

**LOT 18
ALAMEDA BUSINESS PARK
3500 VISTA ALAMEDA
ALBUQUERQUE, NM**

PARKING
OFFICE = 995 ÷ 200 = 4.9
WAREHOUSE = 6141 ÷ 2000 = 3
REQ'D = 8
PROVIDED = 14 (1HC)

LANDSCAPING
AREA OF SITE = 22,500 SF
AREA OF LANDSCAPING = 4,876 SF
% PROVIDED = 21.7%
% REQUIRED = 15%

**THE SUBJECT PROPERTY IS LOCATED ON, NEAR A FORMER LANDFILL.
DUE TO THE SUBJECT PROPERTY BEING ON, NEAR A FORMER LANDFILL
CERTAIN PRECAUTIONARY MEASURES MAY NEED TO BE TAKEN TO
ENSURE THE HEALTH AND SAFETY OF THE PUBLIC. RECOMMENDATIONS
MADE BY A PROFESSIONAL ENGINEER WITH EXPERTISE IN LANDFILL AND LANDFILL
GAS ISSUES (AS REQUIRED BY THE MOST CURRENT VERSION OF THE "INTERNAL GUIDELINES
FOR DEVELOPERS WITHIN 1000 FEET OF A LANDFILL") SHALL BE CONSULTED PRIOR
TO THE DEVELOPMENT OF THE SITE.**

- Landscape Legend:**
- Sycamore or Honey Locust
Acer spp.
Gleditsia triacanthos
2" Cal.
 - Russian Sage or Apache Plum
Perovskia atriplicifolia
Follicia paradoxa
1 Gal.
 - Spreading Juniper
1 Gal.
 - Pyracantha
1 Gal.

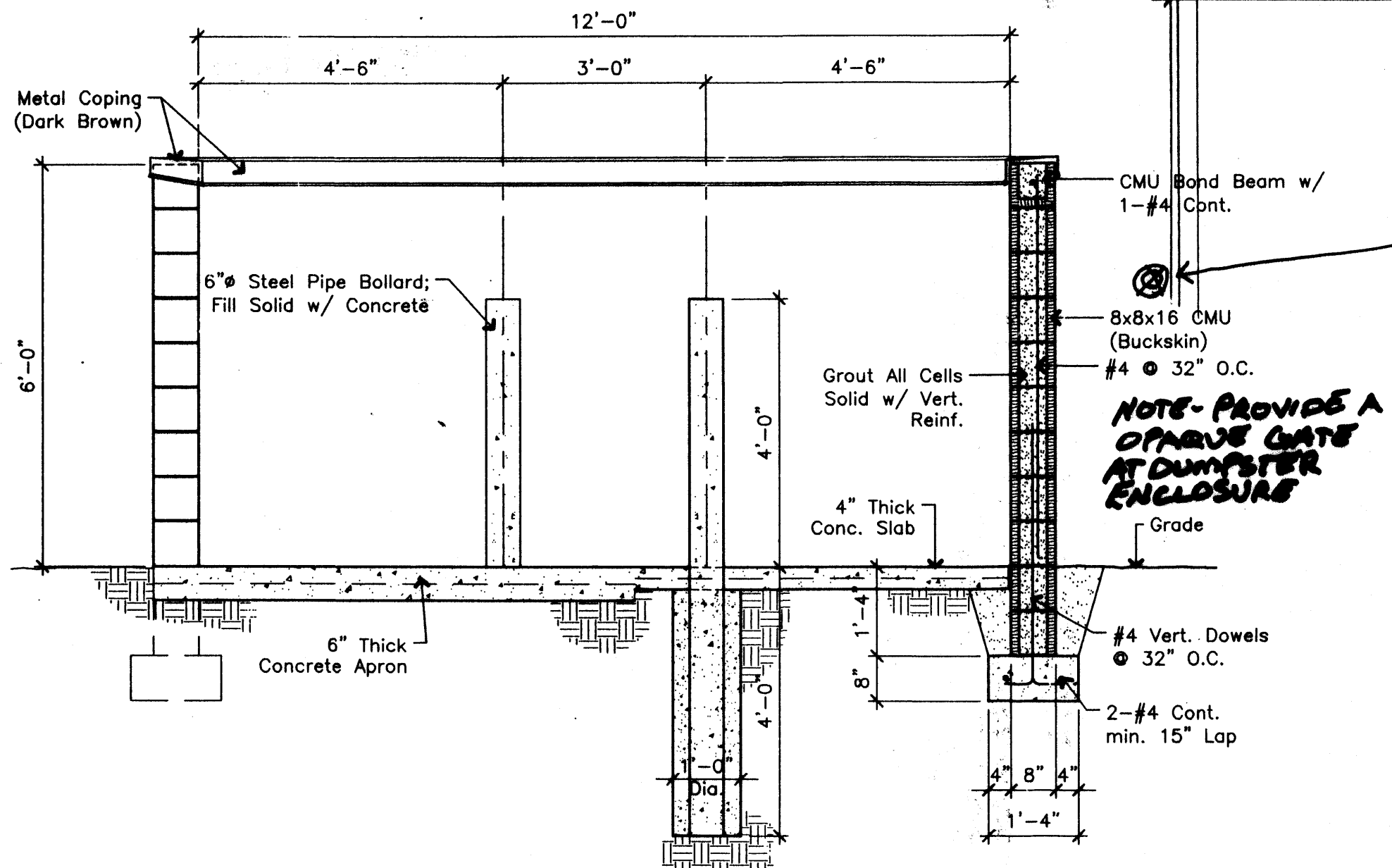
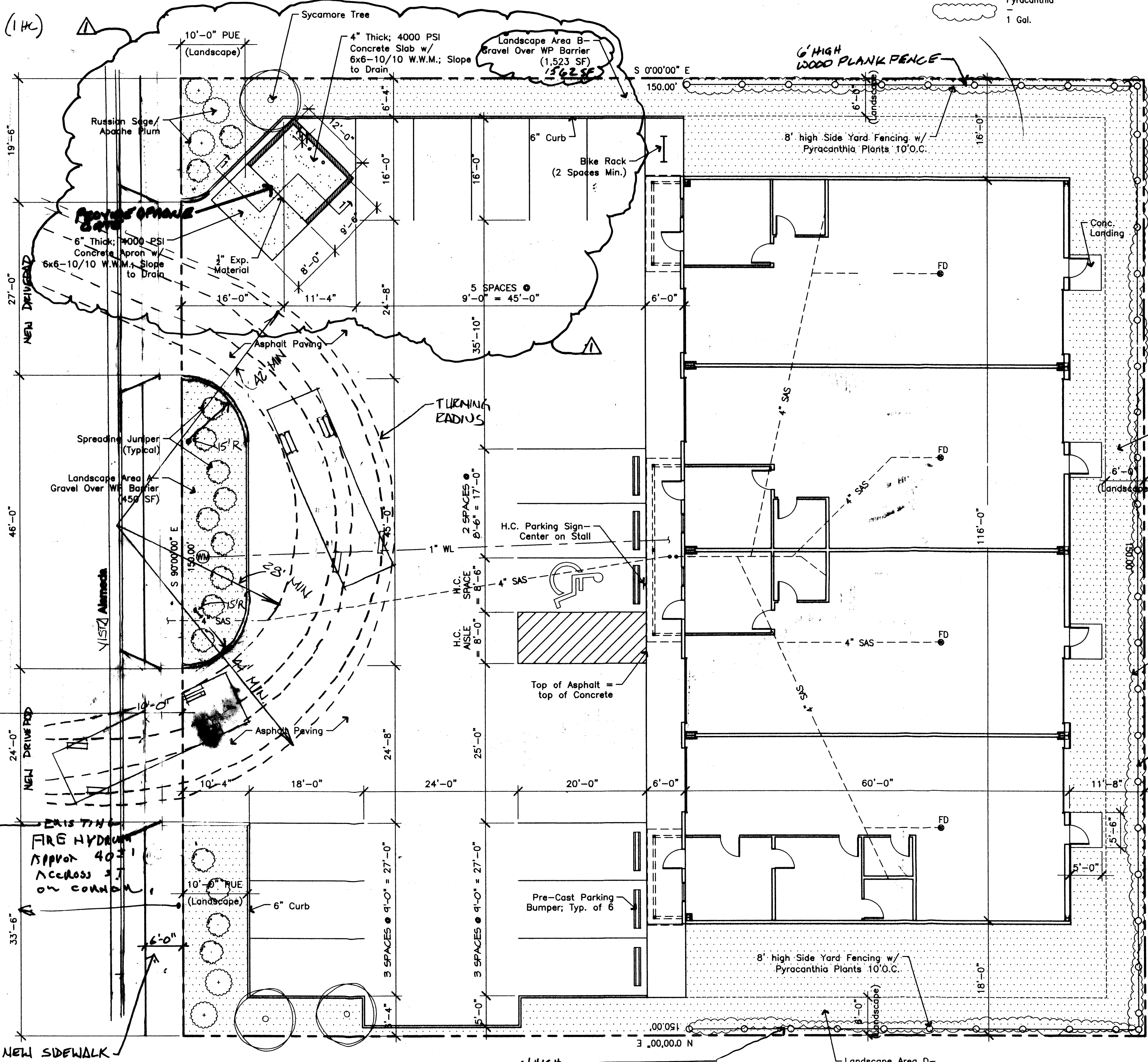
LOCATION MAP E-16

NO SCALE
BUILDING WILL CONTAIN
LANDFILL GAS MONITOR

PROJECT NUMBER: 1000624
APPLICATION NUMBER: 0008-00708

FIRE MARSHAL	DATE
SOLID WASTE DEPARTMENT	DATE
ENVIRONMENTAL HEALTH DEPT	DATE
TRAFFIC ENGINEER, TRANSPORTATION DIVISION	DATE
PARKS & GENERAL SERVICES DEPARTMENT	DATE
PUBLIC WORKS, WATER UTILITIES DIVISION/AMAFA	DATE
APPROVAL AND CONDITIONAL ACCEPTANCE: as specified by the development process manual.	
DATE	DATE

- LIST OF SHEETS**
- 1 SITE PLAN
 - 2 GRADING AND DRAINAGE PLAN
 - 3 GRADING AND DRAINAGE PLAN
 - 4 FOUNDATION PLAN
 - 5 EXTERIOR ELEVATIONS
 - 6 FLOOR PLAN
 - 7 FRAMING PLAN AND SECTIONS
 - 8 ELECTRICAL PLANS
 - 9 ELECTRICAL SCHEDULES
 - 10 ELECTRICAL SCHEDULES



1 DUMPSTER ENCLOSURE
1/2" = 1'-0"

0 SITE PLAN
1" = 10'

**WAREHOUSE/OFFICE
FOR THE
FOR THE
BOYLES CO.**

SHEET CONTENTS
1. SITE PLAN

DATE
May '02

SHEET #
1
OF
10

**STEVE L. MILLENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO**

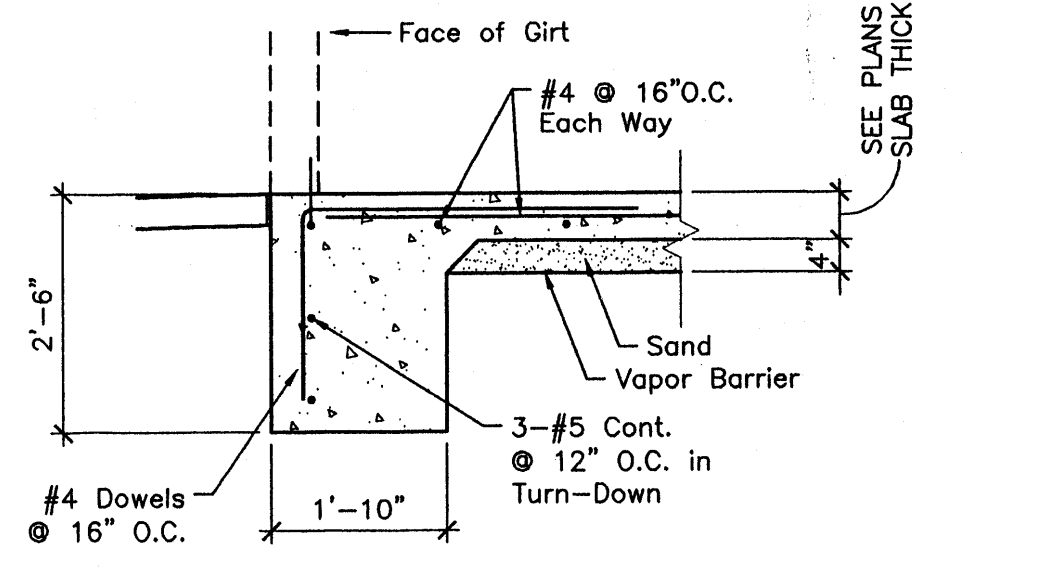
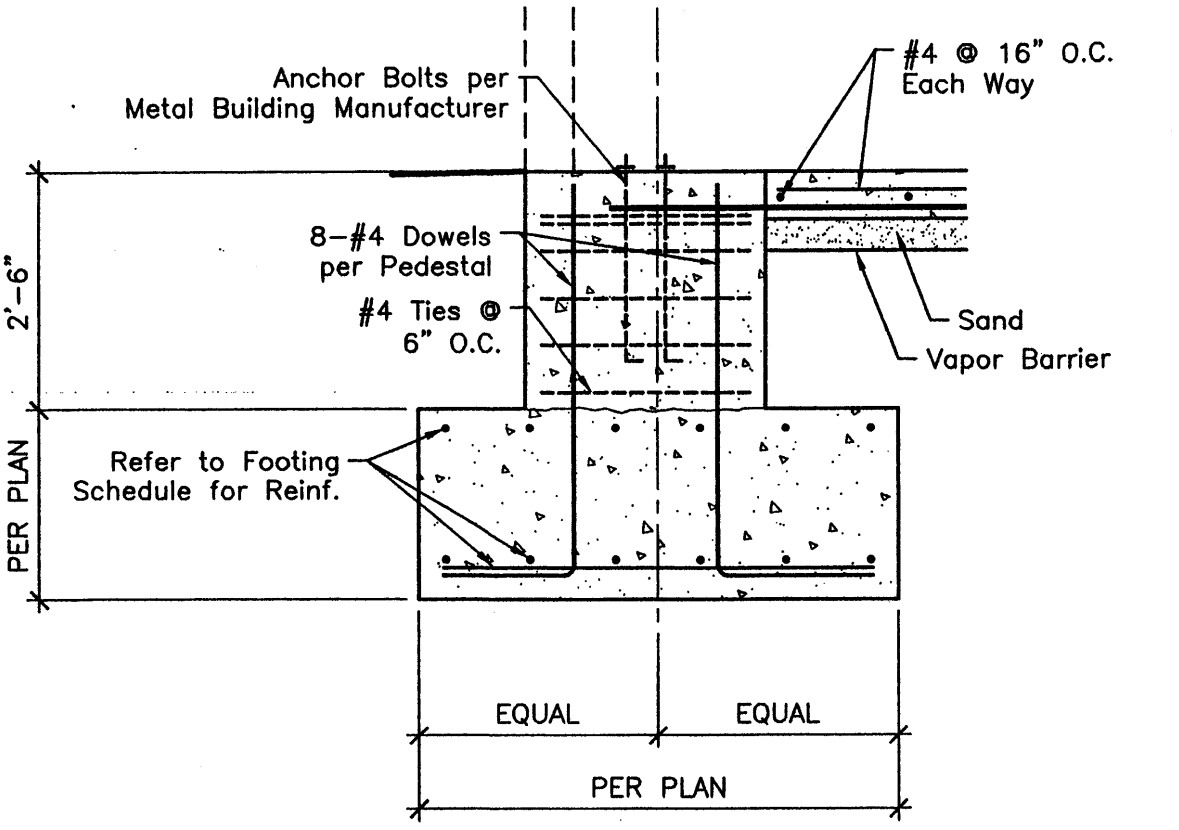
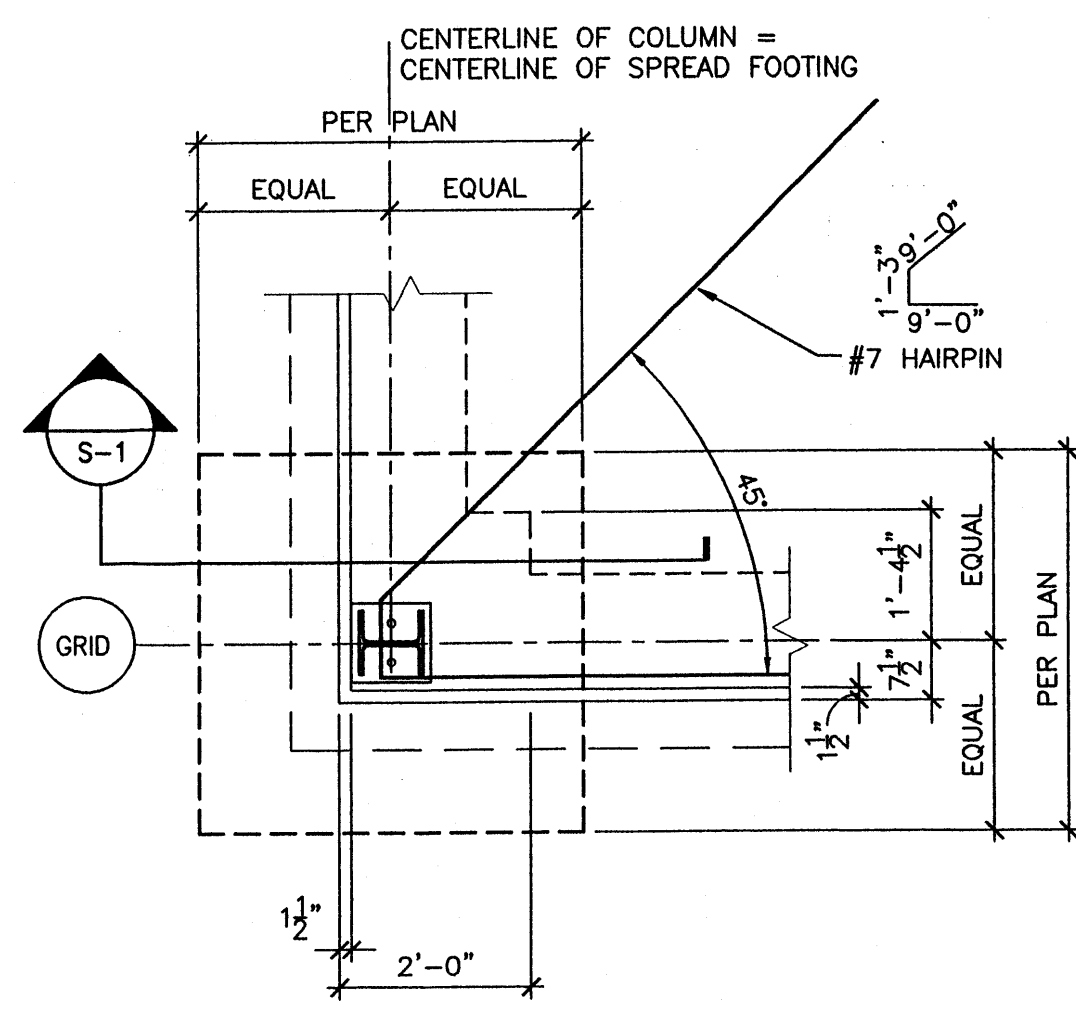
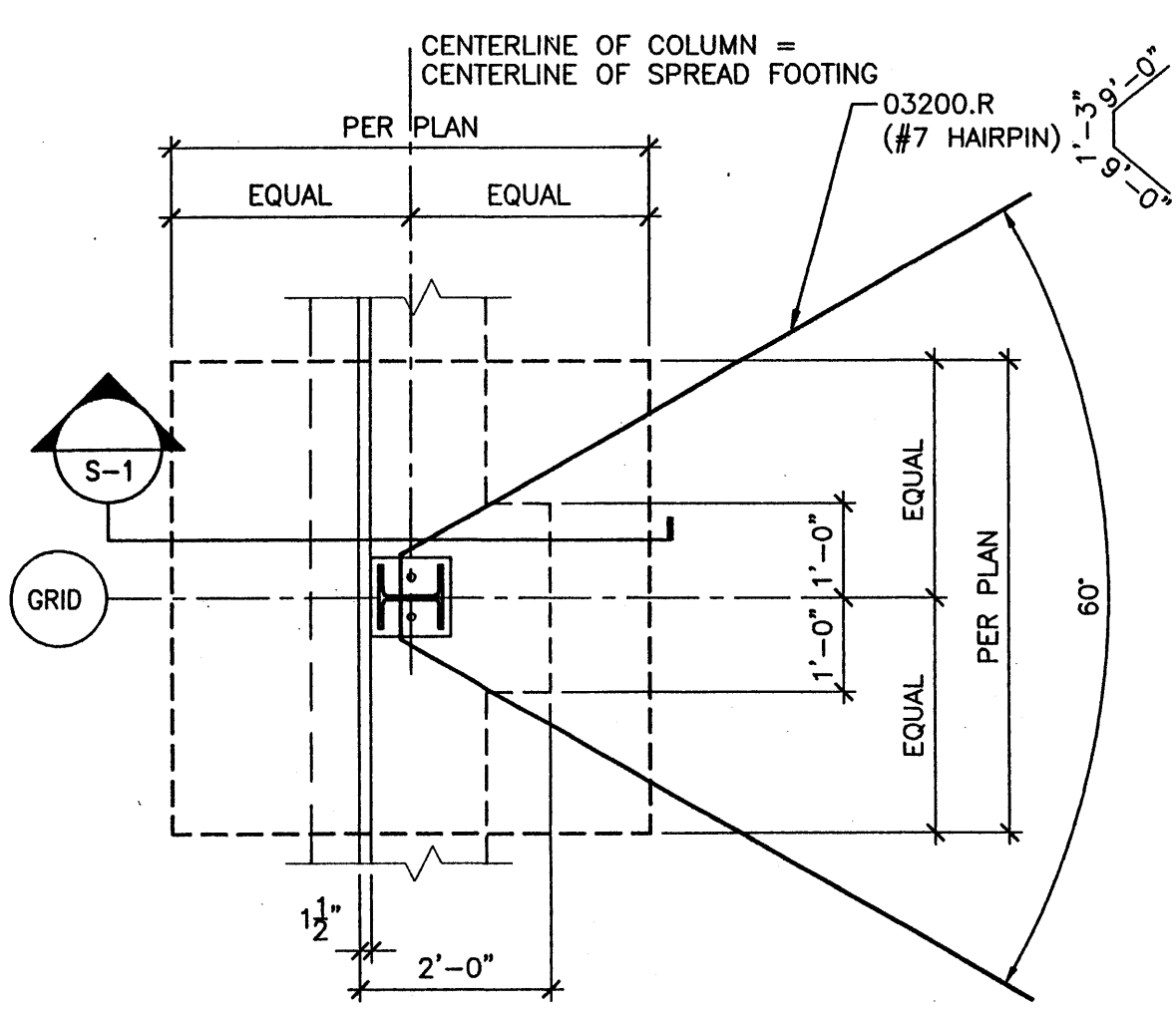
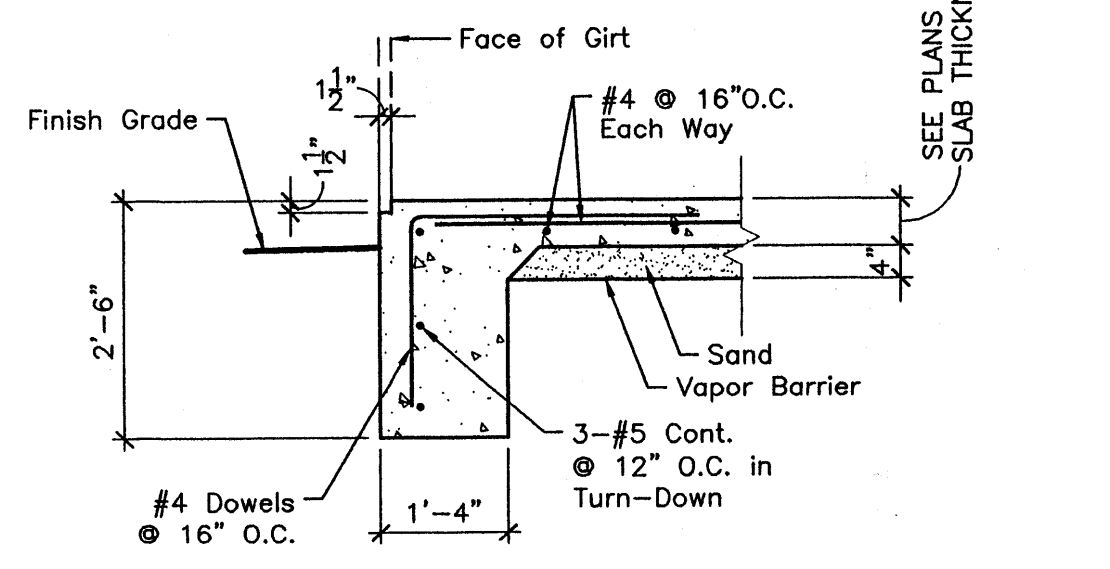
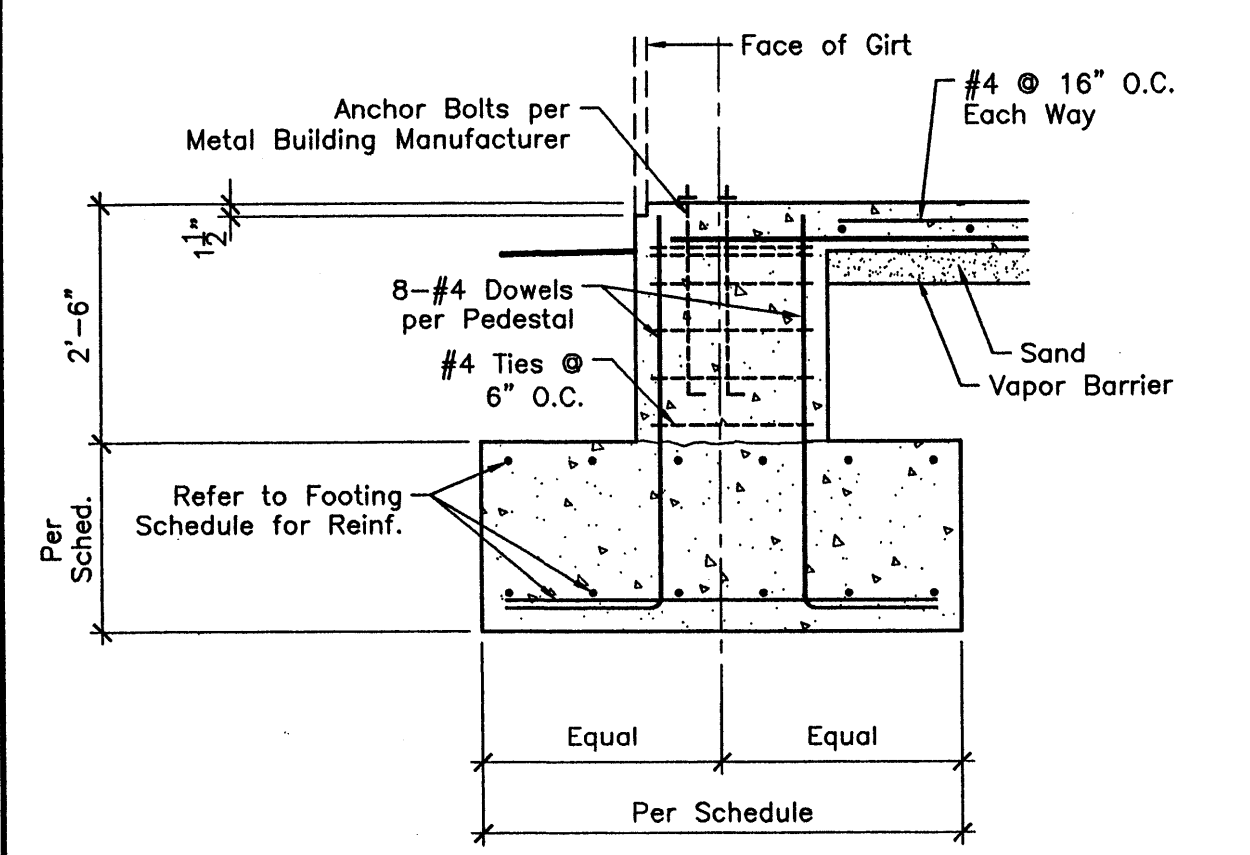
**SLM
DRAFTING & DESIGNS**



Office: 505-242-3351
Mobile: 505-242-3353
E-Mail: slm@slm.com

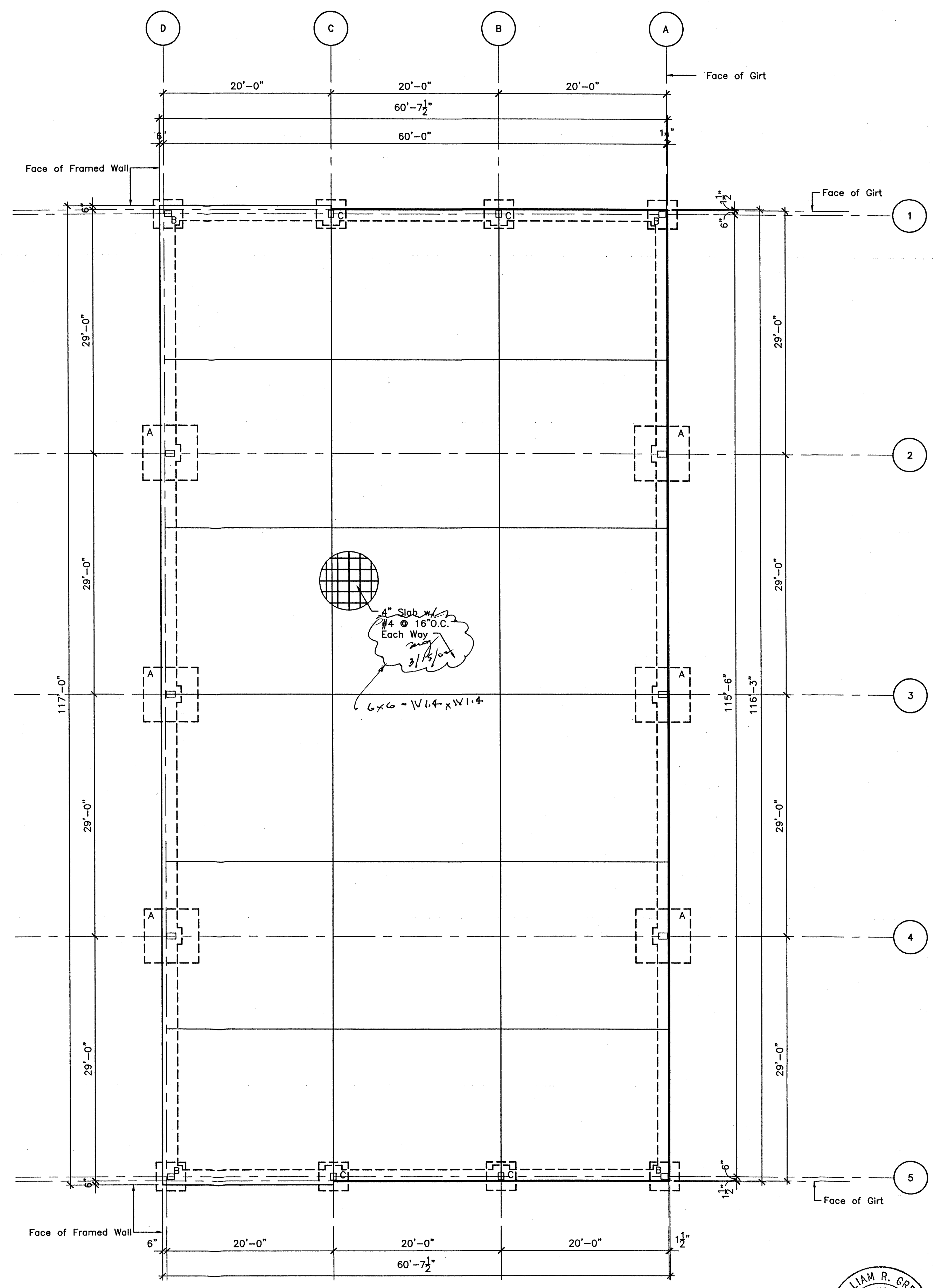
PROJECT 1000624

Note: See Electrical Sheet For Electrical Site Information

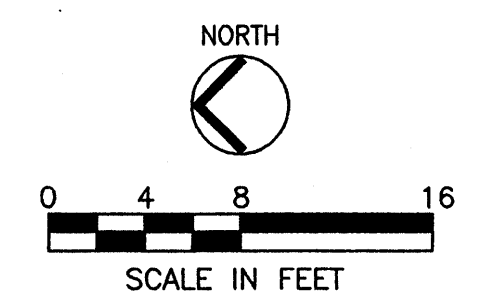
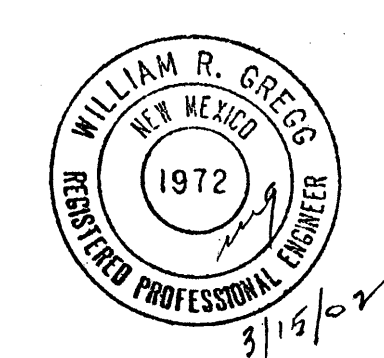


FOOTING	SIZE	REINFORCING
A	6'-6" x 6'-6" x 2'-6"	#509 EW, T&B
B	3'-6" x 3'-6" x 2'-0"	#509 EW, T&B
C	2'-6" x 2'-6" x 2'-0"	#509 EW, T&B

NOTE:
SIZE, LOCATION AND REINFORCEMENT OF FOOTINGS AND PEDESTALS ARE BASED ON PRELIMINARY DESIGNS. ALL DIMENSIONS AND REINFORCEMENT WILL BE FINALIZED UPON REVIEW OF METAL BUILDING SHOP DRAWINGS.



- GENERAL NOTES:
1. REFERENCE FINISH FLOOR ELEVATION = 100'-0" AND REFERENCE DATUM ELEVATION. SEE CIVIL DRAWING FOR DATUM.
 2. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF DOOR OPENINGS AT BUILDING PERIMETER.
 3. SEE CIVIL DRAWINGS FOR LOCATION OF EXTERIOR SLABS, STOOPS AND BOLLARDS.
 4. ALL METAL BUILDING COLUMNS FOOTINGS SHALL BE CENTERED ON COLUMN CENTERLINES.
 5. SEE SPECIFICATIONS & GEOTECHNICAL ENGINEERING SERVICES REPORT, JOB NO. 1-11208 PREPARED BY GEO-TEST INC., DATED JANUARY 9, 2002 FOR OVER EXCAVATION AND STRUCTURAL BACKFILL REQUIREMENTS.
 6. DESIGN REQUIREMENTS:
 FLOOR LIVE LOAD (LL) = 125 PSF
 ROOF LIVE LOAD (LL) = 20 PSF
 ROOF, FLOOR & WALL DEAD LOAD (DL) = 15 PSF
 WIND SPEED = 80 MPH
 EXPOSURE = C
 SEISMIC ZONE = 2B
 ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
 7. ALL WELDS TO BE PERFORMED BY A CERTIFIED WELDER.
 9. REFER TO ARCH. SHEETS FOR BUILDING PERIMETER INSULATION.



FLOOR PLAN
3/8"=1'-0"

FOUNDATION ONLY!

LEGAL DESCRIPTION
ALAMEDA BUSINESS PARK, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

Topography by Marvin Kortum, March, 2002.

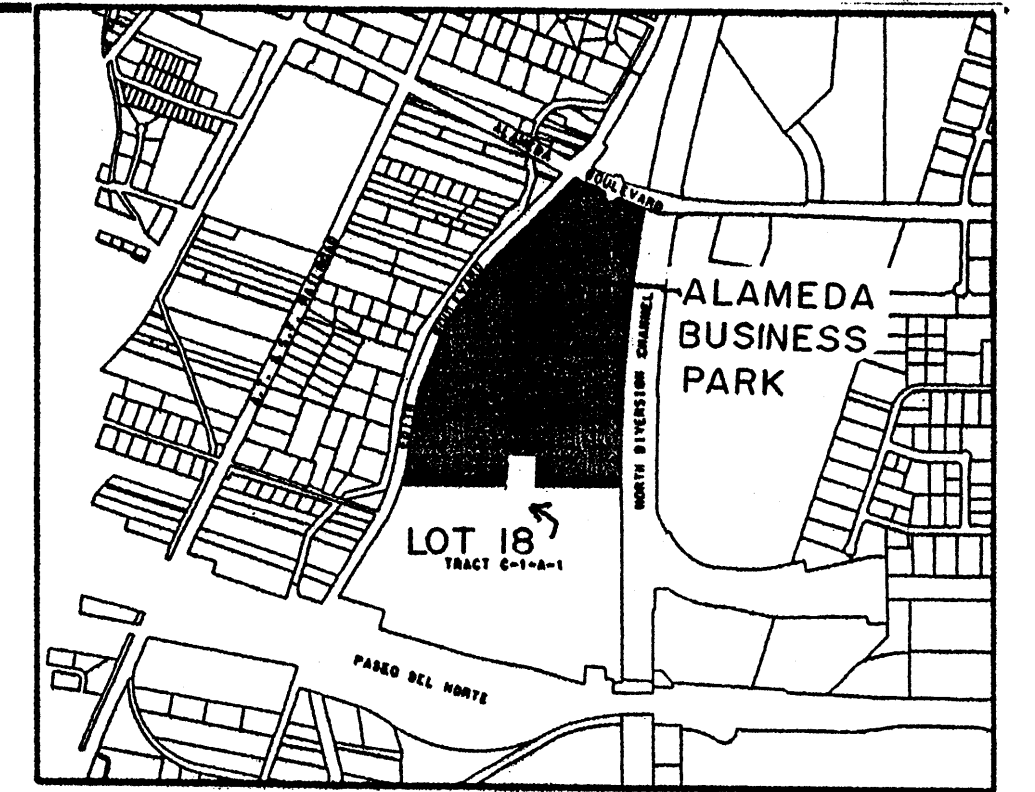
BENCHMARK: AMAFCA BRASS TABLET, STAMPED NDC-7-182, ELEVATION: 5064.5
THE MONUMENT IS LOCATED ABOUT 600 FEET EAST OF LOT 18, ON THE WEST BANK OF THE NORTH DIVERSION DITCH.

NOTES

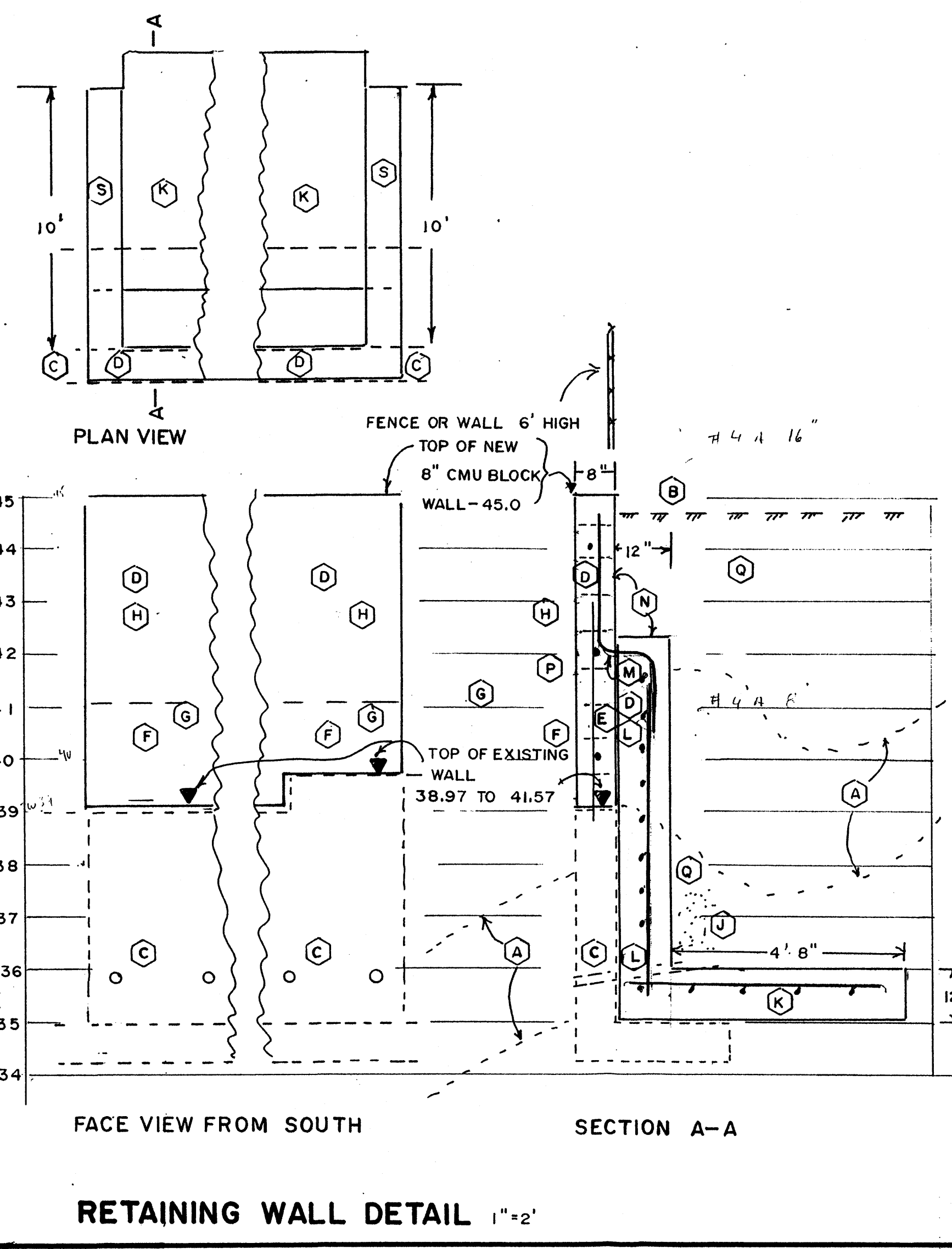
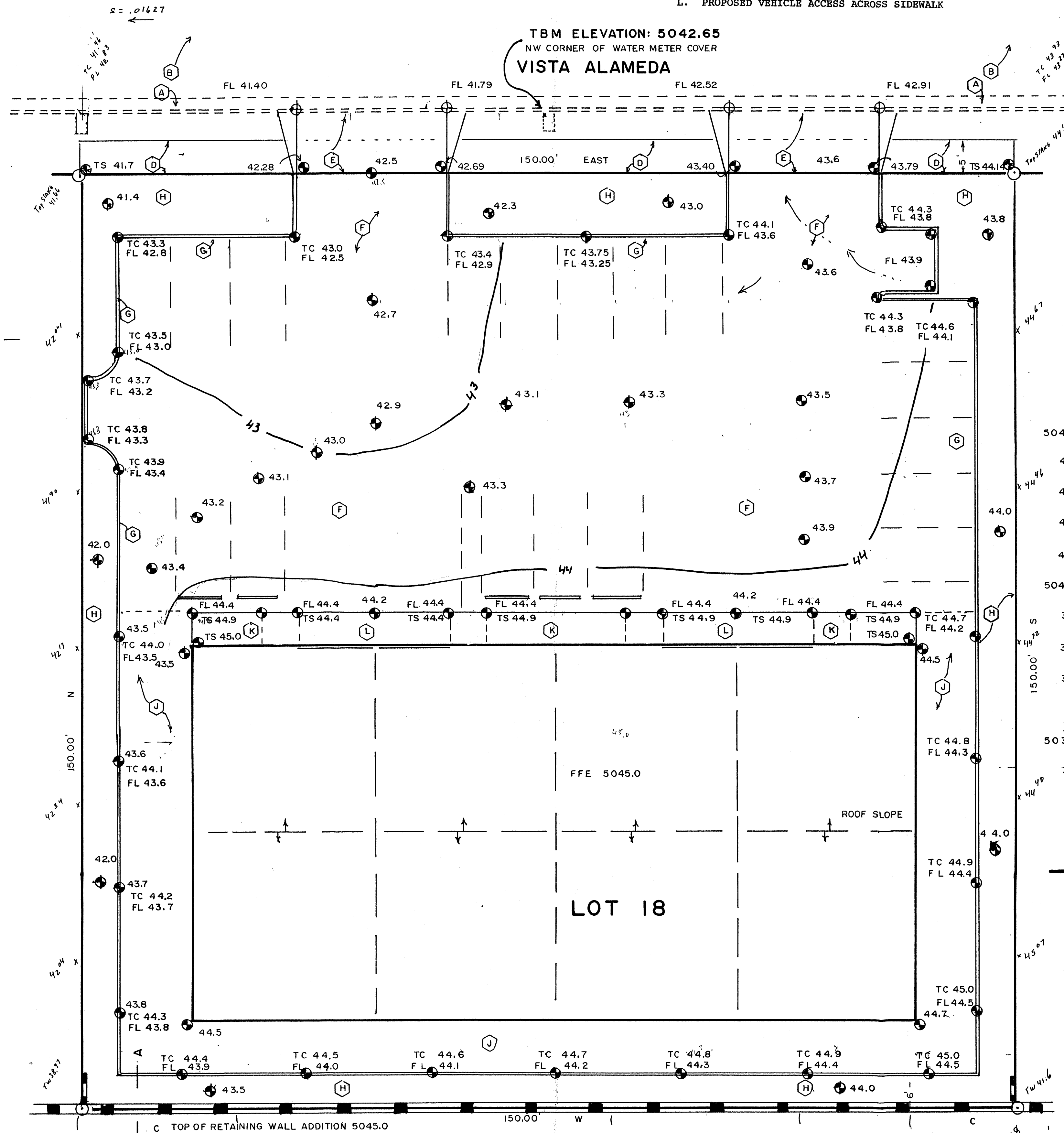
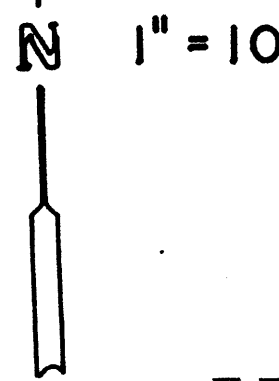
- A. EXISTING STANDARD CURB AND GUTTER
- B. EXISTING ASPHALT SURFACE
- C. EXISTING FOUR FEET HIGH RETAINING WALL
- D. PROPOSED SIDEWALK
- E. PROPOSED DRIVEPAD
- F. PROPOSED ASPHALT SURFACE
- G. PROPOSED 6" X 18" HEADER CURB.
- H. PROPOSED LANDSCAPED AREA (SEE LANDSCAPE PLAN)
- J. PROPOSED GRAVEL SURFACE
- K. PROPOSED SIDEWALK BY BUILDING
- L. PROPOSED VEHICLE ACCESS ACROSS SIDEWALK

LEGEND

	Existing	Proposed
Spot Elevation	64.25	64.25
Top of Curb	TC	TC
Flow Line Invert	FL	FL
Finished Floor Elevation	FFE	FFE
Contour Line	49.12	64
Property Line		
Lot Number		5
Structure		
Curb and Gutter		
Driveway		



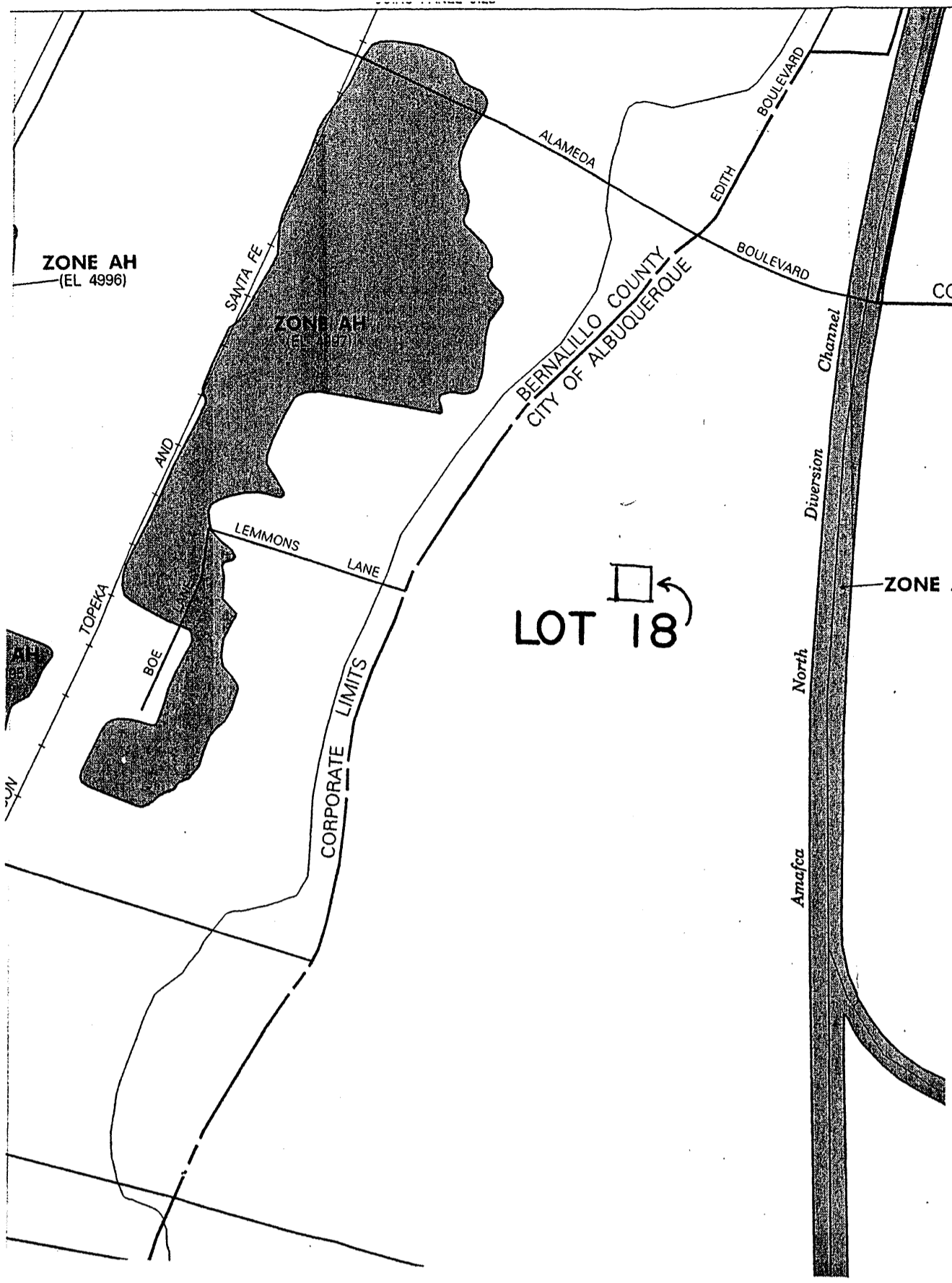
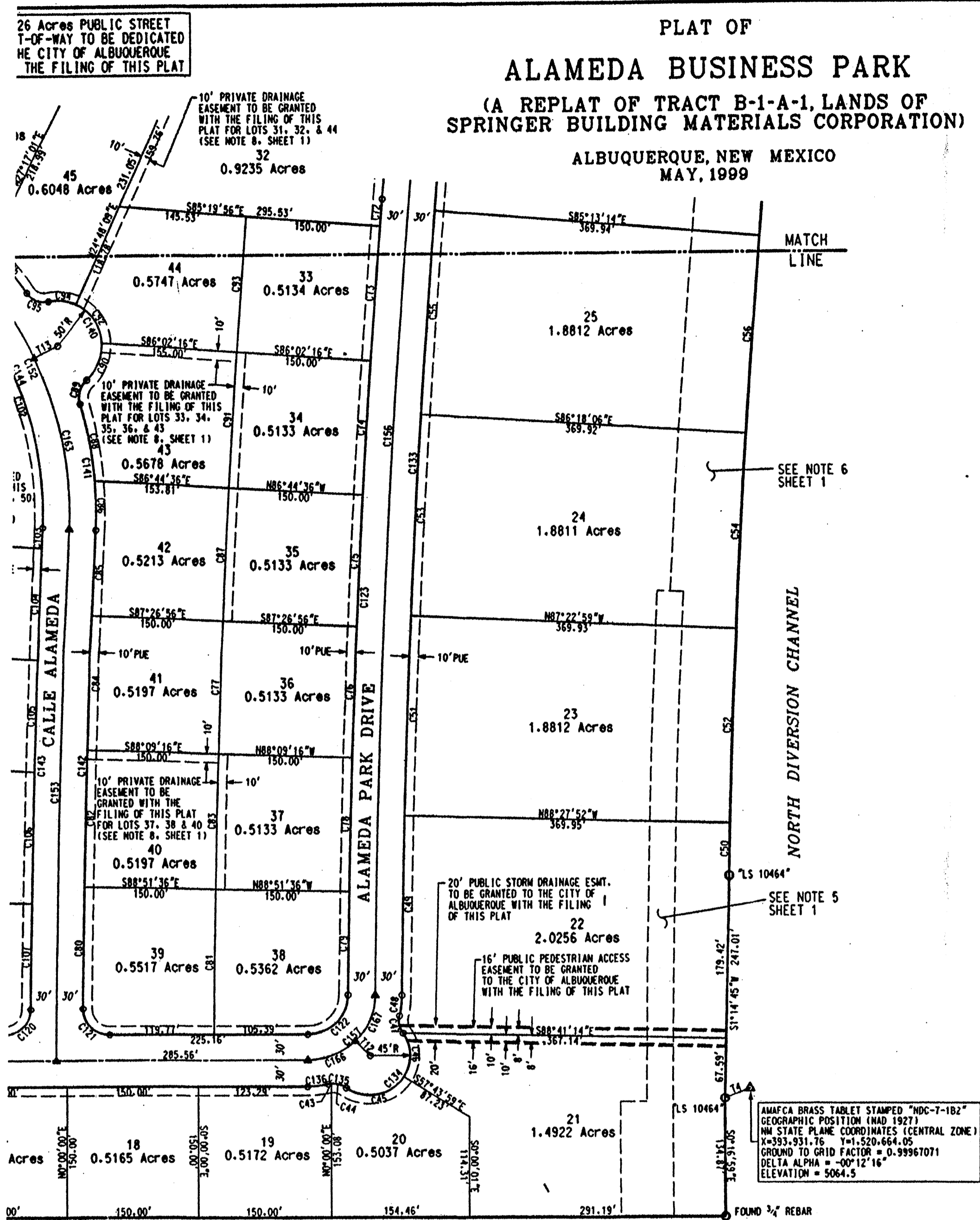
LOCATION MAP
ZONE ATLAS INDEX MAP No. C-16
NOT TO SCALE



- NOTES FOR PROPOSED RETAINING WALL:
- A. EXISTING GROUND SURFACE (VARIES)
 - B. PROPOSED FINISHED SURFACE
 - C. EXISTING FOUR FEET HIGH RETAINING WALL (FOOTER AND REINFORCEMENT UNKNOWN)
 - D. PROPOSED ADDITION TO RETAINING WALL
 - E. BORE HOLES IN EXISTING WALL AND PLACE #4 REBAR AT 16" O. C.
 - F. PLACE NEW 8" CMU BLOCKS ON EXISTING WALL TO ELEVATION OF 5041 (HEIGHT OF EXISTING WALL ON EAST END).
 - G. FILL NEW CMU BLOCKS WITH 3000 PSI PC CONCRETE.
 - H. PLACE NEW 8" CMU BLOCKS TO ELEVATION OF 5045, WITH NORTH SIDE OF BLOCKS ON THE FIRST TWO COURSES REMOVED TO PERMIT REBAR AND CONCRETE TO PASS THROUGH SIDE OF BLOCK. PLACE #5 REBAR HORIZONTALLY EVERY THIRD COURSE.
 - J. EXCAVATE EXISTING SOIL FROM NORTH SIDE OF EXISTING FOUR FEET HIGH RETAINING WALL. CLEAN SURFACE OF EXISTING FOOTER TO MAKE GOOD CONTACT WITH NEW FOOTER.
 - K. PLACE NEW PC CONCRETE FOOTER WITH 3000 PSI PC CONCRETE, WITH #5 REBAR NORTH-SOUTH AT 12" O. C., AND #4 REBAR AT 12" O. C. EAST-WEST.
 - L. PLACE #4 REBAR AT 8" O. C. EACH WAY IN VERTICAL WALL, DOWELS OR EXTEND INTO FOOTER. BORE 3" DIAMETER HOLES THROUGH THE EXISTING RETAINING WALL AT 6 FEET O. C., PLACE 2" DIAMETER SCHEDULE 40 PVC PIPE THROUGH THE EXISTING WALL, EXTENDING THROUGH THE NEW PC CONCRETE WALL TO ABOVE THE FOOTER ON THE NEW WALL.
 - M. EXTEND BENT #4 REBAR FROM RETAINING WALL ADDITION THROUGH CMU BLOCKS AT 16" O. C.
 - N. FORM NORTH WALL RW, PLACE 3000 PSI PC CONCRETE FOR NEW WALL, AND FILL IN THE TOP FOUR FEET OF THE NEW 8" CMU BLOCKS.
 - P. BRACE THE NEW 8" BLOCK WALL IF NECESSARY TO PREVENT MOVEMENT WHEN THE PC CONCRETE IS PLACED.
 - Q. REMOVE FORMS AND BACKFILL WITH COMPACTED SANDY GRAVEL ALONG WALL, AND SUITABLE MATERIAL FOR THE REST OF THE VOID, TO LEVEL REQUIRED BY THIS PLAN.
 - S. EXTEND RETAINING WALL ALONG SIDES OF LOT FOR 10 FEET OR AS NECESSARY TO PREVENT SOIL MATERIAL FROM OVERFLOWING ONTO THE PROPERTY TO THE SOUTH.

FIRST DRAWING	MRK	MAR, 27, 2002
APPROVALS, REVISIONS	BY	DATE
MARVIN R. KORTUM, P.E. Civil Engineering NM PE 6519 1605 Speakman Drive, S.E. Albuquerque, New Mexico 87123 (505) 299-0774		
GRADING AND DRAINAGE PLAN ALAMEDA BUSINESS PARK LOT 18 GRADING		
PROJECT NO	MAP NO	SHEET OF
C-16/006	C-16	1 / 2

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 5845928
 Page 3 of 4
 06/29/1999 09:41A
 Judy D. Woodward Bern. Co. PLRT R 22.89 81-58C Pg-187



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 136 OF 825
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	353002	036	D
BERNALILLO COUNTY, UNINCORPORATED AREAS	356000	036	D
LOS RANCHOS DE ALBUQUERQUE, VILLAGE OF	360023	036	D

MAP NUMBER 35001C0136 D

EFFECTIVE DATE: SEPTEMBER 20, 1996

Federal Emergency Management Agency

PURPOSE:
 The purpose of this grading and drainage plan is to obtain approval for a construction of an office/warehouse building on a vacant tract of 0.5165 acres located in the Alameda Business Park, on Alameda Boulevard, lot 18.

DISCUSSION:
 A. The facilities are to be located in the Rio Grande Valley, on the first terrace or mesa above the level historic floodplain of the Rio Grande, on the east side of the valley.
 B. The area is presently vacant and unimproved. Lot 18 is in the Alameda Business Park, an area which has been developed with a grading and drainage plan approved by the City of Albuquerque. The approved plan (C16/D6) provides for free runoff from lot 18 to the paved street on the north, with the runoff entering a central ponding area along with runoff from other parts of the business park, the ponded water then being pumped to the North Diversion Ditch for discharge to the Rio Grande.
 C. The site is bordered on the north by the paved street, Vista Alameda, and on the east and west by undeveloped lots. On the south there is presently a four feet high retaining wall which separates lot 18 from the General Mills site. The General Mills area adjacent to lot 18 is open, with a railroad spur being located about 50 feet south of the property line.

SOILS:
 The soils within lot 18 have been greatly disturbed as a result of the earthwork for the Alameda Business Park. Before the business Park was developed, the site was part of a sand and gravel quarry. The depth of cut or fill and the degree of compaction of the earth material is unknown.

DRAINAGE CONSIDERATIONS:
 A. The site is not located within the limits of the 100-year flood, see Flood Insurance Rate Map, panel 128 of 825, effective date, September 20, 1996.
 B. There are no apparent flow channels crossing the site.
 C. The site is protected from major flooding from off-site flows by the major drainage structures in the vicinity. The site is located west of the AMARCA North Diversion Channel, so flooding from the east would be diverted by the two levees on the sides of the channel. The site is higher by about 40 feet than the surface of the Rio Grande floodplain to the west, and about 10 feet higher than the General Mills site to the south.
 D. The site is to be developed with an office/warehouse and asphalt surfaced parking area on about 75% of the site, with 15% landscaping and 10% gravel surface around the sides and back of the building. Lot runoff will leave the lot over the parking areas and through the driveways into the street which is paved, with standard curbs and gutters.

CONCLUSIONS:
 A. The proposed construction is not within a designated 100 year floodplain.
 B. Construction as proposed will not increase the hazard from flooding to downstream facilities.
 C. The proposed grading and construction will protect the property from any off-site or on-site runoff.

REFERENCES:
 A. Standard Specifications for Public Works Construction, City of Albuquerque.
 B. Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque..Bernalillo County..AMARCA, December 1999.
 C. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, USDA-SCS.
 D. Flood Insurance Rate Map, City of Albuquerque, Bernalillo County, Federal Emergency Management Agency, Panel 136 of 825, effective date: September 20, 1996.

Bohannon & Huston

Courtyard One 7500 JEFFERSON NE Albuquerque NEW MEXICO 87109

ENGINEERS PLANNERS PHOTOGRAMMETRISTS SURVEYORS SOFTWARE DEVELOPERS

SHEET 3 OF 4

JOB NO. 91144 AZ 0

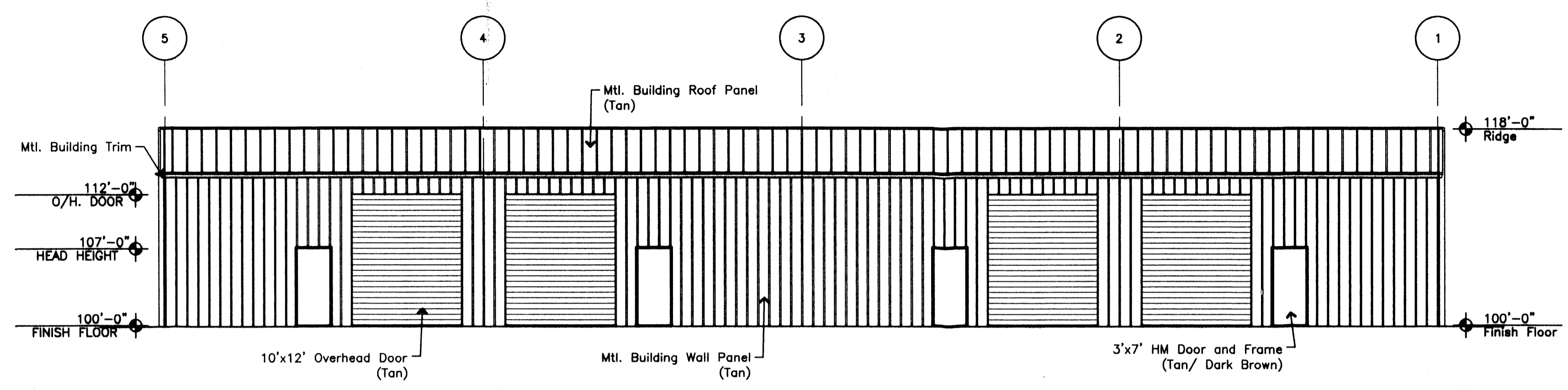
RUNOFF FOR LOT 18, ALAMEDA BUSINESS PARK, ALAMEDA BOULEVARD, ALBUQUERQUE, NM. MARCH 26, 2002

TABLE A
 RUNOFF ESTIMATE FOR ON-SITE BASIN OF 0.5165 ACRES, LOT 18, ALAMEDA BUSINESS PARK

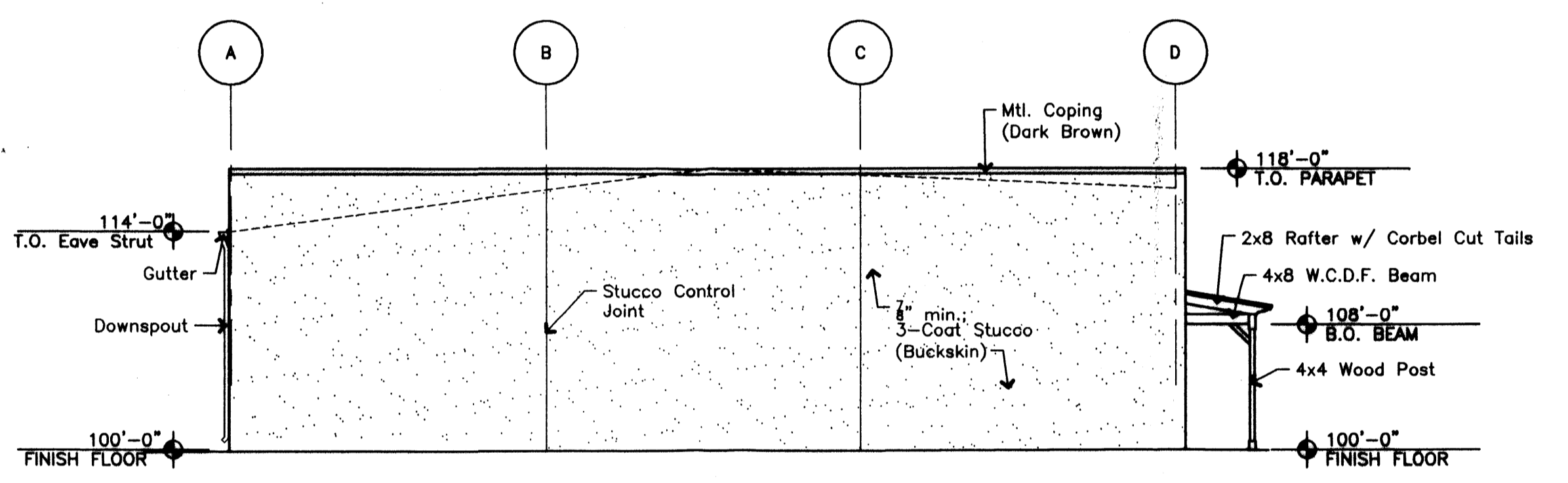
Land use	Runoff Factors		UNDEVELOPED STATE				PROPOSED USE			
	Peak	Total	Area	Percent	Peak	Total	Area	Percent	Peak	Total
	CFS/acre	inches	SF		Runoff	Runoff	SF		Runoff	Runoff
					CF	CF			CF	CF
1 A	1.56	0.53	22500	100.0	0.8	993.7	0	0.0	0.0	0.0
2 B	2.28	0.78	0	0.0	0.0	0.0	3500	15.6	0.2	227.5
3 C	3.14	1.13	0	0.0	0.0	0.0	2300	10.2	0.2	216.6
4 D	4.70	2.12	0	0.0	0.0	0.0	16700	74.2	1.8	2950.3
TOTALS,			22500	100.000	0.8	993.7	22500	100.000	2.2	3394.4
			0.5165	acre			0.5165	acre		39200.516

NOTES:
 a. Runoff factors from Section 22.2, DPM, December, 1999
 b. Land use descriptions: A. Uncompacted soil
 B. Landscaped
 C. Compacted soil, to include most vacant lots
 D. Impervious areas
 c. Peak runoff = Area (acres) x factor (CFS/acre) = CFS
 d. Total runoff = Area (SF) x factor (inches) / 12 (inches/foot) = CF
 e. Peak and total runoff is based on 6 hour, 100 year frequency storm

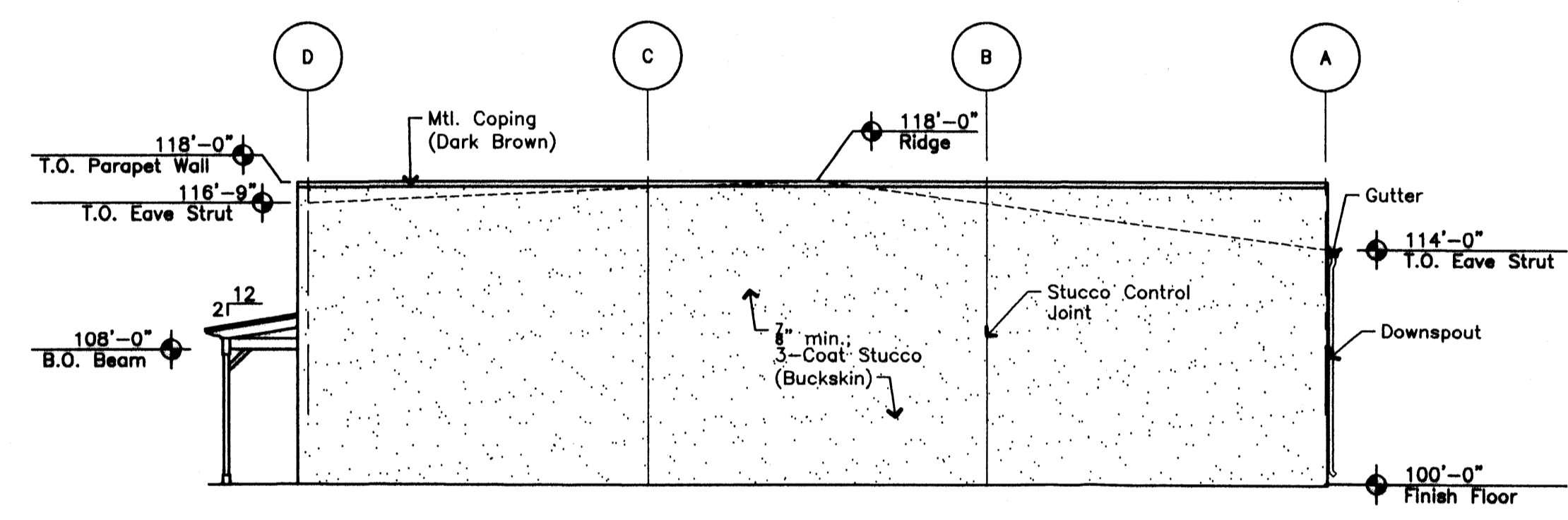
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APPROVALS, REVISIONS	BY	DATE
		MARVIN R. KORTUM, P.E. Civil Engineering NM PE 6519
		1605 Speakman Drive, S.E. Albuquerque, New Mexico 87123 (505) 299-0774
GRADING AND DRAINAGE PLAN		
ALAMEDA BUSINESS PARK		
LOT 18		
MAPS, NOTES		
PROJECT NO	MAP NO	SHEET OF
C-16/006	C-16	2 / 2



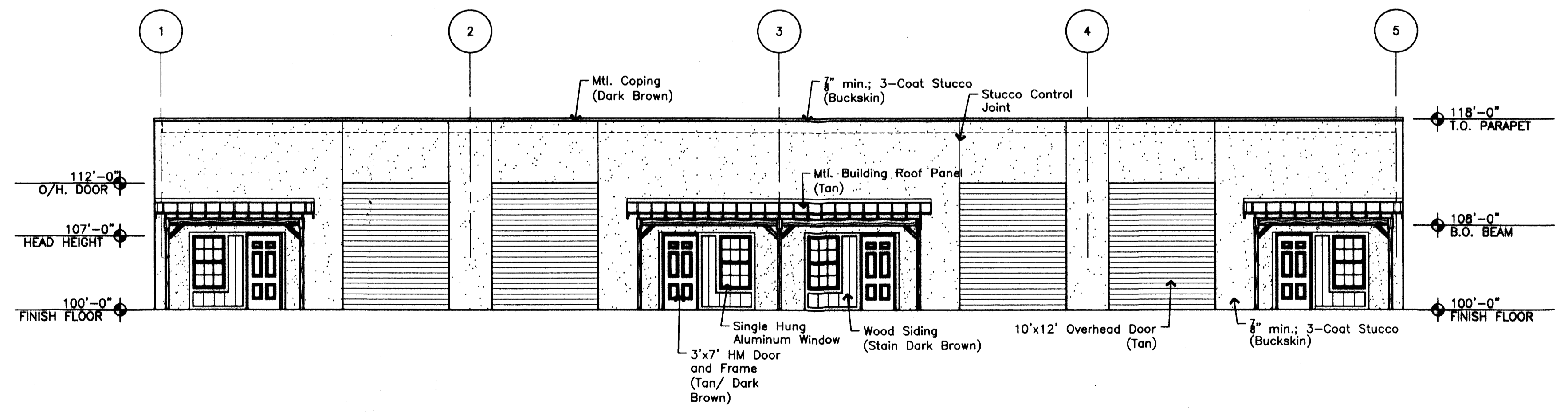
SOUTH ELEVATION
 1/8"=1'-0"



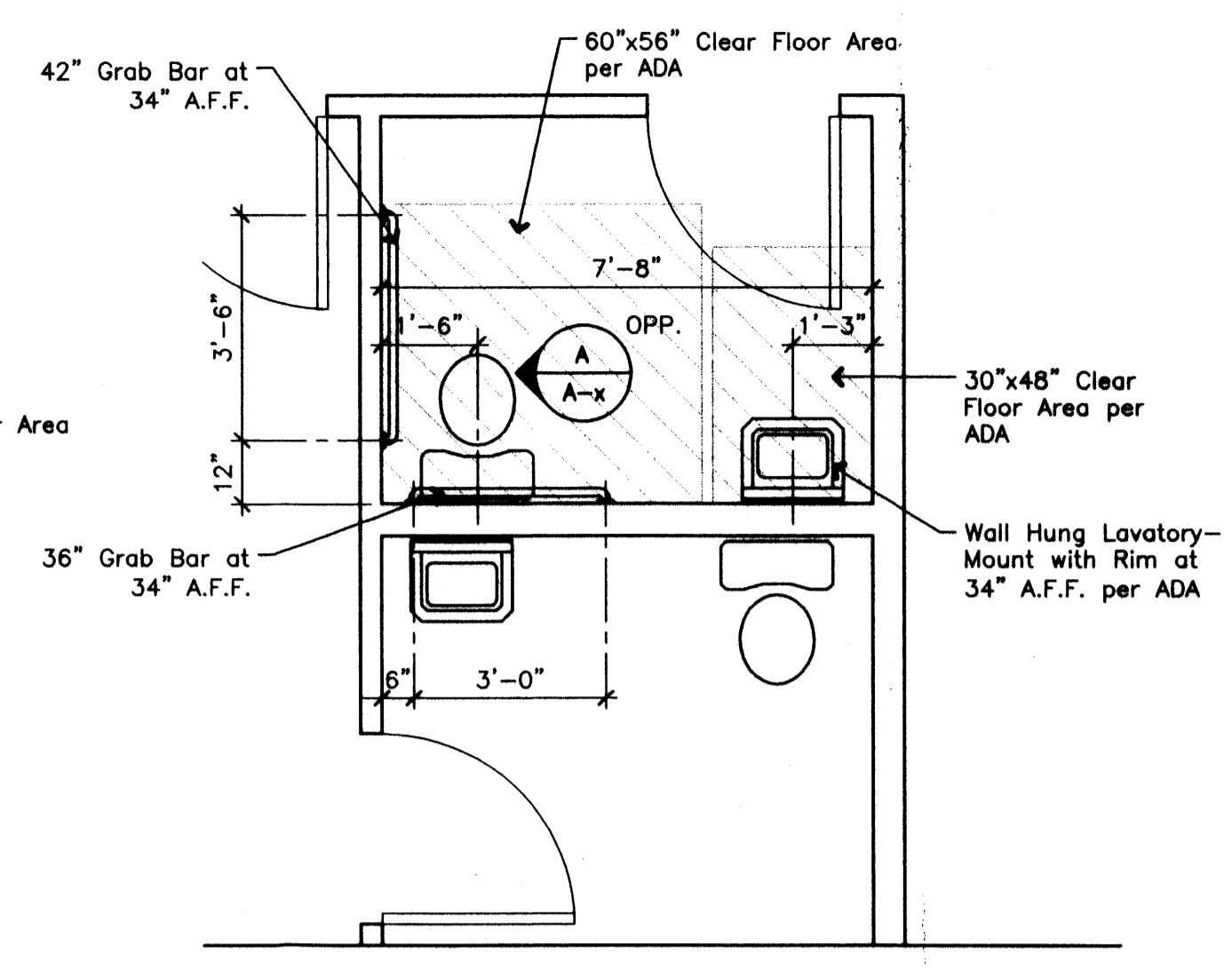
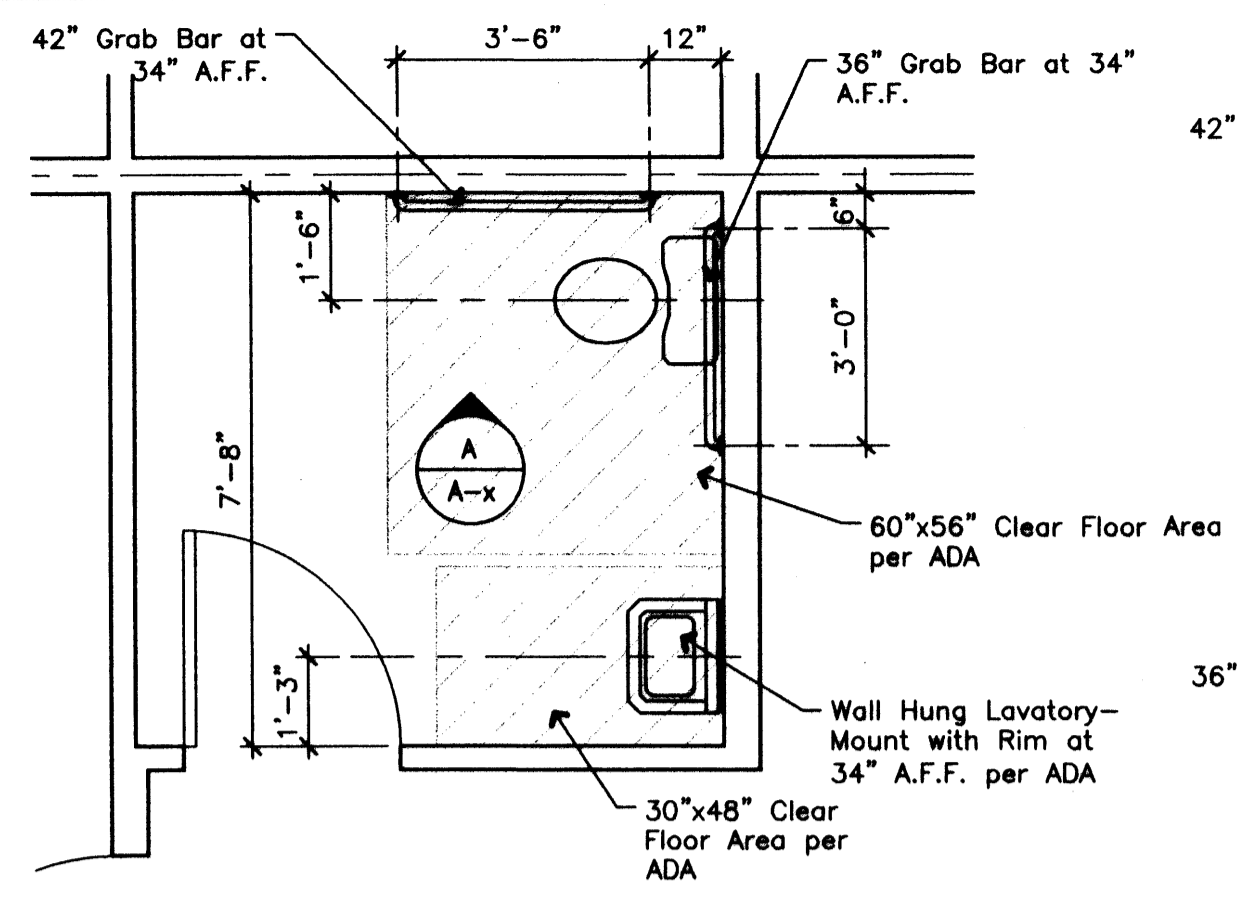
EAST ELEVATION
 1/8"=1'-0"



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

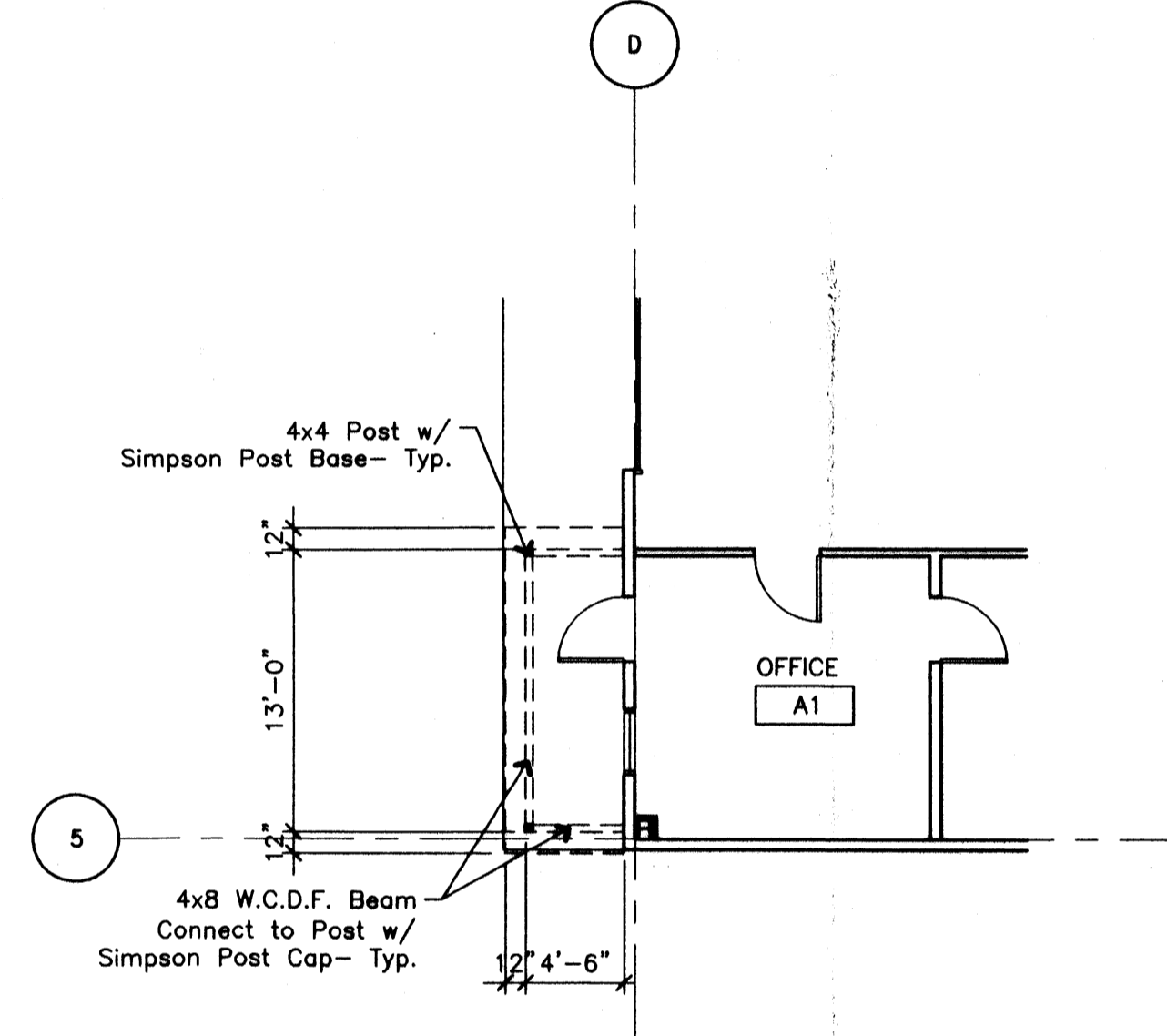
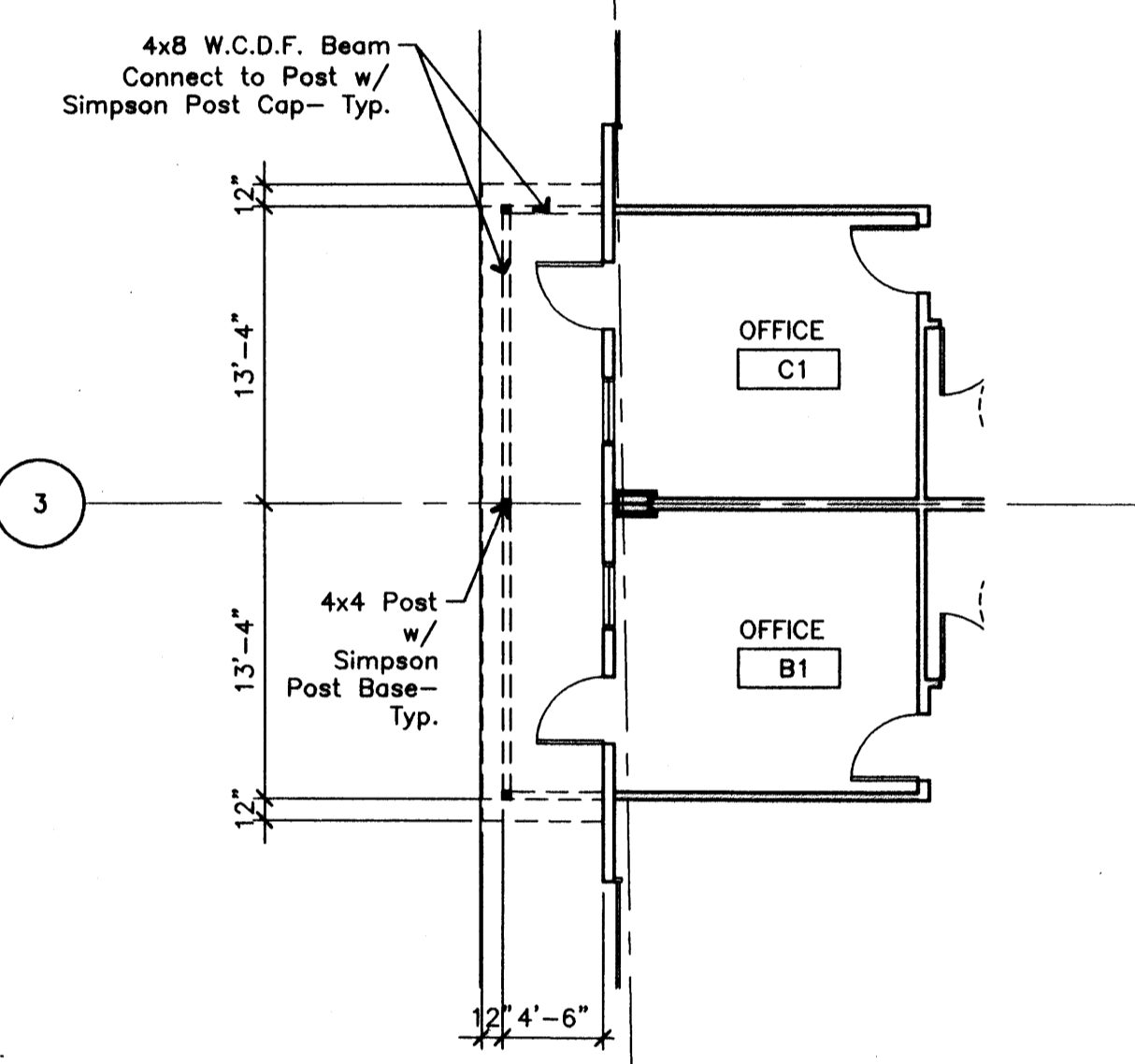


NORTH ELEVATION (Street Side)
 1/8"=1'-0"



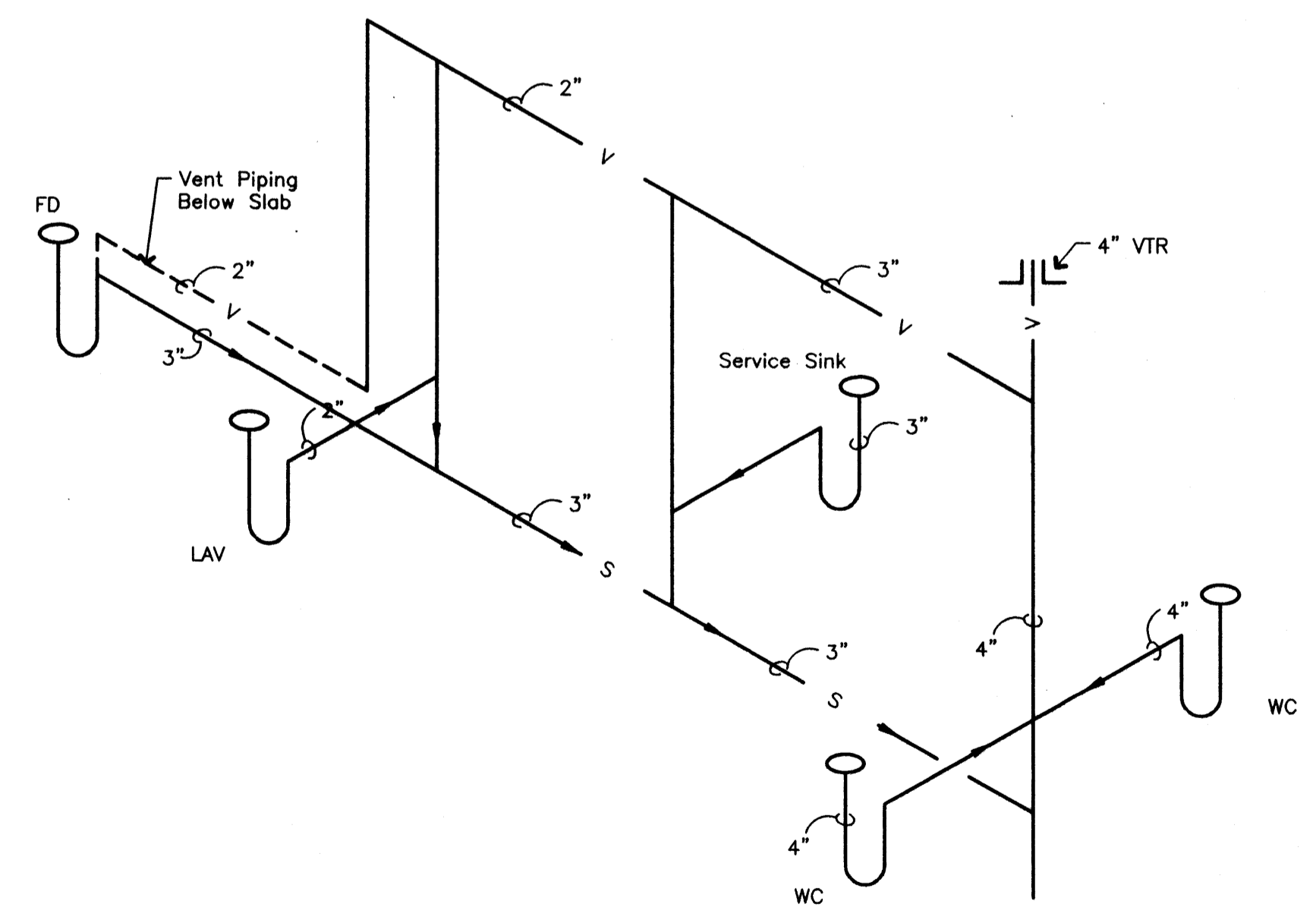
1 ENLARGED TOILET PLAN
3/8"=1'-0"

2 ENLARGED TOILET PLAN
3/8"=1'-0"

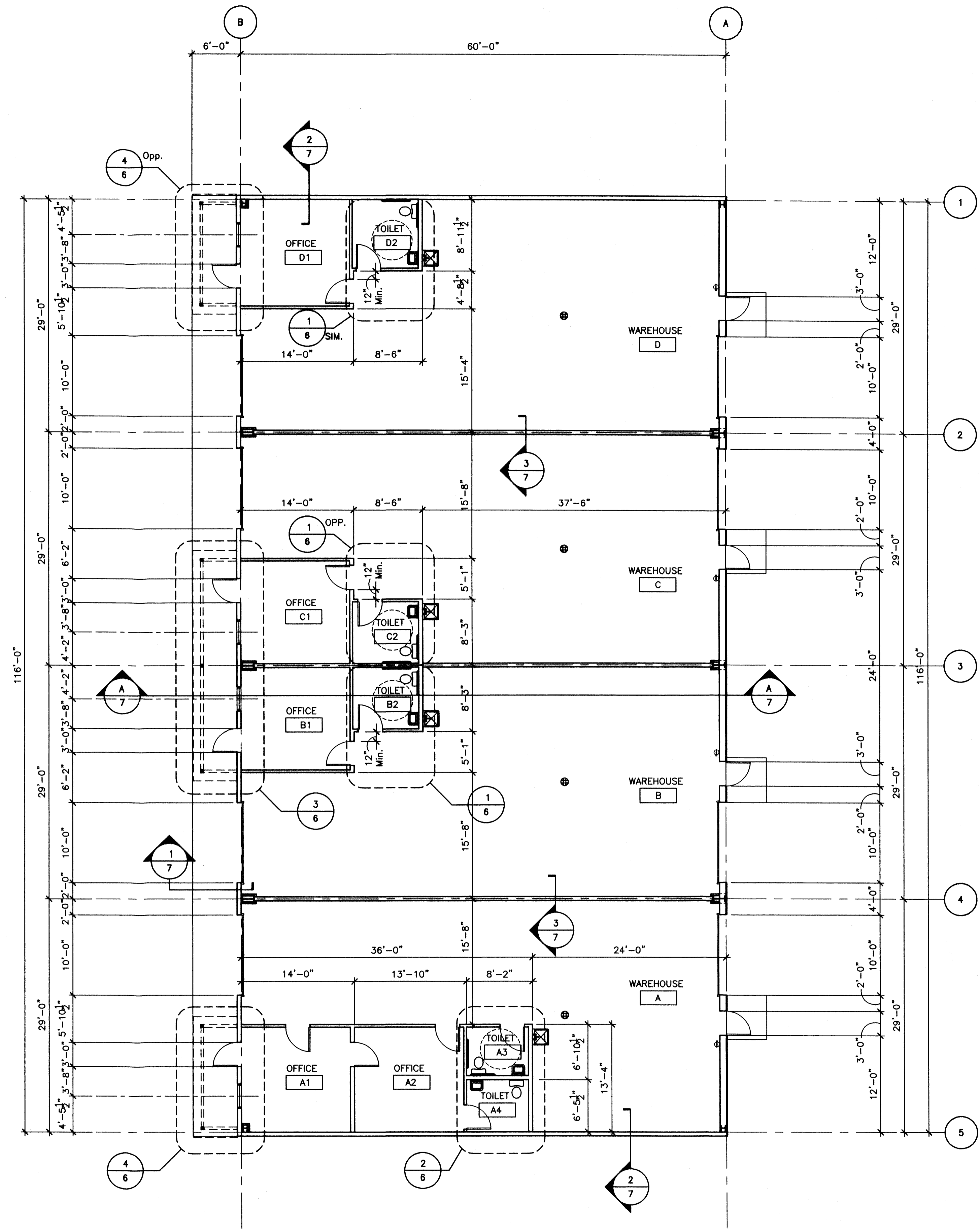


3 PLAN AT PORCH
1/8"=1'-0"

4 PLAN AT PORCH
1/8"=1'-0"

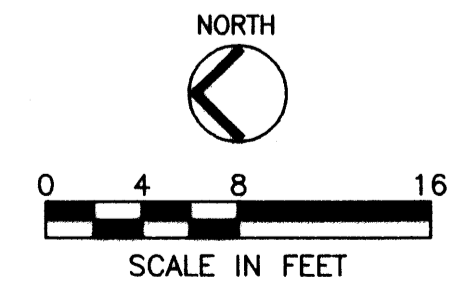


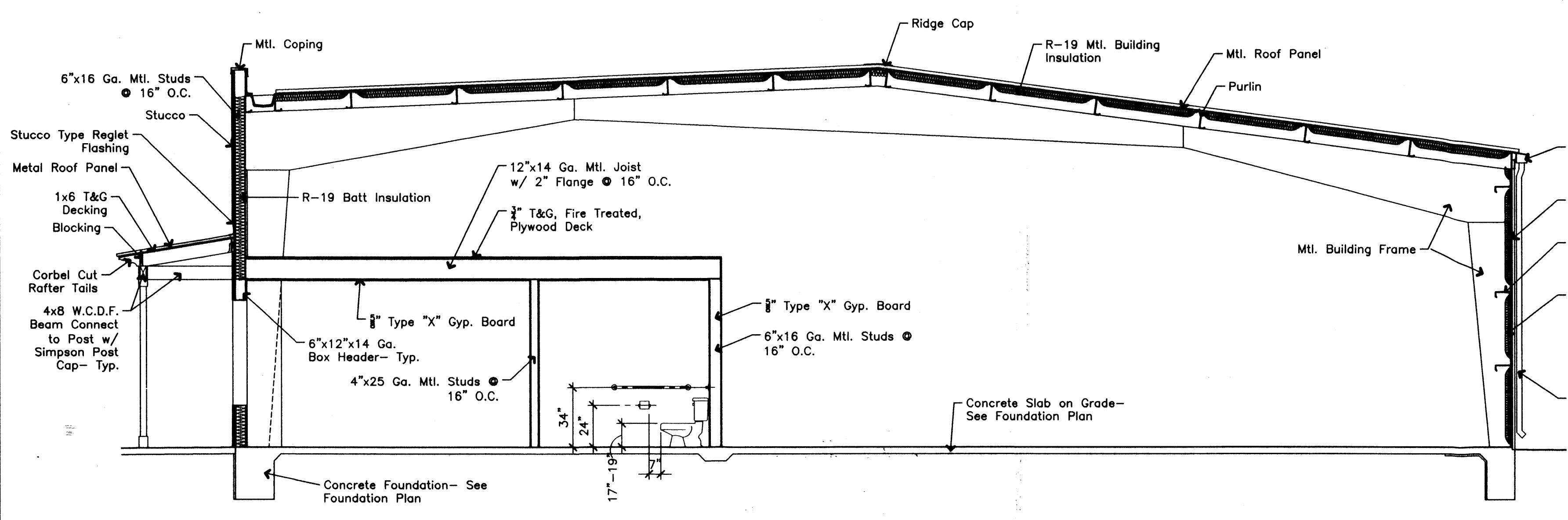
5 SANITARY AND VENT SCHEMATIC
NO SCALE



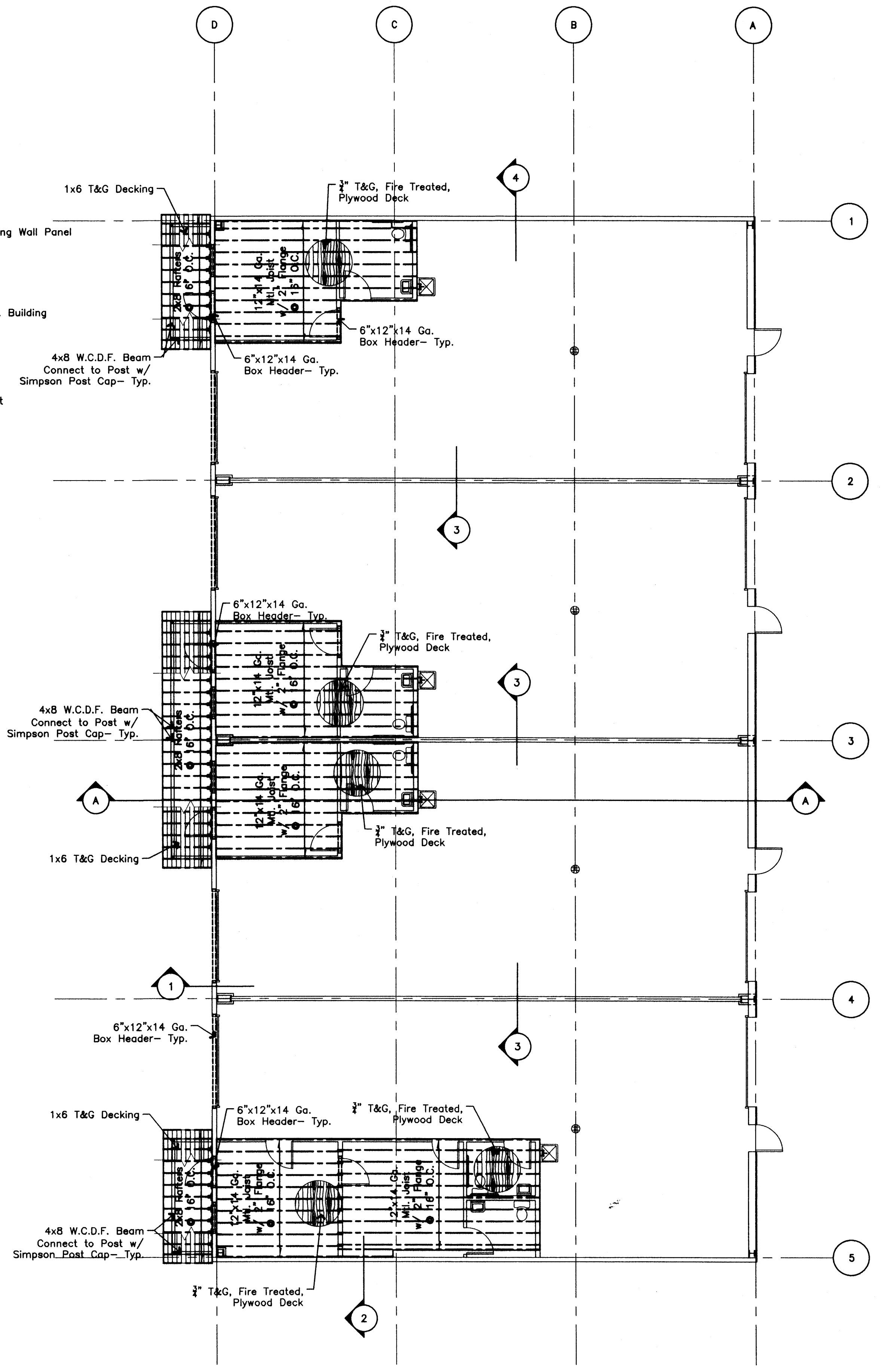
FLOOR PLAN
1/8"=1'-0"

Note: Building Will Contain Landfill Gas Monitors
Note: All Pedestrian Doors Shall Be 3'-0"x7'-0". See Owner For Hardware Requirements

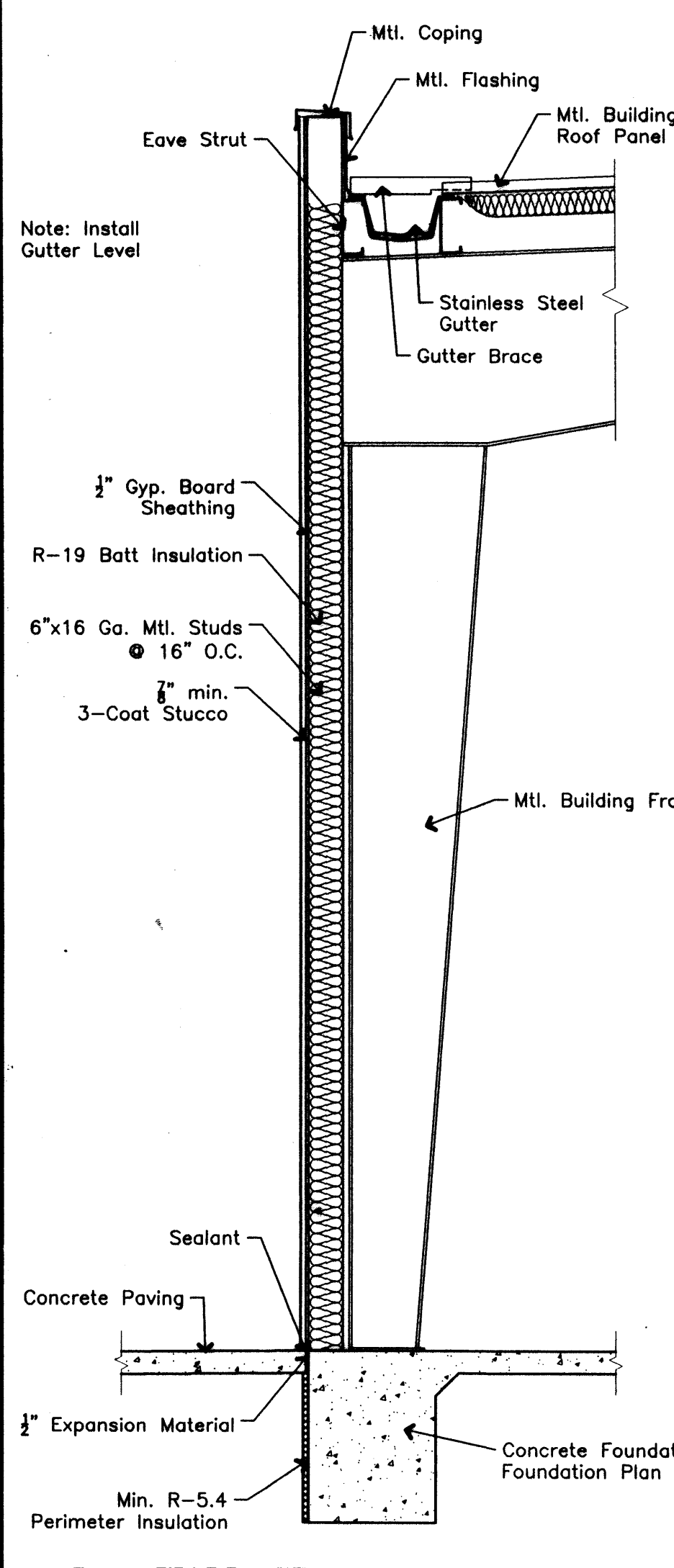




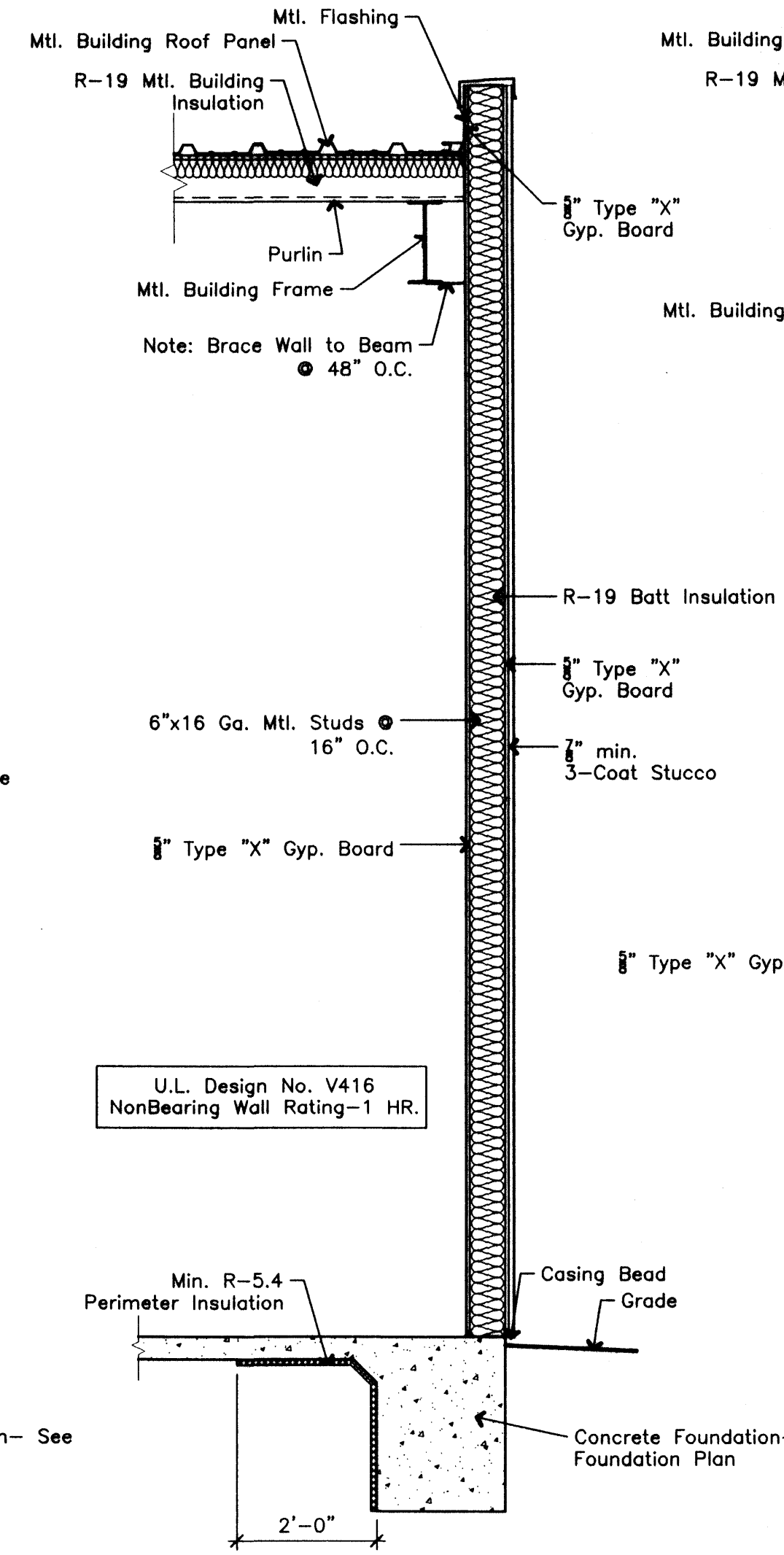
A BUILDING SECTION
 1/4"=1'-0"



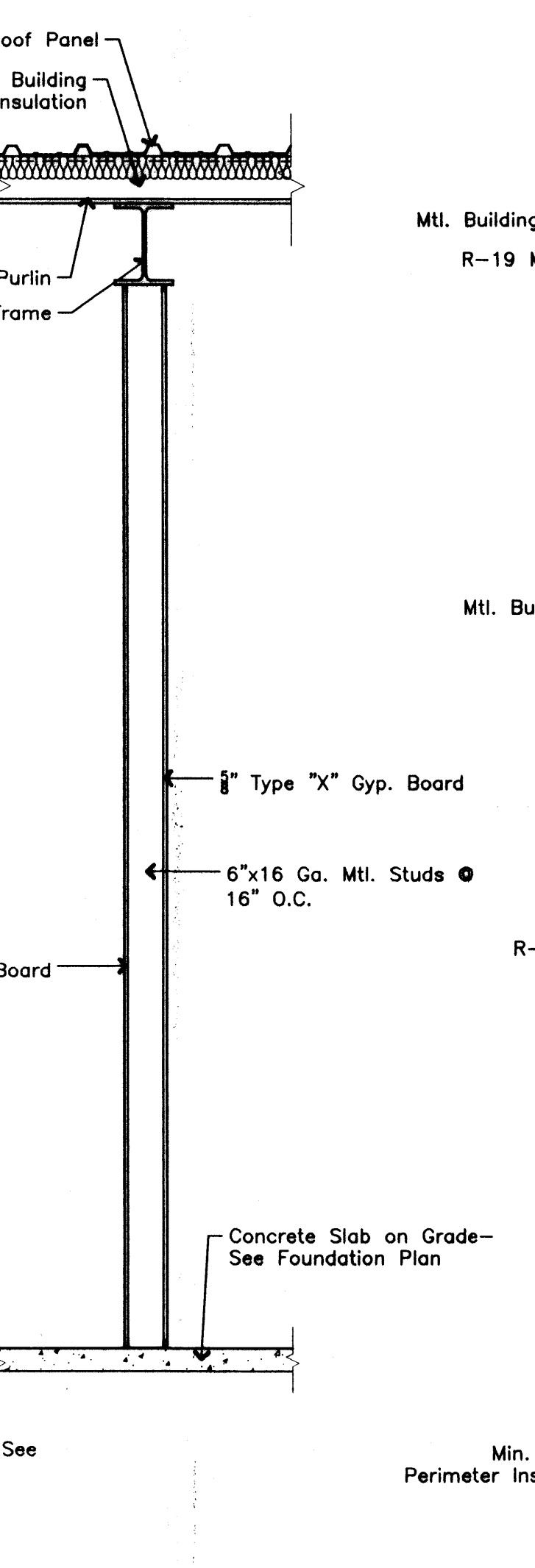
FRAME PLAN
 1/8"=1'-0"



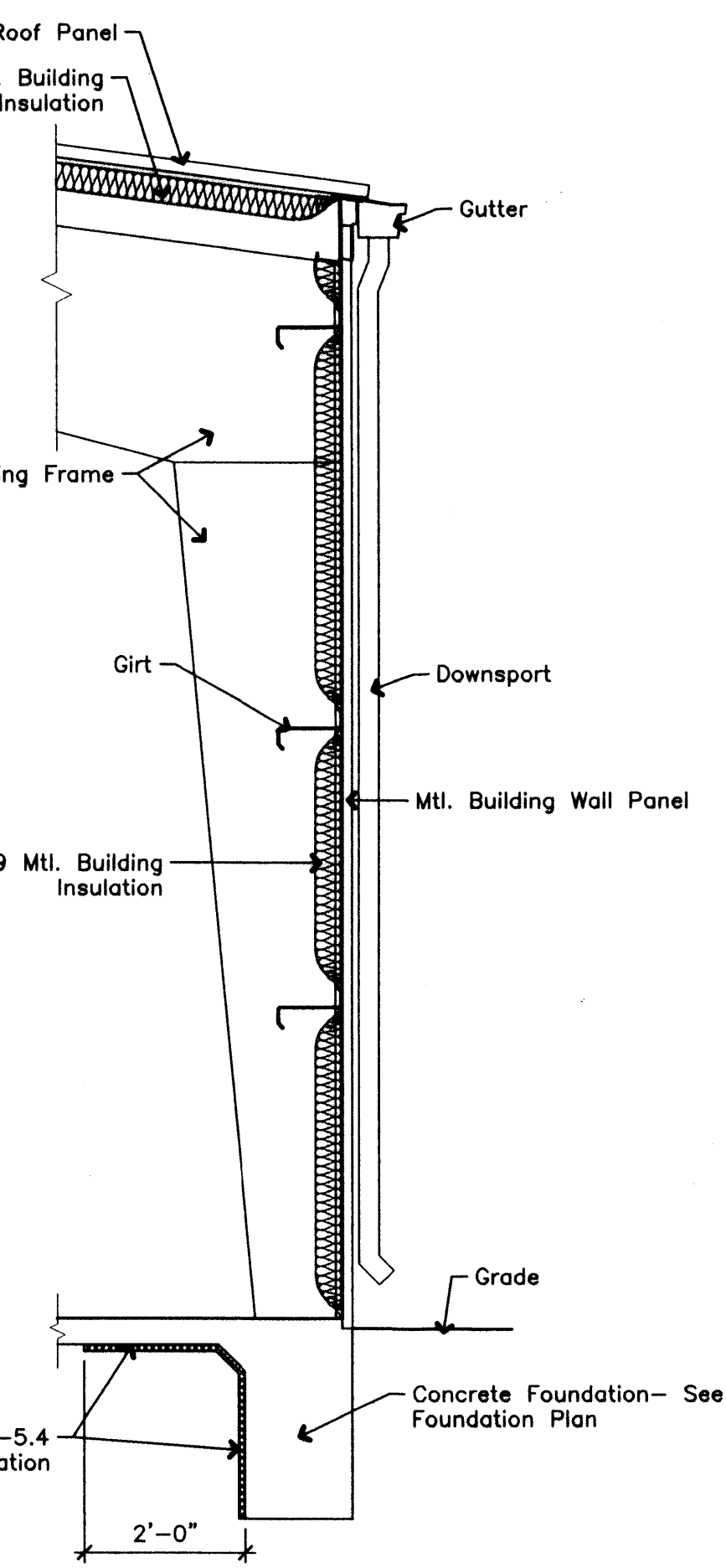
1 WALL SECTION
 1/2"=1'-0"



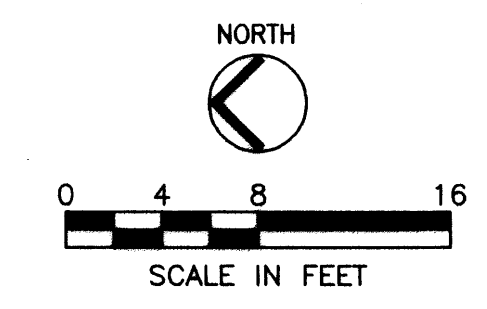
2 WALL SECTION
 1/2"=1'-0"

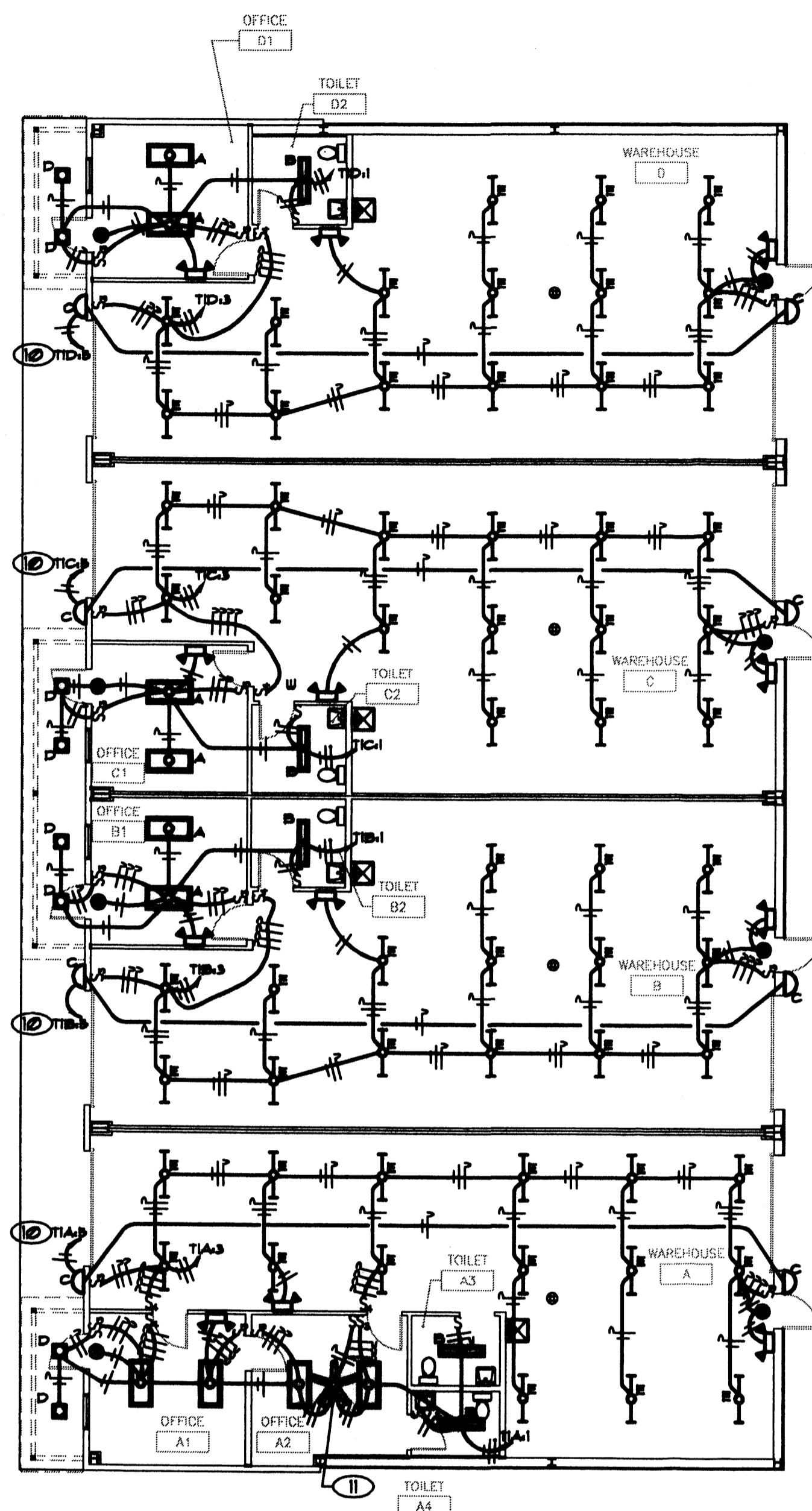


3 WALL SECTION
 1/2"=1'-0"



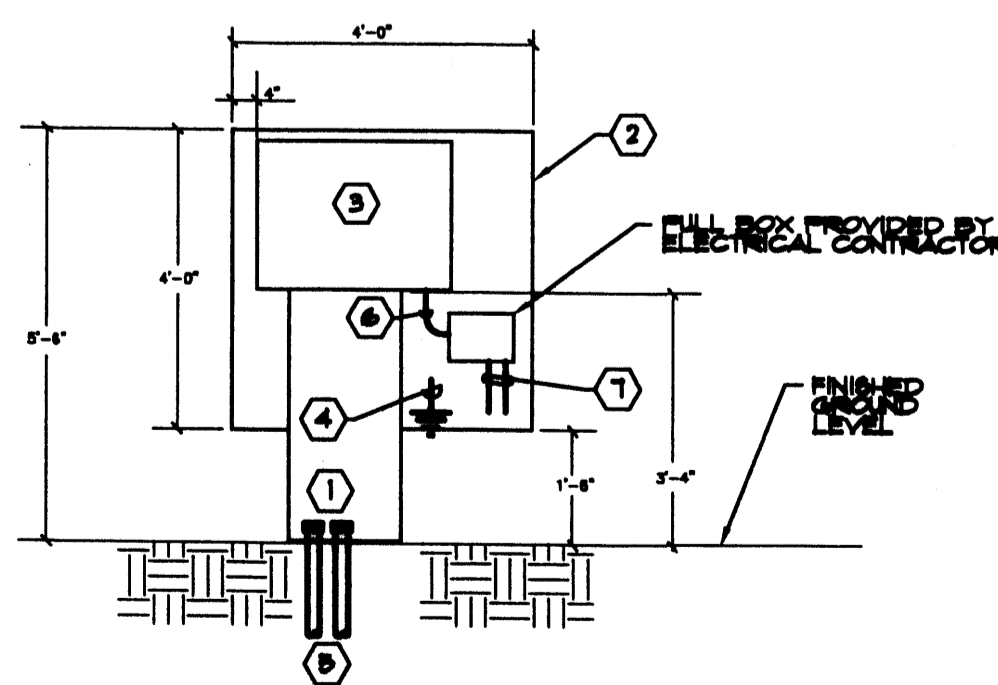
4 WALL SECTION
 1/2"=1'-0"





ELECTRIC LIGHTING PLAN

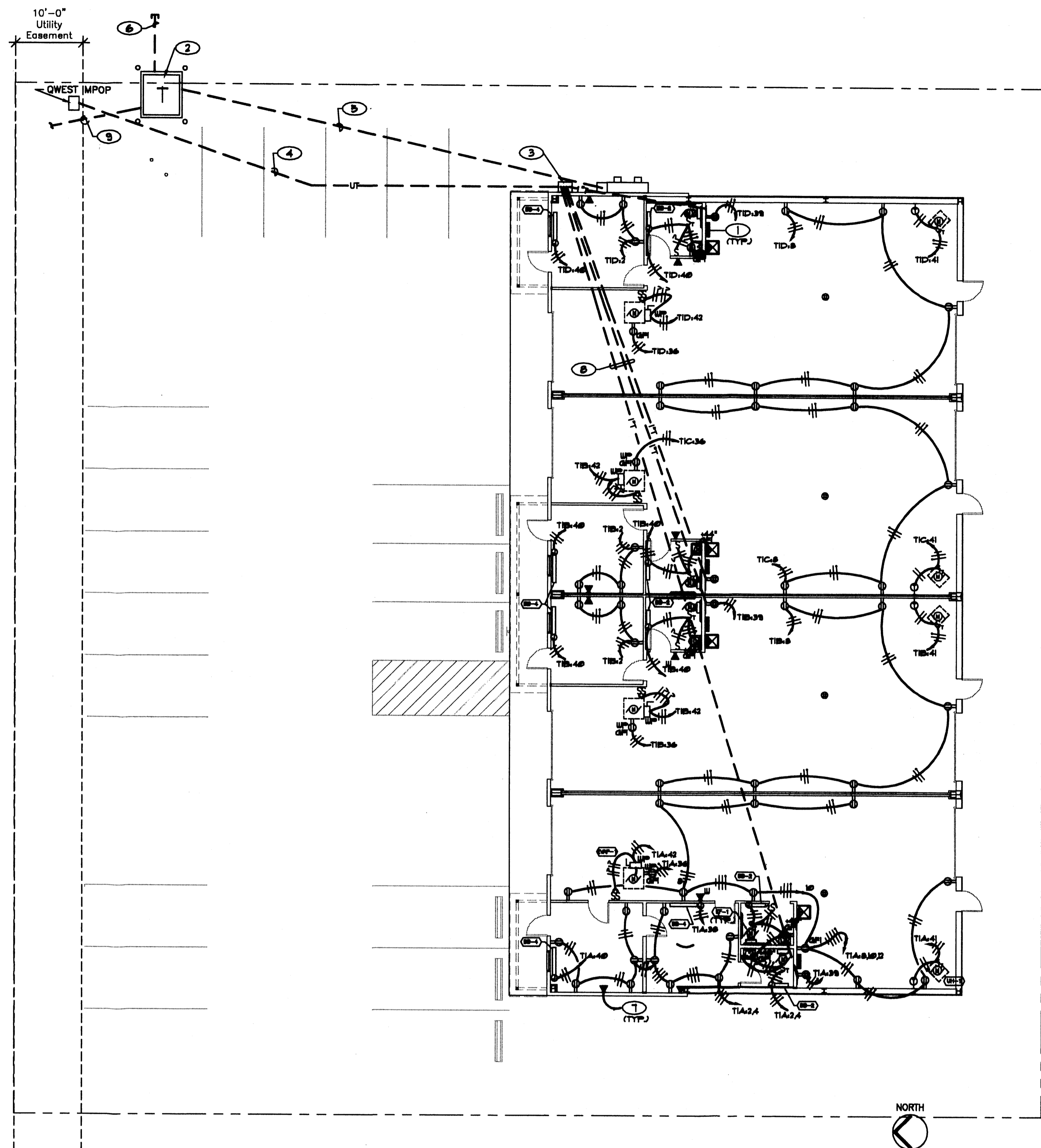
SCALE: 1" = 10'



TELEPHONE SERVICE ENTRANCE DETAIL
NOT TO SCALE

KEYED NOTES

- 1 PROPOSED PANEL BOARD LOCATION FOR TENANT PANELS "TA, TIB, TIC, AND TID". (TYP.) PANEL BOARD DESIGNATION CORRESPONDS TO TENANT SPACE DESIGNATION.
- 2 PAD MOUNTED TRANSFORMER PER PNM DESIGN STANDARDS. SEE DETAIL ON SHEET "E2".
- 3 QWEST ENTRANCE JUNCTION BOX, SEE "TELEPHONE SERVICE ENTRANCE DETAIL" THIS SHEET. COORDINATE INSTALLATION WITH ROSARITO KNIFFIN, WITH QWEST, AT (505) 245-8374.
- 4 3" CONDUIT TO QWEST MAIN POINT OF PRESENCE (MPOP).
- 5 SEE RISER DIAGRAM ON SHEET "E2" FOR MORE INFORMATION.
- 6 STUB OUT AND CAP A 4" CONDUIT 10'-0" FROM OUTSIDE EDGE OF PAD MOUNTED TRANSFORMER TO THE EAST AS SHOWN.
- 7 3/4" CONDUIT TO TENANT TELEPHONE TERMINAL BOARD. (TYP.)
- 8 1" CONDUIT TO EACH TENANT TELEPHONE TERMINAL BOARD. (TYP.)
- 9 4" UNDERGROUND PRIMARY CONDUIT TO PNM'S MAIN POINT OF PRESENCE. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION WITH BOB JARRETT, WITH PNM, AT (505) 241-3585.
- 10 HOMERUN VIA PHOTOCELL - TIMECLOCK. MOUNT PHOTOCELL ON ROOF FACING NORTH.
- 11 CEILING FAN WITH NO LIGHTS.

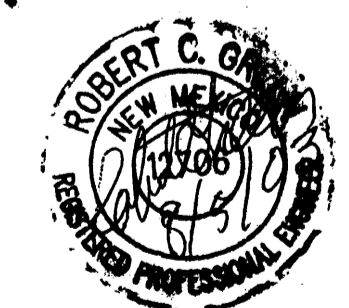


ELECTRIC POWER PLAN

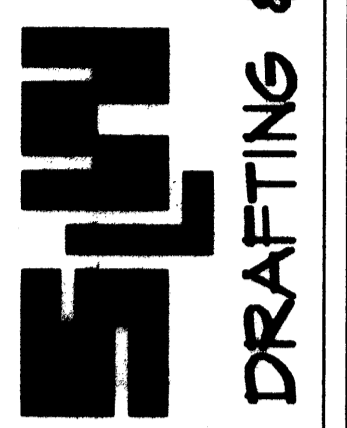
SCALE: 1" = 10'

NOTES:

- 1 METAL SPLICING CHAMBER BY QWEST.
- 2 4' x 4' x 3/4" PLYWOOD BACKBOARD ON BUILDING WALL.
- 3 QWEST PROTECTOR AND DISMANTLING POINT 31 1/2" x 24 1/2" x 8 1/2" CABINET (BY QWEST).
- 4 3/4" SOLID COPPER GROUND WITH 8'-0" TAIL TO ELECTRICAL SERVICE GROUND.
- 5 ENTRANCE CONDUIT(S) TO QWEST (SPECIFIED LOCATION WITH FULL STRING AND TEMPORARILY CAPPED. STUB 6" ABOVE FINISHED GRADE AT BOTH ENDS).
- 6 1 1/2" FLEX CONDUIT.
- 7 CONDUITS TO EACH SEPARATE TENANT SPACE.



STEVE L. WILLEMS
P.O. BOX 183
TULERSA, N.M.



CONSULTANT
Charlie Weaver
Active Electric
Office 281-4303
2381457M

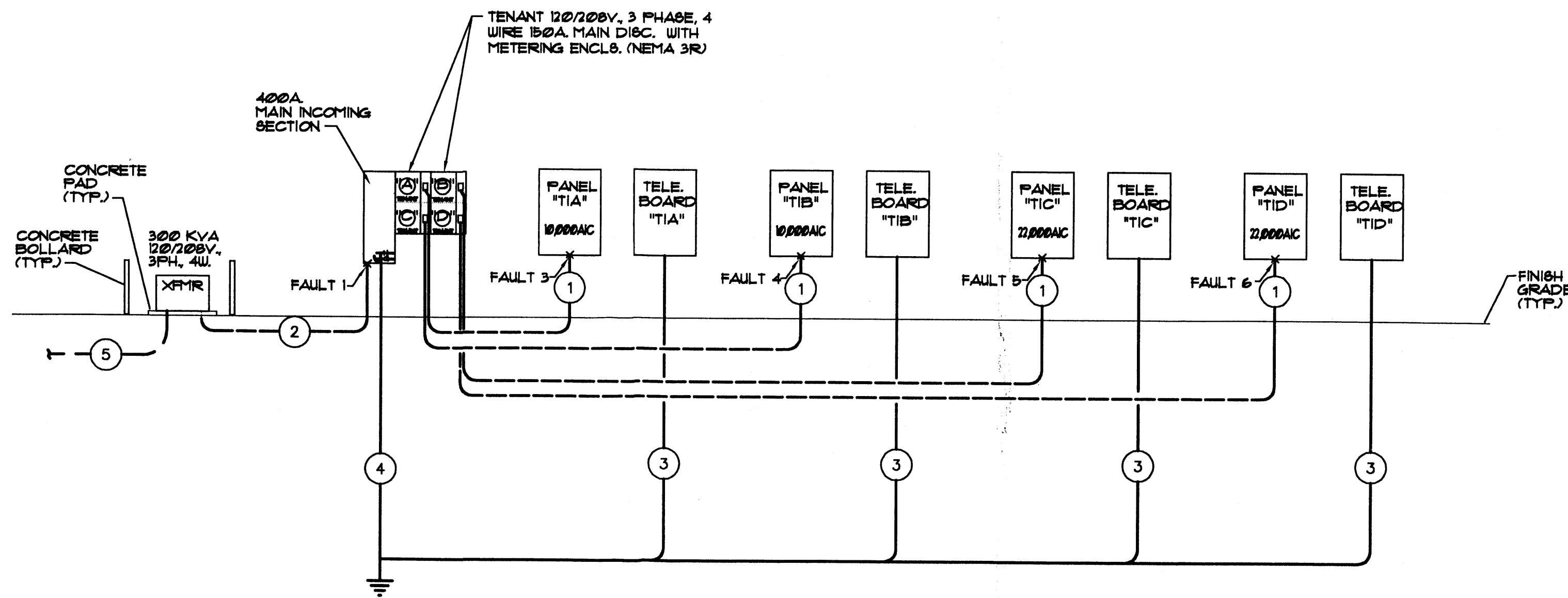
**WAREHOUSE/ OFFICE
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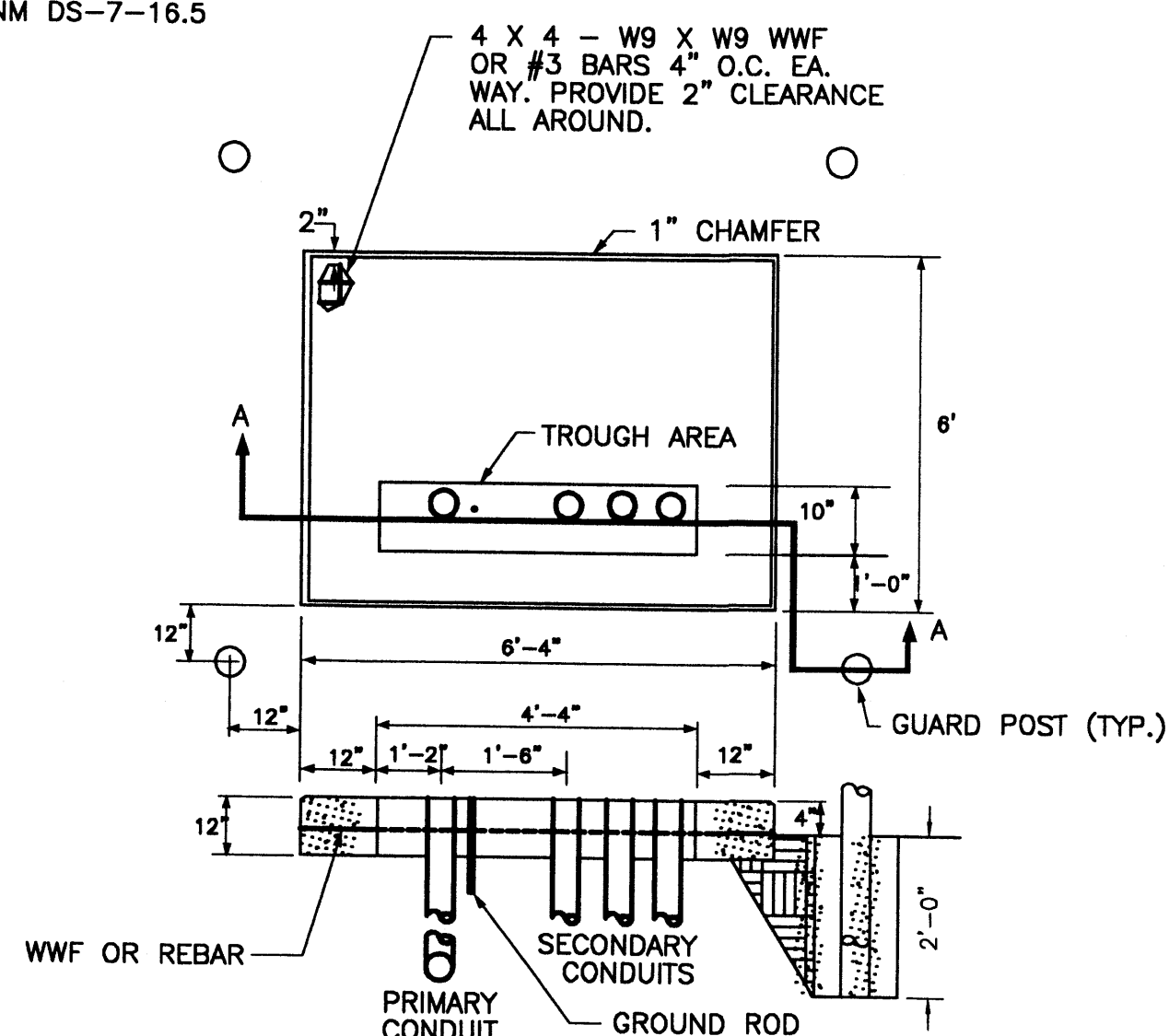
NOTE:
CONTRACTOR SHALL INSTALL
METER, METER ENCLOSURE AND
CT'S PER PNM DESIGN
STANDARDS. CONTRACTOR SHALL
COORDINATE SAID SAME.



RISER DIAGRAM
NOT TO SCALE

ELECTRICAL LOAD ANALYSIS				
SERVICE VOLTAGE: 208Y/120, 3 PHASE, 4 WIRE		AREA: 7,076 S.F.		
OCCUPANCY: OFFICE - WAREHOUSE				
LOAD DESCRIPTION	CONNECTED LOAD (VA)	DIVERSITY %	DESIGN LOAD (VA)	REMARKS
LIGHTING (3W/ft.L)	21,228	125	26,536	
RECEPTACLES (1W/ft.L)	7,076	NEC - ART. 220-13	7,076	
MOTORS	100	100		
228% OF LARGEST MOTOR	25			BALER
HVAC (11W/ft.L)	77,836	100	77,836	
GENERAL (1W/ft.L)	7,076	100	7,076	
SPECIAL		100		
TOTAL LOADS	113,216		118,523	
TOTAL AMPS	314.5		329.2	

PNM DS-7-16.5

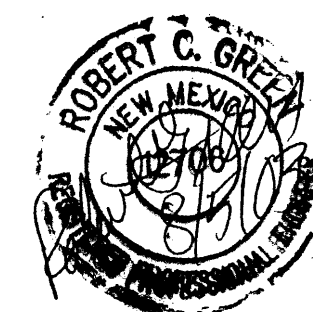


NEW TRANSFORMER PAD DETAIL - TYP.
NOT TO SCALE

FEEDER SCHEDULE	
SYMBOL	DESCRIPTION
1	1/2" THIN CU AND 1#G, IN 2" CONDUIT.
2	1/2" THIN CU IN 4" CONDUIT.
3	1/2" THIN CU "GREEN" CONDUCTOR GROUND FOR TELEPHONE SYSTEM. (TYP.)
4	1/2" SDBC GROUND TO 3/4" x 10'-0" COPPER GROUND ROD AND NEAREST METALLIC COLD WATER PIPE.
5	PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM) PRIMARY. SEE SHEET "E1" FOR MORE INFORMATION.

SHORT CIRCUIT CALCULATIONS		
The following short-circuit calculations are by the point-to-point method as outlined in the 'Electrical Protection Handbook' by Busman.		
SHORT CIRCUIT CURRENT AVAILABLE		
60000	amps per DESIGN STANDARDS	@ PNM
Telephone []	Date []	
OR		
Estimated transformer capacity =	KVA	
	0 FLA @	208 Volts
Estimated transformer impedance =	Z	
Transformer multiplier =	#DIV/O	
Short circuit available (#)	= #DIV/O AMPS	
(#) FLA x multiplier		
FAULT CURRENT CALCULATION METHOD		
1) 'F' factor		
$f = (1.73 \times L \times I_{sc}) / (E \times C \times E)$		
Where: L = length of circuit to fault		
I _{sc} = short circuit current available at beginning of circuit		
C = constant from table		
E = voltage line to line		
2) M = 1/(1+f)		
3) I _{sc} @ point = I _{sc} x M		
4) Let thru per fuse curves		
Conductor sizes should be inputted with AWG designations or in the case of 1/0, 2/0, 3/0, and 4/0 conductors enter .1, .2, .3 and .4 respectively.		
FAULT CURRENT AT POINT # 1 AT MAIN INCOMING SECTION	FAULT CURRENT AT POINT # 2 AT PANEL 'TIA'	FAULT CURRENT AT POINT # 3 AT PANEL 'TIB'
I _{sc} = 60000	I _{sc} =	I _{sc} = 31019
L = 30	L =	L = 120
# = 1	# =	# = 1
CLK(1) or AL(2) = 1	CLK(1) or AL(2) =	CLK(1) or AL(2) = 1
MAG(1) or NDK(2) = 2	MAG(1) or NDK(2) =	MAG(1) or NDK(2) = 2
AWG = 300	AWG =	AWG = 0.2
C = 26706	C = #VALUE!	C = 11423
E = 208	E = 208	E = 208
f = 0.934	Transf. KV = 1.75	f = 2.710
M = 0.517	Transf. % = 0.300	M = 0.270
I _{sc} = 31019	M = 1.000	I _{sc} = 8360
Let thru =	I _{sc} = 0	Let thru =
	Let thru =	KTN-R Fuses
FAULT CURRENT AT POINT # 4 AT PANEL 'TIB'	FAULT CURRENT AT POINT # 5 AT PANEL 'TIC'	FAULT CURRENT AT POINT # 6 AT PANEL 'TID'
I _{sc} = 31019	I _{sc} = 31019	I _{sc} = 31019
L = 74	L = 65	L = 22
# = 1	# = 1	# = 1
CLK(1) or AL(2) = 2	CLK(1) or AL(2) = 1	CLK(1) or AL(2) = 1
MAG(1) or NDK(2) = 2	MAG(1) or NDK(2) = 2	MAG(1) or NDK(2) = 2
AWG = 0.2	AWG = 0.2	AWG = 0.2
C = 7301	C = 11423	C = 11423
E = 208	E = 208	E = 208
f = 2.615	f = 1.468	f = 0.497
M = 0.277	M = 0.405	M = 0.668
I _{sc} = 8581	I _{sc} = 12568	I _{sc} = 20722
Let thru =	Let thru =	Let thru =

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION - NOTE: NOT ALL SYMBOLS MAY BE USED.
[Symbol]	2'x4' RECESSED FLUORESCENT LUMINAIRE "A" DENOTES LUMINAIRE TYPE.
[Symbol]	WALL MOUNTED LUMINAIRE
[Symbol]	HID LUMINAIRE
[Symbol]	TWIN HEAD BATTERY BACK-UP EMERGENCY LUMINAIRE, TYPE 'Q' SEE LUMINAIRE SCHEDULE.
[Symbol]	JUNCTION BOX
[Symbol]	EXIT SIGN WITH DIRECTIONAL ARROW
[Symbol]	DISCONNECT SWITCH
[Symbol]	MOTOR, '5' DENOTES A 5 HORSEPOWER MOTOR
[Symbol]	HOMERUN CONDUIT: GROUND CONDUCTOR SWITCH CONDUCTOR HOT OR PHASE CONDUCTOR NEUTRAL CONDUCTOR ARROW(S) DENOTES NO. OF CIRCUITS
[Symbol]	DUPLEX GROUNDING STYLE RECEPTACLE, MOUNT @ 18" AFF.
[Symbol]	DOUBLE DUPLEX GROUNDING STYLE RECEPTACLE, MOUNT @ 18" AFF.
[Symbol]	FLOOR MOUNTED DOUBLE DUPLEX RECEPTACLE
[Symbol]	FLOOR MOUNTED DUPLEX RECEPTACLE
WP	DENOTES WEATHERPROOF
GFI or GFCI	GROUND FAULT CIRCUIT INTERRUPTER
UON	UNLESS OTHERWISE NOTED
SDBC	SOFT DRAWN BARE COPPER
[Symbol]	PANELBOARD SURFACE MOUNTED
[Symbol]	CONCEALED OR EXPOSED CONDUIT TURNED AWAY FROM OBSERVER
[Symbol]	CONCEALED OR EXPOSED CONDUIT TURNED TOWARD OBSERVER
[Symbol]	CONDUIT UNDERGROUND OR EMBEDDED IN CONCRETE
[Symbol]	MAIN TELEPHONE TERMINAL BOARD WITH GROUND
[Symbol]	METER
[Symbol]	CIRCUIT BREAKER
S	LIGHT SWITCH
S ₃	3-WAY SWITCH
S ₄	4-WAY SWITCH
S _T	MANUAL MOTOR STARTERS WITH THERMAL OVERLOADS
[Symbol]	MECHANICAL EQUIPMENT DESIGNATION
[Symbol]	KEYED NOTE DESIGNATION
[Symbol]	TELEPHONE EQUIPMENT
[Symbol]	TELEPHONE OUTLET, MOUNT @ 18" AFF.



STEVE L. WILLEMS
P.O. BOX 103
TULSA, N.M.
SLW
DRAFTING & DESIGNS

CONSULTANT
Charlie Weaver
Active Electric
Office 201-4903
250/45114

WAREHOUSE/ OFFICE
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LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	LAMPS	TOTAL WATTS	MANUFACTURER	CATALOG NO.	VOLTAGE	FINISH	MOUNTING	RECESS DEPTH
A	4 LAMP FLUORESCENT WRAP AROUND WITH 18 LAMPS AND ELECTRONIC BALLAST.	4-F32T8/SP35	113	HUBBELL OR EQUAL	WV 432B	120	BAKED WHITE ENAMEL	SURFACE	
B	SIMILAR TO TYPE 'A' EXCEPT A 2 LAMP FIXTURE	2-F32T8/SP35	72	HUBBELL OR EQUAL	WV 232B	120	BAKED WHITE ENAMEL	SURFACE	
C	ONE PIECE, HEAVY DUTY, DIE CAST ALUMINUM WALL MOUNTED AREA LIGHT, HIGH PRESSURE SODIUM WITH ONE PIECE INJECTION MOLDED UV STABILIZED PRISMATIC LENS.	1-70W HPS	96	HUBBELL OR EQUAL	PVL-070S-128	120	BAKED WHITE ENAMEL	WALL AT 12'-0" AFG	
D	7" DIA. RECESSED INCANDESCENT DOWNLIGHT WITH ALZAK REFLECTOR AND UL LISTED FOR DAMP LOCATIONS	1-100W A19	100	HUBBELL OR EQUAL	D301 A7 AR W	120	BAKED WHITE ENAMEL	RECESSED	10.375"
E	2 LAMP T8'S FLUORESCENT STRIP SURFACE MOUNTED	2-F32T8/SP35	76	HUBBELL OR EQUAL	C232B	120	WHITE	SURFACE	
Q	TWIN HEAD SELF CONTAINED EMERGENCY FLOOD WITH MAINTENANCE FREE LEAD ACID BATTERIES.	FURNISHED WITH UNIT	14	SURE-LITES OR EQUAL	CU-1	DR 120/277	WHITE	WALL 47" 6"	----
X	19" X 12" X 2" EXIT SIGN RED LETTERS ON WHITE BACKGROUND POLYCARBONATE HOUSING, SINGLE FACE UNIVERSAL MOUNT AND ARROWS.	L.E.D. FURNISHED WITH UNIT	3	SURE-LITES LITHONIA OR EQUAL	CCX-7100-R-WH LON'S V I R 120 EL N	120	WHITE CANOPY AND HOUSING	UNIVERSAL MOUNT	----

MECHANICAL EQUIPMENT SCHEDULE												
KEY	ITEM	LISTED LOAD		EQUIPMENT LOAD	VOLTAGE	FEEDER	PROTECTION			DISC AT UNIT		REMARKS
		HP	FLA				WATTS	BREAKER	DISC.	SWI.	FUSE	
EVAP-1	EVAPORATIVE COOLER			1,500	1500 01	120	120	120	20A	1P	15	
BB-1	BASEBOARD HEATER			1000	1000 0	120	120	120	20A	1P	15	PROVIDE & INSTALL T'S/TAT'S
BB-2	BASEBOARD HEATER			500.0	500.0	120	120	120	20A	1P	15	PROVIDE & INSTALL T'S/TAT'S
RF-1	RESTROOM EXPL. FAN			80	80 0	120	120	120	20A	1P	15	
UH-1	GASTIGHT UNIT HEAT V/FAN			696	696.0	120	120	120	20A	1P	15	

PANEL 'TIA' (TENANT 'A' PANEL)												
150A MAIN LUGS ONLY VOLTAGE 120/208V PHASE 3 PH WIRE 4 W												
10,000 AIC RMS SYM SHORT CIRCUIT RATING												
NOTE: TYPE: BOLT-ON MOUNT 'G' SURFACE												
DESCRIPTION	LIGHTING FLUO/HID	INCAN	RECEPT	MOTORS	OTHER	TOTAL	BREAK'R AMP / P	CCT	PH	CCT	BREAK'R AMP / P	DESCRIPTION
OFFICE LTGS	604	1	230			834	20 / 11	A	2	20 / 11	540	OFFICE RECEPTS.
WAREHOUSE LTGS	1140					1140	20 / 11	B	4	20 / 11	900	OFFICE RECEPTS.
EXT. LTGS	192					192	20 / 11	C	6	20 / 11	360	RESTRM EF-1/BB-2/RECEPTS.
SPARE						0	20 / 11	A	8	20 / 11	540	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	B	10	20 / 11	720	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	C	12	20 / 11	720	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	A	14	20 / 11	0	SPARE
SPARE						0	20 / 11	B	16	20 / 11	0	SPARE
SPARE						0	20 / 11	C	18	20 / 11	0	SPARE
SPARE						0	20 / 11	A	20	20 / 11	0	SPARE
SPARE						0	20 / 11	B	22	20 / 11	0	SPARE
SPARE						0	20 / 11	C	24	20 / 11	0	SPARE
SPARE						0	20 / 11	A	26	20 / 11	0	SPARE
SPARE						0	20 / 11	B	28	20 / 11	0	SPARE
SPARE						0	20 / 11	C	30	20 / 11	0	SPARE
SPARE						0	20 / 11	A	32	20 / 11	0	SPARE
SPARE						0	20 / 11	B	34	20 / 11	0	SPARE
SPARE						0	20 / 11	C	36	20 / 11	0	SPARE
SPARE						0	20 / 11	A	38	20 / 11	0	SPARE
SPARE						0	20 / 11	B	40	20 / 11	0	SPARE
SPARE						0	20 / 11	C	42	20 / 11	0	SPARE
TELE. BOARD RECEPT.			360			360	20 / 11	B	4	20 / 11	1000	1000
UNIT HEATER UH-1				696		696	15 / 11	C	4	20 / 11	1500	1500

PANEL 'TIB, TIC, TID' (TYPICAL TENANT 'B, C, & D' PANELS)												
225A MAIN LUGS ONLY VOLTAGE 120/208V PHASE 3 PH WIRE 4 W												
10,000 AIC RMS SYM SHORT CIRCUIT RATING (TID)												
22,000 AIC RMS SYM SHORT CIRCUIT RATING (TIC & TIB)												
NOTE: TYPE: BOLT-ON MOUNT 'G' SURFACE												
DESCRIPTION	LIGHTING FLUO/HID	INCAN	RECEPT	MOTORS	OTHER	TOTAL	BREAK'R AMP / P	CCT	PH	CCT	BREAK'R AMP / P	DESCRIPTION
OFFICE LTGS	304	1	230			534	20 / 11	A	2	20 / 11	540	OFFICE RECEPTS.
WAREHOUSE LTGS	1140					1140	20 / 11	B	4	20 / 11	900	OFFICE RECEPTS.
EXT. LTGS	192					192	20 / 11	C	6	20 / 11	360	RESTRM EF-1/BB-2/RECEPTS.
SPARE						0	20 / 11	A	8	20 / 11	540	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	B	10	20 / 11	720	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	C	12	20 / 11	720	WAREHOUSE RECEPTS.
SPARE						0	20 / 11	A	14	20 / 11	0	SPARE
SPARE						0	20 / 11	B	16	20 / 11	0	SPARE
SPARE						0	20 / 11	C	18	20 / 11	0	SPARE
SPARE						0	20 / 11	A	20	20 / 11	0	SPARE
SPARE						0	20 / 11	B	22	20 / 11	0	SPARE
SPARE						0	20 / 11	C	24	20 / 11	0	SPARE
SPARE						0	20 / 11	A	26	20 / 11	0	SPARE
SPARE						0	20 / 11	B	28	20 / 11	0	SPARE
SPARE						0	20 / 11	C	30	20 / 11	0	SPARE
SPARE						0	20 / 11	A	32	20 / 11	0	SPARE
SPARE						0	20 / 11	B	34	20 / 11	0	SPARE
SPARE						0	20 / 11	C	36	20 / 11	0	SPARE
SPARE						0	20 / 11	A	38	20 / 11	0	SPARE
SPARE						0	20 / 11	B	40	20 / 11	0	SPARE
SPARE						0	20 / 11	C	42	20 / 11	0	SPARE
TELE. BOARD RECEPT.			360			360	20 / 11	B	4	20 / 11	1000	1000
UNIT HEATER UH-1				696		696	15 / 11	C	4	20 / 11	1500	1500

STEVE L. WILLEMS
P.O. BOX 103
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