

# GENERAL NOTES

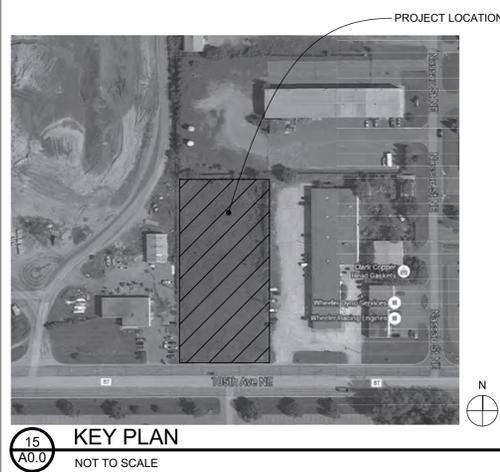
- 1.) ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODE ORDINANCES AND LAWS.
- 2.) THE CONTRACTOR SHALL VISIT THE JOB SITE, VERIFY EXISTING CONDITIONS, AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO SUBMITTING A BID AND/OR BEGINNING ANY CONSTRUCTION WORK.
- 3.) ALL WORK, WHEN COMPLETED, SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES.
- 4.) THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS FOR RESOLUTION.
- 5.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A COMPLETE AS-BUILT SET OF CONSTRUCTION DRAWINGS AT THE JOB SITE AND TURNING THE AS-BUILT DRAWINGS OVER TO THE OWNER UPON COMPLETION OF THE PROJECT.
- 6.) REFER TO INDIVIDUAL DRAWINGS WITHIN THIS SET OF CONSTRUCTION DOCUMENTS FOR ADDITIONAL GENERAL NOTES.
- 7.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THOROUGHLY CLEANING THE COMPLETED JOB SITE PRIOR TO TURNING THE PROPERTY OVER TO THE OWNER FOR OCCUPANCY.
- 8.) IN THE EVENT THAT THE CONTRACTOR, OR SUBCONTRACTOR AT ANY TIER, DETERMINES THAT SOME PORTION OF THE DRAWINGS, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS REQUIRES CLARIFICATION OR INTERPRETATION BY THE ARCHITECT, THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION IN WRITING TO THE ARCHITECT.
  - REQUESTS FOR INFORMATION MAY ONLY BE MADE BY THE GENERAL CONTRACTOR. THE CONTRACTOR SHALL CLEARLY AND CONCISELY SET FORTH THE ISSUE FOR WHICH CLARIFICATION IS SOUGHT AND WHY A RESPONSE IS NEEDED FROM THE ARCHITECT AND/OR CONSULTANTS. IN THE REQUEST FOR INFORMATION, THE CONTRACTOR SHALL SET FORTH AN UNDERSTANDING OF THE REQUIREMENT, ALONG WITH A REASON WHY SUCH AN UNDERSTANDING WAS REACHED. THE ARCHITECT WILL REVIEW THE REQUEST FOR INFORMATION TO DETERMINE IF IT IS A REQUEST FOR INFORMATION WITHIN THE MEANING OF THIS TERM. IF THE ARCHITECT DETERMINES THAT IT IS NOT A REQUEST FOR INFORMATION, IT WILL BE RETURNED TO THE CONTRACTOR, UNREVIEWED AS TO CONTENT, FOR RE-SUBMITTAL IN THE PROPER FORM AND THE PROPER MANNER.
  - RESPONSES TO REQUESTS FOR INFORMATION SHALL BE ISSUED UPON RECEIPT, BUT NO LATER THAN FIVE WORKING DAYS OF RECEIPT OF THE REQUEST, UNLESS THE ARCHITECT DETERMINES THAT A LONGER PERIOD OF TIME IS NEEDED IN ORDER TO PROVIDE AN ADEQUATE RESPONSE. IF A LONGER PERIOD OF TIME IS DETERMINED NECESSARY BY THE ARCHITECT, THE ARCHITECT WILL, WITHIN FIVE WORKING DAYS OF THE RECEIPT OF THE REQUEST FOR INFORMATION, NOTIFY THE CONTRACTOR OF THE ANTICIPATED RESPONSE TIME.
  - IF THE CONTRACTOR SUBMITS A REQUEST FOR INFORMATION WITH FIVE WORKING DAYS OR LESS FLOAT ON THE CURRENT PROJECT SCHEDULE, THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY TIME EXTENSION DUE TO THE TIME IT TAKES THE ARCHITECT TO RESPOND TO THE REQUEST FOR INFORMATION, PROVIDED A RESPONSE IS GIVEN WITHIN FIVE WORKING DAYS AS SET FORTH ABOVE.
  - RESPONSES FROM THE ARCHITECT WILL NOT CHANGE ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS. IN THE EVENT THAT THE CONTRACTOR BELIEVES A RESPONSE TO A REQUEST FOR INFORMATION WILL CAUSE A CHANGE TO REQUIREMENTS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL IMMEDIATELY GIVE WRITTEN NOTICE TO THE ARCHITECT AND THE OWNER STATING THAT THE CONTRACTOR CONSIDERS THE RESPONSE TO BE A CHANGE ORDER. FAILURE TO GIVE SUCH WRITTEN NOTICE IMMEDIATELY SHALL WAIVE THE CONTRACTOR'S RIGHT TO SEEK ADDITIONAL TIME OR COST.



## INVICTUS BREWING COMPANY - 2025 105TH AVE NE - BLAINE, MN

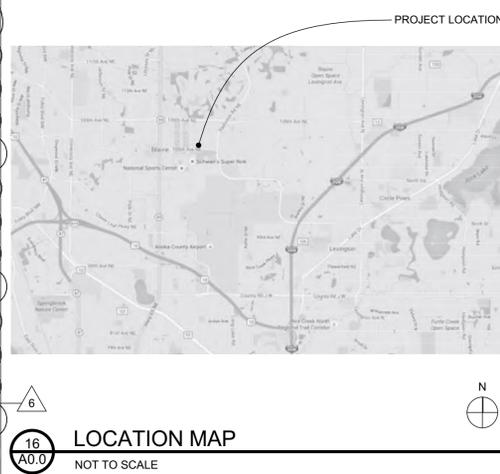
# FIRE DEPARTMENT NOTES

- 1.) ENGINEERED AUTOMATIC FIRE SPRINKLER SYSTEM DRAWINGS AND CALCULATIONS SHALL BE DESIGNED AND SUBMITTED BY AN APPROVED INSTALLER PRIOR TO INSTALLATION.
- 2.) ALL LIFE-SAFETY SYSTEMS SHALL BE DESIGNED PER APPLICABLE FIRE PREVENTION CODE.
- 3.) THE INSPECTION, HYDROSTATIC TESTING, AND FLUSHING OF THE AUTOMATIC FIRE SPRINKLER SYSTEM AND/OR FIRE HYDRANTS SHALL BE WITNESSED BY THE PROPER FIRE DEPARTMENT REPRESENTATIVE AND NO UNDERGROUND PIPING SHALL BE COVERED OR HIDDEN FROM VIEW UNTIL THE PROPER FIRE DEPARTMENT REPRESENTATIVE HAS BEEN NOTIFIED AND GIVEN NO LESS THAN FORTY-EIGHT HOURS IN WHICH TO INSPECT SUCH INSTALLATIONS.
- 4.) FIRE EXTINGUISHER REQUIREMENTS SHALL BE AS DETERMINED BY FIELD INSPECTION AND NFPA 10. THE CONTRACTOR SHALL SUPPLY ALL FIRE EXTINGUISHERS.
- 5.) BUILDING ADDRESS NUMBERS SHALL BE PROVIDED ON THE FRONT OF THE BUILDING AND SHALL BE VISIBLE AND LEGIBLE FROM THE PUBLIC RIGHT-OF-WAY, SAID NUMBERS SHALL CONTRAST VISUALLY WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE PROVIDED BY THE CONTRACTOR.
- 6.) COMMERCIAL DUMPSTERS OR CONTAINERS WITH A CAPACITY OF ONE-AND-ONE-HALF CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN FIVE-FEET OF COMBUSTIBLE WALLS, OPENING, OR ROOF EAVE LINES, UNLESS THESE AREAS ARE PROTECTED BY AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM.
- 7.) POST "NO PARKING - FIRE LANE" SIGNS ALONG VEHICULAR ACCESS ROADS.



# PARKING REQUIREMENTS

- ← Brewery / Kitchen Area (1 Stall / 200 SF)
  - Bar service: 198 SF
  - Kitchen: 1349 SF
  - Brewery: 2145 SF
  - Office: 84 SF
  - Office 76 SF
  - Total: 3852 SF / 200 = 20 Stalls
- ← Bar Area (1 Stall / 40 SF @ Half the public area)
  - Mezzanine A: 824 SF
  - North Patio: 500 SF
  - South Patio: 464 SF
  - Taproom: 1675 SF
  - Meeting Room: 500 SF
  - Total: 1981 / 2 = 49 Stalls
- ← Restaurant (1 Stall / 100 SF @ Half the public area)
  - 1981 / 100 = 20 Stalls
- ← Total Stalls Required: 89



# CODE INFORMATION

**APPLICABLE CODES:**

- Building Code: 2015 Minnesota Building Code
- Plumbing Code: 2015 Minnesota Plumbing Code
- Mechanical Code: 2015 Minnesota Mechanical Code
- Electrical Code: Minnesota Electrical Code
- Fuel Gas Code: 2015 Minnesota Fuel Gas Code
- Fire Prevention Code: 2015 Minnesota Fire Code
- Accessibility Code: 2015 Minnesota Accessibility Code
- Energy Code: 2015 MN Energy Code / ASHRAE 90.1-2013

**A.) CHAPTER 3: USE & OCCUPANCY CLASSIFICATION:**

- Group: Assembly A-2 ( Taverns & Bars )
- Area: 3,200 S.F.

**B.) CHAPTER 3: GENERAL BUILDING HEIGHTS & AREAS:**

- Proposed Use(s): A-2 ( Taverns & Bars )
- Most Restrictive Use: A-2 ( Taverns & Bars )
- Allowable Height (A-2): 1 Story, 40' 0" Maximum
- Allowable Area (A-2): 6,000 square feet
- Area Modification:
  - o Frontage Increase:
    - $L = 40' - (0.25) \times 80' = 20'$
    - $L = (80' / 360 - 0.25) \times 80' = 20'$
    - $L = 40'$
  - o Area Increase:
    - $A = (75' \times 60' \times 4) = 18,000 \text{ S.F.}$
    - $A = (10,000 + 6,000 + 0.75) \times 6,000 = 111,000 \text{ S.F.}$
    - $A = 25,500 \text{ Square Feet}$
- Full Building Automatic Fire Sprinkler System: Yes

**C.) CHAPTER 6: TYPES OF CONSTRUCTION:**

- Type: V-B
- Required Fire-Resistive Rating:

Building Element	Rating
Structural Frame	0
Bearing Walls - Exterior	0
Bearing Walls - Interior	0
Nonbearing Walls - Exterior	0
Nonbearing Walls - Interior	0
Floor Construction	0
Roof Construction	0

**D.) CHAPTER 8: INTERIOR FINISHES:**

- Required Interior Wall & Ceiling Finish Classifications:

Type of Space	Finish Classification
Exit Enclosures & Exit Passageways	0
Corridors	0
Other	0

**E.) CHAPTER 10: MEANS OF EGRESS:**

- Minimum Number of Exits Required = 2 Required, 4 Provided
- Minimum Exit Width Required = 51.6", 252.0" Provided
- Minimum Exit Travel Distance Allowed = 200' 0"
- Occupant Load Calculations: (See Sheet 82.0 for occupant loads & square footages. \*\* Refer to 82.1 for Mezzanine diagram)

Invictus Brewing - Taproom	Area of Space	Floor Area in Sq. Ft. Per Occupant	Occupant Load
Venue	64.03 SF	Accessory Use	0
Taproom (Assembly w/out feed seats)	1975.57 SF	15 (Net)	132
Food service	61.15 SF	1.15 (S.F. T.F.)	41
Bar (Business Areas)	198.48 SF	100 (gross)	2
Meeting Room	500.54 SF	15 (Net)	34
Storage	89.81 SF	300 (Gross)	1
Men's & Women's Restroom / Hallway	492.95 SF	Accessory Use	0
Kitchen (includes dry storage)	1349.22 SF	200 (Gross)	7
Utility	82.18 SF	300 (Gross)	1
Mezzanine A - Accessory Seating	434.02 SF	75 (Net)	30
Mezzanine A - Accessory Storage	298.59 SF	300 (Gross)	2
Mezzanine B - Accessory Storage	1775.77 SF	300 (Gross)	6
<b>TAPROOM OCCUPANT LOAD</b>			<b>198 (+ 37 Mezzanine) = 235</b>

Invictus Brewing - Brewery	Area of Space	Floor Area in Sq. Ft. Per Occupant	Occupant Load
Brewery (includes Milling Area)	2145.38 SF	200 (Gross)	11
Office	84.39 SF	100 (Gross)	1
Office	76.31 SF	100 (Gross)	1
Employee Accessory Break Room	443.63 SF	15 (Net)	10
Locker	111.29 SF	300 (Gross)	1
<b>BREWERY OCCUPANT LOAD</b>			<b>24</b>

Invictus Brewing - Outdoor Patio	Area of Space	Floor Area in Sq. Ft. Per Occupant	Occupant Load
North Patio (Assembly w/out feed seats)	500.37 SF	15 (Net)	34
South Patio (Assembly w/out feed seats)	464.10 SF	15 (Net)	31
Food service	35.17 SF	1.15 (S.F. T.F.)	20
<b>OUTDOOR PATIO OCCUPANT LOAD</b>			<b>65</b>
<b>TOTAL BUILDING OCCUPANT LOAD (ALL AREAS)</b>			<b>344</b>

**F.) CHAPTER 20: PLUMBING FIXTURE REQUIREMENTS:**

- Male Occupant Load (Not including break rooms or accessory uses): 324.2 = 162
- Female Occupant Load (Not including break rooms or accessory uses): 324.2 = 162
- Plumbing Fixture Count Calculations:

Fixture Type	Units	Female
Water Closet	4 Required, 4 Provided	4 Required, 4 Provided
Lavatory	2 Required, 2 Provided	2 Required, 2 Provided
Urinal (Optional)	Substitute For Up To 60% Of W.C.'s	NA

- 1 Service Sink Required
- Lavatory Requirement for A-2: 1 per 75 Occupants (per sex)
- Water Closet Requirement for A-2 (Taverns & Bars): 1 per 40 Occupants (per sex); A-2 (Restaurants): 1 per 75 Occupants

# PROJECT TEAM

**OWNER**  
 INVICTUS BREWING COMPANY  
 11981 MIDWAY ST. NE  
 BLAINE, MN 55449  
 PHONE NUMBER (952) 941-8660  
 CONTACT: KEVIN GREEN - PROJECT MANAGER

**ARCHITECT**  
 WILKUS ARCHITECTS, P.A.  
 11981 MIDWAY ST. NE  
 HOPKINS, MINNESOTA 55343  
 PHONE NUMBER (952) 941-8660  
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 CONTACT: KEVIN GREEN - PROJECT MANAGER

**CIVIL ENGINEER / LANDSCAPE ARCHITECT**  
 LOCKS INC.  
 7200 HEMLOCK LANE, SUITE 300  
 MAPLE GROVE, MN 55369  
 PHONE NUMBER (763) 496-6757  
 CONTACT: NICK MANNEL

**STRUCTURAL ENGINEER**  
 HERZOG ENGINEERING, LLC  
 530 N 3RD STREET, SUITE 230  
 MINNEAPOLIS, MN 55401  
 PHONE NUMBER (612) 200-9510  
 CONTACT: JOSHUA HERZOG, PE, LEED AP

**CONTRACTOR**  
 GENERAL CONTRACTORS OF MN INC.  
 2201 107TH LN. NE  
 BLAINE, MN 55449  
 PHONE NUMBER (763) 862-0005  
 CONTACT: BEN MEINTS

# SHEET INDEX

REV. #	SHEET	SHEET TITLE
		ARCHITECTURAL
6	A0.0	Cover Sheet
	B1.0	Interior Accessibility Standards
6	B2.0	Interior Accessibility Floor Plan
6	B2.1	Future Mezz. Code Plans
6	A0.1	Architectural Site Plan
6	A0.2	Architectural Site Plan Details
5	A1.0	Architectural Floor Plan
2	A1.2	Finish Plan
1	A2.0	Reflected Ceiling Plan
2	A3.0	Interior Elevations
1	A5.0	Wall Types & Schedules
1	A7.0	Building/Wall Sections
1	A8.0	Exterior Elevations
		CIVIL
	ALTA	ALTA SURVEY
1	C1-1	EXISTING CONDITIONS PLAN
6	C2-1	CIVIL SITE PLAN
4	C3-1	GRADING & DRAINAGE PLAN
1	C3-2	STORMWATER POLLUTION PREVENTION PLAN
	C3-3	STORMWATER POLLUTION PREVENTION DETAILS
4	C4-1	SITE UTILITY PLAN
4	C8-1	CIVIL DETAILS
	C8-2	CIVIL DETAILS
4	L1-1	LANDSCAPE PLAN
	L2-1	LANDSCAPE DETAILS
		STRUCTURAL
	S0	General Notes
4	S1	Foundation Plan
4	S2	Framing Plan Details

CONSULTANT:

15 Ninth Avenue North, Hopkins, MN 55343  
 Phone: 952.941.8660 / www.wilkusarch.com

CLIENT:

INVICTUS BREWING COMPANY  
 11981 MIDWAY ST. NE  
 BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
 2025 105TH AVE NE  
 BLAINE, MN 55449

Print Name: MICHAEL J. WILKUS

Signature:

License No.: 16380  
 Expiration Date: 06-30-18  
 Date: 08-22-2017

PROJECT NO.: 2016-0079  
 DRAWN BY: KEVIN GREEN  
 CHECKED BY: MICHAEL J. WILKUS

ISSUE	DATE
CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
DESIGN COORDINATION / SAC	08-18-2016
OWNER COMMENTS	12-05-2016
PERMIT & BID SET	12-29-2016
REVISION:	DATE:
△ CITY COMMENTS	4/11/2017
△ CITY COMMENTS	4/19/2017
△ CITY COMMENTS	8/17/2017
△ CITY COMMENTS	8/22/2017

PROJECT LOCATION

BLAINE, MN

SHEET NUMBER / TITLE

**A0.0**

Cover Sheet

# 2015 MINNESOTA ACCESSIBILITY CODE

ALL INTERIOR CONSTRUCTION WITHIN THE SCOPE OF THIS PROJECT IS REQUIRED TO BE ACCESSIBLE AS SET FORTH IN THE "2015 MINNESOTA ACCESSIBILITY CODE, CHAPTER 1341. SECTIONS INDICATED ON THIS SHEET REFERENCE THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, UNLESS NOTED OTHERWISE.

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660/ www.wilkusarch.com

CLIENT:



INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
2025 105TH AVENUE NE  
BLAINE, MN 55449

SEAL:

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Print Name: MICHAEL J. WILKUS

Signature: *Michael J. Wilkus*

License No.: 16380

Expiration Date: 06-30-18

Date: 07-27-2017

PROJECT NO.: 2016-0079

DRAWN BY: KEVIN GREEN

CHECKED BY: MICHAEL J. WILKUS

ISSUE: DATE:

CUP SUBMITTAL 03-11-2016

SIP PANEL COORDINATION 08-05-2016

DESIGN COORDINATION / SAC 08-18-2016

OWNER COMMENTS 12-05-2016

PERMIT & BID SET 12-29-2016

REVISION: DATE:

PROJECT LOCATION:

BLAINE, MN

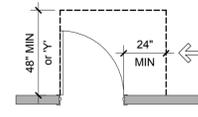
SHEET NUMBER / TITLE:

B1.0

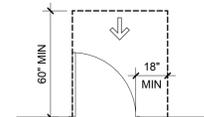
Interior Accessibility Standards

## DOORS

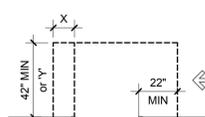
- Doors, doorways, and gates that are part of an accessible route shall comply with 404.
- Door openings shall provide a clear width of 32 inches, unless the opening is more than 24 inches deep, in which case the clear width of the opening shall be 36 inches. For swinging doors, the clear width shall be measured between the face of the door and the stop, with the door open 90 degrees.
- There shall be no projections into the clear opening lower than 34 inches. Projections into the clear opening between 34 inches and 80 inches shall not exceed 4 inches.
- In accordance with 404.2.3 exception 2, door closers and stops shall be permitted to be a minimum of 78 inches above the floor or ground.
- Minimum maneuvering clearances at swinging doors shall comply with MN Accessibility Code Section 404.2.3, Table 404.2.3.2 and Figure 404.2.3.2.
- Fire doors shall have a minimum opening force allowable by the appropriate administrative authority.
- Hinged doors other than fire doors shall have an opening force of 5 pounds maximum.
- Sliding doors shall have an opening force of 5 pounds maximum.
- Door and gate surfaces shall comply with 404.2.10.



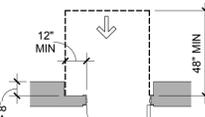
NOTE: Y = 54" MIN. if door has a closer



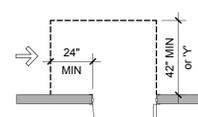
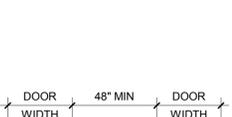
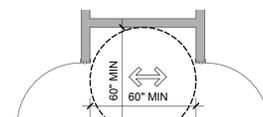
NOTE: X = 12" MIN. if door has both a closer and a latch



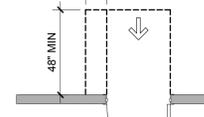
NOTE: Y = 48" MIN. if door has both a closer and a latch



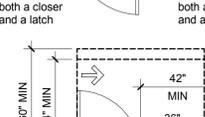
NOTE: Door can have either a latch OR closer, but not both



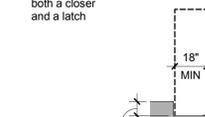
NOTE: Y = 48" MIN. if door has a closer



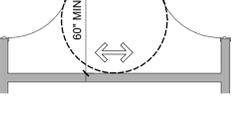
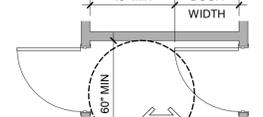
NOTE: X = 12" MIN. if door has both a closer and a latch



NOTE: Y = 48" MIN. if door has both a closer and a latch



NOTE: Door can have either a latch OR closer, but not both



Latch-Side Approaches - Swinging Doors

Front Approaches - Swinging Doors

Hinge-Side Approaches - Swinging Doors

Recessed Doors and Gates

Doors in Series and Gates in Series

Doors in Series and Gates in Series

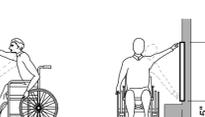
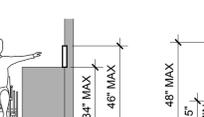
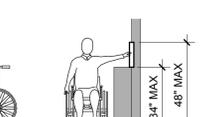
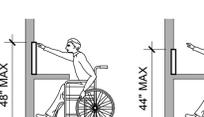
## RESTROOMS & DRINKING FOUNTAINS

- Where toilet facilities are provided, they shall comply with 213. Where toilet rooms are provided, each toilet room shall comply with 603.
- Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment required to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.
- Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground.
- Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.

- Water closets shall comply with 604.2 through 604.8.
- Toilet paper dispensers shall comply with MN Accessibility Code Section 604.7.
- Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.
- Grab bars shall be provided at water closets and shall comply with MN Accessibility Code Sections 604.5.
- Urinals shall comply with 605 and shall be either wall-hung or stall type urinals.
- Lavatories shall comply with 606. Faucets for lavatories shall comply with 606.4. Exposed pipes under lavatories shall be insulated or otherwise protected to prevent against contact.
- Drinking Fountains shall comply with sections 307 and 602.
- Clearance depth at an accessible water closet shall comply with MN Accessibility Code Section 604.3.2

## REACH RANGES, CONTROLS & OPERATING MECHANISMS

- Reach ranges shall comply with 308.
- Operable parts shall comply with 309 and shall be placed within one or more of the reach ranges specified in 308.
- In accordance with 309.4, operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum.

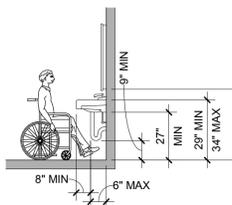


Obstructed Forward Reach

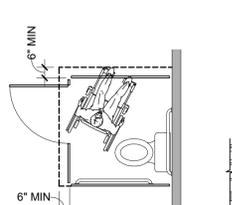
Obstructed Side Reach

Unobstructed Forward Reach

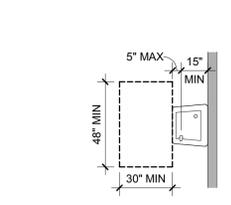
Unobstructed Side Reach



Clearances & Heights at Lavatory



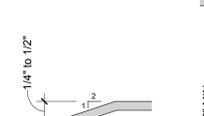
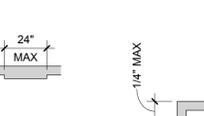
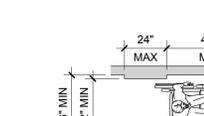
Stall Compartment Toe Clearance



Drinking Fountain Clearance

## PATH OF TRAVEL

- In accordance with 206.2.4, at least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility, which are otherwise connected by a circulation path unless exempted by 206.2.3, exceptions 1-7.
- The running slopes of walking surfaces that are part of an accessible route shall not be steeper than 1:20 with a cross slope that is not steeper than 1:48.
- Changes in level shall comply with 303.
- The clear width of walking surfaces on an accessible route shall comply with 403.5.1.
- The clear width at turns along an accessible route shall comply with 403.5.2.
- In accordance with 403.5.3, an accessible route with a clear width of less than 60 inches shall provide passing spaces at intervals of 200 feet.



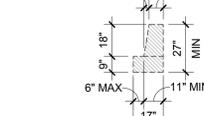
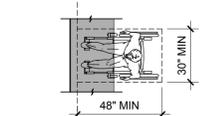
Clear Width of an Accessible Route

Changes in Level

Walking Parallel To A Wall

## SEATING AT TABLES & COUNTERS

- Where dining surfaces are provided for the consumption of food and drink, at least 5 percent of the seating spaces and standing spaces at the dining surfaces shall comply with 902.
- In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902.
- Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the space or facility containing dining surfaces and work surfaces.
- Dining surfaces and work surfaces shall comply with 902.2 and 903.3.



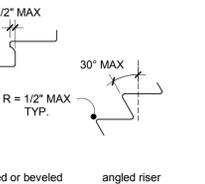
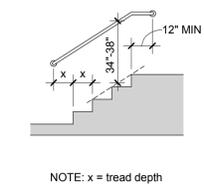
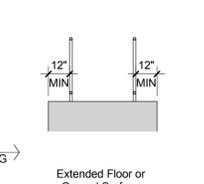
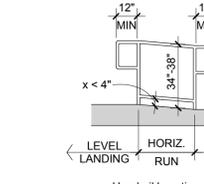
Toe and Knee Clearances

Toe and Knee Clearances

Toe and Knee Clearances

## STAIRS AND RAMPS

- Ramps on accessible routes shall comply with 405.
- Ramp runs shall have a running slope not steeper than 1:12 with a cross slope not steeper than 1:48.
- The clear width of a ramp run or (where handrails are provided) the clear width between handrails shall be 36 inches minimum.
- The rise for any ramp run shall be 30 inches maximum.
- Ramps shall have landings at the top and the bottom of each ramp run complying with 405.7.
- Ramps with a rise greater than 6 inches shall have handrails complying with 505.
- Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and each side of ramp landings.
- Stairs that are part of a means of egress shall comply with 504.
- All steps on a flight of accessible stairs shall have uniform riser heights and uniform tread depths. Riser heights shall be between 4 inches and 7 inches in height. Treads shall be 11 inches deep minimum.
- Open risers are not permitted.
- Nosings at steps shall comply with 504.5.
- Stairway handrails shall comply with 505.



Handrail Location and Edge Protection

Handrail Location and Edge Protection

Handrail Location and Edge Protection

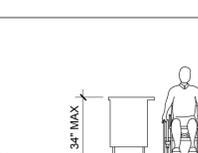
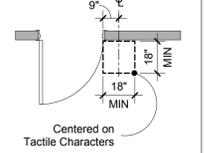
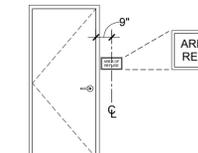
SLOPE	MAX. RISE	MAX. HORIZ. PROJECTION
1:12 to < 1:16	30"	30'-0"
1:16 to < 1:20	40"	40'-0"

Handrail Location and Edge Protection

Handrail Location and Edge Protection

## SIGNAGE

- Signs shall be provided in accordance with 216 and shall comply with 703.
- Signs identifying permanent rooms and spaces shall comply with 703.1, 703.2, and 703.5. Where pictograms are provided as designations of permanent rooms and spaces, the pictograms shall comply with 703.6 and shall have text descriptors complying with 703.2 and 703.5.
- Signs that provide direction to or information about spaces and facilities shall comply with 703.5.
- Signs for means of egress shall comply with 216.4.
- Where more than one check-out aisle is provided, check-out aisles complying with 904.3 shall be identified by the International Symbol of Accessibility complying with 703.7.2.1. Where check-out aisles are identified by numbers, letters, or functions, signs identifying check-out aisles complying with 904.3 shall be located in the same location as the check-out aisle identification.

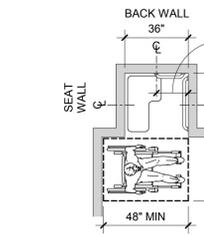


Parallel Approach at Checkout Counter

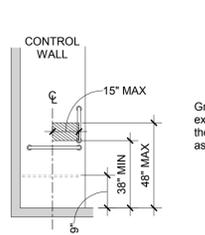
- Where check-out aisles are provided, check-out aisles complying with 904.3 shall be provided in accordance with Table 227.2 and shall be dispersed.
- Where provided, at least one of each type of sales counter and service counter shall comply with 904.4. Where counters are dispersed throughout the building or facility, counters complying with 904.4 also shall be dispersed.
- Food service lines shall comply with 904.5. Where self-service shelves are provided, at least 50 percent, but no fewer than one, of each type provided shall comply with 308.
- Queues and waiting lines servicing counters or check-out aisles required to comply with 904.3 or 904.4 shall comply with 403.
- Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.
- All points of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.

## SHOWERS

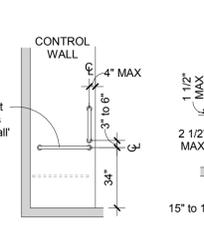
- Showers shall have sizes and clearances complying with 608.2.
- Transfer-type shower compartments shall be 36 inches by 36 inches clear inside dimensions measured at the center points of opposing sides and shall have a 36 inch wide minimum entry on the face of the shower compartment. Clearances of 36 inches wide minimum by 48 inches long minimum measured from the control wall shall be provided.
- In transfer-type compartments, grab bars shall be provided across the entire control wall (as shown) and back wall to a point 18 inches from the control wall (as shown).
- In transfer-type compartments, the controls, faucets, and shower spray unit shall be located on the wall opposite of the seat in an area 15 inches maximum from the center of the seat toward the shower stall opening. See 608.5.
- Showers shall comply with 610.3.
- In transfer-type compartments, grab bars shall comply with MN Accessibility Code Sections 608.3.1, and 609.



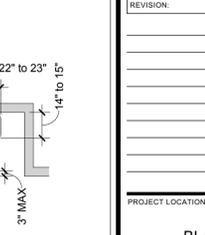
Transfer-Type Compartment Size and Approach Clearance



Transfer-Type Control Location



Transfer-Type Grab Bar Locations



L-Shaped Seat Size and Location

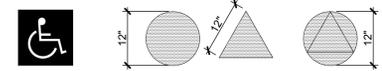
# ACCESS. PLAN KEYNOTES

1. PROVIDE INTERNATIONAL SYMBOL OF ACCESSIBILITY - MOUNT 60" A.F.F. TO CENTERLINE OF SIGN - REFER TO SHEET B1.0 FOR ADDITIONAL INFORMATION
2. PROVIDE TACTILE GRADE-2 CONTRACTED BRAILLE WALL SIGN - REFER TO RESTROOM SIGNAGE DETAIL 19/B2.0 FOR ADDITIONAL INFORMATION - PROVIDED & INSTALLED BY CONTRACTOR
3. DASHED LINE INDICATES 36" PATH OF TRAVEL (48" @ EXTERIOR WALKWAY) - TYPICAL
4. ACCESSIBLE TABLE - PROVIDE KNEE/TOE CLEARANCE PER SHEET B1.0 "TABLE SEATING & COUNTERS" - EQUIPMENT VENDOR/ OWNER TO PROVIDE SEATING - MAINTAIN 5% OF EACH TYPE OF SEATING FOR ACCESSIBILITY REQUIREMENTS AS NOTED
5. THIS COUNTER TO BE AT 34" A.F.F. AS REQUIRED FOR ACCESSIBILITY - REFER TO SHEET B1.0
6. CONTRACTOR TO POST OCCUPANT LOAD SIGN AT MAIN ENTRANCE AS REQUIRED - REFER TO CODE ANALYSIS ON SHEET A0.0 FOR ADDITIONAL INFORMATION
7. OWNER PROVIDED MILLWORK - SHOWN FOR REFERENCE ONLY - REFER TO SHEET B1.0 FOR ACCESSIBILITY STANDARDS - MAINTAIN 34" A.F.F. MAX. - TYPICAL
8. OWNER PROVIDED FRIDGE - MUST COMPLY WITH A117.1 SECTION 804.6.6 (FREEZER REACH RANGE REQUIREMENTS INCLUDED) - COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER COMPARTMENT SHELVES, INCLUDING THE BOTTOM OF THE FREEZER. 54 HATCH INDICATES MEZZANINE FLOOR AREA ABOVE - BY OTHERS - SHOWN FOR REFERENCE ONLY - MAXIMUM OCCUPANT LOAD FOR ALL MEZZANINES IS 30 - REFER TO CODE ANALYSIS ON SHEET A0.0

# EGRESS NOTES

1. MINIMUM WIDTH OF AN ACCESSIBLE EXTERIOR WALKING SURFACE MUST REMAIN 48" PER MN ACCESSIBILITY CODE SECTION 403.5.4
2. MINIMUM CLEAR WIDTH OF AN AISLE SHALL BE DETERMINED BY SECTION 1005.1 FOR THE OCCUPANT LOAD SERVED, BUT SHALL NOT BE LESS THAN 36" - EXCEPTION: NONPUBLIC AISLES SERVING FEWER THAN 20 OCCUPANTS, AND ARE NOT REQUIRED TO BE ACCESSIBLE PER MN ADA, NEED NOT EXCEED 28" IN WIDTH
3. WHERE TABLES OR COUNTERS ARE SERVED BY FIXED SEATS, THE WIDTH OF THE AISLE OR AISLE ACCESSWAY SHALL BE MEASURED FROM THE BACK OF THE SEAT. WHERE SEATING IS LOCATED AT A TABLE OR COUNTER AND IS ADJACENT TO AN AISLE OR AISLE ACCESSWAY, THE MEASUREMENT OF REQUIRED CLEAR WIDTH OF THE AISLE OR AISLE ACCESSWAY SHALL BE MADE TO A LINE 19 INCHES MEASURED PERPENDICULAR TO AN AWAY FROM RUNNING PARALLEL TO THE EDGE OF THE TABLE OR COUNTER
4. HATCH REPRESENTS FUTURE MEZZANINE FLOOR AREA BY OTHERS DEFERRED UNDER A SEPARATE PERMIT - SHOWN FOR REFERENCE ONLY - MEZZANINE SQUARE FOOTAGE TOTALS 2,100 SF - 824 SF FOR MEZZANINE 'A' AND 1276 SF FOR MEZZANINE 'B', WHICH IS 1/3 OF THE TOTAL SQUARE FOOTAGE OF THE OPEN AREA, NOT ENCLOSED BY A ROOM WITH 4 WALLS AT 6,300 SF PER SECTION 505.2.1. REFER TO CODE ANALYSIS ON SHEET A0.0 FOR ADD. INFO.

REFER TO B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



ISA SYMBOL - TYPICAL @ THESE LOCATIONS, BUT NOT LIMITED TO: RESTROOMS, TABLES/BOOTH, SERVICE COUNTERS, ACCESSIBLE RESTROOM STALLS, AND FRONT ENTRY

REFER TO ADAAG 703.7.2.1 FOR SIGNAGE REQUIREMENTS

### MODEL NUMBERS:



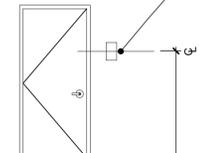
WOMENS: #840 (PROVIDE @ SPACES W/ (2) TOILET ROOMS)



UNISEX: #840-B

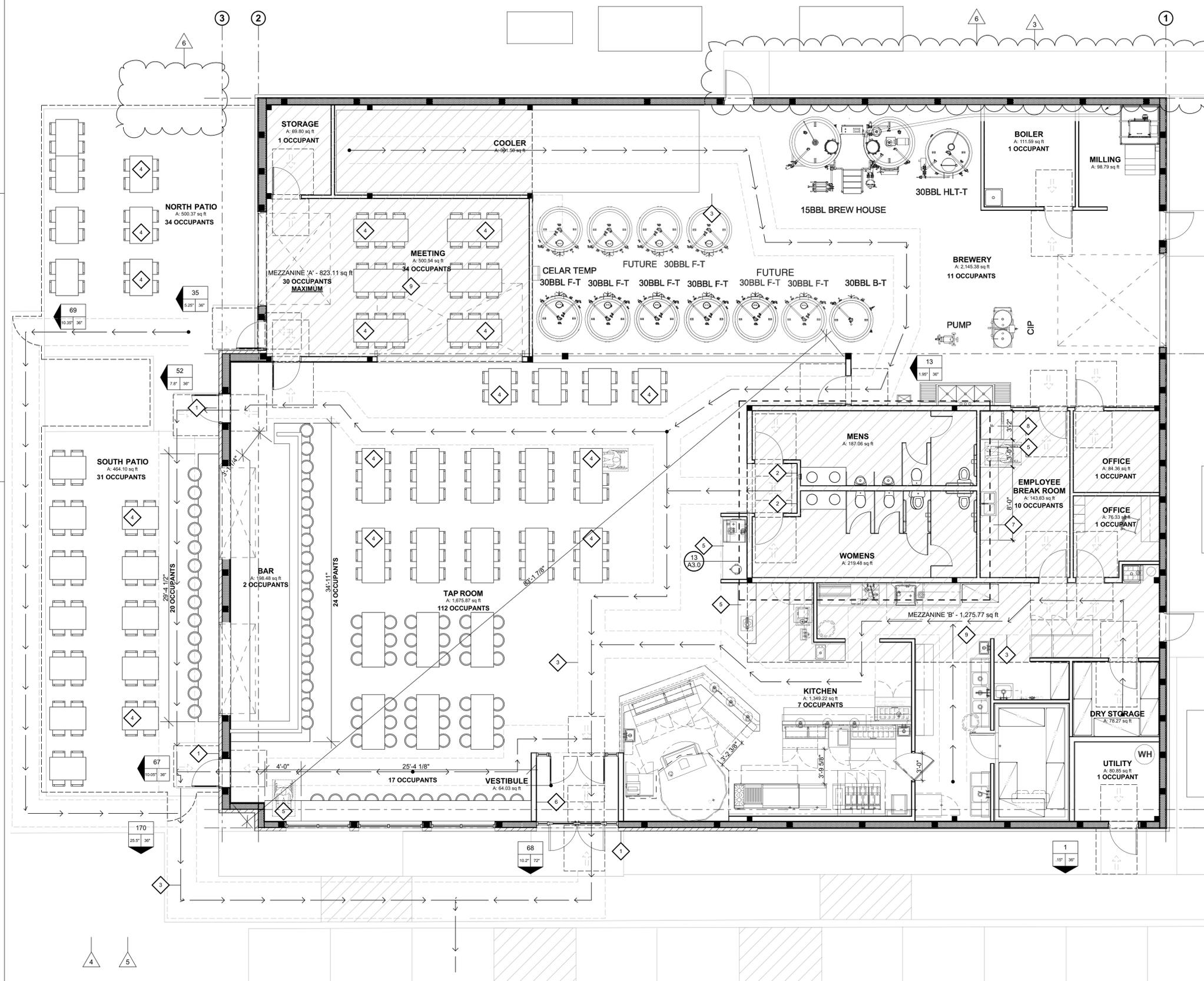
TACTILE CHARACTERS SHALL BE 48" A.F.F. MIN AT THE LOWEST TACTILE CHARACTER & 60" A.F.F. MAX AT THE HIGHEST TACTILE CHARACTER

### MOUNTING LOCATIONS:



ACCESSIBILITY NOTES:  
ANSI APPROVED E.S. PLASTIC, NEMA RATED SELF-EXTINGUISHING ADHESIVE MOUNTED  
BLUE COLOR NO. EQUAL TO 15090 IN FEDERAL STANDARD 595B

**NOTE:**  
1. REFER TO B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS  
2. OWNER TO PROVIDE FURNITURE - 5% OF EACH SEATING TYPE MUST BE ACCESSIBLE PER B1.0



19 B2.0 RESTROOM SIGNAGE DETAILS 1/4" = 1'-0"

1 B2.0 ACCESSIBILITY FLOOR PLAN 1:66



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660 / www.wilkusarch.com



INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
2025 105TH AVENUE NE  
BLAINE, MN 55449

SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Print Name: MICHAEL J. WILKUS  
Signature: *[Signature]*  
License No.: 16380  
Expiration Date: 06-30-18  
Date: 08-22-2017

PROJECT NO.: 2016-0079  
DRAWN BY: KEVIN GREEN  
CHECKED BY: MICHAEL J. WILKUS

ISSUE:	DATE:
CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
DESIGN COORDINATION / SAC	08-18-2016
OWNER COMMENTS	12-05-2016
PERMIT & BID SET	12-29-2016
REVISION:	DATE:
QTY COMMENTS	4/1/2017
TTB	4/24/2017
QTY COMMENTS	8/17/2017
QTY COMMENTS	8/17/2017
QTY COMMENTS	8/22/2017

PROJECT LOCATION:  
BLAINE, MN

SHEET NUMBER / TITLE:  
**B2.0**  
Interior Accessibility Floor Plan

CONSULTANT:



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660/ www.wilkusarch.com

CLIENT:



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OWNER COMMENTS 12-05-2016

PERMIT & BID SET 12-29-2016

REVISION: DATE:

PROJECT LOCATION

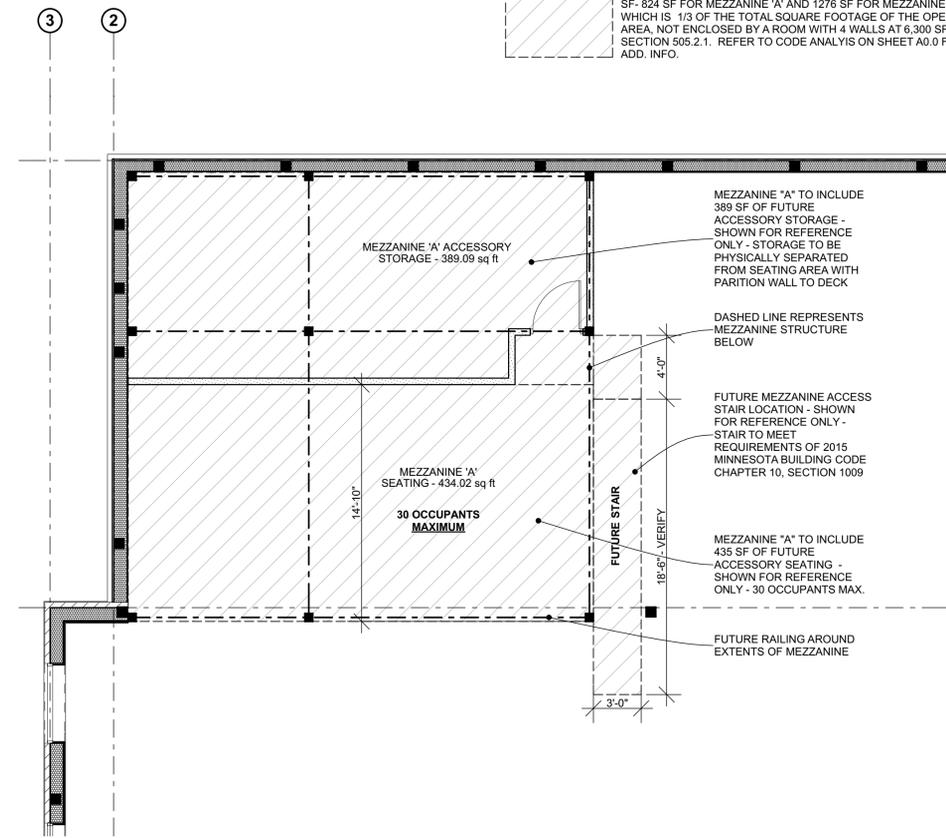
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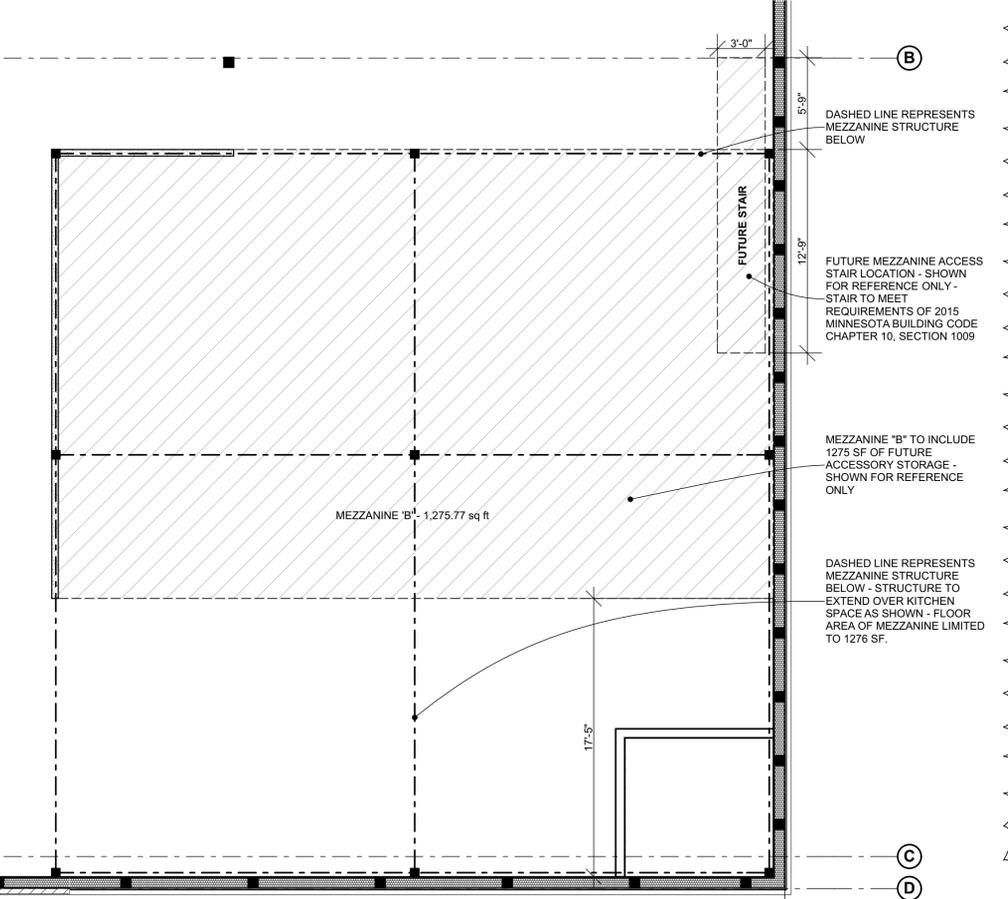
B2.1

Future Mezz. Code Plans

4. HATCH REPRESENTS FUTURE MEZZANINE FLOOR AREA BY OTHERS DEFERRED UNDER A SEPARATE PERMIT - SHOWN FOR REFERENCE ONLY - MEZZANINE SQUARE FOOTAGE TOTALS 2,100 SF- 824 SF FOR MEZZANINE 'A' AND 1276 SF FOR MEZZANINE 'B'. WHICH IS 1/3 OF THE TOTAL SQUARE FOOTAGE OF THE OPEN AREA, NOT ENCLOSED BY A ROOM WITH 4 WALLS AT 6,300 SF PER SECTION 505.2.1. REFER TO CODE ANALYSIS ON SHEET A0.0 FOR ADD. INFO.



1 B2.1 MEZZANINE AREA "A" CODE PLAN  
3/16" = 1'-0"



3 B2.1 MEZZANINE AREA "B" CODE PLAN  
3/16" = 1'-0"

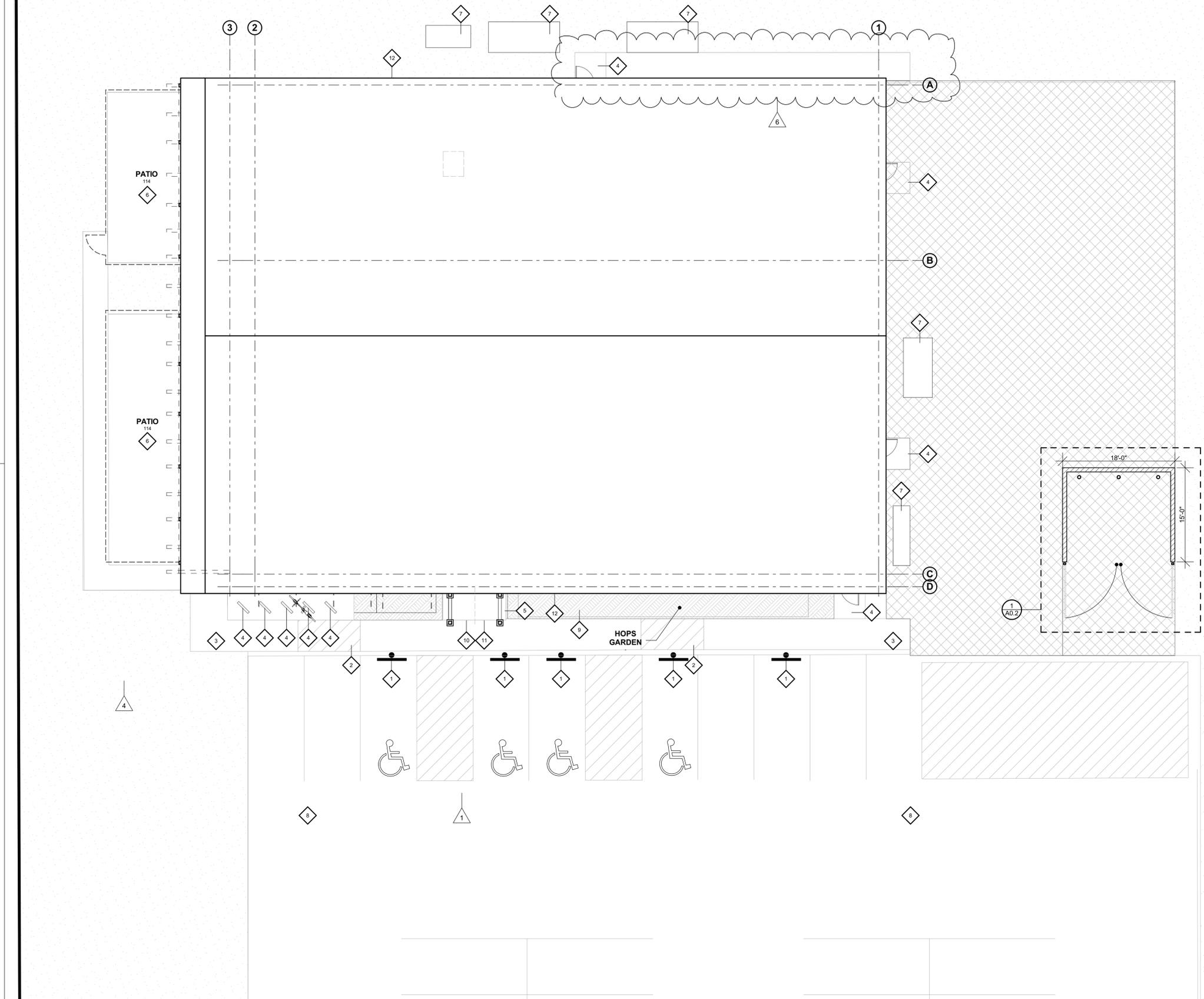
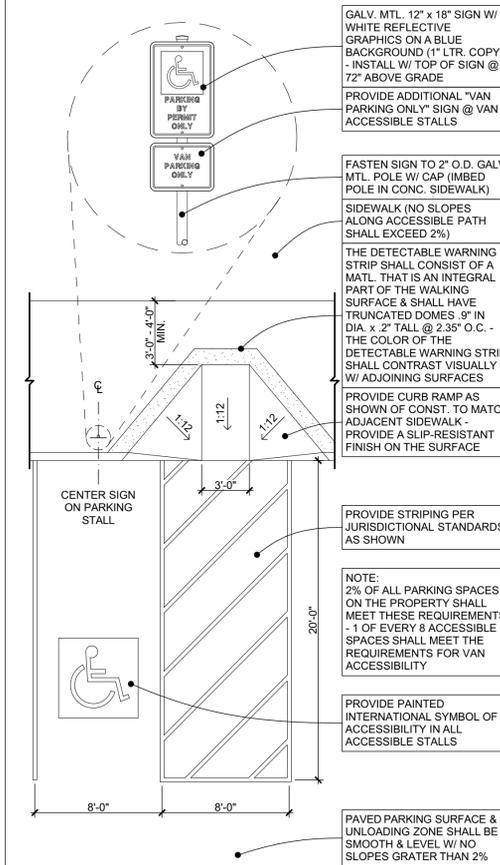
© COPYRIGHT MICHAEL J. WILKUS, ARCHITECT

# SITE PLAN LEGEND

- 1 ACCESSIBLE PARKING SIGN - REFER TO CIVIL DRAWINGS AND 19/A0.1 FOR ADDITIONAL INFORMATION
- 2 ADA PEDESTRIAN RAMP - REFER TO CIVIL DRAWINGS
- 3 5'-0" SIDEWALK - REFER TO CIVIL
- 4 BIKE RACK - PROVIDED BY OWNER - VERIFY REQUIREMENTS PRIOR TO INSTALLATION - REFER TO CIVIL DRAWINGS FOR ADD. INFO.
- 4 PROVIDE 5'-0" X 5'-0" CONCRETE STOOP AT BUILDING EXIT - TYPICAL - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION
- 5 PROVIDE 9'-0" X 5'-0" CONCRETE STOOP AT BUILDING EXIT - REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION
- 6 EXTERIOR PATIO - REFER TO 13/A2.0 & CIVIL/ STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION
- 7 EQUIPMENT PAD - SHOWN FOR REFERENCE ONLY - COORDINATE FINAL LOCATION & REQUIREMENTS WITH OWNER/ EQUIPMENT SUPPLIER PRIOR TO INSTALL
- 8 REFER TO CIVIL DRAWINGS FOR PARKING LOT DESIGN & REQUIREMENTS - TYPICAL
- 9 HOPS GARDEN - SHOWN FOR REFERENCE ONLY - COORDINATE REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION
- 10 ENTRANCE CANOPY - REFER TO EXTERIOR ELEVATIONS & STRUCTURAL DRAWINGS FOR ADD. INFO.
- CONTRACTOR TO PROVIDE 12" CONTRASTING BUILDING ADDRESS NUMBERS ON EXTERIOR BUILDING ELEVATION FACING STREET - COORDINATE EXACT LOCATION W/ CITY PRIOR TO INSTALL.
- CONTRACTOR TO PROVIDE ALUMINUM GUTTERS TO MATCH BUILDING AT NORTH & SOUTH SIDES - PROVIDE DOWNSPOUTS AT CORNERS THAT DRAIN INTO A SUB-GRADE TILE TO AVOID CONFLICT WITH PROPOSED SIDEWALK

## GENERAL NOTES

1. THIS PROJECT IS DESIGN BUILD ARCHITECTURAL & STRUCTURAL - MECHANICAL, ELECTRICAL & PLUMBING ARE DEFERRED UNDER A SEPARATE SUBMITTAL - NOT IN SCOPE
2. PARKING LOT LIGHTING NOT IN SCOPE - DEFERRED UNDER SEPARATE SUBMITTAL



19  
A0.1  
ACCESSIBLE PARKING  
NOT TO SCALE

1  
A0.1  
ARCHITECTURAL SITE PLAN  
1/8" = 1'-0"



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PROJECT INFORMATION:

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2025 105TH AVE NE  
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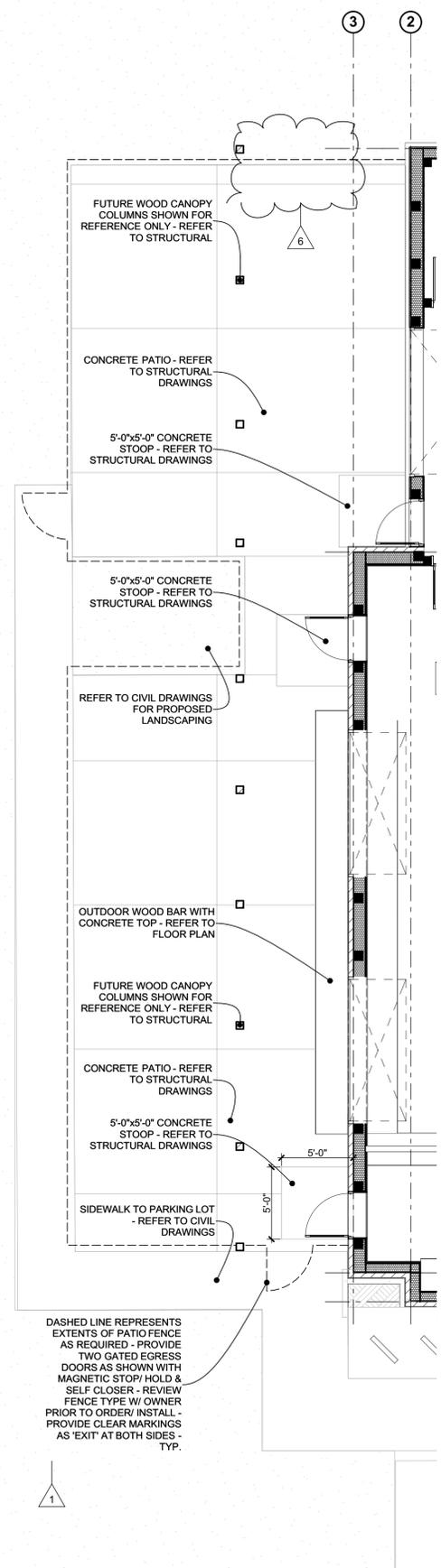
PROJECT NO.: 2016-0079  
DRAWN BY: KEVIN GREEN  
CHECKED BY: MICHAEL J. WILKUS

ISSUE	DATE
CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
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△ CITY COMMENTS	8/22/2017

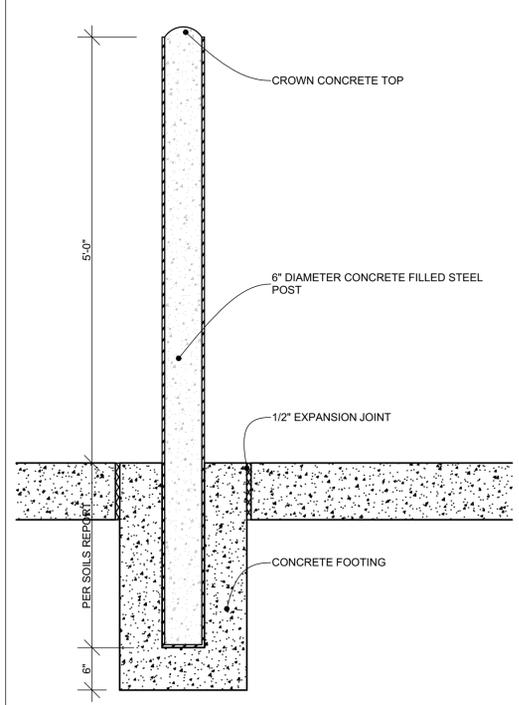
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BLAINE, MN

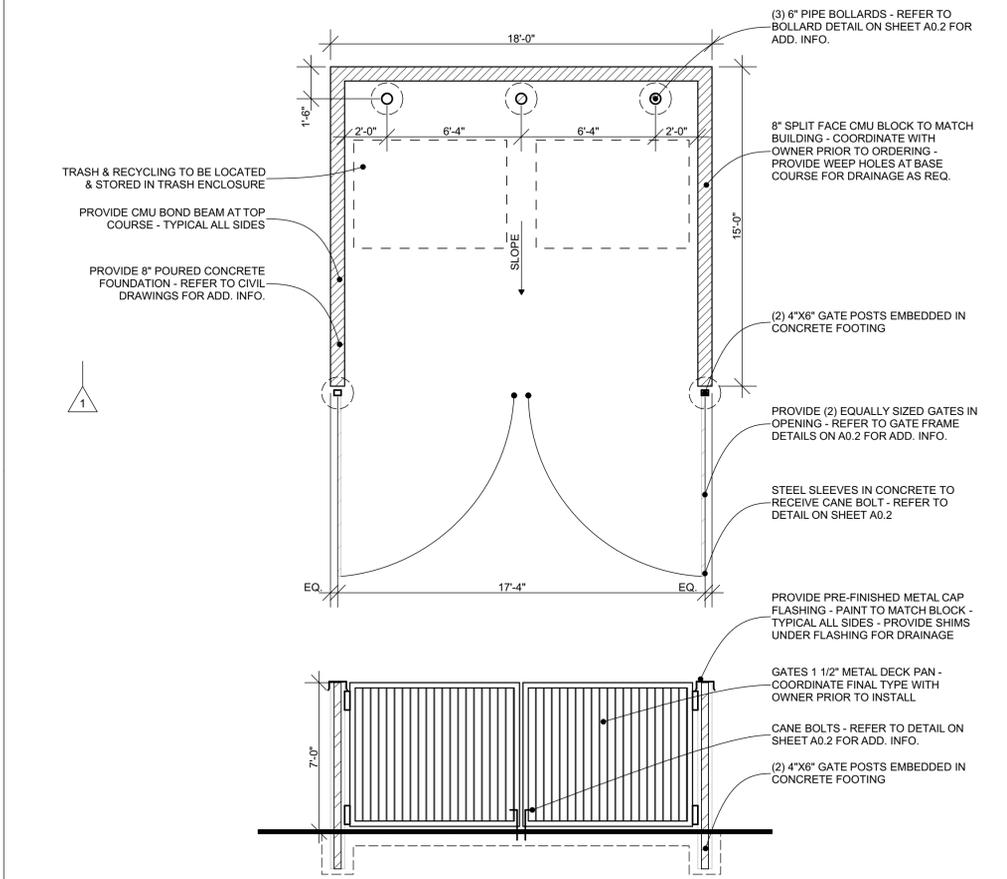
SHEET NUMBER / TITLE:  
**A0.1**  
Architectural Site Plan



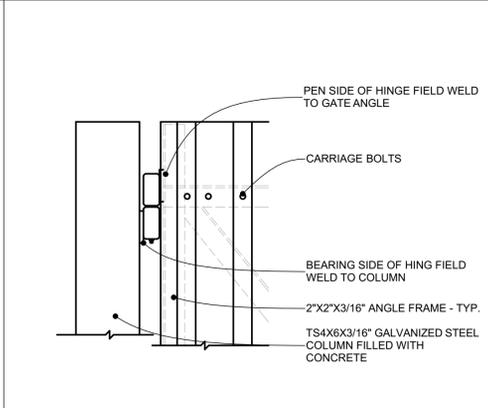
**13**  
A0.2  
PATIO PLAN  
3/16" = 1'-0"



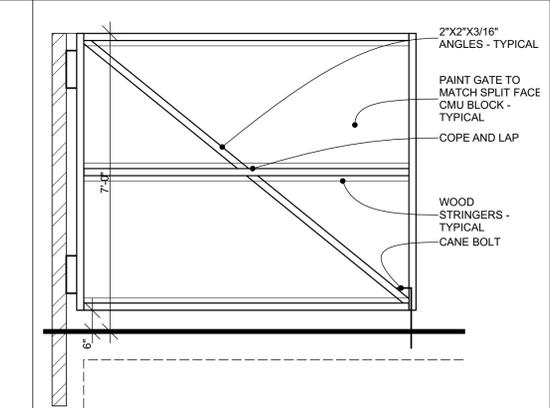
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A0.2  
BOLLARD DETAIL  
1" = 1'-0"



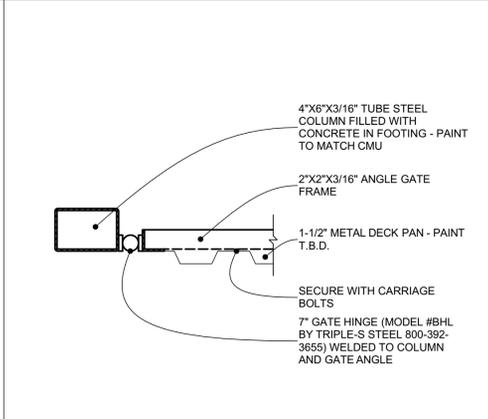
**1**  
A0.2  
TRASH ENCLOSURE DETAIL  
1/4" = 1'-0"



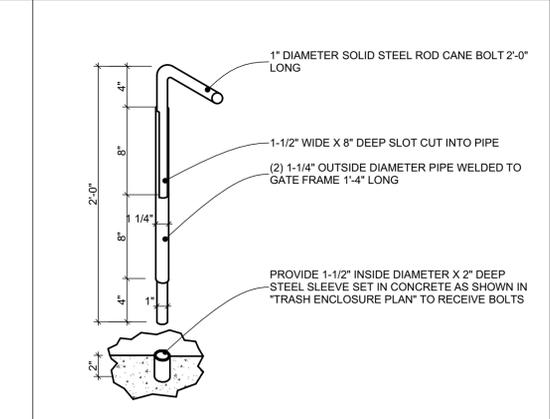
**7**  
A0.2  
GATE HINGE ELEVATION  
1 1/2" = 1'-0"



**3**  
A0.2  
GATE FRAME DETAIL  
1/2" = 1'-0"



**8**  
A0.2  
GATE HINGE PLAN  
1 1/2" = 1'-0"



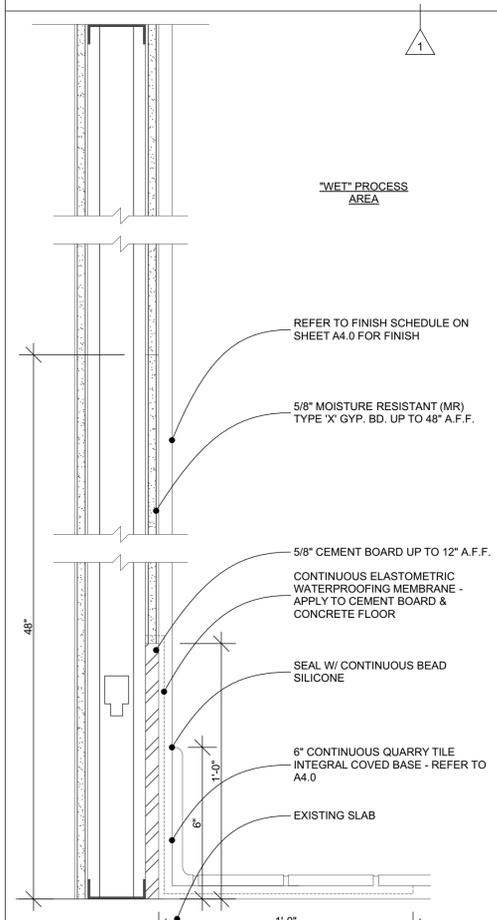
**4**  
A0.2  
CANE BOLT DETAIL  
1 1/2" = 1'-0"

# FLOOR PLAN LEGEND

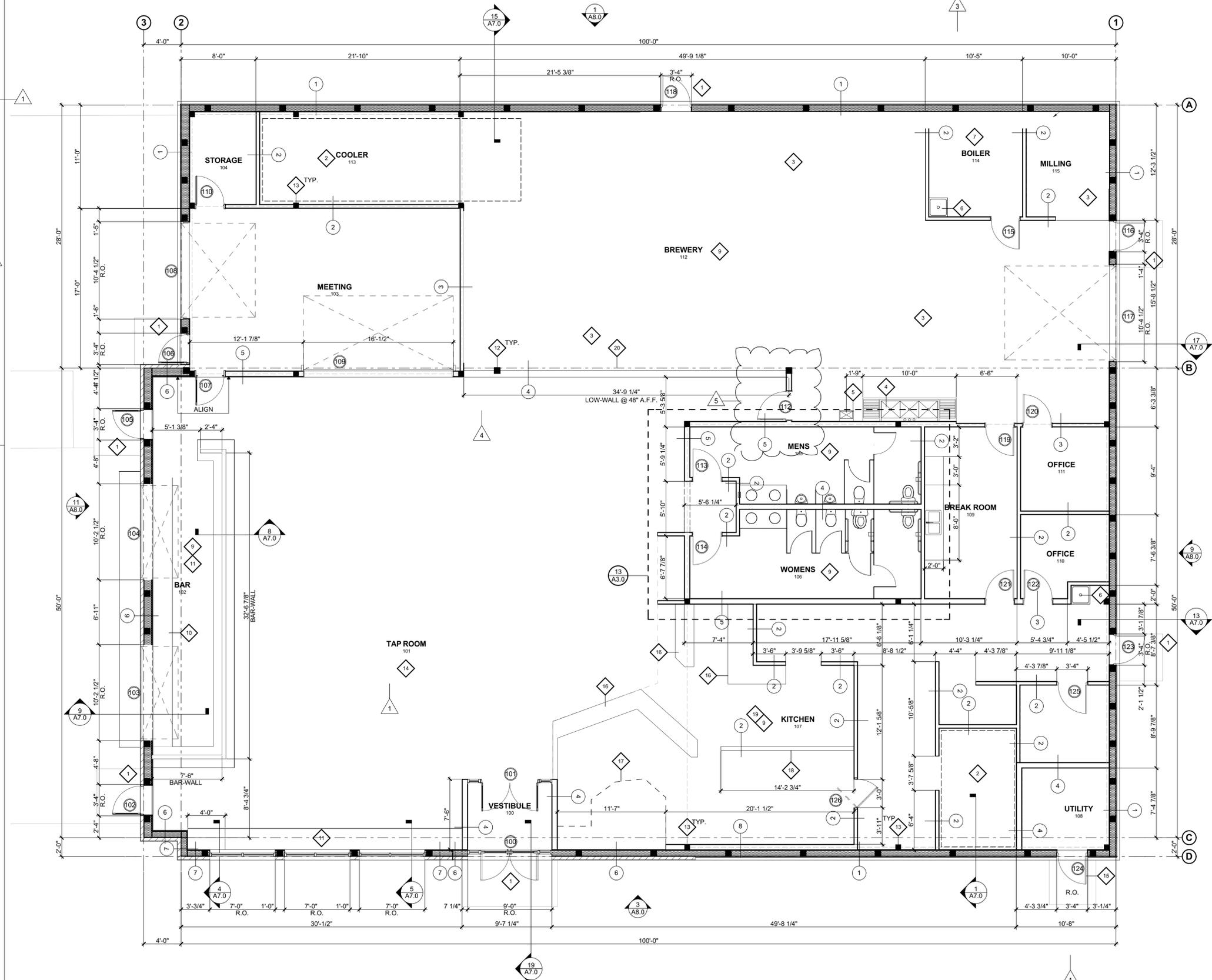
- DOOR STOOP - SHOWN FOR REFERENCE ONLY - REFER TO STRUCTURAL DRAWINGS FOR ADD. INFO.
- WALK-IN COOLER PROVIDED BY OWNER - SHOWN FOR REFERENCE ONLY
- BREWERY EQUIPMENT BY OTHERS - SHOWN FOR REFERENCE ONLY - COORDINATE TRENCH DRAIN REQUIREMENTS WITH EQUIPMENT SUPPLIER / OWNER PRIOR TO INSTALLATION
- GENERAL CONTRACTOR TO PROVIDE NEW N.S.F. RATED 3 COMPARTMENT SINK FOR WAREWASHING - COORDINATE REQUIREMENTS WITH OWNER PRIOR TO ORDERING - REFER TO B1.0 FOR ACCESSIBILITY REQUIREMENTS  
GENERAL CONTRACTOR TO PROVIDE NSF STAINLESS STEEL HAND SINK NEXT TO 3 COMPARTMENT SINK FOR HAND WASHING - PROVIDE SOAP DISPENSER, PAPER TOWEL HOLDER AND HAND SANITIZING EQUIPMENT AS REQUIRED - REFER TO B1.0 FOR ACCESSIBILITY REQUIREMENTS
- GENERAL CONTRACTOR TO PROVIDE NEW 2'-0" X 2'-0" MOP SINK - COORDINATE FINAL TYPE WITH OWNER PRIOR TO ORDERING
- BOILER BY OTHERS - SHOWN FOR REFERENCE ONLY - COORDINATE REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION
- COORDINATE FLOOR DRAIN REQUIREMENTS FOR BAR, RESTROOM, KITCHEN & BREWERY WITH OWNER PRIOR TO CONSTRUCTION - TYPICAL
- COORDINATE FLOOR DRAIN REQUIREMENTS FOR BAR, RESTROOM, KITCHEN & BREWERY WITH OWNER, KITCHEN EQUIPMENT SUPPLIER & PLUMBING DRAWINGS PRIOR TO CONSTRUCTION - TYPICAL
- BACKBAR MILLWORK PROVIDED BY OWNER & INSTALLED BY GENERAL CONTRACTOR - SHOWN FOR REFERENCE ONLY - VERIFY FINISH REQUIREMENTS WITH HEALTH DEPARTMENT AND INSTALL AS REQUIRED - TYPICAL
- REFER TO EXTERIOR ELEVATIONS FOR UPPER WINDOWS AS SCHEDULED
- BUILDING COLUMN SHOWN FOR REFERENCE ONLY - REFER TO STRUCTURAL DRAWINGS FOR ADD. INFO. - ALIGN LOW WALL WITH COLUMN AS SHOWN - TYPICAL
- MEZZANINE BY OTHERS - COLUMN SHOWN FOR REFERENCE ONLY - ALIGN IN WALL AS SHOWN - REFER TO STRUCTURAL DRAWINGS FOR ADD. INFO. - TYPICAL  
CONTRACTOR TO PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY MN FIRE CODE - MULTI-PURPOSE EXTINGUISHERS REQ. A MIN. RATING OF 4A:20BC (10LB) AND BE SPACE A MAX. TRAVEL DISTANCE OF 75'-0" FROM ANY POINT TO AN EXTINGUISHER - VERIFY FINAL LOCATIONS WITH FIRE MARSH  
CONTRACTOR SHALL PROVIDE SIGNAGE FOR UTILITY ROOM DOOR CLEARLY LABELING ROOM CONTAINS ELECTRICAL, MECHANICAL, SPRINKLER AND FIRE ALARM EQUIPMENT
- MILLWORK PROVIDED BY OTHERS - SHOWN FOR REFERENCE ONLY - REFER TO SHEET B1.0 & B2.0 FOR ACCESSIBILITY STANDARDS
- DASHED LINE INDICATES EXTENTS OF OWNER SUPPLIED PIZZA OVEN - G.C. TO PROVIDE ENCLOSURE, FINISH & COORDINATE REQUIREMENTS WITH HEALTH DEPARTMENT
- CONSTRUCT WALL TO 54" A.F.F. - REFER TO KITCHEN EQUIPMENT PLANS FOR ADD. INFO.
- REFER TO KITCHEN EQUIPMENT PLANS FOR WALL BACKING LOCATIONS - TYP.
- CONTRACTOR TO PROVIDE 24" TALL GLASS PRIVACY PANELS ON METAL FRAME FOR BREWERY SEPARATION AS REQUIRED - COORDINATE FINAL TYPE / SELECTION WITH OWNER PRIOR TO ORDERING - PROVIDE AT ENTIRE LENGTH OF LOW WALL

# GENERAL NOTES

- DIMENSIONS ARE TO THE FINISH FACE OF SHEATHING UNLESS OTHERWISE NOTED
- THIS PROJECT IS DESIGN-BUILD ARCHITECTURAL & STRUCTURAL - ALL MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION REQUIREMENTS SHALL BE A DEFERRED SUBMITTAL UNDER A SEPARATE PERMIT BY THE GENERAL CONTRACTOR - ALL FIXTURES AND EQUIPMENT ARE SHOWN FOR COORDINATION PURPOSES ONLY
- ALL BREWERY EQUIPMENT, BAR EQUIPMENT, TABLES, CHAIRS & FIXTURES ARE PROVIDED BY THE OWNER AND INSTALLED BY THE GENERAL CONTRACTOR
- GENERAL CONTRACTOR TO COORDINATE WITH OWNER AND PROVIDE WATERPROOFING MEMBRANE IN ALL 'WET PROCESS AREAS' PER DETAIL 19/A1.0 AS REQUIRED - TYPICAL



19 A1.0 TYPICAL SHEATHING MODIFICATION 3" = 1'-0"



1 A1.0 ARCHITECTURAL FLOOR PLAN 3/16" = 1'-0"



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660 / www.wilkusarch.com

CLIENT:



INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
2025 105TH AVENUE NE  
BLAINE, MN 55449

SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Print Name: MICHAEL J. WILKUS

Signature: *[Signature]*  
License No.: 16380  
Expiration Date: 06-30-18  
Date: 08-17-2017

PROJECT NO.: 2016-0079  
DRAWN BY: KEVIN GREEN  
CHECKED BY: MICHAEL J. WILKUS

ISSUE	DATE
CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
DESIGN COORDINATION / SAC	08-18-2016
OWNER COMMENTS	12-05-2016
PERMIT & BID SET	12-29-2016
REVISION:	DATE:
△ CITY COMMENTS	4/11/2017
△ TTB	4/24/2017
△ CITY COMMENTS	8/17/2017
△ CITY COMMENTS	8/17/2017

PROJECT LOCATION:

BLAINE, MN

SHEET NUMBER / TITLE:

A1.0

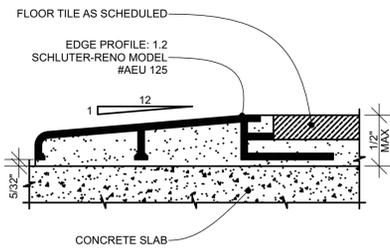
Architectural Floor Plan

# FINISH PLAN LEGEND

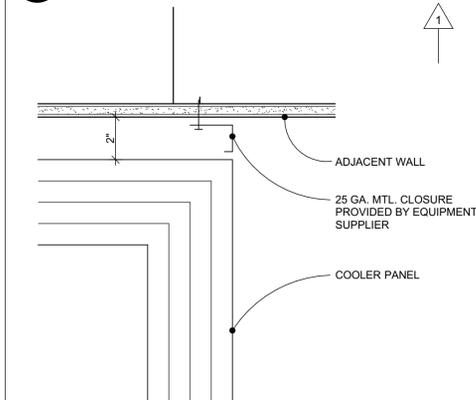
- 1 UTILITY ROOM FLOOR TO REMAIN UNFINISHED - PROTECT DURING CONSTRUCTION
- WALK-IN COOLER PROVIDED BY OWNER & INSTALLED BY GENERAL CONTRACTOR - COORDINATE FLOOR & BASE REQUIREMENTS & REFER TO MANUFACTURER'S SPECIFICATIONS FOR ADD. INFO. - WALL FINISH CAN REMAIN UNFINISHED IF COVERED BY EQUIPMENT
- 4 ALUMINUM EDGE PROFILE - REFER TO 19/A1.2 - TYPICAL AT ALL TILE TO CONCRETE TRANSITIONS
- 5 PROVIDE FLOOR DYE AND SEALANT ON CONCRETE SURFACE IN PUBLIC AREAS - REFER TO ADDITIONAL FLOOR FINISH NOTES ON THE FINISH SCHEDULE FOR ADD. INFO. - COORDINATE DYE & SEALANT COLOR WITH OWNER PRIOR TO APPLICATION

# GENERAL NOTES

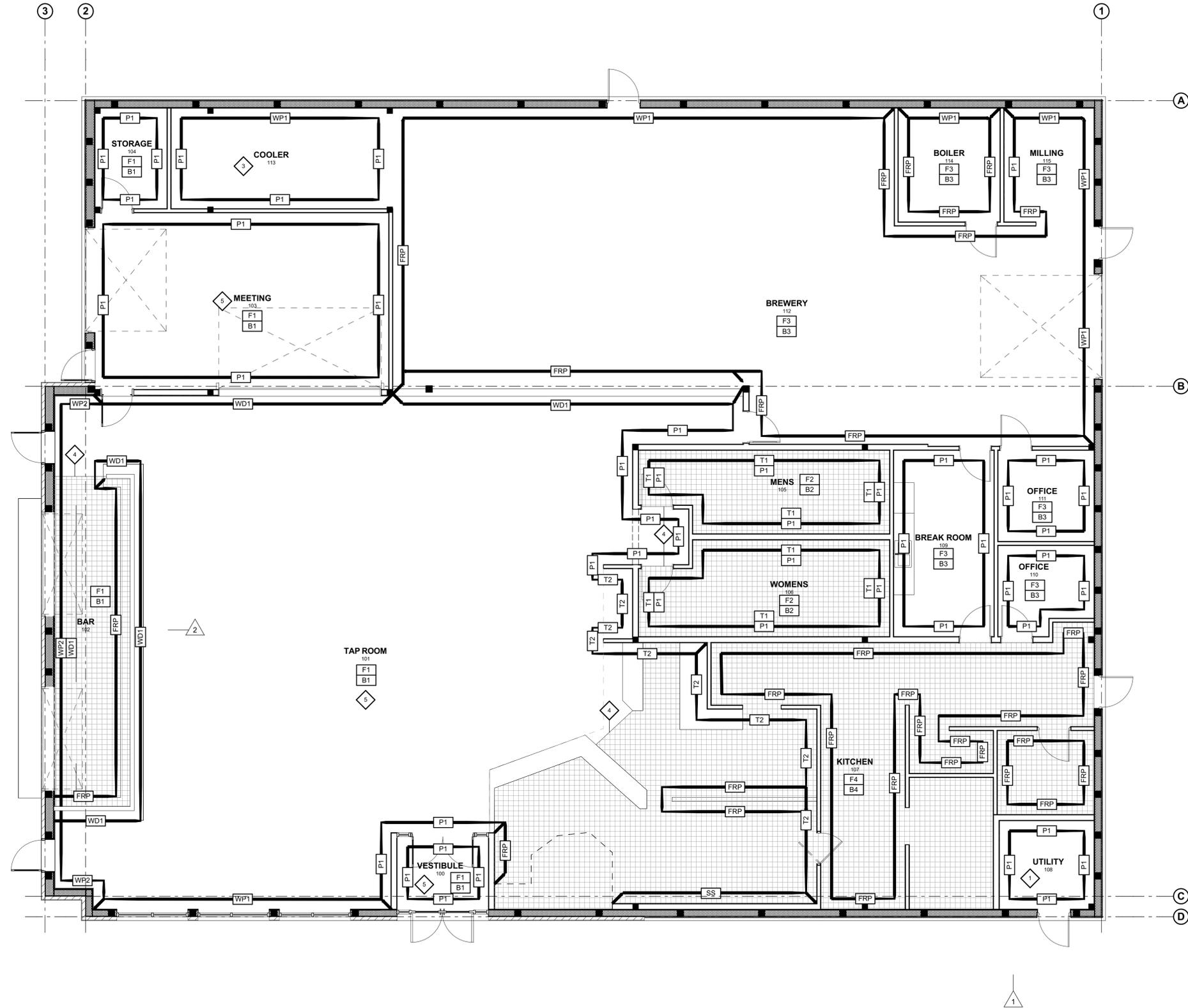
1. REFER TO FINISH SCHEDULE ON SHEET A5.0 FOR CONCRETE FLOOR.
2. EDGE PROFILE AT TILE TRANSITIONS - REFER TO DETAIL 19/A1.2 - SCHLUTER SYSTEMS: 1-800-472-4588
3. COORDINATE PLUMBING REQUIREMENTS FOR ALL FLOOR SINK, FLOOR DRAIN AND TRENCH DRAIN LOCATIONS - PREPARE AND INSTALL ALL FLOOR PENETRATIONS PER MANUFACTURER'S DETAILS - FIXTURES MUST BE CLAMPING TYPE - USE APPROPRIATE WATERPROOF SEALANT AND FOAM BACKER TO SEAL SPACE AROUND PENETRATIONS.



19 A1.2 TYP. EDGE PROFILE DETAIL  
6" = 1'-0"



19 A1.2 TYP. COOLER WALL CORNER DETAIL  
3" = 1'-0"



1 A1.2 FINISH PLAN  
3/16" = 1'-0"

CONSULTANT:



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ISSUE: DATE:

CUP SUBMITTAL 03-11-2016

SIP PANEL COORDINATION 08-05-2016

DESIGN COORDINATION / SAC 08-18-2016

OWNER COMMENTS 12-05-2016

PERMIT & BID SET 12-29-2016

REVISION: DATE:

CITY COMMENTS 4/11/2017

CITY COMMENTS 4/19/2017

PROJECT LOCATION:

BLAINE, MN

SHEET NUMBER / TITLE:

A1.2

Finish Plan

# R.C.P. LEGEND

- HEADER @ 8'-0" - FINISH TO MATCH ADJACENT
- NEW VINYL A.C.T. CEILING SYSTEM 'C2' - COORDINATE HVAC, PLUMBING & ELECTRICAL REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION - TYP.
- NEW GYP. BD. CEILING - PAINT 'P1' & COORDINATE HVAC, PLUMBING & ELECTRICAL REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION - TYP.
- CEILING TO REMAIN OPEN/ EXPOSED - COORDINATE ALL HVAC, ELECTRICAL, LIGHTING & FIXTURE LOCATIONS' REQUIREMENTS WITH OWNER - INCLUDE ALTERNATE IN BID TO PAINT EXPOSED STRUCTURE
- SHADED LINE BEYOND INDICATES LOCATION OF ROOF TRUSS BY OTHERS - COORDINATE LOCATION AGAINST SIP PANEL DRAWINGS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES - TYPICAL
- PROVIDE WALL PACK EM LIGHTING ABOVE ALL EXTERIOR DOOR LANDING AREAS AS REQUIRED - REFER TO RCP GENERAL NOTES FOR ADD. INFO - TYPICAL
- 36" HIGH SOFFIT BY G.C. - SHOWN FOR REFERENCE ONLY

# GENERAL NOTES

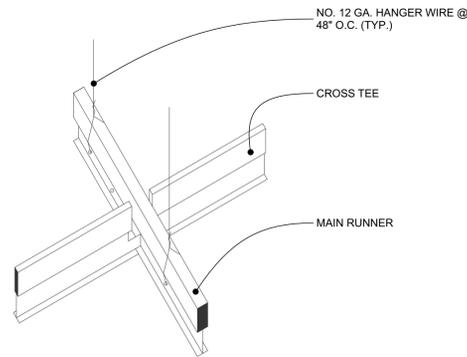
REFER TO ELEC. DWGS. FOR ADDITIONAL INFORMATION

LIGHT FIXTURES LOCATED IN SUSPENDED CEILING SYSTEM GRIDS SHALL BE CENTERED IN THE GRID BAY - U.N.O.

ALL DIMENSIONS ARE TO CENTERLINE OF LIGHT FIXTURE AND/OR FACE OF FINISH WALL - U.N.O.

ILLUMINATED EXIT SIGNS AND EMERGENCY LIGHTING WITH BATTERY BACK-UP MUST BE PROVIDED WHENEVER TWO OR MORE EXITS ARE REQUIRED - WHEN EMERGENCY LIGHTING IS REQUIRED IT MUST ALSO EXTEND TO THE EXTERIOR OF THE BUILDING AND ILLUMINATE THE EXTERIOR DOOR LANDING AREA - EMERGENCY POWER SOURCES MUST BE TESTED AT LEAST ANNUALLY TO VERIFY THE SECONDARY POWER SOURCE (BATTERY PACK) IS ABLE TO PROVIDE A 90-MINUTE POWER TO EXIT SIGNS - INSTALLATION OF EXIT SIGNS AND EMERGENCY LIGHTS THAT ARE CAPABLE OF PERFORMING THE ANNUAL 90-MINUTE TEST AUTOMATICALLY AND WITHOUT HAVING TO HOLD A BUTTON FOR 90-MINUTES IS REQUIRED - INSTALLATION OF SELF-DIAGNOSTIC TYPE EXIT SIGNS AND EMERGENCY LIGHTS IS RECOMMENDED - EXIT SIGNS NEED TO BE LOCATED ABOVE ALL DOORS LEADING TO THE EXTERIOR OF THE BUILDING

NOTE:  
THIS PROJECT IS DESIGN-BUILD ARCHITECTURAL, CIVIL AND STRUCTURAL ONLY - ALL MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS ARE DEFERRED UNDER A SEPARATE SUBMITTAL



19 TYP. SUSPENDED CEILING DETAIL  
1/4" = 1'-0"



1 REFLECTED CEILING PLAN  
3/16" = 1'-0"

CONSULTANT:



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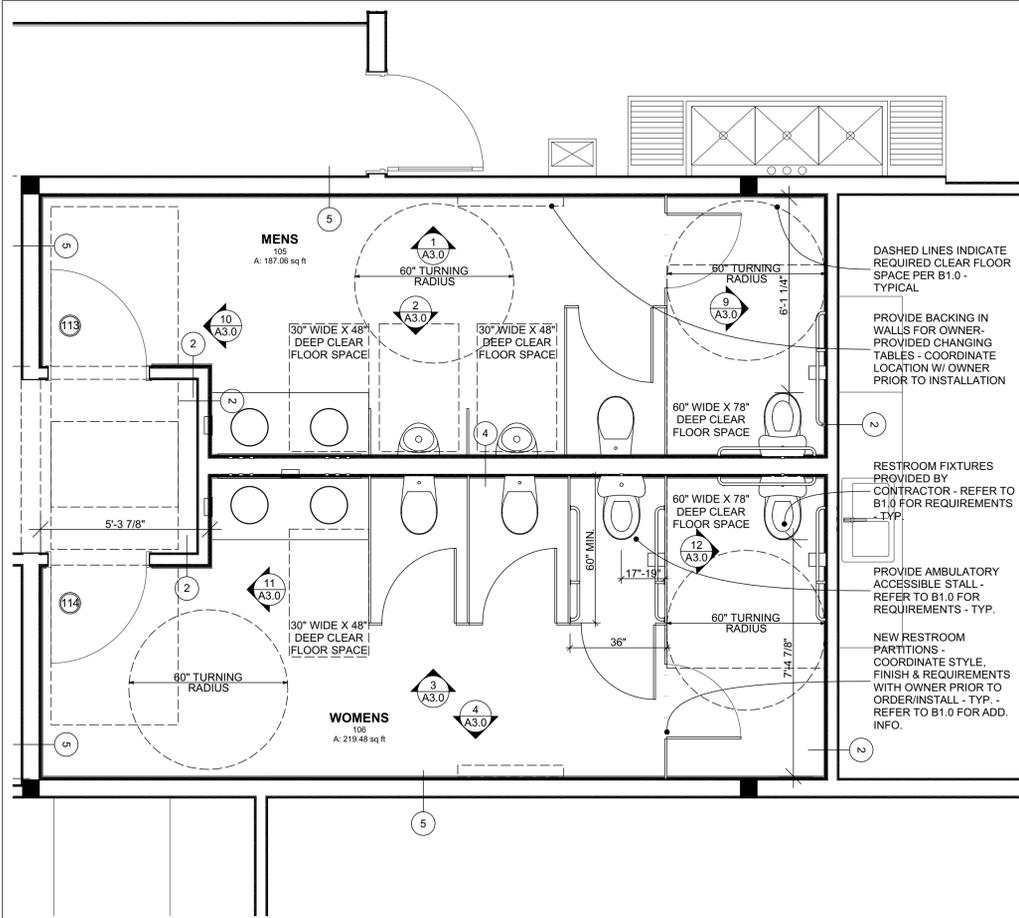
PROJECT LOCATION:

BLAINE, MN

SHEET NUMBER / TITLE:

A2.0

Reflected Ceiling Plan

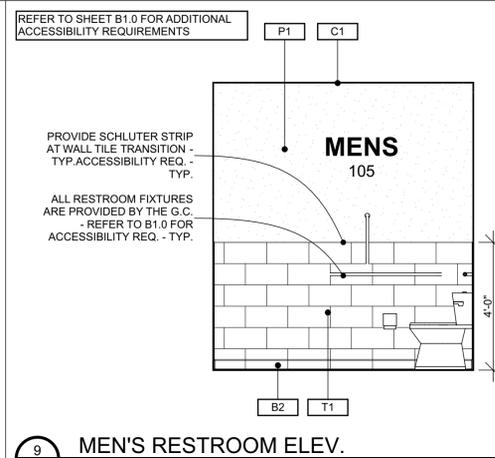


**13 ENLARGED RESTROOM PLAN**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS

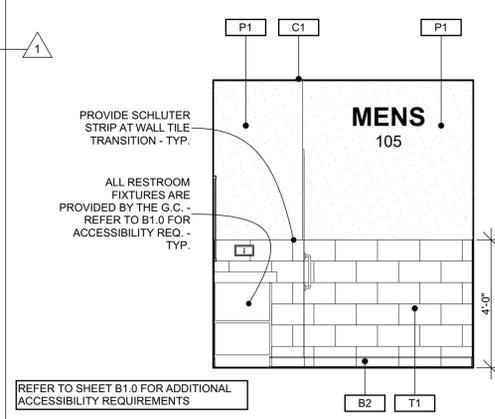
**ROOM FINISH SCHEDULE**

RM. #	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	EAST	WEST	CLG. FINISH	CLG. HGT.	NOTES
100	VESTIBULE	F1	B1	P1	P1	P1	P1	P1	9'-0"	-
101	TAP ROOM	F1	B1	-	P1 / WP1	P1	WD1/WP2	-	OPEN	-
102	BAR	F4	B4	WD1/WP2	WP2	-	WD1/WP2	-	OPEN	-
103	MEETING	F1	B1	P1	P1	P1	P1	P1	9'-6"	COORDINATE MAXIMUM CEILING HEIGHT IN FIELD
104	STORAGE	F3	B3	P1	P1	P1	P1	-	OPEN	-
105	MENS	F2	B2	T1/P1	T1/P1	T1/P1	T1/P1	P1	9'-0"	COORDINATE TILE WITH OWNER PRIOR TO ORDERING
106	WOMENS	F2	B2	T1/P1	T1/P1	T1/P1	T1/P1	P1	9'-0"	COORDINATE TILE WITH OWNER PRIOR TO ORDERING
107	KITCHEN	F4	B4	FRP	FRP	FRP	FRP	ACT	9'-0"	KITCHEN FINISHES LISTED FOR COORDINATION ONLY - FUTURE TENANT TO PROVIDE MATERIAL & INSTALLATION
108	UTILITY	-	-	P1	P1	P1	P1	-	OPEN	-
109	BREAK ROOM	F3	B3	P1	P1	P1	P1	-	OPEN	-
110	OFFICE	F3	B3	P1	P1	P1	P1	-	OPEN	-
111	OFFICE	F3	B3	P1	P1	P1	P1	-	OPEN	-
112	BREWERY	F3	B3	WP1	FRP	WP1/FRP	FRP	-	OPEN	-
113	COOLER	-	MANU F.	WP1	P1	P1	P1	-	OPEN	COOLER BASE BY MANUF.
114	BOILER	F3	B3	WP1	P1	P1	P1	-	OPEN	-
115	MILLING	F3	B3	WP1	P1	P1	P1	-	OPEN	-



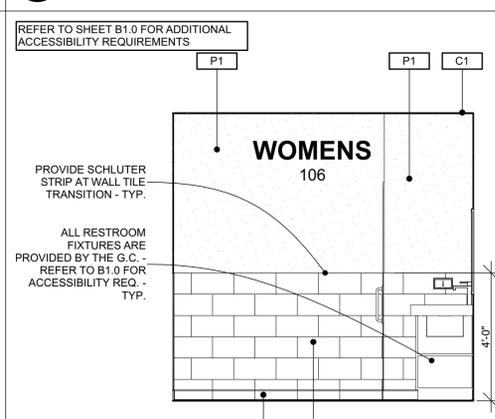
**9 MEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



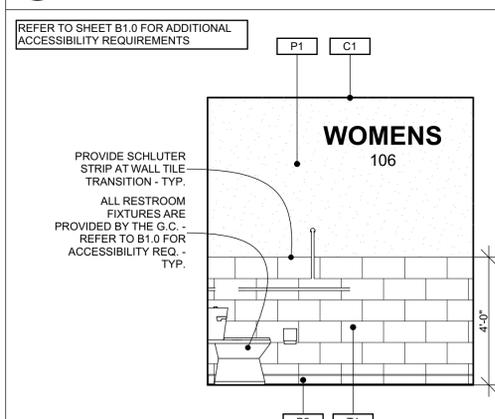
**10 MEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



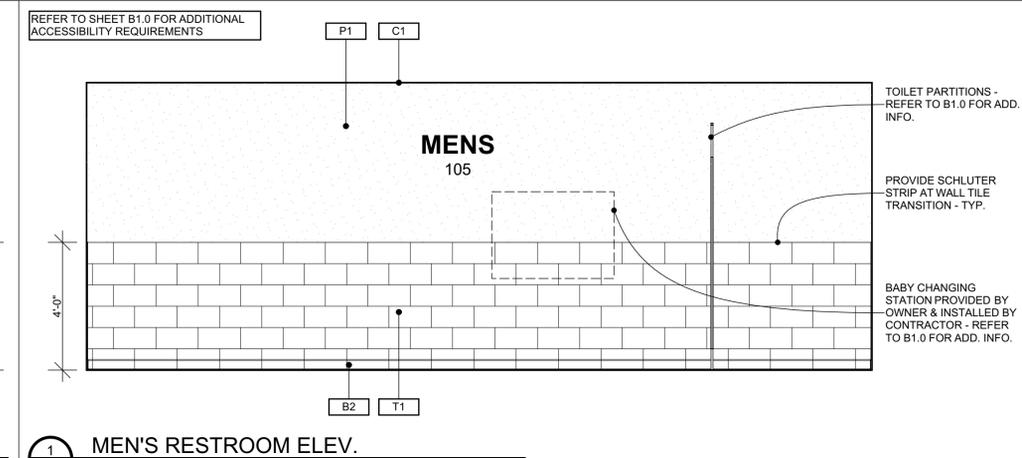
**11 WOMEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



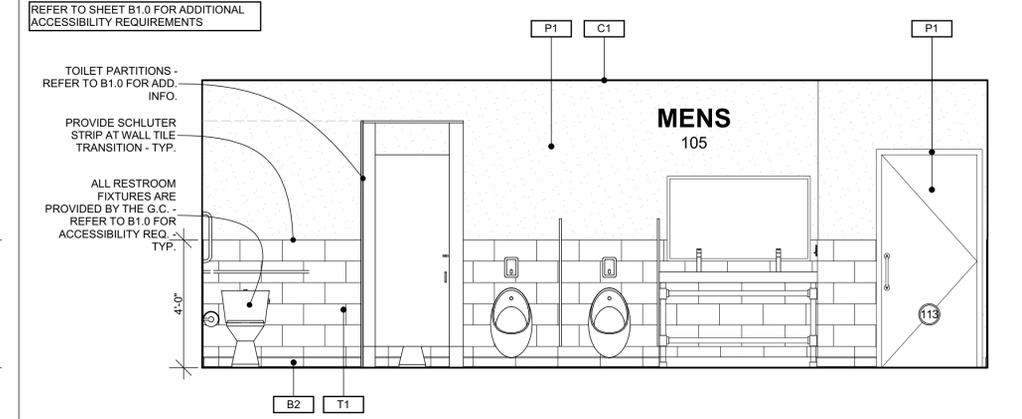
**12 WOMEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



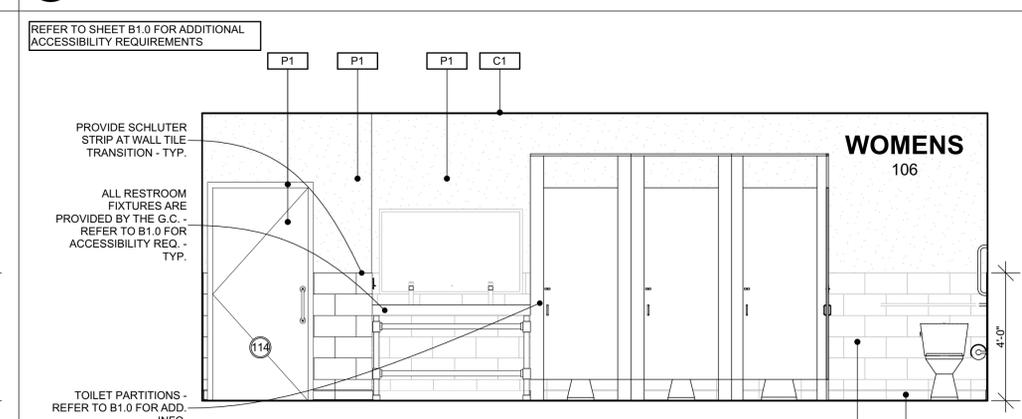
**1 MEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



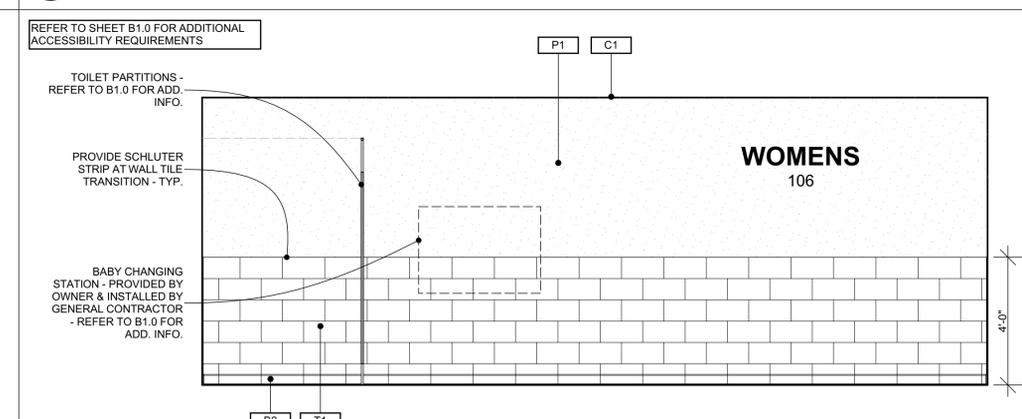
**2 MEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



**3 WOMEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



**4 WOMEN'S RESTROOM ELEV.**  
3/8" = 1'-0"

REFER TO SHEET B1.0 FOR ADDITIONAL ACCESSIBILITY REQUIREMENTS



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PERMIT & BID SET	12-29-2016
REVISION:	DATE
△ CITY COMMENTS	4/11/2017
△ CITY COMMENTS	4/19/2017

PROJECT LOCATION:

BLAINE, MN

SHEET NUMBER / TITLE:

**A3.0**

Interior Elevations

# DOOR & FRAME SCHEDULE

DOOR #	DOOR LEAF DIMENSIONS			DOOR LEAF MAT'L	DOOR FRAME DIMENSIONS		FRAME MAT'L	HWDR. GROUP #	FIRE-RESISTIVE RATING	REMARKS
	W.	HT.	THK.		JAMB WIDTH	HEAD WIDTH				
100	6'-0"	7'-2"	0'-1 1/4"	ALUM. STOREFRONT	2.00"	2.00"	ALUM. STOREFRONT	1	0	DOUBLE DRS W/ 1'-0" SIDELITE
101	6'-0"	7'-2"	0'-1 1/4"	ALUM. STOREFRONT	2.00"	2.00"	ALUM. STOREFRONT	1	0	DOUBLE DRS W/ 1'-0" SIDELITE
102	3'-0"	7'-2"	0'-1 1/4"	ALUM. STOREFRONT	0.06"	2.00"	ALUM. STOREFRONT	1	0	MATCH STOREFRONT
103	9'-10"	4'-0"	0'-1 1/4"	MANUF.	2.00"	2.00"	MANUF.	-	0	BY MANUFACTURER
104	9'-10"	4'-0"	0'-1 1/4"	MANUF.	2.00"	2.00"	MANUF.	-	0	BY MANUFACTURER
105	3'-0"	7'-2"	0'-1 1/4"	ALUM. STOREFRONT	0.06"	2.00"	ALUM. STOREFRONT	1	0	MATCH STOREFRONT
106	3'-0"	7'-2"	0'-1 1/4"	ALUM. STOREFRONT	0.06"	2.00"	ALUM. STOREFRONT	1	0	MATCH STOREFRONT
107	3'-0"	7'-0"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	2	0	PROVIDE VISION WINDOW
108	10'-0"	8'-0"	0'-1 1/4"	MANUF.	2.00"	2.00"	MANUF.	-	0	BY MANUFACTURER
109	16'-0"	8'-0"	0'-1 1/4"	MANUF.	3.00"	3.00"	MANUF.	-	0	BY MANUFACTURER
110	3'-0"	7'-0"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	3	0	STORAGE ROOM DOOR
112	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	3	0	PROVIDE VISION WINDOW
113	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	5	0	RESTROOM
114	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	5	0	RESTROOM
115	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	4	0	BOILER ROOM ENTRANCE
116	3'-0"	7'-2"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	6	0	EXTERIOR DOOR @ LOADING DOCK
117	10'-0"	12'-0"	0'-1 1/4"	MANUF.	2.00"	2.00"	MANUF.	-	0	BY MANUFACTURER
118	3'-0"	7'-2"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	6	0	EXTERIOR DOOR @ NORTH
119	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	4	0	BREAKROOM
120	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	3	0	BREWERY OFFICE
121	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	4	0	BREAKROOM
122	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	4	0	KITCHEN OFFICE
123	3'-0"	7'-2"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	6	0	EXTERIOR DOOR @ KITCHEN
124	3'-0"	7'-2"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	6	0	EXTERIOR DOOR @ UTILITY
125	3'-0"	6'-8"	0'-1 1/4"	H.M.	0'-2"	0'-2"	H.M.	6	0	INTERIOR DOOR @ KITCHEN
126	3'-0"	6'-8"	0'-1 1/4"	-	0'-2"	0'-2"	MANUF.	-	0	DOUBLE ACTING ELISION DOOR BY GC

NOTE:  
- PROVIDE TEMPERED GLAZING AT ALL EXTERIOR FULLY GLAZED EGRESS DOORS & SIDELITES; DOORS 100, 101, 102, 105 & 106

# FINISHES SCHEDULE

ID	DESCRIPTION	MANUFACTURER	COLOR NAME	COLOR #	SIZE	REMARKS
<b>BASE</b>						
B1	1X4 WOOD BASE	CUSTOM	BARNWOOD	N/A	1X4	1X4 BARNWOOD BASE TO MATCH WD1 WALL FINISH - SEAL
B2	COVED BASE IN RESTROOMS	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDE BY OWNER - COVED BASE TO BE SMOOTH, HARD, NON-ABSORBENT) SANITARY
B3	6" POLY-CRETE HF CANT COVE BASE	POLY-CRETE	CHARCOAL	N/A	6"	COORDINATE FINAL COLOR WITH OWNER PRIOR TO ORDERING - SUBMIT ALTERNATES FOR APPROVAL
B4	QUARRY TILE COVED BASE	TBD	TBD	TBD	TBD	-
<b>CEILING</b>						
C1	GYP. BD. CEILING - PAINTED	-	WHITE	P1	-	GYP. BD. CEILING TO BE PAINTED 'P1'
C2	2X4 CEILING TILE W/ PRELUDE GRID SYSTEM	ARMSTRONG PRODUCTS	WHITE	CLEAN ROOM VL#870	2'X4'	2X4 LAY-IN CEILING TILES W/ PRELUDE PLUS GRID SYSTEM - SMOOTH, WASHABLE
<b>FLOORING</b>						
F1	POLISHED CONCRETE	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	-	OWNER TO PROVIDE DESIRED CONCRETE POLISH AND/OR DYE FINISH - COORDINATE REQUIREMENTS WITH HEALTH FOR APPROVAL
F2	RESTROOM FLOOR TILE	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDE BY OWNER - FLOOR TILE TO BE SMOOTH, HARD, NON-ABSORBENT) SANITARY
F3	POLY-CRETE URETHANE FLOORING SYSTEM	POLY-CRETE	CHARCOAL	N/A	-	COORDINATE FINAL COLOR WITH OWNER PRIOR TO ORDERING - SUBMIT ALTERNATES FOR APPROVAL
F4	QUARRY TILE	TBD	TBD	TBD	TBD	-
<b>WALLS</b>						
WP1	CORRUGATED METAL WALL PANEL - INTERIOR - CONTINUOUS RIB PATTERN	DAKOTA STEEL	CHARCOAL	CG	36" WIDE PANEL	COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO INSTALL/ ORDERING
WP2	CORRUGATED METAL WALL PANEL - INTERIOR - CONTINUOUS RIB PATTERN	DAKOTA STEEL	GALVALUME	GU	36" WIDE PANEL	COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO INSTALL/ ORDERING
WP3	CORRUGATED METAL WALL PANEL - EXTERIOR - STRONG RIB PATTERN	DAKOTA STEEL	SMOKE GREY	SG	36" WIDE PANEL	COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO INSTALL/ ORDERING
WD1	BARNWOOD WALL FINISH	-	-	-	VARIES	PROVIDED BY OWNER
FRP	FIBER REINFORCED PANEL	BY G.C.	COORDINATE WITH OWNER	COORDINATE WITH OWNER	4'X8' PANEL	COORDINATE FINAL LOCATIONS & COLOR WITH OWNER PRIOR TO INSTALL/ ORDERING
P1	PAINT	SHERWIN WILLIAMS	COORDINATE WITH OWNER	COORDINATE WITH OWNER	-	COORDINATE FINAL LOCATIONS & COLOR WITH OWNER PRIOR TO INSTALL/ ORDERING
NB1	BRICK VENEER - EXTERIOR BASE COURSE	NOVA BRIK	CHARCOAL (SPLIT)	CHARCOAL (SPLIT)	4'X8" FACE	REFER TO EXTERIOR ELEVATIONS & SECTIONS
NB2	BRICK VENEER - EXTERIOR WALL FINISH	NOVA BRIK	COLONIAL RED (SMOOTH)	COLONIAL RED (SMOOTH)	4'X8" FACE	REFER TO EXTERIOR ELEVATIONS & SECTIONS
NB3	BRICK VENEER - WAINSCOT CAP	NOVA BRIK	CHARCOAL (SPLIT)	CHARCOAL (SPLIT)	4'X8" FACE	REFER TO EXTERIOR ELEVATIONS & SECTIONS
T1	WALL TILE IN RESTROOMS	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDED BY OWNER	PROVIDE BY OWNER - COVED BASE TO BE SMOOTH, HARD, NON-ABSORBENT) SANITARY
T2	SUBWAY TILE	PROVIDED BY OWNER	PROVIDED BY OWNER	WHITE	3X6	PROVIDE BY OWNER - SMOOTH, HARD, NON-ABSORBENT)
SS	STAINLESS STEEL WALL PANELS	-	-	-	-	-

# HARDWARE SCHEDULE

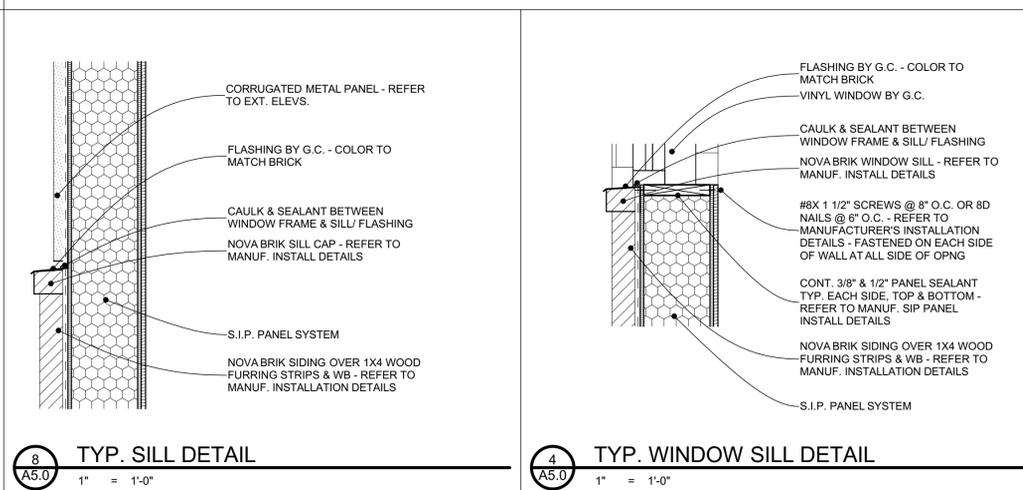
GROUP	SET	DESCRIPTION	GROUP #	FIRE-RATING	REMARKS
GROUP 1: PUBLIC ENTRANCE/ EXIT	(1)	HINGES			
	(1)	CLOSER			
	(1)	THRESHOLD			
	(1)	PUSH/PULL BAR WITH PADDLE HANDLE			
GROUP 2: PUBLIC INTERIOR	(1)	HINGES			
	(1)	CLOSER			
	(1)	PUSH/PULL BAR			
	(1)	DOOR/ WALL STOP			
GROUP 3: PRIVATE STORAGE/ OFFICE	(1)	HINGES			
	(1)	CLOSER			
	(1)	LOCKSET WITH LEVER HAND			
	(1)	DOOR/ WALL STOP			
GROUP 4: PRIVATE WORK AREAS	(1)	HINGES			
	(1)	CLOSER			
	(1)	PASSAGE SET WITH LEVER HAND			
	(1)	DOOR/ WALL STOP			
GROUP 5: RESTROOMS	(1)	HINGES			
	(1)	CLOSER			
	(1)	PUSH/PULL BAR			
	(1)	DOOR/ WALL STOP			
GROUP 6: PRIVATE EXIT	(1)	HINGES			
	(1)	CLOSER			
	(1)	THRESHOLD			
	(1)	LOCKSET WITH LEVER HAND			

NOTE: MANUALLY OPERATED EDGE - OR SURFACE - MOUNTED FLUSH BOLTS / DEAD BOLTS AND SURFACE BOLTS OR ANY OTHER TYPE OF DEVICE THAT MAY BE USED TO CLOSE OR RESTRAIN THE DOOR OTHER THAN BY OPERATION OF THE LOCKING DEVICE SHALL NOT BE USED

# WALL TYPES

WALL TYPE #	WALL DETAIL (IN PLAN)	WALL CONSTRUCTION DESCRIPTION	FIRE-RESISTIVE RATING & DESIGN #
1		SIP PANEL BY OTHERS NOVABRICK SIDING "CHARCOAL" TO 4'-0" A.F.F. WITH CAP - REFER TO EXT. ELEVATIONS FOR NOVABRICK HEIGHTS, CAPS, FINISHES & LOCATIONS	N/A
2		5/8" TYPE 'X' GYP. BD. 3-5/8" 20 GA. MTL. STUDS @ 16" O.C. 5/8" TYPE 'X' GYP. BD. - CONSTRUCT WALL TO 9'-6" A.F.F. - PROVIDE SOUND ATTENUATION BATT INSUL. WHERE INDICATED IN PLAN	N/A
3		5/8" TYPE 'X' GYP. BD. 3-5/8" 20 GA. MTL. STUDS @ 16" O.C. 5/8" TYPE 'X' GYP. BD. - CONSTRUCT WALL TO 12'-0" A.F.F. - PROVIDE SOUND ATTENUATION BATT INSUL. WHERE INDICATED IN PLAN	N/A
4		5/8" TYPE 'X' GYP. BD. 6" 20 GA. MTL. STUDS @ 16" O.C. 5/8" TYPE 'X' GYP. BD. - CONSTRUCT WALL TO 9'-6" A.F.F. - PROVIDE SOUND ATTENUATION BATT INSUL. WHERE INDICATED IN PLAN	N/A
5		5/8" TYPE 'X' GYP. BD. 6" 20 GA. MTL. STUDS @ 16" O.C. 5/8" TYPE 'X' GYP. BD. - CONSTRUCT WALL TO 12'-0" A.F.F. - PROVIDE SOUND ATTENUATION BATT INSUL. WHERE INDICATED IN PLAN	N/A
6		SIP PANEL BY OTHERS NOVABRICK SIDING "CHARCOAL" TO 4'-0" A.F.F. WITH CAP NOVABRICK SIDING "COLONIAL RED" FULL HEIGHT - REFER TO EXT. ELEVATIONS FOR NOVABRICK HEIGHTS, CAPS, FINISHES & LOCATIONS	N/A
7		SIP PANEL BY OTHERS NOVABRICK SIDING "CHARCOAL" TO 4'-0" A.F.F. WITH CAP NOVABRICK SIDING "COLONIAL RED" TO 8'-0" A.F.F. WITH CAP - REFER TO EXT. ELEVATIONS FOR NOVABRICK HEIGHTS, CAPS, FINISHES & LOCATIONS	N/A
8		5/8" DURROCK CEMENT BOARD 3" MIN. MINERAL WOOD BATT INSULATION (FRICTION FIT TO STUDS) 6" 20 GA. MTL. STUD FURRING @ 16" O.C. SIP PANEL BY OTHERS - CONSTRUCT FURRING/ SHEATHING TO 18" ABOVE FINISH CEILING	-

NOTES:  
PROVIDE A DEEP LEG TOP TRACK @ ALL METAL STUD WALLS THAT EXTEND TO THE ROOF DECK TO ALLOW FOR DEFLECTION  
PROVIDE HORIZONTAL & VERTICAL GYP. BD. CONTROL JOINTS AS NEEDED TO PREVENT CRACKING - COORDINATE LOCATIONS W/ ARCHITECT  
REFER TO UNDERWRITERS LABORATORIES INC. LISTINGS FOR COMPLETE INSTALLATION DETAILS FOR FIRE-RESISTIVE WALLS (WHERE INDICATED)  
PROVIDE SOLID BLOCKING AND/OR BACKING INSIDE WALLS WHERE REQUIRED FOR SUPPORT OF ITEMS ATTACHED TO THE FINISH WALL  
PROVIDE BRACING BETWEEN TOP OF WALL (ABOVE CEILING) & ROOF DECK AS NEEDED  
REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION



CONSULTANT:  
**WILKUS ARCHITECTS**  
15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660 www.wilkusarch.com

CLIENT:  
**INVICTUS BREWING CO.**  
INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:  
**INVICTUS BREWING COMPANY**  
2025 105TH AVENUE NE  
BLAINE, MN 55449

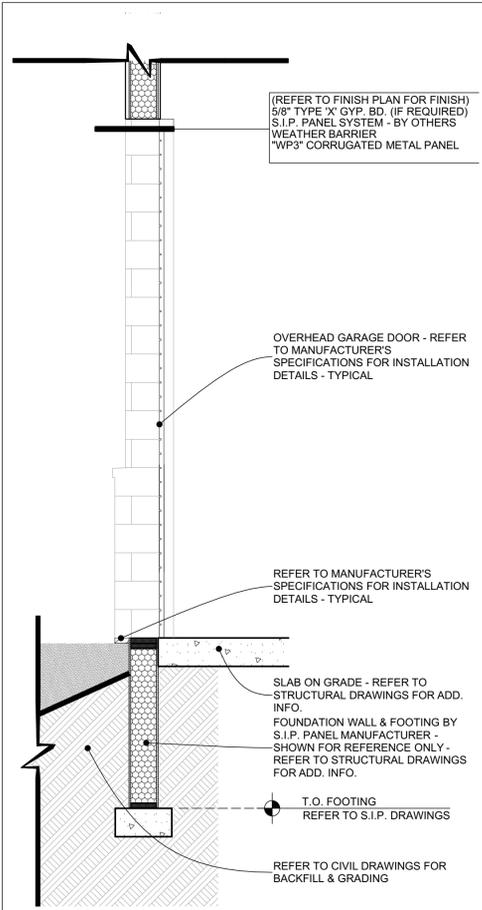
SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Print Name: MICHAEL J. WILKUS  
Signature: *[Signature]*  
License No.: 16380  
Expiration Date: 06-30-18  
Date: 07-27-2017

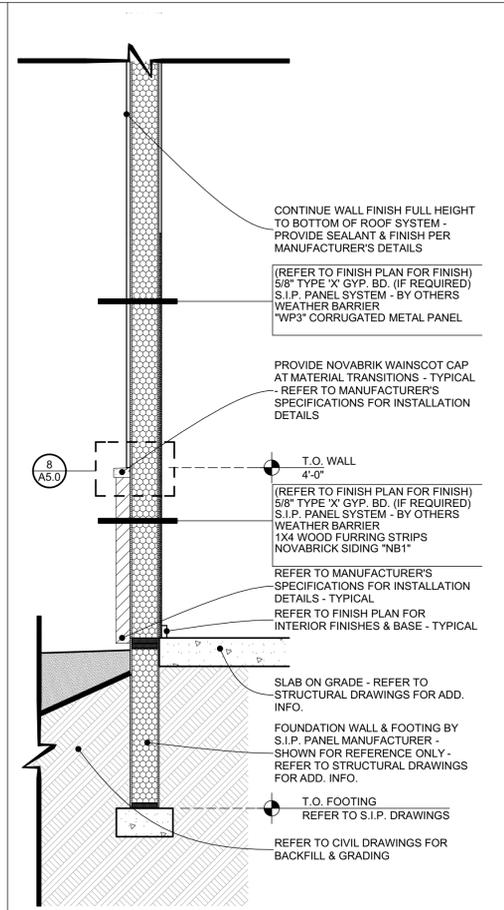
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CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
DESIGN COORDINATION / SAC	08-18-2016
OWNER COMMENTS	12-05-2016
PERMIT & BID SET	12-29-2016
REVISION:	DATE:
CITY COMMENTS	4/11/2017

PROJECT LOCATION:  
**BLAINE, MN**

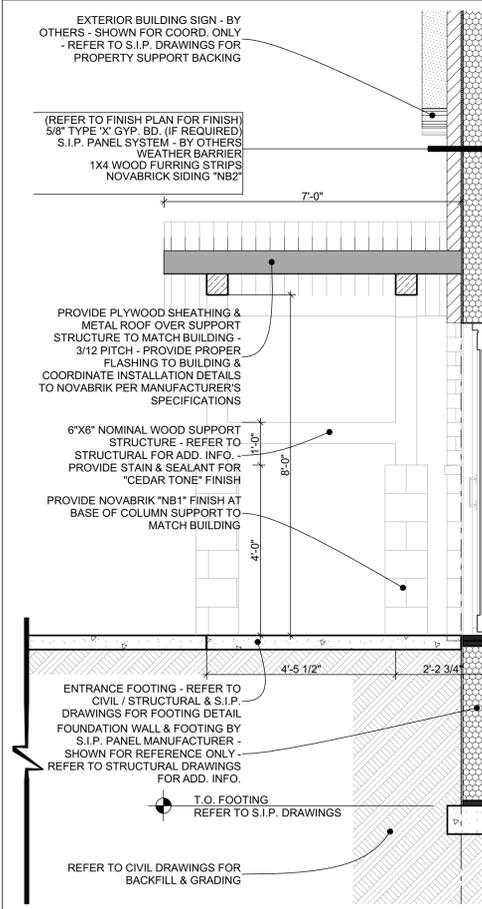
SHEET NUMBER / TITLE:  
**A5.0**  
Wall Types & Schedules



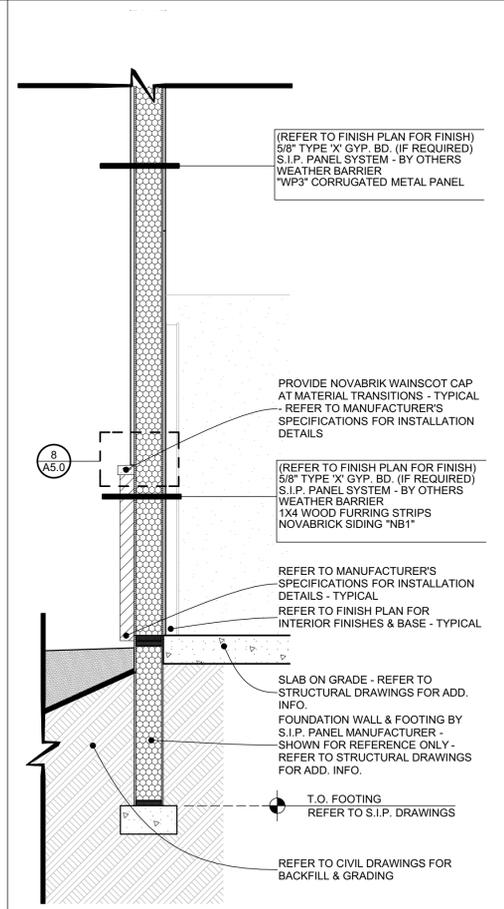
17 TYP. SECTION @ O.H. DOOR  
1/2" = 1'-0"



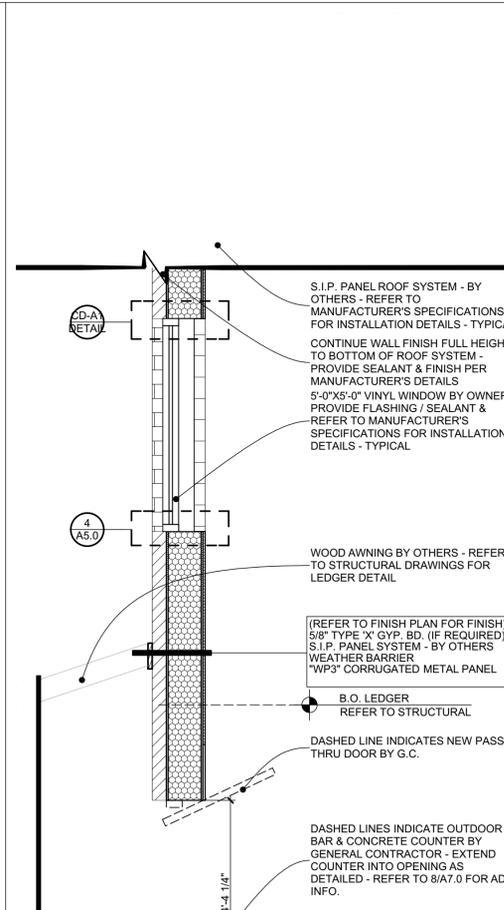
13 TYP. SECTION @ SIDE WALL  
1/2" = 1'-0"



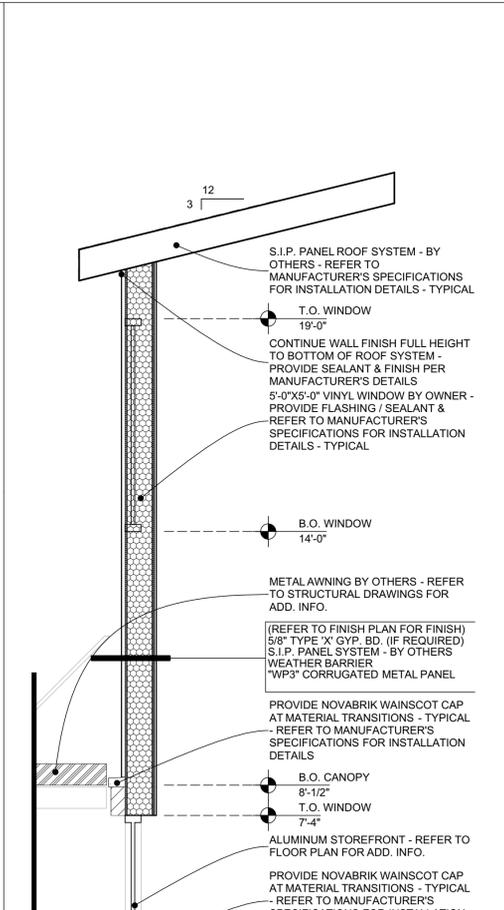
19 SECTION @ ENTRANCE CANOPY  
1/2" = 1'-0"



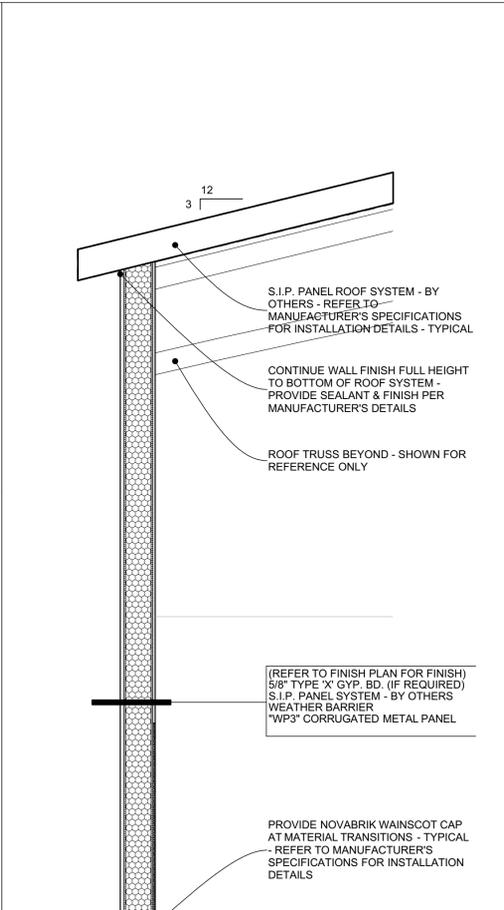
15 TYP. SECTION @ EXIT DOOR  
1/2" = 1'-0"



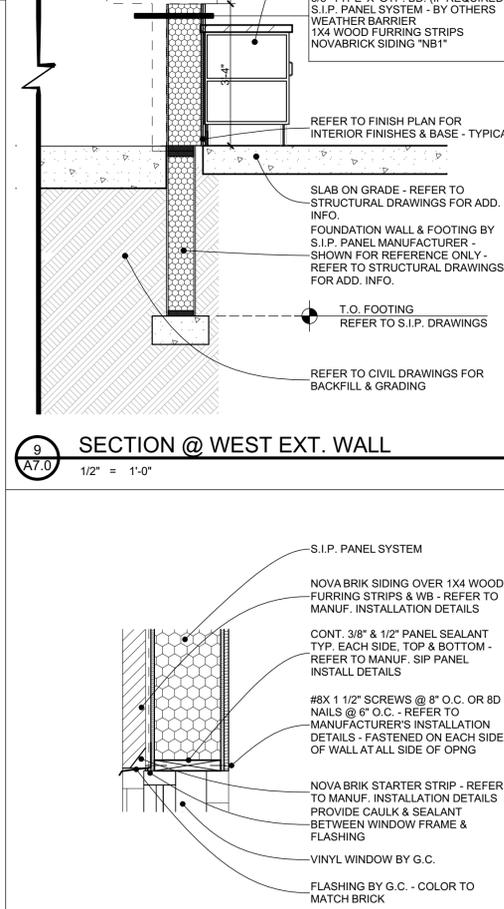
9 SECTION @ WEST EXT. WALL  
1/2" = 1'-0"



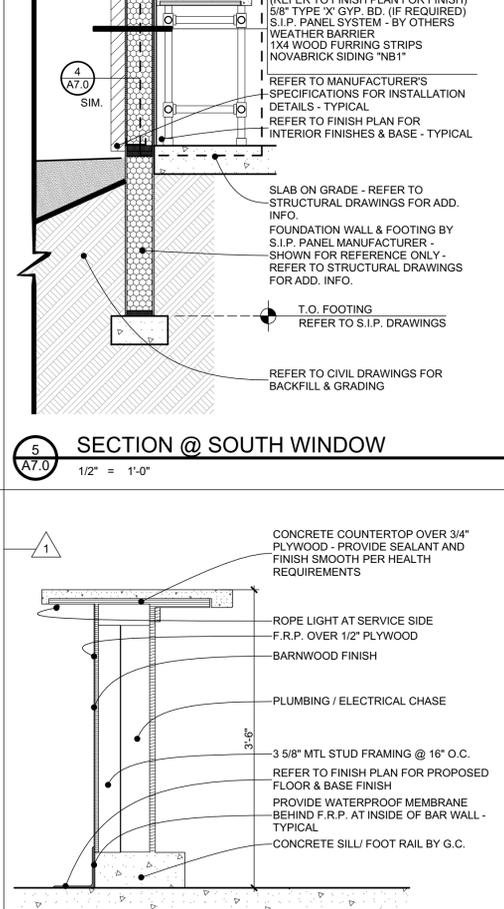
5 SECTION @ SOUTH WINDOW  
1/2" = 1'-0"



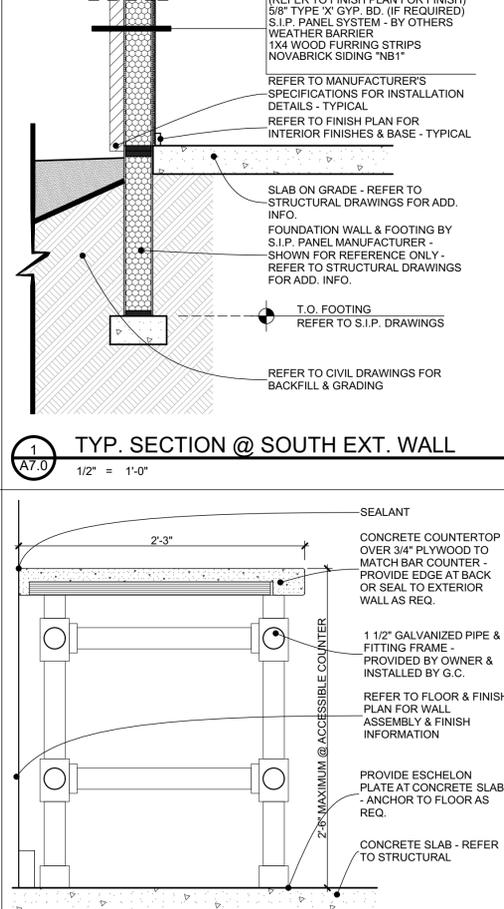
1 TYP. SECTION @ SOUTH EXT. WALL  
1/2" = 1'-0"



12 TYP. WINDOW HEAD DETAIL  
1" = 1'-0"



8 SECTION @ BAR  
1" = 1'-0"



4 SECTION @ ADA COUNTER  
1 1/2" = 1'-0"

NOTE:  
- COORDINATE RIDGE HEIGHT WITH SIP PANEL MANUFACTURER'S DRAWINGS



15 Ninth Avenue North, Hopkins, MN 55343  
Phone: 952.941.8660/ www.wilkusarch.com



INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
2025 105TH AVE NE  
BLAINE, MN 55449

SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

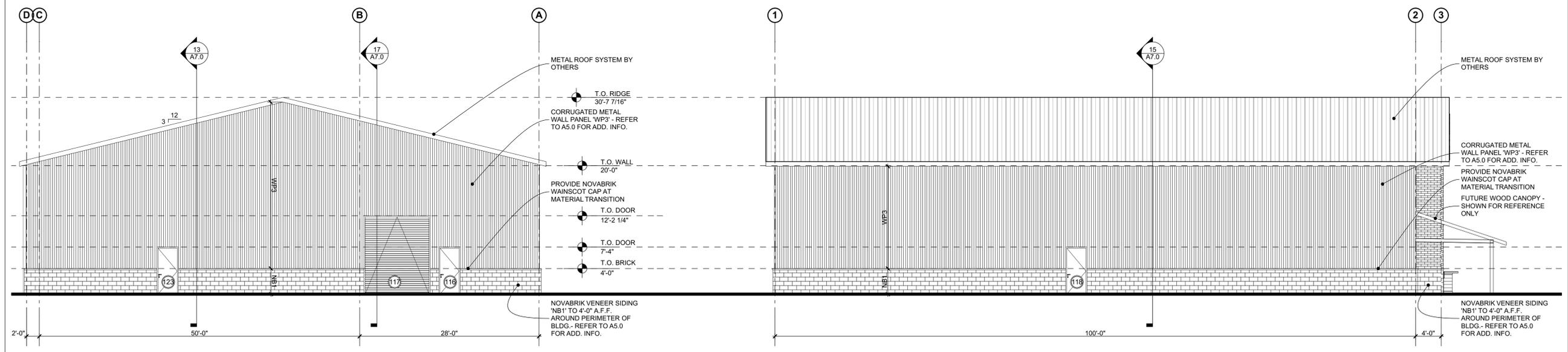
Print Name: MICHAEL J. WILKUS  
Signature: *[Signature]*  
License No.: 16380  
Expiration Date: 06-30-18  
Date: 07-27-2017

PROJECT NO.: 2016-0079  
DRAWN BY: KEVIN GREEN  
CHECKED BY: MICHAEL J. WILKUS

ISSUE	DATE
CUP SUBMITTAL	03-11-2016
SIP PANEL COORDINATION	08-05-2016
DESIGN COORDINATION / SAC	08-18-2016
OWNER COMMENTS	12-05-2016
PERMIT & BID SET	12-29-2016
REVISION:	DATE:
CITY COMMENTS	4/11/2017

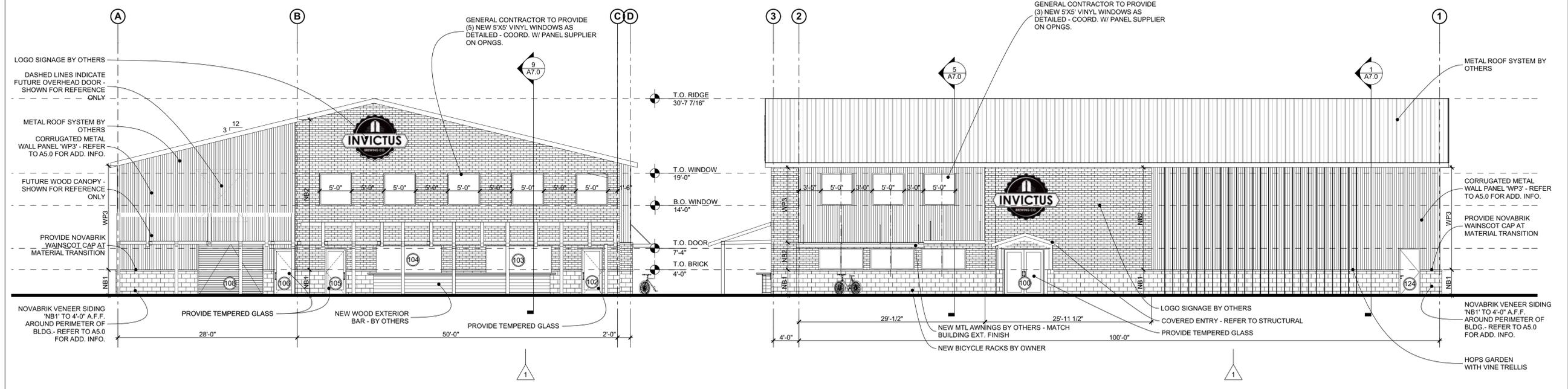
PROJECT LOCATION:  
BLAINE, MN

SHEET NUMBER / TITLE:  
**A8.0**  
Exterior Elevations



**9 EAST ELEVATION**  
1/8" = 1'-0"

**1 NORTH ELEVATION**  
1/8" = 1'-0"

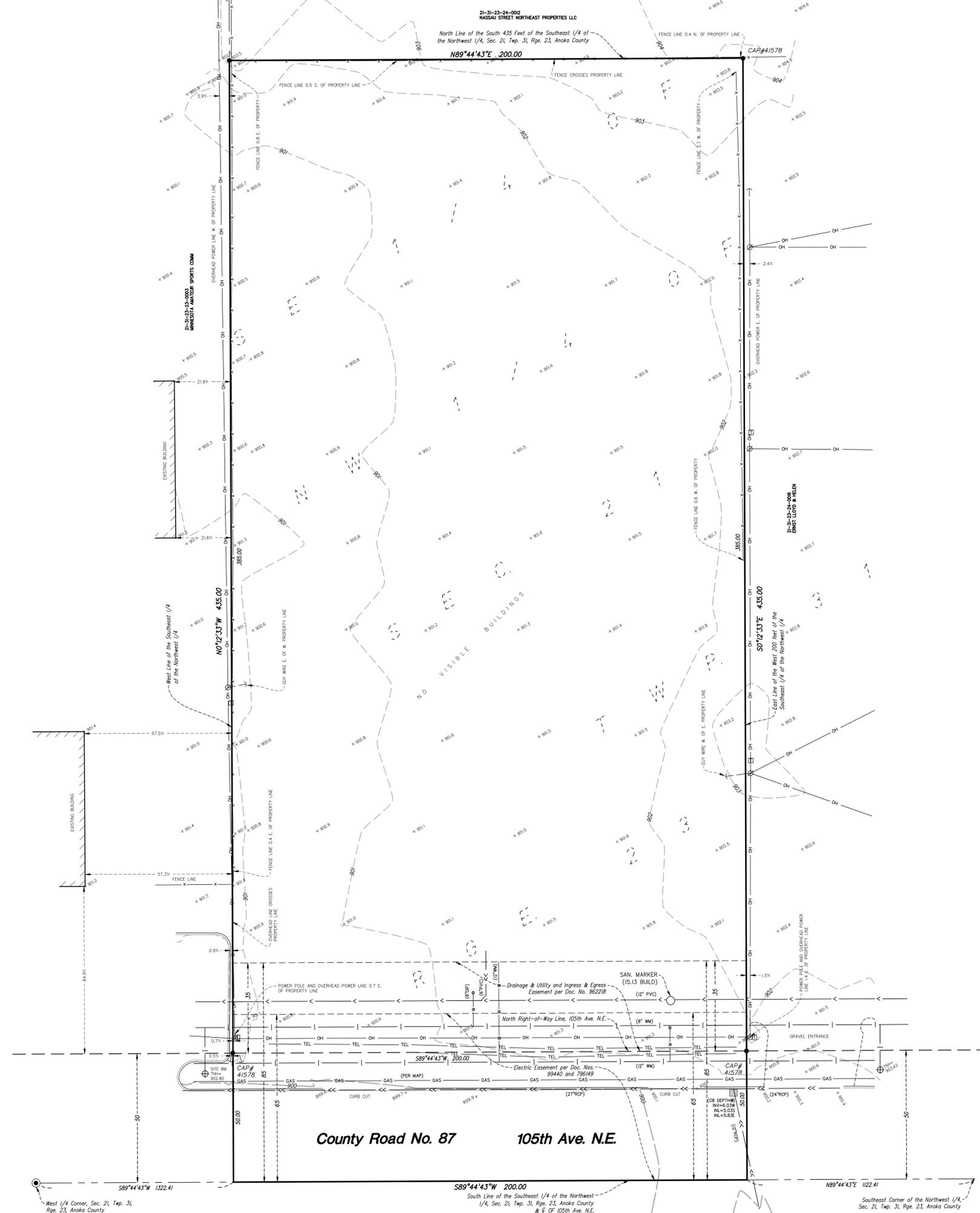


**11 WEST ELEVATION**  
1/8" = 1'-0"

**3 SOUTH ELEVATION**  
1/8" = 1'-0"

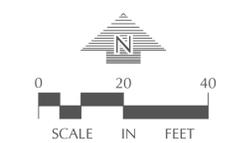
© COPYRIGHT MICHAEL J. WILKUS, ARCHITECT

Plotted: 02/16/2016 8:47 AM W:\2016\16034\CADD\DATA\SURVEYS\16034\MASTER



**SURVEY LEGEND – EXISTING CONDITIONS**

- ▣ CATCH BASIN
- SANITARY MANHOLE
- ⊕ HYDRANT
- ⊠ TELEPHONE PEDESTAL
- ⊗ POWER POLE
- ← GUY WIRE
- ⊙ LIGHT POLE
- ⊙ SPOT ELEVATION
- STORM SEWER
- SANITARY SEWER
- WATERMAIN
- WATERMAIN SERVICE
- GAS UNDERGROUND GAS
- TEL UNDERGROUND TELEPHONE
- OH OVERHEAD UTILITY
- CHAIN LINK FENCE
- CONCRETE CURB
- CONCRETE
- CONTOUR



**DESCRIPTION OF PROPERTY SURVEYED**  
(Per Schedule A of the herein referenced Title Commitment)

The South 435 feet of the West 200 feet of the Southeast Quarter of the Northwest Quarter of Section 21, Township 31, Range 23, Anoka County, Minnesota.

**ALTA/ACSM OPTIONAL TABLE A NOTES**  
(The following items refer to Table A optional survey responsibilities and specifications)

- 1) Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by an existing monument or witness to the corner are shown heron.
- 2) 2025 105th Ave. NE, Blaine, MN 55449
- 3) This property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 270007 0336 E effective date of December 16th, 2015.
- 4) The Gross land area is 87,000 +/- square feet or 1.9972 +/- acres. Right-of-Way area is 10,000 +/- square feet or 0.2296 +/- acres. Net land area is 77,000 +/- square feet or 1.7677 +/- acres.
- 7a) There are no visible buildings on this site.
- 8) Substantial, visible improvements that I am aware of, are shown hereon.
- 9) There are no striped parking stalls on this site.
- 11b) We have shown buried structures and utilities on and/or serving the site Per Gopher State One-Call Ticket No. 160270668 The following utilities and municipalities were notified:

ANOKA COUNTY	(763) 862-4238
CITY OF BLAINE	(763) 785-6165
COMCAST - COMCST01	(612) 522-8141
CENTURYLINK - CTLQL	(855) 742-6062
CONNEXUS ENERGY	(763) 323-4215
CENTER POINT ENERGY - MINGASO	(800) 778-9140
NATIONAL SPORTS CENTER	(651) 587-7284
XCEL ENERGY	(651) 229-2427
ZAYO BANDWIDTH	(888) 267-1063
ZAYO BANDWIDTH	(952) 230-9430

- i) Utility operators do not consistently respond to locate requests through the Gopher State One Call service for boundary purposes such as this. Those utility operators that do respond often will not locate services from their main line to the customer's structure or facility - they consider those segments private installations that are outside their jurisdiction. If a private service to an adjointer's site crosses this site or a service to this site crosses an adjointer, it may not be located since most operators will not mark such "private" services.
- ii) Snow and ice conditions during winter months may obscure otherwise visible evidence of a buried structure or utility.
- iii) Maps provided by operators, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. **EXTREME CAUTION MUST BE EXERCISED BEFORE AN EXCAVATION TAKES PLACE ON OR NEAR THIS SITE. BEFORE DIGGING, YOU ARE REQUIRED BY LAW TO NOTIFY GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE AT 651/454-0002.**

**SURVEY REPORT**

The property depicted on this survey and the easements of record shown hereon are the same as the property and the easements described in the Commitment for Title Insurance issued by Registered Abstracters, Inc. as issuing agent for First American Title Insurance Company, Commitment No. T15-12039, dated December 4, 2015.

- 1) The following remarks reference items in Schedule B, Section II - Exceptions of the herein referenced Title Commitment:
  - a) Item nos. 1-9 and 13-15 are not survey related.
  - b) Item no. 10: Subject to County Road No. 87 (105th Ave NE) over the South 50 feet thereof. The County Road is shown hereon.
  - c) Item no. 11: Subject to an easement to Anoka County Electric Cooperative over the South 65 feet as evidenced by Document No.'s 99440 and 796149. Easement is shown hereon.
  - d) Item no. 12: Subject to an easement for drainage and utility and ingress and egress to the City of Blaine over the North 35 feet of the South 85 feet thereof as evidenced by Document No. 962218. Easement is shown hereon.
- 2) The Surveyor was not provided easement documents for utilities on subject property except for those shown on Survey.
- 3) Orientation is based on the West line of the Southeast Quarter of the Northwest Quarter, Sec. 21, Twp. 31, Rge. 23, Anoka County, Minnesota. The line is assumed to bear North 0 degrees 12 minutes 33 seconds West.
- 4) Benchmark: MNDOT GSD Station 0208 E RESET Elev =905.884 (adjusted). (NGVD 29)  
Site Benchmark: Top Nut Hydrant located near the Southwest of the Property. Elev.=902.80. (NGVD 29)
- 5) Fence line along the West side of the Property falls East of the Property line.
- 6) Fence line along the North side of the Property falls South of the Property line.
- 7) Guy wire along the West line falls on Subject Property.
- 8) Fence line along the East side of the Property falls West of the Property line.
- 9) Guy wire along East line falls on Subject Property.

**CERTIFICATION**

To Invictus Brewing, LLC, Blaine Economic Development Authority, Registered Abstracters, Inc. and First American Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS in 2011, and includes Items 1 - 4, 7a, 8, 9 and 11b of Table A thereof. The field work was completed on February 4, 2016

Date of Plat or Map: February 16, 2016

*Max L. Stanislawski*  
Max L. Stanislawski, PLS Minnesota License No. 48988  
mstanislawski@loucksinc.com



**INVICTUS BREWERY**  
BLAINE, MN

**INVICTUS BREWERY**  
105TH AVE NE  
BLAINE, MN

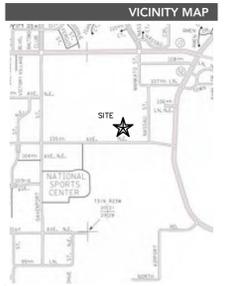
**LOUCKS**  
PLANNING  
CIVIL ENGINEERING  
LAND SURVEYING  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL  
7200 Hemlock Lane, Suite 300  
Maple Grove, MN 55369  
763.424.5505  
www.loucksinc.com

**CADD QUALIFICATION**  
CADD files prepared by the Consultant for this project are instruments of the Consultant's professional services for use solely with respect to this project. These CADD files shall not be used on other projects, for additions to this project, or for completion of this project by others without written approval by the Consultant. With the Consultant's approval, others may be permitted to obtain copies of the CADD drawing files for information and reference only. All intentional or unintentional revisions, additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.

**SUBMITTAL/REVISIONS**  
02/16/16 DRAWING ISSUED

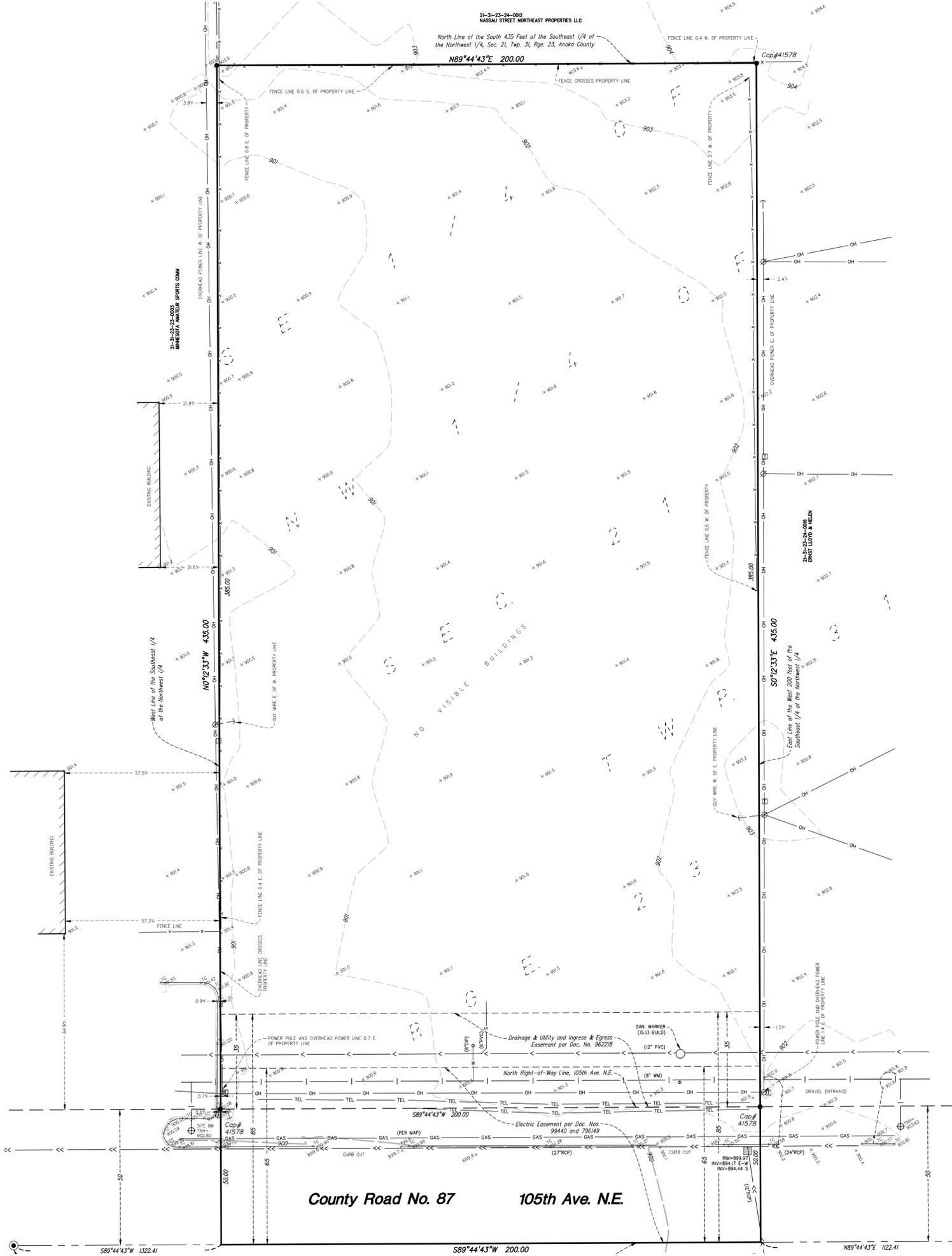
**PROFESSIONAL SIGNATURE**  
I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.  
*Max L. Stanislawski*  
Max L. Stanislawski - PLS  
License No. 48988  
Date 02/16/16

**QUALITY CONTROL**  
Loucks Project No. 16034  
Project Lead HDN  
Drawn By KMM  
Checked By MLS  
Field Crew DP



**ALTA / ACSM LAND TITLE SURVEY**  
**1/1**

Plotfile: 03/07/2017 2:31 PM W:\2016\16084\CADD\DATA\CIVIL\_dwg\Sheet Files\C1-1\_EX\_COND



CALL BEFORE YOU DIG!  
**Gopher State One Call**  
TWIN CITY AREA: 651-454-0002  
TOLL FREE: 1-800-252-1166

**INVICTUS BREWERY**  
BLAINE, MN

**INVICTUS BREWING, LLC**  
2025 105th AVENUE NE  
BLAINE, MN 55449

**LOUCKS**  
PLANNING  
CIVIL ENGINEERING  
LAND SURVEYING  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL  
7200 Hemlock Lane, Suite 300  
Maple Grove, MN 55369  
763.424.5505  
www.loucksin.com

**SURVEY LEGEND**

AS	ASH	☐	CATCH BASIN	—>	STORM SEWER
BA	BASSWOOD	⊗	STORM MANHOLE	—>	SANITARY SEWER
LO	LOCUST	○	SANITARY MANHOLE	— —	WATERMAIN
MA	MAPLE	●	SANITARY CLEAN-OUT	—S—	SANITARY SEWER SERVICE
OA	OAK	◇	HYDRANT	—W—	WATER SERVICE
PI	PINE	⊠	GATE VALVE	—C—	CULVERT
PO	POPLAR	⊕	LIGHT POLE	—S—	SLOPE EASEMENT
SP	SPRUCE	—	GUY WIRE	—CTV—	UNDERGROUND CABLE TV
TR	TREE (GEN)	—	SIGN	—ELE—	UNDERGROUND ELECTRIC
TC	TOP OF CURB	—972.5—	SPOT ELEVATION	—FD—	UNDERGROUND FIBER OPTIC
TW	TOP OF WALL	⊠	A/C UNIT	—GAS—	UNDERGROUND GAS
THSD	ELEV @ THRESHOLD	⊠	ELECTRIC TRANSFORMER	—TEL—	UNDERGROUND TELEPHONE
	CONIFEROUS TREE	⊗	GAS METER	—X—X—	CHAIN LINK FENCE
	DECIDUOUS TREE	⊗	GAS VALVE	—D—D—	WOOD FENCE
		⊠	TELEPHONE MANHOLE	—	RETAINING WALL
		⊠	HAND HOLE	—	CONCRETE CURB
		⊠	FLAG POLE	—	CONCRETE
		⊠	GUARDPOST	—	CONTOUR
		⊠	POST INDICATOR VALVE		
		⊠	NO. PARKING STALLS		

**EXISTING CONDITIONS GENERAL NOTES**

1. THE INFORMATION SHOWN ON THIS EXISTING CONDITIONS PLAN WAS PREPARED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED BY LOUCKS AND DATED FEBRUARY 22, 2016. UTILITY INFORMATION SHOWN ON THIS PLAN, SUCH AS SANITARY SEWER, WATERMAIN, STORM SEWER, FORCEMAIN, ETC. WAS PROVIDED BY THE CITY OF BLAINE RECORD PLANS.

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03-11-16	CITY SUBMITTAL
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03-24-16	PER CITY COMMENTS
04-13-16	INFILTRATION BASIN
12-29-16	PERMIT & BID
03-08-17	CITY COMMENTS

**PROFESSIONAL SIGNATURE**  
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
*Nicholas M. Mummolo*  
Nicholas M. Mummolo, PE

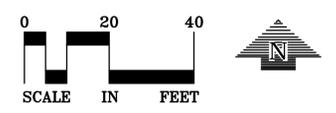
License No. 45861  
Date 12/29/16

**QUALITY CONTROL**

Locks Project No.	16034
Project Lead	NMM
Drawn By	SRT
Checked By	NMM
Review Date	03/08/17

**SHEET INDEX**

C1-1	EXISTING CONDITIONS
C2-1	SITE PLAN
C2-2	TRAFFIC CONTROL PLAN
C3-1	GRADING & DRAINAGE PLAN
C3-2	SWPPP
C3-3	SWPPP
C4-1	UTILITY PLAN
C8-1	CIVIL DETAIL
C8-2	CIVIL DETAILS
L1-1	LANDSCAPE PLAN
L2-1	LANDSCAPE DETAILS



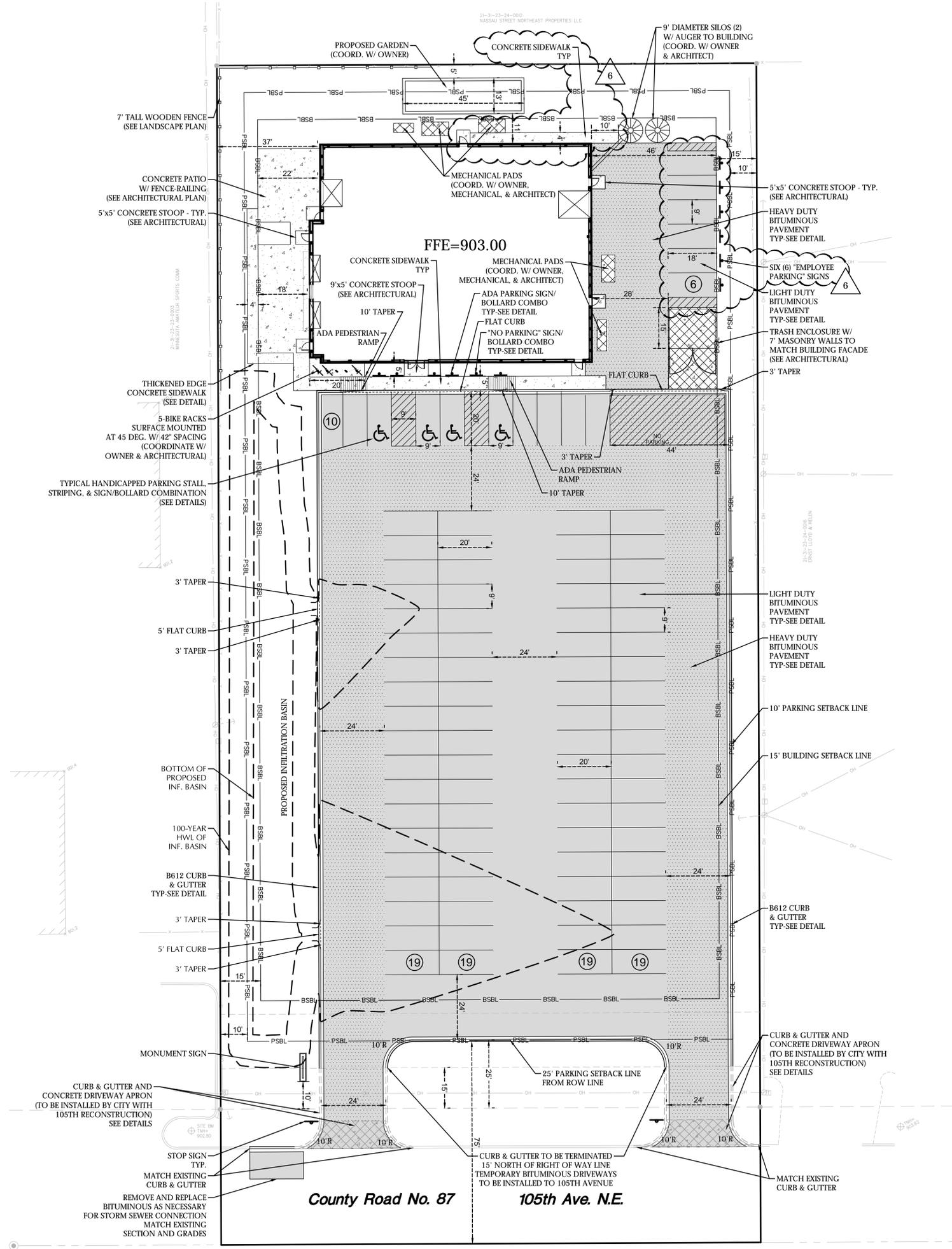
**BENCHMARK**  
TOP NUT HYDRANT LOCATED NEAR THE SOUTHWEST OF THE PROPERTY  
ELEVATION=902.80 FEET (NGVD 1929)

**WARNING:**  
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**EXISTING CONDITIONS**  
**C1-1**

Plotted: 08/22/2017 10:26 AM W:\2016\16034\CADD\DATA\C2-1 SITE



**SITE SIGNAGE**

R1-1	STOP
R7-8	RESERVED PARKING HOLDING PER SUBJECT TO A FINE OF UP TO \$200
R7-8A	VAN ACCESSIBLE
ST-21	NO PARKING ACCESSIBLE

**SITE PLAN LEGEND**

	CONCRETE SIDEWALK
	BITUMINOUS PAVEMENT
	HEAVY DUTY BITUMINOUS PAVEMENT
	CONCRETE PAVEMENT
	GRAVEL
	CONSTRUCTION LIMITS

**SITE DATA**

CURRENT ZONING: I2 - HEAVY INDUSTRIAL  
 PROPOSED ZONING: I2 - HEAVY INDUSTRIAL  
 PROPERTY AREA: 2.00 AC  
 EXISTING IMPERVIOUS AREA: 0.17 AC (8.5%)  
 PROPOSED IMPERVIOUS AREA: 1.30 AC (65%)

**SITE NOTES**

- ALL PAVING, CONCRETE CURB, GUTTER AND SIDEWALK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN PER THE DETAIL SHEET(S) AND STATE/LOCAL JURISDICTION REQUIREMENTS.
- ACCESSIBLE PARKING AND ACCESSIBLE ROUTES SHALL BE PROVIDED PER CURRENT ADA STANDARDS AND LOCAL/STATE REQUIREMENTS.
- ALL CURB DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL UNLESS OTHERWISE NOTED.
- TYPICAL FULL SIZED PARKING STALL IS 9' X 20' UNLESS OTHERWISE NOTED.
- ALL CURB RADII SHALL BE 3.0' UNLESS OTHERWISE NOTED.
- BITUMINOUS IMPREGNATED FIBER BOARD TO BE PLACED AT FULL DEPTH OF CONCRETE ADJACENT TO EXISTING STRUCTURES AND BEHIND CURB ADJACENT TO DRIVEWAYS AND SIDEWALKS.
- SEE SITE ELECTRICAL PLAN FOR SITE LIGHTING.

**OFF-STREET PARKING CALCULATIONS**

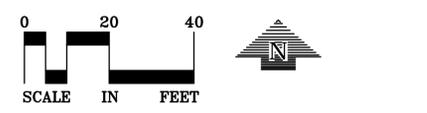
**CITY REQUIREMENT:**  
 1 STALL PER 100 SF OF RESTAURANT  
 1 STALL PER 40 SF OF PUBLIC AREA (@ HALF PUBLIC AREA)  
 1 STALL PER 200 SF OF BREWERY/KITCHEN AREA  
 RESTAURANT AREA SF - 1981 SF  
 HALF PUBLIC AREA SF - 1981 SF  
 BREWERY/KITCHEN AREA SF - 3852 SF  
**TOTAL PARKING REQUIRED = 89 STALLS**  
 EXISTING PARKING = 0 STALLS  
**PROPOSED TOTAL PARKING PROVIDED = 92 STALLS**

**ACCESSIBLE PARKING**

EXISTING ACCESSIBLE PARKING: 0 STALLS  
 REMOVED ACCESSIBLE PARKING: -0 STALLS  
 PROPOSED ACCESSIBLE PARKING: 4 STALLS  
**TOTAL 4 STALLS**

REQUIRED ACCESSIBLE PARKING: 4 STALLS\*\*

\*\*REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES FOR 76 TO 100 STALLS



**BENCHMARK**

TOP NUT HYDRANT LOCATED NEAR THE SOUTHWEST OF THE PROPERTY ELEVATION=902.80 FEET (NGVD 1929)

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EXISTING	CIVIL LEGEND	PROPOSED
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	CULVERT	
	HYDRANT	
	GATE VALVE	
	POST INDICATOR VALVE	
	LIGHT POLE	
	POWER POLE	
	SIGN	
	BENCHMARK	
	SOIL BORINGS	
	WATER MANHOLE	
	TELEPHONE MANHOLE	
	UTILITY MANHOLE	
	ELECTRIC MANHOLE	
	SPOT ELEVATION	
	CONTOURS	
	SANITARY SEWER	
	STORM SEWER	
	WATERMAIN	
	FORCE MAIN	
	DRAIN TILE	
	SILT FENCE	
	CURB & GUTTER	
	RETAINING WALL	
	TREE LINE	
	EASEMENT LINE	
	SETBACK LINE	
	FENCE LINE	
	UNDERGROUND TELE	
	UNDERGROUND GAS	
	OVERHEAD UTILITY	
	UNDERGROUND FIBER OPTIC	
	UNDERGROUND ELECTRIC	
	UNDERGROUND CABLE TV	
	PROPERTY LINE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	PARKING COUNTS	

**INVICTUS BREWERY**  
 BLAINE, MN

**INVICTUS BREWING, LLC**  
 2025 105th AVENUE NE  
 BLAINE, MN 55449

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Loucks Project No. 16034  
 Project Lead NMM  
 Drawn By SRT  
 Checked By NMM  
 Review Date 08/22/17

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C8-1	CIVIL DETAIL
C8-2	CIVIL DETAILS
L1-1	LANDSCAPE PLAN
L2-1	LANDSCAPE DETAILS

**SITE PLAN**  
**C2-1**



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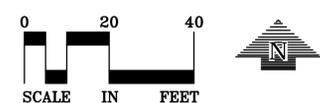
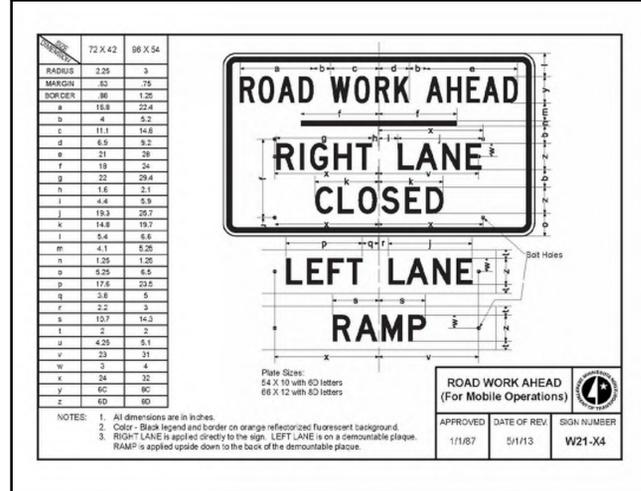
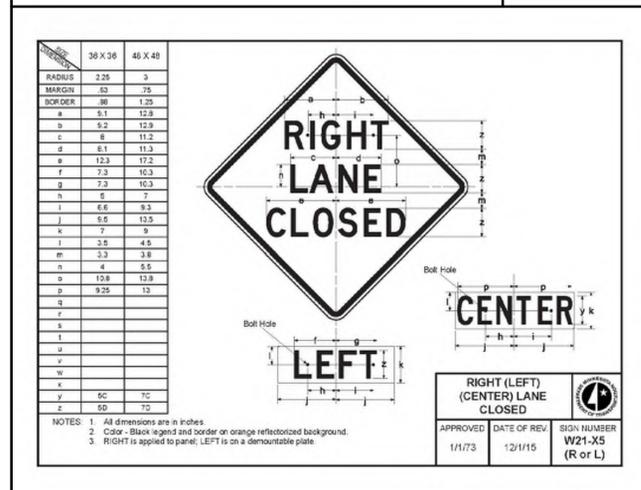
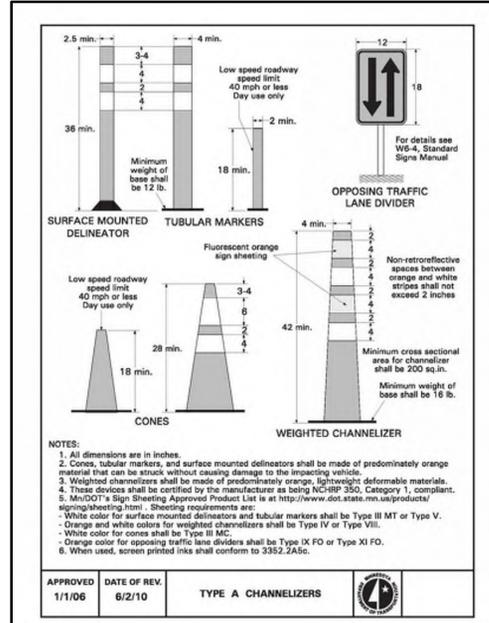
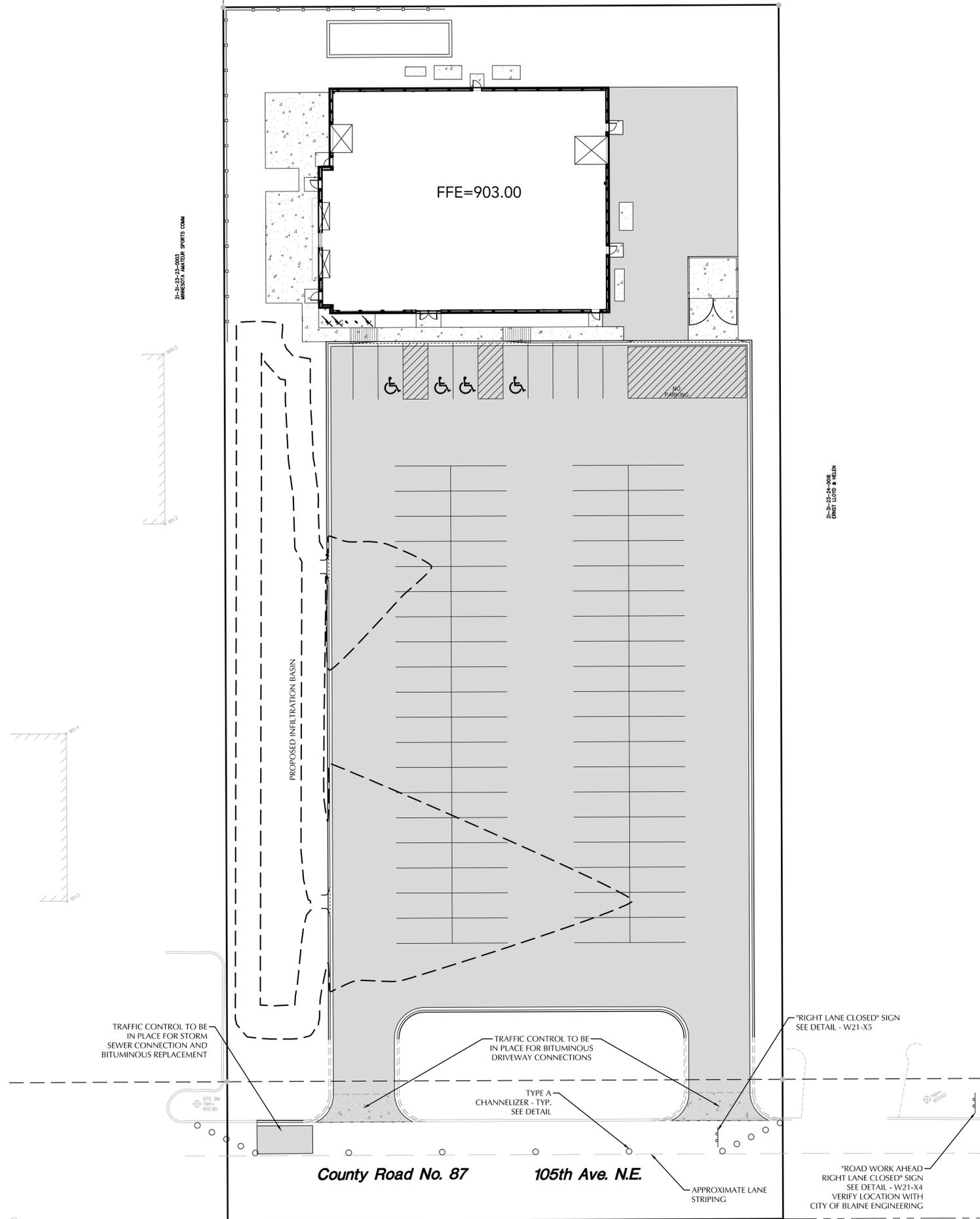
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TRAFFIC  
CONTROL  
PLAN

C2-2



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Signature: Nicholas M. Mummolo, PE

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Checked By NMM  
Review Date 07/27/17

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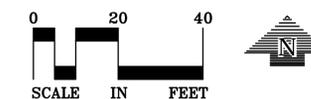
**GRADING &  
DRAINAGE  
PLAN**

**C3-1**

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	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	CULVERT	
	HYDRANT	
	GATE VALVE	
	POST INDICATOR VALVE	
	LIGHT POLE	
	POWER POLE	
	SIGN	
	BENCHMARK	
	SOIL BORINGS	
	WATER MANHOLE	
	TELEPHONE MANHOLE	
	UTILITY MANHOLE	
	ELECTRIC MANHOLE	
	WATER SERVICE	
	SANITARY SERVICE	
	HANDICAP PARKING	
	DIRECTION OF FLOW	
	SPOT ELEVATION	
	CONTOURS	
	SANITARY SEWER	
	STORM SEWER	
	WATERMAIN	
	FORCEMAIN	
	DRAIN TILE	
	SILT FENCE	
	CURB & GUTTER	
	RETAINING WALL	
	TREELINE	
	EASEMENT LINE	
	SETBACK LINE	
	FENCE LINE	
	UNDERGROUND TELE	
	UNDERGROUND GAS	
	OVERHEAD UTILITY	
	UNDERGROUND FIBER OPTIC	
	UNDERGROUND ELECTRIC	
	UNDERGROUND CABLE TV	
	PROPERTY LINE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	PARKING COUNTS	

**GRADING, DRAINAGE & EROSION CONTROL NOTES**

- SPOT ELEVATIONS REPRESENT FINISHED SURFACE GRADES, GUTTER/FLOW LINE, FACE OF BUILDING, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.16 FEET. RIM ELEVATIONS SHOWN ON PLANS DO NOT REFLECT SUMPED ELEVATIONS.
- GRADING OF THE INFILTRATION AREA(S) SHALL BE COMPLETED USING LOW-IMPACT EQUIPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS. SMALL TRACK DOZERS AND BOBCATS WITH RUNNER TRACKS ARE RECOMMENDED. SILT FENCE TO BE INSTALLED AROUND BASIN(S) UPON COMPLETION TO KEEP CONSTRUCTION TRAFFIC OUT OF BASIN FOOTPRINT.
- ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE MINIMUM OF 4 INCHES OF TOP SOIL AND SEED/MULCH OR SOD. THESE AREAS SHALL BE WATERED/MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION IS ESTABLISHED.
- FOR SITE RETAINING WALLS "TW" EQUALS SURFACE GRADE AT TOP FACE OF WALL (NOT TOP OF WALL), "GW" EQUALS SURFACE GRADE AT WALL GRADE TRANSITION, AND "BW" EQUALS SURFACE GRADE AT BOTTOM FACE OF WALL (NOT BOTTOM OF BURIED WALL COURSES).
- TO COMPLY WITH ADA, ALL ACCESSIBLE ROUTES TO HAVE A MAXIMUM 2% CROSS SLOPE AND A MAXIMUM 5% RUNNING SLOPE.
- STREETS MUST BE CLEANED AND SWEEPED WHENEVER TRACKING OF SEDIMENTS OCCURS AND BEFORE SITES ARE LEFT IDLE FOR WEEKENDS AND HOLIDAYS. A REGULAR SWEEPING SCHEDULE MUST BE ESTABLISHED.
- DUST MUST BE ADEQUATELY CONTROLLED.
- SEE SWPPP FOR ADDITIONAL EROSION CONTROL NOTES AND REQUIREMENTS.
- SEE UTILITY PLANS FOR WATER, STORM AND SANITARY SEWER INFORMATION.
- SEE SITE PLAN FOR CURB AND BITUMINOUS TAPER LOCATIONS.
- SEE LANDSCAPE PLAN FOR FINAL SITE STABILIZATION.

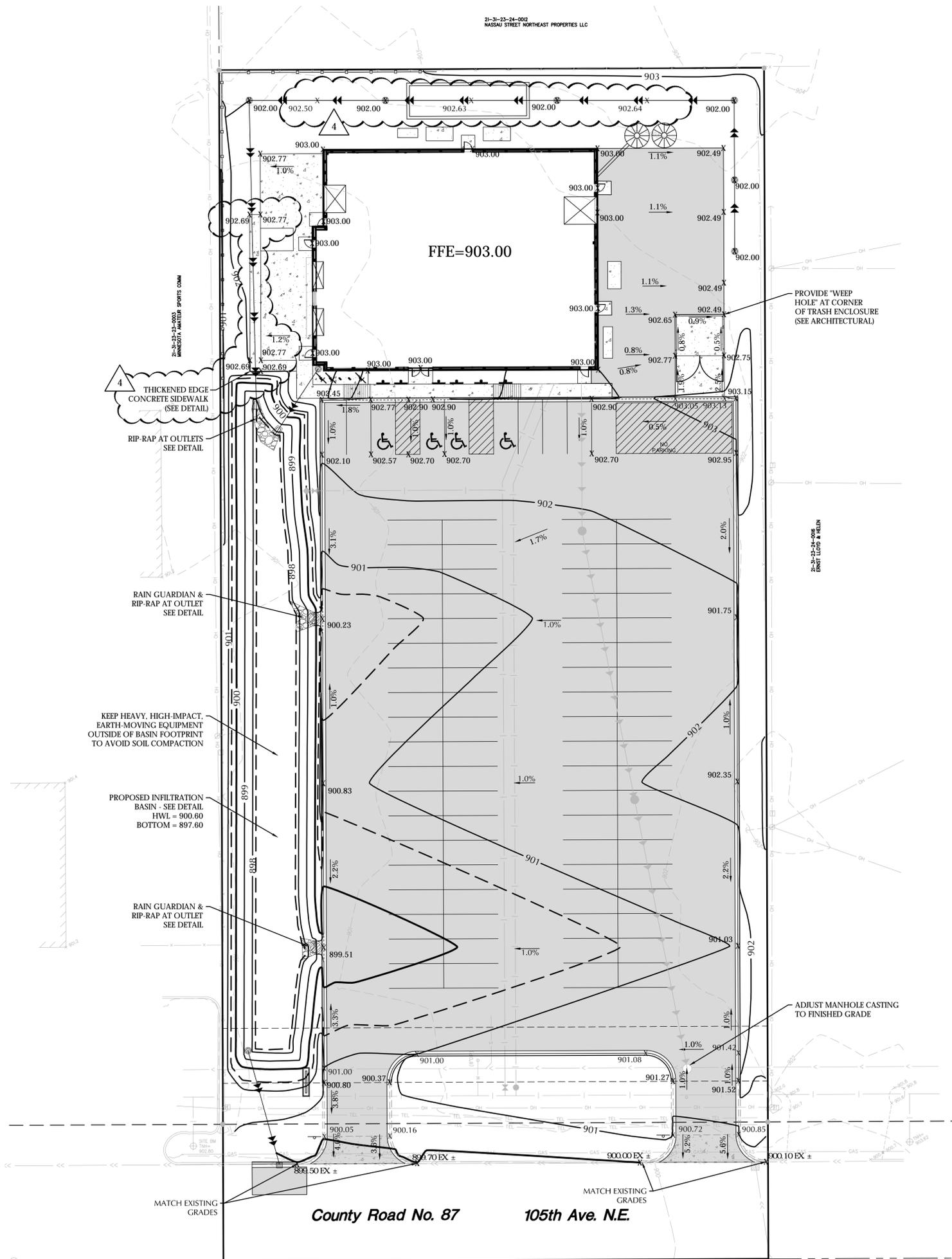


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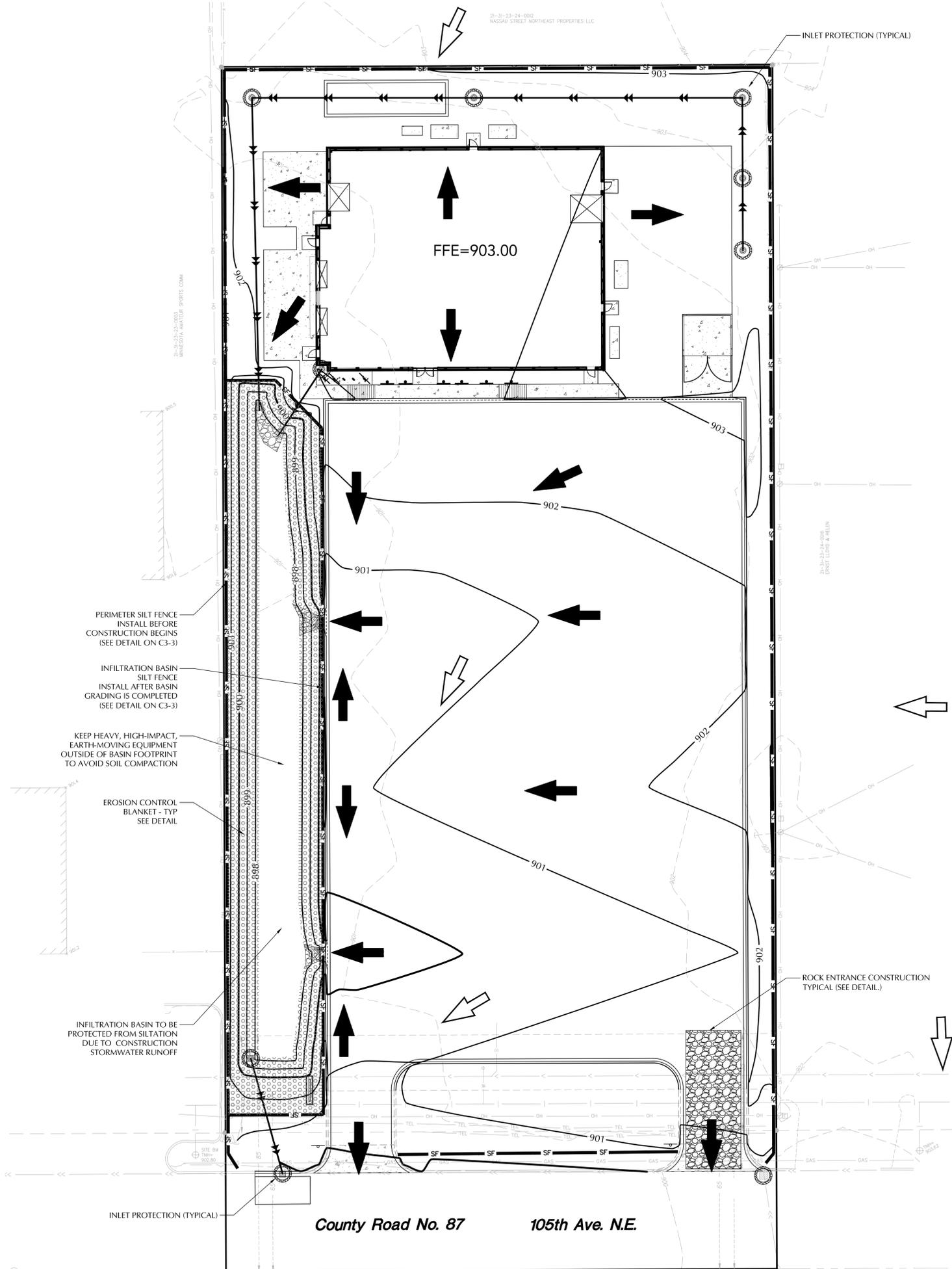
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Plotted: 03/21/2017 11:58 AM W:\2016\16034\CADD\DATA\CIVIL\_dwg\Sheet Files\C3-2\SWPPP

21-3-23-24-002  
NASSAU STREET NORTHEAST PROPERTIES LLC

INLET PROTECTION (TYPICAL)



PERIMETER SILT FENCE  
INSTALL BEFORE  
CONSTRUCTION BEGINS  
(SEE DETAIL ON C3-3)

INFILTRATION BASIN  
SILT FENCE  
INSTALL AFTER BASIN  
GRADING IS COMPLETED  
(SEE DETAIL ON C3-3)

KEEP HEAVY, HIGH-IMPACT,  
EARTH-MOVING EQUIPMENT  
OUTSIDE OF BASIN FOOTPRINT  
TO AVOID SOIL COMPACTION

EROSION CONTROL  
BLANKET - TYP  
SEE DETAIL

INFILTRATION BASIN TO BE  
PROTECTED FROM SILTATION  
DUE TO CONSTRUCTION  
STORMWATER RUNOFF

ROCK ENTRANCE CONSTRUCTION  
TYPICAL (SEE DETAIL)

County Road No. 87      105th Ave. N.E.



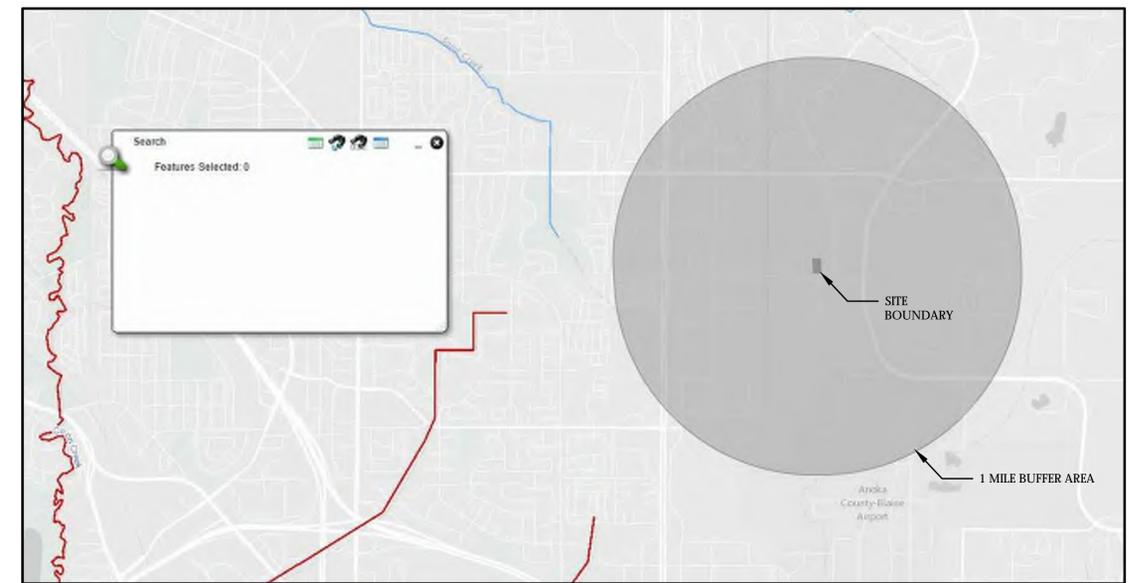
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**CONSTRUCTION STORMWATER SPECIAL WATERS SEARCH MAP**



**PERMANENT STORMWATER MANAGEMENT**

X	INFILTRATION
	STORMWATER HARVEST AND REUSE
	FILTRATION
	WET SEDIMENTATION BASIN
	REGIONAL PONDING

**RECEIVING WATERS**

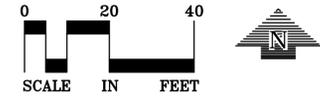
NAME OF WATER BODY	TYPE OF WATER BODY	SPECIAL WATER	IMPAIRED WATER	TYPE OF SPECIAL WATER
NO SPECIAL OR IMPAIRED WATERS WITHIN 1 MILE BUFFER OF SITE				

**ESTIMATED QUANTITIES**

DESCRIPTION	UNIT	QUANTITY
TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	1
SILT FENCE (STANDARD)	LF	2531
INLET PROTECTION	EA	9
WOODFIBER BLANKET	SF	671

**SITE PLAN LEGEND**

- SILT FENCE
- INLET PROTECTION
- EXISTING DRAINAGE PATTERN
- PROPOSED DRAINAGE PATTERN
- EROSION CONTROL BLANKET



**BENCHMARK**  
TOP NUT HYDRANT LOCATED NEAR THE SOUTHWEST OF THE PROPERTY  
ELEVATION=902.80 FEET (NGVD 1929)

**WARNING:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

**CADD QUALIFICATION**  
CADD files prepared by the Consultant for this project are instruments of the Consultant professional services for use solely with respect to this project. These CADD files shall not be used on other projects. For additions to this project, or for completion of this project by others without written approval by the Consultant. With the Consultant's approval, others may be permitted to obtain copies of the CADD drawing files for information and reference only. All intentional or unintentional revisions, additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.

**SUBMITTAL/REVISIONS**

03-11-16	CITY SUBMITTAL
03-22-16	PER CITY COMMENTS
03-24-16	PER CITY COMMENTS
04-13-16	INFILTRATION BASIN
12-29-16	PERMIT & BID
03-08-17	CITY COMMENTS

**PROFESSIONAL SIGNATURE**  
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

License No. 45861  
Date 12/29/16

**QUALITY CONTROL**

Looucks Project No.	16034
Project Lead	NMM
Drawn By	SRT
Checked By	NMM
Review Date	03/08/17

**SHEET INDEX**

C1-1	EXISTING CONDITIONS
C2-1	SITE PLAN
C2-2	TRAFFIC CONTROL PLAN
C3-1	GRADING & DRAINAGE PLAN
C3-2	SWPPP
C3-3	SWPPP
C4-1	UTILITY PLAN
C8-1	CIVIL DETAIL
C8-2	CIVIL DETAILS
L1-1	LANDSCAPE PLAN
L2-1	LANDSCAPE DETAILS

**STORMWATER  
POLLUTION  
PREVENTION  
PLAN**  
**C3-2**

**SWPPP NOTES**

- PROJECT DESCRIPTION**  
THE NATURE OF THIS PROJECT WILL CONSIST OF CONSTRUCTING A SINGLE BREWERY BUILDING AS WELL AS A PARKING LOT AND UTILITIES TO SERVE THE BUILDING.
- SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES ARE AS FOLLOWS:**
  - INSTALL VEHICLE TRACKING BMP
  - INSTALL SILT FENCE AROUND SITE
  - INSTALL PROTECTIVE FENCE AROUND INFILTRATION AREAS
  - CLEAR AND GRUB SITE
  - STRIP AND STOCKPILE TOPSOIL
  - REMOVE PAVEMENTS AND UTILITIES
  - CONSTRUCT STORMWATER MANAGEMENT BASINS
  - INSTALL SILT FENCE AROUND BASINS
  - ROUGH GRADE SITE (PROTECT BASINS) FROM COMPACTION DURING SITE GRADING)
  - PERFORM DOUBLE RING INFILTROMETER TEST AND CONSULT WITH ENGINEER TO VERIFY DESIGN INFILTRATION RATES
  - IMPORT CLEAN FILL FOR REPLACEMENT AND BALANCE
  - INSTALL UTILITIES
  - INSTALL BUILDING FOUNDATIONS
  - INSTALL CURB AND GUTTER
  - INSTALL PAVEMENTS AND WALKS
  - FINAL GRADE SITE
  - REMOVE ACCUMULATED SEDIMENT FROM BASINS
  - CONSTRUCT INFILTRATION BASIN
  - TEST INFILTRATION BASIN'S INFILTRATION RATE WITH DOUBLE RING INFILTROMETER TEST
  - SEED AND MULCH
  - WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.
- SITE DATA:**

AREA OF DISTURBANCE:	±1.8 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	0.17 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	±1.30 AC

GENERAL SOIL TYPE: -
- THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE IDENTIFIED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC. BEFORE CONSTRUCTION BEGINS.
- ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN (7) OR MORE DAYS SHALL BE STABILIZED BY SEEDING OR SODDING (ONLY AVAILABLE PRIOR TO SEPTEMBER 15) OR BY MULCHING OR COVERING OR OTHER EQUIVALENT CONTROL MEASURE. AT A RATE OF 1.5 TIMES STANDARD SEEDING FINAL STABILIZATION TO BE DONE PER LANDSCAPE PLAN. SEE SHEET L1-1.
- ON SLOPES 3:1 OR GREATER MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES. SLOPE LENGTHS CAN NOT BE GREATER THAN 75 FEET.  
 DENOTES SLOPES GREATER THAN 3:1. ALL 3:1 SLOPES TO BE STABILIZED WITH EROSION CONTROL BLANKET
- ALL STORM DRAINS AND INLETS MUST BE PROTECTED UNTIL ALL SOURCES OF POTENTIAL DISCHARGE ARE STABILIZED.
- TEMPORARY SOIL STOCKPILES MUST HAVE EFFECTIVE SEDIMENT CONTROL AND CAN NOT BE PLACED IN SURFACE WATERS OR STORM WATER CONVEYANCE SYSTEMS. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT AMOUNT OF SILT, CLAY, OR ORGANIC COMPOUNDS ARE EXEMPT EX. CLEAN AGGREGATE STOCK PILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES.
- SEDIMENT LADEN WATER MUST BE DISCHARGED TO A SEDIMENTATION BASIN WHENEVER POSSIBLE. IF NOT POSSIBLE, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S.
- SOLID WASTE MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
- THE WATERSHED DISTRICT OR THE CITY MAY HAVE REQUIREMENTS FOR INSPECTIONS OR AS-BUILT DRAWINGS VERIFYING PROPER CONSTRUCTION OF THE BMP'S. A DOUBLE RING INFILTROMETER TEST WILL BE REQUIRED AFTER THE COMPLETION OF THE INFILTRATION BASIN.
- THE OWNER WHO SIGNS THE NPDES PERMIT APPLICATION IS A PERMITEE AND IS RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THE PERMIT. THE OPERATOR (CONTRACTOR) WHO SIGNS THE NPDES PERMIT APPLICATION IS A PERMITEE FOR PARTS II.B., PART II.C., PART II.B-F, PART V, PART IV AND APPLICABLE CONSTRUCTION ACTIVITY REQUIREMENTS FOUND IN APPENDIX A, PART C. OF THE NPDES PERMIT AND IS JOINTLY RESPONSIBLE WITH THE OWNER FOR COMPLIANCE WITH THOSE PORTIONS OF THE PERMIT.
- TERMINATION OF COVERAGE (PERMITEE'S) WISHING TO TERMINATE COVERAGE MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA. ALL PERMITEE'S MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
  - FINAL STABILIZATION, PER NPDES PERMIT PART IV.G. HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITEE IS RESPONSIBLE.
  - TRANSFER OF OWNERSHIP AS DESCRIBED IN THE PERMIT.
- INSPECTIONS**
  - INITIAL INSPECTION FOLLOWING SILT FENCE INSTALLATION BY CITY REPRESENTATIVE IS REQUIRED.
  - EXPOSED SOIL AREAS: ONCE EVERY 7 DAYS AND WITHIN 24 HOURS FOLLOWING A 0.5" OVER 24 HOUR RAIN EVENT.
  - STABILIZED AREAS: ONCE EVERY 30 DAYS
  - FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.
  - INSPECTION AND MAINTENANCE RECORDS MUST BE RETAINED FOR 3 YEARS AFTER FILING OF THE NOTICE OF TERMINATION AND MUST INCLUDE DATE AND TIME OF ACTION, NAME OF PERSON(S) CONDUCTING WORK, FINDING OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION, DATE AND AMOUNT OF RAINFALL EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD.
  - PERFORM DOUBLE RING INFILTROMETER TEST AFTER INFILTRATION BASIN CONSTRUCTION.
- MINIMUM MAINTENANCE**
  - SILT FENCE TO BE REPAIRED, REPLACED, SUPPLEMENTED WHEN NONFUNCTIONAL, OR 1/3 FULL; WITHIN 24 HOURS
  - SEDIMENT BASINS DRAINED AND SEDIMENT REMOVED WHEN REACHES 1/2 STORAGE VOLUME. REMOVAL MUST BE COMPLETE WITHIN 72 HOURS OF DISCOVERY.
  - SEDIMENT REMOVED FROM SURFACE WATERS WITHIN (7)SEVEN DAYS
  - CONSTRUCTION SITE EXITS INSPECTED, TRACKED SEDIMENT REMOVED WITH 24 HOURS.
  - PROVIDE COPIES OF EROSION INSPECTION RESULTS TO CITY ENGINEER FOR ALL EVENTS GREATER THAN 1/2" IN 24 HOURS
- THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION ACTIVITY BY THE PERMITEE(S) WHO HAVE OPERATIONAL CONTROL OF THE SITE.
- OWNER MUST KEEP RECORDS OF ALL PERMITS REQUIRED FOR THE PROJECT, THE SWPPP, ALL INSPECTIONS AND MAINTENANCE, PERMANENT OPERATION AND MAINTENANCE AGREEMENTS, AND REQUIRED CALCULATIONS FOR TEMPORARY AND PERMANENT STORM WATER MANAGEMENT SYSTEMS. THESE RECORDS MUST BE RETAINED FOR THREE YEARS AFTER FILING NPDES NOTICE OF TERMINATION.
- SWPPP MUST BE AMENDED WHEN:**
  - THERE IS A CHANGE IN DESIGN, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON DISCHARGE
  - INSPECTIONS INDICATE THAT THE SWPPP IS NOT EFFECTIVE AND DISCHARGE IS EXCEEDING WATER QUALITY STANDARDS.

- THE BMP'S IN THE SWPPP ARE NOT CONTROLLING POLLUTANTS IN DISCHARGES OR IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE PERMIT.
  - AT ANY TIME AFTER PERMIT COVERAGE IS EFFECTIVE, THE MPCA MAY DETERMINE THAT THE PROJECT'S STORMWATER DISCHARGES MAY CAUSE, HAVE REASONABLE POTENTIAL TO CAUSE, OR CONTRIBUTE TO NON-ATTAINMENT OF ANY APPLICABLE WATER QUALITY STANDARD, OR THAT THE SWPPP DOES NOT INCORPORATE THE APPLICABLE REQUIREMENTS IN PART III.A.B., IMPAIRED WATERS AND TMDLS. IF A WATER QUALITY STANDARD CHANGES DURING THE TERM OF THIS PERMIT, THE MPCA WILL MAKE A DETERMINATION AS TO WHETHER A MODIFICATION OF THE SWPPP IS NECESSARY TO ADDRESS THE NEW STANDARD. IF THE MPCA MAKES SUCH DETERMINATION(S) OR ANY OF THE DETERMINATIONS IN PARTS III.B.1.-3.), THE MPCA WILL NOTIFY THE PERMITEE(S) IN WRITING. IN RESPONSE, THE PERMITEE(S) MUST AMEND THE SWPPP TO ADDRESS THE IDENTIFIED CONCERNS AND SUBMIT INFORMATION REQUESTED BY THE MPCA, WHICH MAY INCLUDE AN INDIVIDUAL PERMIT APPLICATION. IF THE MPCA'S WRITTEN NOTIFICATION REQUIRES A RESPONSE, FAILURE TO RESPOND WITHIN THE SPECIFIED TIMEFRAME CONSTITUTES A PERMIT VIOLATION.
- CONCRETE WASHOUT AREA**
    - CONTRACTOR TO PROVIDE PREFABRICATED CONCRETE WASH-OUT CONTAINER WITH RAIN PROTECTION PER PLAN.
    - CONCRETE WASH-OUT TO BE IDENTIFIED WITH SIGNAGE STATING "CONCRETE WASHOUT AREA DO NOT OVERFILL".
    - CONCRETE WASHOUT WATER NEEDS TO BE PUMPED WITHIN 24 HOURS OF STANDING WATER IN WASHOUT AREA.
  - IN THE EVENT OF ENCOUNTERING A WELL OR SPRING DURING CONSTRUCTION CONTRACTOR TO CEASE CONSTRUCTION ACTIVITY AND NOTIFY ENGINEER.
  - PIPE OULTETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
  - FINAL STABILIZATION**  
FINAL STABILIZATION REQUIRES THAT ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND THAT DISTURBED AREAS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH 70% OF THE EXPECTED FINAL DENSITY, AND THAT ALL PERMANENT PAVEMENTS HAVE BEEN INSTALLED. ALL TEMPORARY BMP'S SHALL BE REMOVED, DITCHES STABILIZED, AND SEDIMENT SHALL BE REMOVED FROM PERMANENT CONVEYANCES AND SEDIMENTATION BASINS IN ORDER TO RETURN THE POND TO DESIGN CAPACITY.
  - TEMPORARY SEDIMENTATION BASINS**
    - THE TEMPORARY SEDIMENTATION BASINS SHALL BE CONSTRUCTED AND MADE OPERATIONAL PRIOR TO DISTURBANCE OF 10 OR MORE ACRES DRAINING TO A COMMON LOCATION.
    - TEMPORARY SEDIMENTATION BASINS ARE REQUIRED PRIOR TO RUNOFF LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS WHEN 10 OR MORE ACRES OF DISTURBED SOILS DRAIN TO A COMMON LOCATION. THE BASIN MUST PROVIDE 3,600 CUBIC FEET OF STORAGE BELOW THE OUTLET PER ACRE DRAINED. IF HYDRAULIC CALCULATIONS ARE AVAILABLE, THE TEMPORARY SEDIMENTATION BASIN MUST PROVIDE A STORAGE VOLUME EQUIVALENT TO THE 2-YEAR, 24-HOUR STORM, BUT IN NO CASE LESS THAN 1800 CUBIC FEET PER ACRE DRAINED. THE TEMPORARY SEDIMENTATION BASIN MUST BE CONSTRUCTED AND MADE OPERATIONAL CONCURRENT WITH THE START OF SOIL DISTURBANCE UP GRADIENT OF THE POND. THE TEMPORARY SEDIMENTATION BASIN SHALL BE DESIGNED TO PREVENT SHORT CIRCUITING. THE OUTFALL SHALL BE DESIGNED TO REMOVE FLOATABLE DEBRIS, ALLOW FOR COMPLETE DRAINDOWN OF THE POND FOR MAINTENANCE ACTIVITIES, AND HAVE ENERGY DISSIPATION. THE EMERGENCY SPILLWAY SHALL BE STABILIZED.
    - TEMPORARY SEDIMENTATION BASINS SHALL BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY REQUIRED BUFFER ZONE, AND MUST BE DESIGNED TO AVOID DRAINING WETLANDS, UNLESS THE IMPACT IS IN COMPLIANCE WITH THE REQUIREMENTS OF THIS PERMIT.
    - EXCESSIVE SEDIMENT-LADEN WATER THAT IS NOT PROPERLY FILTERED WILL NOT BE PERMITTED TO DISCHARGE FROM SIRE.
  - DEWATERING AND BASIN DRAINING**
    - TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING SHALL BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE TEMPORARY OR PERMANENT BASIN MAY DISCHARGE TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT THE NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE. DISCHARGE POINTS SHALL BE ADEQUATELY PROTECTED FROM EROSION AND PROPER VELOCITY DISSIPATION PROVIDED.
    - ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN THE RECEIVING CHANNEL OR ON THE DOWN SLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACTS TO THE WETLAND.
    - IF FILTERS WITH BACKWASH WATERS ARE USED, THE BACKWASH WATER SHALL BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATED INTO SITE IN A MANNER THAT DOES NOT CAUSE EROSION. BACKWASH WATER MAY BE DISCHARGED TO SANITARY SEWER IF PERMISSION IS GRANTED BY THE SANITARY SEWER AUTHORITY.
  - POLLUTION PREVENTION**
    - BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER TO PREVENT DISCHARGE OR PROTECTED BY AN EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
    - PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER.
    - HAZARDOUS MATERIALS AND TOXIC WASTE MUST BE PROVIDED TO PREVENT VANDALISM.
    - SOLID WASTE MUST BE STORED, COLLECTED AND DISPOSED OF IN COMPLIANCE WITH MINN. R. CH 7035.
    - PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH 7041.
    - DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED SHALL BE PREVENTED USING DRIP PANS OR ABSORBENTS. SUPPLIES SHALL BE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD MUST BE AVAILABLE FOR RECOVERED SPILLED MATERIALS.
  - DESIGN CALCULATIONS**  
TEMPORARY & PERMANENT STORMWATER TREATMENT ARE DESIGNED TO MEET MPCA GENERAL & SPECIAL WATER REQUIREMENTS. CALCULATIONS ARE PART OF THE HYDROLOGY REPORT WHICH IS TO BE CONSIDERED PART OF THE SWPP DOCUMENTS. SEE HYDROLOGY REPORT FOR ADDITIONAL INFORMATION.
  - GENERAL STORMWATER DISCHARGE REQUIREMENTS**  
ALL REQUIREMENTS LISTED IN PART III OF THE PERMIT FOR DESIGN OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM AND DISCHARGE HAVE BEEN INCLUDED IN THE PREPARATION OF THIS SWPPP. THESE INCLUDE BUT ARE NOT LIMITED TO:
    - THE EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION PRECIPITATION.
    - THE NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE.
    - PEAK FLOW RATES AND STORWATER VOLUMES TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNEL AND STREAM BANK EROSION.
    - THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT ON THE SITE.
  - CONSTRUCTION OF FILTRATION BASINS**
    - NO HEAVY TRAFFIC ON FILTRATION AREAS. CONSTRUCTION TO BE DONE WITH MINIMAL COMPACTION COMPACTION TO FILTRATION AREAS. IF COMPACTION IS ENCOUNTERED, BASIN SOILS FOR THE FIRST & MUST BE REMOVED & RELAID.
    - INFILTRATION SYSTEMS MUST NOT BE EXCAVATED TO FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAD BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS ARE PROVIDED (PART III.D.1.C.).
    - WHEN AN INFILTRATION SYSTEM IS EXCAVATED TO FINAL GRADE (OR WITHIN THREE (3) FEET OF FINAL GRADE) THE PERMITEE(S) MUST EMPLOY RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT

- AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. THE AREA MUST BE STAKED OFF AND MARKED SO THAT HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT WILL NOT COMPACT THE SOIL IN THE PROPOSED INFILTRATION AREA.
  - TO PREVENT CLOGGING OF THE INFILTRATION OR FILTRATION SYSTEM, THE PERMITEE(S) MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, SMALL SEDIMENTATION BASIN, OR WATER QUALITY INLET (E.G., GRIT CHAMBER) TO SETTLE PARTICULATES BEFORE THE STORMWATER DISCHARGES INTO THE INFILTRATION OF FILTRATION SYSTEM.
- POST CONSTRUCTION**  
THE WATER QUALITY VOLUME THAT MUST BE RETAINED ON SITE BY THE PROJECT'S PERMANENT STORMWATER MANAGEMENT SYSTEM DESCRIBED IN PART III.D. SHALL BE ONE (1) INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACES CRATED BY THE PROJECT. SEE PART III.D.1. FOR MORE INFORMATION ON INFILTRATION DESIGN, PROHIBITIONS AND APPROPRIATE SITE CONDITIONS.
  - RESPONSIBILITIES**
    - THE OWNER MUST IDENTIFY A CONTRACTOR WHO WILL OVERSEE THE SWPPP IMPLEMENTATION AND THE PERSON RESPONSIBLE FOR INSPECTION AND MAINTENANCE.
    - THE OWNER MUST IDENTIFY THE A PERSON WHO WILL BE RESPONSIBLE FOR LONG TERM OPERATIONS AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM.
  - TRAINING REQOEMENTS**  
THE PERMITEE(S) SHALL ENSURE THE FOLLOWING INDIVIDUALS IDENTIFIED IN THIS PART HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS.
    - WHO MUST BE TRAINED:
      - INDIVIDUAL(S) PREPARING THE SWPPP FOR THE PROJECT
      - INDIVIDUAL(S) OVERSEEING IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP AND INDIVIDUAL(S) PERFORMING INSPECTIONS AS REQUIRED IN PART IV.E. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.
      - INDIVIDUAL(S) PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMP'S. AT LEAST ONE INDIVIDUAL ON A PROJECT MUST BE TRAINED IN THESE JOB DUTIES.
    - TRAINING CONTENT:  
THE CONTENT AND EXTENT OF TRAINING MUST BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT FOR THE PROJECT. AT LEAST ONE INDIVIDUAL PRESENT ON THE PERMITTED PROJECT SITE (OR AVAILABLE TO THE PROJECT SITE IN 72 HOURS) MUST BE TRAINED IN THE JOB DUTIES DESCRIBED IN PART III.F.1.B. AND PART III.F.1.C.
    - THE PERMITEE(S) SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STAT, FEDERAL AGENCIES, PROFESSIONAL OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. AN UPDATE REFRESHER-TRAINING MUST BE ATTENDED EVERY THREE (3) YEARS STARTING THREE (3) YEARS FROM THE ISSUANCE DATE OF THIS PERMIT.

UNIVERSITY OF MINNESOTA

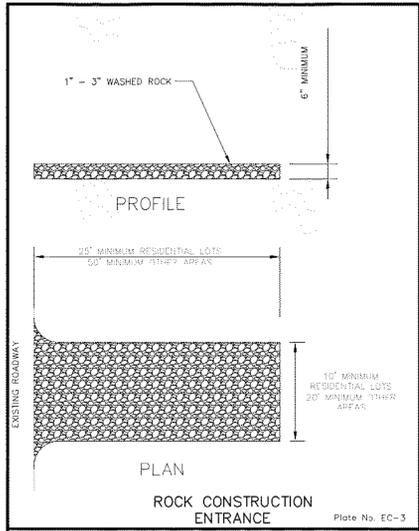
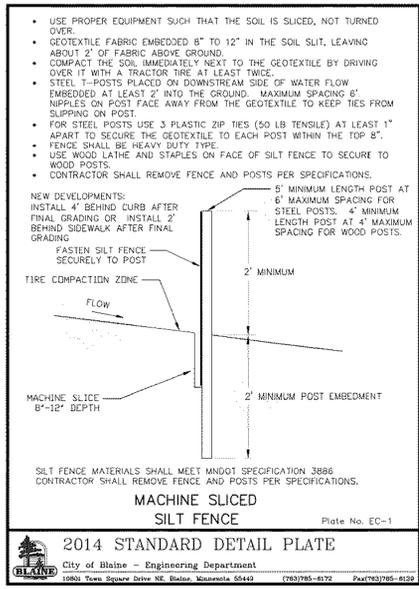
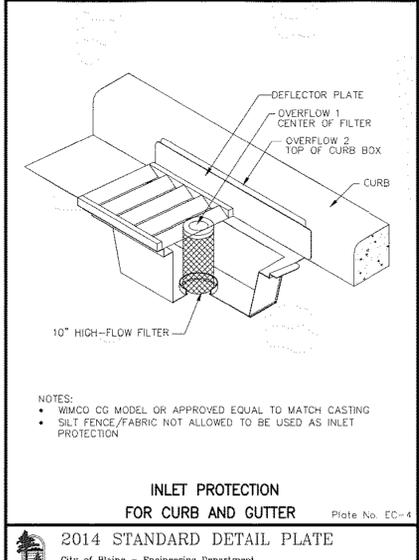
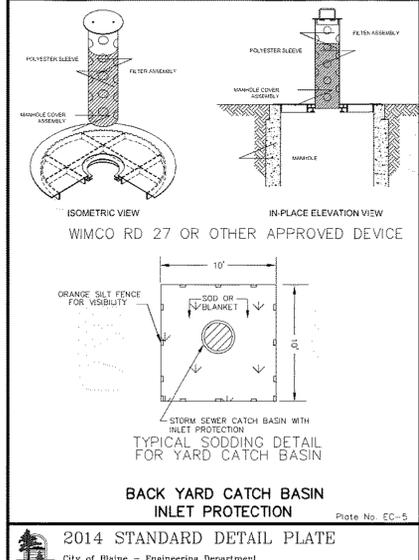
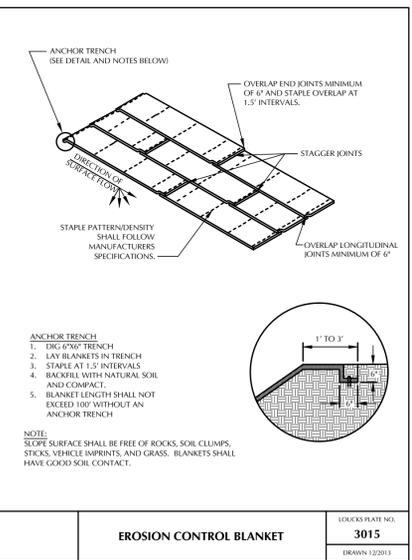
**Samuel Trebesch**

Design of Construction SWPPP (May 31 2018)

2. LIST OF CONTACTS

TILE	CONTACT	COMPANY	PHONE NUMBER
OWNER	PREVIN SOLBERG	INVICTUS BREWERY, LLC	
PROJECT MANAGER	NICK MANNEL	LOUCKS	763-496-6757
SWPPP DESIGNER	SAM TREBESCH	LOUCKS	763-496-6751
CONTRACTOR	TBD		
SITE MANAGER	TBD		

\* MPCA 24HR. HAZARDOUS SPILL HOTLINE: 651-649-5457 OF 80420798



**INVICTUS BREWERY**

BLAINE, MN

**INVICTUS BREWING, LLC**

2025 105th AVENUE NE  
BLAINE, MN 55449

**LOUCKS**

PLANNING  
CIVIL ENGINEERING  
LAND SURVEYING  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL

7200 Hemlock Lane, Suite 300  
Maple Grove, MN 55369  
763.424.5505  
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**CADD QUALIFICATION**

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**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

License No. 45861  
Date 12/29/16  
Samuel M. Trebesch, PE

**QUALITY CONTROL**

Loucks Project No. 16034  
Project Lead NMM  
Drawn By SRT  
Checked By NMM  
Review Date 03/08/17

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L2-1	LANDSCAPE DETAILS

**STORMWATER POLLUTION PREVENTION PLAN**

**C3-3**



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PROFESSIONAL SIGNATURE

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Nicholas M. Mummolo, PE

License No. 45861  
Date 12/29/16

QUALITY CONTROL

Loucks Project No. 16034  
Project Lead NMM  
Drawn By SRT  
Checked By NMM  
Review Date 07/27/17

SHEET INDEX

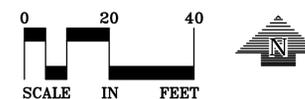
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C3-3	SWPPP
C4-1	UTILITY PLAN
C8-1	CIVIL DETAILS
C8-2	CIVIL DETAILS
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L2-1	LANDSCAPE DETAILS

EXISTING	CIVIL LEGEND	PROPOSED
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	CULVERT	
	HYDRANT	
	GATE VALVE	
	POST INDICATOR VALVE	
	LIGHT POLE	
	POWER POLE	
	SIGN	
	BENCHMARK	
	SOIL BORINGS	
	WATER MANHOLE	
	TELEPHONE MANHOLE	
	UTILITY MANHOLE	
	ELECTRIC MANHOLE	
	WATER SERVICE	
	SANITARY SERVICE	
	HANDICAP PARKING	
	DIRECTION OF FLOW	
	SPOT ELEVATION	
	CONTOURS	
	SANITARY SEWER	
	STORM SEWER	
	WATERMAIN	
	FOREMAN	
	DRANTILE	
	HANDICAP PARKING	
	SILT FENCE	
	CURB & GUTTER	
	RETAINING WALL	
	TREDLINE	
	EASEMENT LINE	
	SETBACK LINE	
	FENCE LINE	
	UNDERGROUND TELE	
	UNDERGROUND GAS	
	OVERHEAD UTILITY	

UTILITY NOTES

- ALL SANITARY SEWER, STORM SEWER AND WATERMAIN UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS, THE MINNESOTA PLUMBING CODE, THE LOCAL GOVERNING UNIT, AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), 2013 EDITION.
- ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL. ALL COMPACTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION.
- ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED PER THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTIONS. THE CITY DEPARTMENT OF ENGINEERING AND BUILDING INSPECTIONS DEPARTMENT AND THE CONSTRUCTION ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT OF WAY, OR WORK IMPACTING PUBLIC UTILITIES.
- ALL STORM SEWER, SANITARY SEWER AND WATER SERVICES SHALL TERMINATE 5' FROM THE BUILDING FACE UNLESS OTHERWISE NOTED.
- A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES UNLESS OTHERWISE NOTED.
- ALL NEW WATERMAIN AND SERVICES MUST HAVE A MINIMUM OF 8.0 FEET OF COVER. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. THE CONTRACTOR SHALL FIELD ADJUST WATERMAIN TO AVOID CONFLICTS WITH SANITARY SEWER, STORM SEWER, AND SERVICES AS REQUIRED. INSULATION OF WATER AND SANITARY SEWER LINES SHALL BE PROVIDED WHERE 8.0 FEET MINIMUM DEPTH CAN NOT BE ATTAINED.
- ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- PROPOSED PIPE MATERIALS:
 

WATERMAIN	DIP CLASS 52	6" TO 8" DIAMETER
WATERMAIN	TYPE K COPPER OR HDPE 3408-200	2" DIAMETER
SANITARY SEWER	PVC SDR 26	6" DIAMETER
STORM SEWER	DUAL WALL HDPE	10" DIAMETER
STORM SEWER	RCP	21" DIAMETER
- ALL SANITARY SEWER WYES, TEES AND SERVICES SHALL BE 6" PVC SDR 26.
- ALL PORTIONS OF THE STORM SEWER SYSTEM, INCLUDING CATCH BASINS, LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED ACCORDANCE WITH MINNESOTA RULES, PART 4715.2820
- ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT (SEE MINNESOTA RULES, PART 4715.0700). APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, AND OTHER STRUCTURES.
- HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINS MUST COMPLY WITH MINNESOTA RULES, PART 4715.0540:
  - PIPES 4-INCH TO 10-INCH IN SIZE MUST COMPLY WITH AASHTO M252.
  - PIPES 12-INCH TO 60-INCH IN SIZE MUST COMPLY WITH ASTM F2306.
  - ALL FITTINGS MUST COMPLY WITH ASTM D3212.
  - WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.
- CONTACT CITY OF BLAINE ENGINEERING DEPARTMENT AT (763) 785-6172 FOR INSPECTION OF ALL UTILITY WORK.



BENCHMARK  
TOP NUT HYDRANT LOCATED NEAR THE SOUTHWEST OF THE PROPERTY  
ELEVATION=902.80 FEET (NGVD 1929)

WARNING:

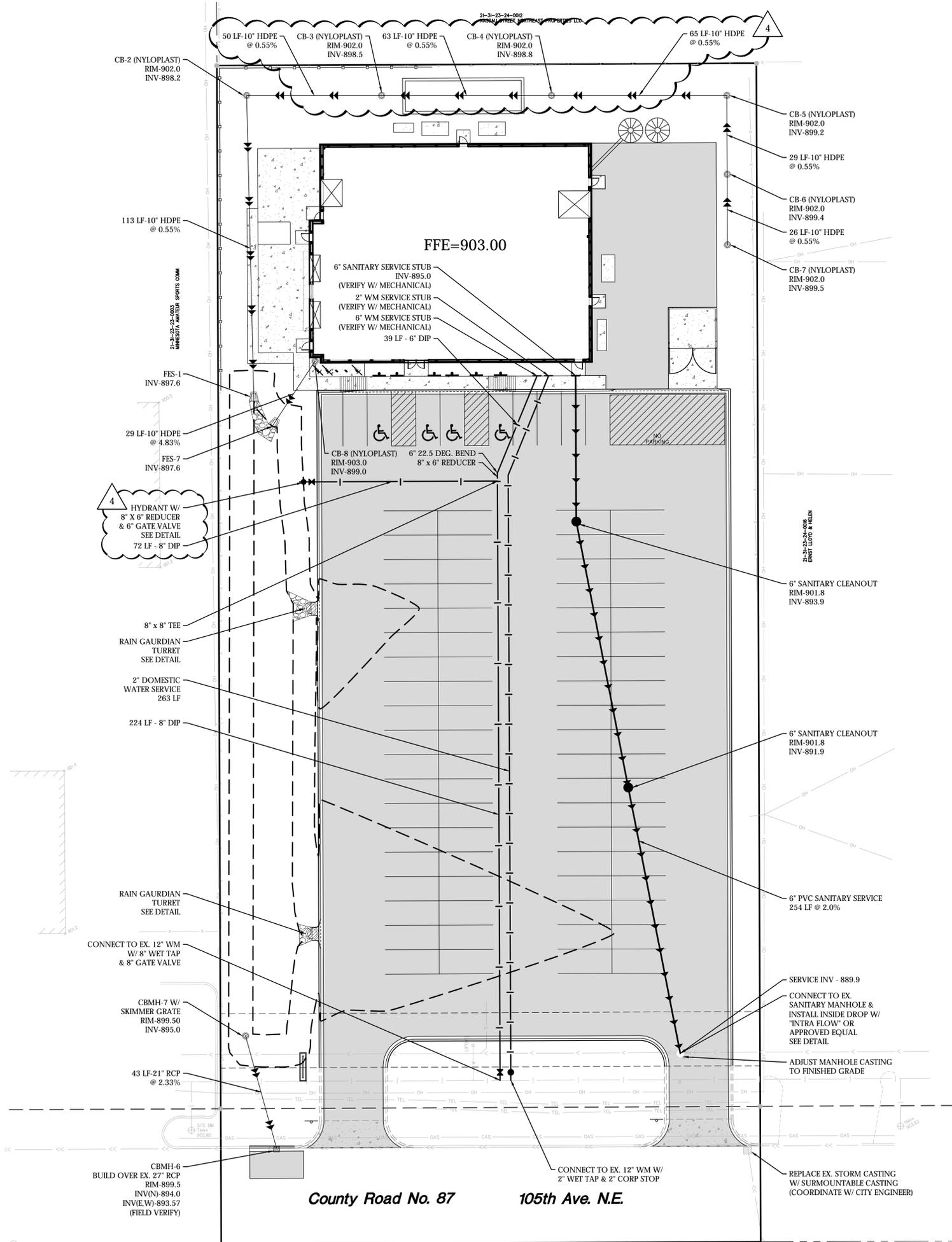
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

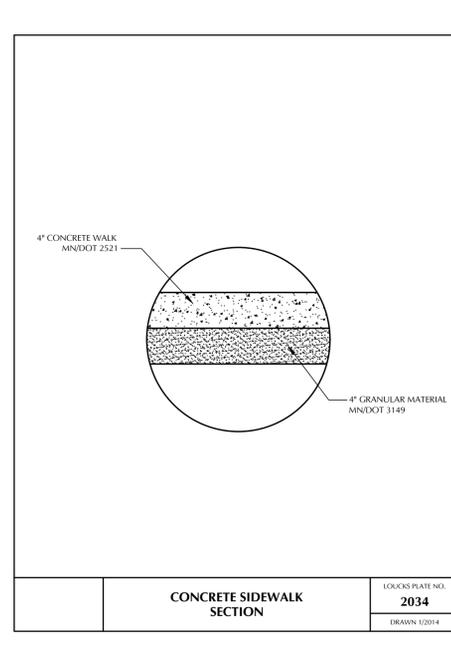
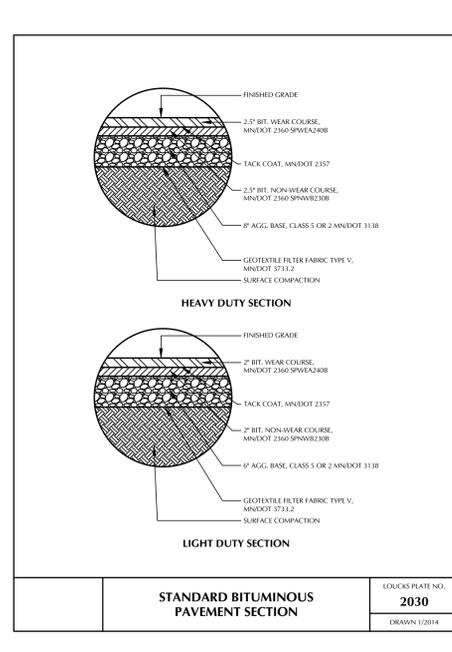
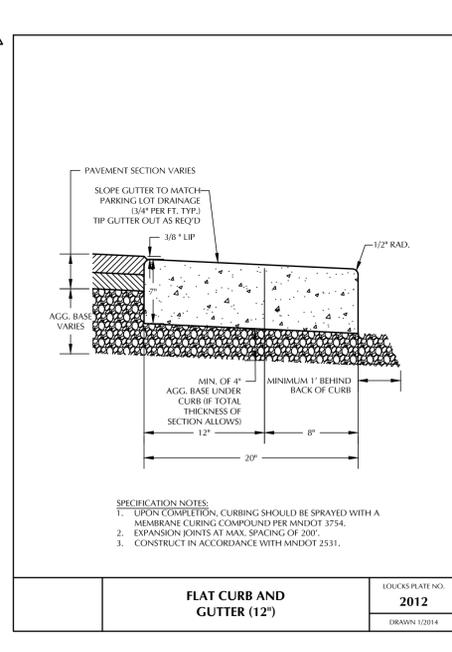
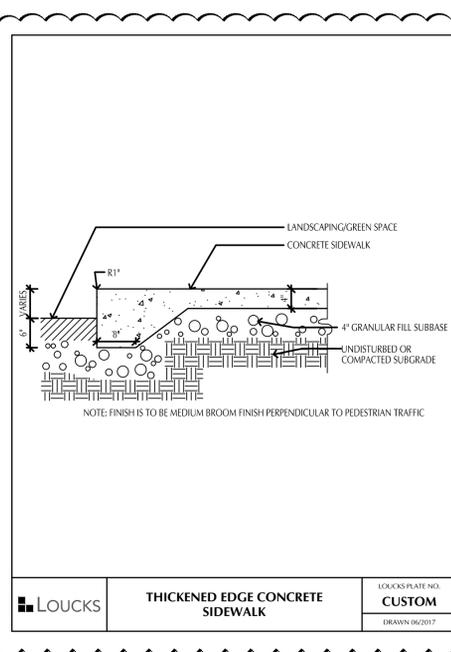
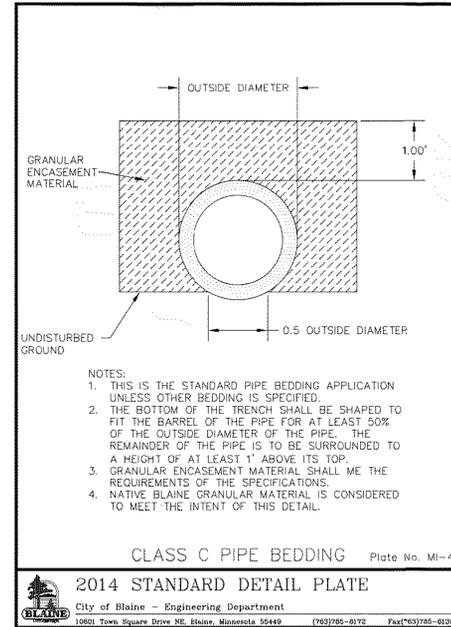
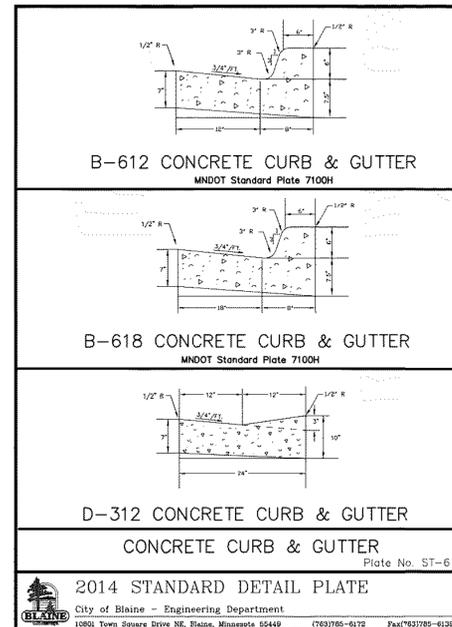
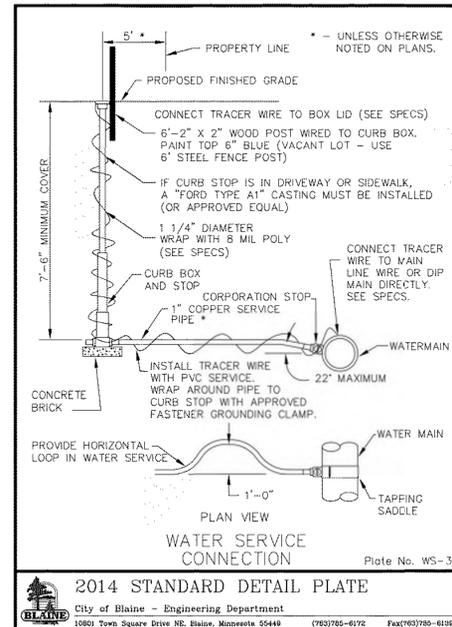
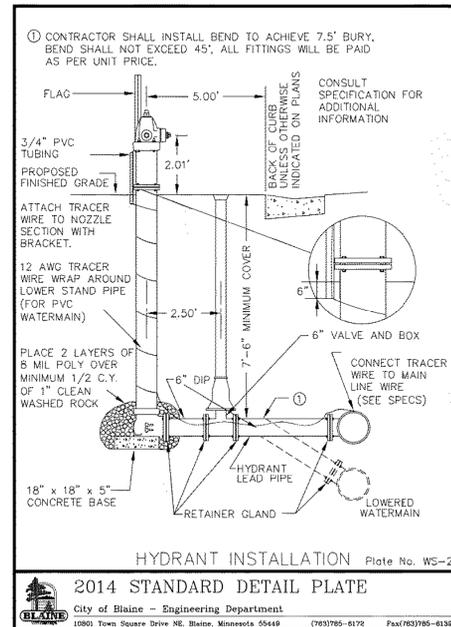
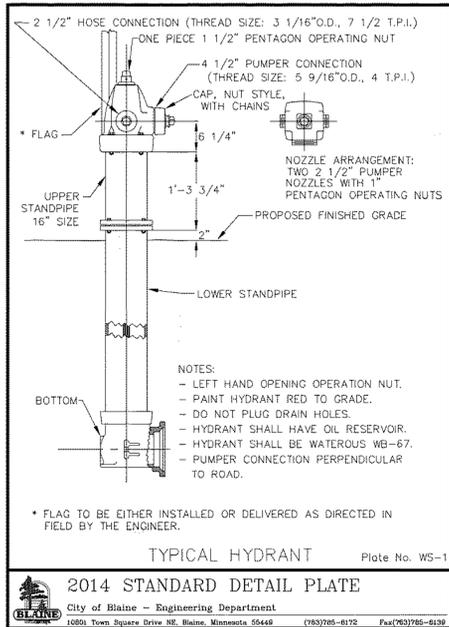
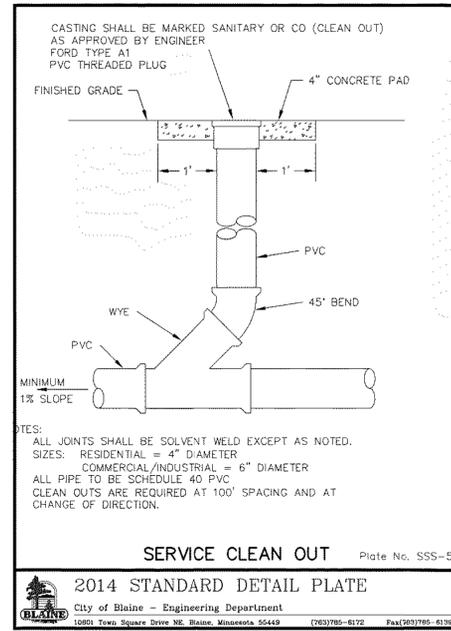
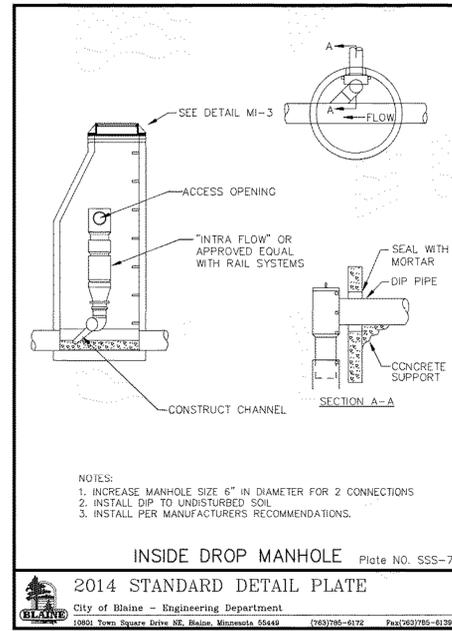
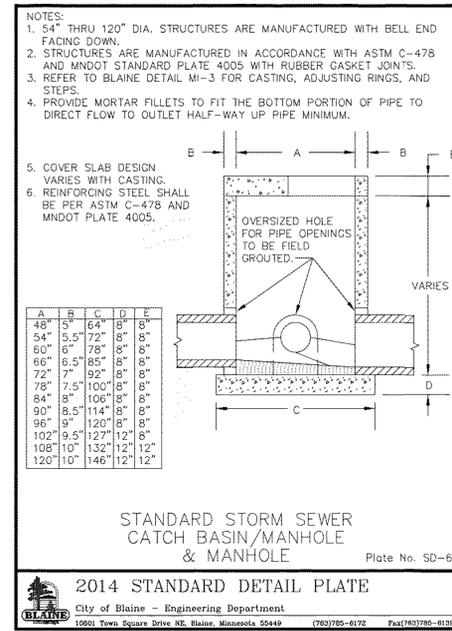
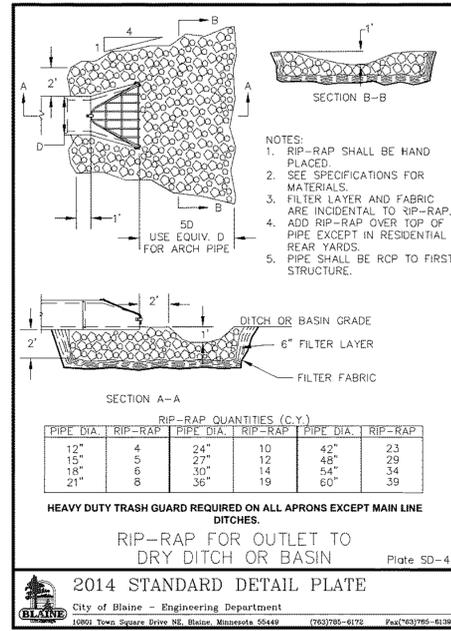
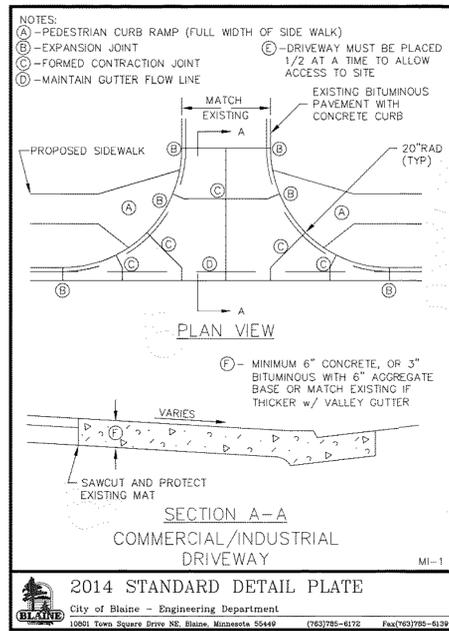
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

UTILITY PLAN

C4-1

Plotfiled: 07/27/2017 12:11 PM W:\2016\16034\CADD\DATA\CIVIL.dwg Sheet Files\C4-1 UTILITY





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 BLAINE, MN

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**PROFESSIONAL SIGNATURE**  
 I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

*Thomas M. Manning, PE*  
 License No. 45861  
 Date 12/29/16

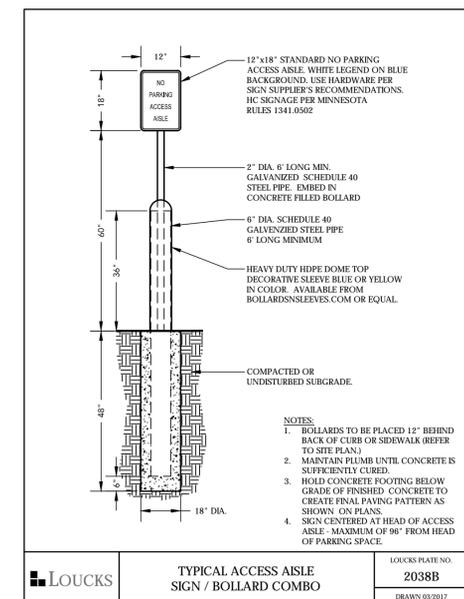
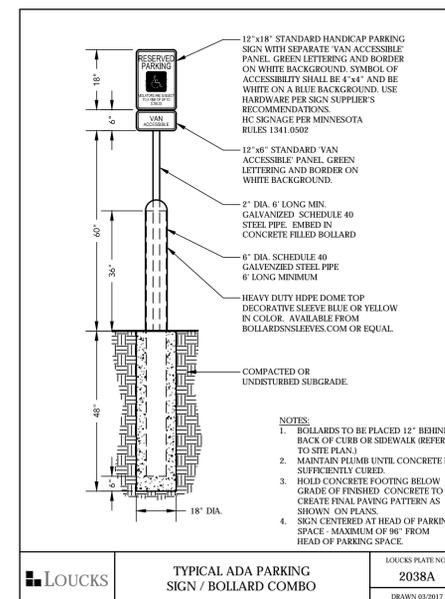
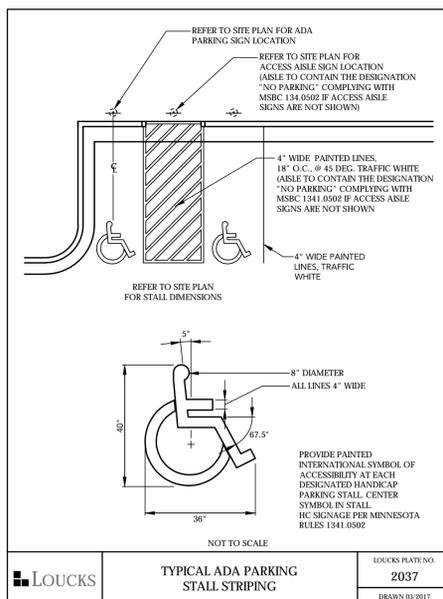
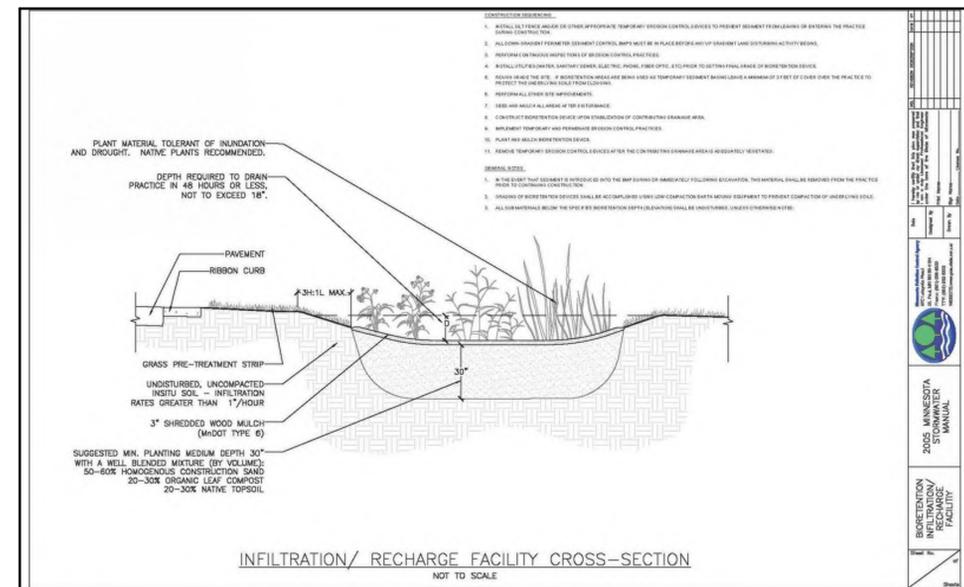
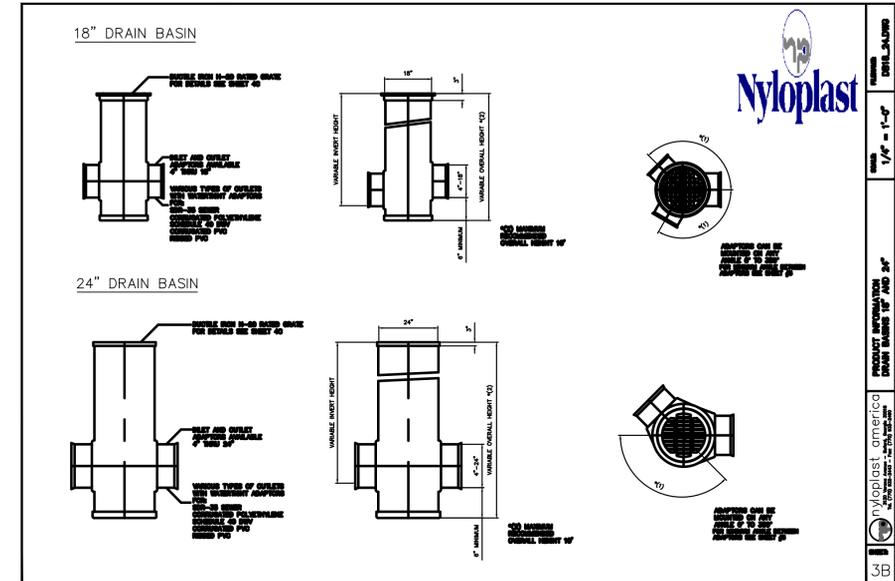
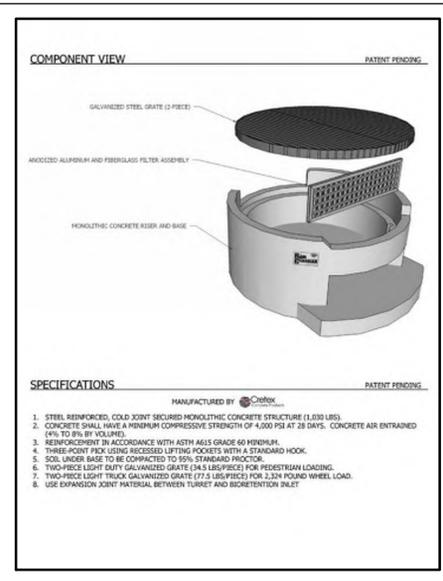
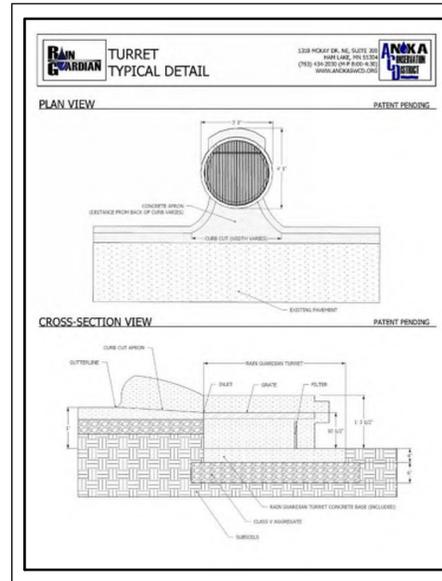
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**DETAIL SHEET**  
**C8-1**



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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Minnesota.

Signature: [Signature]  
 License No. 49860  
 Date 12/29/16

**QUALITY CONTROL**

Loecks Project No. 16034  
 Project Lead NMM  
 Drawn By NMM  
 Checked By ISMM  
 Review Date 03/08/17

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

Nathan W. Elshoff - LA  
License No. 52050  
Date 12/29/16

**QUALITY CONTROL**

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Project Lead NMM  
Drawn By NWE  
Checked By NWE  
Review Date 07/27/17

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PLANT SCHEDULE						
DECIDUOUS TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	
CH	2	COMMON HACKBERRY	Celtis occidentalis	B & B	2.5" Cal	
QB	1	SWAMP WHITE OAK	Quercus bicolor	B & B	2.5" Cal	
WB	7	WHITESPIRE BIRCH CLUMP	Betula populifolia 'Whitespire Sr.'	B & B	8' HGT	
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	
BS	5	BLACK HILLS SPRUCE FULL FORM	Picea glauca 'Densata'	B & B	6' HGT	
ORNAMENTAL TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	
AT	3	APPLE TREE	Malus x	B & B	1.5" Cal	
JT	6	JAPANESE TREE LILAC	Syringa reticulata	B & B	1.5" Cal	
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE	SPACING
DH	10	DWARF BUSH HONEYSUCKLE	Diervilla lonicera	5 gal	18" HGT	36" o.c.
GF	43	GRO-LOW FRAGRANT SUMAC	Rhus aromatica 'Gro-Low'	5 gal	24" SPRD	48" o.c.
GRASSES	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE	SPACING
FG	15	FEATHER REED GRASS	Calamagrostis x acutiflora 'Karl Foerster'	1 gal		24" o.c.
SSG	38	SHENANDOAH SWITCH GRASS	Panicum virgatum 'Shenendoah'	1 gal		36" o.c.
PERENNIALS	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE	SPACING
BE	17	BLACK EYED SUSAN	Rudbeckia fulgida 'Goldstrum'	1 gal		24" o.c.
SD	16	STELLA D' ORO DAYLILY	Hemerocallis x 'Stella de Oro'	1 gal		24" o.c.
GROUND COVERS	CODE	COMMON NAME	BOTANICAL NAME			
SEED		NATIVE SEED SHORT/DRY GRASS MIX & SHORT/DRY WILDFLOWER MIX AS PROVIDED BY PRAIRIE RESTORATIONS INC OR EQUAL				
STM		STONE MULCH 1.5" BUFF LIMESTONE ROCK - 3" MINIMUM DEPTH OVER FILTER FABRIC				
SOD		TURF SOD				

**TREE PRESERVATION REQUIREMENTS**

NO EXISTING TREES ARE LOCATED ON SITE THEREFORE THERE IS NO REQUIREMENT FOR TREE REPLACEMENT.

TOTAL CALIPER INCHES REQUIRED = 0"

**TREE PLANTING REQUIREMENTS**

BUILDING SF = 8,000SF  
SITE PERIMETER = 1.170LF

1 OVERSTORY TREE PER 2,000SF OF BUILDING - 4 REQUIRED  
OR 1 PER 100LF OF SITE PERIMETER - 12 REQUIRED  
15% REDUCTION FOR I-2 ZONING DISTRICT - 10 REQUIRED  
OVERSTORY TREES PROVIDED = 10

1 CONIFEROUS TREE PER 2,000SF OF BUILDING - 4 REQUIRED  
OR 1 PER 200LF OF SITE PERIMETER - 6 REQUIRED  
15% REDUCTION FOR I-2 ZONING DISTRICT - 5 REQUIRED  
CONIFEROUS TREES PROVIDED = 5

1 SHRUB PER 300SF OF BUILDING - 27 REQUIRED  
OR 1 PER 30LF OF SITE PERIMETER - 39 REQUIRED  
15% REDUCTION FOR I-2 ZONING DISTRICT - 33 REQUIRED  
SHRUBS PROVIDED = 33

1 ORNAMENTAL TREE PER 2,000SF OF BUILDING - 4 REQUIRED  
OR 1 PER 200LF OF SITE PERIMETER - 6 REQUIRED  
15% REDUCTION FOR I-2 ZONING DISTRICT - 5 REQUIRED  
ORNAMENTAL TREES PROVIDED = 9

**GENERAL NOTES**

CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID. HE SHALL INSPECT SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF WORK.

VERIFY LAYOUT AND ANY DIMENSIONS SHOWN AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT ANY DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN AND/OR INTENT OF THE PROJECT'S LAYOUT.

ASSURE COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK OR MATERIALS SUPPLIED.

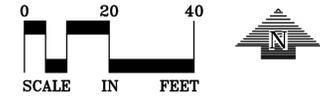
CONTRACTOR SHALL PROTECT ALL EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING PLANTING OPERATIONS. ANY DAMAGE TO SAME SHALL BE REPAIRED AT NO COST TO THE OWNER.

CONTRACTOR SHALL VERIFY ALIGNMENT AND LOCATION OF ALL UNDERGROUND AND ABOVE GRADE UTILITIES AND PROVIDE THE NECESSARY PROTECTION FOR SAME BEFORE CONSTRUCTION / MATERIAL INSTALLATION BEGINS (MINIMUM 10' - 0" CLEARANCE).

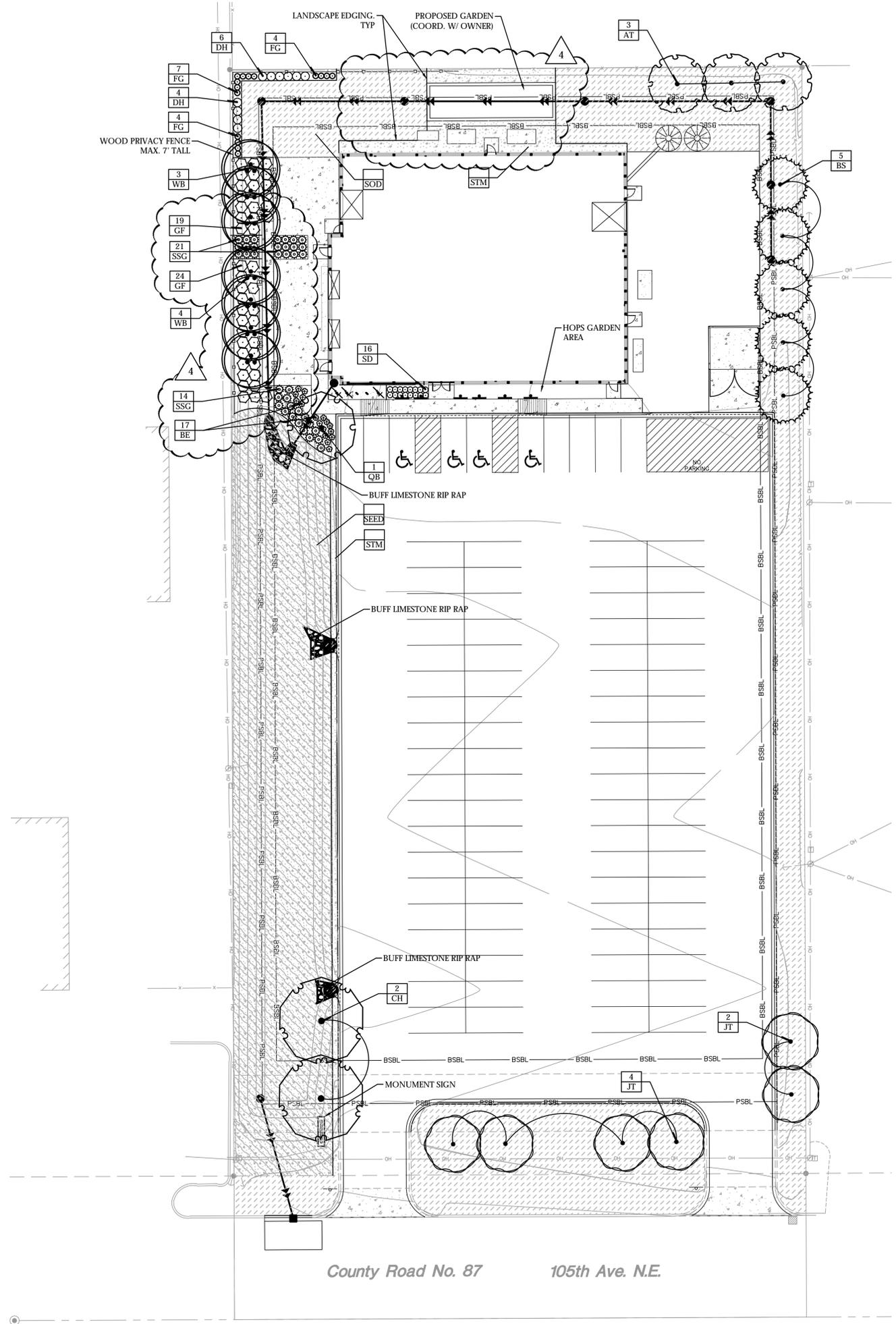
ALL UNDERGROUND UTILITIES SHALL BE LAID SO THAT TRENCHES DO NOT CUT THROUGH ROOT SYSTEMS OF ANY EXISTING TREES TO REMAIN.

EXISTING CONTOURS, TRAILS, VEGETATION, CURB/GUTTER AND OTHER EXISTING ELEMENTS BASED UPON INFORMATION SUPPLIED TO LANDSCAPE ARCHITECT BY OTHERS. CONTRACTOR SHALL VERIFY ANY AND ALL DISCREPANCIES PRIOR TO CONSTRUCTION AND NOTIFY LANDSCAPE ARCHITECT OF SAME.

THE ALIGNMENT AND GRADES OF THE PROPOSED WALKS, TRAILS AND/OR ROADWAYS ARE SUBJECT TO FIELD ADJUSTMENT REQUIRED TO CONFORM TO LOCALIZED TOPOGRAPHIC CONDITIONS AND TO MINIMIZE TREE REMOVAL AND GRADING. ANY CHANGE IN ALIGNMENT MUST BE APPROVED BY LANDSCAPE ARCHITECT.



**BENCHMARK**  
TOP NUT HYDRANT LOCATED NEAR THE SOUTHWEST OF THE PROPERTY  
ELEVATION=902.80 FEET (NGVD 1929)



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**LANDSCAPE INSTALLATION:**

COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.

NO PLANTING WILL BE INSTALLED UNTIL COMPLETE GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.

WHERE SOD/SEED ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC.

SEED ALL AREAS DISTURBED DUE TO GRADING OTHER THAN THOSE AREAS NOTED TO RECEIVE SOD. SEED SHALL BE INSTALLED AND MULCHED AS PER MNDOT SPECS.

SOD ALL DESIGNATED AREAS DISTURBED DUE TO GRADING. SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, THE SOD SHALL BE STAKED TO THE GROUND.

ALL PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERMEN. UNLESS NOTED OTHERWISE, DECIDUOUS SHRUBS SHALL HAVE AT LEAST 5 CANES AT THE SPECIFIED SHRUB HEIGHT. ORNAMENTAL TREES SHALL HAVE NO V CROTCHES AND SHALL BEGIN BRANCHING NO LOWER THAN 3' ABOVE ROOT BALL. STREET AND BOULEVARD TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE FINISHED GRADE.

ANY CONIFEROUS TREE PREVIOUSLY PRUNED FOR CHRISTMAS TREE SALES SHALL NOT BE USED. ALL CONIFEROUS TREES SHALL BE FULL FORM, NATURAL TO THE SPECIES, WITHOUT TRUNCS.

PLAN TAKES PRECEDENCE OVER PLANT SCHEDULE IF DISCREPANCIES IN QUANTITIES EXIST. SPECIFICATIONS TAKE PRECEDENCE OVER NOTES.

ALL PROPOSED PLANTS SHALL BE LOCATED AND STAKED AS SHOWN ON PLAN. LANDSCAPE ARCHITECT MUST APPROVE ALL STAKING OF PLANT MATERIAL PRIOR TO ANY AND ALL DIGGING.

NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR PRIOR TO THE SUBMISSION OF A BID AND/OR QUOTATION.

ADJUSTMENTS IN LOCATION OF PROPOSED PLANT MATERIALS MAY BE NEEDED IN FIELD. SHOULD AN ADJUSTMENT BE ADVISED, THE LANDSCAPE ARCHITECT MUST BE NOTIFIED.

ALL PLANT MATERIALS SHALL BE FERTILIZED UPON INSTALLATION WITH DRIED BONE MEAL. OTHER APPROVED FERTILIZER MIXED IN WITH THE PLANTING SOIL PER THE MANUFACTURER'S INSTRUCTIONS OR MAY BE TREATED FOR SUMMER AND FALL INSTALLATION WITH AN APPLICATION OF GRANULAR 0-20-20 OF 12 OZ PER 2.5" CALIPER PER TREE AND 6 OZ PER SHRUB WITH AN ADDITIONAL APPLICATION OF 10-10-10 THE FOLLOWING SPRING IN THE TREE SAUCER.

ALL PLANTING AREAS RECEIVING GROUND COVER, PERENNIALS, ANNUALS, AND/OR VINES SHALL RECEIVE A MINIMUM OF 12" DEPTH OF PLANTING SOIL CONSISTING OF AT LEAST 45 PARTS TOPSOIL, 45 PARTS PEAT OR MANURE AND 10 PARTS SAND.

ALL AREAS RECEIVING SEED OR SOD MUST RECEIVE A MINIMUM OF 12" DEPTH OF TOPSOIL. TOPSOIL TO BE INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE GRADING.

SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED THROUGH SOIL AMENDMENT AND/OR RIPPING TO A DEPTH OF 18". AVOID DISTURBING UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION.

ALL PLANTS TO BE INSTALLED AS PER PLANTING DETAILS.

WRAPPING MATERIAL SHALL BE CORRUGATED PVC PIPING 1" GREATER IN CALIPER THAN THE TREE BEING PROTECTED OR QUALITY, HEAVY, WATERPROOF CREPE PAPER MANUFACTURED FOR THIS PURPOSE. WRAP ALL DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO 12-1 AND REMOVE ALL WRAPPING AFTER 5-1.

BLACK METAL EDGER TO BE USED TO CONTAIN SHRUBS, PERENNIALS, AND ANNUALS WHERE BED MEETS SOD/SEED UNLESS NOTED OTHERWISE.

**IRRIGATION NOTES:**

VERIFY PROPOSED IRRIGATION SYSTEM LAYOUT AND CONFIRM COMPLETE LIMITS OF IRRIGATION PRIOR TO SUPPLYING SHOP DRAWINGS.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN IRRIGATION LAYOUT PLAN AND SPECIFICATION AS A PART OF THE SCOPE OF WORK WHEN BIDDING. THESE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ORDER AND/OR INSTALLATION. IT SHALL BE THE LANDSCAPE CONTRACTORS RESPONSIBILITY TO INSURE THAT ALL SODDED/SEEDED AND PLANTED AREAS ARE IRRIGATED PROPERLY, INCLUDING THOSE AREAS DIRECTLY AROUND AND ABUTTING BUILDING FOUNDATION.

PROVIDE 2 QUICK COUPLER LOCATIONS. COORDINATE WITH THE OWNER ON LOCATIONS.

THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH A WATERING/LAWN IRRIGATION SCHEDULE APPROPRIATE TO THE PROJECT SITE CONDITIONS AND TO PLANT MATERIAL GROWTH REQUIREMENTS.

CONTRACTOR IS NOT TO SPRINKLE ACROSS PAVEMENT.

CONTRACTOR TO INCORPORATE RAIN SENSOR INTO IRRIGATION SYSTEM.

PLANTINGS OUTSIDE THE LIMITS OF IRRIGATION ARE TO BE WATERED REGULARLY UNTIL PLANTING/SOD/SEED HAS BEEN ESTABLISHED.

ALL SHRUB BED MASSINGS TO RECEIVE 3" DEEP SHREDDED HARDWOOD MULCH AND FIBER MAT WEED BARRIER.

ALL TREES NOT IN PLANTING BEDS TO RECEIVE A 4' DIA. TREE RING WITH 4" DEEP SHREDDED HARDWOOD MULCH. NO MULCH IN DIRECT CONTACT WITH TREE TRUNK.

WOOD MULCH TO BE SYLVA ACORN COLORED DOUBLE SHREDDED HARDWOOD MULCH.

ALL ANNUAL AND PERENNIAL PLANTING BEDS TO RECEIVE 3" DEEP SHREDDED HARDWOOD MULCH WITH NO WEED BARRIER.

SPREAD GRANULAR PRE EMERGENT HERBICIDE (PREEN OR EQUAL) PER MANUFACTURERS RECOMMENDATIONS UNDER ALL MULCHED AREAS.

MAINTENANCE STRIPS TO HAVE EDGER AND MULCH AS SPECIFIED/INDICATED ON DRAWING OR IN SPECIFICATION.

IF THE LANDSCAPE CONTRACTOR IS CONCERNED OR PERCEIVES ANY DEFICIENCIES IN THE PLANT SELECTIONS, SOIL CONDITIONS OR ANY OTHER SITE CONDITION WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR GUARANTEE, HE MUST BRING THESE DEFICIENCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO PROCUREMENT AND/OR INSTALLATION.

CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR THE OWNER ACCEPTANCE INSPECTION OF ALL LANDSCAPE AND SITE IMPROVEMENTS.

CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTENANCE OF ALL NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER ACCEPTANCE. ANY ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PROVIDE THE OWNER WITH A MAINTENANCE PROGRAM INCLUDING, BUT NOT NECESSARILY LIMITED TO, PRUNING, FERTILIZATION AND DISEASE/PEST CONTROL.

CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF OWNER ACCEPTANCE.

WARRANTY (ONE FULL GROWING SEASON) FOR LANDSCAPE MATERIALS SHALL BEGIN ON THE DATE OF ACCEPTANCE BY THE LANDSCAPE ARCHITECT AFTER THE COMPLETION OF PLANTING OF ALL LANDSCAPE MATERIALS. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED.

REPRODUCIBLE AS-BUILT DRAWING(S) OF ALL LANDSCAPE INSTALLATION AND SITE IMPROVEMENTS UPON COMPLETION OF CONSTRUCTION INSTALLATION AND PRIOR TO PROJECT ACCEPTANCE.

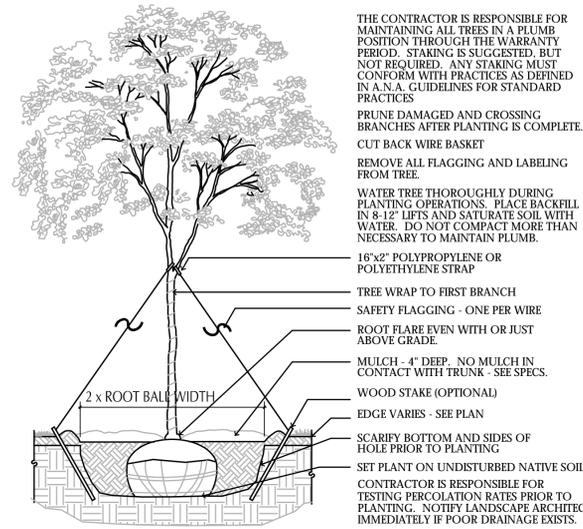
UNLESS NOTED OTHERWISE THE APPROPRIATE DATES FOR SPRING PLANT MATERIAL INSTALLATION AND SEED/SOD PLACEMENT IS FROM THE TIME GROUND HAS THAWED TO JUNE 15.

FALL SODDING IS GENERALLY ACCEPTABLE FROM AUGUST 15 - NOVEMBER 1. FALL SEEDING FROM AUGUST 15 - SEPTEMBER 15; DORMANT SEEDING IN THE FALL SHALL NOT OCCUR PRIOR TO NOVEMBER 1. PLANTING OUTSIDE THESE DATES IS NOT RECOMMENDED. ANY ADJUSTMENT MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

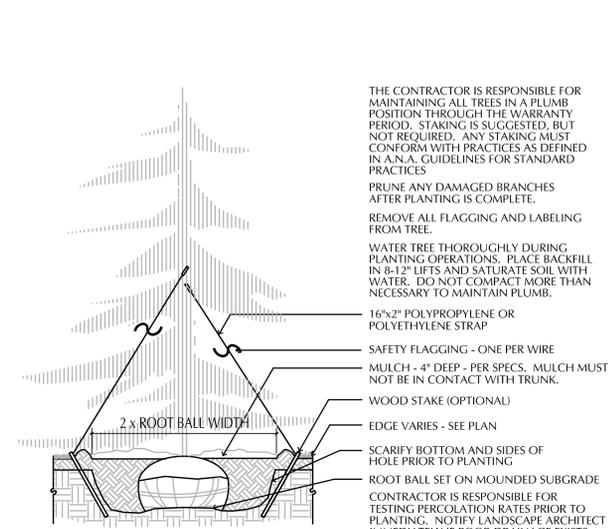
CONIFEROUS PLANTING MAY OCCUR FROM AUGUST 15 - OCTOBER 1 AND FALL DECIDUOUS PLANTING FROM THE FIRST FROST UNTIL NOVEMBER 15. PLANTING OUTSIDE THESE DATES IS NOT RECOMMENDED. ANY ADJUSTMENT MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

PROTECT ALL EXISTING OAKS ON SITE SCHEDULED TO REMAIN. IF EXISTING OAKS ARE DAMAGED IN ANY MANNER, ABOVE OR BELOW GROUND IN THE ROOT SYSTEM, AN ASPHALTIC TREE PRUNING PAINT SHOULD BE APPLIED IMMEDIATELY AFTER WOUNDING. OAKS ARE NOT TO BE PRUNED, REMOVED OR TRANSPLANTED BETWEEN APRIL 15 AND JULY 1. NOTIFY LANDSCAPE ARCHITECT IF THESE DATES ARE UNAVOIDABLE.

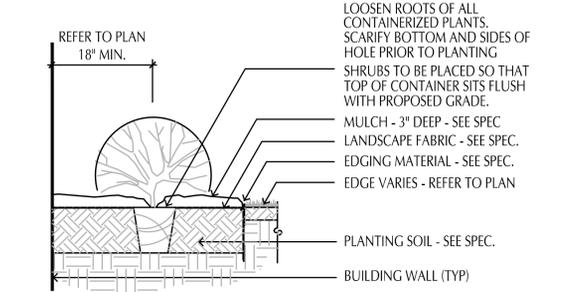
LANDSCAPE CONTRACTOR SHALL ESTABLISH TO HIS SATISFACTION THAT SOIL AND COMPACTION CONDITIONS ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AT AND AROUND THE BUILDING SITE.



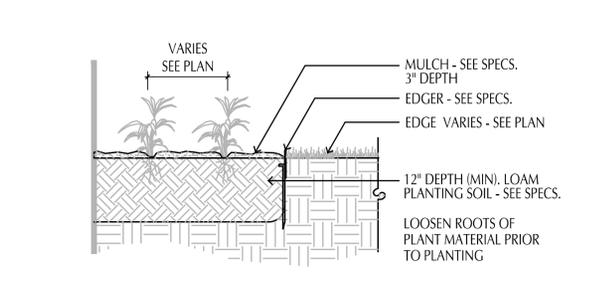
**1** DECIDUOUS TREE PLANTING DETAIL  
SCALE: 1/2" = 1'-0"  
Deciduous Tree.DWG



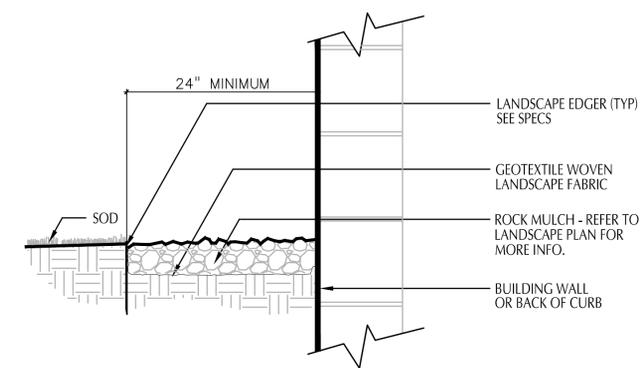
**2** CONIFEROUS TREE PLANTING DETAIL  
SCALE: 1/2" = 1'-0"  
Coniferous Tree.DWG



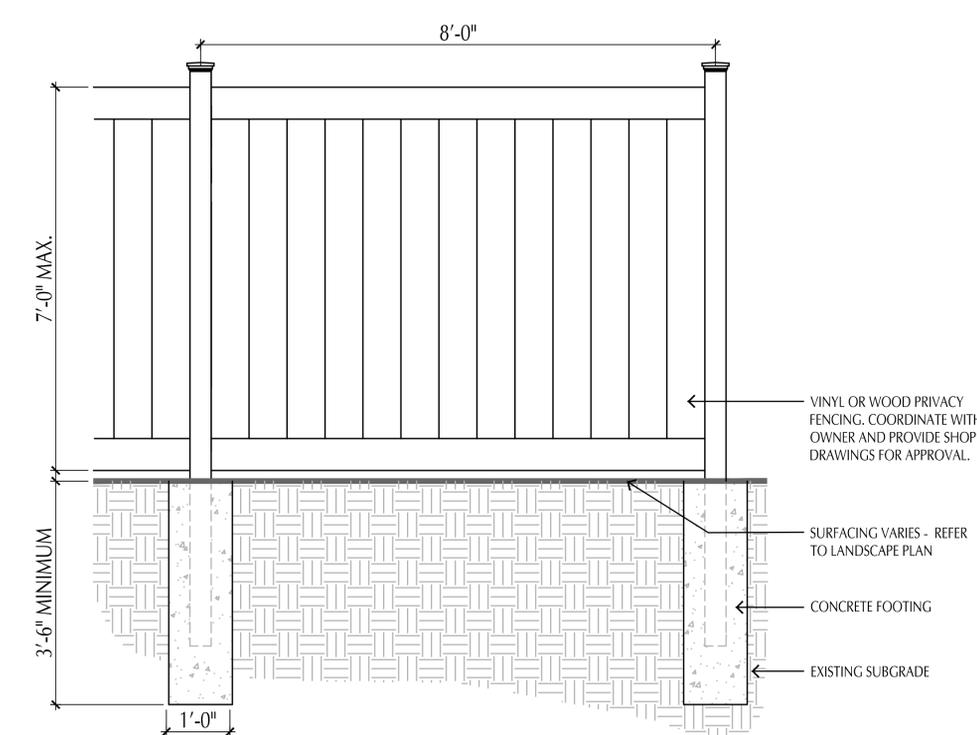
**3** SHRUB PLANTING DETAIL  
SCALE: 3/4" = 1'-0"  
L2-1



**4** PERENNIAL PLANTING  
SCALE: 3/4" = 1'-0"  
Perennial.DWG



**5** MAINTENANCE STRIP AT BUILDING EDGE AND BACK OF CURB  
SCALE: 1 1/2" = 1'-0"  
L2-1



**6** PRIVACY FENCE  
SCALE: 3/4" = 1'-0"  
L2-1

**INVICTUS BREWERY**  
BLAINE, MN

**INVICTUS BREWING, LLC**  
2025 105th AVENUE NE  
BLAINE, MN 55449

**LOUCKS**  
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CIVIL ENGINEERING  
LAND SURVEYING  
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**CADD QUALIFICATION**

CADD files prepared by the Consultant for this project are instruments of the Consultant professional services for use solely with respect to this project. These CADD files shall not be used on other projects, for additions to this project, or for completion of this project by others without written approval by the Consultant. With the Consultant's approval, others may be permitted to obtain copies of the CADD drawing files for information and reference only. All intentional or unintentional revisions, additions, or deletions to these CADD files shall be made at the full risk of that party making such revisions, additions or deletions and that party shall hold harmless and indemnify the Consultant from any & all responsibilities, claims, and liabilities.

**SUBMITTAL/REVISIONS**

03-11-16	CITY SUBMITTAL
03-22-16	PER CITY COMMENTS
03-24-16	PER CITY COMMENTS
04-13-16	INFILTRATION BASIN
12-29-16	PERMIT & BID
03-08-17	CITY COMMENTS

**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the State of Minnesota.

*Nathan W. Elshoff*  
Nathan W. Elshoff - LA

License No. 52050  
Date 12/29/16

**QUALITY CONTROL**

Loucks Project No.	16034
Project Lead	NMM
Drawn By	NWE
Checked By	NWE
Review Date	03/08/17

**SHEET INDEX**

C1-1	EXISTING CONDITIONS
C2-1	SITE PLAN
C2-2	TRAFFIC CONTROL PLAN
C3-1	GRADING & DRAINAGE PLAN
C3-2	SWPPP
C3-3	SWPPP
C4-1	UTILITY PLAN
C8-1	CIVIL DETAIL
C8-2	CIVIL DETAILS
L1-1	LANDSCAPE PLAN
L2-1	LANDSCAPE DETAILS

**LANDSCAPE DETAILS**  
**L2-1**

GENERAL STRUCTURAL NOTES

1. BUILDING CODES USED FOR DESIGN:
  - a. MINNESOTA BUILDING CODE, 2015 EDITION. (IBC 2012)
2. DESIGN CRITERIA:
  - a. WIND LOAD CRITERIA:
    - BASIC WIND SPEED (ULTIMATE)  $V = 115$  MPH
    - WIND LOAD EXPOSURE  $C$
    - WIND TOPOGRAPHIC FACTOR  $Kzt = 1.0$
    - INTERNAL PRESSURE COEFFICIENT  $Gcpi = 0.18$  (ENCLOSED)
  - b. SNOW LOAD CRITERIA:
    - GROUND SNOW LOAD  $Pg = 50$  PSF
    - SNOW IMPORTANCE FACTOR  $Is = 1.0$
    - SNOW EXPOSURE FACTOR  $Ce = 1.0$
    - SLOPED ROOFLAT ROOF FACTOR  $Cs = 1.0$
    - ROOF THERMAL LOAD  $Ct = 1.0$
    - ROOF SNOW LOAD  $Fs = Pg(0.7)(Is)(Ce)(Cs)(Ct) = 35$  PSF
    - SOLAR PANEL DEAD LOAD:  $5$  PSF APPLIED OVER ENTIRE ROOF
3. DESIGN STRESSES:
  - a. CONCRETE:

MEMBER TYPE/ LOCATION	MINIMUM STRENGTH @ 28 DAYS	EXPOSURE CLASSES	MAX W/C RATIO	AIR CONTENT (SEE NOTE 1)
EXTERIOR PIERS AND FOOTINGS (SEE NOTE 2)	4500	F1, S0, P0, C1	0.45	PER ACI 318-11 TABLE 4.4.1
INTERIOR PIERS AND FOOTINGS	3000	F0, S0, P0, C1	0.45	N/A
EXTERIOR SLABS AND STOOP SLABS	5000	F3, S0, P0, C2	0.40	PER ACI 318-11 TABLE 4.4.1
INTERIOR SLABS	4000	F0, S0, P0, C1	0.45	N/A

- TABLE NOTES:**
1. AIR CONTENT TOLERANCE SHALL BE +/- 1.5%.
  2. INCLUDES PERIMETER PIERS AND FOOTINGS
- b. NON-SHRINK GROUT  $f_c = 10,000$  PSI (@28 DAYS)
  - c. REINFORCEMENT  $F_y = 60,000$  PSI ASTM A615 (DEFORMED BARS)
  - d. STRUCTURAL STEEL
    - i. WIDE FLANGE SHAPES  $F_y = 50$  KSI ASTM A992
    - ii. ALL OTHER SHAPES  $F_y = 36$  KSI ASTM A36
  - e. STRUCTURAL TUBING  $F_y = 46$  KSI ASTM A500 GR. B
  - f. STANDARD STEEL PIPE  $F_y = 35$  KSI ASTM A53 GR. B
  - g. PLATES  $F_y = 36$  KSI ASTM A36
  - h. BOLTS  $F_u = 120$  KSI ASTM A325
  - i. ANCHOR BOLTS  $F_y = 36$  KSI ASTM F1554 UNO
  - j. WELD ELECTRODE  $F_u = 70$  KSI
  - k. WELDED WIRE FABRIC ASTM A185
4. CONCRETE COVERAGE FOR REINFORCEMENT:
    - a. FOOTINGS 3" FROM BOTTOM
    - b. PEDESTALS 2" TO TIES
    - c. FOUNDATION WALLS 2" EXTERIOR FACE, 1" INTERIOR FACE
    - d. EXPOSED EXT. CONCRETE 2"
    - e. SLAB ON GRADE 1" FROM TOP
  5. FOUNDATIONS:
    - a. ALL FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL OR ON COMPACTED GRANULAR FILL. ALL FOOTINGS ARE DESIGNED USING AN ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF. (SEE SOILS REPORT #16-0199 BY HAUGO GEOTECHNICAL SERVICES). THE SOILS ENGINEER SHALL CONFIRM THESE BEARING VALUES AT THE TIME OF EXCAVATION.
    - b. GRANULAR FILL SHALL BE COMPACTED TO 98% STANDARD DENSITY (ASTM D698).
    - c. IF SOIL AT BOTTOM OF FOOTINGS AS DETAILED IS OF QUESTIONABLE BEARING VALUE, THE ARCHITECTS' OFFICE SHALL BE NOTIFIED AT ONCE.
    - d. WALL FOOTING ELEVATION CHANGES SHALL BE STEPPED AT A RATIO OF 1 (VERTICAL) TO 2 (HORIZONTAL). MAXIMUM VERTICAL STEP SHALL BE 1'-4" UNLESS OTHERWISE NOTED.
    - e. ALL EXTERIOR WALL FOOTINGS ADJACENT TO HEATED STRUCTURES SHALL HAVE A MINIMUM SOIL COVER OF 3'-6" AND FOOTINGS AT UNHEATED STRUCTURES SHALL HAVE A MINIMUM SOIL COVER OF 5'-0". SOIL COVER IS MEASURED FROM BOTTOM OF FOOTING UNLESS OTHERWISE NOTED.
    - f. SEE SOILS REPORT FOR ANTICIPATED SETTLEMENT VALUES. THE OWNER SHOULD VERIFY THAT THIS SETTLEMENT CRITERIA WILL NOT BE DETRIMENTAL TO THE BUILDING OR ITS OPERATION.
    - g. PROVIDE A 6" SAND CUSHION AND POLY VAPOR BARRIER BENEATH ALL SLABS ON GRADE. COMPACT SAND WITH MECHANICAL EQUIPMENT TO +0" TO -3/4" OF CORRECT ELEVATIONS. THE VAPOR BARRIER SHALL BE PLACED DIRECTLY BENEATH THE SLAB. THE SLAB SHALL BE MOIST CURED TO PREVENT CURLING.
    - h. BASE FILL (SAND CUSHION) FOR SLABS ON GRADE SHALL BE REASONABLY WELL GRADED SAND (SW OR SP) CLEAN AND FREE OF ORGANIC MATERIAL WITH NOT MORE THAN 5% BY WEIGHT, PASSING A NO. 200 SIEVE AND LESS THAN 40% BY WEIGHT, PASSING THE #40 SIEVE. COARSE AGGREGATE SHALL NOT EXCEED 3/4".

6. BREWERY SLAB REQUIREMENTS (WHERE 8" SLAB IS REQUIRED):
  - a. THE SUBGRADE SHOULD BE PROOF ROLLED PRIOR TO SLAB PLACEMENT SO THAT ANY SOFT AREAS CAN BE CORRECTED. THE PROPER PERFORMANCE OF THE SLABS IS ABSOLUTELY DEPENDENT ON UNIFORMITY OF THE SUBGRADE.
  - b. A 4" MINIMUM THICKNESS GRANULAR SUB-BASE SHOULD BE PLACED DIRECTLY BENEATH THE SLAB AND COMPACTED TO 98% STANDARD PROCTOR.
  - c. PRIOR TO CONSTRUCTION, A MIX DESIGN PREPARED BY A LICENSED ENGINEER SHALL BE SUBMITTED FOR REVIEW.
  - d. IF HARD WHEELED LIFT TRUCKS OR PALLET JACKS ARE TO BE USED, THE CONCRETE SHOULD BE FINISHED USING A SURFACE HARDENER. SUBMIT HARDENER SPECIFICATIONS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. ALSO (FOR HARD WHEEL CONDITIONS), SAW-CUT JOINTS SHALL BE FILLED WITH AN APPROVED FILLER CONSISTING OF 100% SOLIDS AND A MINIMUM SHORE D OF 80 (MEASURED ACCORDING TO ASTM D 2240).
  - e. THE SLAB SHALL NOT BE SUBJECT TO DESIGN LOADS PRIOR TO ACHIEVING ITS 28 DAY STRENGTH.
  - f. PERFORM SAW-CUTTING OF JOINTS WITHIN 4 TO 12 HOURS OF HARDENING - AS SOON AS SURFACE IS HARD ENOUGH SO THAT IT WILL NOT BE DAMAGED BY THE SAW BLADE.

7. REINFORCING STEEL:
  - a. THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS SHOWN OTHERWISE ON THE PLANS AND/OR DETAILS.
  - b. CONCRETE REINFORCEMENT SHALL BE PLACED ACCORDING TO THE CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS".
  - c. COMPRESSION AND TENSION LAP SPLICES FOR CAST-IN-PLACE CONCRETE SHALL BE 38 BAR DIAMETER MINIMUM UNLESS OTHERWISE NOTED.
  - d. HORIZONTAL REINFORCING STEEL IN FOOTINGS AND CONCRETE WALLS SHALL BE CONTINUOUS AROUND CORNERS.
  - e. ALL LAPS IN WWF SHOULD BE ONE MESH PLUS TWO INCHES AT SPLICES.
  - f. REINFORCING BARS MAY NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. ONLY ASTM A706 REINFORCEMENT MAY BE WELDED.

8. CONCRETE:
  - a. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301.
  - b. COMPLY WITH ACI 304 FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
  - c. COMPLY WITH ACI 305 FOR HOT WEATHER CONCRETING.
  - d. COMPLY WITH ACI 306 FOR COLD WEATHER CONCRETING.

9. DIMENSION LUMBER (FOR PERGOLA AND ENTRANCE CANOPY ONLY)
  - a. DIMENSION LUMBER TO BE NORTHERN SPF NO. 2 (OR BETTER) FOR JOISTS & BEAMS AND NORTHERN SPF STUD GRADE (OR BETTER) FOR STUDS AND PLATES.
  - b. ALL MEMBER SIZES GIVEN ON PLAN ARE NOMINAL DIMENSIONS.
  - c. ALL NAILING SHALL CONFORM TO IBC TABLE 2304.9.1 "FASTENING SCHEDULE" UNLESS OTHERWISE NOTED ON PLANS.
  - d. ALL WOOD CONNECTORS SHALL BE BY "USP LUMBER CONNECTORS" OR "SIMPSON STRONG-TIE". ALL JOISTS AND BEAMS NOT BEARING ON A SUPPORTING MEMBER SHALL BE FRAMED WITH AN APPROPRIATE WOOD CONNECTOR.
  - e. WOOD JOISTS SHALL BEAR ON THE FULL WIDTH OF SUPPORTING MEMBERS (STUD WALLS, BEAMS, ETC.), UNLESS NOTED OTHERWISE.
  - f. ALL FOUNDATION PLATES, SILLS AND SLEEPERS ON CONCRETE SLAB, WHICH IS IN DIRECT CONTACT WITH EARTH, AND SILLS WHICH REST ON CONCRETE OR MASONRY FOUNDATION WALLS, SHALL BE TREATED WOOD.
  - g. FOR ALL WOOD TREATED WITH PRESERVATIVES OTHER THAN CCA, CONNECTORS AND FASTENERS MUST BE COATED WITH ONE OF THE FOLLOWING:
    - i. BATCHPOST HOT DIPPED GALVANIZED PER ASTM A123 FOR CONNECTORS AND ASTM 153 FOR FASTENERS.
    - ii. MECHANICALLY GALVANIZED PER ASTM 695, CLASS 55 OR GREATER.
    - iii. TRIPLE ZINC G185 HDG PER ASTM A653 OR EQUAL.

10. LAMINATED VENEER LUMBER (LVL):
  - a. ALL LVL HEADERS AND BEAMS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
    - i. ALLOWABLE BENDING STRESS,  $F_b = 2600$  PSI
    - ii. ALLOWABLE SHEAR STRESS,  $F_v = 285$  PSI
    - iii. MODULUS OF ELASTICITY,  $E = 1,900,000$  PSI
  - b. LVL MEMBERS SHALL BE ONE OF THE FOLLOWING:
    - i. "MICROLAM" BY TRUS JOIST (WEYERHAUSER)
    - ii. "LP SOLID START" BY LOUISIANA PACIFIC
    - iii. "GP LAM" BY GEORGIA PACIFIC

11. LAMINATED STRAND LUMBER (LSL):
  - a. ALL LSL STUDS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
    - i. ALLOWABLE BENDING STRESS,  $F_b = 1700$  PSI
    - ii. ALLOWABLE COMPRESSION STRESS, PARALLEL TO GRAIN,  $F_{c||} = 1400$  PSI
    - iii. MODULUS OF ELASTICITY,  $E = 1,300,000$  PSI
  - b. LSL MEMBERS SHALL BE FROM ONE OF THE FOLLOWING MANUFACTURERS:
    - i. TRUS JOIST (WEYERHAUSER)
    - ii. LOUISIANA PACIFIC
    - iii. GEORGIA PACIFIC

12. PARALLEL STRAND LUMBER (PSL):
  - a. ALL PSL COLUMNS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
    - i. ALLOWABLE BENDING STRESS,  $F_b = 2400$  PSI
    - ii. ALLOWABLE COMPRESSIVE STRESS,  $F_c(\text{PARALLEL}) = 2500$  PSI
    - iii. MODULUS OF ELASTICITY,  $E = 1,800,000$  PSI
  - b. PSL MEMBERS SHALL BE FROM ONE OF THE FOLLOWING MANUFACTURERS:
    - i. TRUS JOIST (WEYERHAUSER)
    - ii. LOUISIANA PACIFIC
    - iii. GEORGIA PACIFIC

13. ROOF TRUSSES:
  - a. TRUSSES SHALL BE DESIGNED TO MEET ALL LOADING AND SPANS AS INDICATED ON THE PLANS.
  - b. TRUSSES AT ENTRANCE CANOPY SHALL BE DESIGNED FOR SNOW DRIFT LOADS AS REQUIRED BY THE CODE.
  - c. TRUSSES SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT. PE-CERTIFIED SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
  - d. ALL PERMANENT BRACING FOR INDIVIDUAL TRUSS COMPRESSION ELEMENTS SHALL BE PROVIDED AS INDICATED ON THE TRUSS SHOP DRAWINGS. THE DESIGN OF THIS BRACING IS THE RESPONSIBILITY OF THE TRUSS SUPPLIER.
  - e. THE CONTRACTOR SHALL INSTALL ALL NECESSARY TEMPORARY BRACING AS REQUIRED BY BCSI 1-03 (BY WTCA AND TPI) AND BE FULLY RESPONSIBLE FOR THE STABILITY OF THE TRUSSES DURING ERECTION.
  - f. CONNECTOR PLATES SHALL BE MADE OF GRADE 'A' GALVANIZED STEEL, MINIMUM 20 GAUGE PER LATEST TPI SPECIFICATIONS.
  - g. ALL CONNECTION HARDWARE SHALL BE DESIGNED AND FURNISHED BY THE TRUSS SUPPLIER.
  - h. ROOF TRUSSES SHALL BE DESIGNED FOR UNBALANCED SNOW LOADS IN ACCORDANCE WITH CODE REQUIREMENTS.

14. STRUCTURAL STEEL:
  - a. FABRICATION & ERECTION OF STRUCTURAL STEEL MEMBERS ARE TO BE IN ACCORDANCE WITH A.I.S.C. CODE OF STANDARD PRACTICE.
  - b. ALL WELDING SHALL BE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE STANDARDS OF THE AMERICAN WELDING SOCIETY, D1.1-STRUCTURAL WELDING CODE - STEEL. WELDING OF GALVANIZED PARTS IS NOT PERMITTED.
  - c. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL CONFORM TO MATCHING FILLER METAL REQUIREMENTS OF AWS D1.1.
  - d. FIELD CONNECTIONS ARE TO BE BOLTED. USE 3/4" DIAM. HIGH STRENGTH BOLTS AND NUTS (A325) UNLESS SHOWN OTHERWISE ON PLANS.
  - e. ALL INTERIOR STRUCTURAL STEEL AND MISCELLANEOUS METALS SHALL BE PRIME PAINTED WITH ONE COAT OF TNESEC #99 PRIMER OR EQUAL. TOUCH UP ALL DISTURBED AREAS AFTER ERECTION.
  - f. CUTS, HOLES (OPENINGS), ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN PERMISSION FROM THE ENGINEER.
  - g. GROUT UNDER BEAM BEARING PLATES AND COLUMN BASE PLATES SHALL BE "NON-SHRINK" AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 10,000 PSI.

15. BACKFILLING:
  - a. BOTH SIDES OF FOUNDATION WALLS SHALL BE BACKFILLED SIMULTANEOUSLY SO AS TO PREVENT OVERTURNING OR LATERAL MOVEMENT OF WALLS.

16. CONSTRUCTION AND CONTROL JOINTS IN CONCRETE:
  - a. CONSTRUCTION JOINTS SHALL BE MADE AS DETAILED ON THE DRAWINGS.
  - b. MAXIMUM SPACING FOR CONTROL JOINTS IN SLABS ON GRADE SHALL BE 15'-0".
  - c. A 15'-0" MAXIMUM SPACING OF CONTROL JOINTS MAY NOT ENSURE COMPLETE CONTROL OF SHRINKAGE CRACKS. A CLOSER SPACING MAY BE USED BY REQUEST OF OWNER IF MORE COMPLETE SHRINKAGE CRACK CONTROL IS DESIRED. CONTRACTOR TO VERIFY WITH OWNER.
  - d. CONSTRUCTION JOINTS IN CONCRETE FOUNDATION WALLS SHALL BE LOCATED SO NO SINGLE POUR IS LONGER THAN 40 FEET.

17. CONSTRUCTION PROCEDURE:
  - a. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN PLACE" LOADS.
  - b. COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL LAWS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.
  - c. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED, THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC.
  - d. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. OBSERVATION VISITS TO THE SITE BY ENGINEER'S FIELD REPRESENTATIVE SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
  - e. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. AS A PART OF THIS RESPONSIBILITY, RETAIN THE SERVICES OF A LICENSED STRUCTURAL ENGINEER TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKMEN, AND ALL SHORING OF FORMS AND ELEMENTS OF THE CONSTRUCTION.

18. MISCELLANEOUS:
  - a. PLACEMENT OF ANCHOR BOLT, PIPE SLEEVES, PADS AND OPENINGS FOR EQUIPMENT SHALL BE COORDINATED BETWEEN THE GENERAL CONTRACTOR AND THE OTHER SUBCONTRACTORS.
  - b. ALL CORE DRILLING SHALL BE DONE UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR. NO REINFORCING SHALL BE CUT. VERIFY LOCATION OF REINFORCING BEFORE CORE DRILLING. THERE SHALL NOT BE ANY CORE DRILLING THROUGH BEAMS OR COLUMNS. MAXIMUM CORE HOLE THROUGH SLABS SHALL BE PIPE DIAMETER PLUS 1".

19. COORDINATION WITH ARCHITECTURAL DRAWINGS:
  - a. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION.

20. SHOP DRAWINGS:
  - a. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
  - b. SHOP DRAWINGS SHALL BE STAMPED AND PREPARED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT, AND INCLUDE COMPLETE DETAILS, SCHEDULES, PROCEDURES AND DIAGRAMS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL MEMBERS.
  - c. FABRICATORS SHALL DRAW THEIR OWN ERECTION PLANS. COPYING THE STRUCTURAL PLANS AND USING THEM AS ERECTION DRAWINGS IS NOT ACCEPTABLE.
  - d. PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE CONTRACTOR SHALL STAMP AND SIGN THE DRAWINGS AS EVIDENCE THAT HE HAS REVIEWED THEM.
  - e. SHOP DRAWINGS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS.
  - f. TURN AROUND TIME FOR SHOP DRAWINGS SHALL BE TWO WEEKS FROM DATE RECEIVED IN THE ENGINEER'S OFFICE.

21. STRUCTURAL INSULATED PANELS:
  - a. A PROFESSIONAL ENGINEER SHALL PERFORM A STRUCTURAL ANALYSIS AND DESIGN OF THE SIP ASSEMBLIES AND CONNECTIONS IN ACCORDANCE WITH THE DESIGN LOADS REQUIRED BY THE LOCAL BUILDING CODE.
  - b. SHOP DRAWINGS AND CALCULATIONS, STAMPED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT, SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
  - c. SIP MANUFACTURER SHALL BE A MEMBER OF THE STRUCTURAL INSULATED PANEL ASSOCIATION.
  - d. ANCHOR BOLT DIAMETERS AND LOCATIONS SHALL BE DETERMINED BY THE SIP SUPPLIER.
  - e. FOUNDATION CONSTRUCTION SHALL NOT PROCEED UNTIL MANUFACTURER'S FINAL BUILDING REACTIONS, AND ANCHOR BOLT GEOMETRY HAVE BEEN REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD.
  - f. PANELS SHALL BE DESIGNED FOR THE DEFLECTION LIMITS PER THE REQUIREMENTS OF THE WALL COVERINGS.

22. SPECIAL INSPECTIONS:
  - a. SPECIAL INSPECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH IBC CHAPTER 17. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER, SHALL BE THOROUGHLY KNOWLEDGEABLE OF IBC SPECIAL INSPECTION REQUIREMENTS AND SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL (IBC 1704). THE CONTRACTOR SHALL CONTACT THE SPECIAL INSPECTOR DURING APPROPRIATE PHASES OF CONSTRUCTION SO THAT INSPECTIONS CAN BE MADE IN A TIMELY MANNER. THE SPECIAL INSPECTOR SHALL SUBMIT WRITTEN INSPECTION REPORTS TO THE ENGINEER OF RECORD'S OFFICE, WITHIN 3 WORKING DAYS OF EACH INSPECTION. ANY PROBLEMS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR. THE FOLLOWING ITEMS WILL REQUIRE SPECIAL INSPECTION:
    - i. STEEL
      - ii. SPECIAL INSPECTIONS MAY NOT BE REQUIRED FOR WORK DONE IN AN APPROVED FABRICATING SHOP. THE STEEL FABRICATOR MUST BE REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM THE WORK WITHOUT SPECIAL INSPECTIONS. SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 380 (IBC 1705.2.1).
      - iii. HIGH STRENGTH BOLTING: CONTINUOUS INSPECTIONS ARE REQUIRED FOR SLIP-CRITICAL CONNECTIONS. PERIODIC INSPECTIONS ARE REQUIRED FOR BEARING-TYPE CONNECTIONS.
      - iv. FIELD WELDING: CONTINUOUS INSPECTIONS ARE REQUIRED FOR COMPLETE AND PARTIAL PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16". PERIODIC INSPECTIONS ARE REQUIRED FOR FLOOR AND ROOF DECK WELDS AND SINGLE-PASS FILLET WELDS SMALLER THAN OR EQUAL TO 5/16". CORRECT WELD FILLER MATERIAL SHALL BE VERIFIED IN ALL CASES.
      - v. STEEL ERECTION: PERIODIC INSPECTIONS SHALL BE MADE TO VERIFY COMPLIANCE WITH THE DESIGN DRAWINGS.
      - vi. MATERIALS: THE STEEL MANUFACTURERS CERTIFIED MILL TEST REPORTS SHALL BE SUBMITTED TO THE SPECIAL INSPECTOR OR TO THE ENGINEER OF RECORD.
    - b. CONCRETE:
      - i. REINFORCEMENT: REINFORCING STEEL SHALL BE INSPECTED ON A PERIODIC BASIS. WELDING OF REINFORCEMENT SHALL BE CONTINUOUSLY INSPECTED. ONLY ASTM A706 REINFORCEMENT MAY BE WELDED.
      - ii. ANCHOR BOLTS: ANCHOR BOLTS PLACEMENT SHALL BE PERIODICALLY INSPECTED.
      - iii. SAMPLING AND TESTING: CONTINUOUS INSPECTIONS SHALL BE PROVIDED DURING SLUMP TESTS, AIR CONTENT TESTS AND WHEN DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.
      - iv. CONCRETE PLACEMENT: PERIODIC INSPECTION REQUIRED.
      - v. COLD AND HOT WEATHER CONCRETING: PERIODIC INSPECTION OF COMPLIANCE IS REQUIRED, IF APPLICABLE.
    - c. SOILS:
      - i. THE SPECIAL INSPECTOR SHALL DETERMINE COMPLIANCE WITH THE SOILS REPORT FOR SITE PREPARATION, FILL PLACEMENT AND DENSITY TESTS.

23. TESTING REQUIREMENTS:
  - a. CONCRETE:
    - i. SAMPLE FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS. A MINIMUM OF FIVE STRENGTH TESTS SHOULD BE MADE FOR A GIVEN PROJECT.

CONSULTANT:



CLIENT:



INVICTUS BREWING COMPANY  
11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:

INVICTUS BREWING COMPANY  
2025 105TH AVENUE  
BLAINE, MN 55449

SEAL:

Registration Information:  
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer, under the laws of the State of Minnesota.

Signature:   
Name: JOSHUA HERZOG  
Date: 07/27/17 Reg. No.: 42392

PROJECT NO.: 161992  
DRAWN BY: CL  
CHECKED BY: JH

ISSUE: DATE:  
FINAL DESIGN: 11-11-16  
CONTRACTOR REVISIONS: 12-20-16

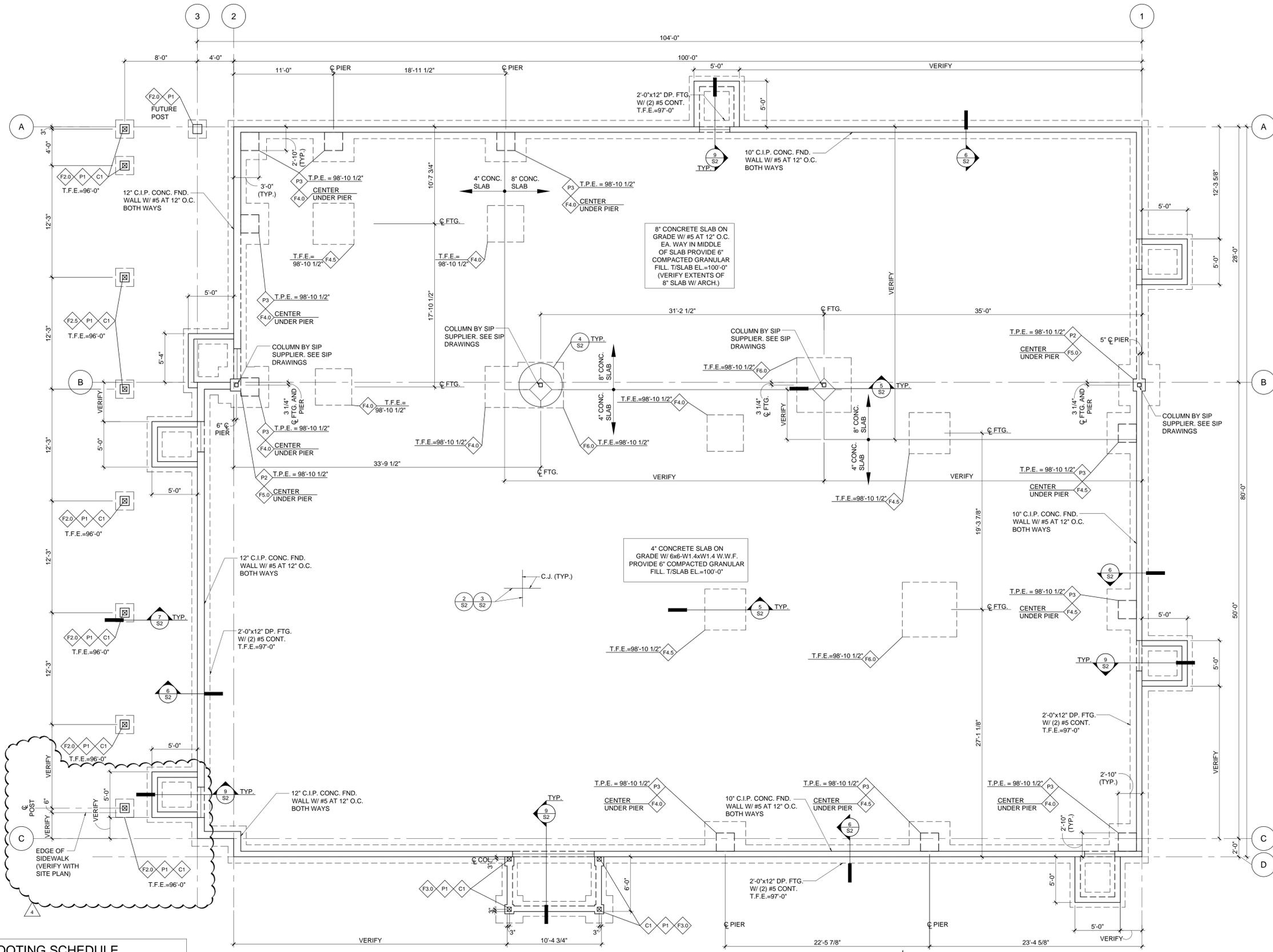
REVISION: DATE:  
PER CITY COMMENTS: 07-27-17

PROJECT LOCATION:

BLAINE, MN

SHEET NUMBER / TITLE:

SO  
GENERAL STRUCTURAL NOTES



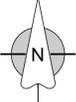
1 FOUNDATION PLAN  
SCALE: 3/16" = 1'-0"

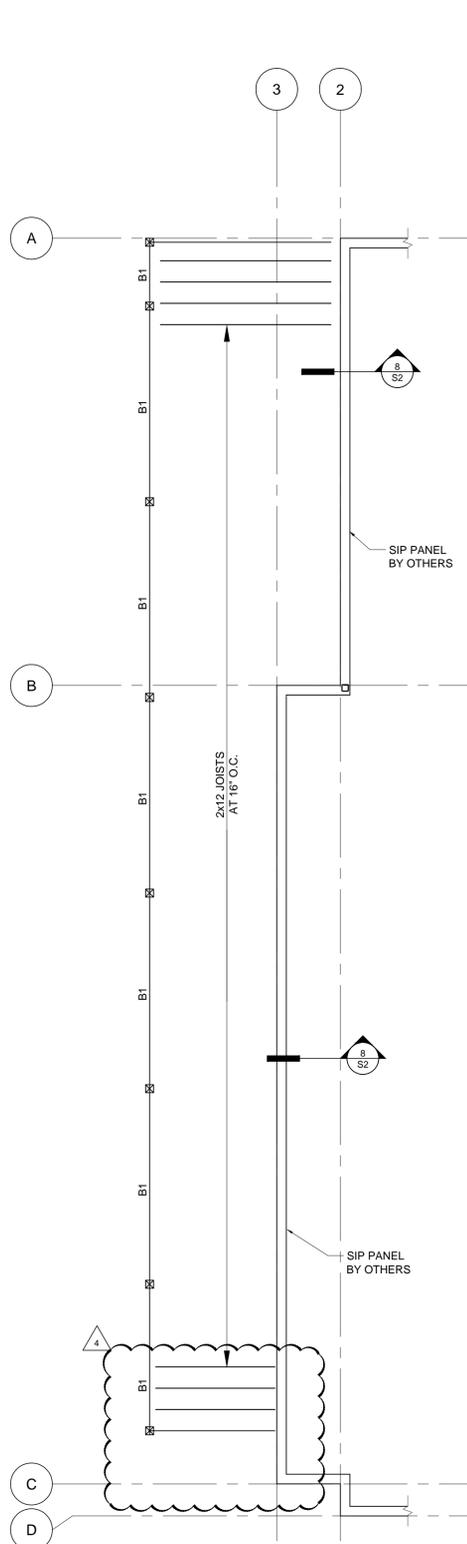
FOOTING SCHEDULE		
MARK	DESCRIPTION	REMARKS
F2.0	2'-0"x2'-0"x1'-0" W/ (2) #5 BARS E.W. BOTTOM	-
F2.5	2'-6"x2'-6"x1'-0" W/ (3) #5 BARS E.W. BOTTOM	-
F4.0	4'-0"x4'-0"x1'-0" DP. W/ (4) #5 BARS E.W. BOTTOM	-
F4.5	4'-6"x4'-6"x1'-0" DP. W/ (4) #5 BARS E.W. BOTTOM	-
F5.0	5'-0"x5'-0"x1'-0" DP. W/ (5) #5 BARS E.W. BOTTOM	-
F6.0	6'-0"x6'-0"x1'-2" DP. W/ (7) #5 BARS E.W. BOTTOM	-

COLUMN SCHEDULE		
MARK	DESCRIPTION	BASEPLATE
C1	6x6 WOOD POST (FUTURE)	SIMPSON CB66

PIER SCHEDULE		
MARK	DESCRIPTION	REMARKS
P1	12"x12" POURED CONC W/ (4) #5 VERT. AND #3 TIES AT 10" O.C.	-
P2	16"x16" POURED CONC W/ (4) #6 VERT. AND #3 TIES AT 12" O.C.	-
P3	24"x24" POURED CONC W/ (8) #6 VERT. AND #3 TIES AT 12" O.C.	-

- PLAN NOTES**
- REFER TO SIP BUILDING DRAWINGS AND ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. ANCHOR BOLTS AND EVERYTHING ABOVE TOP OF FOUNDATION IS BY OTHERS.
  - SEE 10/S2 FOR TYP. TRENCH DRAIN DETAIL.
  - PIERS AND FOOTINGS ARE SHOWN FOR FUTURE MEZZANINES BASED UPON ESTIMATED LOADS. IT WILL BE FUTURE MEZZANINE SUPPLIER'S RESPONSIBILITY TO ENSURE FOUNDATION IS ADEQUATE FOR MEZZANINE LOADS.
  - T.P.E. = TOP OF PIER ELEVATION
  - T.F.E. = TOP OF FOOTING ELEVATION
  - DO NOT SCALE DRAWINGS

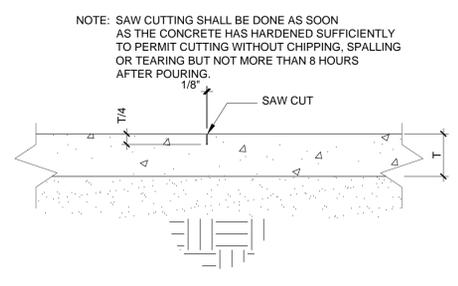




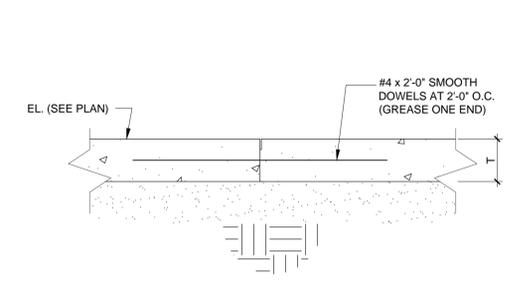
1  
S2  
PERGOLA FRAMING PLAN (FUTURE)  
SCALE: 3/16" = 1'-0"

BEAM SCHEDULE		
MARK	DESCRIPTION	REMARK
B1	5 1/4"x11 7/8" PSL	-

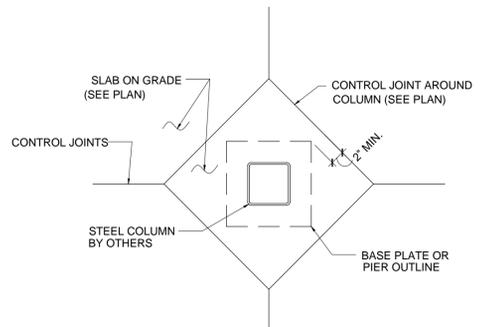
NOTE: ALL EXTERIOR LUMBER SHALL BE PRESSURE TREATED.



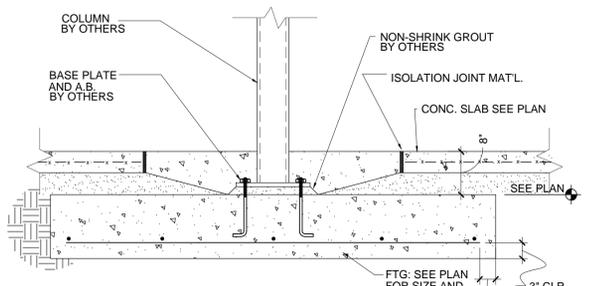
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S2  
TYP. CONTROL JOINT DETAIL  
SCALE: NO SCALE



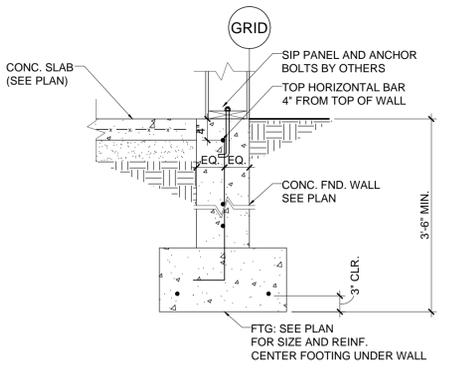
3  
S2  
TYP. CONSTRUCTION JOINT DETAIL  
SCALE: NO SCALE



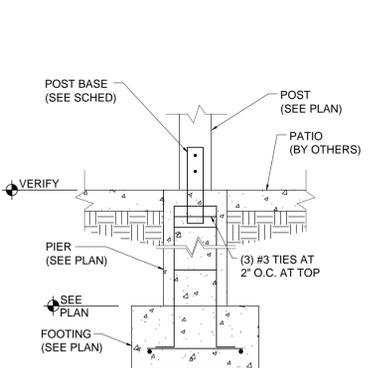
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S2  
TYPICAL ISOLATION JOINT DETAIL  
SCALE: NO SCALE



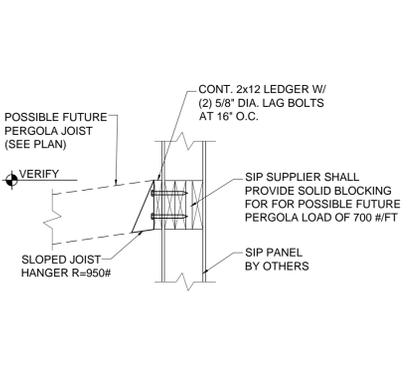
5  
S2  
DETAIL  
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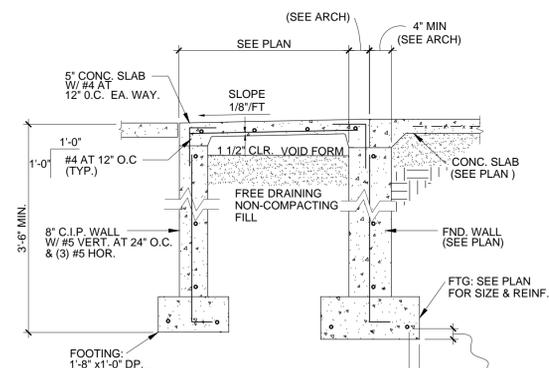
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S2  
DETAIL  
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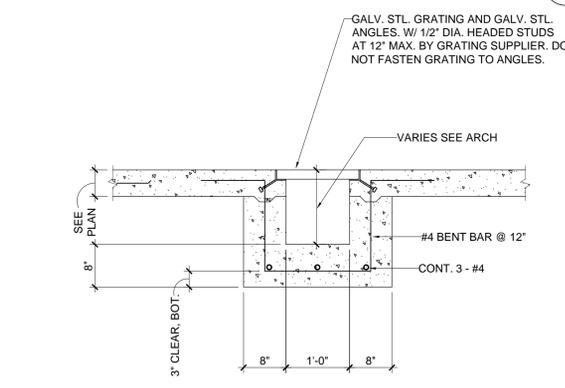
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S2  
CANOPY PIER DETAIL  
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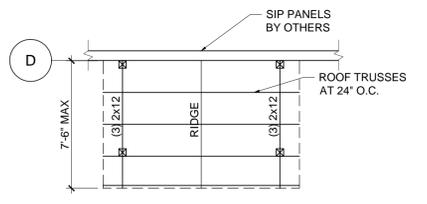
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S2  
PERGOLA CONNECTION DETAIL  
SCALE: NO SCALE



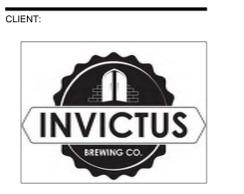
9  
S2  
STOOP DETAIL  
SCALE: NO SCALE



10  
S2  
TYP. TRENCH DRAIN DETAIL  
SCALE: NO SCALE



11  
S2  
FRONT ENTRANCE CANOPY FRAMING  
SCALE: NO SCALE



CLIENT:  
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11981 MIDWAY ST. NE  
BLAINE, MN 55449

PROJECT INFORMATION:  
**INVICTUS BREWING COMPANY**  
2025 105TH AVENUE NE  
BLAINE, MN 55449

SEAL:  
Registration Information:  
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer, under the laws of the State of Minnesota.  
Signature: *[Signature]*  
Name: JOSHUA HERZOG  
Date: 07/27/17 Reg. No.: 42392

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