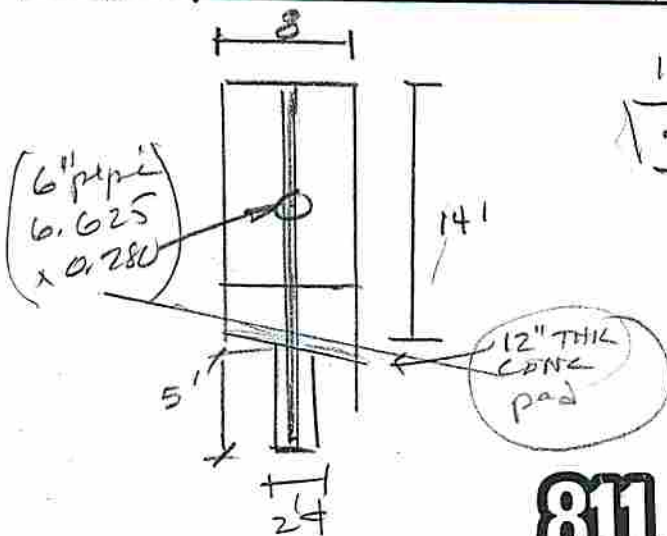


1-POLE

14'0" A4

MIDWEST SIGN
ARISTOCRAT

LEE'S SUMMIT MO

Know what's below.
Call before you dig.

WIND @ 25 PSF 115 mph C14
 SNOW @ 20 PSF
 SOILS AT 2000 PSF (ASSUMED)
 LATERAL SOIL LOADING AT
 FOOTING/FOUNDATION 150
 2' x 5'

POUR CONCRETE AGAINST UNDISTURBED SOILS, NOT BACKFILL
 ALL DESIGN, DETAILING, FABRICATION, AND CONSTRUCTION
 SHALL CONFORM TO THE FOLLOWING CODES AND
 SPECIFICATIONS:

- IBC 2018 EXP "C" (3-SEC GUST)
- CURRENT INTL. BLDG CODE (IBC)
- AMERICAN SOCIETY OF TEST'G MAT'L'S (ASTM)
- BLDG CODE REQMT - REINF CONC (ACI 318-83).
- CODE FOR WELDING IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SOCIETY.
- CURRENT SPECS - AMERICAN INST OF STEEL CONST (AISC) - DESIGN, FAB, & ERECTION.
- CONCRETE 3000 P.S.I. @ 28 DAYS COMPRESSIVE STRENGTH (150 P.C.F.)
- REINF ST'L - ASTM A-615, GR 60, (IF REQD), WELDED WIRE FABRIC (WWF) - ASTM A185
- ALL REINF SHALL BE FREE FROM MUD, OIL, RUST OR COATINGS THAT WOULD REDUCE OR DESTROY BOND
- ALL REINF BARS SHALL LAP 30 DIAMETERS OR 12" MINIMUM, EXCEPT AS NOTED.
- MIN CONC COVER ON TIES, STIRRUPS AND MAIN BARS SHALL BE 1 INCH FOR SLAB, WALL AND SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND ± 3 INCHES FOR UNFORMED SURFACES DEPOSITED AGAINST GROUND EXCEPT AS NOTED.

TIE RE-BARS. DO NOT WELD RE-BAR.

STRUCTURAL STEEL AND PLATES - A-36.

STRUCTURAL TUBING - ASTM A-500, GR B, FY=46 KSI.

STRUCT PIPE - ASTM A-53, GR B, FY=36 KSI.

ANCHOR BOLTS ASTM A-307, EXCEPT AS NOTED.

HI STRENGTH BOLTS - CONNECTIONS - ASTM A-325, U.N.O.

WELDING ELECTRODES - AWS D1.1-85, E70xx.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE ERECTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

NO CABINET ENGINEERING PROVIDED. IF CABINET ENGR IS REQ'D, CONTACT THE ENGINEER FOR ADD'L SVCS.
 6" OF CONCRETE OR GRAVEL PLACED IN BOTTOM OF FOUNDATION PRIOR TO MAIN POUR.

ISOLATE ALUMINUM FROM STEEL.

ALL BOLT HOLES TO BE DRILLED OR PUNCHED.

ALL PIPE SIZES SHOWN ARE MINIMUM SIZES. PIPE WITH A LARGER DIAMETER, GREATER YIELD STRENGTH, AND/OR GREATER SECTN MOD MAY BE SUBSTITUTED.

ALL STRUCTURAL LENGTHS REQUIRED ARE APPROXIMATIONS ONLY. ACTUAL LENGTH MAY SLIGHTLY VARY DEPENDING ON SIGN CABINET CONDITIONS.

ALL WORK PERFORMED ON SITE SHALL BE DONE ACCORDING TO APPLICABLE OSHA REGULATIONS

WATER SHOULD NOT BE ALLOWED TO POND IN THE EXCAVATION PRIOR TO CONCRETE PLACEMENT OR ABOVE CONCRETE AFTER THE FDN IS COMPLETED
 EXERCISE CARE DURING EXCAVATION OF THE FOUNDATION TO MINIMIZE DISTURBANCE TO THE SURROUNDING SOILS.

CALCULATIONS SHOWN ON THESE SHEETS ARE ONLY FOR THE BASE POLE(S) AND CONCRETE BASE-FOUNDATION

SR = SECTION MODULUS REQUIRED
 SP = SECTION MODULUS PROVIDED

CAE 2008010470
 CROCKER
 3211 E. SHADY GLEN ST
 SPRINGFIELD MO 65804
 417-883-4056

IBC 2018, 115 mph

STEEL

$$8 \times 14 \times 25 = 2800 \times 7 = 19,600$$

$$S_R = \frac{19,600 \times 12}{21,600 \times 1.33} = 8.18 \text{ in}^3$$

$$S_P = \frac{6'' \text{ pipe } 6.625 \times 0.280}{12} = 8.50 \text{ in}^3$$

$S_P > S_R$ OK

CONCRETE

$$P = 2800$$

$$M = 19,600$$

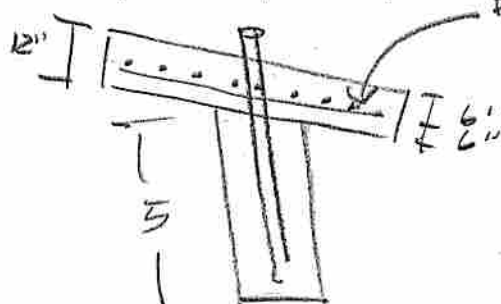
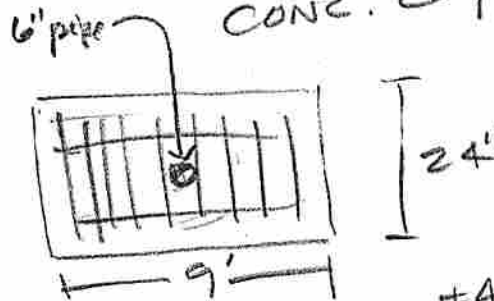
$$h = 7$$

$$b = 2$$

$$S_t = (150)(2) \left(\frac{4}{3} \right) \left(\frac{5}{3} \right) = 667$$

$$d = (0.14) \frac{(1.17)(2800)}{(2)(667)} \left[1 + \sqrt{1 + \frac{1.86(667)(2)(7)}{2800}} \right]$$

d = 5' deep need
 with 12" THK
 CONC. CAP



#4 rebar 2 lengthwise
 with (9) #4 crosswa

RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI

05/27/2020

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[illegible]

MIDWEST SIGN COMPANY