HOURS OF OPERATION, CONTROLLED BY THE ASTRONOMICAL TIMER.

THE OVERRIDE SWITCHES FUNCTION AS REGULAR SWITCHES DURING NORMAL HOURS, BUT ALLOW PERSONNEL WORKING DURING OFF-HOURS TO TEMPORARILY OVERRIDE THE LIGHTING CONTROL FOR A PERIOD OF UP TO 2-HOURS. THE OVERRIDE SWITCHES CAUSE THE LIGHTING FOR THE ZONE THEY ARE WIRED TO TO TURN ON FOR THE SPECIFIED TIME PERIOD.

EXTERIOR:

THESE LIGHT FIXTURES ARE CONFIGURED WITH THE LIGHTING CONTROL PANEL FOR AFTER HOURS OVERRIDE, AND WITH AUTOMATIC-ON/AUTOMATIC-OFF CONTROLS FROM ROOF MOUNTED PHOTOCELL.

CORRIDOR:

THESE LIGHT FIXTURES ARE CONFIGURED WITH THE LIGHTING CONTROL PANEL FOR AFTER HOURS OVERRIDE, AND WITH ON/OFF CONTROL DURING NORMAL HOURS. LOW-VOLTAGE MOMENTARY CONTACT SWITCHES ARE PROVIDED FOR AFTER HOURS OVERRIDE. SCENE CONTROL SHALL BE DEFINED BY OWNERSHIP.

VACANCY SENSORS AND OCCUPANCY SENSORS (NOT PART OF THE LCP):

WALL AND CEILING MOUNTED VACANCY AND OCCUPANCY SENSORS ARE USED IN ENCLOSED SPACES AND CONTROLLED WITH LOCAL OVERRIDE SWITCHES.

EXTERIOR LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE	VOLTS	WATTAGE	MOUNTING	MANUFACTURER & CATALOG # OR APPROVED EQUAL	DESCRIPTION
S1	LED	UNV	102W	POLE	LITHONIA: DSX1-LED-P3-30K-T4M-MVOLT PROVIDE POLE PER SITE PLAN	POLE MOUNTED EXTERIOR FIXTRE
S2	LED	UNV	38.8W	WALL	LITHONIA: DSXW1-LED-10C-1000-30K-TFTM-MVOLT	WALL MOUNTED EXTERIOR FIXTURE

LIGHTING FIXTURE SCHEDULE NOTES

1. INSTALLATION OF LIGHTING FIXTURES SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODE REQUIREMENTS.
2. ALL LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT.

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin
SINGLE LINE DIAGRAM

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: E3.0

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GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

Branch Panel: MDP

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 65,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 800 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 800 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1				14435...	8661 VA								2
3	ACCU-1 (120.2 MCA)	150 A	3			14435...	6850 VA			3	200 A	PANEL 'RP1'	4
5								14435...	8008 VA				6
7				5128 VA	16911...								8
9	FPB-1 (42.7 MCA)	45 A	3			5128 VA	16733...			3	200 A	PANEL 'RP2'	10
11								5128 VA	13851...				12
13				2486 VA	4260 VA								14
15	MUA-1 (20.7 MCA)	25 A	3			2486 VA	3300 VA			3	200 A	PANEL 'RP3'	16
17								2486 VA	2160 VA				18
19				4161 VA	1560 VA								20
21	AHU-1 (2 X 5 H.P.)	45 A	3			4161 VA	1560 VA			2	20 A	ECUH-5 (15 MCA)	22
23								4161 VA	2250 VA				24
25				1681 VA	2250 VA					2	30 A	EWH-1 (4.5 KW)	26
27	AHU-2 (14 MCA)	25 A	3			1681 VA	1272 VA						28
29								1681 VA	1272 VA	3	20 A	EF-7 (3 H.P.)	30
31				2882 VA	1272 VA								32
33	EUH-5 (24 MCA)	30 A	3			2882 VA	--			1	--	SPACE	34
35								2882 VA	--	1	--	SPACE	36
37				1508 VA	--								38
39	EUH-3 (14.5 MCA)	20 A	2			1508 VA	--			3	--	SPACE	40
41	AHU-1 (5 A)	15 A	1					600 VA	--				42
			Total Load:	67194 VA		61995 VA		58914 VA					
			Total Amps:	564 A		521 A		491 A					
			Total Amps:	521 A									

Branch Panel: RP1

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	OFFICE & CORRIDOR LIGHTING	20 A	1	1623 VA	900 VA					1	20 A	OFFICE 105 - RECS.	2
3	STORAGE & GARAGE LIGHTING	20 A	1			1605 VA	720 VA			1	20 A	OFFICE 104 & VESTIBLE - RECS.	4
5	MAIL, WORK, CONFERENCE LIGHTING	20 A	1					1140 VA	720 VA	1	20 A	OFFICE 107 - RECS.	6
7	EXTERIOR LIGHTING	20 A	1	530 VA	900 VA					1	20 A	OFFICE 108 & 109 - RECS.	8
9	GARAGE 135 - DOOR OPENER	20 A	1			500 VA	720 VA			1	20 A	WAITING 102 & 110 - RECS.	10
11	GARAGE 135 - DOOR OPENER	20 A	1					500 VA	1080 VA	1	20 A	STORAGE 116 - RECS.	12
13	GARAGE 135 - DOOR OPENER	20 A	1	500 VA	720 VA					1	20 A	CORRIDOR 120 - RECS.	14
15	GARAGE 135 - DOOR OPENER	20 A	1			500 VA	180 VA			1	20 A	ELECTRIC WATER COOLER	16
17	SHOP - CONV. RECS.	20 A	1					900 VA	720 VA	1	20 A	BATHROOM & JANITOR - RECS.	18
19	EXTERIOR RECEPTACLES	20 A	1	900 VA	1080 VA					1	20 A	STORAGE 126& 136 - RECS.	20
21	TELEPHONE BOARD	20 A	1			180 VA	1080 VA			1	20 A	GARAGE 135 - RECS.	22
23	CONFERENCE ROOM RECEPTACLES	20 A	1					1080 VA	1080 VA	1	20 A	GARAGE 135 - RECS.	24
25	CONFERENCE ROOM REFRIGERATOR	20 A	1	500 VA	720 VA					1	20 A	FURNITURE RECEPTACLES	26
27	CONFERENCE ROOM ABV COUNTER RECS	20 A	1			360 VA	720 VA			1	20 A	FURNITURE RECEPTACLES	28
29	LIGHTING CONTROL PANEL	20 A	1					500 VA	288 VA	1	20 A	SPARE	30
31	SPARE	20 A	1	0 VA	288 VA					3	15 A	DOCK SUMP PUMP (1/2HP)	32
33	SPARE	20 A	1			0 VA	288 VA						34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
			Total Load:	8661 VA		6850 VA		8008 VA					
			Total Amps:	74 A		57 A		68 A					
			Total Amps:	64 A									

4

Branch Panel: RP2

Location: GARAGE 135 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	EBB-B (2,103W)	20 A	2	1052 VA	1052 VA					2	20 A	EBB-B (2,103W)	2
3						1052 VA	1052 VA						4
5	EBB-B (2,103W)	20 A	2					1052 VA	1052 VA	2	20 A	EBB-B (2,103W)	6
7				1052 VA	1052 VA								8
9	EBB-B (2,103W)	20 A	2			1052 VA	1577 VA			2	20 A	(2) EBB-A (1,577W EACH)	10
11								1052 VA	1577 VA				12
13	EBB-B & EBB-A (2,103W & 1,577W)	20 A	2	1840 VA	1577 VA					2	20 A	(2) EBB-A (1,577W EACH)	14
15						1840 VA	1577 VA						16
17	EBB-B (2,103W)	20 A	2					1052 VA	2294 VA				18
19				1052 VA	2294 VA					3	20 A	VAVE-1 (19.1 MCA)	20
21	EBB-B (2,103W)	20 A	2			1052 VA	2294 VA						22
23								1052 VA	748 VA	2	20 A	EF-3,4 (1/4 H.P. EACH)	24
25	EBB-B (2,103W)	20 A	2	1052 VA	748 VA								26
27						1052 VA	1344 VA						28
29	EBB-B (2,103W)	20 A	2					1052 VA	1344 VA	3	20 A	EF-2,5 (1-1/4 H.P.)	30
31				1052 VA	1344 VA								32
33	EBB-B (2,103W)	20 A	2			1052 VA	696 VA			1	20 A	EF-1 (1/4 H.P.)	34
35								1052 VA	528 VA	1	20 A	EF-6 (1/6 H.P.)	36
37	EBB-B (2,103W)	20 A	2	1052 VA	696 VA					1	20 A	EF-8 (1/4 H.P.)	38
39						1052 VA	45 VA			1	20 A	RP-1 (45 W)	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
			Total Load:	16911 VA		16733 VA		13851 VA					
			Total Amps:	145 A		143 A		115 A					
			Total Amps:	132 A									

Branch Panel: RP3

Location: WORK AREA 129 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: SEE SINGLE LINE DIAGRAM | **Phases:** 3 | **Mains Rating:** 225 A
Mounting: Surface | **Wires:** 4 | **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	2
3	WORK AREA 129 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	4
5	WORK AREA 129 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	6
7	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	8
9	WORK AREA 129 - RECS.	20 A	1			180 VA	0 VA			1	20 A	SPARE	10
11	WORK AREA 129 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	12
13	WORK AREA 129 - RECS.	20 A	1	180 VA	0 VA					1	20 A	SPARE	14
15	WORK AREA 129 - RECS.	20 A	1			180 VA	0 VA			1	20 A	SPARE	16
17	WORK AREA 129 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	18
19	WORK AREA 129 - RECS.	20 A	1	360 VA	0 VA					1	20 A	SPARE	20
21	WORK AREA 129 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	22
23	WORK AREA 129 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	24
25	MAIL 130 - RECS.	20 A	1	360 VA	0 VA					1	20 A	SPARE	26
27	MAIL 130 - RECS.	20 A	1			1500 VA	0 VA			1	20 A	SPARE	28
29	MAIL 130 - RECS.	20 A	1					360 VA	0 VA	1	20 A	SPARE	30
31	MAIL 130 - RECS.	20 A	1	1500 VA	0 VA					1	20 A	SPARE	32
33	MAIL 130 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	34
35	MAIL 130 - RECS.	20 A	1					180 VA	0 VA	1	20 A	SPARE	36
37	MAIL 130 - RECS.	20 A	1	1500 VA	0 VA					1	20 A	SPARE	38
39	MAIL 130 - RECS.	20 A	1			360 VA	0 VA			1	20 A	SPARE	40
41	MAIL 130 - RECS.	20 A	1					540 VA	0 VA	1	20 A	SPARE	42
			Total Load:	4260 VA		3300 VA		2160 VA					
			Total Amps:	37 A		29 A		18 A					
			Total Amps:	27 A									

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

PANEL SCHEDULES

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PROJECT NO.: 154.21.085
DRAWN BY: Author | CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: **E3.1**

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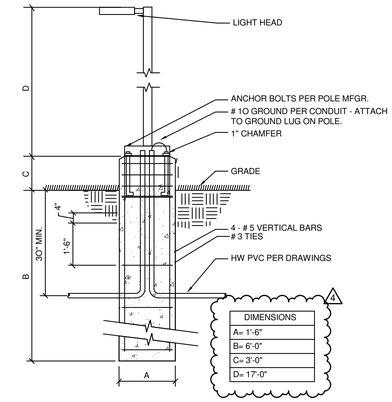
GENERAL NOTES:

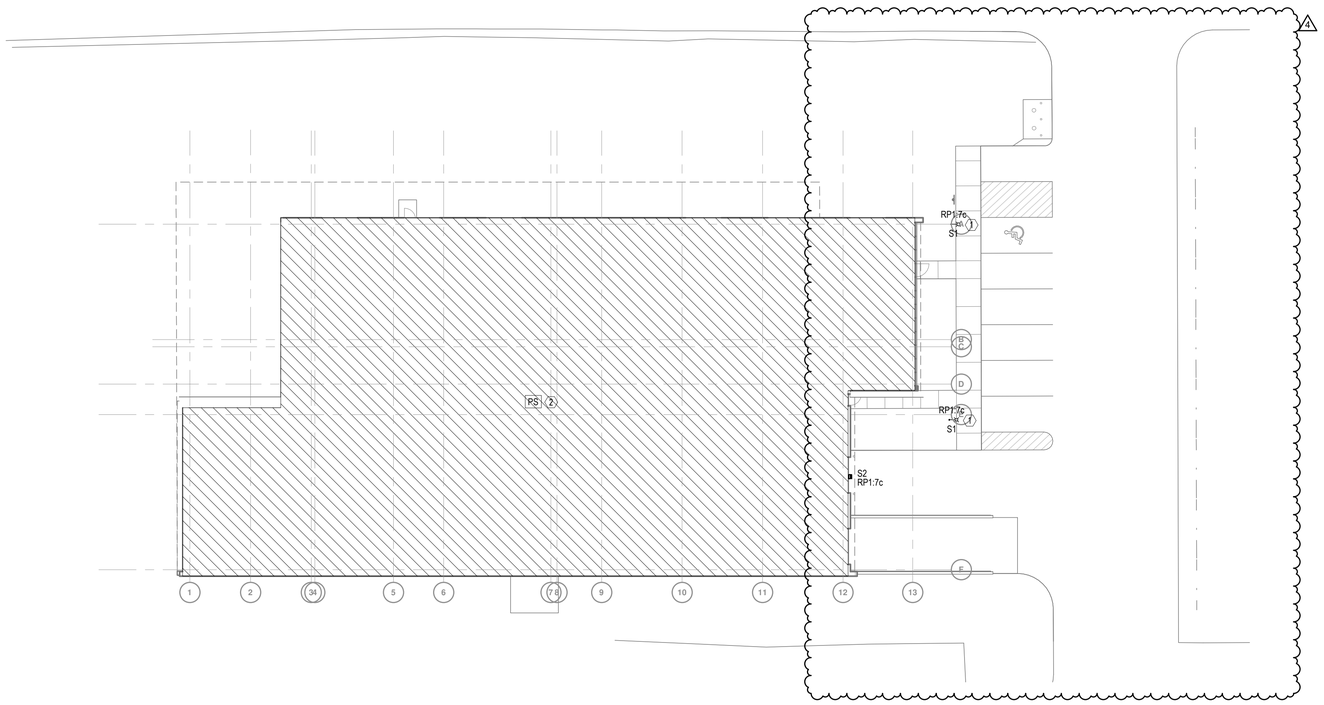
1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.

KEYNOTES

1. PROVIDE 1"C AND ASSOCIATED #10 AWG CONDUCTORS TO EXTERIOR POLE MOUNTED FIXTURES. CONDUIT IS FOR REFERENCE ONLY. COORDINATE EXACT ROUTING IN THE FIELD WITH CIVIL PLANS AND HOMERUN BACK TO ELECTRICAL PANEL. PROVIDE POLE BASE PER DETAIL 2/ES1.0
2. PROVIDE ROOF MOUNTED PHOTOCELL TO TURN EXTERIOR LIGHTING ON AT DUSK AND OFF AT DAWN. IN CONJUNCTION WITH LIGHTING CONTROL PANEL.



2 POLE BASE DETAIL



1 ELECTRICAL - SITE PLAN
1" = 20'-0"

REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
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ELECTRICAL - SITE PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: ES1.0

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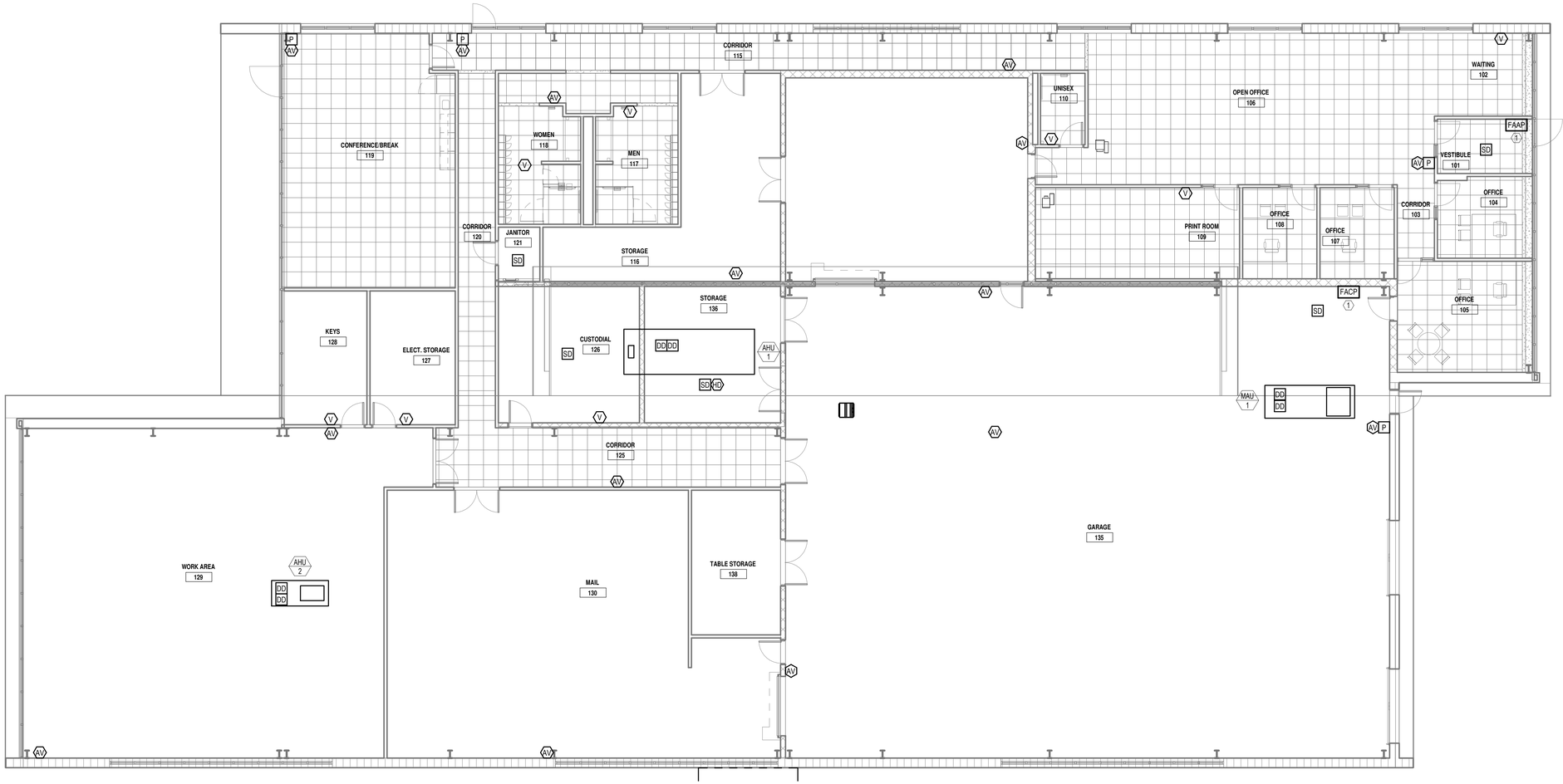
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET E0.0.
2. REFER TO SPECIFICATIONS ON SHEET E0.1.
3. REFER TO FIRE ALARM SYMBOLS LEGEND ON SHEET E0.0.
4. ALL FIRE ALARM DEVICES ARE NEW.
5. ALL FIRE ALARM PANELS SHALL BE AN APPROVED ADDRESSABLE TYPE.
6. A MAP INDICATING THE LOCATION OF ALL FIRE ALARM DEVICES SHALL BE POSTED DIRECTLY ADJACENT TO THE FIRE ALARM PANEL OR IN A LOCATION ACCEPTABLE TO THE FIRE PREVENTION BUREAU.
7. COORDINATE ALL WORK WITH LOCAL FIRE MARSHALL PRIOR TO BID.
8. ALL AUDIO/VISUAL DEVICES MAY NOT BE SHOWN AS REQUIRED BY THE LOCAL JURISDICTION HAVING AUTHORITY. ALL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 72, ADA, STATE & LOCAL CODES. A COMPLETE FIRE ALARM DEVICE LAYOUT SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR.
9. CONDUIT & WIRING FOR ALL FIRE ALARM DEVICES TO BE RUN WITHIN COLUMNS OR WALLS WHERE APPLICABLE. ALL WIRING SHALL BE CONCEALED.
10. ALL FIRE ALARMS TO BE AUDIBLE & VISUAL, & COMPLY FULLY TO ICC/ANSI A117.1 SECTION 702. ALL VISUAL ALARMS TO BE SYNCHRONIZED THROUGHOUT.
11. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT. IT SHALL BE PERMITTED TO RUN CABLES OPEN THROUGHOUT CEILING WITH OWNER & AHJ APPROVAL. CONDUIT SHALL BE PROVIDED WITHIN WALLS AND INACCESSIBLE CEILINGS, AS WELL AS FOR ALL SURFACE MOUNTED DEVICES UP TO THE CEILING SPACE.

KEYNOTES:

1. COORDINATE LOCATION WITH AHJ.



1 FIRE ALARM PLAN
1/8" = 1'-0"

PLENUM NOTE

SPACE ABOVE ALL LAY-IN CEILINGS IS BEING USED AS A RETURN AIR PLENUM. ALL MATERIALS CONTAINED THEREIN SHALL BE PLENUM RATED AND COMPLY WITH INTERNATIONAL MECHANICAL CODE; IMC SECTION 602.2.1 PLENUMS. MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84. PIPING AND DUCTWORK SHALL BE INSTALLED SO THAT THE RETURN AIR PATH IS NOT BLOCKED OR OBSTRUCTED.

FIRE ALARM SHALL BE DESIGN-BUILD BY ELECTRICAL CONTRACTOR. DEVICES ARE SHOWN FOR REFERENCE ONLY. IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO VERIFY ANY ADDITIONAL REQUIREMENTS WITH THE FIRE MARSHALL AS PART OF THE BASE BID.

RTM FIRE ALARM DRAWINGS ARE SCHEMATIC ONLY. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR BIDDING A COMPLETE & OPERATIONAL FIRE ALARM SYSTEM THAT MEETS LOCAL CODE. E.C. SHALL PROVIDE NEW DEVICES AS REQUIRED TO MEET LOCAL MINIMUM REQUIREMENTS & NFPA FIRE CODE.

REVISIONS:

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FIRE ALARM - PLAN

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PROJECT NO.: 154.21.085
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PLUMBING CALCULATIONS

FIXTURE	FIXTURE MARK	QUANTITY	DFU EACH	DFU TOTAL	HWFU EACH	HWFU TOTAL	CWFU EACH	WSFU EACH	WSFU TOTAL
WATER CLOSET	WC-1	1	6	6	0	0	6.5	6.5	6.5
WATER CLOSET	WC-2	3	6	18	0	0	6.5	6.5	19.5
URINAL	UR-1	1	2	2	0	0	4	4	4
LAVATORY	L-1	4	2	8	0.5	2	0.5	1	4
LAVATORY	L-2	1	2	2	0.5	0.5	0.5	1	1
SINK	SK-1	1	2	2	2	2	2	3	3
FLOOR DRAIN	FD-1	7	4	28	0	0	0	0	0
TRENCH DRAIN	TD-1 AND TD-2	2	4	8	0	0	0	0	0
HOSE BIB	HB-1	2	0	0	0	0	1	1	2
DRINKING FOUNTAIN	EWC-1	1	0.5	0.5	0	0	0.25	0.25	0.25
MOP BASIN	MB-1	1	3	3	2	2	2	3	3
TOTALS	-	24	-	77.5	-	6.5	-	-	43.25
PIPE SIZE			SAN = 6"		HW = 3/4"			CW = 2"	

PLUMBING FIXTURE SCHEDULE

DESIG.	COMPONENT	MANUF./MODEL	REMARKS
WC-1	FLUSH VALVE WATER CLOSET	KOHLER / K-4325 "KINGSTON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE WATER CLOSET, HIGH EFFICIENCY,ELONGATED BOWL, MOUNT AT STANDARD HEIGHT A.F.F. PROVIDE BEMIS # 3155CT COMMERCIAL ANTIMICROBIAL GRADE OPEN FRONT TOILET SEAT , POLISHED BRASS TOILET SUPPLY, & FLOOR FLANGE WITH BRASS BOLTS AND RUBBER GASKET. PROVIDE W/ BATTERY POWERED FLUSH VALVE SLOAN #G2 8113-1.28. PROVIDE ZURN Z1201-N OR Z1201-ND WATER CLOSET CARRIER.
WC-2	FLUSH VALVE WATER CLOSET	KOHLER / K-4325 "KINGSTON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE WATER CLOSET, HIGH EFFICIENCY, ELONGATED BOWL, COMPLIANT HEIGHT, MOUNT AT ADA COMPLIANT HEIGHT A.F.F. PROVIDE BEMIS # 3155CT COMMERCIAL ANTIMICROBIAL GRADE OPEN FRONT TOILET SEAT , POLISHED BRASS TOILET SUPPLY, & FLOOR FLANGE WITH BRASS BOLTS AND RUBBER GASKET. PROVIDE W/ BATTERY POWERED FLUSH VALVE SLOAN #G2 8113-1.28. PROVIDE ZURN Z1201-N OR Z1201-ND WATER CLOSET CARRIER.
L-1	LAVATORY (UNDER MOUNT)	KOHLER / K-2209 "CAXTON"	20-1/4" X 18-1/8" WALL-MOUNT/CONCEALED ARM CARRIER BATHROOM SINK WITH 4" CENTERSET FAUCET HOLES, FRONT OVERFLOW, BARRIER FREE, ADA COMPLIANT (SEE ARCH. DRAWINGS FOR ADDITIONAL INFO). PROVIDE W/ BATTERY POWERED FAUCET, SLOAN "OPTIMA" #EBF-615. PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110°, TRUEBRO LAV GUARD 2 UNDERSINK PIPING COVERS, 1-1/2" CP, "P" TRAP AND 1/2" SUPPLIES WITH STOPS.
L-2	LAVATORY (WALL MOUNT)	KOHLER / K-2005-0 "KINGSTON"	17" x 14" UNDER-MOUNT BATHROOM SINK, 4" CENTERSET FAUCET HOLES, FRONT OVERFLOW, BARRIER FREE, ADA COMPLIANT (SEE ARCH. DRAWINGS FOR ADDITIONAL INFO). PROVIDE W/ BATTERY POWERED FAUCET, SLOAN "OPTIMA" #EBF-615. PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110°, TRUEBRO LAV GUARD 2 UNDERSINK PIPING COVERS, 1-1/2" CP, "P" TRAP, 1/2" SUPPLIES WITH STOPS AND LAVATORY SUPPORTS. PROVIDE WITH WALL CARRIER AS REQUIRED.
UR-1	WALL MOUNTED URINAL	KOHLER / K-4991-ET "BARDON"	VITREOUS CHINA, WALL MOUNTED FLUSH VALVE URINAL, HIGH EFFICIENCY, ULTRA LOW-CONSUMPTION 0.5 GPF FLOW RATE, 3/4" TOP SPUD. PROVIDE WITH ZURN #Z1221 WALL CARRIER & BATTERY POWERED FLUSH VALVE SLOAN #G2 8186-0.5.
EWC-1	ELECTRIC WATER COOLER	ELKAY / EZSTLDDWSLK	WALL-MOUNT ADA COMPLIANT, BI-LEVEL 2-STATION, FILTERED, REFRIGERATED, STAINLESS STEEL WATER COOLER DRINKING FOUNTAIN WITH BOTTLE FILLING STATION. (ELECTRICAL: 115V/60HZ, 6.0 AMPS)
TD-1	TRENCH DRAIN 10'-0" LENGTH	SIOUX CHIEF	SIOUX CHIEF 865 GAST TRACK TRENCH DRAIN - 10'-0" TOTAL LENGTH - HIGH DENSITY POLYETHYLENE WITH HIGH DENSITY POLYETHYLENE SLOTTED GRATE HEEL-PROF AND ADA COMPLIANT
TD-2	TRENCH DRAIN 62'-0" LENGTH	SIOUX CHIEF	SIOUX CHIEF 865 GAST TRACK TRENCH DRAIN - 62'-0" TOTAL LENGTH - HIGH DENSITY POLYETHYLENE WITH HIGH DENSITY POLYETHYLENE SLOTTED GRATE HEEL-PROF AND ADA COMPLIANT
FD-1	FLOOR DRAIN	SIOUX CHIEF	5" ROUND FLOOR DRAIN W/ VANDAL PROOF SCREWS FOR 4" OUTLET PIPE, TRAP SEAL GUARD, & NICKEL BRONZE STRAINER. COORDINATE WITH FLOORING SPECS ON ARCHITECTURAL DRAWINGS.
WH-1	ELECTRIC WATER HEATER	BRADFORD WHITE #LE350S3-3	50 GALLON STORAGE CAPACITY - 4500 kW NON-SIMULTANEOUS OPERATION OF HEATING ELEMENTS - 18 GPH AT 100 DEGREE RISE PROVIDE EXPANSION TANK WATTS #PLT-5 2.1 TANK VOLUME 3/4" CONNECTION - NO VALVES BETWEEN WATER HEATER AND EXPANSION TANK.
RP-1	HOT WATER RECIRCULATION PUMP	BELL AND GOSSETT #NBF-33 - 103351LF	LEAD-FREE BRONZE CIRCULATOR - 3/4" FLANGE SIZE - 125 WATTS - 1 PHASE - 1.10 AMPS PROVIDE AQUA-STAT AND TIMER BELL AND GOSSETT AQS-3/4 AND TC-1
SK-1	BREAK ROOM SINK	ELKAY LRAD252155	SINGLE BOWL, STAINLESS STEEL, BOWL SIZE: 21"X15-3/4"X5-3/8", SINGLE HOLE, PROVIDE WITH CODE REQUIRED THERMOSTATIC MIXING VALVE TEMPERED TO 110 DEGREES, AND 1 1/2" CP "P" TRAP, 1/2" SUPPLIES WITH STOPS. PROVIDE KOHLER FORTE K-10415-CP SINGLE HOLE, 9-1/16" SPOUT, SINGLE LEVER, ADA COMPLIANT
MB-1	MOB BASIN	FIAT TSBC1610	TERRAZZO CORNER MOUNT MOP SERVICE BASIN - 12" DEPTH WITH 6" DROP FRONT PROVIDE CHICAGO FAUCETS 540-LD897SWXFABCP, WALL MOUNT DOUBLE LEVER HANDLE SERVICE SINK FAUCET, TOP-MOUNT WALL BRACE AND LOOSE-KEY STOPS
CATCH BASIN	CATCH BASIN	AK INDUSTRIES	36" DIAMETER X 48" DEEP HIGH DENSITY POLYETHYLENE PROVIDE CAST IRON FRAME AND GRATE - HEAVY DUTY TRAFFIC RATED

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS PREPARED BY THE ENGINEER-OF-RECORD AFTER FINAL INSPECTION OF INSTALLED PLUMBING SYSTEMS.
3. FURNISH TO THE OWNER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
4. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
5. REFER TO ARCHITECTURAL PLANS AND KITCHEN EQUIPMENT PLAN FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
6. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
7. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
8. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
9. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
10. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
11. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
12. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
13. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.
14. PAINT ALL EXPOSED GAS PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND/OR OWNER.
15. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING. ALL COLD WATER LINES SHALL BE INSULATED WITH MINIMUM OF 3/4" FIBERGLASS INSULATION WITH VAPOR BARRIER. ALL HOT WATER AND HOT WATER RECIRCULATING LINES SHALL BE INSULATED WITH MINIMUM OF 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER IN/HxSFx°F.
16. PROVIDE SHIELDED ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE DIVISION 15 SPECIFICATION SECTION "DRAINAGE AND VENT SYSTEMS" FOR MORE INFORMATION.
17. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
18. PROVIDE CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
19. EXPOSED HOT WATER PIPES AND DRAINPIPES UNDER HANDICAPPED ACCESSIBLE LAVATORIES SHALL BE CONFIGURED OR INSULATED TO PROTECT AGAINST CONTACT.
20. RPZ SHALL BE INSTALLED IN THE POTABLE WATER SUPPLY TO EACH LOCATION WHERE SANITIZING CHEMICALS OR DETERGENTS WILL BE ASPIRATED OR PUSHED BY WATER PRESSURE INTO CLEANSING/SANITIZING OPERATION.
21. DRAINAGE AND VENT SYSTEM SHALL BE PRESSURE TESTED WITH WATER OR AIR.
22. ALL RPZ ASSEMBLIES SHALL BE TESTED AND APPROVED BY A CROSS CONNECTION CONTROL DEVICE INSPECTOR BEFORE INITIAL OPERATION. RECORDS TO VERIFY THIS TESTING SHALL BE AVAILABLE ON SITE.
23. ALL PENETRATIONS OF FLOOR/CEILING ASSEMBLIES SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
24. ALL DRY VENTS SHALL RISE VERTICALLY TO A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM OF THE HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.
25. MATERIAL EXPOSED WITHIN A PLENUM CEILING SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 (IMC 602.2.1).
26. ALL ABANDONED AND/OR UNUSED COMPONENTS CREATED OR EXPOSED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HVAC, CABLES, PIPING WIRING, AND ASSOCIATED SUPPORTS AND/OR ATTACHMENTS SHALL BE REMOVED.

DSP-1 TRUCK DOCK SUMP PUMP SYSTEM

4

ITEM: DSP-1 TRUCK DOCK SUMP PUMP SYSTEM

PROVIDE A METROPOLITAN DUPLEX "VORTEX" PUMP SYSTEM, WHICH SHALL INCLUDE TWO (2) MODEL SEH50 HEAVY-DUTY SUBMERSIBLE "RECESSED IMPELLER VORTEX-TYPE" PUMPS, WITH PUMP-OUT VANES ON THE REAR SHROUD. PUMPS SHALL BE OF CAST IRON, STAINLESS-FITTED CONSTRUCTION. ALL SOLIDS MUST BE ABLE TO PASS THROUGH THE PUMP CASING, WITHOUT PASSING THROUGH THE IMPELLER. THE PUMPS SHALL HAVE CARBON-CERAMIC SHAFT-SEALS. THE UNITS SHALL BE RATED 60 GPM AT 15-FEET TDH, WITH 2-INCH DISCHARGE, DESIGNED TO PASS 2-INCH DIAMETER SOLIDS. THE MOTORS SHALL BE CLOSE-COUPLED, OIL-FILLED, RATED 1/2-HP, 3450-RPM, 3-PHASE, 60-HZ, 208-VOLT, NON-OVERLOADING. THE LEVEL CONTROLS SHALL CONSIST OF FOUR (4) LEVEL-SWITCHES, SUSPENDED FROM THE STEEL BASIN COVER WITH A STAINLESS STEEL CHAIN AND ANCHOR FLOAT MOUNTING SYSTEM, AND A NEMA-1, U. L. LABELED DUPLEX CONTROL PANEL WITH A MAIN DOOR-INTERLOCKED DISCONNECT, CIRCUIT BREAKERS, STARTERS, O.L. BLOCKS, H-O-A SWITCHES, TRANSFORMER, AND AN "INTELLI-PUMP" MICROPROCESSOR-BASED PROCESS-CONTROLLER. IMPORTANT NOTE: IF ONE, TWO OR THREE OF THE LEVEL SWITCHES BECOME INOPERABLE, THE SELF-DIAGNOSTIC CONTROLLER SHALL BE DESIGNED TO CONTINUE UNINTERRUPTED AUTOMATIC OPERATION OF THE PUMPS, AND ALL ALARM FUNCTIONS.

THE CONTROLLER SHALL INCLUDE THE FOLLOWING FEATURES:

(1) POWER-ON LIGHT
(2) PUMP-RUN LIGHTS
(2) PUMP-FAIL LIGHTS
(2) CONTACTOR FEEDBACK STATUS LIGHTS
(4) LEVEL SWITCH STATUS LIGHTS
(3) FLASHING FAULT CODES
(1) FLASHING HIGH LIQUID LEVEL ALARM LIGHT
(2) SETS, PUMP-FAIL DRY REMOTE ALARM CONTACTS
(1) SET, HIGH LIQUID LEVEL DRY REMOTE ALARM CONTACT.

CONTROL SYSTEMS WITHOUT THE ESSENTIAL FUNCTIONS & INDICATORS LISTED ABOVE ARE NOT ACCEPTABLE. A 40-INCH O.D. GASKETED EPOXY-COATED STEEL BASIN COVER SHALL BE PROVIDED, DESIGNED TO MATE WITH A 36-INCH DIAMETER X 120 -INCH DEEP FIBERGLASS BASIN WITH ANTI-FLOATATION FLANGE. THE ENTIRE SYSTEM SHALL BE MANUFACTURED, SERVICED, AND WARRANTEED BY A "LOCAL" MANUFACTURER: METROPOLITAN INDUSTRIES, OF NEARBY ROMEOVILLE, ILLINOIS.

PLUMBING SYMBOLS

- DOMESTIC COLD WATER - EXISTING - X-CW
- DOMESTIC COLD WATER - DEMO
- DOMESTIC COLD WATER - NEW - CW
- DOMESTIC HOT WATER - EXISTING - X-HW
- DOMESTIC HOT WATER - DEMO
- DOMESTIC HOT WATER - NEW - HW
- DOMESTIC HOT WATER RETURN - EXISTING - X-HWR
- DOMESTIC HOT WATER RETURN - DEMO
- DOMESTIC HOT WATER RETURN - NEW - HWR
- SANITARY DRAIN BELOW GROUND - EXISTING - X-SS - X-SAN
- SANITARY DRAIN - DEMO
- SANITARY DRAIN - NEW - SS - SAN
- SANITARY DRAIN - EXISTING - X-S - X-SAN
- SANITARY DRAIN - DEMO
- SANITARY DRAIN - NEW - S - SAN
- VENT - EXISTING - X-V
- VENT - DEMO
- VENT - NEW - V
- FS — FLOOR SINK - FS
- FD — FLOOR DRAIN - FD
- FCO — FLOOR CLEANOUT FCO
- WCO — WALL CLEANOUT - WCO
- RD — ROOF DRAIN - RD
- OD — ROOF DRAIN OVER-FLOW - OD
- SHUT-OFF VALVE
- CIRCUIT SETTER - CS
- BACKFLOW PREVENTER - BFP
- WHA — WATER HAMMER ARRESTOR - WHA

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS, ETC. ARE NECESSARILY USED ON THE DRAWINGS.

PLUMBING MATERIALS

ALL PLUMBING INSTALLATION AND MATERIALS SHALL CONFORM TO THE WISCONSIN ADMINISTRATIVE CODE - SAFETY AND PROFESSIONAL SERVICES CHAPTER SPS 382

WATER DISTRIBUTION PIPE AND FITTINGS

COPPER - TYPE L

UNDERGROUND BUILDING DRAINAGE AND VENT PIPE AND FITTINGS

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
COPPER - TYPE L
PVC - SCHEDULE 40

ABOVE GROUND DRAINAGE AND VENT PIPE AND FITTINGS (NON-PLENUM CEILING SPACE)

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
CAST IRON HUBLESS - SERVICE WEIGHT
COPPER - TYPE L
PVC - SCHEDULE 40

ABOVE GROUND DRAINAGE AND VENT PIPE AND FITTINGS (PLENUM CEILING SPACE)

CAST IRON HUB AND SPIGOT - SERVICE WEIGHT
CAST IRON HUBLESS - SERVICE WEIGHT
COPPER - TYPE L

PLUMBING SHEET INDEX

SHEET NO.	SHEET NAME
P0.0	PLUMBING GENERAL NOTES, SYMBOLS, & LEGENDS
P3.1	PLUMBING FIRST FLOOR SANITARY & VENT PLAN
P3.2	PLUMBING FIRST FLOOR DOMESTIC WATER PLAN
P3.3	PLUMBING MEZZANINE FLOOR PLAN
P4.1	PLUMBING RISER DIAGRAMS

REVISIONS:

1	7.13.2022	ADDENDUM NO.1
3	7.19.2022	ADDENDUM NO.3
4	7.29.2022	ADDENDUM NO.4

FACILITIES BUILDING
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PLUMBING GENERAL NOTES, SYMBOLS, & LEGENDS

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: P0.0

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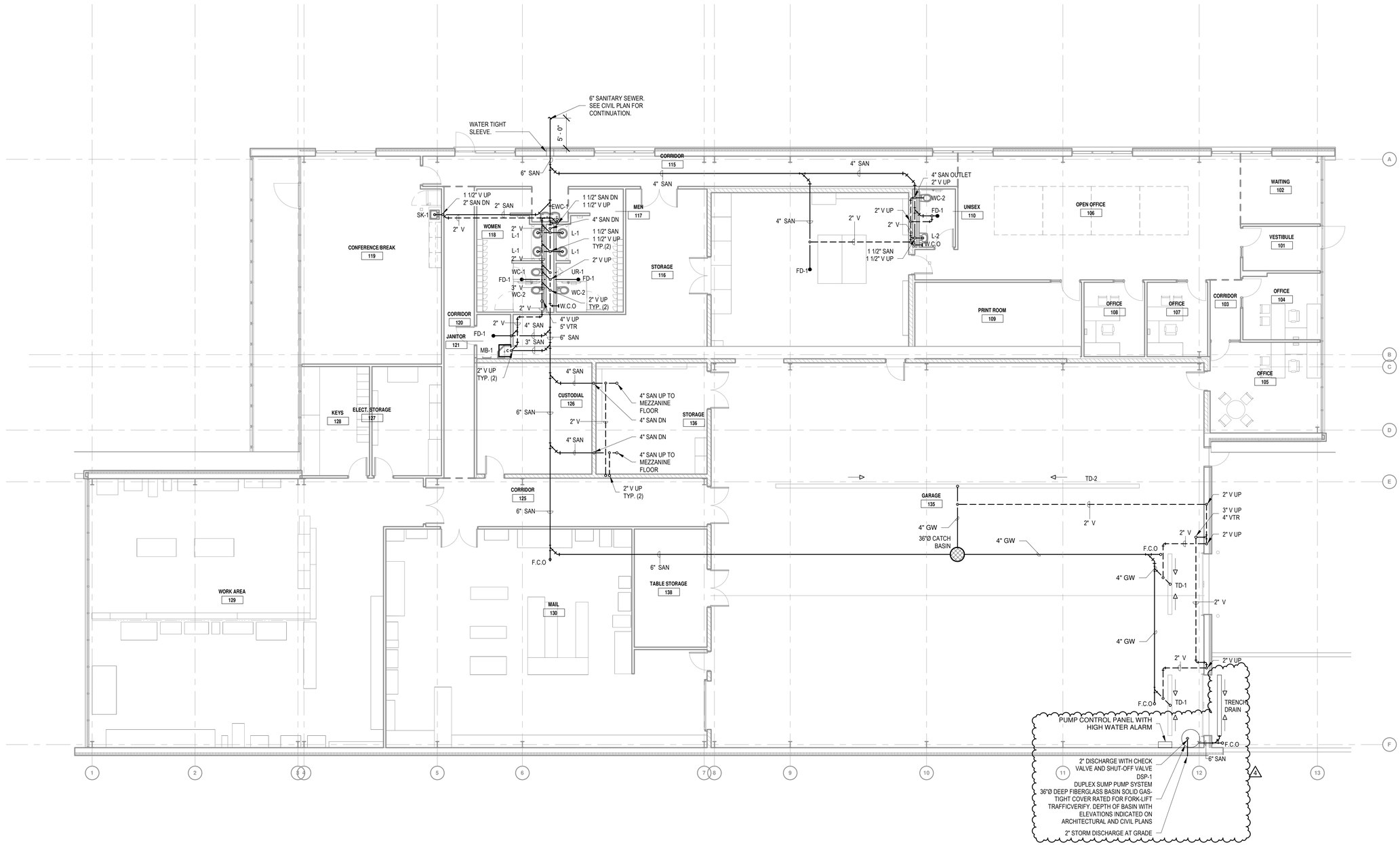

1 PLUMBING - SANITARY & VENT PLAN
1/8" = 1'-0"

REVISIONS:
4 7.29.2022 ADDENDUM NO.4

FACILITIES BUILDING
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PLUMBING FIRST FLOOR SANITARY & VENT PLAN

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DRAWN BY: Author
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SHEET NO.: P3.1

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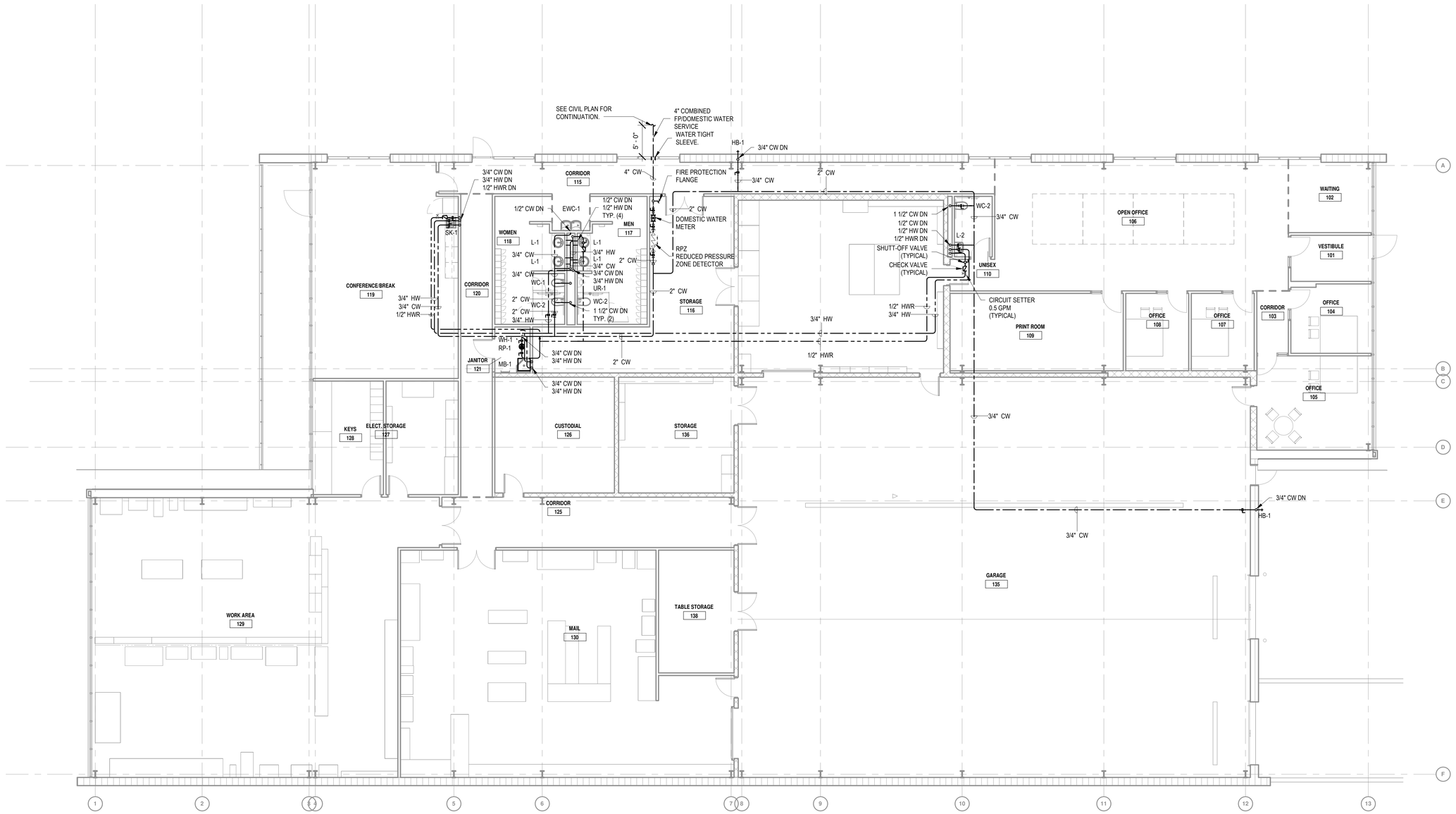

1 PLUMBING - DOMESTIC WATER PLAN
1/8" = 1'-0"

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PLUMBING FIRST FLOOR DOMESTIC WATER PLAN

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SHEET NO.: P3.2

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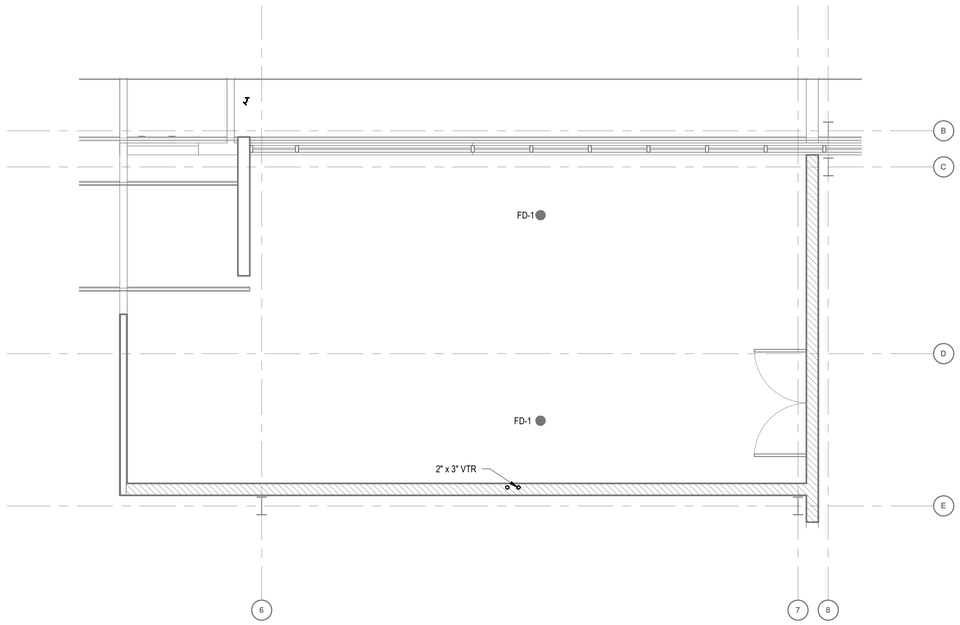

1 MEZZANINE PLUMBING PLAN
1/4" = 1'-0"

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PLUMBING MEZZANINE FLOOR PLAN

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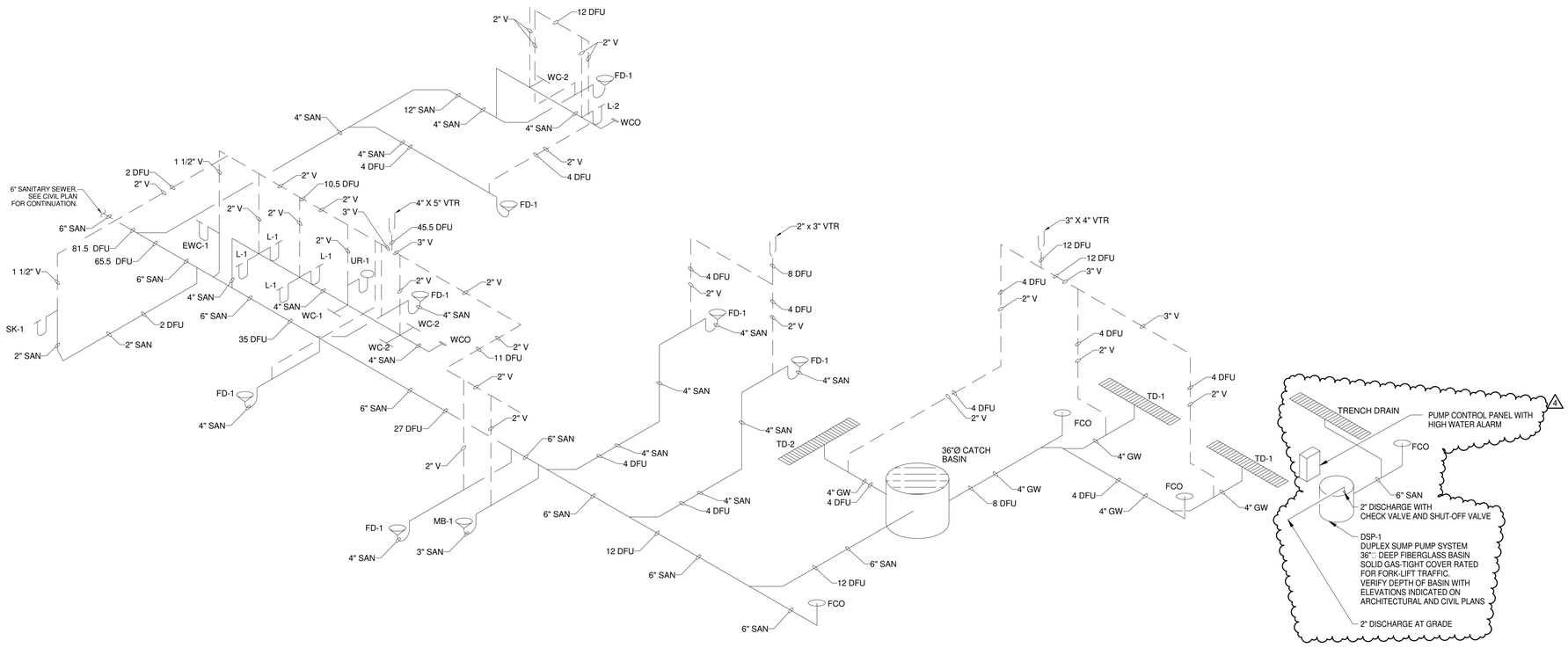
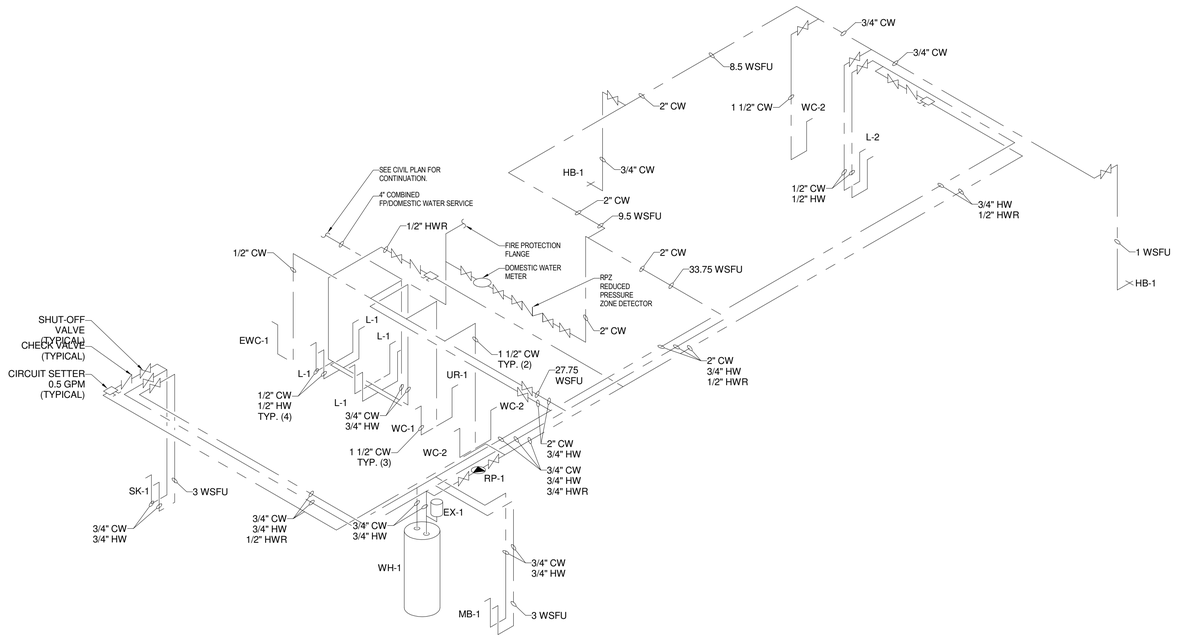


1 PLUMBING-SANITARY AND VENT RISER DIAGRAM
NOT TO SCALE



2 PLUMBING-DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE

REVISIONS:
1 7.29.2022 ADDENDUM NO.4

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PLUMBING RISER DIAGRAMS

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FIRE PROTECTION SCOPE SPECIFICATION

1. THE CONTRACTOR FOR THE FIRE PROTECTION WORK SHALL BE A RECOGNIZED, QUALIFIED AND LICENSED FIRE PROTECTION CONTRACTOR, PRIMARY ENGAGED IN THE PROTECTION SYSTEMS. THE FIRE PROTECTION WORKING DRAWINGS INCLUDING HYDRAULIC CALCULATIONS (BASED ON RECENT FLOW TEST DATA) & MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE STATE INSPECTION SERVICE, LOCAL GOVERNING AUTHORITIES HAVING JURISDICTION AND TO THE OWNER'S FIRE INSURANCE UNDER WRITER'S, OWNER'S ENGINEER OF RECORD FOR REVIEW, APPROVALS AND PERMITS.
2. THIS DRAWING IS FOR REFERENCES PURPOSE ONLY. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL DESIGN OF THE SPRINKLER SYSTEM AND ITS CONFORMANCE TO NFPA 13 AND ANY LOCAL CODE REQUIREMENTS. THE FIRE PROTECTION CONTRACTOR SHALL INCLUDE ALL NEEDED OFFSETS, CHANGES IN DIRECTION, TRANSITIONS, ETC. NEEDED FOR COMPLETE AND OPERATIONAL SYSTEMS.
3. THE CONTRACTOR WILL VISIT THE SITE AND BE FAMILIAR WITH SITE CONDITIONS. NO EQUIPMENT OR MATERIAL IS TO BE ORDERED OR FABRICATED PRIOR TO FIELD VERIFICATION OF ALL MEASUREMENTS, CLEARANCES, POTENTIAL CONFLICTS WITH EXISTING CONDITIONS OR THAT OF OTHER TRADES ON THE JOB.
4. PERFORM ALL WORK IN ACCORDANCE WITH THE, RULES & REGULATIONS OF THE APPROPRIATE STATE AND LOCAL BUILDING CODES AND SUBTITLES.
5. QUESTIONS REGARDING THESE DRAWINGS SHALL BE ADDRESSED TO THE ENGINEER PRIOR TO THE AWARDING OF THE CONTRACT. OTHERWISE THE ENGINEER'S INTERPRETATION OF THE MEANING AND INTENT OF THE DRAWINGS SHALL BE FINAL.
6. SPRINKLER CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CEILING TYPES, HEIGHTS, COLOR, ELEVATIONS, SOFFITS, DISPLAY WINDOWS, RACKING (TYPES, HEIGHTS, ETC...), ETC.
7. FIRE PROTECTION CONTRACTOR SHALL PROVIDE 1/8" SCALE PIPING DRAWING FOR COORDINATION WITH OTHER TRADES. DRAWINGS TO INDICATE DIMENSION AND CRITICAL ELEVATION OF PIPING.
8. ALL PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR NO LESS THAN 2 HOURS. THE FIRE DEPARTMENT BE NOTIFIED (NO LESS THAN 48 HOURS PRIOR) OF THE DATE AND TIME AND MAY WITNESS IT IF SO DESIRED OR REQUIRED.
9. CONTRACTOR SHALL PROVIDE WARRANTY FOR ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP FOR (1) ONE YEAR FROM SUBSTANTIAL COMPLETION OF WORK.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL INSPECTIONS WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
11. CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER HEADS ABOVE AND BELOW MECHANICAL/ELECTRICAL DUCTS AND EQUIPMENT WHICH EXCEEDS 48 INCHES IN WIDTH.
12. ALL INSTALLATIONS SHALL CONFORM TO NFPA 13, LATEST EDITION.
13. ALL FIRE PROTECTION PIPING SHALL BE SUSPENDED WITH APPROVED/LISTED PIPE HANGERS IN COMPLIANCE WITH NFPA STANDARDS. CUTTING STRUCTURAL MEMBERS TO RUN PIPING, OR TO FACILITATE HANGER FASTENING, IS NOT PERMITTED.
14. ALL PIPING PASSING THRU FLOOR CONSTRUCTION SHALL HAVE A SCHEDULE 40 PIPE SLEEVE INSTALLED AROUND PIPE ONLY. ALL PIPE PASSING THRU WALLS SHALL HAVE A GALVANIZED SHEET METAL OR SCHEDULE 40 PIPE SLEEVE INSTALLED AROUND THE PIPE. ALL EXPOSED PIPE WHICH PASSES THROUGH A WALL OR CEILING SHALL BE EQUIPPED WITH AN ESCUTCHEON PLATE.
15. FIRE PROTECTION PIPING SHALL BE AS FOLLOWS:
    A. (1"-6") STEEL PIPE: ASTM A795; SCHEDULE 40, BLACK. STEEL FITTINGS: ASME B16.5, STEEL FLANGES AND FITTINGS. CAST IRON FITTINGS: ASME 16.1, FLANGES AND FLANGED FITTINGS; OR AMSE B16.4, THREADED FITINGS. MALLEABLE IRON FITTINGS: ASME B16.3, THREADED FITTINGS.
    B. (1 1/4"-6") STEEL PIPE: ASTM A795; SCHEDULE 40, BLACK. MECHANICAL GROOVED COUPLINGS: MALLEABLE IRON HOUSING CLAMPS TO ENGAGE AND LOCK, "C" SHAPED ELECTROMETRIC SEALING GASKET, STEEL BOLTS, NUTS, AND WASHERS.
    C. (1 1/4"-6") STEEL PIPE: ASTM A135, SCHEDULE 40, BLACK. STEEL FITTINGS: ASME B16.5, STEEL FLANGES AND FITTINGS. MECHANICAL GROOVED COUPLINGS: MALLEABLE IRON HOUSING CLAMPS TO ENGAGE AND LOCK, "C" SHAPED ELECTROMETRIC SEALING GASKET, STEEL BOLTS, NUTS, AND WASHERS.
18. SPRINKLER PIPING SHALL NOT BE INSTALLED DIRECTLY OVER ANY ELECTRICAL EQUIPMENT PANELS.
19. ALL PIPE AND FITTINGS SHALL BE INSTALLED IN RUST-FREE CONDITION.
20. THE USE OF THREADED BUSHINGS WILL NOT BE PERMITTED IN ANY AREA OF THIS INSTALLATION.
21. ALL PIPING AND COMPONENTS NECESSARY FOR INSTALLATION MAY BE PREFABRICATED. HOWEVER, THE CONTRACTOR MUST BE WILLING TO REWORK THE PREFABRICATED PIPE, FITTINGS, AND THE LIKE, AS NECESSARY TO CONSTITUTE A PROPER APPROVED INSTALLATION, EXISTING SITE CONDITIONS NOTWITHSTANDING, AT NO ADDITIONAL COST TO THE OWNER.
22. THE CONTRACTOR SHALL BE RESPONSIBLE DURING AND TESTING PERIODS OF THE FIRE SPRINKLER SYSTEM WORK, FOR ANY MATERIAL DAMAGE TO THE WORK OF THE OWNER OR OTHERS, AND TO THE PROPERTY AND MATERIALS OF THE OWNER OR OTHERS, INCLUDING CEILING SPRINKLER TILES, AND INCLUDING DAMAGE CAUSED BY GREASE, OIL, OR LEAKS IN SPRINKLER EQUIPMENT, FITTINGS OR BY DISCONNECTED PIPES.
23. THE GENERAL CONDITIONS AND SUPPLEMENTAL GENERAL CONDITIONS ISSUED BY THE ARCHITECT SHALL GOVERN WHERE APPLICABLE.
24. ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL; ACCEPTANCE BY THE OWNER SHALL BE A CONDITION WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES, PRESERVE MAXIMUM HEADROOM AND AVOID OMISSIONS.
25. CONTRACTOR TO MAKE ALL NECESSARY TAPS, AS CALLED FOR ON THE DRAWINGS.
26. THIS CONTRACTOR SHALL REMOVE ALL DEBRIS ON COMPLETION OF THE JOB AND CLEAN ALL FIXTURES.
27. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, ENGINEER, OWNERS INSURANCE UNDERWRITER, AND LOCAL FIRE DEPARTMENT FOR APPROVAL COMPLETE INSTALLATION AND DESIGN DRAWINGS SHOWING THE SPRINKLER SYSTEM LAYOUTS. THE LAYOUT SHALL INDICATE ALL OF THE SPRINKLER PIPING, SPRINKLER HEAD LOCATIONS, EQUIPMENT AND DETAILS OF ANCHORS AND SUPPORTS AS REQUIRED.
28. FITTINGS SHALL BE NEW 125 LB. CAST IRON SCREWED OR FLANGED CONFORMING TO A.S.A. B16.4, MANUFACTURED IN THE U.S. AND APPROVED FOR FIRE PROTECTION SPRINKLER SYSTEMS.
29. THE SPRINKLER RISERS, MAINS AND BRANCH PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, USING APPROVED TYPE STEEL HANGERS, BRACKETS, ANCHORS AND STUDS, OF SIZE AND NUMBER IN ACCORDANCE WITH N.F.P.A. #13.
30. ALL PIPING ABOVE GRADE SHALL BE HYDROSTATICALLY TESTED AT 200 PSIG FOR A TWO-HOUR PERIOD IN ACCORDANCE WITH N.F.P.A. #24.
31. CONTRACTOR IS RESPONSIBLE FOR SPACING, PIPE SIZE, OFFSETS, CLEARANCES, VALVES, ELBOWS, HANGERS, ALL ACCESSORIES AND QUANTITIES FOR ALL.

SPRINKLER LEGEND

- ● DOWN-TURNED, QUICK RELEASE, CONCEALED TYPE SPRINKLER.
- ○ UPTURNED SPRINKLER

1 FIRE PROTECTION PLAN
1/8" = 1'-0"

REVISIONS

FACILITIES BUILDING
Carthage College - Kenosha, Wisconsin

LEVEL 1 FIRE PROTECTION SPRINKLER PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: FP3.1

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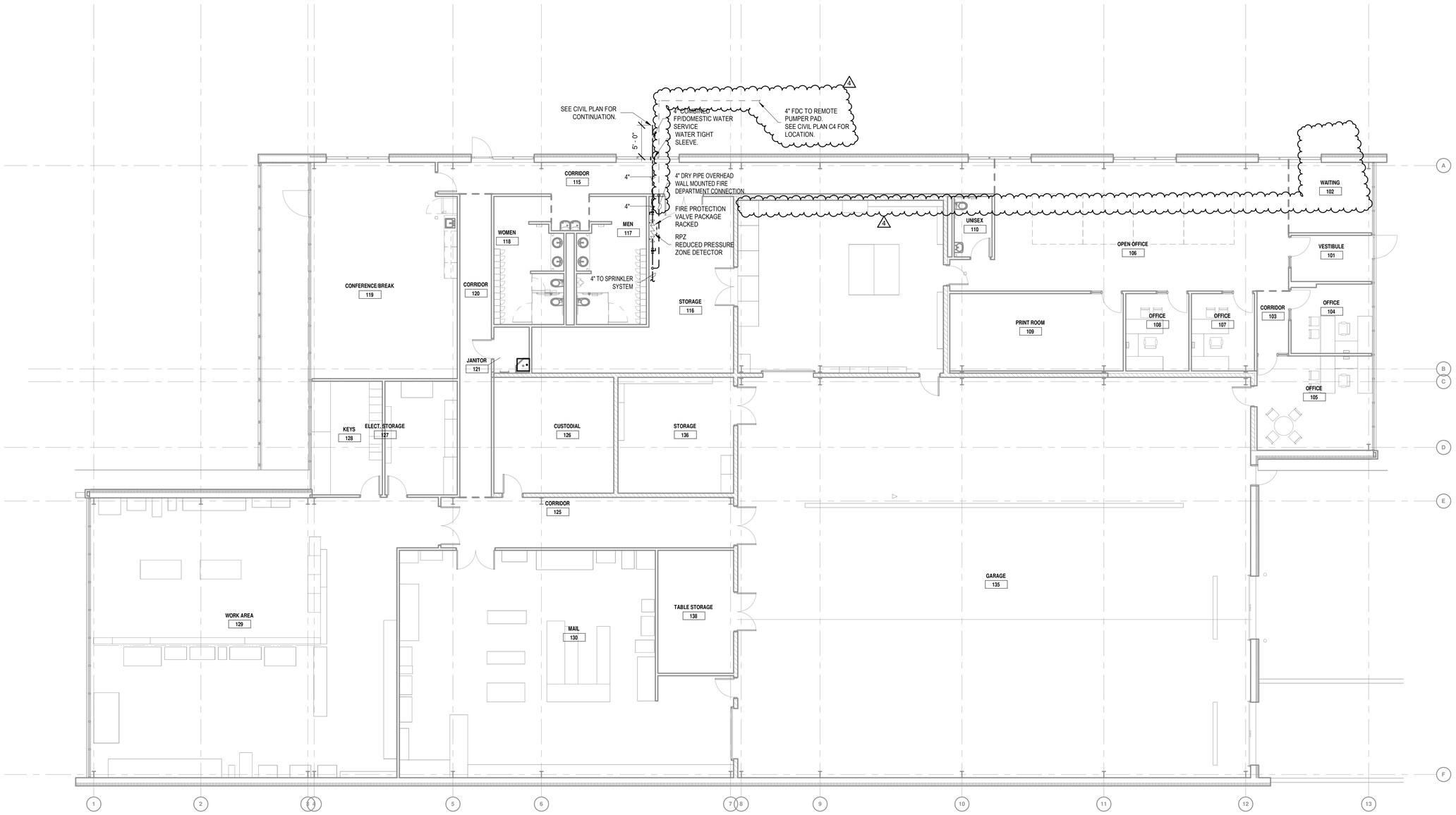

1 PLUMBING - FIRE PROTECTION PLAN
1/8" = 1'-0"

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REVISIONS:
2 7.15.2022 ADDENDUM NO.2
4 7.29.2022 ADDENDUM NO.4

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LEVEL 1 FIRE PROTECTION PLAN

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PROJECT NO.: 154.21.085
DRAWN BY: Author
CHECKED BY: Checker
DATE: 04.10.22
SHEET NO.: FP3.2