THE CITY OF WATERTOWN

PLAN COMMISSION MEETING AGENDA

MONDAY, MARCH 11, 2024 AT 4:30 PM

COUNCIL CHAMBERS, SECOND FLOOR, MUNICIPAL BUILDING, 106 JONES STREET, WATERTOWN, WI 53094

By Phone or GoToMeeting: Members of the media and the public may attend by calling:
1 877 309 2073 Access Code: 835-481-365 or https://meet.goto.com/835481365
All public participants' phones will be muted during the meeting except during the public comment period.

1. **CALL TO ORDER**
2. **APPROVAL OF MINUTES**
   - A. Review and take action: Plan Commission minutes dated February 26, 2024
3. **BUSINESS**
   - A. Review and take action: W7880 County Road Q – Extraterritorial Certified Survey Map (CSM)
   - B. Review and take action: 916 Labaree Street – Architectural and location review of Riverside Park restrooms
   - C. Review and take action: Plan Commission confirmation of zoning code interpretation – Density Standards
   - D. Convene into closed session per Wis. Stat. Sec. 19.85(1)(e) to deliberate or negotiate the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session. (Town of Emmet Boundary Agreement)
   - E. Reconvene to open session
4. **ADJOURNMENT**

Persons requiring other reasonable accommodations for any of the above meetings, may contact the office of the City Clerk at mdunneisen@watertownwi.gov, phone 920-262-4006

A quorum of any City of Watertown Council, Committee, Board, Commission, or other body, may be present at this meeting for observing and gathering of information only

PLAN COMMISSION
MINUTES
February 26, 2024

The Plan Commission met on the above date in the Council Chambers.

The following members were present: Mayor McFarland, Alderman Blanke, Beyer, Konz, Krueger, Lampe, Talaga (virtual), Zirbes

Also in attendance: Mason Becker, Brad Hayes, Margaret Hayes, Candy Grams

1. **Call to order**

2. **Approval of Minutes**
   - **A. Site Plan Review minutes February 12, 2024**
   - **B. Plan Commission minutes February 12, 2024**
     Motion to approve Site Plan minutes and Plan Commission minutes was made by Lampe and seconded by Konz, passed on unanimous voice vote.

3. **Business**
   - **A. Conduct public hearing:** 1722 S. Church Street – Conditional Use Permit (CUP) request for an addition under Indoor Commercial Entertainment Section 550-33B(2)(g)
     No comments from the public.

   - **B. Review and take action:** 1722 S. Church Street – Conditional Use Permit (CUP) request for an addition under Indoor Commercial Entertainment Section 550-33B(2)(g)
     Brian Zirbes presented the request to bring the existing Culver's into compliance with the zoning code and for the construction of an addition to the building.
     Motion was made to approve with the condition that the a final landscape plan that meets the zoning requirements is submitted to the city was made by Beyer and seconded by Lampe, passed on a unanimous voice vote.

   - **C. Conduct public hearing:** 717 W. Main Street – Conditional Use Permit (CUP) request for a Group Development under Section 550-68A(1)
     No comments from the public.

   - **D. Review and take action:** 717 W. Main Street – Conditional Use Permit (CUP) request for a Group Development under Section 550-68A(1)
     Brian Zirbes presented the request for a CUP for 717 W. Main St. Three standards need to be waived for this CUP:
     Parking lot design shall employ interior landscaped islands with a minimum of 400 square feet at all parking islands, and in addition shall provide a minimum of one landscaped island of a minimum of 400 square feet in each parking aisle for every 20 cars in that aisle. Aisle-end islands shall count toward meeting this requirement. Landscaped medians shall be used to break large parking areas into distinct pods, with a maximum of 100 spaces in any one pod.

On-site landscaping shall be provided per the landscaping requirements of this chapter, except that building foundation landscaping and paved area landscaping shall be provided at 1.5 times the required landscape points for development in the zoning district.
A conceptual plan for exterior signage shall be provided at time of detailed site plan or GDP that provides for coordinated and complementary exterior sign location, configurations and colors throughout the planned development. All freestanding signage within the development shall complement the on-building signage. Freestanding sign materials and design shall complement the building exterior and may not exceed the maximum height requirement of this chapter and the Building Code.

The developer would also need to obtain approval for a condominium plat for the development. Brad Hayes spoke to the commission about the plan to redevelop this site.

Motion was made by Lampe and seconded by Krueger to approve the request for a CUP with the waivers stated above and the pending approval of the condominium plat by the Plan Commission, passed on a unanimous voice vote.

E. Initial review and set public hearing date for Zoning Text Amendments: Amend Chapter 550 Zoning

Brian Zirbes presented 5 proposed amendments to the zoning code. A summary of each is as follows:

Amendment #1: Current zoning code requires a minimum of 50 feet for both lot width and street frontage when developing Twin Homes. This text amendment reduces the minimum lot width and street frontage for Twin Homes to 42.5 ft. This text amendment also changes the Maximum Gross Density (MGD) to 8 dwelling units per acre for Twin Homes. This change will allow an existing duplex on an 85 ft wide lot (minimum lot with is 85 ft) to be divided into Twin Homes on separate lots and for new Twin Home developments to be developed with these standards. This change applies only to Twin Home development.

Amendment #2: Current zoning code does not allow for 'Outdoor Commercial Entertainment Incidental to Indoor Commercial Entertainment' as an accessory use in the General Business (GB) Zoning District or the Planned Business (PB) Zoning District. 'Outdoor Commercial Entertainment Incidental to Indoor Commercial Entertainment' includes uses such as outdoor dining spaces. This text amendment allows 'Outdoor Commercial Entertainment Incidental to Indoor Commercial Entertainment' in both the General Business (GB) Zoning District and the Planned Business (PB) Zoning District. This change would only allow 'Outdoor Commercial Entertainment' as an accessory use in locations where 'Indoor Commercial Entertainment' is a principle use.

Amendment #3: Current zoning code does not define a 'Street Side Yard'. A 'Street Side Yard' applies to corner lots with two sides having frontage on a street. On a corner lot a 'Street Side Yard' is the yard with street frontage not designated as the front yard. This designation has importance for maintaining proper vision clearance at intersections. Current zoning code language is often confusing for property owners regarding the storage of items such as firewood in these areas. This text amendment adds a definition for 'Street Side Yard' and adds a reference to 'Street Side Yard' within the firewood storage standards to clarify that firewood storage is not permitted in these areas.

Amendment #4: Current zoning code allows 'Commercial Apartments' above the ground floor of a commercial building but not below the ground floor. This text change would allow the potential to establish 'Commercial Apartments' in lower levels (basement) of commercial buildings where appropriate.
Amendment #5: Current zoning code sets requirements for exterior storage in nonresidential districts. The existing language in this section is inconsistent with permitted uses that allow for outdoor storage in the Industrial Zoning Districts. This text amendment corrects this inconsistency and rewords the language of this section to add clarity.
After lengthy discussion the Commission chose to bring back Amendment 5 at a later date with more information on current city code for dealing with construction sites and abandoned buildings.
Motion was made by Lampe and seconded by Krueger to approve amendments 1-4 for a public hearing on March 19th, passed on a unanimous voice vote.

All materials discussed at this meeting can be found at:

https://cms4files.revize.com/watertownwi/February%2026,%202024%20Plan%20Commission%20Meeting%20Packet.pdf

4. **Adjournment**

   Motion to adjourn was made by Blanke and seconded by Lampe and passed on a unanimous voice vote. (5:10pm)

Respectfully Submitted,

Alderman Brad Blanke

Main Office
920-262-4060

Brian Zirbes
920-262-4041

Mark Hady
920-342-0986

Nikki Zimmerman
920-262-4045

Dell Zwieg
920-262-4042

Doug Zwieg
920-262-4062

Dennis Quest
920-262-4061

TO: Plan Commission
DATE: March 11th, 2024
SUBJECT: W7880 / W7894 County Road Q - Extraterritorial Certified Survey Map (CSM)

A request by Stephanie Bartz to create a two lot Certified Survey Map (CSM) within the City of Watertown 3-mile extraterritorial plat review jurisdiction. Parcel PIN(s): 040-0914-1334-000 & 040-0914-1334-006

SITE DETAILS:
Parent Parcel Acres: 1.08 & 3.26
Proposed Lot Size(s): 3.03 & 1.31 acres
Jurisdiction: Town of Shields

BACKGROUND & APPLICATION DESCRIPTION:
The applicant is proposing to create a two lot Certified Survey Map to adjust the property lines between two existing lots.

STAFF EVALUATION:
The preliminary CSM lots are not located within the Airport Approach Protection Zone. County Road Q in this location is not identified in the 2019 City of Watertown Comprehensive Plan as having an expanded right-of-way.

PLAN COMMISSION OPTIONS:

The following possible options for the Plan Commission:
1. Deny the preliminary extraterritorial CSM.
2. Approve the preliminary extraterritorial CSM without conditions.
3. Approve the preliminary CSM with other conditions as identified by the Plan Commission.

ATTACHMENTS:

- Application materials.

CERTIFIED SURVEY MAP

For the Richwood Real Estate LLC and the Silver Oaks LLC
Lot 1 of CSM No. 1500, Volume 10/166 and Unplatted Land
Located in the SE1/4-SW1/4 of Section 13, T9N-R14E
Town of Shields, Dodge County, Wisconsin
Sale of Land to Adjacent Landowner

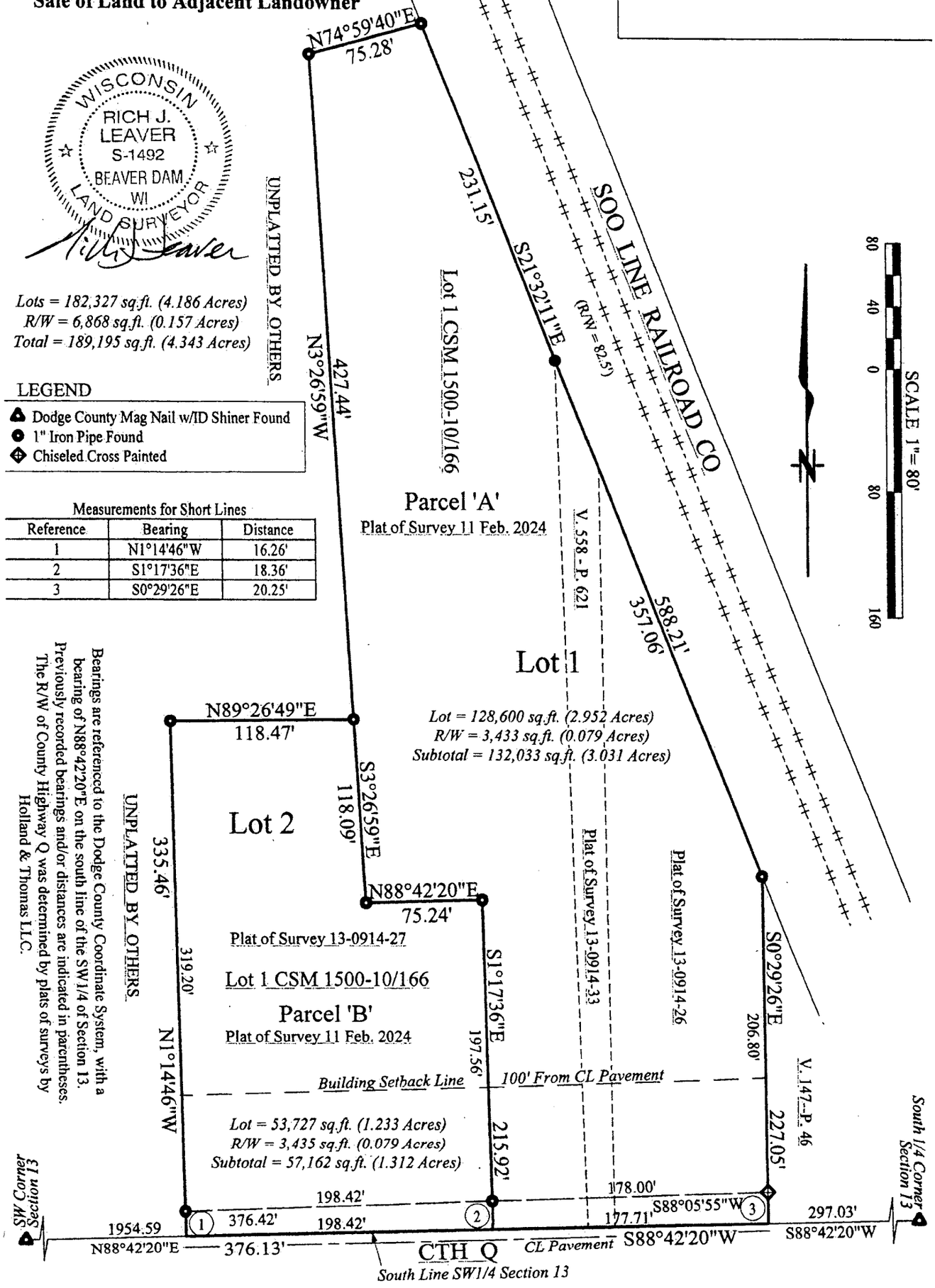
Lots = 182,327 sq.ft. (4.186 Acres)
R/W = 6,868 sq.ft. (0.157 Acres)
Total = 189,195 sq.ft. (4.343 Acres)

LEGEND

- Dodge County Mag Nail w/ID Shiner Found
- 1" Iron Pipe Found
- Chiseled Cross Painted

Measurements for Short Lines

Reference	Bearing	Distance
1	N1°14'46"W	16.26'
2	S1°17'36"E	18.36'
3	S0°29'26"E	20.25'



Bearings are referenced to the Dodge County Coordinate System, with a bearing of N88°42'20"E on the south line of the SW1/4 of Section 13. Previously recorded bearings and/or distances are indicated in parentheses. The R/W of County Highway Q was determined by plats of surveys by Holland & Thomas LLC.

CERTIFIED SURVEY MAP

For the Richwood Real Estate LLC and the Silver Oaks LLC
Lot 1 of CSM No. 1500, Volume 10/166 and Unplatted Land
Located in the SE1/4-SW1/4 of Section 13, T9N-R14E
Town of Shields, Dodge County, Wisconsin
Sale of Land to Adjacent Landowner

This sheet shows improvements and recorded bearings/distances from CSM 1500.

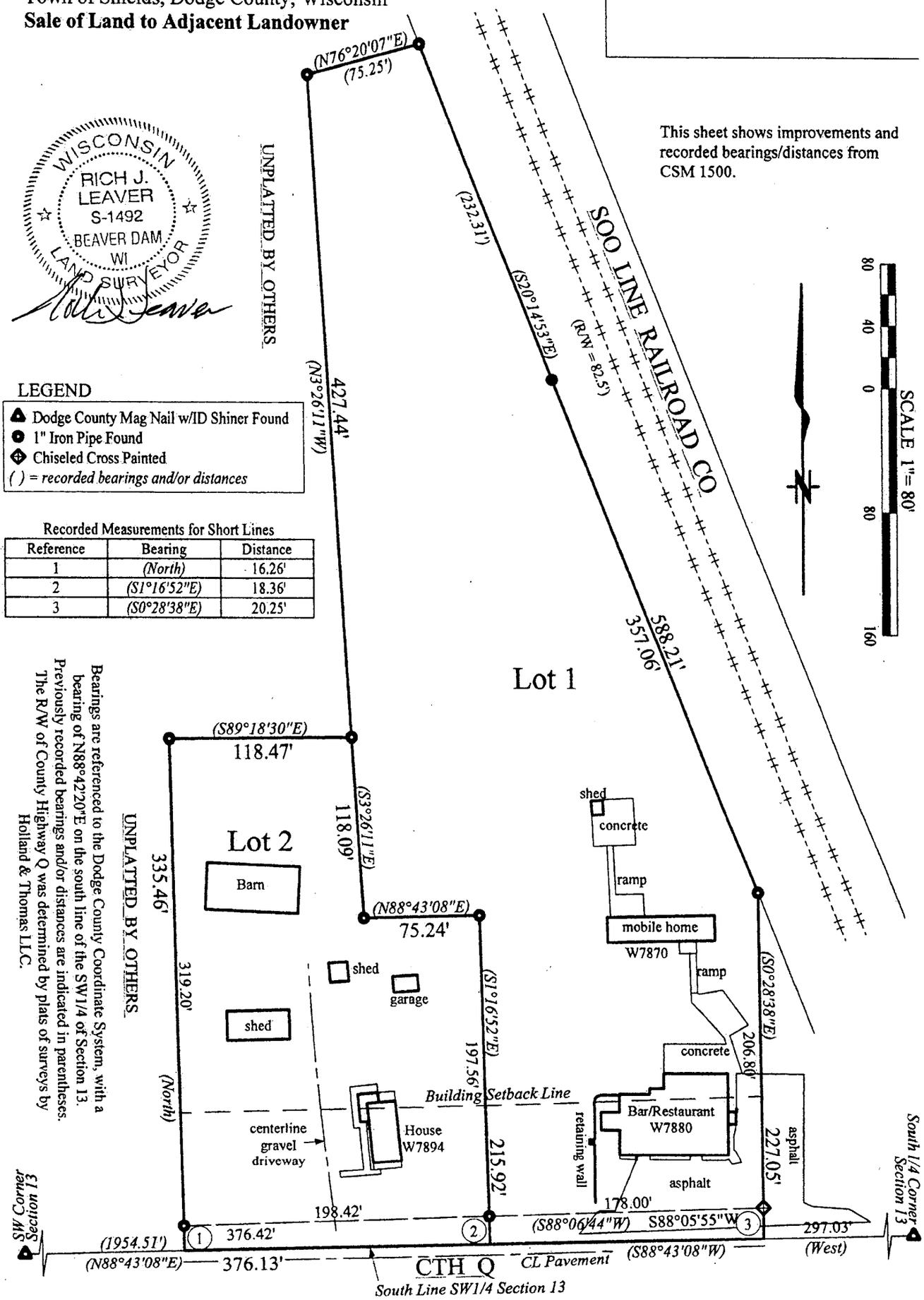
LEGEND

- ▲ Dodge County Mag Nail w/ID Shiner Found
- ● 1" Iron Pipe Found
- ⊕ Chiseled Cross Painted
- *( ) = recorded bearings and/or distances*

Recorded Measurements for Short Lines

Reference	Bearing	Distance
1	*(North)*	16.26'
2	*(S1°16'52"E)*	18.36'
3	*(S0°28'38"E)*	20.25'

Bearings are referenced to the Dodge County Coordinate System, with a bearing of N88°42'20"E on the south line of the SW1/4 of Section 13. Previously recorded bearings and/or distances are indicated in parentheses. The R/W of County Highway Q was determined by plats of surveys by Holland & Thomas LLC.



CERTIFIED SURVEY MAP

For the Richwood Real Estate LLC and the Silver Oaks LLC
Lot 1 of CSM No. 1500, Volume 10/166 and Unplatted Land
Located in the SE1/4-SW1/4 of Section 13, T9N-R14E
Town of Shields, Dodge County, Wisconsin
Sale of Land to Adjacent Landowner

SURVEYOR'S CERTIFICATE

I, Rich J. Leaver, Wisconsin Professional Land Surveyor, hereby certify that I have surveyed, mapped and divided a parcel of land by the direction of Stephanie Bratz, who is representing the LLC's. This parcel is located and described as indicated above, and more particularly described as the following:

Commencing at the South 1/4 Corner of Section 13, T9N-R14E,
thence S88°42'20"W, 297.03 feet along the south line of the SW1/4 of Section 13;
thence continuing S88°42'20"W, 376.13 feet along said south line of the SW1/4 to the SW corner of Lot 1 of Certified Survey Map (CSM) No. 1500, recorded in Volume 10, page 166 of the Dodge County Register of Deeds;
thence the following courses along lines of said Lot 1 of CSM No. 1500:
N1°14'46"W, 335.46 feet; N89°26'49"E, 118.47 feet; N3°26'59"W, 427.44 feet; N74°59'40"E, 75.28 feet to the southwesterly right-of-way line of the Soo Line Railroad Co.;
thence S21°32'11"E, 588.21 feet along this southwesterly right-of-way line;
thence S0°29'26"E, 227.05 feet along the west line of land as described in Volume 147, page 46 of said register to the point of beginning. Bearings are referenced to the Dodge County Coordinate System.

The above-described parcel contains 189,195 square feet (4.343 acres) of land, of which 6,868 square feet (0.157 acres) is subject to the north right-of-way of County Road Q. This parcel is also subject to all other easements, including utility easements, restrictions, and setbacks, either recorded or unrecorded, if any.

I further certify that the information contained herein is a correct representation of the boundaries of the land surveyed and mapped, and that I have fully complied with the provisions of Chapter 236.34 of the revised Wisconsin State Statutes and the Dodge County Land Use Code in surveying and mapping the same, to the best of my knowledge and belief.

Rich J. Leaver, WI_LS-1492
Leaver Land Surveying LLC
W8871 Gossfeld Ln.
Beaver Dam, WI 53916
920-887-2401

CLIENT
Stephanie Bratz
Richwood Real Estate LLC
W7894 County Rd. Q
Watertown, WI 53098

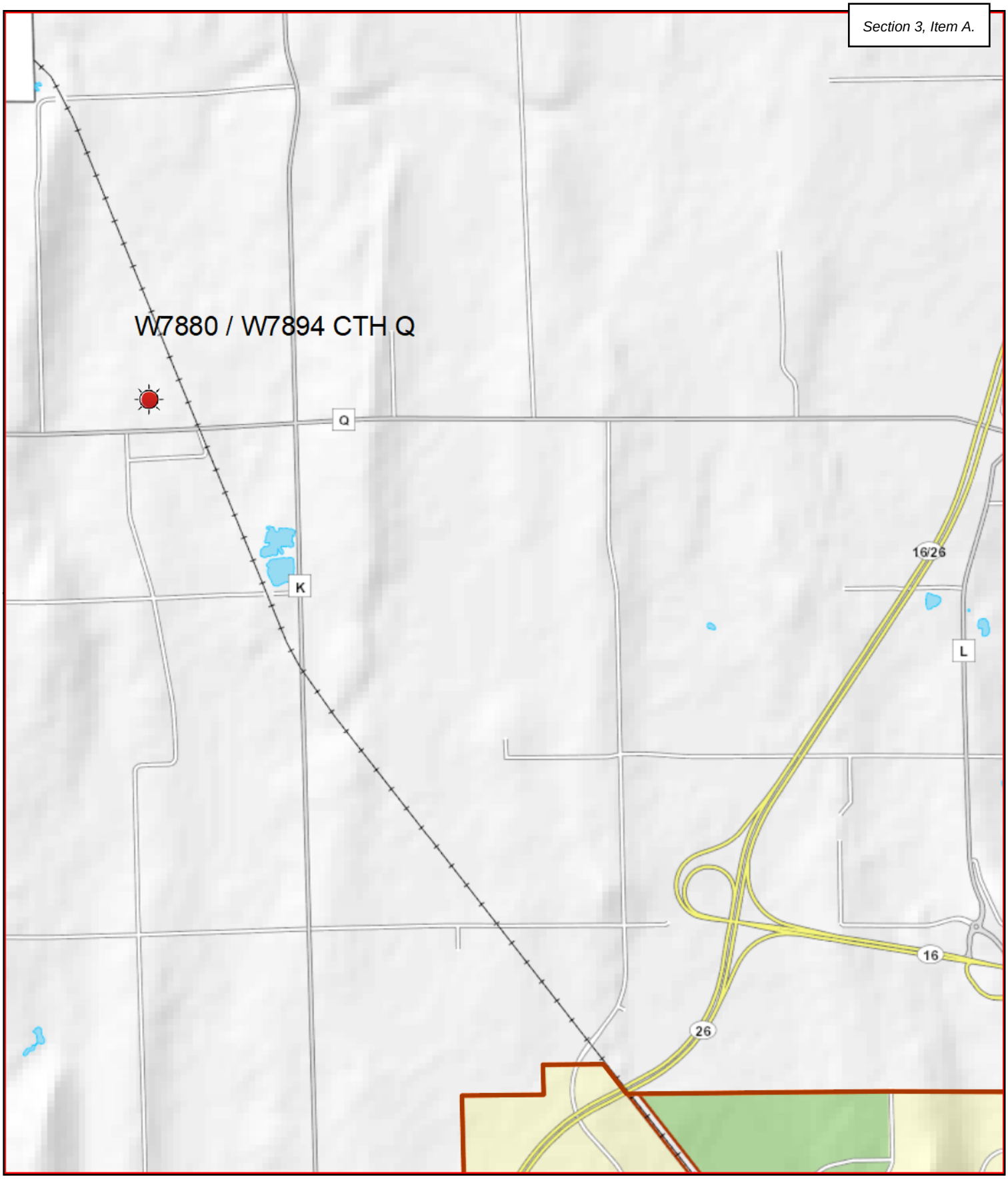
CITY of WATERTOWN EXTRATERRITORIAL Jurisdiction Approval

Approved by the City of Watertown Plan Commission:

Dated this _____ day of _____, 2024

_____
Emily McFarland, Chairperson/Mayor

_____ Dated _____
Megan Dunneisen, City Clerk



Points

Override 1

City Limits

N

THE CITY OF WATERTOWN
Opportunity runs through it.

City of Watertown Geographic Information System

Scale: 1 inch = 2,000 feet

Printed on: March 4, 202

Author:

SCALE BAR = 1"

DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled. Other inherent inaccuracies occur during the compilation process. City of Watertown makes no warranty whatsoever concerning this information.

THE CITY OF WATERTOWN

ENGINEERING DIVISION

Andrew Beyer, P.E.
920.262.4050

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920.206-4264

Ritchie
920.262.4034

Christopher Newberry
920-390-3164

Administrative Assistant
Wanda Fredrick 920.262.4060

MEMO

TO: Mayor McFarland and Commissioners

FROM: Andrew Beyer, P.E.

DATE: March 6, 2024

RE: Plan Commission Meeting of March 11, 2024

Review and take action: 916 Labaree Street – Architectural and location review of Riverside Park restrooms

Background:

The City of Watertown is looking to develop a new restroom facility at Riverside Park. The restroom project was awarded in late February to the lowest responsible and responsive bidder, Ray Stadler Construction Co., Inc. with construction anticipated to begin in April. The proposed structure has a footprint of roughly 1,600 square feet. The new restroom facility will also go before the Site Plan Review Committee. The plan set is attached for review.

Per Wis. Stat. § 62.23(5):

(5) Matters referred to city plan commission. The council, or other public body or officer of the city having final authority thereon, shall refer to the city plan commission, for its consideration and report before final action is taken by the council, public body or officer, the following matters: ***The location and architectural design of any public building****; the location of any statue or other memorial; the location, acceptance, extension, alteration, vacation, abandonment, change of use, sale, acquisition of land for or lease of land for any street, alley or other public way, park, playground, airport, area for parking vehicles, or other memorial or public grounds; the location, extension, abandonment or authorization for any public utility whether publicly or privately owned; all plats of lands in the city or within the territory over which the city is given platting jurisdiction by ch. 236; the location, character and extent or acquisition, leasing or sale of lands for public or semipublic housing, slum clearance, relief of congestion, or vacation camps for children; and the amendment or repeal of any ordinance adopted pursuant to this section. Unless such report is made within 30 days, or such longer period as may be stipulated by the common council, the council or other public body or officer, may take final action without it.*

Options:

These are the following options available, but not limited to, for the Plan Commission:

1. Make an advisory recommendation to the Common Council
    a. Negative advisory recommendation on the location and/or architectural design.
    b. Positive advisory recommendation on the location and/or architectural design.
    c. Positive advisory recommendation on the location and/or architectural design with additional recommendation.

RIVERSIDE PARK RESTROOM - NEW CONSTRUCTION

600 LABAREE ST. | WATERTOWN, WI 53098

SHEET INDEX

BUILDING CODE SUMMARY

BASED ON THE	WISCONSIN COMMERCIAL BUILDING CODE (2015 INTERNATIONAL BUILDING CODE w/ WI AMENDMENTS) 2015 INTERNATIONAL EXISTING BUILDING CODE 2009 ANSI A117.1 ACCESSIBILITY CODE ALL OTHER CODES AND ORDINANCES AS REFERENCED BY THE ABOVE CODES
BUILDING AREA	TOTAL AREA FIRST FLOOR: 1,602 GROSS SF
FIRE ALARM:	NOT REQUIRED
OCCUPANCY	U - UTILITY
OCCUPANCY SEPARATION	NONE
CONSTRUCTION TYPE	V-B
SPRINKLER SYSTEM	NOT REQUIRED
FLAME SPREAD & SMOKE INDEX	NO RESTRICTIONS
CODE EXCEPTION	NONE

GENERAL NOTES

1. CONSTRUCTION IS TO BE IN COMPLIANCE WITH ALL GOVERNING CODES, ORDINANCES & STANDARDS. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, & SUPERVISING ALL SAFETY PRECAUTIONS & PROGRAMS IN CONNECTION WITH THE PERFORMANCE OF THIS PROJECT.
2. ARCHITECT/DESIGNER SHALL NOT BE RESPONSIBLE FOR ANY COST, SCHEDULE OR CONSTRUCTION ISSUES ARISING DUE GC/OWNERS FAILURE TO DISTRIBUTE ALL DOCS. SUBCONTRACTORS & SUPPLIERS SHOULD ENDEAVOR TO REVIEW A COMPLETE SET OF DOCS BEFORE BIDDING, FABRICATING & INSTALL.
3. GC, SUBCONTRACTORS, MATERIAL SUPPLIERS, OWNER, ETC. MUST NOTIFY ARCHITECT OF ANY ERRORS, OMISSIONS, OR DEFECTS IN THE CONSTRUCTION DOCUMENTS PRIOR TO BIDDING, FABRICATING OR INSTALLING WORK.
4. SITE DIMENSIONS ARE TO BE FIELD VERIFIED AND ADJUSTED ACCORDINGLY. THE ARCHITECT/DESIGNER SHALL BE NOTIFIED OF ANY VARIANCES BEFORE CONTRACTOR BEGINS OR PROCEEDS WORK.
5. MECH, ELEC, PLUMB & FIRE PROTECTION ARE TO BE DESIGN BUILT COMPLYING WITH ALL GOVERNING CODES, ORDINANCES & STANDARDS, WHICH WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR; THE ARCHITECT ASSUMES NO LIABILITY.
6. ALL MECH, ELEC, PLUMB & FIRE PROTECTION SYSTEMS/EQUIP. SHALL BE MAINTAINED ACCORDING TO MANUFACTURER'S STANDARDS. BLDG. OWNER SHALL ASSUME FULL RESPONSIBILITY FOR MAINTANANCE/OPPERATION UPON OCCUPANCY.
7. THE INSTALLATION AND EXECUTION OF ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDS AND SPECIFICATIONS. ALL MEANS & METHODS OF CONSTRUCTION TO BE THE SOLE RESPONSIBILITY OF THE GC.
8. PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE INTERNATIONAL FIRE CODE. INSTALLATION LOCATIONS SHALL HAVE A MAXIMUM TRAVEL DISTANCE OF 75' TO ANY EXTINGUISHER. EXTINGUISHERS SHALL BE LOCATED IN CONSPICUOUS LOCATIONS WERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE, TYPICALLY ALONG PATHS OF TRAVEL. EXTINGUISHERS SHALL NOT BE OBSTRUCTED FROM VIEW. IF VISUAL OBSTRUCTION CAN NOT BE AVOIDED ANOTHER MEANS SHALL BE PROVIDED TO INDICATE THE EXTINGUISHER LOCATIONS. EXTINGUISHERS NOT EXCEEDING 40" SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAT 5'-0" ABOVE THE FLOOR, EXTINGUISHERS EXCEEDING 40" SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAN 3'-6" ABOVE THE FLOOR. THE CLEARANCE BETWEEN THE FLOOR AND BOTTOM OF HAND HELD UNITS SHALL NOT BE LESS THAN 4". VERIFY EXTINGUISHER LOCATIONS W/ LOCAL FIRE DEPT. & OWNER PRIOR TO INSTALLATION.
9. ALL CONCRETE FLAT WORK MUST BE WET CURED PER ACI REQUIREMENTS AND/OR CURED USING A CURING COMPOUND. REFER TO STRUCTURAL NOTES FOR CURING COMPOUND SPECS. CONTRACTOR IS RESPONSIBLE FOR APPLYING CURING COMPOUNDS PER THE MANUFACTURER'S REQUIREMENTS.

TYPICAL ABBREVIATIONS

ABV: Above
ACOUS: Acoustical
ADDL: Additional
ADH: Adhesive
ADJ: Adjustable
AFF: Above Finish Floor
AGG: Aggregate
AHJ: Authority Having Jurisdiction
A/C: Air Conditioning
ALT: Alternate
ALUM: Aluminum
ANC: Anchor, Anchorage
AB: Anchor Bolt
ANOD: Anodized
APX: Approximate
APT: Apartment
ARCH: Architect (architectural)
ASPH: Asphalt
AUTO: Automatic
AVE: Avenue
AVR: Average
AWN: Awning

BSMT: Basement
BM: Beam
BVL: Beveled
BITUM: Bituminous
BLK: Block
BLKG: Blocking
BLW: Below
BLDV: Boulevard
BTW: Between
BD: Board
BOT: Bottom
BLDG: Building
BUR: Built Up Roofing

B/O: By Others
BO: Bottom Of
BR: Bedroom

CAB: Cabinet
CALC: Calculation
CD: Cabinet Door
CG: Corner Guard
CIP: Cast-In-Place (Concrete)
CL: Centerline
CO: Clean Out
CONTR: Contract (or)
COORD: Coordinate
CRPT: Carpet
CIP: cast-in-place
CLK: Caulking
CAS: Casement
CB: Catch Basin
CLG: Ceiling
CT: Ceramic Tile
CIR: Circle
CLR: Clear
COL: Column
CONC: Concrete
CMU: Concrete Masonry Unit
CONST: CONSTruction
CONT: Continuous
CJT: Control Joint
CORR: Corrugated
CUFT: Cubic Foot
CUYD: Cubic Yard

DP: Dampproofing
DTL: Detail
DIA: Diameter
DIM: Dimension

DW: Dishwasher
DIV: Division
DR: Door
DH: Double Hung
DS: Downspout
DRWR: Drawer
DT: Drain Tile
DWG: Drawing
D: Nail Size

EW: Each Way
E: East
EL: Elevation
ELEV: Elevation
EQ: Equal
EQP: Equipment
EXCV: Excavate
EXH: Exhaust
EXIST: Existing
EXT: Exterior

FOC: Face of Concrete
FOF: Face of Finish
FOM: Face of Masonry
FOS: Face of Studs
FOW: Face of Wall
FBD: Fiberboard
FCB: Fiber Cement Board
FGL: Fiberglass
FIN: Finish
FFE: Finished Floor Elevation
FA: Fire Alarm
FE: Fire Extinguisher
FPL: Fireplace
FLSH: Flashing
FLR: Floor
FLOR: Fluorescent
FT: Foot, Feet

FTG: Footing
FND: Foundation
FRM: Fram(d), (ing)
FBO: Furnished by Others
FUR: Furred

GA: Gage, Gauge
GAL: Gallon
GL: Glass, Glazing
GI: Galvanized Iron
GLBK: Glass Block
GLB: Glue Laminated Beam
GT: Grout
GRD: Grade, Grading
GWB: Gypsum Wall Board

HWD: Hardware
HDR: Header
HTG: Heating
HVAC: Heating, Ventilation-Air Conditioning
HT: Height
HC: Hollow Core
HOR: Horizontal
HB: Hose Bib

IN: Inch
INCL: Include
ID: Inside Diameter
INS: Insulate
INT: Interior
INV: Invert

JNT: Joint
JST: Joist

KD: Kiln Dried
KIT: Kitchen

LB: Pound
LAM: Laminate(d)
LAV: Lavatory
LH: Left Hand
L: Length
LOA: Length Overall
LT: Light
LF: Lineal Feet
LL: Live Load
LVL: Laminated Veneer Lumber
LVR: Louver

MFR: Manufacturer
MO: Masonry Opening
MAX: Maximum
MAS: Masonry
MECH: Mechanic(al)
MC: Medicine Cabinet
MED: Medium
MDF: Medium Density Fiberboard
MDO: Medium Density Overlay
MBR: Member
MMB: Membrane
MTL: Metal
MWK: Millwork
MIN: Minimum
MIR: Mirror
MISC: Miscellaneous
MOD: Module
MLD: Moulding
MLB: Micro Laminate Beam

NOM: Nominal
N: North
NIC: Not in Contract
NTS: Not To Scale

NO, #: Number

O: Non-Operable Window Section
OBS: Obscure
OC: On Center
OP: Opaque
OPG: Opening
OSB: Orientated Strand Board
OD: Outside Diameter

PNT: Paint(ed)
PBD: Particle Board
PRT: partition
PVMT: Pavement
PERF: Perforate(d)
PLAS: Plaster
PLAM: Plastic Laminate
PLT: Plate
PLYWD: Plywood
PCC: Precast Concrete
PCF: Pounds Per Cubic Foot
PLF: Pounds Per Linear Foot
PSF: Pounds Per Square Foot
PSI: Pounds Per Square Inch
PBF: Prefabricated
PRF: Preformed
PT: Pressure Treated
PL: Property Line
PH: Toilet Paper Hanger

QTY: Quantity
QT: Quarry Tile

RAD: Radius
REF: Reference
RFL: Reflect(ed),(ive),(or)

REFR: Ref
REG: Register
RE: Reinforced
REQD: Required
RA: Return Air
REV: Revision
R: Riser
RD: Rod
R&S: Rod and Shelf
RFG: Roofing
RM: Room
RO: Rough Opening

SCH: Schedule
SCN: Screen
SECT: Section
SGD: Sliding Glass Door
SHTH: Sheathing
SHT: Sheet
SH: Shelf, Shelving
SIM: Similar
SKL: Skylight
S: South
SLB: Slab
SLD: Slider(ing)
SPEC: Specification
SQ: Square
STD: Standard
STV: Stove
STL: Steel
STR: Structural
SA: Supply Air
SC: Solid Core
SW: Shear Wall
SS: Stainless Steel
SYS: System

TEL: Telephone

TEMP: Tempered
TK: Tight Knot
T&G: Tongue and Groove
T/O: Top of
TOC: Top of Concrete
TOW: Top of Wall
TB: Towel Bar
T: Tread
TS: Tubular Steel
TYP: Typical

UL: Underwriters Laboratory
UNF: Unfinished
UNO: Unless Noted Otherwise

VB: Vapor Barrier
VAR: Varnish
VIF: Verify in Field
VRN: Veneer
VERT: Vertical
VG: Vertical Grain
VIN: Vinyl Sheet

WL: Wall
WC: Water Closet
WH: Water Heater
WP: Water Proofing
WR: Weather Resistant
WRB: Weather Resistive Barrier
WWF: Welded Wire Fabric
WWM: Welded Wire Mesh
W: West
WIN: Window
W/O: Without
W/: With
WD: Wood

X: Operable Window Section

PROJECT CONTACT INFO

ARCHITECT:
THRIVE ARCHITECTS
259 SOUTH STREET, SUITE A
WAUKESHA, WI 53186
P: 833-380-6180
PROJECT MANAGER: DAVID RASCHKA

WISCONSIN JEREMY D. BARTLETT 10236-005 Muskego WI ARCHITECT
01/17/2024
ATTN: JEREMY BARTLETT, ARCHITECT OF RECORD

CIVIL ENGINEER:
JSD INC.
W238 N1610 BUSSE RD., SUITE 100
WAUKESHA, WI 53188
P: 262-513-0666
ATTN: KEVIN BYRNE, PLA & LEED AP BD+C

STRUCTURAL ENGINEER:
CORE 4 ENGINEERING, INC.
12308 CORPORATE PKWY., SUITE 450
MEQUON, WI 53092
P: 262-307-9988
ATTN: TOMMY TOLGAHAN UNAL

WISCONSIN MATTHEW A CHRISTIANSEN PE 36579-6 WEATHERFORD WI PROFESSIONAL ENGINEER
1/23/24

MECHANICAL ENGINEER:
IBC ENGINEERING SERVICES, INC.
N8W22195 JOHNSON DR.
WAUKESHA, WI 53186
P: 262-549-1190
ATTN: COLLEEN HOFFMANN, PE

WISCONSIN COLLEEN M. HOFFMANN 40740 NEW BERLIN WIS. PROFESSIONAL ENGINEER
1/19/2024

ELECTRICAL ENGINEER:
IBC ENGINEERING SERVICES, INC.
N8W22195 JOHNSON DR.
WAUKESHA, WI 53186
P: 262-549-1190
ATTN: DENNIS HESS, PE

WISCONSIN DENNIS M. HESS 33662 DOUSMAN, PROFESSIONAL ENGINEER
1/19/2024

PLUMBING ENGINEER:
IBC ENGINEERING SERVICES, INC.
N8W22195 JOHNSON DR.
WAUKESHA, WI 53186
P: 262-549-1190
ATTN: COLLEEN HOFFMANN, PE

WISCONSIN COLLEEN M HOFFMANN 40740 NEW BERLIN WIS. PROFESSIONAL ENGINEER
1/19/2024

OWNER:
CITY OF WATERTOWN
106 JONES ST., P.O. BOX 477
WATERTOWN, WI 53094
P: 920-262-4000

SITE

VICINITY MAP
SCALE: N.T.S.

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
WAUKESHA, WI 53186
p: 833-380-6180

Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

TITLE SHEET

Drawn by	Checked by
JAJ	DMR

Revisions

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T1.0

RIVERSIDE PARK RESTROOM - NEW CONSTRUCTION

812 LABAREE ST. | WATERTOWN, WI 53098

OCCUPANT LOAD PER TABLE 1004.1.2 TOTAL OCCUPANT LOAD = 183 OCCUPANTS				
OCCUPANCY	SF	FLOOR AREA	CALC. OCC.	ASSIGNED OCC.
UTILITY	1,602 SF	500/GROSS	3	45

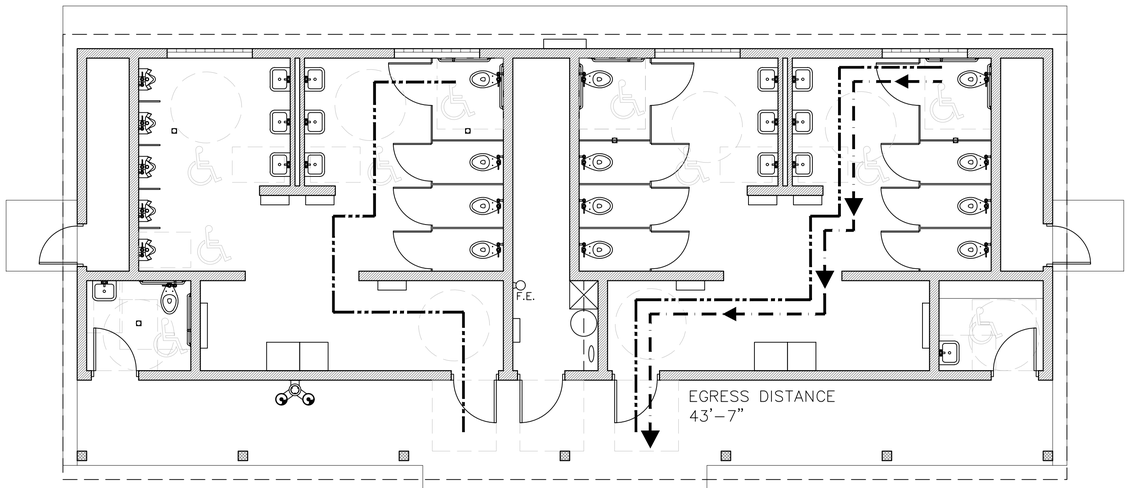
EGRESS REQUIREMENTS EGRESS WIDTH PER 1005.3			
# OF OCCUPANTS	EGRESS WIDTH FACTOR	EGRESS WIDTH REQUIRED	EGRESS WIDTH PROVIDED
45	.2 INCHES PER OCCUPANT	9"	34"

NO. OF EXITS REQUIRED PER SECTION 1006 = 1
NO. OF EXITS PROVIDED = 1
MAXIMUM EXIT TRAVEL DISTANCE PER TABLE 1017.2 = 200' (w/out SPRINKLER)

FIRE-RESISTANCE RATING SUMMARY REFER TO IBC CHAPTER 6	
CONSTRUCTION TYPE V-B	
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS	
EXTERIOR	0
INTERIOR	0
NONBEARING WALLS	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

ACCESSIBLE ROUTE

DELINEATES EXIT EGRESS PATH



FIRST FLOOR CODE PLAN 1
SCALE: N.T.S.

N

THRIVE ARCHITECTS
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WAUKESHA, WI 53186
p: 833-380-6180

Project Info. — 22005

Riverside Park Restrooms

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600 Labaree St
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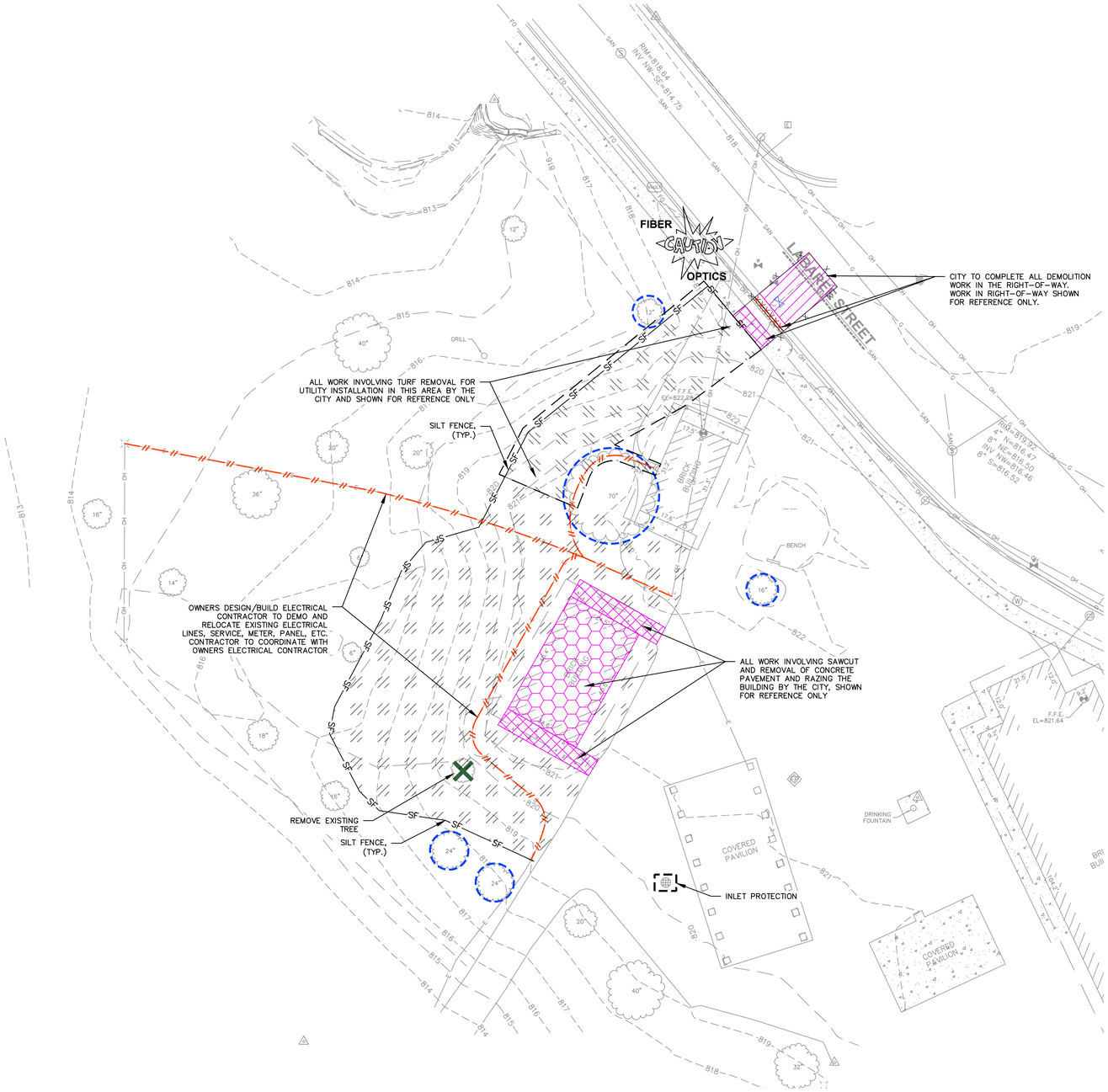
CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE AND INLET PROTECTION.
2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES AS NEEDED.
4. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
5. COMPLETE INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
6. FINAL GRADING BY CITY.
7. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGER'S HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVE GROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE AND PROVIDE THEIR OWN DUE DILIGENCE TO INCLUDE IN THEIR BID WHAT ADDITIONAL ITEMS, IN THEIR OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. CONTRACTOR SHALL KEEP ALL STREETS AND PRIVATE DRIVES FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED UNLESS SPECIFICALLY CALLED OUT FOR REMOVAL. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY AND STUMPS SHALL BE GROUND TO PROPOSED SUBGRADE.
4. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
5. ABANDONED/REMOVED ITEMS SHALL BE DISPOSED OF OFF SITE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES, WHICH IS DAMAGED BY THE CONSTRUCTION, OR ANY SIDEWALK AND CURB AND GUTTER THAT THE CITY ENGINEER DETERMINES NEEDS TO BE REPLACED BECAUSE IT IS NOT AT A DESIRABLE GRADE REGARDLESS OF WHETHER THE CONDITION EXISTED PRIOR TO BEGINNING CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - 7.1. EXAMINE ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - 7.2. VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
   - 7.3. NOTIFYING ALL UTILITIES PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
   - 7.4. NOTIFYING THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.
8. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
10. CONTRACTOR TO COORDINATE PRIVATE UTILITY REMOVAL / ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. COORDINATION REQUIRED PRIOR TO CONSTRUCTION.
11. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED MUNICIPALITY RECYCLING PLAN.
12. ANY CONTAMINATED SOILS SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROVED LANDFILL.
13. ALL EXISTING UTILITIES TO BE FIELD LOCATED AND FLAGGED BY CONTRACTOR.
14. EXISTING FIBER OPTIC LINE TO BE CLEARLY MARKED PRIOR TO ANY EXCAVATION. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OCCUR IN THE LOCATION SHOWN OR PROPOSED IMPROVEMENTS IMPACTING EXISTING FIBER OPTIC LINE LOCATION.
15. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENT FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST AND DEBRIS.



LEGEND

- PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- EXISTING ASPHALT PAVEMENT AND BASE TO BE REMOVED BY CITY, N.I.C.
- EXISTING CONCRETE PAVEMENT AND BASE TO BE REMOVED BY THE CITY, N.I.C.
- EXISTING BUILDING TO BE REMOVED BY THE CITY, REFER TO BLDG. PLAN, N.I.C.
- SF SF — SILT FENCE
- X X — PAVEMENT SAWCUT BY CITY, N.I.C.
- XXXXXXXXXXXXX — EXISTING CURB TO BE REMOVED BY CITY, N.I.C.
- REMOVE TREE
- EXISTING ELECTRICAL TO BE REMOVED AND RELOCATED BY OTHERS, N.I.C.
- PROTECT EXISTING TREES
- INLET PROTECTION
- REMOVE AND DISPOSE OF VEGETATION, STRIP AND STOCKPILE TOPSOIL, THICKNESS MAY VARY
- VEGETATION AND TOPSOIL PREVIOUSLY REMOVED BY CITY FOR UTILITY INSTALLATION, N.I.C.

CIVIL SHEET INDEX

north

SCALE IN FEET
20' 0 20'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666
JSD #21-11127

THRIVE ARCHITECTS
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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

DEMOLITION PLAN

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YT	KCB

Revisions

No.	Date	Description
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C1.0

GENERAL NOTES

1. WATER AND SANITARY SEWER WERE INSTALLED BY THE CITY AND STUBBED TO THE BACK OF THE BUILDING.
2. ROUGH GRADE IN THE CONTRACT.
   FINISH GRADE, SODDING, LANDSCAPING, AND EROSION MATTING NOT IN CONTRACT. CITY TO COMPLETE THE WORK.
3. OLD BUILDING ELECTRICAL IS DISCONNECTED.
4. ELECTRICAL CONTRACTOR TO COORDINATE OUTDOOR PANEL, METER, ETC.
5. BUILDING AND CONCRETE SIDEWALK IN CONTRACT.

PAVING NOTES

1. GENERAL

   1.1. ALL PAVING SHALL CONFORM TO "STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY & STRUCTURE CONSTRUCTION, LATEST EDITION, APPLICABLE CITY OF WATERTOWN ORDINANCES.

   1.2. SURFACE PREPARATION – NOTIFY ENGINEER/OWNER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.

2. CONCRETE PAVING SPECIFICATIONS

   2.1. CONCRETE PAVING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 415 AND 416 OF THE STATE HIGHWAY SPECIFICATIONS.

   2.2. CONTRACTOR SHALL SAWCUT ASPHALT AND REMOVE AS NECESSARY TO CREATE A CLEAN, STRUCTURALLY SOUND EDGE TO ABUT CONCRETE TO.

   2.3. CONCRETE PAVEMENT SHALL BE REINFORCED WITH NOVOMESH 950 (OR EQUAL) FIBER REINFORCEMENT AT A RATE OF 5 LBS/CUBIC YARD.

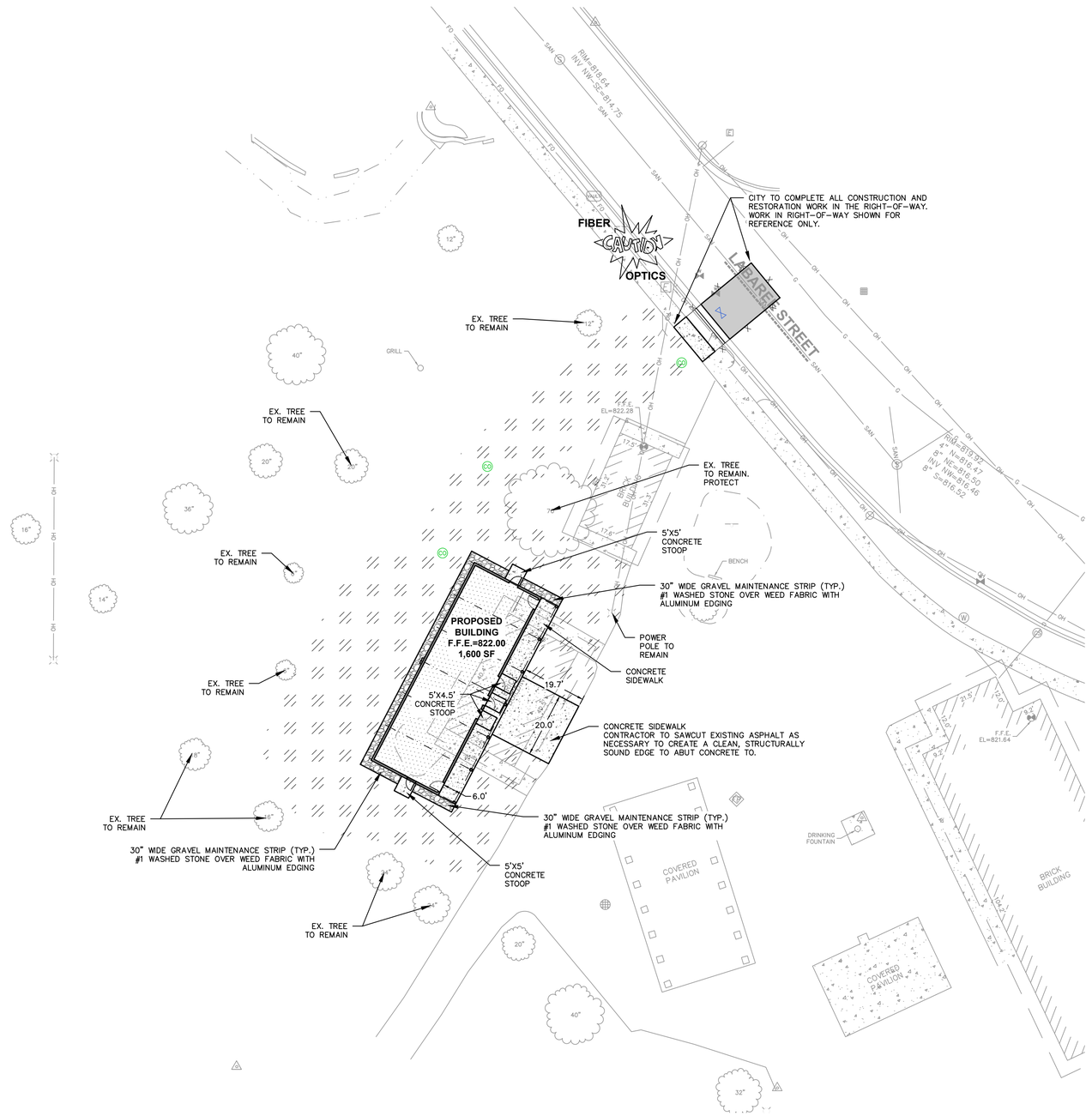
   2.4. CURING COMPOUNDS SHALL CONFORM TO SECTION 415 OF THE STATE HIGHWAY SPECIFICATIONS.

   2.5. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 8' ON CENTER.

   2.6. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 24' ON CENTER.

   2.7. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.

   2.8. ALL CONCRETE SURFACES TO BE SEALED WITH TYPE TK-26UV CONCRETE SEALANT.



SITE INFORMATION BLOCK

SITE ADDRESS	812 LABAREE ST (ZONING SR-4)
PROPERTY ACREAGE	11.38 ACRES
DISTURBANCE AREA	0.23 ACRES
NUMBER OF BUILDING STORIES	
TOTAL BUILDING SQUARE FOOTAGE	1,600 SF

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- STANDARD CURB AND GUTTER BY CITY
- LIGHT DUTY ASPHALT PAVEMENT BY CITY
- CONCRETE SIDEWALK
  5" CONCRETE
  6" CRUSHED AGGREGATE BASE COURSE
- 30" WIDE GRAVEL MAINTENANCE STRIP
- SAWCUT PAVEMENT BY CITY
- SANITARY CLEANOUT
- WATER VALVE
- CONTRACTOR TO ROUGH GRADE AREA. CITY TO COMPLETE FINISH GRADE, SEEDING, AND EROSION MATTING.

north
SCALE IN FEET
20' 0 20'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666
JSD #21-11127

THRIVE ARCHITECTS
Architect
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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

SITE LAYOUT PLAN

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C2.0

GENERAL NOTES

1. ALL WORK IN THE ROW AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN AND MUNICIPAL REQUIREMENTS.
2. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
3. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
4. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

GRADING AND SEEDING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.
3. PARKING LOT AND DRIVEWAY ELEVATIONS ARE PAVEMENT GRADES, NOT TOP OF CURB GRADES, UNLESS OTHERWISE NOTED.
4. ANY WORK WITHIN RIGHT-OF-WAY SHALL BE PROPERLY PERMITTED AND COORDINATED WITH THE APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. ALL GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS.
5. CONTRACTOR SHALL PROVIDE NOTICE TO THE MUNICIPALITY IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.

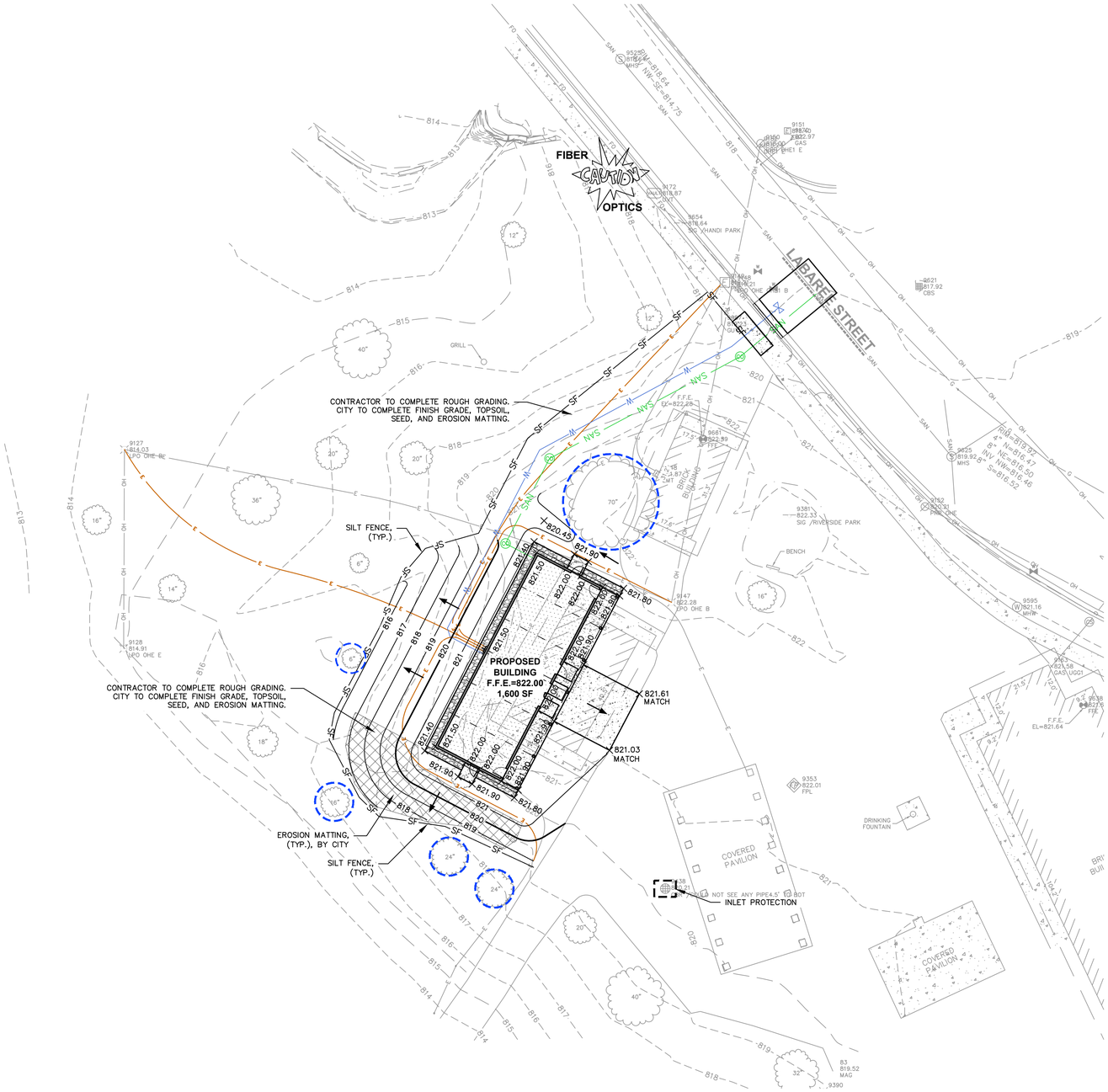
THE FOLLOWING NOTES APPLY TO RESTORATION WORK COMPLETED BY THE CITY, N.I.C.

6. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SOD/SEED MIX TO BE IN ACCORDANCE WITH LANDSCAPE PLAN.
7. CITY SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7 DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
8. CITY TO DEEP TILL ALL COMPACTED PERVIOUS SURFACES PRIOR TO SODDING AND/OR SEEDING AND MULCHING.
9. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE.
10. ALL EXPOSED SOIL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 30 DAYS AND REQUIRE VEGETATIVE COVER FOR LESS THAN 1 YEAR, REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1059 AND CITY OF WATERTOWN ORDINANCE.

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- STANDARD CURB AND GUTTER
- SF — SF — SILT FENCE
- 959 — PROPOSED 1 FOOT CONTOUR
- 960 — PROPOSED 5 FOOT CONTOUR
- 959 — EXISTING 1 FOOT CONTOUR
- 960 — EXISTING 5 FOOT CONTOUR
- PROTECT EXISTING TREES
- EROSION MATTING, BY CITY
- SAN — SANITARY SERVICE
- SANITARY CLEANOUT
- W — WATER SERVICE
- WATER VALVE
- INLET PROTECTION - SILT LOGS OR STAKED STRAW BALES
- DRAINAGE ARROW

SEE UTILITY SHEET FOR ADDITIONAL INFORMATION



north
SCALE IN FEET
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Project Info. — 22005

Riverside Park Restrooms

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GRADING AND EROSION CONTROL PLAN

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UTILITY PLAN AND NOTES: FOR REFERENCE ONLY - SCOPE NOT IN CONTRACT. UTILITIES BY CITY, CONTRACTOR TO COORDINATE WITH CITY AND CITY'S CONTRACTORS.

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
   EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING ALL ELEVATIONS, LOCATIONS AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
   - COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.

3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN – AND ALL STATE AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.

4. SPECIFICATIONS SHALL COMPLY WITH THE CITY OF WATERTOWN SPECIAL PROVISIONS.

5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.

6. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.

7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED IN CONSTRUCTION SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.

8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.

9. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.

10. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS–BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.

12. WATER MAIN SPECIFICATIONS –

    PIPE – POLYVINYL CHLORIDE (PVC) PIPE SHALL MEET THE REQUIREMENTS OF AWWA STANDARD C–900, CLASS 150, DR–18, WITH CAST IRON O.D. AND INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS. NON–METALLIC WATER MAINS SHALL BE INSTALLED WITH BLUE INSULATION TRACER WIRE AND CONFORM WITH SPS 382.30(11)(h).

    VALVES AND VALVE BOXES – GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C–500 AND CHAPTER 8.27.0 OF THE "STANDARD SPECIFICATIONS". GATE VALVES AND VALVE BOXES SHALL CONFORM TO LOCAL PLUMBING ORDINANCES.

    BEDDING AND COVER MATERIAL – PIPE BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

    BACKFILL: PRIVATE SERVICE – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS". GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

    BACKFILL AND BEDDING: PUBLIC R.O.W – ALL EXCAVATION IN THE PUBLIC STREET RIGHT–OF–WAY HALL BE BACKFILLED WITH SLURRY IN ACCORDANCE WITH LOCAL REGULATIONS.

13. SANITARY SEWER SPECIFICATIONS –

    PIPE – SANITARY SEWER PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) MEETING REQUIREMENTS OF ASTM D 3034, SDR–35, WITH INTEGRAL BELL TYPE FLEXIBLE ELASTOMERIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D–3212.

    BEDDING AND COVER MATERIAL – BEDDING AND COVER MATERIAL SHALL CONFORM TO THE APPROPRIATE SECTIONS OF THE "STANDARD SPECIFICATION" WITH THE FOLLOWING MODIFICATION: "COVER MATERIAL SHALL BE THE SAME AS USED FOR BEDDING AND SHALL CONFORM TO SECTION 8.43.2 (A). BEDDING AND COVER MATERIAL SHALL BE PLACED IN A MINIMUM OF THREE SEPARATE LIFTS, OR AS REQUIRED TO INSURE ADEQUATE COMPACTING OF THESE MATERIALS, WITH ONE LIFT OF BEDDING MATERIAL ENDING AT OR NEAR THE SPRINGLINE OF THE PIPE. THE CONTRACTOR SHALL TAKE CARE TO COMPLETELY WORK BEDDING MATERIAL UNDER THE HAUNCH OF THE PIPE TO PROVIDE ADEQUATE SIDE SUPPORT."

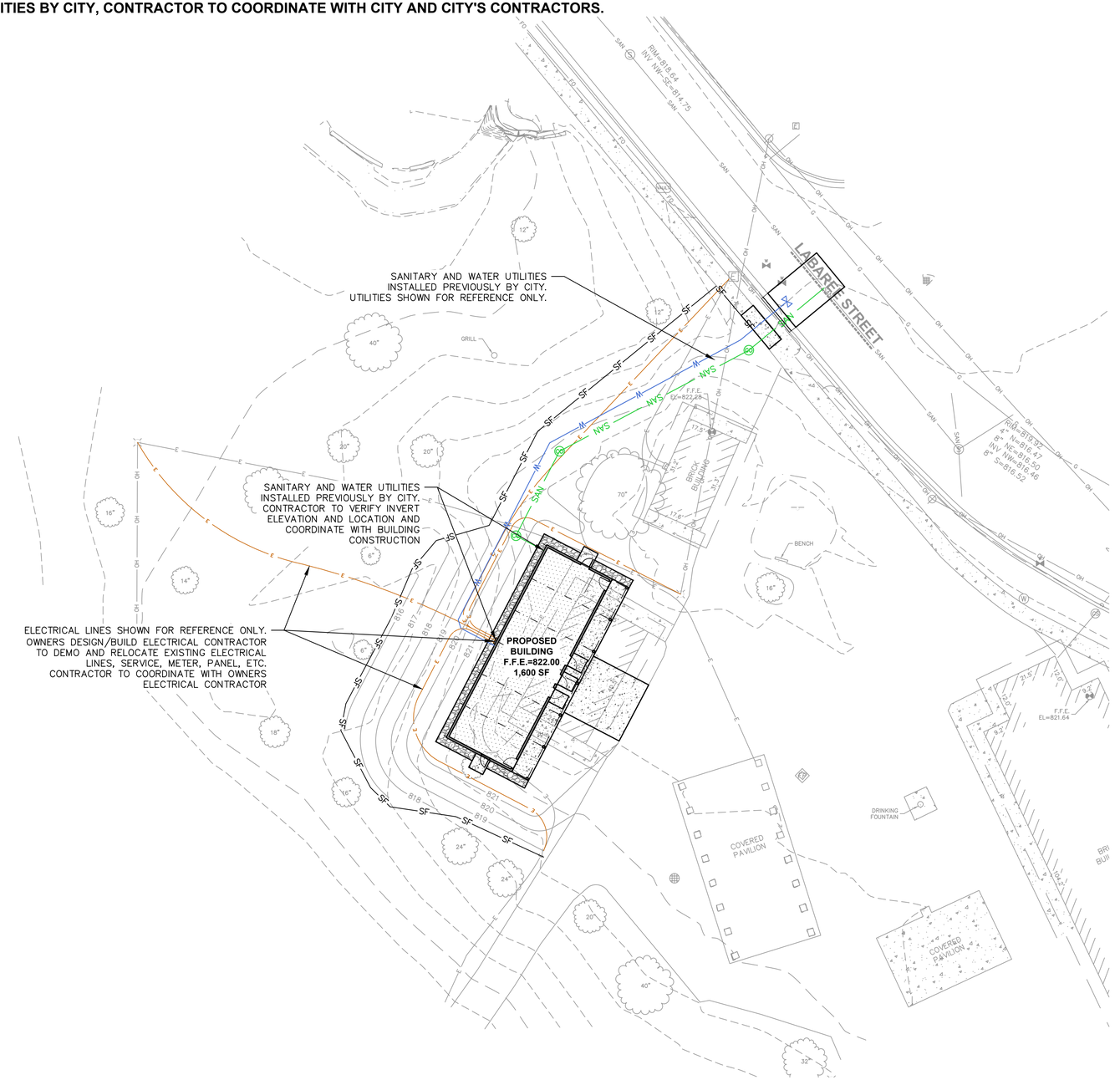
    BACKFILL: PRIVATE SERVICE – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS." GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS."

    BACKFILL AND BEDDING: PUBLIC R.O.W – ALL EXCAVATION IN THE PUBLIC STREET RIGHT–OF–WAY HALL BE BACKFILLED WITH SLURRY IN ACCORDANCE WITH LOCAL REGULATIONS.

14. WATERMAIN AND SANITARY SEWER SHALL BE INSULATED WHEREVER THE DEPTH OF COVER IS LESS THAN 6 FEET. INSULATION AND INSTALLATION OF INSULATION SHALL BE CONFORMING WITH CHAPTER 4.17.0 "INSULATION" OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN 6TH EDITION UPDATED WITH ITS LATEST ADDENDUM (TYP.).

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- STANDARD CURB AND GUTTER
- SF SILT FENCE
- SAN SANITARY SERVICE
- SANITARY CLEANOUT
- W WATER SERVICE
- WATER VALVE



north
SCALE IN FEET
20' 0 20'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666
JSD #21-11127

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Architect
259 South Street, Suite A
WAUKESHA, WI 53186
p: 833-380-6180

Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

UTILITY PLAN

Drawn by	Checked by
YT	KCB

Revisions

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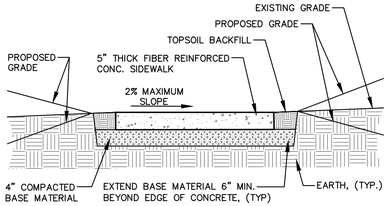
2024-01-23 Bid & Permit Set

Sheet No.

C4.0

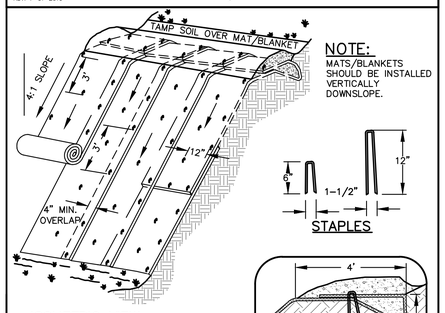


NOTE: CONCRETE PAVEMENT SHALL BE REINFORCED WITH NOVOMESH 950 (OR EQUAL) FIBER REINFORCEMENT AT A RATE OF 5 LBS/CUBIC YARD.

CONCRETE SIDEWALK

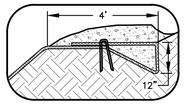
REV. 11-19-2018

N.T.S.



ISOMETRIC VIEW
TYPICAL SLOPE SOIL STABILIZATION

STAPLES



BERM

GENERAL NOTES:

1. EROSION MAT CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1052 "NON-CHANNEL EROSION MAT".
2. ONLY WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) APPROVED MATS SHALL BE ALLOWED. REFER TO EROSION CONTROL PLAN FOR EXACT MAT CLASSIFICATION.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
5. ONLY WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) APPROVED MATS SHALL BE ALLOWED. REFER TO EROSION CONTROL PLAN FOR EXACT MAT CLASSIFICATION.

NOTE:
MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.

EROSION MATTING

REV. 11-19-2018

N.T.S.

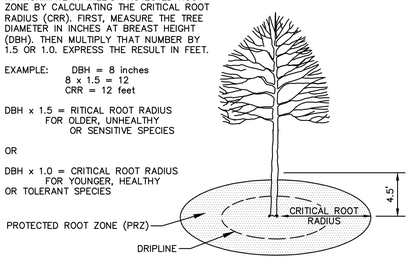
APPROXIMATE A TREE'S PROTECTED ROOT ZONE BY CALCULATING THE CRITICAL ROOT RADIUS (CRR). FIRST, MEASURE THE TREE DIAMETER IN INCHES AT BREAST HEIGHT (DBH). THEN MULTIPLY THAT NUMBER BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

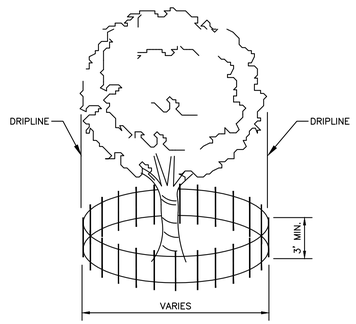
EXAMPLE: DBH = 8 inches
8 x 1.5 = 12
CRR = 12 feet

DBH x 1.5 = RITICAL ROOT RADIUS FOR OLDER, UNHEALTHY OR SENSITIVE SPECIES

OR

DBH x 1.0 = CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES



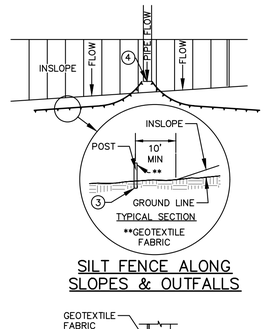


NOTE:
1. CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING IN THE AREA SURROUNDING THE TREE WITHIN THE CRITICAL ROOT RADIUS
2. NO EXCAVATION IS PERMITTED WITHIN THE CRITICAL ROOT RADIUS
3. IF EXCAVATION WITHIN THE CRITICAL ROOT RADIUS OF ANY TREE IS NECESSARY, CONTRACTOR SHALL CONTACT CITY FORESTER PRIOR TO EXCAVATION TO ASSESS THE IMPACT TO THE TREE AND ROOT SYSTEM.

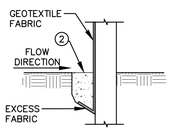
TREE PROTECTION DETAIL

REV. 01-04-2019

N.T.S.

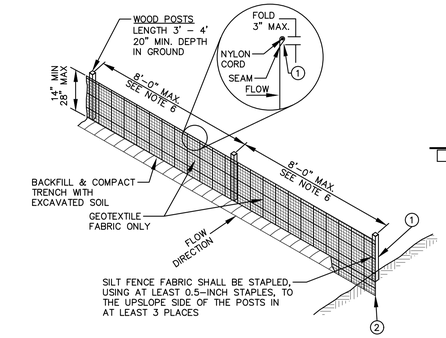


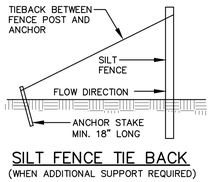
SILT FENCE ALONG SLOPES & OUTFALLS



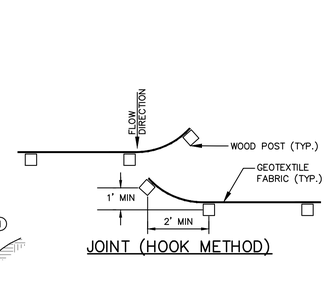
NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

TRENCH DETAIL





SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)



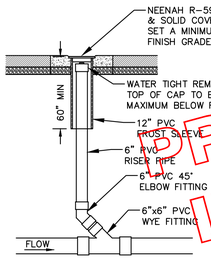
GENERAL NOTES:

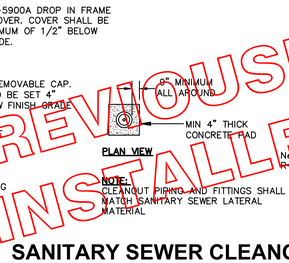
1. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
2. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125-INCHES x 1.125-INCHES OF DRIED OAK OR HICKORY.
4. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE.
5. SILT FENCE CONSTRUCTION AND GEOTEXTILE FABRIC SHALL CONFORM TO WDNR TECHNICAL STANDARD 1056.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8-FEET FOR WOVEN & 3-FEET FOR NON-WOVEN)

SILT FENCE

REV. 7-01-2019

N.T.S.





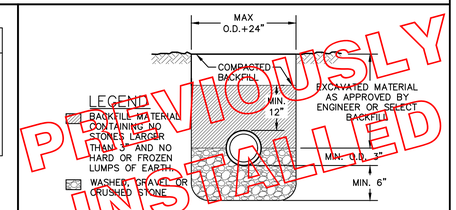
NOTE:
CLEANOUT PIPING AND FITTINGS SHALL MATCH SANITARY SEWER LATERAL MATERIAL

Neenah Grates
R-5900A 12-inch Pipe

Comm Table 82.35		
Dia of Lateral	Min Dia of Cleanout Riser	Min Dia of Riser Cap
1.5	1.5	1.5
2	1.5	1.5
3	3	2.5
4	4	3.5
5	5	4
6	6	5
8+	6	6

SANITARY SEWER CLEANOUT

N.T.S.



SANITARY SEWER BEDDING

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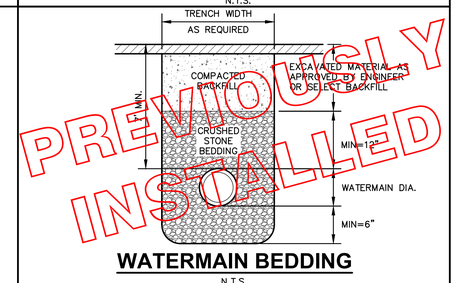
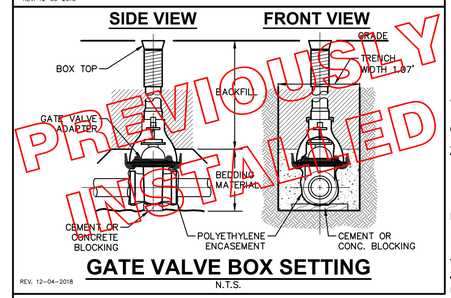


WATERMAIN BEDDING

REV. 12-05-2018

N.T.S.



GATE VALVE BOX SETTING

REV. 12-04-2018

N.T.S.

GENERAL NOTES:

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

(1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER OF FACILITATE MAINTENANCE OR REMOVAL.

(2) FOR INLET PROTECTION, TYPE "C" (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

(3) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT A WOOD 2X4

INSTALLATION NOTES:

TYPE "B" & "C"

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3 INCHES OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHODS TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

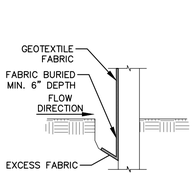
INSTALLATION NOTES:

TYPE "D"

DO NOT INSTALL INLET PROTECTION TYPE "D" IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

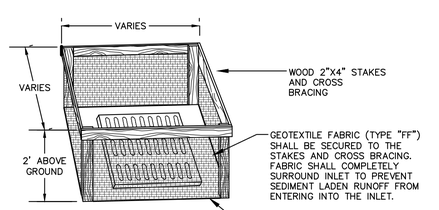
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3 INCHES OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3 INCHES. WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCHES CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4 INCHES FROM THE BOTTOM OF THE BAG.

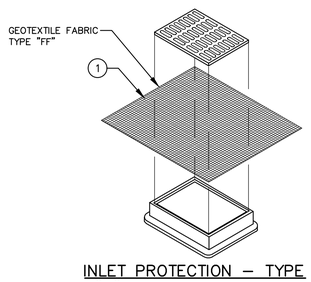


NOTE: 2' MINIMUM POST DEPTH. ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

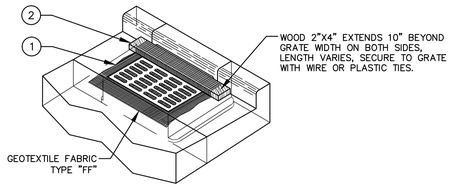
TRENCH DETAIL



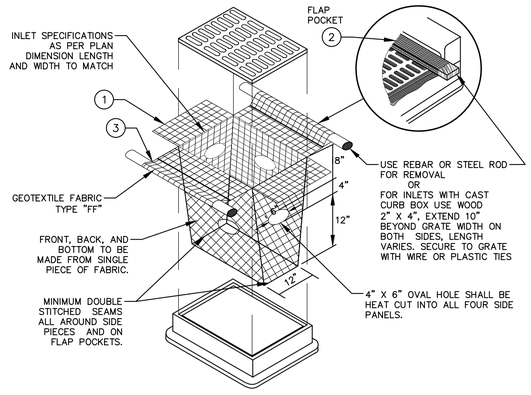
INLET PROTECTION – TYPE "A"



INLET PROTECTION – TYPE "B" WITHOUT CURB BOX



INLET PROTECTION – TYPE "C" WITH CURB BOX



INLET PROTECTION – TYPE "D"

INLET PROTECTION

N.T.S.

JSD
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666
JSD #21-11127

THRIVE ARCHITECTS
Architect
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WAUKESHA, WI 53186
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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

DETAILS

Drawn by	Checked by
YT	KCB

Revisions

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2024-01-23 Bid & Permit Set

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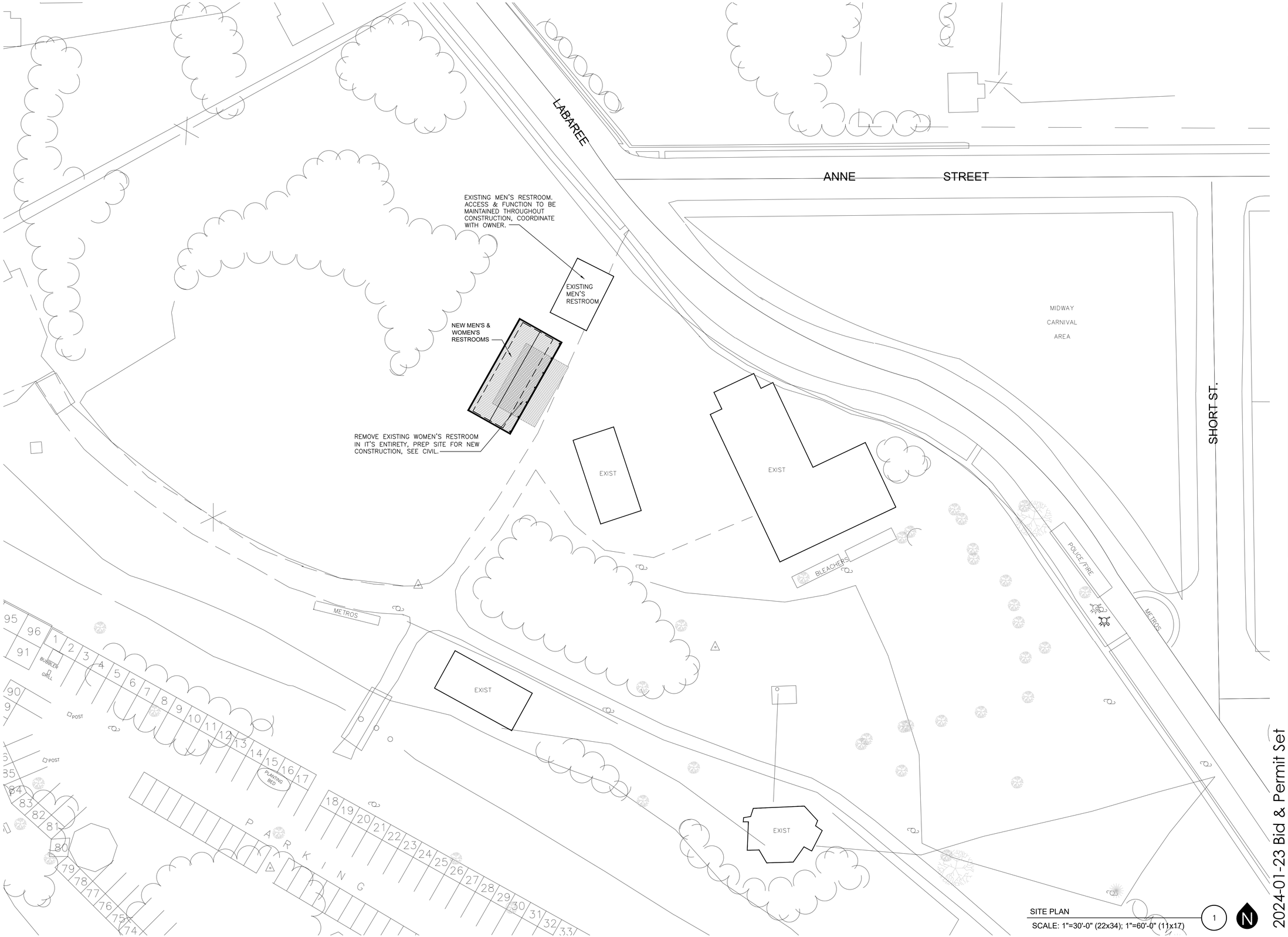

SITE PLAN

SCALE: 1"=30'-0" (22x34); 1"=60'-0" (11x17)

1

N

THRIVE ARCHITECTS

Architect

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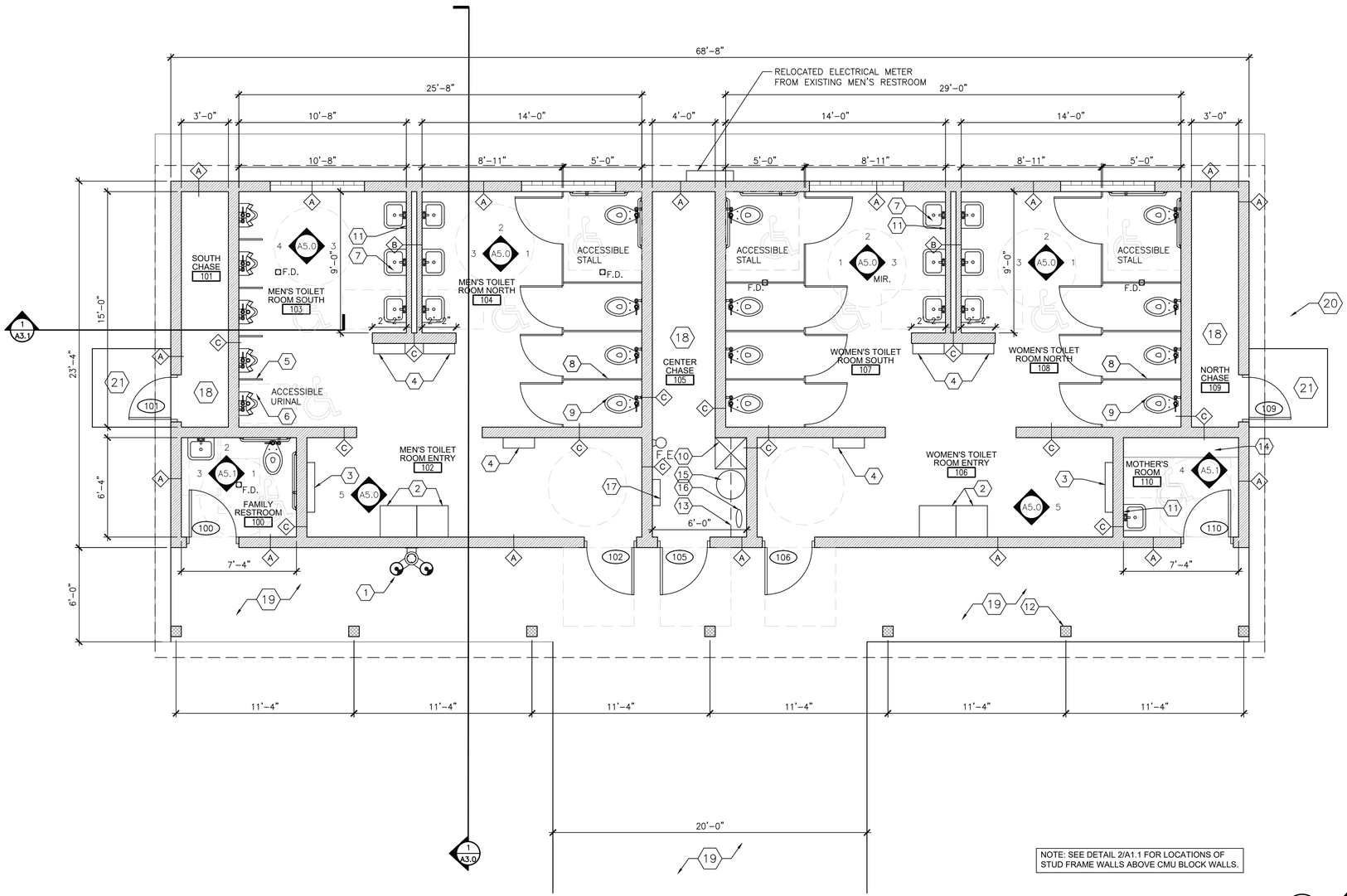
SP1.0

PLAN/EQUIP. KEY

1 DRINKING FOUNTAIN, BOTTLE FILLER	9 TOILET PARTITION	17 ELECTRICAL PANEL
2 TRASH RECEPTACLE	10 JANITOR'S SINK	18 PLUMBING CHASE
3 CHANGING STATION	11 MIRROR	19 CONCRETE SIDEWALK
4 HAND DRYER	12 COLUMN, SEE STRUCTURAL	20 GRAVEL MAINTENANCE STRIP
5 URINAL	13 SHELVING, BY OWNER	21 5X5 STOOP
6 URINAL PARTITION	14 BENCH SEAT	
7 LAVATORY	15 WATER HEATER	
8 TOILET	16 WATER METER	



NOTE: SEE DETAIL 2/A1.1 FOR LOCATIONS OF STUD FRAME WALLS ABOVE CMU BLOCK WALLS.

FLOOR PLAN

SCALE: 1/4"=1'-0" (22x34); 1/8"=1'-0" (11x17)

1

N

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FLOOR PLAN

Drawn by	Checked by
JAJ	DMR

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2024-01-23 Bid & Permit Set

Sheet No.

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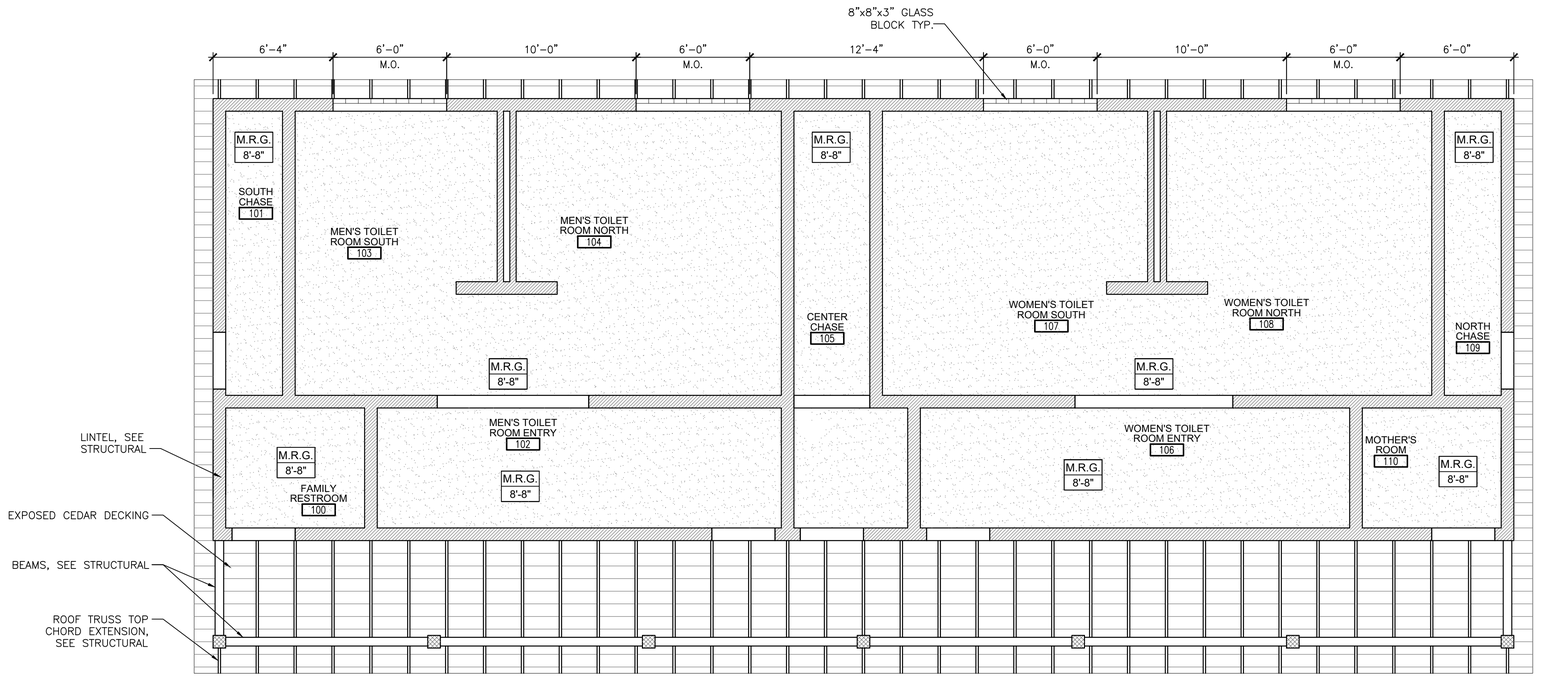

REFLECTED CEILING PLAN

SCALE: 1/4"=1'-0" (22x34); 1/8"=1'-0" (11x17)

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
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Revisions

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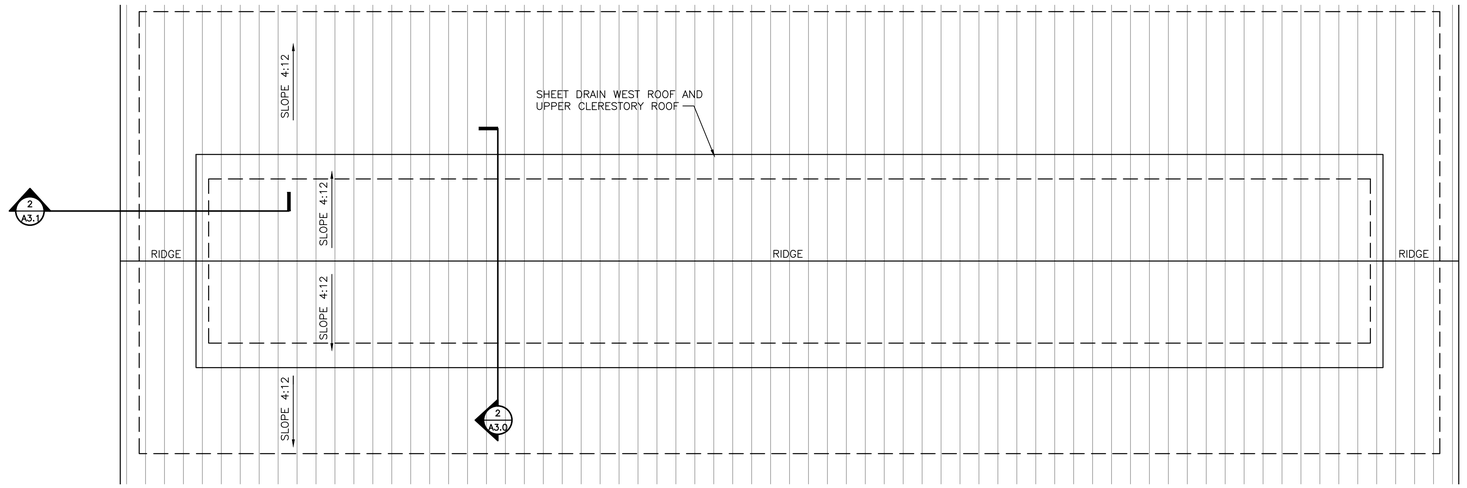
2024-01-23 Bid & Permit Set

Sheet No.

A1.2



ALTERNATE 1 ROOF PLAN
SCALE: 1/4"=1'-0" (22x34); 1/8"=1'-0" (11x17)

2

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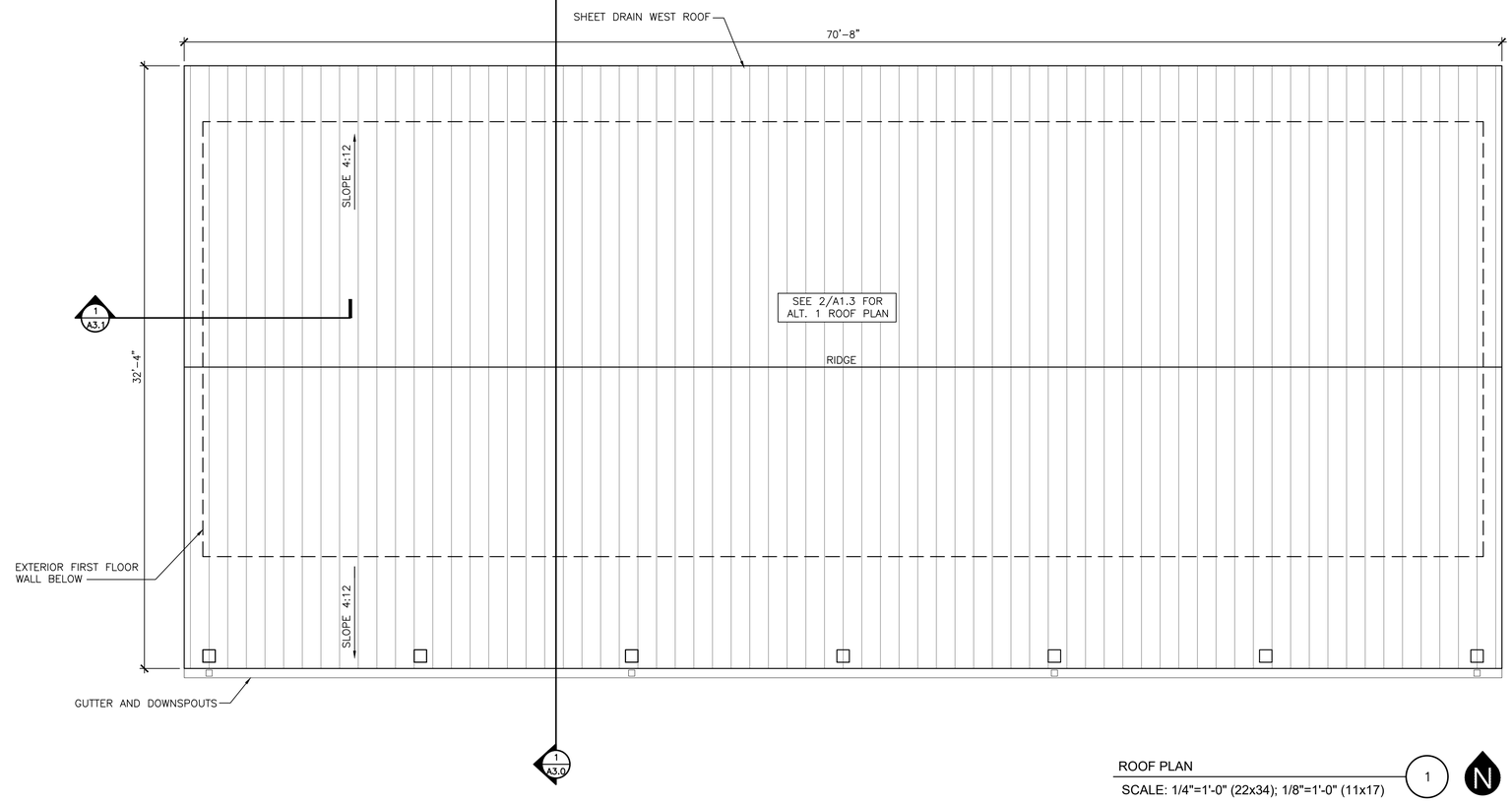

ROOF PLAN
SCALE: 1/4"=1'-0" (22x34); 1/8"=1'-0" (11x17)

1

N

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WAUKESHA, WI 53186
p: 833-380-6180

Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

ROOF PLAN

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JAJ	DMR

Revisions

No.	Date	Description
	01.23.24	Bid & Permit Set

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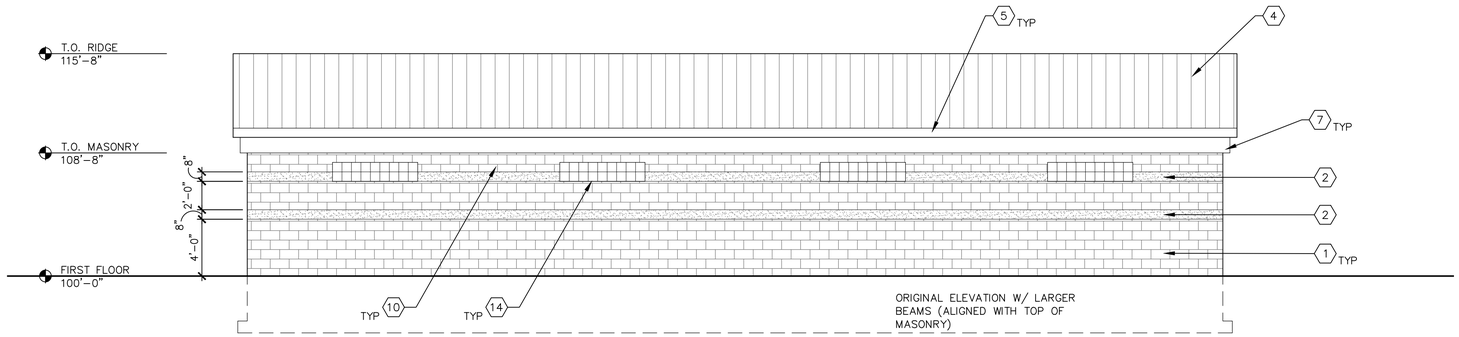
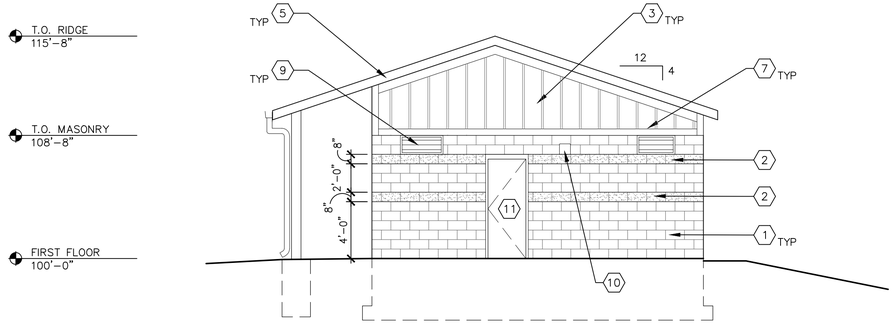
A1.3

KEY NOTES

1. CMU SPLIT FACE BLOCK (FIELD) COLOR: NATURAL, MFG: COUNTY MATERIALS OR EQUAL.
2. CMU SMOOTH FACE BLOCK (ACCENT STRIPE) COLOR: STEEL GREY, MFG: COUNTY MATERIALS OR EQUAL.
3. BOARD & BATTEN LP SIDING COLOR: T.B.D.
4. BASE BID: STANDING SEAM ROOF COLOR: CHARCOAL, MFG: ATAS, OR EQUAL. ALTERNATE BID: ASPHALT SHINGLES COLOR: ESTATE GREY; MFG: OWENS CORNING DURATION OR EQUAL.
5. PREFINISHED ALUMINUM FASCIA, GUTTERS AND DOWNSPOUTS. COLOR: CHARCOAL GREY, MFG: ATAS, OR EQUAL.
6. WINDOW, FROSTED GLASS, 3M SECURITY FILM APPLIED, COMPOSITE TRIM, TO MATCH BOARD & BATTEN SIDING
7. CEDAR CLAD STRUCTURE
8. 12"x12" PREFINISHED VENT LOUVER, WITH INTERIOR MESH BUG SCREEN
9. EXHAUST / INTAKE LOUVER, COORDINATE WITH MECHANICALS; COLOR TO MATCH FIELD CMU.
10. WALL MOUNTED LIGHT FIXTURE, COORDINATE WITH ELECTRICAL.
11. HOLLOW METAL DOOR AND FRAME, PAINTED TO MATCH CMU FIELD COLOR.
12. HOLLOW METAL DOOR AND FRAME, PAINTED TO MATCH CMU ACCENT COLOR.
13. SIGNAGE.
14. 8"x8" GLASS BLOCK
15. FAUX DECORATIVE VENT



NORTH ELEVATION (4)
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17)



EAST ELEVATION (3)
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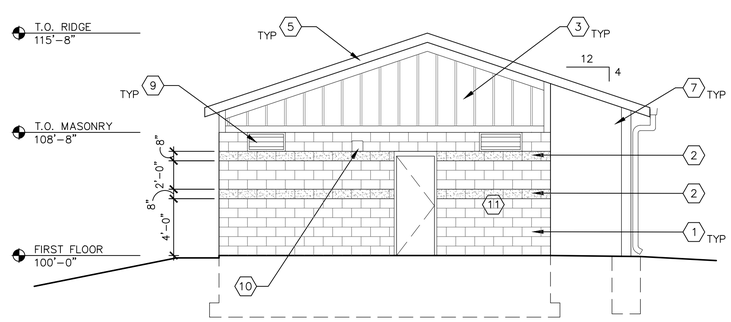
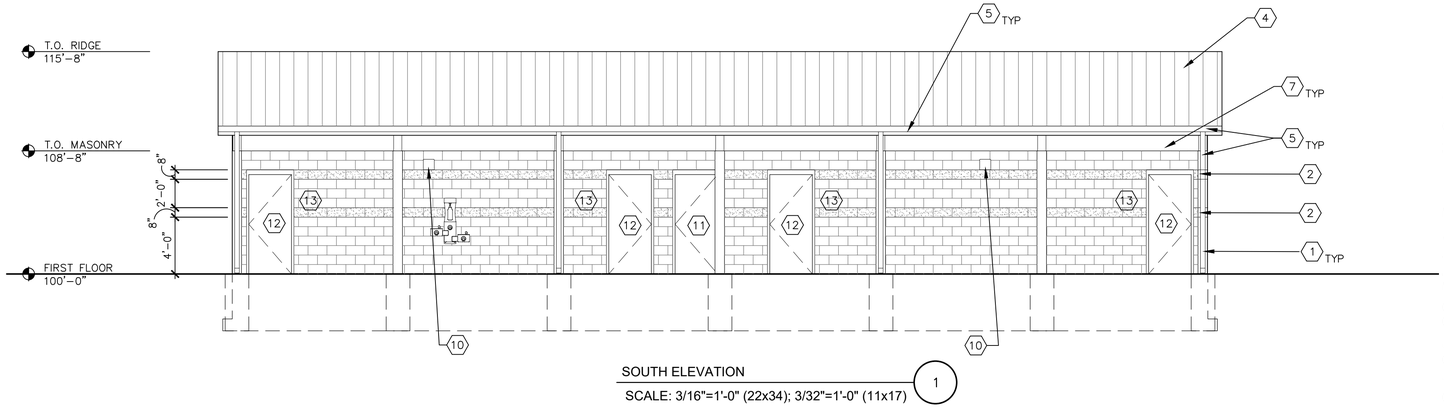


WEST ELEVATION (2)
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17)

NOTE: SEE A2.1 FOR ALT. 1 ELEVATIONS



SOUTH ELEVATION (1)
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17)

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
WAUKESHA, WI 53186
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EXTERIOR ELEVATIONS

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A2.0

KEY NOTES

1. CMU SPLIT FACE BLOCK (FIELD) COLOR: NATURAL, MFG: COUNTY MATERIALS OR EQUAL.
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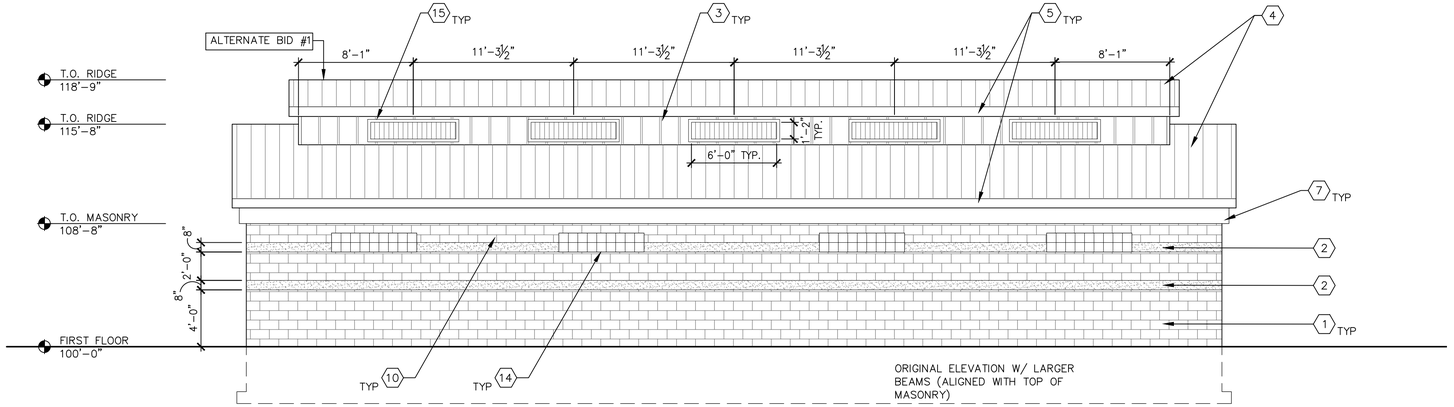
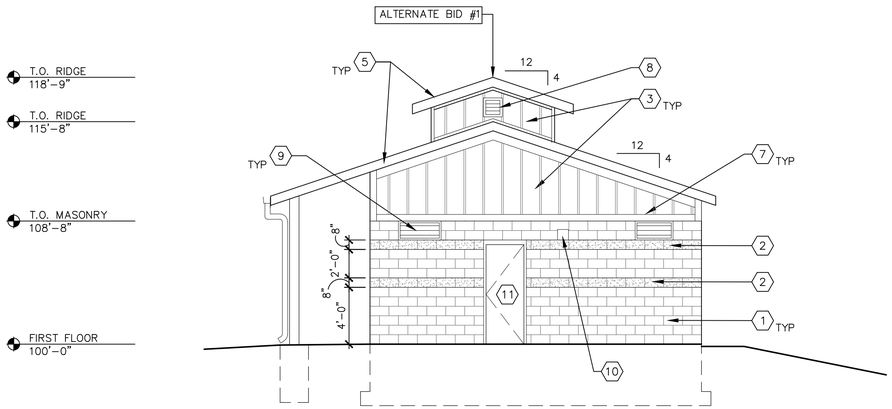
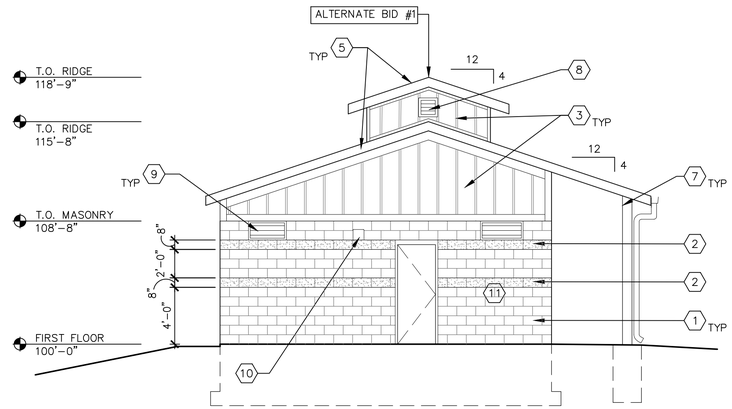


NORTH ELEVATION
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17) 4

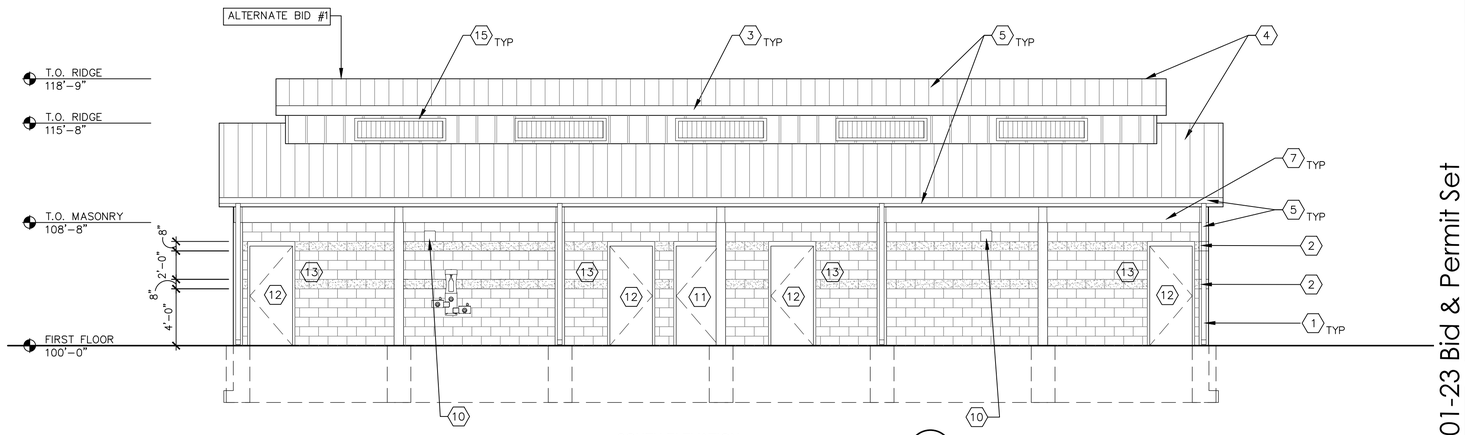


EAST ELEVATION
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17) 3



WEST ELEVATION
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17) 2

NOTE: SEE A2.0 FOR BASE BID ELEVATIONS



SOUTH ELEVATION
SCALE: 3/16"=1'-0" (22x34); 3/32"=1'-0" (11x17) 1

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
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New Construction

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Watertown, WI

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ALTERNATE 1 EXTERIOR ELEVATIONS

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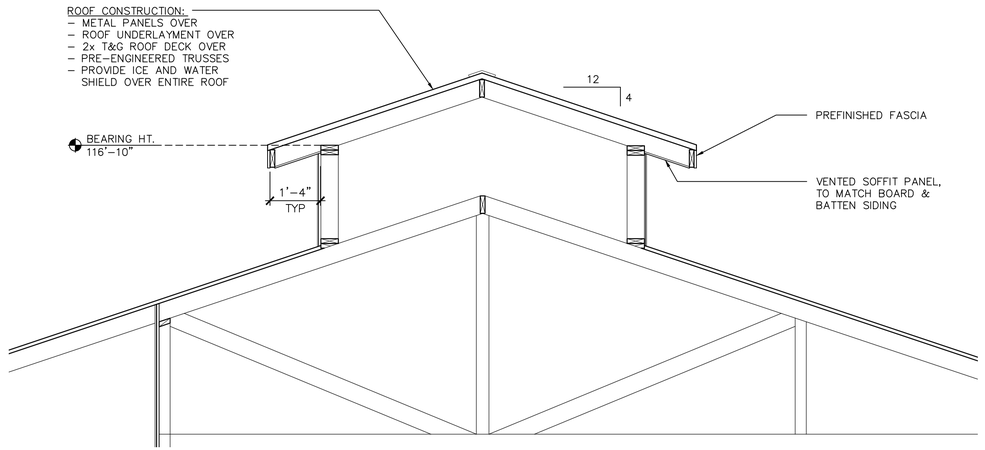
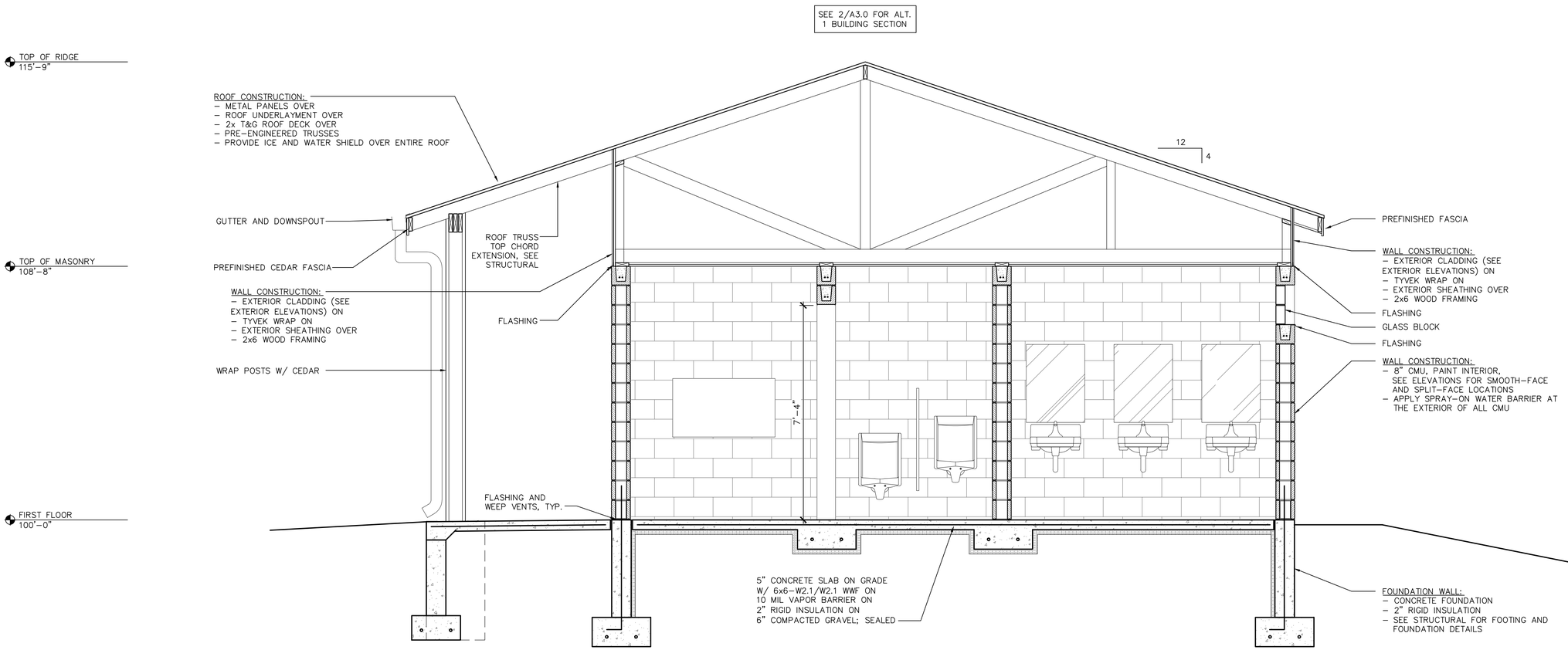


ALTERNATE 1 BUILDING SECTION — 2

SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



BUILDING SECTION — 1

SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)

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BUILDING SECTIONS

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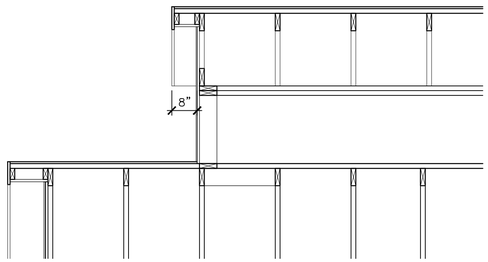
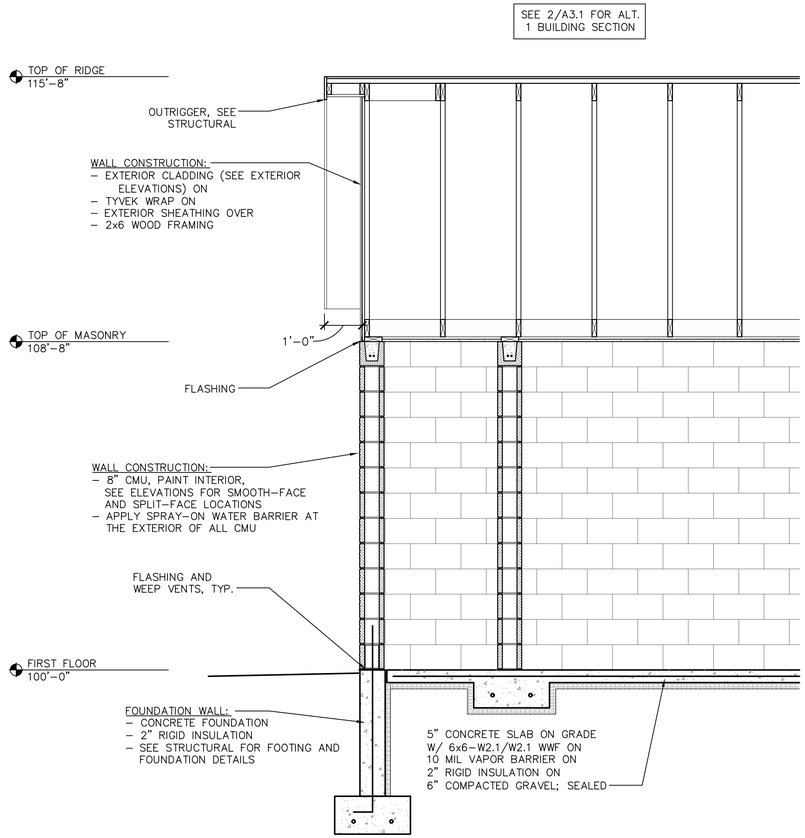


ALTERNATE 1 BUILDING SECTION 2

SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



BUILDING SECTION 1

SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)

THRIVE ARCHITECTS

Architect

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WAUKESHA, WI 53186
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BUILDING SECTIONS

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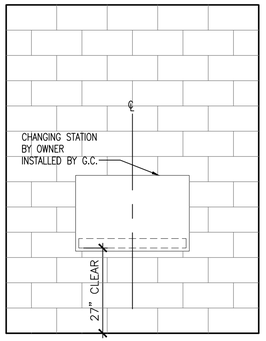
NOTES:
1. SEE THE SPECIFICATIONS FOR ACCESSORIES SELECTIONS.

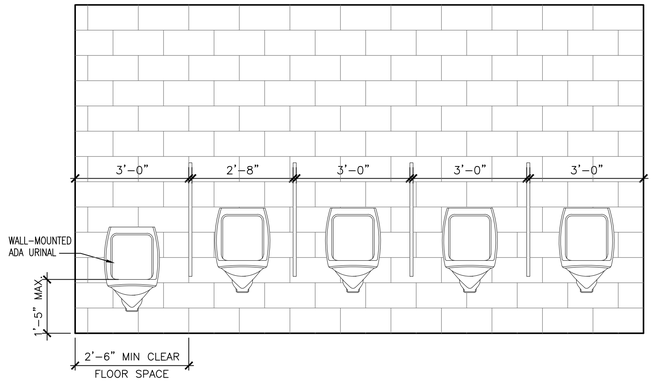
2. SEE THE PLUMBING FIXTURE SCHEDULE FOR TOILET, URINAL, AND LAVATORY SELECTIONS.



CHANGING STATION

SCALE: 1/2"=1'0"

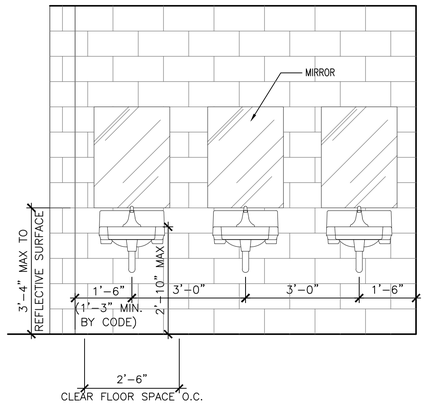
5



WATER CLOSET WALL

SCALE: 1/2"=1'0"

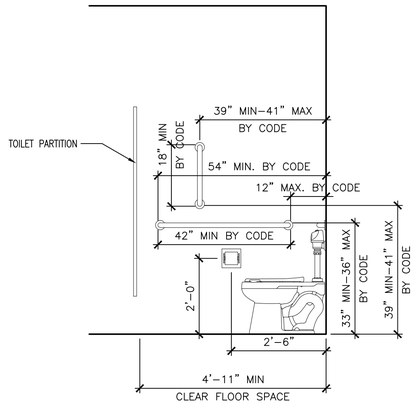
4



LAVATORY WALL

SCALE: 1/2"=1'0"

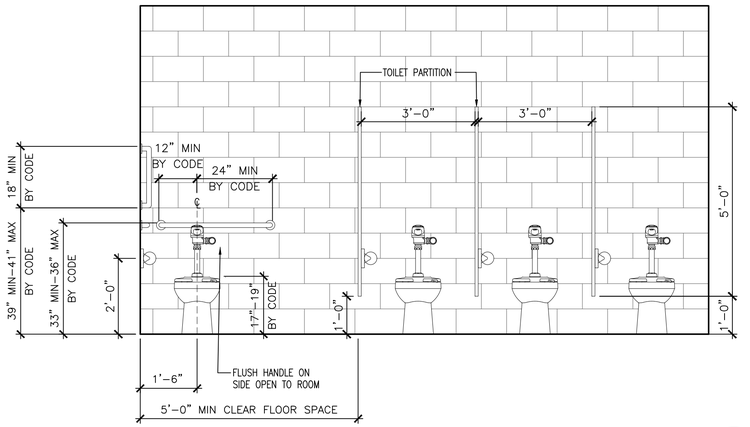
3



ADA TOILET STALL

SCALE: 1/2"=1'0"

2



WATER CLOSET WALL

SCALE: 1/2"=1'0"

1

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
WAUKESHA, WI 53186
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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

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INTERIOR ELEVATIONS

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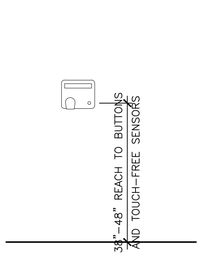
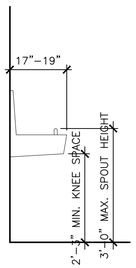
A5.0

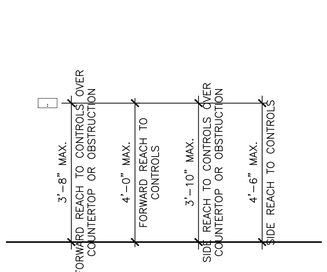
NOTES:
1. SEE THE SPECIFICATIONS FOR ACCESSORIES SELECTIONS.
2. SEE THE PLUMBING FIXTURE SCHEDULE FOR TOILET, URINAL, AND LAVATORY SELECTIONS.



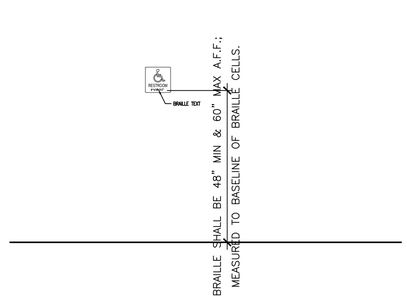
ACCESSIBLE HAND DRYER 8
SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



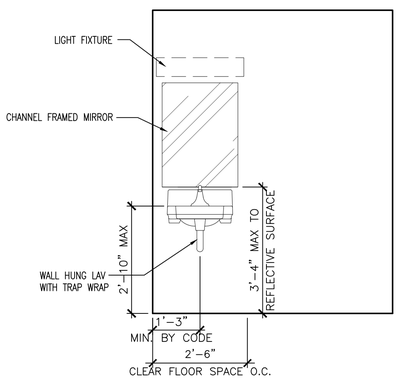
ACCESSIBLE DRINKING FOUNTAIN 7
SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



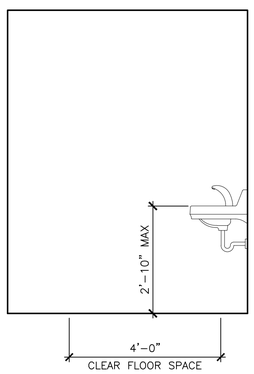
ACCESSIBLE SOAP DISPENSER 6
SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



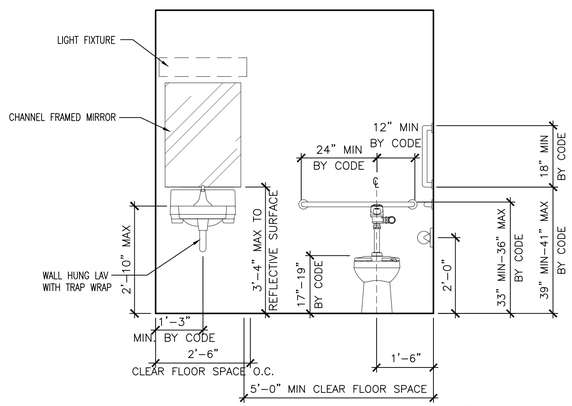
ACCESSIBLE TOILET ROOM SIGN 5
SCALE: 1/2"=1'-0" (22x34); 1/4"=1'-0" (11x17)



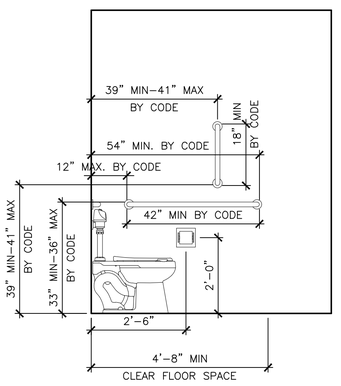
MOTHER'S ROOM 4
SCALE: 1/2"=1'0"



FAMILY RESTROOM 3
SCALE: 1/2"=1'0"



FAMILY RESTROOM 2
SCALE: 1/2"=1'0"



FAMILY RESTROOM 1
SCALE: 1/2"=1'0"

THRIVE ARCHITECTS
Architect
259 South Street, Suite A
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Riverside Park Restrooms

New Construction

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Watertown, WI

Sheet Title

INTERIOR ELEVATIONS

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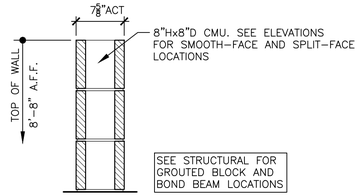
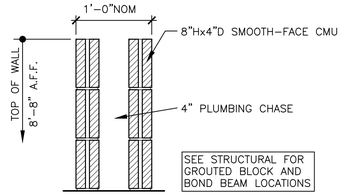


WALL TYPE A



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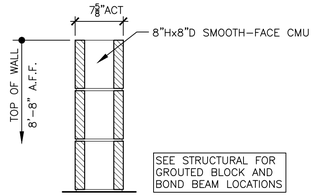
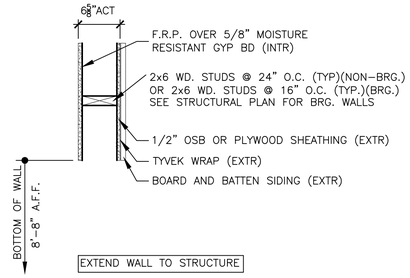
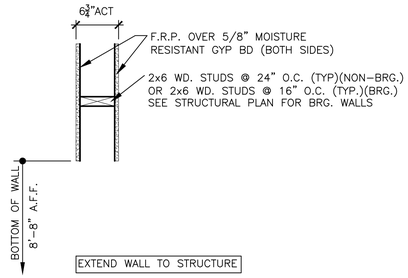


WALL TYPE C



WALL TYPE D

NOTE: SEE DETAIL 2/A1.1 FOR LOCATIONS OF STUD FRAME WALLS ABOVE CMU BLOCK WALLS.

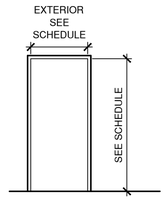


WALL TYPE E

NOTE: SEE DETAIL 2/A1.1 FOR LOCATIONS OF STUD FRAME WALLS ABOVE CMU BLOCK WALLS.

FRAME TYPES

F1

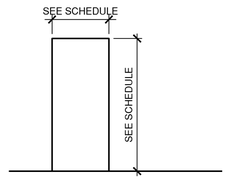


FRAME: HOLLOW METAL
TRIM: NONE
FINISH: PAINTED

DOOR TYPES

D1

EXTERIOR



THICKNESS: 1-3/4"
MATERIAL: HOLLOW METAL
PANEL: FLUSH
FINISH: PAINTED
GLAZING: NONE
HARDWARE: SEE DOOR SCHEDULE NOTES

DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	NO. OF PANELS	SIZE		DOOR TYPE	FRAME TYPE	FIRE RATING	REMARKS
			WIDTH	HEIGHT				
100	FAMILY RESTROOM	1	3'-0"	7'-0"	D1	F1		HG1
101	SOUTH CHASE	1	2'-8"	7'-0"	D1	F1		HG2
102	MEN'S TOILET ROOM ENTRY	1	3'-0"	7'-0"	D1	F1		HG1
105	CENTER CHASE	1	3'-0"	7'-0"	D1	F1		HG2
106	WOMEN'S TOILET ROOM ENTRY	1	3'-0"	7'-0"	D1	F1		HG1
109	NORTH CHASE	1	2'-8"	7'-0"	D1	F1		HG2
110	MOTHER'S ROOM	1	3'-0"	7'-0"	D1	F1		HG1

NOTES:

1. G.C. TO SUPPLY ALL DOOR HARDWARE REQUIRED BY CODE.
2. DOOR HARDWARE SHALL COMPLY WITH ICC/ANSI A117.1 SEC 404.2.6 – HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE HARDWARE SHALL BE PLACED AT LEAST 34 INCHES, BUT NOT MORE THAN 48 INCHES ABOVE THE FLOOR SURFACE.
3. COORDINATE REQUIREMENTS OF ELECTRONIC STRIKE WITH OWNER FOR REMOTE/TIMED ACCESS TO PUBLIC DOORS.

THRIVE ARCHITECTS
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DOOR, WALL TYPES AND SCHEDULES

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EXHAUST FANS (EF)

TYPE MARK	MARK	MANUFACTURER	MODEL	SERVICE	LOCATION	DRIVE	AIRFLOW (CFM)	ESP (IN WC)	RPM	BACKDRAFT DAMPER	MOTOR		UNIT ELECTRICAL			WEIGHT (LBS)	SONES	REMARKS
											HP	BHP	VOLTS / PH	STARTER	DISCONNECT			
EF	1	GREENHECK	SQ-100-VG	WOMENS RESTROOM	IN JOIST SPACE	DIRECT	600	0.25	985	MOTORIZED	1/4	0.04	120 / 1Ø	MANUAL	BY MANUFACTURER	45	4.3	1
EF	2	GREENHECK	SQ-100-VG	MENS RESTROOM	IN JOIST SPACE	DIRECT	675	0.25	1046	MOTORIZED	1/4	0.05	120 / 1Ø	MANUAL	BY MANUFACTURER	45	5.0	1
EF	3	GREENHECK	SP-80-VG	FAMILY RESTROOM	CEILING SUSPENDED	DIRECT	75	0.25	935	-	-	-	120 / 1Ø	MANUAL	BY MANUFACTURER	12	0.3	1
EF	4	GREENHECK	SP-80-VG	JANITOR'S CLOSET	CEILING SUSPENDED	DIRECT	75	0.25	935	-	-	-	120 / 1Ø	MANUAL	BY MANUFACTURER	12	0.3	1
EF	5	GREENHECK	SP-80-VG	MOTHER'S ROOM	CEILING SUSPENDED	DIRECT	75	0.25	935	-	-	-	120 / 1Ø	MANUAL	BY MANUFACTURER	12	0.3	1

1. FAN TO BE PROVIDED WITH ECM ADJUSTABLE SPEED MOTOR. PROVIDE ADJUSTABLE SPEED DIAL IN AN ACCESSIBLE LOCATION ON FAN.

LOUVER

MARK	MANUFACTURER	MODEL	LOCATION	SERVICE	CONSTRUCTION		CFM	SIZE			MAX FREE AREA VELOCITY - FPM	MAX PRESSURE DROP - IN WC	REMARKS
					TYPE	MATERIAL		LENGTH	WIDTH	DEPTH			
L-1	GREENHECK	ESD-403	SEE PLANS	WOMENS RESTROOM	FASTENED	ALUMINUM	750	26"	16"	6"	649	0.1	1, 2, 3
L-2	GREENHECK	ESD-403	SEE PLANS	MENS RESTROOM	FASTENED	ALUMINUM	750	26"	16"	6"	649	0.1	1, 2, 3
L-3	GREENHECK	ESD-202	SEE PLANS	WOMENS RESTROOM	FASTENED	ALUMINUM	625	26"	16"	6"	700	0.1	1, 2, 3
L-4	GREENHECK	ESD-403	SEE PLANS	MENS RESTROOM	FASTENED	ALUMINUM	700	26"	16"	6"	606	0.1	1, 2, 3

1. COORDINATE COLOR WITH ARCHITECT
2. PROVIDE WITH INSECT SCREEN
3. LOUVERS WILL BE PROVIDED BY THE GENERAL CONTRACTOR UNDER DIVISION 08 90 00. THE SELECTIONS ABOVE ARE FOR MECHANICAL PERFORMANCE CRITERIA ONLY.

DIFFUSERS AND GRILLES

MARK	MANUFACTURER	MODEL	TYPE	SERVICE	MATERIAL	CONFIGURATION			FINISH	REMARKS
						BLADES		MOUNTING / FRAME		
						SPACING (IN)	ANGLE			
S1	TITUS	TMR	ROUND CONICAL	SUPPLY	STEEL	-	-	LAY-IN	WHITE	1
E1	TITUS	350FL	SINGLE DEFLECTION	EXHAUST	STEEL	3/4"	35°	LAY-IN	WHITE	1

NOTE: SEE PLANS FOR NECK SIZES

1. ARCHITECT TO COMFIRM COLOR SELECTION

Sequence of Operation: Exhaust fans and motor operated control dampers

Note: All exhaust fans will take an occupancy input from the lighting system. In all cases the fan shall receive an occupied signal from the associated zone lighting occupancy sensor. The method of delivery of the occupancy status from the lighting system may vary slightly from zone to zone. If there is no occupancy sensor in a specific zone or space then the exhaust fan operation should be indexed to turn on and off in sequence with the manual light switch in that room or zone.

Lighting System Interface:
The lighting occupancy sensor shall send a signal from the auxiliary contact of the occupancy sensor to the HOA controller of inline exhaust fans EF-1 and EF-2. Fans should be programmed to run for 10 minutes after the lighting occupancy sensor has turned off the lights to facilitate adequate removal of odors. If communication is lost with the lighting system, the exhaust fan shall continue to operate until the programmed time out of 10 minutes after the room has switched to unoccupied mode.

The lighting occupancy sensor shall send a direct 0-10V signal from the auxiliary contact of the occupancy sensor directly to the ECM motor of ceiling mounted exhaust fans EF-3 and EF-5. Fans should operate when lighting is on and turn off when lighting occupancy sensors times out, switching the room to an unoccupied set point. This timeout shall be no longer than 30 minutes.

Ceiling mounted EF-4 shall be controlled directly by the manual light switch in the Janitor's Closet.

Occupancy Mode: The occupancy mode shall be communicated to each exhaust fan via a binary input. Valid Occupancy modes for the exhaust fans shall be:

Occupied: Normal operating mode for occupied spaces during normal operation. When the lighting sensor is in the occupied mode the associated exhaust fan shall be energized and shall maintain the scheduled space airflow. When a fan is energized the associated motorized dampers shall open.

Unoccupied Standby: Mode used for unoccupied spaces. The occupancy sensor integral to the lighting system shall be used to indicate that the space is occupied or unoccupied. In the standby mode the exhaust fan airflow setpoint will be reduced to the minimum CFM, scheduled for 0 CFM. When the fan enters unoccupied mode the motor shall shut off and the associated motorized dampers shall close.

Motorized Dampers: Each fan shall be provided with a motorized control damper. Control dampers are intended to prevent backflow of outdoor air into the exhaust system when the system is de-energized.

Exhaust: Each exhaust fan will have an associated motorized control damper. When the fan is energized the associated motorized damper shall open. The damper shall close when the fan shuts off. Actuators shall be selected so that these motorized exhaust dampers fail open.

Intakes: Each outdoor air louver will have an associated motorized control damper. When any one of the associated exhaust fans are energized that the associated motorized damper at the intake louver shall open. The intake damper shall close when all associated exhaust dampers prove closed. Actuators shall be selected so that motorized intake dampers fail closed.

Heating Control:
Heat is not provided by this system. The intent is that the domestic water systems will be shut off and drained in advance of freezing or sub-freezing conditions.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
COND	CONDENSATE DRAIN
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CR	LOW PRESSURE STEAM CONDENSATE RETURN
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DE	DISHWASHER EXHAUST
DN	DOWN
EA	EXHAUST AIR
GSHXR	GROUND SOURCE HEAT EXCHANGER RETURN
GSHXS	GROUND SOURCE HEAT EXCHANGER SUPPLY
HPS	HIGH PRESSURE STEAM
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
KE	KITCHEN EXHAUST
LPS	LOW PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
RCOVR	ENERGY RECOVERY RETURN
RCOVS	ENERGY RECOVERY SUPPLY
RELF	RELIEF AIR
RL	REFRIGERATION LIQUID
RS	REFRIGERATION SUCTION
SA	SUPPLY AIR
SOLR	SOLAR THERMAL RETURN
SOLS	SOLAR THERMAL SUPPLY
TA	TRANSFER AIR
VFD	VARIABLE FREQUENCY DRIVE
X	EXISTING

HVAC LEGEND

- NEW HVAC EQUIPMENT
- NEW DUCTWORK
- EXISTING MECHANICAL COMPONENT
- DEMOLISHED MECHANICAL COMPONENT
- MECHANICAL EQUIPMENT SERVICE AREA
- (M##) KEY NOTE
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- OUTSIDE AIR DUCT UP
- OUTSIDE AIR DUCT DOWN
- EXHAUST AIR DUCT UP
- EXHAUST AIR DUCT DOWN
- ELBOW WITH TURNING VANES
- FLEX DUCT
- M — MOTORIZED DAMPER
- BD — BACK DRAFT DAMPER
- FD — FIRE DAMPER
- SD — SMOKE DAMPER
- FSD — COMBINATION FIRE/SMOKE DAMPER
- XX-1 — DAMPER WITH SEQUENCING NUMBER
- BALANCING DAMPER
- AIR FLOW INDICATOR
- UC — DOOR UNDER CUT
- TRANSFER/DOOR GRILLE
- S-* — NEW SUPPLY DIFFUSER
- R-*/T-* — NEW RETURN/TRANSFER GRILLE
- E-* — NEW EXHAUST GRILLE
- C — CO2 SENSOR
- PD — PRESSURE DIFFERENTIAL SENSOR
- SP — STATIC PRESSURE CONTROLLER
- T — THERMOSTAT
- T — TEMPERATURE SENSOR
- TC — THERMOSTAT /CO2 SENSOR
- TC — TEMPERATURE /CO2 SENSOR
- $ — WALL SWITCH
- CONTROL WIRE
- POINT OF CONNECTION
- DN — DUCT OFFSET
- EQUIPMENT / RTU X-X / FLOOR / TAG — HVAC EQUIPMENT TAG ELECTRICALLY POWERED
- EQUIPMENT / VAV X-X / FLOOR / TAG — HVAC EQUIPMENT TAG NOT ELECTRICALLY POWERED
- NECK SIZE / A1 XX"xXX" CFM / TAG / TYP. # — DIFFUSER/GRILLE TAG

GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL REQUIRED OFFSETS FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND SHALL MAINTAIN APPROPRIATE CLEARANCES.
2. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK AND PROJECT CONDITIONS. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
5. COORDINATE EXACT LOCATION OF CEILING DIFFUSERS AND GRILLES WITH REFLECTED CEILING PLAN.
6. ALL BRANCH DUCTS SHALL MATCH DIFFUSER NECK SIZES UNLESS OTHERWISE NOTED.
7. ALL CONTROL WIRING SHALL BE RUN IN CONDUIT.
8. KEYNOTES PERTAIN ONLY TO THE DRAWING THEY ARE LOCATED ON.
9. DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
10. ALL HOT WATER BRANCH LINES ARE 3/4" UNLESS NOTED OTHERWISE.
11. MAINTAIN 10' MINIMUM DISTANCE FROM OUTSIDE AIR INTAKE TO ANY EXHAUST OR PLUMBING VENTS.
12. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH.
13. ALL SUPPLY AND RETURN DUCTWORK IN UNINSULATED ATTIC SPACE SHALL BE WRAPPED WITH 3" INSULATION.
14. CLEAN ALL EXISTING DUCTWORK, COILS AND DIFFUSERS DESIGNATED TO REMAIN WITHIN THE PROJECT'S SCOPE OF WORK.
15. REMOVAL AND REINSTALLATION OF EXISTING CEILING IS REQUIRED. REPLACE ALL DAMAGED CEILING WITH NEW, EQUAL TO EXISTING.

MECHANICAL SHEET INDEX

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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

MECHANICAL NOTES, LEGEND, AND ABBREVIATIONS

Drawn by	Checked by

Revisions

No.	Date	Description
	01.23.2024	Bid & Permit Set

2023-06-30 Bid & Permit Set

Sheet No.

M0.1

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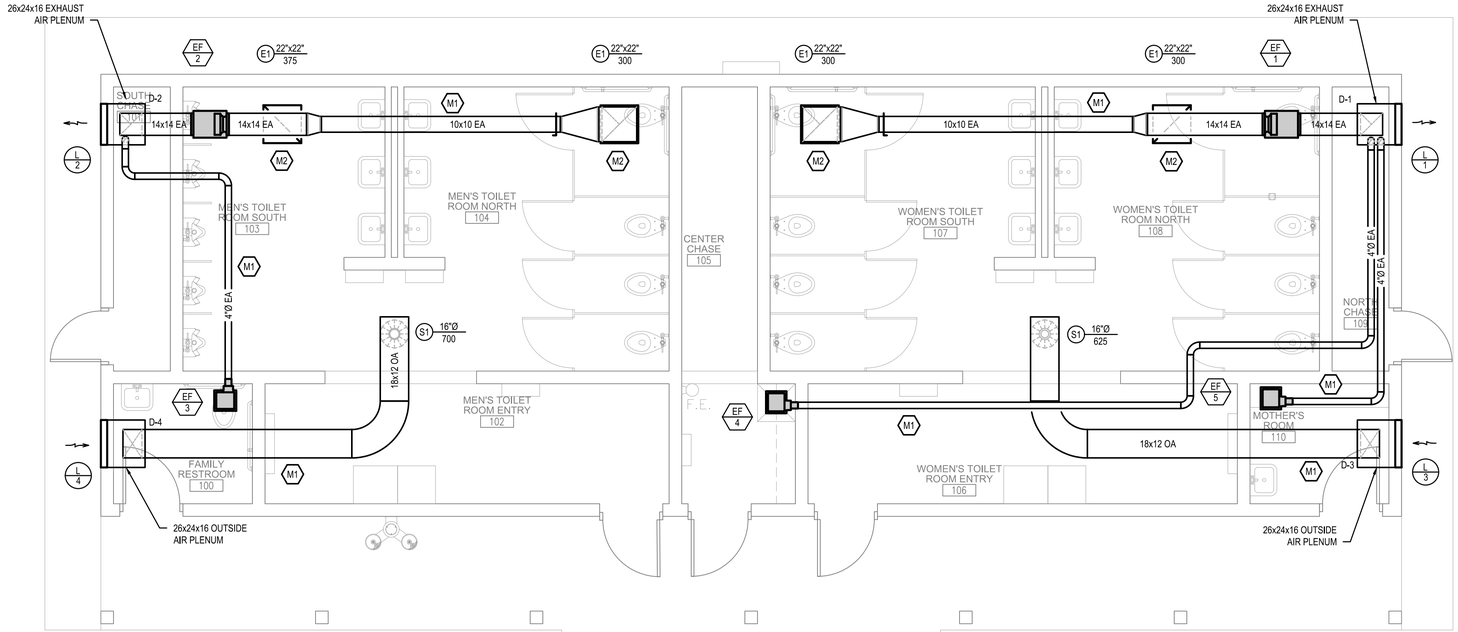
KEY NOTES	
M1	ROUTE DUCT UP AND INTO JOIST SPACE.
M2	CONTRACTOR TO ADD BALANCING DAMPERS FOR EACH GRILLE.



1 MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

N

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MECHANICAL SPECIFICATIONS

A. STATEMENT OF INTENT

1. IT IS THE INTENT OF THESE DOCUMENTS THAT THE MECHANICAL CONTRACTOR (MC) PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS NECESSARY FOR THE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL APPURTENANCES REQUIRED TO SET RESPECTIVE SYSTEMS IN OPERATION. THE TERM "FURNISH AND INSTALL" WILL NOT BE USED, BUT IS INTENDED UNLESS SPECIFIC NOTATIONS ARE MADE TO THE CONTRARY.

2. ALL ITEMS OF WORK AND ALL SYSTEMS ARE TO BE COMPLETE IN ALL DETAILS, READY FOR SATISFACTORY OPERATION. PROVIDE ALL NECESSARY DEVICES AND RELATED APPARATUS FOR COMPLETE SYSTEMS EVEN THOUGH SUCH ITEMS MAY NOT BE SPECIFICALLY MENTIONED.

B. CODES: REGULATIONS

1. IF THE MC OBSERVES THAT ANY OF THE CONTRACT DOCUMENTS ARE AT VARIANCE WITH LAWS, ORDINANCES, RULES AND REGULATIONS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK THEY SHALL PROMPTLY NOTIFY THE ARCHITECT IN WRITING AND ANY NECESSARY CHANGES SHALL BE ADJUSTED BY APPROPRIATE MODIFICATIONS. IF THE MC PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO SUCH LAWS, ORDINANCES, RULES AND REGULATIONS, AND WITHOUT SUCH NOTICE TO THE ARCHITECT, THEY SHALL ASSUME FULL RESPONSIBILITY THEREFORE AND SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO.

2. COMPLY WITH ALL APPLICABLE REGULATIONS OF UTILITY COMPANIES SERVING THE PROJECT.

3. COMPLY WITH ALL APPLICABLE RECOMMENDATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NATIONAL ELECTRIC CODE, AMERICAN SOCIETY OF MECHANICAL ENGINEERS, FACTORY INSURANCE ASSOCIATION AND FACTORY MUTUAL INSURANCE COMPANIES.

4. WHERE APPLICABLE, MATERIAL OR EQUIPMENT SHALL BEAR THE STAMP OF U.L., ASME, AGA AND NEMA.

5. COMPLY WITH OWNER, ARCHITECT AND LANDLORD'S REQUIREMENTS.

C. DESIGN INTENT

1. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL EQUIPMENT. FOLLOW THE MECHANICAL PLANS AS CLOSELY AS POSSIBLE FOR INSTALLATION OF DUCTWORK AND EQUIPMENT. MECHANICAL DRAWINGS MAY NOT SHOW ALL OFFSETS, AND DETAIL EVERY POINT AT WHICH CONSTRUCTION MAY REQUIRE SPECIAL ATTENTION.

2. SHOULD CONDITIONS NECESSITATE GENERAL REARRANGEMENTS, OR IF DUCTWORK CAN BE RUN TO BETTER ADVANTAGE, PREPARE AND SUBMIT DRAWINGS SHOWING THE CHANGES BEFORE PROCEEDING WITH THE WORK. IF SUCH CHANGES ARE APPROVED, THEY SHALL BECOME A PART OF THE CONTRACT AFTER THEIR APPROVAL.

3. ANY ADDITIONAL FITTINGS, VALVES, DUCTS, CONDUITS OR SPECIALTIES REQUIRED OR OTHER APPURTENANCES NECESSARY DUE TO FIELD CONDITIONS OR CODE REQUIREMENTS SHALL BE FURNISHED AND INSTALLED BY THE MC AT NO EXTRA COST TO THE OWNER.

D. CUTTING AND PATCHING

1. CUTTING OF EXISTING WORK: CUTTING TO BE BY TRADE INSTALLING THE WORK.

2. NO CUTTING OF STRUCTURAL ELEMENTS OR FIREWALLS WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT.

3. PATCHING: UNLESS NOTED OTHERWISE PATCHING IS TO BE BY TRADE THAT PROVIDED THE PENETRATION OR CUT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PATCHING RELATED TO THE INSTALLATION OF MECHANICAL EQUIPMENT. SEE GENERAL CONDITIONS REGARDING CUTTING AND PATCHING AT CORRECTIVE WORK. PATCHING MATERIALS SHALL MATCH EXISTING.

E. CLEANING: REMOVAL OF RUBBISH

1. RUBBISH: EACH TRADE TO PROMPTLY REMOVE ALL DEBRIS, SURPLUS AND DISCARDED MATERIAL FROM THE PREMISES. THIS CONTRACTOR SHALL, IN FINISHING STAGES, COOPERATE WITH OTHER CONTRACTORS IN REMOVING RUBBISH. BEFORE COMPLETION OF THE WORK, REPLACE ALL FILTERS.

F. TESTING, BALANCING AND ADJUSTING

1. GENERAL CONTRACTOR SHALL CONTRACT DIRECTLY WITH A THIRD PARTY TO PERFORM THE TEST AND BALANCING OF THE HVAC SYSTEM. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCING CONTRACTOR WITH NEBB OR AABC CERTIFICATION. THE BALANCING CONTRACTOR SHALL:
   1.1. TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION.
   1.2. PERFORM TESTS IN ACCORDANCE WITH AABC, NEBB OR ASHRAE STANDARDS.
   1.3. ELIMINATE UNNECESSARY NOISE AND VIBRATION.
   1.4. ASSURE PROPER FUNCTION OF CONTROLS.
   1.5. SUBMIT FINAL BALANCING REPORT TO OWNER AND GC AFTER WORK IS COMPLETED AND SYSTEM IS FUNCTIONAL AND OPERATING PER THE CONTRACT DOCUMENTS.

2. BALANCING CONTRACTOR SHALL BALANCE SYSTEMS TO ACHIEVE THE AIR QUANTITIES INDICATED ON THE FLOOR PLAN WITHIN $\pm$ 5%. MARK FINAL POSITION OF ALL VOLUME DAMPERS. REPORT ALL DEFICIENCIES TO MC FOR CORRECTION.

G. GUARANTEE

1. MC SHALL BE RESPONSIBLE FOR ALL WORK INSTALLED UNDER THIS CONTRACT. THIS CONTRACTOR SHALL MAKE GOOD, REPAIR OR REPLACE AT THEIR OWN COST AND EXPENSE ANY DEFECTIVE WORK OR MATERIAL WHICH IS DISCOVERED WITHIN ONE YEAR AFTER DATE OF FINAL ACCEPTANCE OF THE WORK.

2. THIS CONTRACTOR SHALL MAKE GOOD, REPAIR OR REPLACE MATERIAL OR WORKMANSHIP THAT IS IDENTIFIED AS A DEFECT IN THE OPINION OF THE ARCHITECT OR ENGINEER.

3. ALL MATERIAL, WORKMANSHIP AND EQUIPMENT SHALL BE GUARANTEED FOR ONE YEAR AFTER SYSTEM ACCEPTANCE.

4. THE MECHANICAL SHALL PROVIDE PRIOR TO THE FINAL PAYMENT BEING RELEASED THE FOLLOWING:
   4.1. OPERATING INSTRUCTIONS FOR ALL SYSTEMS AND EQUIPMENT.
   4.2. CUT SHEETS FOR ALL EQUIPMENT AND SPECIALTIES INCLUDING EXHAUST FANS, UNIT HEATERS AND OCCUPANCY SENSORS AS APPLICABLE.
   4.3. WRITTEN OPERATING INSTRUCTIONS FOR ALL SYSTEMS AND EQUIPMENT INCLUDING FINAL WIRING AND CONTROL DIAGRAMS.
   4.4. EQUIPMENT WARRANTIES FOR ALL EQUIPMENT FOR NO LESS THAN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
5. AS A PART OF THIS CONTRACT, THE MC SHALL PROVIDE A ONE YEAR SERVICE AND MAINTENANCE AGREEMENT WITH ALL PARTS AND LABOR INCLUDED FOR MECHANICAL REPAIRS AS NECESSARY.
6. THIS CONTRACTOR SHALL INSTRUCT THE OWNER AND FACILITY STAFF IN SYSTEM OPERATION PRIOR TO SYSTEM TURNOVER.
7. NOTIFY THE OWNER 48 HOURS PRIOR TO SYSTEM TURNOVER AND DEMOBILIZATION OF THE MC.

G. INSURANCE

1. THIS CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT THEM FROM CLAIMS INCLUDING WORKMAN'S COMPENSATION AND PUBLIC LIABILITY WHICH MAY ARISE OUT OF, OR RESULT FROM, THE CONTRACTOR'S OPERATIONS UNDER THE CONTRACT, WHETHER SUCH OPERATIONS BE BY THE MC OR BY ANY SUBCONTRACTOR OR BY ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

I. COORDINATION AND INSTALLATION

1. THE ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST- CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIONAL AND ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT.

2. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES, PRESERVE HEADROOM, AVOID OMISSIONS AND VERIFY EQUIPMENT LOCATIONS.

3. DUCTWORK AND PIPING SHALL BE CONCEALED WHERE POSSIBLE, RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO THE BUILDING CONSTRUCTION, AS HIGH AS POSSIBLE.

4. ALL OUTSIDE AIR INTAKES SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM ALL EXHAUST AS PER LOCAL CODES (VERIFY IN FIELD).

6. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER AND WITH THE CONSTRAINTS OF THE CONDITIONS OF THE PROJECT SITE.

J. DUCTWORK

1. ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES, ASHRAE STANDARDS AND SMACNA STANDARDS.

2. ALL CONCEALED OUTSIDE, RETURN AND SUPPLY DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL WITH 1-1/2" DUCT FIBERGLASS DUCT WRAP (MIN R-5) WITH FOIL FACED VAPOR BARRIER COMPLYING WITH ASTM 553, TYPE II. EXPOSED DUCTWORK WITHIN CONDITIONED SPACES SHALL NOT BE WRAPPED AND SHALL BE PROVIDED WITH PAINTABLE SURFACE. ALL PLAN DIMENSIONS SHALL BE FREE INSIDE DIMENSIONS.

3. ALL FLEXIBLE DUCTWORK ASSEMBLY SHALL BE CLASS 1 AIR DUCT UL 181 WITH MIN. R-5 FIBERGLASS INSULATION WITH FOIL FACED VAPOR BARRIER COMPLYING WITH ASTM 553, TYPE II. PROVIDE SCREW-OPERATED METAL ADJUSTABLE CLAMPING DEVICES. USE TWIST LOCK TAP COLLARS AT CONNECTIONS TO SHEET METAL DUCTWORK. FLEXIBLE DUCT SHALL NOT EXCEED 5FT.

4. ALL DUCTWORK INSULATING MATERIALS SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25, SMOKE DEVELOPED RATING SHALL NOT EXCEED 50. ALL VALUES SHALL BE IN ACCORDANCE WITH ASTM TEST E84 "SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS".

5. FURNISH AND INSTALL ALL STARTING COLLARS, MANUAL DAMPERS, SPLITTERS AND DEFLECTORS SHOWN ON THE DRAWINGS OR WHEREVER REQUIRED FOR THE PROPER AIR FLOW AND BALANCING OF THE ENTIRE AIR SYSTEM. ALL SQUARE (90 DEGREES) ELBOWS SHALL BE PROVIDED WITH TURNING VANES IN ACCORDANCE WITH SMACNA STANDARDS. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.

6. SHEET METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A". DUCTWORK SHALL BE GALVANIZED OF LOCK FORMING QUALITY, ASTM A653 AND A924. SEAL ALL SEAMS TRANSVERSE AND LONGITUDINAL AIR TIGHT.

7. ROUND GALVANIZED SHEET METAL DUCTWORK SHALL SPIRAL SEAM OR SNAP LOCK FOR DUCTS UP TO 10'Ø. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.

8. RECTANGULAR VOLUME DAMPERS SHALL BE MIN. 16 GAUGE GALVANIZED STEEL FRAME AND BLADES, MIN. ⅜" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS WITH LOCKING POSITION REGULATOR. WHERE POSITION REGULATOR IS NOT ACCESSIBLE PROVIDE COUPLING AND EXTENSION ROD FOR CEILING OR WALL INSTALLATION.

9. ROUND VOLUME DAMPERS SHALL BE MIN. 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MIN. ⅜" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS WITH LOCKING POSITION REGULATOR. WHERE POSITION REGULATOR IS NOT ACCESSIBLE PROVIDE COUPLING AND EXTENSION ROD FOR CEILING OR WALL INSTALLATION.

10. FIRE DAMPERS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES. PROVIDE AN ACCESS DOOR FOR FUSIBLE LINK REPLACEMENT. DAMPERS SHALL BE FOLDED BLADE TYPE, ARRANGED OUT OF THE AIRSTREAM.

11. INSTALL AND PROVIDE HANGERS FOR ALL DUCTWORK PER SMACNA STANDARDS AND PER LOCAL CODE.

12. UNLESS NOTED OTHERWISE, DUCT DIMENSIONS ON THE PLANS ARE INSIDE CLEAR DIMENSIONS.

13. TRAPEZE HANGERS SHALL BE MIN. 1"X2"X1"X18 GUAGE CHANNELS WITH MIN. 1"X18 GUAGE STRAPS TO STRUCTURAL SUPPORTS.

14. EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARATION CHEMICAL TO PREPARE DUCT FOR PAINT.

15. PROVIDE POLYMERIC RUBBER DUCT SEALANT FOR USE ON BOTH INTERIOR LOCATED AND EXPOSED TO OUTDOOR DUCTWORK. SEALER SHALL HAVE HIGH BONDING STRENGTH FOR FIRST TIME SEALING OF JOINTS IN LOW, MEDIUM AND HIGH PRESSURE DUCT SYSTEMS. SEALER SHALL BE HIGH IN SOLID CONTENT. PROVIDE A TWO PART TAPE SEALING SYSTEM CONSISTING OF WOVEN FIBER TAPE IMPREGNATED WITH GYPSUM MINERAL COMPOUND AND A MODIFIED ACRYLIC/SILICONE ACTIVATOR THAT REACTS EXOTHERMICALLY WITH THE TAPE. TWO PART TAPE SEALING SYSTEM MUST BE RATED FOR BOTH INDOOR AND OUTDOOR APPLICATIONS. TAPE SHALL NOT CONTAIN ASBESTOS.

K. ELECTRICAL MOTORS

THIS CONTRACTOR SHALL FURNISH MOTORS, MOTOR STARTERS AND CONTROLS FOR ALL MECHANICAL EQUIPMENT PROVIDED HEREIN; INCLUDING SETTING OF ALL LOOSE MOTORS FURNISHED. MOUNTING OF STARTERS AND ALL POWER WIRING WILL BE BY ELECTRICAL TRADES.

M. TEMPERATURE CONTROL

1. THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPERATURE CONTROL DEVICES, WIRING, PROGRAMMING, ETC.

2. ALL NEW TEMPERATURE CONTROL WIRING SHALL BE COMPATIBLE WITH NEW SYSTEMS.

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ABBREVIATIONS

AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
AMP	AMPERE
AOR	AREA OF REFUGE
AORM	AREA OF REFUGE MASTER STATION
AORR	AREA OF REFUGE REMOTE STATION
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
BLDG	BUILDING
BOT	BOTTOM
C	CONDUIT
CAB	CABINET
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA OR CONSTRUCTION DOCUMENT
CKT	CIRCUIT
CLG	CEILING
COAX	COAXIAL CABLE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CU	COPPER
dB	DECIBEL
DB	DIRECT BURIAL
DEMO	DEMOLITION
DISC	DISCONNECT
DIST	DISTRIBUTION
DM	DIMMING
DN	DOWN
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DAYLIGHT SENSOR
DWG	DRAWING
EBU	EMERGENCY BATTERY UNIT
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATOR
EM	EMERGENCY
ENCL	ENCLOSURE
ER	ELEVATOR RECALL
ERL	EXISTING TO BE RELOCATED
ES	ELECTRIC STRIKE
ETR	EXISTING TO REMAIN
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT-CANDLE
FLA	FULL LOAD AMPERE
FP	FIRE PROTECTION
FSS	FUSED SAFETY SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GRD	GROUND
GC	GENERAL CONTRACTOR
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HZ	HERTZ
IG	INSOLATED GROUND
K	KEY OPERATED
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LF	LINEAR FOOT (FEET)
LM	LUMEN
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPERAGE
LTG	LIGHTING
LV	LOW VOLTAGE
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MATV	MASTER ANTENNA TELEVISION SYSTEM
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MFG	MANUFACTURER
MH	MANHOLE
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUG ONLY
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL
NA	NOT APPLICABLE
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION AGENCY
NFSS	NON-FUSED SAFETY SWITCH
NIC	NOT INCLUDED IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLOAD
OS	OPTIONAL STANDBY
P	POLE
PA	PUBLIC ADDRESS
PB	PUSHBUTTON
PC	PLUMBING CONTRACTOR
PE	PHOTOELECTRIC CELL, PHOTOEYE
PED	PEDESTAL
PEND	PENDANT
PF	POWER FACTOR
PH	PHASE
PL	PILOT LIGHT
PNL	PANEL
PWR	POWER
RC	REMOTE CONTROL
RCP	REFLECTED CEILING PLAN
REC	RECESSED
RECPT	RECEPTACLE
SCC	SHORT CIRCUIT CAPACITY
SF	SQUARE FOOT (FEET)
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SS	SWITCH STATION
SW	SWITCH
T	TAMPERPROOF
TC	TIMECLOCK
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNV	UNIVERSAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLT AMPERE
VAC	VOLT AMPERE CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT OR WIRE
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
X-	EXISTING
XFER	TRANSFER
XFMR	TRANSFORMER

LIGHTING LEGEND

- $ — SWITCH
- SS — SWITCH STATION
- OS — SWITCH-BOX OCCUPANCY SENSOR
- OS — CEILING MOUNT OCCUPANCY SENSOR
- ODS — COMBINATION CEILING MOUNT OCCUPANCY DAYLIGHT SENSOR
- DS — CEILING MOUNT DAYLIGHT SENSOR
- VS — SWITCH-BOX VACANCY SENSOR
- VS — CEILING MOUNT VACANCY SENSOR
- PC — EXTERIOR PHOTOELECTRIC SWITCH
- SURFACE MOUNT LIGHT FIXTURE
- SURFACE MOUNT LIGHT FIXTURE - EMERGENCY
- STRIP/INDUSTRIAL FIXTURE
- LINEAR WALL BRACKET
- WALL MOUNTED FIXTURE
- RECESSED FIXTURE
- CEILING MOUNTED FIXTURE
- POLE MOUNT LUMINAIRE
- BOLLARD
- FLOOD LIGHT
- CEILING OR WALL MOUNTED EXIT, SINGLE FACE
- EMERGENCY WALL PACK (EBU)
- EMERGENCY WALL PACK REMOTE HEAD

GENERAL LEGEND

- NEW ELECTRICAL COMPONENT
- EXISTING ELECTRICAL COMPONENT
- DEMOLISHED ELECTRICAL COMPONENT
- E## — KEY NOTE
- TYPICAL CIRCUIT
- UNSWITCHED CIRCUIT

POWER LEGEND

- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE 6" ABOVE COUNTER OR BACKSPLASH OR AT HEIGHT INDICATED
- DOUBLE DUPLEX RECEPTACLE
- SPECIAL PURPOSE OUTLET
- DUPLEX FLOOR OUTLET
- DOUBLE DUPLEX FLOOR OUTLET
- PUSH BUTTON
- J — JUNCTION BOX
- CIRCUIT BREAKER
- GROUND
- M — TRANSOCKET
- SURFACE MOUNT PANEL
- RECESSED PANEL
- M — METER
- NON-FUSED DISCONNECT
- FUSED DISCONNECT
- MAGNETIC STARTER
- COMBINATION STARTER
- MOTOR
- POWER ASSIST OPERATOR PUSH PLATE

GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL FURNISH AND INSTALL MATERIAL,EQUIPMENT, DEVICES, FIXTURES, SERVICE REQUIREMENTS NECESSARY TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS, FOR A COMPLETE AND FUNCTIONAL INSTALLATION AND SHALL MAINTAIN APPROPRIATE CLEARANCES.
2. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK AND PROJECT CONDITIONS. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
5. THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS OF OTHER TRADES AND INCLUDE IN THEIR BID ANY ADDITIONAL WORK REQUIRED BY THIS TRADE.
6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHT SWITCHES, POWER, AND COMMUNICATIONS OUTLETS. ALL OUTLETS SHALL BE MOUNTED VERTICALLY UNLESS OTHERWISE NOTED. COORDINATE ALL FINAL DEVICE REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION.
7. ALL CONDUITS SHOULD BE SUPPORTED IN COMPLIANCE WITH CODE REQUIREMENTS AND INSTALLED IN A MANNER AS TO AFFORD MINIMUM INTERFERENCE WITH OTHER TRADES. ALL CONDUITS ABOVE CEILING SHALL BE RIGIDLY SUPPORTED BY SUITABLE HANGERS FROM THE STRUCTURAL SLAB DECK OR FRAMING ABOVE INDEPENDENT OF THE CEILING, CEILING SUPPORT SYSTEM AND OTHER TRADE COMPONENTS. ALL CONDUITS SHALL BE CONCEALED UNLESS OTHERWISE NOTED ON DRAWINGS.
8. FIRE RATED SEALS SHALL BE PROVIDED FOR ALL CONDUIT PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, AND CEILINGS.
9. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION CONFIGURATIONS BEFORE PURCHASE. ALL DEVICES SHOWN ARE FOR REFERENCE ONLY. TO COMMUNICATE DESIGN INTENT, FINAL LOCATIONS SHALL BE VERIFIED PRIOR TO INSTALLATION. THIS NOTE SHALL APPLY TO, BUT NOT BE LIMITED TO, RECEPTACLES, SWITCHES, DATA PORTS, AUDIO/VIDEO DEVICES, AND TELEPHONE JACKS.
10. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL ABOVE CEILING REQUIREMENTS (PLENUM, NON-PLENUM, AIR HANDLING, ETC.) AS REQUIRED BY LOCAL AUTHORITY BEFORE THE INSTALLATION AND PURCHASE OF ELECTRICAL EQUIPMENT, MATERIALS AND DEVICES, WIRING, CABLING, AND THE ORDERING OF LIGHTING FIXTURES.
11. CONDUCTOR SIZES INDICATED ARE MINIMUM SIZES BASED ON 60°C COPPER CONDUCTOR 100 AMPS OR LESS AND 75°C COPPER CONDUCTOR GREATER THAN 100 AMPS. AMPACITIES OF CONDUCTORS DO NOT TAKE VOLTAGE DROP INTO CONSIDERATION. CONTRACTOR SHALL SIZE CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS TO PREVENT A VOLTAGE DROP EXCEEDING 3 PERCENT AT THE FARTHEST OUTLET OF POWER, HEATING, AND LIGHTING LOADS, OR COMBINATION OF SUCH LOADS, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET DOES NOT EXCEED 5 PERCENT, TO PROVIDE REASONABLE EFFICIENCY OF OPERATION.

ELECTRICAL SHEET INDEX

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WAUKESHA, WI 53186
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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

ELECTRICAL NOTES, LEGEND, AND ABBREVIATIONS

Drawn by	Checked by

Revisions

No.	Date	Description
	01.23.2024	Bid & Permit Set

2023-06-30 Bid & Permit Set

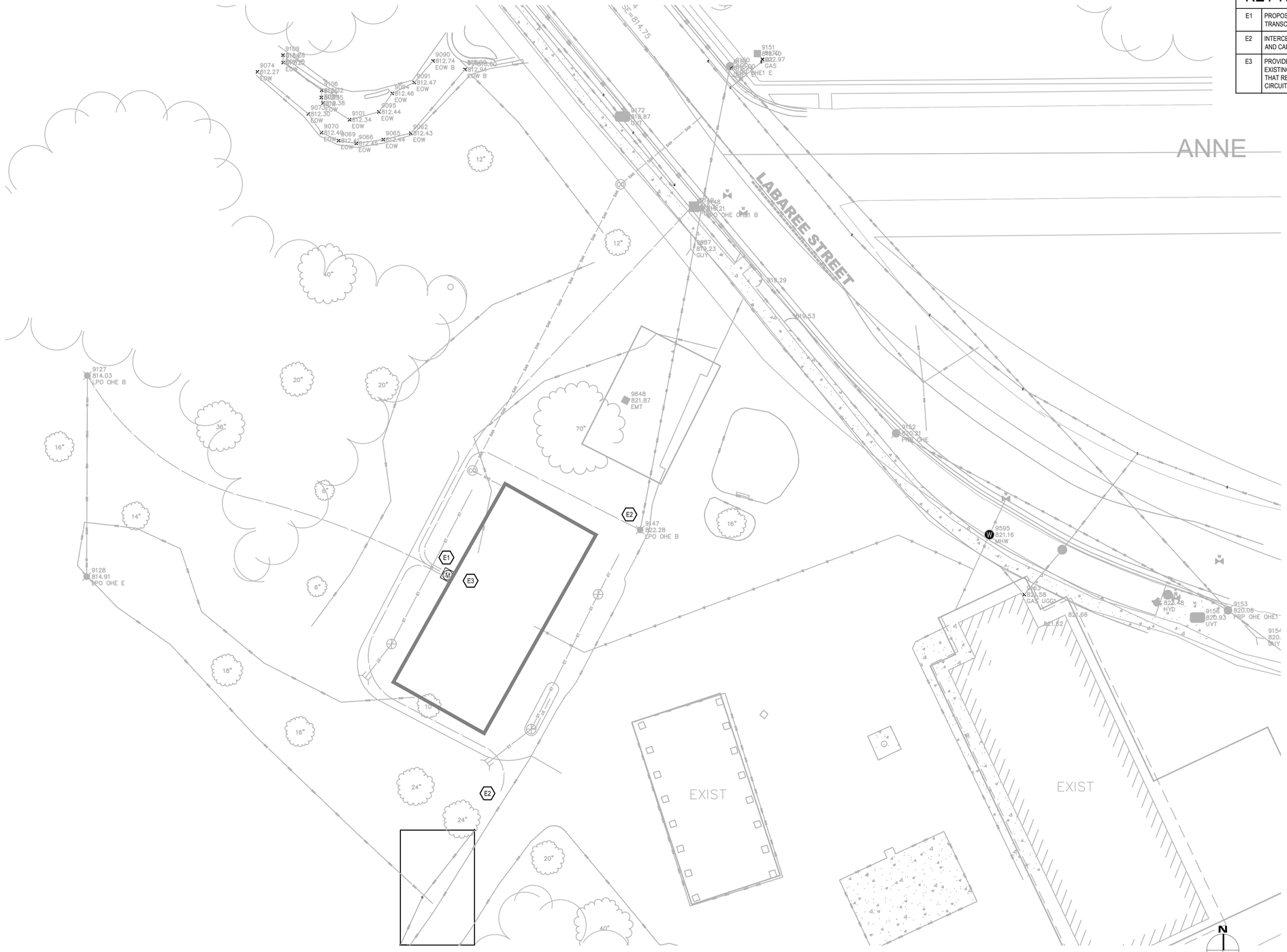
ibc engineering services, inc.

Sheet No.

E0.1

KEY NOTES

E1	PROPOSED LOCATION OF NEW 240V/120V, 100A SERVICE TRANSOCKET. COORDINATE WITH UTILITY.
E2	INTERCEPT AND REROUTE EXISTING ELECTRICAL CONDUIT AND CABLE AROUND NEW BUILDING.
E3	PROVIDE NEW 42 CIRCUIT, 240/120V PANELBOARD. EXTEND EXISTING CIRCUITS FROM EXISTING PANEL BEING REMOVED THAT REMAIN TO NEW PANEL. VERIFY IN FIELD WHICH CIRCUITS ARE TO REMAIN.



1 ELECTRICAL SITE PLAN
SCALE: 1/16" = 1'-0"

Architect
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ELECTRICAL SITE PLAN

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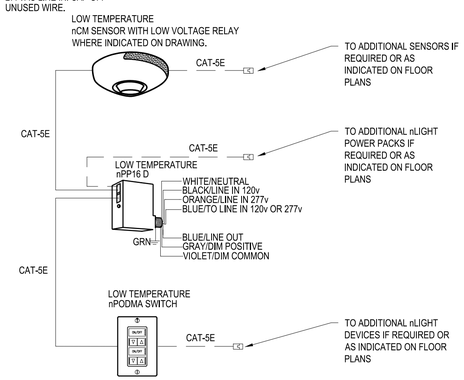
Sheet No.

E1.0

ibc engineering services, inc.

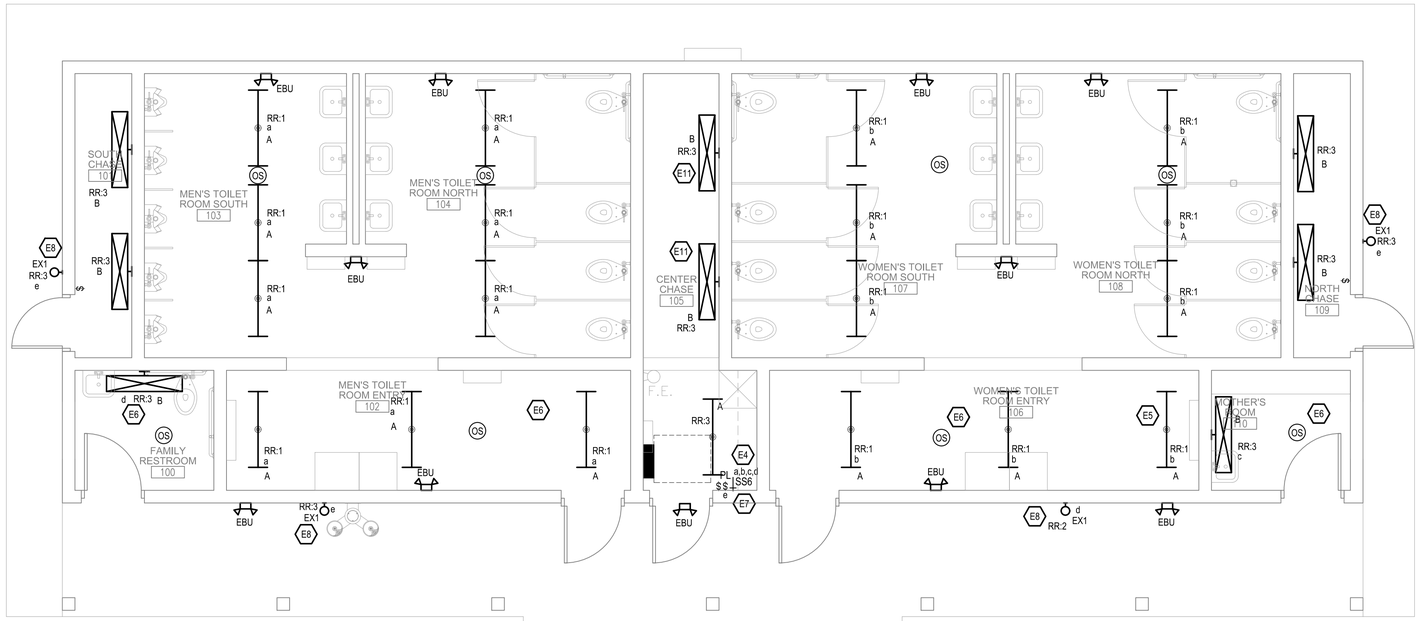
THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

NOTE:
EITHER BLUE WIRE CAN BE CONNECTED TO 120VAC OR 277VAC LINE IN. CAP OFF UNUSED WIRE.



1 TYPICAL nLIGHT 0-10V DIMMING WIRING DIAGRAM

N.T.S.



1 ELECTRICAL LIGHTING FLOOR PLAN

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

SHEET NOTES

1. EMERGENCY BATTERY UNITS SHALL BE CIRCUITED TO THE UNSWITCHED PORTION OF THE NEAREST LIGHTING BRANCH CIRCUIT SERVING THE IMMEDIATE AREA.

KEY NOTES

E4	MANUAL SWITCH IS TO SERVE LOCAL ELECTRICAL/MECHANICAL ROOM. SS6 IS TO OVERRIDE INTERIOR TOILET LIGHTS AND THE OTHER MANUAL PILOT SWITCH IS TO OVERRIDE EXTERIOR LIGHTS. SWITCHES SHALL BE LABELED INTERIOR LIGHTING AND EXTERIOR LIGHTING. SS6 SHALL BE 4 ZONE DIMMING SWITCH.
E5	LIGHT FIXTURE TYPE A TO BE MOUNTED TO BOTTOM OF CEILING UNLESS INDICATED OTHERWISE.
E6	PROVIDE AUXILIARY CONTACT FOR FAN CONTROL. SWITCH DOES NOT CONTROL FAN.
E7	ZONE LOW VOLTAGE SWITCH, ONE CONTROL FOR EACH TOILET ROOM.
E8	BOTTOM OF FIXTURE SHALL BE 80" AFF.

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ELECTRICAL LIGHTING PLAN

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No.	Date	Description
	01.23.2024	Bid & Permit Set

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Sheet No.

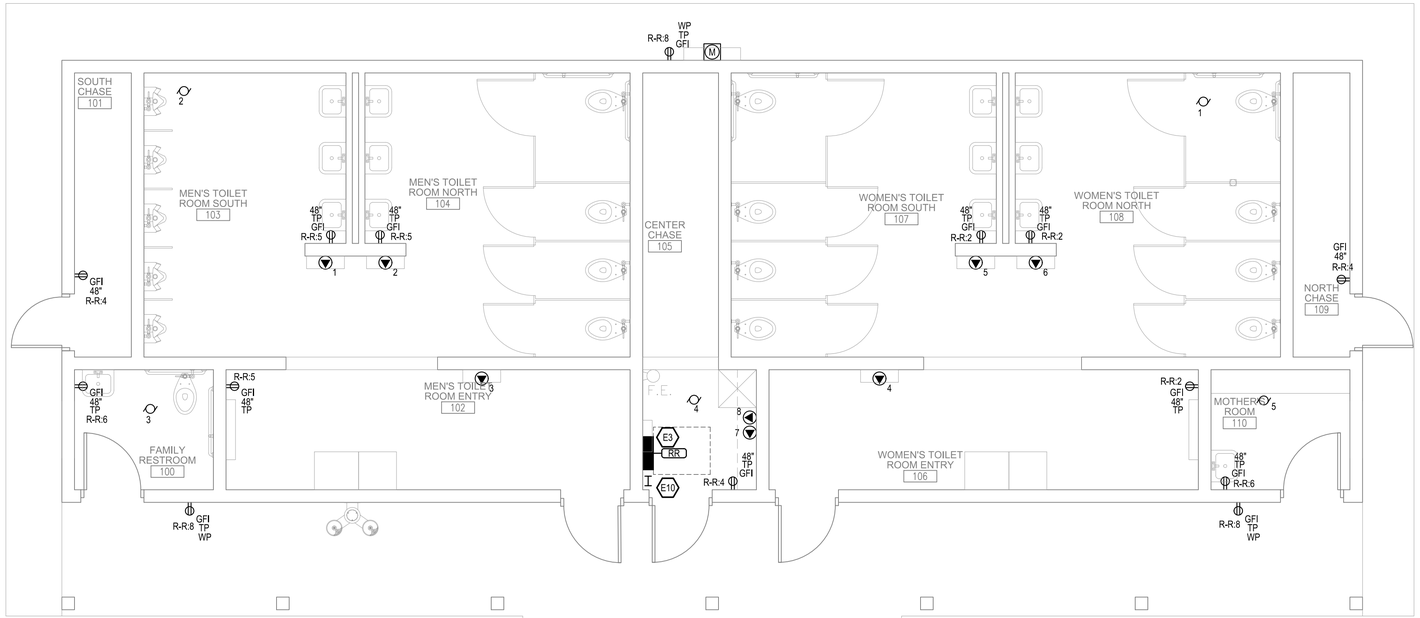
E2.0

ibc engineering services, inc.

THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

KEY NOTES

E3	PROVIDE NEW 42 CIRCUIT, 240/120V PANELBOARD. EXTEND EXISTING CIRCUITS FROM EXISTING PANEL BEING REMOVED THAT REMAIN TO NEW PANEL. VERIFY IN FIELD WHICH CIRCUITS ARE TO REMAIN.
E10	PROPOSED LOCATION OF GROUND BAR LOCATED ABOVE PANEL.



1 ELECTRICAL POWER & SYSTEMS FLOOR PLAN
SCALE: 1/4" = 1'-0"

N

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p: 833-380-6180

Project Info. — 22005

Riverside Park Restrooms

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ELECTRICAL POWER & SYSTEMS FLOOR PLAN

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Sheet No.

E3.0

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PANEL NAME: R-R

LOCATION:	ELECTRICAL	VOLTS:	120/240	AIC RATING:	10,000
SUPPLY FROM:	UTILITY	PHASES:	1	MAINS TYPE:	MCB
MOUNTING:	SURFACE	WIRES:	3	BUS RATING:	200A
ENCLOSURE:	NEMA 250 TYPE 4			MCB RATING:	150A

POLE NO.	POLES	AMP	DESCRIPTION	NOTES	A		B		DESRIPTION	NOTES	AMP	POLES	POLE NO.
1	1	20	LIGHTS		920	540			RECPT - RR		20	1	2
3	1	20	EXHAUST FAN 4 AND LIGHTS				531	540	RECPT - ELECTRICAL ROOM/PLUMBING CHASE		20	1	4
5	1	20	RECPT - RR		410	360			RECPT - FAMILY RR/MOTHERS ROOM		20	1	6
7	1	20	EXHAUST FAN 1,5				700	540	RECPT - OUTSIDE		20	1	8
9	1	20	EXHAUST FAN 2,3		700	2400			HAND DRYER	1	25	1	10
11	1	20	SPARE					2400	HAND DRYER	1	25	1	12
13	1	20	RECIRCULATION PUMP		55	2400			HAND DRYER	1	25	1	14
15	2	50	WATER HEATER				4800	2400	HAND DRYER	1	25	1	16
17	-	-	-		4800	2400			HAND DRYER	1	25	1	18
19	1	20	SPARE					2400	HAND DRYER	1	25	1	20
21	1	20	SPARE						SPARE		20	1	22
23	1	20	SPARE						SPARE		20	1	24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			PHASE TOTAL:		14985		14311						
			TOTAL LOAD:		29296								

NOTES:
1. GFI BREAKER
2. SHUNT TRIP BREAKER

MOTOR WIRING SCHEDULE

NO.	LOAD DESCRIPTION	LOC.	HP	FLA	VOLT	PH.	FEED FROM		BREAKER		SEE NOTE
							PANEL	CIRCUIT	SIZE	POLE	
1	EF-1	WOMEN	1/4	3.8	120	1	RR	7	20	1	1,3
2	EF-2	MEN	1/4	3.8	120	1	RR	9	20	1	1,3
3	EF-3	FAMILY		0.1	120	1	RR	9	20	1	1.3
4	EF-4	JANITOR		0.1	120	1	RR	3	20	1	2,3
5	EF-5	MOTHER		0.1	120	1	RR	7	20	1	1,3

REMARKS:
A. ELECTRICAL CONTRACTOR TO PROVIDE PROPERLY RATED FUSED DISCONNECT FUSED PER EQUIPMENT NAMEPLATE WITHIN SIGHT OF EQUIPMENT, UNLESS OTHERWISE NOTED IN THE MECHANICAL DRAWINGS.
B. REFER TO MECHANICAL SHEETS FOR TYPE OF CONTROLLERS PROVIDED WITH THE HVAC EQUIPMENTNT. CONTROLLER TO BE WIRED BY EC UNLESS INDICATED OTHERWISE.

NOTES:
1. EXHAUST FANS ARE CONTROLLED VIA CONTACT IN COMBINATION OCCUPANCY/DAYLIGHT SENSOR.
2. EXHAUST FANS ARE CONTROLLED ON/OFF WITH LIGHT SWITCH
3. PROVIDE NON FUSED DISCONNECT SWITCH

SPECIAL PURPOSE OUTLET SCHEDULE

NO.	LOAD DESCRIPTION	LOCATION	KW	FLA	VOLT	PH	FEED FROM		BREAKER		OUTLET	SEE NOTE
							PANEL	CKT	SIZE	POLE		
1	HAND DRYER	MENS	2.4	20	120	1	RR	10	25	1	DIRECT	
2	HAND DRYER	MENS	2.4	20	120	1	RR	12	25	1	DIRECT	
3	HAND DRYER	MENS	2.4	20	120	1	RR	14	25	1	DIRECT	
4	HAND DRYER	WOMENS	2.4	20	120	1	RR	16	25	1	DIRECT	
5	HAND DRYER	WOMENS	2.4	20	120	1	RR	18	25	1	DIRECT	
6	HAND DRYER	WOMENS	2.4	20	120	1	RR	20	25	1	DIRECT	
7	RECIRCULATION PUMP	ELEC/MECH	0.055	-	120	1	RR	13	20	1	DIRECT	2
8	WATER HEATER	ELEC/MECH	9.5		240	1	RR	15,17	50	2	DIRECT	1

REMARKS:
A. REFER TO EQUIPMENT DATA SHEET FOR ADDITIONAL INFORMATION.
B. COORDINATE WITH EQUIPMENT SUPPLIER FOR INSTALLATION REQUIREMENTS.
C. FOR DIRECT CONNECTED EQUIPMENT, TERMINATE EQUIPMENT WIRING IN A JUNCTION BOX WITH PROPERLY RATED WIRE NUTS.

NOTES:
1. PROVIDE A FUSED DISCONNECT FUSED PER EQUIPMENT NAME PLATE.
2. PROVIDE A PILOT LIGHT DISCONNECT TO ILLUMINATE WHEN PUMP IS ENERGIZED.

LIGHTING FIXTURE SCHEDULE

FIXT.	DESCRIPTION	LAMPING			VOLT	MANUFACTURER	CATALOG NUMBER	MOUNTING	SEE NOTE
		NO.	TYPE	INPUT					
A	SURFACE MOUNT STRIP LIGHT		2923 LUMEN, 4000K LED	44.5	120	COOPER	FVS4-P-4-LD4-1-HI-40-120-OPL-EDD1	SURFACE	
B	WALL MOUNT STRIP LIGHT		2923 LUMEN, 4000K LED	44.5	120	COOPER	FVS4-WP-4-LD4-1-HI-40-120-OPL-EDD1	SURFACE	
EX1	EXTERIOR WALL MOUNT		3500 LUMEN, 4000K LED	25	UNV	HUBBELL	RWL1-48L-25-4K7-3-PC	SURFACE	
EBU	EMERGENCY BATTERY UNIT		LED W/ UNIT	3	UNV	LITHONIA	AFO-W-MVOLT-N-SD-CW	SURFACE	

REMARKS:
A. CONTRACTOR SHALL CONFIRM CEILING TYPE REQUIREMENTS PRIOR TO THE RELEASE OF THE ORDER.
B. CATALOG NUMBERS ARE TO PROVIDE GUIDANCE ONLY AND MAY NOT BE COMPLETE.
C. FIXTURES SPECIFIED TO MEET DESIGN INTENT. EQUALS MAY BE SUBSTITUTED SUBJECT TO DESIGN TEAM'S APPROVAL.
D. PROVIDE ALL PARTS AND PIECES NECESSARY FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
E. ARCHITECT TO DETERMINE ALL FINISHES.
F. VERIFY DIMMING CONTROLS ARE COMPATIBLE WITH DIMMING DRIVER SELECTED FOR FIXTURE.

FEEDER SCHEDULE

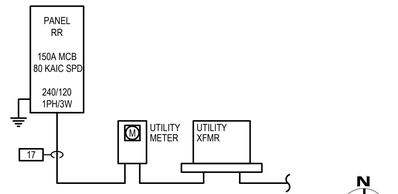
ID #	AMPS	SINGLE PHASE, 2 WIRE		1 OR 3 PHASE, 3 WIRE		THREE PHASE, 4 WIRE		ALL
		CND SIZE	PHASE CONDUCTORS	CND SIZE	PHASE CONDUCTORS	CND SIZE	PHASE CONDUCTORS	EQUIP. GRD. CONDUCTOR
1	10	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
2	15	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
3	20	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12
4	25	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
5	30	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10
6	35	3/4"	(2) #8	3/4"	(3) #8	1"	(4) #8	#10
7	40	3/4"	(2) #8	3/4"	(3) #8	1"	(4) #8	#10
8	45	3/4"	(2) #6	1"	(3) #6	1"	(4) #6	#10
9	50	3/4"	(2) #6	1"	(3) #6	1"	(4) #6	#10
10	60	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#10
11	70	1"	(2) #4	1-1/4"	(3) #4	1-1/4"	(4) #4	#8
12	80	1"	(2) #3	1-1/4"	(3) #3	1-1/4"	(4) #3	#8
13	90	1-1/4"	(2) #2	1-1/4"	(3) #2	1-1/2"	(4) #2	#8
14	100	1-1/4"	(2) #1	1-1/2"	(3) #1	1-1/2"	(4) #1	#8
15	110	1"	(2) #2	1-1/4"	(3) #2	1-1/2"	(4) #2	#6
16	125	1-1/4"	(2) #1	1-1/2"	(3) #1	1-1/2"	(4) #1	#6
17	150	1-1/4"	(2) #1/0	1-1/2"	(3) #1/0	2"	(4) #1/0	#6
18	175	N / A	N / A	2"	(3) #2/0	2"	(4) #2/0	#6
19	200	N / A	N / A	2"	(3) #3/0	2"	(4) #3/0	#6
20	225	N / A	N / A	2"	(3) #4/0	2-1/2"	(4) #4/0	#4
21	250	N / A	N / A	2-1/2"	(3) 250 kcmil	3"	(4) 250 kcmil	#4
22	300	N / A	N / A	3"	(3) 350 kcmil	3"	(4) 350 kcmil	#4
23	350	N / A	N / A	3"	(3) 500 kcmil	3-1/2"	(4) 500 kcmil	#3
24	400	N / A	N / A	(2) 2"	2 SETS OF (3) #3/0	(2) 2"	2 SETS OF (4) #3/0	#3
25	450	N / A	N / A	(2) 2"	2 SETS OF (3) #4/0	(2) 2-1/2"	2 SETS OF (4) #4/0	#2
26	500	N / A	N / A	(2) 2-1/2"	2 SETS OF (3) 250 kcmil	(2) 3"	2 SETS OF (4) 250 kcmil	#2
27	600	N / A	N / A	(2) 3"	2 SETS OF (3) 350 kcmil	(2) 3"	2 SETS OF (4) 350 kcmil	#1
28	700	N / A	N / A	(2) 3"	2 SETS OF (3) 500 kcmil	(2) 3-1/2"	2 SETS OF (4) 500 kcmil	#1/0
29	800	N / A	N / A	(3) 2-1/2"	3 SETS OF (3) 300 kcmil	(3) 3"	3 SETS OF (4) 300 kcmil	#1/0
30	900	N / A	N / A	(3) 3"	3 SETS OF (3) 350 kcmil	(3) 3"	3 SETS OF (4) 350 kcmil	#2/0
31	1000	N / A	N / A	(4) 2-1/2"	4 SETS OF (3) 250 kcmil	(4) 3"	4 SETS OF (4) 250 kcmil	#2/0
32	1200	N / A	N / A	(4) 3"	4 SETS OF (3) 350 kcmil	(4) 3"	4 SETS OF (4) 350 kcmil	#3/0
33	1600	N / A	N / A	(5) 3"	5 SETS OF (3) 400 kcmil	(5) 3"	5 SETS OF (4) 400 kcmil	#4/0
34	1800	N / A	N / A	(6) 3"	6 SETS OF (3) 350 kcmil	(6) 3"	6 SETS OF (4) 350 kcmil	250 kcmil
35	2000	N / A	N / A	(6) 3"	6 SETS OF (3) 500 kcmil	(6) 3-1/2"	6 SETS OF (4) 500 kcmil	250 kcmil
36	2500	N / A	N / A	(8) 3"	8 SETS OF (3) 400 kcmil	(8) 3"	8 SETS OF (4) 400 kcmil	350 kcmil
37	3000	N / A	N / A	(8) 3"	8 SETS OF (3) 500 kcmil	(8) 3-1/2"	8 SETS OF (4) 500 kcmil	400 kcmil

SCHEDULE BASED ON NEC TABLE 310.15(B)(16), 60 DEGREE CELSIUS CONDUCTOR 100 AMPS OR LESS AND 75 DEGREE CELSIUS CONDUCTOR GREATER THAN 100 AMPS. SIZES REFERENCED ARE MINIMUM. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONDUCTOR SIZES TO ACCOMMODATE VOLTAGE DROP.
PLAN NOTATION:

(X)— - SINGLE-PHASE, TWO-WIRE FEEDER, NUMBER IS THE FEEDER ID #

[X]— - SINGLE OR THREE-PHASE, THREE-WIRE FEEDER, NUMBER IS THE FEEDER ID #

(X)— - THREE PHASE, FOUR-WIRE FEEDER, NUMBER IS THE FEEDER ID#



1 PARTIAL ONE-LINE DIAGRAM
SCALE: 1/8" = 1'-0"

NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PANEL EQUIPMENT RATED FOR OR EXCEEDING THE SHORT CIRCUIT RATING AT THE POINT OF INSTALLATION AND PROVIDING ARC FLASH LABELS PER NEC.

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Project Info. — 22005
Riverside Park Restrooms
New Construction
600 Labaree St
Watertown, WI

Sheet Title
ELECTRICAL RISER & SCHEDULES

Drawn by	Checked by

Revisions

No.	Date	Description
	01.23.2024	Bid & Permit Set

2023-06-30 Bid & Permit Set

Sheet No.
E4.0

ibc engineering services, inc.

THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

ELECTRICAL SPECIFICATIONS

1. SCOPE

1.1. APPLICABLE REQUIREMENTS OF CONDITIONS OF CONTRACT AND OF SECTIONS LISTED UNDER GENERAL REQUIREMENTS APPLY TO WORK OF THIS SECTION.

2. GENERAL PROVISIONS

2.1. IN GENERAL, THE WORK INCLUDES: ELECTRICAL WORK AND THE KINDRED MATERIALS AND OPERATIONS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED IN THE FOLLOWING ARTICLES.

2.2. JOB INFORMATION: OBTAIN AT BUILDING INCLUDING:
2.2.1. CONDITIONS AFFECTING THIS SECTION OF THE WORK.
2.2.2. ACCESSIBILITY
2.2.3. STORAGE SPACE

3. GENERAL REQUIREMENTS

3.1. THIS SECTION OF THE SPECIFICATIONS APPLIES TO ALL ELECTRICAL WORK. THE FRONT END DOCUMENTS AND DIVISION 1 FORM A PART OF THESE SPECIFICATIONS AND THE CONTRACTOR SHALL CONSULT THEM IN DETAIL. ELECTRICAL WORK INDICATED IN OTHER SECTIONS OF THE SPECIFICATIONS TO BE DONE BY THE ELECTRICAL CONTRACTOR SHALL BE INCLUDED IN THE WORK OF THIS SECTION.

4. DEFINITIONS

4.1. CERTAIN TERMS USED HEREIN; ON THE DRAWINGS; AND IN THE CONTRACT DOCUMENTS, SHALL BE DEFINED AS FOLLOWS:
4.1.1. PROVIDE: FURNISH AND INSTALL COMPLETE AND READY FOR SERVICE.
4.1.2. EXPOSED: EXPOSED TO VIEW IN ANY ROOM, HALLWAY, PASSAGEWAY, OR OUTSIDE.
4.1.3. APPROVAL: THE APPROVAL OF THE ARCHITECT IN WRITING OR BY SIGNED RUBBER STAMP APPLIED TO DRAWINGS, ILLUSTRATIONS, ETC.

5. INTENT OF DRAWINGS AND SPECIFICATIONS

5.1. THESE SPECIFICATIONS AND ATTENDANT DRAWINGS ARE INTENDED TO COVER A COMPLETE INSTALLATION OF SYSTEMS. THE OMISSION OF EXPRESSED REFERENCE TO ANY ITEM OF LABOR OR MATERIAL NECESSARY FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT PRACTICES OF THE TRADE SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL LABOR AND MATERIALS.

6. DRAWINGS

6.1. THE ELECTRICAL DRAWINGS DO NOT ATTEMPT TO SHOW THE COMPLETE DETAILS OF BUILDING CONSTRUCTION WHICH AFFECT THE ELECTRICAL INSTALLATION. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, CIVIL, STRUCTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS WHICH AFFECT THE PROPER INSTALLATION OF THIS WORK.
6.2. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE A/E FOR RESOLUTION.
6.3. THE CONTRACTOR IS CAUTIONED THAT DIAGRAMS SHOWING ELECTRICAL CONNECTIONS AND/OR CIRCUITING ARE DIAGRAMMATIC ONLY AND MUST NOT BE USED FOR OBTAINING LINEAL RUNS OF WIRE TO CONDUIT. WIRING DIAGRAMS DO NOT NECESSARILY SHOW THE EXACT PHYSICAL ARRANGEMENT OF THE EQUIPMENT.

7. MATERIAL AND EQUIPMENT

7.1. ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE QUALITY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE, AND SHALL BE STANDARD PRODUCT OF REPUTABLE MANUFACTURERS. EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME, CATALOG NUMBER, AND CAPACITY OR RATING ON A NAMEPLATE, SECURELY AFFIXED ON THE EQUIPMENT IN A CONSPICUOUS PLACE.

8. SUBSTITUTION AND APPROVAL OF MATERIAL

7.1. SUCH REQUESTS SHALL BE ACCOMPANIED BY THREE COPIES OF ALL NECESSARY ILLUSTRATIONS, CUTS, DRAWINGS AND DESCRIPTIONS OF MATERIAL PROPOSED FOR SUBSTITUTION AND SHALL FULLY DESCRIBE ALL POINTS IN WHICH IT DIFFERS FROM THE ARTICLES SPECIFIED. TWO COPIES WILL BE RETAINED BY THE ARCHITECT AND ONE COPY RETURNED TO THE CONTRACTOR WITH APPROVAL OR REVISIONS INDICATED THEREON.

8. DAMAGE TO OTHER WORK

8.1. THE ELECTRICAL CONTRACTOR WILL BE HELD RIGIDLY RESPONSIBLE FOR ALL DAMAGES TO THE WORK OF HIS OWN OR ANY OTHER TRADE RESULTING FROM THE EXECUTION OF HIS WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY PROTECT HIS WORK AT ALL TIMES. ALL DAMAGES RESULTING FROM HIS OPERATIONS SHALL BE REPAIRED OR THE DAMAGED PORTIONS REPLACED BY THE PARTY ORIGINALLY PERFORMING THE WORK, (TO THE ENTIRE SATISFACTION OF THE ARCHITECT), AND ALL COST THEREOF SHALL BE BORNE BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.

9. COOPERATION WITH OTHER TRADES

9.1. THIS CONTRACTOR SHALL COMPLETELY COOPERATE WITH ALL OTHER TRADES IN THE MATTER OF PLANNING AND EXECUTING OF THE WORK. EVERY REASONABLE EFFORT SHALL BE MADE TO PREVENT CONFLICT AND INTERFERENCES AS TO SPACE REQUIREMENTS, DIMENSIONS, LOCATIONS, OPENINGS, SLEEVING OR OTHER MATTERS WHICH TEND TO DELAY OR OBSTRUCT THE WORK OF ANY TRADE.

10. NEGLIGENCE

10.1. SHOULD THE CONTRACTOR FAIL TO PROVIDE MATERIALS, TEMPLATES, ETC., OR OTHER NECESSARY INFORMATION CAUSING DELAY OR EXPENSE TO ANOTHER PARTY, HE SHALL PAY THE ACTUAL AMOUNT OF THE DAMAGES TO THE PARTY WHO SUSTAINED THE LOSS.

11. FIELD CHANGES

11.1. SHOULD ANY CHANGE IN DRAWINGS OR SPECIFICATIONS BE REQUIRED TO COMPLY WITH LOCAL REGULATIONS AND/OR FIELD CONDITIONS, THE CONTRACTOR SHALL REFER SAME TO ARCHITECT FOR APPROVAL BEFORE ANY WORK WHICH DEVIATES FROM THE ORIGINAL REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS IS STARTED. IN THE EVENT OF DISAGREEMENTS AS TO THE NECESSITY OF SUCH CHANGES, THE DECISION OF THE ARCHITECT SHALL BE FINAL.

12. CUTTING AND PATCHING

12.1. AS NECESSARY AND WITH APPROVAL TO PERMIT THE INSTALLATION OF CONDUIT OR ANY PART OF THE WORK UNDER THIS BRANCH. ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK SHALL BE BY THE PARTY RESPONSIBLE THEREFOR. PATCHING OF HOLES, OPENINGS, ETC. RESULTING FROM THE WORK OF THIS BRANCH SHALL BE FURNISHED BY THIS CONTRACTOR.

12.2. 1.1DEMOLITION, RENOVATION AND DISPOSITION OF EXISTING EQUIPMENT.

12.2.1. THIS CONTRACTOR SHALL NOTE THAT THE EXISTING BUILDING WILL REMAIN IN SERVICE DURING PORTIONS OF THE CONSTRUCTION PERIOD. AREAS OF THE BUILDING WILL BE VACATED AS REQUIRED TO FACILITATE CONSTRUCTION. THIS CONTRACTOR SHALL PROCEED WITH THE COMPLETION OF HIS WORK IN SUCH A MANNER AS TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH THE OWNER'S OPERATION. ALL WORK REQUIRED IN THE EXISTING BUILDING SHALL BE DONE IN A MANNER AND TIME ACCEPTABLE TO THE OWNER. OUTAGES AND OTHER WORK RENDERING EXISTING EQUIPMENT INOPERATIVE SHALL BE HELD TO A MINIMUM - PRIOR ARRANGEMENTS FOR EACH SHALL BE MADE WITH THE OWNER AND SHALL BE ACCEPTABLE AS TO TIME AND DURATION

12.2.2. ELECTRICAL EQUIPMENT IN CONFLICT WITH CONSTRUCTION SHALL BE REMOVED AND/OR RELOCATED AS INDICATED ON THE DRAWINGS, AS DIRECTED OR REQUIRED. THIS CONTRACTOR SHALL REMOVE ALL ELECTRICAL EQUIPMENT RELEASED FROM SERVICE AS A RESULT OF CONSTRUCTION, AND NO EQUIPMENT REMOVED SHALL BE REUSED, EXCEPT AS SPECIFICALLY DIRECTED ON THE DRAWINGS OR ELSEWHERE HEREIN. THE OWNER SHALL HAVE THE PRIVILEGE TO RETAIN OWNERSHIP OF ANY ELECTRICAL EQUIPMENT THAT HAS BEEN REMOVED, AND ALL SUCH EQUIPMENT SHALL BE RELOCATED TO A DESIGNATED TEMPORARY LOCATION FOR STORAGE UNTIL REMOVED BY THE OWNER. ALL OTHER EQUIPMENT, CONDUIT, CONDUCTORS, AND MISCELLANEOUS HARDWARE REMOVED SHALL BECOME THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

12.2.3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK OF OTHER TRADES AS MAY BE NECESSARY TO FACILITATE THE INSTALLATION OF ELECTRICAL WORK IN THE EXISTING BUILDING. SUCH WORK NECESSARY THAT IS NORMALLY DONE BY OTHER TRADES AND IS NOT COVERED AS A PART OF OTHER DIVISIONS OF THE WORK SHALL BE DONE UNDER THE DIRECTION AND AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

12.2.4. THIS WORK SHALL INCLUDE BUT IS NOT LIMITED TO, CUTTING, PATCHING, AND REFINISHING AND ALL NECESSARY AND REQUIRED TO LEAVE EXISTING BUILDING IN ACCEPTABLLE CONDITION .

13. COMPLETION DATES

13.1. THIS CONTRACTOR SHALL BE IN A POSITION TO MEET ALL COMPLETION DATES ESTABLISHED BY THE ARCHITECT AND SHALL FURNISH ALL LABOR OF ALL CLASSES REQUIRED TO MEET SUCH SCHEDULES AND COMPLETION DATES.

14. STANDARDS, CODES AND PERMITS

14.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL ELECTRICAL CODES, LAWS, ORDINANCES AND REGULATIONS. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND ALL REQUIREMENTS IMPOSED BY THE AUTHORITY HAVING JURISDICTION.
14.2. ALL MATERIALS SHALL HAVE A U.L. LABEL WHERE A U.L. STANDARD AND/OR TEST EXISTS.
14.3. PREPARE AND SUBMIT TO ALL AUTHORITIES HAVING JURISDICTION, FOR THEIR APPROVAL, ALL APPLICATIONS AND WORKING DRAWINGS REQUIRED BY THEM. SECURE AND PAY FOR ALL PERMITS AND LICENSES REQUIRED.

15. CLEAN-UP
15.1. THIS CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM EXCESSIVE ACCUMULATION OF WASTE MATERIAL OR RUBBISH RESULTING FROM HIS WORK, INCLUDING TOOLS, SCAFFOLDING AND SURPLUS MATERIALS, AND HE SHALL LEAVE HIS WORK BROOM-CLEAN OR ITS EQUIVALENT. IN CASE OF DISPUTES, THE ARCHITECT MAY ORDER THE REMOVAL OF SUCH RUBBISH AND CHARGE THE COST TO THE RESPONSIBLE CONTRACTOR AS DETERMINED BY THE ARCHITECT. AT THE TIME OF FINAL CLEAN-UP ALL FIXTURES AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND LEFT IN PROPER CONDITION FOR THEIR INTENDED USE.

16. TESTS
16.1. GENERAL: THE CONTRACTOR SHALL PROVIDE ALL INSTRUMENTATION, LABOR AND CONDUCT ALL TESTS REQUIRED BY THE ARCHITECT AND ENGINEER. ALL TESTS SHALL BE MADE BEFORE ANY CIRCUIT OR ITEM OF EQUIPMENT IS PERMANENTLY ENERGIZED. CIRCUITS SHALL BE PHASED OUT AND LOADS SHALL BE DISTRIBUTED AS EVENLY AS POSSIBLE ON ALL PHASES. ALL PHASE CONDUCTORS SHALL BE ENTIRELY FREE FROM GROUNDS AND SHORT CIRCUITS. ALL INSTRUMENTATION AND PERSONNEL REQUIRED FOR TESTING SHALL BE PROVIDED BY THE CONTRACTOR AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE ARCHITECT OR HIS AUTHORIZED REPRESENTATIVE.

16.2. SYSTEM TESTS:
16.1.1. THE FOLLOWING TESTS ARE REQUIRED PRIOR TO ENERGIZATION OF THE ELECTRICAL SYSTEM:
16.1.1.1. SERVICE AND BUILDING GROUND TESTS.
16.1.1.2. SECONDARY FEEDERS SHALL HAVE AN INSULATION RESISTANCE TEST UTILIZING A MEGGER APPLYING A TEST POTENTIAL OF 500 VOLTS DC MINIMUM.
16.1.1.3. ESTABLISH SECONDARY PHASE TO GROUND VOLTAGES.
16.1.1.4. SET TRANSFORMER TAPS TO DELIVER NOMINAL RATED VOLTAGE.
16.1.1.5. ESTABLISH PROPER PHASE RELATIONSHIP AND MOTOR ROTATION.

16.2. THE FOLLOWING TESTS ARE REQUIRED UNDER NORMAL LOAD CONDITION:
16.2.1. RECORD SECONDARY PHASE TO PHASE AND PHASE TO GROUND VOLTAGES AND PHASE CURRENTS AT ALL MAJOR EQUIPMENT, APPARATUS, AND ON ALL SECONDARY FEEDERS. VOLTAGE READINGS SHALL BE TAKEN AT LINE SIDE TERMINALS OF DISTRIBUTION CENTERS AND PANELBOARDS.
16.2.2. CONFIRM PROPER PHASE RELATIONSHIP AND MOTOR ROTATION.
16.2.3. CONFIRM LOAD BALANCE AT DISTRIBUTION CENTERS AND PANELS. REBALANCE LOAD IF NECESSARY SUCH THAT THE MINIMUM UNBALANCE BETWEEN PHASES SHALL NOT EXCEED 7-1/2%.
16.2.4. RESET TRANSFORMER TAPS IF NECESSARY TO DELIVER NOMINAL RATED VOLTAGE. IDENTIFY FINAL TAP SETTINGS ON TRANSFORMERS NAMEPLATES.
16.2.5. CONFIRM OPERATION OF ALL ELECTRICALLY OPERATED APPARATUS, SUCH AS CIRCUIT BREAKERS, TRANSFER SWITCHES, ETC., BY EXERCISING SAME UNDER LOAD.
16.2.6. CONFIRM VOLTAGE DROP DOES NOT EXCEED NEC STANDARDS.

16.3. RECORD ALL SETTINGS AND CALIBRATIONS OF CIRCUIT BREAKERS, TRANSFER SWITCHES, TRANSFORMERS, METERS, TIMING DEVICES, ETC.

16.4. RECORDS: ALL TEST DATA OBTAINED BY THE PEC OR MANUFACTURER/SUPPLIER SHALL BE RECORDED AND FILED WITH THE MAINTENANCE MANUAL AS PART OF PERMANENT JOB RECORDS. TEST DATA SHALL INCLUDE IDENTIFICATION OF INSTRUMENTS EMPLOYED, (FIELD TEST ONLY) CONDITION OF TEST (TIME, DATE, WEATHER, ETC.), PARAMETERS OF TEST, PERSONNEL CONDUCTING TEST, AND ANY PERTINENT INFORMATION OR CONDITIONS NOTED DURING THE TEST.

17. SHOP DRAWINGS

17.4. SUBMIT TO ENGINEER FOR REVIEW, COPIES OF MANUFACTURER'S SHOP DRAWINGS AND/OR EQUIPMENT BROCHURE DEPICTING:
17.4.1. LIGHTING FIXTURES AND CONTROLS
17.4.2. PANELBOARDS
17.4.3. ENCLOSED CONTROLLERS, STARTERS AND DISCONNECTS
17.4.4. OVERCURRENT PROTECTION, BREAKERS AND FUSES
17.4.5. LIGHTING CONTROL PANEL
17.4.6. OTHER MATERIALS AS SELECTED BY THE ENGINEER.

17.5. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP INDICATING APPROVAL.
17.6. ANY EQUIPMENT FABRICATION PRIOR TO SHOP DRAWING REVIEW SHALL BE AT THE CONTRACTOR'S RISK.

18. WORKMANSHIP

18.1. THE INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS WILL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION, AND SHALL BE LEFT WITH ALL EQUIPMENT PROPERLY ADJUSTED AND IN WORKING ORDER. THE WORK SHALL BE EXECUTED IN CONFORMITY WITH THE BEST ACCEPTED STANDARD PRACTICE OF THE TRADE SO AS TO CONTRIBUTE TO EFFICIENCY AND APPEARANCE. IT SHALL ALSO BE EXECUTED SO THAT THE INSTALLATION WILL CONFORM AND ADJUST ITSELF TO THE BUILDING STRUCTURE, ITS EQUIPMENT AND ITS USAGE.

19. DRAWINGS OF OTHER TRADES

19.1. THE CONTRACTOR SHALL CONSULT THE DRAWINGS OF THE WORK FOR THE VARIOUS OTHER TRADES; FIELD LAYOUTS OF THE PARTIES PERFORMING THE WORK OF THE OTHER TRADES; THEIR SHOP DRAWINGS, AND HE SHALL BE GOVERNED ACCORDINGLY IN LAYING OUT HIS WORK.
19.2. SPECIFICALLY EXAMINE SHOP DRAWINGS TO CONFIRM VOLTAGE, CURRENT CHARACTERISTICS, AND OTHER WIRING REQUIREMENTS FOR UTILIZATION EQUIPMENT. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE A/E.

20. FIELD MEASUREMENTS

20.1. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY FOR HIS WORK AND SHALL ASSUME THE FULL RESPONSIBILITY FOR THEIR ACCURACY.

21. STRUCTURAL INTERFERENCES

21.1. SHOULD ANY STRUCTURAL INTERFERENCES PREVENT THE INSTALLATION OF THE OUTLETS, RUNNING OF CONDUITS, ETC., AT POINTS SHOWN ON DRAWINGS, THE NECESSARY MINOR DEVIATIONS THEREFROM, AS DETERMINED BY THE ARCHITECT, MAY BE PERMITTED. MINOR CHANGES IN THE POSITION OF THE OUTLETS OR EQUIPMENT IF DECIDED UPON BEFORE ANY WORK HAS BEEN DONE BY THE CONTRACTOR SHALL BE MADE WITHOUT ADDITIONAL CHARGE.

22. EXAMINATION OF PLANS, SPECIFICATIONS AND SITE

22.1. BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL FEATURES OF THE BUILDING AND SITE WHICH MAY AFFECT THE EXECUTION OF HIS WORK. NO EXTRA PAYMENT WILL BE ALLOWED FOR THE FAILURE TO OBTAIN THIS INFORMATION. IF IN THE OPINION OF THE CONTRACTOR THERE ARE OMISSIONS OR ERRORS IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CLARIFY THESE POINTS WITH THE ARCHITECT BEFORE SUBMITTING HIS BID. IN LIEU OF WRITTEN CLARIFICATION BY ADDENDUM, RESOLVE ALL CONFLICTS IN FAVOR OF THE GREATER QUANTITY OR BETTER QUALITY.

23. GUARANTEE

23.1. THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE HIS WORK AND ALL COMPONENTS THEREOF, EXCLUDING LAMPS, FOR A PERIOD OF ONE YEAR FROM THE DATE OF HIS FINAL PAYMENT. HE SHALL REMEDY ANY DEFECTS IN WORKMANSHIP AND REPAIR OR REPLACE ANY FAULTY EQUIPMENT WHICH SHALL APPEAR WITHIN THE GUARANTEE PERIOD TO THE ENTIRE SATISFACTION OF THE ARCHITECT AT NO ADDITIONAL CHARGE.

24. ELECTRICAL SYSTEM

24.1. PROVIDE ELECTRICAL DISTRIBUTION SYSTEMS AS INDICATED ON THE DRAWINGS WITH ALL NECESSARY BRANCH CIRCUIT WIRING AND ASSOCIATED EQUIPMENT AS SPECIFIED HEREINAFTER OR ON INSTALLATION.
24.2. PROVIDE ALL CIRCUIT WIRING FOR COOLING AND VENTILATING EQUIPMENT INCLUDING THE FINAL ELECTRICAL CONNECTION TO ALL LINE VOLTAGE EQUIPMENT.
24.3. PROVIDE LIGHTING FIXTURES AND LAMPS AS DESCRIBED IN LIGHTING FIXTURE SCHEDULE.
24.4. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

25. CONDUIT

25.1. PROVIDE A COMPLETE CONDUIT SYSTEM AS REQUIRED TO PROVIDE CIRCUITING AND SWITCH ARRANGEMENTS AS SHOWN ON THE PLANS.
25.2. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE.
25.3. CONDUITS SHALL BE CONCEALED EXCEPT IN MECHANICAL OR STORAGE ROOMS. ANY EXCEPTIONS ARE NOTED ON THE DRAWINGS.
25.4. CONDUITS EXPOSED TO THE EXTERIOR SHALL BE RIGID HEAVY WALL GALVANIZED STEEL OR I.M.C. ALL CONDUIT IN CONCRETE OR UNDERGROUND SHALL BE RIGID STEEL, I.M.C., OR SCHEDULE 40 PVC CONTAINING A GREEN GROUND WIRE SIZED PER CODE.
25.5. FLEXIBLE METAL CONDUIT SHALL BE 1/2" MINIMUM NOMINAL TRADE SIZE. LENGTH SHALL NOT EXCEED 24" FOR CONNECTION TO MOTORIZED EQUIPMENT. GROUNDED LIQUID TIGHT WHERE EXPOSED TO WATER. ADD GREEN GROUND WIRE TO JUMP FLEXIBLE CONDUIT FOR ALL MOTORS. FLEXIBLE METAL CONDUIT MAY ONLY BE USED FOR FINAL CONNECTION TO MOTORS AND LIGHTING FIXTURES ABOVE SUSPENDED CEILINGS.

26. COUPLINGS, CONNECTORS AND FITTINGS

26.1. USE STANDARD STEEL ITEMS TO PROPERLY ATTACH CONDUITS, OUTLET BOXES, PULL BOXES, CABINETS, ETC., TO PROVIDE A COMPLETE RACEWAY SYSTEM. USE COMPRESSION OR SET SCREWS TYPE FITTINGS. ALL CONNECTORS SHALL HAVE INSULATED THROATS; INDENTATION TYPE, DIECAST, AND PUSH-ON TYPE FITTINGS ARE NOT ACCEPTABLE. BUSHING FOR RIGID H.W. CONDUIT SHALL BE REINFORCED INSULATED TYPE USED WITH DOUBLE LOCKNUTS.

27. OUTLET BOXES

27.1. PROVIDE OUTLET BOXES BY APPLETON, STEEL CITY, OR EQUAL AS REQUIRED TO ACCOMMODATE THE DEVICE INDICATED BY SYMBOL ON THE DRAWINGS, SIZED IN ACCORDANCE WITH CODE, WITH THE FOLLOWING MINIMUM REQUIREMENTS.
27.2. OUTLET BOXES SHALL BE DIE FORMED, GALVANIZED AND SECURELY FASTENED IN PLACE PLUMB AND LEVEL WITH ADJACENT CONSTRUCTION NOT DEPENDENT UPON CONDUIT FOR SUPPORT.
27.3. MULTI-GANG DIE FORMED BOXES SHALL BE PROVIDED FOR ALL DEVICES INDICATED ADJACENT TO ONE ANOTHER ON THE PLANS.

28. PULL BOXES AND JUNCTION BOXES

28.1. PROVIDE AS REQUIRED BY CODE, OF CODE GAUGE STEEL IN SIZES AS REQUIRED BY THE CODE. COVERS SHALL BE OF THE SAME MATERIAL FASTENED WITH BRASS MACHINE SCREWS. BOXES AND COVERS SHALL HAVE GALVANIZED FINISH AND THEY SHALL BE SECURELY FASTENED TO STRUCTURAL MEMBERS.

29. CONDUCTORS

29.1. CONDUCTORS SHALL BE NEW SOFT DRAWN COPPER. NO. 8 AND LARGER SHALL BE STRANDED; NO. 12 SHALL BE MINIMUM SIZE UNLESS OTHERWISE INDICATED, WITH 600 VOLT INSULATION, COLOR-CODED AS REQUIRED BY CODE. WIRE MUST BE DELIVERED TO JOB SITE IN ORIGINAL CARTONS.
29.2. WIRE AND CABLE FOR GENERAL INTERIOR USE SHALL HAVE 600 VOLT INSULATION. SIZES SMALLER THAN NO. 8 SHALL COMPLY WITH CODE FOR TYPE THHN/THWN. SIZE NO. 8 AND LARGER SHALL COMPLY WITH CODE FOR TYPE THW.

30. WIRE JOINTS, SPLICES AND CONNECTORS

30.1. BRANCH LIGHTING CIRCUITS NO. 10 AND SMALLER SHALL BE SCOTCHLOCK TYPE H SPRING COMPRESSION CONNECTOR AS MANUFACTURED BY MINNESOTA MINING AND MANUFACTURING CO. OR PIGGY PIGTAILS AS MANUFACTURED BY THOMAS AND BETTS MANUFACTURING CO.
30.2. FEEDER AND POWER WIRING: MECHANICAL TYPE LUGS AND CONNECTORS ON SIZES NO. 8 AND LARGER.
30.3. INSULATION: USE ONE HALF-LAPPED OKONITE RUBBER TAPE OR SCOTCH #33 AND COMPLY WITH ALL CODE REQUIREMENTS.

31. ELECTRICAL SERVICE

31.1. PROVIDE (2) NEW ELECTRICAL SERVICE AT 120/208V, 3 PHASE, 4 WIRE AS INDICATED ON CONSTRUCTION DOCUMENTS.
31.2. COORDINATE ALL ASPECTS OF THE SERVICE WITH THE ELECTRIC UTILITY AND COMPLY WITH ALL THEIR REQUIREMENTS.
31.3. COST OF SERVICE BY OWNER.

32. GROUNDING

32.1. COMPLETE RACEWAY SYSTEM SHALL BE GROUNDED SO GROUND WILL BE ELECTRICALLY CONTINUOUS FROM SOURCE TO ALL OUTLET BOXES AND EQUIPMENT.
32.2. PROVIDE BONDING CONDUCTORS AS REQUIRED TO SECURELY GROUND ALL ELECTRICAL EQUIPMENT ENCLOSURES, INCLUDING LIGHTING FIXTURES IF THEY HAVE METALLIC HOUSING AND ARE CORD CONNECTED.
32.3. FLEXIBLE METAL CONDUIT MUST BE JUMPERED WITH A GREEN GROUNDING CONDUCTOR.
32.4. GROUND SERVICE PER CODE.

33. BRANCH CIRCUIT WIRING

33.1. SEE PLANS FOR GENERAL ARRANGEMENT OF CIRCUITS, CONDUIT RUNS, AND RATINGS OF BRANCH CIRCUITS AND SPECIAL CIRCUITS.
33.2. PROVIDE EVERYTHING NECESSARY TO COMPLY WITH THE GENERAL SCHEME SHOWN, INCLUDING ALL TYPES OF CONTROL.
33.3. CIRCUIT NUMBERS AS SHOWN ON PLANS ARE FOR CONTRACTOR TO PLAN HIS WIRING AND FOR ESTIMATING PURPOSES. THESE NUMBERS ARE NOT NECESSARILY CONSECUTIVE NUMBERS OF THE PANELBOARD BREAKERS. BALANCED LOAD ON BUS IS TO BE THE DETERMINING FACTOR IN ARRANGEMENT OF CIRCUITS. BALANCE LOADING TO WITHIN 7 1/2%.
33.4. MINIMUM SIZE OF LIGHTING SYSTEM BRANCH CIRCUIT CONDUCTORS TO BE #12 AWG.
33.5. CONDUCTORS TERMINATING AT WIRED OUTLETS SHALL EXTEND AT LEAST EIGHT (8) INCHES BEYOND OUTLET BOX CONDUIT FITTING.
33.6. 120 VOLT CIRCUIT HOME RUNS GREATER THAN 100 FEET IN LENGTH SHALL HAVE #10 AWG MINIMUM SIZE BETWEEN PANEL AND FIRST RECEPTACLE OR FIXTURE OUTLET.
33.7. CIRCUIT BREAKERS:
33.7.1. PANEL-MOUNTED CIRCUIT BREAKERS SHALL BE SINGLE-POLE AND MULTI-POLE COMMON TRIP, QUICK-MAKE AND QUICK-BREAK OVER CENTER TOGGLE TYPE SWITCHING MECHANISM ARRANGED FOR MANUAL AND AUTOMATIC OPERATION WITH THERMAL MAGNETIC TRIP ELEMENT FREE FROM HANDLE WITH AMPERE RATING AND BREAKER POSITIONS, I.E., ON, OFF, AND TRIP CLEARLY VISIBLE. MINIMUM 10,000 A.I.C. OR AS OTHERWISE INDICATED ON DRAWINGS OR REQUIRED TO MEET THE MAXIMUM FAULT CURRENT WHERE INSTALLED IN THE ELECTRICAL SYSTEM. PLUG-ON BREAKERS SHALL BE ACCEPTABLE.
33.7.2. CIRCUIT BREAKERS SHALL BE U.L. LISTED AND SHALL CONFORM WITH THE LATEST APPLICABLE NEMA STANDARDS.

33.8. CIRCUIT DIRECTORIES: FURNISH AND INSTALL IN DIRECTORY FRAME ON INSIDE OF DOOR OF EACH PANEL CABINET A TYPEWRITTEN DIRECTORY IDENTIFYING EACH CIRCUIT.

34. DISCONNECT SWITCHES

34.1. PROVIDE HEAVY DUTY FUSIBLE TYPE DISCONNECT SWITCHES OF TYPES SCHEDULES AT LOCATIONS SHOWN ON THE DRAWINGS.
34.2. IN ADDITION, PROVIDE OTHER DISCONNECT SWITCHES AS NECESSARY AND REQUIRED WITH POLES AND VOLTAGE RATINGS AS REQUIRED FOR THE APPLICATION.
34.3. DISCONNECT SWITCHES SHALL BE HEAVY DUTY SWITCH OPERATED TYPE WITH COVER INTERLOCK AND ENCLOSED ARC CHAMBER, QUICK-MAKE AND QUICK-BREAK AND PROVISION FOR PADLOCKING IN EITHER THE OPEN OR CLOSED POSITION. ALL HEAVY DUTY, SAFETY SWITCHES 30-600A, SHALL BE PROVIDED WITH CLASS R REJECTION STYLE FUSE CLIPS. THE COMBINATION RATING OF THE HEAVY DUTY SWITCH AND R FUSE SHALL BE 200,000 SYMMETRICAL AMPS AND LABELED AS SUCH. APPROVED MANUFACTURERS: SQUARE D AND EATON/CUTLER-HAMMER.
34.4. SEE "MOTOR WIRING" OF THESE SPECIFICATIONS AS TO REQUIREMENTS PERTAINING TO MOTOR DISCONNECT SWITCHES AND FURNISH AND INSTALL SAME IN ACCORDANCE WITH REQUIREMENTS THEREIN.

35. LIGHTING FIXTURES, LAMPS AND BALLASTS

35.1. GENERAL:
35.1.1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHT FIXTURES AS SHOWN ON THE DRAWINGS.
35.1.2. THE APPROXIMATE LOCATION OF LIGHTING FIXTURES IS SHOWN ON THE DRAWINGS. THE EXACT LOCATION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
35.1.3. THE FIXTURE TYPES THAT SHALL BE INSTALLED ARE DEPICTED ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL FURTHER EXAMINE ALL CONSTRUCTION AND SUPPLY ALL REQUIRED ACCESSORIES TO HANG THE FIXTURES.
35.1.4. THE CONTRACTOR SHALL VERIFY CEILING TYPES AND PROVIDE COMPATIBLE FIXTURES. CONFIRM LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLAN.
35.1.5. ALL FIXTURES IN LAY-IN CEILING SHALL RECEIVE THEIR FINAL CONNECTION VIA A 6'-0" LENGTH OF FLEXIBLE METALLIC CONDUIT TO PERMIT RELOCATION.

35.2. ALL OUTDOOR DRIVERS SHALL BE DESIGNED FOR OPERATION DOWN TO MINUS 20 DEG. F.

36. IDENTIFICATION
36.1. GENERAL:
36.1.1. MATERIALS AND EQUIPMENT INSTALLED UNDER THIS SECTION SHALL BE CLEARLY IDENTIFIED AS LISTED BELOW.
36.1.2. LOCATE IDENTIFICATION CONSPICUOUSLY.
36.1.3. TERMINOLOGY IS TO BE APPROVED BY ARCHITECT.
36.1.4. SEE PLANS FOR ANY ADDITIONAL ITEMS TO BE IDENTIFIED.
36.1.5. LOADS SUCH AS MOTORS SHALL BE DESCRIBED BY FUNCTION RATHER THAN BY THE SYSTEM OR BY ARBITRARY NUMBER AS SHOWN ON ELECTRICAL PLANS.
36.1.6. USE ABBREVIATIONS SPARINGLY
36.2. LAMINATED BAKELITE PLATES: ENGRAVED PLASTIC NAMEPLATE SHALL BE SECURELY FASTENED TO THE FOLLOWING EQUIPMENT. SIZE 1" X 4" WITH 3/8" HIGH LETTERS; UNLESS SPACE AVAILABLE DICTATES DIFFERENTLY.
36.2.1. EACH PANELBOARD, CONTACTOR, TIME SWITCH, STARTER OR DISCONNECT SWITCH. LOCATE ON INSIDE COVER OF PANELS.
37.2.1. EACH FEEDER AT ALL ACCESSIBLE LOCATIONS.
37.2.2. EACH END OF EMPTY CONDUIT RUNS TO INDICATE THE INTENDED USE OF THE CONDUIT AND THE LOCATION OF OPPOSITE END. USE ROOM NUMBERS THAT ARE PERMANENTLY ASSIGNED.

37.3. TYPEWRITTEN DIRECTORY: EACH PANELBOARD SHALL BE PROVIDED WITH A TYPEWRITTEN DIRECTORY ATTACHED TO THE INSIDE OF PANEL DOOR AND COVERED WITH CLEAR PLASTIC INDICATING LOAD SERVED AND ROOMS SERVED BY EACH PROTECTIVE DEVICE IN THE RESPECTIVE PANEL.

37.4. SWITCH STATION:
37.4.1. ALL SWITCHES SHALL BE ENGRAVED INDICATING CONTROLLED ITEM.
37.4.2. ALL REMOTE SWITCHES SHALL BE ENGRAVED INDICATING CONTROLLED ITEM.

37.5. CONDUCTOR IDENTIFICATION:
37.5.1. IDENTIFY EACH CONDUCTOR AT EACH WIRING DEVICE, CONNECTOR OR SPLICE POINT WITH PERMANENTLY ATTACHED WRAP-AROUND ADHESIVE MARKERS AS MANUFACTURED BY BRADY CO.
37.5.2. THIS IDENTIFICATION SHALL INCLUDE BRANCH CIRCUIT NUMBER, CONTROL CIRCUIT, OR ANY OTHER APPROPRIATE NUMBER OR LETTERING THAT WILL EXPEDITE FUTURE TRACING AND TROUBLE SHOOTING.
37.5.3. MARK THE PANEL AND CIRCUIT NUMBER SERVING THE DEVICE ON THE BACK OF THE DEVICE COVERPLATE USING A PERMANENT MARKING SYSTEM THAT DOES NOT SHOW THROUGH THE FRONT OF THE PLATE.

38. WIRING DEVICES
38.1. GENERAL:
38.1.1. AT EACH LOCATION SHOWN ON THE DRAWINGS, FURNISH AND INSTALL WIRING DEVICE AS INDICATED BY SYMBOL ON THE DRAWINGS.
38.1.2. UNLESS OTHERWISE INDICATED, ALL WIRING DEVICES SHALL BE BY THE SAME MANUFACTURER, EITHER ARROW-HART-HEGEMAN, HUBBELL, PASS AND SEYMOUR, EAGLE, LEVITON, BRYANT OR SLATER. PASS AND SEYMOUR CATALOG NUMBERS ARE USED HEREIN TO DESIGNATE TYPE OF DEVICE REQUESTED. ALL WIRING DEVICES SHALL BE FEDERAL SPECIFICATION GRADE. IVORY DEVICES SHOWN - PROVIDE COLOR SELECTED BY ARCHITECT.
38.1.3. WRAP WIRING DEVICES WITH INSULATING TAPE BEFORE INSTALLING.

38.2. LOCAL SWITCHES:
38.2.1. IN GENERAL:
38.2.1.1. SINGLE POLE - PASS AND SEYMOUR 20AC 1-I
38.2.1.2. DOUBLE POLE - PASS AND SEYMOUR 20AC 2-I
38.2.1.3. THREE WAY - PASS AND SEYMOUR 20AC 3-I
38.2.1.4. FOUR WAY - PASS AND SEYMOUR 20AC 4-I
38.2.1.5. LOCK TYPE AS INDICATED BY SYMBOL ON THE DRAWINGS.
38.2.1.6. ALL LOCAL SWITCHES CONTROLLING LIGHTS OR EQUIPMENT AT LOCATIONS OTHER THAN THE ROOM IN WHICH THE SWITCH IS LOCATED SHALL BE COMPLETE WITH RED NEON PILOT LAMP TO INDICATE THE ENERGIZED POSITION OF THE LIGHTS OR EQUIPMENT IN QUESTION. IN ADDITION, SWITCH PLATE SHALL BE ENGRAVED TO IDENTIFY LIGHTS OR EQUIPMENT CONTROLLED.
38.2.1.7. WALL SWITCH OCCUPANCY SENSOR SHALL BE nLIGHT "WSX-PDT-LT-SSW" WITH PHOTO SENSOR OR EQUAL.
38.2.1.8. NETWORK CEILING OCCUPANCY/DAYLIGHT SENSOR SYSTEM SHALL BE nLIGHT SENSOR "nCM-PDT-10-RJB-ADCX-AR(WHERE INDICATED ON DRAWINGS)-LT" ; SWITCH "nPODMA-4P-LT-SSW"; POWER PACK "nPP16-D-EFP-LT" OR EQUAL. EACH ROOM SHALL HAVE A POWER PACK..

38.3. RECEPTACLES: ALL RECEPTACLES SHALL BE RATED FOR CAPACITY AND CHARACTERISTICS OF THE EQUIPMENT SERVICED AND SHALL BE COMPLETE WITH ONE ADDITIONAL POLE FOR GROUNDING. SELF-GROUNDING RECEPTACLES ARE NOT ACCEPTABLE. IVORY DEVICES ARE INDICATED. VERIFY COLOR DESIRED WITH ARCHITECT.
38.3.1. IN GENERAL:
38.3.1.1. 20 AMPERE, 125 VOLT DUPLEX - PASS AND SEYMOUR HBL 5352I
38.3.1.2. 20 AMPERE, 125 VOLT DUPLEX, GFI - PASS AND SEYMOUR GFR 5352IL
38.3.1.3. 20 AMPERE, 125 VOLT DUPLEX, GFI, TAMPER RESISTANCE - PASS AND SEYMOUR PT2097TRW
38.3.1.4. 20 AMPERE, 125 VOLT DUPLEX, GFI, TAMPER RESISTANCE, WEATHER RESISTANCE - PASS AND SEYMOUR 2097TRWRW
38.3.2. PROVIDE WEATHER RESISTANT GFI RECEPTACLES AS INDICATED BY SYMBOL ON DRAWINGS MOUNTED WITH CAST GASKETED WEATHERPROOF WHILE "IN-USE". NON-METALLIC COVERS NOT ACCEPTABLE.

38.4. COVER PLATES:
38.4.1. COVER PLATES SHALL BE SMOOTH THERMOSET PLASTIC IN COLOR AS SELECTED BY ARCHITECT.
38.4.2. SEE IDENTIFICATION REQUIREMENTS OF THESE SPECIFICATIONS.
38.4.3. SURFACE MOUNTED OUTLET BOXES - GALVANIZED STEEL SURFACE COVER WITH ROUNDED EDGES DESIGNED TO FIT FLUSH WITH OUTLET BOX.

39. LOCATIONS OF OUTLETS AND WIRING DEVICES

39.1. WIRING DEVICES:
39.1.1. THE APPROXIMATE LOCATION OF WIRING DEVICES ARE INDICATED ON THE DRAWINGS; THE SPECIFIC LOCATIONS SHALL BE DETERMINED IN ACCORDANCE WITH "LOCATION OF OUTLETS" OF THESE SPECIFICATIONS AND AS FOLLOWS.
39.1.2. THIS SECTION IS REFERRED TO EQUIPMENT PLANS, EQUIPMENT SHOP DRAWINGS, ELEVATION DRAWINGS AND OTHER DETAIL OR DIMENSIONAL DRAWINGS, AND HE SHALL CONSULT WITH THE ARCHITECT BEFORE INSTALLATION OF OUTLET BOXES FOR WIRING DEVICES OR BEFORE PROCEEDING WITH ANY WORK DEPENDENT UPON THIS INFORMATION.
39.1.3. GENERALLY, WIRING DEVICES SHALL BE LOCATED AS FOLLOWS:
39.1.3.1. WALL RECEPTACLES SHALL GENERALLY BE LOCATED 18" ABOVE THE FINISHED FLOOR TO THE BOTTOM OF THE BOX AND 6" ABOVE SURFACE OF BUILT-IN COUNTERS AND TABLES WHERE SAME ABUTS WALL AND 4" ABOVE BACKSPLASHES IF COUNTERS ARE SO EQUIPPED.
39.1.3.2. SPECIAL PURPOSE RECEPTACLES SHALL BE LOCATED AS REQUIRED BY EQUIPMENT SERVED.
39.1.3.3. SWITCHES SHALL BE LOCATED 48" ABOVE FINISHED FLOOR TO THE TOP OF THE BOX ON LATCH SIDE OF DOOR OPENING WITH EDGE OF PLATE NOT MORE THAN 12" FROM DOOR FRAME, EXCEPT AS NOTED ON THE DRAWINGS.

40. RECORD DOCUMENTS

40.1. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AS-BUILT RED-LINE DRAWINGS THROUGHOUT CONSTRUCTION TO DOCUMENT MODIFICATIONS MADE TO THE DESIGN INTENT REFLECTING INSTALLED CONDITIONS.
40.2. CONTRACTOR SHALL PROVIDE COLOR COPIES TO SCALE OF AS-BUILT DRAWINGS WITH DIGITAL RECORD DRAWINGS TO THE ARCHITECT AND ENGINEER AT SUBSTANTIAL COMPLETION. DIGITAL RECORD DRAWINGS SHALL BE PROVIDED IN AUTOCAD 2011 FILE FORMAT.
40.3. CONTRACTOR SHALL ASSEMBLE DOCUMENTATION, INCLUDING BUT NOT LIMITED TO, APPROVED SUBMITTALS, MAINTENANCE MANUALS, INSTALLATION MANUALS, WARRANTIES, AND WIRING DIAGRAMS FOR THE SYSTEMS INSTALLED TO COMPILE AN OPERATIONS AND MAINTENANCE MANUAL. THE OPERATIONS AND MAINTENANCE MANUAL SHALL BE ASSEMBLED IN A THREE-RING HARD COVER BINDER, TABBED BY SYSTEM FOR EASY USE. CONTRACTOR SHALL PROVIDE ONE COPY TO THE OWNER, ONE COPY TO THE ARCHITECT, AND ONE COPY TO THE ENGINEER. IT IS THE OPTION OF EACH RECIPIENT TO BE PROVIDED HARD COPY OR DIGITAL COPY.

41. TRAINING

41.1. CONTRACTOR SHALL PROVIDE TRAINING ON THE OPERATION AND MAINTENANCE REQUIRED OF EACH SYSTEM INSTALLED. TRAINING PROVIDED SHALL NOT BE LESS THAN FOUR HOURS FOR EACH SYSTEM, AND SHALL BE SCHEDULED AFTER SUBSTANTIAL COMPLETION. INDIVIDUAL RESPONSIBLE FOR TRAINING SHALL ALLOW FOR A MINIMUM OF TWO WEEKS NOTICE AND SHALL PROVIDE AN AGENDA.

THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

ELECTRICAL SPECIFICATIONS

Drawn by	Checked by

Revisions

No.	Date	Description
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PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	WSFU			DFU
				HW	CW	TOTAL	VALUE
DF-1	ELKAY	LK4408BFGRY	OUTDOOR, WALL MOUNTED BI-LEVEL DRINKING FOUNTAIN WITH BOTTLE FILLING STATION, HEAVY DUTY, STAINLESS STEEL, VANDAL RESISTANT, PUSH BUTTON ACTIVATED, GRAY FINISH.	-	0.25	0.25	0.5
FD-1	ZURN	Z415S	SQUARE CAST IRON FLOOR DRAIN, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS. POLISHED NICKLE BRONZE, HEEL-PROOF TOP, LIGHT DUTY STRAINER.	-	-	-	4.0
HB-1	WOODFORD	B65	HOSE BIBB IN CONCEALED, LOCKABLE BOX, NON-FREEZE, LOOSE KEY, AUTOMATIC DRAINING WITH ANTI-SIPHON VACUUM BREAKER, CHROME FINISH	-	4.0	4.0	-
L-1	KOHLER	K-2031	WALL HUNG, WHITE, VITREOUS CHINA, ADA LAVATORY WITH OVERFLOW AND BACKSPLASH. OVERALL DIMENSIONS: 20-3/4"X18-1/4"X12-7/8". FAUCET: CHICAGO FAUCETS 116.606.AB.1 BATTERY POWERED, SENSOR ACTIVATED, SINGLE HOLE WITH 0.5 GPM NON-AERATING LAMINAR FLOW, VANDAL PROOF. PROVIDE WITH KOHLER K-7129-A GRID DRAIN, P-TRAP, AND LOOSE KEY STOPS. PROVIDE "HANDY-SHIELD MAXX" INSULATION ON P-TRAP, WATER VALVES AND EXPOSED SUPPLY PIPING.	0.5	0.5	1.0	1.0
MB-1	MUSTEE	63M	FLOOR MOUNTED, MOLDED STONE MOP BASIN WITH OVERALL DIMENSIONS: 24"X24"X10". FAUCET: MUSTEE 63.300A HEAVY DUTY, CHROME PLATED BRASS WITH TOP REINFORCING BAR AND PAIL HOOK. PROVIDE WITH HOSE CONNECTION VACUUM BREAKER EQUAL TO WATTS 8FR. PROVIDE WITH MUSTEE 65.700 HOSE AND HOSE HOLDER AND MUSTEE 65.600 MOP HANGER.	2.0	2.0	3.0	3.0
UR-1	KOHLER	K-4991-ET	VITREOUS CHINA WALL-MOUNT ADA WASHOUT URINAL WITH 3/4" TOP SPUD. OVERALL DIMENSIONS: 26 7/8" X 18" X 14 1/8". FLUSHOMETER: SLOAN G2 8186 BATTERY POWERED, SENSOR ACTIVATED, 0.5 GPF. FIXTURE SUPPORT: JAY R. SMITH 0637.	-	2.0	2.0	2.0
WC-1	KOHLER	K-96057	VITREOUS CHINA, FLOOR MOUNT, SIPHON JET, ADA WATER CLOSET WITH 1-1/2" TOP SPUD. OVERALL DIMENSIONS: 21-7/8"X14-5/8"X16-5/8". FLUSHOMETER: SLOAN G2 8111 BATTERY POWERED, SENSOR ACTIVATED, 1.28 GPF.	-	6.5	6.5	6.0

NOTES: CONTRACTOR IS RESPONSIBLE FOR COORDINATING NECESSARY ELECTRICAL PROVISION WITH DIVISION 26 CONTRACTOR. DIVISION 22 CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE (24V) WIRING FOR ALL PLUMBING FIXTURES AND EQUIPMENT. PROVIDE ALL NECESSARY TRANSFORMERS TO ACCOMMODATE POWER SUPPLIES INDICATED ON ELECTRICAL DRAWINGS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY POWER SUPPLY PROVISIONS BEYOND WHAT IS INDICATED ON THE ELECTRICAL DRAWINGS.

PUMPS

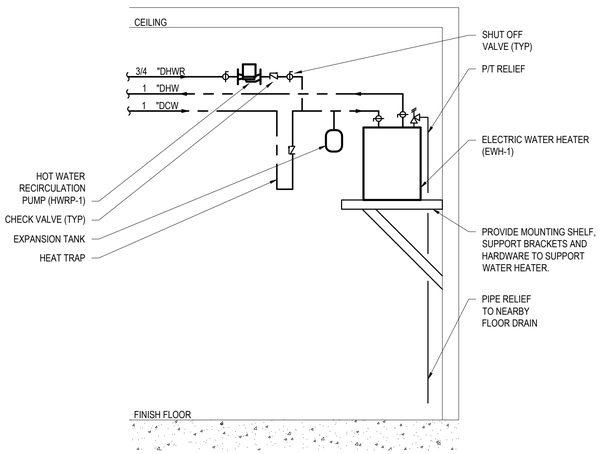
MARK	MANUFACT	MODEL	TYPE	SERVICE	GPM MIN.	HEAD FT WC	MOTOR (WATTS)	RPM	VOLTS	PHASE	REMARKS
HWRP -1	BELL & GOSSETT	NBF-12	INLINE	BRONZE	2	10	55	2,800	120	1	1,2

1. PROVIDE WITH STARTER & DISCONNECT.
2. PROVIDE WITH AQUASTAT & TIMER.

ELECTRIC WATER HEATER

MARK	MANUFACTURER	MODEL	GALLON CAPACITY	DATA			HEIGHT	DIAMETER	REMARKS
				KW	VOLT	PHASE			
EWH-1	A.O. SMITH	DSE-20A-9	20	9	240	1	31.75"	22"	1,2

1 INCLUDE TEMPERATURE CONTROL, PRESSURE RELIEF VALVE, DRAIN VALVE
2 SINGLE ELEMENT WATER HEATER
3 PROVIDE WITH EXPANSION TANK EQUAL TO B&G PTA-5



1 ELECTRIC WATER HEATER DETAIL
N.T.S.

ABBREVIATIONS

AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CO	CLEANOUT
DN	DOWN
ET-*	EXPANSION TANK
EWC-*	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD-*	FLOOR DRAIN
GI-*	GREASE INTERCEPTOR
HB-*	HOSE BIBB
HWRP-*	HOT WATER RECIRCULATION PUMP
IWH-*	INSTANTANEOUS WATER HEATER
L-*	LAVATORY
MB-*	MOP BASIN
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OD-*	OVERFLOW DRAIN
RD-*	ROOF DRAIN
S-*	SINK
SH-*	SHOWER
SP-*	SUMP PUMP
SS-*	SERVICE SINK
ST-*	STORAGE TANK
STP-*	SOLAR THERMAL PANEL
UR-*	URINAL
VFD	VARIABLE FREQUENCY DRIVE
WC-*	WATER CLOSET
WCO	WALL CLEANOUT
WH-*	WATER HEATER
WWHP-*	WATER-TO-WATER HEAT PUMP
X-*	EXISTING
YCO	YARD CLEANOUT

PLUMBING PIPING LEGEND

NEW PLUMING EQUIPMENT
EXISTING PLUMBING COMPONENT
DEMOLISHED PLUMBING COMPONENT
PLUMBING EQUIPMENT SERVICE AREA
P## KEY NOTE
DCW NEW DOMESTIC COLD WATER
X-DCW EXISTING DOMESTIC COLD WATER
DHW NEW DOMESTIC HOT WATER
X-DHW EXISTING DOMESTIC HOT WATER
DHWR NEW DOMESTIC HOT WATER RETURN
X-DHWR EXISTING DOMESTIC HOT WATER RETURN
DTW NEW DOMESTIC TEMPERED WATER
X-DTW EXISTING DOMESTIC TEMPERED WATER
FPCH NEW FIRE PROTECTION - CHEMICAL PIPE
FPD NEW FIRE PROTECTION - DRY PIPE
FPW NEW FIRE PROTECTION - WET PIPE
X-FP EXISTING FIRE PROTECTION
IRR NEW IRRIGATION
X-IRR EXISTING IRRIGATION
SS NEW SANITARY SEWER
X-SS EXISTING SANITARY SEWER
V NEW SANITARY VENT
X-V EXISTING SANITARY VENT
STOF NEW STORM OVERFLOW
X-STOF EXISTING STORM OVERFLOW
SD NEW STORM SEWER
X-SD EXISTING STORM SEWER
DEMOLISHED PIPING (ALL SYSTEMS)
EQUIPMENT / WH X-X / FLOOR TAG — PLUMBING EQUIPMENT TAG ELECTRICALLY POWERED
EQUIPMENT / WC X-X / FLOOR TAG — PLUMBING EQUIPMENT TAG NOT ELECTRICALLY POWERED

BALL VALVE
BUTTERFLY VALVE
CHECK VALVE
CIRCUIT SETTER
2-WAY ELECTRONIC CONTROL VALVE
3-WAY ELECTRONIC CONTROL VALVE
GATE VALVE
HOSEBIBB/DRAIN VALVE
OS&Y VALVE
PLUG VALVE
PRESSURE & TEMPERATURE RELIEF VALVE
PRESSURE REGULATING VALVE
TRIPLE DUTY VALVE
AIR VENT
FLEX PIPE
FLOOR DRAIN / ROOF DRAIN
P-T PLUG
PIPE BREAK
PIPE CAPPED END
PIPE CLEANOUT
PIPE ELBOW/TEE DOWN
PIPE ELBOW/TEE UP
CONNECT TO EXISTING
PUMP
REDUCER
STRAINER
UNION
FLOW GAUGE
FS FLOW SENSOR
PRESSURE GAUGE
PS PRESSURE SENSOR
TEMPERATURE GAUGE
TS TEMPERATURE SENSOR

GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL REQUIRED OFFSETS FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND SHALL MAINTAIN APPROPRIATE CLEARANCES.
2. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK AND PROJECT CONDITIONS. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.

PLUMBING SHEET INDEX

WATER CALCULATION WORKSHEET

INFORMATION NEEDED FOR WATER SERVICE SIZING

1	Demand of building in water supply fixture units:	124.75	WSFU
1a	Demand of building in WSFU converted to Gallons per Minute.	75	GPM
2	Elevation difference from main or external pressure tank to building control valve:	8	FEET
3	Size of water meter (if applicable):	2	
4	Developed length from main or external pressure tank to building control valve	175	FEET
5	Low pressure at main in street or external pressure tank:	75	PSI

CALCULATE WATER SERVICE PRESSURE LOSS

6	Low pressure at main in street or external pressure tank. (value of # 5 above)		75	PSI
7	Determine pressure loss due to friction in 4 inch diameter water service.			
	Water service piping is COPPER			
	Pressure loss per 100 ft = 0.3 x 1.75	0.525		
	Subtotal		74.5	PSI
8	Determine pressure loss or gain due to elevation (multiply the value of # 2 above by 0.434):		3.5	PSI
9	Available pressure after the bldg. control valve:		71.0	PSI

CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

A = [B - (C + D + E+F+G)] / H x 100

B	Available pressure after the bldg. control valve. (from # 9 above):		71.0	PSI
C	Pressure loss of water meter (when meter is required)		3	PSI
D	Pressure required at controlling fixture		35	PSI
	(Controlling fixture is: WATER CLOSET)			
E	Difference in elevation between building control valve and the controlling fixture in feet	1 x 0.434	0.4	
F	Pressure loss due to water treatment devices and backflow preventors which serve the controlling fixture.		0	PSI
G	Pressure loss through tankless water heaters, combination boiler / hot water heaters, heat exchangers which serve the controlling fixture:		0	PSI
H	Developed length from building control valve to controlling fixture in feet	90 x 1.5	135	FT
A	**Pressure available for uniform loss (psi/100' of pipe).**		**24.1**	**PSI / 100'**

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Project Info. — 22005
Riverside Park Restrooms
New Construction
600 Labaree St
Watertown, WI

Sheet Title
PLUMBING NOTES, LEGEND, AND ABBREVIATIONS

Drawn by	Checked by
KJW	CMH

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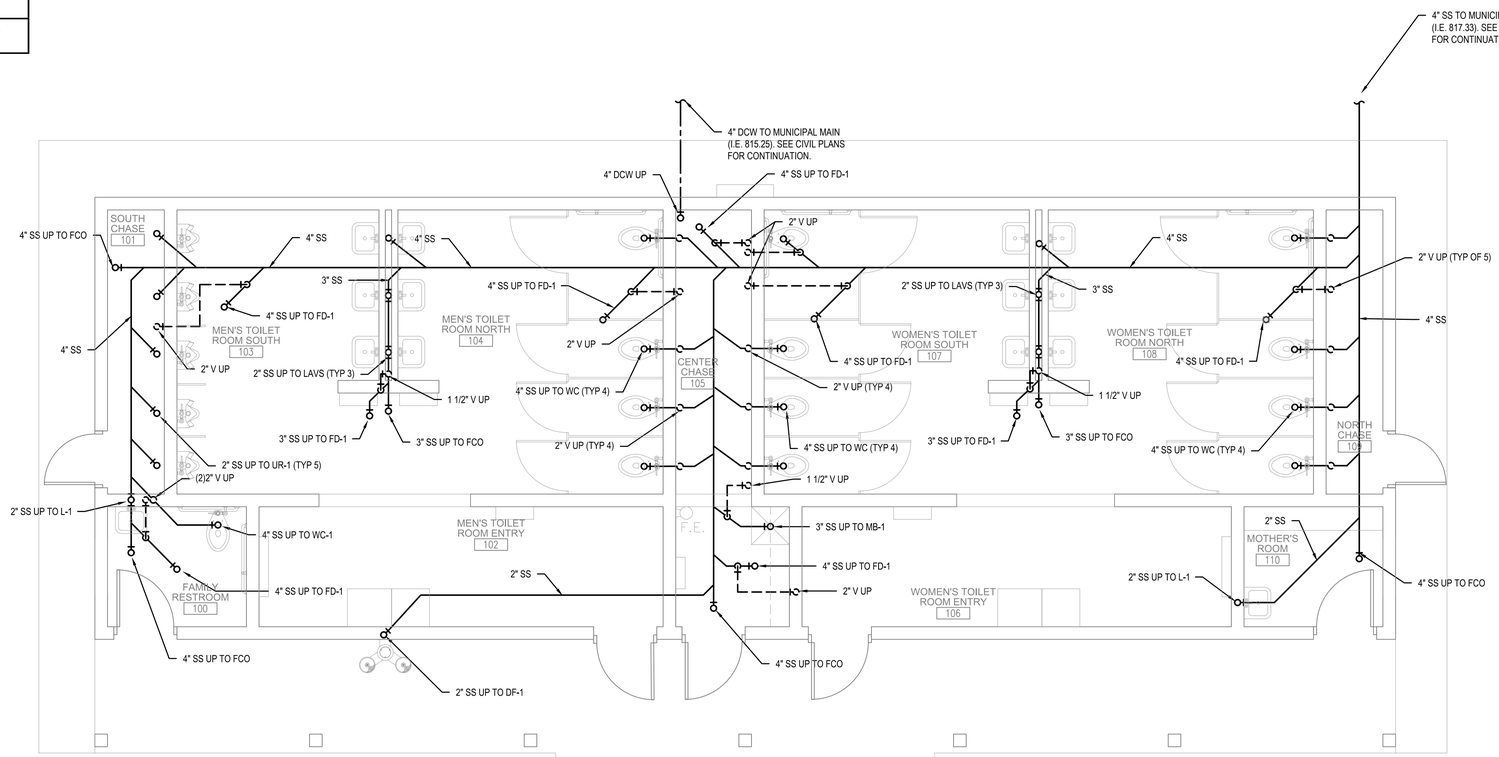
SANITARY PIPING SLOPE	
PIPE SIZE	SLOPE
< 2"	1/4" / 12"
> 2"	1/8" / 12"



1 PLUMBING UNDERGROUND PLAN
SCALE: 1/4" = 1'-0"

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PLUMBING UNDERGROUND PLAN

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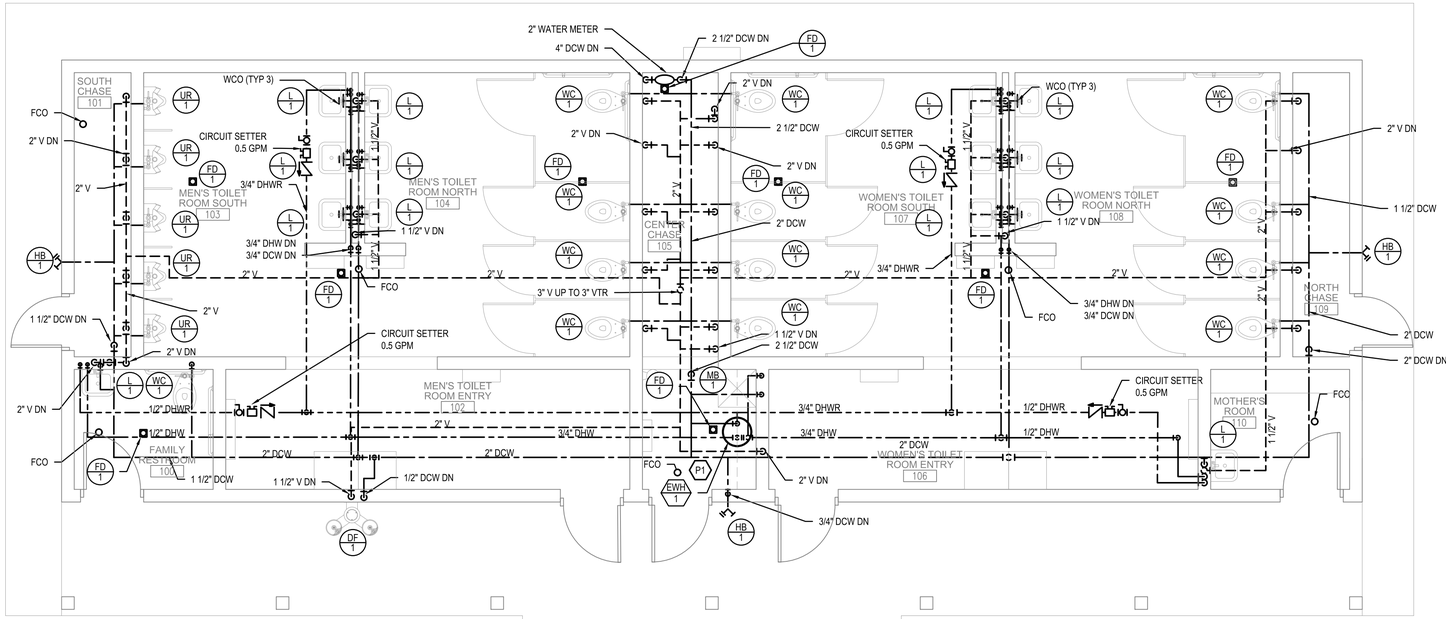
FIXTURE CONNECTIONS				
MARK	DCW	DHW	SS	V
DF-1	1/2"	-	1 1/2"	1 1/2"
HB-1	3/4"	-	-	-
L-1	1/2"	1/2"	2"	1 1/2"
MB-1	1/2"	1/2"	3"	1 1/2"
UR-1	3/4"	-	2"	1 1/2"
WC-1	1 1/2"	-	4"	2"



1 PLUMBING FLOOR PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1	PIPE 1" DCW, 1" DHW, 3/4" DHWR TO EWH-1. REFER TO DETAIL 1 ON SHEET P0.1

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Project Info. — 22005

Riverside Park Restrooms

New Construction

600 Labaree St
Watertown, WI

Sheet Title

PLUMBING FLOOR PLAN

Drawn by	Checked by
KJW	CMH

Revisions

No.	Date	Description
	01.23.2024	Bid & Permit Set

2023-06-30 Bid & Permit Set

Sheet No.

P2.0

ibc engineering services, inc.

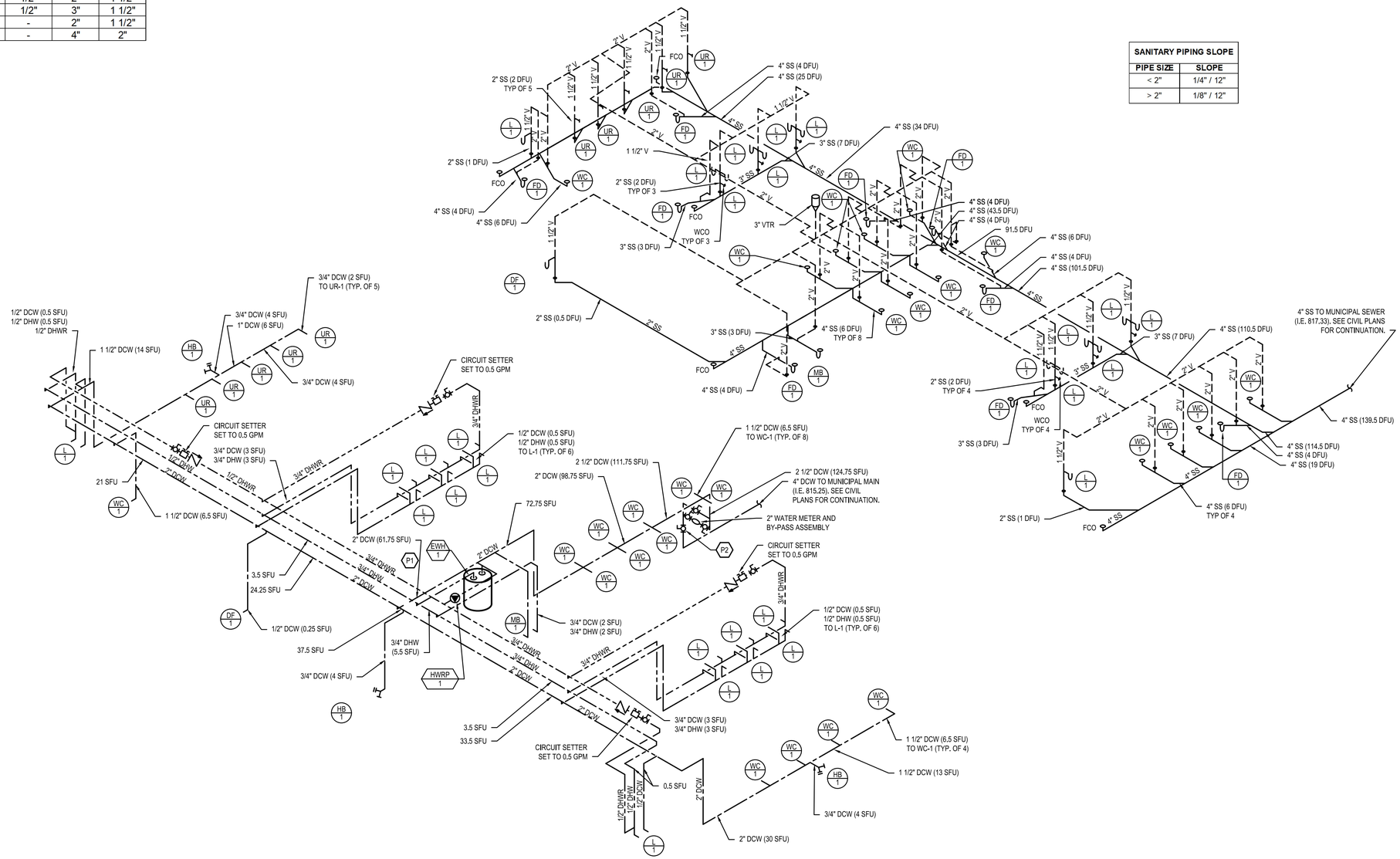
THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

FIXTURE CONNECTIONS				
MARK	DCW	DHW	SS	V
DF-1	1/2"	-	1 1/2"	1 1/2"
HB-1	3/4"	-	-	-
L-1	1/2"	1/2"	2"	1 1/2"
MB-1	1/2"	1/2"	3"	1 1/2"
UR-1	3/4"	-	2"	1 1/2"
WC-1	1 1/2"	-	4"	2"

KEY NOTES

1	PIPE 1" DCW (9 SFU), 1" DHW (9 SFU), 3/4" DHWR TO EWH-1. REFER TO DETAIL 1 ON SHEET P0.1
2	PROVIDE BLOWOUT VALVE AT BUILDING WATER METER FOR ADEQUATE WINTERIZATION OF TO FACILITY.

SANITARY PIPING SLOPE	
PIPE SIZE	SLOPE
< 2"	1/4" / 12"
> 2"	1/8" / 12"



1 PLUMBING ISOMETRICS
N.T.S.

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Riverside Park Restrooms

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PLUMBING ISOMETRICS

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Revisions

No.	Date	Description
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Sheet No.

P3.0

ibc engineering services, inc.

THIS BAR APPEARS 2" LONG ON FULL SIZE SHEETS.

DESIGN CRITERIA

1. BUILDING CODE - INTERNATIONAL BUILDING CODE (IBC) 2015 / ASCE7-10
2. DEAD LOADS
   - ROOF 15 PSF
3. ROOF LIVE LOADS 20 PSF
4. FLOOR LIVE LOADS
   - PUBLIC AREAS 100 PSF
   - STORAGE 125 PSF
5. SNOW LOADS
   - GROUND SNOW, Pg 30 PSF
   - EXPOSURE FACTOR, Ce 1.0
   - TEMPERATURE FACTOR, Ct 1.2
   - SLOPED ROOF FACTOR, Cs 1.0
   - IMPORTANCE FACTOR, Is 1.0
   - FLAT ROOF SNOW, Pf 25.2 PSF
   - SLOPED ROOF SNOW, Ps 25.2 PSF
   - SLIDING & DRIFTING SNOW, IN ADDITION TO FLAT ROOF SNOW, SEE PLANS
   - UNBALANCED SNOW PER ASCE 7
6. WIND LOADS
   - ULTIMATE WIND SPEED, V 115 MPH
   - RISK CATEGORY II
   - EXPOSURE CATEGORY C
   - INTERNAL PRESSURE COEFFICIENT, Gcpi ±0.18

   COMPONENTS & CLADDING NOT DESIGNED BY THE ENGINEER OF RECORD SHALL BE DESIGNED FOR THE WIND PRESSURES SHOWN ON THE COMPONENTS AND CLADDING DIAGRAM. WIND PRESSURES FOR LARGER TRIBUTARY AREAS MAY BE USED BASED ON DELEGATED DESIGN CALCULATIONS.
7. SEISMIC LOADS
   - RISK CATEGORY II
   - IMPORTANCE FACTOR, Ie 1.0
   - SITE CLASS D
   - MAPPED SPECTRAL RESPONSE...
     - Ss 0.083 g
     - S1 0.045 g
   - SPECTRAL RESPONSE COEFFICIENTS
     - SDS 0.089 g
     - SD1 0.072 g
   - SEISMIC DESIGN CATEGORY B
   - SEISMIC FORCE RESISTING SYSTEM ORDINARY REINFORCED MASONRY SHEAR WALLS
   - RESPONSE MODIFICATION FACTOR, R 2
   - RESPONSE COEFFICIENT, Cs 0.044
   - DESIGN BASE SHEAR Cs x (WEIGHT OF BUILDING)
   - ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
8. SOIL DESIGN VALUES
   - REFERENCE GEOTECHNICAL REPORT
   - PEPARED BY TERRACON CONSULATANTS, INC DATED ***06/23/2002***
   - SOIL UNIT WEIGHT (γ) 120 PCF
   - ALLOWABLE SOIL BEARING PRESSURES
     - VERTICAL (NET) 3,000 PSF
9. COMPONENT DESIGN
   - WOOD ROOF TRUSSES
     - DEAD
       - TOP CHORD 10.0 PSF
       - BOTTOM CHORD 5.0 PSF
     - LIVE
       - BOTTOM CHORD 5.0 PSF
     - SNOW
       - TOP CHORD SEE NOTE 5
     - DEFLECTION CRITERIA
       - LL L/360
       - TL L/240

GENERAL REQUIREMENTS

1. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INCLUDE THE METHOD OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, TEMPORARY STRUCTURES, AND PARTIALLY COMPLETED WORK. OBSERVATION VISITS TO THE SITE BY STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
2. GENERAL CONTRACTOR TO DISTRIBUTE ALL SHEETS IN THE SET TO SUBCONTRACTORS.
3. THE ARCHITECT AND/OR ENGINEER OF RECORD SHALL NOT HAVE CONTROL OVER OR BE IN CHARGE OF, AND SHALL NOT BE RESPONSIBLE IN ANY WAY FOR CONSTRUCTION MEANS, METHODS TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH ANY CONSTRUCTION ACTIVITIES, SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
4. SUBMITTALS PREPARED BY SUBCONTRACTORS SHALL BE REVIEWED BY CONTRACTOR PRIOR TO SUBMITTING TO ARCHITECT/ENGINEER.
5. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS AT THE JOB SITE. ANY DISCREPANCIES BETWEEN THE CONDITIONS FOUND AND THOSE INDICATED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
6. SEE DOCUMENTS FROM OTHER DISCIPLINES FOR FLOOR, WALL, AND ROOF OPENINGS, TRENCHES, PITS, PIPE SLEEVES, EQUIPMENT PADS, METAL PAN STAIRS, MISCELLANEOUS IRON, ETC.
7. DO NOT PLACE PIPES, DUCTS, CHASES, ETC. IN STRUCTURAL BEAM AND COLUMN MEMBERS. DO NOT CUT ANY STRUCTURAL MEMBER FOR PIPES, DUCTS, ETC., UNLESS NOTED OTHERWISE. NOTIFY STRUCTURAL ENGINEER WHEN DOCUMENTS BY OTHER DISCIPLINES SHOW OPENINGS, POCKETS, ETC. NOT INDICATED IN THE STRUCTURAL DRAWINGS BUT ARE LOCATED IN THE STRUCTURAL MEMBERS. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM STRUCTURAL ENGINEER FOR INSTALLATION OF SUCH PIPES, DUCTS, CHASES, ETC.
8. DETAILS LABELED "TYPICAL" ON THE STRUCTURAL DRAWINGS APPLY TO ALL SITUATIONS OCCURRING ON PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE LOCATIONS SPECIFICALLY INDICATED. WHERE A DETAIL IS NOT INDICATED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR CONDITIONS.
9. CONTRACTOR DESIGNED ELEMENTS SHALL BE DESIGNED BY LICENSED PROFESSIONAL ENGINEERS REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DESIGN LOAD DATA, SUPPORT REACTIONS, AND CERTIFICATION THAT ELEMENTS WERE DESIGNED FOR LOADS SPECIFIED IN THE CONTRACT DOCUMENTS OR IN THE BUILDING CODE. ALL DOCUMENTS NOTED SHALL BE SEALED BY THE LICENSED ENGINEER. IF CRITERIA INDICATED ARE NOT SUFFICIENT, SUBMIT A WRITTEN REQUEST FOR ADDITIONAL INFORMATION TO THE ARCHITECT. THE FOLLOWING ELEMENTS AND THEIR CONNECTIONS SHALL BE CONTRACTOR DESIGNED:
   A. WOOD TRUSSES

CONCRETE

CODES:	
ACI 301	*SPECIFICATION FOR STRUCTURAL CONCRETE*
ACI MCP	*MANUAL OF CONCRETE PRACTICE*
ACI 318	*BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE*
ACI 318.1	*BUILDING CODE REQUIREMENTS FOR STRUCTURAL PLAIN CONCRETE*

MATERIALS (28 DAY COMPRESSIVE STRENGTH):	
FOOTINGS	f'c=3,000 PSI
INTERIOR SLAB ON GRADE	f'c=4,000 PSI
EXTERIOR SLAB ON GRADE (EXCLUDING SIDEWALKS)	f'c=5,000 PSI
FOUNDATION WALLS / GRADE BEAMS / PIERS	f'c=4,500 PSI
BEAMS / COLUMNS	f'c=4,000 PSI
CONCRETE ON METAL DECK	f'c=4,000 PSI
CONCRETE TOPPING	f'c=4,000 PSI

1. CONCRETE MIX DESIGN (INCLUDING AGGREGATE SIZE, WATER CEMENT RATIO, AIR ENTRAINMENT, ADMIXTURES, SLUMP AND HISTORY OF BREAK TESTS) SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO THE COMMENCEMENT OF ANY WORK. CONCRETE SHALL BE NORMAL WEIGHT UNO.
2. MAXIMUM WATER/CEMENT RATIO PERMITTED SHALL BE 0.50 FOR INTERIOR SLABS ON GRADE, 0.45 FOR BELOW GRADE CONCRETE AND 0.40 FOR CONCRETE EXPOSED TO WATER AND DEICING CHEMICALS.
3. CONCRETE WHICH WILL BE EXPOSED TO THE WEATHER (INCLUDING FOUNDATION WALLS) SHALL HAVE AIR-ENTRAINING ADMIXTURE AS REQUIRED TO PROVIDE 6% ± 1% AIR ENTRAINMENT.
4. MAXIMUM AGGREGATE SIZE SHALL BE 3/4" FOR SLABS ON GRADE, WALLS, BEAMS & COLUMNS, 1" FOR FOOTINGS AND 3/8" FOR TOPPING SLABS. NORMAL WEIGHT AGGREGATE TO CONFORM TO ASTM C33, LIGHTWEIGHT AGGREGATE TO CONFORM TO ASTM C330.
5. CONCRETE SHALL BE EVALUATED ACCORDING TO METHOD 1 OR METHOD 2 AS DESCRIBED IN ACI 301. THE RESULTS OF THESE ANALYSES SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO ANY WORK.
6. THE CONTRACTOR SHALL MAKE PROVISIONS TO ALLOW AN INDEPENDENT TESTING AGENCY TO CAST 4 TEST CYLINDERS FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED, OR FOR ANY DAY'S OPERATION. THE TESTING AGENCY SHALL BE RESPONSIBLE FOR CASTING AND CURING SPECIMENS IN COMPLIANCE TO ASTM C31 AND CASTING TESTING SPECIMENS IN COMPLIANCE TO ASTM C39.
7. DRAWINGS SHOWING THE LOCATION OF CONSTRUCTION JOINTS, CONTROL JOINTS, AND PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE PREPARATION OF REINFORCING SHOP DRAWINGS. MAXIMUM POUR LENGTHS OF WALLS TO BE 40'-0" AND A MINIMUM OF 4'-0" AWAY FROM INTERSECTIONS AND CORNERS.
8. GROUT USED TO SET PLATES SHALL BE NON-SHRINK AND NON-METALLIC.
9. THE CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. BOARD FORMS MAY BE USED FOR UNEXPOSED CONCRETE SURFACES. EARTH FORMS ARE FORBIDDEN.
10. PROVIDE A MINIMUM OF 6" OF COMPACTED GRANULAR FILL UNDER ALL SLABS ON GRADE.
11. VAPOR BARRIER TO BE 10 MILS THICKNESS MINIMUM, LAP MINIMUM 6" AND TAPE ALL SEAMS. VERIFY ADDITIONAL REQUIREMENTS WITH ARCHITECT.
12. FLOOR FLATNESS AND LEVELNESS OF SLAB ON GRADE CONCRETE SHALL HAVE THE FOLLOWING TOLERANCES, AS RECOGNIZED BY THE MOST CURRENT VERSION OF ASTM E 1155 AND ACI 302.1. SEE SPECIFICATION FOR FURTHER REQUIREMENTS (F(F) SPECIFIED OVERALL VALUE (SOV) OF 50, MINIMUM LOCALIZED VALUE (MLV) OF 25 AND F(L) SPECIFIED OVERALL VALUE (SOV) OF 33, MINIMUM LOCALIZED VALVE (MLV) OF 17).

SPREAD FOUNDATIONS

1. ALL FOUNDATIONS SHALL BE SUPPORTED ON APPROVED EXISTING SUBGRADE OR APPROVED COMPACTED STRUCTURAL FILL HAVING A MINIMUM ALLOWABLE BEARING CAPACITY AS INDICATED IN THE SOIL DESIGN VALUES.
2. SUBSURFACE CONDITIONS SHALL BE IMPROVED TO MEET CAPACITY WHEN REQUIRED, AS RECOMMENDED IN GEOTECHNICAL REPORT.
3. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED IN THE DRAWINGS, SPECIFICATIONS, TEST BORINGS OR GEOTECHNICAL REPORTS. THIS DATA IS INCLUDED TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION, AND TO REPRESENT CONDITIONS ONLY AT SPECIFIC LOCATIONS AT THE PARTICULAR TIME THE OBSERVATIONS WERE MADE.
4. ALL EXTERIOR FOUNDATIONS SHALL BEAR ON APPROVED SUBGRADE AT MINIMUM DEPTH OF 4'-0 BELOW ADJACENT FINISH EXTERIOR GRADE.
5. FOOTING ELEVATIONS SHOWN ON THE DRAWINGS REPRESENT ESTIMATED DEPTHS AND ARE NOT TO BE CONSTRUED AS LIMITING THE AMOUNT OF EXCAVATION REQUIRED TO REACH SUITABLE BEARING MATERIAL.
6. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS IN ALL EXCAVATIONS AS REQUIRED TO PREVENT HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OF SURROUNDING SOIL AND/OR PROPERTY WHICH WILL ENDANGER LIVES OR PROPERTY.
7. THE CONTRACTOR SHALL PROVIDE CONTROL OF SURFACE AND SUBSURFACE WATER PROMPTLY TO ENSURE THAT ALL FOUNDATION WORK IS PERFORMED IN A DRY CONDITION.
8. FOUNDATIONS SHALL NOT BE PLACED ON FROZEN SUBGRADE.
9. THE CONTRACTOR SHALL PROTECT IN-PLACE FOUNDATIONS AND SLABS-ON-GRADE FROM FROST PENETRATION UNTIL THE PROJECT IS COMPLETE.
10. FOUNDATION WALLS SHALL BE BRACED DURING BACKFILLING AND COMPACTION OPERATIONS. BRACING SHALL BE LEFT IN PLACE UNTIL PERMANENT STRUCTURAL SUPPORT SYSTEM IS INSTALLED AND APPROVED BY THE ENGINEER.
11. WHERE FOUNDATION WALLS HAVE FILL ON BOTH SIDES, BACKFILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDES OF THE WALL.

CONCRETE REINFORCING

CODES:	
ACI 315	*DETAIL AND DETAILING OF CONCRETE REINFORCEMENT*
ACI 318	*BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE*
MSP2	*CRSI MANUAL OF STANDARD PRACTICE*
AWS D1.4	*STRUCTURAL WELDING CODE - REINFORCING STEEL*
WRI	*WELDED WIRE FABRIC MANUAL OF STANDARD PRACTICE*

MATERIALS:		
REINFORCING BARS	ASTM A615 Gr 60	Fy=60 KSI
WELDED WIRE FABRIC	ASTM A185	
MACRO FIBER REINFORCING	ASTM C1116 Type III	

1. THE REINFORCEMENT FABRICATOR SHALL PROVIDE AND SCHEDULE ON SHOP DRAWINGS ALL REQUIRED REINFORCING STEEL AND NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN PLACE AT THE CORRECT LOCATIONS.
2. THE REQUIRED CLEARANCE FOR REINFORCEMENT (UNO) SHALL BE 3" FOR CONCRETE PLACED DIRECTLY AGAINST EARTH, 2" (#6 & LARGER) AND 1 1/2" (#5 & SMALLER) FOR CONCRETE EXPOSED TO EARTH OR WEATHER, 1 1/2" (# 14 & LARGER) AND 3/4" (#11 & SMALLER) FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER.
3. THE CONTRACTOR SHALL REFER TO TYPICAL DETAILS SHOWN ON THE CONTRACT DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS.
4. WHERE REINFORCEMENT IS REQUIRED IN SECTIONS, REINFORCEMENT IS CONSIDERED TYPICAL WHERE EVER THE SECTION APPLIES.
5. WELDED WIRE FABRIC SHALL HAVE A MINIMUM OF 6" LAP AND BE TIED TOGETHER.
6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF COMPLETION OF REINFORCEMENT INSTALLATION AND ALLOW AT LEAST 24 HOURS BEFORE SCHEDULED CONCRETE PLACEMENT FOR THE ARCHITECT TO INSPECT REINFORCEMENT.

PREFABRICATED WOOD TRUSSES

CODES:	
TRUSS PLATE INSTITUTE	*DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES*

1. THE WOOD TRUSS FABRICATOR SHALL SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE CALCULATIONS MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE LOCAL JURISDICTION.
2. THE WOOD TRUSSES SHALL BE ERECTED AND BRACED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN "BRACING OF WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS".
3. ALL WOOD TRUSSES SHALL BE SUPPORTED BY DIRECT END BEARING ON WALLS, BEAMS, COLUMNS, OR JOIST HANGERS.
4. DESIGN LOADS FOR TRUSSES SHALL BE AS NOTED ON DRAWINGS.
5. DESIGN TRUSS MEMBERS FOR CONCENTRATED LOADS OF SPRINKLER PIPING AND OTHER MECHANICAL LOADS.

REINFORCED MASONRY

CODES:	
ACI 530.1/ASCE 6/TMS 602	*SPECIFICATION FOR MASONRY STRUCTURES*
ACI 530/ASCE 5/TMS 402	*BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES*

MATERIALS:		
CONCRETE MASONRY BLOCK	ASTM C-90	2,000 PSI
TYPE M/S MORTAR	ASTM C270	
GROUT (28 DAY STRENGTH)	ASTM C476	2,000 PSI
REINFORCING BARS	ASTM A615 Gr 60	Fy=60 KSI

1. THE REQUIRED MINIMUM 28 DAY COMPRESSIVE STRENGTH OF THE COMBINATION OF CONCRETE BLOCK, GROUT AND MORTAR ON THE NET AREA OF THE CONSTRUCTION (f'm) SHALL BE A MINIMUM OF 2,000 PSI.
2. ALL CONCRETE BLOCK MASONRY UNITS SHALL BE NORMAL WEIGHT.
3. ALL CONCRETE BLOCK MASONRY UNITS SHALL BE LAID IN RUNNING BOND, UNO.
4. MASONRY BLOCK CELLS CONTAINING VERTICAL REINFORCING SHALL BE GROUTED SOLID. FILLING CELLS WITH MORTAR IS UNACCEPTABLE.
5. ALL BOND BEAMS TO BE GROUTED SOLID.
6. THE BASE OF EACH CELL IN WHICH REINFORCING BAR IS PLACED MUST HAVE A CLEAN OUT HOLE.
7. VERTICAL REINFORCING BARS SHALL BE LAPPED PER SCHEDULE. MECHANICAL SPLICES MAY BE USED IN LIEU OF LAP SPLICES.
8. PROVIDE CONTINUOUS REINFORCED BOND-BEAMS IN ALL REINFORCED MASONRY WALLS AT THE TOP, AND AS REQUIRED IN THE CONTRACT DRAWINGS. BOND-BEAMS AT THE TOP OF THE WALL SHALL BE CONTINUOUS AT MASONRY CONTROL JOINTS. ALL OTHER BOND-BEAMS SHALL NOT BE CONTINUOUS AT MASONRY CONTROL JOINTS. BOND-BEAM REINFORCING SHALL EXTEND INTO AND BE CONTINUOUS WITH ALL INTERSECTING BOND-BEAMS.
9. REINFORCED MASONRY WALLS SHALL HAVE #9 GAUGE (LADDER TYPE) HORIZONTAL REINFORCING AT SPACING AS NOTED ON CONTRACT DRAWINGS, BUT AT A MAXIMUM OF 16" O.C. VERTICALLY.
10. FILL CORES OF MASONRY UNDER ALL BEARING PLATES. THE MINIMUM WIDTH SHALL BE 3 TIMES THE BEARING PLATE LENGTH FOR THREE COURSES BELOW BEARING, UNO.
11. BRACE ALL MASONRY WALLS DURING CONSTRUCTION AS REQUIRED TO RESIST WIND AND OTHER TEMPORARY LOADS UNTIL FINAL STRUCTURAL MEMBERS ARE INSTALLED.
12. PROVIDE BAR POSITIONERS ON ALL REINFORCING TO HOLD AND MAINTAIN PROPER REBAR LOCATIONS AND COVER DURING GROUTING.

STRUCTURAL WOOD CONSTRUCTION

CODES:	
NFPA	*NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION*
NFPA	*DESIGN VALUES FOR WOOD CONSTRUCTION*
AITC	*TIMBER CONSTRUCTION MANUAL, PART II, DESIGN SPECIFICATIONS*
APA	*US PRODUCT STANDARD PS 1-83 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD*
AFPA	*AMERICAN FOREST AND PAPER ASSOCIATION - MANUAL FOR ENGINEERED WOOD CONSTRUCTION*

MATERIALS:		SPECIES/GRADE
SAWN LUMBER	ASTM D1990-96A OR ASTM D245	
WALL STUDS		SPF STUD
COLUMNS		SPF No.1/No.2
JOISTS & BEAMS		SPF No.1/No.2
I-JOISTS	ASTM D5055	
LSL		
WALL STUDS		1.3E
HEADERS		1.3E
LVL	ASTM D5055	
WALL STUDS		
HEADERS		2600 Fb, 2.0E
PSL	ASTM D5055	
BEAMS		2.0E
COLUMNS		1.8E
GLUE-LAMINATED TIMBER	AITC A190.1 & ASTM D3737	DF BALANCED 24F -1.8E
WOOD PANELS (COMPOSITE, ORIENTED STRANDBOARD & PLYWOOD)	DOC PS 1 OR PS 2	APA RATED
PRESERVATIVE TREATED WOOD	AWPA STD U1 & M4	S. PINE No.2
FIRE-RETARDANT TREATED LUMBER	IBC 2303.2 ASTM E84 CLASS A	S. PINE No.2
TONGUE & GROOVE DECKING	AMERICAN FOREST AND PAPER ASSOCIATION WOOD CONSTRUCTION DATA 2	Fb=1000 PSI E=1.8 KSI

1. ALL WOOD SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 15% PRIOR TO INSTALLATION. MOISTURE CONTENT SHALL BE DETERMINED PER ASTM D4442.
2. ALL WOOD SHALL BE PROTECTED FROM MOISTURE BEFORE INSTALLATION. ALL WOOD STORED AT THE BUILDING SITE SHALL BE ELEVATED 6" ABOVE THE GROUND AND COVERED WITH PLASTIC TARPAULINS.
3. ALL STRUCTURAL WOOD SHALL MEET OR EXCEED ALLOWABLE UNIT STRESSES AND/OR GRADE AS REQUIRED BY THE DRAWINGS.
4. JOISTS SHALL BE BRIDGED WITH 1" X 3" CROSS BRIDGING, OR EQUAL, AT INTERVALS NOT EXCEEDING 8' -0" O.C.
5. ALL WOOD PERMANENTLY EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, MASONRY OR CONCRETE SHALL HAVE A PRESERVATIVE TREATMENT EQUAL TO 0.4 P.C.F RETENTION OF PRESSURE INJECTED PRESERVATIVE.
6. ALL JOISTS AND RAFTERS SHALL BE SUPPORTED BY DIRECT END BEARING ON WALLS, BEAMS OR JOIST HANGERS.
7. WOOD MEMBERS SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE OR MASONRY WITHOUT BEING MADE OF NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD UNLESS 1/2" AIR SPACE IS PROVIDED AROUND (TOP, SIDES, END) OF WOOD RAFTERS/JOISTS/GIRDERS; IMPERVIOUS MOISTURE BARRIER OR 1" ELEVATED BASE IS PROVIDED AT WOOD COLUMNS; IMPERVIOUS MOISTURE BARRIER IS PROVIDED AT SILL PLATES.
8. WOOD STRUCTURAL PANELS SHALL BE LAID WITH THE LONG PANEL DIRECTION PERPENDICULAR TO THE SUPPORTING MEMBERS, WITH ENDS STAGGERED.
9. WOOD STRUCTURAL PANELS SHALL BEAR THE APPROPRIATE GRADING STAMP BY THE REVIEWING AGENCY.
10. ALL NAILS GIVEN ON THE PLANS SHALL BE CONSIDERED "COMMON NAILS" UNLESS NOTED ON THE PLANS.
11. ALL FASTENERS FOR WOOD CONSTRUCTION CONNECTORS (JOIST HANGERS, ETC.) SHALL BE PROVIDED BY OR APPROVED BY THE CONNECTOR'S MANUFACTURER.
12. ALL FASTENERS AND WOOD CONSTRUCTION CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE TREATED WOOD SHALL BE STAINLESS STEEL.
13. ALL FASTENERS AND WOOD CONSTRUCTION CONNECTORS IN CONTACT WITH FIRE RETARDANT TREATED WOOD USED IN INTERIOR APPLICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS FASTENERS AND WOOD CONSTRUCTION CONNECTORS SHALL BE STAINLESS STEEL OR HOT-DIPPED GALVANIZED STEEL.
14. ALL BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 OR HOT DIP GALV. WASHERS SHALL BE PROVIDED BETWEEN THE HEAD OR NUT AND THE WOOD SURFACE.
15. NO WOOD MEMBER SHALL BE CUT, NOTCHED, OR DRILLED WITHOUT THE SPECIFIC WRITTEN PERMISSION OF THE EOR.
16. THE GLUE-LAMINATED TIMBER FABRICATOR SHALL SUBMIT DRAWINGS AND CALCULATIONS, INCLUDING CONNECTIONS, TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE CALCULATIONS MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE LOCAL JURISDICTION.

STRUCTURAL STEEL

CODES:	
AISC	*SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STEEL FOR BUILDINGS*
AISC	*CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES*
AWS D1.1	*STRUCTURAL WELDING CODE - STEEL*
AISC	*STRUCTURAL STEEL DETAILING MANUAL*

MATERIALS:		
HOT ROLLED W & WT SHAPES	ASTM A992	Fy=50 KSI
ANGLES, CHANNELS & PLATES	ASTM A36	Fy=36 KSI
S + M SHAPES	ASTM A36	Fy=36 KSI
HP SHAPES	ASTM A572 Gr 50	Fy=50 KSI
STEEL PIPE	ASTM A53 Gr B	Fy=35 KSI
RECTANGULAR HSS	ASTM A500 Gr B	Fy=46 KSI
ROUND HSS	ASTM A500 Gr B	Fy=42 KSI
HIGH STRENGTH BOLTS	ASTM A325	
HEAVY HEX NUTS	ASTM A563	
HARDENED STEEL WASHERS	ASTM A436	
ANCHOR RODS	ASTM F1554 Gr 36	Fy=36 KSI
THREADED RODS	ASTM A36	Fy=36 KSI
HEADED STUD ANCHORS	ASTM A108	

1. PROVIDE 2 MIL THICKNESS RED OR GRAY OXIDE PRIMER ON ALL STEEL SURFACES (UNO).
2. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND FASTENERS HOT DIPPED GALVANIZED PER ASTM A153.
3. ANCHOR RODS SHALL BE PRESET WITH TEMPLATES.
4. LEVELING PLATES AND BEARING PLATES SHALL BE SET IN A FULL BED OF NON-SHRINK GROUT.
5. CONNECTIONS MAY BE BOLTED OR WELDED AT THE FABRICATORS OPTION. BOLTED CONNECTIONS SHALL BE A MINIMUM BOLT DIAMETER OF 3/4" (UNO), HIGH STRENGTH BOLTS IN SINGLE OR DOUBLE SHEAR (UNO) AND SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR UNRESTRAINED MEMBERS.
6. THE MINIMUM FILLET WELD SIZE SHALL NOT BE LESS THAN 3/16" (UNO).
7. ALL WELDS SHALL USE WELD METAL CONFORMING TO E70XX AND CONFORMING TO AWS WELDING PROCEDURES AND STANDARDS.
8. ALL WELDS SHALL BE MADE BY AWS CERTIFIED WELDERS CERTIFIED IN THE POSITION IN WHICH THE WELD IS TO BE MADE.
9. THE ERECTION OF ANY STRUCTURAL STEEL MEMBERS SHALL NOT COMMENCE UNTIL ALL SUPPORTING CONCRETE/MASONRY ELEMENTS HAVE ATTAINED AT LEAST 75% OF THEIR INTENDED MINIMUM COMPRESSIVE STRENGTH.
10. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SUPPORTS AS REQUIRED FOR THE SAFE ERECTION OF ALL STEEL. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL PERMANENT BRACING HAS BEEN INSTALLED AND FLOOR SLAB CONCRETE HAS ATTAINED 75% OF ITS REQUIRED STRENGTH.
11. STRUCTURAL STEEL SHALL BE TRUE AND PLUMB BEFORE FINAL BOLTING OR WELDING OF CONNECTIONS.
12. THE CONTRACTOR SHALL NOT MODIFY OR CUT ANY STRUCTURAL STEEL WITHOUT WRITTEN APPROVAL FROM THE EOR.
13. THE CONTRACTOR SHALL FIELD TOUCH UP ALL ABRASIONS, BURNS, AND SIMILAR DEFECTS IN PAINT OF STRUCTURAL STEEL.
14. PROVIDE 1/4" CLOSURE/END PLATES FOR ALL OPEN ENDS OF HSS & PIPE MEMBERS.

POST- INSTALLED ANCHORS

1. THE DIAMETER, EMBEDMENT LENGTH AND TYPE OF ADHESIVE ANCHORS, EXPANSION ANCHORS, AND SCREW ANCHORS SHALL BE AS SPECIFIED ON THE DRAWINGS.
2. THE SUBSTITUTION OF OTHER MANUFACTURER'S SIMILAR PRODUCTS IS ALLOWED, PROVIDED THAT THE SIZE IS EQUAL TO, AND CAPACITY IN SHEAR AND UPLIFT ARE EQUAL TO OR GREATER THAN WHAT IS SPECIFIED ON THE DRAWINGS. THE COST OF REDESIGN OF SUCH SUBSTITUTIONS SHALL BE BORE BY THE CONTRACTOR.
3. INSTALLATION OF ANCHORS SHALL STRICTLY FOLLOW ALL MANUFACTURER'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS. ALL DRILL HOLE PREPARATIONS SHALL BE FOLLOWED.
4. NO LOAD SHALL BE APPLIED TO ADHESIVE ANCHORS PRIOR TO THE FULL CURE TIME AS SPECIFIED BY THE MANUFACTURER.
5. TESTING OF 10% OF ALL INSTALLED ANCHORS IS REQUIRED. TESTED ANCHORS SHALL MEET THE MANUFACTURERS PROOF LOAD REQUIREMENTS AND/OR INSTALLATION TORQUE REQUIREMENTS. MALFUNCTIONING FASTENERS SHALL BE REPLACED.

STRUCTURAL SHEET INDEX

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Project Info. 22005

RIVERSIDE PARK RESTROOMS

New Construction

600 Labaree St
Watertown, WI

Sheet Title

GENERAL NOTES

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SHEARWALL SCHEDULE

MARK	BLOCKED/ UNBLOCKED	EXTERIOR SHEATHING		INTERIOR SHEATHING		SILL PLATE ANCHORS
		TYPE	FASTENING	TYPE	FASTENING	
SW1	BLOCKED	APA RATED 7/16"	8d (1 3/8" PEN MIN) @ 6/12	SEE ARCH	-	SIMPSON 1/4" Ø SDS HD SCREW @ 12" OC (3" PEN MIN) @ WOOD
SW2	BLOCKED	APA RATED 7/16"	8d (1 3/8" PEN MIN) @ 4/12	SEE ARCH	-	SIMPSON 1/4" Ø SDS HD SCREW @ 6" OC (3" PEN MIN) @ WOOD

NOTES:
1. SEE TYPICAL SHEARWALL DETAIL.
2. LETTER AFTER SHEARWALL DESIGNATION DENOTES ANCHORAGE TYPE, SEE SHEARWALL ANCHORAGE SCHEDULE.

SHEARWALL ANCHORAGE

LABEL	STRAP	HOLDOWN	THREADED ROD Ø	ENDPOST
A	-	DTT2Z	1/2"	(1) 2x

NOTE:
1. SEE TYPICAL HOLDOWN ANCHORAGE DETAIL FOR THREADED ROD EMBEDMENT LENGTH AND ANCHORAGE REINFORCING.
2. HOLDOWNS ONLY REQUIRED AT CONCRETE, USE STRAPS ELSEWHERE. SEE TYPICAL SHEARWALL DETAIL.
3. AT STRAPS, PROVIDE 1/2 OF SPECIFIED NAILS IN EACH END LENGTH. BETWEEN END LENGTHS, PROVIDE NAILS @ 6" ON CENTER.
4. IF SHEARWALL ENDS ARE UNALIGNED, CONTINUE END POST TO FOUNDATION AND PROVIDE HOLDOWN. IF SHEARWALL IS SUPPORTED BY BEAM, PROVIDE STRAPS AND WRAP AROUND BEAM.

CONCRETE SLAB ON GRADE SCHEDULE

MARK	SYSTEM DEPTH	CONCRETE SLAB			COMPACTED GRAVEL THICKNESS	REMARKS
		TYPE	THICKNESS	SLAB REINFORCING		
SOG 5	11"	NWC	5"	FORTA FERRO FIBER REINFORCING (3 LB/CY)	6"	SEE TYPICAL SLAB JOINT DETAIL

WOOD DECK/SHEATHING SCHEDULE

MARK	SYSTEM DEPTH	STRUCTURAL LAYER		TOPPING/OVERLAYMENT		REMARKS
		TYPE	THICKNESS	TYPE	THICKNESS	
WD062	5/8"	PLYWOOD/OSB WOOD SHEATHING	5/8"	-		PROVIDE SIMPSON PSC CLIPS AT PANEL EDGES

PIER SCHEDULE

MARK	DIMENSIONS			REINFORCING		REMARKS
	DIAMETER	WIDTH	DEPTH	VERTICAL	TIES	
P1		1'-0"	1'-0"	(4)-#6	#3 @1'-0" OC	

LINTEL SCHEDULE

MARK	LINTEL	JAMB REINF	LINTEL TYPE	REMARKS
L1	8" BOND BEAM W/ (2)-#5 CONT	(1) #5	A	
L2	16" BOND BEAM W/ (2)-#5 CON	(1) #5	A	

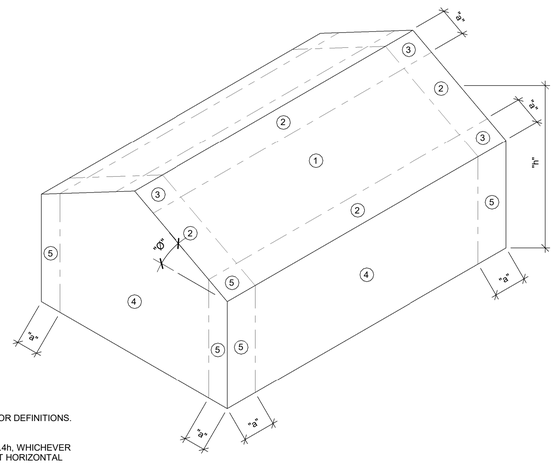
WOOD COLUMN SCHEDULE

MARK	SIZE	GRADE	TOP CONNECTION	BOTTOM CONNECTION	REMARKS
WC1	6X6 TIMBER	SPF No.1/No.2	CCQ	ABU	GALVANIZE CONNECTIONS WHEN EXPOSED TO WEATHER

WOOD HEADER SCHEDULE

MARK	SIZE	GRADE	JAMB STUDS	KING STUDS	REMARKS
H1	(3) 2x8	SPF	(1) 2x	(1) 2x	

ULTIMATE ROOF SURFACE PRESSURE (PSF)			
AREA (SF)	10.0	50.0	100.0
NEGATIVE ZONE 1	-27.0	-25.3	-24.5
NEGATIVE ZONE 2	-47.0	-38.3	-34.5
NEGATIVE ZONE 3	-69.5	-59.0	-54.5
POSITIVE ZONE 1	17.0	16.0	16.0
POSITIVE ZONES 2 & 3	-	-	-
OVERHANG ZONE 1 & 2	-55.0	-55.0	-55.0
OVERHANG ZONE 3	-92.5	-71.5	-62.5
ULTIMATE PARAPET SURFACE PRESSURE (PSF)			
AREA (SF)	10.0	50.0	100.0
CASE A: INTERIOR ZONE	0.0	0.0	0.0
CASE A: CORNER ZONE	0.0	0.0	0.0
CASE B: INTERIOR ZONE	0.0	0.0	0.0
CASE B: CORNER ZONE	0.0	0.0	0.0
ULTIMATE WALL SURFACE PRESSURE (PSF)			
AREA (SF)	10.0	100.0	200.0
NEGATIVE ZONE 4	-32.0	-27.6	-26.3
NEGATIVE ZONE 5	-39.5	-30.7	-28.0
POSITIVE ZONE 4 & 5	29.5	25.1	23.8



NOTE:
1. REFER TO "WIND LOADS AT COMPONENTS AND CLADDING" FOR DEFINITIONS.
(1) THROUGH (5) INDICATES WIND LOAD ZONES.
2. NOTATION:
"a" 10 PERCENT OF LEAST HORIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4" OF LEAST HORIZONTAL DIMENSION OR 3 FT.
"h" MEAN ROOF HEIGHT, IN FEET, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR Ø ≤ 10°
"Ø" ANGLE OF PLANE OF ROOF FROM HORIZONTAL, IN DEGREES.

1 / S0.2 COMPONENTS & CLADDING DIAGRAM

SCALE: 1" = 1'-0"

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RIVERSIDE PARK RESTROOMS

New Construction

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SCHEDULES

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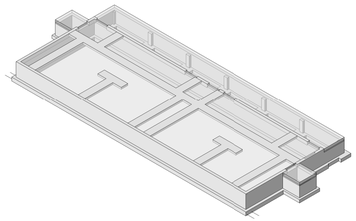
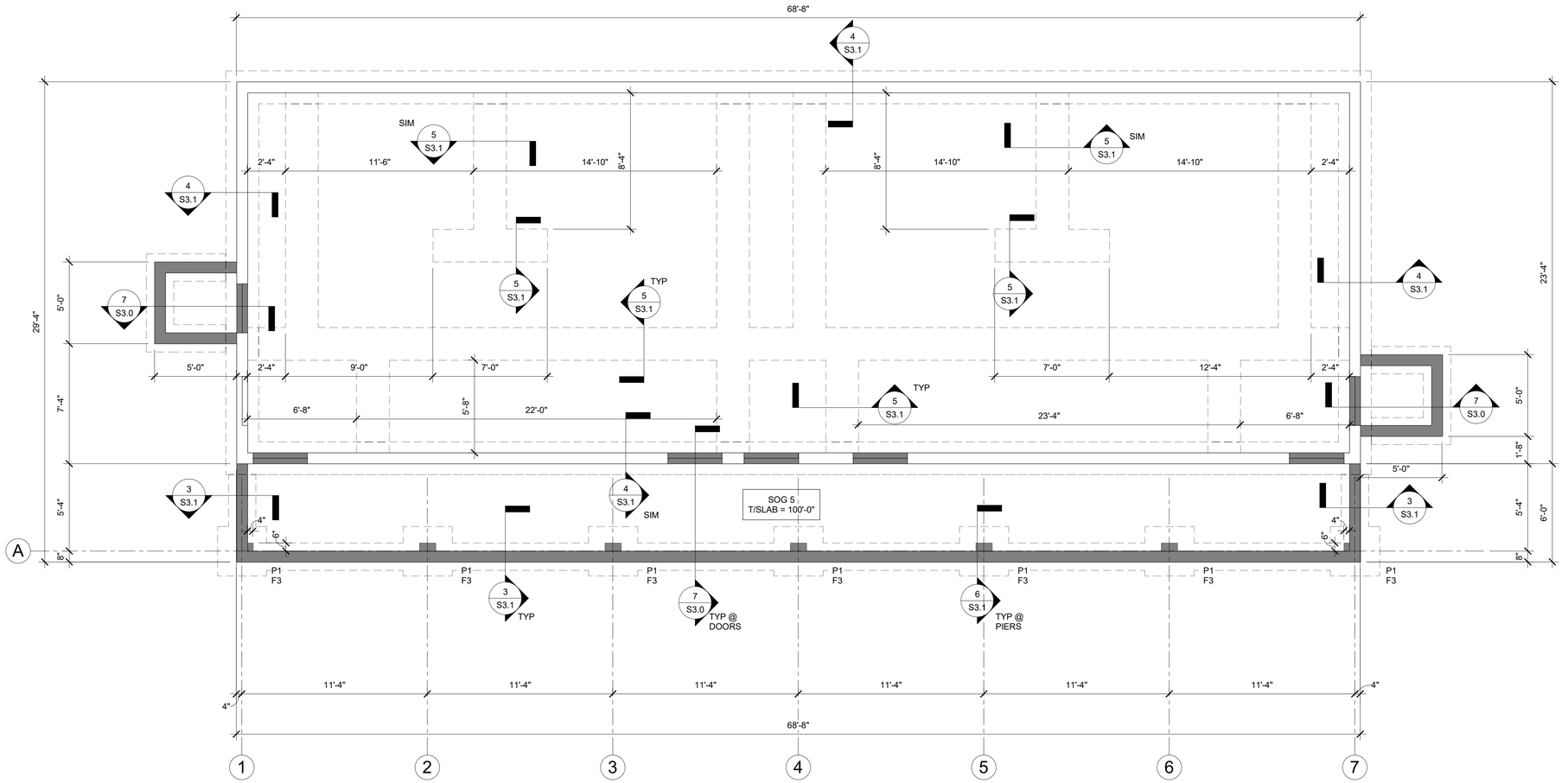


FOUNDATION PLAN NOTES:

1. SEE SHEET S0.1 FOR GENERAL NOTES AND S0.2 FOR SCHEDULES.
2. SEE SHEET S3.0.FOR FOUNDATION WALL CONSTRUCTION JOINTS AND TYPICAL REINFORCING DETAILS.
3. TOP OF EXTERIOR FOOTING ELEVATION = 96'-0" UNO.
4. TOP OF INTERIOR FOOTING ELEVATION = 100'-0" UNO.
5. TOP OF PIER ELEVATION = 99'-4" UNO.
6. TOP OF FOUNDATION WALL ELEVATION = 100'-0" UNO.
7. SEE MECHANICAL DRAWINGS FOR HOUSEKEEPING PADS REQUIRED FOR MECHANICAL EQUIPMENT.
8. SEE ARCHITECTURAL DRAWINGS FOR DOOR OPENING SIZES AND LOCATIONS IN WALLS.



1 S1.0 FOUNDATION PLAN

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

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FOUNDATION PLAN

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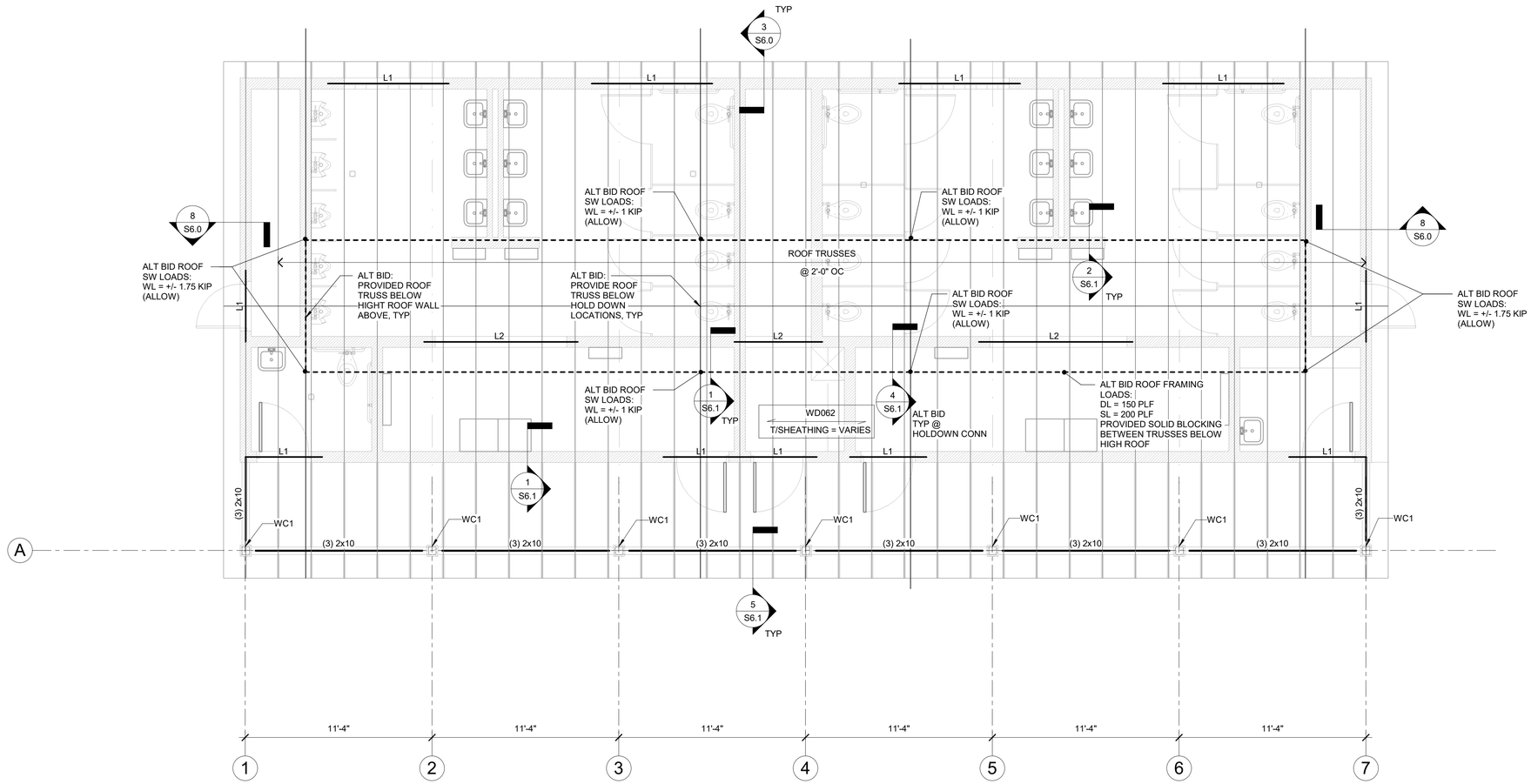
HIGH ROOF PLAN NOTES:

1. SEE SHEET S0.1 FOR GENERAL NOTES AND S0.2 FOR SCHEDULES.
2. SEE SHEET S4.0 FOR TYPICAL MASONRY SECTIONS AND DETAILS, INCLUDING TYPICAL WALL REINFORCING.
3. SEE SHEET S6.0 FOR TYPICAL WOOD SECTIONS AND DETAILS.
4. SEE ARCHITECTURAL DRAWINGS FOR TRUSS PROFILES, HEEL HEIGHTS, TRUSS BEARING ELEVATIONS AND ROOF SLOPES.
5. COORDINATE FINAL SIZE AND LOCATION OF OPENINGS, EQUIPMENT AND ROOF DRAINS WITH MECHANICAL AND PLUMBING CONTRACTORS.
6. ALL HEADERS AND BEAMS TO BE DROPPED UNO.
7. ALL WOOD STUD BEARING WALLS TO BE 2x6 SPF No.1/No.2 @ 16" OC.



1 / S1.1 ROOF FRAMING PLAN

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

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ROOF FRAMING PLAN

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ROOF PLAN NOTES:

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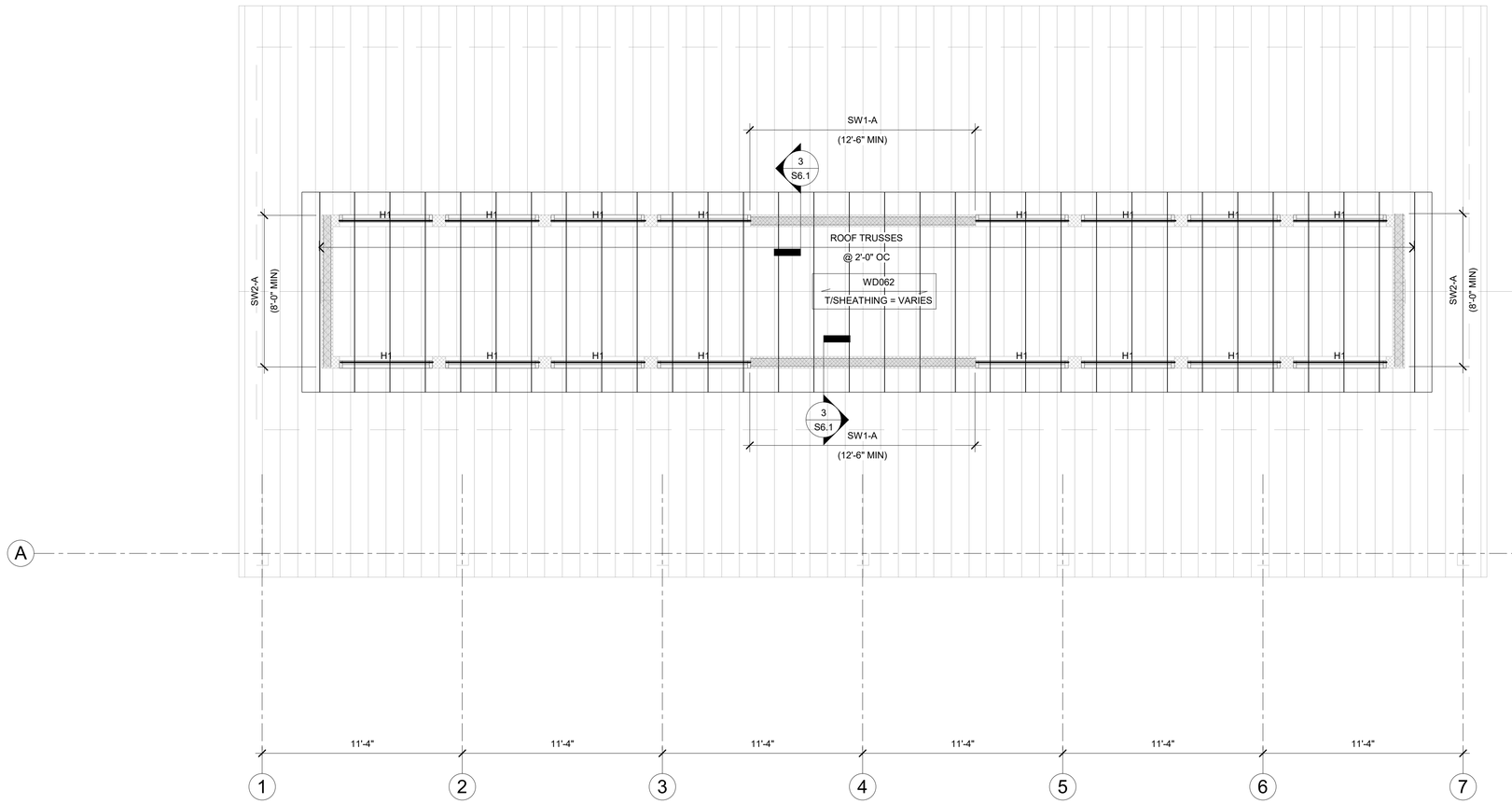
4. SEE ARCHITECTURAL DRAWINGS FOR TRUSS PROFILES, HEEL HEIGHTS, TRUSS BEARING ELEVATIONS AND ROOF SLOPES.
5. COORDINATE FINAL SIZE AND LOCATION OF OPENINGS, EQUIPMENT AND ROOF DRAINS WITH MECHANICAL AND PLUMBING CONTRACTORS.
6. PROVIDE L1 LINTEL FOR ALL LOUVER OPENINGS. COORDINATE WITH ARCH & MEP FOR LOCATIONS AND SIZES.



1 / S1.2 HIGH ROOF FRAMING PLAN - ALTERNATE BID

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

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HIGH ROOF FRAMING PLAN

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REINFORCING LAP SPLICE LENGTH SCHEDULE										
f'c (PSI)	LOCATION	BAR SIZE								
		#3	#4	#5	#6	#7	#8	#9	#10	#11
3,000	TOP BARS	28	38	47	56	81	93	105	118	131
	OTHERS	22	29	36	43	63	72	81	91	101
4,000	TOP BARS	25	33	41	49	71	81	91	102	114
	OTHERS	19	25	31	37	54	62	70	79	87

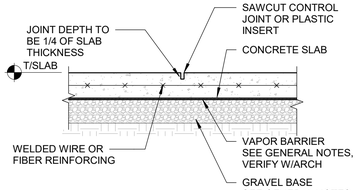
NOTES:
1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
2. TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318-14. LENGTHS ARE IN INCHES.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. SPLICE LENGTHS IN THIS SCHEDULE ARE BASED ON CLEAR COVER AT LEAST 1.0 BAR Ø AND CLEAR SPACING AT LEAST 2.0 BAR Ø.

SECTION 1: SLAB-ON-GRADE NOTES
1. SLAB-ON-GRADE CONSTRUCTION SHOULD CONFORM WITH THE RECOMMENDATIONS AND REQUIREMENTS SET FORTH IN THE LATEST RELEASE OF ACI 302 GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION.
2. REFER TO GEOTECHNICAL REPORT AND/OR ARCHITECTURAL DRAWINGS & SPECIFICATIONS FOR SUB-FLOOR DRAINAGE SYSTEM, SUBGRADE PREPARATION, MUD SLAB AND/OR VAPOR RETARDER REQUIREMENTS.
3. THE SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
4. REFER TO PLANS FOR SLAB THICKNESS ("T") AND REINFORCEMENT (WWF OR REINFORCEMENT BARS). REFER TO SPECIFICATIONS FOR FIBER REINFORCEMENT TO BE INCORPORATED IN CONCRETE MIX, IF ANY. WHERE PRESENT, REINFORCING BARS SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
5. PROVIDE (2) #5 x 6'-0" AT ALL RE-ENTRANT CORNERS AND OTHER SIMILAR SLAB DISCONTINUITIES.
6. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, PROVIDE CONTROL AND/OR CONSTRUCTION JOINTS AT EVERY COLUMN LINE AND IN BETWEEN THE COLUMNS SUCH THAT THE JOINT SPACING DOES NOT EXCEED 36 x ("T") UNO. THE RESULTING PANELS SHOULD BE APPROXIMATELY SQUARE.

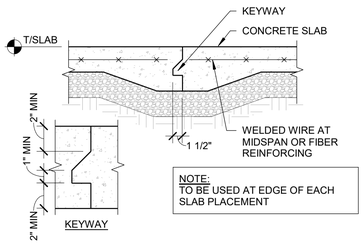
SECTION 2: CONSTRUCTION JOINT NOTES
1. BREAK THE BOND BETWEEN NEW AND PREVIOUSLY PLACES SLABS BY SPRAYING OR BY PAINTING THE EXPOSED SIDE OF THE JOINT WITH A CURING COMPOUND, ASPHALTIC EMULSION, OR FORM OIL.

SECTION 3: CONTROL JOINT NOTES
1. FOR SAW-CUT CONTROL JOINTS, MAKE THE SAW-CUT AS SOON AS THE SLAB IS ABLE TO SUPPORT THE WEIGHT OF WORKERS AND SAWING EQUIPMENT WITHOUT DAMAGE TO THE FINISHED SURFACE OF THE SLAB, BUT WITHIN 24 HOURS.
2. DEPTH OF SAW-CUT SHOULD BE 1 1/4" IF PRODUCED USING THE EARLY ENTRY DRY-CUT PROCESS AND "T"/4 (1" MIN) IF PRODUCED USING THE CONVENTIONAL WET-CUT PROCESS.
3. REFER TO SPECIFICATIONS REGARDING EPOXY RESIN OR ELASTOMERIC SEALANT REQUIREMENTS FILL CONTROL JOINTS.

SECTION 4: FORMED CONTROL JOINT OPTION NOTES
1. FORM CONTROL JOINTS BY INSERTING A PRE-MOLDED STRIP INTO THE FRESH CONCRETE UNTIL THE TOP SURFACE OF THE STRIP IS FLUSH WITH THE TOP SURFACE OF THE SLAB.
2. TOOL THE SLAB EDGES ROUND ON EACH SIDE OF THE INSERT, 1/8" MAX RADIUS.
3. AFTER THE CONCRETE HAS CURED, REMOVE THE INSERTS AND CLEAN THE GROOVE OF LOOSE DEBRIS.

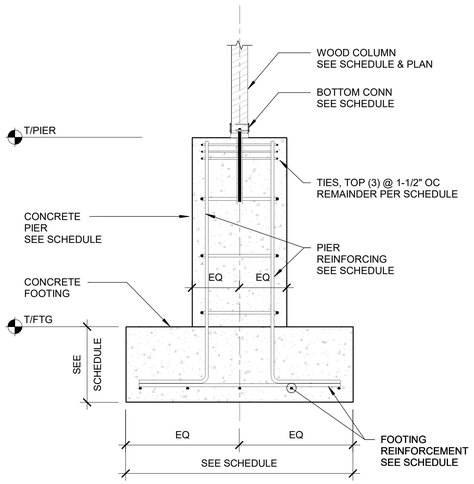


SLAB CONTROL JOINT



NOTE:
TO BE USED AT EDGE OF EACH SLAB PLACEMENT

SLAB CONSTRUCTION JOINT



1 S3.0 TYPICAL CONCRETE REINFORCING LAP LENGTHS
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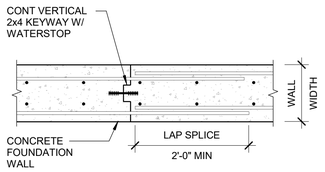
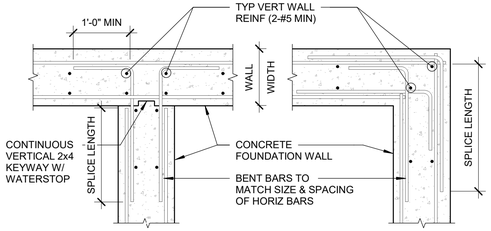
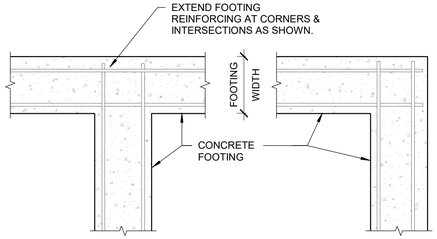
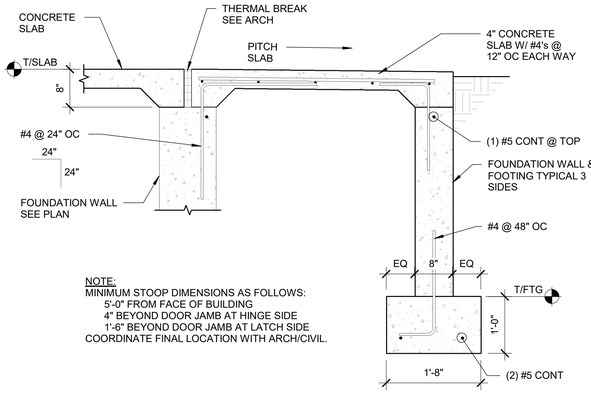


2 S3.0 TYPICAL SLAB JOINTS
SCALE: NTS





3 S3.0 TYPICAL CONCRETE PIER DETAIL
SCALE: NTS



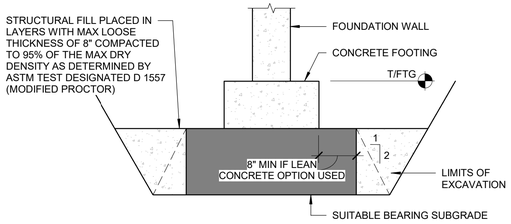
NOTE:
MINIMUM STOOP DIMENSIONS AS FOLLOWS:
5'-0" FROM FACE OF BUILDING
4" BEYOND DOOR JAMB AT HINGE SIDE
1'-6" BEYOND DOOR JAMB AT LATCH SIDE
COORDINATE FINAL LOCATION WITH ARCH/CIVIL.

4 S3.0 TYPICAL WALL CONSTRUCTION JOINT
SCALE: NTS

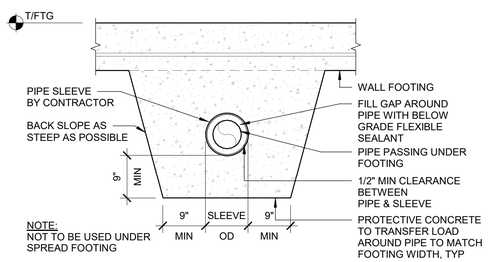
5 S3.0 TYPICAL WALL REINFORCING
SCALE: NTS

6 S3.0 TYPICAL FOOTING REINFORCING
SCALE: NTS

7 S3.0 TYPICAL STOOP SECTION
SCALE: NTS

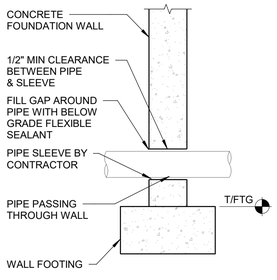


NOTES:
1. CONTRACTOR'S OPTION: ELIMINATE STRUCTURAL FILL BY LOWERING DESIGNED FOOTING ELEVATION SO THAT FOOTING RESTS DIRECTLY ON SUITABLE BEARING SUBGRADE, PROVIDE LEAN CONCRETE (Fc = 500 PSI MIN) UNDER THE FOOTING AS SHOWN HATCHED ABOVE, OR INCREASE FOOTING THICKNESS TO REACH SUITABLE BEARING SUBGRADE.
2. THIS DETAIL APPLIES ONLY AT THOSE LOCATIONS WHERE GEOTECH ENGINEER DEEMS SOILS AT DESIGNED FOOTING ELEVATIONS ARE INADEQUATE FOR FOOTING SUPPORT. WHERE THIS WORK IS REQUIRED, CONTRACTOR WILL BE COMPENSATED ON A PRE-ESTABLISHED UNIT COST AGREED UPON BY THE CONTRACTOR, ARCHITECT/ENGINEER, AND OWNER.

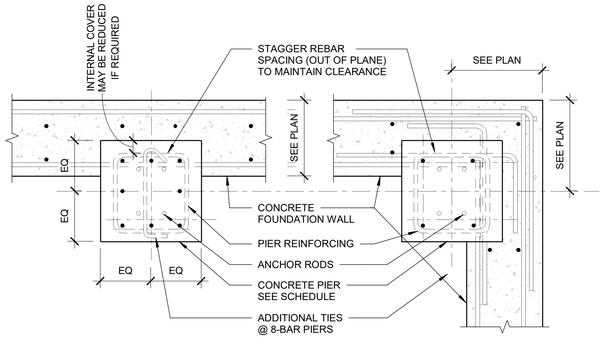


NOTE:
NOT TO BE USED UNDER SPREAD FOOTING

UNDER WALL FOOTING



THROUGH WALL



8 S3.0 TYPICAL OVER EXCAVATION DETAIL
SCALE: NTS

9 S3.0 TYPICAL PIPE CROSSING FOUNDATION WALL
SCALE: NTS

10 S3.0 TYPICAL PIER AT WALL AND CORNER
SCALE: NTS

THRIVE ARCHITECTS

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p: 833-380-6180

Project Info. 22005

RIVERSIDE PARK RESTROOMS

New Construction

600 Labaree St
Watertown, WI

Sheet Title

CONCRETE SECTIONS & DETAILS

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Mequon, WI 53092 | 262.236.9372
C4E Project #: 21325

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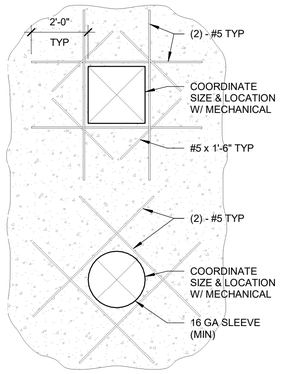
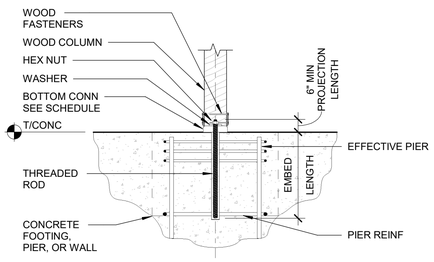


NOTES:

1. APPLIES TO 24" (MAX) OPENINGS THROUGH FOUNDATION WALL.
2. TOP OF OPENING TO BE 24" (MIN) FROM TOP OF WALL.
3. REINFORCING LAYERS TO MATCH FOUNDATION WALL.
4. USE 90° STANDARD HOOK AT CORNERS AND ENDS OF WALL.

1 S3.1 TYPICAL CONCRETE WALL PENETRATION

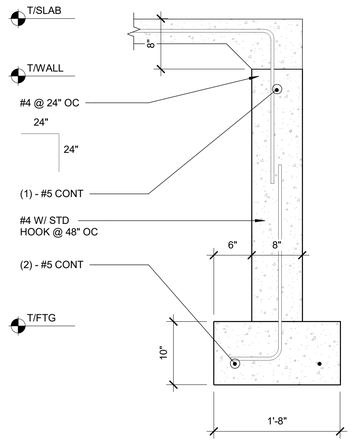
SCALE: NTS



CONN TYPE	WOOD FASTENERS	THREADED ROD Ø (IN.)	EMBED LENGTH (IN.)	EPOXY TYPE
SIMPSON ABA44	(6) - 10d	1/2	4 1/4	HILTI HIT-RE 500
SIMPSON ABA66	(8) - 16d	5/8	5	HILTI HIT-RE 500
SIMPSON ABU88	(18) - 16d	(2) - 5/8	6 5/8	HILTI HIT-RE 500

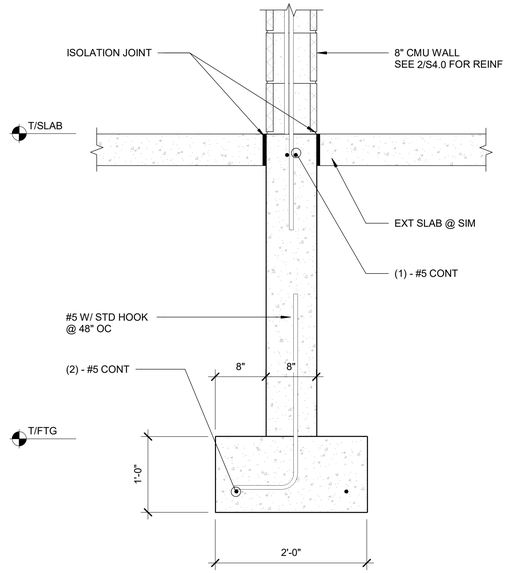
2 S3.1 TYPICAL WOOD COLUMN BASE

SCALE: NTS



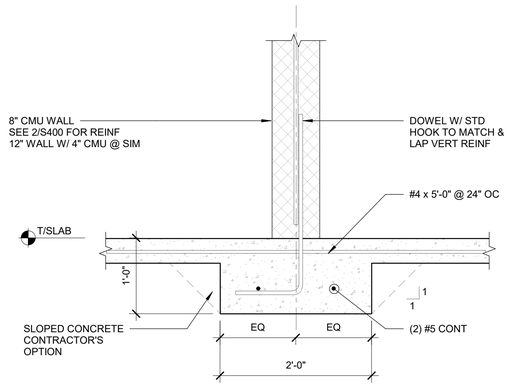
3 S3.1 SECTION

SCALE: NTS



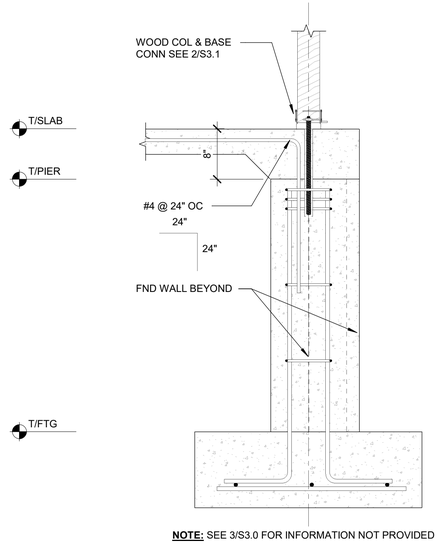
4 S3.1 SECTION

SCALE: NTS



5 S3.1 SECTION

SCALE: NTS



NOTE: SEE 3/S3.0 FOR INFORMATION NOT PROVIDED

6 S3.1 SECTION

SCALE: NTS

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RIVERSIDE PARK RESTROOMS

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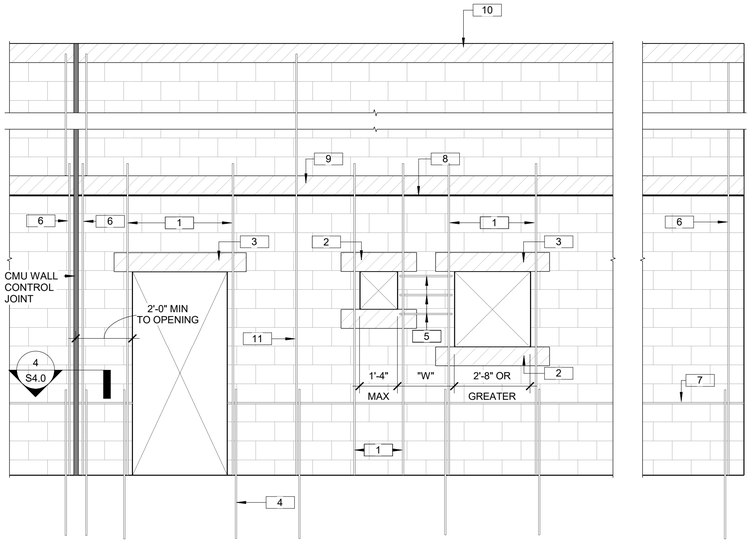
C4E Project #: 21325

MASONRY BAR LAP LENGTHS (Ld) F'm = 2,000 psi

BAR SIZE	8" & 10" BLOCK CLEAR COVER ≥ 1 3/4"	12" BLOCK CLEAR COVER ≥ 2"	CENTERED IN 8" BLOCK	CENTERED IN 10" BLOCK	CENTERED IN 12" BLOCK
#3	15"	13"	8"	8"	8"
#4	25"	22"	13"	10"	10"
#5	39"	35"	20"	16"	13"
#6	MECH SP	MECH SP	38"	29"	24"
#7	MECH SP	MECH SP	MECH SP	40"	33"
#8	MECH SP	MECH SP	MECH SP	MECH SP	MECH SP
#9	NA	MECH SP	NA	MECH SP	MECH SP
#10	NA	MECH SP	NA	MECH SP	MECH SP
#11	NA	MECH SP	NA	NA	MECH SP

1 S4.0 TYPICAL MASONRY REINFORCING LAP LENGTHS

SCALE: NTS

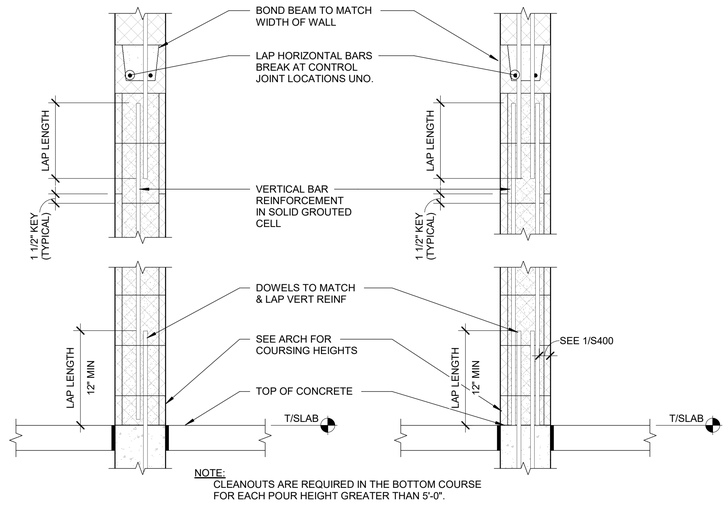


NOTES:

1. JAMB REINFORCEMENT PER LINTEL SCHEDULE OR LINTEL DETAILS. MIN (1) #5 EA JAMB.
2. 8" BOND BEAM W/ (1) #5 CONT.
3. LINTEL SEE SCHEDULE
4. DOWELS TO MATCH & LAP VERTICAL REINFORCEMENT.
5. WHEN "W" IS LESS THAN 2'-0" AT 8" CMU WALL AND 3'-0" AT 12" CMU WALL, ADD 1/4" CLOSED TIE SETS AT 8" OC.
6. REINFORCE VERT CELLS AT END OF WALL AND ADJACENT TO CONTROL JOINTS.
7. HORIZ JOINT REINFORCEMENT, SEE GENERAL NOTES.
8. ROOF OR FLOOR LINE BEYOND.
9. 8" BOND BEAM W/ (2) #4 CONT AT ROOF OR FLOOR LINE, UNO.
10. 8" BOND BEAM W/ (2) #4 CONT AT TOP OF WALL, UNO.
11. #5 @ 48" OC TYPICAL WALL REINFORCING, UNO,

2 S4.0 TYP CMU WALL REINFORCEMENT

SCALE: NTS



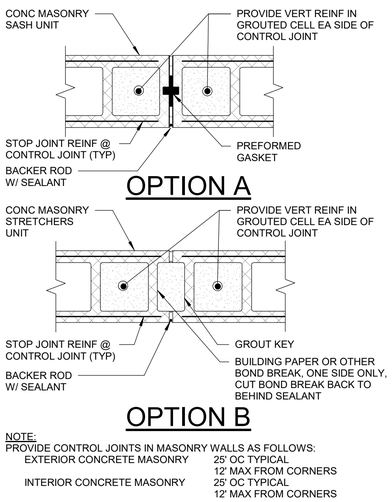
NOTE:
CLEANOUTS ARE REQUIRED IN THE BOTTOM COURSE FOR EACH POUR HEIGHT GREATER THAN 5'-0".

1 LAYER OF REINFORCING

2 LAYERS OF REINFORCING

3 S4.0 TYPICAL REINFORCED CMU WALL CONSTRUCTION DETAIL

SCALE: NTS



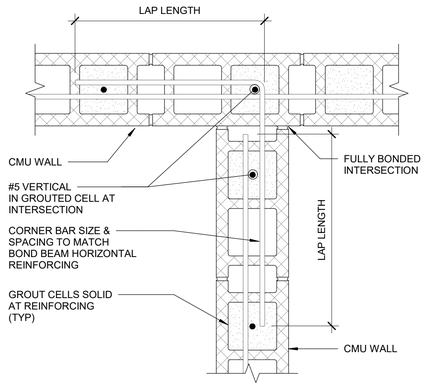
OPTION A

OPTION B

NOTE:
PROVIDE CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS:
EXTERIOR CONCRETE MASONRY 25' OC TYPICAL
12' MAX FROM CORNERS
INTERIOR CONCRETE MASONRY 25' OC TYPICAL
12' MAX FROM CORNERS

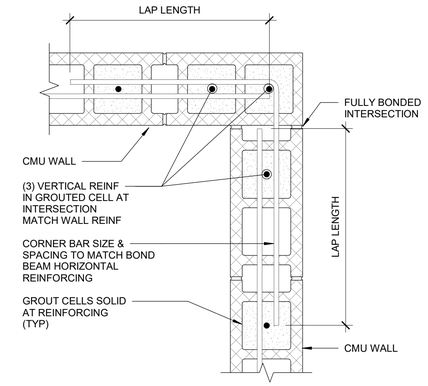
4 S4.0 CMU CONTROL JOINT

SCALE: NTS



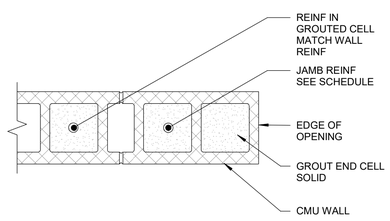
5 S4.0 CMU WALL INTERSECTION

SCALE: NTS



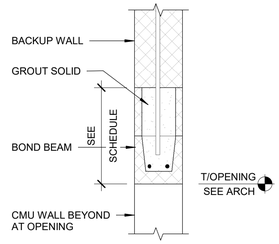
6 S4.0 CMU WALL CORNER

SCALE: NTS



7 S4.0 CMU WALL END

SCALE: NTS



A S4.0 LINTEL TYPE A

SCALE: NTS

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RIVERSIDE PARK RESTROOMS

New Construction

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MASONRY SECTIONS & DETAILS

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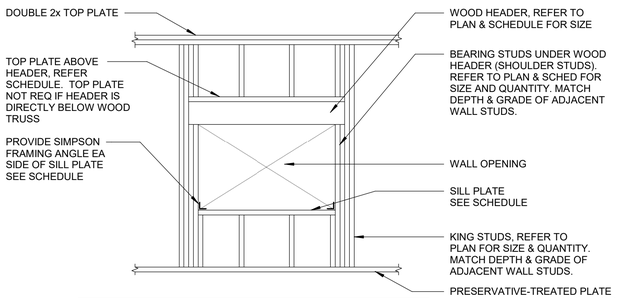
TYPICAL FASTENING SCHEDULE		
CONNECTION TYPE:	NAILING - COMMON NAILS: (UNLESS OTHER CONNECTION IS REQUIRED)	NAILING - STRIP NAILS: (UNLESS OTHER CONNECTION IS REQUIRED)
DOUBLE TOP PLATES, FACE NAIL DOUBLE TOP PLATES, LAP SPLICE, FACE NAIL TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	16d COMMON (3-1/2"x0.135") @ 16" OC (8) 16d COMMON (3-1/2"x0.162") (2) 16d COMMON (3-1/2"x0.162")	3"x0.131" @ 12" OC (12) 3"x0.131" (3) 3"x0.131"
TOP PLATE TO STUD, END NAIL CONT HEADER TO STUD, TOENAIL STUD TO SOLE PLATE	(2) 16d COMMON (3-1/2"x0.162") (4) 8d COMMON (2-1/2"x0.131") (4) 8d COMMON (2-1/2"x0.131"), TOENAIL OR (2) 16d COMMON (3-1/2"x0.162"), END NAIL	3"x0.131" -- (4) 3"x0131" TOENAIL (3) 3"x0.131" END NAIL
BUILT-UP STUD COLUMNS, FACE NAIL BUILT-UP CORNER STUDS & SUPPORT STUDS	10d COMMON (3"x0.148") @ 16" OC STAGGERED 16d COMMON (3-1/2"x0.162") @ 24" OC STAGGERED	3"x0.131" @ 12" OC STAGGERED 3"x0.131" @ 16" OC STAGGERED
BUILT-UP HEADER, FACE NAIL	16d COMMON (3-1/2"x0.162") @ 12" OC ALONG EACH EDGE	--
PLYWOOD/OSB ROOF SHEATHING (APA RATED) UNLESS NOTED OTHERWISE	8d COMMON (2-1/2"x0.131") @ 6" OC AT SUPPORTED PANEL EDGES 8d COMMON (2-1/2"x0.131") @ 12" OC AT INTERMEDIATE MEMBERS IN FIELD OF PANELS	3"x0.131" @ 6" OC AT SUPPORTED PANEL EDGES 3"x0.131" @ 12" OC AT INTERMEDIATE MEMBERS IN FIELD OF PANELS
JOIST TO SILL OR GIRDER, TOENAIL RIM JOIST TO TOP PLATE, TOENAIL BLOCKING BTWN JOIST/RAFTERS TO TOP PL, TOENAIL	(3) 8d COMMON (2-1/2"x0.131") 8d COMMON (2-1/2"x0.131") @ 6" OC (3) 8d COMMON (2-1/2"x0.131")	(3) 3"x0.131" 3"x0.131" @ 6" OC (3) 3"x0.131"
JOIST TO RIM BOARD, FACE NAIL SOLE PLATE TO JOIST/BLOCKING, FACE NAIL	(3) 16d COMMON (3-1/2"x0.162") 16d COMMON (3-1/2"x0.135") @ 16" OC	(4) 3"x0.131" 3"x0.131" @ 8" OC
FLOOR SHEATHING (APA RATED) UNLESS NOTED OTHERWISE	#8 SCREWS @ 6" OC AT SUPPORTED PANEL EDGES #8 SCREWS @ 12" OC AT INTERMEDIATE MEMBERS IN FIELD OF PANELS W/ CONSTRUCTION ADHESIVE	#8 SCREWS @ 6" OC AT SUPPORTED PANEL EDGES #8 SCREWS @ 12" OC AT INTERMEDIATE MEMBERS IN FIELD OF PANELS W/ CONSTRUCTION ADHESIVE

1 S6.0 TYPICAL WOOD FASTENING SCHEDULE

SCALE: NTS

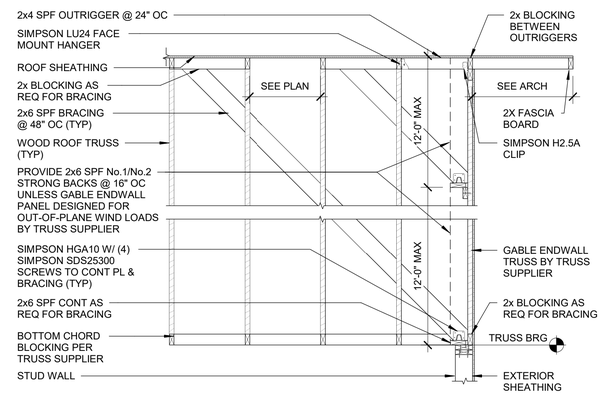


OPENING WIDTH	SILL PLATE SIZE	PLATE GRADE	FRAMING ANGLE
0'-0" TO 4'-0"	2x6	SPF STUD	-
4'-0" TO 8'-0"	2x6	SPF No.1/No.2	A35
8'-0" TO 11'-0"	1 3/4"x5 1/2"	2.0E LVL	A35
11'-0" TO 14'-0"	(2) 1 3/4"x5 1/2"	2.0E LVL	A35
14'-0" TO 16'-0"	(3) 1 3/4"x5 1/2"	2.0E LVL	A35

NOTE:
USE SIMPSON HH HEADER HANGER FOR HEADER CONNECTION TO WOOD COLUMNS.

4 S6.0 TYPICAL FRAMING AROUND AN OPENING IN A WOOD STUD BEARING WALL

SCALE: NTS

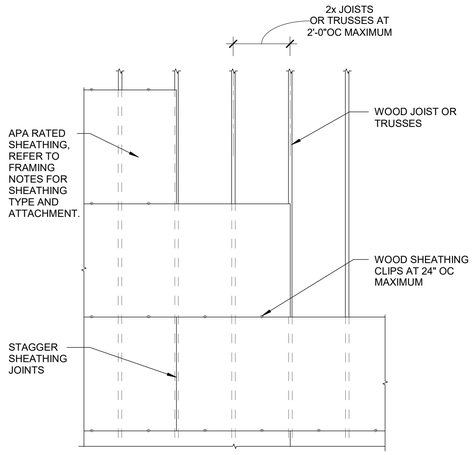


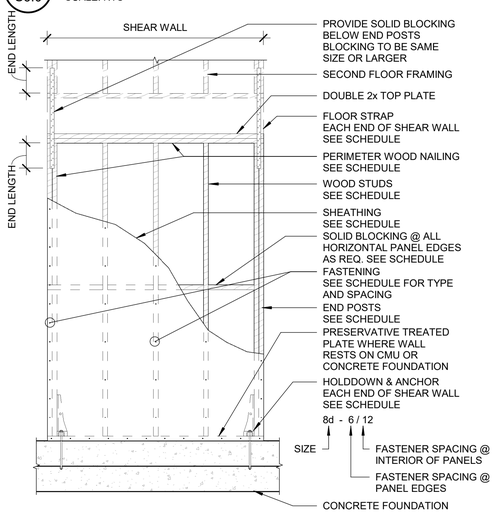
7 S6.0 TYPICAL GABLE END DETAIL - STUD WALL

SCALE: NTS

2 S6.0 TYPICAL WOOD ROOF DECK ATTACHMENT

SCALE: NTS

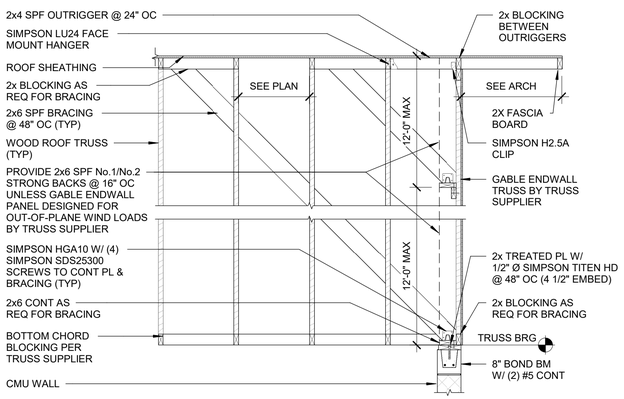




NOTES:
1. TYPICAL DETAILS SHOWN WITH PLYWOOD OR OSB SHEATHING. GYPSUM BOARD SHEAR WALLS SIMILAR, SEE SCHEDULE FOR FASTENERS AND SPACING.
2. CONTRACTOR OPTION: WOOD SHEATHING MAY BE ORIENTED W/ LONG DIMENSION VERTICAL-OPPOSITE WHAT IS SHOWN ON DETAIL.

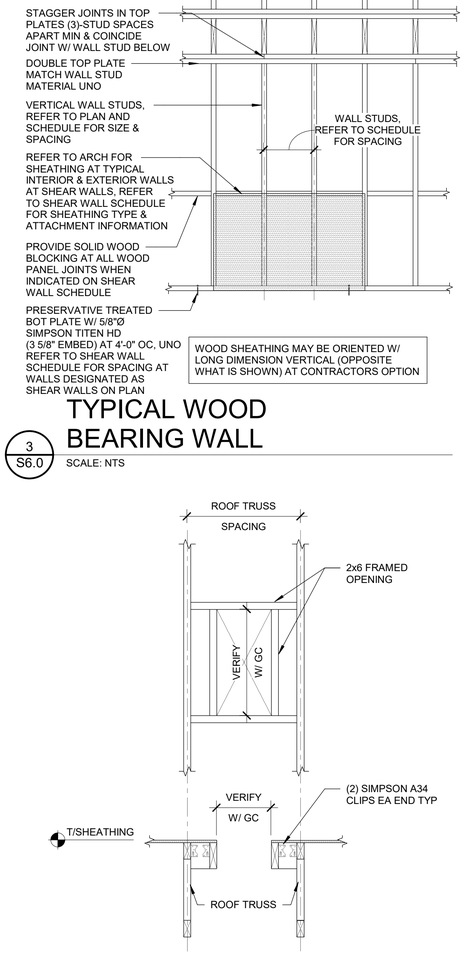
5 S6.0 TYPICAL WOOD SHEAR WALL

SCALE: NTS



8 S6.0 TYPICAL GABLE END DETAIL - CMU WALL

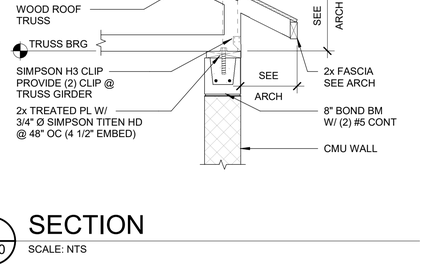
SCALE: NTS



WOOD SHEATHING MAY BE ORIENTED W/ LONG DIMENSION VERTICAL (OPPOSITE WHAT IS SHOWN) AT CONTRACTORS OPTION

3 S6.0 TYPICAL WOOD BEARING WALL

SCALE: NTS



NOTES:
1. PROVIDE FRAMING FOR OPENINGS LARGER THAN 8" X 8", 8" Ø OR SUPPORTING EQUIPMENT IN EXCESS OF 50 LBS.
2. GENERAL CONTRACTOR TO COORDINATE FINAL SIZE AND LOCATIONS OF MECHANICAL AND PLUMBING OPENINGS.

6 S6.0 TYPICAL ROOF OPENING

SCALE: NTS

9 S6.0 SECTION

SCALE: NTS

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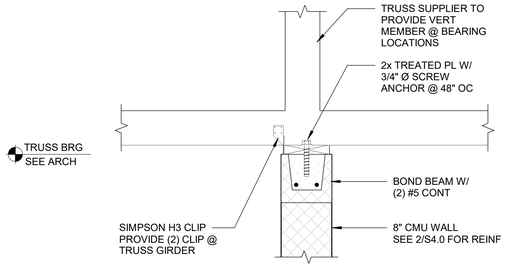

1 / S6.1 SECTION
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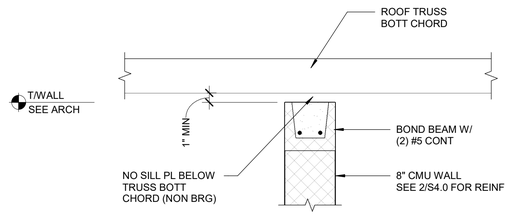

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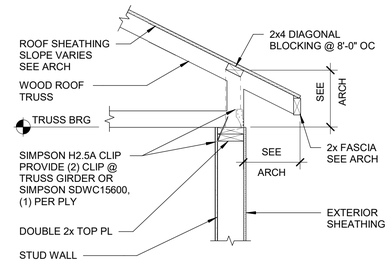

3 / S6.1 SECTION
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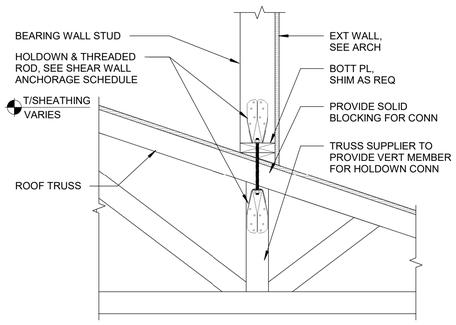

NOTE: SEE 1/S1.1 FOR TRUSS DESIGN LOADS

4 / S6.1 SECTION
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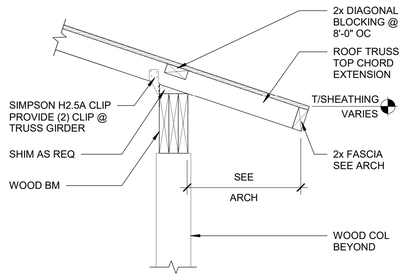

5 / S6.1 SECTION
SCALE: NTS

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Architect
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C4E Project #: 21325

THE CITY OF WATERTOWN

BUILDING, SAFETY & ZONING DEPARTMENT

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Doug Zwieg
920-262-4062

Dennis Quest
920-262-4061

TO: Plan Commission
DATE: March 11th, 2024
SUBJECT: Zoning Code Interpretation

A request for the Plan Commission to confirm a Zoning Code Interpretation regarding the application of density standards.

BACKGROUND:
Some recent development proposals in the City for 'infill' types of development have raised the question of how and when density standards are to be applied within the zoning code. In particular, the question has been raised regarding whether the density standards are applied to an individual parcel of land at the time of development or to an entire subdivision when it is platted.

Each residential zoning district contains a density standard measured as the Maximum Gross Density (MGD). For example, the MGD in the Single-Family Residential (SR-4) Zoning District is 4 dwelling units per acre and in the Two-Family Residential (TR-6) Residential Zoning District the MGD is 6 dwelling units per acre. The MGD is defined in the zoning ordinance as 'the maximum number of dwelling units permitted per acre of gross site area'. Gross Site Area (GSA) is defined in the zoning ordinance as 'the total area of a site available for inclusion in calculations of the maximum permitted density or intensity of development'.

The Maximum Gross Density (MGD) for a development site is calculated by taking the total acreage of all lands to be platted within a development, both developable and non-developable, and multiplying that by the allowed dwelling units per acre. Maximum Gross Density is different from Net Density. Net Density consists of the developable land after all non-developable areas, such as roads, parks, and wetlands, are subtracted from the total acreage of the development. This is the area where the calculated number of dwelling units are allocated for development at the time of platting.

Per consultation with Vandewalle & Associates, we have determined the following interpretation of MGD within the Zoning Code:

> *Maximum Gross Density is only calculated for newly platted areas on land with metes and bounds legal descriptions (e.g. unplatted lands) or on platted outlots meant for future development. Maximum Gross Density (MGD) regulations within a particular zoning district do not apply to areas that were previously platted (by plat or CSM). In these cases, the MGD requirements were applied at the time the land was subdivided by the platting process. Future land divisions within the platted areas only need to conform to lot area, lot width, street frontage, and similar requirements of the zoning district.*

The idea here is that all existing parcels within a platted area have already been factored into the MGD at the time the development as a whole was platted. To later hold individual lots within these platted areas to individual MGD calculations is not the proper application of the density standard. Existing lots can be developed as long as they can meet the zoning district bulk requirements such as setbacks, height, size, etc. Likewise, existing lots can be further subdivided if the new lots can meet the zoning district bulk requirements such as lot area, lot width, street frontage, etc.

Plan Commission confirmation is requested for this interpretation of Maximum Gross Density (MGD) and it application under the Zoning Code.

Gross translated to Net Density

To understand how development will act compared to how it will look and feel, gross density must be translated into net density.

Just as gross revenues are different from net profits in the business world, gross density is different from net density. Gross density is the total number of units just as gross revenue is the total number of dollars taken in by a business. Net density leaves the total number of units allowed but divides by a number that represents the developable land rather than the total land, just as net revenue takes away the expenses required to attract the total dollars and you are left with net dollars, so $100 dollars gross suddenly looks and feels like 20 dollars net.

The following chart tries to demonstrate the difference between gross density and net density on a hypothetical 100 acre tract with land features that are undevelopable.

Density Overview
Gross Vs. Net

Hypothetical 100 Acre Parcel

Total Gross Area		100 Acres
Undevelopable Area		40 Acres
Highway ROW	10 Acres	
Floodway	5 Acres	
Slope Protection	25 Acres	
Net Developable Area		60 Acres

Gross Density Acts Like		Net Density Looks Like:
1 DUA (gross) [100 acres x 1 unit per acre yields 100 units]	⇨	**1.67 DUA (net)** [100 units on 60 acres, or approximately 18,000 SF Lots]
2 DUA (gross) [100 acres x 2 unit per acre yields 200 units]	⇨	**3.33 DUA (net)** [200 units on 60 acres, or approximately 9,000 SF Lots]
3 DUA (gross) [100 acres x 3 unit per acre yields 300 units]	⇨	**5.00 DUA (net)** [300 units on 60 acres, or approximately 6,000 SF Lots]