

# BUNKER LAKE INDUSTRIAL PARK - LOT 3 SITE IMPROVEMENTS

## CIVIL SITE CONSTRUCTION PLANS

### RAMSEY, MINNESOTA

### GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" 2013 EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS SHALL APPLY.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

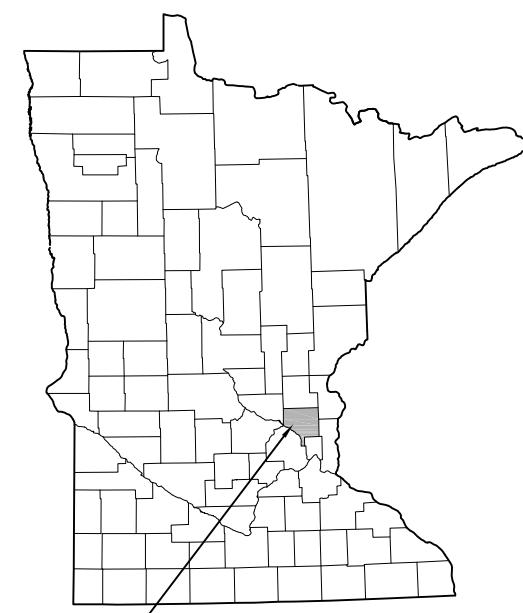
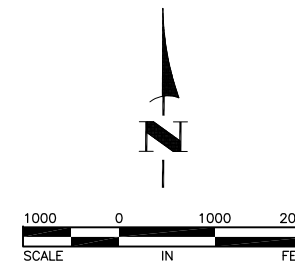
ALL REQUIREMENTS OF THE PROJECT MANUAL.

### SHEET INDEX

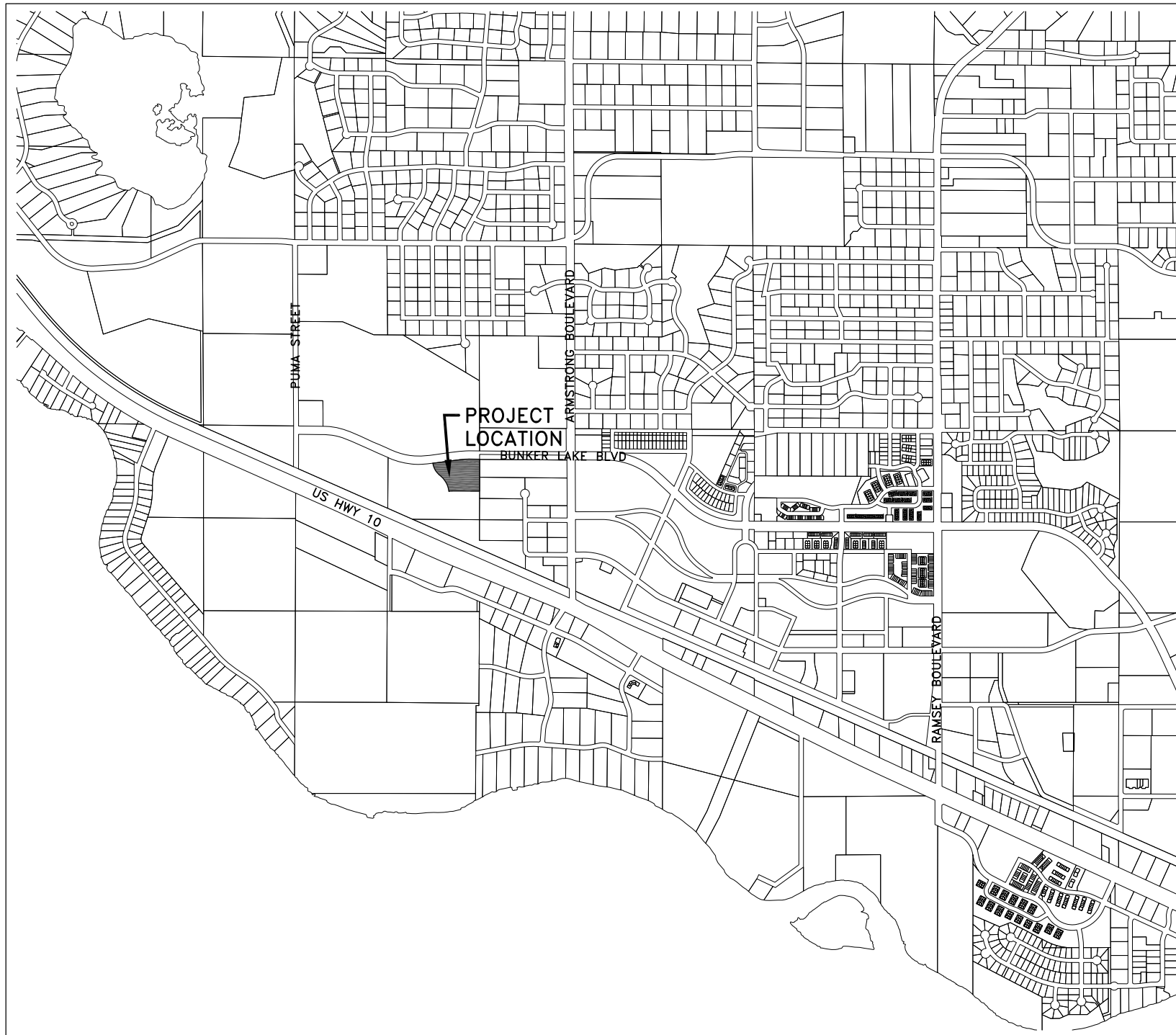
THIS PLAN CONTAINS 8 SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	DETAILS
4	SITE PLAN
5	GRADING, DRAINAGE AND EROSION CONTROL PLAN
6	UTILITY PLAN
7	LANDSCAPE PLAN
8	LANDSCAPE SCHEDULE & DETAILS

OWNER  
PSD, LLC  
CONTACT: MATT KUKER  
7533 SUNWOOD DRIVE, SUITE 315  
RAMSEY, MN 55303



CITY OF RAMSEY,  
ANOKA COUNTY,  
MINNESOTA



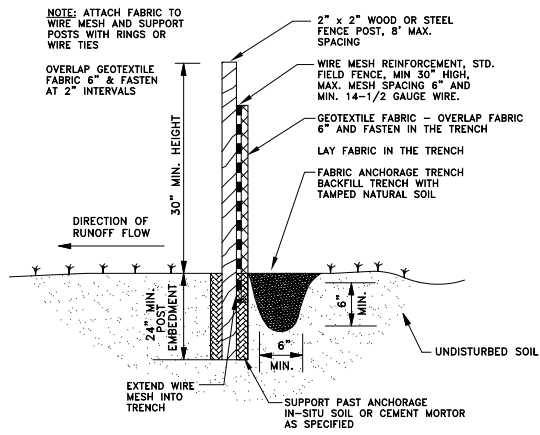
THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

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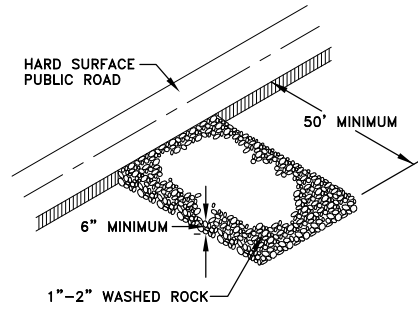
*Shane M. Nelson*  
SHANE M. NELSON, P.E.  
HAKANSON ANDERSON  
DESIGN ENGINEER

43381 LIC. NO. DATE 7/18/18

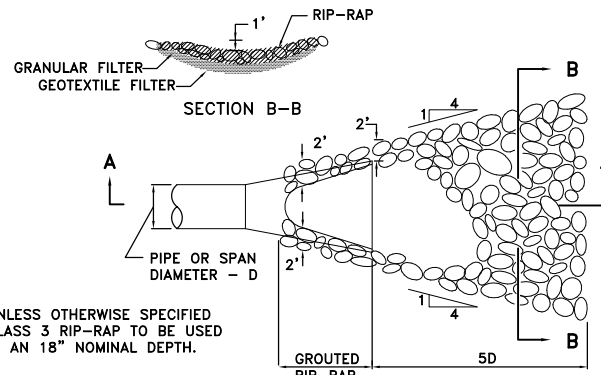
DATE	REVISION



1  
2 **SILT FENCE DETAIL**  
NO SCALE

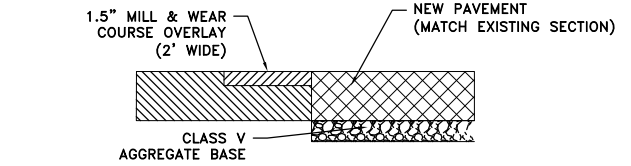


2  
2 **ROCK CONSTRUCTION ENTRANCE**  
NO SCALE

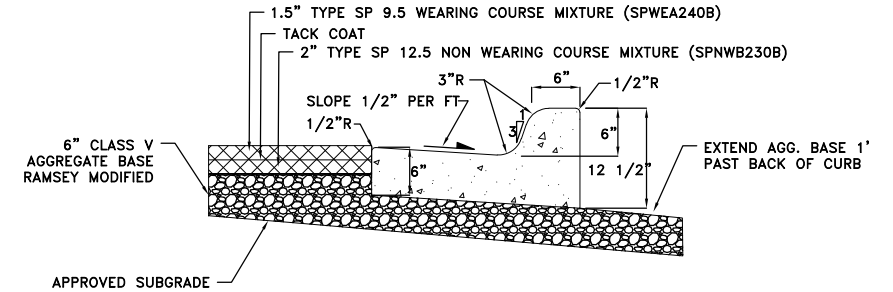


UNLESS OTHERWISE SPECIFIED  
CLASS 3 RIP-RAP TO BE USED  
IN AN 18" NOMINAL DEPTH.

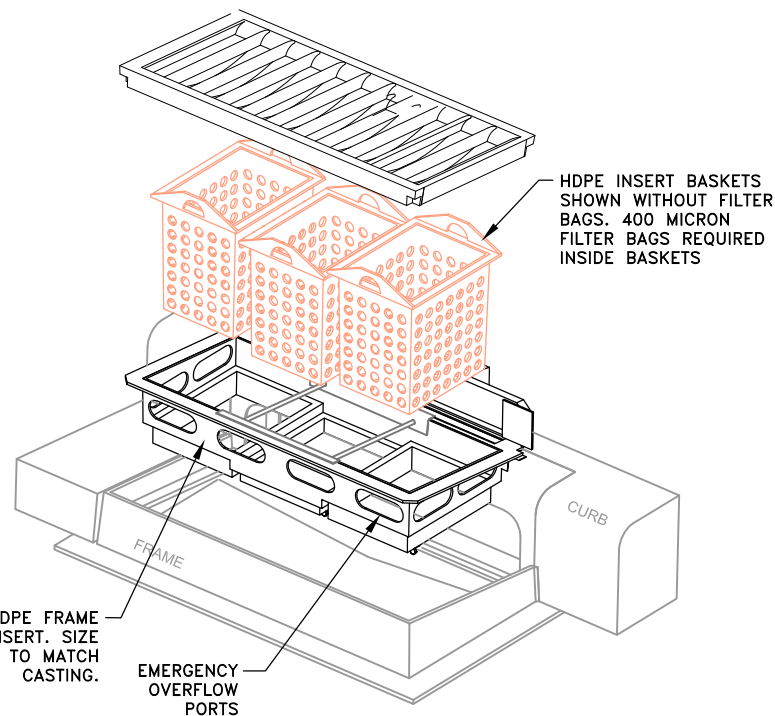
4  
2 **RIP-RAP AT FES OUTLET**  
NO SCALE



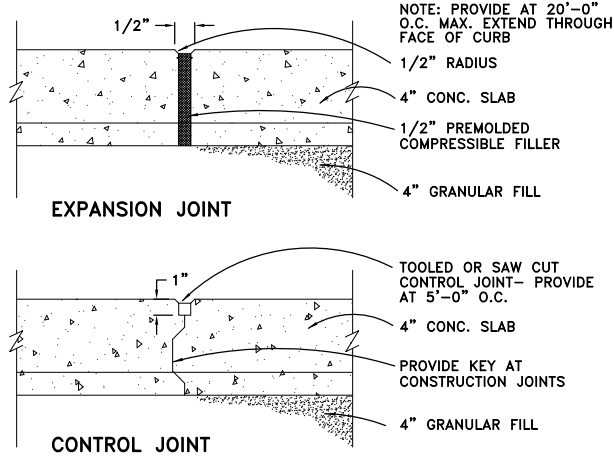
5  
2 **BITUMINOUS PATCH REPAIR SECTION**  
NO SCALE



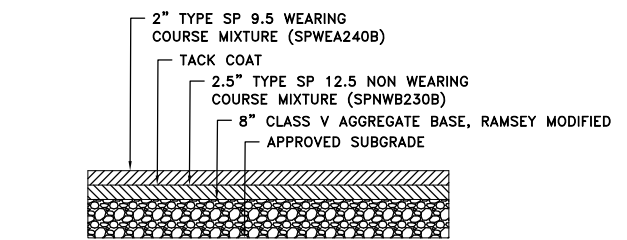
6  
2 **TYPICAL PAVEMENT/CURB SECTION**  
NO SCALE



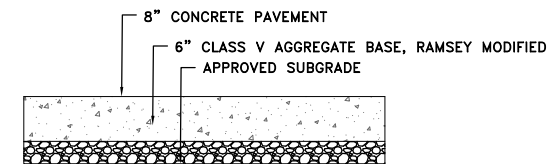
3  
2 **INLET PROTECTION**  
NO SCALE



9  
2 **SIDEWALK DETAILS**  
NO SCALE



7  
2 **HEAVY-DUTY PAVEMENT SECTION**  
NO SCALE



8  
2 **CONCRETE TRAILER SUPPORT PAD**  
NO SCALE

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*Shane M. Nelson*  
SHANE M. NELSON, P.E.  
Date 7/18/18 Lic. No. 43381

DESIGNED BY:  
AMT  
DRAWN BY:  
AMT  
CHECKED BY:  
SMN

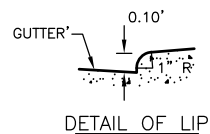
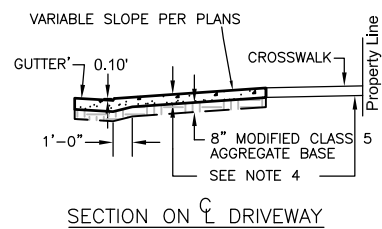
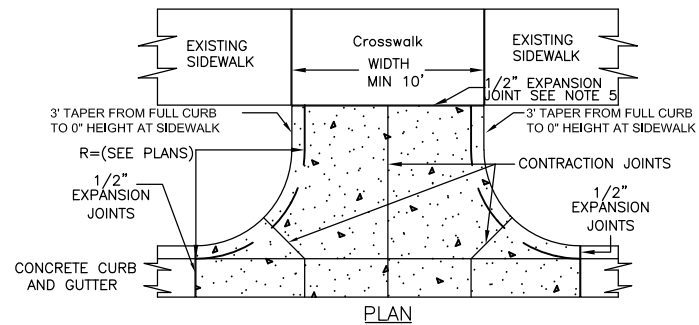


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**BUNKER LAKE INDUSTRIAL PARK  
- LOT 3 SITE IMPROVEMENTS**

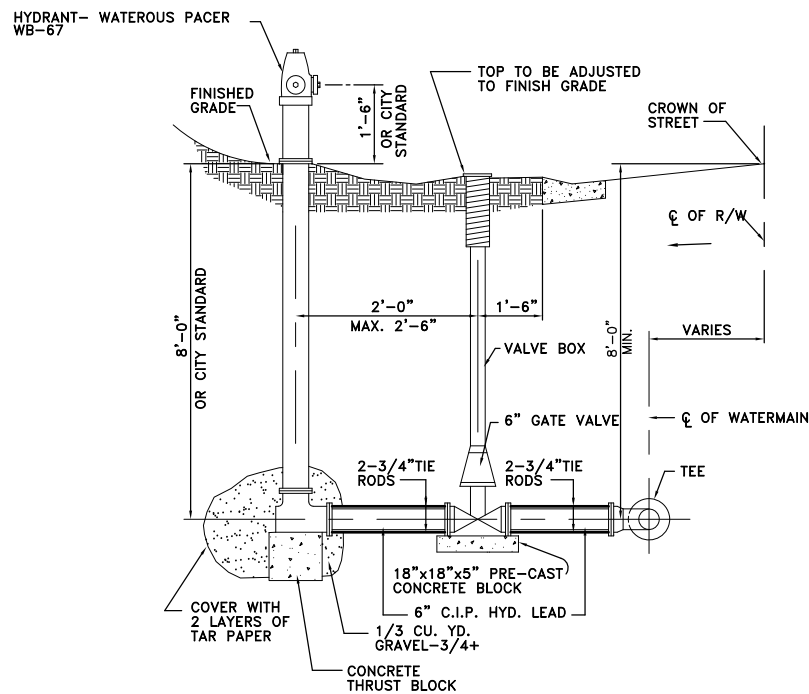
**DETAILS**  
**RAMSEY, MINNESOTA**

SHEET 2  
OF 8  
SHEETS



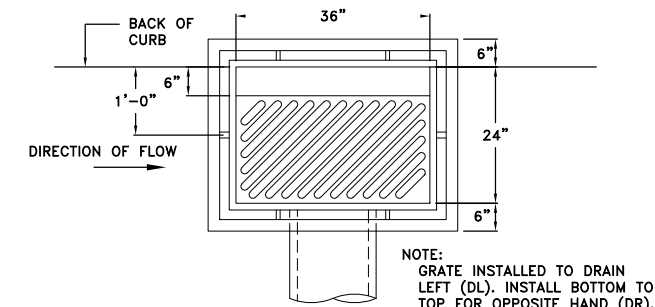
- NOTES:
- PANEL WIDTH SHALL NOT EXCEED 10 FT. WITHOUT A CENTERLINE CONSTRUCTION JOINT.
  - DRIVEWAY TO BE ONE COURSE CONCRETE PAVEMENT. (SEE SPECIAL PROVISIONS FOR CLASS OF CONCRETE.)
  - GUTTER TO BE PAVED INTEGRAL WITH DRIVEWAY.
  - 8" THICK FOR COMMERCIAL DRIVEWAYS.
  - 1/2" EXPANSION JOINT, 1/2" PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPARATELY.)

1  
3 COMMERCIAL DRIVEWAY  
NO SCALE

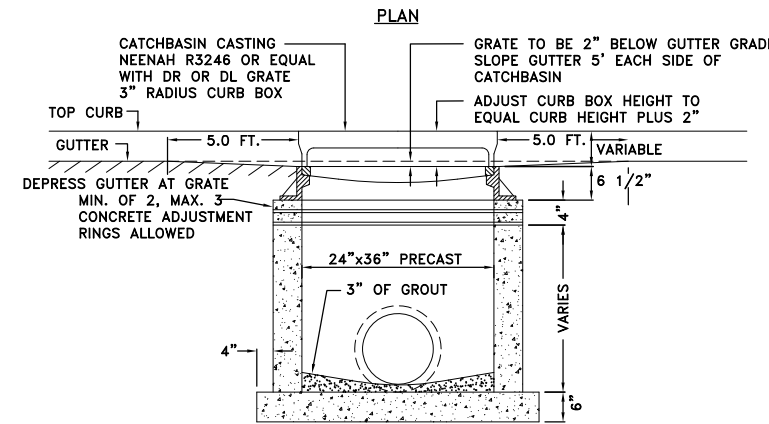


- NOTE:
- RETAINER GLANDS MAY BE USED IN LIEU OF TIE RODS.
  - HYDRANTS SET IN AREAS WHERE GROUND WATER LEVELS ARE WITHIN 2' OF THE BOTTOM OF THE HYDRANT OR LESS, MAY REQUIRE PLUGGED DRAIN HOLES PER SPECIFICATIONS OR CITY STANDARDS.

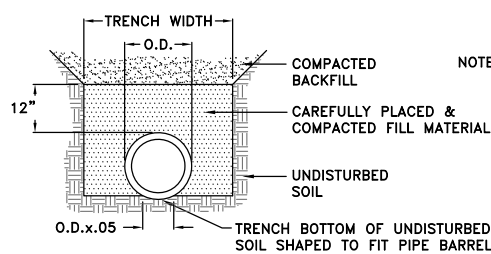
2  
3 HYDRANT DETAIL  
NO SCALE



NOTE:  
GRATE INSTALLED TO DRAIN LEFT (DL). INSTALL BOTTOM TO TOP FOR OPPOSITE HAND (DR).

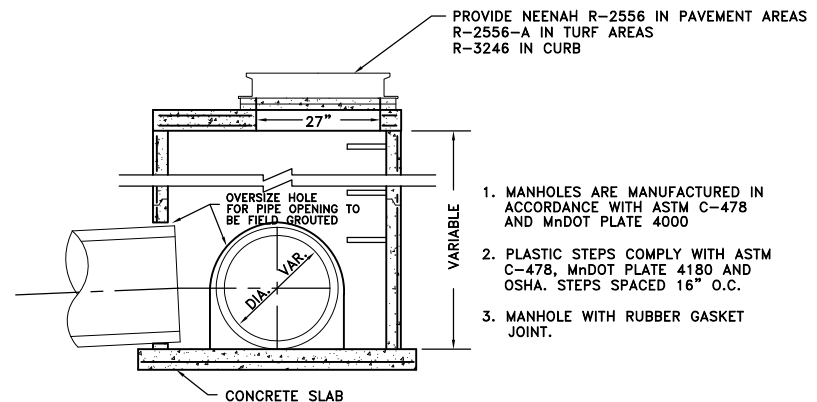


3  
3 STANDARD CURB INLET  
NO SCALE



NOTE: WORKING SPACE ON EACH SIDE OF PIPE SHALL BE NOT LESS THAN 12", OR ONE THIRD (1/3) THE INSIDE DIAMETER OF THE PIPE, BUT NOT TO EXCEED 24" EACH SIDE OF THE PIPE. IF THE TRENCH WIDTH EXCEEDS THIS MAXIMUM, THE CONTRACTOR SHALL FURNISH & INSTALL A BETTER GRADE OF BEDDING MATERIAL OR A HIGHER CLASS OF PIPE AS REQUIRED FOR THE ACTUAL TRENCH WIDTH AT NO EXTRA COST TO OWNER. SEE SPECIFICATIONS.

4  
3 PIPE BEDDING  
NO SCALE



- MANHOLES ARE MANUFACTURED IN ACCORDANCE WITH ASTM C-478 AND MnDOT PLATE 4000
- PLASTIC STEPS COMPLY WITH ASTM C-478, MnDOT PLATE 4180 AND OSHA. STEPS SPACED 16" O.C.
- MANHOLE WITH RUBBER GASKET JOINT.

STANDARD STORM MANHOLE  
48" THRU 72" DIAMETER

5  
3 STANDARD CATCH BASIN MANHOLE  
NO SCALE

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SHANE M. NELSON, P.E.  
Date 7/18/18 Lic. No. 43381

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DRAWN BY: AMT  
CHECKED BY: SMN

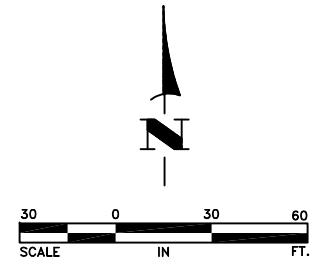






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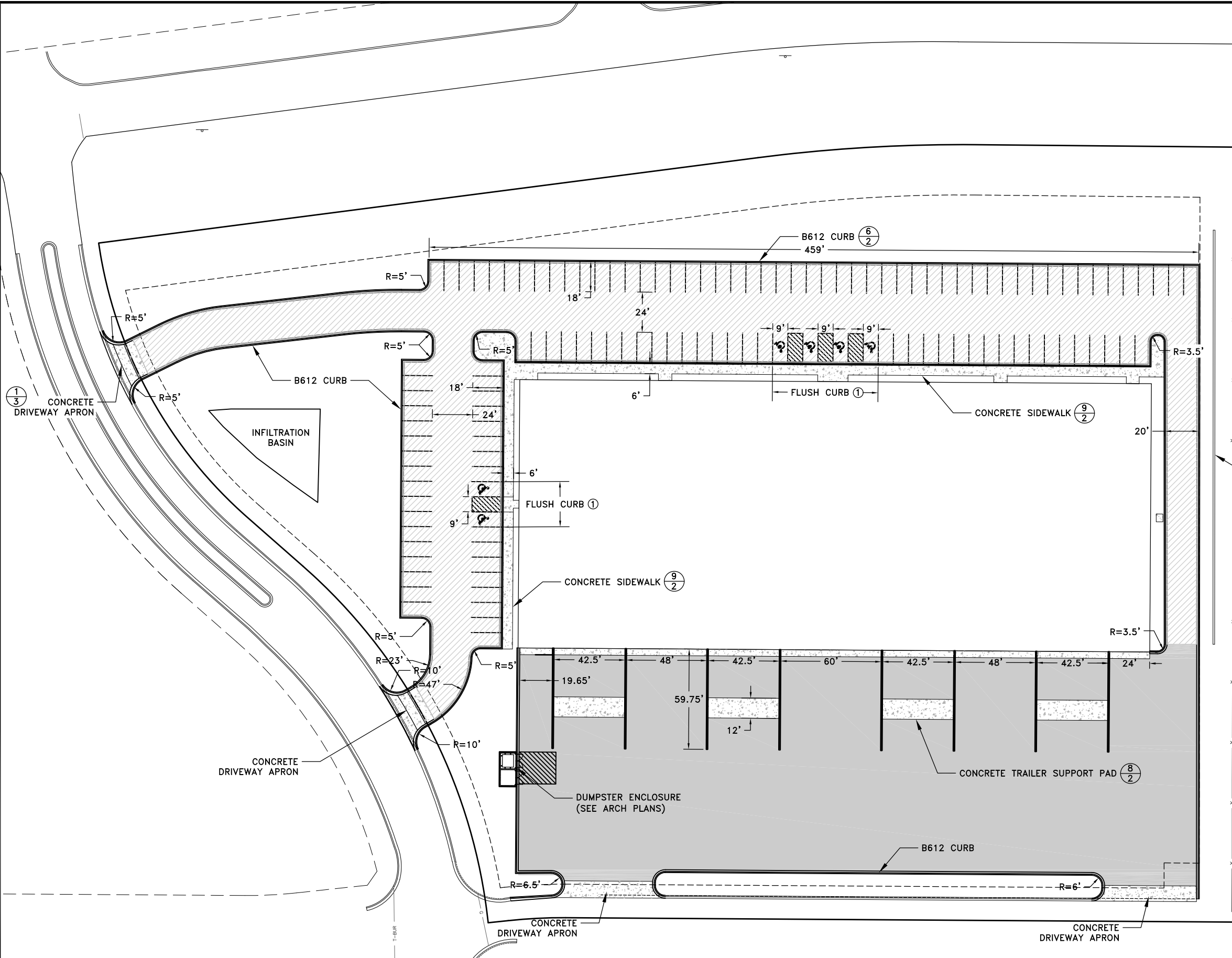
**BUNKER LAKE INDUSTRIAL PARK**  
- LOT 3 SITE IMPROVEMENTS

**DETAILS**  
RAMSEY, MINNESOTA

SHEET 3 OF 8 SHEETS



-  LIGHT DUTY PAVEMENT (6/2)
-  HEAVY DUTY PAVEMENT (7/2)
-  CONCRETE PAVEMENT
-  TIP-OUT CURB



RETAINING WALL

REFERENCE NOTES:  
 ① CONSTRUCT FLUSH "RIBBON" CURB AT HANDICAP PARKING STALLS. TAPER TO FULL HEIGHT CURB OVER 20' EITHER SIDE OF FLUSH CURB. FLUSH CURB SHALL BE 7" THICK AND MATCH WIDTH OF B612 CURB.

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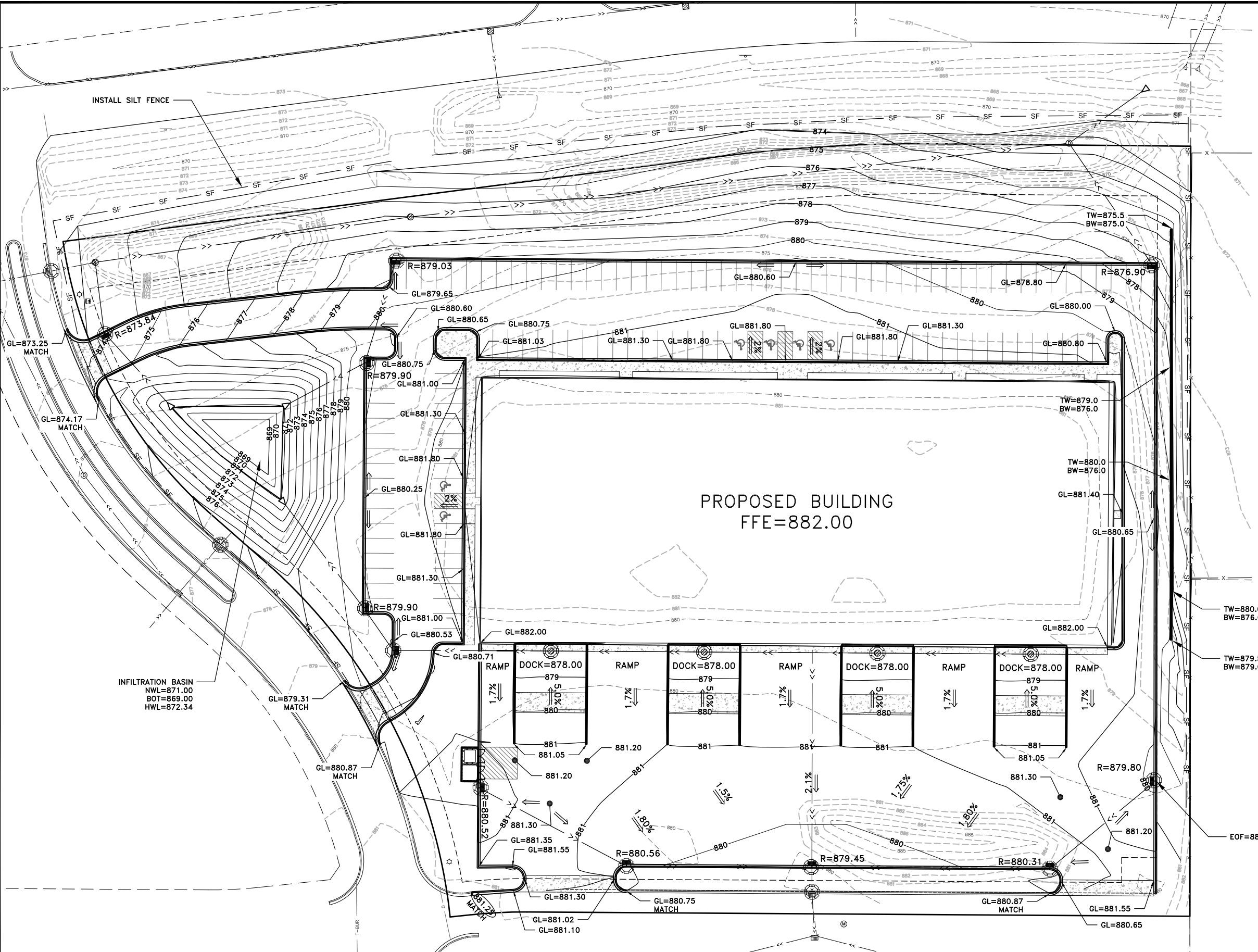
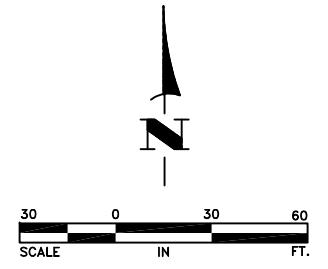


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**BUNKER LAKE INDUSTRIAL PARK  
 - LOT 3 SITE IMPROVEMENTS**

**SITE PLAN**  
 RAMSEY, MINNESOTA

SHEET 4 OF 8 SHEETS



**LEGEND**

	856	EXISTING CONTOUR
	856	PROPOSED CONTOUR
		EXISTING SANITARY SEWER
		EXISTING WATERMAIN
		EXISTING STORM SEWER
		EXISTING GAS
		EXISTING TELEPHONE
		EXISTING OVERHEAD UTILITY
		EXISTING UNDERGROUND ELECTRIC
		PROPOSED STORM SEWER
		PROPOSED STORM SEWER STRUCTURES
		PROPOSED SPOT ELEVATION
		DRAINAGE ARROW
		MODULAR BLOCK RETAINING WALL
		SILT FENCE, PER (1/2)
		INLET PROTECTION, PER (3/2) OR EQUAL

- GENERAL NOTES:**
1. INSTALL SILT FENCE AND INLET PROTECTION AS SHOWN AND PER DETAILS ON SHEET 2 PRIOR TO GRADING OR EARTH DISTURBANCE. CONSTRUCT STABILIZED CONSTRUCTION EXIT PER DETAIL 2 SHEET 2 WHERE MAIN SITE ACCESS IS LOCATED.
  2. ALL SPOT ELEVATIONS REPRESENT FINISHED GRADE OF PAVEMENT OR GUTTER LINE, UNLESS OTHERWISE NOTED.
  3. REVEGETATION AND STABILIZATION SHALL OCCUR WITHIN 7 DAYS OF ROUGH GRADING.
  4. MAXIMUM PAVED SLOPES SHALL NOT EXCEED 12:1
  5. STREETS AND PROPERTY ADJACENT TO THE CONSTRUCTION SHALL BE KEPT FREE FROM SEDIMENT CAUSED BY CONSTRUCTION TRAFFIC, SITE RUNOFF AND BLOWING DUST. HAND BROOM OR PICKUP SWEEPER SHALL BE EMPLOYED AS NEEDED OR AT THE REQUEST OF THE CITY OF COON RAPIDS. KICK BROOM STYLE SWEEPER NOT ALLOWED.
  6. ALL DISTURBED AREAS SHALL RECEIVE 4" TOPSOIL AND BE SEEDED WITH Mn/DOT SEED MIX 25-131 OR APPROVED EQUAL. APPLY FERTILIZER AND MULCH PER THE RECOMMENDATIONS OF THE MNDOT SEEDING MANUAL.
  7. SEE GEOTECHNICAL REPORT PREPARED BY XXXX. DATED X/XX/XXXX FOR ADDITIONAL INFORMATION AND RECOMMENDATIONS FOR SOIL CONDITIONS AND PREPARATION.
  8. RETAINING WALLS TO BE DESIGNED BY OTHERS.

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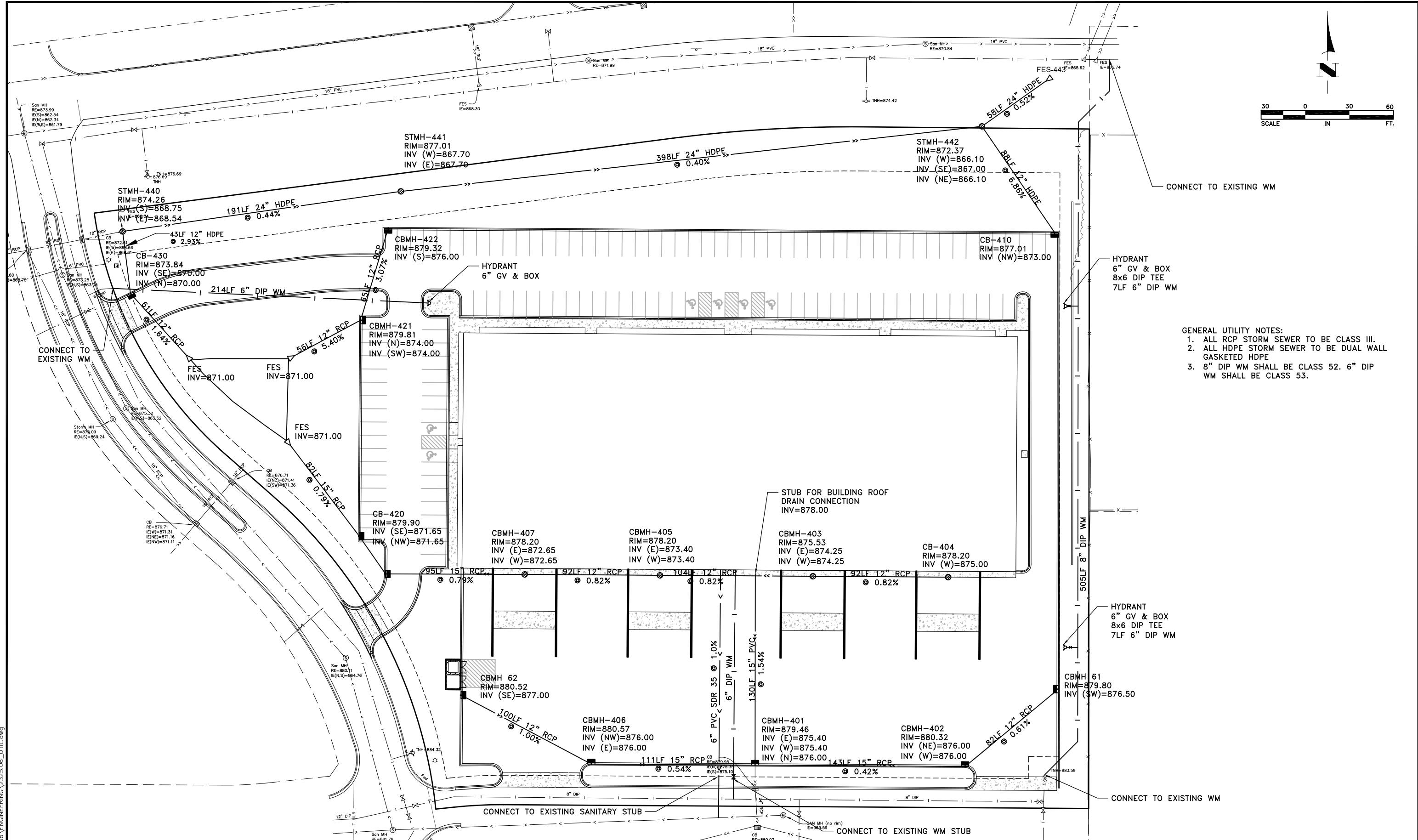
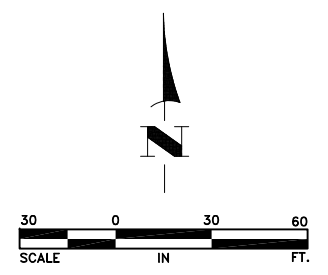


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- LOT 3 SITE IMPROVEMENTS**

**GRADING, DRAINAGE, &  
EROSION CONTROL  
RAMSEY, MINNESOTA**

SHEET 5 OF 8 SHEETS



- GENERAL UTILITY NOTES:
1. ALL RCP STORM SEWER TO BE CLASS III.
  2. ALL HDPE STORM SEWER TO BE DUAL WALL GASKETED HDPE
  3. 8" DIP WM SHALL BE CLASS 52. 6" DIP WM SHALL BE CLASS 53.

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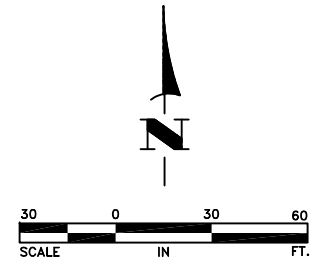


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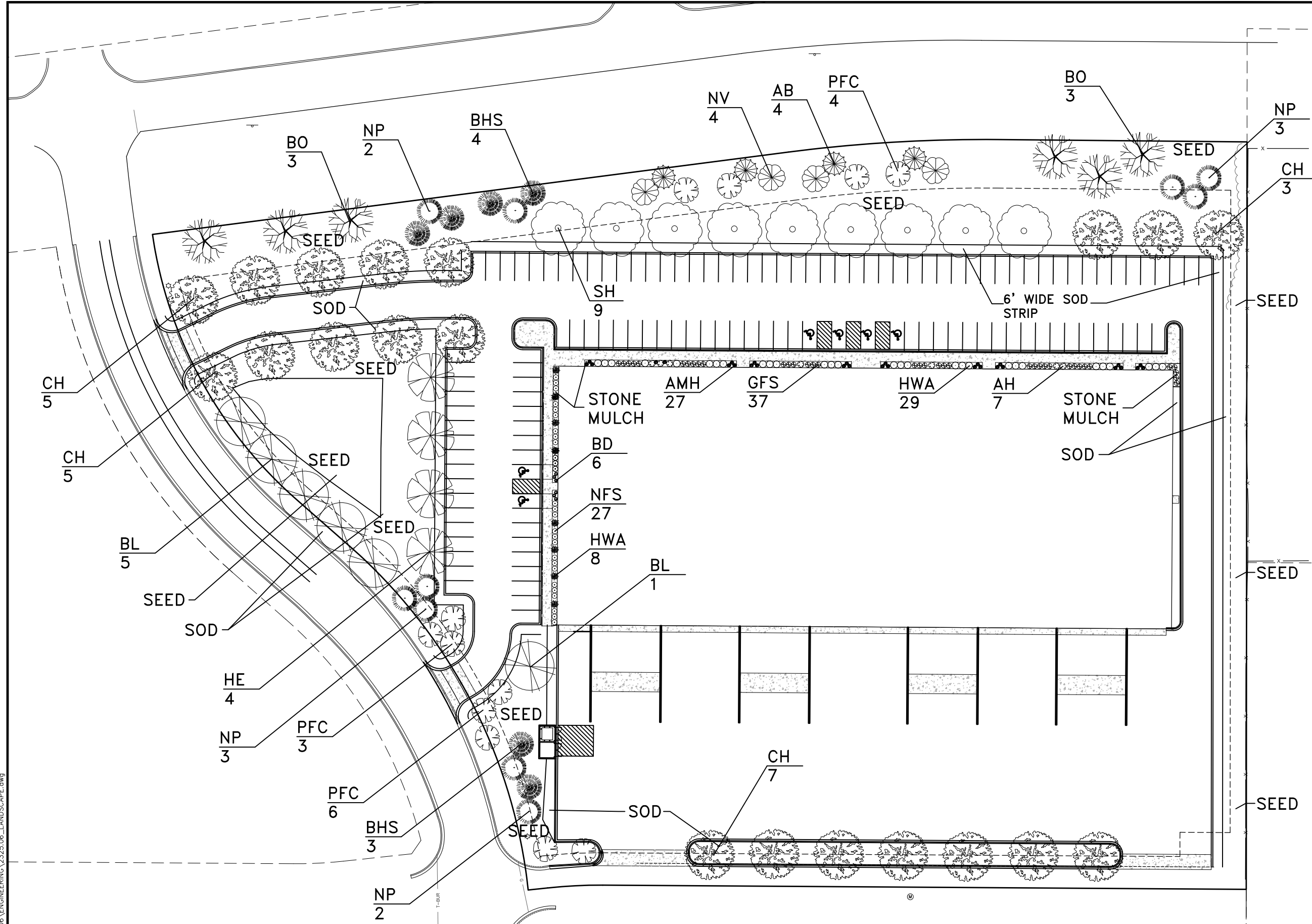
**BUNKER LAKE INDUSTRIAL PARK**  
 - LOT 3 SITE IMPROVEMENTS

**UTILITY PLAN**  
 RAMSEY, MINNESOTA

SHEET 6 OF 8 SHEETS



SEE SHEET 8 FOR PLANTING SCHEDULE AND DETAILS



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*Debra Bralle*

REG. NO. 23849    DATE 07-16-18

**BRODSHO CONSULTING**  
Landscape Architecture Site Planning

698 NORTHBRIDGE COURT  
EAGAN, MN 55123  
PHONE: 651-688-8023  
FAX: 651-456-5748

**BUNKER LAKE INDUSTRIAL PARK  
- LOT 3 SITE IMPROVEMENTS**

**LANDSCAPE PLAN**  
RAMSEY, MINNESOTA

SHEET 7 OF 8 SHEETS  
2325.06

PLANT LIST: Site Plantings

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE/ROOT
<b>TREES</b>				
20	CH	Celtis occidentalis	Common Hackberry	2-1/2" B&B
9	SH	Gleditsia triacanthos inermis 'Skycole'	Skyline Honeylocust	2-1/2" B&B
6	BL	Tilia americana 'Boulevard'	Boulevard Linden	2-1/2" B&B
6	BO	Quercus macrocarpa	Bur Oak	2-1/2" B&B
4	HE	Ulmus 'Homestead'	Homestead Elm	2-1/2" B&B
7	BHS	Picea glauca densata	Black Hills Spruce	6'-0" B&B
10	NP	Pinus resinosa	Norway Pine	6'-0" B&B
4	AB	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7' Clump, Pot
13	PFC	Malus 'Prairie Fire'	Prairie Fire Crabapple	1-1/2" B&B
4	NV	Viburnum lentago 'Nannyberry'	Nannyberry Viburnum, tree form	1-1/2" B&B
<b>SHRUBS</b>				
7	AH	Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea	5 Gal. Pot
27	NFS	Spiraea japonica 'Neon Flash'	Neon Flash Spirea	2 Gal. Pot
37	GFS	Spiraea x bumalda 'Gold Flame'	Gold Flame Spirea	5 Gal. Pot
37	HWA	Thuja occidentalis 'Hetz Wintergreen'	Hetz Wintergreen Arborvitae	5 Gal. Pot
<b>PERENNIALS &amp; GRASSES</b>				
6	BD	Hemerocallis 'Baja'	Baja Daylily	1 Gal. Pot
27	AMH	Hota fortunei 'Albomarginata'	Albomarginata Hosta	1 Gal. Pot

SOD & SEED

Sod, placed 6" behind all curbed areas.  
Sod shall be seed grown and drought tolerant. Prior to installation, the Contractor shall supply a sample of the sod for approval by the Owner and the City. Check with the following vendors for availability.

- Specialty Turf and Ag
- Anoka Turf Farm
- A & L Sod
- Central Turf Farm

Seed Mixture: To be approved by Owner and City. Suggested mixture as follows or equivalent.  
54% Little bluestem, 35% Side oats grama, 10% Blue grama, .5% Sand dropseed, .5% Prairie dropseed.

PLANTING NOTES:

Contractor shall call and verify locations with all utilities prior to any digging or installation of plants.

Contractor shall provide a two year guarantee of all plant materials. The guarantee begins on the date of the Owner's written acceptance of the initial planting. Replacement plant materials shall have a one year guarantee commencing upon planting. Owner is responsible for maintenance after all is accepted by the Owner.

All plants to be northern-grown and hardy.

Plants to be installed as per standard AAN planting practices.

Use minimum 12" loam planting soil on trees and 6" on shrubs.

All landscaping and sod areas shall be irrigated with an in ground system.

Staking of trees optional; reposition if not plumb after one year.

Wrap all smooth-barked trees—fasten top and bottom. Remove by April 1.

Remove burlap, twine, rope, and wire from top of BB materials; remove pot on potted plants; split and break apart peat pots.

Prune only dead and damages branches on plants as necessary. All pruning shall be made just outside of branch collar area.

Plants shall be immediately planted upon arrival at site. Properly heel-in materials if necessary.

All disturbed areas to be sodded unless otherwise noted. Sod shall be drought tolerant.

Planting beds for shrubs shall have (4 oz. min.) weed barrier fabric, 4" - 5" of washed River Rock mulch and 4" vertical (commercial grade) black poly edging (where mulch is not contained by the building and sidewalk or curb. It is to be placed and staked in straight lines as shown on the plan.

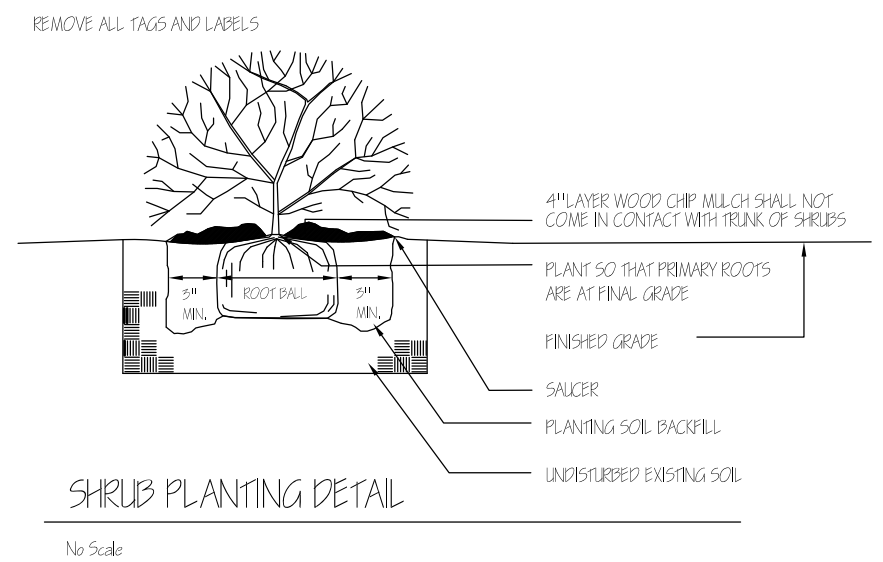
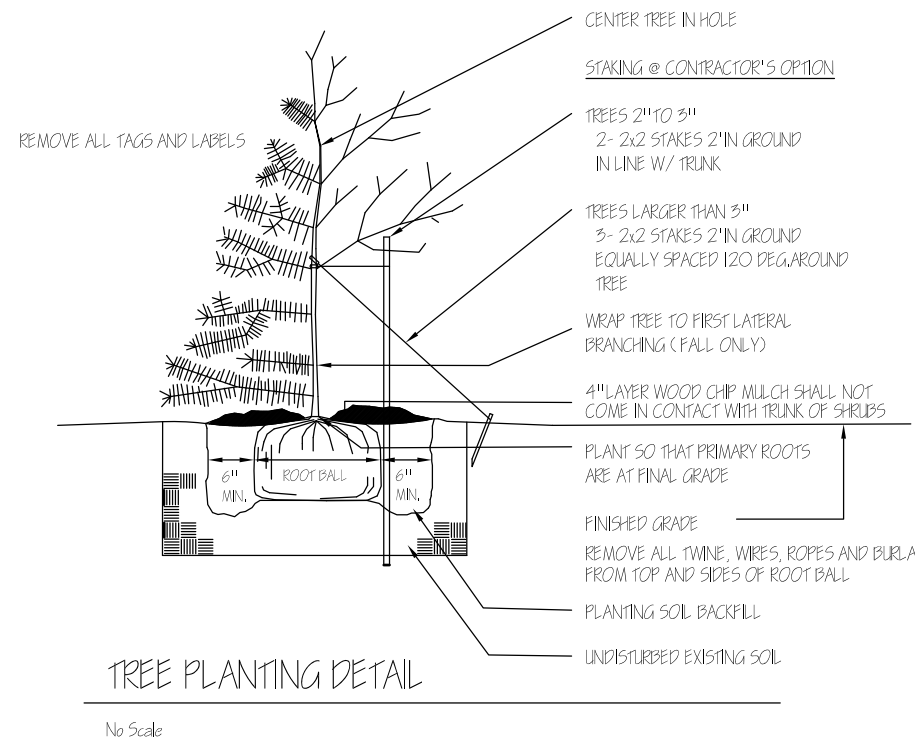
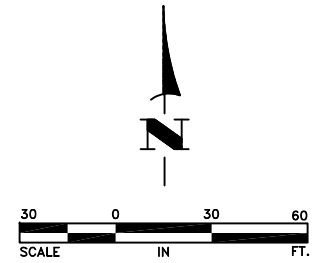
Topsoil shall be a minimum of 6 inches deep. Existing soils may be used if amended to meet City requirements of 6 inch deep MNDOT premium topsoil or better.

Double shredded dark brown hardwood mulch 4" deep shall be provided around all installed trees.

Retaining walls are not the responsibility of the Landscape Architect. Contact the Project Engineer for details, locations, materials, and specifications for all retaining walls.

Shrub sizes shall be a minimum of 24 inches in height or width at time of planting.

THE PLANTING BED ADJACENT TO THE BUILDING SHALL BE ADJUSTED IF NECESSARY TO FIT WITH THE BUILDING'S ARCHITECTURE SUCH AS WINDOW PATTERNS AND EXTERIOR WALL MATERIALS. IF THERE ARE ANY QUESTIONS OR CONCERNS, CONTACT THE OWNER PRIOR TO ANY PLANT INSTALLATION.



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**BRODSHO CONSULTING**  
Landscape Architecture Site Planning

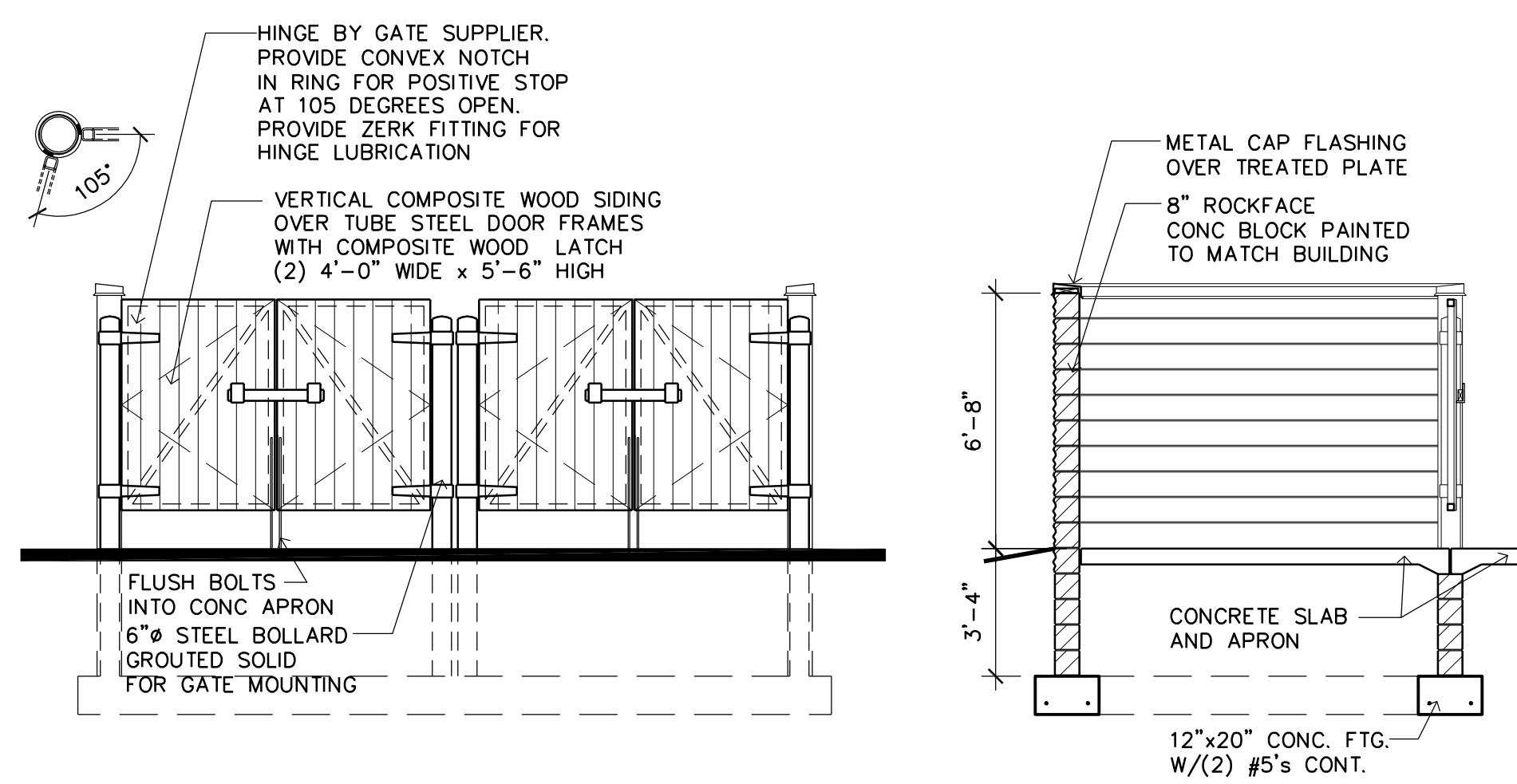
698 NORTHBRIDGE COURT  
EAGAN, MN 55123  
PHONE: 651-688-8023  
FAX: 651-456-5748

**BUNKER LAKE INDUSTRIAL PARK  
- LOT 3 SITE IMPROVEMENTS**

**LANDSCAPE SCHEDULE &  
DETAILS  
RAMSEY, MINNESOTA**

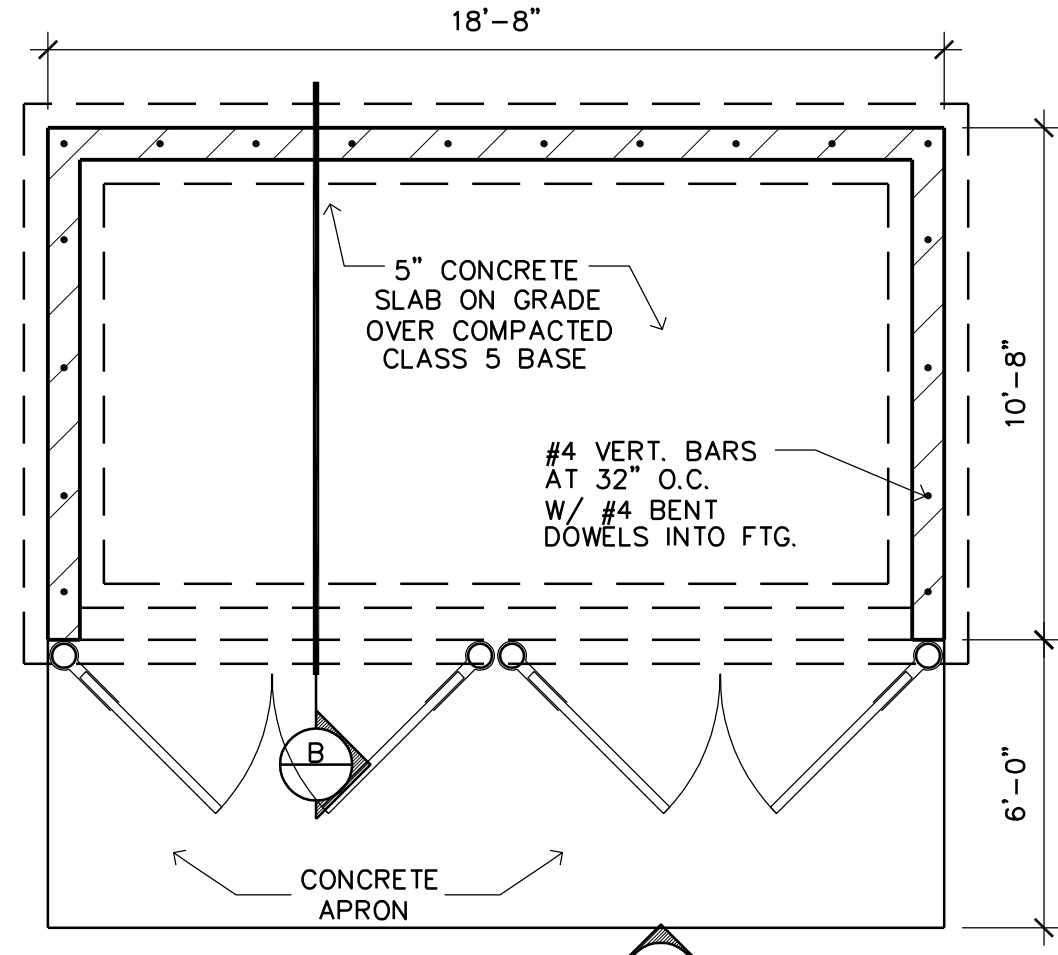
SHEET 8 OF 8 SHEETS

Filename: BUNKER LAKE INDUSTRIAL PARK-BUILDING #3-BUNKER LAKE #3-A1

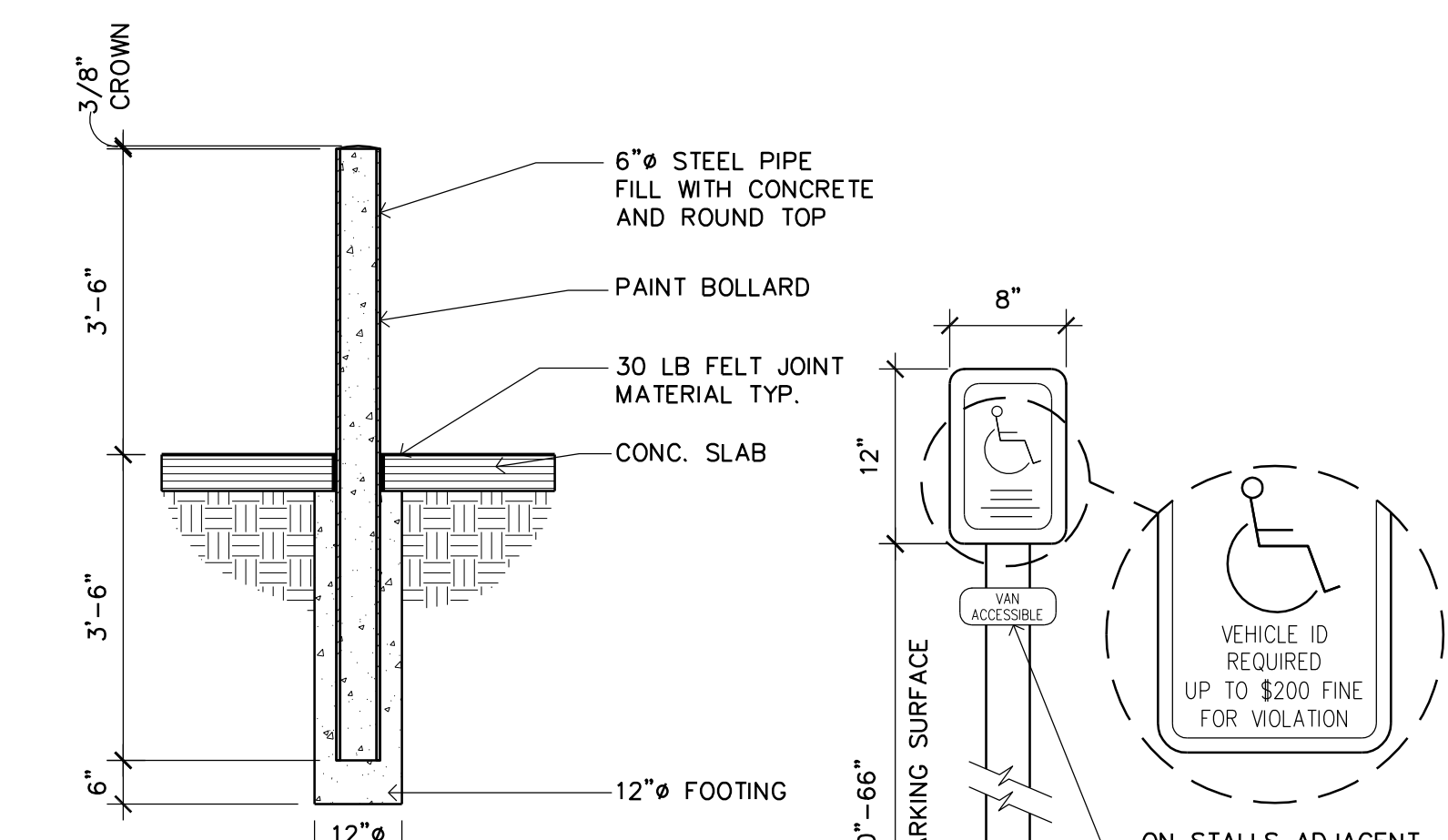


ELEVATION 'A'

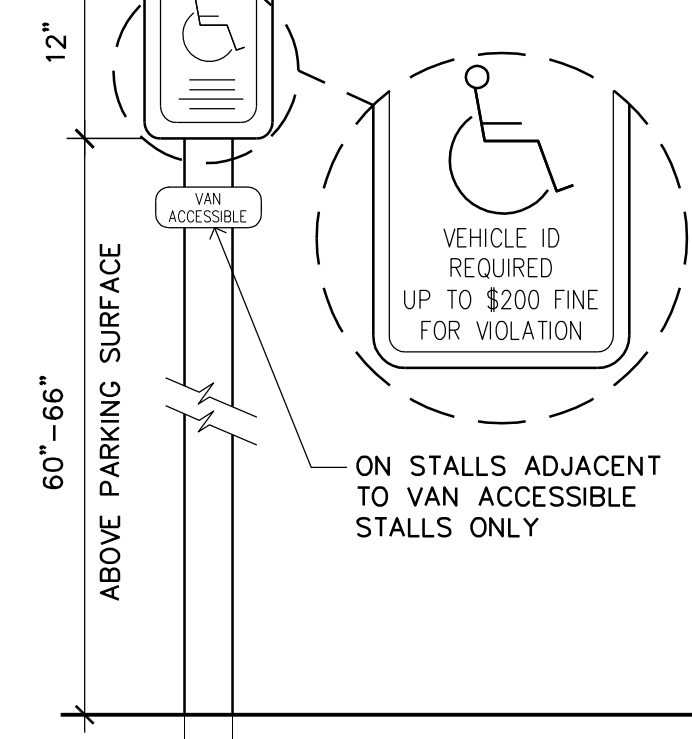
SECTION 'B'



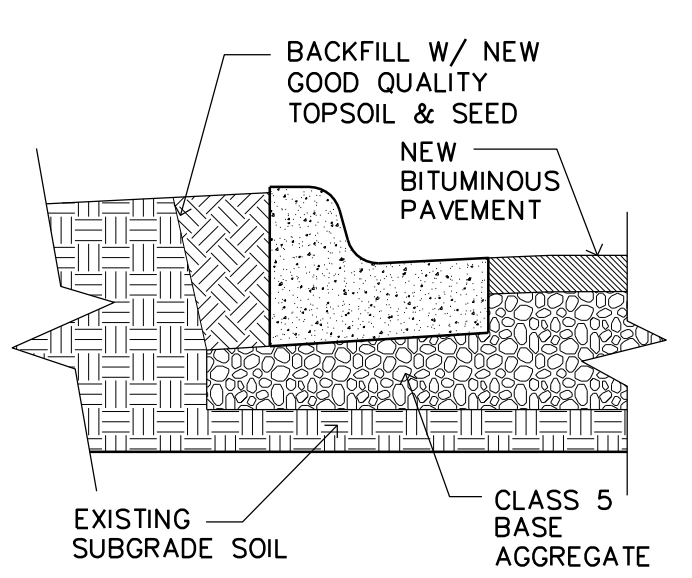
5 TRASH ENCLOSURE  
A1 SCALE: 1/4" = 1'-0"



3 CONCRETE BOLLARD  
A1 SCALE: 1/2" = 1'-0"



4 ACCESSIBLE PARKING SIGN  
A1 1" = 1'-0"



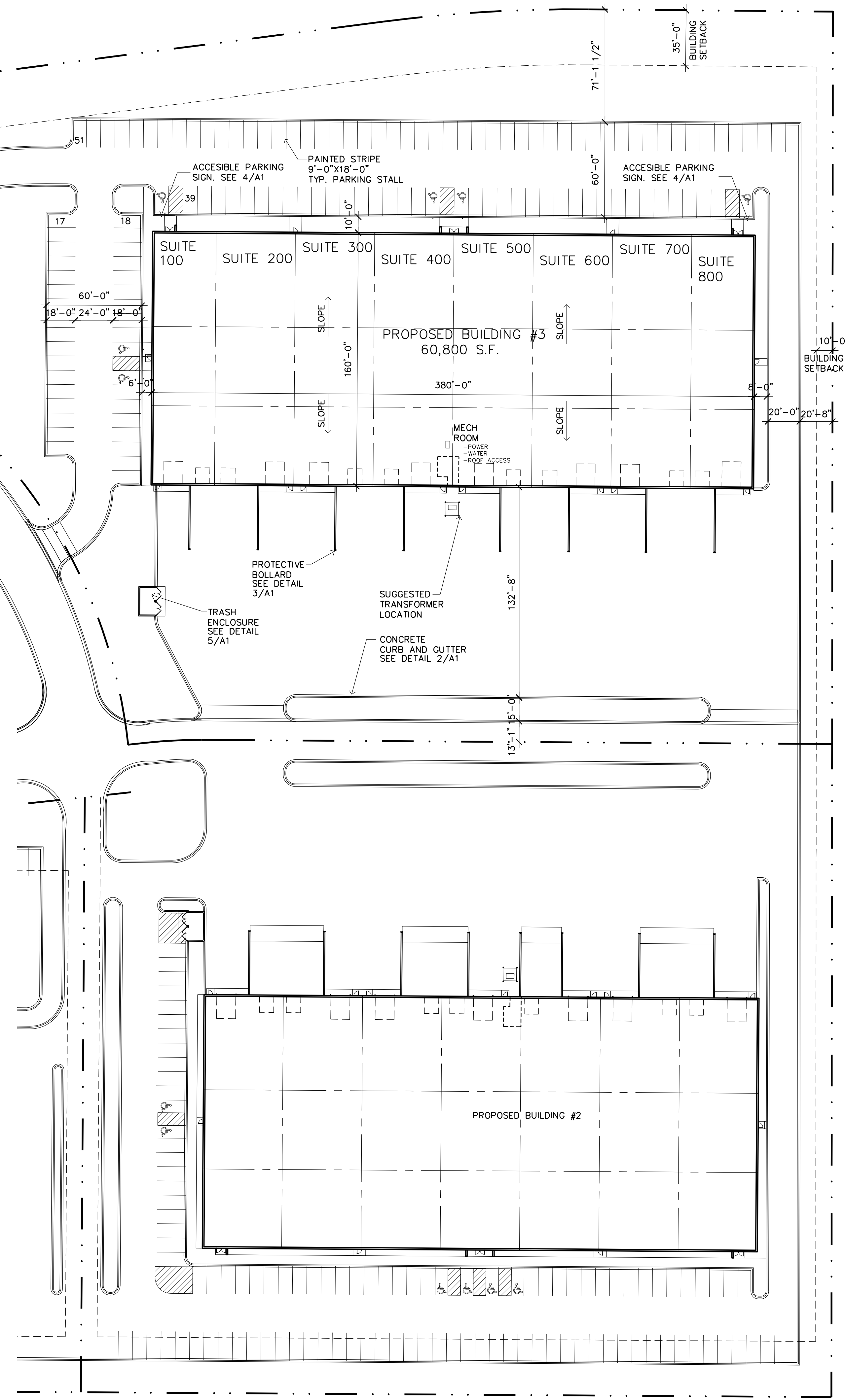
2 B6-12 CONCRETE CURB  
A1 SCALE: 1/2" = 1'-0"

BUNKER LAKE BLVD

**PARKING DATA**  
OFFICE (20%) - 12,160 S.F. AT 1/300 = 41 STALLS  
WAREHOUSE (80%) - 48,640 S.F. AT 1/1000 = 49 STALLS  
90 STALLS REQUIRED  
125 STALLS PROVIDED

1 SITE PLAN  
A1 SCALE: 1" = 40'-0"

NORTH



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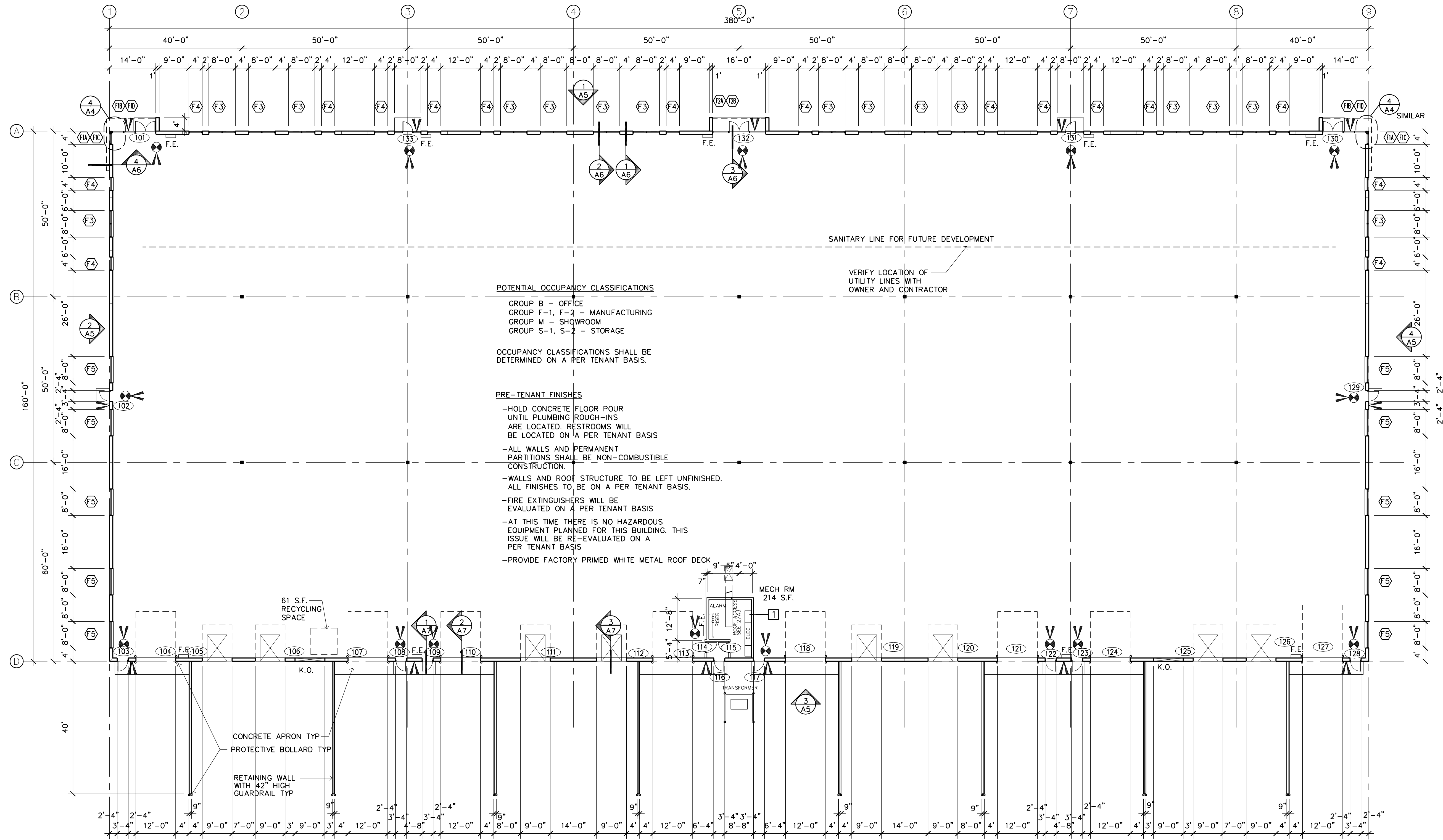
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BUILDING #3**  
Ramsey, Minnesota

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Project Designer: JAMES B  
Drawn By: JRB  
Checked By: LL

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**SITE PLAN**  
Sheet Number

**A1**  
Project No. 180510-1



**POTENTIAL OCCUPANCY CLASSIFICATIONS**  
 GROUP B - OFFICE  
 GROUP F-1, F-2 - MANUFACTURING  
 GROUP M - SHOWROOM  
 GROUP S-1, S-2 - STORAGE

OCCUPANCY CLASSIFICATIONS SHALL BE DETERMINED ON A PER TENANT BASIS.

**PRE-TENANT FINISHES**

- HOLD CONCRETE FLOOR POUR UNTIL PLUMBING ROUGH-INS ARE LOCATED. RESTROOMS WILL BE LOCATED ON A PER TENANT BASIS
- ALL WALLS AND PERMANENT PARTITIONS SHALL BE NON-COMBUSTIBLE CONSTRUCTION.
- WALLS AND ROOF STRUCTURE TO BE LEFT UNFINISHED. ALL FINISHES TO BE ON A PER TENANT BASIS.
- FIRE EXTINGUISHERS WILL BE EVALUATED ON A PER TENANT BASIS
- AT THIS TIME THERE IS NO HAZARDOUS EQUIPMENT PLANNED FOR THIS BUILDING. THIS ISSUE WILL BE RE-EVALUATED ON A PER TENANT BASIS
- PROVIDE FACTORY PRIMED WHITE METAL ROOF DECK

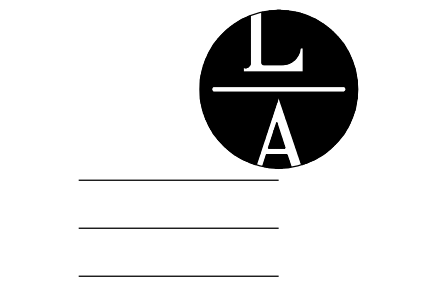
SANITARY LINE FOR FUTURE DEVELOPMENT

VERIFY LOCATION OF UTILITY LINES WITH OWNER AND CONTRACTOR

1 FLOOR PLAN  
 A2 SCALE: 1/16" = 1'-0"



- PLAN NOTES**
1. [Symbol] = EXIT SIGNAGE. PROVIDE EMERGENCY BACK-UP POWER
  2. [Symbol] = EMERGENCY LIGHTING. PROVIDE EMERGENCY BACK-UP POWER
  3. F.E. = FIRE EXTINGUISHER. VERIFY SIZE AND SPACING WITH BUILDING OFFICIAL.



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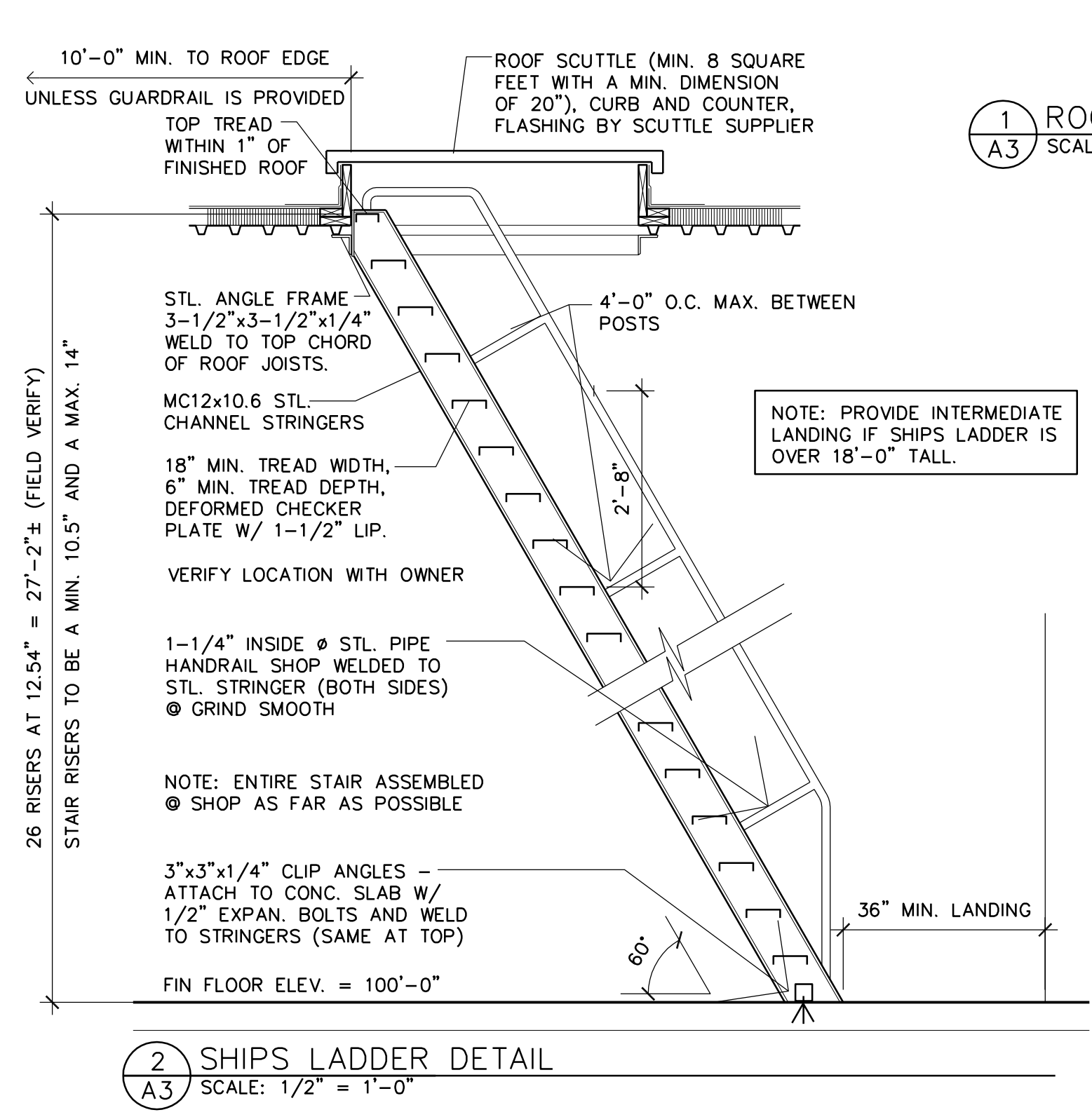
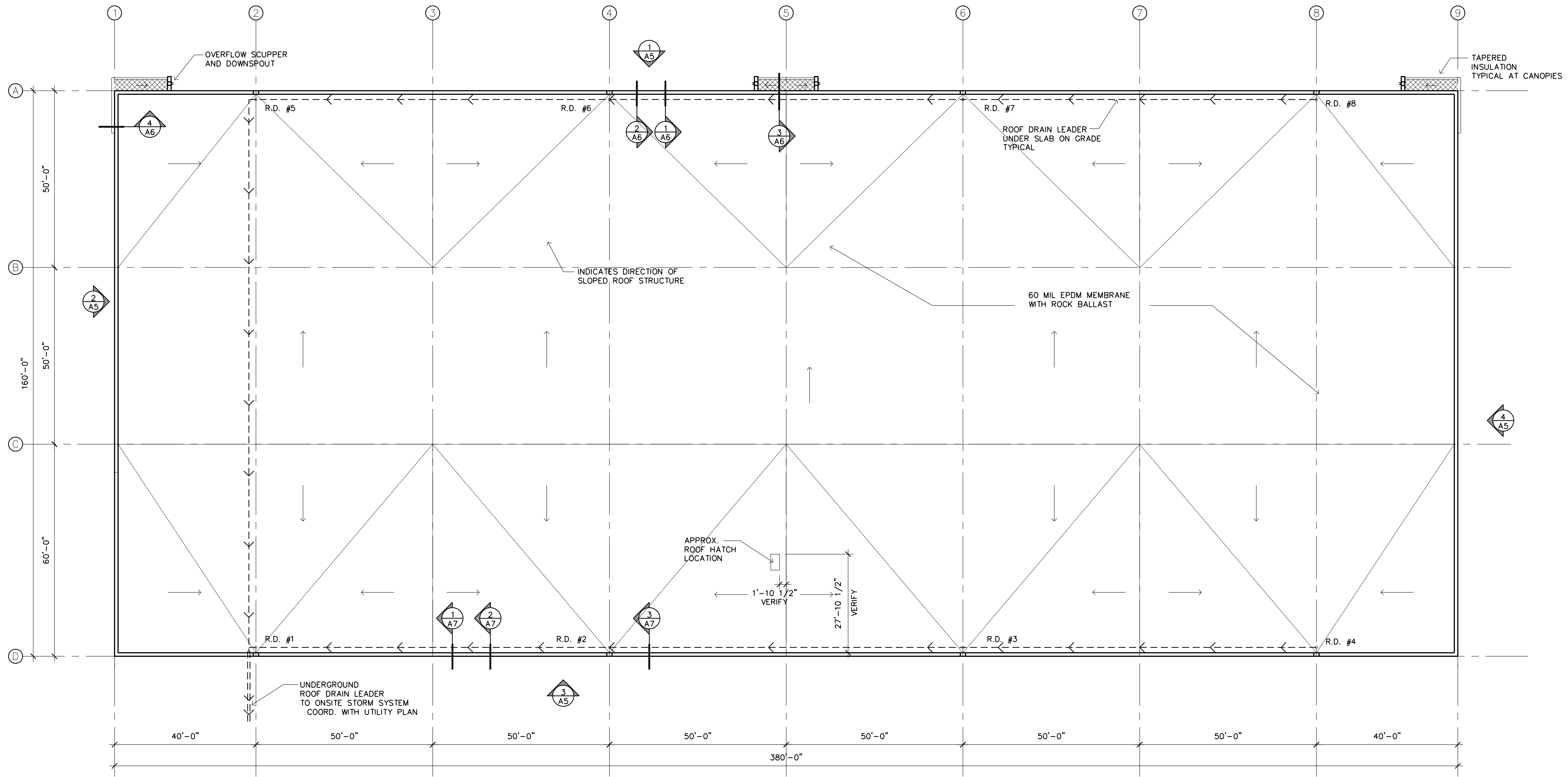
Revisions

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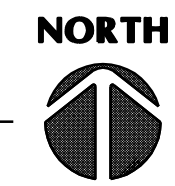
**FLOOR PLAN**

Sheet Number

**A2**



1 ROOF PLAN  
A3 SCALE: 1/16" = 1'-0"



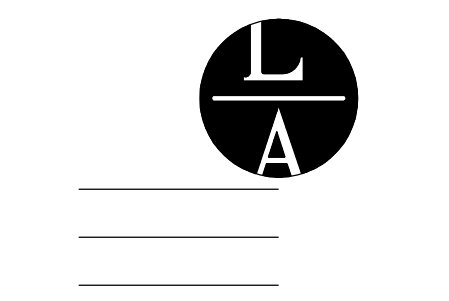
PLAN NOTES:

1. ROOF SLOPES 12" OVER 99'-0" (1.0%)
2. ROOF TOP UNIT LOCATIONS MUST BE CONFIRMED WITH MECHANICAL DRAWINGS (DESIGN BUILD) ROOF TOP UNITS TO BE LOCATED AWAY FROM THE PARAPET EDGE SO FAR AS POSSIBLE TO MINIMIZE THEIR APPEARANCE FROM THE GROUND.
3. ROOF DRAIN AND DRAIN LEADER DESIGN IS BY PLUMBING CONTRACTOR LEADERS TO BE TIED INTO ONSITE STORM DRAIN - SEE CIVIL PLAN FOR STUB LOCATION

AREA SERVED BY ROOF DRAIN

ROOF DRAIN #1 ± 5,251 S.F.	ROOF DRAIN #5 ± 8,811 S.F.
ROOF DRAIN #2 ± 5,900 S.F.	ROOF DRAIN #6 ± 9,900 S.F.
ROOF DRAIN #3 ± 5,900 S.F.	ROOF DRAIN #7 ± 9,900 S.F.
ROOF DRAIN #4 ± 5,251 S.F.	ROOF DRAIN #8 ± 8,811 S.F.

2 SHIPS LADDER DETAIL  
A3 SCALE: 1/2" = 1'-0"



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Ramsey, Minnesota

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Project Designer: JAMES B  
Drawn By: JRB  
Checked By: LL

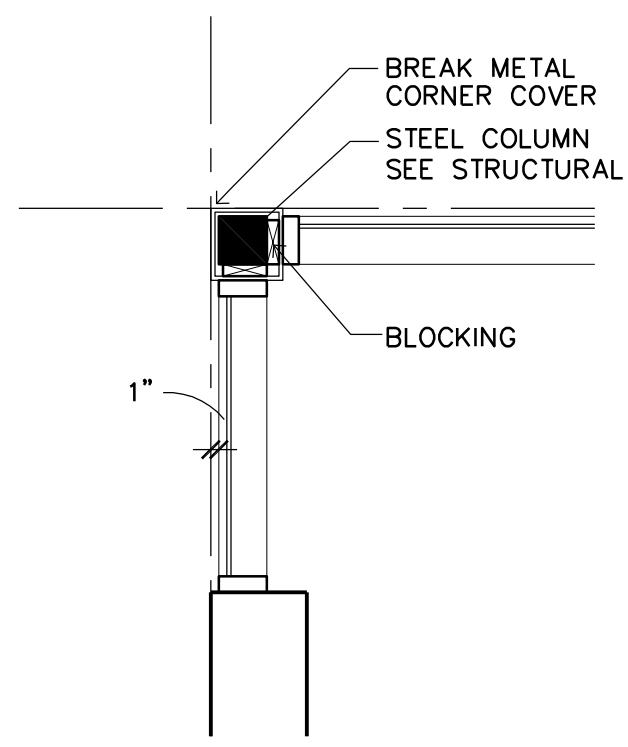
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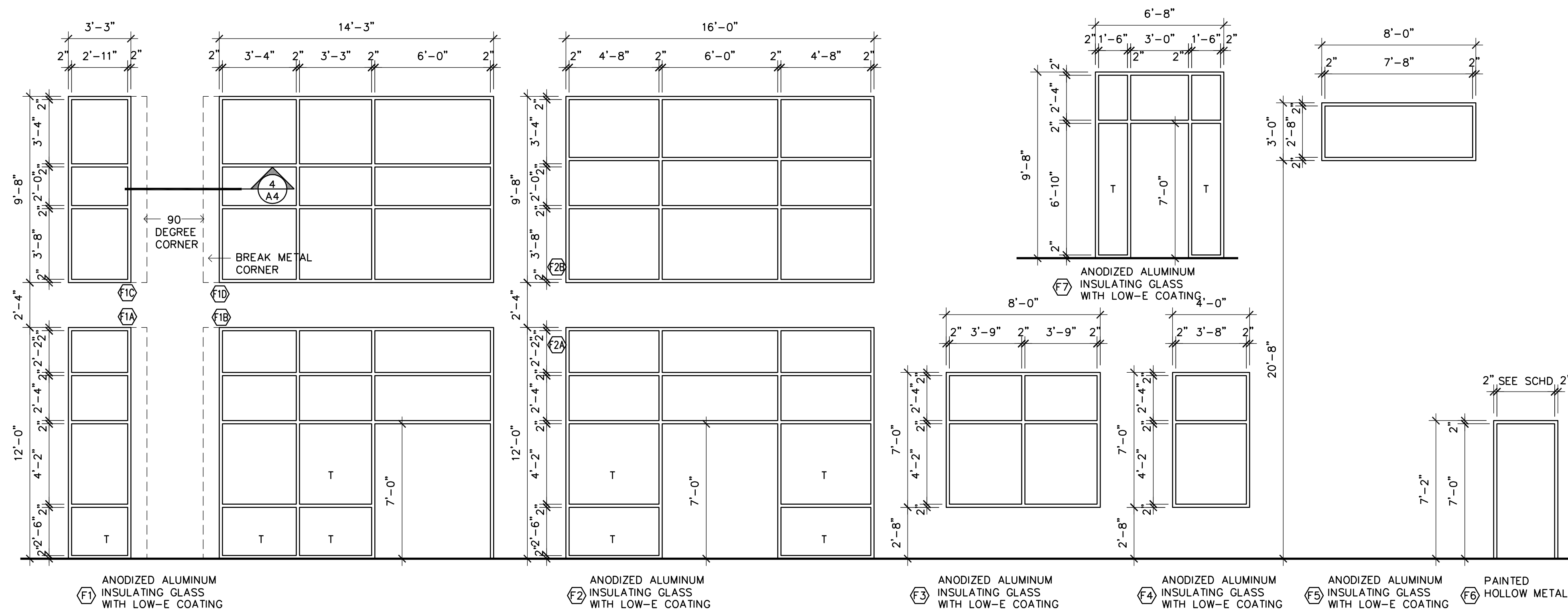
ROOF PLAN

Sheet Number

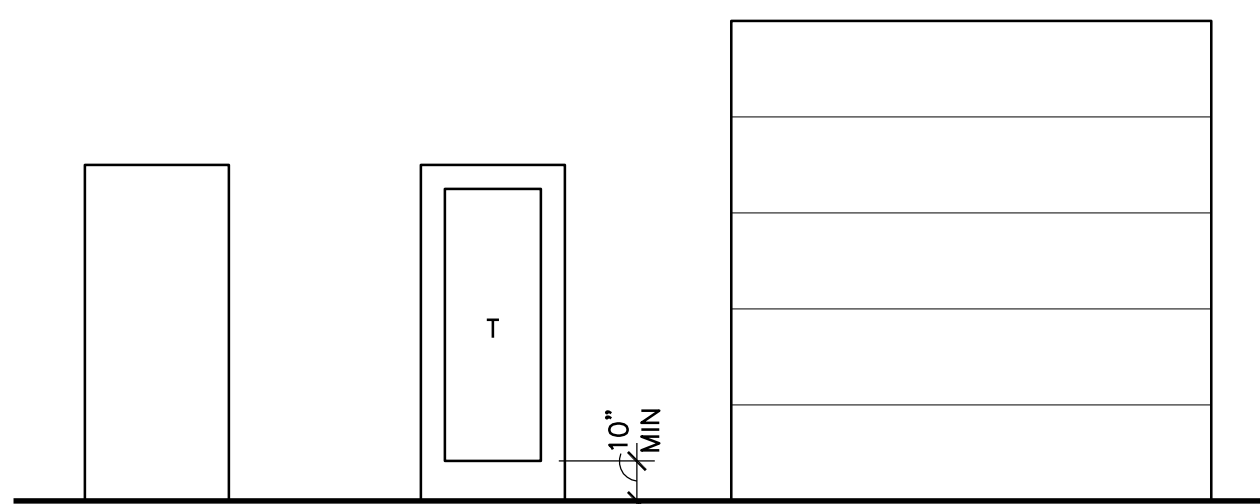
**A3**



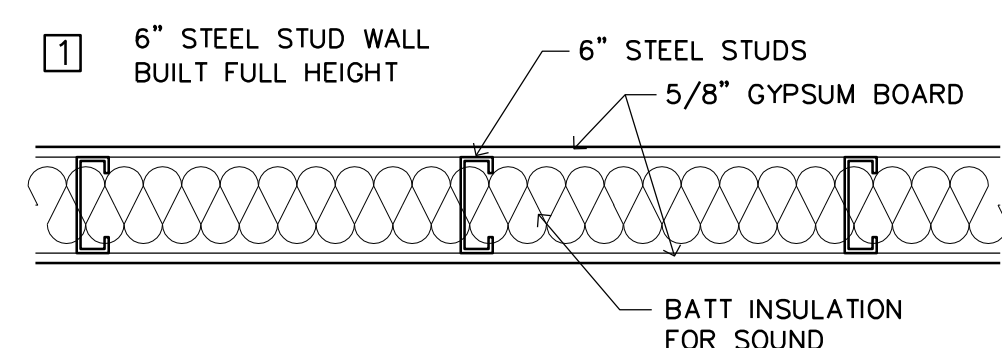
4 STOREFRONT CORNER DETAIL  
SCALE: 1/2" = 1'-0"



1 DOOR FRAME TYPES  
SCALE: 1/4" = 1'-0" T = TEMPERED GLASS



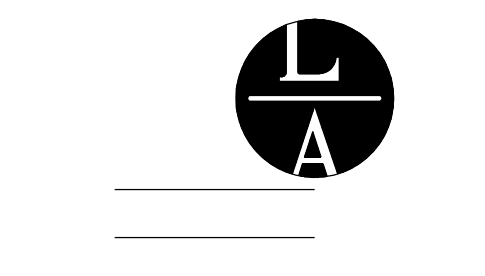
2 DOOR TYPES  
SCALE: 1/4" = 1'-0" T = TEMPERED GLASS



3 WALL TYPES  
SCALE: 1" = 1'-0"

DR #	DOOR SIZE	THICK	DOOR	FRAME	REMARKS
101	(2) 3'-0"x7'-0"	1 3/4"	D2	F1B	INSULATING GLASS
102	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
103	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
104	12'-0"x14'-0"	2"	D3	---	INSULATED
105	9'-0"x10'-0"	2"	D3	---	INSULATED
106	9'-0"x10'-0"	2"	D3	---	INSULATED
107	12'-0"x14'-0"	2"	D3	---	INSULATED
108	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
109	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
110	12'-0"x14'-0"	2"	D3	---	INSULATED
111	9'-0"x10'-0"	2"	D3	---	INSULATED
112	9'-0"x10'-0"	2"	D3	---	INSULATED
113	12'-0"x14'-0"	2"	D3	---	INSULATED
114	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
115	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
116	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
117	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
118	12'-0"x14'-0"	2"	D3	---	INSULATED
119	9'-0"x10'-0"	2"	D3	---	INSULATED
120	9'-0"x10'-0"	2"	D3	---	INSULATED
121	12'-0"x14'-0"	2"	D3	---	INSULATED
122	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
123	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
124	12'-0"x14'-0"	2"	D3	---	INSULATED
125	9'-0"x10'-0"	2"	D3	---	INSULATED
126	9'-0"x10'-0"	2"	D3	---	INSULATED
127	12'-0"x16'-0"	2"	D3	---	INSULATED
128	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
129	3'-0"x7'-0"	1 3/4"	D1	F6	INSULATED
130	(2) 3'-0"x7'-0"	1 3/4"	D2	F1B	INSULATING GLASS
131	3'-0"x7'-0"	1 3/4"	D2	F7	INSULATING GLASS
132	(2) 3'-0"x7'-0"	1 3/4"	D2	F2A	INSULATING GLASS
133	3'-0"x7'-0"	1 3/4"	D2	F7	INSULATING GLASS

- NOTES:
- ALL DOOR HARDWARE TO BE SPECIFIED & PROVIDED BY CONTRACTOR
  - ALL EXIT HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. MOUNT HARDWARE BETWEEN 34"-48" (ANSI A117.1-404.2.6)
  - PROVIDE A KNOX BRAND FIRE DEPARTMENT KEY BOX AS SPECIFIED BY THE FIRE MARSHAL
  - THE MAIN EXIT IS ALLOWED TO HAVE A KEYED LOCK PROVIDED THAT THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED AND A SIGN WITH 1" CONTRASTING LETTERS IS POSTED ON THE EGRESS SIDE STATING: 'THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.' (IBC 1008.1.9.3)



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BUILDING #3  
Ramsey, Minnesota

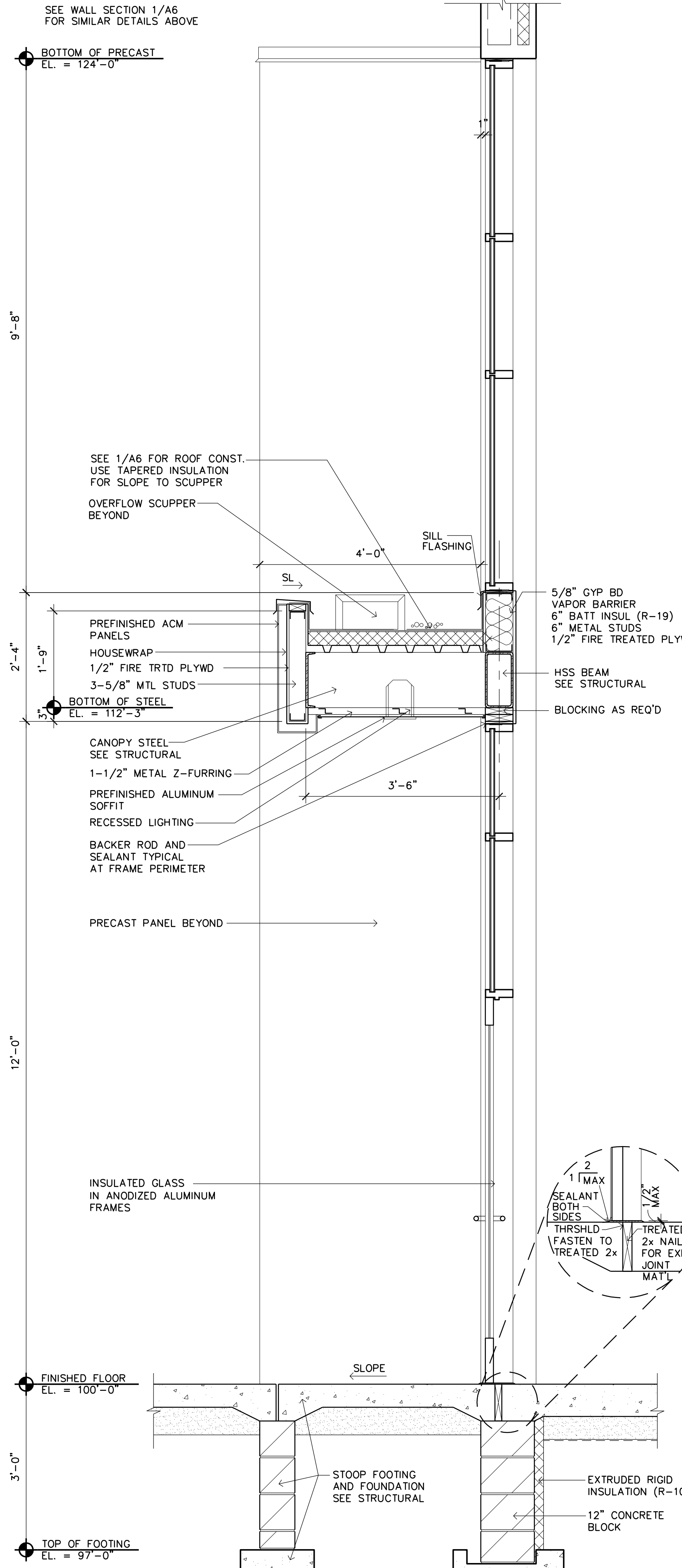
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Drawn By: JRB  
Checked By: LL

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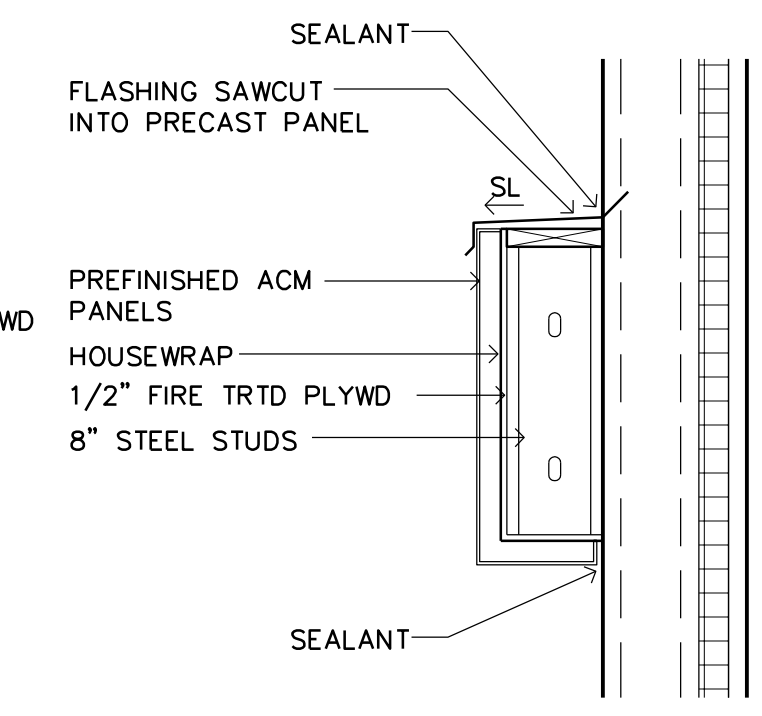
DOOR TYPES  
WINDOW TYPES  
WALL TYPES  
Sheet Number

A4  
Project No. 180510-01

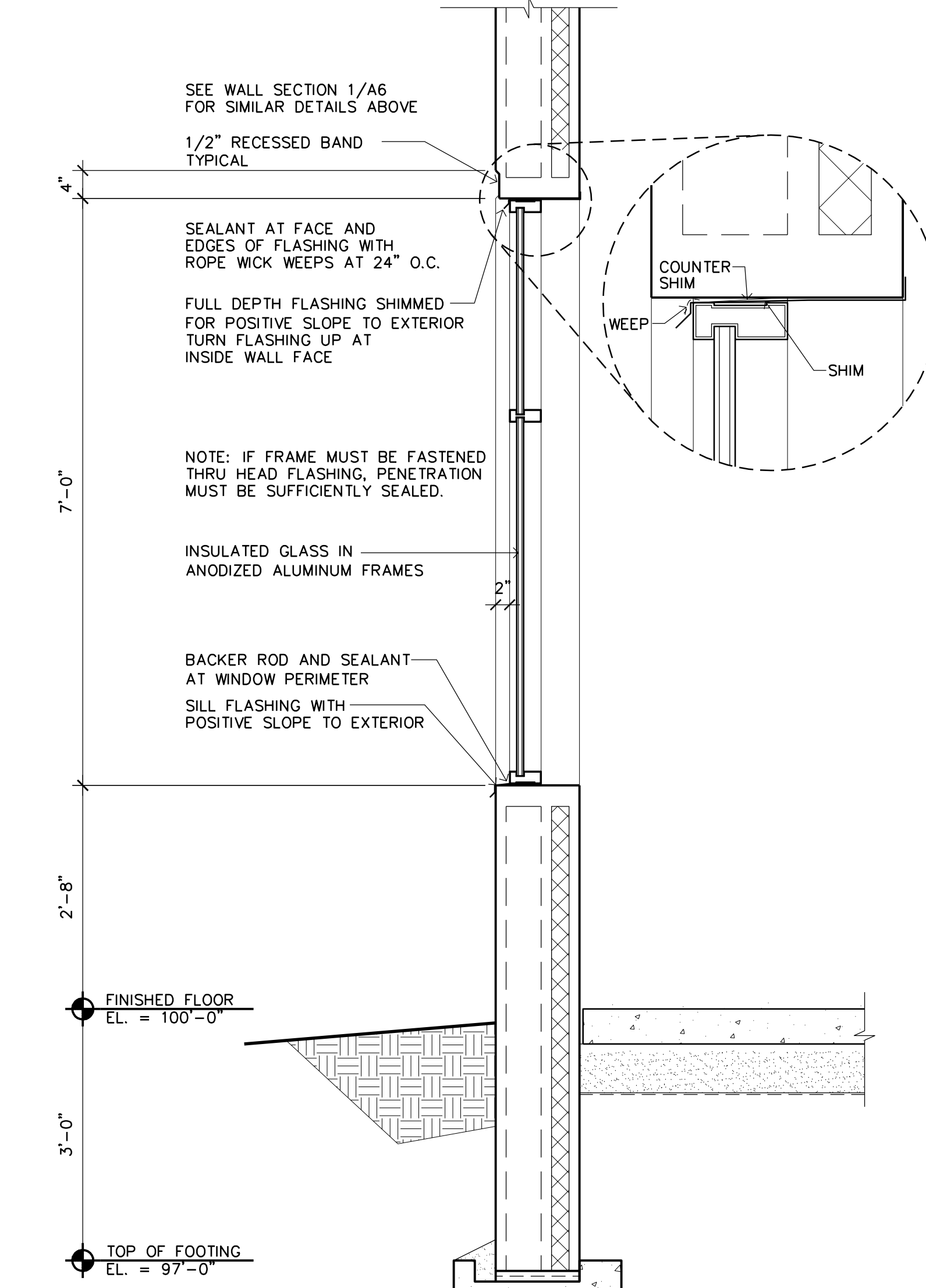




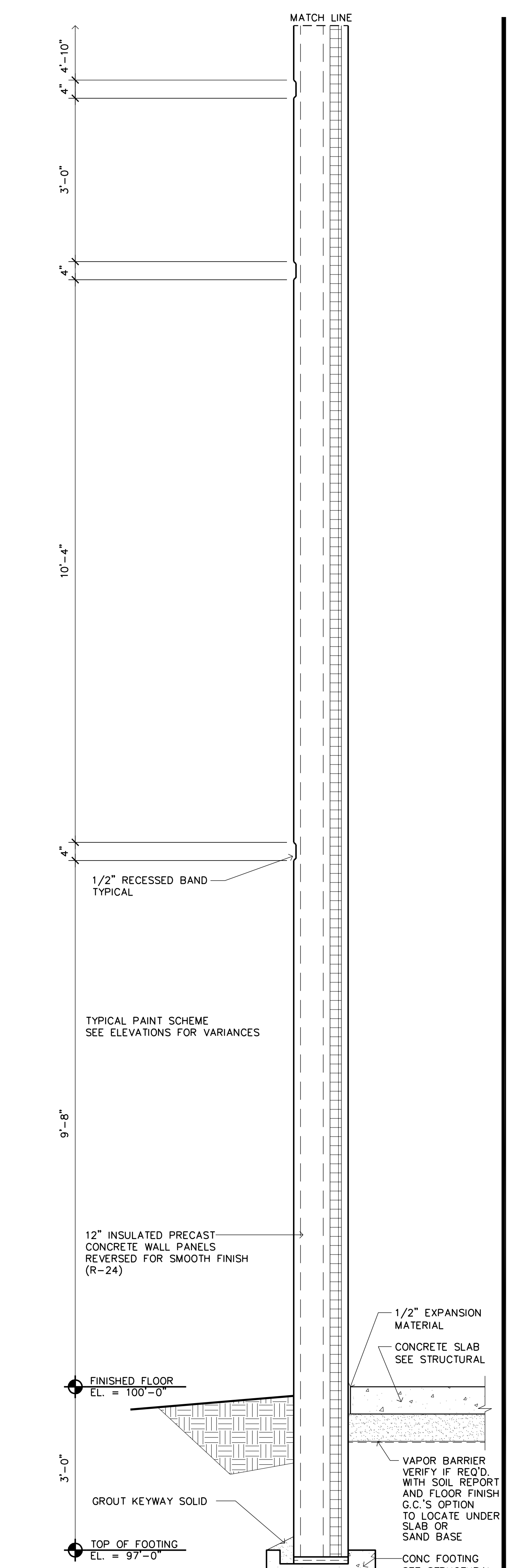
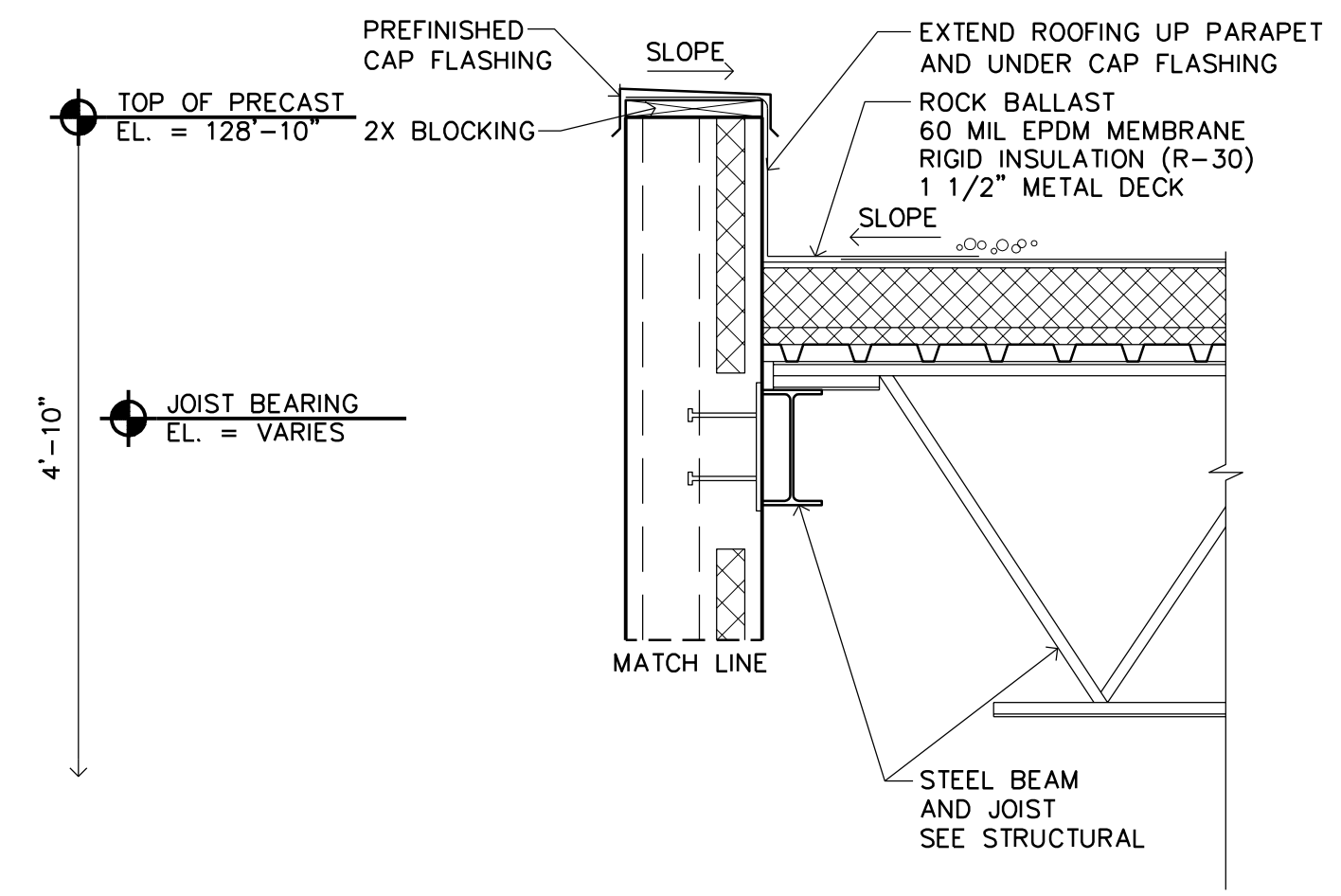
**3** WALL SECTION AT ENTRY  
A6 SCALE: 3/4" = 1'-0"



**4** WALL SECTION AT CANOPY  
A6 SCALE: 3/4" = 1'-0"



**2** WALL SECTION AT WINDOW  
A6 SCALE: 3/4" = 1'-0"



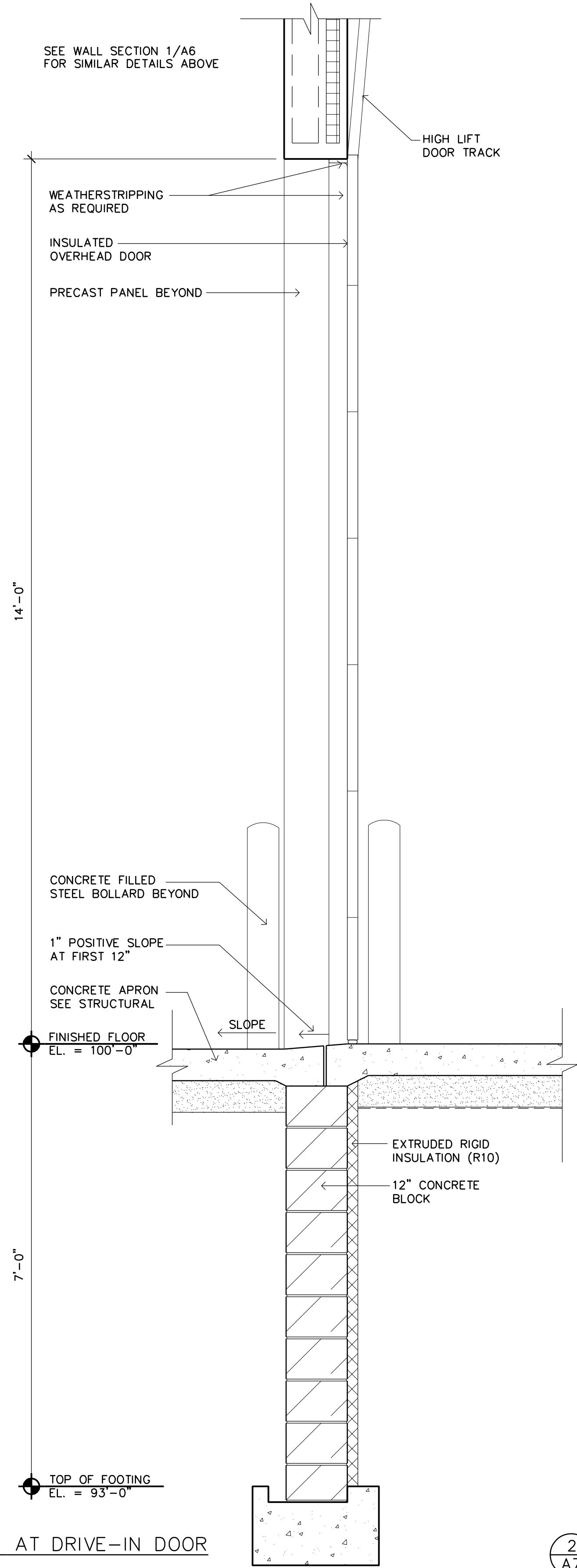
**1** TYPICAL WALL SECTION  
A6 SCALE: 3/4" = 1'-0"

**BUNKER LAKE INDUSTRIAL PARK BUILDING #3**  
Ramsey, Minnesota

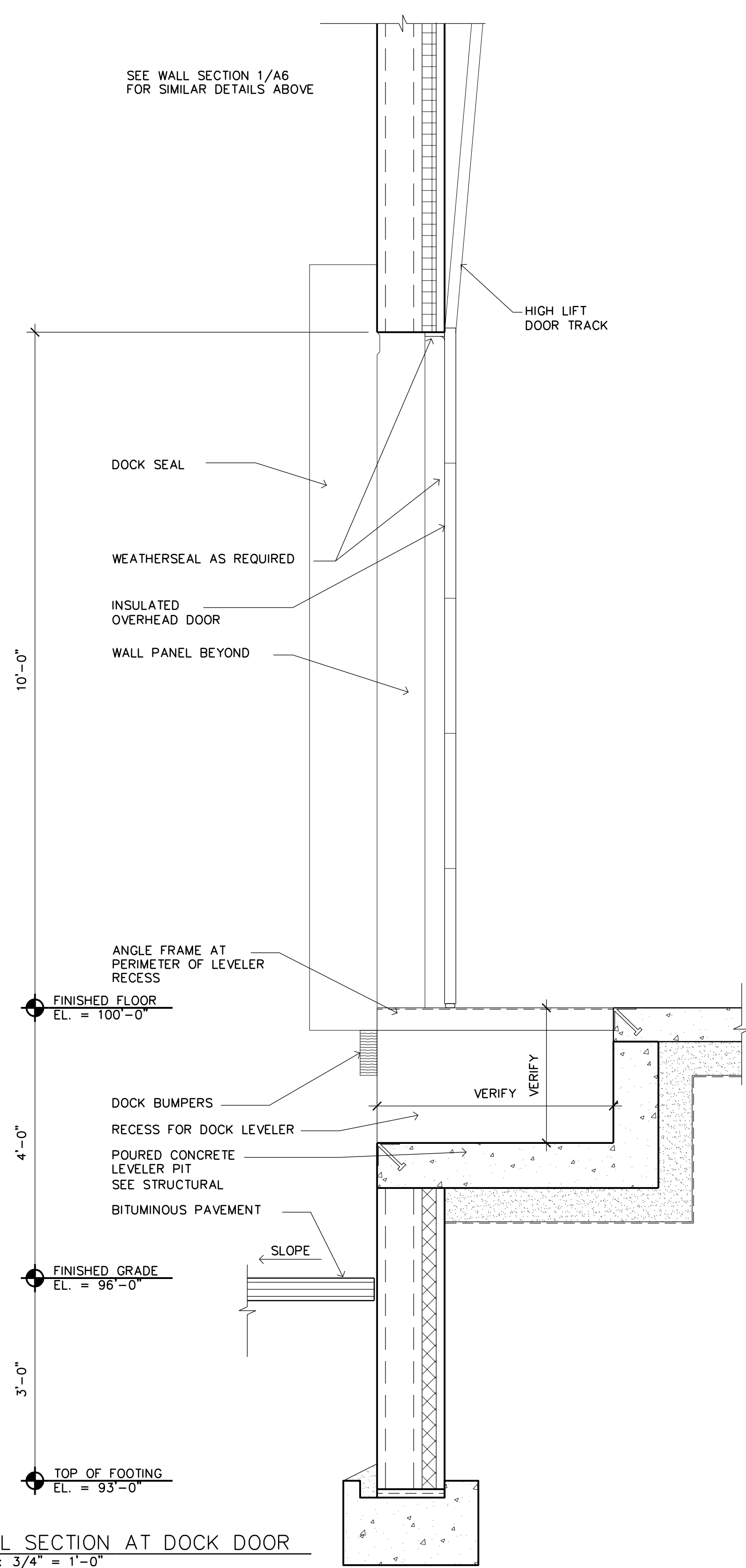
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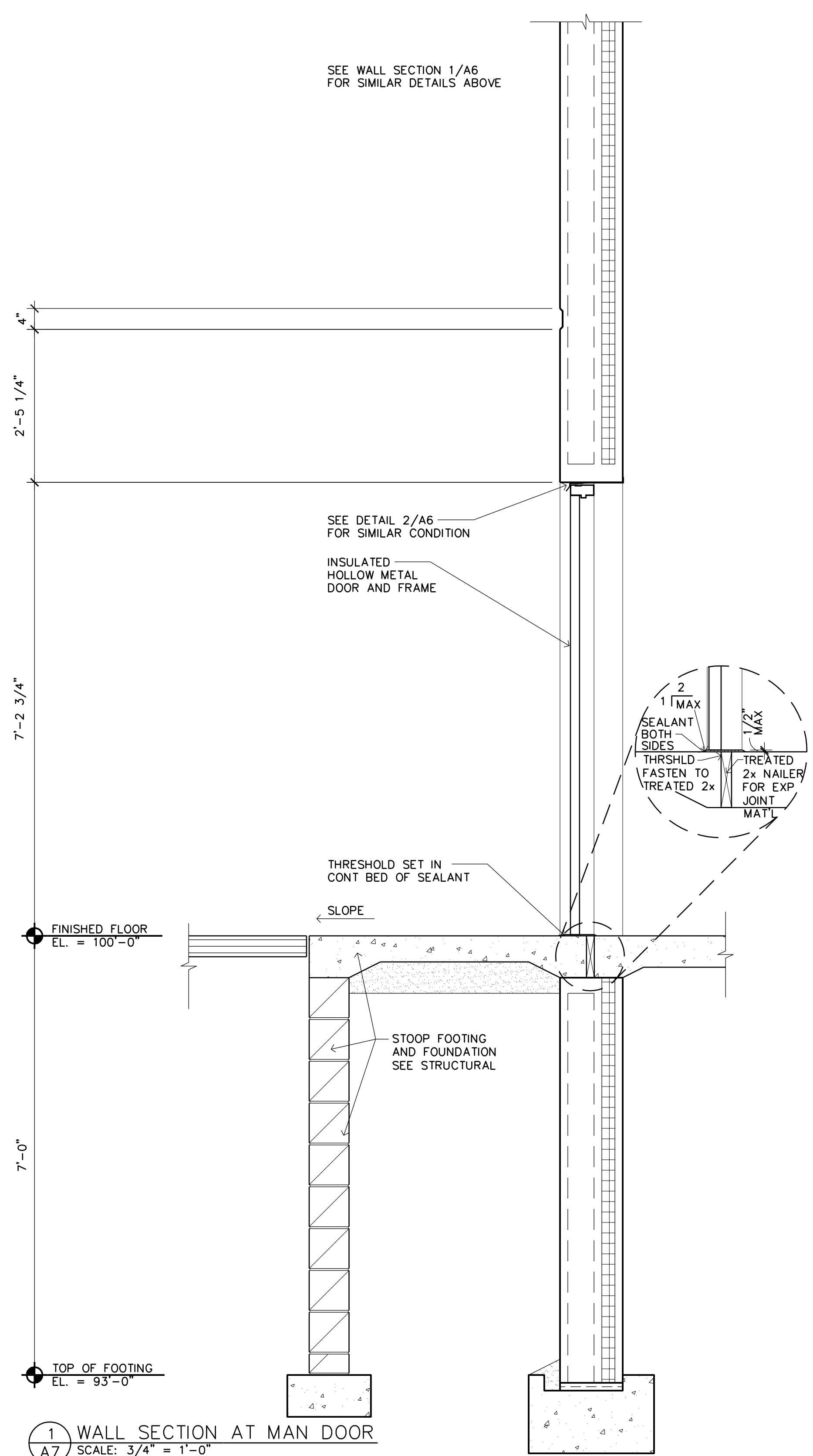
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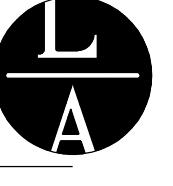
3 WALL SECTION AT DRIVE-IN DOOR  
A7 SCALE: 3/4" = 1'-0"



2 WALL SECTION AT DOCK DOOR  
A7 SCALE: 3/4" = 1'-0"



1 WALL SECTION AT MAN DOOR  
A7 SCALE: 3/4" = 1'-0"



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Project Designer: JAMES B  
Drawn By: JRB  
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Revisions

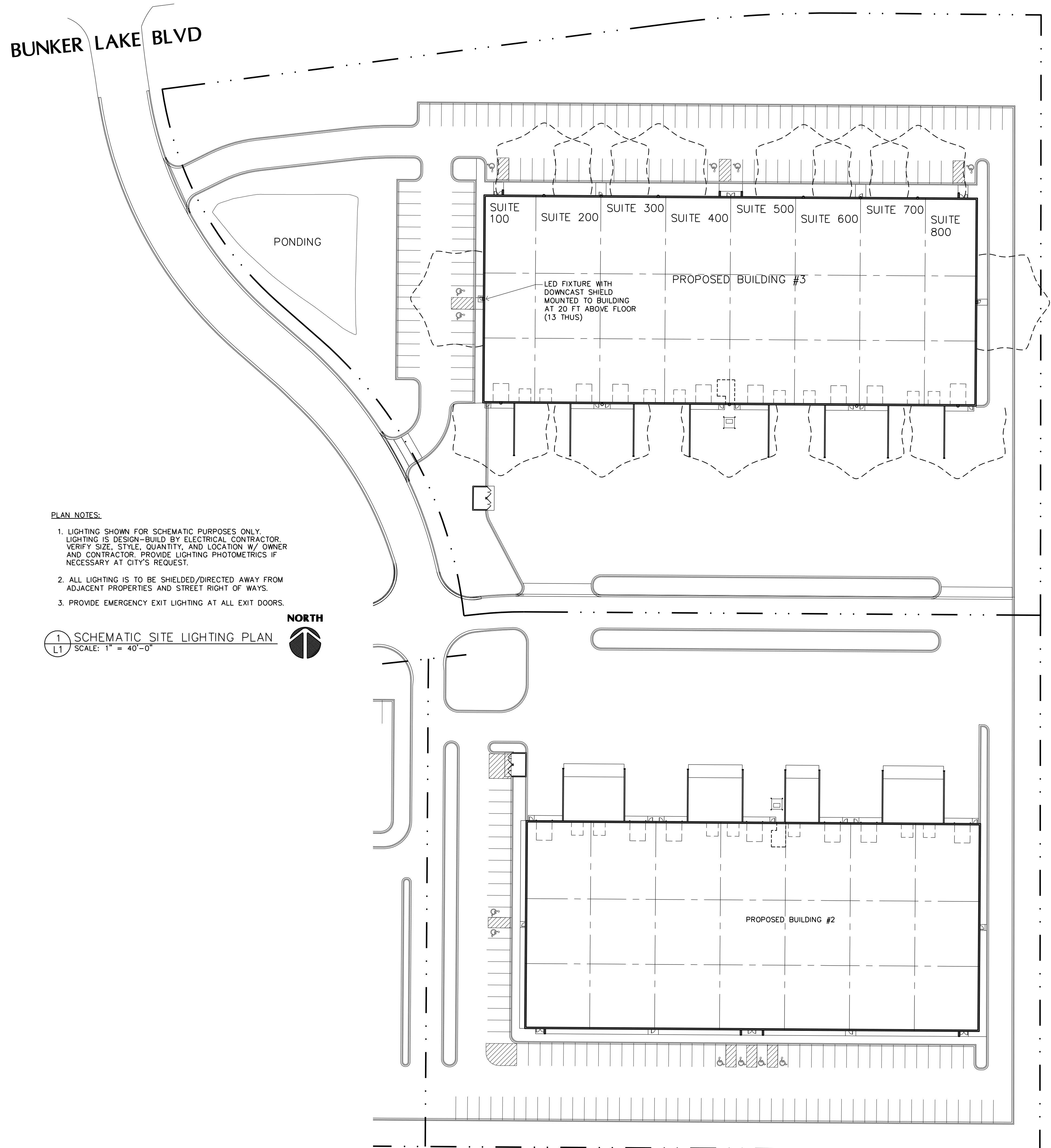
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**WALL SECTIONS**

Sheet Number

**A7**

Project No. 180510-1



**PLAN NOTES:**

1. LIGHTING SHOWN FOR SCHEMATIC PURPOSES ONLY. LIGHTING IS DESIGN-BUILD BY ELECTRICAL CONTRACTOR. VERIFY SIZE, STYLE, QUANTITY, AND LOCATION W/ OWNER AND CONTRACTOR. PROVIDE LIGHTING PHOTOMETRICS IF NECESSARY AT CITY'S REQUEST.
2. ALL LIGHTING IS TO BE SHIELDED/DIRECTED AWAY FROM ADJACENT PROPERTIES AND STREET RIGHT OF WAYS.
3. PROVIDE EMERGENCY EXIT LIGHTING AT ALL EXIT DOORS.

1 SCHEMATIC SITE LIGHTING PLAN  
L1 SCALE: 1" = 40'-0"



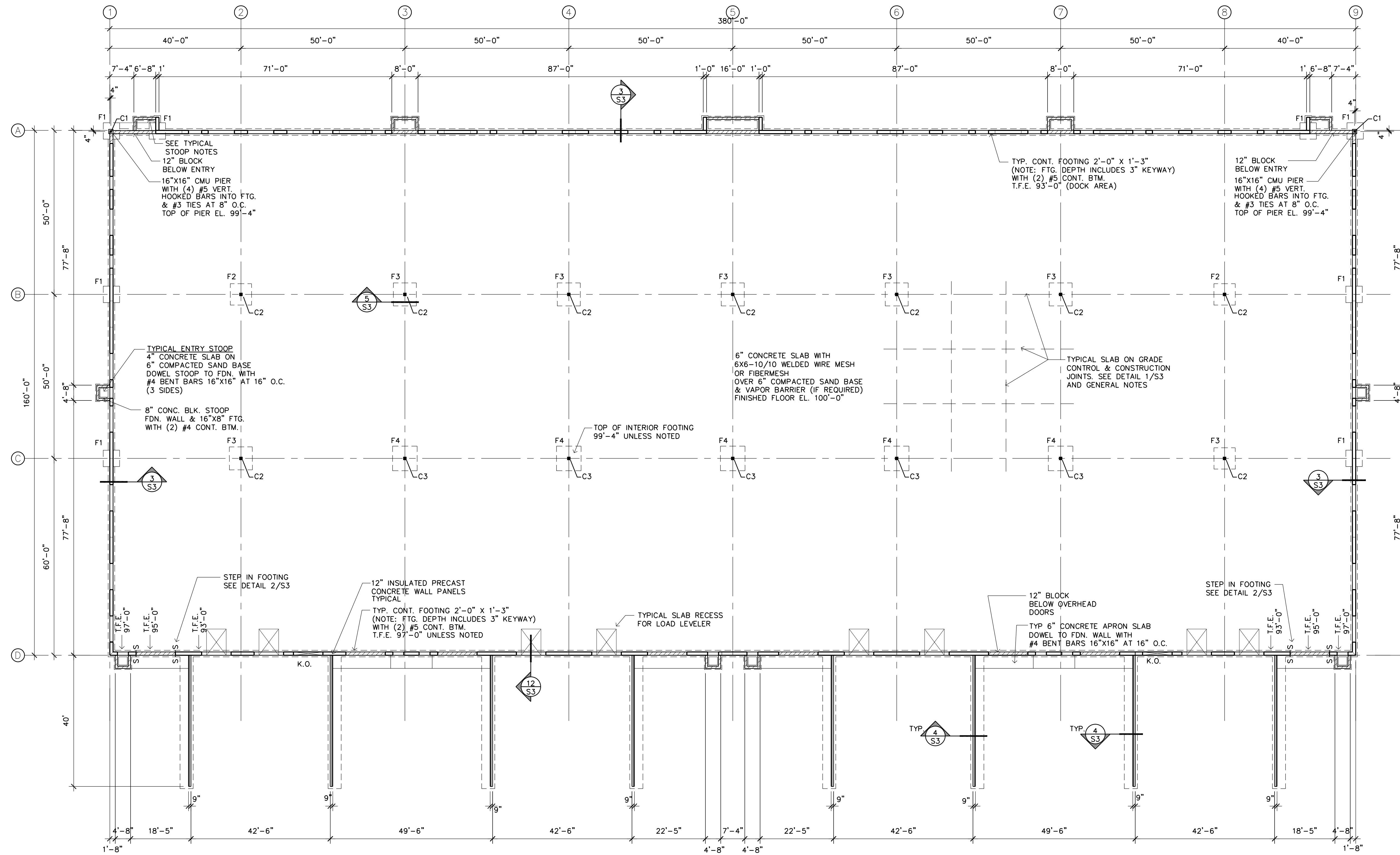
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BUILDING #3  
Ramsey, Minnesota**

Drawn By: JRB	
Checked By: LL	
Revisions	
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**SCHEMATIC  
SITE LIGHTING  
PLAN**

Sheet Number

**L1**



1 FOOTING AND FOUNDATION PLAN  
 S1 SCALE: 1/16" = 1'-0"



SPREAD FOOTING SCHEDULE		
MARK	SIZE	REINFORCING EACH WAY
F1	5'-0"x5'-0"x12"	(6) #5 EACH WAY BOTTOM
F2	6'-6"x6'-6"x17"	(6) #6 EACH WAY BOTTOM
F3	7'-0"x7'-0"x18"	(7) #6 EACH WAY BOTTOM
F4	7'-6"x7'-6"x19"	(8) #6 EACH WAY BOTTOM

FOOTINGS DESIGNED FOR SOIL BEARING PRESSURE OF 3500 PSF PER GEOTECHNICAL REPORT RECOMMENDATION

STEEL COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	ANCHOR BOLT
C1	HSS 6X6X1/4	3/4"x14"x1'-2"	(4) 3/4" DIA BENT ANCHOR BOLTS
C2	HSS 10X10X1/4	1"x18"x1'-6"	(4) 3/4" DIA BENT ANCHOR BOLTS
C3	HSS 10X10X5/16	1"x18"x1'-6"	(4) 3/4" DIA BENT ANCHOR BOLTS

ENGINEER CERTIFICATION:  
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Signature: *B. Stroh*  
 BERNIE STROH  
 LICENSE NO. 7/27/18  
 DATE

**BUNKER LAKE INDUSTRIAL PARK  
 BUILDING #3  
 Ramsey, Minnesota**

Structural Engineer: B. STROH  
 Drawn By: JRB  
 Checked By: BS

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7/13/18	PRELIMINARY
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**FOOTING AND FOUNDATION PLAN**

Sheet Number

**S1**

**BUNKER LAKE INDUSTRIAL PARK  
BUILDING #3  
Ramsey, Minnesota**

Structural Engineer: B. STROH

Drawn By: JRB

Checked By: BS

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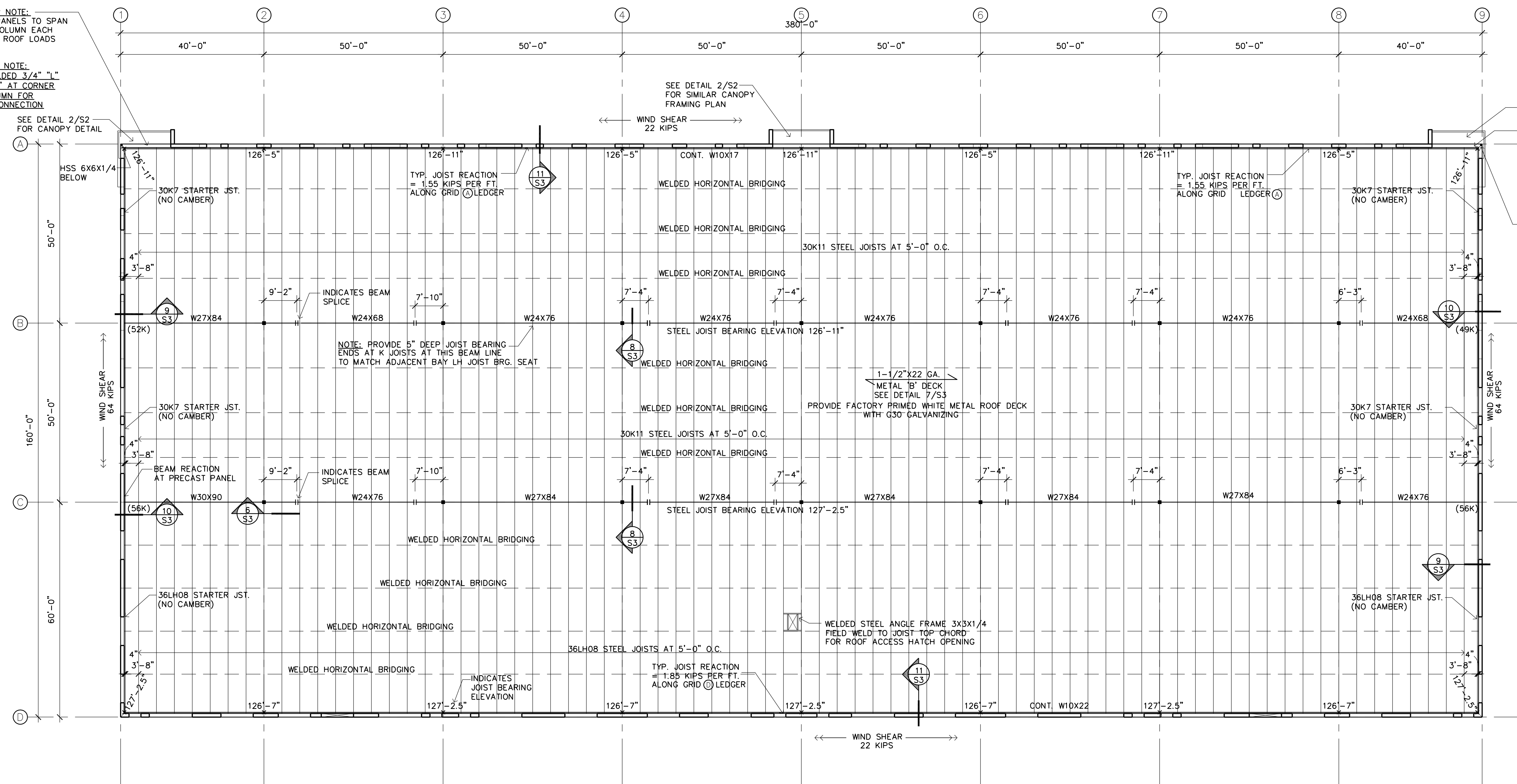
**ROOF FRAMING  
PLAN**

Sheet Number

**S2**

PRECAST DESIGNER NOTE:  
DESIGN PRECAST PANELS TO SPAN  
TO CORNER HSS COLUMN EACH  
WAY WITH TYPICAL ROOF LOADS  
AS INDICATED.

STEEL FABRICATOR NOTE:  
PROVIDE SHOP WELDED 3/4" "L"  
CAP PLATE 16"x16" AT CORNER  
HSS 6x6x1/4 COLUMN FOR  
PRECAST PANEL CONNECTION

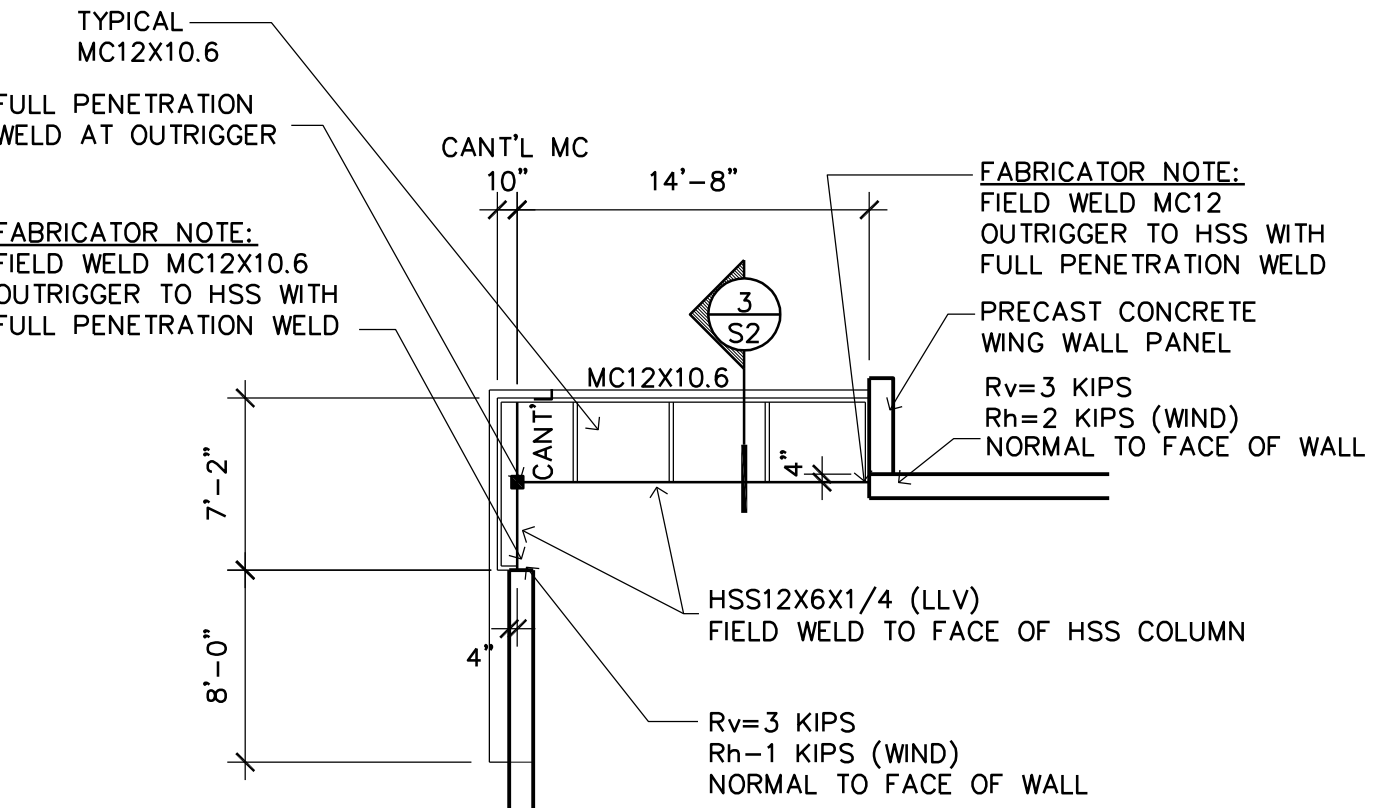


SEE DETAIL 2/S2  
FOR CANOPY DETAIL

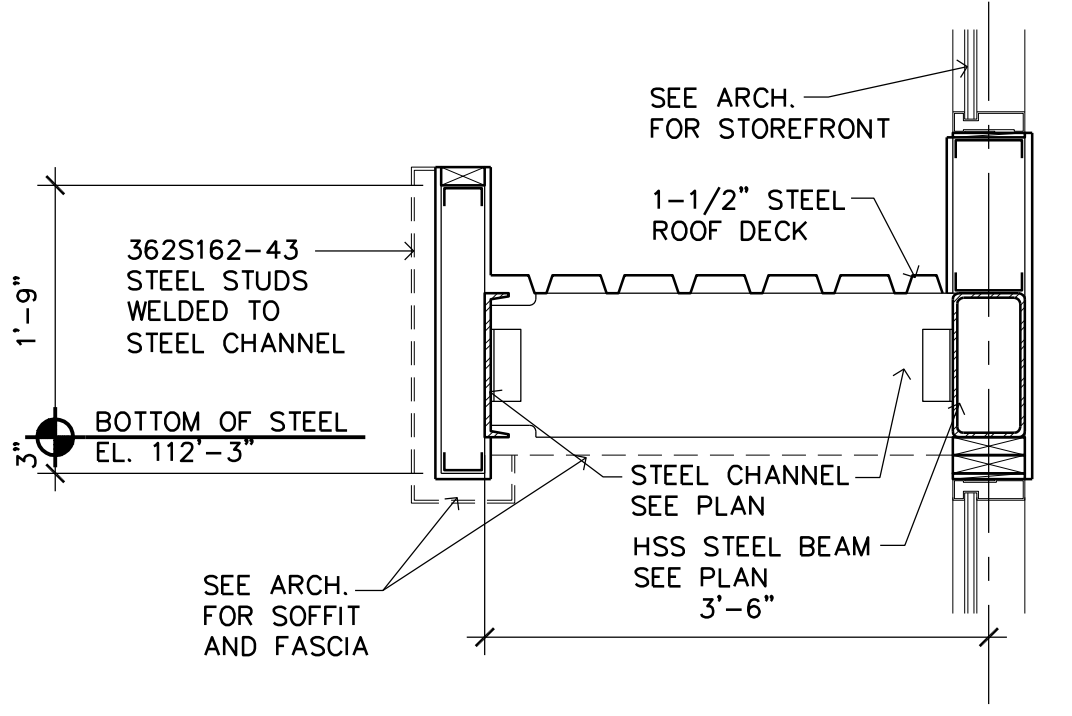
PRECAST DESIGNER NOTE:  
DESIGN PRECAST PANELS TO SPAN  
TO CORNER COLUMN EACH WAY  
WITH TYPICAL ROOF LOADS AS  
INDICATED.

STEEL FABRICATOR NOTE:  
PROVIDE SHOP WELDED 3/4" "L"  
CAP PLATE 16"x16" AT CORNER  
HSS 6x6x1/4 COLUMN FOR  
PRECAST PANEL CONNECTION.

HSS  
6x6x1/4  
BELOW



**2** ROOF CANOPY FRAMING PLAN  
SCALE: 1/8" = 1'-0"



**3** ROOF CANOPY SECTION  
SCALE: 3/4" = 1'-0"

**1** ROOF FRAMING PLAN  
SCALE: 1/16" = 1'-0"



ROOF PLAN NOTES:  
1. CANTILEVER BEAM SPLICES HAVE BEEN OPTIMIZED FOR STEEL  
SIZES, STOCK LENGTHS AND STRUCTURAL DESIGN LOADS.  
STEEL FABRICATOR MAY SUBMIT ALTERNATE SPLICE  
LOCATIONS FOR CONSIDERATION BY STRUCTURAL ENGINEER  
OF RECORD.

**GENERAL STRUCTURAL NOTES:**

- BUILDING CODE:**  
STRUCTURAL DESIGN CONFORMS TO THE REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE (IBC) & MINNESOTA STATE BLDG. CODE (MSBC 2015)
- DESIGN LOADS:**
  - WIND LOAD  
BASIC WIND SPEED (3 SECOND GUST)..... 90 MPH (115 MPH ULT.)
  - WIND IMPORTANCE FACTOR, I..... 1.0
  - EXPOSURE..... B
  - INTERNAL PRESSURE COEFFICIENTS, GC..... ±0.18 pi
  - ROOF LOAD  
LIVE LOAD (L.L.)..... 35 PSF \*\*
  - DEAD LOAD (DESIGN D.L.)..... 20 PSF
- ROOF SNOW LOAD:**
  - GROUND SNOW LOAD, Pg..... 50 PSF
  - FLAT ROOF SNOW LOAD, Pf..... 35 PSF
  - SNOW EXPOSURE FACTOR, Ce..... 1.0
  - SNOW LOAD IMPORTANCE FACTOR, I..... 1.0
  - THERMAL FACTOR, Ct..... 1.0

- \*\* PLUS SNOW ACCUMULATION AS REQUIRED BY IBC, CHAPTER 16, SECTION 1608.
- COORDINATION:**
- STRUCTURAL MEMBERS INCLUDING SLABS, BEAMS, JOISTS, COLUMNS AND WALLS ARE DESIGNED FOR "IN PLACE LOADS" CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.

- FOUNDATIONS:**
- FOOTINGS WERE DESIGNED FOR A MAXIMUM SOIL BEARING PRESSURE OF 3500 PSF PER GEOTECHNICAL REPORT. FIELD VERIFY PRIOR TO THE CONSTRUCTION OF THE FOOTINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER. LOWER THE EXISTING FOOTING ELEVATIONS SHOWN IF NECESSARY TO OBTAIN THE REQUIRED BEARING PRESSURE.

- CONCRETE:**
- ALL CONCRETE SHALL BE NORMAL WEIGHT (150 PCF.) MINIMUM 28 DAY COMPRESSIVE STRENGTH, AS SPECIFIED BELOW:  
FOOTINGS AND FOUNDATION WALLS.....3000 PSI.  
SLAB ON GRADE.....4000 PSI.
  - PROVIDE 3" CLEAR COVER ON BOTTOM AND SIDES FOR FOOTING REINFORCING.
  - MAX. DISTANCE BETWEEN SLAB CONTROL OR CONSTRUCTION JOINTS SHALL NOT EXCEED 15'-0"
  - EXCEPT WHERE OTHERWISE SHOWN, SLABS ON GRADE SHALL BE REINFORCED WITH 6X6-10/10 WELDED WIRE MESH OR FIBERMESH.
  - EXCEPT WHERE OTHERWISE SHOWN, SLABS ON GRADE SHALL BE 6" THICK CONCRETE.
  - CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS. ALL SLAB CONCRETE SHALL BE 4000 PSI. W. WATER CONTENT RATIO LESS THAN .50 AND PLASTERCIZER ADDED AT JOB SITE.

- STRUCTURAL PRECAST CONCRETE:**
- STRUCTURAL PRECAST CONCRETE MEMBERS AND THEIR CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PCI HANDBOOK FOR PRECAST/PRESTRESSED CONCRETE. PRESTRESSED UNITS SHALL BE DESIGNED TO SUPPORT THE DESIGN LOADS AS INDICATED.
  - PRECAST CONCRETE FABRICATOR SHALL FURNISH ALL LOOSE CLIP ANGLES, INSERTS AND WELD PLATES IN PRECAST AS NECESSARY FOR THE PROPER INSTALLATION OF THE PRECAST MEMBERS.
  - ALL HEADERS AT OPENINGS IN PRECAST TO BE DESIGNED AND FURNISHED BY PRECAST SUPPLIER.

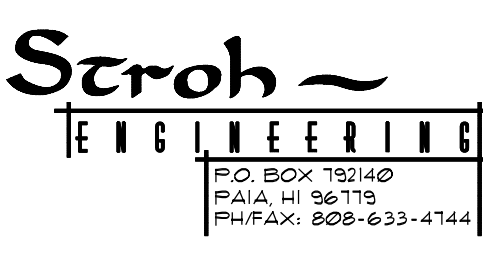
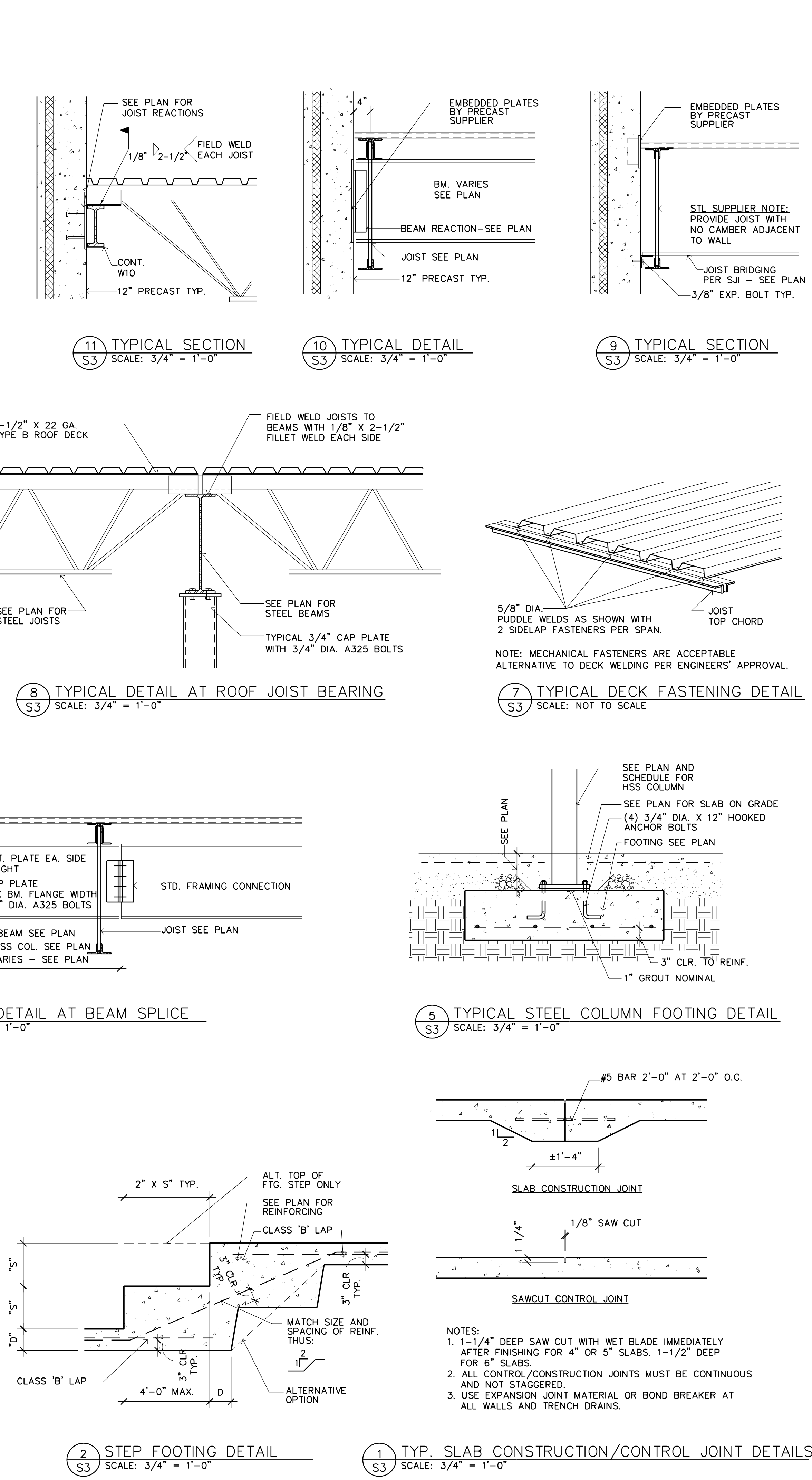
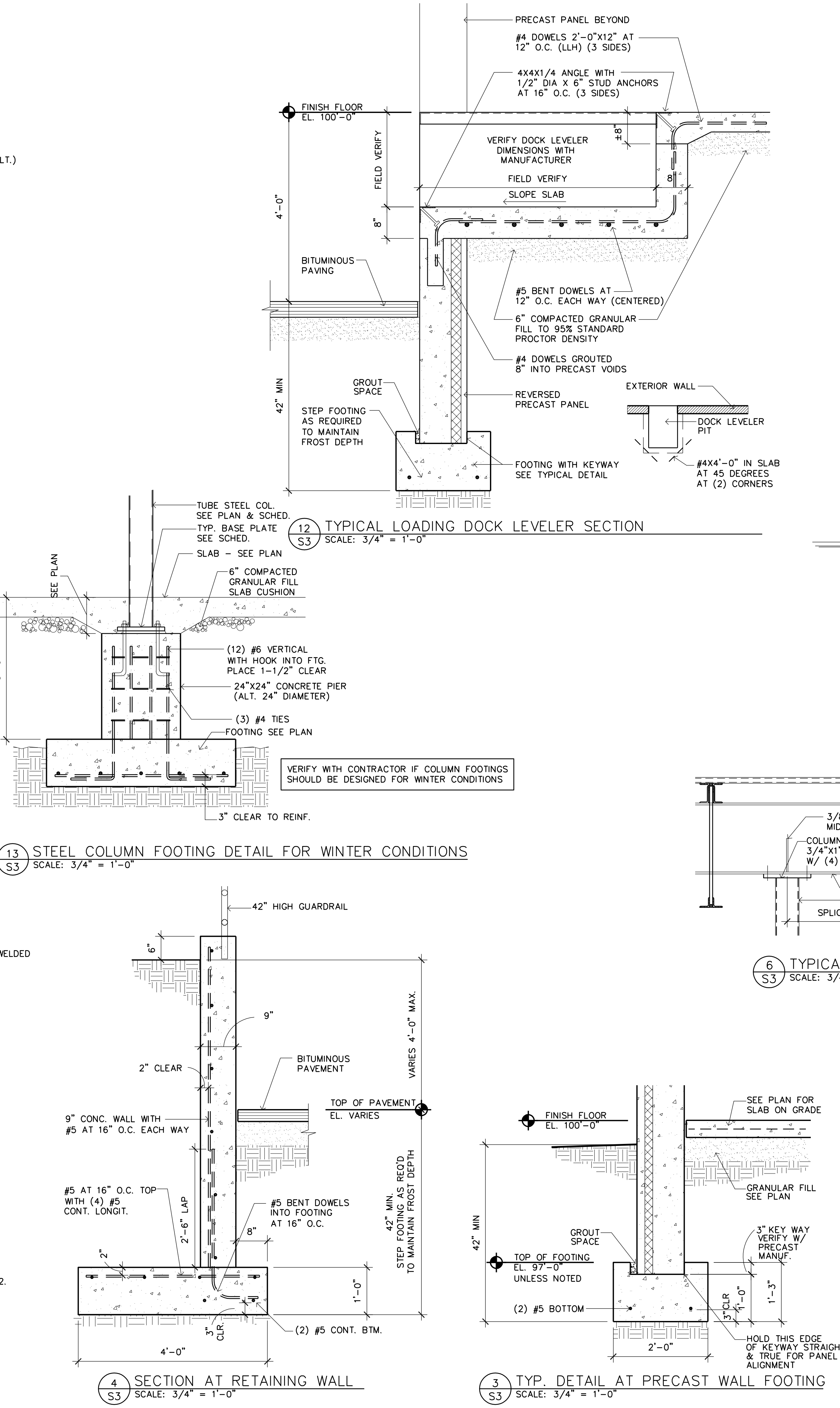
- REINFORCING STEEL:**
- REINFORCING STEEL SHALL CONFORM TO ASTM (GRADE 60).
  - WELDED WIRE FABRIC SHALL BE NEW BILLET STEEL, COLD DRAWN AND CONFORMING TO ASTM A185 AND A82.
  - BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING BARS AND MESH SHALL BE IN ACCORDANCE WITH THE ACI CODE AND DETAILING MANUAL.
  - UNLESS NOTED OTHERWISE, ALL REINFORCING LAP SPLICES SHALL BE 40 BAR DIAMETERS OR 12", WHICHEVER IS GREATER.

- STEEL JOISTS:**
- ALL JOISTS SHALL COMPLY WITH THE STEEL JOIST INSTITUTE RECOMMENDED "CODE OF STANDARD PRACTICE FOR STEEL JOISTS FOR FABRICATION AND ERECTION"
  - ALL K SERIES AND LH SERIES JOISTS SHALL HAVE HORIZONTAL WELDED BRIDGING AS SHOWN ON PLANS OR PER SJI RECOMMENDATIONS.
  - FOR DRAINAGE, STEEL JOISTS HAVE BEEN SIZED FOR PONDING CONSIDERATION PER IBC SEC. 1611

- STEEL DECK:**
- STEEL ROOF DECK SHALL BE 1-1/2" X 22 GA. "TYPE B-WIDE RIB DECK" MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.
  - STEEL DECK SHALL BE WELDED TO SUPPORTING MEMBERS WITH 5/8" DIA. PUDDLE WELDS AT 12" O.C. SIDELAP CONNECTIONS SHALL BE WELDED OR FASTENED WITH #12 TEKS SELF-DRILLING, SELF-TAPPING SCREWS (2 FASTENERS MINIMUM EQUALLY SPACED PER SIDELAP BETWEEN JOISTS).

- MASONRY:**
- CONCRETE MASONRY UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C90.
  - MINIMUM COMPRESSIVE STRENGTH OF MSY. UNITS F'm 1500 PSI.
  - GROUT FOR HOLLOW MASONRY UNITS SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. AND SHALL BE NORMAL WEIGHT PEA GRAVEL CONCRETE.
  - ALL MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING FABRICATED WITH 9 GAUGE SIDE RODS. THIS REINFORCING SHALL BE LOCATED AT EVERY OTHER COURSE.
  - ALL VERTICAL REINFORCING SHALL BE CONTINUOUS WITH 40 BAR DIAMETER LAPS AT SPLICES UNLESS NOTED.

- STRUCTURAL STEEL:**
- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION"
  - ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A572 OR A992. STEEL PIPE SHALL CONFORM TO ASTM A501 OR ASTM A53. STEEL TUBES SHALL CONFORM TO ASTM A500 - GRADE B.
  - ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES AND SHALL CONFORM TO AWS STANDARDS.
  - ALL BOLTS SHALL BE 3/4" DIAMETER, ASTM A325.



**ENGINEER CERTIFICATION:**  
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.

Signature: *B. Stroh*  
Print Name: **BERNIE STROH**  
License No: 7/27/18  
Date: 7/27/18

**BUNKER LAKE INDUSTRIAL PARK BUILDING #3**  
Ramsey, Minnesota

Structural Engineer: B. STROH  
Drawn By: JRB  
Checked By: BS

Revisions	DATE	DESCRIPTION
7/13/18	PRELIMINARY	
7/27/18	ISSUE FOR PERMIT	

**STRUCTURAL DETAILS AND GENERAL NOTES**  
Sheet Number

