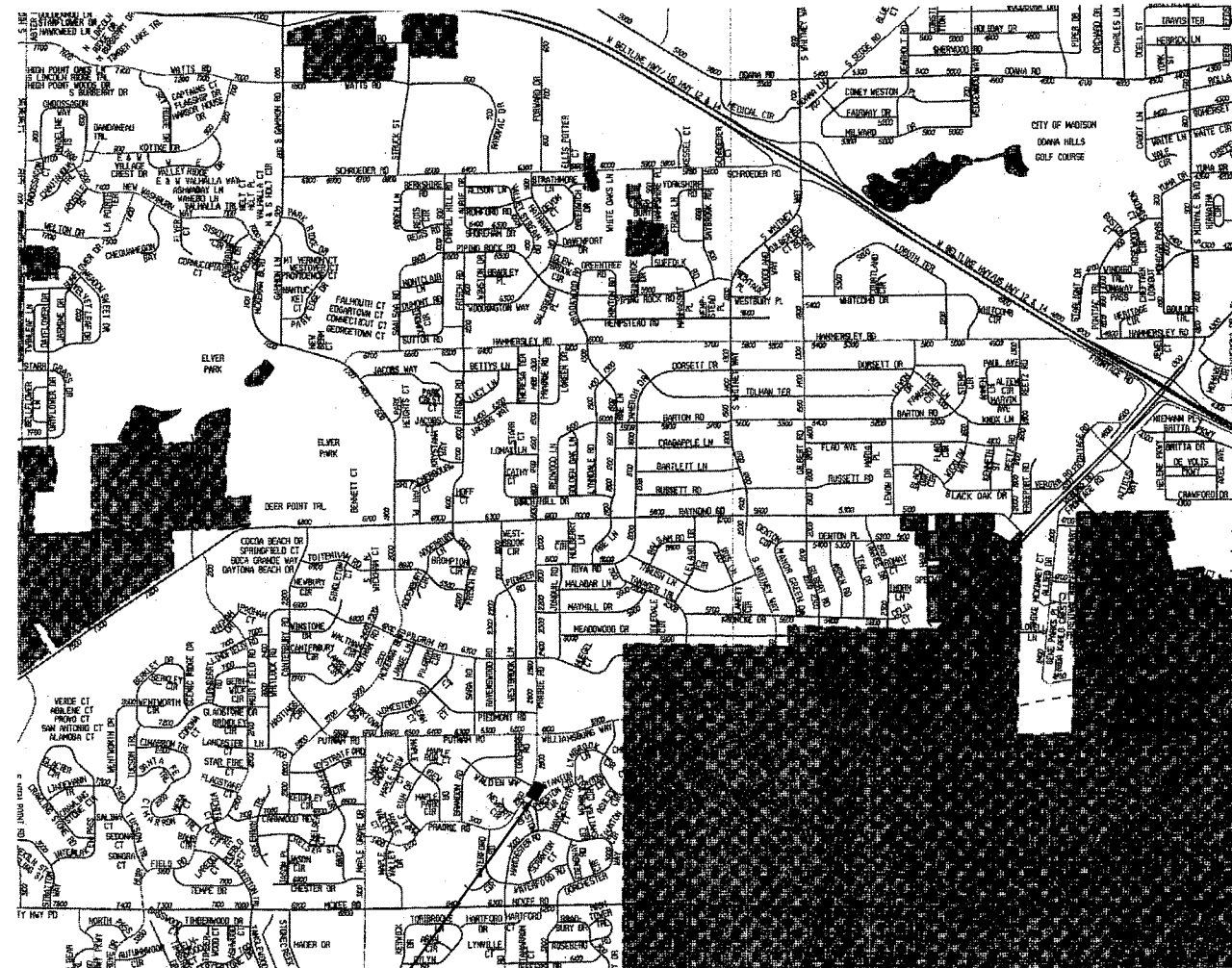


# MADISON WATER UTILITY

## MADISON, WISCONSIN

### UNIT WELL 20

### PUMP AND MCC UPGRADES



PROJECT LOCATION  
2829 PRAIRIE ROAD

VICINITY MAP



Madison, Wisconsin  
608.277.1230

Burlington, Wisconsin  
262.763.7834

Crystal Lake, Illinois  
815.459.1260

Grayslake, Illinois  
847.223.5088

Plainfield, Illinois  
815.609.7425

Mokena, Illinois  
708.478.2090

DeKalb, Illinois  
815.787.3111

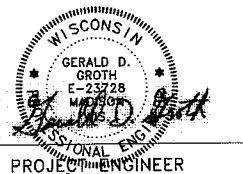
Chicago, Illinois  
312.578.0050

Itasca, Illinois  
630.773.1870



CALL DIGGERS HOTLINE  
1-800-242-8511  
TOLL FREE

WIS. STATUTE 182.0175 (1974)  
REQUIRES MIN. OF 3 WORK DAYS  
NOTICE BEFORE YOU EXCAVATE.



PROJECT ENGINEER

4/17/13

BAXTER & WOODMAN, INC.  
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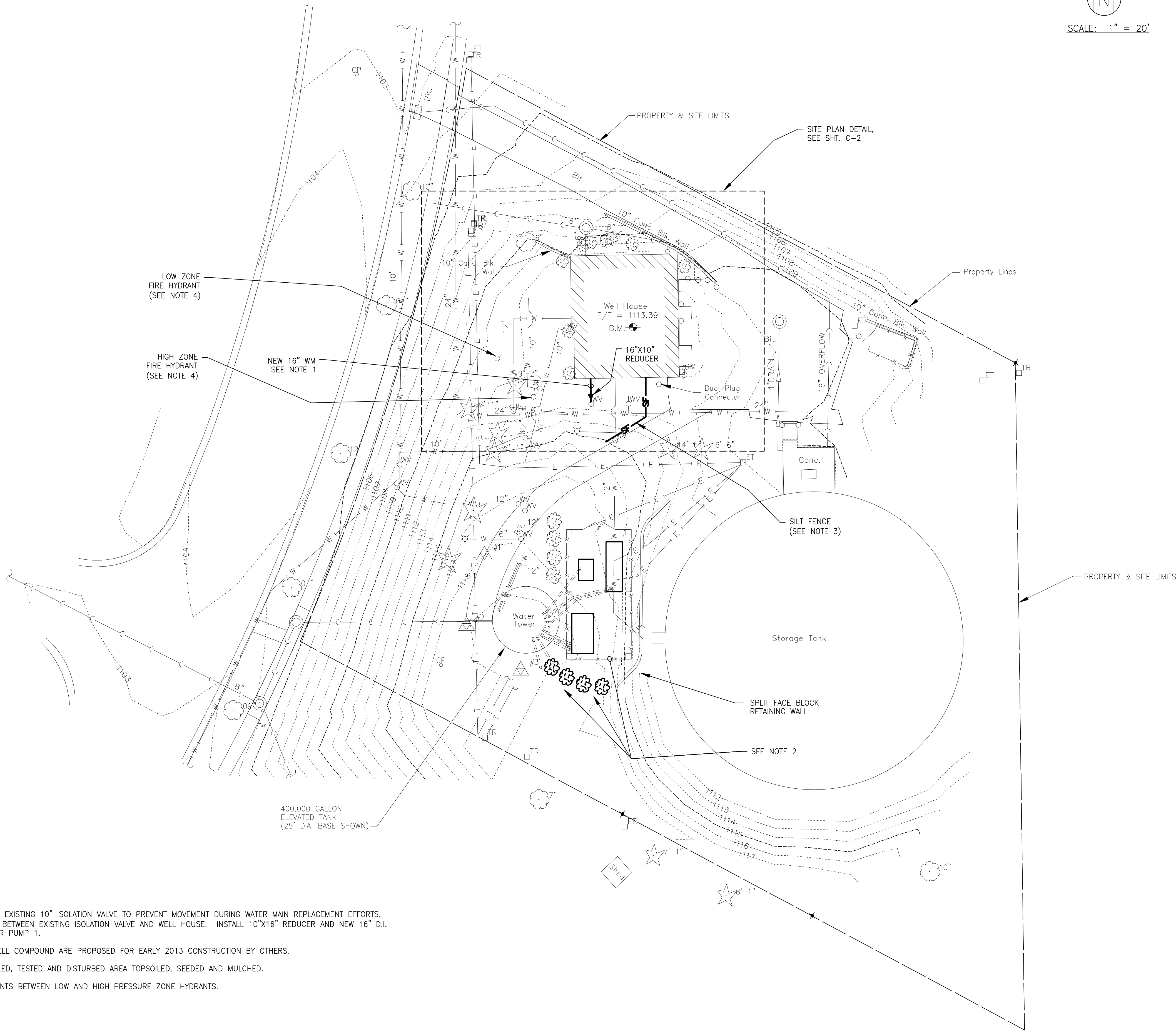
PROJECT NO.: 120581.40 DATE: 4-11-13

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NOTES:

- EXCAVATE TO EXPOSE EXISTING 10" D.I. WATER MAIN. RESTRAIN EXISTING 10" ISOLATION VALVE TO PREVENT MOVEMENT DURING WATER MAIN REPLACEMENT EFFORTS. DISCONNECT AND REMOVE EXISTING 10" BOOSTER SUCTION LINE BETWEEN EXISTING ISOLATION VALVE AND WELL HOUSE. INSTALL 10"x16" REDUCER AND NEW 16" D.I. PIPING INTO WELL HOUSE FOR NEW SUCTION PIPING TO BOOSTER PUMP 1.
- WOOD FENCE, CELL EQUIPMENT AND LANDSCAPING SOUTH OF CELL COMPOUND ARE PROPOSED FOR EARLY 2013 CONSTRUCTION BY OTHERS.
- INSTALL SILT FENCE AND MAINTAIN UNTIL WATER MAIN IS INSTALLED, TESTED AND DISTURBED AREA TOPSOILED, SEEDED AND MULCHED.
- REFER TO SPECIFICATIONS FOR TEMPORARY PUMPING REQUIREMENTS BETWEEN LOW AND HIGH PRESSURE ZONE HYDRANTS.



SCALE: 1" = 20'

BAXTER



WOODMAN

Consulting Engineers

CONSULTANTS

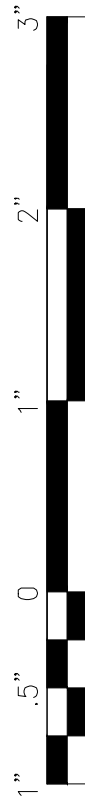
REVISIONS

DESCRIPTION

DATE

NO.

REFER TO EQUIPMENT MANUFACTURER'S SHOP DRAWING



PLAN SHEET DESIGNATION

COVER  
G - GENERAL  
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E - ELECTRICAL  
T - TELECOMMUNICATIONS  
OP - OPERATIONS

PROJECT NO: 120581.40

SCALE: AS NOTED  
DRAWING DATE: 4-11-13  
DESIGNED BY: GDG  
DRAWN BY: TLB  
CHECKED BY: GDG

CLIENT

MADISON WATER UTILITY  
MADISON, WISCONSIN

UNIT WELL 20  
PUMP AND MCC UPGRADES

SHEET TITLE

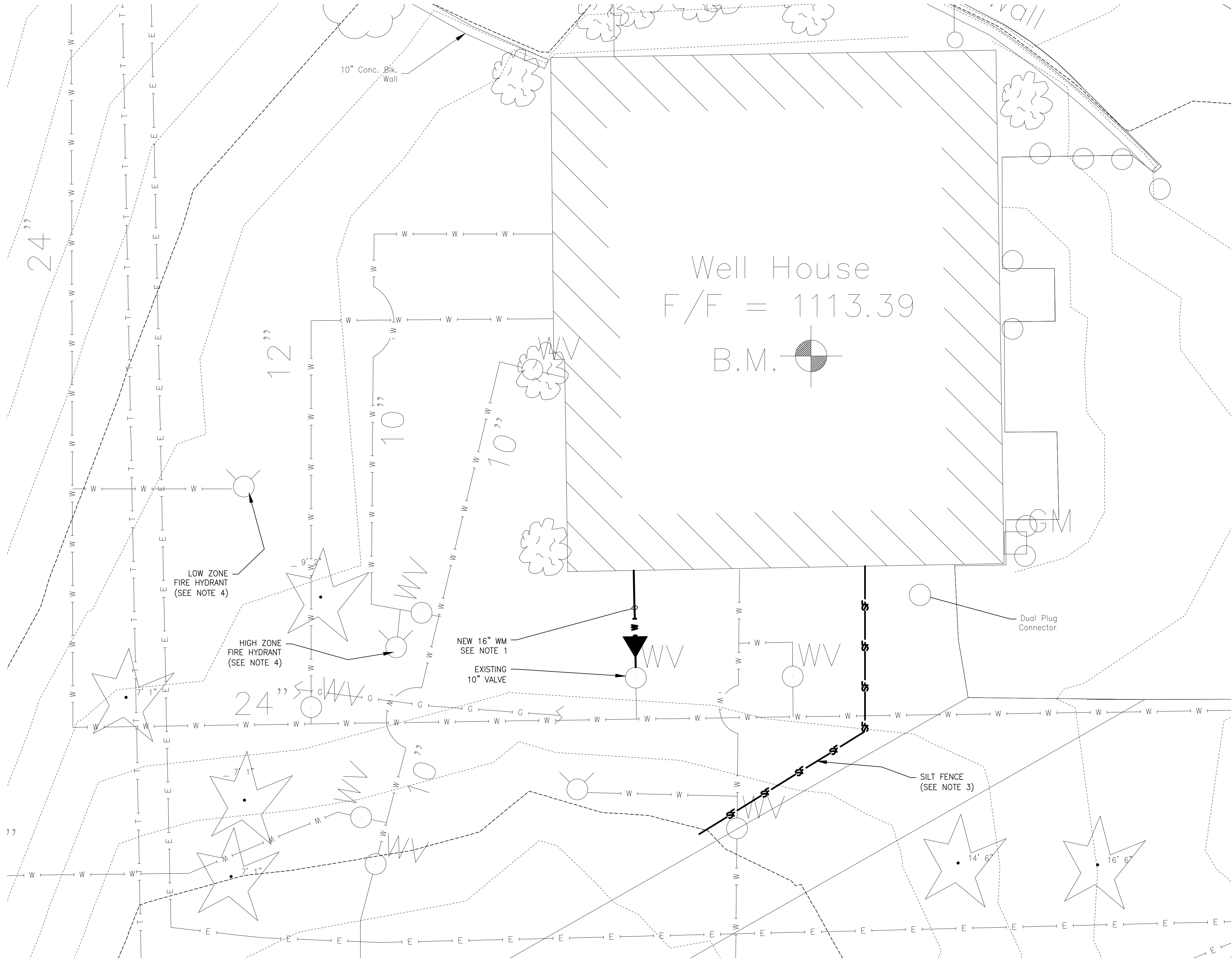
EXISTING SITE PLAN

C-1

I:\BURLINGTON\MADUD\WELL\_20\CADD\DRAWINGS\DWGS\120581\_40-SITE.DWG C-2  
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NOTES:

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SCALE: 1" = 5'

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DRAWING DATE: 4-11-13  
DESIGNED BY: GDG  
DRAWN BY: TLB  
CHECKED BY: GDG

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MADISON WATER UTILITY  
MADISON, WISCONSIN

UNIT WELL 20  
PUMP AND MCC UPGRADES

SHEET TITLE

SITE PLAN DETAIL

C-2

I:\BURLINGTON\MADISON\WELL\_20\CADD\DRAWINGS\DWGS\120581\_40-WELL20-WOD.DWG D-PLAN  
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1

2

3

4

5

D

C

B

A

NOTE:

1. TEMPORARILY RELOCATE AND KEEP PRESSURE TRANSDUCER ACTIVE DURING CONSTRUCTION AND RE-INSTALL IN FINAL LOCATION AFTER NEW PIPING IS INSTALLED.

REMOVE EXISTING 10" M.O. BUTTERFLY VALVE & ACTUATOR, CAP & PLUG ALL AIR & ELECTRIC CONNECTIONS

REMOVE EXISTING 12" WAFER BUTTERFLY VALVE

EXISTING AIR HANDLING UNIT (ABOVE) TO REMAIN

EXISTING WATER SUPPLY TO A.H.U. AND HOSE BIB (TO REMAIN)

INSTALL NEW 3/4" HOSE VALVE CONNECTION

INSTALL TEMPORARY 3/4" HOSE CONNECTION FOR WELL PRE-LUBE

BOOSTER PUMP NO. 2

BOOSTER PUMP NO. 1

REMOVE & SALVAGE PIPING, VALVES & BOOSTER PUMPS W/ MOTORS AND CONCRETE BASES (TYP. FOR 2) SEE SECTIONS FOR DETAILS

REUSE EQUIPMENT SUPPORT BRACKET, SEE NOTE 1

EXISTING DRAIN LINE (TO REMAIN)

CAP EXISTING DRAIN

REMOVE 3/4" WELL PRE-LUBE BELOW FLOOR

INSTALL NEW 3/4" ISOLATION VALVE W/ HOSE CONNECTION

EXISTING WELL PUMP PRE-LUBE PIPING (TO REMAIN)

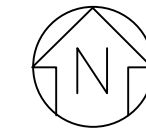
GENERATOR

CHEMICAL ROOM

REPLACE & SALVAGE EXISTING 300 HP WELL PUMP MOTOR

DEMOLITION PLAN

SCALE: 3/8" = 1'-0"



CONSULTANTS

REVISIONS

DESCRIPTION

DATE

NO.

REFER TO EQUIPMENT MANUFACTURER'S SHOP DRAWING



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DESIGNED BY: GDG  
DRAWN BY: TLB  
CHECKED BY: GDG

CLIENT

MADISON WATER UTILITY  
MADISON, WISCONSIN

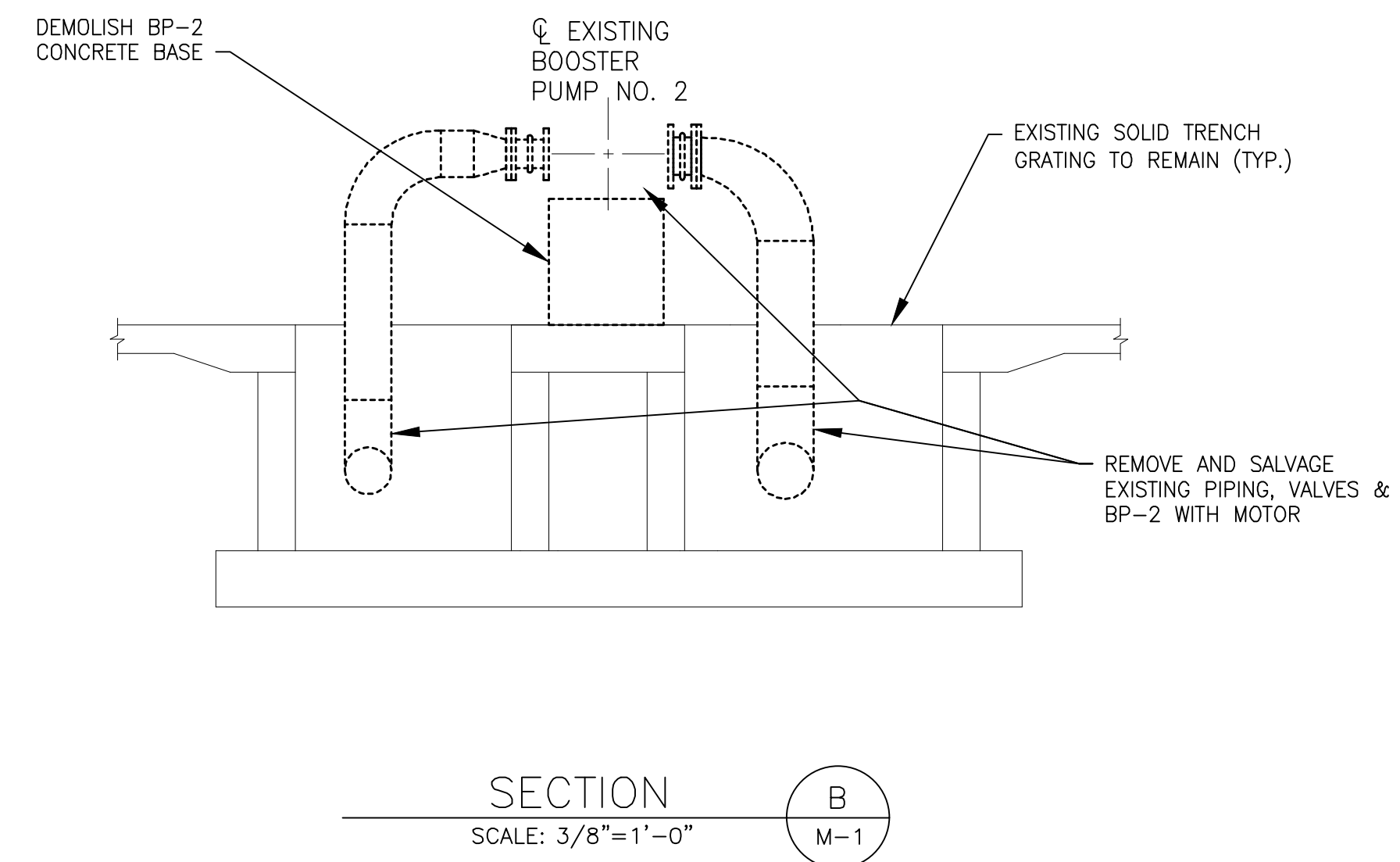
UNIT WELL 20  
PUMP AND MCC UPGRADES

SHEET TITLE

DEMOLITION FLOOR PLAN

M-1





CONSULTANTS

[illegible]

COVER	
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P	PLUMBING
M	MECHANICAL
E	ELECTRICAL
T	TELECOMMUNICATIONS
OP	OPERATIONS

B	PROJECT NO: 120581.40
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SCALE:	AS NOTED
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**MADISON WATER UTILITY  
MADISON, WISCONSIN**

## UNIT WELL 20 PUMP AND MCC UPGRADES

SHEET TITLE

## DEMOLITION SECTIONS

**M-2**

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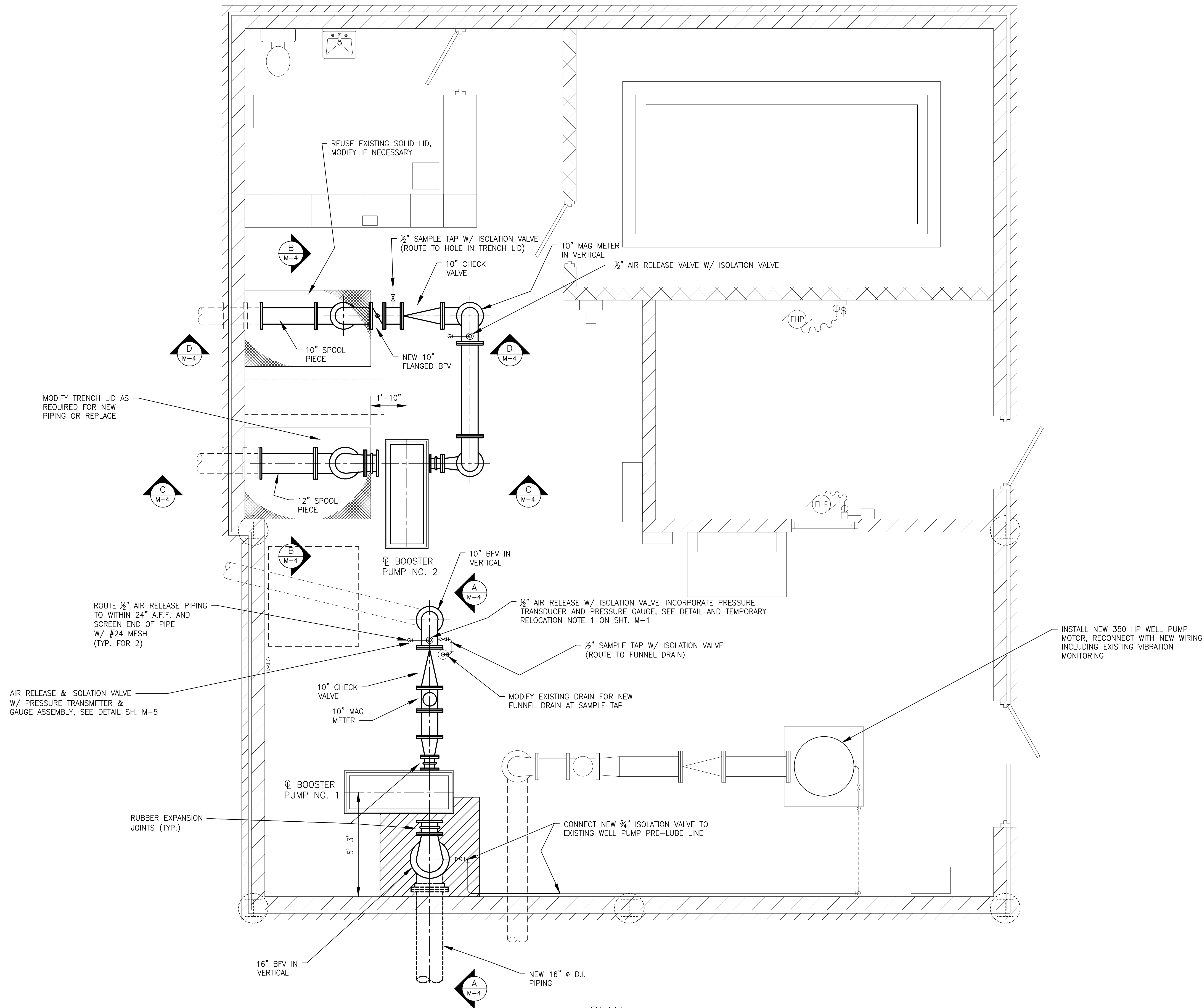
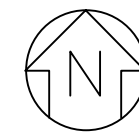
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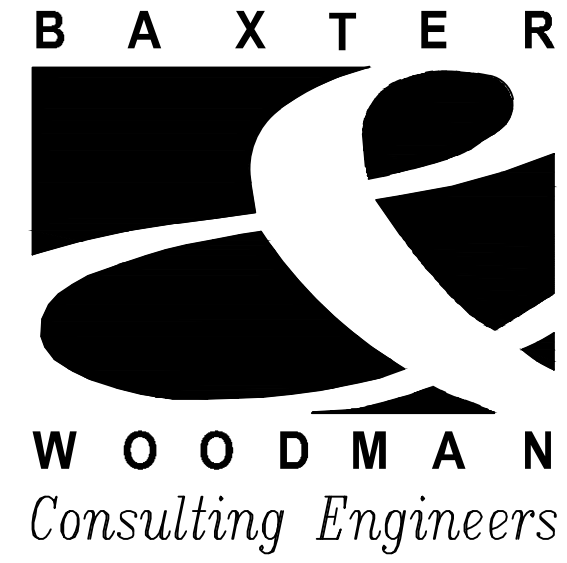
3

4

5



PLAN  
SCALE:  $\frac{3}{8}" = 1'-0"$



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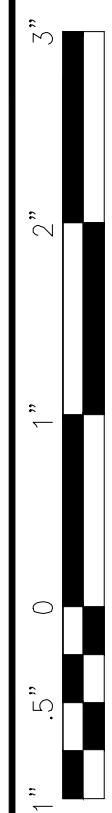
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DESCRIPTION

DATE

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CHECKED BY: GDG

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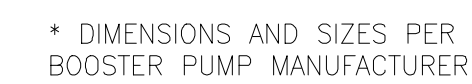
MADISON WATER UTILITY  
MADISON, WISCONSIN

UNIT WELL 20  
PUMP AND MCC UPGRADES

SHEET TITLE

FLOOR PLAN

M-3

[illegible]

COVER

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DESIGNED BY:	GDG
DRAWN BY:	TLB
CHECKED BY:	GDG

**MADISON WATER UTILITY  
MADISON, WISCONSIN**

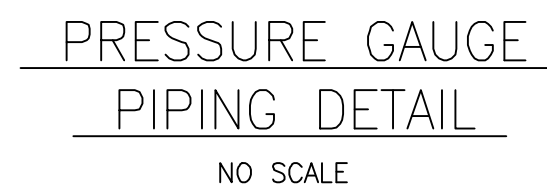
## UNIT WELL 20 PUMP AND MCC UPGRADES

SHEET TITLE

## SECTIONS

**M-4**



CONSULTANTS

PLAN SHEET DESIGNATION	
COVER	
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B	PROJECT NO:	120581.40
	SCALE:	AS NOTED
	DRAWING DATE:	4-11-13
	DESIGNED BY:	GDG
	DRAWN BY:	TLB
	CHECKED BY:	GDG

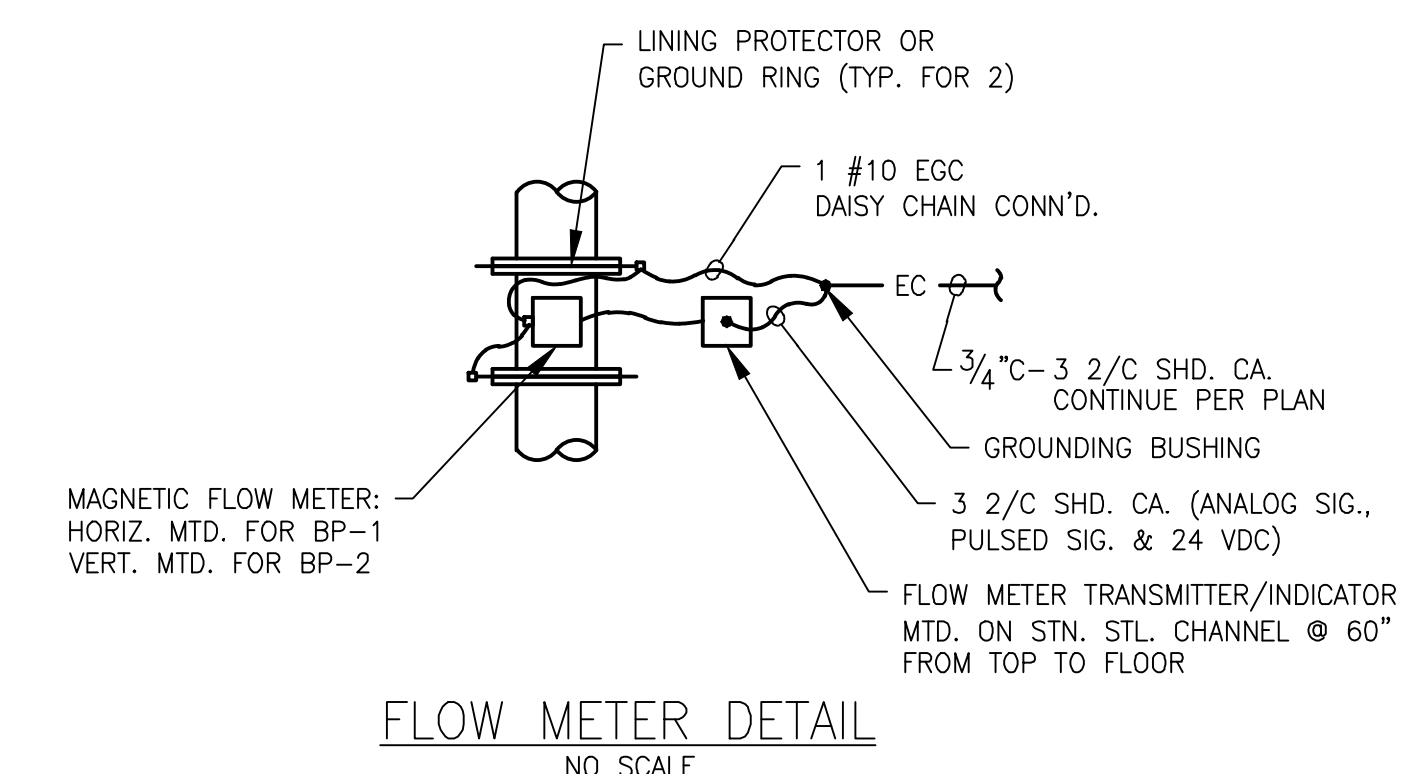
**MADISON WATER UTILITY  
MADISON, WISCONSIN**

## UNIT WELL 20 PUMP AND MCC UPGRADES

SHEET TITLE

### MISCELLANEOUS DETAILS

**M-5**



FLOW METER DETAIL

NO. SCALE

CONSULTANTS

[illegible]

PLAN SHEET DESIGNATION

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PROJECT NO: 120581.40

SCALE:	AS NOTED
DRAWING DATE:	4-11-13
DESIGNED BY:	DJM
DRAWN BY:	TLB
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CLIENT

**MADISON WATER UTILITY  
MADISON, WISCONSIN**

## UNIT WELL 20 PUMP AND MCC UPGRADES

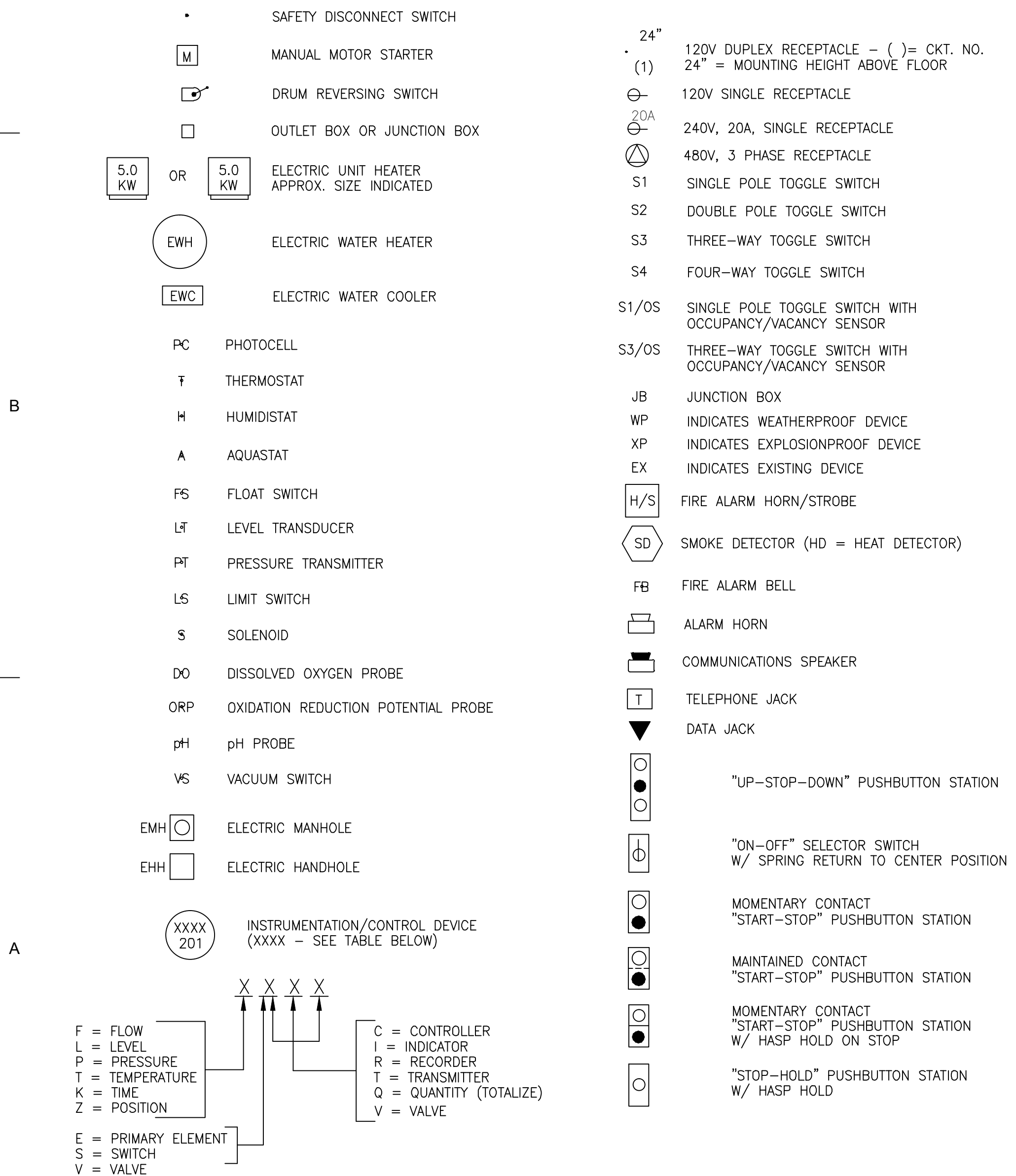
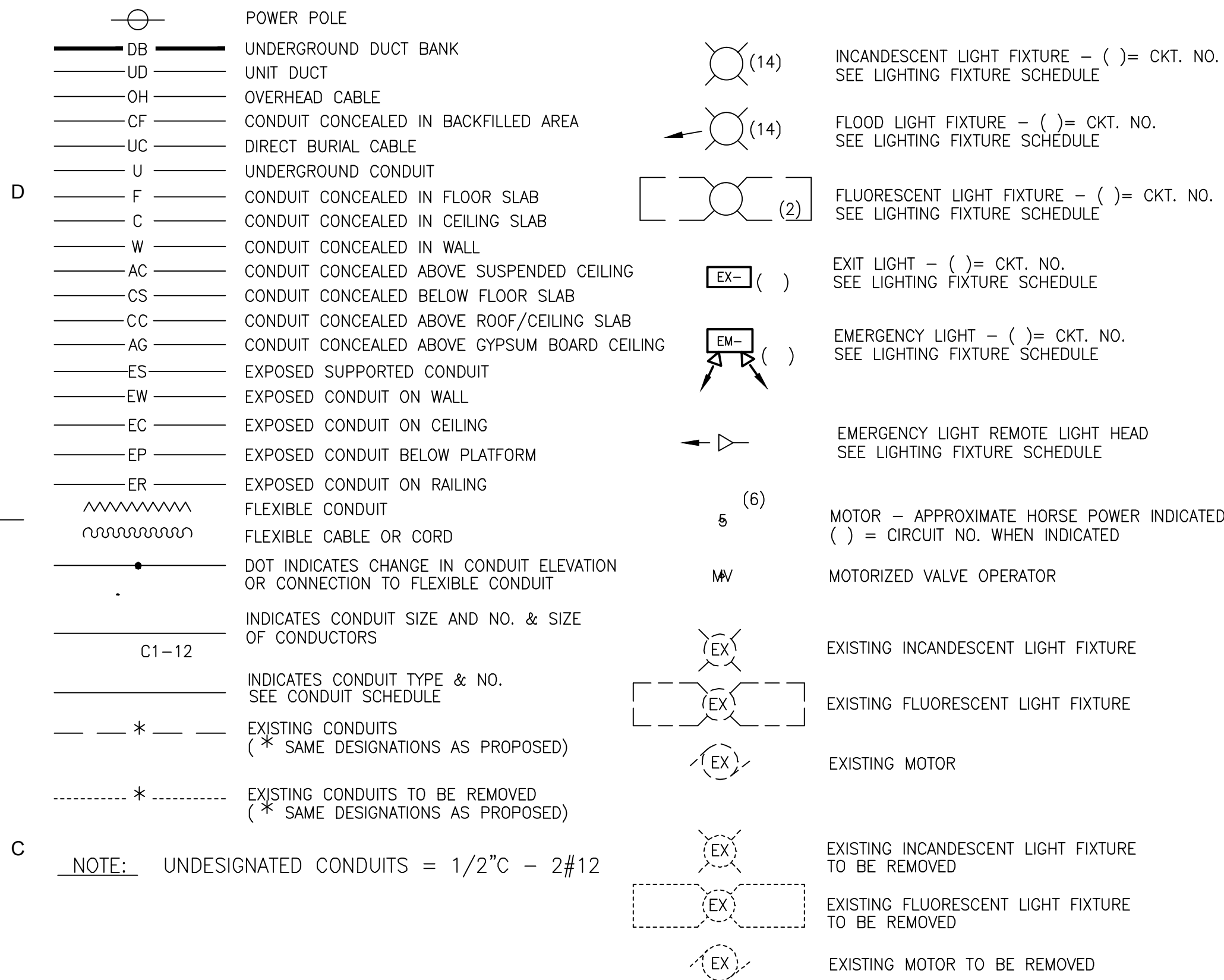
SHEET TITLE

## ELECTRICAL PLAN

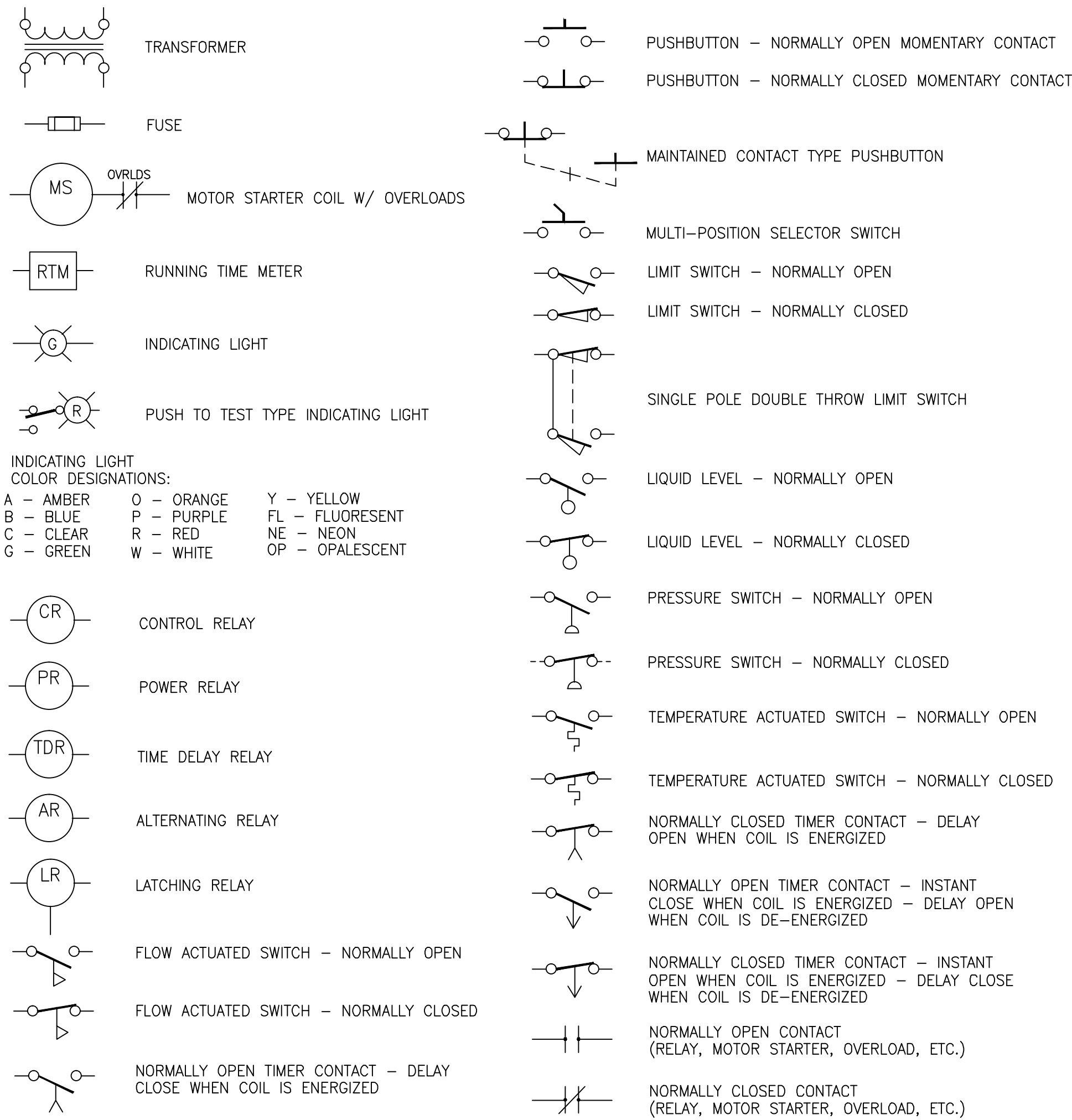
E-1



## SITE, BUILDING & STRUCTURE PLAN SYMBOLS



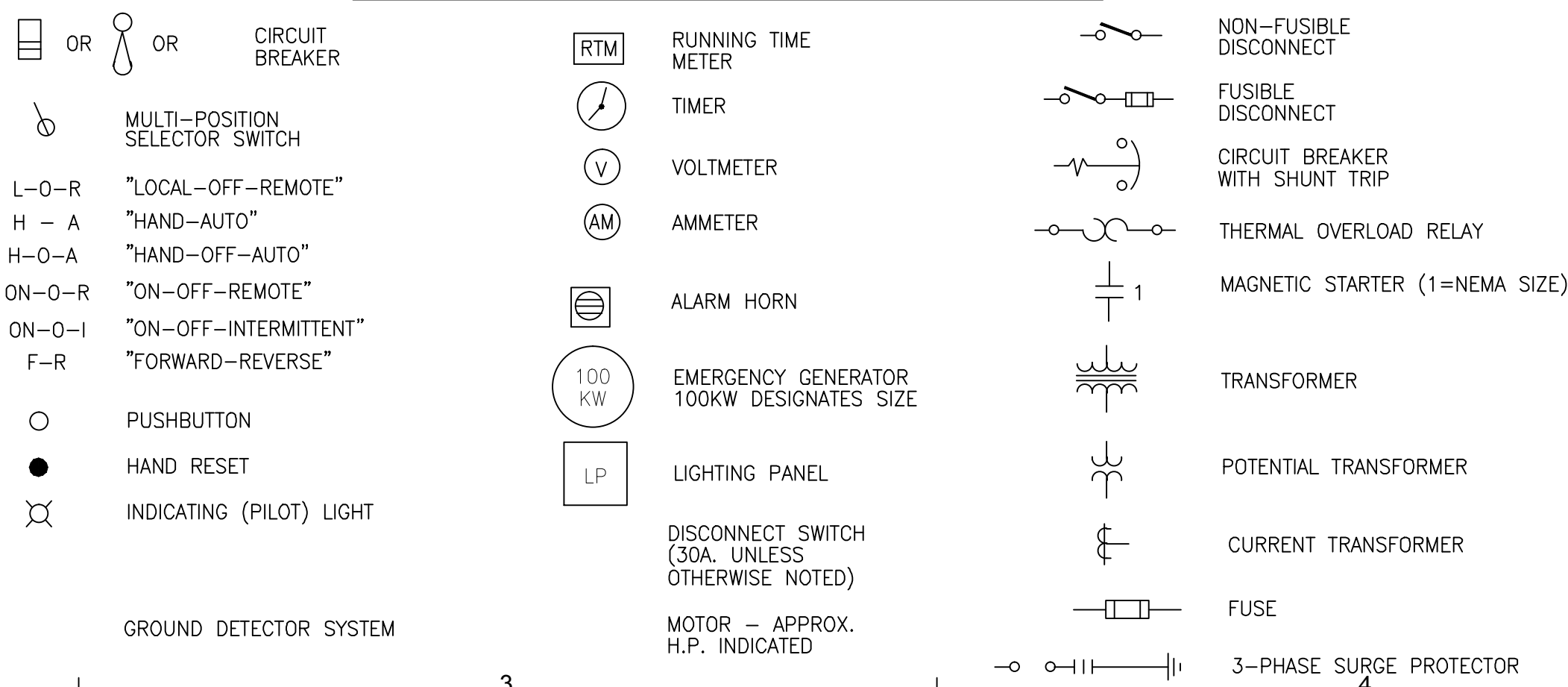
## CONTROL SCHEMATIC SYMBOLS



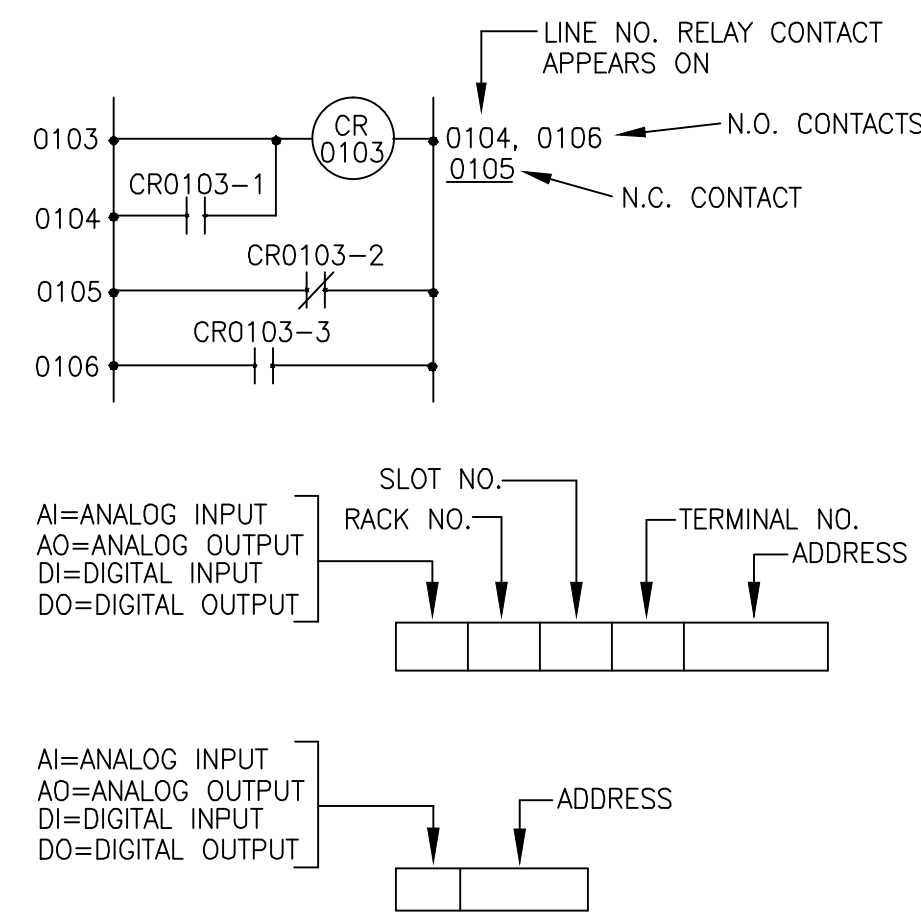
## ABBREVIATIONS & ACRONYMS

A OR AMP.	AMPERE	GEC	GROUNDING ELECTRODE CONDUCTOR	PB	PUSHBUTTON
ACK.	ACKNOWLEDGE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PLC	PROGRAMMABLE LOGIC CONTROLLER
A.F.F.	ABOVE FINISHED FLOOR	GND	GROUND	PNL	PANEL
ANN	ANNUNCIATOR	H.O.A.	HAND-OFF-AUTO SELECTOR SWITCH	PPM	PARTS PER MILLION
ANT.	ANTENNA	HD	HEAVY DUTY	PR	PROBE
AUX	AUXILIARY	HP	HORSE POWER	PS	PRESSURE SWITCH
BAT.	BATTERY	HWL or H.W.L.	HIGH WATER LEVEL	PSI	POUNDS PER SQUARE INCH
BLDG.	BUILDING	ISR	INTRINSICALLY SAFE RELAY	PT	PRESSURE TRANSDUCER
BKR.	BREAKER	JB or J. BOX	JUNCTION BOX	PVC	POLYVINYL CHLORIDE
C	CONDUIT	KW	KILOWATT	R.A.S.	RETURN ACTIVATED SLUDGE
CA	CABLE	KWH	KILOWATT HOUR	RM	ROOM
CAP	CAPACITOR	KVA	KILOVOLT-AMPERE	RTM	RUNNING TIME METER
CCT.	CIRCUIT	LGT	LIGHT	SH.	SHEET
CH	CHANNEL	LP	LIGHTING PANEL	SHD	SHIELDED
COM.	COMMON	LTG	LIGHTING	SIL	SILENCE
COND.	CONDUCTOR	LTS	LIGHTS	SOL	SOLENOID
CONT.	CONTROL	LV	LOW VOLTAGE	SPDT	SINGLE POLE DOUBLE THROW
CPU	CENTRAL PROCESSING UNIT	LWL or L.W.L.	LOW WATER LEVEL	SW	SWITCH
CSR	CURRENT SENSING RELAY	MA	MILLIAMPERE	SWGR	SWITCHGEAR
CT	CURRENT TRANSFORMER	MAN	MANUAL	TDR	TIME DELAY RELAY
D.E.	DUAL ELEMENT	MCC	MOTOR CONTROL CENTER	TM	TIMER
DET	DETECTOR	MFR	MANUFACTURER	TYP.	TYPICAL
DISACW	DISCONNECT SWITCH	MGD	MILLION GALLONS PER DAY	V	VOLT
DISC.	DISCONNECT	MMSW	MOTOR MOISTURE SENSOR WIRES	VAC	VOLTS ALTERNATING CURRENT
D.O.	DISSOLVED OXYGEN	MOSW	MOTOR OVERTEMPERATURE	W.A.S.	WASTE ACTIVATED SLUDGE
DPDT	DOUBLE POLE DOUBLE THROW	N	NEUTRAL	WHM	WATT-HOUR METER
EGC	EQUIPMENT GROUNDING CONDUCTOR	N.C.	NORMALLY CLOSED	WM	WATT METER
ENCL.	ENCLOSURE	N.I.C.	NOT IN CONTRACT	WP	WEATHERPROOF
EX. or EXIST.	EXISTING	N.F.	NON-FUSIBLE	X	CLOSE
F.O.	FIBER OPTIC	NO.	NUMBER	XFMR	TRANSFORMER
FU	FUSE	N.O.	NORMALLY OPEN	XMTR	TRANSMITTER
FSBL	FUSIBLE	O	OPEN	2P	TWO POLE
		OLS	OVERLOADS	3P	THREE POLE
		ORP	OXIDATION-REDUCTION POTENTIAL		

## MOTOR CONTROL CENTER SYMBOLS



## LIGHTING FIXTURE SCHEDULE



CONSULTANTS

REVISIONS

DATE

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SCALE: AS NOTED  
DRAWING DATE: 4-11-13  
DESIGNED BY: DJM  
DRAWN BY: TLB  
CHECKED BY: GSW

CLIENT

MADISON WATER UTILITY  
MADISON, WISCONSIN

UNIT WELL 20  
PUMP AND MCC UPGRADES

SHEET TITLE

ELECTRICAL SYMBOL LIST