

NEW FACILITIES SERVICES MAINTENANCE BUILDING



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FIRE SPRINKLER

FP101 FIRE SPRINKLER LEGENDS NOTES - ADD ALT. 5

FP201 FIRE SPRINKLER PLAN - ADD ALT. 5

ELECTRICAL

E001	ELECTRICAL ABBREVIATIONS AND SYMBOLS
E101	ELECTRICAL SITE
E301	ELECTRICAL LEVEL 1
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E401	LIGHTING LEVEL 1
E501	ELECTRICAL SINGLE LINE & PANELBOARD SCHEDULES
E502	ELECTRICAL PANELBOARD SCHEDULES
E503	ELECTRICAL PANELBOARD SCHEDULES

BID ALTERNATES

ALTERNATE NO. 1 :
 PROVIDE AND INSTALL EXTERIOR HORIZONTAL PREFINISHED METAL
 WALL PANELS AND REQUIRED FRAMING AS SHOWN ON DRAWINGS

ALTERNATE NO. 2:
EXTEND THE HEIGHT OF ALL NEW WOOD PRIVACY FENCING AND GATES FROM 6' - 0" TO 8' - 0" HIGH

ALTERNATE NO. 3 :
PROVIDE AND INSTALL COVERED CANOPY STRUCTURE FOR GROUNDS
EQUIPMENT STORAGE

ALTERNATE NO. 4 :
PROVIDE AND INSTALL BUILDING CANOPIES ON THE NORTH AND SOUTH ELEVATIONS OF THE BUILDING

ALTERNATE NO. 5 :
PROVIDE AND INSTALL A COMPLETE WET PIPE FIRE SUPPRESSION
SYSTEM

ALTERNATE NO. 6 :
PROVIDE AND INSTALL ALL PAVING FOR SOUTH FLEET PARKING AREA

CODE SUMMARY

FACTORY INDUSTRIAL

OCCUPANCY TYPE	2015 IBC GROUP F -1 (MODERATE)
CONSTRUCTION TYPE	TYPE V-A (UNPROTECTED)
SPRINKLER	NOT SPRINKLED (BASE BID) SPRINKLED (ADD. ALT. NO. 5)
BUILDING AREA	9,375 SQ. FT.
OCCUPANT LOAD	19 OCCUPANTS

PROJECT ADDRESS

2517 HAMPSTEAD LANE
WICHITA FALLS, TEXAS 76308

PROJECT / OWNER

MIDWESTERN STATE UNIVERSITY
3410 TAFT BLVD.
WICHITA FALLS, TEXAS 76308

ARCHITECT

BYSP ARCHITECTS
1005 9th STREET, STE 200
WICHITA FALLS, TEXAS 76301
940-761-2404

DECEMBER 7, 2018

BYSP architects

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NEW FACILITIES SERVICES
MAINTENANCE BUILDING



BYSP PROJECT # 18002 ISSUE DATE: DECEMBER 7, 2018

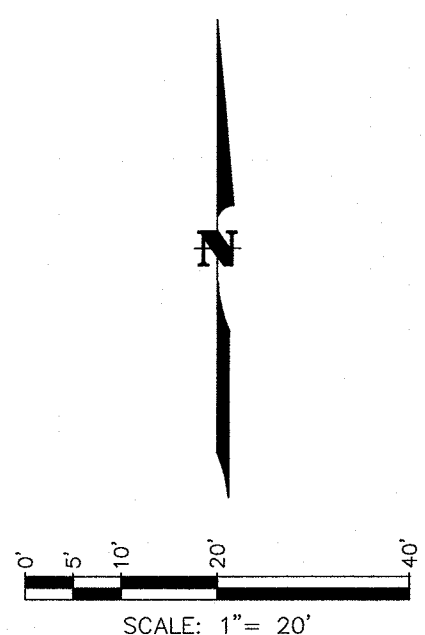
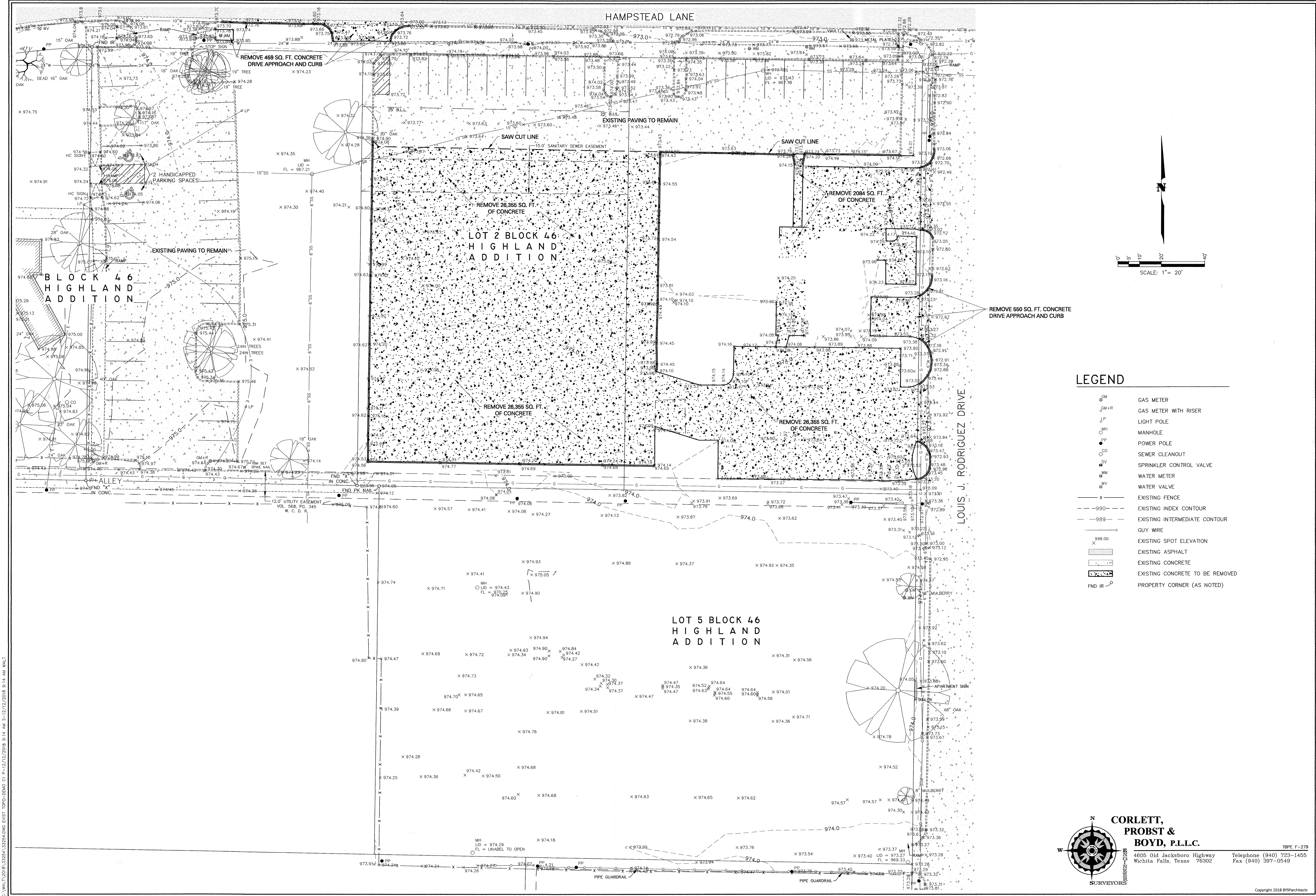
REV	DATE	DESCRIPTION

SET NO:

SUMMIT CONSULTANTS, INC.
CONSULTING ENGINEERS
1300 SUMMIT AVENUE, SUITE 500
FORT WORTH, TX 76102
(817) 878-4242

FISCHER ENGINEERING
STRUCTURAL ENGINEERING
P.O. BOX 722
OLNEY, STATE 76374
(940) 564-2565

CORLETT, PROBST & BOYD, P.L.L.C.
CONSULTING ENGINEERS
4605 OLD JACKSBORO HIGHWAY
WICHITA FALLS, TX 76302
(940) 723-1455



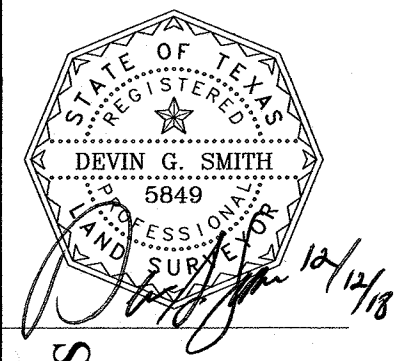
LEGEND

- GM GAS METER
- GM+R GAS METER WITH RISER
- LP LIGHT POLE
- MH MANHOLE
- PP POWER POLE
- CO SEWER CLEANOUT
- CV SPRINKLER CONTROL VALVE
- WM WATER METER
- WV WATER VALVE
- X EXISTING FENCE
- - - 990 - - - EXISTING INDEX CONTOUR
- - - 989 - - - EXISTING INTERMEDIATE CONTOUR
- GUY WIRE
- 998.00 EXISTING SPOT ELEVATION
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING CONCRETE TO BE REMOVED
- FND IR PROPERTY CORNER (AS NOTED)

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TSPE F-279

REV	DATE	DESCRIPTION
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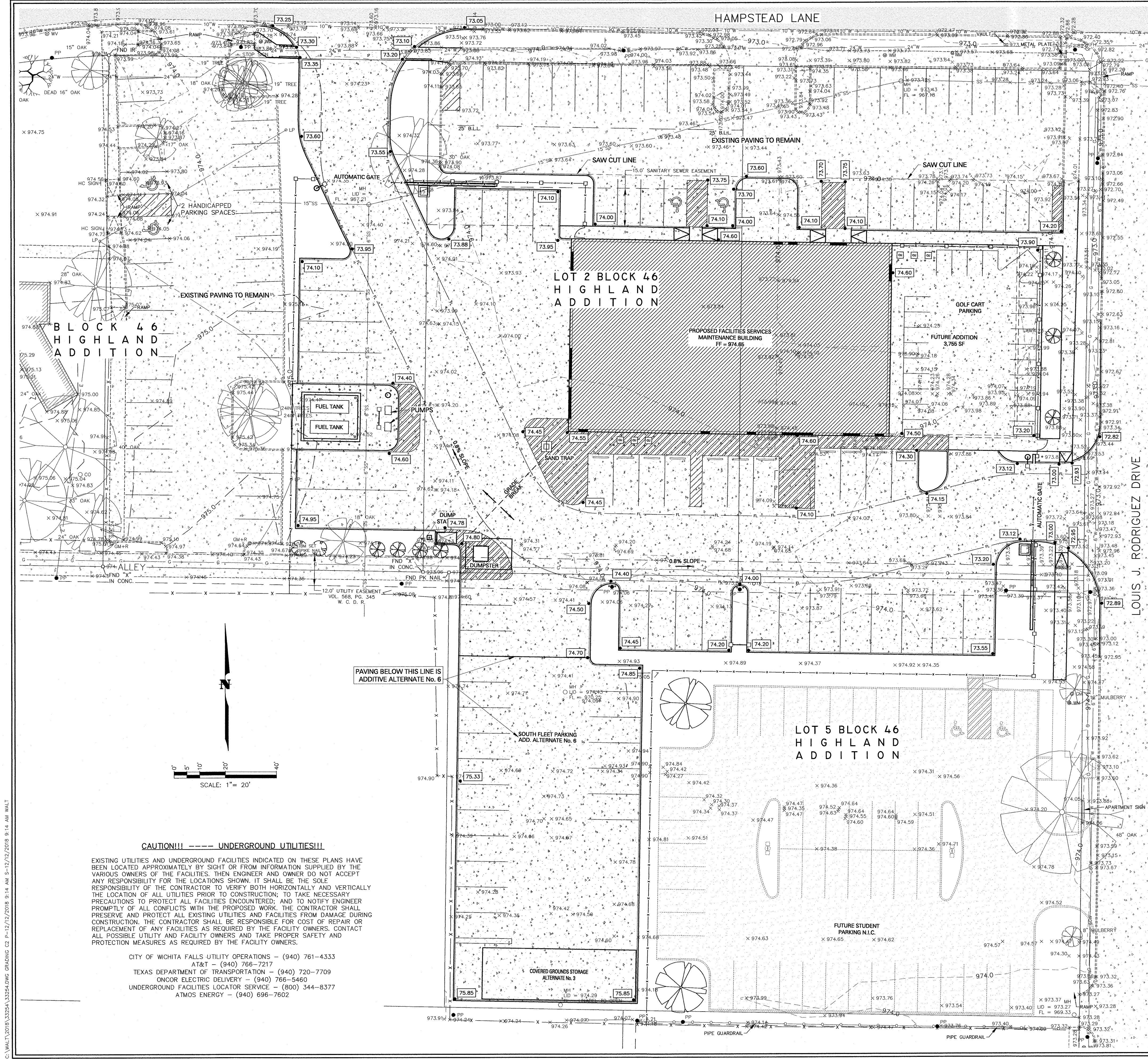
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MSU
TEXAS
MAINTENANCE BUILDING
MIDWESTERN STATE UNIVERSITY

BYS Architects

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DRAWN BY	WAT
CHECKED BY	DGS
DATE	DECEMBER, 2018
PROJECT NO.	33254
EXISTING SITE AND DEMOLITION PLAN	

C:\WALT\2018\33254\33254.DWG GRADING C2 P-12/12/2018 5:14 AM S-12/12/2018 5:14 AM WALT



CAUTION!!! ----- UNDERGROUND UTILITIES!!!

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED APPROXIMATELY BY SIGHT OR FROM INFORMATION SUPPLIED BY THE VARIOUS OWNERS OF THE FACILITIES. THEN ENGINEER AND OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE LOCATIONS SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION; TO TAKE NECESSARY PRECAUTIONS TO PROTECT ALL FACILITIES ENCOUNTERED; AND TO NOTIFY ENGINEER PROMPTLY OF ALL CONFLICTS WITH THE PROPOSED WORK. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF REPAIR OR REPLACEMENT OF ANY FACILITIES AS REQUIRED BY THE FACILITY OWNERS. CONTACT ALL POSSIBLE UTILITY AND FACILITY OWNERS AND TAKE PROPER SAFETY AND PROTECTION MEASURES AS REQUIRED BY THE FACILITY OWNERS.

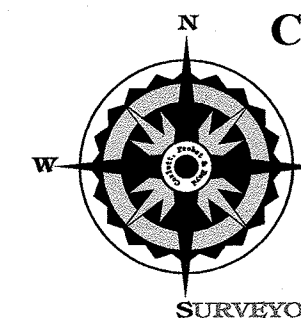
CITY OF WICHITA FALLS UTILITY OPERATIONS - (940) 761-4333
AT&T - (940) 766-7217
TEXAS DEPARTMENT OF TRANSPORTATION - (940) 720-7709
ONCOR ELECTRIC DELIVERY - (940) 766-5460
UNDERGROUND FACILITIES LOCATOR SERVICE - (800) 344-8377
ATMOS ENERGY - (940) 696-7602

LEGEND

- GM GAS METER
- GM+R GAS METER WITH RISER
- LP LIGHT POLE
- MH MANHOLE
- PP POWER POLE
- SC SEWER CLEANOUT
- SCV SPRINKLER CONTROL VALVE
- WM WATER METER
- WV WATER VALVE
- EXISTING FENCE
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- GUY WIRE
- EXISTING SPOT ELEVATION
- NEW SPOT ELEVATION
- EXISTING ASPHALT
- EXISTING CONCRETE
- PROPERTY CORNER (AS NOTED)

SITE GRADING NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - NORTH CENTRAL TEXAS", THIRD EDITION, AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS ("NCTCOG").
- THIS PLAN IS INTENDED FOR THE SITE GRADING AND STORMWATER DETENTION PURPOSES ONLY. ALL PROPOSED GRADES SHALL BE THE PROPOSED FLOWLINE ELEVATION UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWING FOR SITE PLAN.
 - ALL PAVING AND STRUCTURES SHALL BE PLACED ON UNDISTURBED SOIL OR SELECT FILL (NOT FILL SAND) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - ALL CONCRETE (UNLESS OTHERWISE NOTED) SHALL BE CLASS "A", DEVELOPING A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MINIMUM. USE A "BULL-NOSED" EDGER OR 3/4 INCH CHAMFER ON ALL EXPOSED EDGES. PROVIDE A LIGHT BROOM FINISH. UNLESS OTHERWISE NOTED ALL CONCRETE SHALL BE REINFORCED WITH #3 BARS @ 18 INCHES ON CENTER EACH WAY.
 - ALL REBAR SHALL BE GRADE 60 AND SHALL BE INSTALLED IN ACCORDANCE WITH ACI 318, LATEST EDITION. 18" OF TRANSVERSE BARS SHALL BE TURNED UP INTO CURBS OR DOWN INTO FOOTINGS OR WALLS.
 - ALL SIDEWALKS AND HANDICAP ACCESSIBLE ROUTES SHALL HAVE A CROSS SLOPE OF 2% OR LESS, AND A LONGITUDINAL SLOPE OF 5% OR LESS.
 - ALL TRENCHING AND EXCAVATIONS SHALL COMPLY WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
 - IMMEDIATELY AFTER THE DETENTION IMPROVEMENTS HAVE BEEN BROUGHT TO FINAL LINE AND GRADE, THE ENGINEER SHOULD BE CONTACTED TO VERIFY THAT THE DETENTION IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THIS PLAN. THIS PLAN MUST BE ADHERED TO IN ORDER TO OBTAIN THE ENGINEER'S CONCURRENCE BEFORE ANY REQUEST WILL BE MADE TO OBTAIN A REFUND OF THE FINANCIAL DEPOSIT FROM THE CITY, AND PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FROM THE CITY.
 - IMMEDIATELY AFTER THE DETENTION IMPROVEMENTS HAVE BEEN BROUGHT TO FINAL LINE AND GRADE, ALL AREAS BARE OF VEGETATION SHALL BE PREPARED, FERTILIZED, AND SEED OR HYDRO-MULCHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS" MENTIONED IN THE LEAD PARAGRAPH. ALL THESE AREAS SHALL BE MAINTAINED BY WATERING, RE-SEEDING, AND FERTILIZING AS NECESSARY UNTIL A STAND OF GRASS IS ESTABLISHED WITH NO BARE SPOTS GREATER THAN ONE SQUARE FOOT IN SIZE.
 - THE CONTRACTOR SHALL HAVE THE SOLE RESPONSIBILITY FOR SAFETY ON THIS PROJECT.
 - THE CITY OF WICHITA FALLS WILL REQUIRE A FLOODPLAIN DEVELOPMENT PERMIT PURSUANT TO FEMA REQUIREMENTS. THE CITY WILL ISSUE A FOUNDATION ONLY PERMIT. AFTER CONCRETE SLAB IS IN PLACE, A FLOOD ELEVATION CERTIFICATE MUST BE PROVIDED BY A LICENSE SURVEYOR THAT CERTIFIES THE SLAB ELEVATION IS AT LEAST 968 BEFORE THE CITY WILL ISSUE A FULL BUILDING PERMIT.

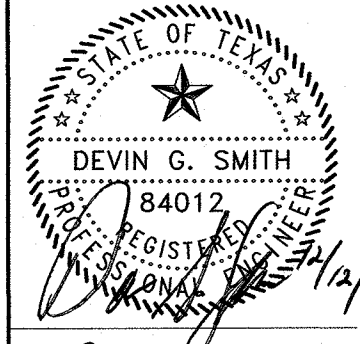


**CORLETT,
PROBST &
BOYD, P.L.L.C.**

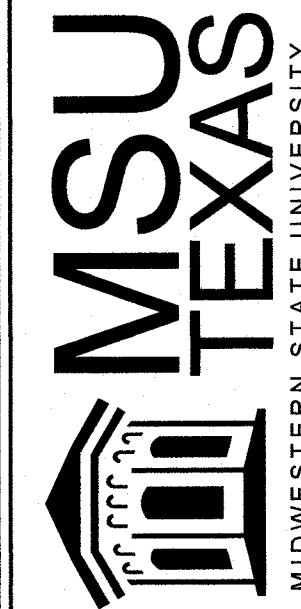
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NEW FACILITIES SERVICES
MAINTENANCE
BUILDING



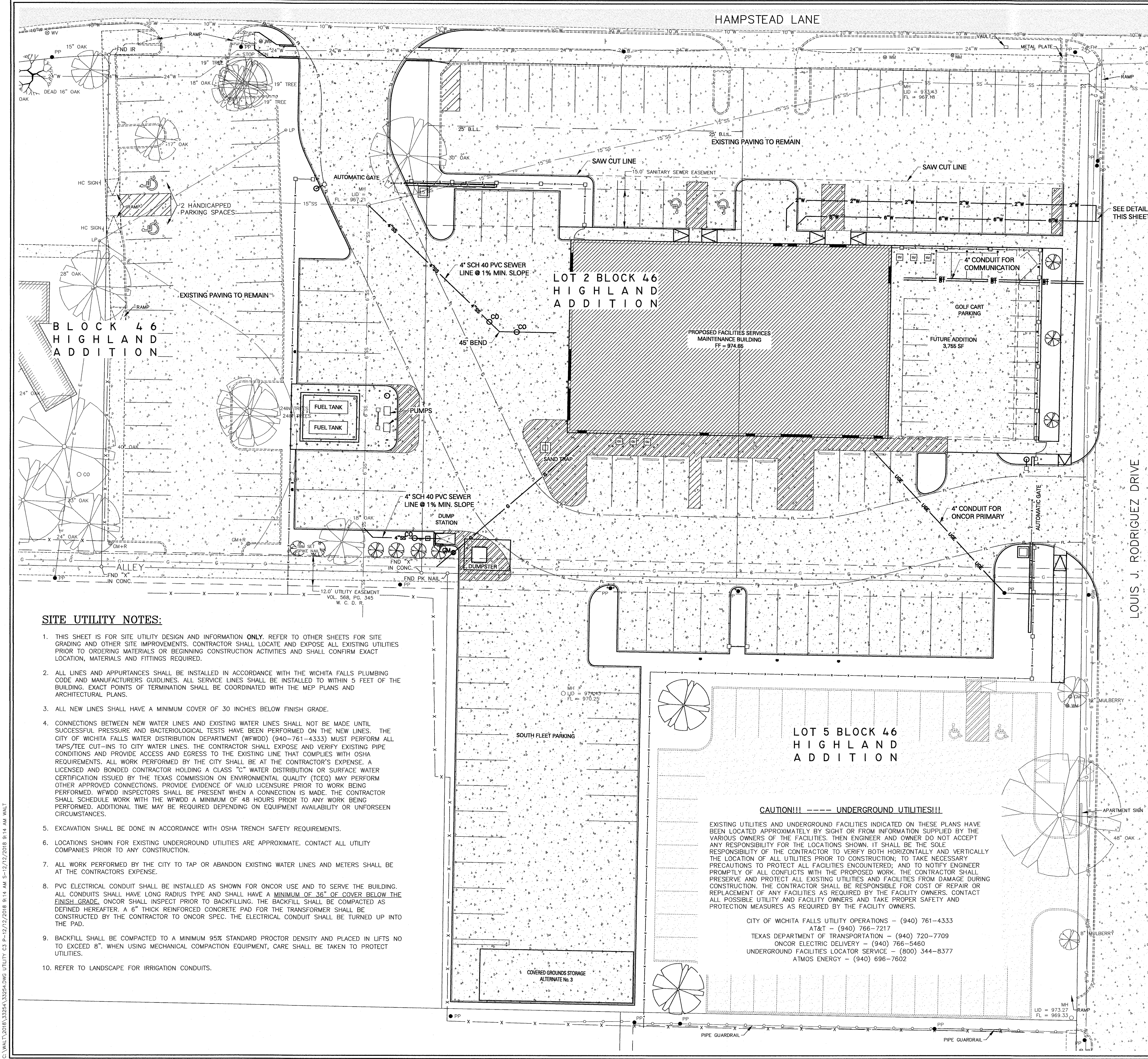
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DATE: DECEMBER, 2018
PROJECT NO.: 33254
SITE GRADING PLAN

C2

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SITE UTILITY NOTES:

1. THIS SHEET IS FOR SITE UTILITY DESIGN AND INFORMATION ONLY. REFER TO OTHER SHEETS FOR SITE GRADING AND OTHER SITE IMPROVEMENTS. CONTRACTOR SHALL LOCATE AND EXPOSE ALL EXISTING UTILITIES PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION ACTIVITIES AND SHALL CONFIRM EXACT LOCATION, MATERIALS AND FITTINGS REQUIRED.
2. ALL LINES AND APPURTANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE WICHITA FALLS PLUMBING CODE AND MANUFACTURERS GUIDELINES. ALL SERVICE LINES SHALL BE INSTALLED TO WITHIN 5 FEET OF THE BUILDING. EXACT POINTS OF TERMINATION SHALL BE COORDINATED WITH THE MEP PLANS AND ARCHITECTURAL PLANS.
3. ALL NEW LINES SHALL HAVE A MINIMUM COVER OF 30 INCHES BELOW FINISH GRADE.
4. CONNECTIONS BETWEEN NEW WATER LINES AND EXISTING WATER LINES SHALL NOT BE MADE UNTIL SUCCESSFUL PRESSURE AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED ON THE NEW LINES. THE CITY OF WICHITA FALLS WATER DISTRIBUTION DEPARTMENT (WFWD) (940-761-4333) MUST PERFORM ALL TAPS/TEE CUT-INS TO CITY WATER LINES. THE CONTRACTOR SHALL EXPOSE AND VERIFY EXISTING PIPE CONDITIONS AND PROVIDE ACCESS AND EGRESS TO THE EXISTING LINE THAT COMPLIES WITH OSHA REQUIREMENTS. ALL WORK PERFORMED BY THE CITY SHALL BE AT THE CONTRACTOR'S EXPENSE. A LICENSED AND BONDED CONTRACTOR HOLDING A CLASS "C" WATER DISTRIBUTION OR SURFACE WATER CERTIFICATION ISSUED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) MAY PERFORM OTHER APPROVED CONNECTIONS. PROVIDE EVIDENCE OF VALID LICENSE PRIOR TO WORK BEING PERFORMED. WFWD INSPECTORS SHALL BE PRESENT WHEN A CONNECTION IS MADE. THE CONTRACTOR SHALL SCHEDULE WORK WITH THE WFWD A MINIMUM OF 48 HOURS PRIOR TO ANY WORK BEING PERFORMED. ADDITIONAL TIME MAY BE REQUIRED DEPENDING ON EQUIPMENT AVAILABILITY OR UNFORSEEN CIRCUMSTANCES.
5. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH OSHA TRENCH SAFETY REQUIREMENTS.
6. LOCATIONS SHOWN FOR EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. CONTACT ALL UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION.
7. ALL WORK PERFORMED BY THE CITY TO TAP OR ABANDON EXISTING WATER LINES AND METERS SHALL BE AT THE CONTRACTORS EXPENSE.
8. PVC ELECTRICAL CONDUIT SHALL BE INSTALLED AS SHOWN FOR ONCOR USE AND TO SERVE THE BUILDING. ALL CONDUITS SHALL HAVE LONG RADIUS TYPE AND SHALL HAVE A MINIMUM OF 36" OF COVER BELOW THE FINISH GRADE. ONCOR SHALL INSPECT PRIOR TO BACKFILLING. THE BACKFILL SHALL BE COMPACTED AS DEFINED HEREFTER. A 6" THICK REINFORCED CONCRETE PAD FOR THE TRANSFORMER SHALL BE CONSTRUCTED BY THE CONTRACTOR TO ONCOR SPEC. THE ELECTRICAL CONDUIT SHALL BE TURNED UP INTO THE PAD.
9. BACKFILL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY AND PLACED IN LIFTS NO TO EXCEED 8". WHEN USING MECHANICAL COMPACTION EQUIPMENT, CARE SHALL BE TAKEN TO PROTECT UTILITIES.
10. REFER TO LANDSCAPE FOR IRRIGATION CONDUITS.

LEGEND

	GAS METER		PROPOSED UNDERGROUND ELECTRIC
	PROPOSED GAS METER		PROPOSED GAS LINE
	GAS METER WITH RISER		PROPOSED 6" SANITARY SEWER
	LIGHT POLE		PROPOSED BURIED TELEPHONE
	MANHOLE		EXISTING INDEX CONTOUR
	POWER POLE		EXISTING INTERMEDIATE CONTOUR
	SEWER CLEANOUT		GUY WIRE
	PROPOSED SEWER CLEANOUT		EXISTING SPOT ELEVATION
	SPRINKLER CONTROL VALVE		EXISTING ASPHALT
	WATER METER		EXISTING CONCRETE
	WATER VALVE		PROPERTY CORNER (AS NOTED)
	EXISTING FENCE		

LOCAL UTILITY CONTACTS

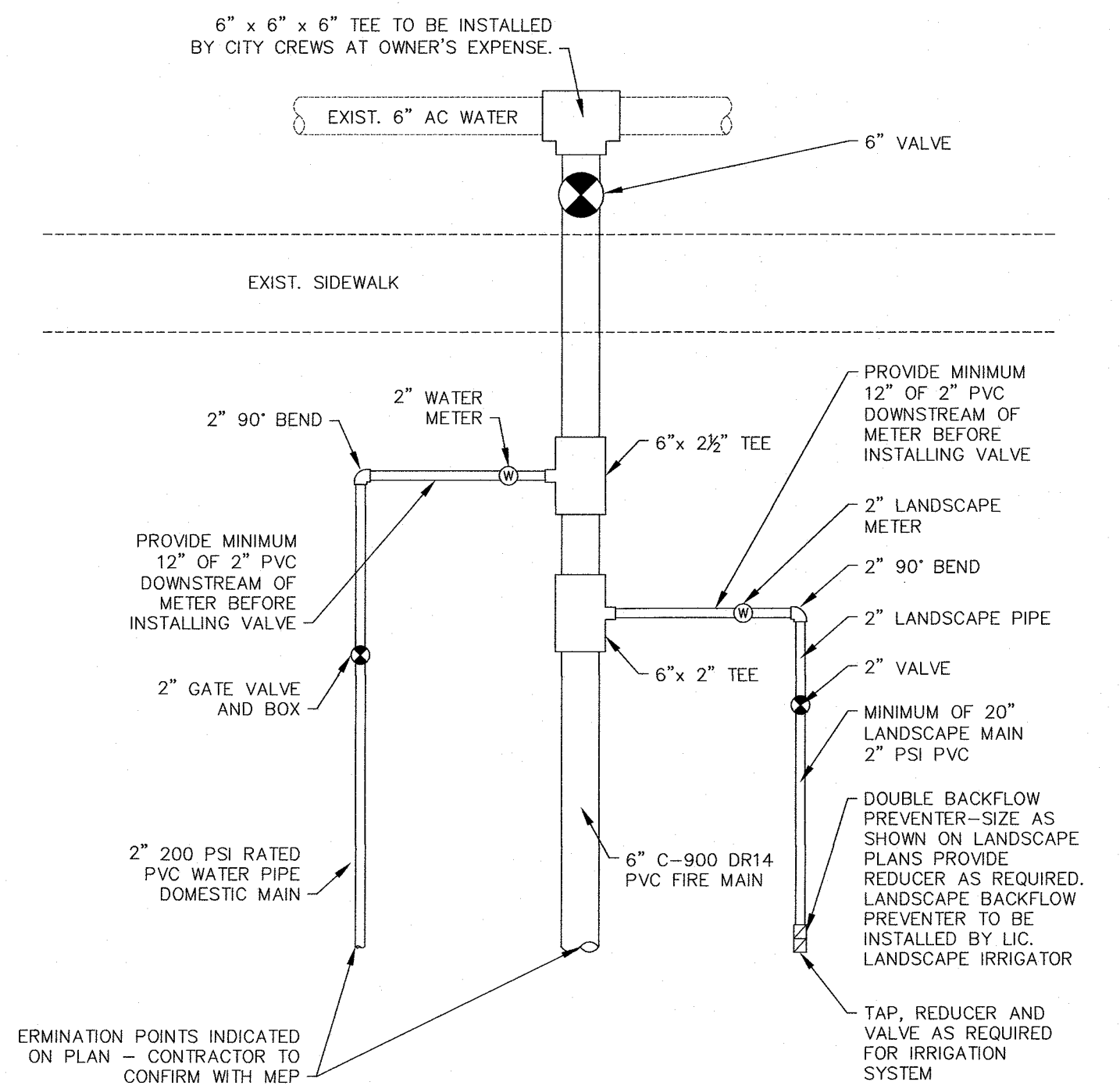
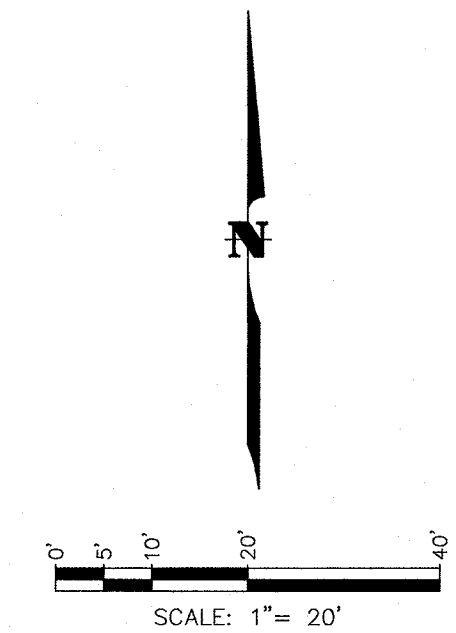
CITY OF WICHITA FALLS UTILITY OPERATIONS (WATER & SEWER TAPS):
MR. JACK SCOTT
402 EAST SCOTT,
WICHITA FALLS, TX. 76301
(940) 761-4333

ATMOS ENERGY (NATURAL GAS)
KELLY COATS
5808 ASHLEYANNE CIRCLE
WICHITA FALLS, TX. 76310
(940) 696-7602

ATT COMMUNICATIONS
GARY DILBECK,
812 9TH STREET
WICHITA FALLS, TX. 76301
(940) 766-7205

CHARTER COMMUNICATIONS
JEFF WHITLEY
3225 MAURINE STREET
WICHITA FALLS, TX. 76306

(940) 642-8436
ONCOR ELECTRIC DELIVERY
RYAN SANDERS
1905 BLUFF STREET
WICHITA FALLS, TX. 76301
(940) 761-4333

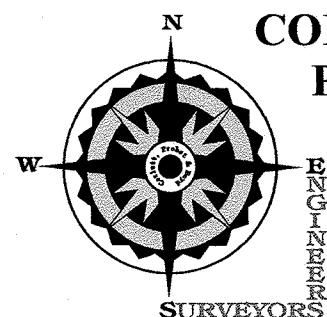


NOTES:

1. 2 1/2" DOMESTIC METER WITH STRAINER TO BE PROVIDED BY THE CITY AT PLUMBER'S EXPENSE. CONTACT CITY UTILITY OPERATIONS AT 940-761-4333 FOR COST AND INSTALLATION PROCEDURES.
2. 2" LANDSCAPE METER TO BE OBTAINED THROUGH THE CITY BY LANDSCAPE INSTALLER.
3. ALL FIRE AND DOMESTIC LINES PAST THE 6"x 6" TEE AND METERS ARE PRIVATE AND WILL NOT BE PUBLICLY MAINTAINED.

FIRE MAIN, DOMESTIC WATER AND LANDSCAPE METER MANIFOLD DETAIL

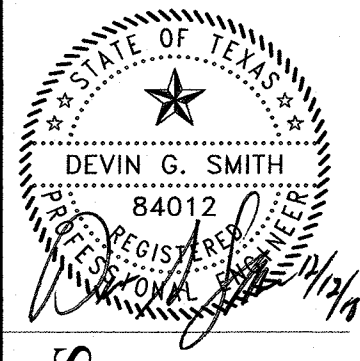
SCALE: NONE



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REV DATE DESCRIPTION



NEW FACILITIES SERVICES
MAINTENANCE
BUILDING



BYS architects

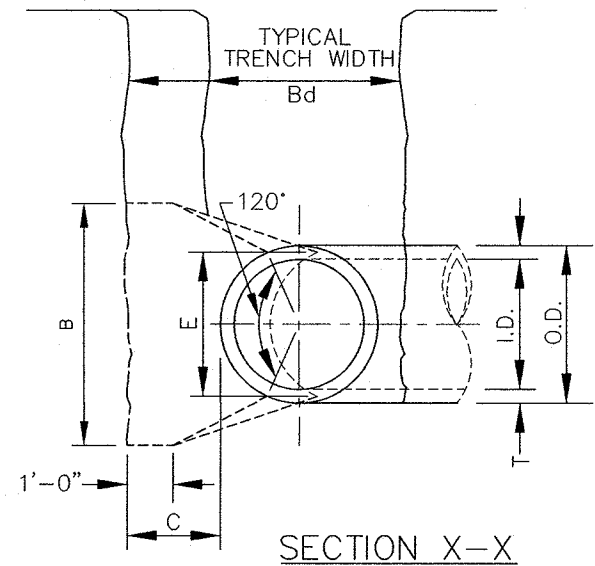
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PROJECT NO.	33254

UTILITY PLAN

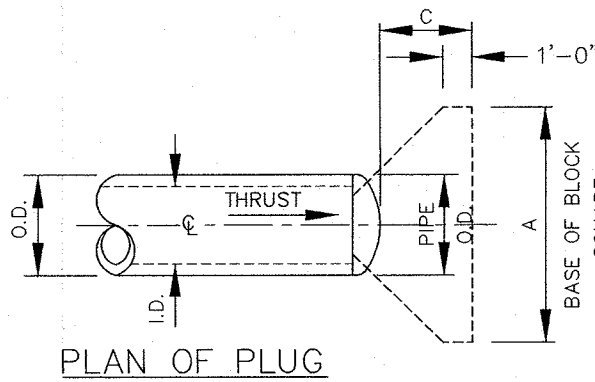
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GENERAL NOTES

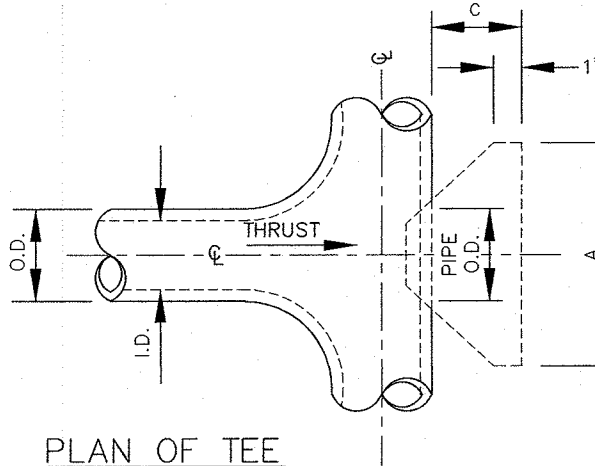
1. CONCRETE BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE AT 200 PSI FOR DUCTILE IRON AND P.V.C., AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.



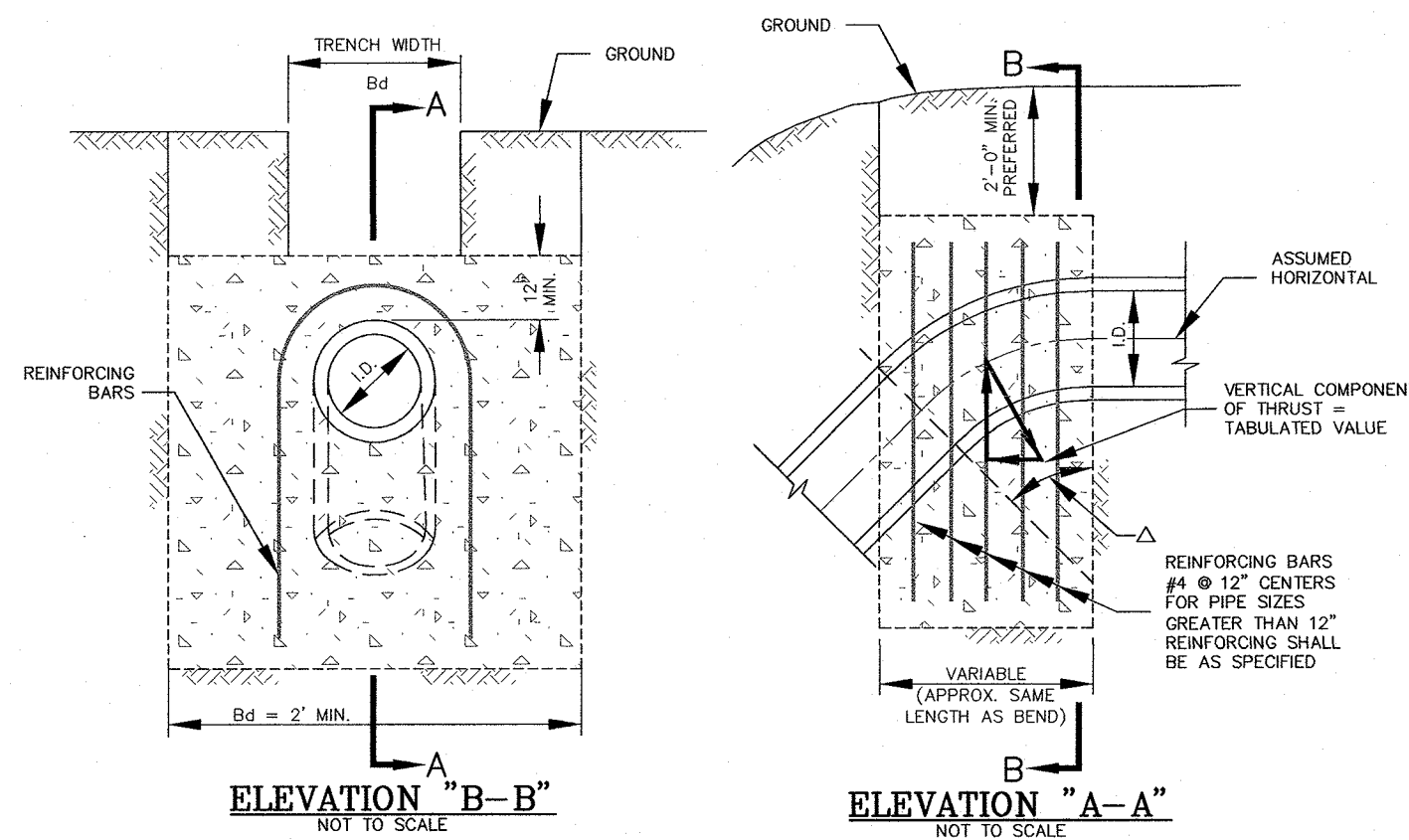
PLAN OF BEND



PLAN OF TEE



PLAN OF TEE



ELEVATION "B-B"

ELEVATION "A-A"

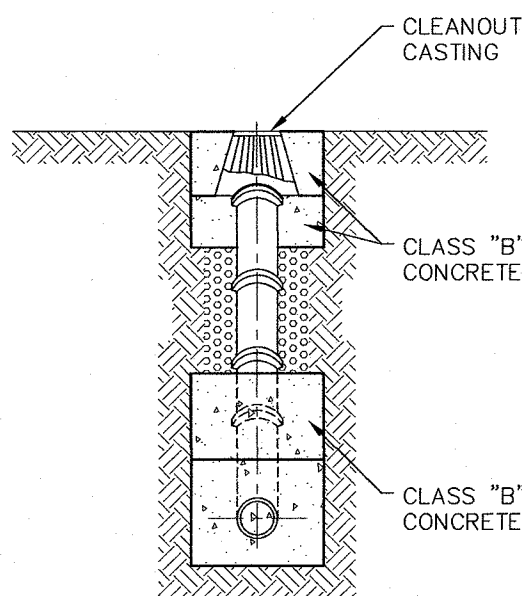
TABLE OF DIMENSIONS FOR BENDS

Δ = 11.25°									Δ = 22.50°									Δ = 30°																	
			EARTH			ROCK						EARTH			ROCK						EARTH			ROCK											
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)			
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1	4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.0	0.3	1.5	1.5	0.1	10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.1	10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2

Δ = 45°									Δ = 67.50°									Δ = 90°									I.D. (IN.)	T (IN.)	Δ = 11.25° (FT.)	Δ = 22.50° (FT.)	E (FT.)
EARTH					ROCK				EARTH					ROCK				EARTH					ROCK								
I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)	I.D. (IN.)	G (FT.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL (C.Y.)	A (FT.)	B (FT.)	VOL (C.Y.)					
4.6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1	4.6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4.6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2					
10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3	10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5					

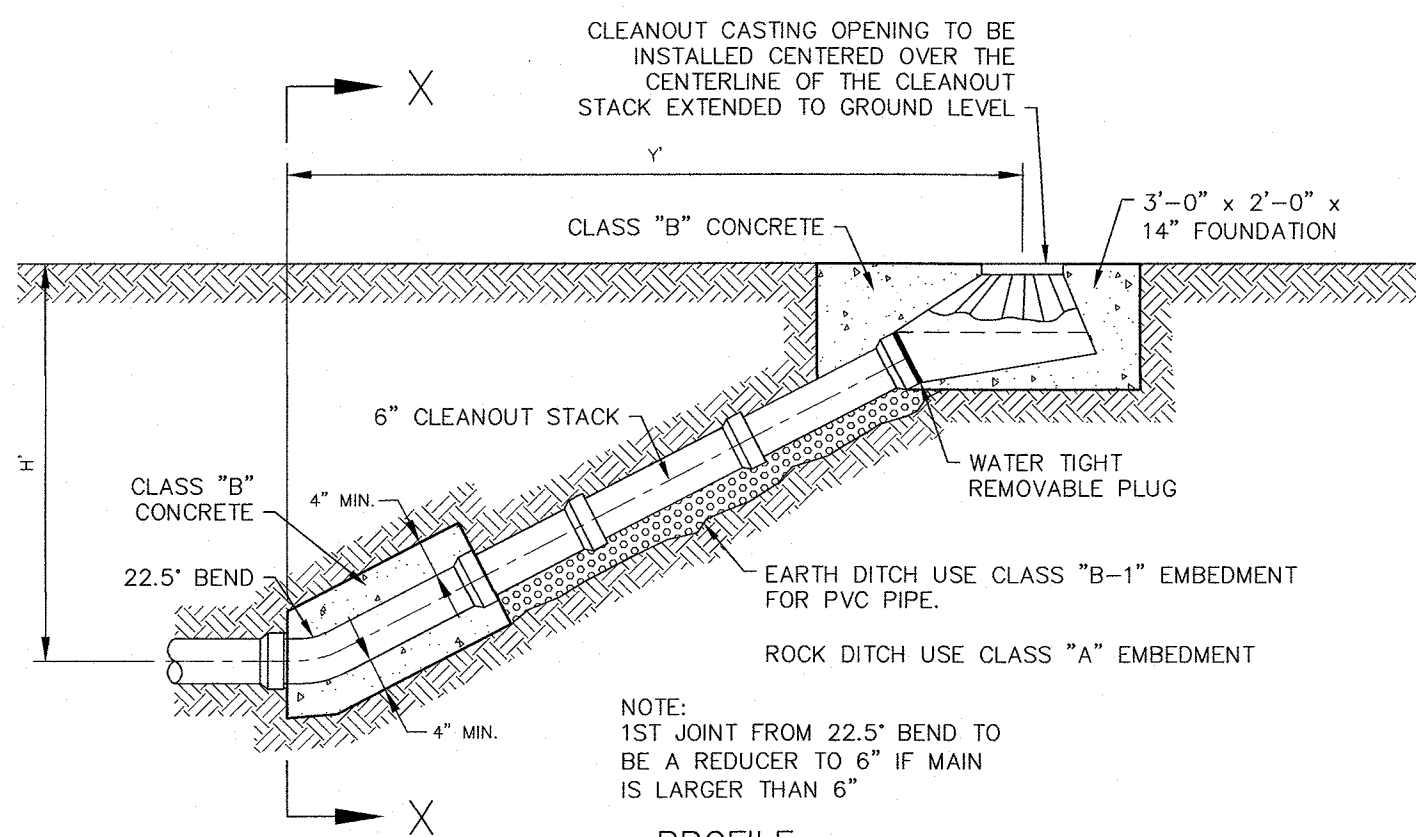
HORIZONTAL THRUST BLOCK DETAILS

NOT TO SCALE



SECTION X-X

H'	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	H'
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'

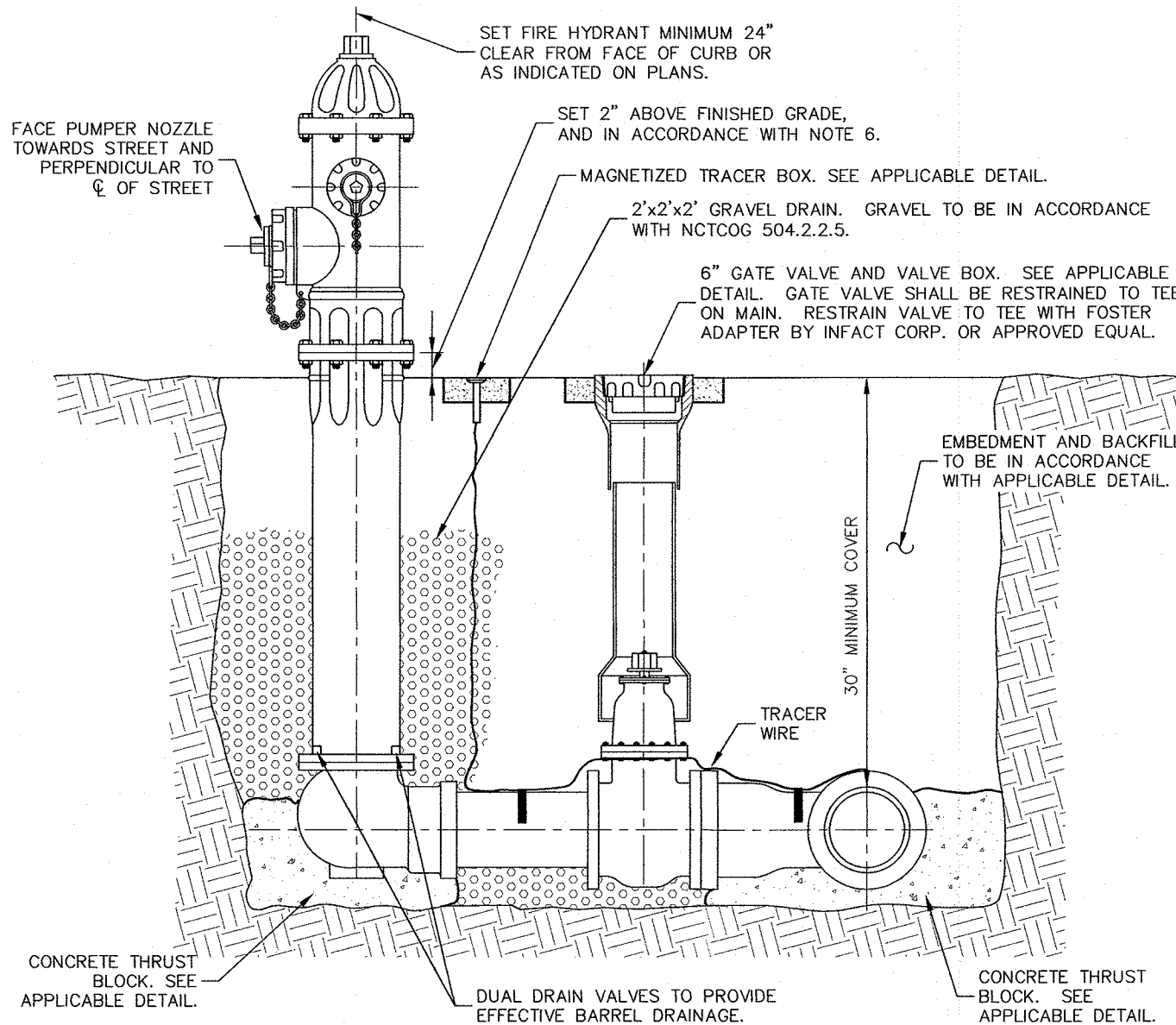


CLEANOUT DETAIL

SCALE: NONE

NOTES:

1. MECHANICALLY COMPACT BACKFILL AROUND CLEANOUT RISER TO A DENSITY EQUAL TO ADJACENT SOIL.
2. FINISHED GRADE SHALL BE 6" ABOVE NATURAL GROUND FOR NON-PAVED AREAS OR AS SHOWN ON PLANS.
3. IF CLEANOUT IS PLACED IN ADVANCE OF PAVEMENT, PLACE SAND AROUND CLEANOUT CASTING IN LIEU OF CLASS "B" CONCRETE.

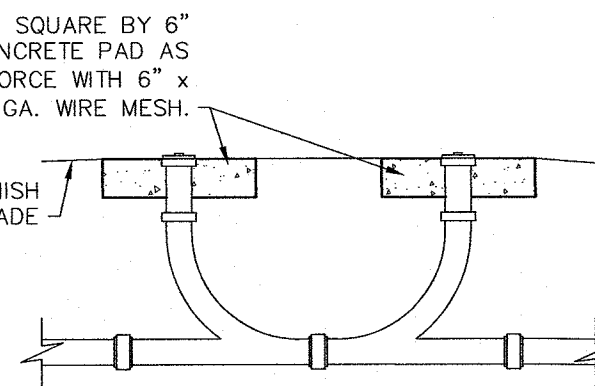


GENERAL NOTES:

1. FIRE HYDRANT ASSEMBLY SHALL MEET REQUIREMENTS OF AWWA STANDARD C502 AND NCTCOG, OCTOBER 2004 EDITION, SECTION 502.3.
2. FIRE HYDRANT ASSEMBLY SHALL BE 5-1/4", 3-WAY DESIGN, WITH ONE 4-1/2" NST THREAD PUMPER NOZZLE, TWO 2-1/2" NST THREAD HOSE NOZZLES, PENTAGON 1-1/2" OPERATING NUT, OPEN LEFT, DRY BARREL, TRAFFIC FEATURE, WITH DUAL DRAIN VALVES TO PROVIDE EFFECTIVE BARREL DRAINAGE, AND 6" MJ SHOE.
3. FIRE HYDRANT ASSEMBLY SHALL BE MUELLER SUPER CENTURION 250 A-423, CLOW MEDALLION, M&H STYLE 129, OR EJ WATERMASTER 50D250.
4. FIRE HYDRANT SHALL BE SET VERTICAL AND PLUMB TO FINISHED GROUND.
5. FIRE HYDRANT SHALL BE SUPPLIED BY THE MANUFACTURER ENAMELED IN BRIGHT YELLOW.
6. FIRE HYDRANT BURY DEPTH TO BE IN STRICT ACCORDANCE WITH MANUFACTURERS TRAFFIC "BREAK-A-WAY" FLANGE CRITERIA.
7. FIRE HYDRANT SHALL NOT BE INSTALLED IN SIDEWALK UNLESS APPROVED BY CITY ENGINEER.
8. FIRE HYDRANT ADJUSTMENT SHALL BE BY USE OF FIRE HYDRANT EXTENSION KIT, BY GRADELOCK FITTING BY ASSURED FLOW SALES INC., OR AS APPROVED BY CITY ENGINEER. NO MORE THAN ONE (1) FIRE HYDRANT EXTENSION KIT SHALL BE INSTALLED FOR ANY APPLICATION.
9. FIRE HYDRANT SHALL BE RESTRAINED FROM TEE ON MAIN TO FIRE HYDRANT SHOE BY FOSTER ADAPTER, MECA-LUG MECHANICAL THRUST RESTRAINTS, SWIVEL BY SWIVEL ADAPTER, OR APPROVED EQUAL, AND THRUST BLOCKS SHALL BE INSTALLED AT ALL FITTINGS AND VALVES.

FIRE HYDRANT ASSEMBLY

SCALE: NONE

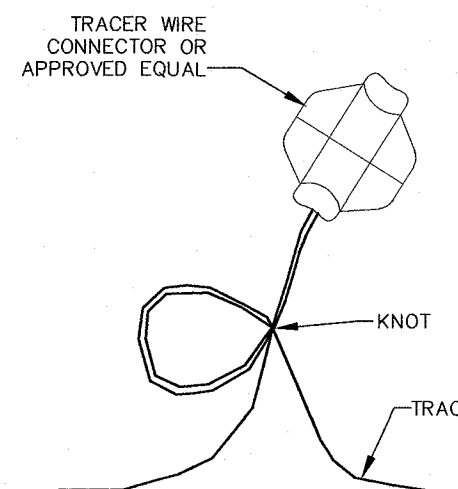


TWO WAY CLEANOUT

NOT TO SCALE

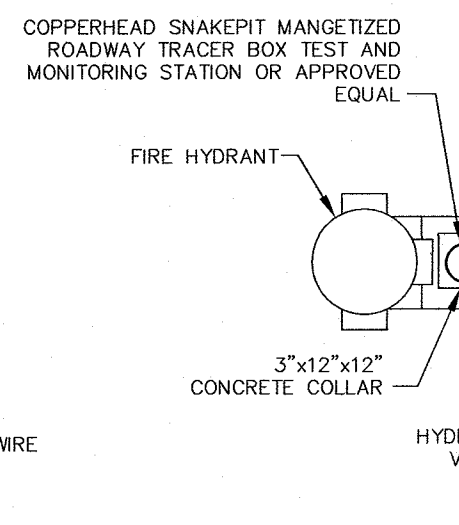
VERTICAL THRUST BLOCK AT PIPE BEND

NOT TO SCALE



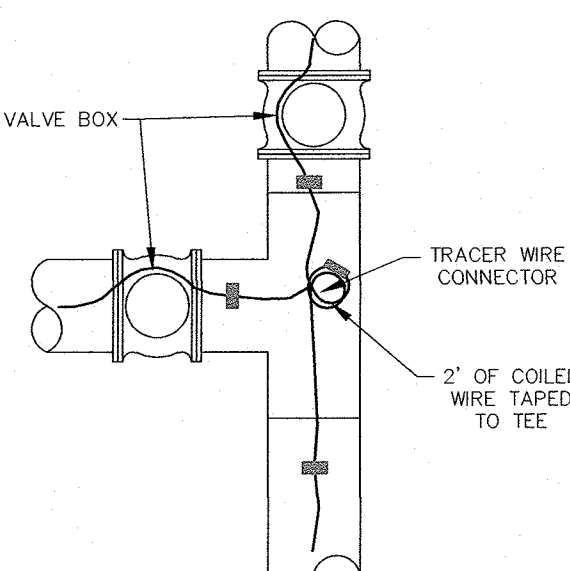
TRACER WIRE CONNECTOR

NOT TO SCALE



FIRE HYDRANT CONNECTION

NOT TO SCALE

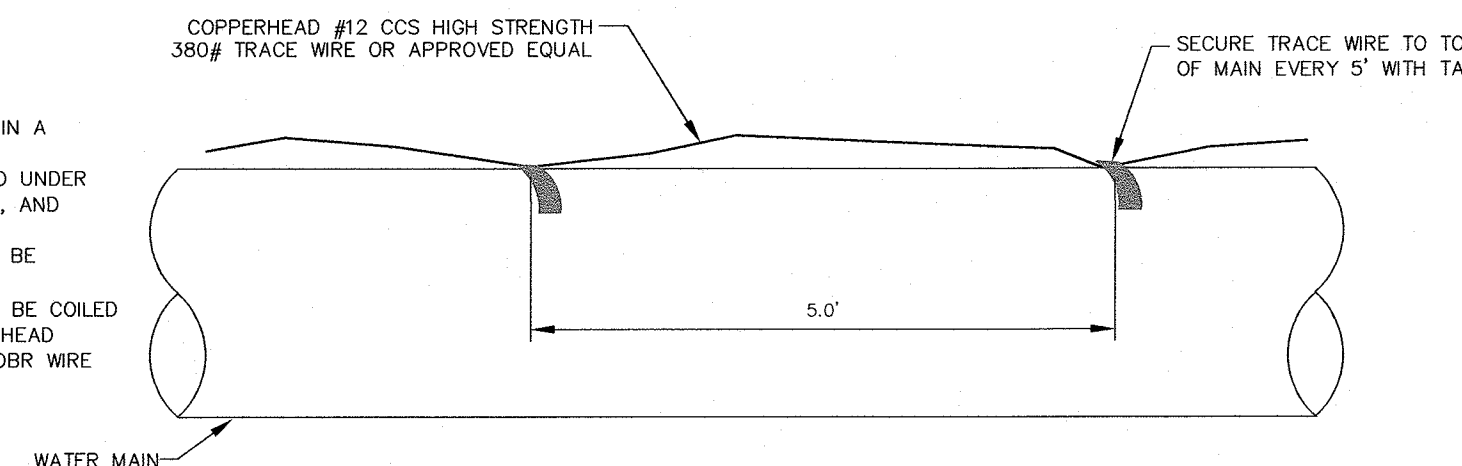


TYPICAL TEE BRANCH

NOT TO SCALE

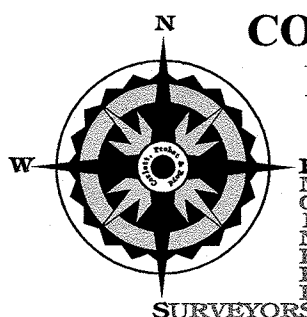
GENERAL NOTES:

1. TRACER WIRE SHALL BE INSTALLED IN A CONTINUOUS FASHION.
2. TRACER WIRE SHALL BE INSTALLED UNDER POLYWRAP AT ALL FITTINGS, TEES, AND VALVES.
3. TRACER WIRE CONNECTORS SHALL BE MINIMIZED WHEN POSSIBLE.
4. AN ADDITIONAL 6" OF WIRE SHALL BE COILED AT ALL END POINTS WITH COPPERHEAD SNAKEBITE WATER-TIGHT OR 3M DBR WIRE CONNECTOR INSTALLED ON END.



TRACER WIRE INSTALLATION

NOT TO SCALE



CORLETT, PROBST & BOYD, P.L.L.C.

4805 Old Jacksboro Highway
Wichita Falls, Texas 76302

Telephone (940) 723-1455
Fax (940) 397-0549

TBPE F-279

REV DATE DESCRIPTION



NEW FACILITIES SERVICES
MAINTENANCE BUILDING
MSU TEXAS
MIDWESTERN STATE UNIVERSITY

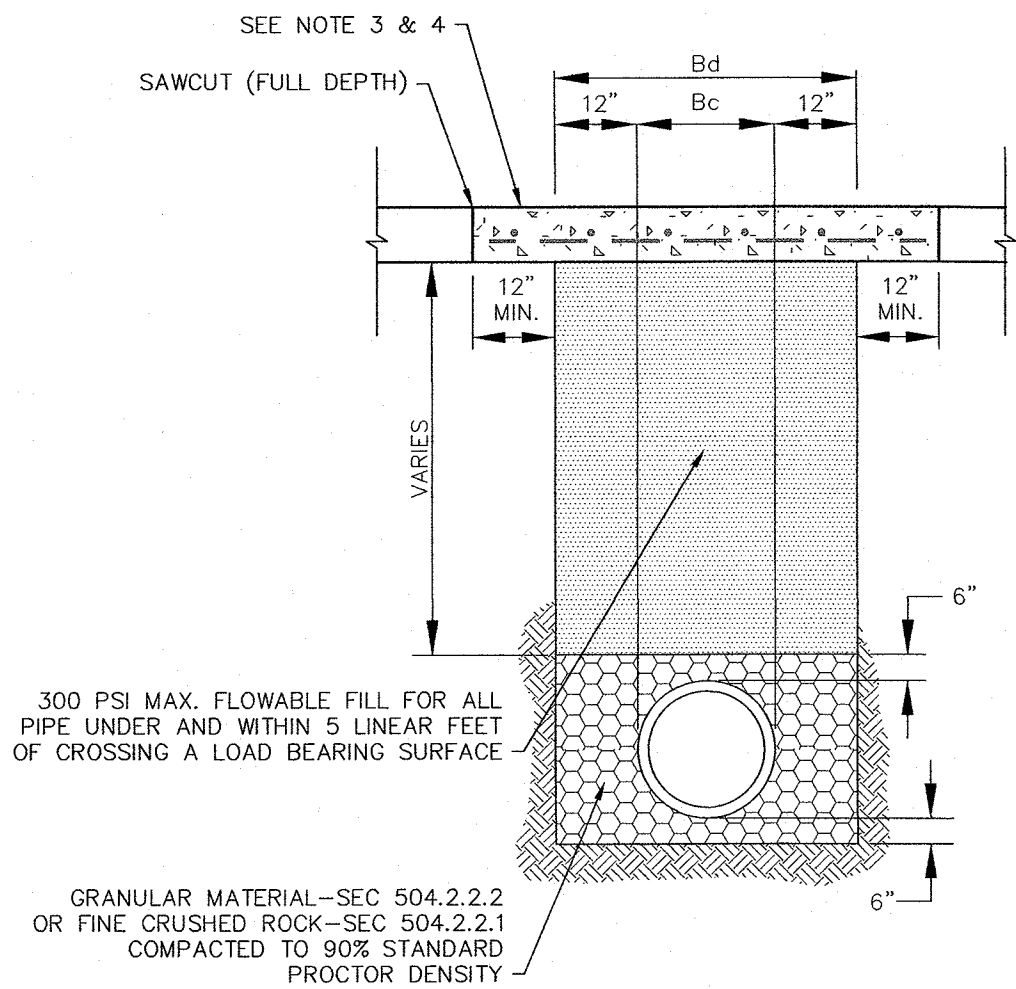
BYSP architects

1005 Ninth Street - Suite 200 Wichita Falls, Texas 76301 (940) 761-2404
Member American Institute of Architects

DRAWN BY: WAT
CHECKED BY: DGS
DATE: DECEMBER, 2018
PROJECT NO.: 33254
UTILITY PLAN DETAILS

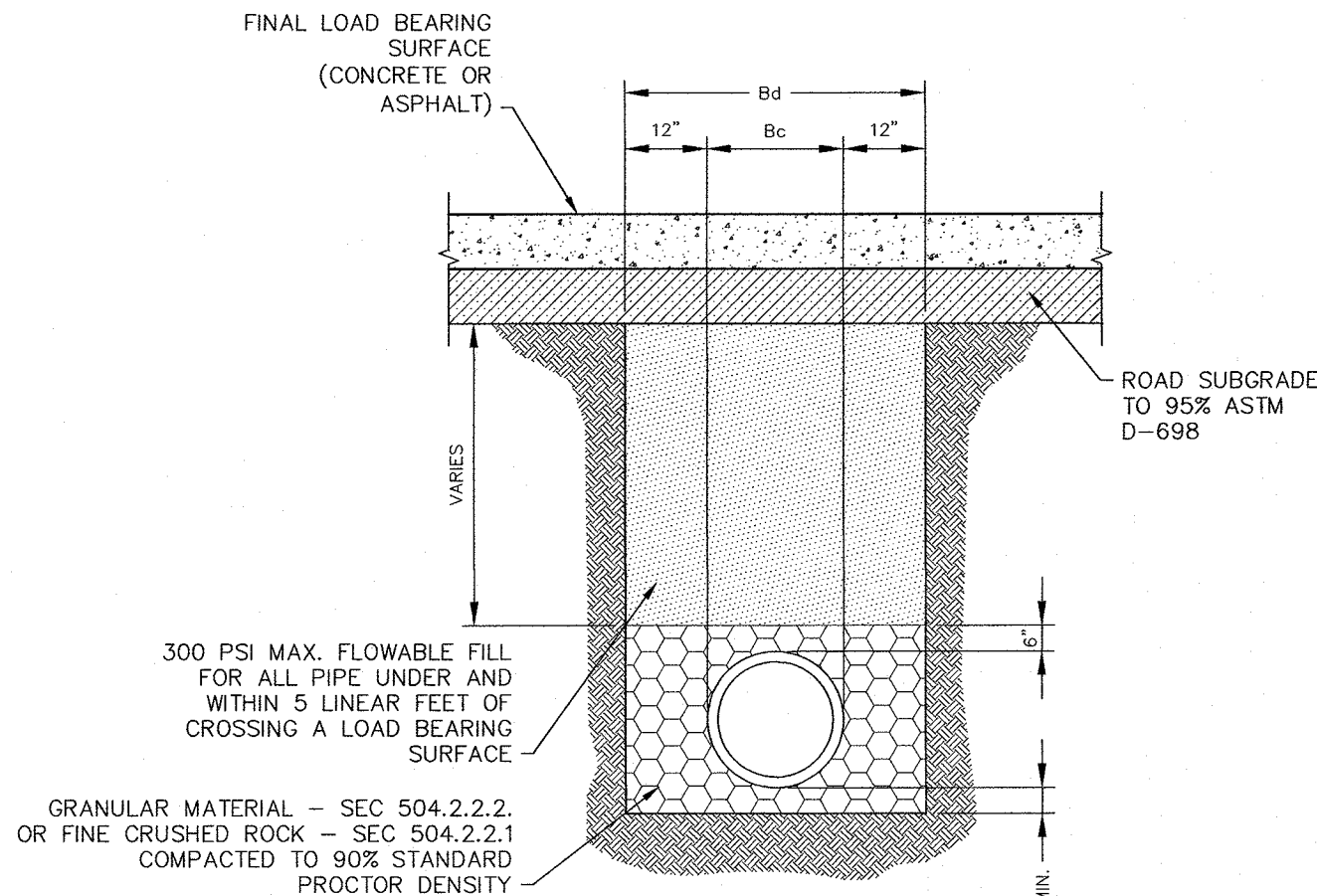
C4

C:\WALT\2018\33254\33254-DWG UTILITY DET C5 P-12/11/2018 10:05 AM 5-12/11/2018 10:04 AM WALT



GENERAL NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE.
2. Bd = TRENCH WIDTH
3. MATCH EXISTING CONCRETE PAVEMENT WITH A MINIMUM 6" OF 3600 PSI, REINFORCED WITH EITHER #3 BARS @ 12" O.C.E.W OR #4 BARS @ 18" O.C.E.W. AND DOWELED INTO EXISTING CONCRETE AT 24" O.C.
4. IF EXISTING PAVEMENT IS REINFORCED, EXISTING BARS REMAINING MAY BE USED IN PLACE OF DOWELS.
5. COARSE CRUSHED ROCK PIPE EMBEDMENT MUST BE USED WHEN GROUND WATER IS ENCOUNTERED IN THE TRENCH.



GENERAL NOTES:

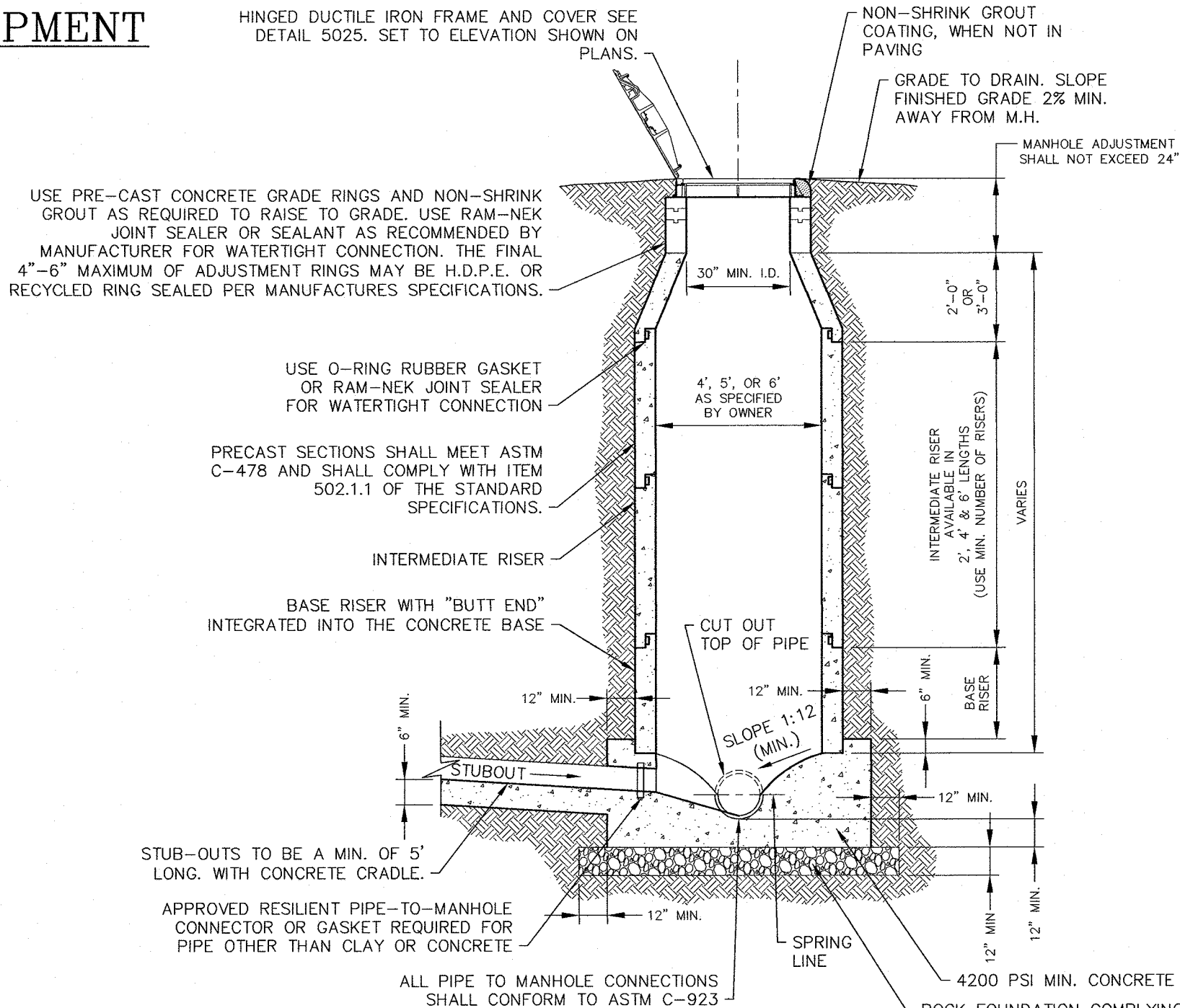
1. Bc = OUTSIDE DIAMETER OF PIPE.
2. Bd = TRENCH WIDTH
3. COARSE CRUSHED ROCK PIPE EMBEDMENT MUST BE USED WHEN GROUND WATER IS ENCOUNTERED IN THE TRENCH.

LOAD BEARING PIPE EMBEDMENT NEW DEVELOPMENT

NOT TO SCALE

CONCRETE PAVEMENT UTILITY CUT REPAIR NEW DEVELOPMENT

NOT TO SCALE



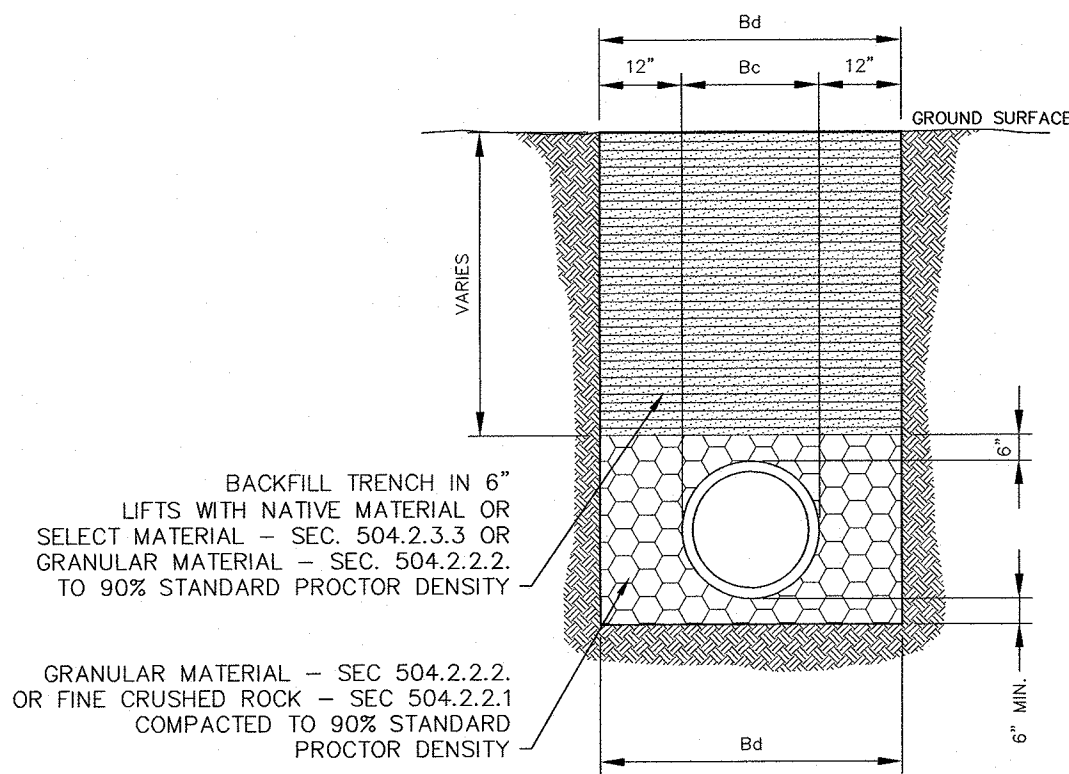
CAST IN PLACE BASE (4' 5' & 6')

GENERAL NOTES:

1. MANHOLES SHALL BE VACUUM TESTED IN STRICT ACCORDANCE WITH ITEM 502.1.5.2 OF THE NCTCOG STANDARD SPECIFICATIONS.
2. ECCENTRIC CONE SECTION TO ONLY BE USED AS APPROVED AND DIRECTED BY CITY ENGINEER.
3. MANHOLE CONES, INVERTS, AND BASES SHALL MEET REQUIREMENT OF TQEQ 217.55.
4. ALL MAIN LINE JOINTS TO BE A MINIMUM LENGTH OF 5' WITH CONCRETE CRADLE (FROM SAME POUR AS BASE IF CAST IN PLACE, UNDER ENTIRE LENGTH.)
5. STUB OUTS TO BE MIN. 5' LONG. STUB OUTS TO BE GROUTED AT M.H. WITH NON SHRINK GROUT. STUB OUTS SHALL ALSO BE FITTED WITH WATER TIGHT STOPPER OR CAP.
6. DIFFERENT SIZE MAINS ENTERING MANHOLE MUST HAVE TOP OF PIPES AT THE SAME ELEVATION.
7. SET INFLOW MAIN ELEVATIONS AND GROUT MANHOLE BOTTOM IN MANNER TO PREVENT FREE FALL OF FLUID INTO MANHOLE FROM MAINS.
8. WHEN A DROP IS APPROVED, AN EXTERNAL DROP PIPE MUST BE CONSTRUCTED.

STANDARD MANHOLE

SCALE: NONE

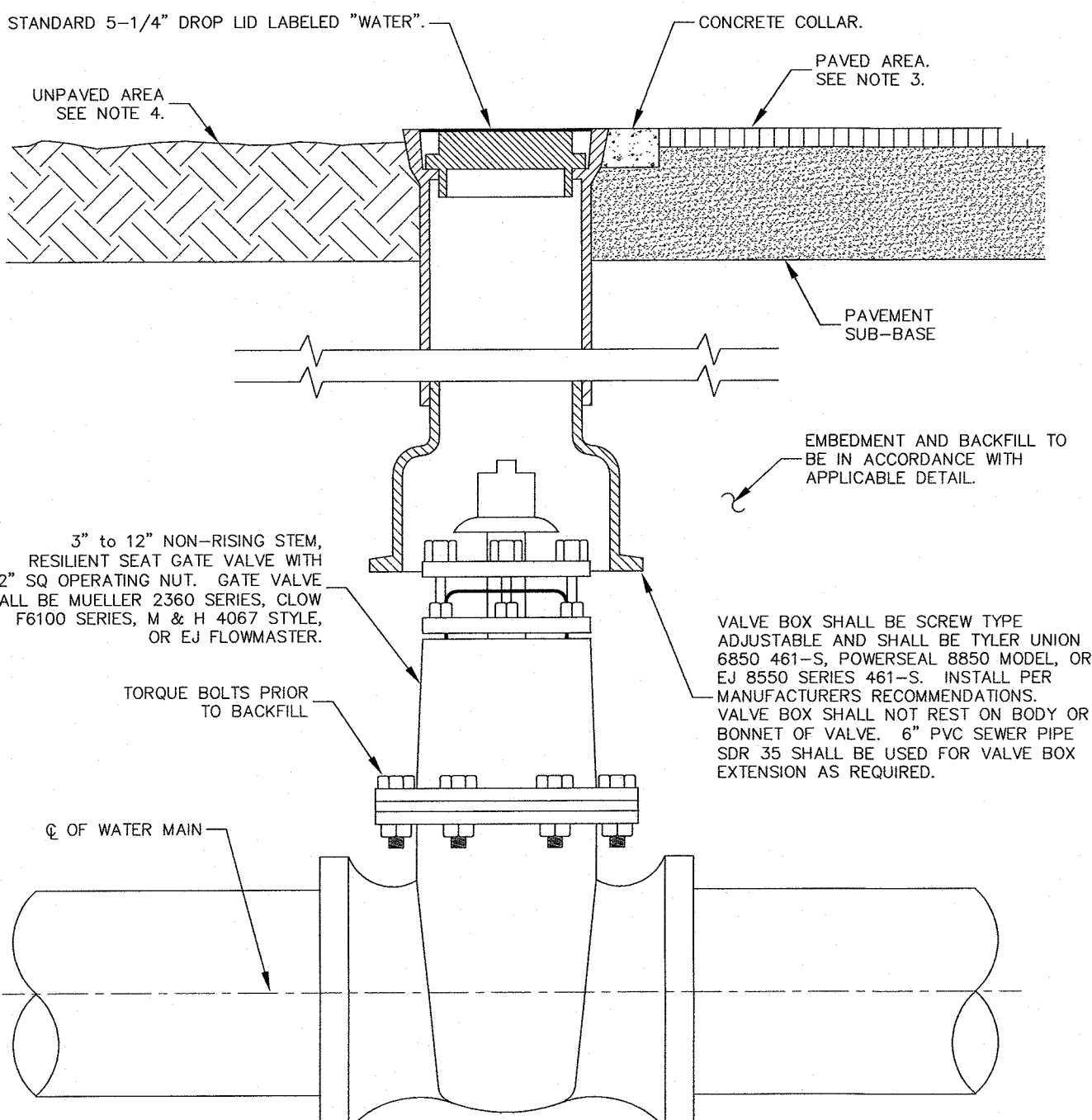


GENERAL NOTES:

1. Bc=OUTSIDE DIAMETER OF PIPE
2. Bd=TRENCH WIDTH
3. COARSE CRUSHED ROCK PIPE EMBEDMENT MUST BE USED WHEN GROUND WATER IS ENCOUNTERED IN THE TRENCH.

NON-LOAD BEARING PIPE EMBEDMENT

NOT TO SCALE



GENERAL NOTES:

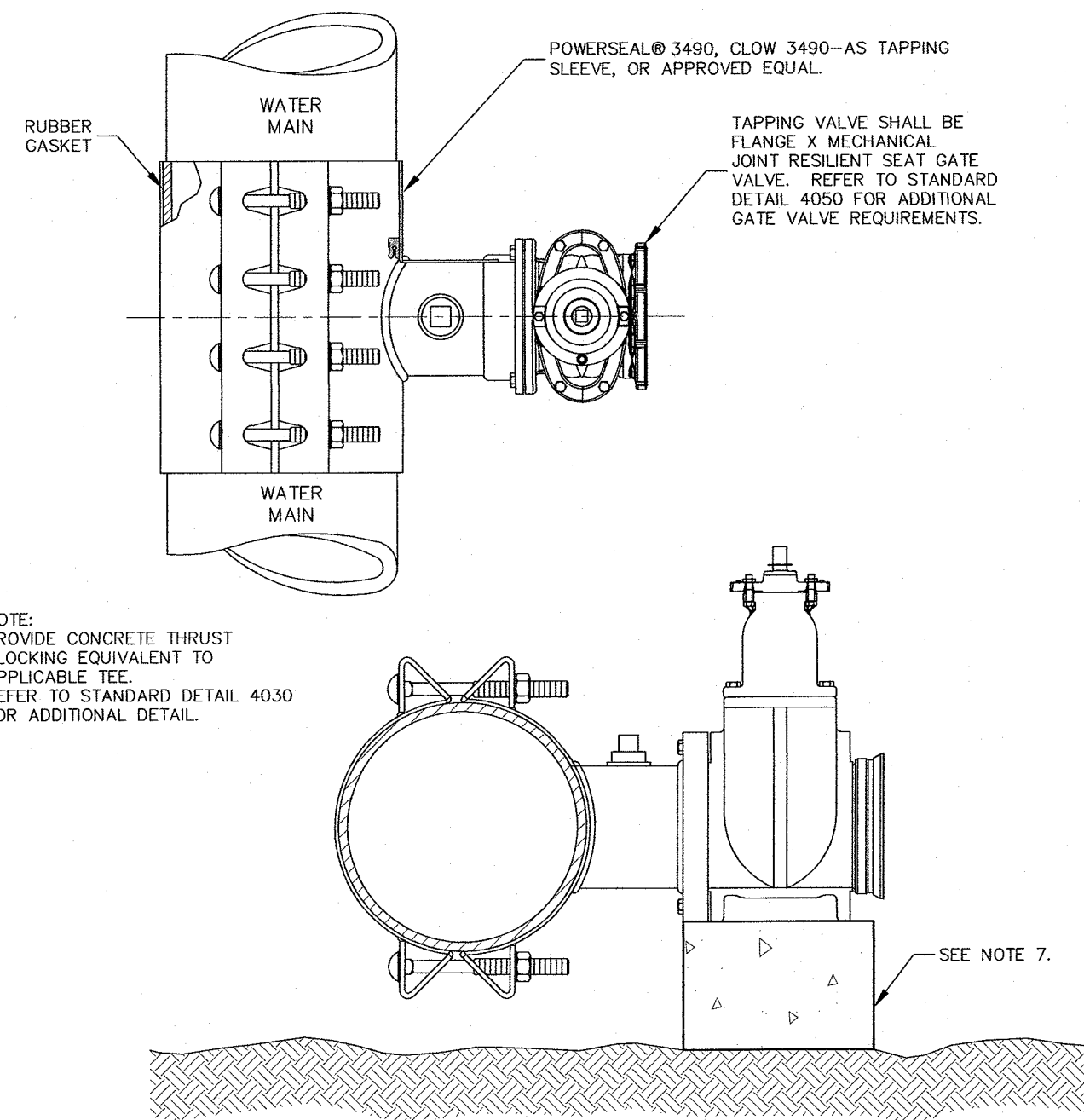
1. ALL GATE VALVES SHALL MEET REQUIREMENTS OF AWWA STANDARD C509 AND NCTCOG, OCTOBER 2004 EDITION, SECTION 502.6.
2. 2" GATE VALVES SHALL BE BRONZE, NON-RISING STEM, RESILIENT SEAT, WITH HANDWHEEL OPERATOR, OPEN LEFT, F.I.P. X F.I.P. AND SHALL BE MUELLER PART # E372.
3. IN PAVED AREAS, INSTALL 24" SQUARE X 5-1/2" CONCRETE VALVE PAD FLUSH WITH TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS. SET VALVE BOX FLUSH WITH FINISHED GRADE.
4. IN UNPAVED AREAS, SET VALVE BOX 2" ABOVE FINISHED GRADE.
5. ALL CONCRETE SHALL BE MINIMUM 3600 PSI 28-DAY COMPRESSIVE STRENGTH.
6. GATE VALVE SHALL BE SET VERTICAL AND PLUMB TO FINISHED GROUND.

2" TO 12" GATE VALVE

NOT TO SCALE

CONSTRUCTION NOTES FOR SEWER LINES

1. ALL ON-SITE SEWER LINES TO BE SCH. 40 P.V.C. PIPE.
2. MINIMUM GRADIENT FOR ALL LINES TO BE 1.0% OR 1/8" PER FOOT.
3. ALL SEWER LINES AND APPURTENANCES TO BE INSTALLED IN ACCORDANCE WITH THE WICHITA FALLS PLUMBING CODE.



NOTE:
PROVIDE CONCRETE THRUST
BLOCKING EQUIVALENT TO
APPLICABLE TEE.
REFER TO STANDARD DETAIL 4030
FOR ADDITIONAL DETAIL.

GENERAL NOTES:

1. TAPPING SLEEVE SHALL BE CONSTRUCTED OF 304 STAINLESS STEEL AND SHALL BE FULLY PASSIVATED TO RETURN WELDED STAINLESS STEEL TO ITS ORIGINAL STATE.
2. RUBBER GASKET SHALL BE A 360° COMPLETE FULL CIRCLE. DO NOT USE GREASE OR PIPE LUBRICATES ON GASKET.
3. BRANCH SHALL BE A MINIMUM 3/8" LARGER THAN NORMAL TO ALLOW FOR FULL SIZE CUTTER HEAD.
4. TAPPING SLEEVE SHALL BE SUPPLIED WITH FLANGE FACE ON BRANCH.
5. TAPPING SLEEVE SHALL HAVE A FLANGE FACE GASKET PERMANENTLY ATTACHED TO SLEEVE AT FACTORY.
6. LUGS SHALL BE STRUCTURALLY WELDED TO THE SHELL.
7. VALVE AND TAPPING EQUIPMENT SHALL BE SUPPORTED BY BLOCKING DURING AND AFTER INSTALLATION.
8. THOROUGHLY CLEAN WATER MAIN WITH WIRE BRUSH PRIOR TO INSTALLATION OF TAPPING SLEEVE.
9. FLANGE FACE SHALL BE INSTALLED VERTICALLY TRUE AND PLUMB.
10. TAPPING SLEEVE SHALL NOT BE INSTALLED WITHIN 4 (FOUR) PIPE DIAMETERS OF AN EXISTING PIPE BELL UNLESS APPROVED OTHERWISE.

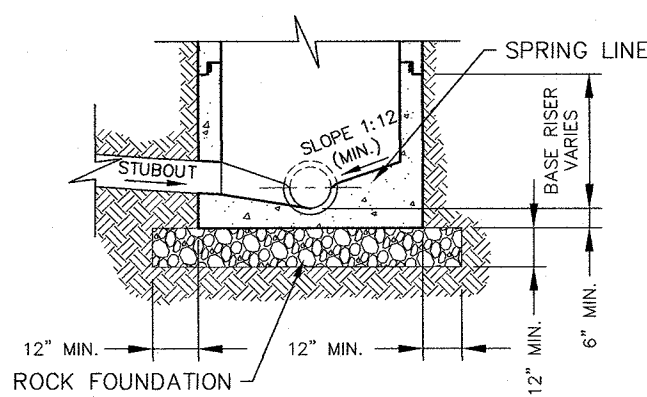
TAPPING SLEEVE AND TAPPING VALVE

NOT TO SCALE

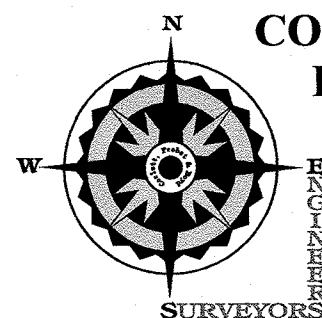
SIZE OF SLEEVE	A PIPE O.D RANGE	E	H CONVEN- TIONAL PACKING	O-RING PACKING	I	J	K	M	N
4 X 2	4.74 - 5.32	16 1/2	13	10 5/8	8 3/32	14 1/32	9 31/32	3 1/8	11 17/32
4 X 3	4.74 - 5.32	16 1/2	15	12 1/2	8 12/16	14 3/4	9 15/16	3 1/2	12 1/4
4 X 4	4.74 - 5.32	16 1/2	17 3/4	15	11 1/2	18 9/16	12 7/8	4 3/16	16 1/16
6 X 2	6.84 - 7.40	18 3/8	13	10 5/8	8 3/32	15 5/32	11 3/32	3 1/8	11 19/32
6 X 3	6.84 - 7.40	18 3/8	15	12 1/2	8 13/16	15 7/8	11 1/16	3 1/2	12 5/16
6 X 4	6.84 - 7.40	18 3/8	17 3/4	15	11 1/2	20 3/8	14 11/16	4 3/16	16 3/4
6 X 6	6.84 - 7.40	18 3/8	21	18 1/8	12 3/4	21 7/16	15 3/16	4 11/16	17 7/8
8 X 2	8.99 - 9.62	19 3/4	13	10 5/8	8 3/32	16 17/32	12 15/32	3 1/8	12 1/32
8 X 3	8.99 - 9.62	19 3/4	15	12 1/2	8 13/16	17 1/4	12 7/16	3 1/2	12 3/4
8 X 4	8.99 - 9.62	19 3/4	17 3/4	15	11 1/2	21 1/16	15 3/8	4 3/16	16 9/16
8 X 6	8.99 - 9.62	19 3/4	21	18 1/8	12 3/4	22 13/16	16 9/16	4 11/16	18 5/16
8 X 8	8.99 - 9.62	21 1/4	25 1/8	22 1/8	14 1/4	24 5/8	17 5/8	5 1/4	20 1/8

TAPPING SLEEVE AND TAPPING VALVE DIMENSIONS

NOT TO SCALE



PRECAST BASE



**CORLETT,
PROBST &
BOYD, P.L.L.C.**

4605 Old Jacksboro Highway
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CHECKED BY DGS

DATE DECEMBER, 2018

PROJECT NO. 33254

UTILITY PLAN DETAILS

C5

REV DATE DESCRIPTION

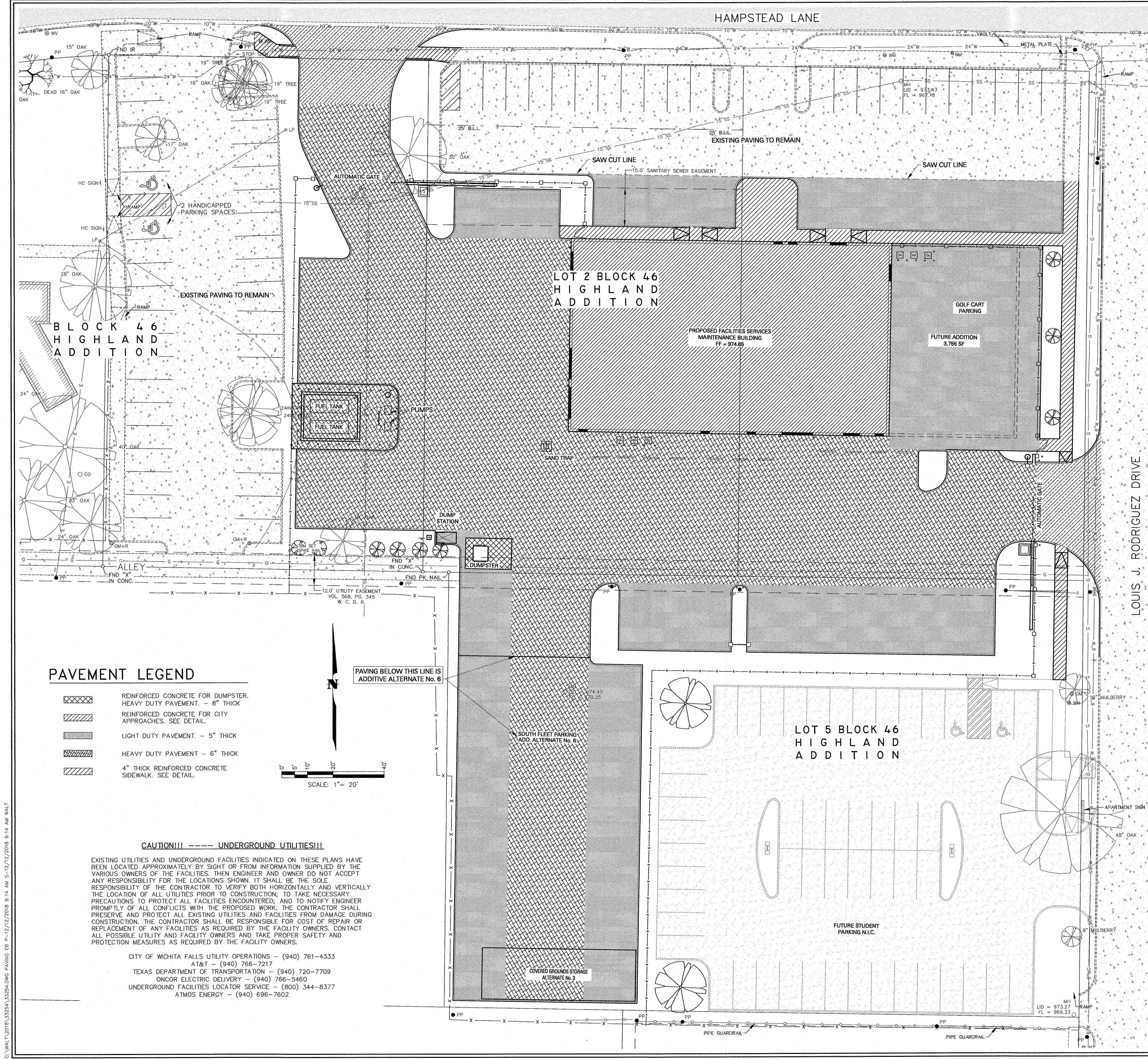


NEW FACILITIES SERVICES
MAINTENANCE
BUILDING



BYSP architects
1005 Ninth Street - Suite 200, Wichita Falls, Texas 76301 (940) 761-2404
Member American Institute of Architects

C:\WLT\2018\33254\33254.DWG PAVING CB P-12/12/2018 9:14 AM S-12/12/2018 9:14 AM WLT



LEGEND

- GM GAS METER
- GM+R GAS METER WITH RISER
- P LIGHT POLE
- MH MANHOLE
- PP POWER POLE
- CO SEWER CLEANOUT
- SV SPRINKLER CONTROL VALVE
- WM WATER METER
- WV WATER VALVE
- X — EXISTING FENCE
- 990--- EXISTING INDEX CONTOUR
- 989--- EXISTING INTERMEDIATE CONTOUR
- GUY WIRE
- X 998.00 EXISTING SPOT ELEVATION
- EXISTING ASPHALT
- EXISTING CONCRETE
- FND IR PROPERTY CORNER (AS NOTED)

STRIPING NOTES:

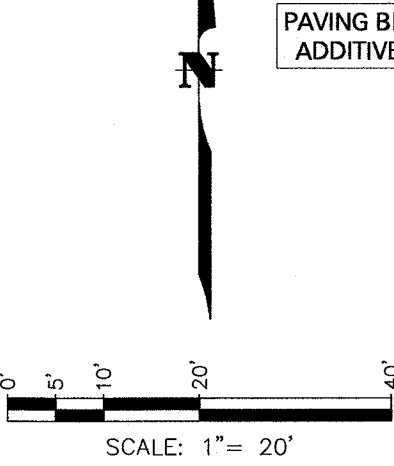
- THE SURFACE OF THE CONCRETE TO BE STRIPED SHALL BE BROOMED CLEAN (OR POWER WASHED) TO REMOVE DIRT AND MUD PRIOR TO PAINTING.
- THE SURFACES TO BE PAINTED SHALL BE THOROUGHLY DRY AND JOINT SEALANT SHALL BE FULL CURED AND PAINTABLE. PPG OR SHERWIN-WILLIAMS TRAFFIC MARKING PAINT SHALL BE APPLIED FULL STRENGTH IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- STRIPES FOR PARKING SPACES SHALL BE A MINIMUM OF 4-INCHES WIDE AND SHALL BE WHITE EXCEPT HANDICAP SPACES (INCLUDING STRIPING, CURB FACE AND SYMBOLS) WHICH SHALL BE SAFETY BLUE.
- PAINTED AREAS SHALL BE PROTECTED FROM TRAFFIC UNTIL THOROUGHLY DRY.
- ALL REQUIRED FIRE LANES SHALL BE PROVIDED AND MAINTAINED WITH FIRE LANE STRIPING THAT CONSISTS OF A SIX INCH (6") WIDE RED BACKGROUND STRIPE WITH FOUR INCH (4") HIGH WHITE LETTERS STATING "NO PARKING", "FIRE LANE", TO BE PAINTED UPON THE RED STRIPE EVERY FIFTEEN FEET (15') ALONG THE ENTIRE LENGTH OF THE FIRE LANE SHOWING THE EXACT BOUNDARY OF THE FIRE LANE. FIRE LANE MARKINGS SHALL BE UPON THE VERTICAL SURFACE OF THE CURB, UNLESS OTHERWISE APPROVED BY THE CHIEF OR AUTHORIZED REPRESENTATIVE.

SITE PAVING NOTES:

- REFER TO FOUNDATION PLAN FOR THE BUILDING FOUNDATION AND SLAB DETAILS.
- ALL VEGETATIVE & DELETERIOUS MATERIALS SHALL BE REMOVED FROM AREAS TO RECEIVE PAVEMENTS. TOPSOIL MAY BE STOCKPILED FOR REUSE ON THE SITE.
- ALL PAVING AND STRUCTURES SHALL BE PLACED ON PREPARED SUBGRADE OR SELECT FILL (NOT SAND). FILL MATERIAL, PLACEMENT & COMPACTION SHALL BE AS SPECIFIED IN THAT GEOTECHNICAL ENGINEER'S REPORT PREPARED BY TERRADYNE, PROJECT No. D181061. ALL LIFTS SHALL BE PROPERLY COMPACTED AND TESTED.
- ALL CONCRETE (UNLESS OTHERWISE NOTED ON DETAILS) SHALL BE CLASS "A", DEVELOPING A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MINIMUM. USE "BULL-NOSED" EDGER OR 3/4 CHAMFER ON ALL EXPOSED EDGES. PROVIDE LIGHT BROOM FINISH.
- ALL REBAR SHALL BE GRADE 60, FREE OF EXCESSIVE RUST & MILL SCALE, & SHALL BE INSTALLED IN ACCORDANCE WITH ACI 318, LATEST EDITION. 18" TRANSVERSE BARS SHALL BE TURNED UP INTO OR DOWN INTO FOOTINGS OR WALLS.
- ALL CURBING SHALL BE MONOLITHIC CURB AND GUTTER. DOWEL-ON CURBING SHALL NOT BE ALLOWED.
- EXPANSION JOINTS SHALL NOT BE PLACED TO RUN WITH FLOW LINES.
- 1/4" CONTRACTION JOINTS SHALL BE SAW CUT TO 1/4" THE PAVEMENT THICKNESS WITHIN 24 HOURS OF CONCRETE REACHING ITS INITIAL SET AT A MAXIMUM OF 16' ON CENTER EACH WAY. AFTER ALL PAVING IS IN PLACE, ALL JOINTS SHALL BE BLOWN CLEAN WITH COMPRESSED AIR AND SEALED WITH SELF LEVELING SEALER, W.R.
- CONSTRUCTION JOINTS SHALL BE DOWELED TOGETHER PER DETAILS. DOWELS MAY BE ELIMINATED IF TRANSVERSE STEEL IS CONTINUOUS ACROSS THE JOINT.
- ALL SIDEWALKS AND HANDICAP ACCESSIBLE ROUTES SHALL HAVE A CROSS SLOPE OF 2% OR LESS. HANDICAP RAMPS SHALL NOT EXCEED A 1:12 SLOPE, REFER TO RAMP DETAILS.
- TRAFFIC SHALL NOT BE ALLOWED UPON THE NEW PAVEMENT FOR A MINIMUM OF 14 DAYS OR UNTIL COMPRESSIVE TESTS INDICATE THAT DESIGN STRENGTH HAS BEEN ACHIEVED.
- AFTER ALL CONCRETE PLACEMENT AND AFTER JOINT SEALANT HAS CURED, THE PARKING SPACES, DRIVE LANES, AND DIRECTIONAL ARROWS SHALL BE STRIPED AS SHOWN USING SHERMAN-WILLIAMS OR PPG TRAFFIC MARKING PAINT APPLIED FULL STRENGTH IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL STRIPES SHALL BE A MINIMUM OF 4" WIDE EXCEPT THE STOP LINES WHICH SHALL BE 12" WIDE X 15' LONG. HANDICAP STRIPING SHALL BE BLUE, ALL OTHERS WHITE. PAINTED AREAS SHALL BE PROTECTED FROM TRAFFIC UNTIL THOROUGHLY DRY.
- A CITY OF WICHITA FALLS APPROACH PERMIT IS REQUIRED AND THE APPROACHES WILL BE SUBJECT TO CITY INSPECTION.
- ALL WORK WITHIN CITY RIGHTS-OF-WAY SHALL COMPLY WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - NORTH CENTRAL TEXAS", LATEST EDITION, AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS WITH CITY OF WICHITA FALLS REVISIONS. THE CITY OF WICHITA FALLS PUBLIC WORKS DEPARTMENT SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO WORK IN CITY RIGHTS-OF-WAY. (940) 761-7477. AN APPROACH PERMIT WILL BE REQUIRED.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF EMPLOYEES AND THE PUBLIC AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO REDUCE RISK ON THE JOBSITE. TRAFFIC SAFETY MEASURES MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, SHALL BE USED WITHIN THE STREET RIGHT-OF-WAY TO PROTECT THE TRAVELING PUBLIC.

PAVEMENT LEGEND

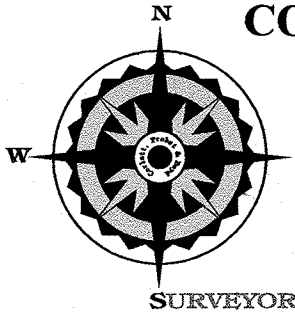
- REINFORCED CONCRETE FOR DUMPSTER, HEAVY DUTY PAVEMENT. - 8" THICK
- REINFORCED CONCRETE FOR CITY APPROACHES. SEE DETAIL.
- LIGHT DUTY PAVEMENT. - 5" THICK
- HEAVY DUTY PAVEMENT - 6" THICK
- 4" THICK REINFORCED CONCRETE SIDEWALK. SEE DETAIL.



CAUTION!!! ----- UNDERGROUND UTILITIES!!!

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED APPROXIMATELY BY SIGHT OR FROM INFORMATION SUPPLIED BY THE VARIOUS OWNERS OF THE FACILITIES. THEN ENGINEER AND OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE LOCATIONS SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION; TO TAKE NECESSARY PRECAUTIONS TO PROTECT ALL FACILITIES ENCOUNTERED; AND TO NOTIFY ENGINEER PROMPTLY OF ALL CONFLICTS WITH THE PROPOSED WORK. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF REPAIR OR REPLACEMENT OF ANY FACILITIES AS REQUIRED BY THE FACILITY OWNERS. CONTACT ALL POSSIBLE UTILITY AND FACILITY OWNERS AND TAKE PROPER SAFETY AND PROTECTION MEASURES AS REQUIRED BY THE FACILITY OWNERS.

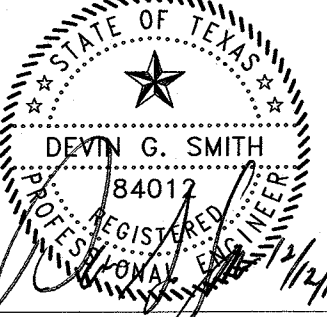
CITY OF WICHITA FALLS UTILITY OPERATIONS - (940) 761-4333
AT&T - (940) 766-7217
TEXAS DEPARTMENT OF TRANSPORTATION - (940) 720-7709
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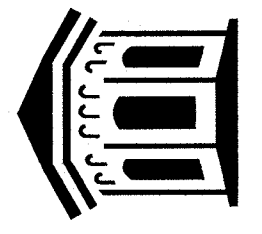
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Wichita Falls, Texas 76301 Telephone (940) 723-1455
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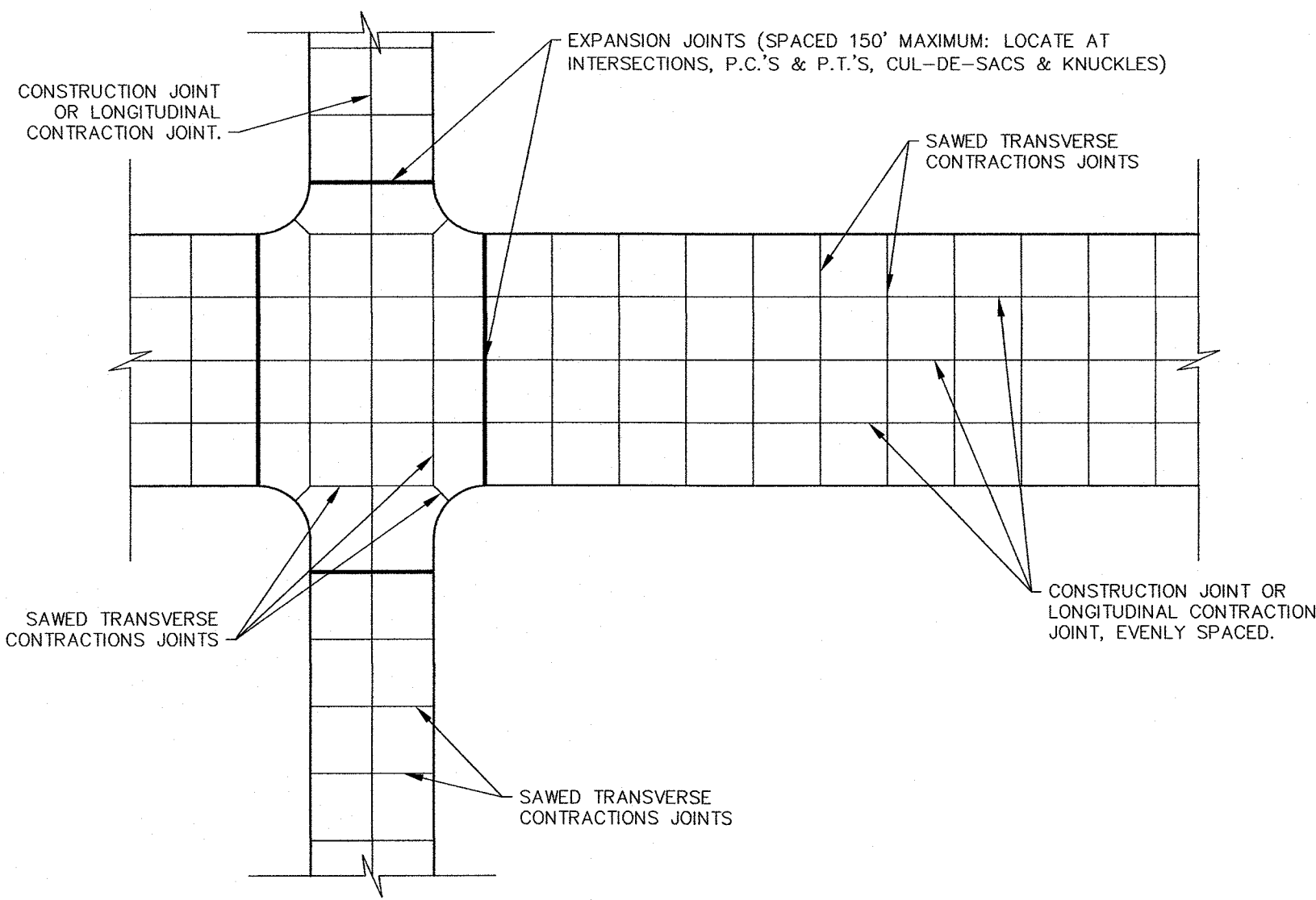
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DATE DECEMBER, 2018
PROJECT NO. 33254

PAVING PLAN

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C6

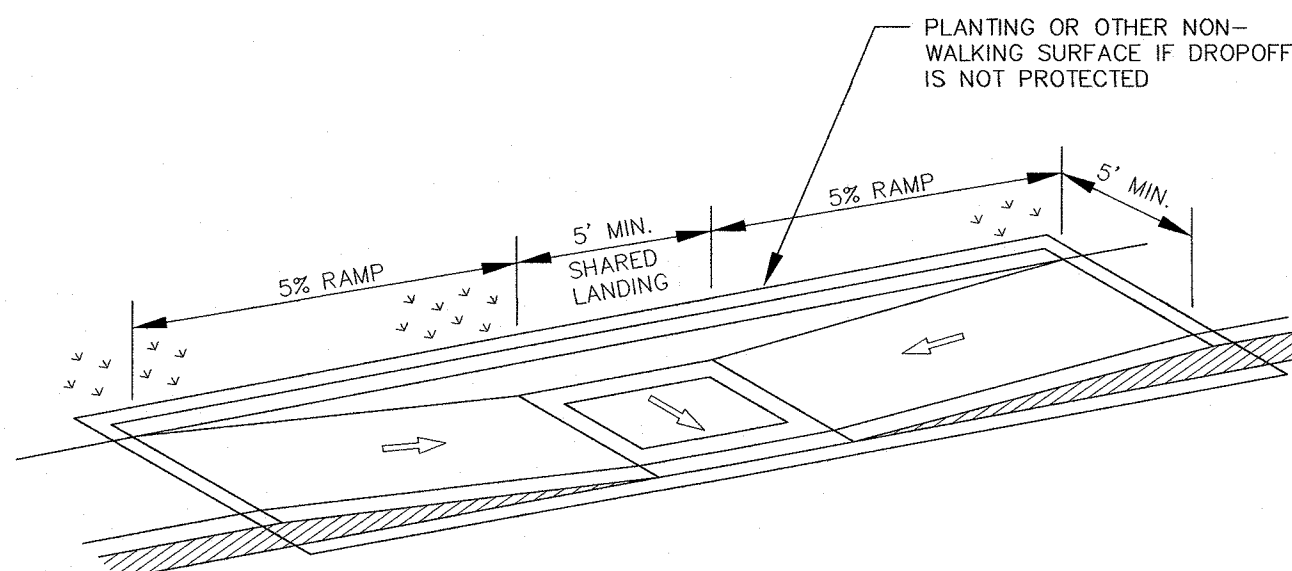


GENERAL NOTES:

1. SAWED TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED AT 15' MAX. SPACING.

SPACING DIAGRAM FOR JOINTS

SCALE: NONE

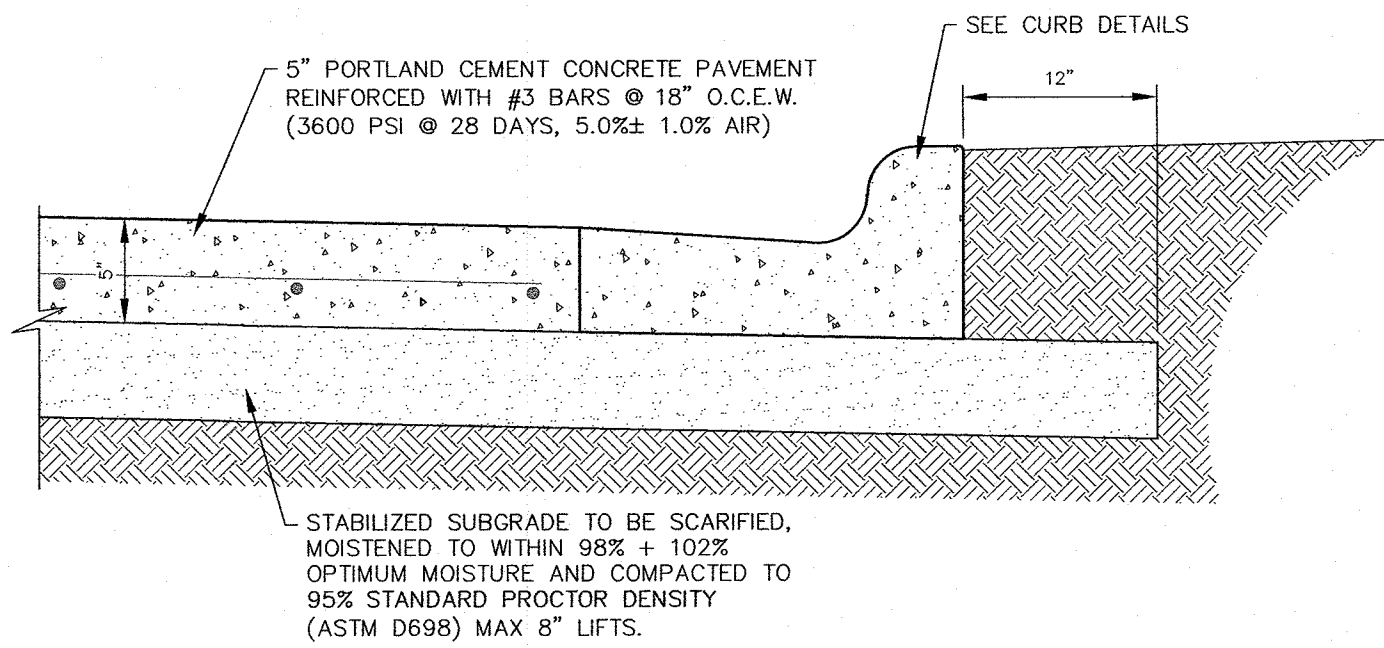


TYPE 2 PERPENDICULAR CURB RAMP

SCALE: NONE

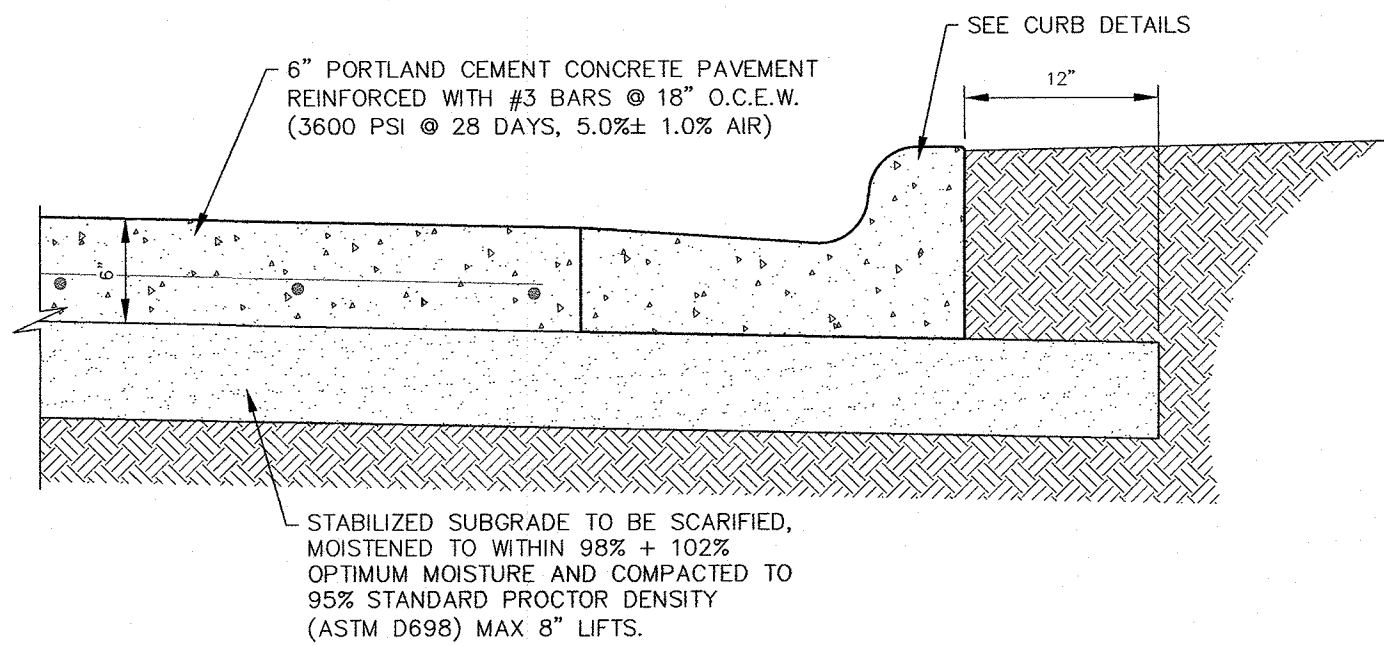
GENERAL NOTES:

1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. THE MINIMUM SIDEWALK WIDTH IS 4'. WHERE A 4' SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM 3' SIDEWALK WITH 5' X 5' PASSING AREAS AT INTERVALS NOT TO EXCEED 200 FT IS REQUIRED.
3. LANDINGS SHALL BE 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
4. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4' X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
5. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND RAMP SURFACES IS 2%.
6. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED.
7. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
8. RAMP TEXTURES MUST CONSIST OF TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
9. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE, AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
10. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHOULD BE A MINIMUM OF 5' WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
11. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
12. EXISTING FEATURES THAT COMPLY WITH TAS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
13. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHEREVER ON ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
14. SHADED AREAS INDICATE LOCATIONS OF DETECTABLE WARNINGS. (COLOR/LIGHT REFLECTIVE VALUE AND TEXTURE CONTRAST)



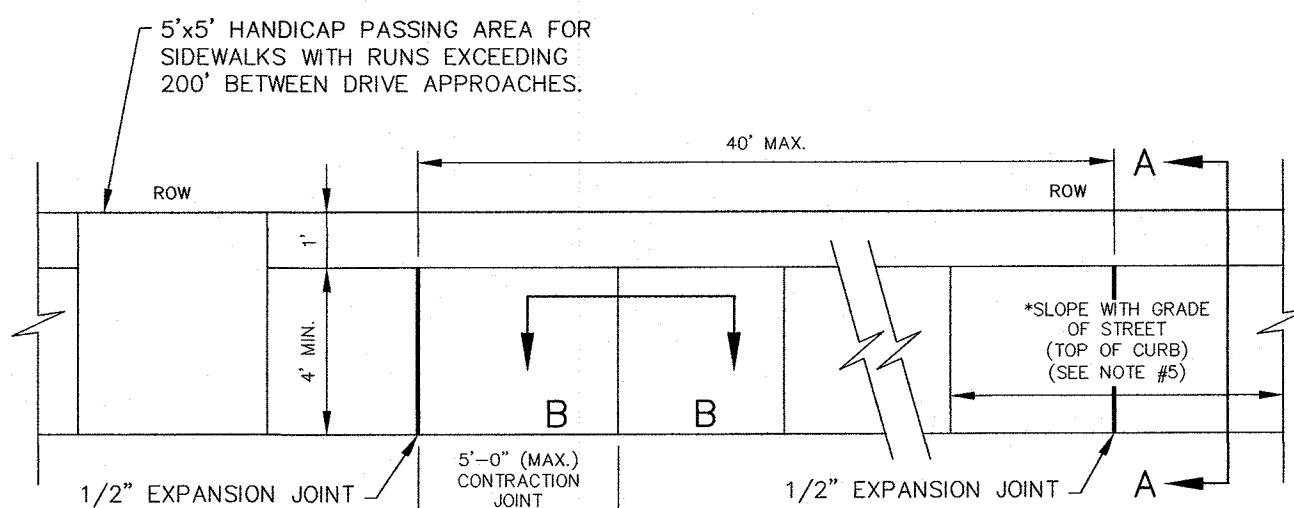
LIGHT DUTY – 5" PAVEMENT SECTION

NTS

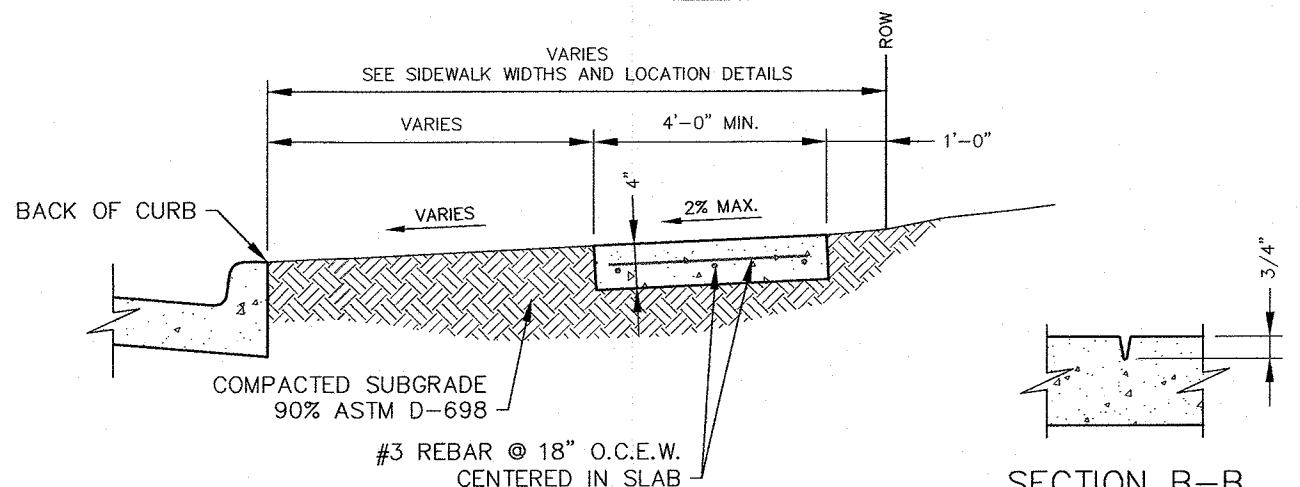


HEAVY DUTY – 6" PAVEMENT SECTION

NTS



PLAN



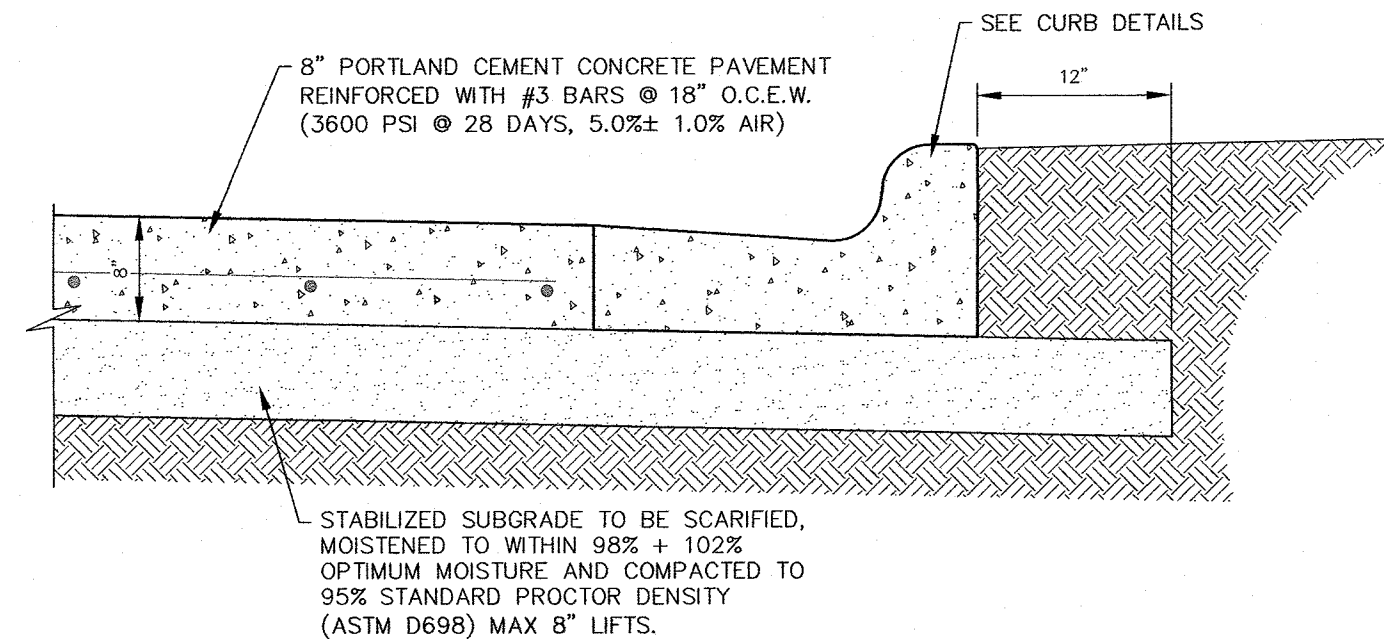
SECTION A-A

GENERAL NOTES:

1. SIDEWALK REINFORCING (EXCLUDING DRIVE APPROACHES) SHALL BE #3 BARS @ 18" O.C.E.W. OR #4 BARS ON 24" O.C.
2. ALL CONCRETE SHALL BE CLASS "A", (COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS.)
3. SAND SHALL NOT BE ACCEPTED AS COMPACTED SUBGRADE. SAND WILL BE ALLOWED FOR LEVEL-UP ONLY.
4. ANY UTILITY BOXES OR MANHOLES WITHIN THE SIDEWALK MUST BE ADJUSTED BY THE CITY UTILITY DEPARTMENT, OR OWNER OF UTILITY, TO BE FLUSH WITH FINISH GRADE, OR RELOCATED OUT OF THE SIDEWALK TO THE PROPER GRADE. ALL ADJUSTMENT COST WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, OR THE OWNER INSTALLING THE SIDEWALK.
5. CROSS SLOPE AT DRIVE APPROACHES AND RAMPS MUST COMPLY WITH ADA REQUIREMENTS. (1 INCH PER FOOT MAXIMUM)
6. IF SIDEWALK IS PLACED ADJACENT TO CURB, MINIMUM WIDTH SHALL BE 6'.
7. SIDEWALK 1' OFF ROW LINE. PROVIDE 5' MINIMUM WIDTH SIDEWALK IN COMMERCIAL AREAS WITH HEAVY PEDESTRIAN MOVEMENTS.
8. SIDEWALKS INSTALLED WITHIN TYPICAL RIGHT OF WAY SHALL BE A MINIMUM WIDTH OF 5' AND MEET REQUIREMENTS OF TYPICAL PEDESTRIAN STANDARDS.

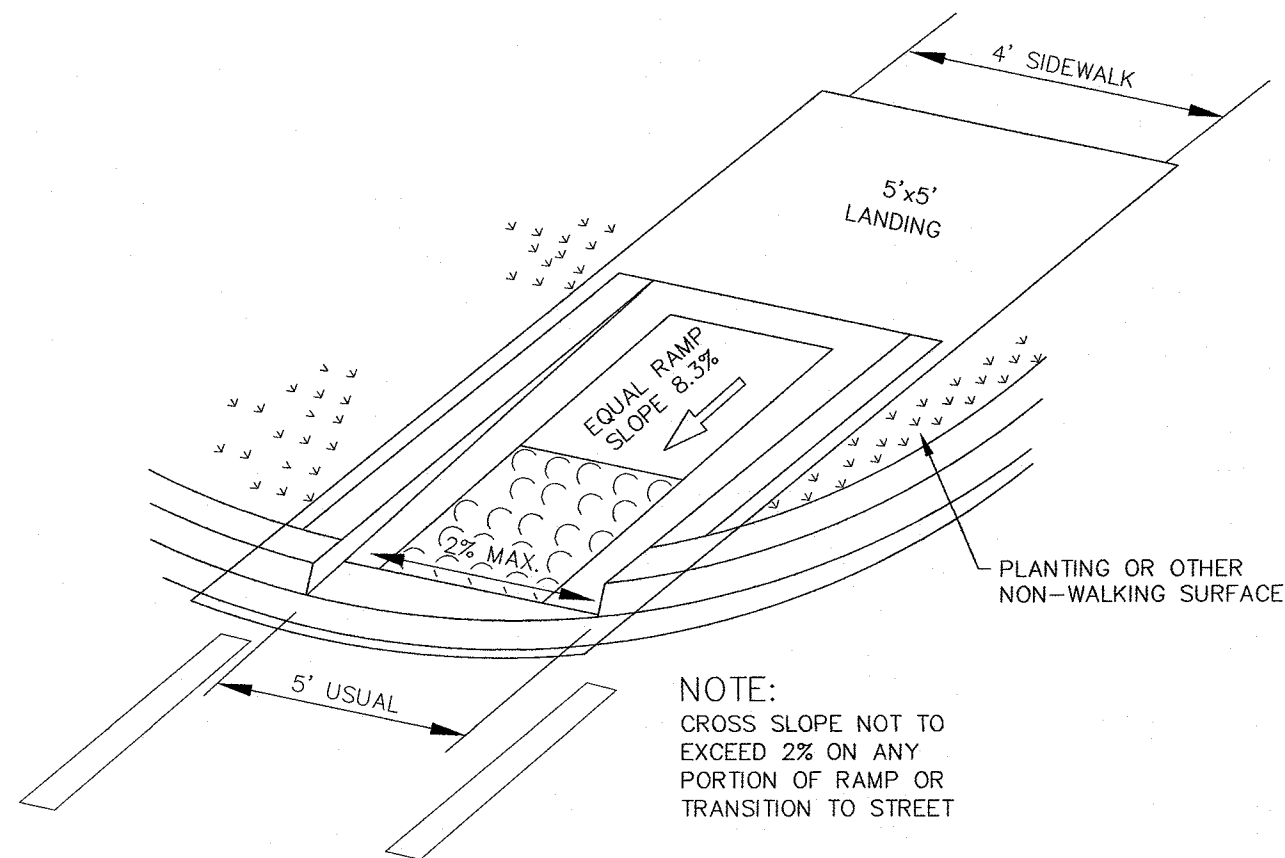
SIDEWALK

SCALE: NONE



DUMPSTER – 8" PAVEMENT SECTION

NTS

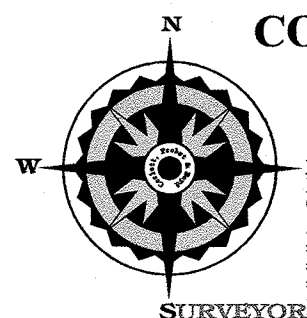


TYPE 5 DIRECTIONAL RAMP WITHIN RADIUS

SCALE: NONE

PEDESTRIAN FACILITIES CURB RAMP NOTES:

1. INSTALL A CURB RAMP AT EACH PEDESTRIAN STREET CROSSING.
2. RAMP SHALL NOT BE STEEPER THAN 12:1 AND PAVEMENT COUNTER SLOPE SHALL NOT EXCEED 20:1 TOWARDS THE RAMP. ALL SLOPES SHOWN ARE MAXIMUM ALLOWABLE. LESSER SLOPES THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
3. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.
4. GUTTER FLOW LINE AND STREET PROFILE SHALL BE MAINTAINED THOUGH THE RAMP AREA WITH A SMOOTH TRANSITION BETWEEN RAMP AND STREET. ENSURE THAT POSITIVE DRAINAGE IS OBTAINED OFF LANDING AREA AND RAMP. CHANGES IN LEVEL GREATER THAN 1/4" ARE NOT PERMITTED.
5. PROVIDE FLARED SIDES WHERE THE PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP. FLARED SIDES SHALL BE SLOPED AT 10% MAXIMUM, MEASURED PARALLEL TO THE CURB, RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTED, SUBSTANTIALLY OBSTRUCTED OR OTHERWISE PROTECTED.
6. LANDINGS SHALL BE 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
7. MANEUVERING SPACE AT THE BOTTOM OF THE CURB RAMPS SHALL BE A MINIMUM OF 4' X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
8. PLACE CONCRETE AT A MINIMUM DEPTH OF 5" FOR RAMPS, FLARES AND LANDINGS, UNLESS OTHERWISE DIRECTED. THE GUTTER PORTION OF THE RAMP IS MINIMUM 6" DEPTH OR MATCH ADJACENT PAVEMENT THICKNESS.
9. ALL CONCRETE SHALL BE CLASS "A" (COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.)
10. RAMP AND LANDING AREA REINFORCING SHALL BE #3 BARS @ 18" O.C.E.W.
11. DETECTABLE WARNINGS SHALL CONSIST OF A CAST IN PLACE DETECTABLE WARNING SURFACE AS MANUFACTURED BY ARMOR-TILE, ADA SOLUTIONS OR APPROVED EQUAL. THE DETECTABLE WARNING SHALL BE BROCK RED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR A DESIGNATED REPRESENTATIVE. THE COLOR SHALL BE A HOMOGENOUS PART OF THE DETECTABLE WARNING DEVICE.
12. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
13. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF THE CURB. ALIGN ROWS OF DOMES TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADII.
14. PLACE UTILITY POLES, GROUND BOXES, METER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SO AS NOT TO OBSTRUCT THE PEDESTRIAN ACCESS ROUTE OR CLEAR GROUND SPACE.
15. RAMP LIMITS OF PAYMENT SHALL INCLUDE RAMP, LANDING, REQUIRED FLARES AND GUTTER ADJACENT TO RAMP AND FLARES.



**CORLETT,
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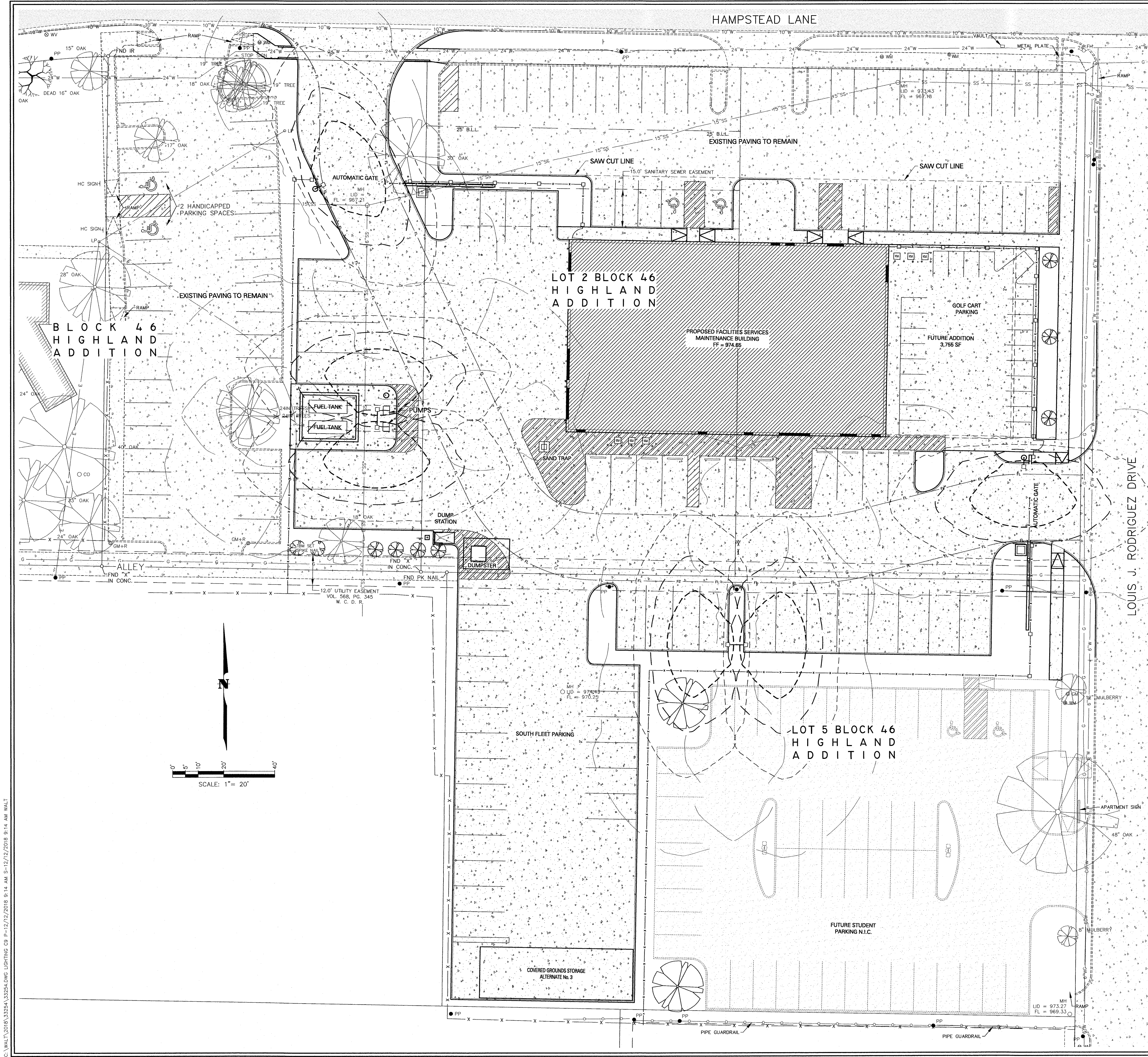
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C 8

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C:\WALT\2018\3254\3254.DWG LIGHTING CB P-12/12/2018 8:14 AM S-12/12/2018 8:14 AM WALT



LEGEND

GM	GAS METER
GM+R	GAS METER WITH RISER
LP	LIGHT POLE
MH	MANHOLE
PP	POWER POLE
CO	SEWER CLEANOUT
SV	SPRINKLER CONTROL VALVE
WM	WATER METER
WV	WATER VALVE
X	EXISTING FENCE
---	EXISTING INDEX CONTOUR
---	EXISTING INTERMEDIATE CONTOUR
---	GUY WIRE
998.00	EXISTING SPOT ELEVATION
---	EXISTING ASPHALT
---	EXISTING CONCRETE
FND IR	PROPERTY CORNER (AS NOTED)

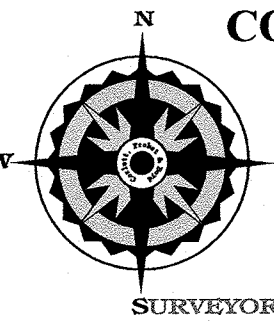
LIGHTING NOTES

- THE NEW PARKING LOT LIGHTS SHALL BE MOUNTED ON 24" DIAMETER CONCRETE FOUNDATIONS AS DESCRIBED ON DETAIL SHEET 7.
- THE NEW LIGHT POLES SHALL BE KW INDUSTRIES RTSU25-6.1-11-BRZ 185-BC (SINGLE ARM) AND KW INDUSTRIES RTSU25-6.1-11-BRZ 285-BC (DOUBLE ARM AT 180°) MOUNTED TO THE CONCRETE FOUNDATIONS WITH GALVANIZED 3/4" X 30" LONG WITH 3" HOOK ANCHOR BOLTS. THE ANCHOR BOLTS SHALL BE DOUBLE-NUTTED TO PLUMB THE POLE. ONCE THE POLE HAS BEEN PLUMBED AND BOLTS TIGHTENED, THE SPACE BETWEEN THE BASE PLATE SHALL BE PACKED WITH NON-SHRINK, HIGH STRENGTH GROUT. POLE ARMS SHALL BE ORIENTED AS INDICATED ON THE PLAN.
- THE NEW LIGHT FIXTURES SHALL BE GE EVOLVE LED MEDIUM COBRAHEAD ROADWAY LIGHT, ERMCO-A3-60-A-4-GRAY, 208/1. PROVIDE A PHOTOCELL ON THE LIGHT STANDARD NEAREST THE SERVICE POLE. INSTALL SHORTING CAPS IN THOSE FIXTURES THAT ARE CONTROLLED BY A REMOTE PHOTOCELL.
- BURIED 3/4" SCH. 40 PVC CONDUIT RUNS AND WIRING ARE REQUIRED TO MAKE THE CONNECTIONS. CONDUIT SHALL BE BURIED A MINIMUM OF 24" BELOW FINISH GRADE. USE LONG SWEEP ELBOWS TO BRING CONDUIT UP INTO LIGHT FOUNDATIONS. ALL WORK SHALL BE DONE BY A LICENSED ELECTRICIAN IN KEEPING WITH THE NATIONAL ELECTRIC CODE, LATEST EDITION.
- ALL ELECTRICAL WORK SHALL BE COORDINATED THROUGH AND INSPECTED BY THE MWSU ELECTRICAL SUPERINTENDENT, DOUGLAS ALLISON (940) 397-4706.

CAUTION!!! ----- UNDERGROUND UTILITIES!!!

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED APPROXIMATELY BY SIGHT OR FROM INFORMATION SUPPLIED BY THE VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER AND OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE LOCATIONS SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION; TO TAKE NECESSARY PRECAUTIONS TO PROTECT ALL FACILITIES ENCOUNTERED; AND TO NOTIFY ENGINEER PROMPTLY OF ALL CONFLICTS WITH THE PROPOSED WORK. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND FACILITIES FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF REPAIR OR REPLACEMENT OF ANY FACILITIES AS REQUIRED BY THE FACILITY OWNERS. CONTACT ALL POSSIBLE UTILITY AND FACILITY OWNERS AND TAKE PROPER SAFETY AND PROTECTION MEASURES AS REQUIRED BY THE FACILITY OWNERS.

CITY OF WICHITA FALLS UTILITY OPERATIONS - (940) 761-4333
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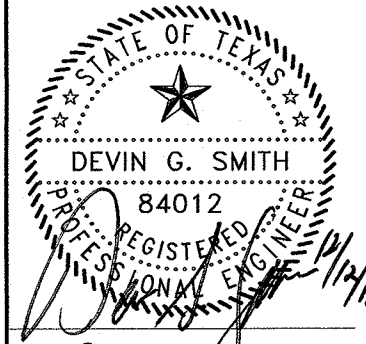
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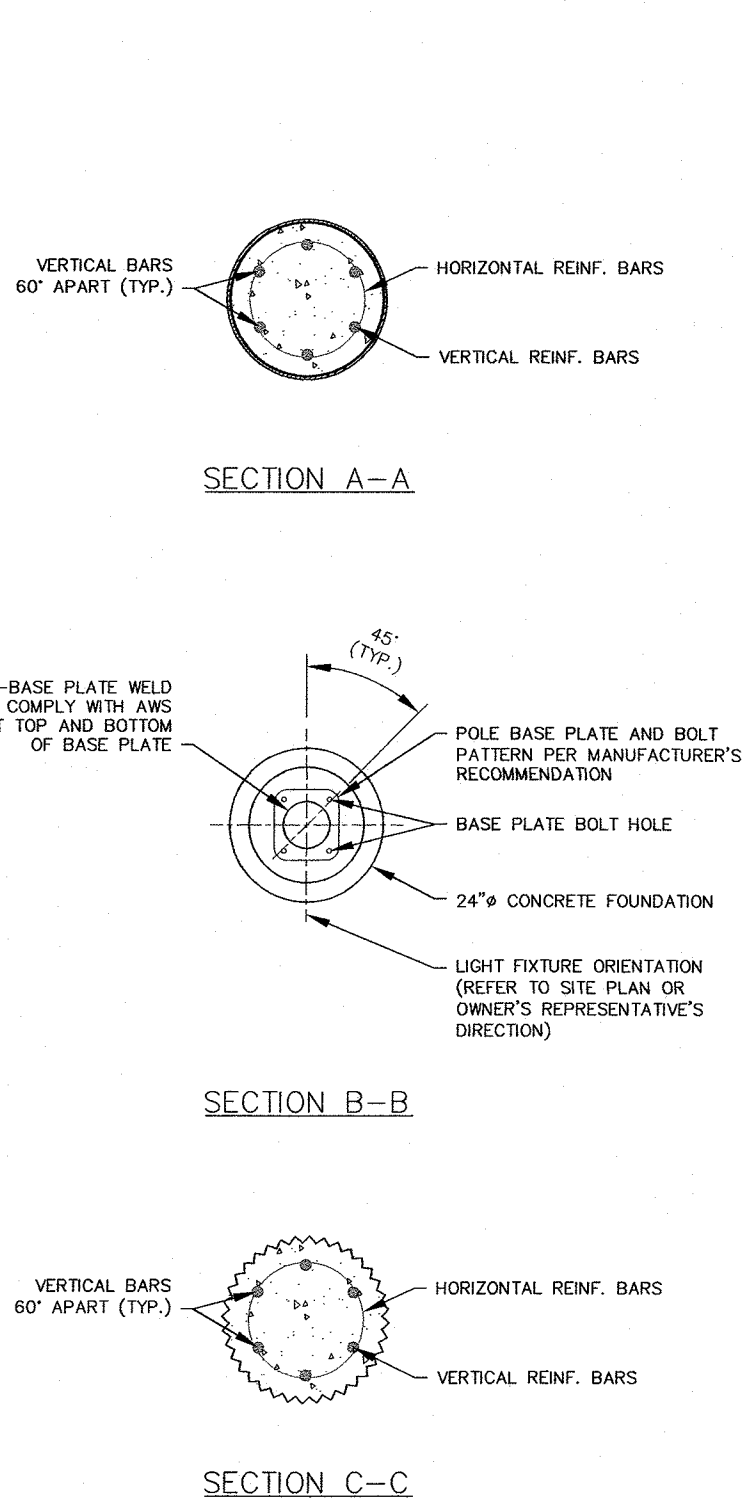
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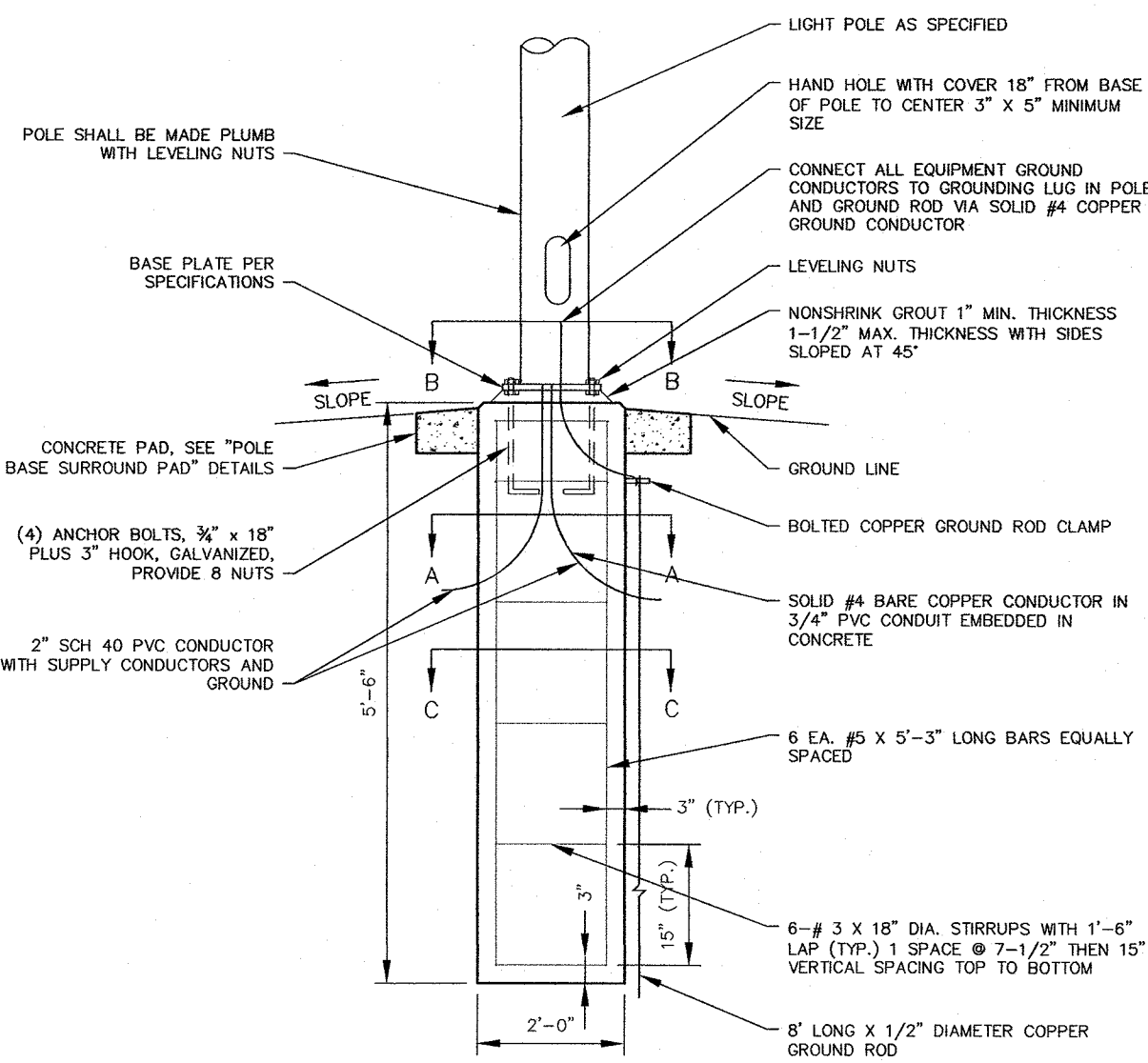
LIGHTING PLAN

C 9

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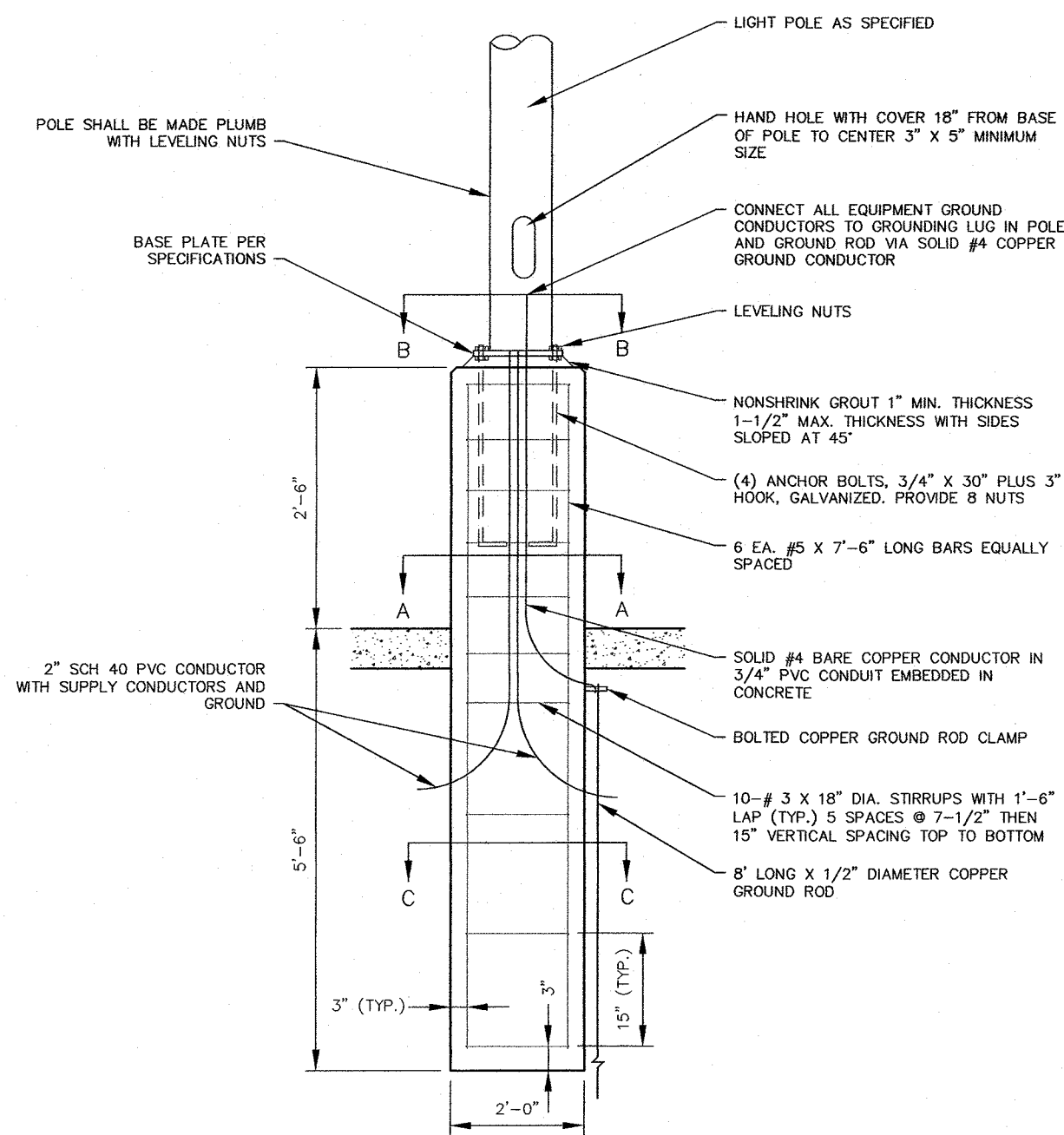


LIGHT POLE FOUNDATION SECTIONS
SCALE: NONE



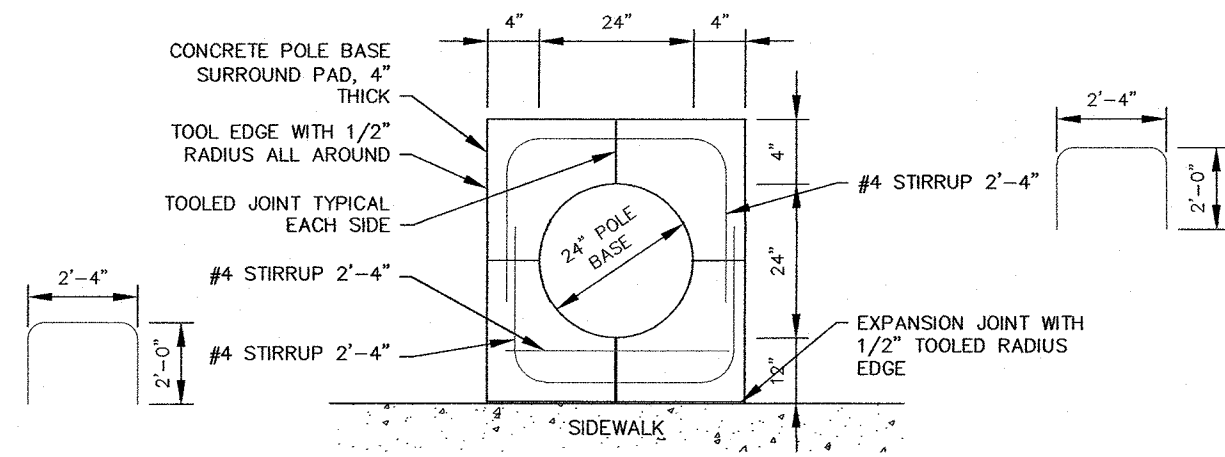
- NOTES:
1. USE 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONC. WITH GRADE 60 REINFORCING.
 2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE PLACING CONCRETE.
 3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED SOIL. ALL LOOSE SOIL MATERIAL SHALL BE REMOVED PRIOR TO PLACING CONCRETE.
 4. CONFIRM ACTUAL ANCHOR BOLT PATTERN AND DIMENSIONS WITH POLE MANUFACTURER'S DRAWINGS.
 5. FORM CONCRETE FROM 6" BELOW GRADE TO TOP OF BASE. FILL ENTIRE EXCAVATION WITH CONCRETE AFTER REMOVAL OF ALL DISTURBED SOIL.
 6. STREET LIGHTING AREAS ARE DEFINED AS AREAS OUTSIDE PAVEMENT WHERE THE CENTERLINE OF THE POLE IS GREATER THAN 5 FEET FROM THE BACK OF CURB.
 7. POLE AND LAMP HOLDER TO BE GE/KW INDUSTRIES ERS10F1X40DGRAY/RTSU25-6.1-11-BRZ18S-BG WITH MULTI-VOLTAGE CAPABILITIES.

**LANDSCAPE OR FOOT TRAFFIC AREA
LIGHT POLE FOUNDATION DETAIL**
SCALE: NONE

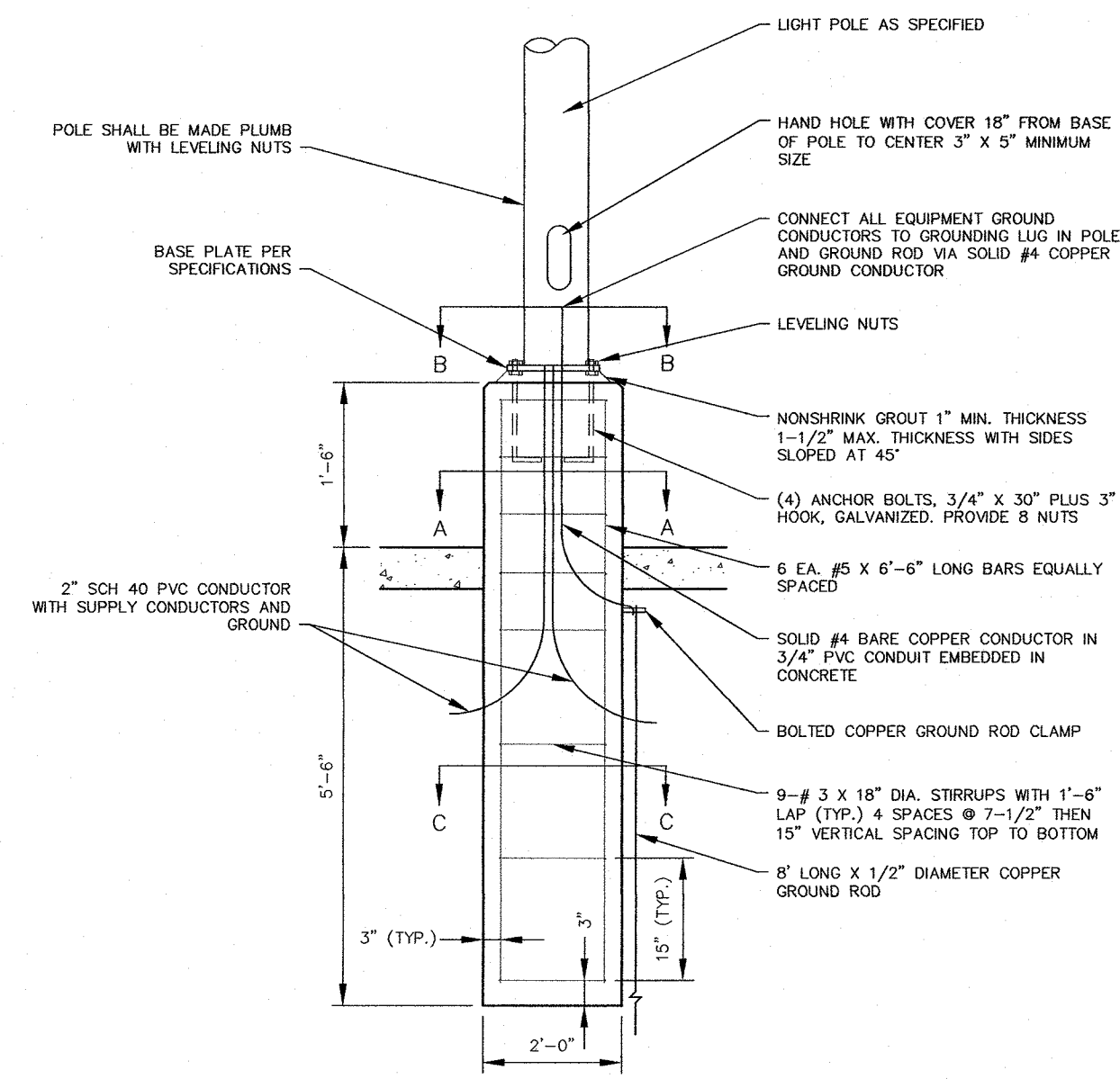


- NOTES:
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 7. POLE AND LAMP HOLDER TO BE GE/KW INDUSTRIES ERS10F1X40DGRAY/RTSU25-6.1-11-BRZ18S-BG WITH MULTI-VOLTAGE CAPABILITIES.

**VEHICULAR TRAFFIC AREA LIGHT
POLE FOUNDATION DETAIL**
SCALE: NONE

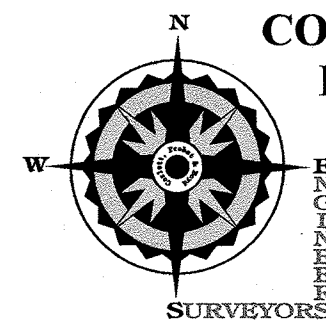


**STREET LIGHTING
AREA DETAIL**
SCALE: NONE



- NOTES:
1. USE 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONC. WITH GRADE 60 REINFORCING.
 2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE PLACING CONCRETE.
 3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED SOIL. ALL LOOSE SOIL MATERIAL SHALL BE REMOVED PRIOR TO PLACING CONCRETE.
 4. CONFIRM ACTUAL ANCHOR BOLT PATTERN AND DIMENSIONS WITH POLE MANUFACTURER'S DRAWINGS.
 5. FORM CONCRETE FROM 6" BELOW GRADE TO TOP OF BASE. FILL ENTIRE EXCAVATION WITH CONCRETE AFTER REMOVAL OF ALL DISTURBED SOIL.
 6. STREET LIGHTING AREAS ARE DEFINED AS AREAS OUTSIDE PAVEMENT WHERE THE CENTERLINE OF THE POLE IS GREATER THAN 5 FEET FROM THE BACK OF CURB.
 7. POLE AND LAMP HOLDER TO BE GE/KW INDUSTRIES ERS10F1X40DGRAY/RTSU25-6.1-11-BRZ18S-BG WITH MULTI-VOLTAGE CAPABILITIES.

**STREET LIGHTING AREA LIGHT
POLE FOUNDATION DETAIL**
SCALE: NONE



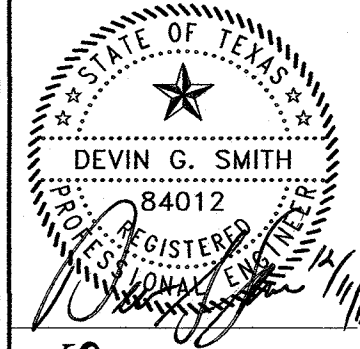
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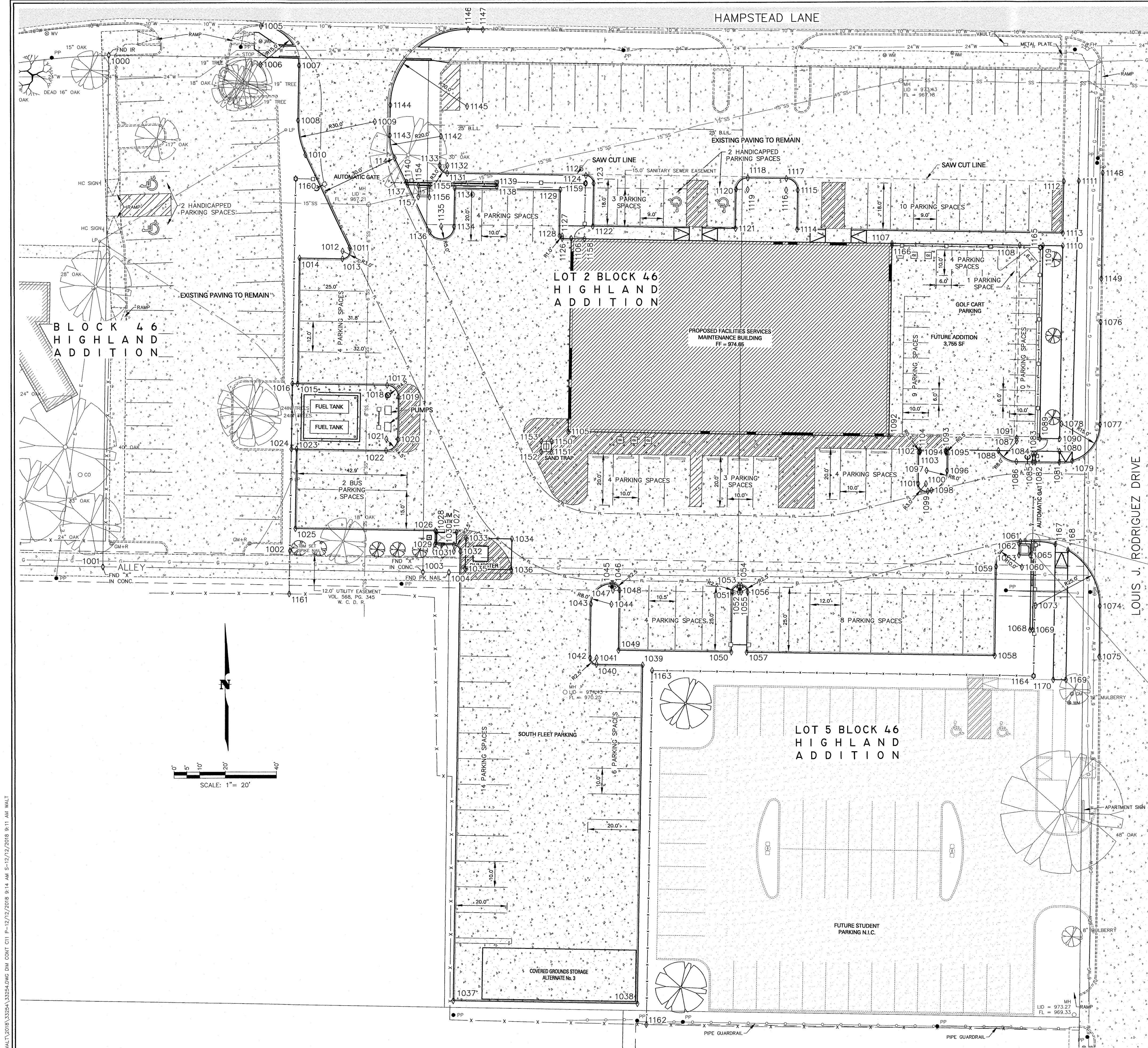


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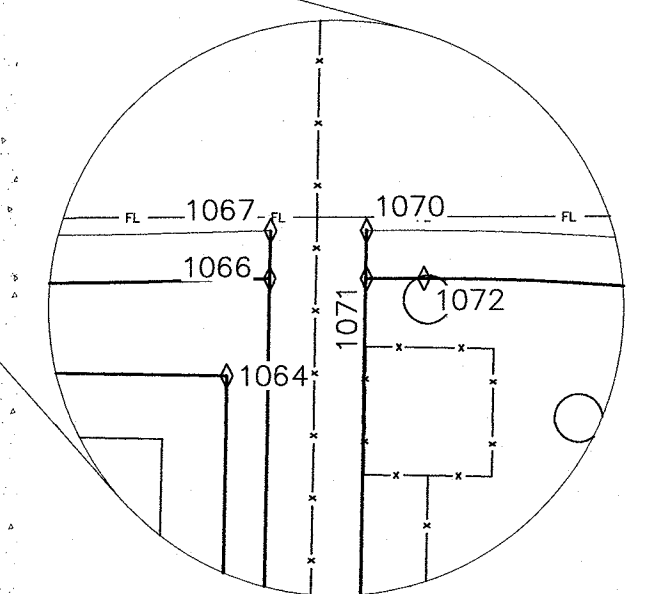
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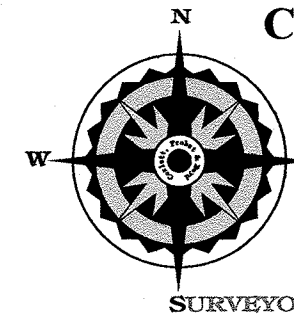
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PROJECT NO. 33254
LIGHTING DETAILS

C 10



LEGEND	
	GAS METER
	GAS METER WITH RISER
	LIGHT POLE
	MANHOLE
	POWER POLE
	SEWER CLEANOUT
	SPRINKLER CONTROL VALVE
	WATER METER
	WATER VALVE
	EXISTING FENCE
	EXISTING INDEX CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	GUY WIRE
	EXISTING SPOT ELEVATION
	EXISTING ASPHALT
	EXISTING CONCRETE
	PROPERTY CORNER (AS NOTED)





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NEW FACILITIES SERVICES
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DIMENSION CONTROL PLAN

C 11

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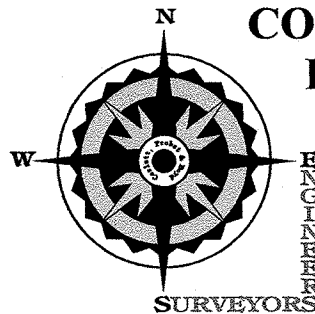
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1004	805757.22	1689119.93	FND PK NAIL
1005	805970.28	1689046.85	PNT STK
1006	805955.28	1689046.59	RAD
1007	805955.02	1689061.59	PNT STK
1008	805933.57	1689061.21	PNT STK
1009	805933.04	1689091.21	RAD
1010	805920.23	1689064.08	PNT STK
1011	805883.87	1689081.26	PNT STK
1012	805882.59	1689078.55	RAD
1013	805879.59	1689078.50	PNT STK
1014	805879.88	1689061.72	PNT STK
1015	805830.89	1689060.87	PNT STK
1016	805830.92	1689058.88	PNT STK
1017	805830.28	1689095.89	PNT STK
1018	805825.78	1689095.81	RAD
1019	805825.70	1689100.31	PNT STK
1020	805809.20	1689100.02	PNT STK
1021	805809.28	1689095.53	RAD
1022	805804.79	1689095.45	PNT STK
1023	805805.40	1689060.42	PNT STK
1024	805805.43	1689058.43	PNT STK
1025	805774.40	1689059.88	PNT STK
1026	805773.45	1689114.56	PNT STK
1027	805772.80	1689122.88	PNT STK
1028	805772.94	1689115.05	PNT STK
1029	805768.14	1689114.43	PNT STK
1030	805767.98	1689121.88	PNT STK
1031	805765.49	1689121.84	RAD
1032	805765.44	1689124.34	PNT STK
1033	805770.64	1689126.57	PNT STK
1034	805770.22	1689144.56	PNT STK

Point Table			
Point #	Northing	Easting	Description
1035	805758.64	1689126.29	PNT STK
1036	805758.22	1689144.28	PNT STK
1037	805590.11	1689121.28	PNT STK
1038	805588.85	1689193.27	PNT STK
1039	805720.96	1689195.57	PNT STK
1040	805721.28	1689177.49	PNT STK
1041	805723.78	1689177.53	RAD
1042	805723.82	1689175.03	PNT STK
1043	805744.86	1689175.40	PNT STK
1044	805744.72	1689183.40	RAD
1045	805752.72	1689183.54	PNT STK
1046	805752.71	1689184.04	PNT STK
1047	805750.21	1689184.00	RAD
1048	805750.17	1689186.50	PNT STK
1049	805726.77	1689186.09	PNT STK
1050	805726.00	1689230.07	PNT STK
1051	805749.41	1689230.47	PNT STK
1052	805749.36	1689232.97	RAD
1053	805751.86	1689233.01	PNT STK
1054	805751.84	1689234.01	PNT STK
1055	805749.34	1689233.97	RAD
1056	805749.31	1689236.47	PNT STK
1057	805725.90	1689236.06	PNT STK
1058	805724.21	1689333.05	PNT STK
1059	805758.91	1689333.65	PNT STK
1060	805758.74	1689343.65	RAD
1061	805768.72	1689343.03	PNT STK
1062	805767.84	1689342.58	PNT STK
1063	805763.50	1689342.50	PNT STK
1064	805767.76	1689346.91	PNT STK
1065	805763.43	1689346.84	PNT STK
1066	805768.77	1689347.36	PNT STK
1067	805769.27	1689347.37	PNT STK
1068	805734.30	1689346.76	PNT STK
1069	805734.28	1689347.76	PNT STK

Point Table			
Point #	Northing	Easting	Description
1070	805769.27	1689348.37	PNT STK
1071	805768.77	1689348.37	PNT STK
1072	805768.77	1689348.97	PNT STK
1073	805743.77	1689348.97	RAD
1074	805743.49	1689373.97	PNT STK
1075	805723.74	1689373.75	PNT STK
1076	805854.21	1689374.51	STK PNTS
1077	805814.33	1689374.19	STK PNTS
1078	805814.59	1689359.19	RAD
1079	805800.18	1689363.34	STK PNTS
1080	805803.78	1689358.40	STK PNTS
1081	805799.61	1689358.33	STK PNTS
1082	805799.77	1689348.90	STK PNTS
1083	805802.73	1689348.95	STK PNTS
1084	805802.75	1689347.95	STK PNTS
1085	805799.79	1689347.90	STK PNTS
1086	805799.90	1689341.57	STK PNTS
1087	805807.90	1689341.71	RAD
1088	805804.20	1689334.61	STK PNTS
1089	805808.92	1689350.73	STK PNTS
1090	805808.78	1689358.49	STK PNTS
1091	805809.07	1689341.71	STK PNTS
1092	805809.95	1689291.84	STK PNTS
1093	805804.05	1689314.14	STK PNTS
1094	805803.55	1689314.13	RAD
1095	805803.55	1689314.63	STK PNTS
1096	805796.40	1689314.51	STK PNTS
1097	805796.54	1689306.51	RAD
1098	805788.77	1689308.44	STK PNTS
1099	805788.41	1689307.00	STK PNTS
1100	805791.32	1689306.27	RAD
1101	805791.38	1689303.27	STK PNTS
1102	805803.74	1689303.49	STK PNTS
1103	805803.73	1689303.99	RAD
1104	805804.23	1689304.00	STK PNTS

Point Table			
Point #	Northing	Easting	Description
1105	805812.13	1689166.61	STK PNTS
1106	805887.36	1689167.93	STK PNTS
1107	805885.18	1689293.15	STK PNTS
1108	805884.31	1689343.02	STK PNTS
1109	805884.16	1689352.04	STK PNTS
1110	805884.02	1689359.80	STK PNTS
1111	805909.34	1689366.08	STK PNTS
1112	805909.24	1689360.24	STK PNTS
1113	805889.02	1689359.89	STK PNTS
1114	805890.83	1689256.05	STK PNTS
1115	805906.07	1689256.32	STK PNTS
1116	805906.15	1689251.82	RAD
1117	805910.65	1689251.90	STK PNTS
1118	805910.91	1689236.85	STK PNTS
1119	805906.41	1689236.77	RAD
1120	805906.49	1689232.27	STK PNTS
1121	805891.25	1689232.01	STK PNTS
1122	805892.22	1689176.35	STK PNTS
1123	805908.96	1689176.65	STK PNTS
1124	805909.01	1689173.65	RAD
1125	805912.01	1689173.70	STK PNTS
1126	805887.43	1689164.36	STK PNTS
1127	805888.43	1689164.38	STK PNTS
1128	805888.44	1689163.38	STK PNTS
1129	805906.43	1689163.69	STK PNTS
1130	805907.15	1689122.40	STK PNTS
1131	805912.95	1689119.50	STK PNTS
1132	805915.95	1689119.56	RAD
1133	805916.01	1689116.56	STK PNTS
1134	805892.12	1689122.14	STK PNTS
1135	805892.21	1689117.14	RAD
1136	805890.08	1689112.62	STK PNTS
1137	805908.46	1689103.93	STK PNTS
1138	805907.85	1689138.87	STK PNTS
1139	805908.85	1689138.89	STK PNTS

Point Table			
Point #	Northing	Easting	Description
1140	805909.47	1689103.45	STK PNTS
1141	805918.83	1689099.03	STK PNTS
1142	805927.37	1689117.11	RAD
1143	805927.72	1689097.11	STK PNTS
1144	805939.51	1689097.32	STK PNTS
1145	805938.99	1689127.32	RAD
1146	805968.99	1689127.77	STK PNTS
1147	805968.90	1689133.52	STK PNTS
1148	805912.46	1689375.43	STK PNTS
1149	805871.25	1689374.83	STK PNTS
1150	805808.24	1689160.09	STK PNTS
1151	805804.24	1689160.02	STK PNTS
1152	805804.31	1689156.03	STK PNTS
1153	805808.31	1689156.09	STK PNTS
1154	805908.12	1689108.25	STK PNTS
1155	805908.04	1689112.58	STK PNTS
1156	805903.71	1689112.51	STK PNTS
1157	805903.78	1689108.17	STK PNTS
1158	805887.27	1689173.10	STK PNTS
1159	805908.92	1689173.48	STK PNTS
1160	805910.87	1689060.27	STK PNTS
1161	805748.92	1689057.42	STK PNTS
1162	805580.68	1689196.76	STK PNTS
1163	805718.88	1689199.16	STK PNTS
1164	805716.26	1689348.13	STK PNTS
1165	805883.37	1689351.03	STK PNTS
1166	805884.38	1689293.14	STK PNTS
1167	805767.54	1689356.69	STK PNTS
1168	805765.31	1689361.66	STK PNTS
1169	805714.71	1689360.77	STK PNTS
1170	805714.80	1689355.77	STK PNTS



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BOYD, P.L.L.C.**

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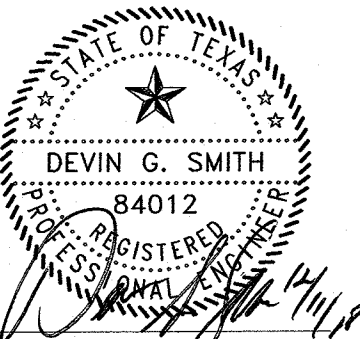
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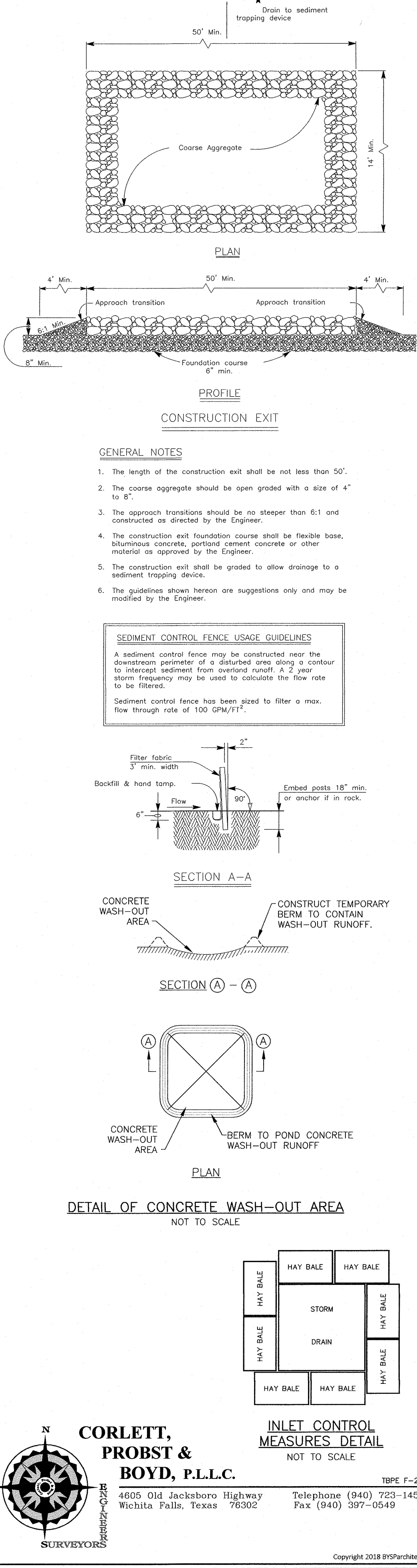
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DATE DECEMBER, 2018
PROJECT NO. 33254
DIMENSION CONTROL
PLAN

C 12

REV DATE DESCRIPTION



NEW FACILITIES SERVICES
MSU MAINTENANCE
TEXAS BUILDING
MIDWESTERN STATE UNIVERSITY



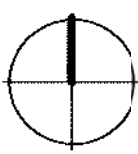
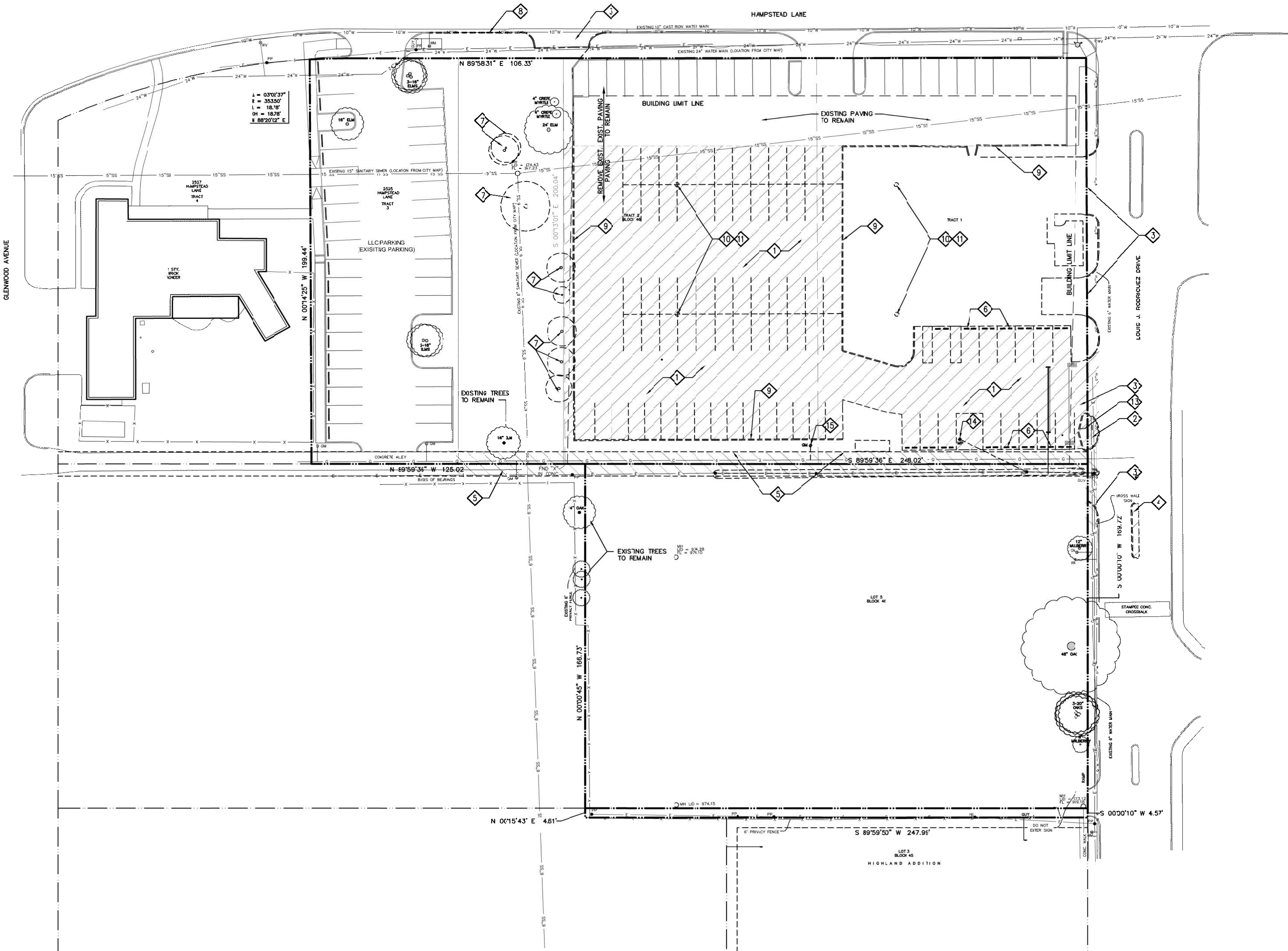
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CHECKED BY	DGS
DATE	DECEMBER, 2018
PROJECT NO.	33254
STORMWATER POLLUTION PREVENTION PLAN	
C 13	

GENERAL NOTES - DEMOLITION

- DEMOLITION DRAWINGS INDICATE APPROXIMATE LOCATION, QUANTITY, & SIZE OF AREAS & ITEMS TO BE REMOVED. THE CONTRACTOR SHALL VERIFY LOCATION, QUANTITY, & SIZE OF ALL ITEMS. COORDINATE WITH THE ARCHITECTURAL SITE AND CIVIL PLANS FOR LIMITS OF DEMOLITION.
- COORDINATE MECHANICAL & ELECTRICAL DEMOLITION WITH MECHANICAL & ELECTRICAL CONTRACTORS. REFER TO MECHANICAL DEMOLITION PLAN FOR CONCRETE DEMOLITION REQUIRED FOR NEW PLUMBING SYSTEM.
- FOR ITEMS INDICATED FOR DEMOLITION, IT IS INTENDED THAT DEMOLITION IS TO INCLUDE THE ITEM & IT'S RELATED SYSTEMS & ACCESSORIES.

KEY NOTES - DEMOLITION

- REMOVE PAVING AS SHOWN COMPLETE.
- REMOVE EXISTING CONCRETE WALK COMPLETE.
- REMOVE EXISTING CONCRETE APPROACH.
- DENO EXISTING SLANC PAVING, CURB & GUTTER COMPLETE.
- REMOVE EXISTING CONCRETE ALLEY PAVING, COMPLETE.
- REMOVE WHEEL STOPS, SAVE FOR REUSE, TYP.
- REMOVE EXISTING TREE(S) COMPLETE.
- REMOVE EXISTING CONCRETE CURB & SIDE WALK FOR NEW CONCRETE APPROACH.
- REMOVE EXISTING CONCRETE CURBING.
- REMOVE EXISTING CONCRETE LIGHT POLE BASE.
- REMOVE EXISTING LIGHT POLE, SAVE FOR REUSE, TYP.
- REMOVE EXISTING GROUND SIGN COMPLETE.
- REMOVE EXISTING FLASHING TRAFFIC SIGN AND RELOCATE PER ELEC.
- REMOVE EXISTING ELEC. METER POLE AND BOLLARDS COMPLETE.
- REMOVE & CAP EXISTING GAS METER & PIPING REFER PLUMBING AND CIVIL.



1 SITE PLAN - DEMOLITION

SCALE: 1" = 30'-0" (1"=60' on 11x17)
0 5 10 20 40 60

REV	DATE	DESCRIPTION



NEW FACILITIES SERVICES
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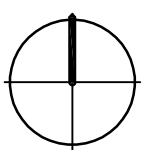
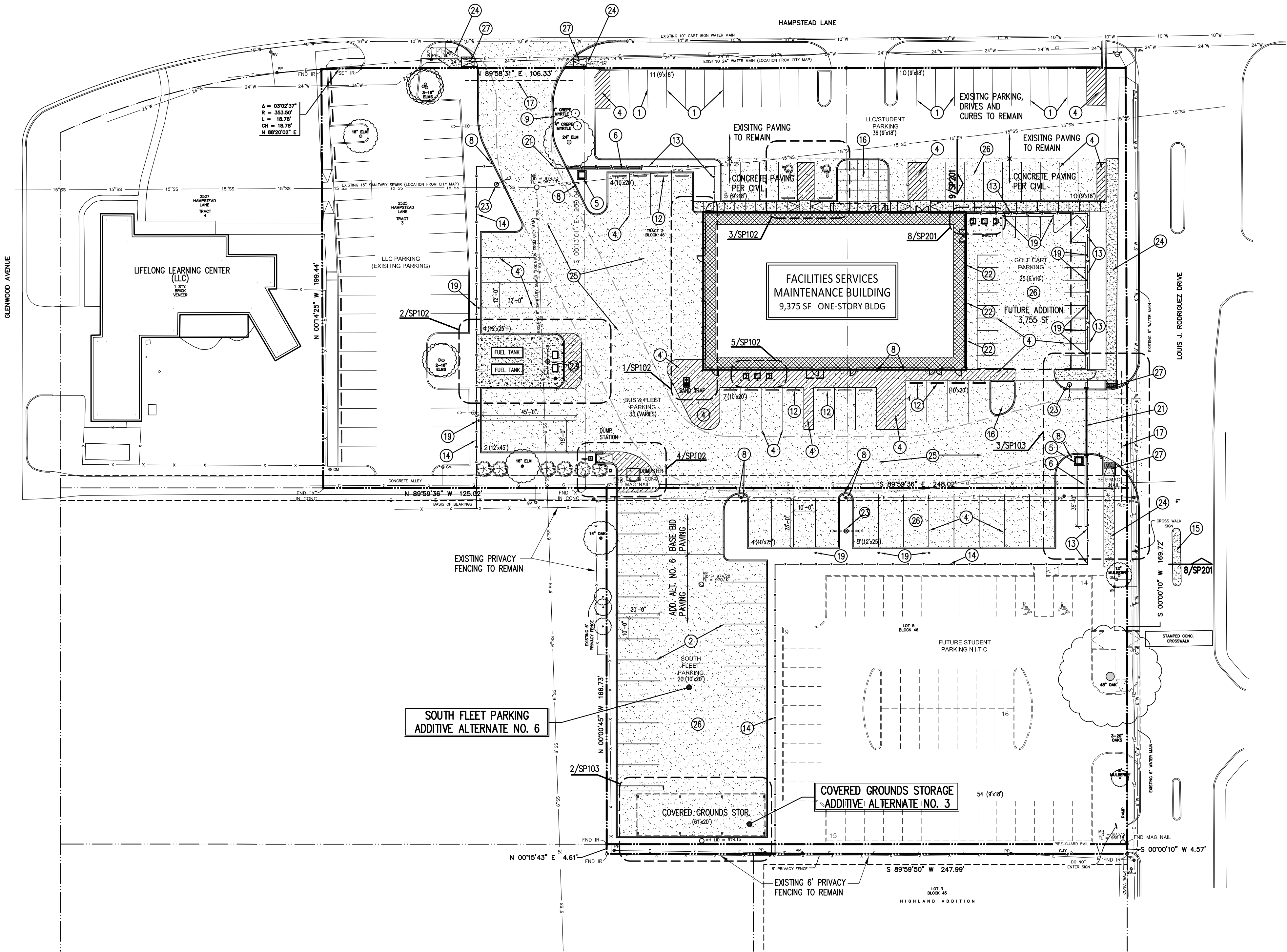
SITE PLAN
DEMOLITION
SPD101

GENERAL NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR UNFORSEEN CONDITIONS AS SOON AS THEY ARE DISCOVERED.
2. COORDINATE WITH REQUIREMENTS OF CIVIL DRAWINGS.
3. COORDINATE LOCATION OF JOB SHACK AND CONSTRUCTION SIGN WITH ARCHITECT.

SITE KEY NOTES:

- 1 RE-PAINT PARKING STRIPES AND SYMBOLS AS SHOWN ON PLAN, AT EXISTING PAVING TO REMAIN
- 2 PROVIDE HC PARKING SIGNS PER DETAIL 1/SP201 & 2/SP201, MOUNTED TO BLDG. EXTERIOR.
- 3 PROVIDE HC PARKING RAMPS PER DETAIL 5/SP201.
- 4 4" WIDE PAINTED STRIPING AT LOADING & PARKING AREA, COLOR, TBD.
- 5 3'x3'x24" DEEP CONCRETE PIER PAD FOR AUTOMATIC GATE OPERATOR, LOCATION PER MANUFACTURE.
- 6 12" WIDE x 8" DEEP CONCRETE PAVING FOR AUTOMATIC GATE TRACK, REFER TO GATE DETAILS FOR LENGTH.
- 7 4" DIAMETER CONCRETE FILLED BOLLARD, REF DETAIL 4/SP201.
- 8 6" DIAMETER CONCRETE FILLED BOLLARD, REF DETAIL 4/SP201.
- 9 KEYPAD MOUNTED ON STEEL POLE, FOR AUTOMATIC GATE OPERATIONS, VERIFY W/ARCHITECT.
- 10 MOTOR FUEL DISPENSING STATIONS, AS SPECIFIED REF PLUMBING & CIVIL DRAWINGS.
- 11 MOTOR FUEL, ABOVE GROUND TANKS, AS SPECIFIED, REF PLUMBING AND CIVIL DRAWINGS
- 12 CONCRETE WHEEL STOPS, REF DETAIL 3/SP201. (REUSE STORED STOPS NEW)
- 13 FENCE TYPE I 6'-0" TALL WOOD PRIVACY FENCE W/ TOP RAIL & CAP. REF. DETAIL 1/SP202.
- 14 FENCE TYPE II 6'-0" TALL WOOD PRIVACY FENCE REF DETAIL 2/SP202.
- 15 CONCRETE PAVING IN-FILL AT REMOVED ISLANDS, PAVING TO MATCH DESIGN OF SURROUNDING CONC PAVING.
- 16 CONCRETE ISLAND WITH 6" CURB & 4" WALK PAVING.
- 17 PROVIDE 4" PVC SLEEVES BELOW FROST LINE FOR FUTURE IRRIGATION SYSTEM. EXTEND 2'-0" BEYOND CONC. EA. SIDE.
- 18 SAND TRAP, REF CIVIL.
- 19 POLE MOUNT ELECTRICAL RECEPTACLE, REFER ELECTRICAL.
- 20 NON-FREEZE WATER HYDRANT, REFER PLUMBING.
- 21 ROLLING AUTOMATIC STEEL GATE, REF. 3/SP202
- 22 DUMP STATION SIGNAGE PER CODE, REFER 4/SP202
- 23 PARKING LOT LIGHTING, CONCRETE BASE, REF ELECTRICAL & CIVIL.
- 24 CONCRETE WALK PER CIVIL.
- 25 CONCRETE DRIVE PER CIVIL.
- 26 CONCRETE PARKING SURFACE PER CIVIL.
- 27 HC RAMP, PER DETAIL 8/SP201



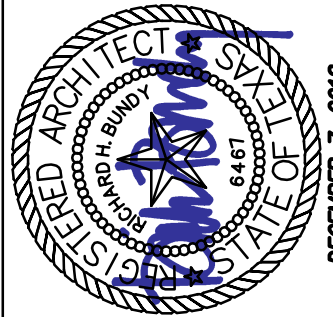
1

FACILITIES SERVICE COMPLEX - OVERALL SITE PLAN

SCALE: 1"= 30'-0" (1"=60' on 11x17)
0 5 10 20 40 60

DESCRIPTION

REV DATE



NEW FACILITIES SERVICES
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OVERALL
SITE PLAN

SP101

2. COORDINATE WITH REQUIREMENTS OF CIVIL DRAWINGS.

3. COORDINATE LOCATION OF JOB SHACK AND CONSTRUCTION SIGN WITH ARCHITECT.

② PROVIDE HC PARKING SIGNS PER DETAIL 1/SP201 & 2/SP201, MOUNTED TO BLDG. EXTERIOR.

③ PROVIDE HC PARKING RAMPS PER DETAIL 5/SP201.

④ 4" WIDE PAINTED STRIPING AT LOADING & PARKING AREA, COLOR, TBD.

⑤ 3'x3'x24" DEEP CONCRETE PIER PAD FOR AUTOMATIC GATE OPERATOR, LOCATION PER MANUFACTURE.

⑥ 12" WIDE x 8" DEEP CONCRETE PAVING FOR AUTOMATIC GATE TRACK, REFER TO GATE DETAILS FOR LENGTH.

⑦ 4" DIAMETER CONCRETE FILLED BOLLARD, REF DETAIL 4/SP201.

⑧ 6" DIAMETER CONCRETE FILLED BOLLARD, REF DETAIL 4/SP201.

⑨ KEYPAD MOUNTED ON STEEL POLE, FOR AUTOMATIC GATE OPERATIONS, VERIFY W/ARCHITECT.

(10) MOTOR FUEL DISPENSING STATIONS, AS SPECIFIED REF PLUMBING & CIVIL DRAWINGS.

(11) MOTOR FUEL, ABOVE GROUND TANKS, AS SPECIFIED, REF PLUMBING AND CIVIL DRAWINGS

(12) CONCRETE WHEEL STOPS. REF DETAIL 3/SP201. (REUSE STORED STOPS NEW)

(13) FENCE TYPE I 6'-0" TALL WOOD PRIVACY FENCE W/ TOP RAIL & CAP. REF. DETAIL 1/SP202.

⑭ FENCE TYPE II 6'-0" TALL WOOD PRIVACY FENCE REF DETAIL 2/SP202.

(15) CONCRETE PAVING IN-FILL AT REMOVED ISLANDS, PAVING TO MATCH DESIGN OF SURROUNDING CONC PAVING.

(16) CONCRETE ISLAND WITH 6" CURB & 4" WALK PAVING.

(17) PROVIDE 4" PVC SLEEVES BELOW FROST LINE FOR FUTURE IRRIGATION SYSTEM. EXTEND 2'-0" BEYOND CONC. EA. SIDE.

(18) SAND TRAP, REF CIVIL

(19) POLE MOUNT ELECTRICAL RECEPTACLE. REFER ELECTRICAL

(20) NON-FREEZE WATER HYDRANT, REFER PLUMBING.

(21) ROLLING AUTOMATIC STEEL GATE. REF. 3/SP202

(22) DUMP STATION SIGNAGE PER CODE. REFER 4/SP202

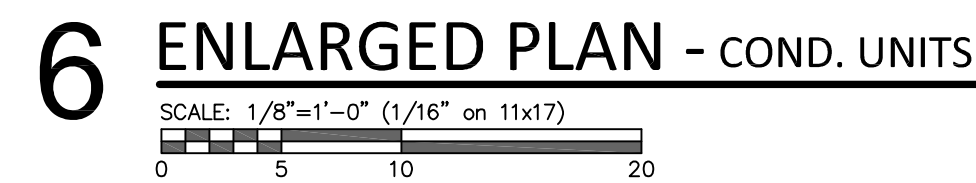
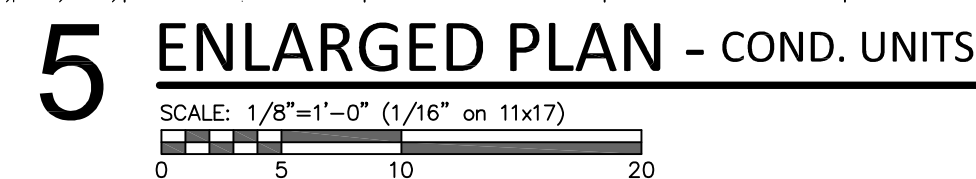
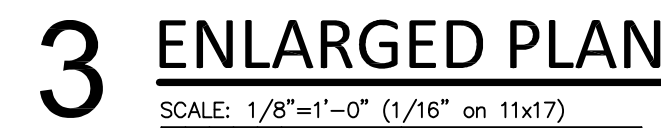
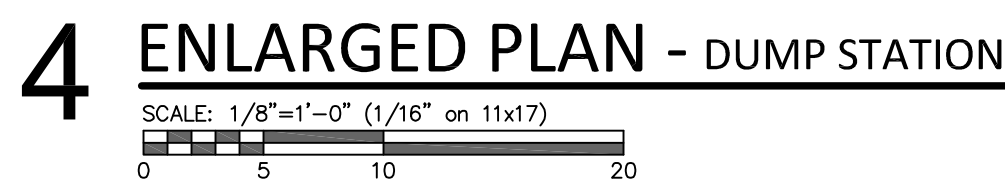
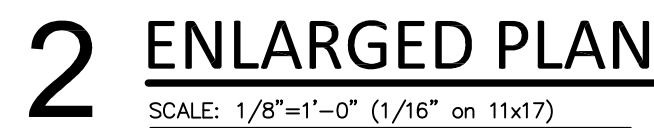
(23) PARKING LOT LIGHTING. CONCRETE BASE. REF ELECTRICAL & CIVIL

(24) CONCRETE WALK PER CIVIL

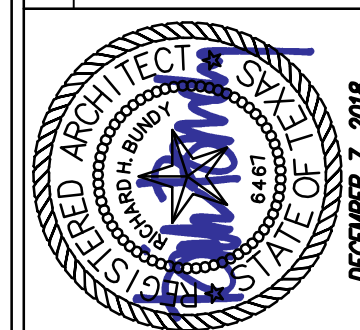
(25) CONCRETE DRIVE PER CIVIL

(26) CONCRETE PARKING SURFACE PER CIVL.

(27) HC RAMP, PFR DETAIL 8/SP201



REV	DATE	DESCRIPTION



NEW FACILITIES SERVICES
MAINTENANCE
BUILDING



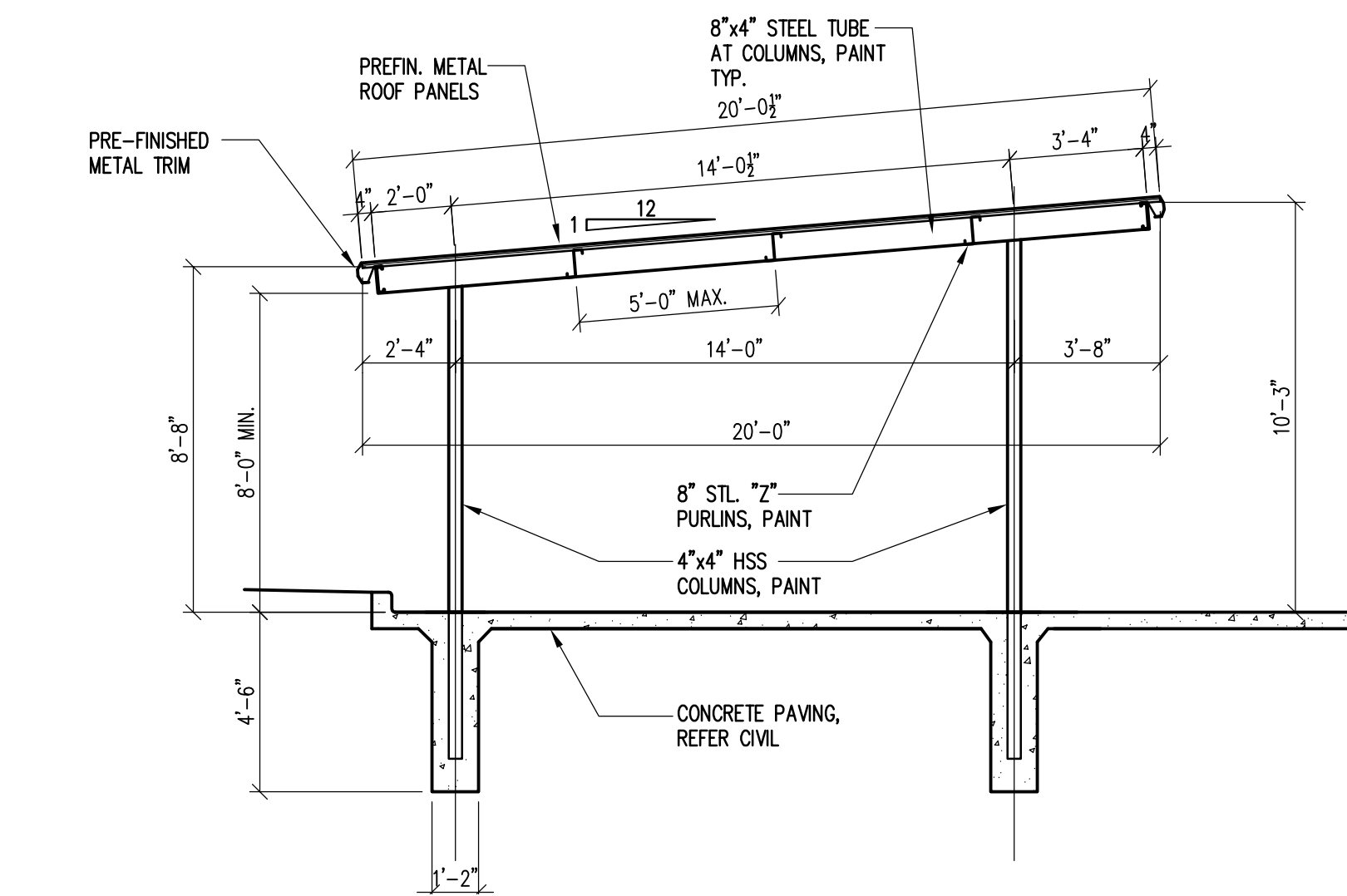
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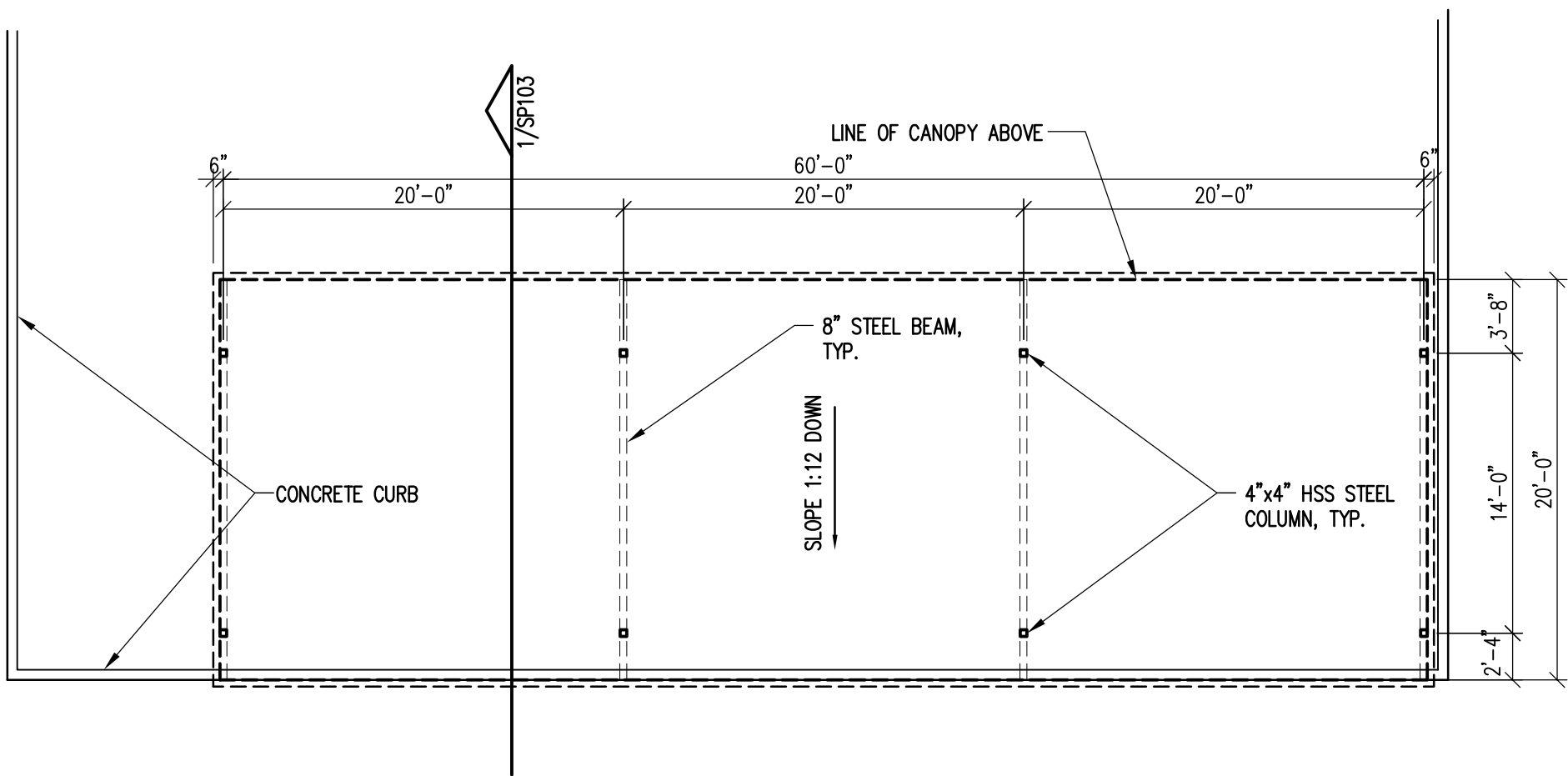
ENLARGED SITE PLAN

SP102



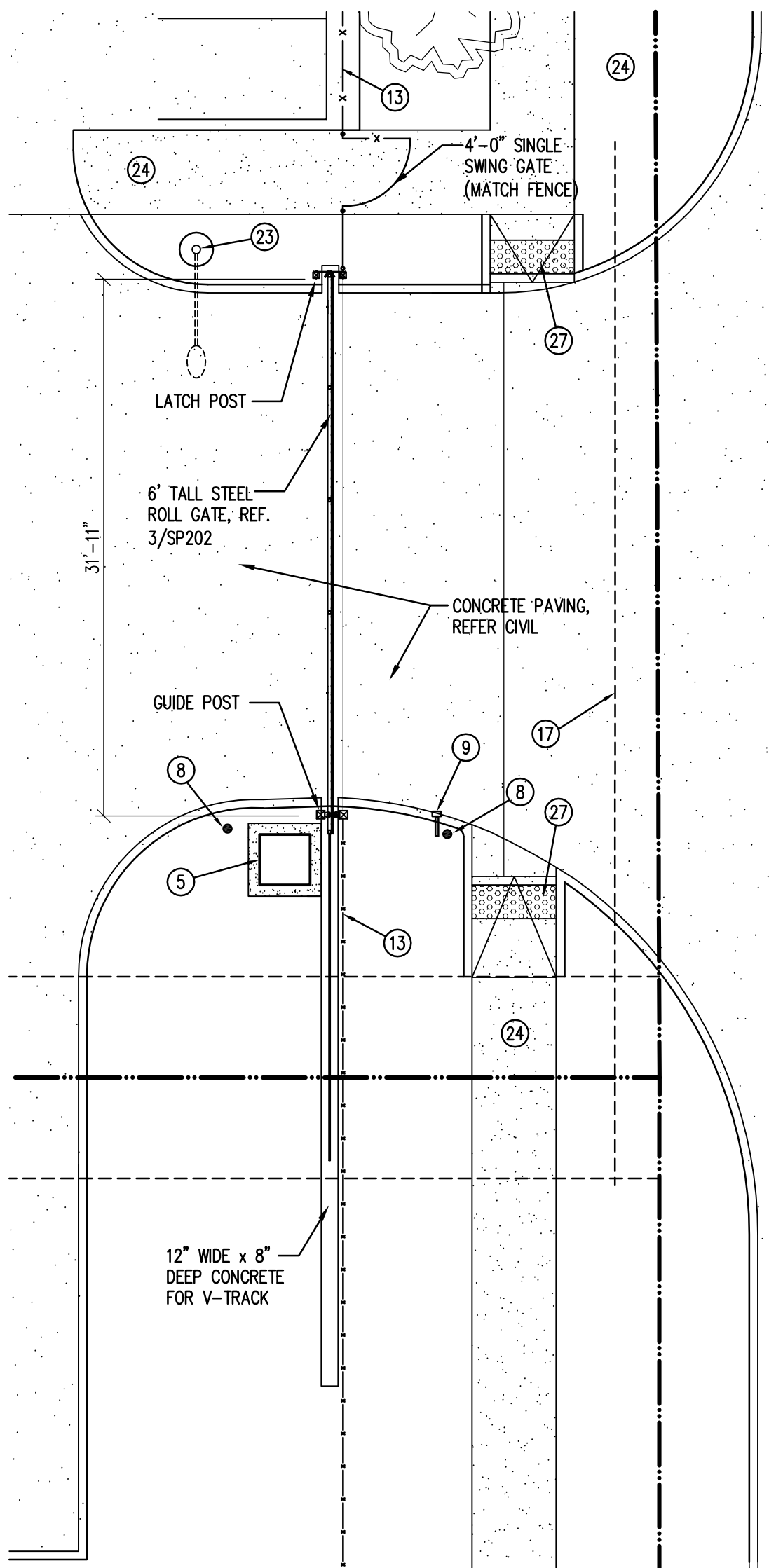
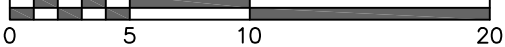
1 DETAIL - ADDITIVE ALT. NO. 3

SCALE: 1/4"=1'-0" (1/8" on 11x17)



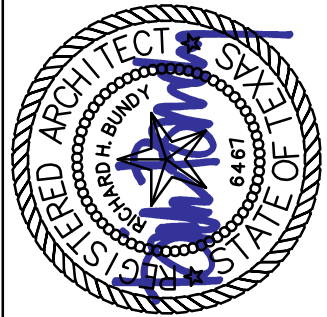
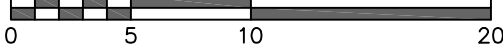
2 ENLARGED PLAN - ADDITIVE ALT. NO. 3

SCALE: 1/8"=1'-0" (1/16" on 11x17)



3 ENLARGED PLAN

SCALE: 1/8"=1'-0" (1/16" on 11x17)



NEW FACILITIES SERVICES
MAINTENANCE
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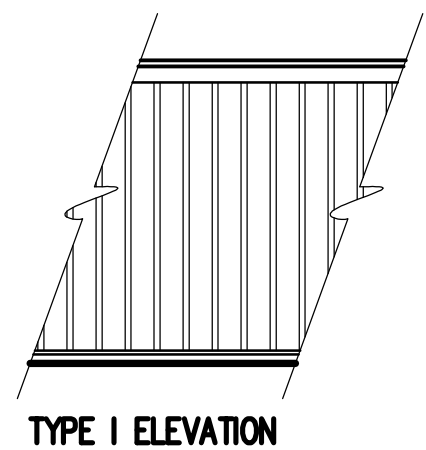
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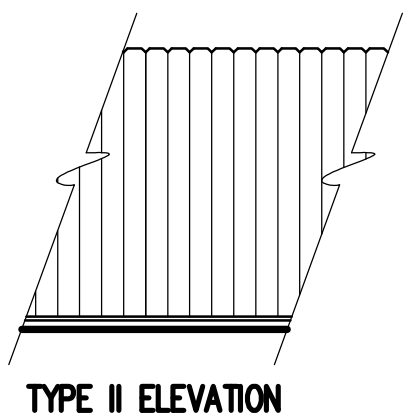
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CHECKED BY	RHB
DATE	12/07/18
PROJECT NO.	18002

SITE PLAN
DETAILS

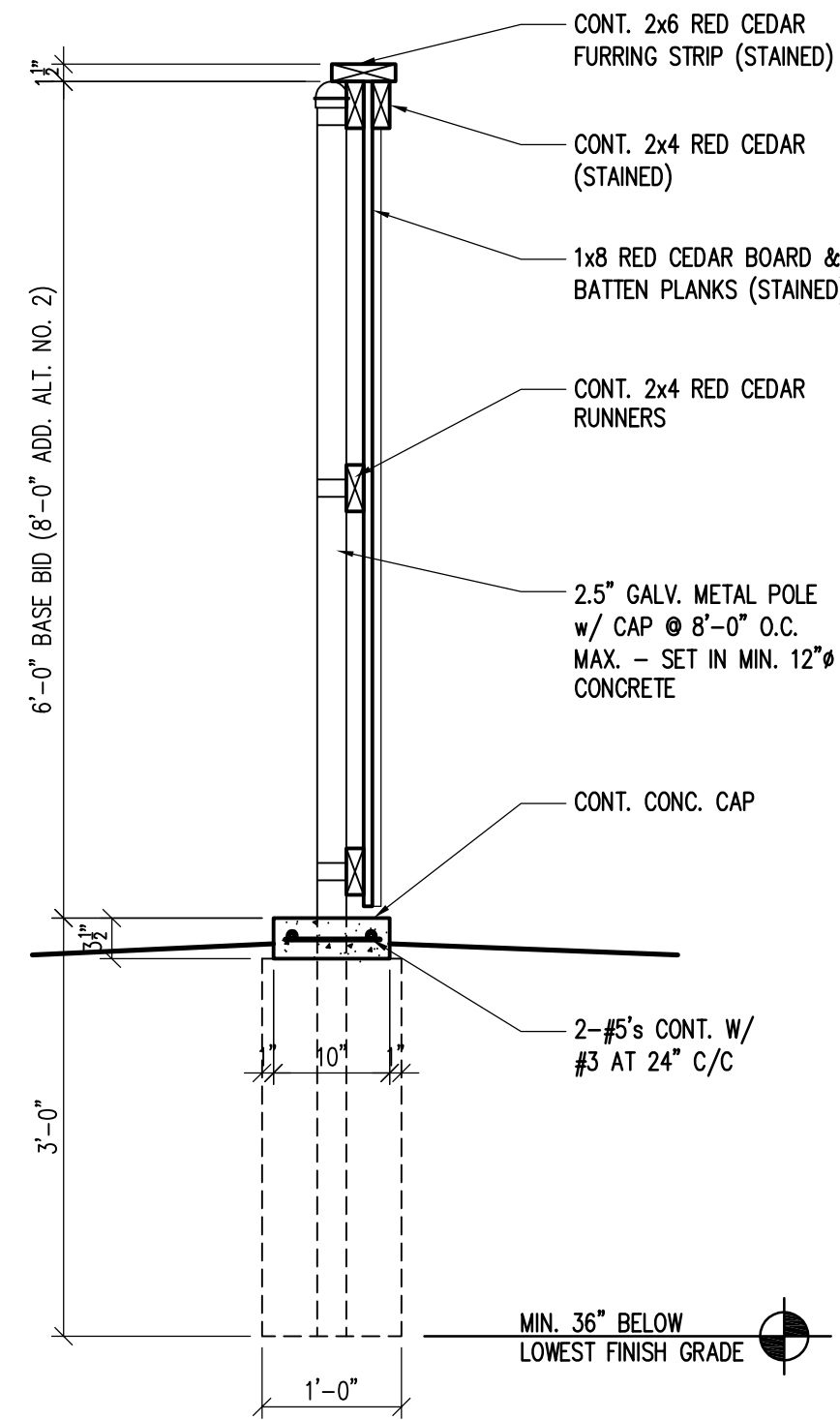
SP103



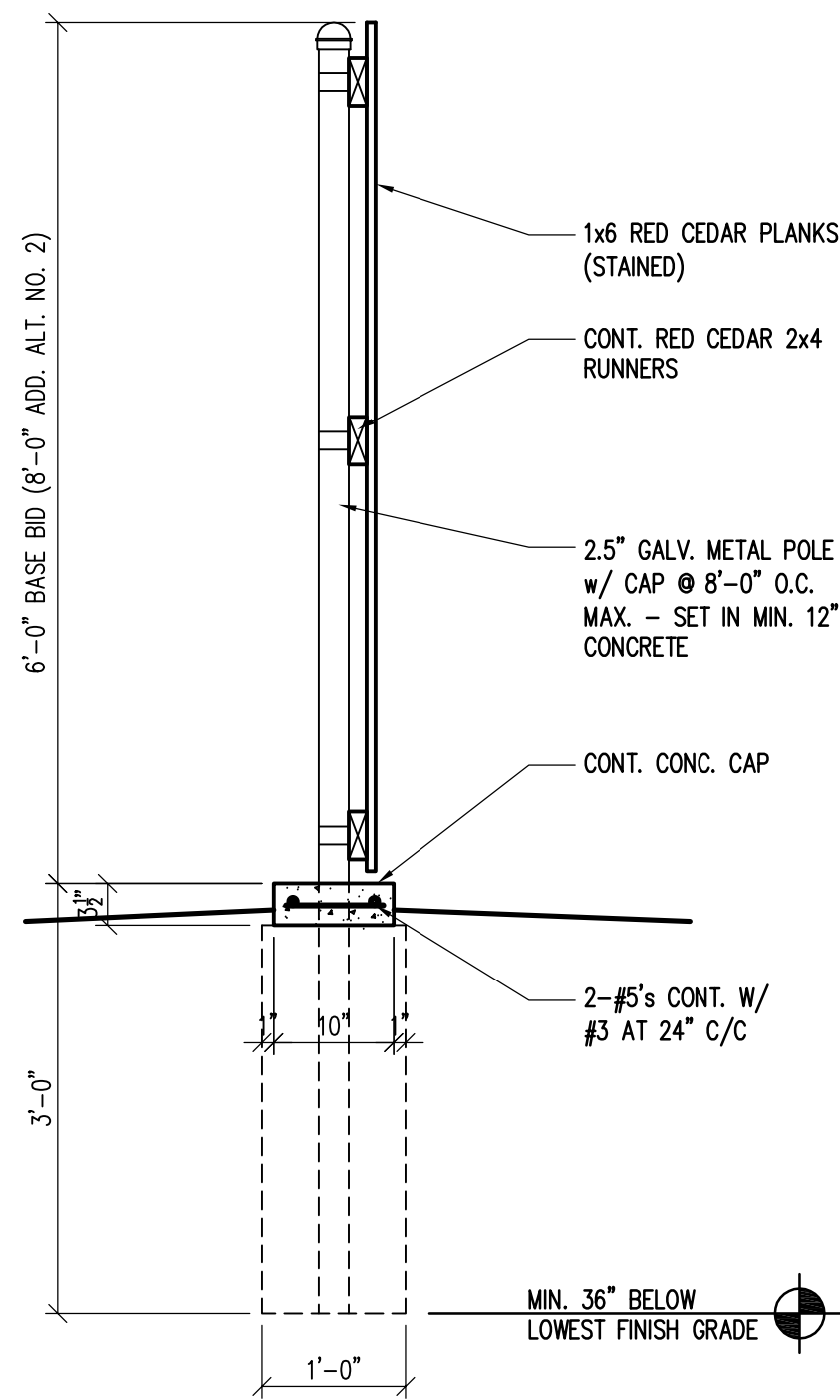
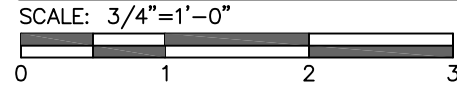
TYPE I ELEVATION



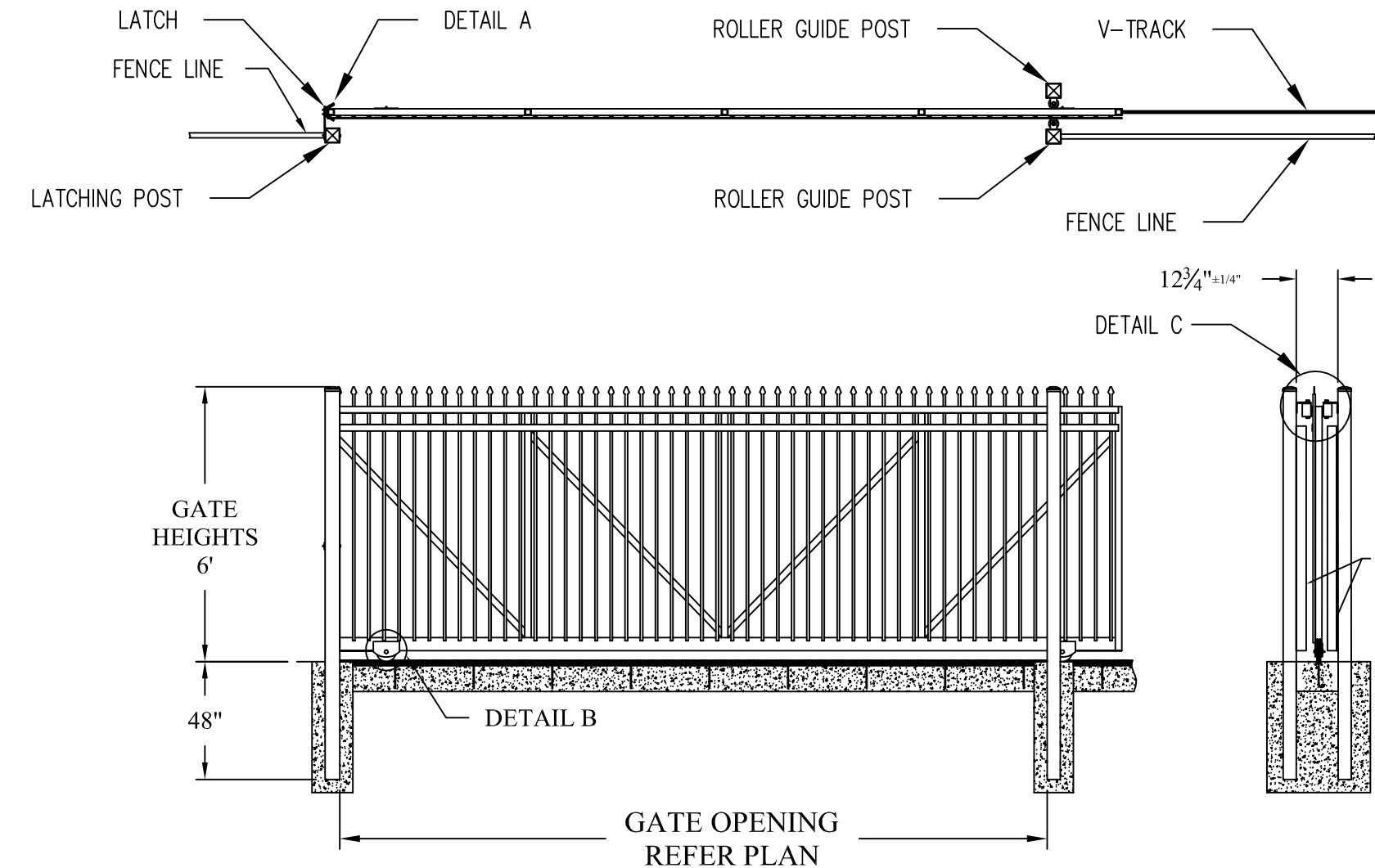
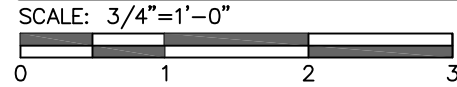
TYPE II ELEVATION



1 TYPE I FENCE DETAIL



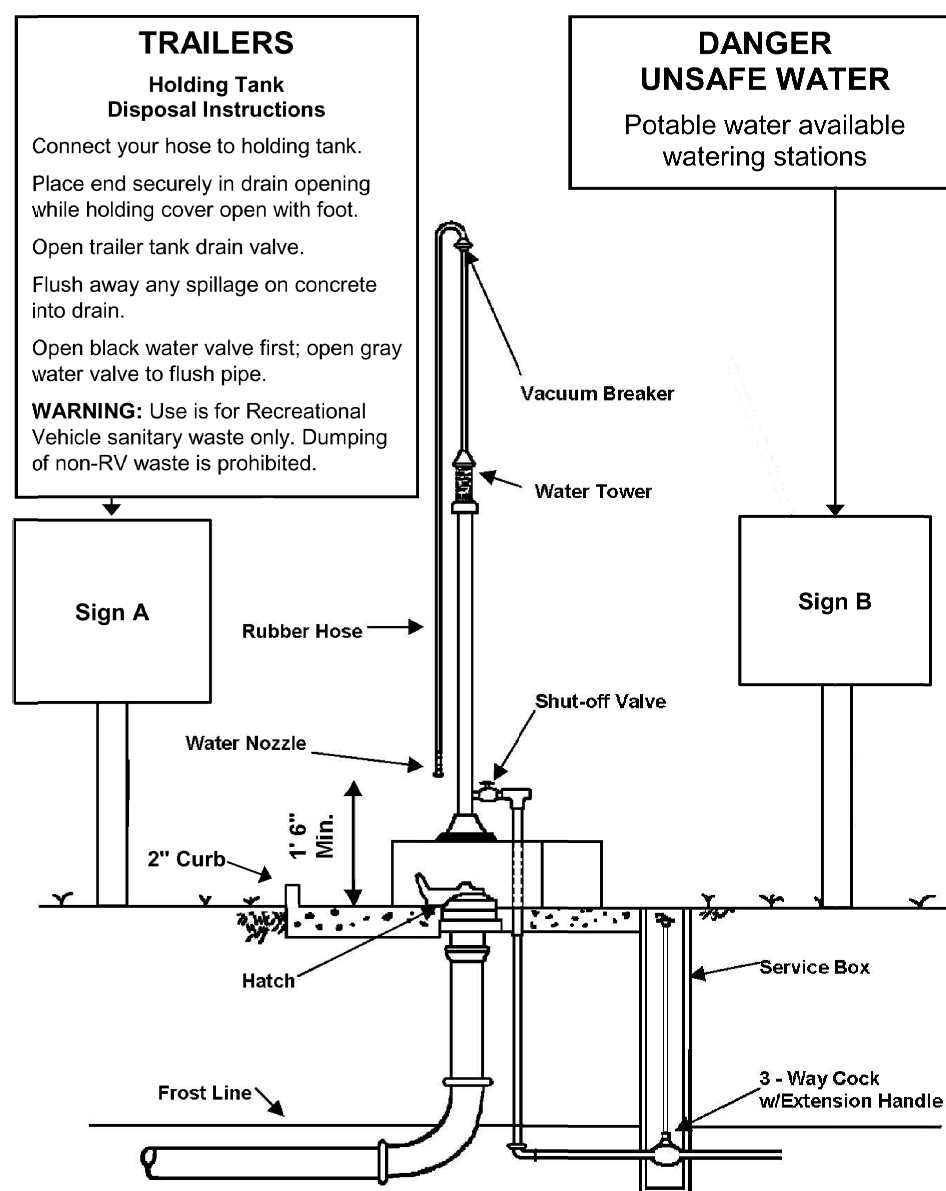
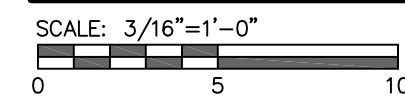
2 TYPE II FENCE DETAIL



PassPort[®] Commercial Ornamental Roll Gate

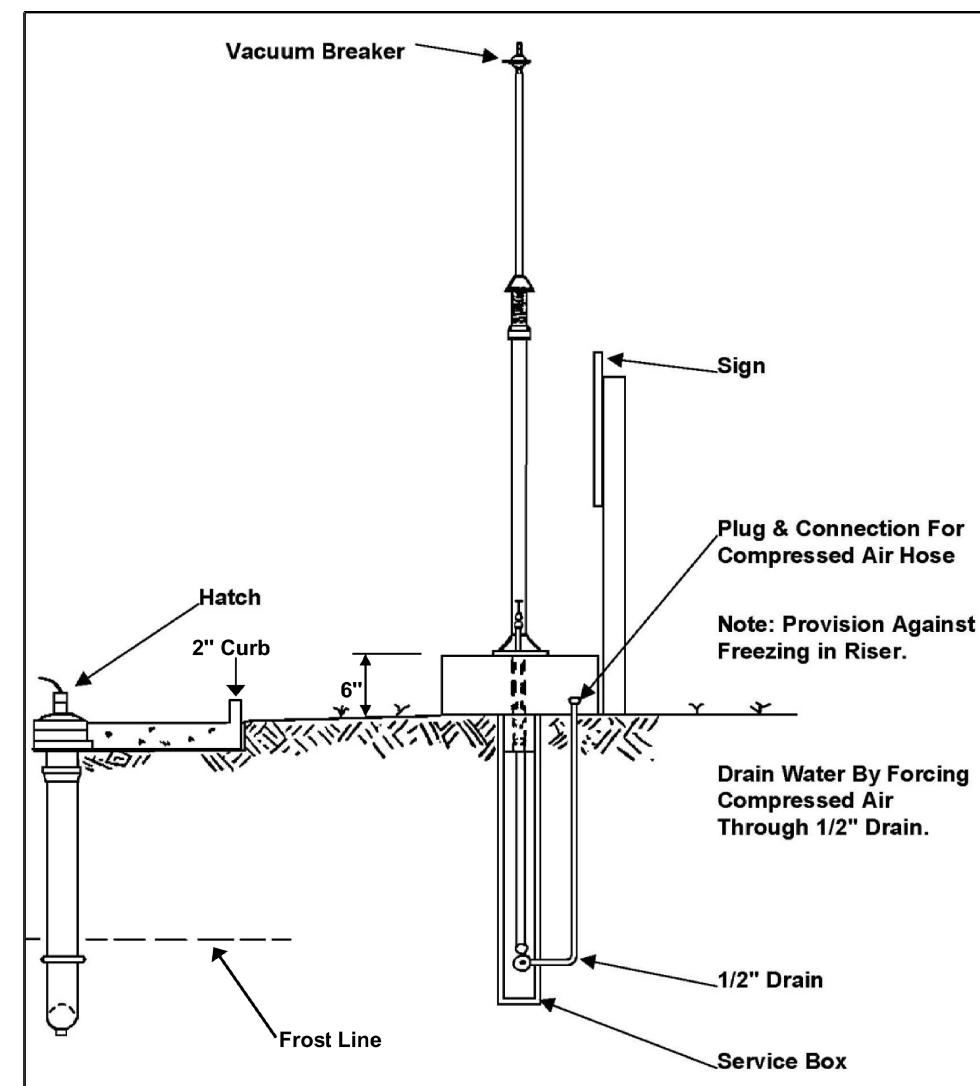
Ornamental Pickets: 3/4" Square
Top Rail(s), Uprights and Diagonals Braces: 2"Square x 11Ga.
Bottom Rail: 2" x 4" x 11Ga. (Notched &Plated for V-track Wheels)
Roll Gate Hardware : Kit #PGKOD

3 OPERABLE GATE DETAIL



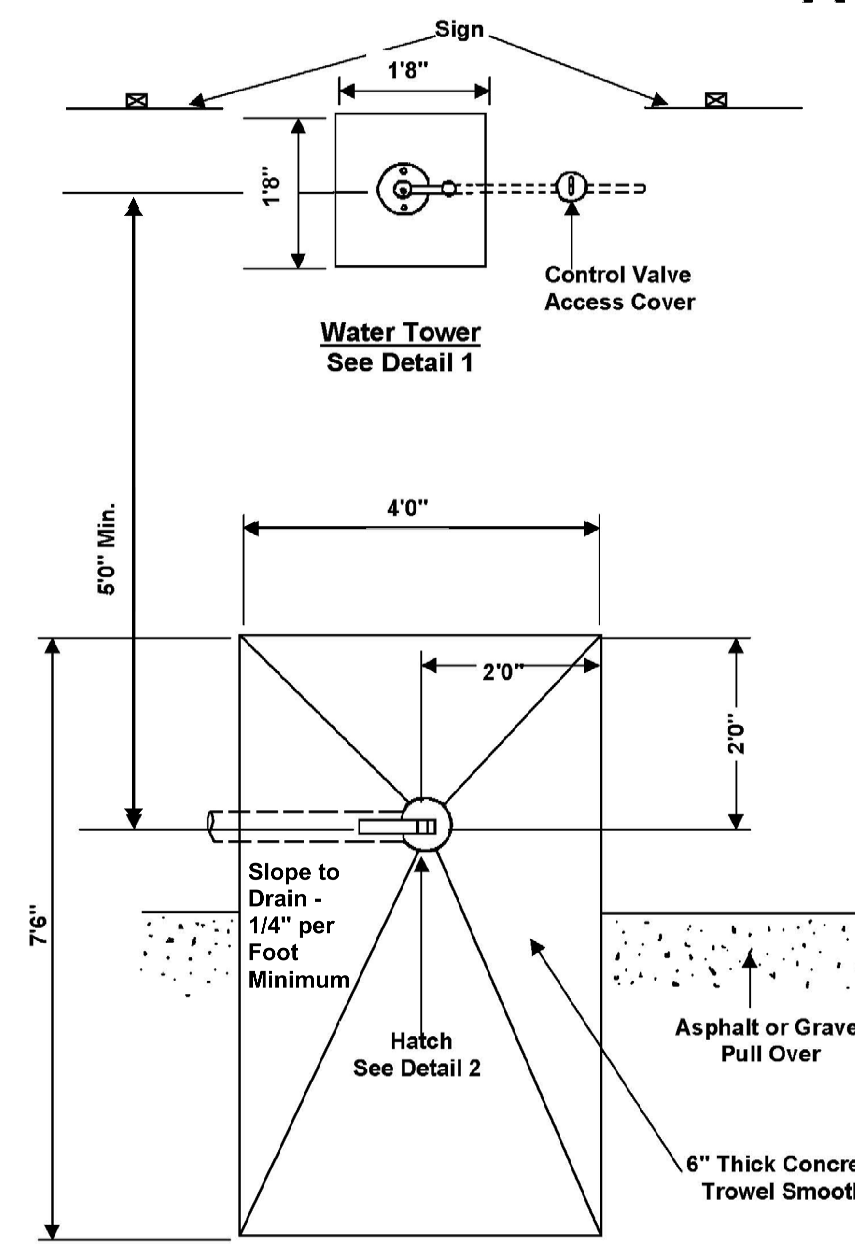
4 HOLDING TANK DISPOSAL DETAIL

SCALE: N.T.S.



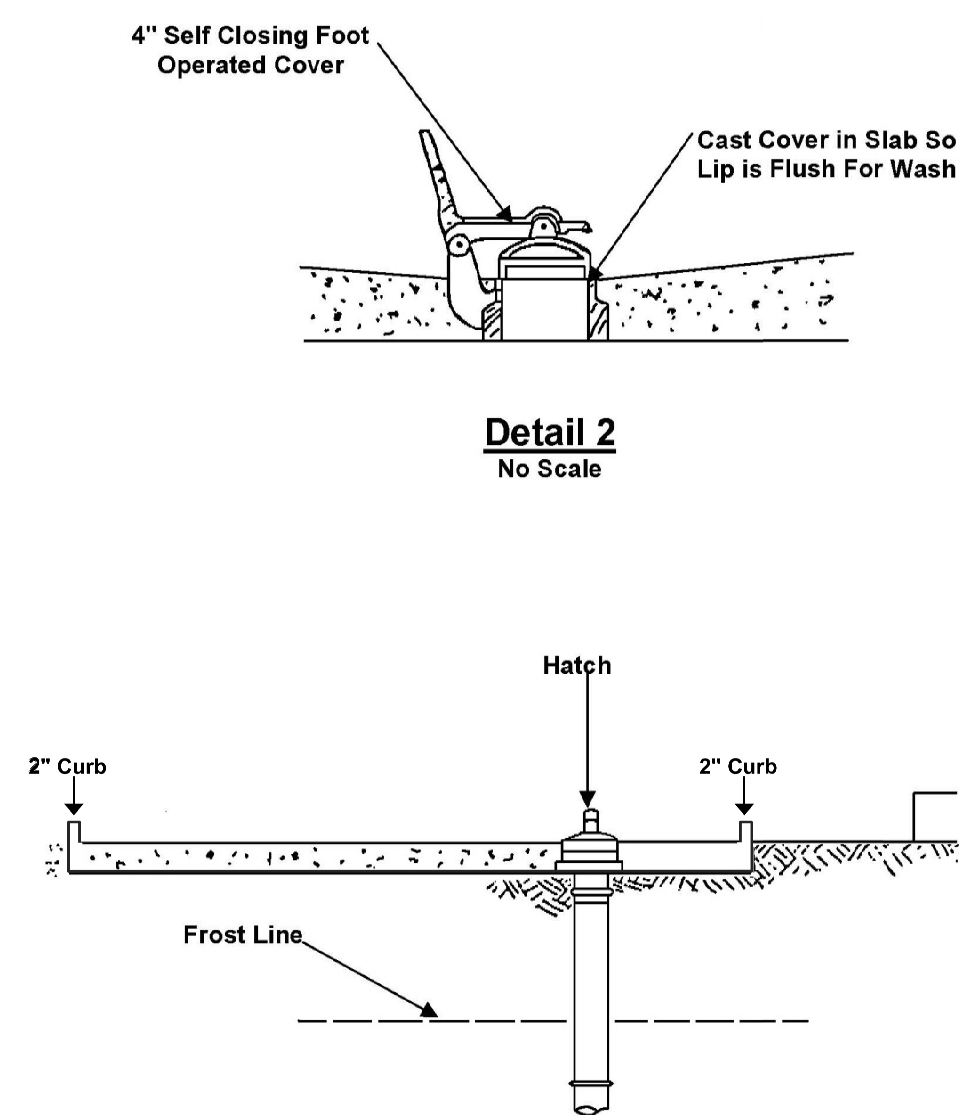
5 WATER TOWER ELEVATION

SCALE: N.T.S.



6 WATER TOWER DETAIL

SCALE: N.T.S.

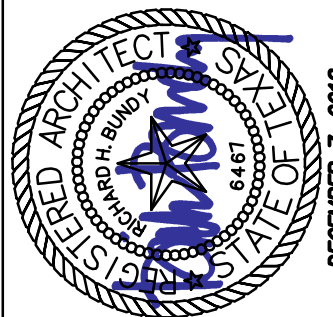


7 HATCH DETAIL

SCALE: N.T.S.

DESCRIPTION

REV DATE



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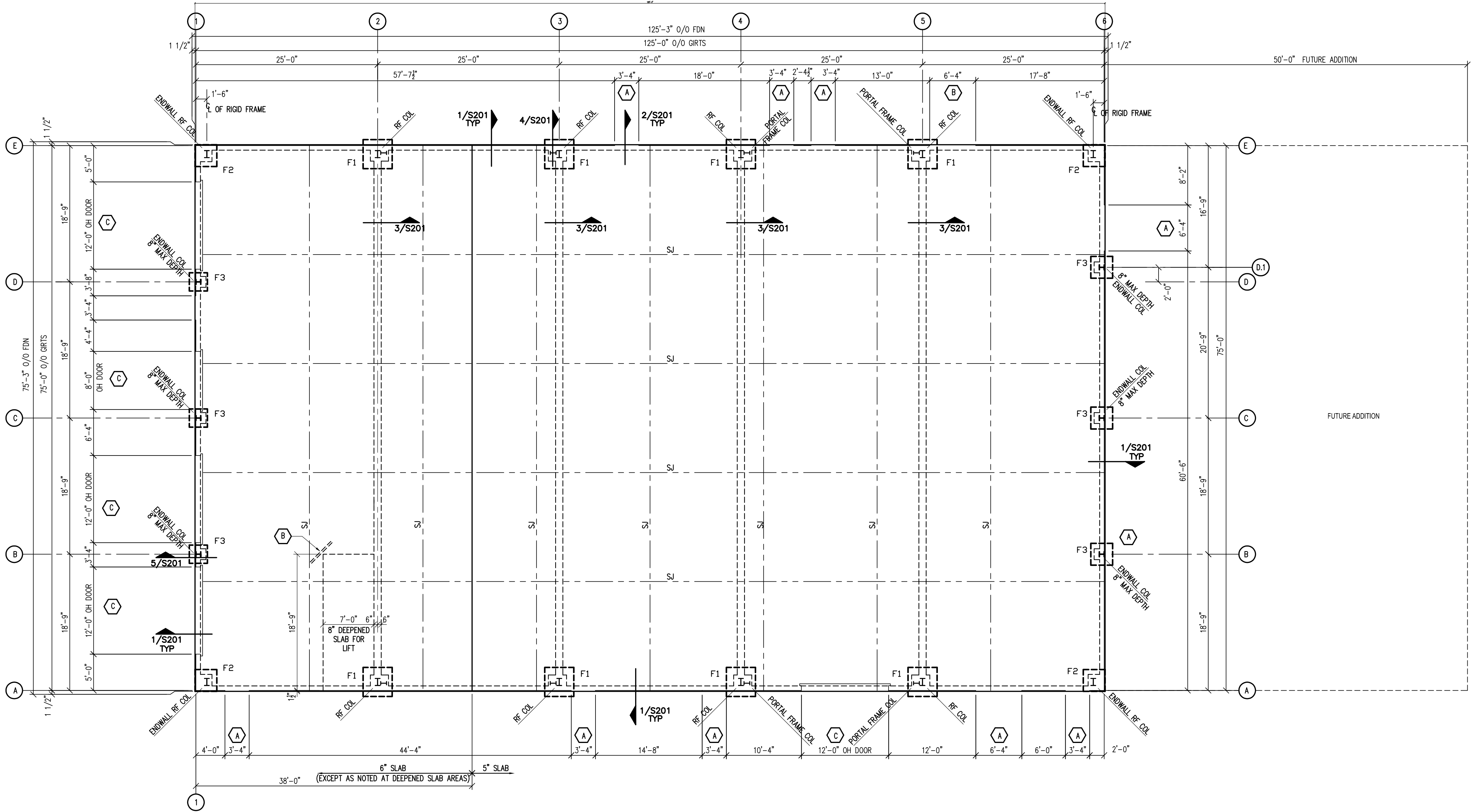


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SITE DETAILS

SP202



1 FOUNDATION PLAN

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

PLAN NOTES:

- FIN FLOOR REF ELEV 100'-0"; SEE SITE PLAN FOR ACTUAL ELEVATION;
- FLOOR SLAB: VEHICLE SHOP AREA - 6" MINIMUM FLOOR SLAB W/ #4'S AT 12" C/C, CENTERED IN SLAB; EXTEND #4 BARS 16" MIN INTO 5" SLAB AREA (TYP U.N.O.)
OFFICE/SHOP AREA - 5" MINIMUM FLOOR SLAB W/ #3'S AT 16" C/C, CENTERED IN SLAB (TYP U.N.O.)
- SEE GENERAL NOTES FOR SLAB SAW CUT CONTROL JOINTS.
- SEE PLUMBING DRAWINGS FOR DRAINS, FLOOR DRAINS, TRENCH DRAINS, OIL TRAPS, AND OTHER PLUMBING IN SLAB AS MAY BE REQUIRED.
- TROWEL FINISH WITH HARDENER OR SEALER AS SPECIFIED BY OWNER; CLEAR CURING COMPOUND TO BE COMPATIBLE W/ SEALER/HARDENEOR FLOOR FINISH.
- SEE ARCH. DWGS FOR DOOR AND WALL LAYOUT; OMIT SHEETING LEDGE AT WALK DOORS.
- SEE DRAWING S201 FOR GENERAL NOTES
- USE POLY VAPOR BARRIER (15 MIL. MIN.) UNDER ALL BUILDING SLAB AREAS.
- ANCHOR BOLT SIZE, SPACING, AND LAYOUT SHALL BE PER METAL BLDG MANUFACTURER.
ANCHOR BOLTS SHALL BE ASTM A1554, GRADE 36, ASTM A36 OR APPROVED EQUAL BOLT W/ HEAVY HEX NUT TOP AND BOTTOM.
PROVIDE 15 DIAMETER MIN. EMBED TO TOP OF EMBEDDED NUT AND THREADS AT BOTTOM OF BOLT AS REQUIRED TO PROVIDE FULLY ENGAGED NUT AT BOTTOM OF ANCHOR ROD.
TACK WELD EMBEDDED NUT AT UNLOADED SIDE OF NUT. PROVIDE THREADED BOLT PROJECTION ABOVE CONCRETE SLAB PER MBM DESIGN DRAWINGS, TYP.
- PROVIDE SOIL TERMITE TREATMENT. USE LICENSED APPLICATOR.
- SEE SECTION 6/S201 FOR TYPICAL REINFORCING BAR LAYOUT AT INTERSECTING GRADE BEAMS, TYP.

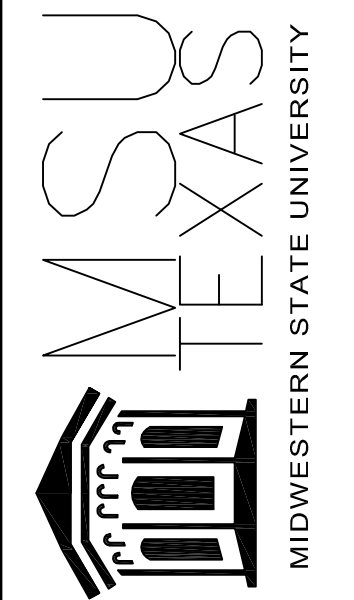
PLAN KEY NOTES:

- (A) -- OPG FOR WALK DOOR; OMIT MASONRY LEDGE RECESS;
SEE NOTE AT 1/S201 FOR DOWELS AT DOORS, TYP
- (B) -- 2-#4x4'-0" EXTRA DIAGONAL BARS AT 3" C/C AND 2" DEEPENED CLEAR CORNER, CENTERED IN THE SLAB
- (C) -- RECESS AND SLOPE SLAB FOR OVERHEAD DOOR AND TRACK; COORDINATE DOOR TRACK POCKET WITH DOOR VENDOR; SEE DETAIL 2/S201, TYP

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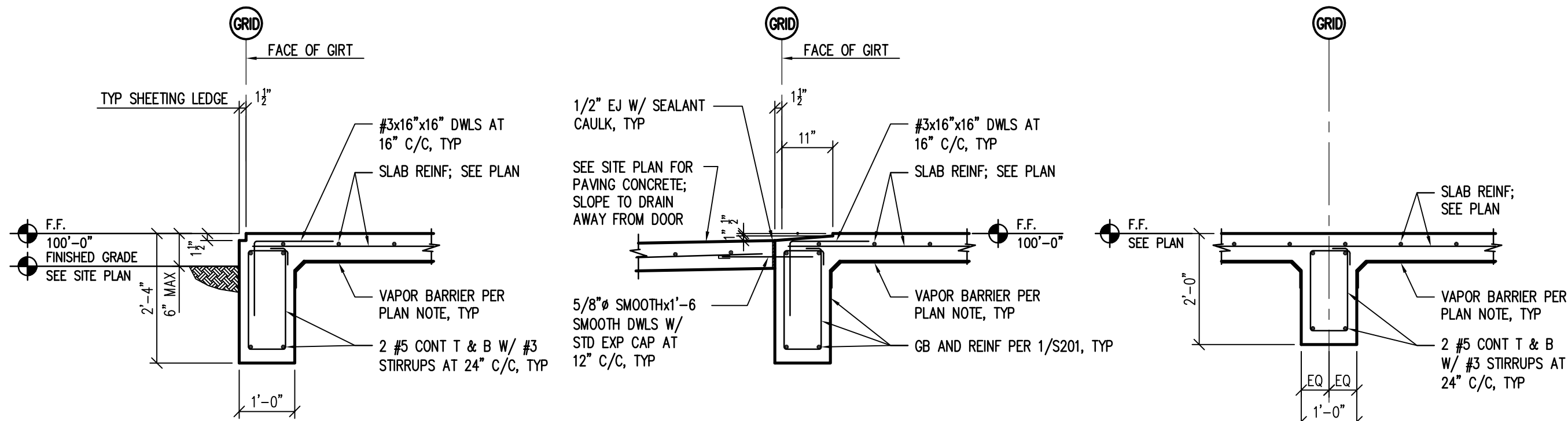


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FOUNDATION PLAN

S101

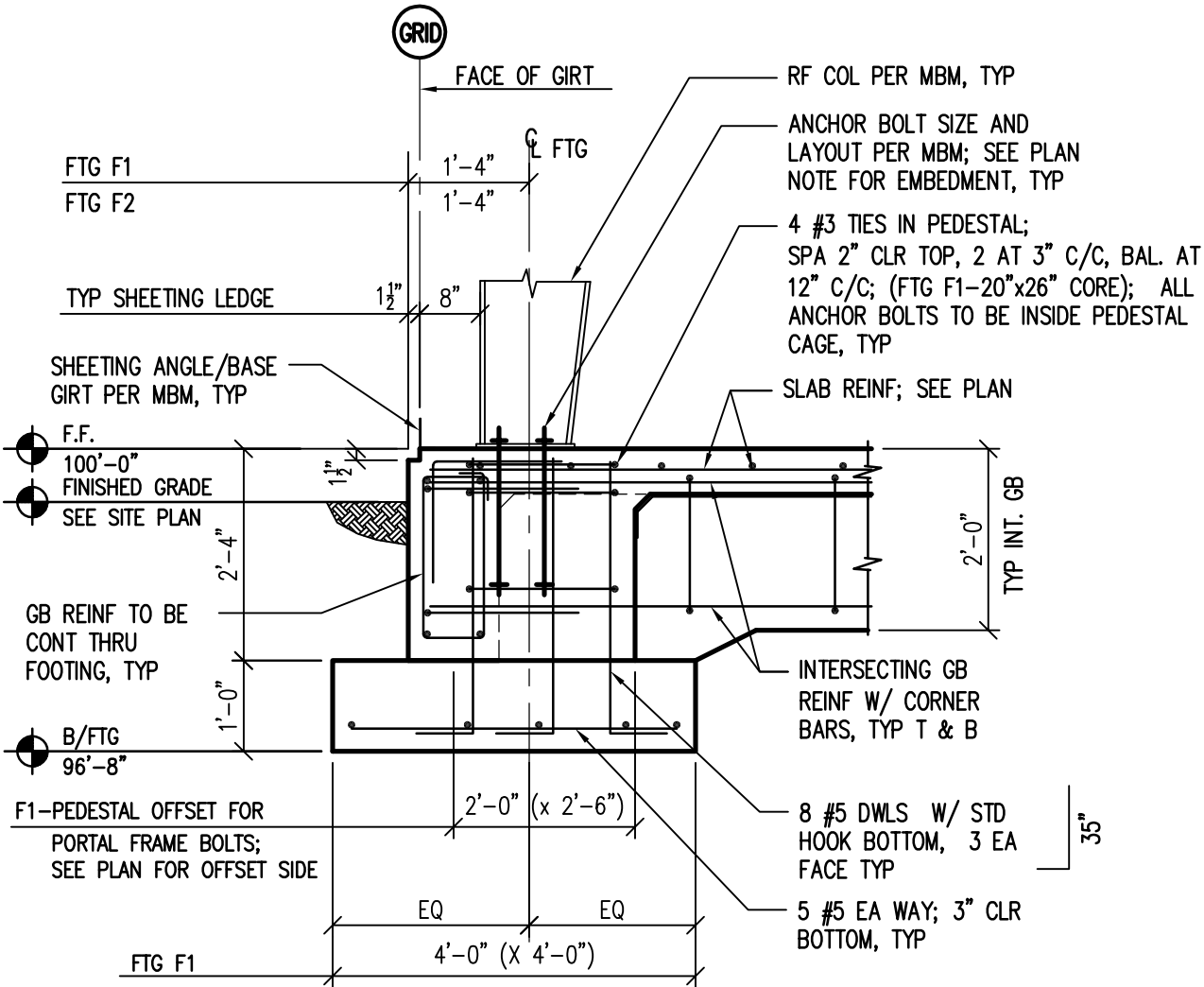


TYPICAL PERIMETER G.B.

1 SECTION

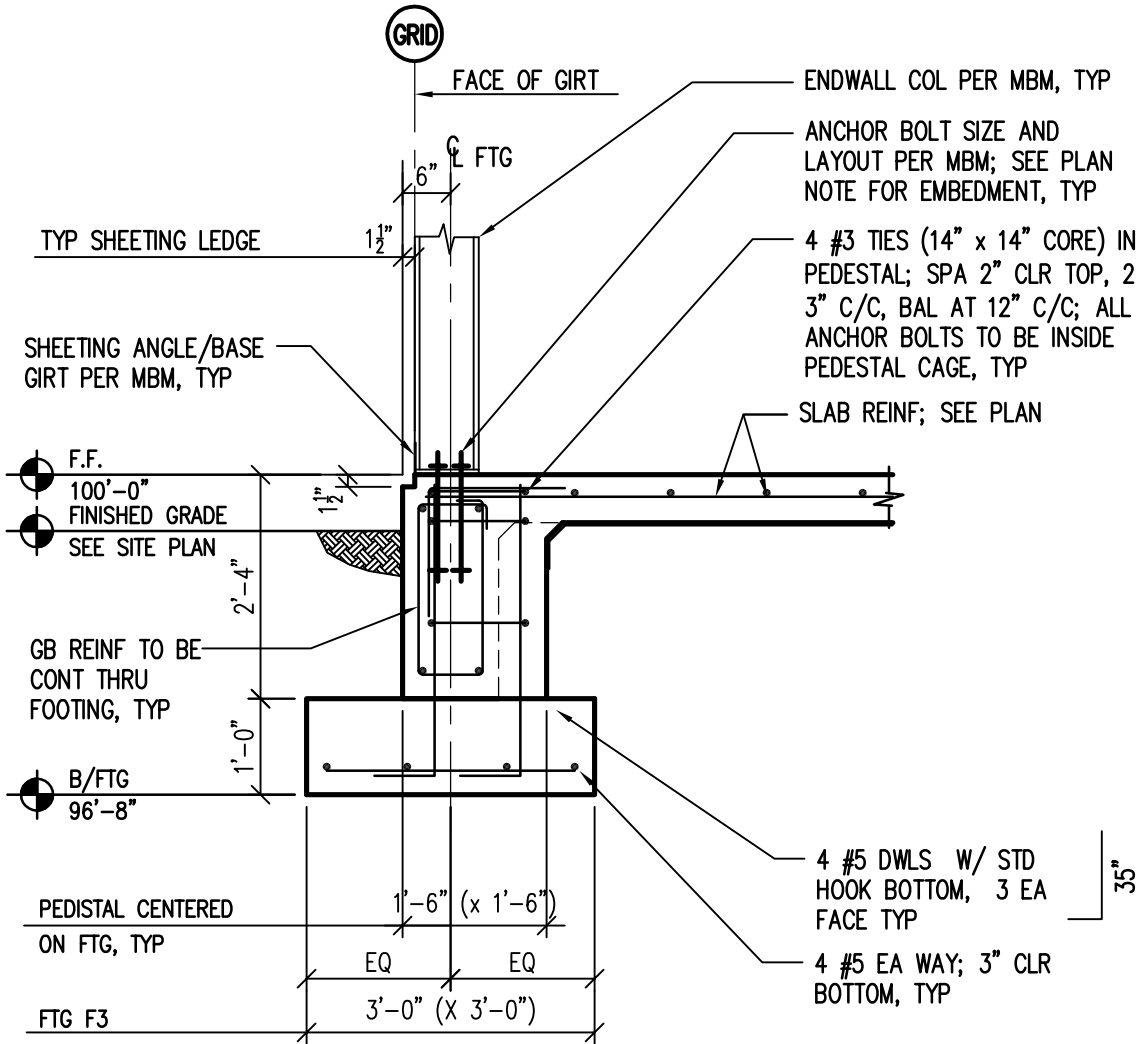
SCALE: 1/2" = 1'-0" TYP U.N.O.

NOTE: PROVIDE 1/2" x 1'-4" SMOOTH DWLS W/ STD EXP CAPS AT 12" C/C TO CONCRETE LANDINGS AT EXTERIOR WALK DOORS; DWLS NOT SHOWN FOR CLARITY, TYP



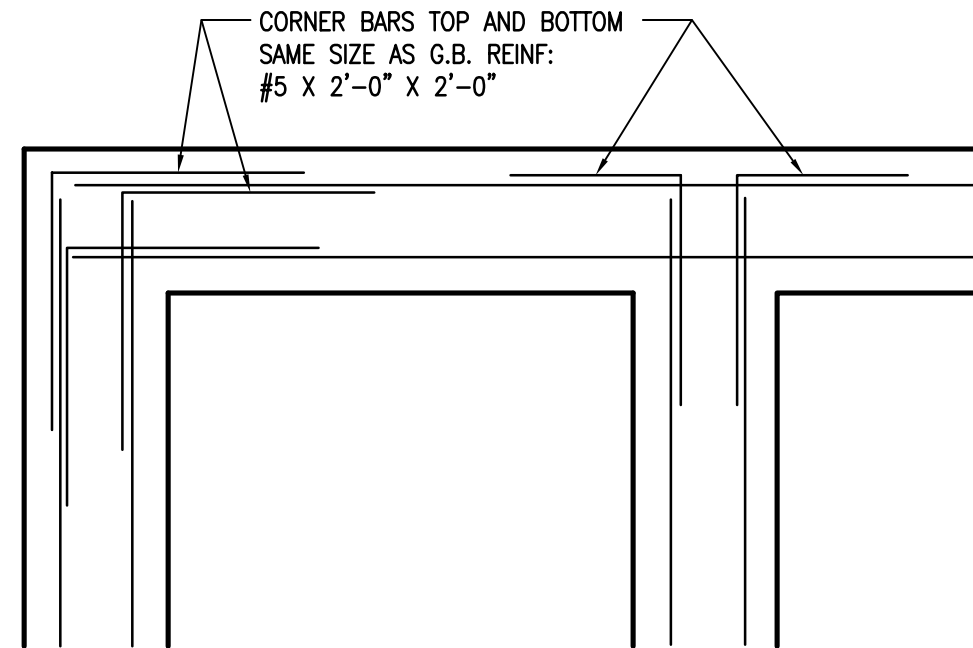
TYPICAL FTG F1 (AS NOTED) AT SIDE WALL

4 SECTION



TYPICAL FTG F2 & F3 AT SIDE WALL

5 SECTION



TYPICAL PLAN VIEW AT INTERSECTING GRADE BEAMS

6 SECTION

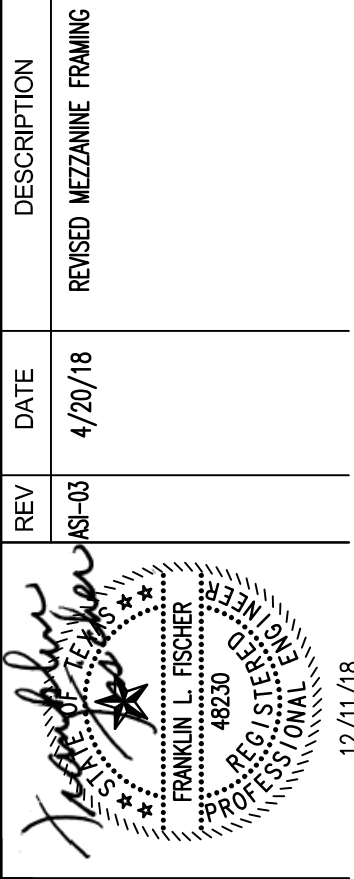
SCALE: NONE

GENERAL NOTES

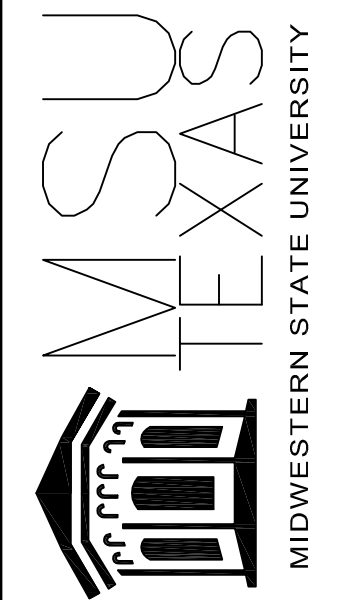
- BUILDING CODE: IBC2015
- LOADS:
 - SEE METAL BUILDING GENERAL NOTES ON DRAWING S401 FOR DESIGN LOADS
- CONCRETE:
 - ALL CONCRETE SHALL DEVELOP 3,500 PSI COMPRESSIVE STRENGTH IN 28 DAYS. SLUMP SHALL BE 4" (+/- 1"). AGGREGATE SHALL CONFORM TO ASTM C-33. COURSE AGGREGATE SIZE NOT TO EXCEED 1 1/2".
 - CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150, TYPE II. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260. ENTRAINED AIR CONTENT SHALL BE NO LESS THAN 4% AND NO GREATER THAN 6.5% (BY VOLUME).
 - ADMIXTURES CONTAINING CALCIUM CHLORIDE COMPOUNDS SHALL NOT BE ALLOWED. WATER REDUCING ADMIXTURES SHALL BE PER ASTM C494, TYPE A. SET CONTROL ADMIXTURES SHALL BE PER ASTM C494, TYPE D OR TYPE E, AS MAY BE REQUIRED.
 - FLY ASH PER ASTM C618 MAY BE SUBSTITUTED FOR CEMENT FOR UP TO 20% BY WEIGHT OF MIX DESIGN CEMENT.
 - CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301, 305, 306, 308, 315, AND 318, LATEST EDITIONS AND REVISIONS.
 - ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.
 - NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF 40 BAR DIAMETERS UNLESS NOTED OTHERWISE. MAKE ALL BARS CONTINUOUS AROUND CORNERS. STAGGER SPLICES IN TOP AND BOTTOM BARS 4'-0" MIN. LAP SPLICE TOP BARS MID-WAY BETWEEN FOOTINGS WITH MINIMUM OF 40 BAR DIAMETER SPLICE. BOTTOM BARS SHALL BE LAP SPICED OVER FOOTINGS WITH A MINIMUM LAP OF 12".
 - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE DRAWINGS.
 - PLACE 2 #5 BARS (1 EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE UNLESS OTHERWISE SHOWN OR NOTED. PLACE 2-#5 X 4'-0" DIAGONAL BARS IN SLAB AT ALL INSIDE CORNERS OF BUILDING. CENTER EXTRA DIAGONAL BARS IN SLAB.
 - SLABS AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT QUARTER OF SPAN WITH VERTICAL BULKHEADS WITH HORIZONTAL 2 X 4 KEYS SPACED AT 6" ON CENTER. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
 - WIRE FABRIC REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS AND MESH SHALL BE TIED TOGETHER.
 - DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST ED.
 - LAP SLAB REINFORCING BARS A MINIMUM OF 12".
 - PROVIDE CONTROL OR CONSTRUCTION JOINTS AS INDICATED IN PLAN OR SPACED NO MORE THAN 15 FT. ON CENTER, EACH WAY, IF NOT SO INDICATED ON THE DRAWINGS. COORDINATE JOINT LAYOUT WITH ARCHITECT OR ENGINEER. CUT BEFORE INITIAL CONCRETE SHRINKAGE.
 - CONTROL JOINTS SHALL BE MASTIC FILLED VERTICAL SAW CUTS 1-1/4" DEEP.
 - APPLY LIQUID CURING COMPOUND AS SOON AS PRACTICAL TO FINISHED CONCRETE. CURING COMPOUND SHALL BE COMPATIBLE WITH FLOOR FINISH.
 - APPLY LIQUID FLOOR HARDENER PER SPECIFICATIONS. PROVIDE "EUCOSIL" BY THE EUCLID CHEMICAL COMPANY OR APPROVED EQUAL UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS. APPLY ACCORDING TO MANUFACTURER'S PRINTED INSTRUCTIONS
 - SEE ELECTRICAL DRAWINGS FOR CONDUITS, DUCTS, JUNCTION BOXES, AND GROUNDING GRIDS OR GROUND RODS THAT MAY BE REQUIRED OR SPECIFIED BY OTHER TRADES TO BE EMBEDDED IN CONCRETE FOUNDATIONS.
- BUILDING FOUNDATIONS:

FOUNDATION DESIGN IS BASED ON A GEOTECHNICAL REPORT BY BRAUN INTERTECH, PROJECT NO. B1605508, DATED OCTOBER 2016, FOR THE HEALTH AND HUMAN SERVICES BUILDING, CADDO TRAIL AND LOUIS J. RODRIQUEZ DRIVE. THIS SITE IS ADJACENT TO THIS BUILDING SITE.

 - DESIGN BEARING PRESSURE--2,000 PSF FOR GRADE BEAMS AND FOOTINGS BEARING AT 3' TO 4' BELOW SLAB F/F ELEV.
 - GENERAL SITE PREPARATIONS: REMOVE TOPSOIL (APPROX 4" TO 6") AND OTHER DELETERIOUS MATERIAL, TREES AND ROOTS, AND STOCKPILE FOR FINAL GRADING. HAUL EXCESS FROM SITE OR SPREAD ON SITE PER OWNER'S WRITTEN APPROVAL. BUILDING PAD SHALL EXTEND 5'-0 MINIMUM BEYOND BUILDING LINE IN ALL DIRECTIONS. EXCAVATE SITE TO 2'-0" MINIMUM BELOW FINISHED FLOOR ELEVATION; STOCKPILE EXCAVATED CUT MATERIAL FOR USE IN SITE GRADING. REMOVE EXCESS FROM SITE. CUTS AND FILLS SHALL BE STAIR STEPPED 8" MAXIMUM AND NOT FEATHERED SO THAT BUILDING PAD FILL IS PLACED IN (APPROXIMATELY) UNIFORM THICKNESS IN HORIZONTAL LAYERS ACROSS BUILDING. AFTER EXCAVATION OF THE EXISTING SOIL SUBGRADE TO THE REQUIRED DEPTH, SCARIFY NATURAL SUBGRADE TO A DEPTH OF SIX INCHES (6") AND RECOMPACT NATURAL SOIL SUBGRADE TO 95% STD. PROCTOR DENSITY (ASTM D-698) WITH MOISTURE CONTENT MAINTAINED WITHIN (+/- 2%) THE OPTIMUM MOISTURE OF THE MATERIAL. PROOF ROLL SUB-GRADE IN ACCORDANCE WITH PROCEDURES GIVEN IN ITEM 216 OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF ROADS AND BRIDGES" 2004 ED. (TXDOT SPECIFICATION). THE PROOF ROLLING SHALL BE WITNESSED BY A GEOTECHNICAL ENGINEER. REWORK ANY SOFT AREAS AND RETEST. FILL MATERIAL PLACEMENT: USE SELECT, NON-EXPANSIVE SANDY FILL (CLASSIFIED AS GW, GP, GM, SW, SP, SC, OR SM) WITH P.I. BETWEEN 6 AND 12 AND LIQUID LIMIT NO MORE THAN 35. CLEAN SITE MATERIAL MAY BE USED FOR SELECT FILL PROVIDED IT IS TESTED AND MEETS ALL SELECT FILL SPECIFICATIONS. COMPACT TO MINIMUM OF 95% STD. PROCTOR DENSITY (ASTM D-698) WITH MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM MOISTURE CONTENT OF THE MATERIAL. DO NOT EXCEED 8" PER LOOSE LIFT. COMPACTION TO BE VERIFIED BY TEST. AREA BACKFILL OUTSIDE THE BUILDING LINE SHALL BE SANDY CLAY MATERIAL WITH A PI BETWEEN 6 AND 12 AND SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM STD. PROCTOR DENSITY WITH THE MOISTURE WITHIN +/- 2% OF OPTIMAL. PAY SPECIAL ATTENTION TO BACKFILLING OF UTILITY TRENCHES WHERE THEY ENTER THE BUILDING OR RUN PARALLEL AND ADJACENT TO THE BUILDING FOUNDATION. PROVIDE CLAY PLUGS AT UTILITY ENTRY TO PREVENT MOISTURE PENETRATION INTO OR UNDER THE BUILDING PAD.
 - FINISHED FLOOR ELEVATION SHOULD BE AT LEAST 6" ABOVE FINISHED GRADE ELEVATION UNLESS NOTED OTHERWISE ON SITE DRAWINGS. PROVIDE SITE GRADING TO CHANNEL SURFACE WATER AWAY FROM CONCRETE FOUNDATION. SITE GRADING SHALL SLOPE AT A MINIMUM OF 1 FT VERTICAL TO 10 FEET HORIZONTAL FOR A MINIMUM DISTANCE OF 10 FEET FROM THE BUILDING LINE, TYPICAL.
- GENERAL CONDITIONS:
 - THE CONTRACTOR SHALL CHECK AND VERIFY DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS AGAINST ON-SITE CONDITIONS AND SITE DRAWINGS PRIOR TO FABRICATION. NOTIFY ENGINEER OF ANY DISCREPANCIES. DO NOT SCALE DRAWINGS.
 - CONSTRUCTION MATERIALS SHALL BE AS SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. SUBSTITUTIONS OR ALTERNATES MUST BE REQUESTED IN WRITING BY THE CONTRACTOR AND APPROVED IN WRITING BY THE ENGINEER.



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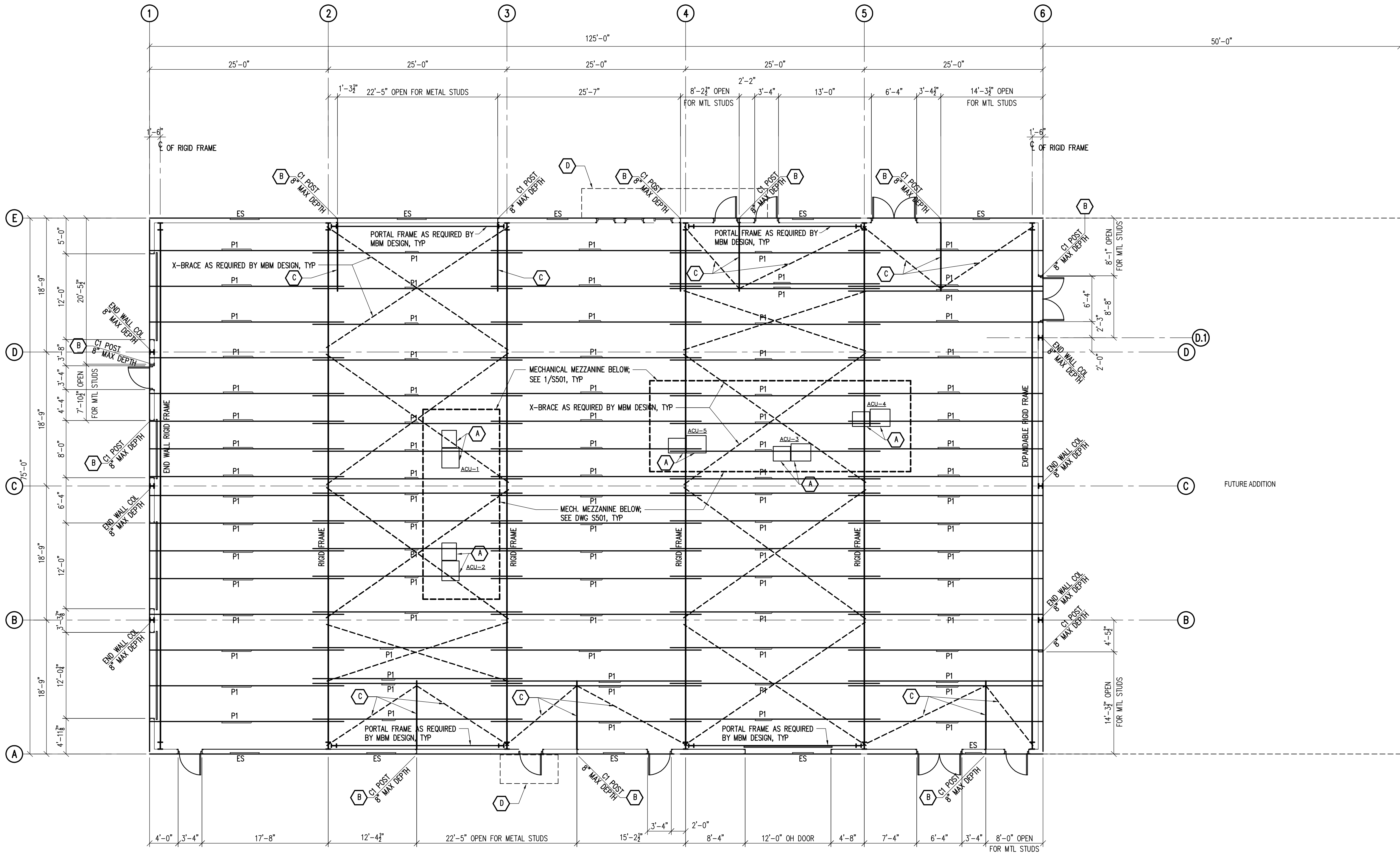
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FOUNDATION SECTIONS
AND DETAILS AND
GENERAL NOTES

S201

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1 ROOF FRAMING PLAN

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

PLAN NOTES:

- SEE DRAWING S401 FOR METAL BUILDING GENERAL NOTES.
- SEE DRAWING S201 FOR GENERAL NOTES.

PLAN KEY NOTES:

- A** -- MBM TO PROVIDE EXTRA ROOF FRAMING AS REQUIRED TO SUPPORT SUSPENDED MECHANICAL UNITS BELOW ROOF; SEE MECHANICAL DRAWINGS FOR LOCATIONS AND UNIT LOADS; TYPICAL ACU-1 THRU ACU-5
- B** -- ADDITIVE ALTERNATE #1: PROVIDE 8" x 4" CEE (OR EQUAL) END POST P1 BY MBM DESIGN TO SUPPORT WALL GIRTS AT LIMITS OF 8" LIGHT GAGE METAL STUD FRAMING FOR HORIZONTAL SIDING; SEE PLAN FOR LIMITS OF HORIZONTAL SIDING; COORDINATE WITH ARCH. DRAWINGS, TYP
- C** -- ADDITIVE ALTERNATE #1: PROVIDE EXTRA ROOF BRACING AND STRUTS AS REQUIRED TO BRACE POSTS C1 AND EAVE STRUTS FOR WIND LOADS FROM 8" LIGHT GAGE METAL STUD WALL FRAMING ATTACHED TO BOTTOM OF EAVE STRUTS, TYP
- D** -- ADDITIVE ALTERNATE #4: PROVIDE 4'-0" CANOPY; SEE ARCH DRAWINGS FOR LIMITS; SEE DETAILS 4/S402 AND 5/S402, TYP

PLAN LEGEND:

- ES = EAVE STRUT BY MBM DESIGN
- P1 = ROOF PURLIN BY MBM DESIGN
- C1 = ADDITIVE ALTERNATE #1: 8x4 CEE POST PER MBM DESIGN; SEE PLAN KEY NOTE "B"

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MIDWESTERN STATE UNIVERSITY

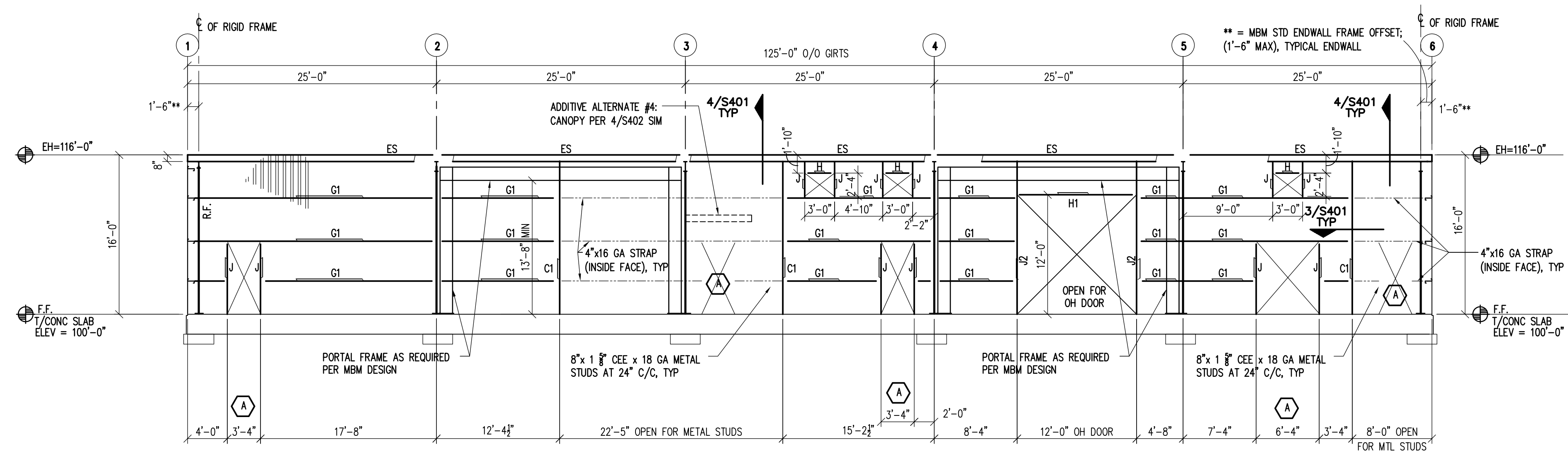
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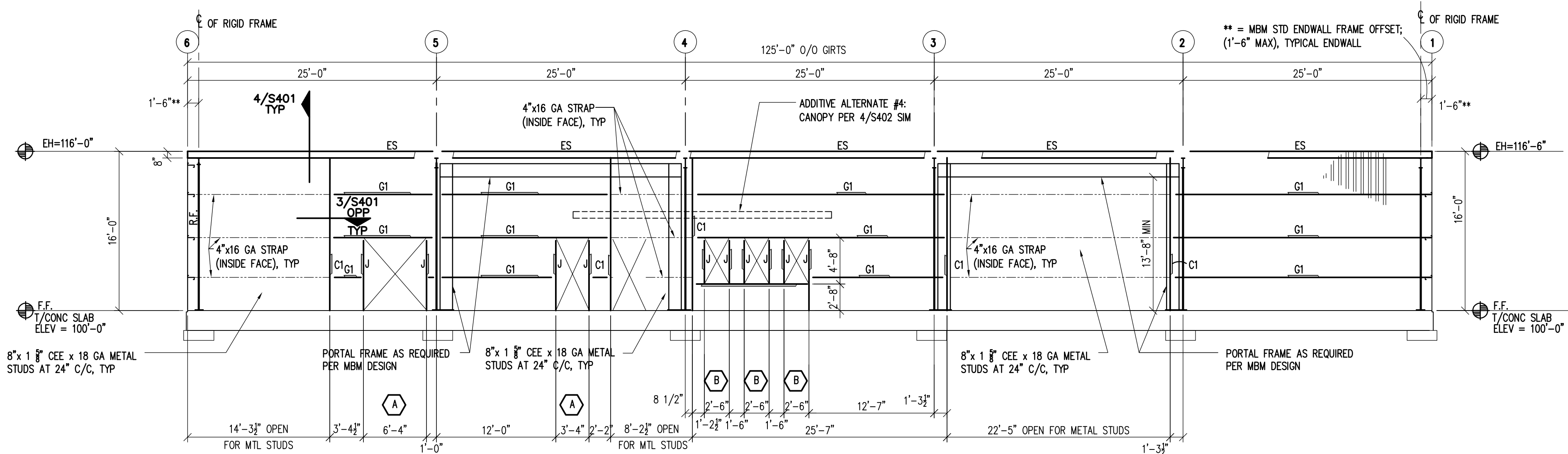
ROOF FRAMING PLAN

S301



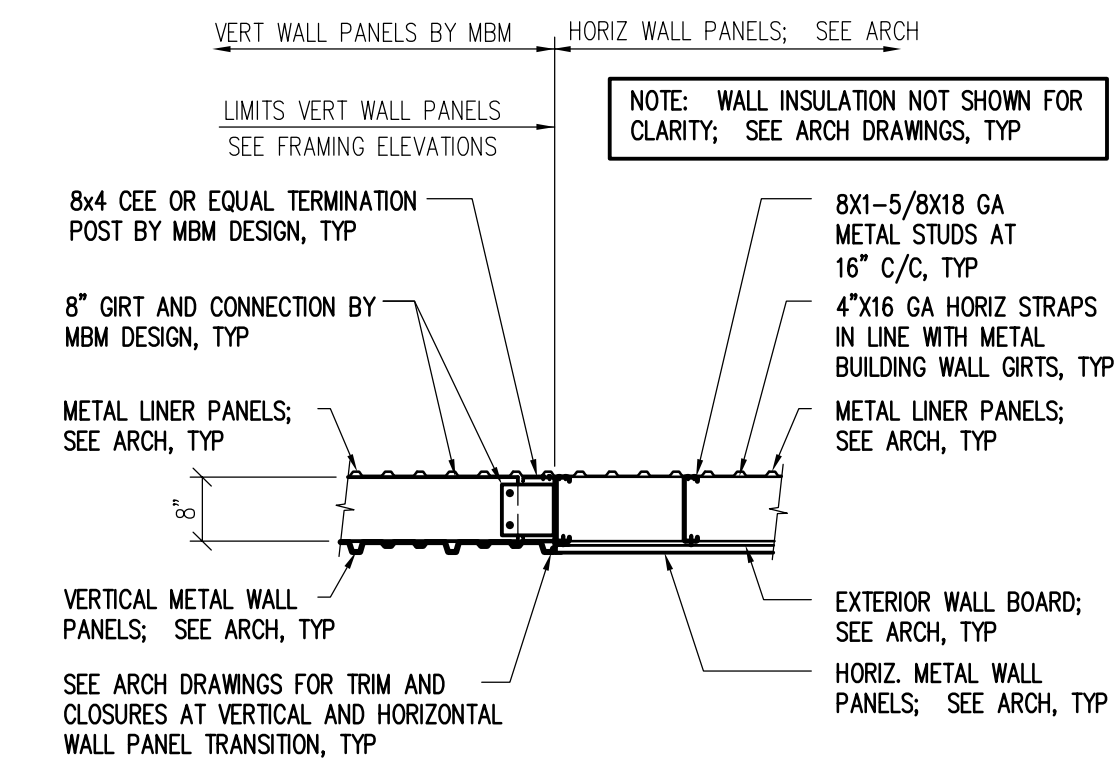
1 ELEVATION GRID LINE A

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



2 ELEVATION GRID LINE E

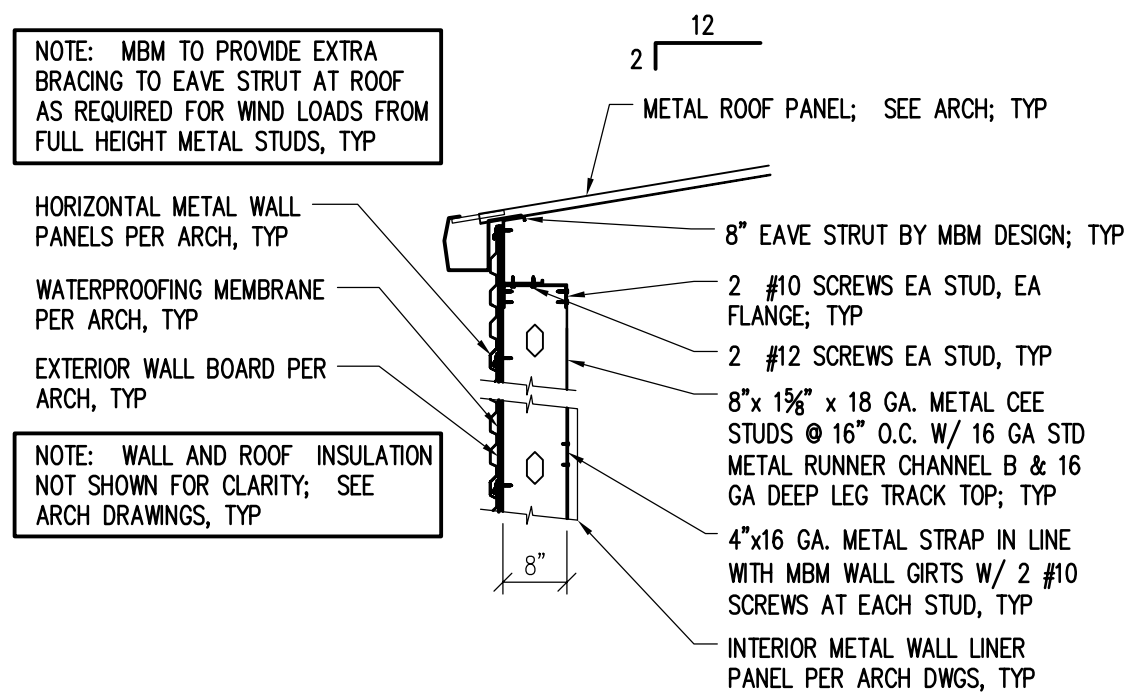
SCALE: 1/8" = 1'-0"



ADD ALT #1: DETAIL AT VERT TO HORIZ SIDING

3 SECTION

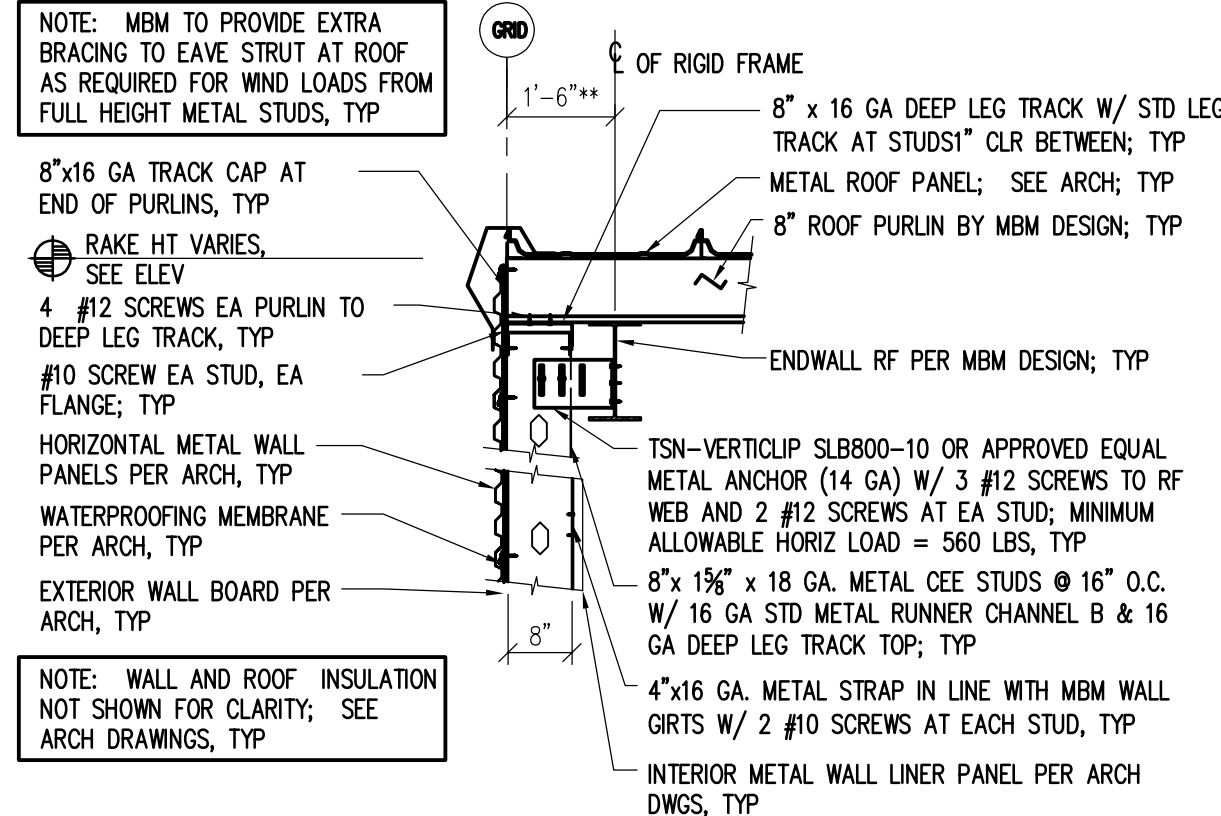
SCALE: 1/2" = 1'-0"



ADD ALT #1: DETAIL AT EAVE AT HORIZ SIDING

4 SECTION

SCALE: 1/2" = 1'-0"



ADD ALT #1: DETAIL AT RAKE AT HORIZ SIDING

5 SECTION

SCALE: 1/2" = 1'-0"

ELEVATION LEGEND:

- ES = EAVE STRUT BY MBM DESIGN
G1 = WALL GIRT BY MBM DESIGN
C1 = ADDITIVE ALTERNATE #1: 8x4 CEE POST PER MBM DESIGN; SEE PLAN KEY NOTE "B"
B1 = ADDITIVE ALTERNATE #1: 8" TUBE GIRT PER MBM DESIGN FOR 8" LIGHT GAGE METAL STUDS; PROVIDE METAL RUNNER TRACK T & B, TYP
J = DOOR JAMB BY MBM DESIGN
J2 = OH DOOR JAMB BY MBM DESIGN; 3-1/2" MINIMUM FLANGE
H = HEADER BY MBM DESIGN
RF = RIGID FRAME BY MBM DESIGN
MBM = METAL BUILDING MANUFACTURER

KEY NOTES:

- (A) -- FRAMED OPENING FOR WALK DOOR; SEE ARCH, TYP
(B) -- FRAMED OPENING FOR WINDOW; SEE ARCH, TYP

METAL BUILDING NOTES

- DEAD LOADS USED IN DESIGN:
 - ROOF: DEAD LOADS-----3 PSF (MIN)
 - ROOF: COLATERAL DEAD LOADS-----5 PSF
 - ROOF: SUSPENDED MECHANICAL UNITS---SEE MECH DRAWINGS FOR LOCATION AND LOADS TO ROOF
- LIVE LOADS USED IN DESIGN:
 - ROOF LIVE LOAD-----20 PSF (W/ CODE ALLOWED REDUCTION FOR TRIBUTARY AREA)
 - GROUND SNOW LOAD-----5 PSF MIN.
 - WIND (3 SECOND GUST) ULTIMATE DESIGN WIND-----115 MPH; (V_{asd} = 90 MPH) BASIC WIND LOAD PRESSURES AND SHAPE FACTORS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2015 ED. FOR ENCLOSED STRUCTURE. EXPOSURE C; RISK CATEGORY II (ASD IMPORTANCE FACTOR=1.0)
- METAL BUILDING:
 - THE BUILDING SHALL BE A MANUFACTURER'S STANDARD PREFABRICATED METAL STRUCTURE OF THE DIMENSIONS SHOWN, EXCEPT AS NOTED BELOW. RIGID FRAMES SHALL BE SPACED AS SHOWN ON THE STRUCTURAL DRAWINGS, BUT CONSTRUCTION DETAILS MAY VARY TO SUIT MANUFACTURER'S STANDARD DESIGN. PROVIDE LEAN-TO FRAMES ONLY IF INDICATED ON THE DRAWINGS. FRAMES AND PORTAL FRAMES TO BE DESIGNED AS "PINNED" BASE
 - THE BUILDING SHALL BE DESIGNED AND FABRICATED ACCORDING TO AISC & AISI SPECIFICATIONS, LATEST EDITIONS. THE DIMENSIONAL TOLERANCES OUTLINED IN THE AWS CODE UNDER WORKMANSHIP AND THE TOLERANCES APPLICABLE TO ROLL FORMED STEEL UNDER THE AISC "STANDARD MILL PRACTICE" SECTION SHALL BE REQUIRED IN THE FABRICATION OF THE STEEL BUILDING FRAMES AND COMPONENTS.
 - A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR THE RIGID FRAMES, PURLINS, AND X-BRACING FOR DEAD, LIVE, AND WIND LOADS AND A LAYOUT OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE DETAILS OF ALL MAIN MEMBERS, TYPICAL CONNECTIONS (SHOWING BOLT HOLES AND WELDS), AND ERECTION DRAWINGS.
 - BUILDING DESIGN SHALL BE DONE UNDER THE DIRECTION OF A TEXAS REGISTERED PROFESSIONAL ENGINEER AND DRAWINGS AND CALCULATIONS SHALL BE SEALED.
 - THE BUILDING SHALL BE DESIGNED TO SUPPORT ALL PLATFORM AND MECHANICAL EQUIPMENT AS MAY BE INDICATED OR SPECIFIED; COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.
 - COMBINATION DESIGN LOADS SHALL BE ACCORDING TO INTERNATIONAL BUILDING CODE.
 - MANUFACTURER'S STANDARD CABLE OR ROD SYSTEM MAY BE USED FOR X-BRACING IN ROOF AND WALLS PER MANUFACTURER'S DESIGN.
 - LATERAL DEFLECTIONS OF THE RIGID FRAMES AND WIND BENTS AT THE EAVE HEIGHT FOR WIND LOADS IN ANY DIRECTION SHALL BE NO MORE THAN H/240 OF THE BUILDING EAVE HEIGHT.
 - USE STANDARD FRAMED BEAM CONNECTIONS WITH 3/4" DIAMETER ASTM A307 BOLTS, OR WELDED EQUIVALENT, UNLESS OTHERWISE SHOWN OR NOTED FOR ALL SECONDARY FRAMING. USE ASTM A325 BOLTS FOR MAIN FRAME CONNECTIONS.
 - ALL DIMENSIONS ON STRUCTURAL DRAWINGS TO BE CHECKED AGAINST ARCHITECTURAL DRAWINGS. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION OR FABRICATION.
 - VERIFY ALL OPENINGS THROUGH FLOORS, ROOF, AND WALL WITH MECHANICAL AND ELECTRICAL REQUIREMENTS.
 - ANCHOR BOLTS SHALL BE ASTM F1554, GR 36; A307, OR A36 STEEL WITH A MINIMUM EMBEDMENT OF 15 BOLT DIAMETERS IN CONCRETE. LOCATE COLUMN ANCHOR BOLTS BY TEMPLATES. PROVIDE FULLY ENGAGED HEAVY HEX NUT TACK WELDED AT BOTTOM OF EMBEDDED BOLT. COORDINATE BOLT PROJECTION WITH MBM REQUIREMENTS.
 - PROVIDE MANUFACTURER'S STANDARD TRIM AND NEOPRENE CLOSURES FOR A COMPLETE WEATHER-TIGHT ENCLOSURE. COLOR SELECTED FROM STANDARD COLORS UNLESS NOTED OTHERWISE IN ARCHITECTURAL DRAWINGS OR SPECIFICATIONS.
 - PROVIDE MANUFACTURER'S STANDARD GUTTERS AND DOWNSPOUTS SIZED PER MBM DESIGN FOR LOCAL RAINFALL CONDITIONS. SEE ARCH. DRAWINGS.
 - PROVIDE ROOF AND WALL INSULATION AS INDICATED IN ARCHITECTURAL DRAWINGS, TYP
 - PROVIDE METAL ROOF PANELS AS INDICATED IN ARCHITECTURAL DRAWINGS; PROVIDE ROOF FASTENERS TO PROVIDE UL-90 UPLIFT RATING PER ARCHITECTURAL DRAWINGS.
 - PROVIDE METAL LINER PANELS AND TRIM AS INDICATED IN THE ARCHITECTURAL DRAWINGS.
 - ENDWALL FRAMES ARE TO BE DESIGNED FOR FULL 25' BAY LOADING FOR FUTURE EXPANSION, TYP
 - SEE PLANS AND ELEVATIONS FOR ADDITIVE ALTERNATE #1 FRAMING FOR OPEN WALL AREAS FOR LIGHT GAGE 8" METAL STUDS AT 16" C/C AND HORIZONTAL ARCHITECTURAL WALL PANEL AREAS. PROVIDE WALL AND ROOF FRAMING AND BRACING, AS REQUIRED TO ACCOMMODATE OPEN AREAS AS SHOWN; COORDINATE WITH ARCHITECTURAL DRAWINGS AND DETAILS, TYP

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Structural Engineering
TBPE FIRM F-1793
P.O. Box 722
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940-564-2565

DESCRIPTION

RENSED MEZZANINE FRAMING

DATE

4/20/18

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AS-03

12/11/18

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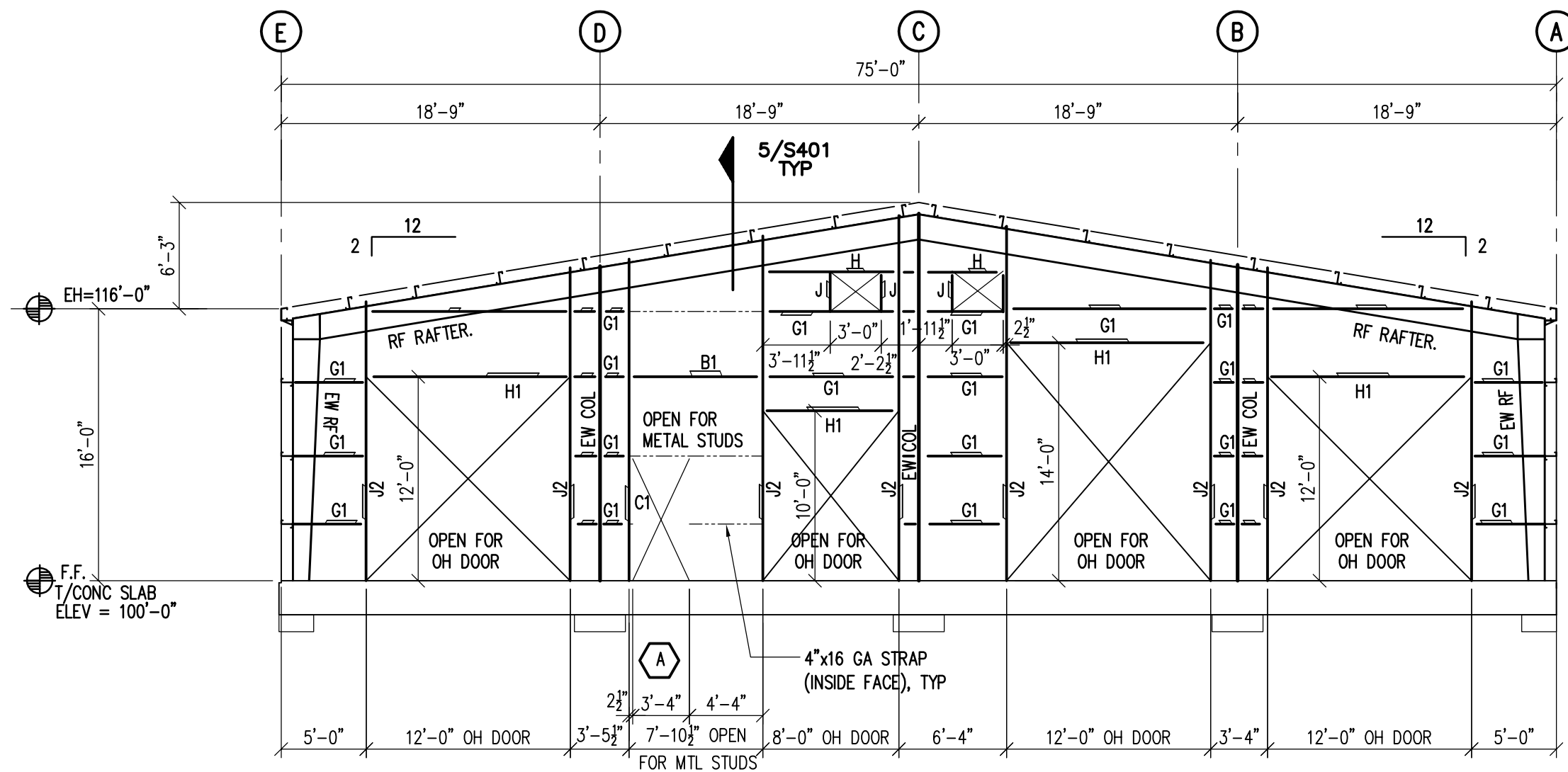
PROJECT NO.

18002

FRAMING ELEVATIONS
SECTIONS AND DETAILS
AND METAL BLDG NOTES

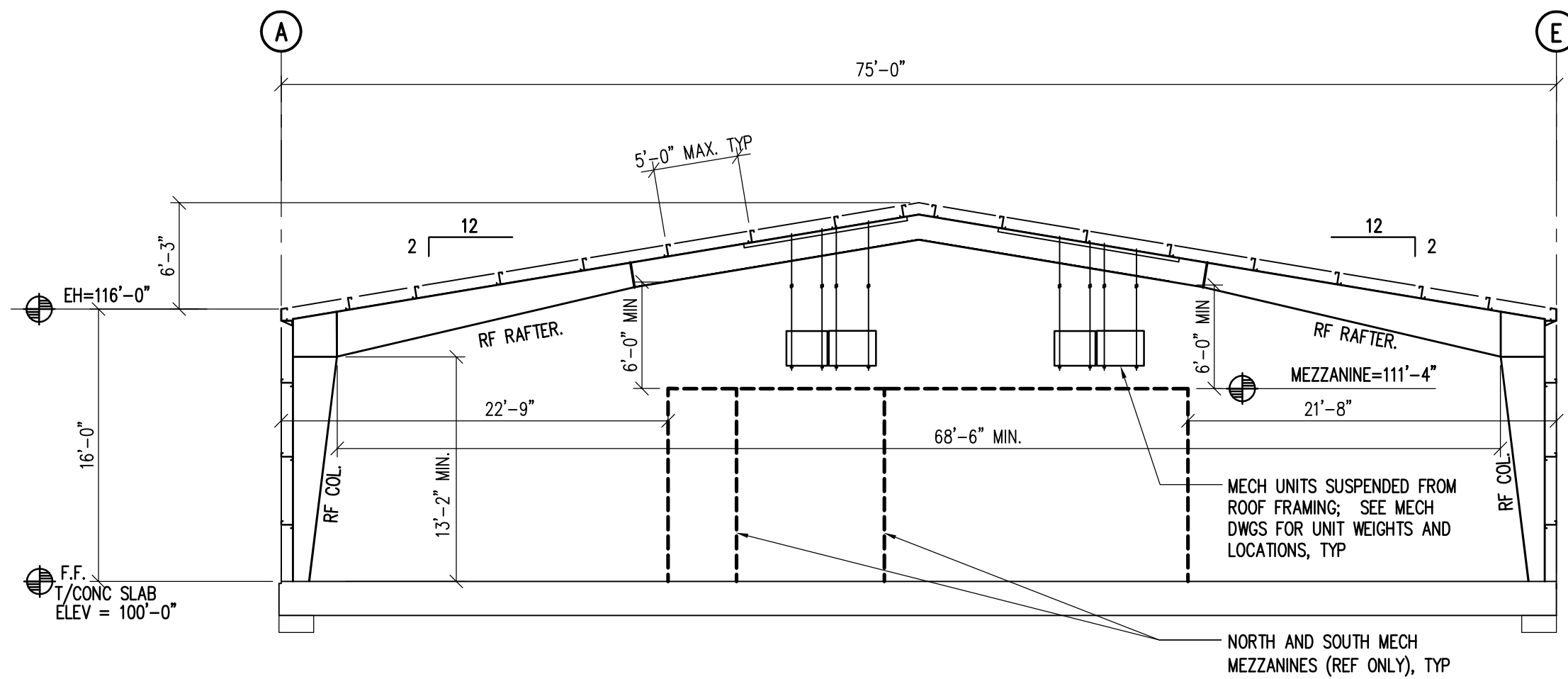
S401

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1 ELEVATION GRID LINE 1

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



3 ELEVATION GRID LINES 2, 3, 4, AND 5

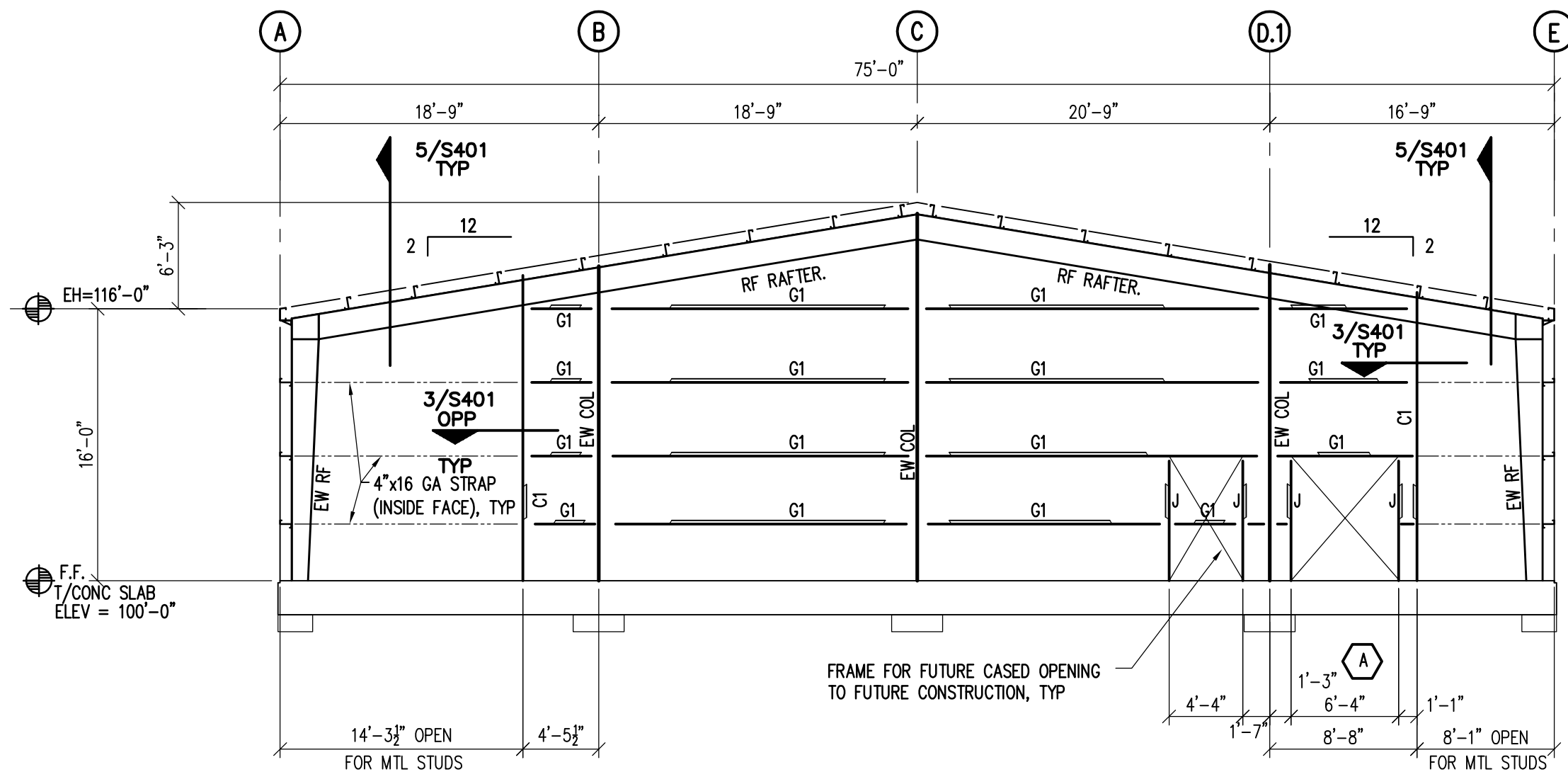
SCALE: 1/8" = 1'-0"

ELEVATION LEGEND:

- ES = EAVE STRUT BY MBM DESIGN
G1 = WALL GIRT BY MBM DESIGN
C1 = ADDITIVE ALTERNATE #1: 8x4 CEE POST PER MBM DESIGN; SEE PLAN KEY NOTE "B"
B1 = ADDITIVE ALTERNATE #1: 8" TUBE GIRT PER MBM DESIGN FOR 8" LIGHT GAGE METAL STUDS; PROVIDE METAL RUNNER TRACK T & B, TYP
J = DOOR JAMB BY MBM DESIGN
J1 = FRAMED OPENING JAMB BY MBM DESIGN
J2 = OH DOOR JAMB BY MBM DESIGN; 3-1/2" MINIMUM FLANGE
H = HEADER BY MBM DESIGN
H1 = OH DOOR HEADER BY MBM DESIGN; PROVIDE EXTRA FRAMING AND BRACING AS REQUIRED FOR OPENER MOUNTING
RF = RIGID FRAME BY MBM DESIGN
MBM = METAL BUILDING MANUFACTURER

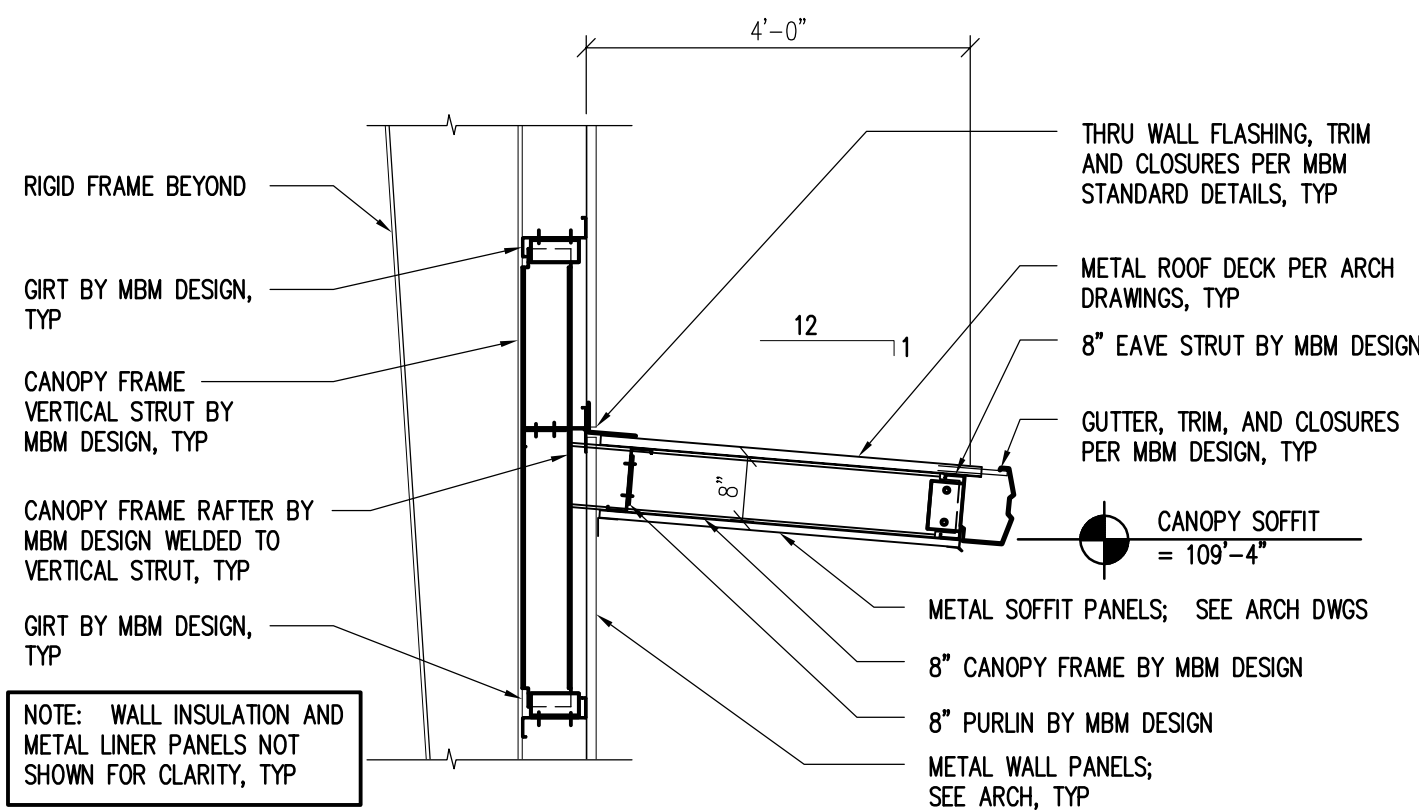
KEY NOTES:

- A -- FRAMED OPENING FOR WALK DOOR; SEE ARCH, TYP



2 ELEVATION GRID LINE 6

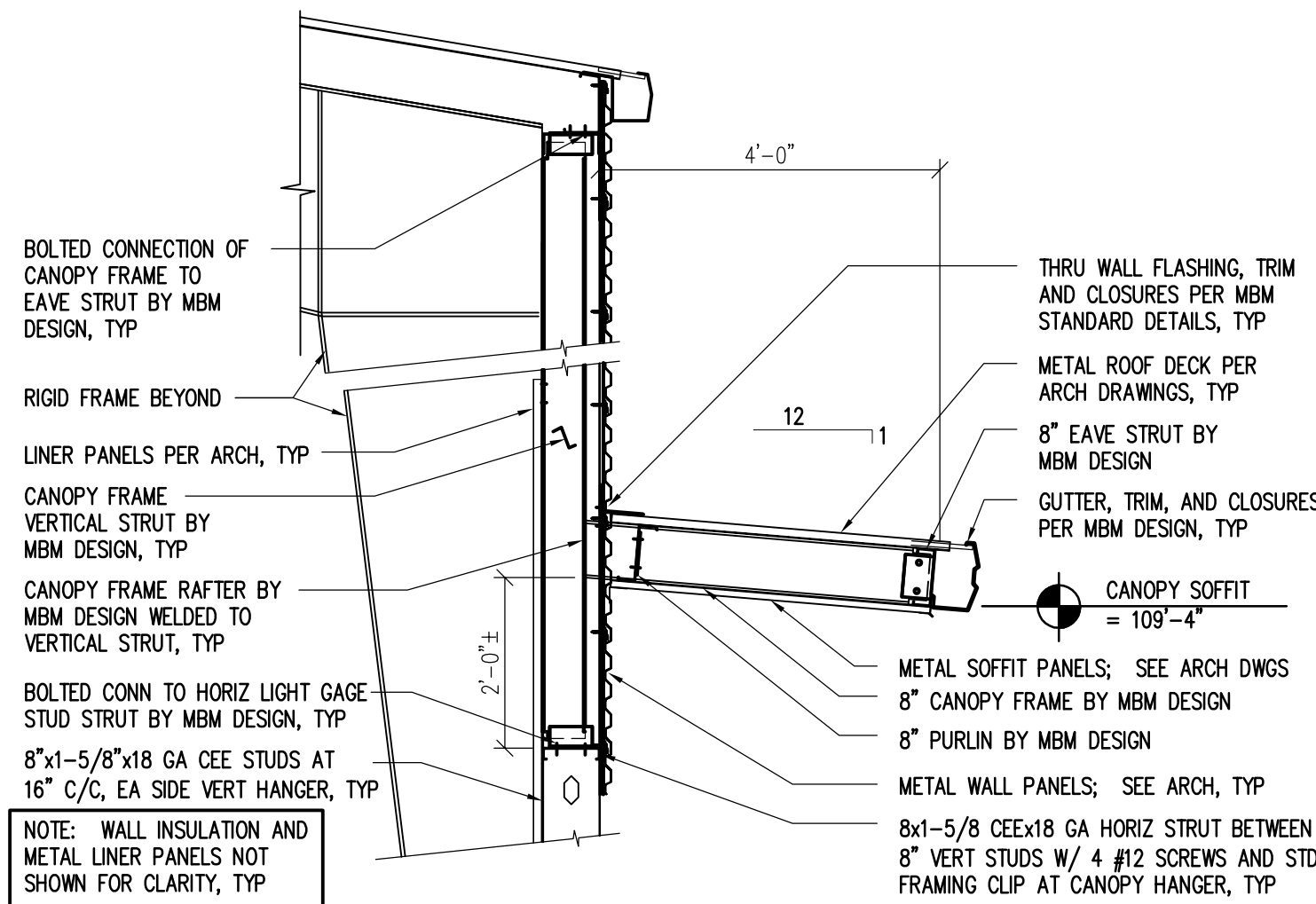
SCALE: 1/8" = 1'-0"



ADD ALTERNATE #4: CANOPY

4 SECTION

SCALE: 1/2" = 1'-0"



ADD ALTERNATE #4: CANOPY AT LIGHT GAGE ATAL STUD FRAMING

5 SECTION

SCALE: 1/2" = 1'-0"

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Olney, Texas 76374
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AS-03	4/20/18	RENISED MEZZANINE FRAMING

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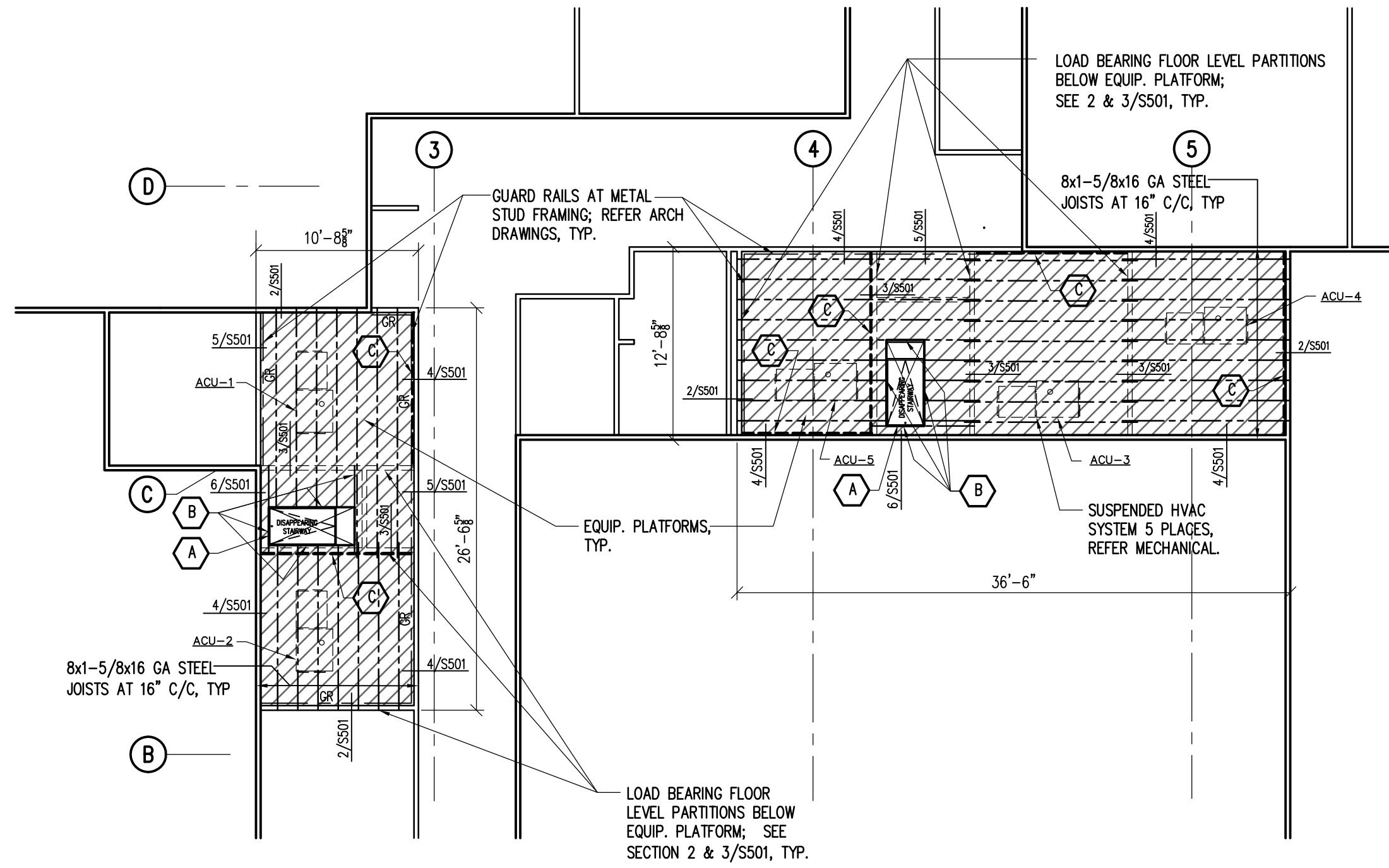


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FRAMING ELEVATIONS
SECTIONS AND DETAILS

S402



1 MEZZANINE FRAMING PLANS

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

MEZZANINE PLAN NOTES:

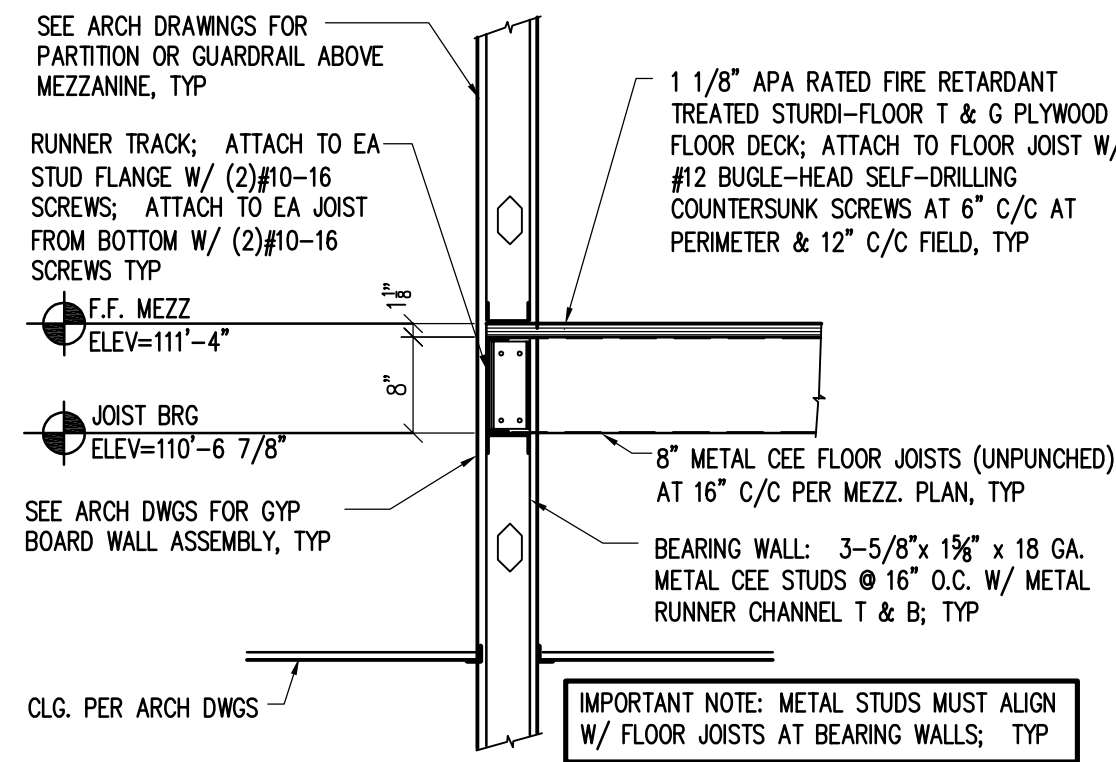
- BEARING WALL: JOIST BEARING ELEV = 110'-6 7/8" U.N.O. TOP OF PLYWOOD FINISHED FLOOR ELEV = 111'-4" U.N.O.
- MEZZANINE FLOOR DECK: PROVIDE 1 1/8" T & G APA RATED FIRE RETARDANT STURD-I-FLOOR PLYWOOD FLOOR DECK; ATTACH WITH #12 BUGLE-HEAD SELF-DRILLING COUNTERSUNK SCREWS AT 6" C/C AT MEZZANINE EDGES AND AT 12" C/C AT FIELD, TYP
- DESIGN LIVE LOAD = 50 PSF (WORK ACCESS ONLY)
DESIGN DEAD LOAD = 10 PSF = (5 PSF PLYWOOD DECK + 5 PSF MISC SUSPENDED)
MECH EQUIPMENT LOAD = 10 PSF MISC. MECH EQUIP, ETC, TYP (MAIN EQUIP IS SUSPENDED FROM ROOF FRAMING)
DESIGN TOTAL COMBINED LOAD = 70 PSF
- STEEL FLOOR JOISTS:
8"x1-5/8" x 16 GA GALV METAL CEE FLOOR JOISTS (UNPUNCHED) AT 16" C/C; MINIMUM YIELD STRENGTH = 50 KSI, TYP; SEE PLAN KEY NOTE "B" FOR METAL JOIST HANGERS AT STEEL JOIST TRIMMERS FRAMING OPENINGS FOR DISAPPEARING STAIRS, TYP
- ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE A.W.S. STANDARD QUALIFICATIONS TEST, OR APPROVED EQUAL QUALIFICATIONS.
- SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES OR OTHER HOLES REQUIRED IN STEEL MEMBERS.
- PROVIDE MFG STANDARD STRAP BRIDGING AN MID-SPAN OF JOIST AT BOTTOM FLANGE OF JOISTS; TYPICAL ALL SPANS GREATER THAN 10'-0".

MEZZANINE LEGEND

GR = GUARDRAIL AT OPEN MEZZANINE EDGE PER ARCH DWGS, TYP

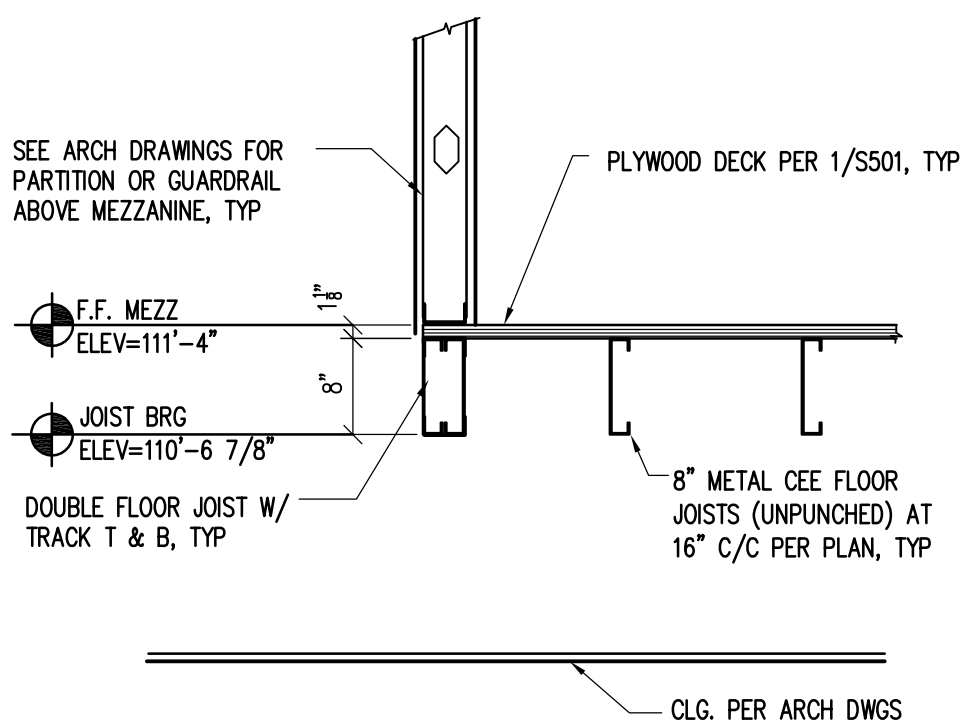
PLAN KEY NOTES:

- A**--- DISAPPEARING STAIRWAY WITH DEEP ANGLE FRAME FOR DROPPED CEILING; COORDINATE LOCATION AND FRAMED OPENING SIZE REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND VENDOR CERTIFIED SHOP DRAWINGS, TYP
- B**--- PROVIDE 8x1-5/8x16 GA STEEL JOIST SINGLE TRIMMER ALL ROUND OPENING FOR DISAPPEARING STAIRWAY; FRAME TRIMMERS TO ADJACENT LOAD BEARING WALLS AND BEAR TRIMMER 3-1/2" MINIMUM AT EACH END; PROVIDE EXTRA STUD AT BEARING END AND WEB STIFFENER AS SHOWN IN DETAIL 3/S501 AT EACH END OF TRIMMER AT BEARING WALL; PROVIDE "STRIONTIE" S/JCT METAL JOIST HANGER OR APPROVED EQUAL METAL HANGER AT EACH END OF FRAMED OPENING SIDE TRIMMERS AND AT FLOOR JOISTS INTERSECTING TRIMMERS; FASTEN HANGER TOP, SIDE, AND CONNECTED JOIST WITH #10 SCREWS WITH NUMBER SHOWN TO DEVELOP MAXIMUM ALLOWABLE LOAD TABULATED IN MANUFACTURER'S PRODUCT CATALOG, TYP
- C**--- METAL STRAP X-BRACE PER DETAIL 7/S501, TYP

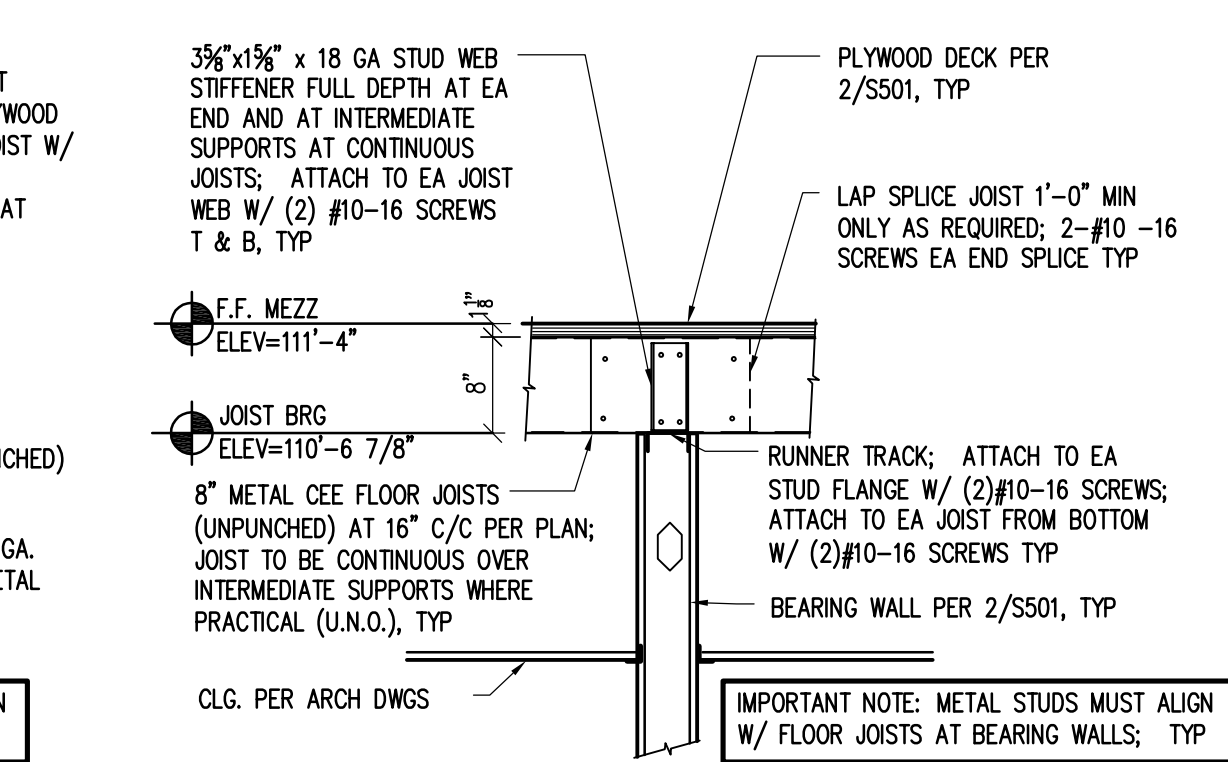


2 SECTION

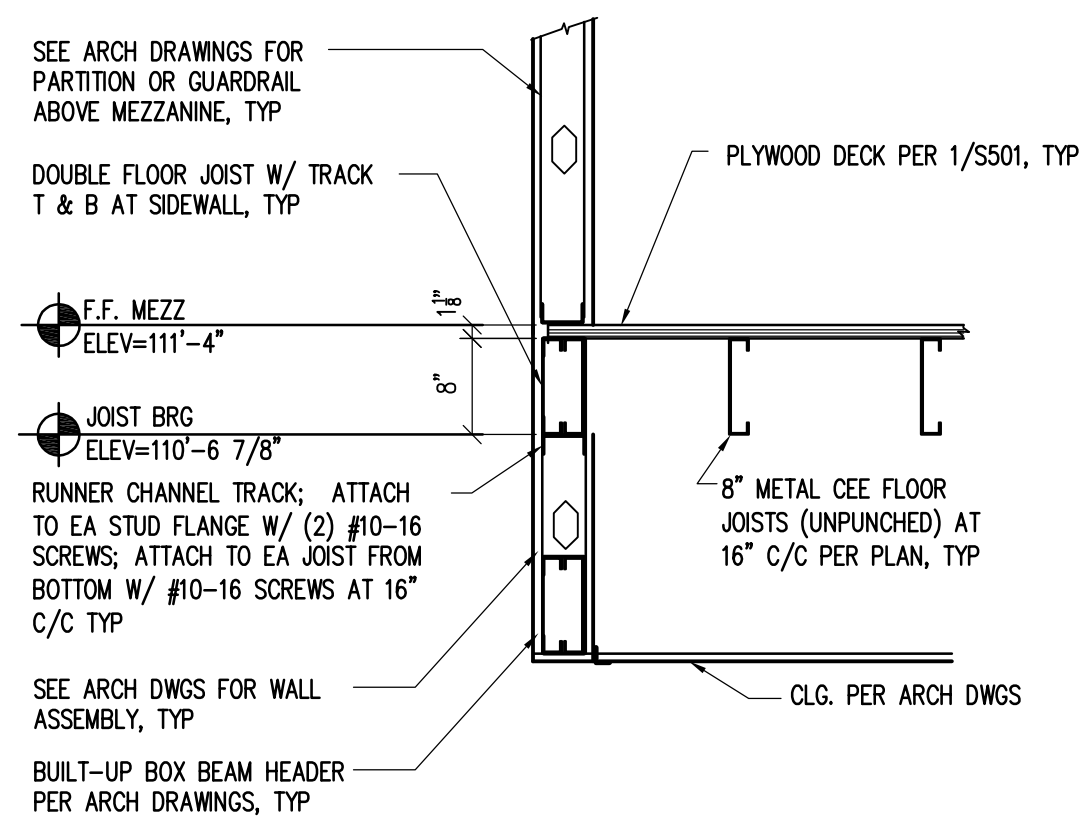
SCALE: 3/4" = 1'-0" TYP U.N.O.



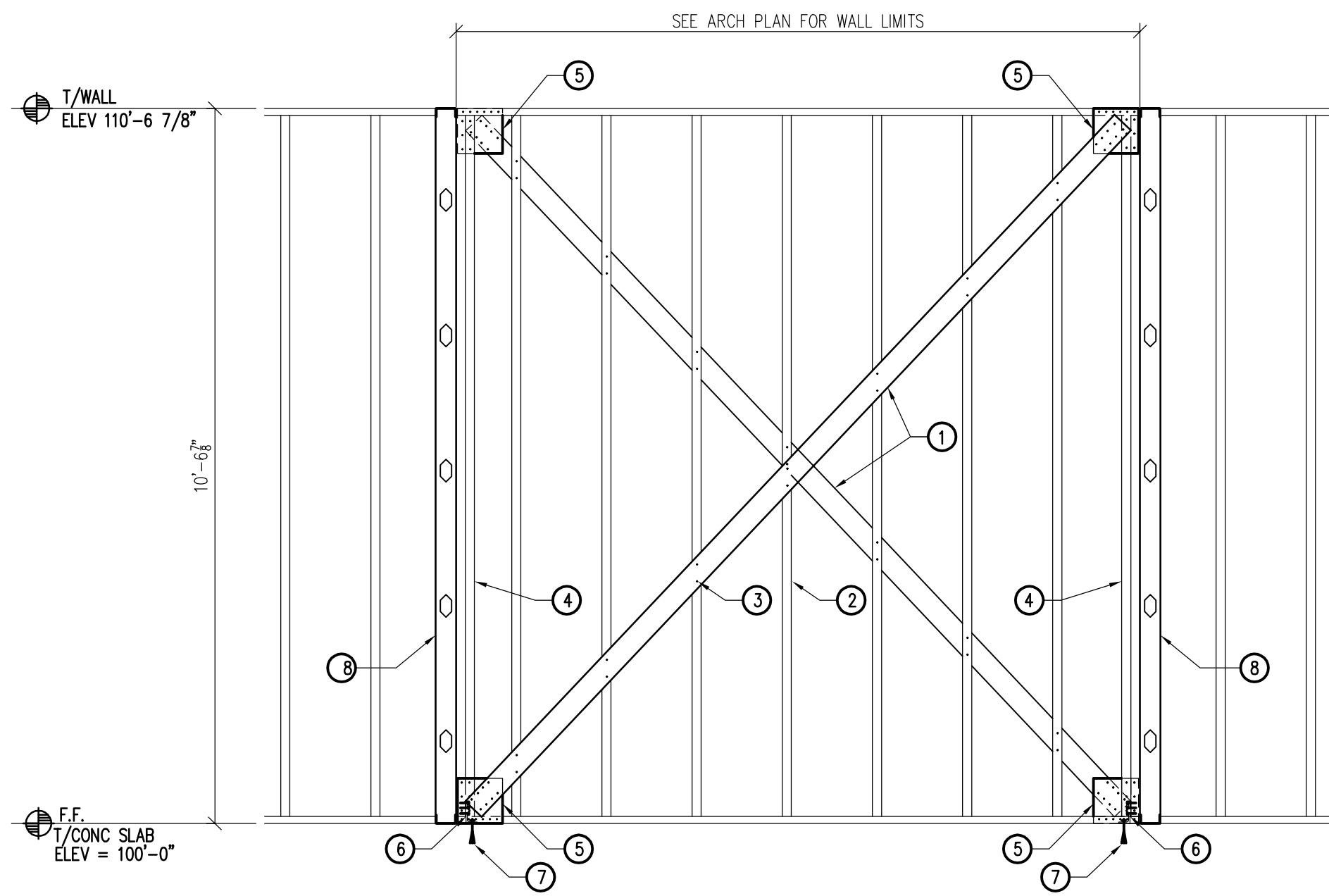
5 SECTION



3 SECTION



6 SECTION



GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR UNFORESEEN CONDITIONS AS SOON AS THEY ARE DISCOVERED.
2. ALL WALL DIMENSIONS ARE TO FACE OF EXISTING OR NEW FRAMING MEMBERS OR FACE OF MASONRY, CENTER LINE OF WINDOW, AND CENTER LINE OF COLUMNS. DOOR OPENING DIMENSIONS ARE TO EDGE OF OPENING. NOTIFY ARCHITECT IMMEDIATELY IF ANY DIMENSIONAL DISCREPANCIES OCCUR.
3. FINISH FLOOR ELEVATION 100'-0" IS REFERENCE ONLY. ELEVATION RELATED TO 100'-0" REFERENCE ELEVATION = 974.65' MEAN SEA LEVEL. REFER CIVIL.
4. CONTRACTOR TO PROVIDE CORNER GUARDS, NUMBER REQUIRED = 20
5. PARTITIONS SHALL BE SCHEDULE 1/A406 UNLESS OTHERWISE NOTED.
6. AREAS OF EXTERIOR WALLS SHOWN WITH CROSS HATCHING SHALL BE CONSTRUCTED W/P.E.M.B GIRTS, & PREFINISHED METAL "R" PANEL SIDING AS BASE BID. PROVIDE ADDITIVE ALTERNATE COST FOR 8" MTL. STUDS GYP. SHEATHING & PREFINISHED HORIZONTAL METAL PANELS AS SHOWN ON PLAN, ELEVS & SECTIONS.

KEY NOTES

- 1 MOP/BROOM HOLDER w/ SHELF (BOBRICK B224, 36" 8" DEEP SHELF, HOOKS, ROD) MOUNTED @ 60" A.F.F. TO BOTTOM OF SHELF
- 2 36" GRAB BAR (BOBRICK B-5806, 36", 18 GA.) MOUNTED AT 35" A.F.F. REF. INTERIOR ELEVATIONS
- 3 48" GRAB BAR (BOBRICK B-5806, 48", 18 GA.) MOUNTED AT 35" A.F.F. REF. INTERIOR ELEVATIONS
- 4 TOILET PAPER DISPENSER MOUNTED AT 47" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 5 SOAP DISPENSER MOUNTED AT 40" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 6 PAPER TOWEL DISPENSER MOUNTED AT 40" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 7 MIRROR (BOBRICK B-165 2440) MOUNTED @ 38" A.F.F. TO BOTTOM
- 8 SANITARY NAPKIN DISPENSER (BOBRICK B-270), MOUNTED AT 24" A.F.F. TO BOTTOM.
- 9 BRADLEY ROBE HOOK-932-00MOUNTED @ 42" A.F.F.
- 10 BRADLEY ROBE HOOK-932-00MOUNTED @ 60" A.F.F.
- 11 EXPOSED STEEL COLUMN, PAINT AS SCHEDULED, TYP.
- 12 GYP. BOARD FURR DOWN ON METAL STUDS, TEXTURE & PAINT. REFER REFLECTED CEILING PLAN.
- 13 FRP WAINSCOT TO 60" A.F.F. W/ GYP. BRD. ABOVE.
- 15 3 5/8" METAL STUD FURRING AT COLUMN.
- 16 SOLID SURFACE WINDOW SILLS TYP, REFER WINDOW DETAILS.
- 17 WALL AND FLOOR MOUNTED URINAL PARTITION
- 18 WALL MOUNTED HOSE REEL, REFER PLUMBING
- 19 8' TALL CHAIN LINK FENCE W/4'-0" GATE
- 20 24"x 24" LOCKERS, OWNER FURNISHED, CONTRACTOR INSTALLED
- 21 PERSONAL LOCKERS, OWNER FURNISHED, CONTRACTOR INSTALLED
- 22 FOLD DOWN ALUM. STAIR AS SPECIFIED.
- 23 SHOP SINKS, RELOCATED BY CONTRACTOR FROM CURRENT SHOPS IN DANIEL BLDG. TO NEW LOCATIONS SHOWN, COORDINATE WITH PLUMBING, OWNER PROVIDED, CONTRACTOR INSTALLED
- 24 FLOOR PICK-UP HOOD FOR DUST CONTROL SYSTEM, REFER MECHANICAL
- 25 VERTICAL GRAB BAR (BOBRICK B-5806 18", 18 GA.) REFER. INTERIOR ELEVATIONS
- 26 FLOOR MOUNTED 4" DIA. STEEL BOLLARD, REFER 7/SP201 & 11/A501
- 27 TWO-POST LIFT RELOCATED BY CONTRACTOR FROM CURRENT VEHICLE MAINTENANCE BAY TO NEW LOCATION AS SHOWN, COORDINATE WITH ELEC. & PLUMBING.

LEGEND

STUD WALL

1 HR. RATING STUD WALL

WALL NOTES:

1. AT METAL STUD WALLS LOCATE VERTICAL GYP. BRD. CONTROL JOINTS @ 24'-0" O.C. MAX. - REF. 4/A407

MARKER BOARD

TACK BOARD

ROOM NAME

ROOM NAME/NO & MATL. CODE LIST MARK

FIRE EXTINGUISHER ON BRACKET

RECESSED FIRE EXTINGUISHER CABINET

CORNER GUARDS (8" TALL)

EQUIPMENT (A) OWNER FURNISHED/CONTRACTOR INSTALLED

EQUIPMENT (B) OWNER FURNISHED/OWNER INSTALLED

SOAP DISPENSER, SEE KEY NOTE 5

PAPER TOWEL DISPENSER, SEE KEY NOTE 6

TOILET PAPER DISPENSER, SEE KEY NOTE 4

SANITARY NAPKIN, SEE KEY NOTE 8

36" GRAB BAR, SEE KEY NOTE 2

48" GRAB BAR, SEE KEY NOTE 3

INTERIOR ELEVATION REFERENCE MARKS

PARTITION REFERENCE MARKS

ELEVATION/SECTION MARKS

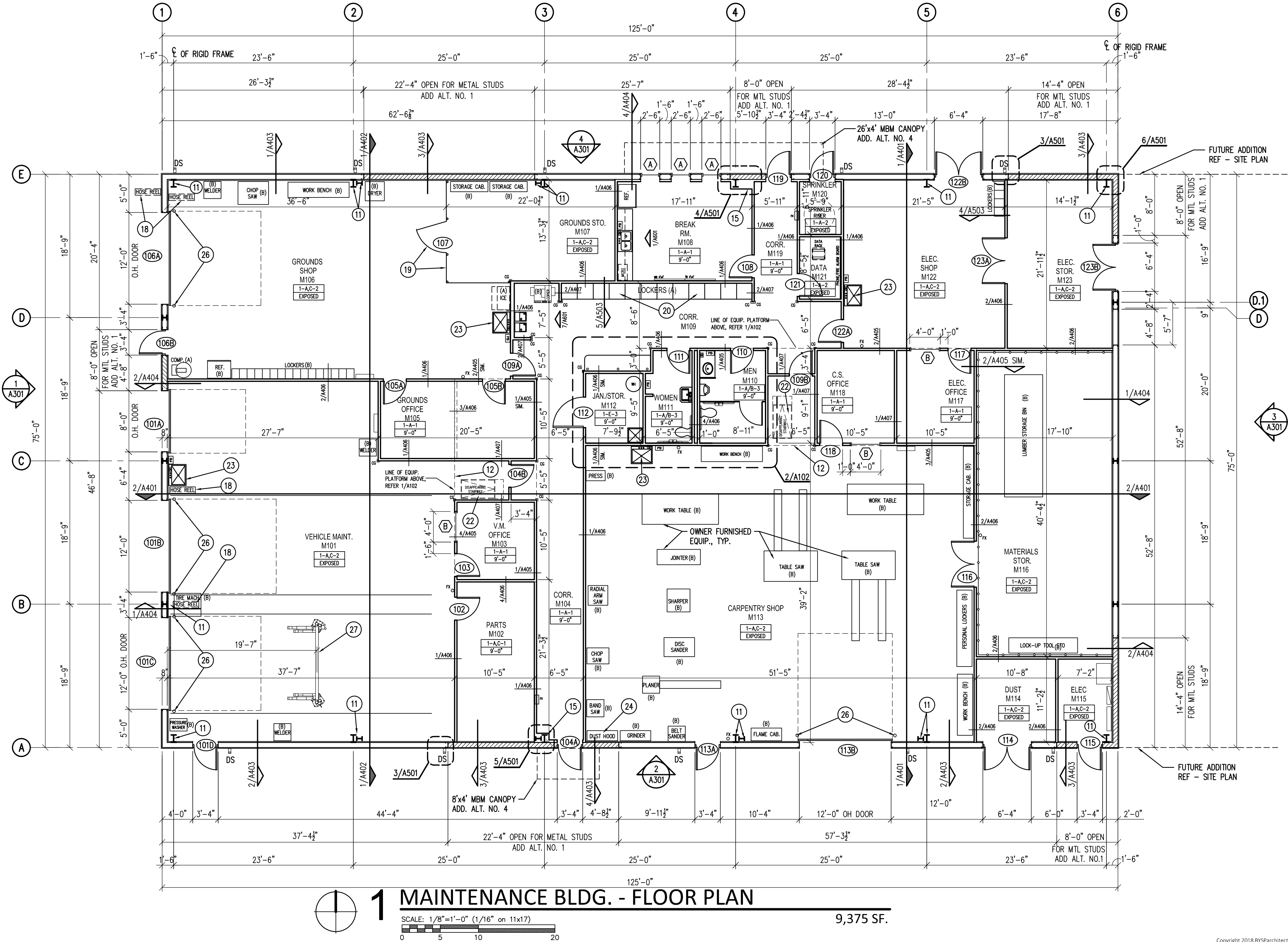
DOOR SCHEDULE MARK

GLAZING SCHEDULE MARK

KEYNOTE MARK

FLOOR/BASE	WALLS/WAINSCOT	CEILING
1	SEALED CONC. W/ 4" RUBBER BASE AT MTL. STD WALLS	2' x 2' SUSPENDED ACOUSTICAL CEILING TILE AND GRID (TYPE 1) (SEE NOTE 2)
2		OPEN EXPOSED STRUCTURE
3		2X2 SUSPENDED GYP. CLG. TILE & GRID (TYPE 2)
4		
5		

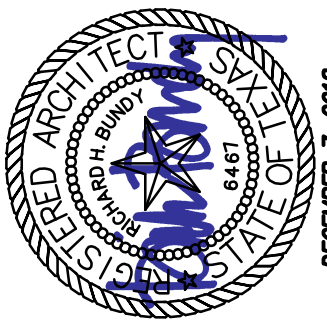
- ROOM MATERIAL NOTES:
1. PROVIDE ABUSE RESISTANT 5/8" CMB UP TO 8'-0" A.F.F. ALL WALLS, RATED 1 HOUR WHERE NOTED ON PLAN
2. PROVIDE HOLD DOWN CLIPS @ ALL EXTERIOR DOOR ENTRANCES



DESCRIPTION

DATE

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FLOOR PLAN

A101

NOTHING IS TO BE DONE TO THE BELOW ITEMS UNLESS AS SHOWN ON THIS, ELEV. & SECTIONS

KEY NOTES

- 1

MOP/BROOM HOLDER w/ SHELF (BOBRICK B224, 36" 8" DEEP SHELF, HOOKS, ROD) MOUNTED @ 60" A.F.F. TO BOTTOM OF SHELF
- 2

36" GRAB BAR (BOBRICK B-5806, 36", 18 GA.) MOUNTED AT 35" A.F.F. REF. INTERIOR ELEVATIONS
- 3

48" GRAB BAR (BOBRICK B-5806, 48", 18 GA.) MOUNTED AT 35" A.F.F. REF. INTERIOR ELEVATIONS
- 4

TOILET PAPER DISPENSER MOUNTED AT 47" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 5

SOAP DISPENSER MOUNTED AT 40" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 6

PAPER TOWEL DISPENSER MOUNTED AT 40" A.F.F. TO BOTTOM, OWNER FURNISHED CONTRACTOR INSTALLED.
- 7

MIRROR (BOBRICK B-165 2440) MOUNTED @ 38" A.F.F. TO BOTTOM
- 8

SANATARY NAPKIN DISPENSER (BOBRICK B-270), MOUNTED AT 24" A.F.F. TO BOTTOM.
- 9

BRADLEY ROBE HOOK-932-00MOUNTED @ 42" A.F.F.
- 10

BRADLEY ROBE HOOK-932-00MOUNTED @ 60" A.F.F.
- 11

EXPOSED STEEL COLUMN, PAINT AS SCHEDULED, TYP.
- 12

GYP. BOARD FURR DOWN ON METAL STUDS, TEXTURE & PAINT. REFER REFLECTED CEILING PLAN.
- 13

FRP WAINSCOT TO 60" A.F.F. W/ GYP. BRD. ABOVE.
- 15

3 5/8" METAL STUD FURRING AT COLUMN.
- 16

SOLID SURFACE WINDOW SILLS TYP, REFER WINDOW DETAILS.
- 17

WALL AND FLOOR MOUNTED URINAL PARTITION
- 18

WALL MOUNTED HOSE REEL, REFER PLUMBING
- 19

8" TALL CHAIN LINK FENCE W/4'-0" GATE
- 20

24"x 24" LOCKERS, OWNER FURNISHED, CONTRACTOR INSTALLED
- 21

PERSONAL LOCKERS, OWNER FURNISHED, CONTRACTOR INSTALLED
- 22

FOLD DOWN ALUM. STAIR AS SPECIFIED.
- 23

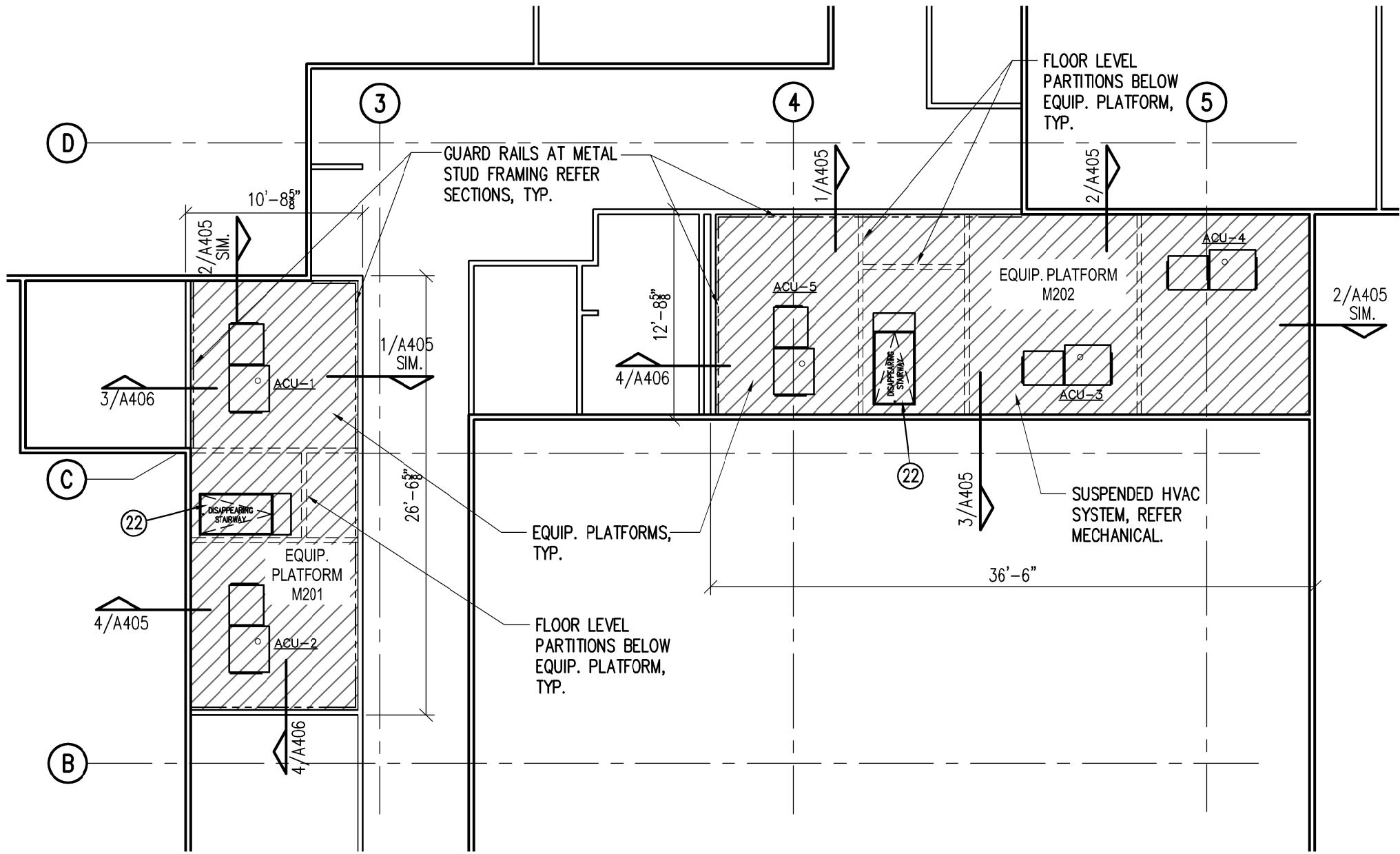
SHOP SINKS, OWNER PROVIDED, CONTRACTOR INSTALLED
- 24

FLOOR PICK-UP HOOD FOR DUST CONTROL SYSTEM, REFER MECHANICAL
- 25

VERTICLE GRAB BAR (BOBRICK B-5806 18", 18 GA.) REFER. INTERIOR ELEVATIONS
- 26

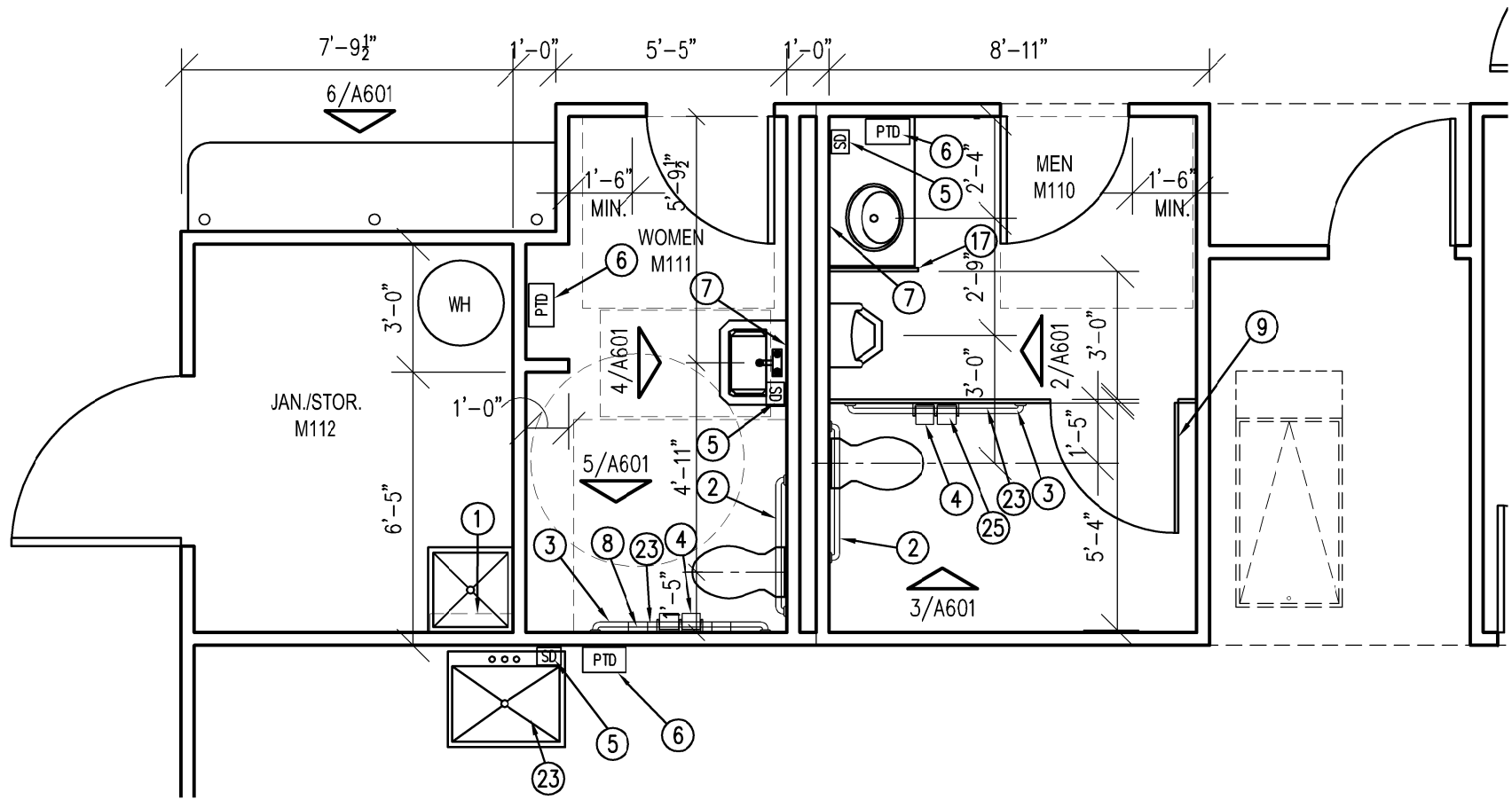
FLOOR MOUNTED 4" DIA. STEEL BOLLARD, REFER 9/A501
- 27

TWO-POST LIFT RELOCATED BY CONTRACTOR FROM CURRENT VEHICLE MAINTENANCE BAY TO NEW LOCATION AS SHOWN, COORDINATE WITH ELEC. & PLUMBING.



1 EQUIPMENT PLATFORM PLAN

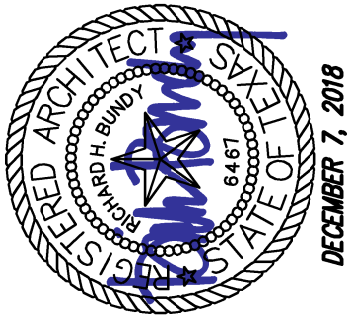
SCALE: 1/8"=1'-0" (1/16" on 11x17)



2 ENLARGED PLAN

SCALE: 1/4"=1'-0"

REV	DATE	DESCRIPTION



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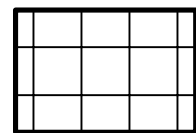
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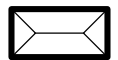
EQUIP. PLATFORM PLAN

A102

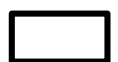
RCP LEGEND



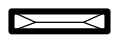
LAY-IN ACOUSTICAL CEILING HOLD DOWN W/CLIPS AT ALL ENTRIES



2x4 HIGH BAY LED REF - ELECTRICAL



2x4 LAY-IN LIGHT FIXTURE REF - ELECTRICAL



4' SUSPENDED LIGHT FIXTURE REF - ELECTRICAL



2x2 LAY-IN LIGHT FIXTURE REF - ELECTRICAL



UNDERCOUNTER LIGHT FIXTURE, REF - ELECTRICAL



EXIT LIGHT, REF - ELECTRICAL



SUPPLY AIR REGISTER - REF. MECHANICAL FOR ADDTL. INFORMATION



EXHAUST FAN - REF. MECHANICAL FOR ADDTL. INFORMATION



RETURN AIR REGISTER - REF. MECHANICAL FOR ADDTL. INFORMATION



RETURN AIR REGISTER - REF. MECHANICAL FOR ADDTL. INFORMATION



GYP. BRD. CEILING - TEXTURE & PAINT



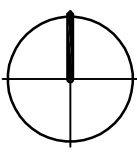
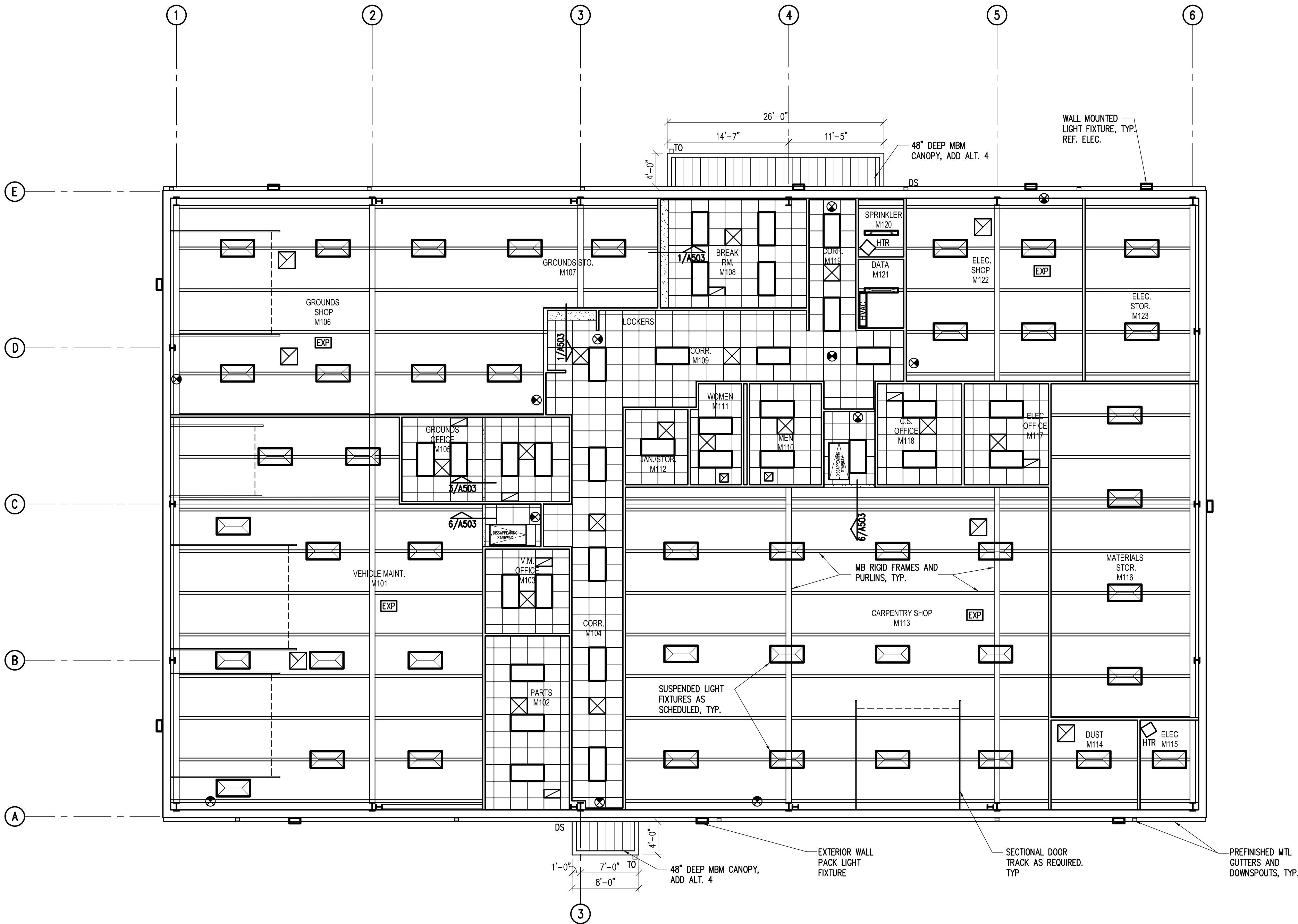
EXTERIOR WALL PACK FIXTURE, REF ELECTRICAL, & ARCH ELEVATIONS FOR HT. A.F.F.



EXPOSED STRUCTURE



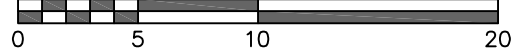
EXPOSED STRUCTURE



1

MAINTENANCE BLDG. - REFLECTIVE CEILING PLAN

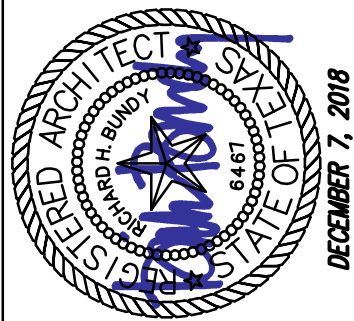
SCALE: 1/8"=1'-0" (1/16" on 11x17)



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



RCP

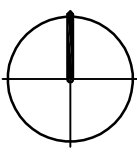
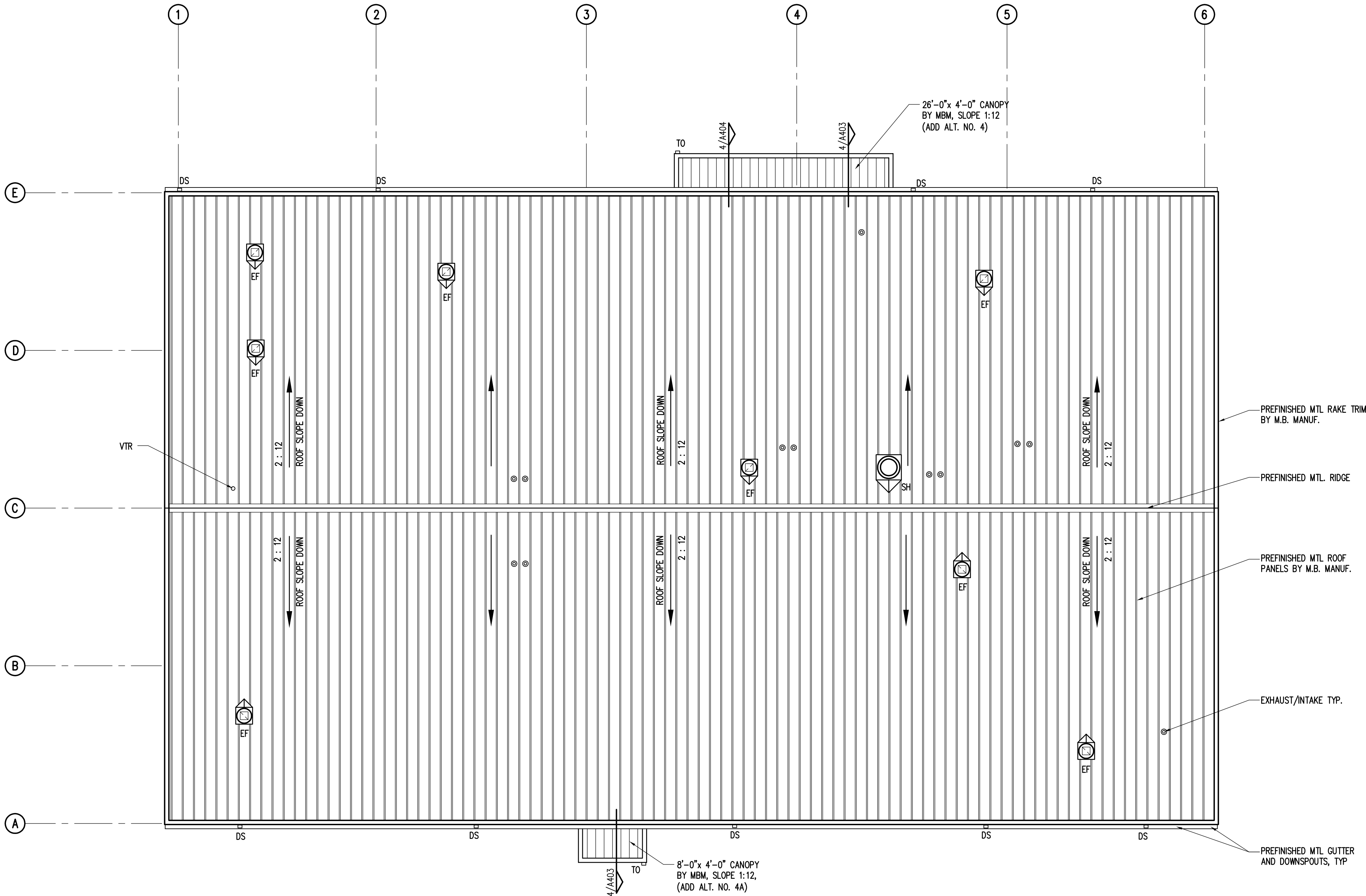
A103

NOTES:

1. TYPICAL ROOF SLOPE ON PREFINISHED MTL. ROOFING IS 2:12.
2. ARROWS INDICATE ROOF SLOPE DOWN.
3. "DS" DENOTES DOWNSPOUT, "TO" TURN OUT, "EF" DENOTES EXHAUST FAN, "VTR" DENOTES VENT THROUGH ROOF.
4. REFERENCE MECHANICAL, ELECTRICAL AND PLUMBING, FOR DETAIL INFORMATION REGARDING EXHAUST FAN, VENTS, ETC.
5. REFERENCE MECHANICAL, ELECTRICAL & PLUMBING FOR DETAIL INFORMATION REGARDING ROOF TOP UNITS AND EXHAUST FANS.
5. REFERENCE PLUMBING DRAWINGS FOR LOCATIONS OF PLUMBING, VENTS, 1/A502

LEGEND:

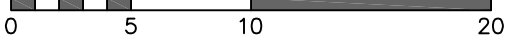
-  VENT THRU ROOF, REF 1/A502
-  EXHUAST FAN
-  EXHAUST/INTAKE, REFER TO MECH. 2/A502
-  FRESH AIR INTAKE, REFER MECH.



1

MAINTENANCE BLDG. - ROOF PLAN

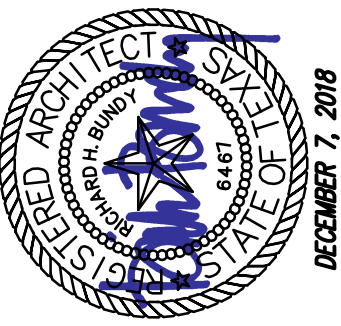
SCALE: 1/8"=1'-0" (1/16" on 11x17)



DESCRIPTION

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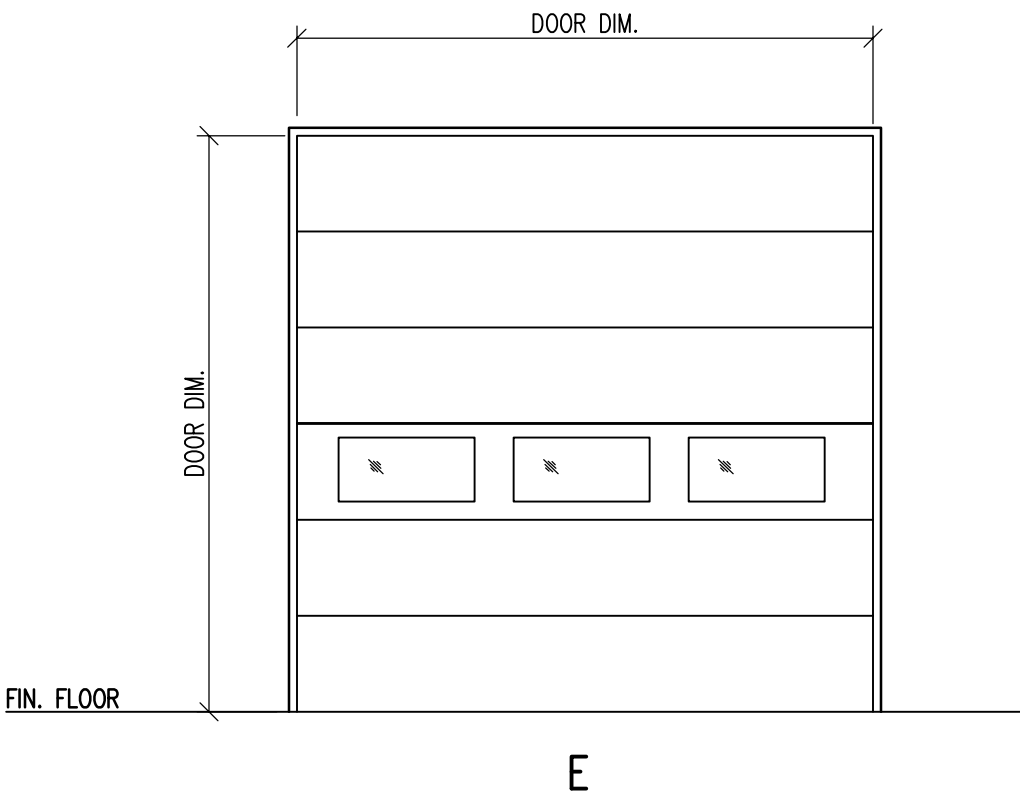
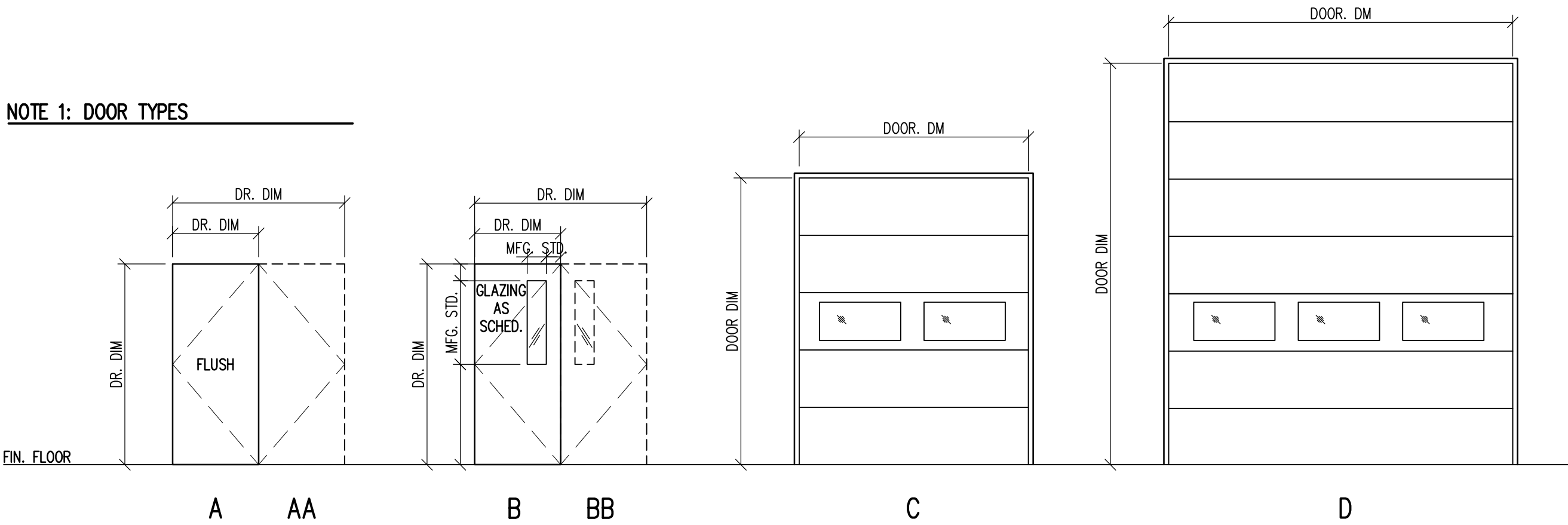
18002

ROOF PLAN

A104

DOOR NOTES

NOTE 1: DOOR TYPES



NOTE 2: DOOR CONSTRUCTION TYPES

- WD - SOLID CORE WOOD, PREFINISHED
- HM - HOLLOW METAL, PAINTED
- HMI - HOLLOW METAL INSULATED, PAINTED
- ST - INSULATED STEEL SECTIONAL DOOR PREFINISHED

NOTE 3: GLASS TYPES

- TNI - 1" TINTED TEMPERED INSULATED, LOW "E" GLASS
- TP - 1/4" CLEAR TEMPERED

NOTE 4: DOOR FRAME TYPES

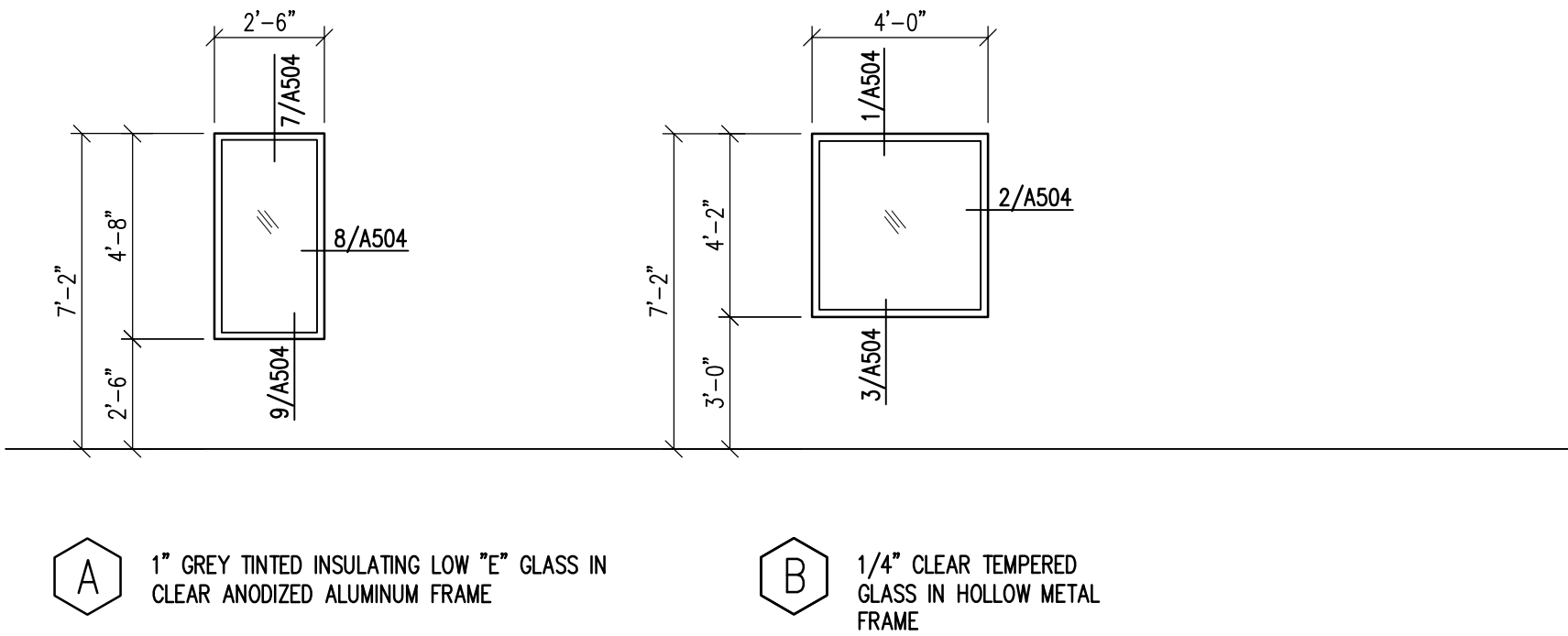
- HM - HOLLOW METAL, PAINTED
- HMI - HOLLOW METAL INSULATED, PAINTED
- ST - STEEL, GALVANIZED

NOTE 5: REMARKS

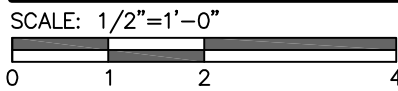
- A. MANUAL DOORS, EQUIPPED W/CHAIN MECHANISM, LATCH SLIDE AS SPECIFIED

TYPICAL DOOR FRAME LOCATION
U.N.O. 4" FORM CORNER OF WALL
OUTSIDE FACE OF FRAME

WINDOW SCHEDULE

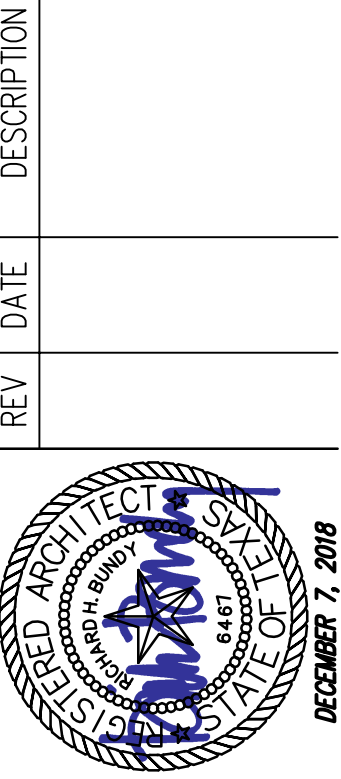


DOOR FRAME DETAIL



DOOR SCHEDULE

DOOR MARK	OPENING SIZE	TYPE (NOTE 1)	THICKNESS IN INCHES	CONSTRUCTION (2)	GLASS (NOTE 3)	RATING	FRAME TYPE (4)	HEAD	JAMB	SILL	REMARKS (5)
PD BLDG - BASE BID											
101A	8'-0" x 10'-0"	C	2"	ST	TNI		ST	13/A504	16/A504		MANUAL OVERHEAD SECTIONAL DOOR, NOTE A VEHICLE MAINT M101
101B	12'-0" x 14'-0"	D	2"	ST	TNI		ST	13/A504	16/A504		MOTORIZED OVERHEAD SECTIONAL DOOR VEHICLE MAINT M101
101C	12'-0" x 12'-0"	E	2"	ST	TNI		ST	13/A504	16/A504		MOTORIZED OVERHEAD SECTIONAL DOOR VEHICLE MAINT M101
101D	3'-0" x 7'-0"	B	1 3/4"	HMI	TNI		HMI	10/A504	11/A504	6/A504	VEHICLE MAINT M101
102	3'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		PARTS M102
103	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		V.M. OFFICE M103
104A	3'-0" x 7'-0"	B	1 3/4"	HMI	TNI		HMI	14/A504	15/A504	6/A504	CORRIDOR M104
104B	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		CORRIDOR M104
105A	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		GROUND'S OFFICE M105
105B	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		GROUND'S OFFICE M105
106A	12'-0" x 12'-0"	E	2"	ST	TNI		ST	13/A504	16/A504		MOTORIZED OVERHEAD SECTIONAL DOOR
106B	3'-0" x 7'-0"	B	1 3/4"	HMI	TNI		HMI	10/A504	11 & 15/A504		GROUND'S SHOP M106
107	4'-0" x 8'-0"	-	-	-	-		-	-	-		CHAIN LINK GATE
108	3'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		BREAK RM. M108
109A	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		CORRIDOR M109
109B	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		CORRIDOR M109
110	3'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		MEN M110
111	3'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		WOMEN M111
112	4'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		JAN./STO. M112
113A	3'-0" x 7'-0"	B	1 3/4"	HMI	TNI		HMI	10/A504	11/A504	6/A504	CARPENTRY M113
113B	12'-0" x 12'-0"	E	2"	ST	TNI		ST	13/A504	16/A504		MOTORIZED OVERHEAD SECTIONAL DOOR
114	PR. 3'-0" x 7'-0"	AA	1 3/4"	HMI	-		HMI	10/A504	11/A504	6/A504	DUST M114
115	3'-0" x 7'-0"	A	1 3/4"	HMI	-		HMI	14/A504	15/A504	6/A504	ELECTRICAL RM. M115
116	PR. 3'-0" x 7'-0"	AA	1 3/4"	HM	-	45 MIN.	HM	4/A504	5/A504		MATERIALS STO. M116
117	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		ELEC. OFFICE M117
118	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		C.S. OFFICE M118
119	3'-0" x 7'-0"	B	1 3/4"	HMI	TP		HMI	10/A504	11 & 15/A504	6/A504	CORRIDOR M119
120	3'-0" x 7'-0"	A	1 3/4"	HMI	-		HMI	10/A504	11/A504	6/A504	SPRINKLER M120
121	3'-0" x 7'-0"	A	1 3/4"	WD	-		HM	4/A504	5/A504		DATA M121
122A	3'-0" x 7'-0"	B	1 3/4"	WD	TP		HM	4/A504	5/A504		ELEC. SHOP M122
122B	PR. 3'-0" x 7'-0"	BB	1 3/4"	HMI	TP		HMI	10/A504	11/A504	6/A504	ELEC. SHOP M122
123A	PR. 3'-0" x 7'-0"	BB	1 3/4"	HMI	TP		HM	4/A504	5/A504		ELEC. STOR. M123
123B	PR. 3'-0" x 7'-0"	AA	1 3/4"	HMI	TP		HMI	10/A504	11/A504	6/A504	ELEC. STOR. M123



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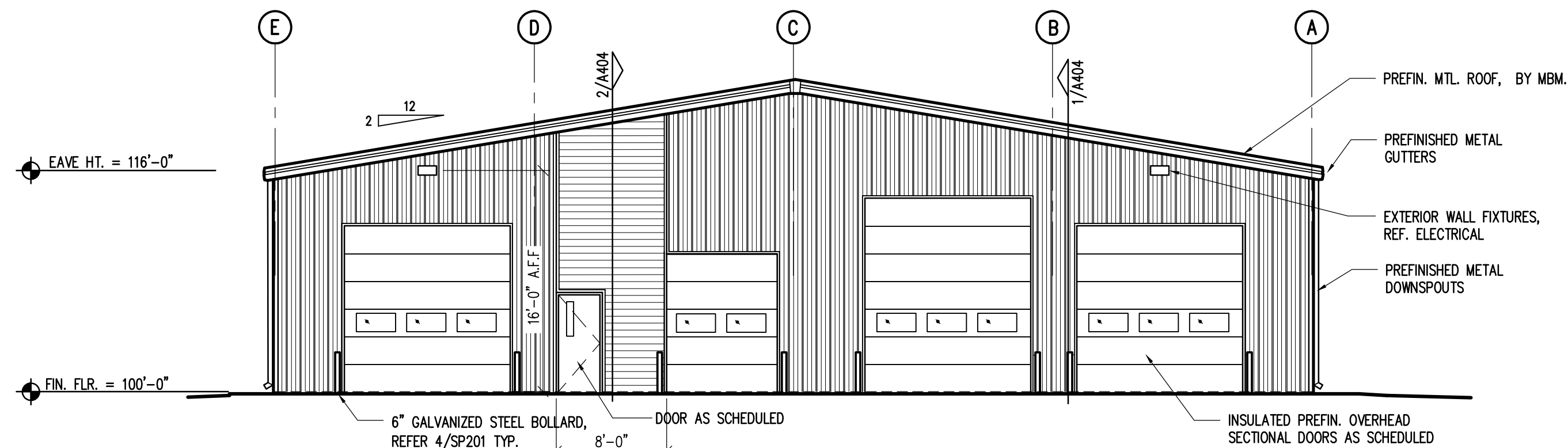
BYP architects

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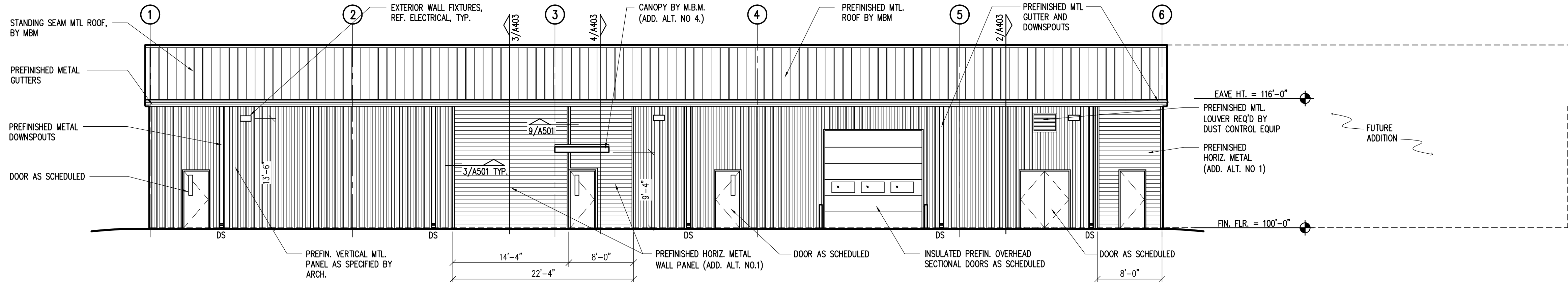
DOOR & WINDOW
SCHEDULE

A201



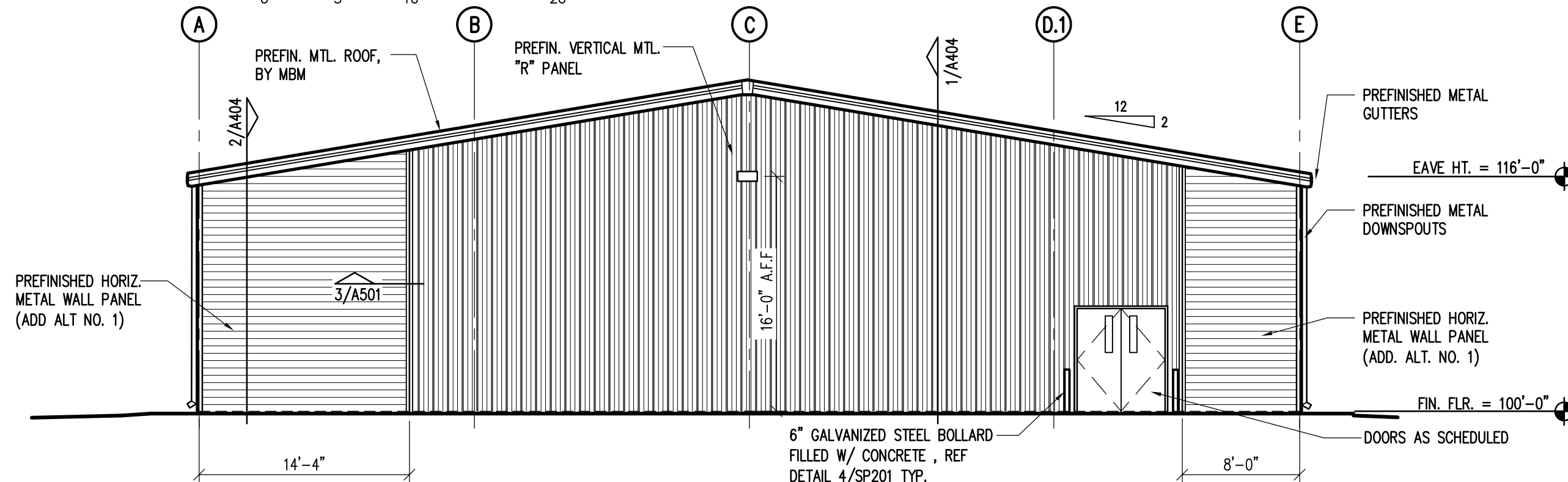
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SCALE: 1/8"=1'-0" (1/16" on 11x17)



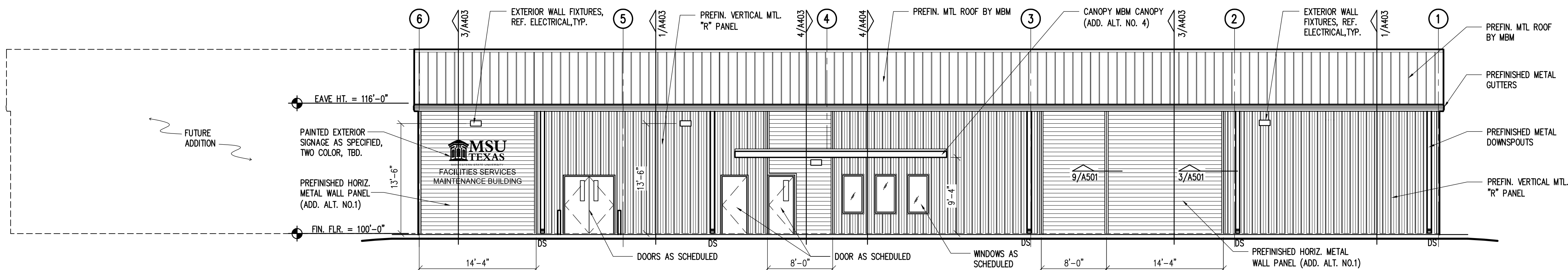
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SCALE: 1/8"=1'-0" (1/16" on 11x17)



3 MAINT. BLDG. - EAST ELEVATION

SCALE: 1/8"=1'-0" (1/16" on 11x17)



4 MAINT. BLDG. - SOUTH ELEVATION

SCALE: 1/8"=1'-0" (1/16" on 11x17)

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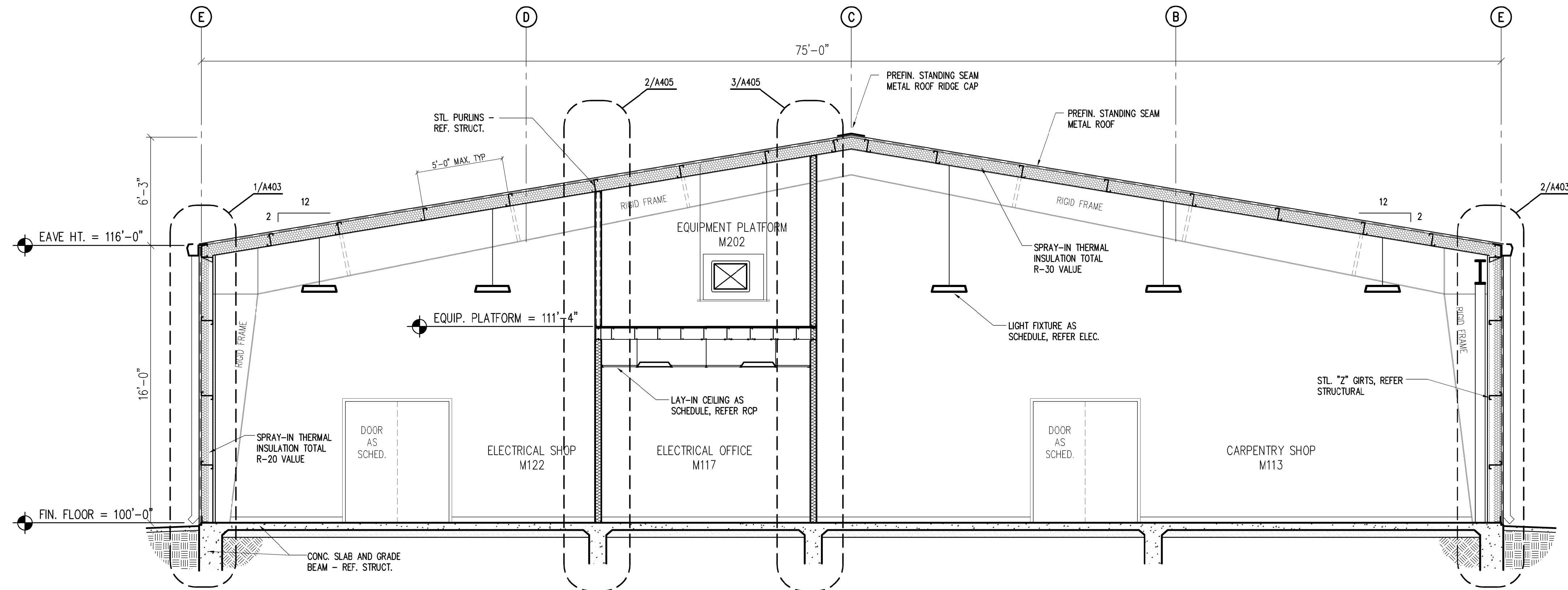
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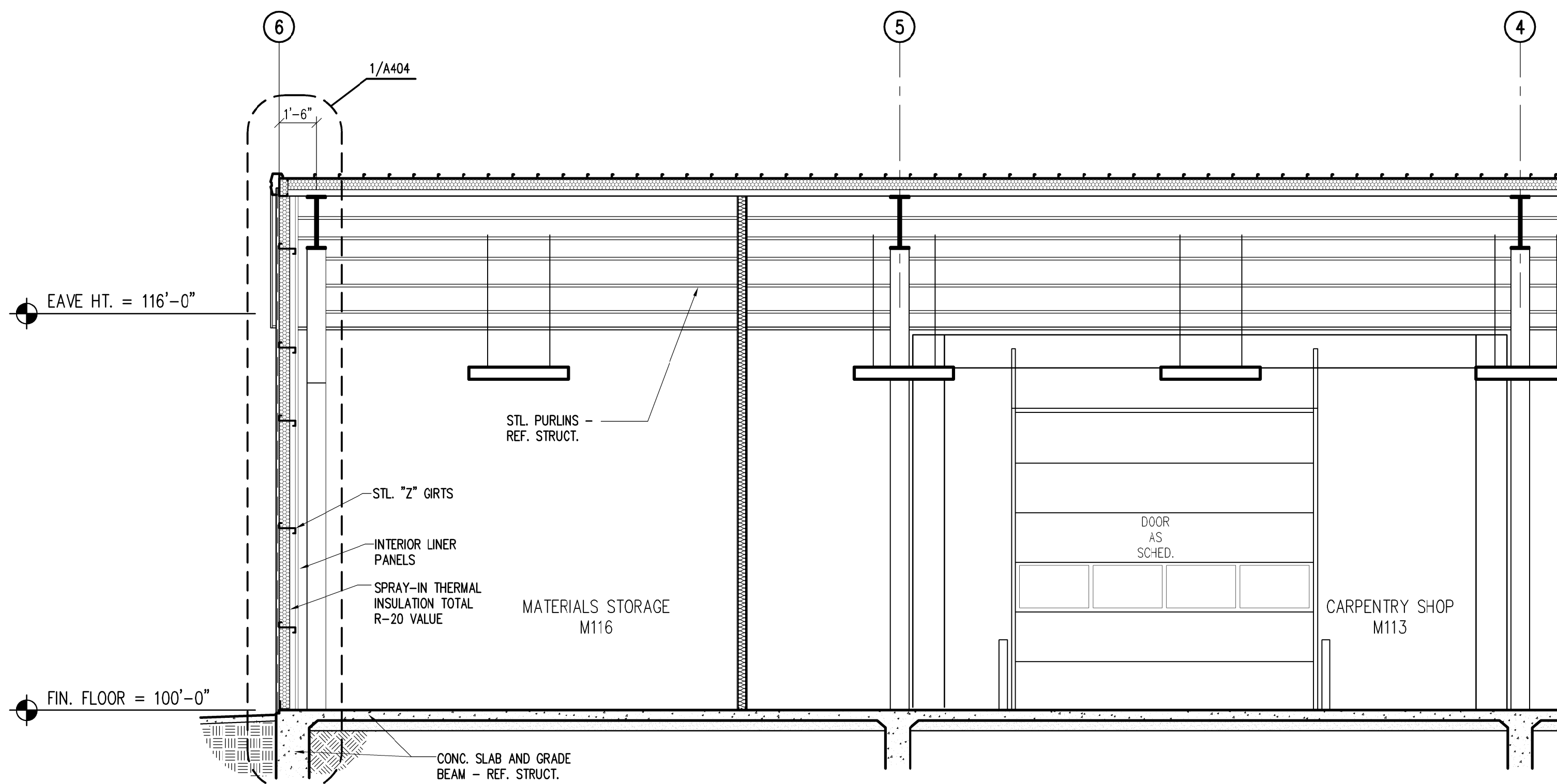
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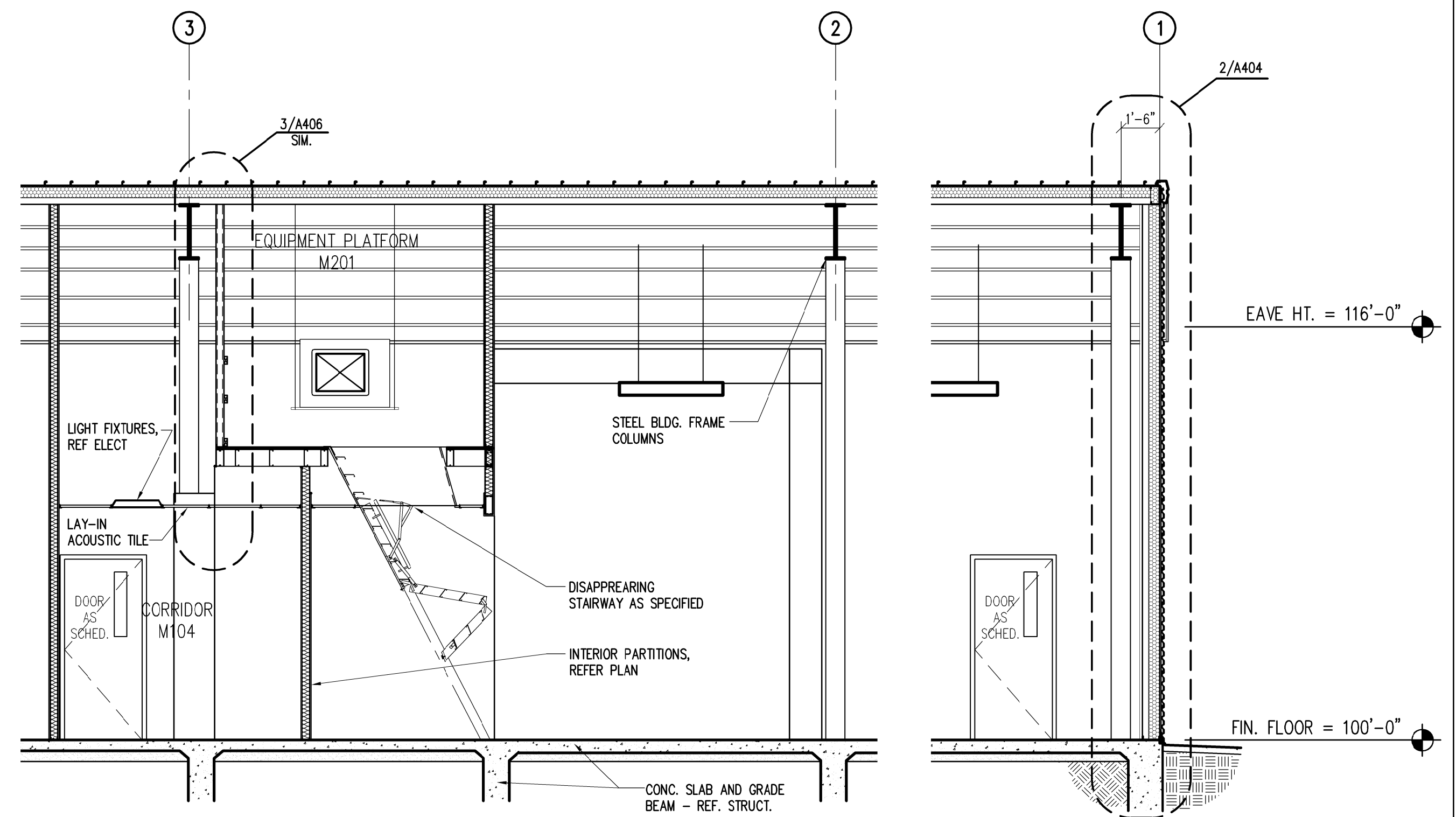
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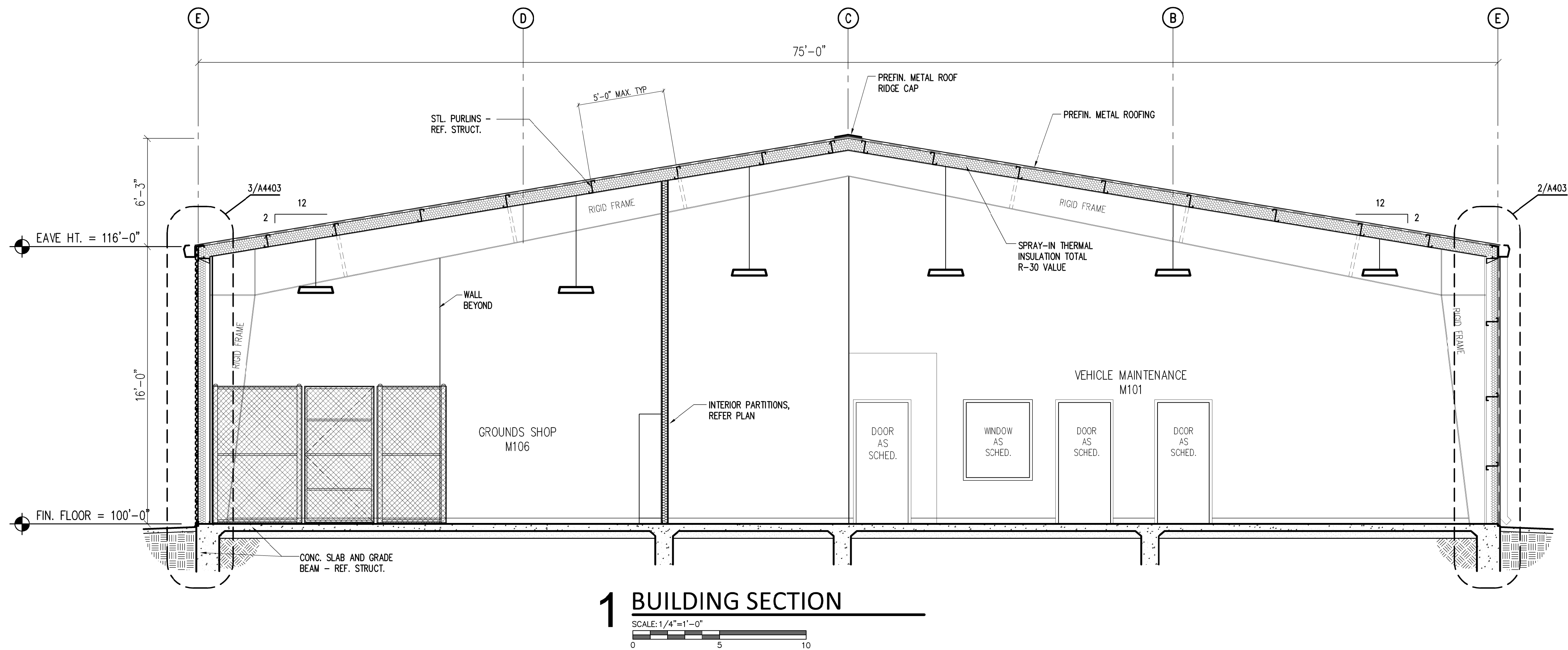
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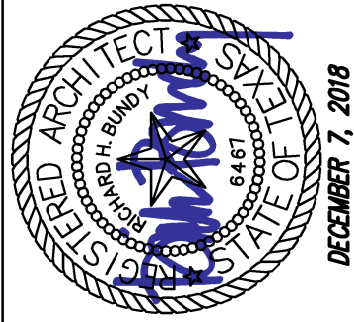
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SCALE: 3/16"=1'-0"





REV	DATE	DESCRIPTION



NEW FACILITIES SERVICES
MAINTENANCE
BUILDING



MSU
TEXAS
MIDWESTERN STATE UNIVERSITY

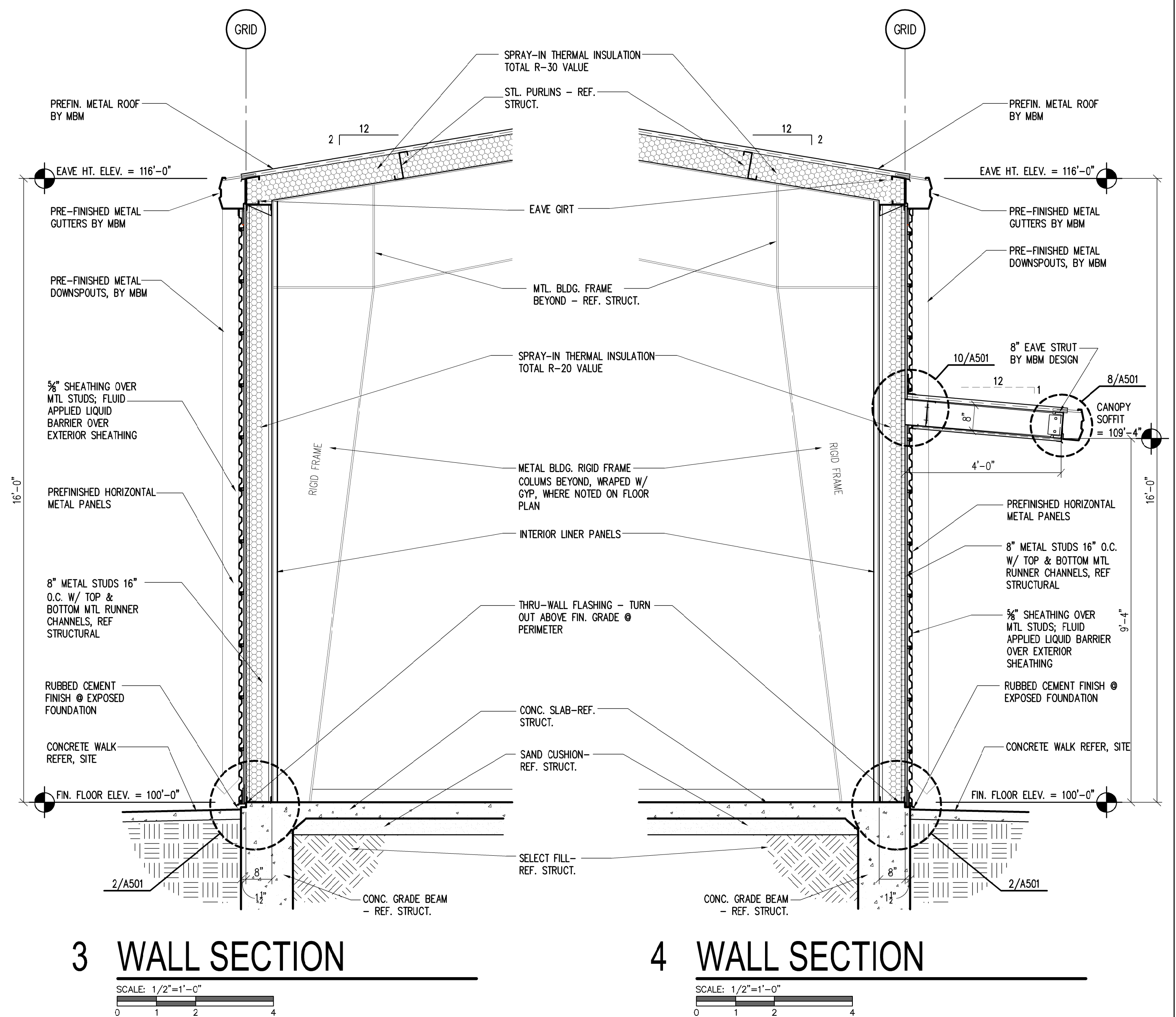
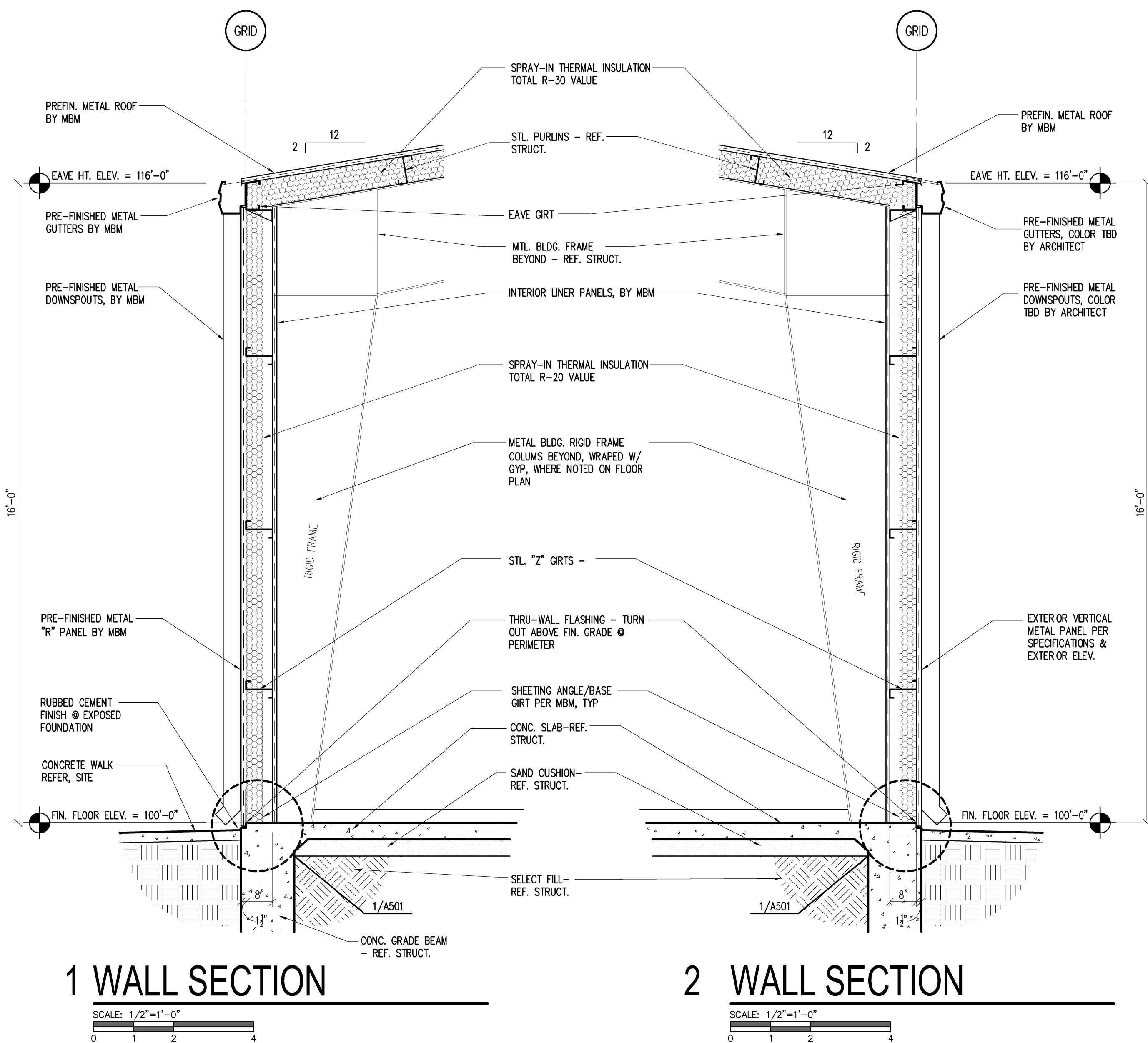
BYSParchitects

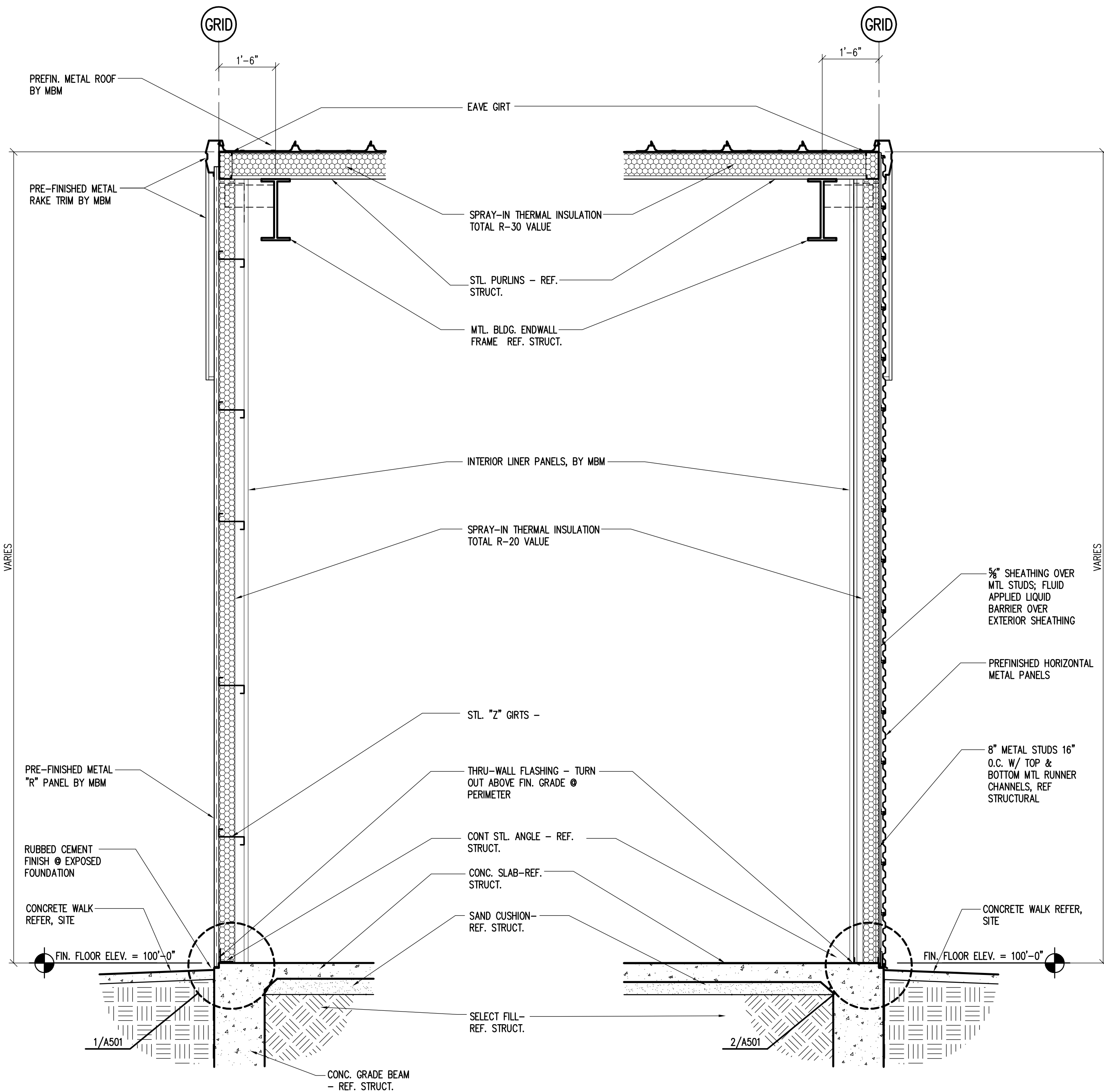
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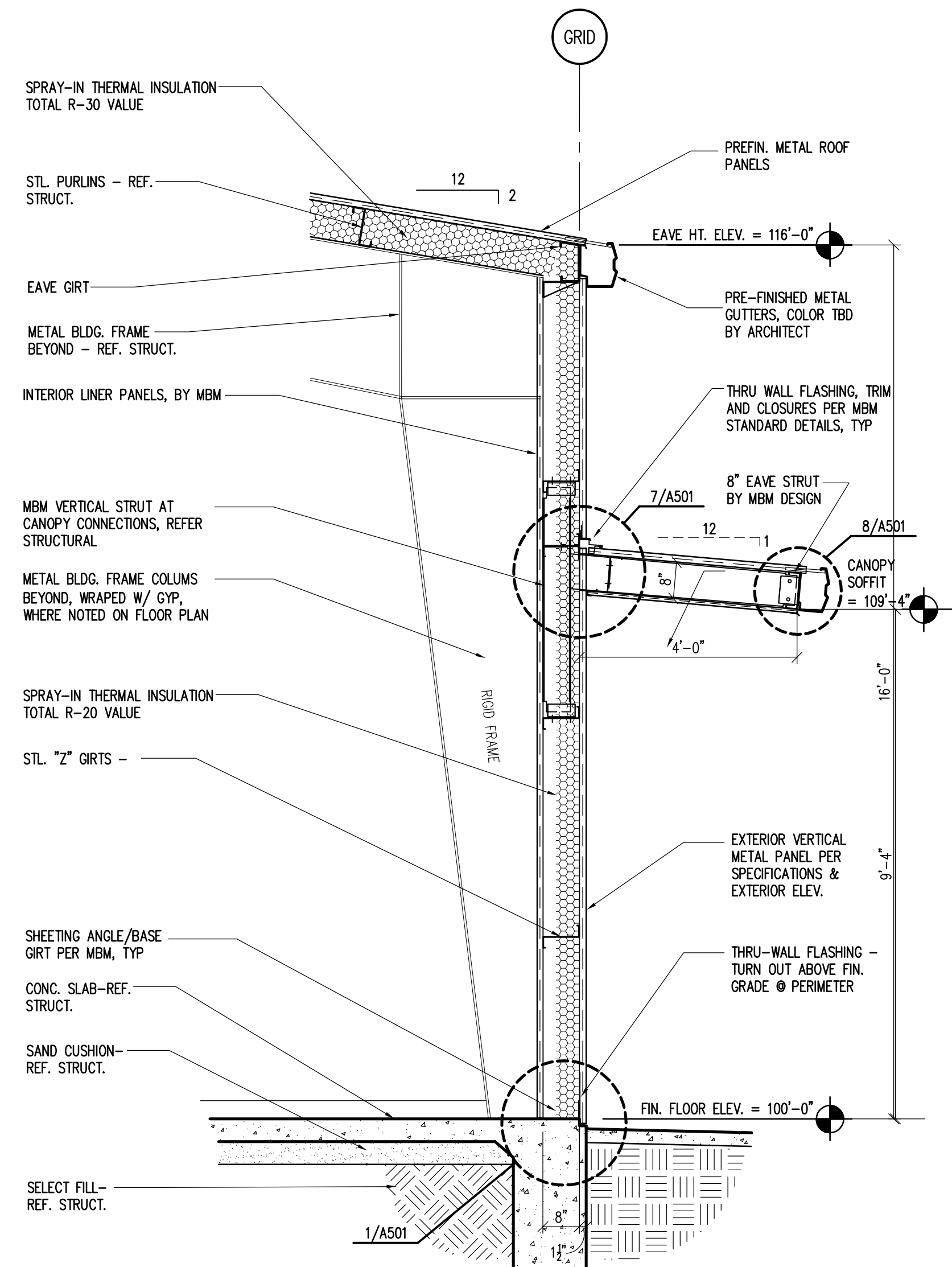
EXTERIOR WALL
SECTIONS

A402





NOT USED



REV	DATE	DESCRIPTION

NEW FACILITIES SERVICES
MAINTENANCE
BUILDING

MSU
TEXAS

MIDWESTERN STATE UNIVERSITY

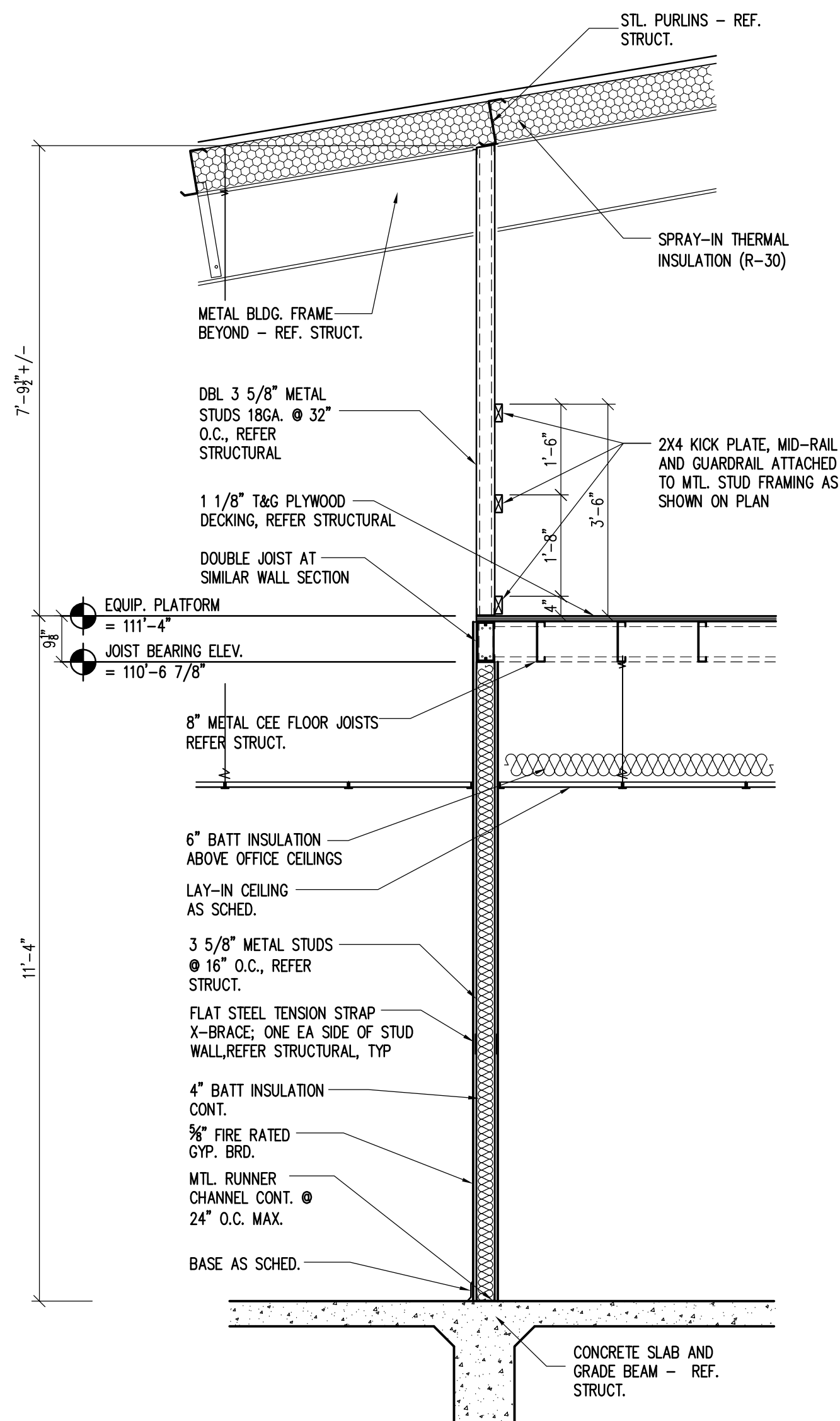
BYS Architects

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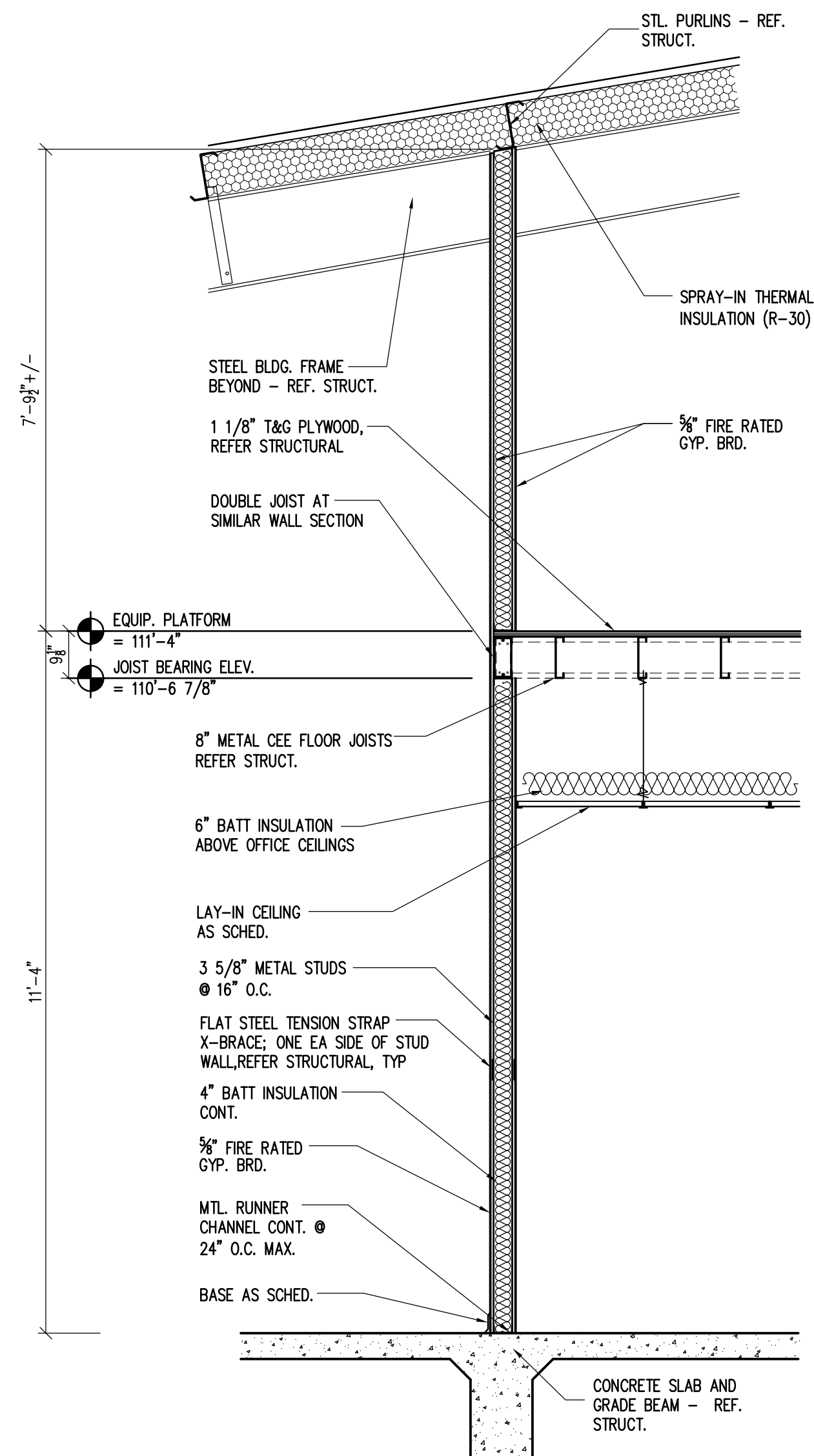
WALL SECTIONS

A404



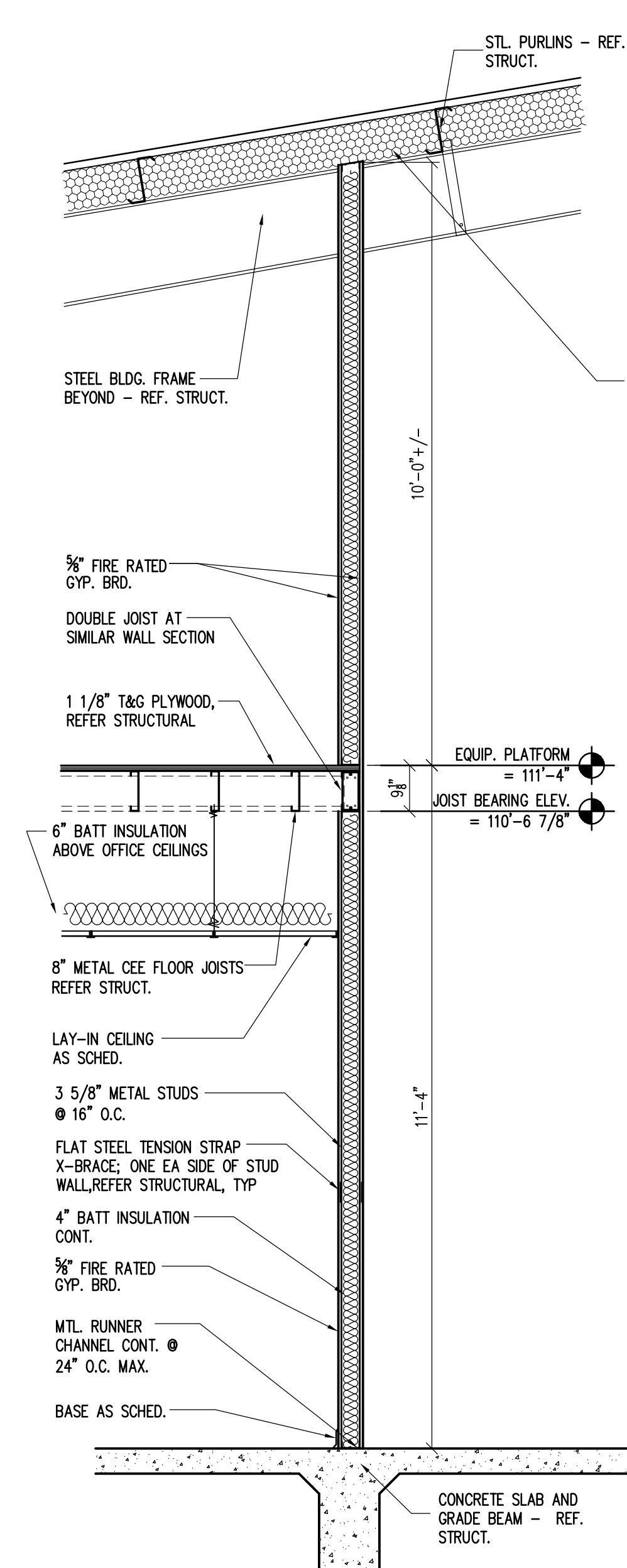
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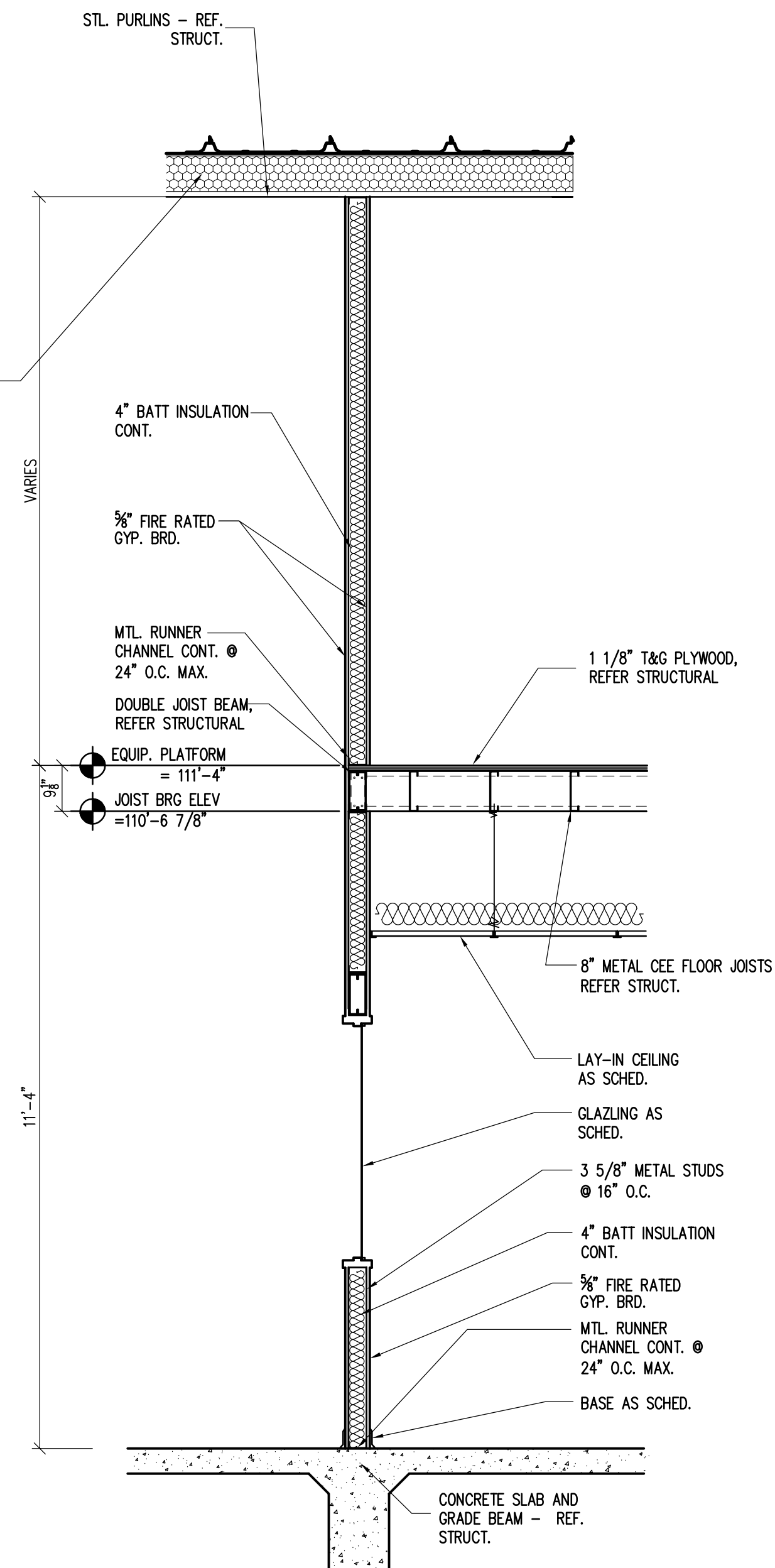
2 WALL SECTION

SCALE: 1/2"=1'-0"



3 WALL SECTION

SCALE: 1/2"=1'-0"



4 WALL SECTION

SCALE: 1/2"=1'-0"

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NEW FACILITIES SERVICES
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BUILDING

MSU
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MIDWESTERN STATE UNIVERSITY

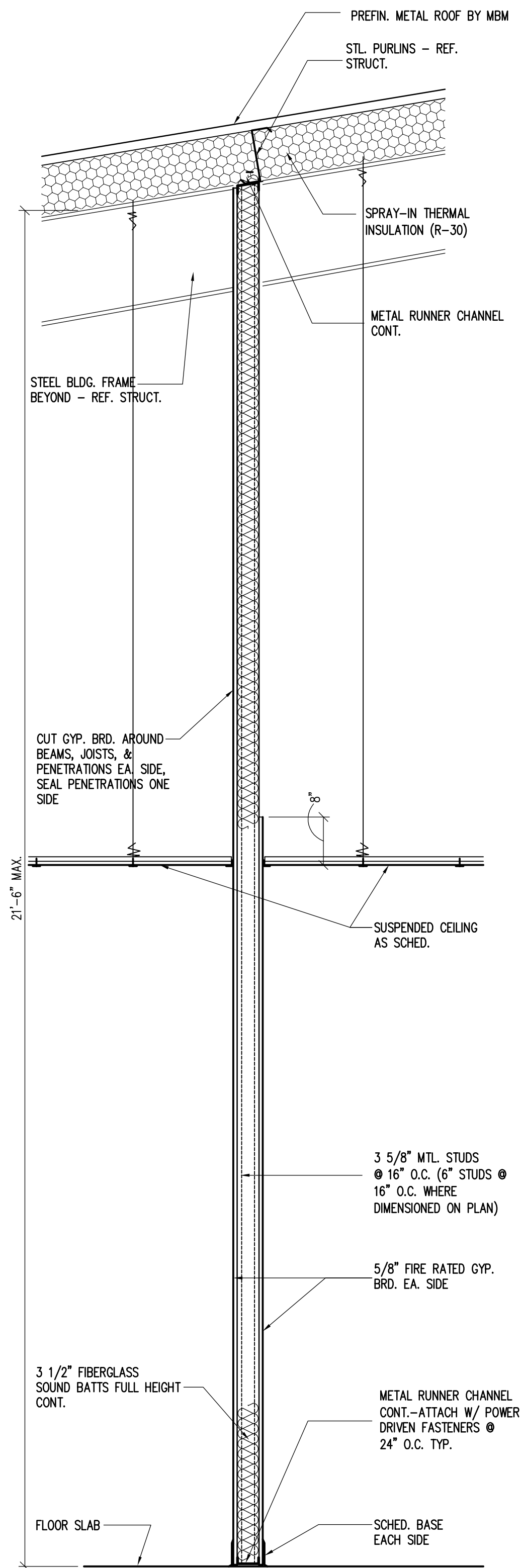
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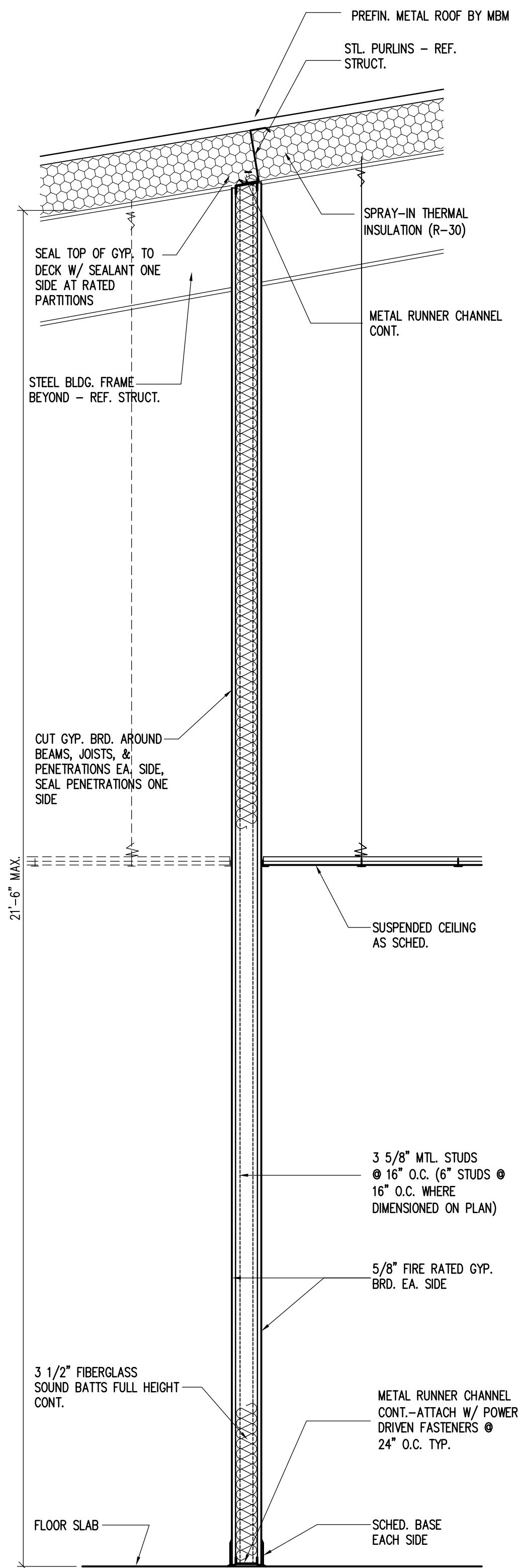
WALL SECTIONS

A405



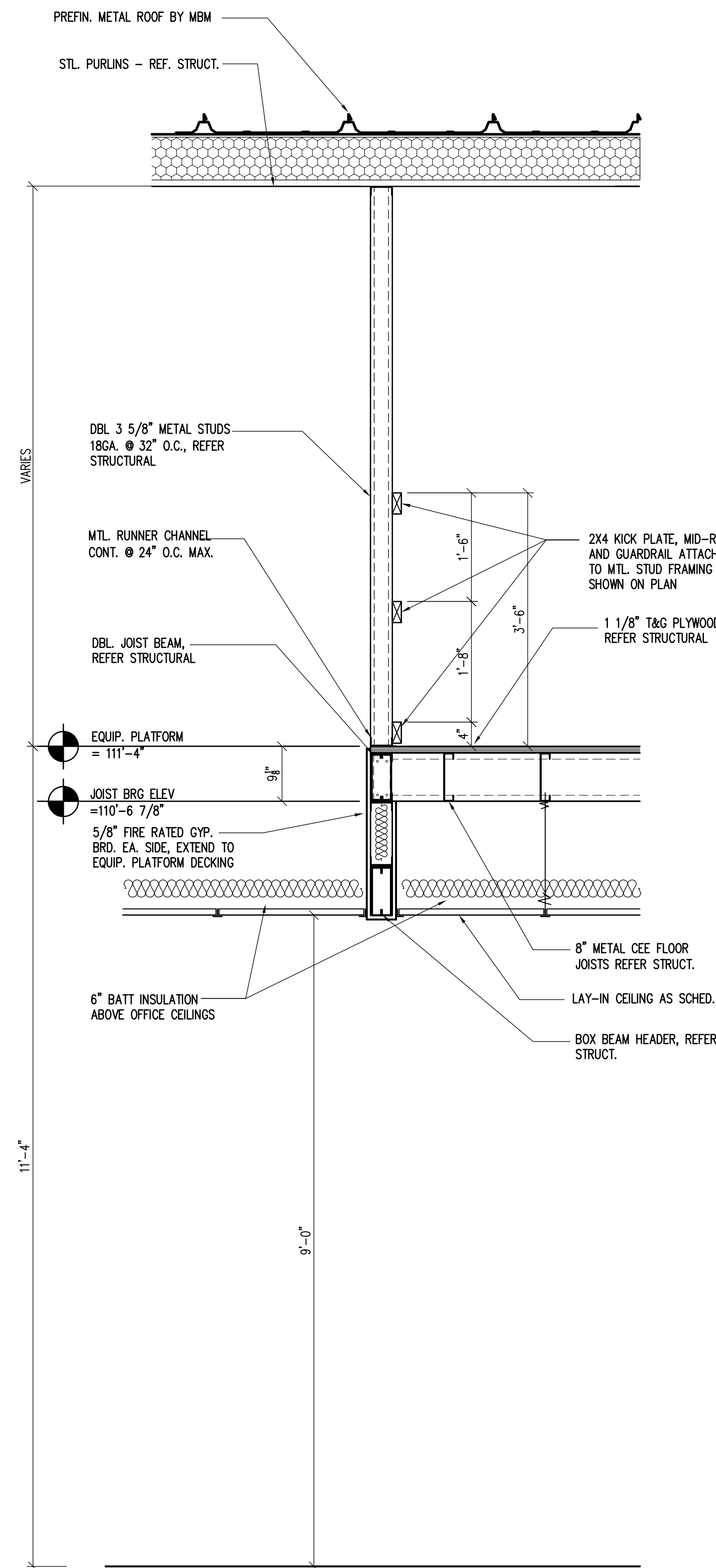
1 PARTITION SECTION

SCALE: 3/4"=1'-0"
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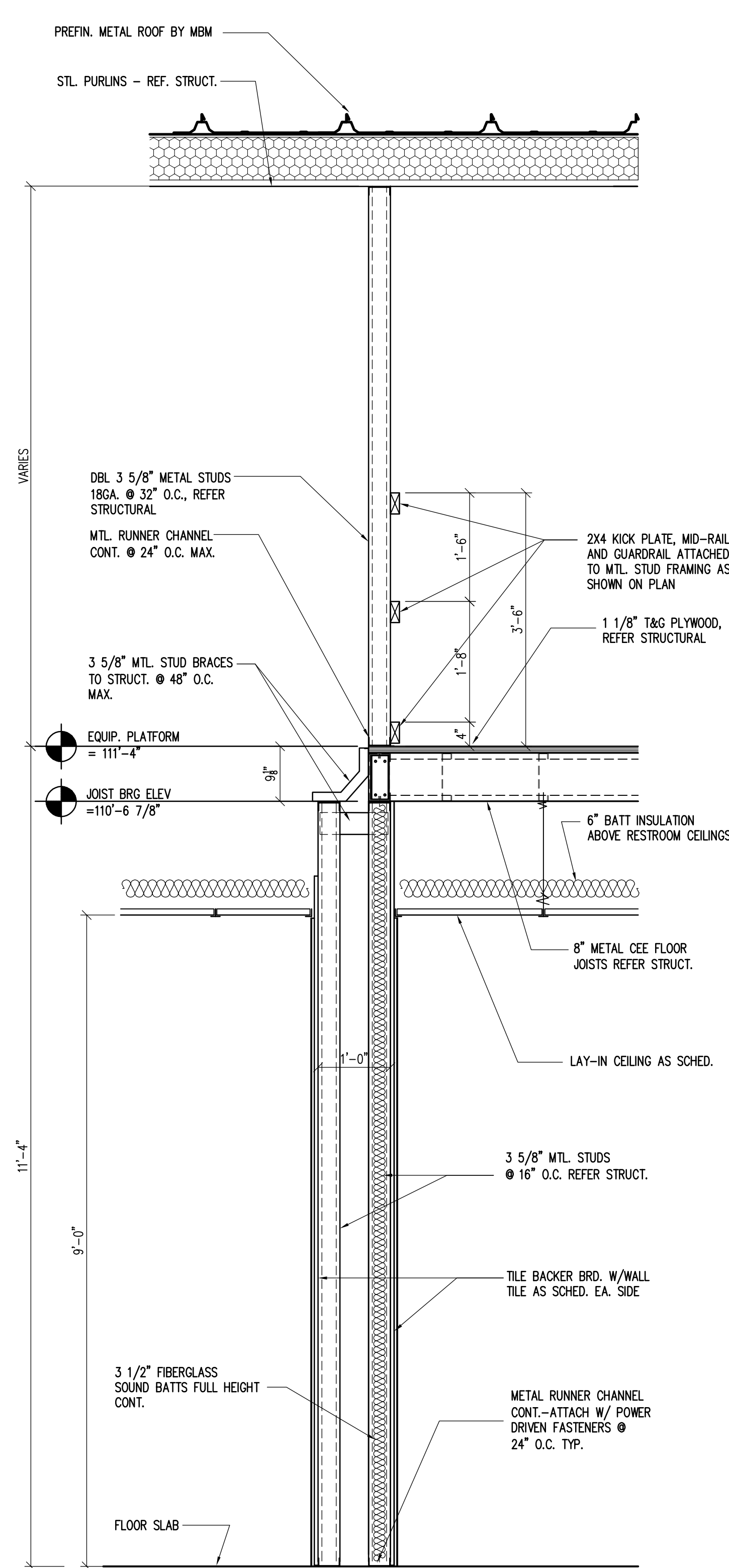
2 PARTITION SECTION

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3 PARTITION SECTION

SCALE: 3/4"=1'-0"
0 1 2 3



4 PARTITION SECTION

SCALE: 3/4"=1'-0"
0 1 2 3

REV	DATE	DESCRIPTION



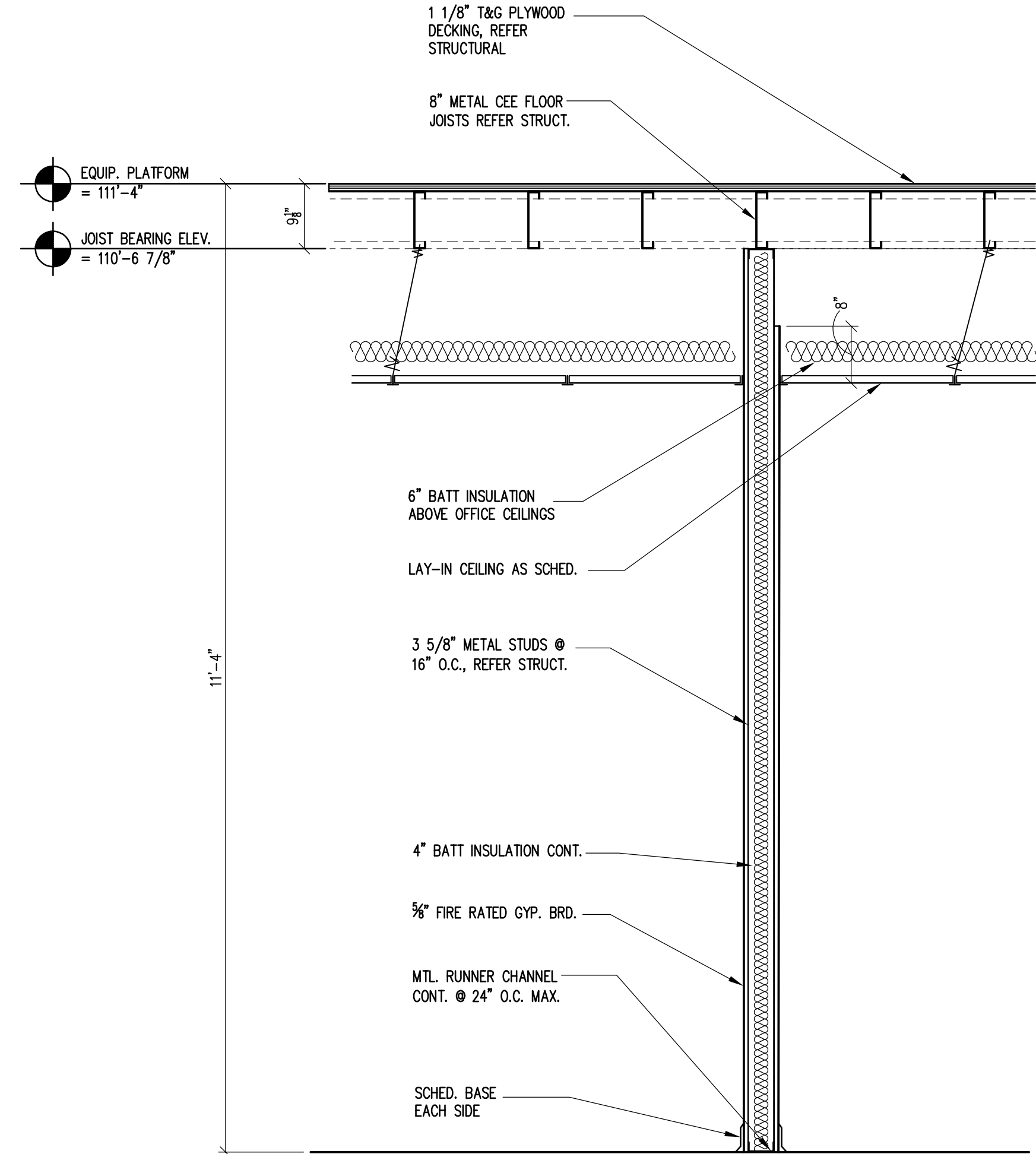
NEW FACILITIES SERVICES
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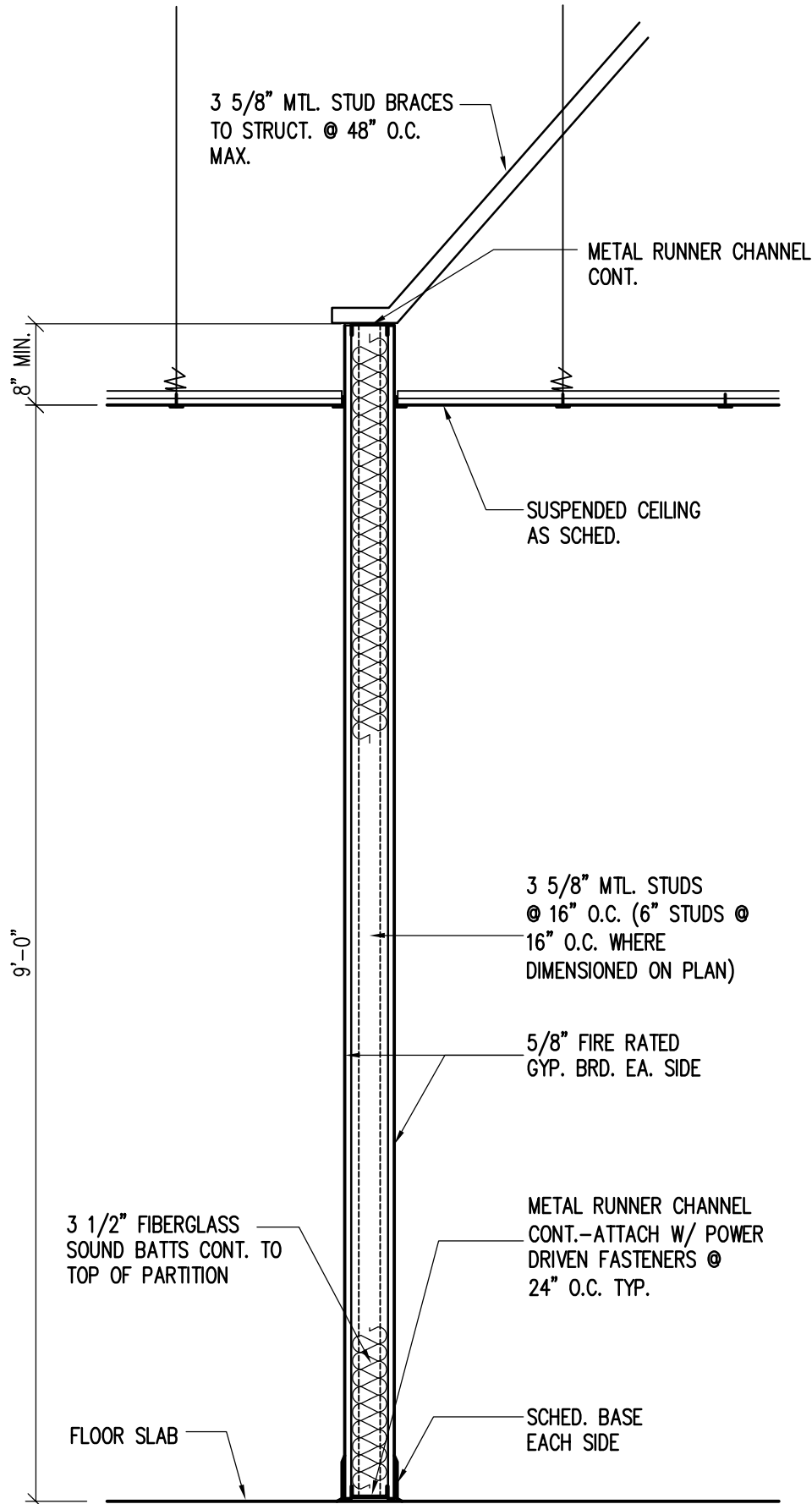
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CHECKED BY	RHB
DATE	12/07/18
PROJECT NO.	18002
PARTITION SECTIONS	

A406



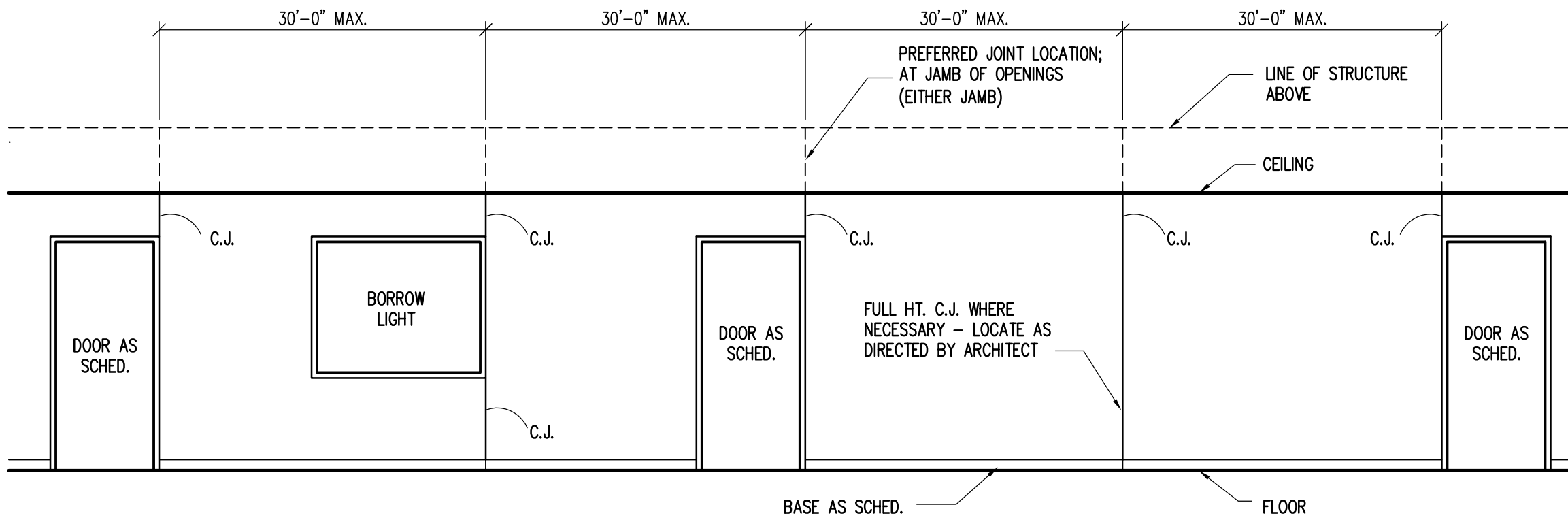
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2 PARTITION SECTION

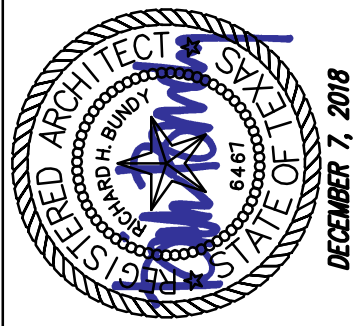
SCALE: 3/4"=1'-0"



5 PARTITION CONTROL JOINT REQUIREMENTS

SCALE: 3/4"=1'-0"

REV	DATE	DESCRIPTION



NEW FACILITIES SERVICES
MAINTENANCE
BUILDING

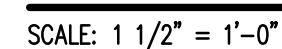
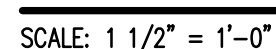
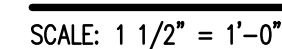
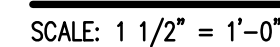
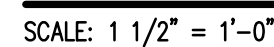
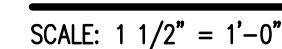
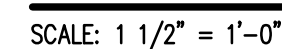
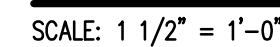
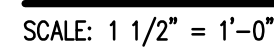
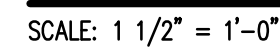
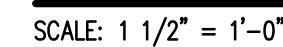


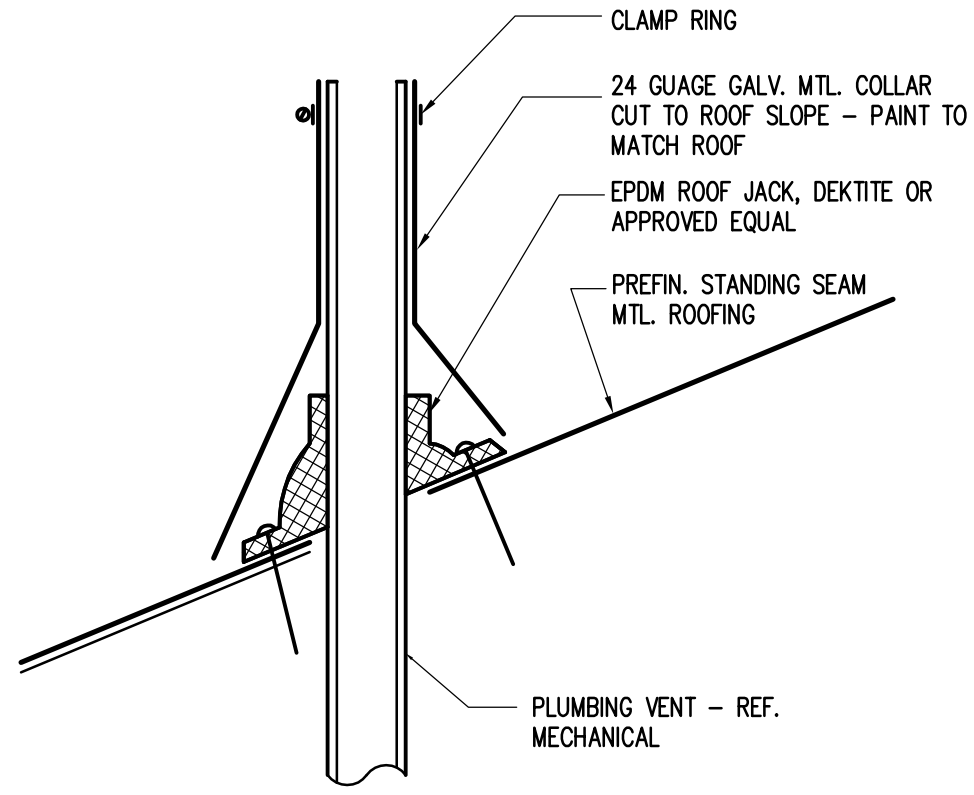
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PARTITION SECTIONS

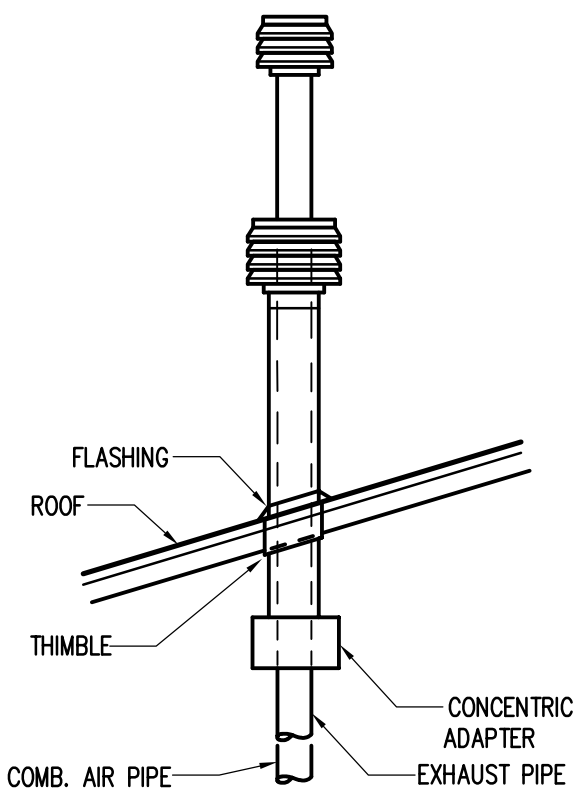
A407





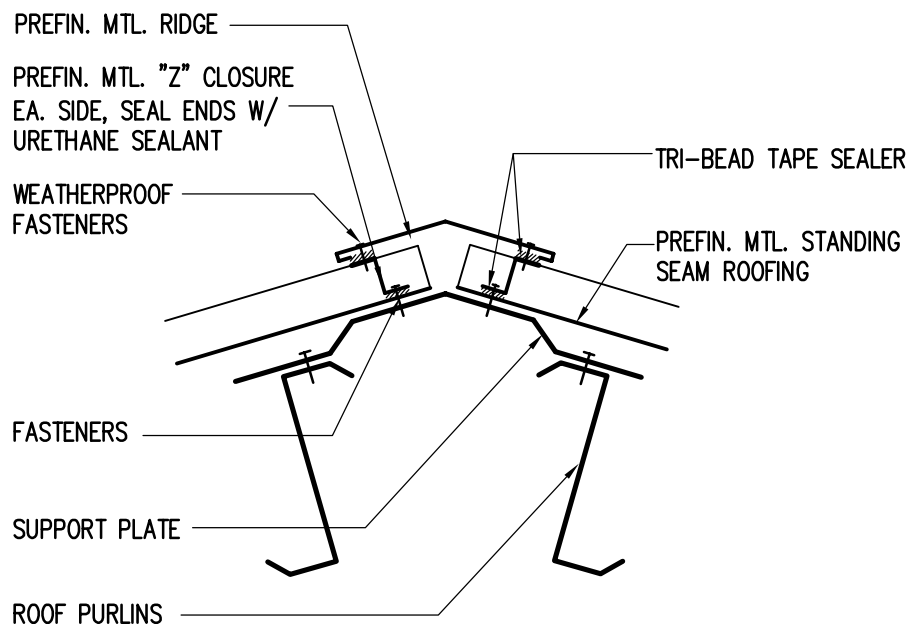
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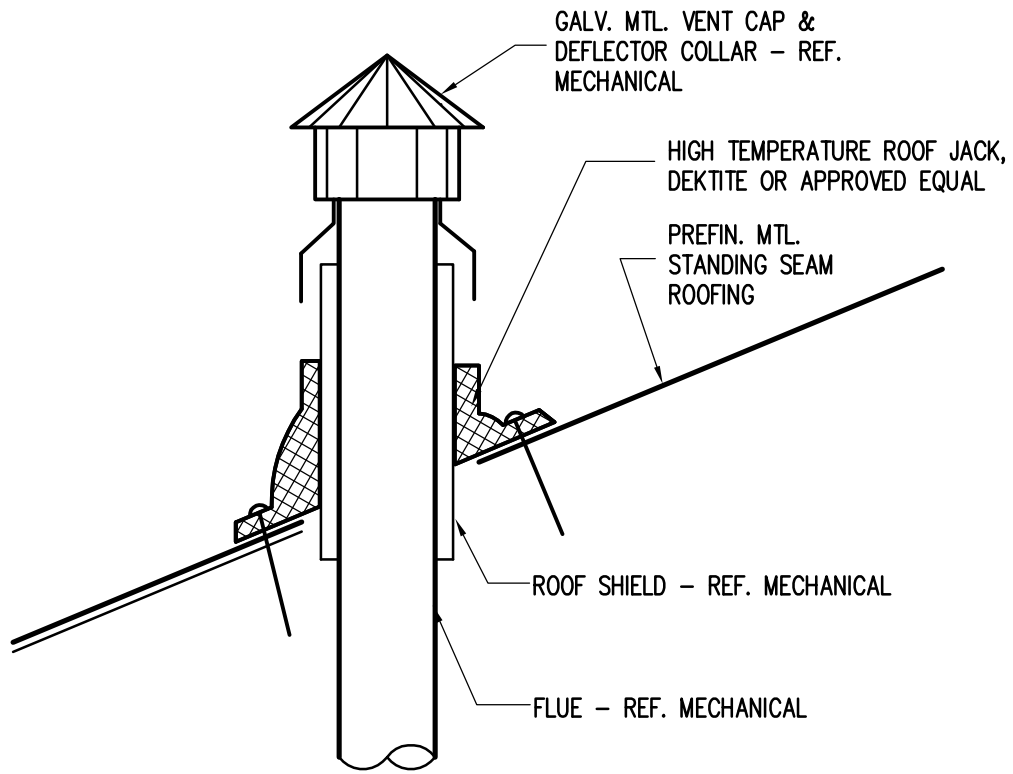
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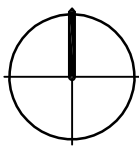
3 DETAIL

SCALE: 1 1/2" = 1'-0"



4 DETAIL

SCALE: 1 1/2" = 1'-0"



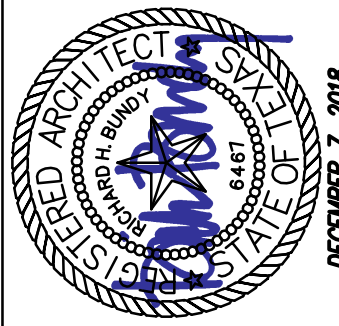
1 ROOF DETAILS

SCALE: 1 1/2"=1'-0"



DESCRIPTION

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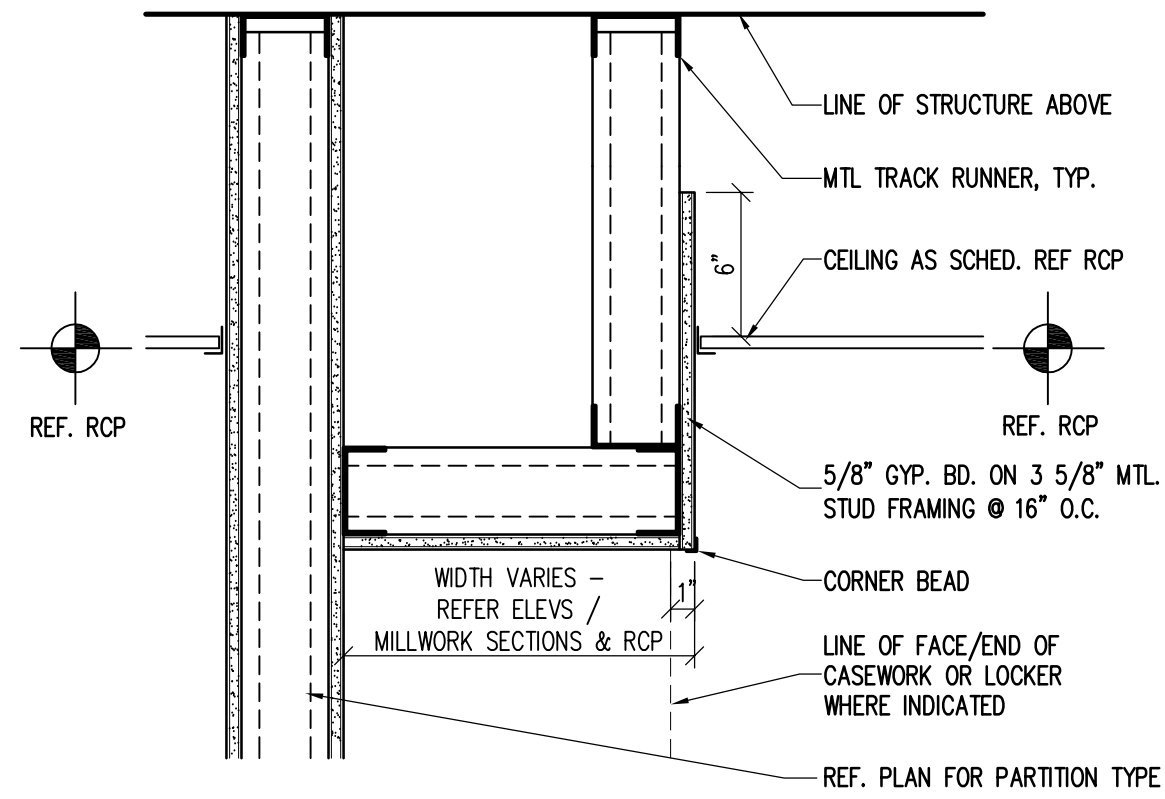
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DATE 12/07/18

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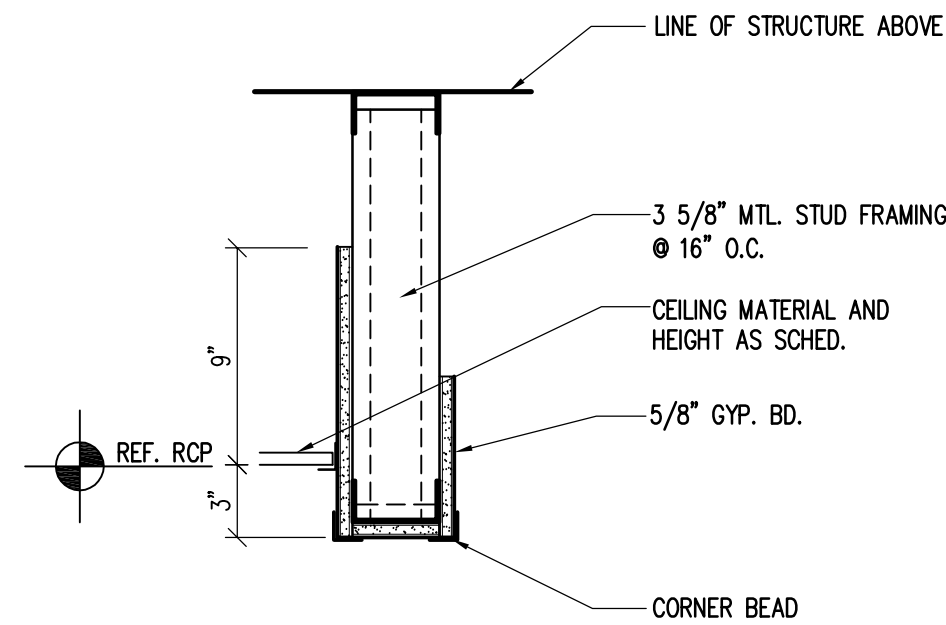
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A502



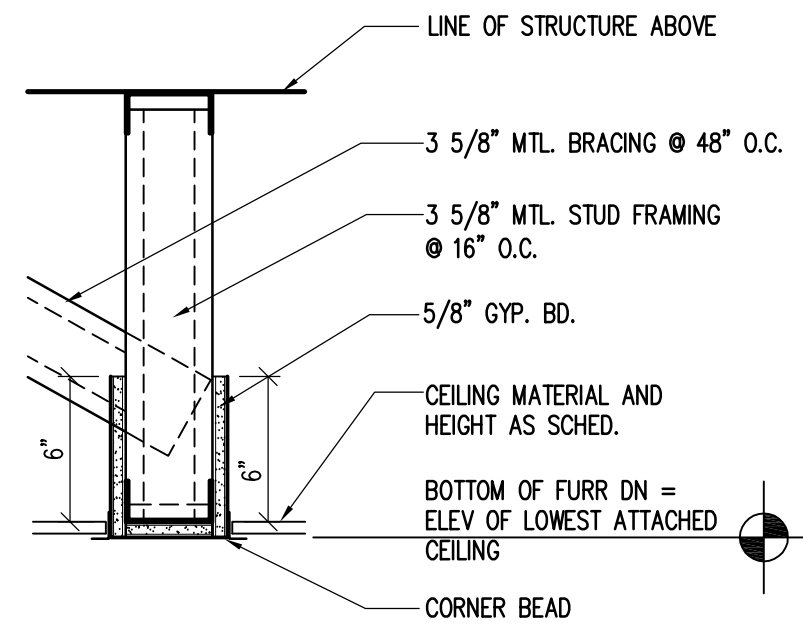
1 FURR DOWN

SCALE: 1 1/2"=1'-0"



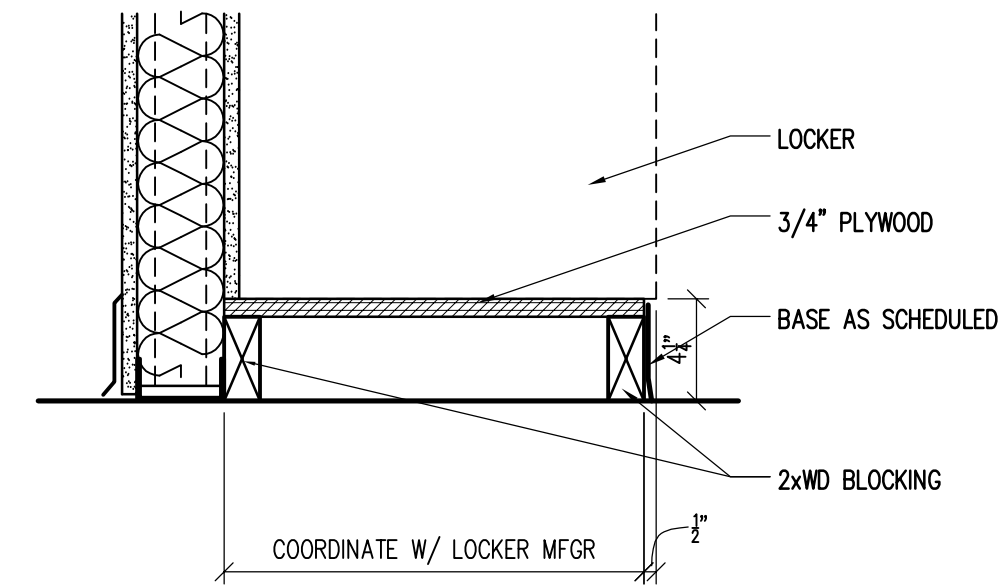
2 CEILING FURR DOWN

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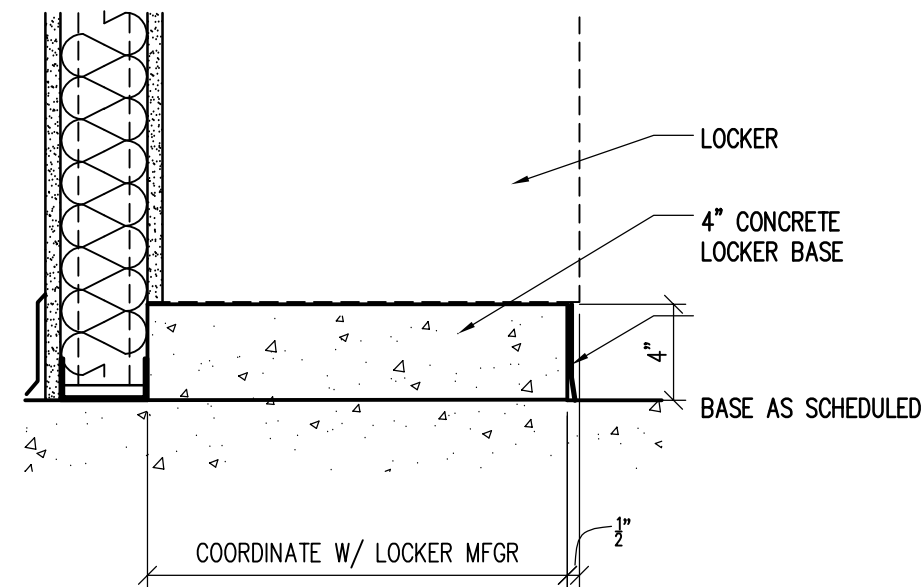
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SCALE: 1 1/2"=1'-0"



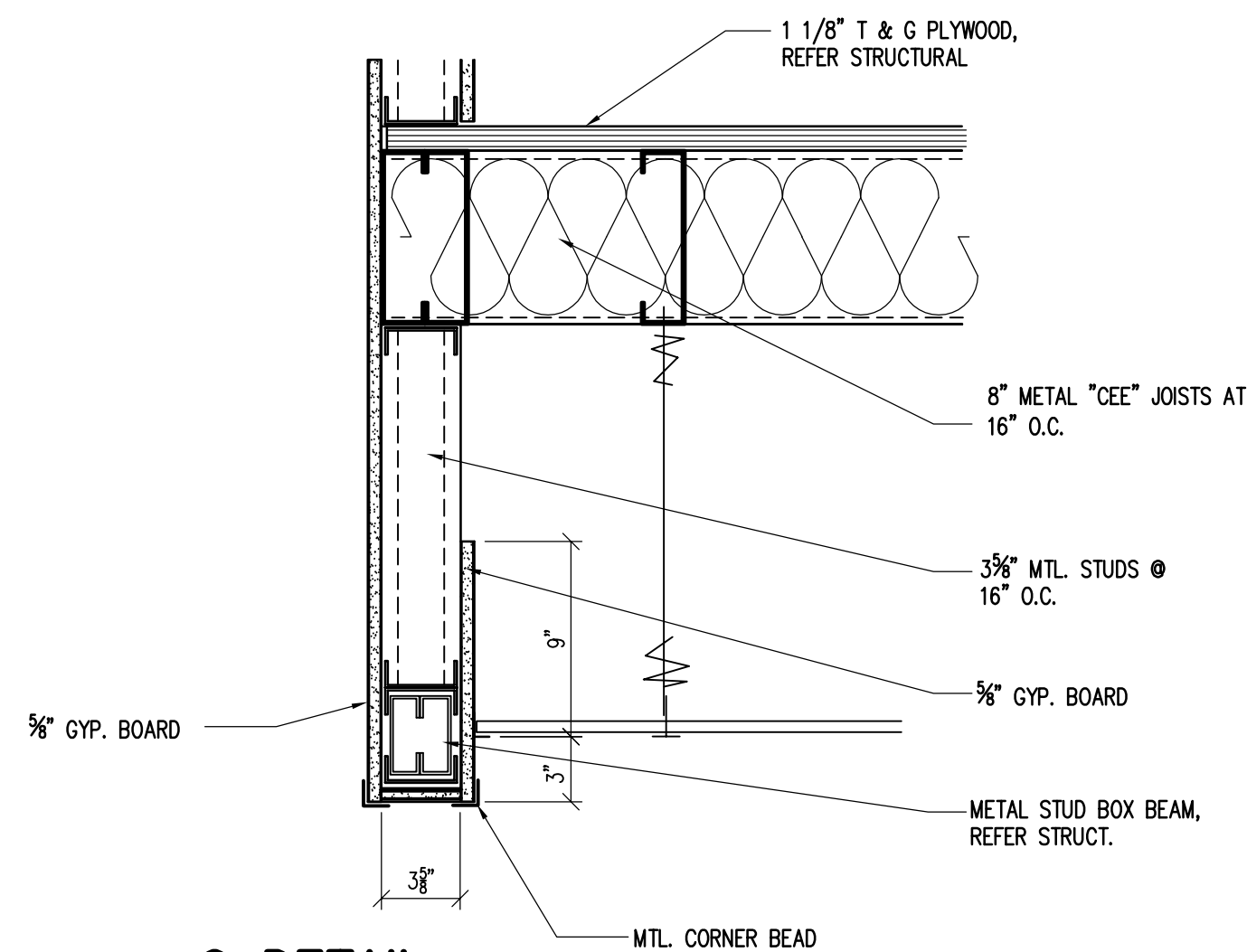
4 BASE @ LOCKERS

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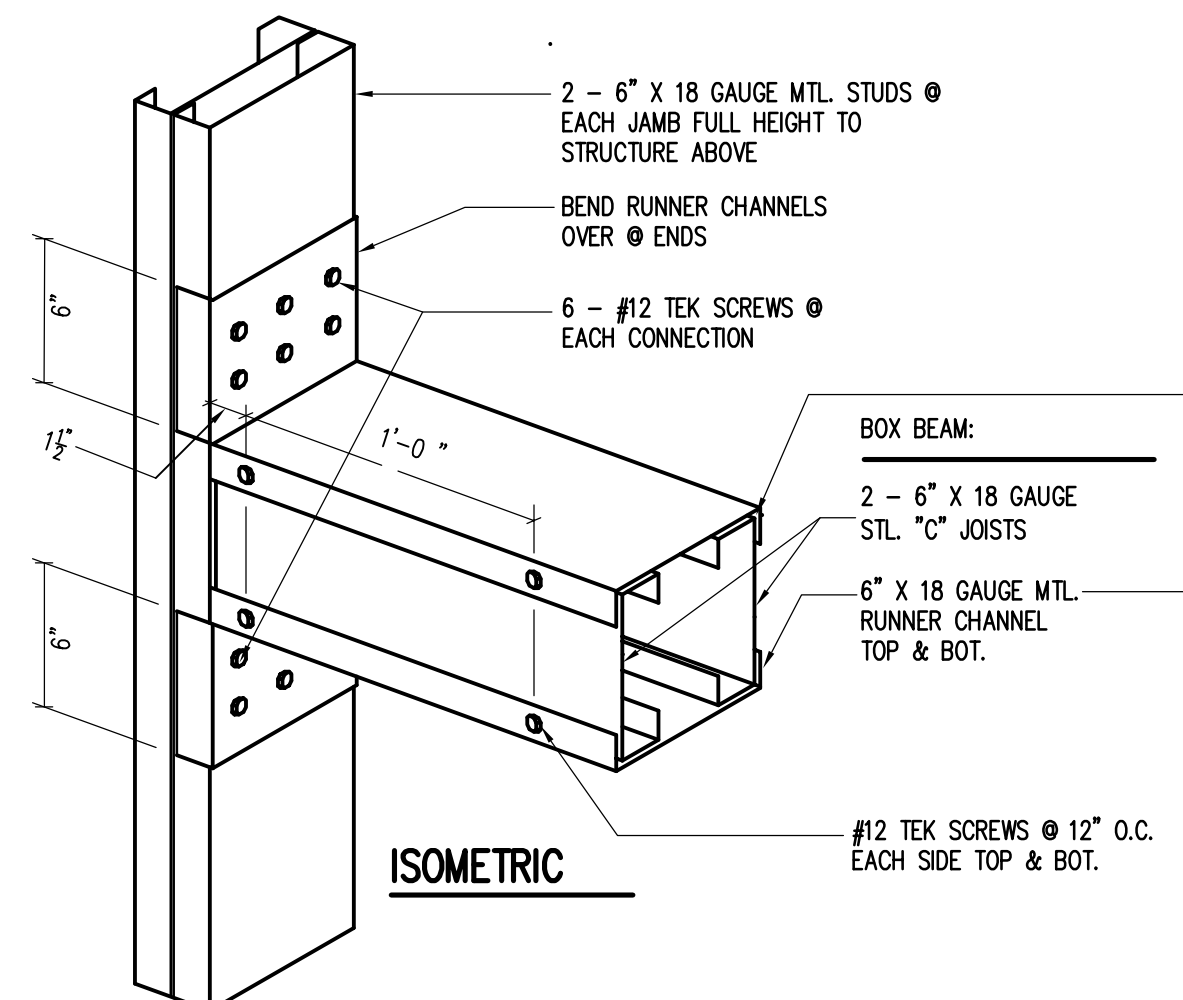
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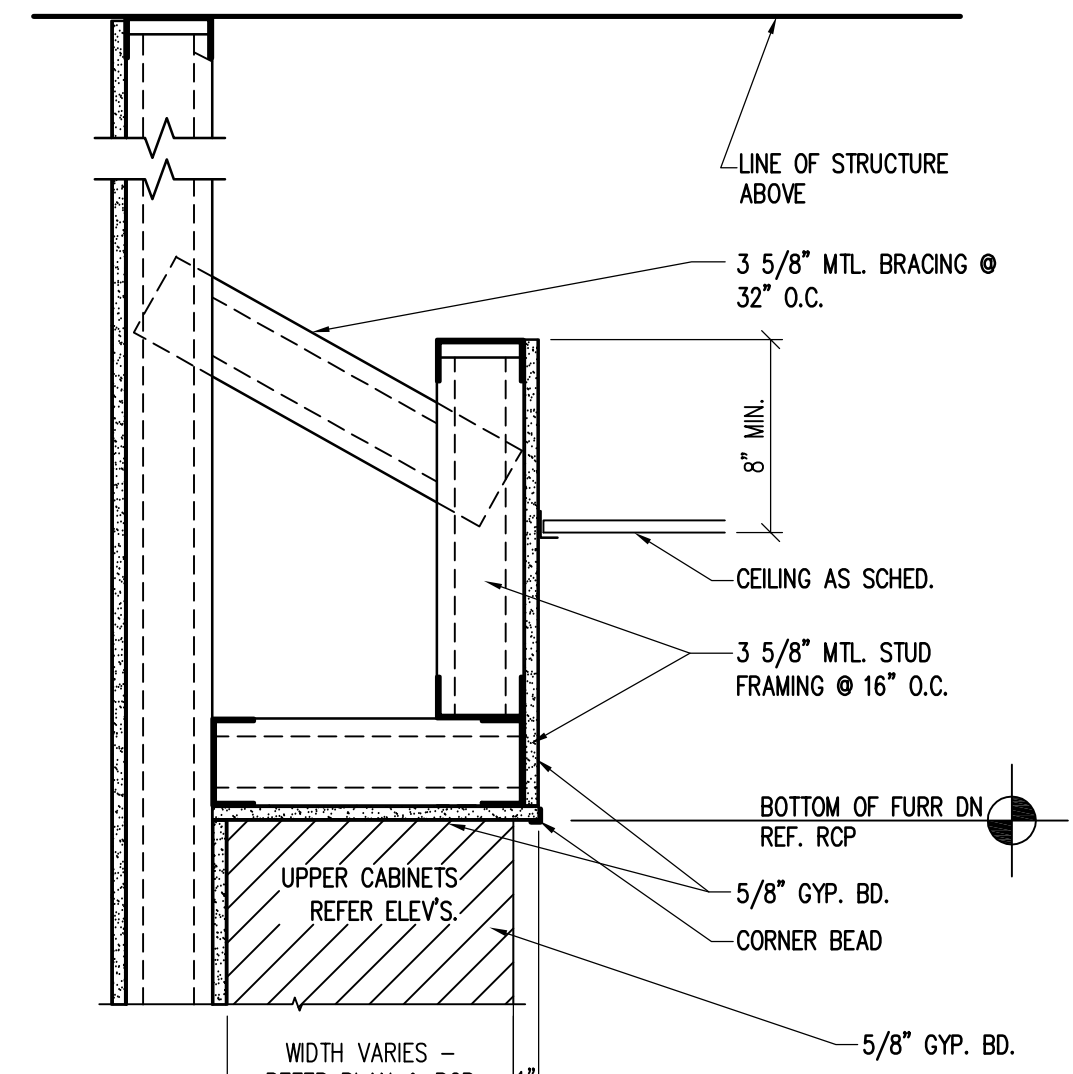
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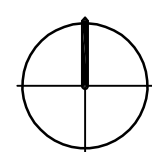
7 DETAIL

SCALE: 1 1/2" = 1'-0"



8 DETAIL

SCALE: 1 1/2" = 1'-0"

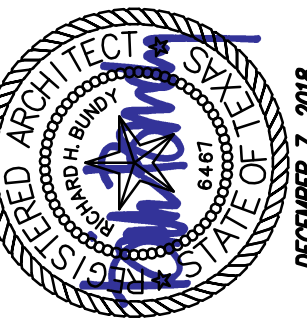


1 INTERIOR DETAILS

SCALE: 1 1/2"=1'-0"



REV DATE DESCRIPTION



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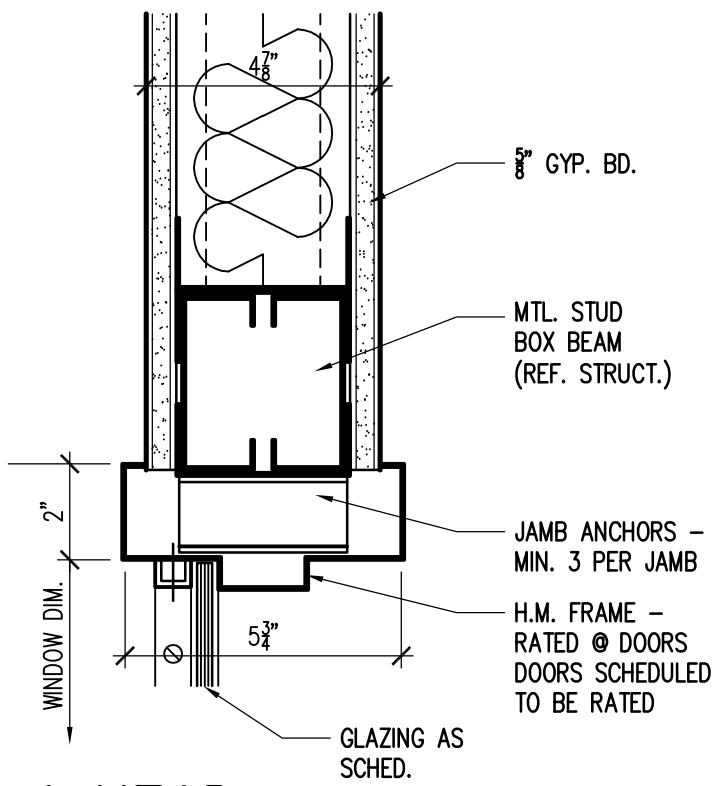


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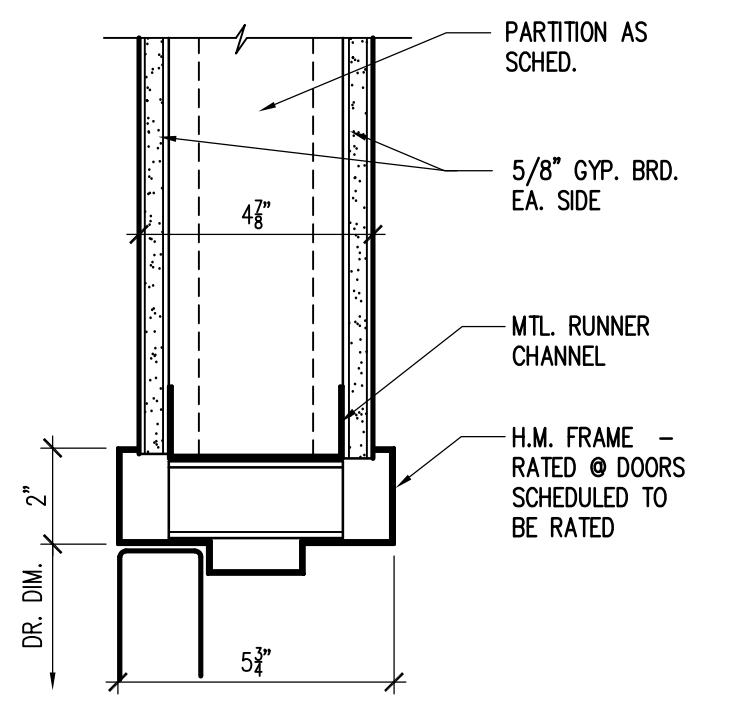
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PROJECT NO. 18002
INTERIOR DETAILS

A503



1 HEAD

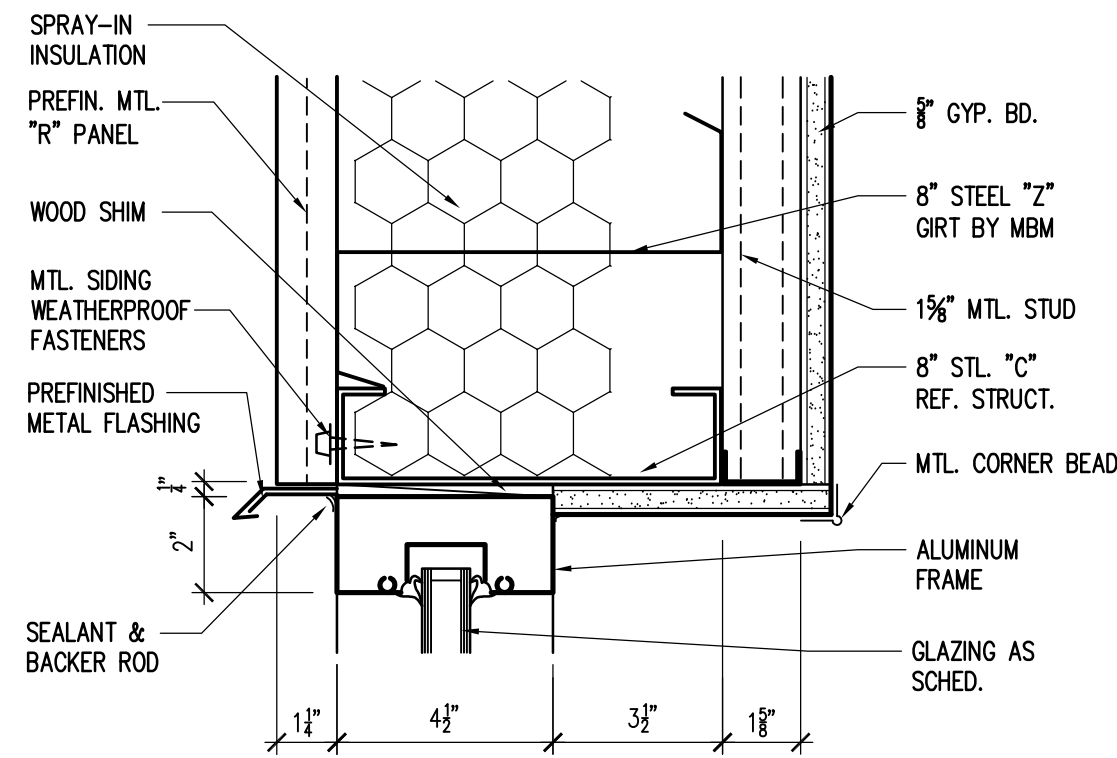
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4 HEAD

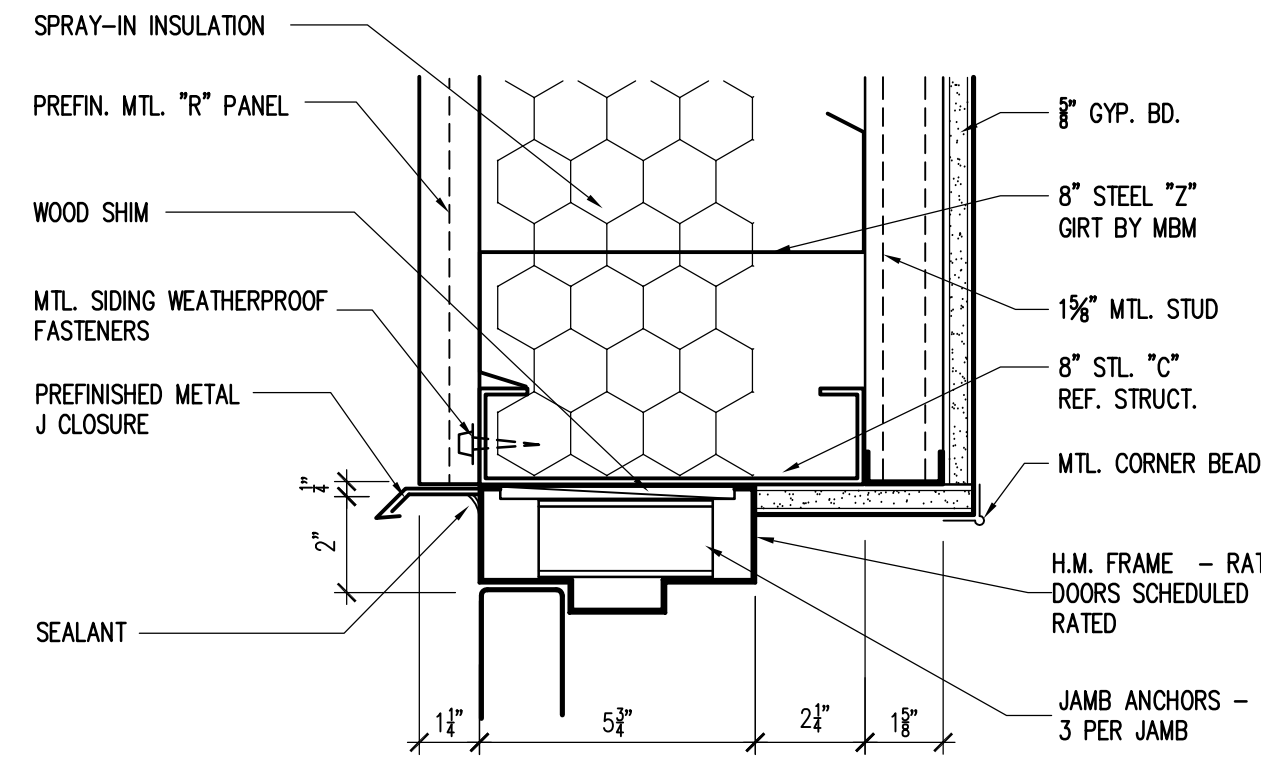
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ALL FRAMES GREATER THAN 4'-0" WIDE, PROVIDE JAMB ANCHORS IN THE HEAD @ 4'-0" O.C. MAX.



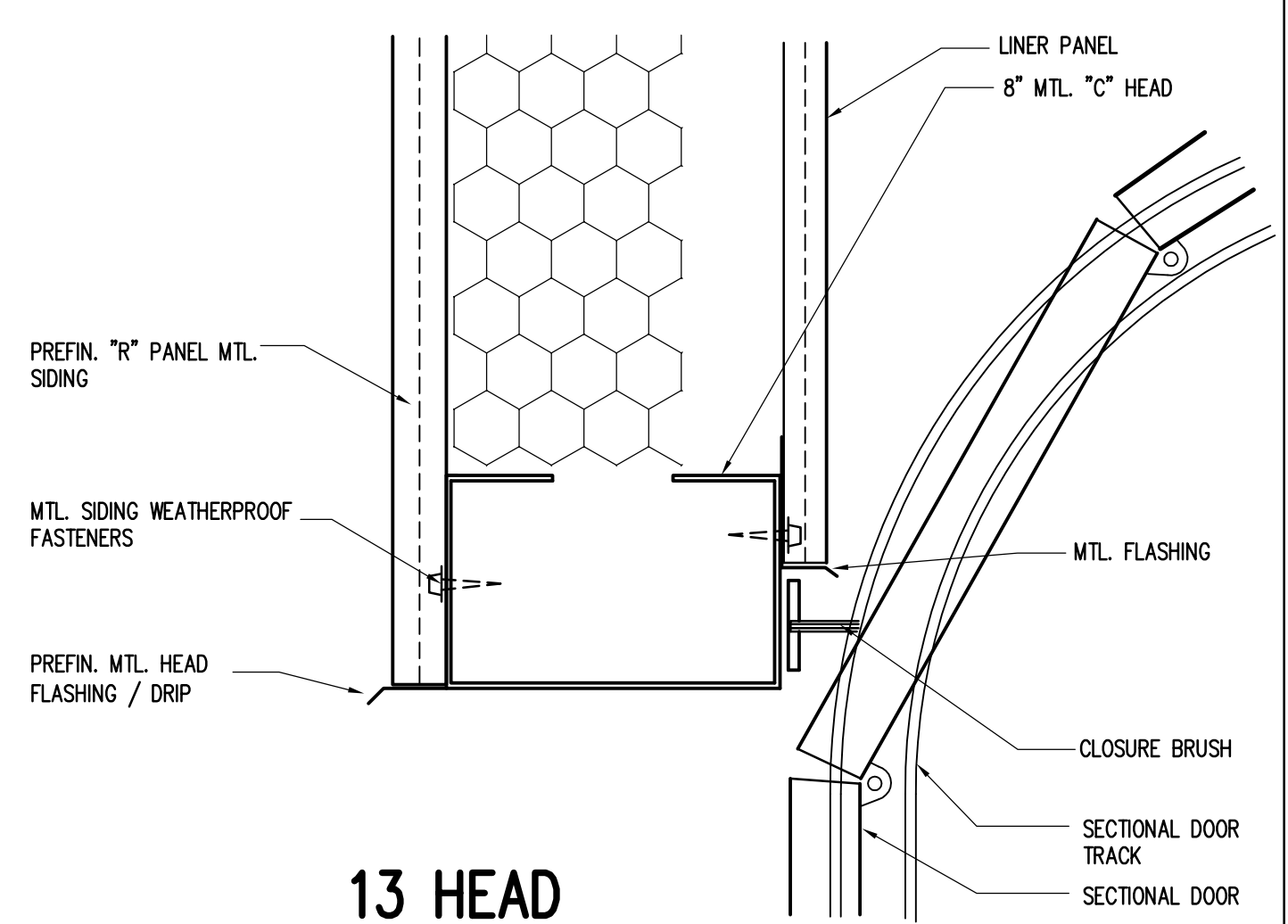
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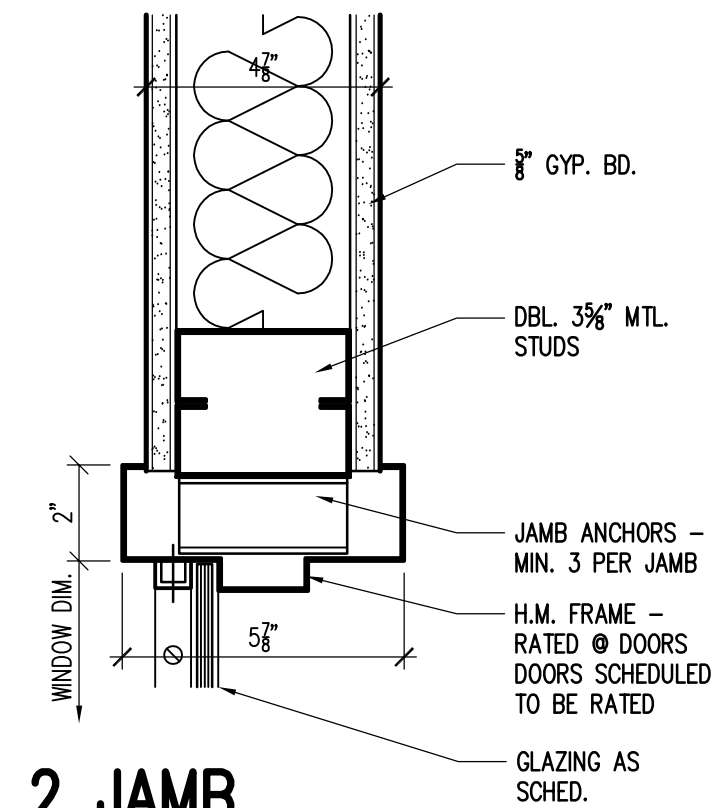
10 HEAD

SCALE: 3" = 1'-0"



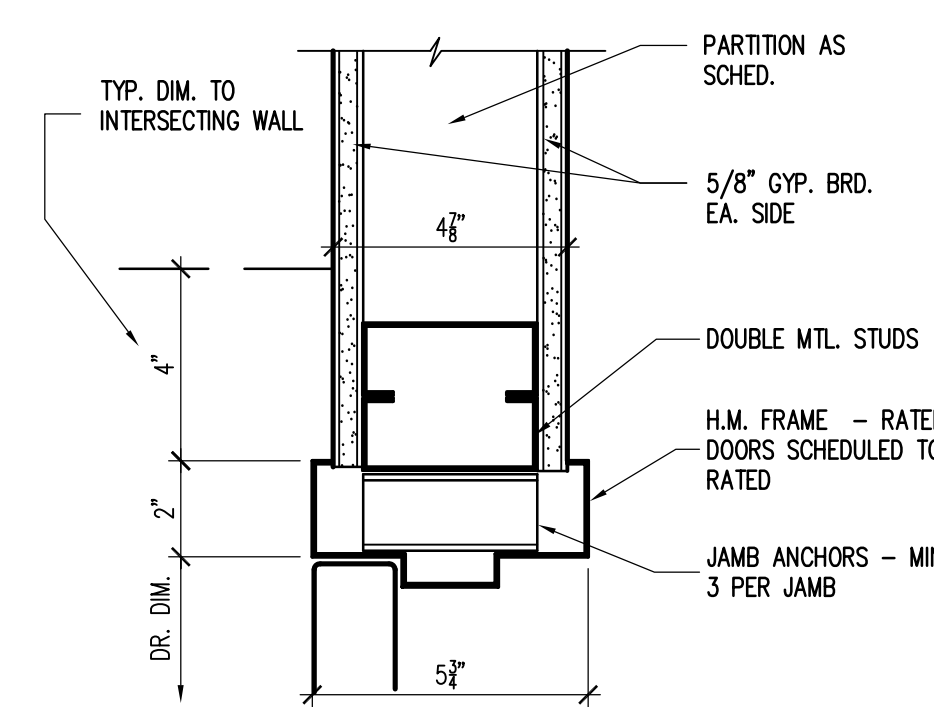
13 HEAD

SCALE: 3" = 1'-0"



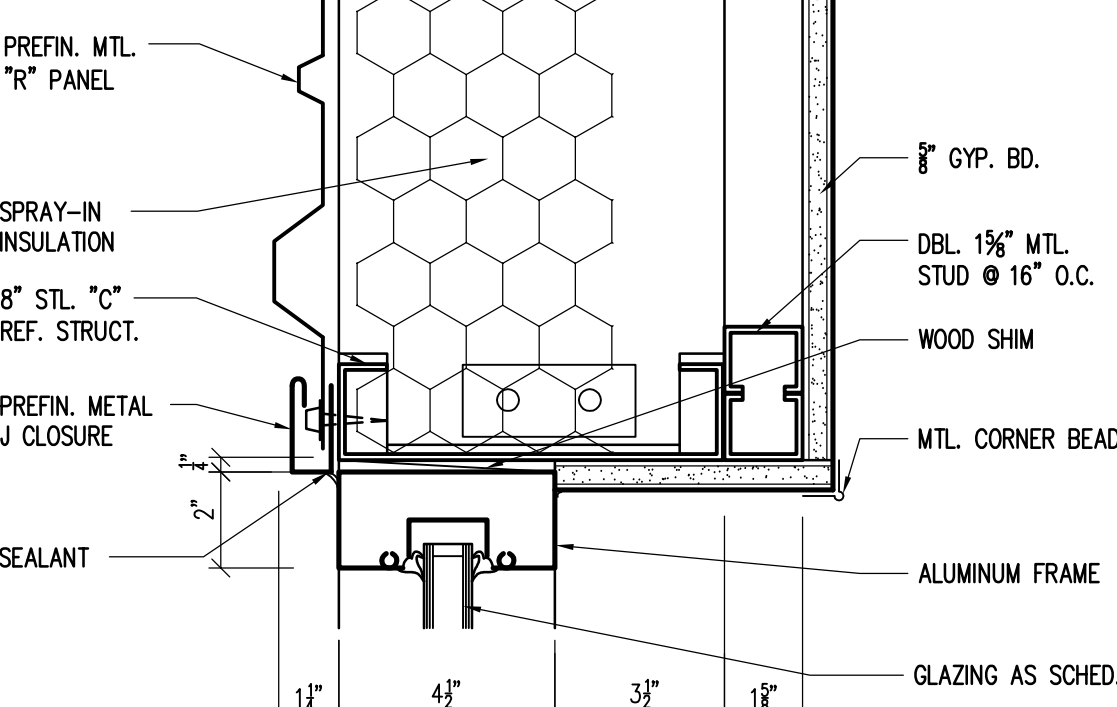
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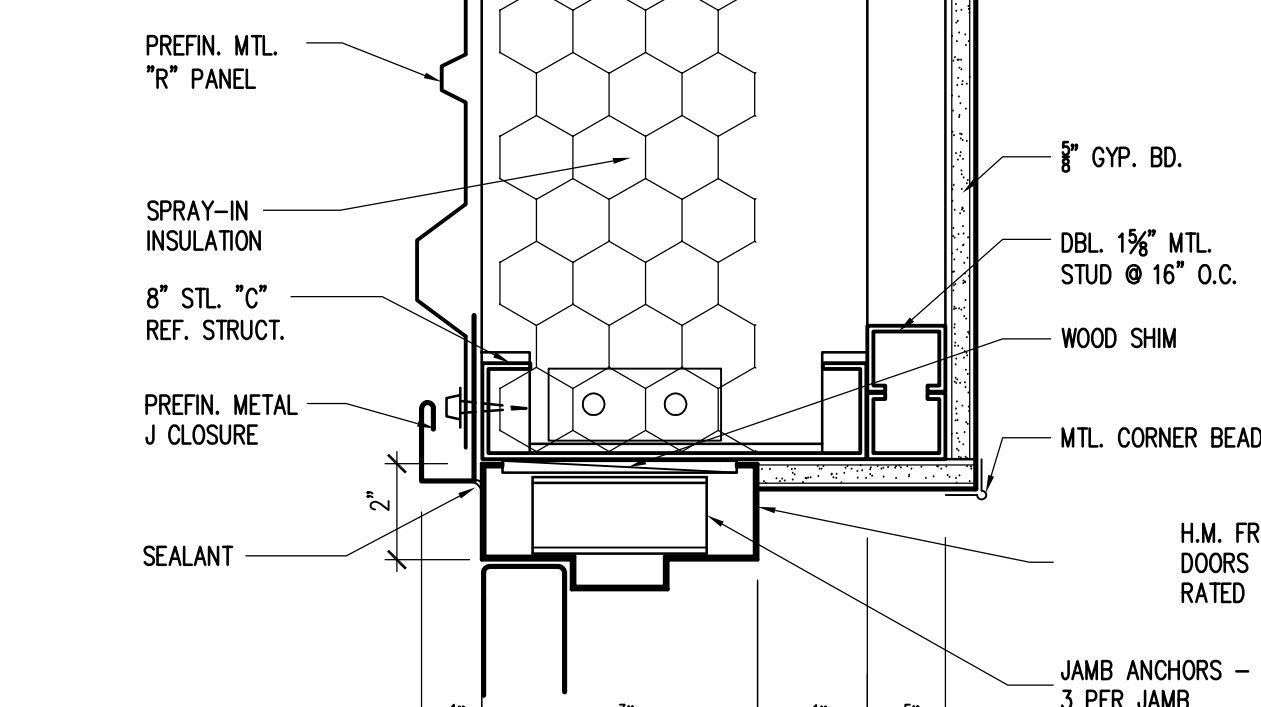
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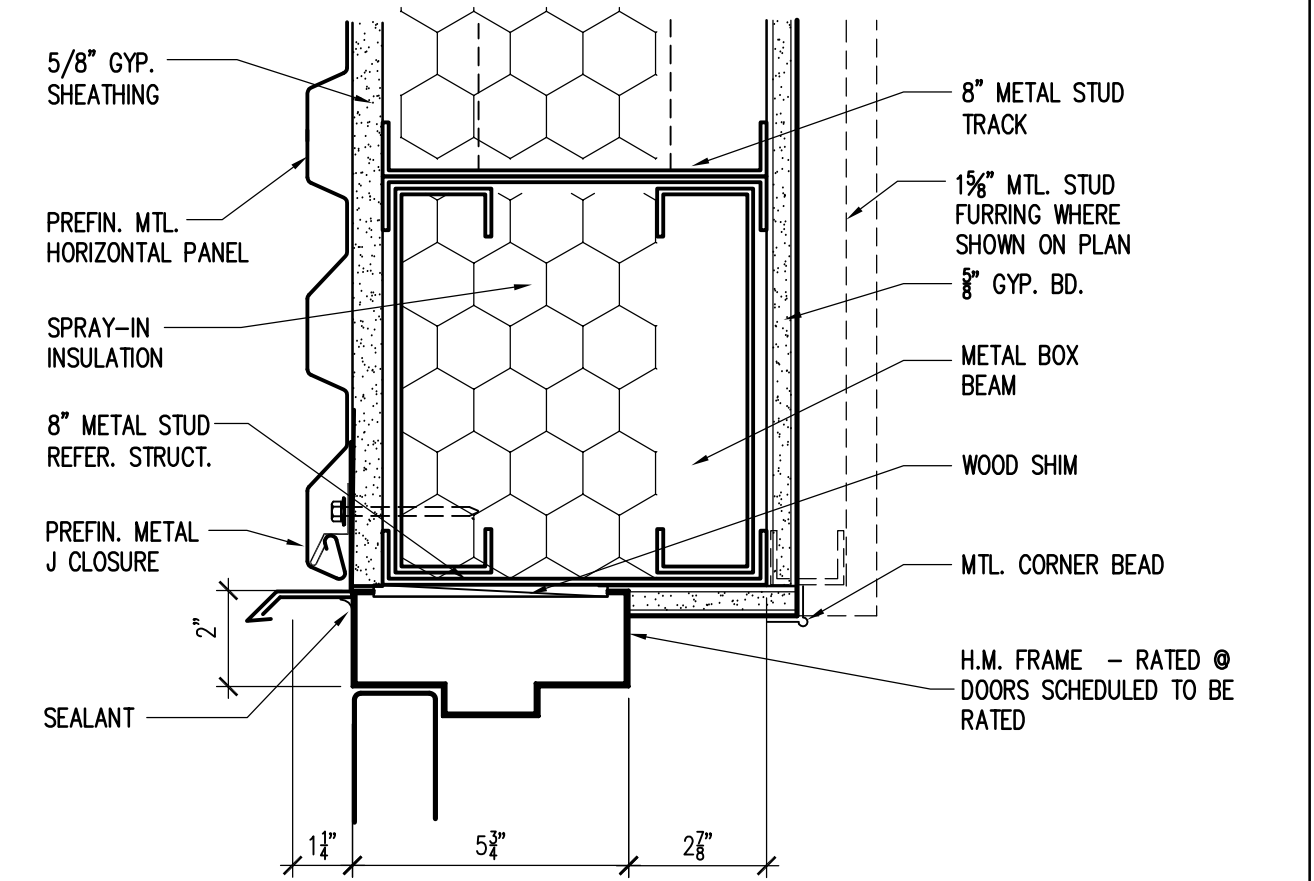
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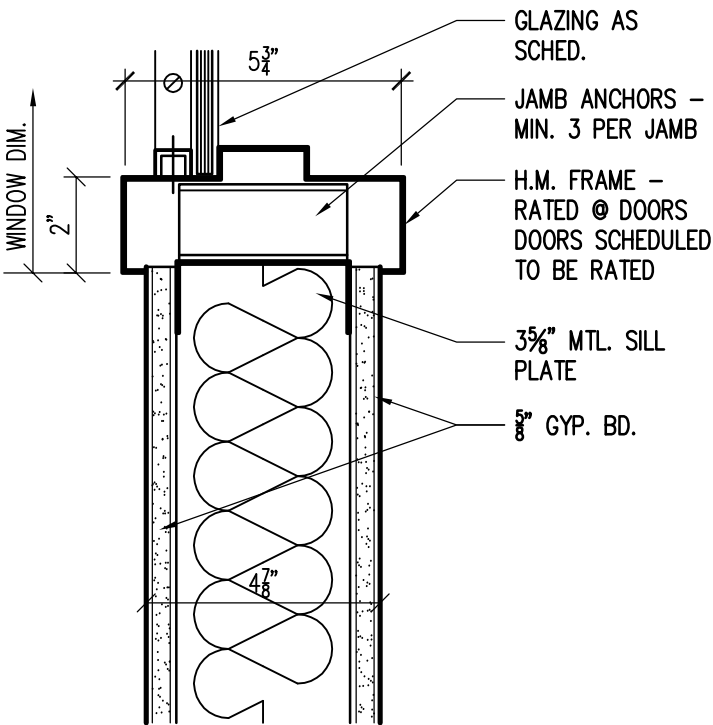
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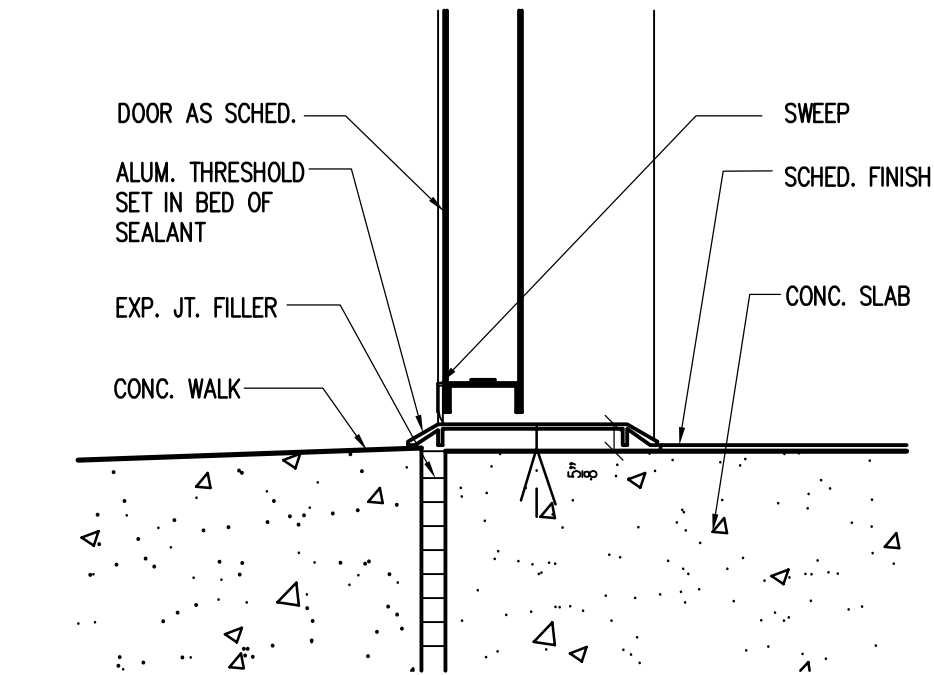
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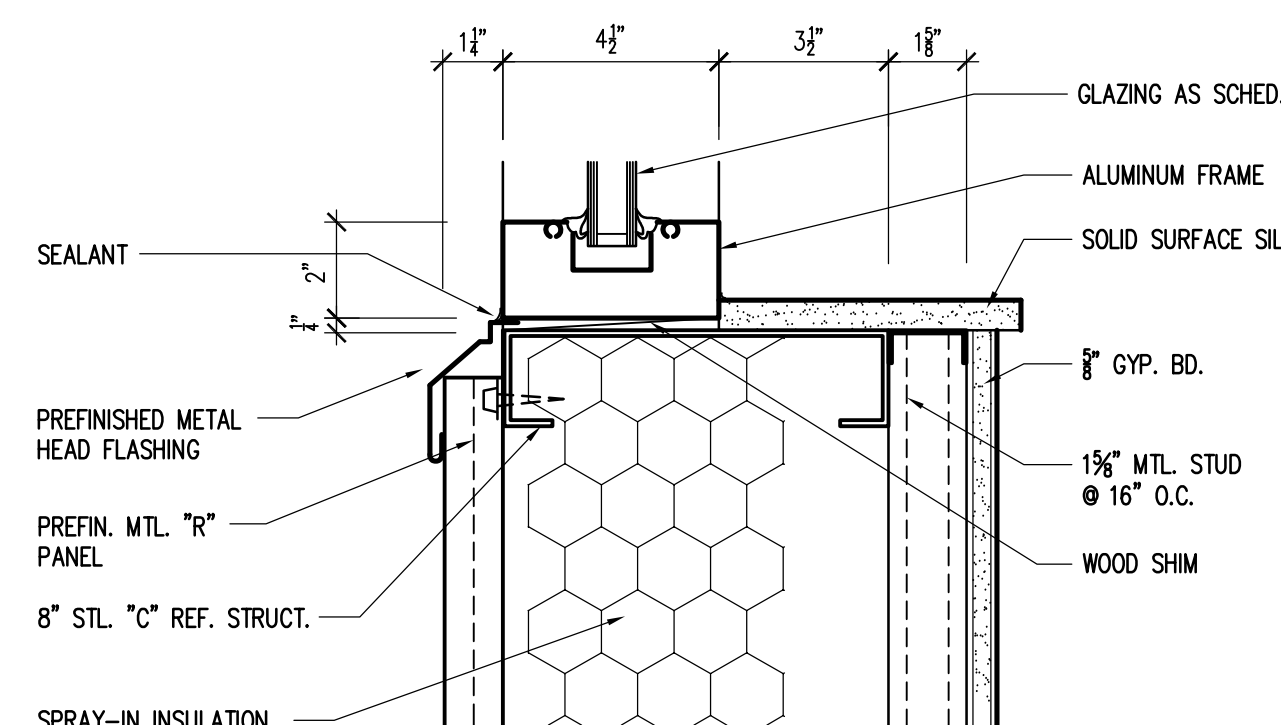
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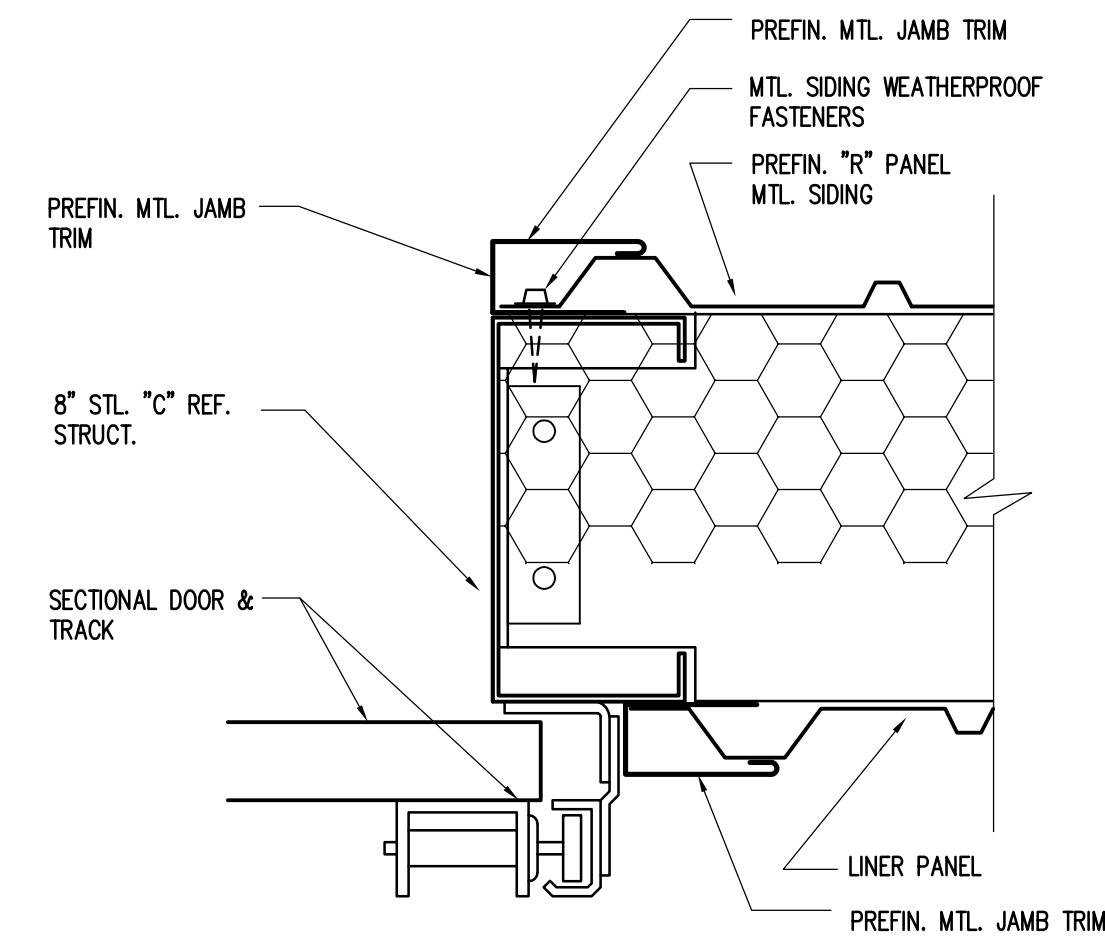
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SCALE: 3" = 1'-0"



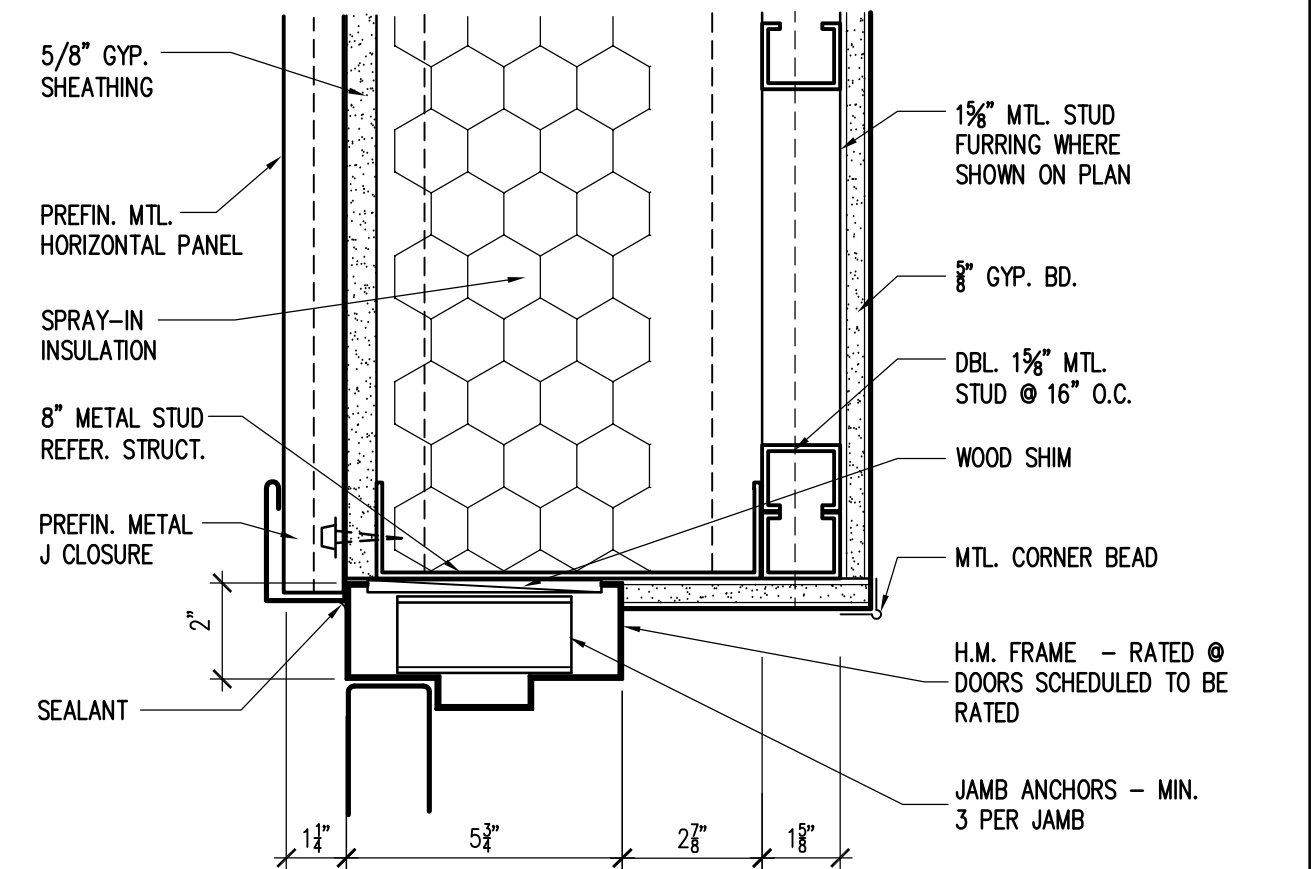
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SCALE: 3" = 1'-0"



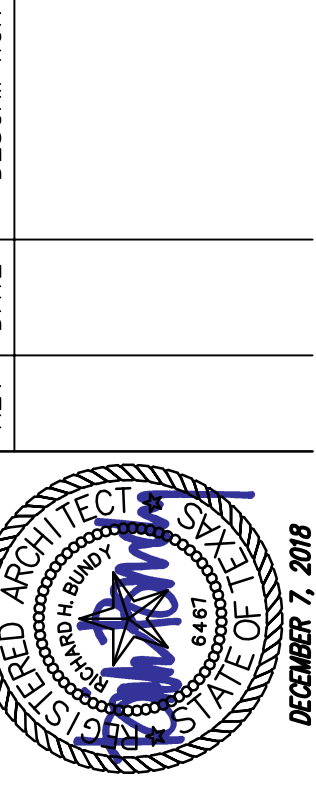
16 JAMB

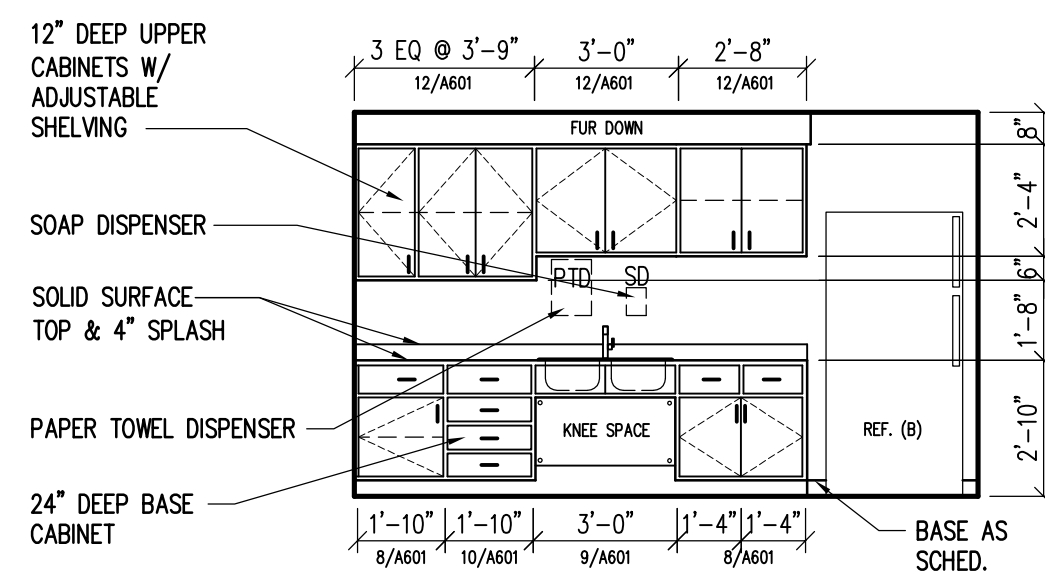
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15 JAMB

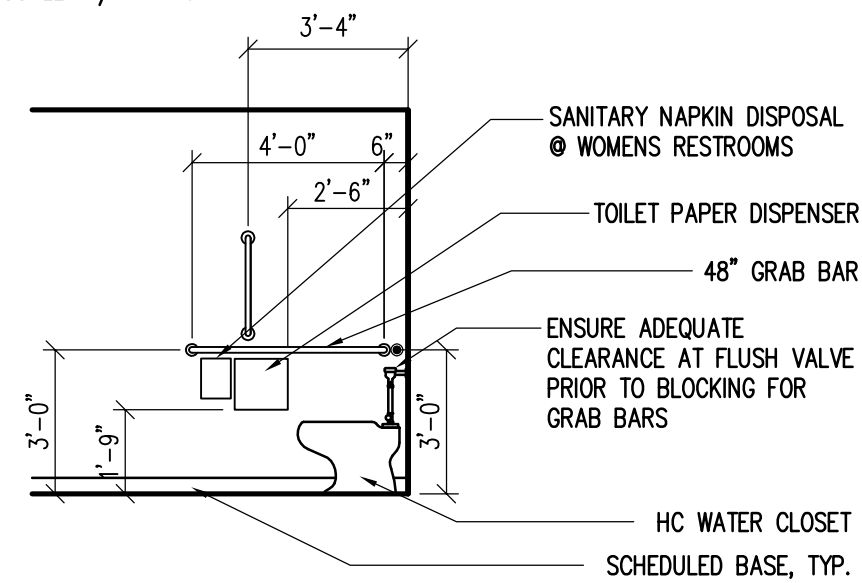
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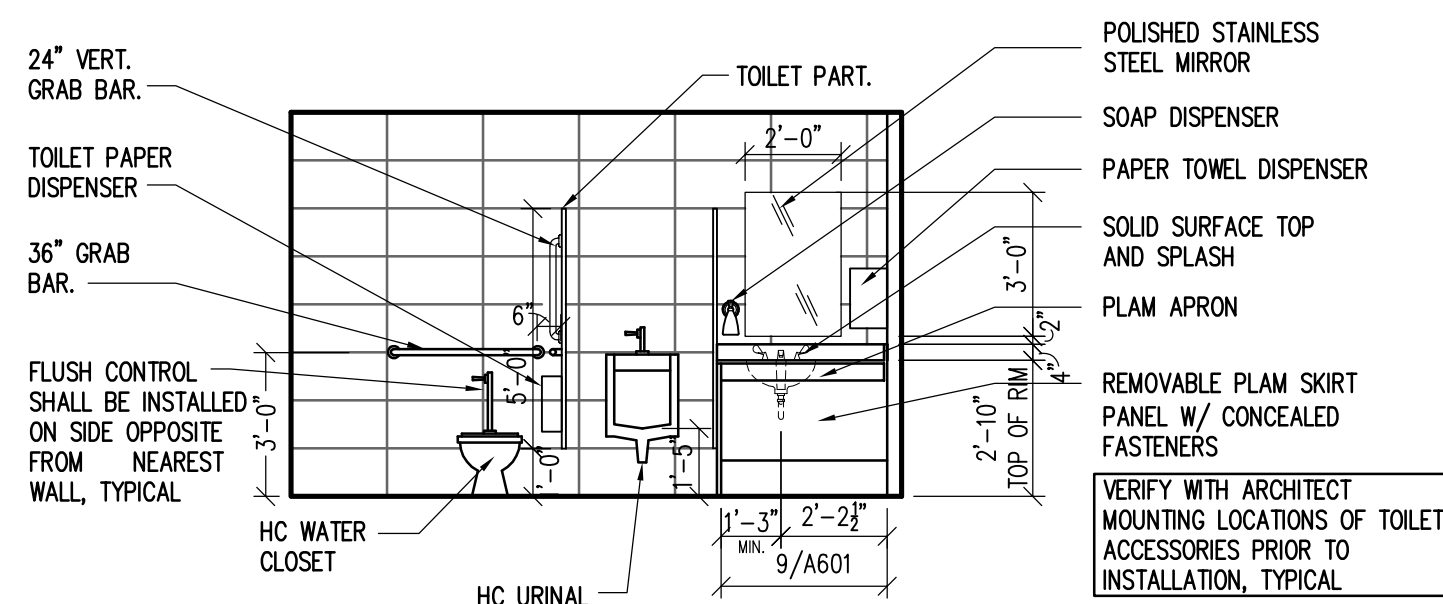
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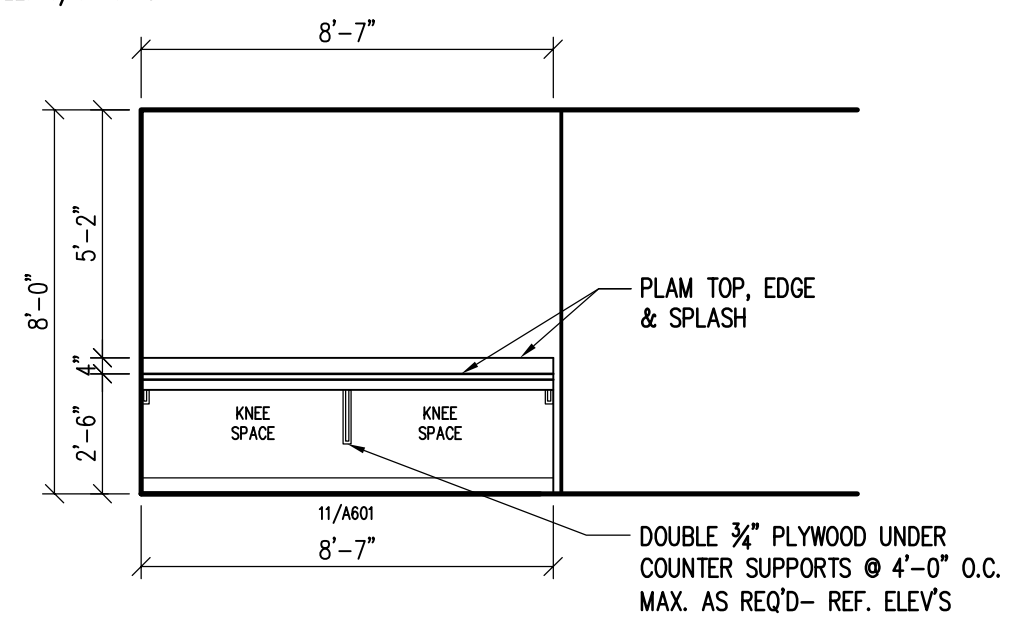
5 WOMEN M111

SCALE: 1/4"=1'-0"



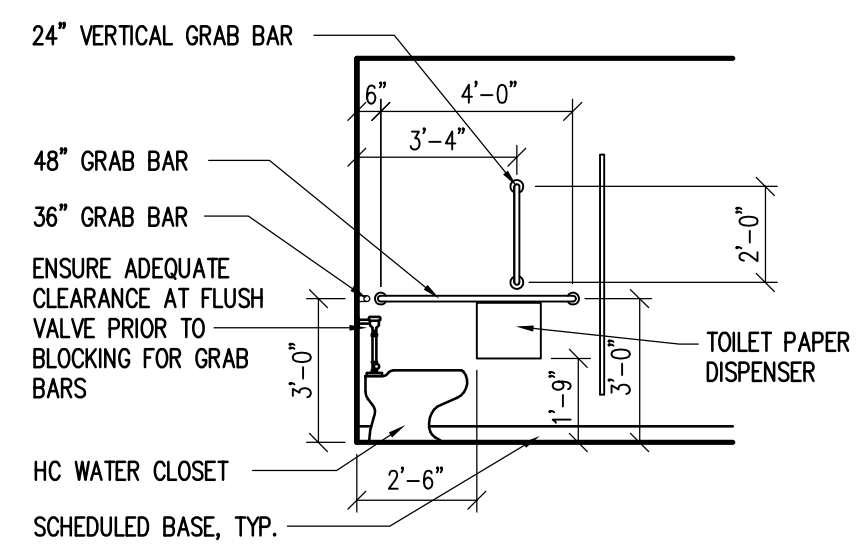
2 RESTROOM M110

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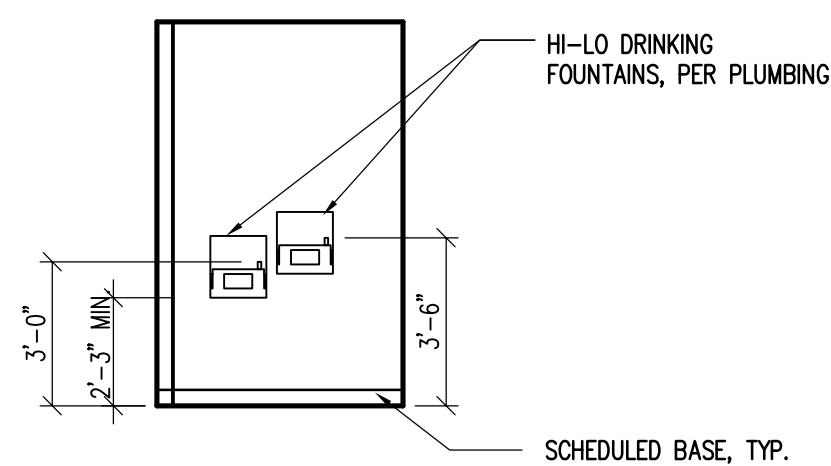
6 CORRIDOR M109

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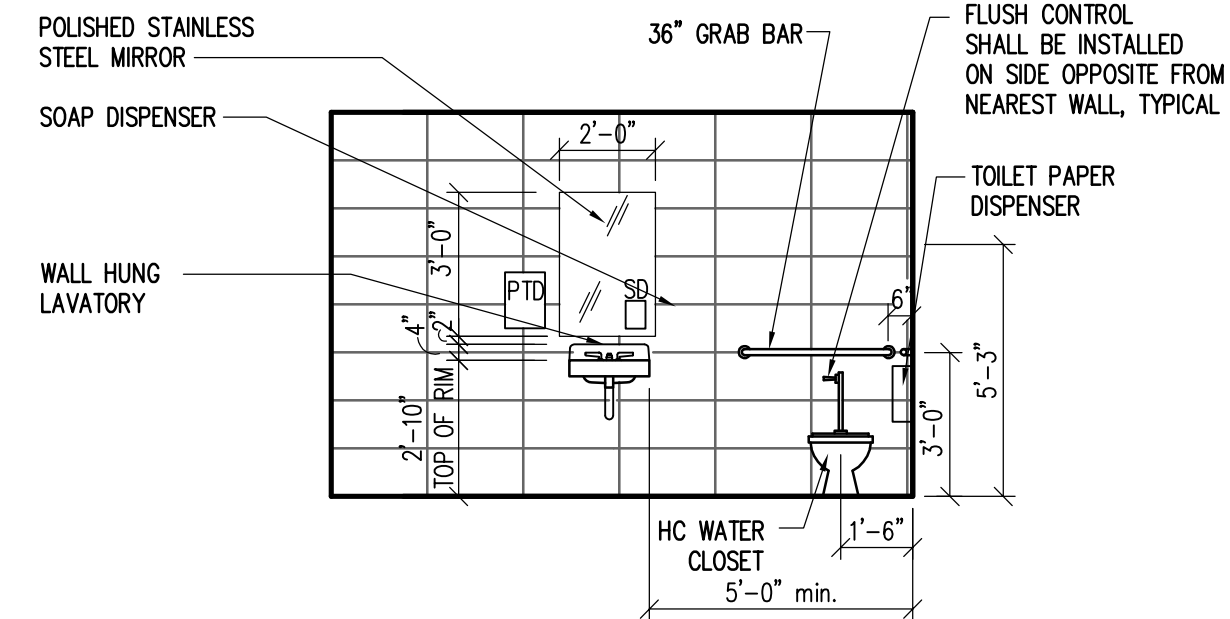
3 MEN M110

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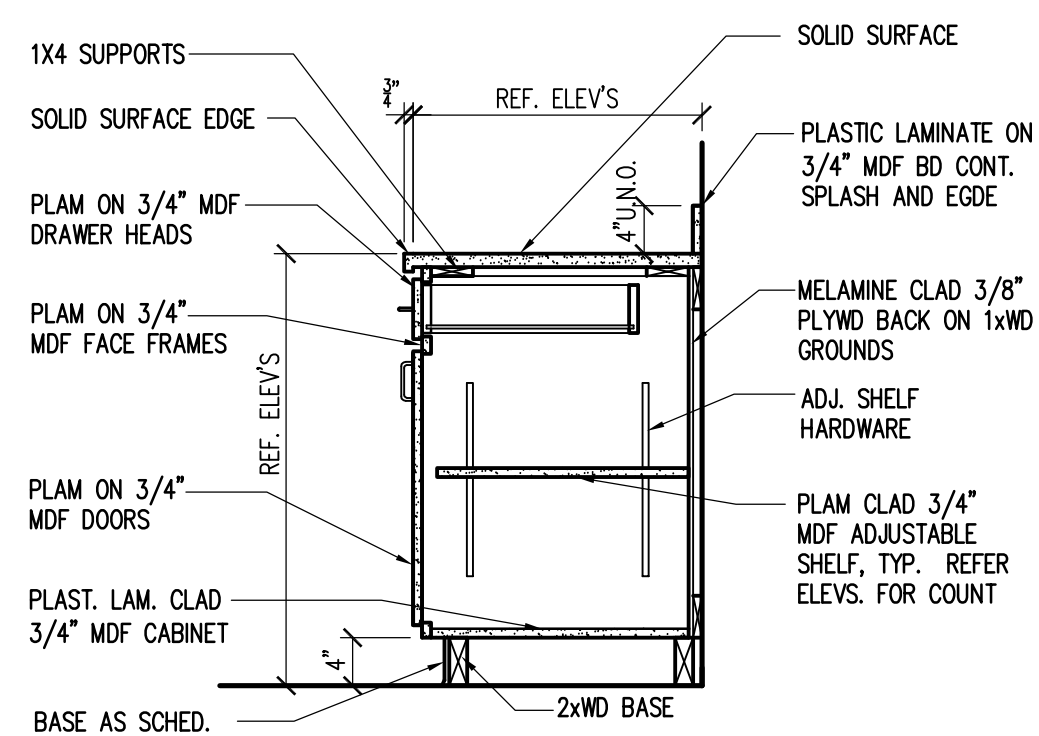
7 CARPENTRY M113

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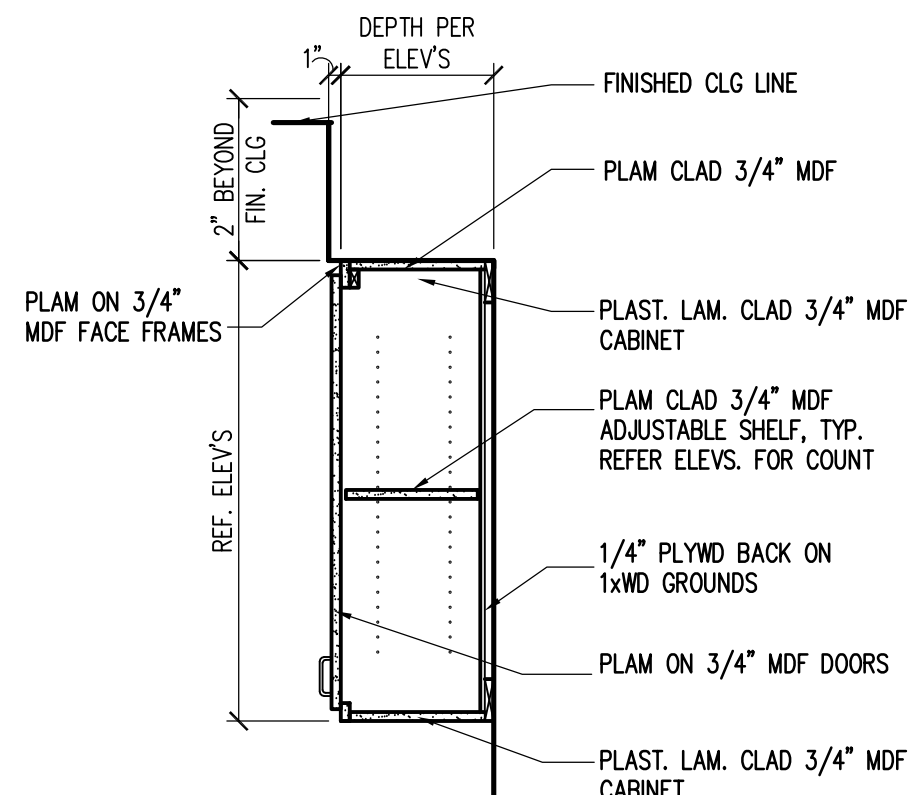
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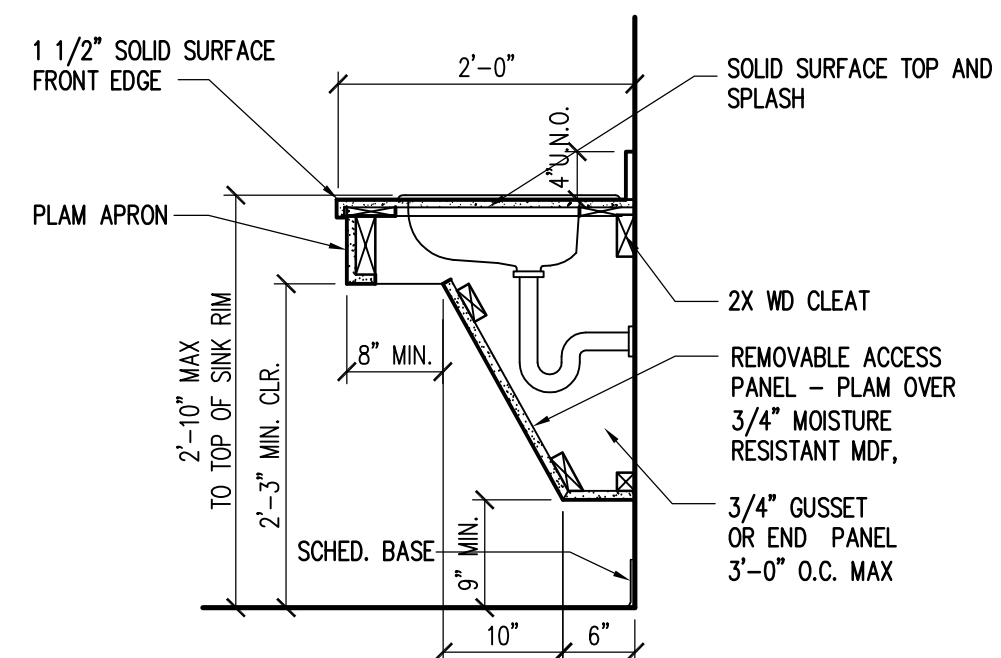
8 DETAIL

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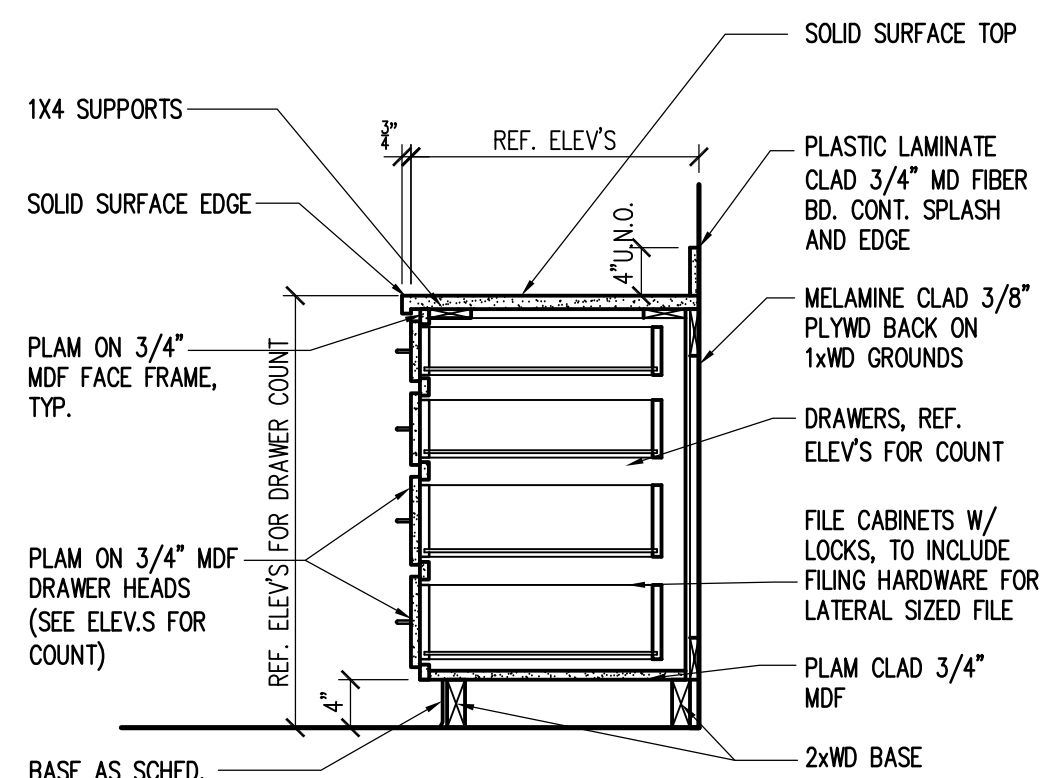
12 DETAIL

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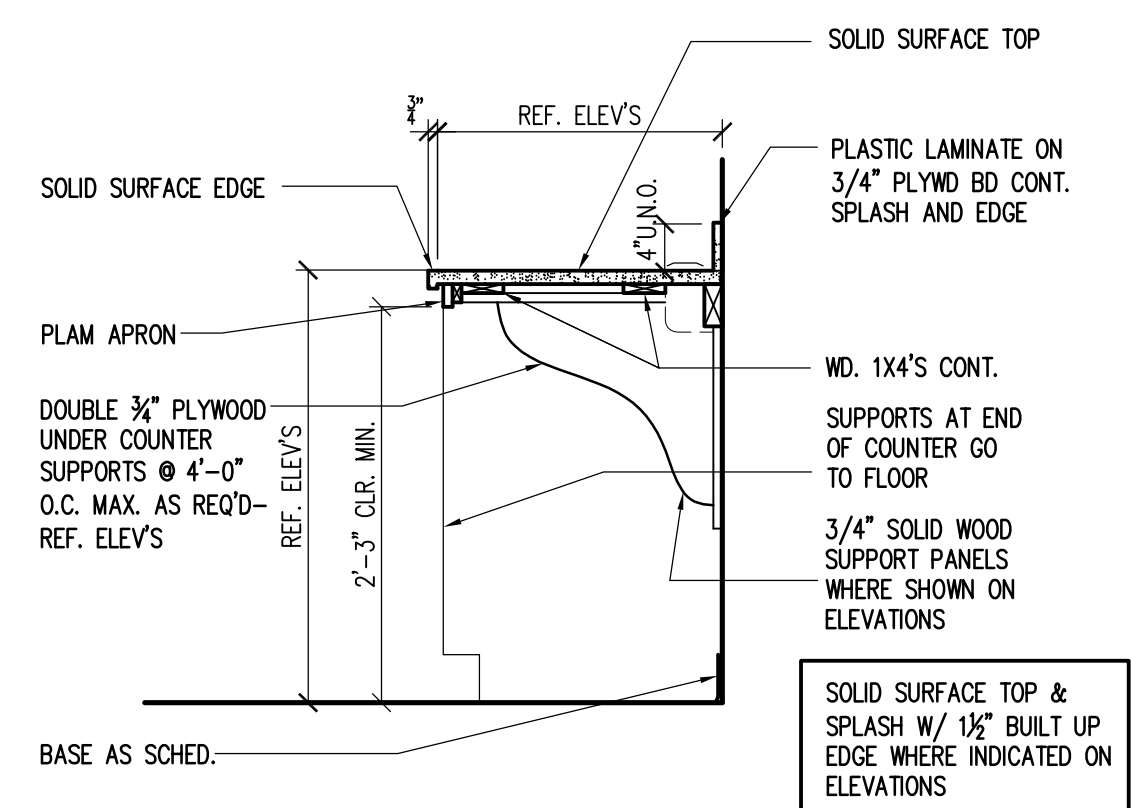
9 DETAIL

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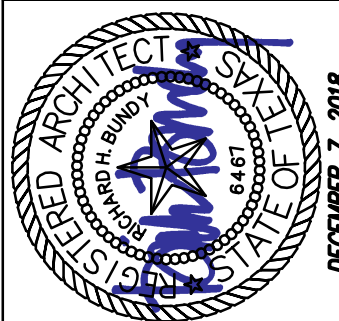
10 DETAIL

SCALE: $3/4"=1'-0"$



11 DETAIL

SCALE: 3/4"=1'-0"



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INTERIOR ELEVATIONS & SECTIONS

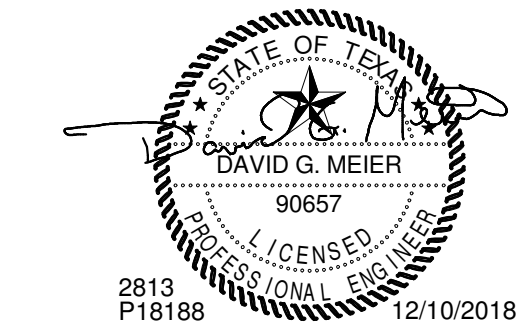
A601

DRAWING/DETAIL REFERENCE	

MISCELLANEOUS	
	DRAWING NOTE REFERENCE (I.E., NOTES BY SYMBOL)
	CONNECTION INTO EXISTING

SYMBOLS	
SYMBOL	DESCRIPTION
	ACOUSTICAL DUCT LINING (FIGURES SHOWN ARE INSIDE DUCT DIMENSIONS)
	SUPPLY AIR DUCT UP (POSITIVE PRESSURE)
	RETURN, EXHAUST OR OUTSIDE AIR INTAKE DUCT UP (NEGATIVE PRESSURE)
	SUPPLY AIR DUCT DOWN (POSITIVE PRESSURE)
	RETURN, EXHAUST OR OUTSIDE AIR INTAKE DUCT DOWN (NEGATIVE PRESSURE)
	ROUND DUCT UP
	ROUND DUCT DOWN
	ARROW INDICATES DIRECTION OF AIR FLOW
	INDICATES SMACNA PRESSURE CLASS OF DUCT CONSTRUCTION
	CHANGE OF ELEVATION, RISE(UP) OR DROP (DN) IN DIRECTION OF ARROW
	ACCESS DOOR, BOTTOM (UNLESS OTHERWISE NOTED) SIZE AS NOTED OR SPECIFIED
	ACCESS DOOR, SIDE, SIZE AS NOTED OR SPECIFIED
	RECTANGULAR DUCT SQUARE ELBOW WITH TURNING VANES
	RECTANGULAR DUCT RADIUS ELBOW
	ROUND DUCT RADIUS ELBOW
	TRANSITION CONCENTRIC UNLESS TOP LEVEL(TOP LVL) OR BOTTOM LEVEL(BOT LVL) IS NOTED
	TRANSITION, RECTANGULAR TO ROUND CONCENTRIC UNLESS TOP LEVEL(TOP LVL) OR BOTTOM LEVEL (BOT LVL) IS NOTED
	DUCT FLEXIBLE CONNECTION
	SOUND ATTENUATOR
	SQUARE CEILING DIFFUSER (SUPPLY) (4-WAY UNLESS OTHERWISE INDICATED)
	SQUARE CEILING GRILLE (RETURN OR EXHAUST)
	THERMOSTAT (OR) TEMP SENSOR
	DUCT SPLITTER WITH DAMPER
	MOTORIZED DAMPER
	MANUAL VOLUME DAMPER
	FIRE DAMPER

GENERAL NOTES	
1.	PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2.	THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS, FIELD MEASUREMENTS, AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.
3.	CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4.	BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTOR'S FAILURE TO FIELD COORDINATE.
5.	THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6.	LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.
7.	PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE MECHANICAL EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.
8.	COORDINATE ELECTRICAL REQUIREMENTS OF APPROVED MECHANICAL EQUIPMENT WITH THE ELECTRICAL SUB-CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL EQUIPMENT, DEVICES, WIRING, OR CONDUIT.
9.	PROVIDE GENERAL CONTROL WIRING, THERMOSTATS, MOTORIZED DAMPERS AND CONDUIT ASSOCIATED WITH HVAC EQUIPMENT. COORDINATE THE LOCATION OF ALL THERMOSTATS, ROOM SENSORS, ETC WITH THE ARCHITECT AND ALL OTHER TRADES PRIOR TO INSTALLATION. IF A CONFLICT WITH MILLWORK, LIGHT SWITCHES, WINDOWS, ETC EXISTS, NOTIFY THE ARCHITECT OF THE POTENTIAL INTERFERENCE PRIOR TO INSTALLATION. INSTALL THERMOSTATS WITH PROTECTIVE LOCKING COVER, CENTERED AT 4'-0" ABOVE FINISHED FLOOR, UNLESS OTHERWISE INDICATED. COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE TEXAS ACCESSIBILITY'S STANDARD (TAS).
10.	ALL DIMENSIONS SHOWN ON THE DRAWINGS FOR DUCTWORK ARE NET INSIDE CLEAR DIMENSIONS. FOR RECTANGULAR DUCT, THE FIRST FIGURE OF THE DUCT SIZE INDICATES THE DIMENSION OF THE FACE SHOWN. VERIFY THAT THE DUCTWORK SPECIFIED WILL FIT IN THE SPACE AVAILABLE USING THE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AS REFERENCE PRIOR TO FABRICATION AND INSTALLATION. ROUND DUCT OF EQUAL NET INSIDE CLEAR AREA MAY BE USED IN LIEU OF RECTANGULAR DUCT.
11.	UNLESS OTHERWISE SHOWN, PROVIDE TURNING VANES ON ALL RECTANGULAR SUPPLY, EXHAUST AND RETURN DUCTWORK INCLUDING THE TOP AND BOTTOM OF VERTICAL DUCTS.
12.	PROVIDE A LOCKING QUADRANT VOLUME DAMPER AT THE TAP OF EACH RUN-OUT TO DIFFUSERS FOR BALANCING PURPOSES, UNLESS OTHERWISE INDICATED. THE RUN-OUT DUCT SIZE IS THE SAME SIZE AS THE DIFFUSER OR GRILLE NECK SIZE UNLESS OTHERWISE INDICATED.
13.	CEILING SPACE IS NEEDED AS A RETURN AIR PLENUM IN CERTAIN AREAS. FOLLOW ALL APPLICABLE CODES AS TO MATERIALS ALLOWED FOR USE IN AIR PLENUMS. COORDINATE ALL WORK TO PROVIDE FREE RETURN OF AIR FROM ALL LOCATIONS.
14.	REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL FIRE RATED WALLS AND CEILINGS. PROVIDE FIRE DAMPERS AND/OR COMBINATION FIRE/SMOKE DAMPERS IN DUCTWORK AT ALL LOCATIONS WHERE DUCTS PASS THROUGH FIRE RATED ASSEMBLY. MECHANICAL SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING FIRE AND FIRE/SMOKE DAMPERS. COORDINATE CONSTRUCTION REQUIREMENTS AND PROVISIONS FOR CONNECTIONS TO FIRE ALARM SYSTEM.
15.	ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH SMACNA STANDARDS. SUPPLY AND RETURN DUCTWORK LOCATED OUTSIDE, EXPOSED TO AMBIENT CONDITIONS SHALL BE INTERNALLY LINED WITH 2" DUCT LINER. BREAK SHEET METAL IN A MANNER TO PREVENT STANDING WATER ON HORIZONTAL SURFACES. SEAL ALL SEAMS WITH MASTIC DESIGNED FOR USE ON METAL DUCT, GLASS FIBER DUCT BOARD, AND FLEXIBLE DUCT. MASTIC SHALL BE UL 181 LISTED FOR THE APPLICATION USED.
16.	ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH SMACNA STANDARDS. ALL DUCT WORK ON VAV SYSTEMS FROM AHU TO TERMINAL UNIT SHALL BE CONSTRUCTED TO 6" W.G. AND SEALED TO SMACNA CLASS A. DUCT WORK DOWN STREAM OF TERMINAL UNITS SHALL BE CONSTRUCTED TO 1" W.G. AND SEALED TO SMACNA CLASS C. ALL DUCT WORK ASSOCIATED WITH CONSTANT VOLUME AHE SHALL BE CONSTRUCTED TO 2" W.G. AND SEALED TO SMACNA CLASS B. SEAL ALL SEAMS WITH MASTIC SEALANT UL 181 LISTED FOR THE APPLICATION USED. SEALANT SHALL BE DESIGNED FOR USE ON METAL DUCT AND FLEXIBLE DUCT.
17.	SUPPLY AND RETURN DUCTWORK LOCATED OUTSIDE, EXPOSED TO AMBIENT CONDITIONS SHALL BE INTERNALLY LINED WITH 2" DUCT LINER. LINER SHALL BE FOIL-FACED, SUITABLE FOR HEALTHCARE APPLICATION; OTHERWISE USE DOUBLE WALL CONSTRUCTION. BREAK SHEET METAL IN A MANNER TO PREVENT STANDING WATER ON HORIZONTAL SURFACES. SEAL ALL SEAMS WITH MASTIC SEALANT UL 181 LISTED FOR THE APPLICATION USED. SEALANT SHALL BE DESIGNED FOR USE ON METAL DUCT AND FLEXIBLE DUCT.
18.	ALL RECTANGULAR AND ROUND SUPPLY AND RETURN DUCTWORK LOCATED IN EXPOSED INTERIOR AREAS SHALL BE INTERNALLY LINED WITH DUCT LINER AND EXTERNALLY PAINTED. REFER TO ARCHITECT FOR COLOR SELECTION.
19.	INSTALL DX PIPING AS SPECIFIED, INCLUDING FILTER/DRYER, SIGHT GLASS, ISOLATION/CHARGING VALVES AND ALL APPURTENANCES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL BE ACCOMPLISHED IN A NEAT AND ORDERLY FASHION, AS APPROVED BY THE ENGINEER. COORDINATE FOR ROUTING OF DX PIPING, UP INSIDE OF WALLS, ETC. AS REQUIRED, TERMINATING AT AHU's. PROVIDE BRACING/ISOLATION, AS REQUIRED TO PREVENT VIBRATION OF DX PIPING INSIDE WALLS, ETC. SIZE, ROUTE AND INSULATE DX PIPING PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATION REQUIREMENTS.
20.	PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN EQUIPMENT UNLESS NOTED OTHERWISE. PROVIDE ISOLATION AS INDICATED OR AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
21.	SOME PIPES AND DUCTS SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.
22.	SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.
23.	ALL EQUIPMENT SHALL HAVE IDENTIFICATION TAGS. TAGS SHALL BE PLASTIC LAMINATE, WHITE FACE WITH 1/2" TALL BLACK LETTERS. THE TAG SHALL MATCH THE UNIT DESIGNATIONS SHOWN ON THE SCHEDULES.
24.	EXPAND OR REDUCE DUCTS AT EQUIPMENT CONNECTIONS BASED ON THE EQUIPMENT PURCHASED, WITH TRANSITIONS NOT TO EXCEED 30 DEGREES. SIZES SHOWN ON SCHEDULES, ETC. ARE FOR GUIDANCE ONLY. ASPECT RATIO SHALL BE NO GREATER THAN 4:1, PER SMACNA'S GUIDELINES.
25.	ALL DUCTS WITH A DIMENSION GREATER THAN 12" PASSING THRU A NON-RATED WALL SHALL HAVE THE OPENING FRAMED IN WITH METAL STUDS. COORDINATE OPENING SIZE AND LOCATION WITH OTHER TRADES.
26.	PROVIDE ALL CEILING RETURN GRILLES WITH RETURN SOUND ATTENUATOR AS DETAILED. RE:X/MXXX.
27.	TEST AND BALANCE SHALL BE PERFORMED BY AN AABC LICENSED FIRM IN THE TESTING, ADJUSTING, AND BALANCING (TAB) BUSINESS FOR A MINIMUM OF 10 YEARS. AABC FIRM SHALL SUBMIT A REPORT TO THE ENGINEER OF RECORD INDICATING EQUIPMENT NAMEPLATE DATA, DESIGN PERFORMANCE, INITIAL TESTED PERFORMANCE, AND FINAL ADJUSTED PERFORMANCE. REPORT SHALL BE SUBMITTED IN A TIMELY FASHION PRIOR TO JOB CLOSE-OUT. TAB SHALL BE PERFORMED ON ALL NEW SYSTEMS SPECIFIED AND ON ALL EXISTING SYSTEMS MODIFIED AS PART OF THIS CONTRACT. TAB FIRM SHALL PERFORM A FUNCTIONAL PERFORMANCE TEST OF THE SYSTEM BASED ON THE CONTRACT DOCUMENTS HEREIN SHALL AND RELAY ALL DISCREPANCIES AND OUTSTANDING CONSTRUCTION ITEMS RELATING TO THE MECHANICAL EQUIPMENT AND PERFORMANCE TO THE ENGINEER OF RECORD.



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MECHANICAL
LEGENDS, NOTES

M101

GAS FIRED FURNACE/DX SPLIT SYSTEM COOLING COIL SCHEDULE																									
MARK	NOMINAL SIZE (TONS)	SUPPLY AIRFLOW (ACFM)	OUTSIDE AIRFLOW (ACFM)	EXTERNAL STATIC PRESSURE (IN WC)	COOLING COIL PERFORMANCE							GAS HEAT PERFORMANCE				ELECTRICAL CHARACTERISTICS						MANUFACTURER MODEL NUMBER (AHU/COOLING COIL)	REMARKS		
					T.C. (MBH)	S.C. (MBH)	ENTERING AIR		LEAVING AIR		MINIMUM EER/ SEER	ENTERING AIR (MAT) DB(°F)	MINIMUM CAPACITY (MBH)	INPUT (MBH)	OUTPUT (MBH)	INDOOR FAN HP	C/A FAN HP	VOLTS	PHASE	HZ	M.C.A.			MOCP	
							DB(°F)	WB(°F)	DB(°F)	WB(°F)															
AHU-1	4	1,600	400	0.7	39.7	30.5	82.3	65.6	59.0	55.7	13.0/15.5	59.4	57.9	100	92.1	3/4	1/20	115	1	60	13.5	20	TRANE, TUH2C120A94VA / 4TXCD063BC3HC	①②③④	
AHU-2	5	2,000	500	0.7	55.0	37.7	78.2	64.6	57.0	54.3	10.8/12.25	56.2	85	120	96	1/2	1/50	115	1	60	17	20	TRANE, TUH2C120A94VA / 4TXCD063BC3HC	①②③④	
AHU-3	5	2,000	500	0.7	55.0	37.7	78.2	64.6	57.0	54.3	10.8/12.25	56.2	85	120	96	1/2	1/50	115	1	60	17	20	TRANE, TUH2C120A94VA / 4TXCD063BC3HC	①②③④	
AHU-4	2.5	900	225	0.6	21.4	17.8	82.3	65.2	58.0	54.7	13.0/16.0	59.0	30.1	60	56	1/2	1/55	115	1	60	11.1	15	TRANE, TUH2B060A9V3VA / 4TXCC005CC3HC	①②③④	
AHU-5	3.5	1,240	300	0.6	38.7	28.7	81.1	65.9	58.0	56.1	12.5/15.0	57.4	59.4	100	92.1	3/4	1/25	115	1	60	12.4	15	TRANE, TUH1C100A9H41A / 4TXCD050BC3HC	①②③④	
① EXTERNAL STATIC PRESSURE INDICATED IN SCHEDULE INCLUDES COOLING COIL (WET), DUCTWORK, BALANCING DAMPERS AND AIR DEVICES ONLYAND DOES NOT INCLUDE FILTER OR UNIT LOSSES																									
② SIZE, ROUTE, INSULATE AND PROVIDE REQUIRED APPURTENANCES FOR DX PIPING SYSTEMS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS																									
③ PROVIDE ALL EQUIPMENT AND ACCESSORIES, AND MAKE ALL NECESSARY CHANGES TO STANDARD EQUIPMENT, PER THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS FOR LONG REFRIGERANT LINE INSTALLATIONS.																									
④ PROVIDE WITH COMBUSTION-AIR INDUCER: CENTRIFUGAL FAN WITH THERMALLY PROTECTED MOTOR AND SLEEVE BEARINGS PREPURGES HEAT EXCHANGER AND VENTS COMBUSTION PRODUCTS; PRESSURE SWITCH PREVENTS FURNACE OPERATION IF COMBUSTION-AIR INLET OR FLUE OUTLET IS BLOCKED.																									
MOCP: MAXIMUM OVERCURRENT CIRCUIT PROTECTION																									

AIR COOLED CONDENSING UNIT SCHEDULE																		
MARK	SERVES	NOMINAL SIZE (TONS)	CONDENSING UNIT DATA								ELECTRICAL CHARACTERISTICS					MANUFACTURER MODEL NUMBER	REMARKS	
			REFRIG TYPE	COMPRESSOR		COND. FANS		NO. REFR CIRC.	AMB. TEMP. (°F)	FAN DIA (IN)	VOLTS	PHASE	HZ	M.C.A.	M.O.C.P.			
				NO.	F.L. AMPS	NO.	HP EA.											
CU-1	AHU-1	4	R-410A	1	19.9	1	1/3	1	105	27.5	208	1	60	28	45	TRANE, 4TTB4049	①②③	
CU-2	AHU-2	5	R-410A	1	21.9	1	1/2	1	105	27.5	208	1	60	31	45	TRANE, 4TTB4060	①②③	
CU-3	AHU-3	5	R-410A	1	21.9	1	1/2	1	105	27.5	208	1	60	31	45	TRANE, 4TTB4060	①②③	
CU-4	AHU-4	2.5	R-410A	1	9.1	1	1/5	1	105	27.5	208	1	60	12	20	TRANE, 4TTB4030	①②③	
CU-5	AHU-5	3.5	R-410A	1	17.9	1	1/5	1	105	27.5	208	1	60	23	40	TRANE, 4TTB4042	①②③	
① SIZE, ROUTE, INSULATE AND PROVIDE REQUIRED APPURTENANCES FOR DX PIPING SYSTEMS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS																		
② PROVIDE CRANKCASE HEATER.																		
③ PROVIDE LOW-AMBIENT CONTROLS TO ALLOW OPERATION DOWN TO 35°F AMBIENT.																		
MOCP: MAXIMUM OVERCURRENT CIRCUIT PROTECTION																		

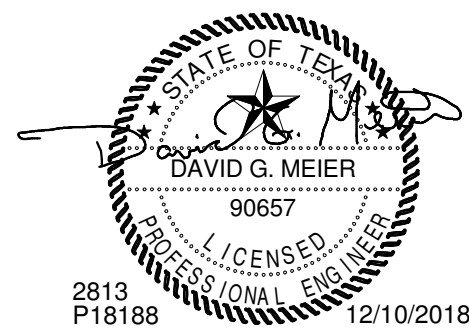
AIR DEVICE SCHEDULE							
MARK	SERVES	TYPE	FACE SIZE	MOUNTING	MATERIAL	MANUFACTURER AND MODEL NUMBER	REMARKS
A	SUPPLY AIR	LOUVERED, UNIFORM FACE, FIXED / DIRECTIONAL DISCHARGE	24"x24"	LAY-IN	ALUMINUM	TITUS, MODEL TDC-AA	①②③④
B	RETURN AIR	PERFORATED, FACE FLUSH W/ CEILING, 3/16"□ HOLES, 1/4" STAGGERED CTRS	24"x24"	LAY-IN	ALUMINUM	TITUS, MODEL PAR-AA	①②③④
C	EXHAUST AIR	PERFORATED, FACE FLUSH W/ CEILING, 3/16"□ HOLES, 1/4" STAGGERED CTRS	24"x24"	DUCT	ALUMINUM	TITUS, MODEL PAR-AA	①②③④
D	SUPPLY AIR	LOUVERED FACE, SURFACE MOUNT, 3/4" BLADE SPACING,35 DEG DEF.	16"x6"	DUCT	ALUMINUM	TITUS, MODEL 350RS-HD	①②③④
E	RETURN AIR	LOUVERED FACE, SURFACE MOUNT, 3/4" BLADE SPACING,35 DEG DEF.	18"x14"	SURFACE	ALUMINUM	TITUS, MODEL 350RS	①②③④
① UNITS SHALL BE FURNISHED WITH APPROPRIATE FRAMES, ETC FOR MOUNTING IN RESPECTIVE CEILING TYPES AND CONDITIONS							
② OFF-WHITE BAKED ENAMEL							
③ TRANSITION FROM BACK OF GRILLE OR SUPPLY PLENUM OPENING TO DUCT SIZE SHOWN ON THE FLOOR PLANS							
④ SOUND VALUES SHALL NOT EXCEED NC 30 FOR ANY ROOM, UNLESS OTHERWISE NOTED.							

FAN SCHEDULE													
MARK	TYPE	SERVES	CFM	EXT SP IN. WG	DRIVE TRAIN	MOTOR DATA					MAX. SONES	MANUFACTURER AND MODEL NO.	REMARKS
						HP	RPM	VOLTS	PH	HZ			
EF-1	DOWNBLAST	VEHICLE MAINTENANCE	400	0.125	BELT	1/25	1050	120	1	60	5.1	LOREN COOK, MODEL ACE-D, 90C10DH	①②③④⑤⑩⑪
EF-2	DOWNBLAST	GROUPS SHOP	400	0.125	BELT	1/25	1050	120	1	60	5.1	LOREN COOK, MODEL ACE-D, 90C10DH	①②③④⑥⑩⑪
EF-3	DOWNBLAST	WOOD SHOP	400	0.125	BELT	1/25	1050	120	1	60	5.1	LOREN COOK, MODEL ACE-D, 90C10DH	①②③④⑦⑩⑪
EF-4	DOWNBLAST	ELECTRIC SHOP	250	0.125	BELT	1/20	1050	120	1	60	5.2	LOREN COOK, MODEL ACE-D,70C15DH	①②③④⑧⑩⑪
EF-5	DOWNBLAST	RESTROOMS	560	0.25	BELT	1/8	1550	120	1	60	8.9	LOREN COOK, MODEL ACE-D, 90C15DH	①②③④⑨⑩⑪
SH-1	DOME	FRESH AIR	1925	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	LOREN COOK, MODEL PR	①②③④⑪
① PROVIDE WITH INTEGRAL DISCONNECT, AUTO BACKDRAFT DAMPER AND SPEED CONTROLLER.									⑦ INTERLOCK OPERATION WITH OPERATION OF AHU-3				
② PROVIDE FLEXIBLE CONNECTION AT INLET OF FAN AND INTAKE HOOD									⑧ INTERLOCK OPERATION WITH OPERATION OF AHU-4				
③ PROVIDE INSECT SCREEN AT DISCHARGE/INTAKE									⑨ INTERLOCK OPERATION WITH OPERATION OF AHU-5				
④ PROVIDE INSULATED ALUM. FACTORY ROOF CURB WITH BUILT-IN KANT.									⑩ PROVIDE MOTORIZED DAMPER AT DISCHARGE INTERLOCKED WITH OPERATION OF FAN				
⑤ INTERLOCK OPERATION WITH OPERATION OF AHU-1									⑪ OR EQUAL				
⑥ INTERLOCK OPERATION WITH OPERATION OF AHU-2													

UNIT HEATER SCHEDULE									
MARK	LOCATION	TYPE	GAS HEAT PERFORMANCE			MOTOR DATA			REMARKS
			MINIMUM CAPACITY (MBH)	INPUT (MBH)	OUTPUT (MBH)	VOLTS	PHASE	HZ	
UH-1	ELEC M115	POWER VENT AXIAL FAN	20	30	24.6	115	1	60	③④⑤
UH-2	SPRINKLER M129	POWER VENT AXIAL FAN	20	30	24.6	115	1	60	③④⑤
UH-3	DUST M114	POWER VENT AXIAL FAN	20	30	24.6	115	1	60	③④⑤
① EXTEND GAS VENT THRU ROOF									
② PROVIDE UNIT MOUNTED THERMOSTAT									
③ OR EQUAL									

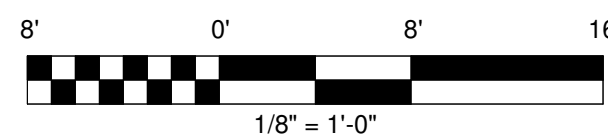
DUST COLLECTION SYSTEM											
MARK	LOCATION	AIRFLOW CFM	TOTAL SP IN.WG	DRIVE	MOTOR DATA				MANUFACTURER AND MODEL NO.	REMARKS	
					HP	VOLTS	PHASE	HZ			
DCS-1	DUST COLLECTION	1000	5.9	DIRECT	7.5	208	3	60	DONALDSON-TORIT DFE	①②③④	
① PROVIDE WITH TOP MOUNT DONALDSON-TORIT BACKWARD INCLINED FAN TBI-7.5 AND MATCHING FAN MOTOR											
② PROVIDE DELTA P PLUS CONTROLLER/DISCONNECT											
③ PROVIDE WITH MATCHING SILENCER, REF. TO UNIT/SILENCER ORIENTATION											
④ OR EQUAL											

DUCTLESS DX SPLIT SYSTEM SCHEDULE																
MARK	AIR HANDLING UNIT					AIR COOLED CONDENSING UNIT				COOLING PERFORMANCE DATA				FCU / CU MODEL NUMBER	REMARKS	
	ARRANGEMENT	UNIT CFM	O/A CFM	EXT. S.P.	HP	REFR. TYPE	POWER CONNECTION				CAPACITY (MBH)		OD D.B. °F			MIN. SEER
							VOLTS	PH	MCA	MOCP	TOT.	SENS				
FCU-1 / CU-1	WALL	512	N/A	0.1	1/10	R410A	208	1	12	20	16.5	12.9	105	18	LS180HEV1/LSU180HEV1	1, 2, 3, 4, 5, 6, 7, 8, 9
1. LG IS BASIS FOR DESIGN.																
2. SIZE, ROUTE, INSULATE AND PROVIDE APPURTENANCES FOR DX PIPING SYSTEMS PER MANUFACTURER'S RECOMMENDATIONS																
3. LISTED CAPACITIES ARE FOR THE AIR HANDLER UNIT AND THE CONDESSENER UNIT COMBINATION, UNITS SHALL PERFORM TO LISTED NET CAPACITIES.																
4. FOR LONG DX RUNS, USE MANUFACTURER'S RECOMMENDED LONG LINE INSTALLATION GUIDELINES.																
5. UNIT SHALL BE PROVIDED WITH TVX VALVES.																
6. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS.																
7. REFER TO 6/M401 FOR UNIT SUPPORT CURB.																
8. PROVIDE WITH INTERNAL CONDENSATE PUP.																
9. INDOOR UNIT IS POWERED THROUGH OUTDOOR UNIT CIRCUIT.																



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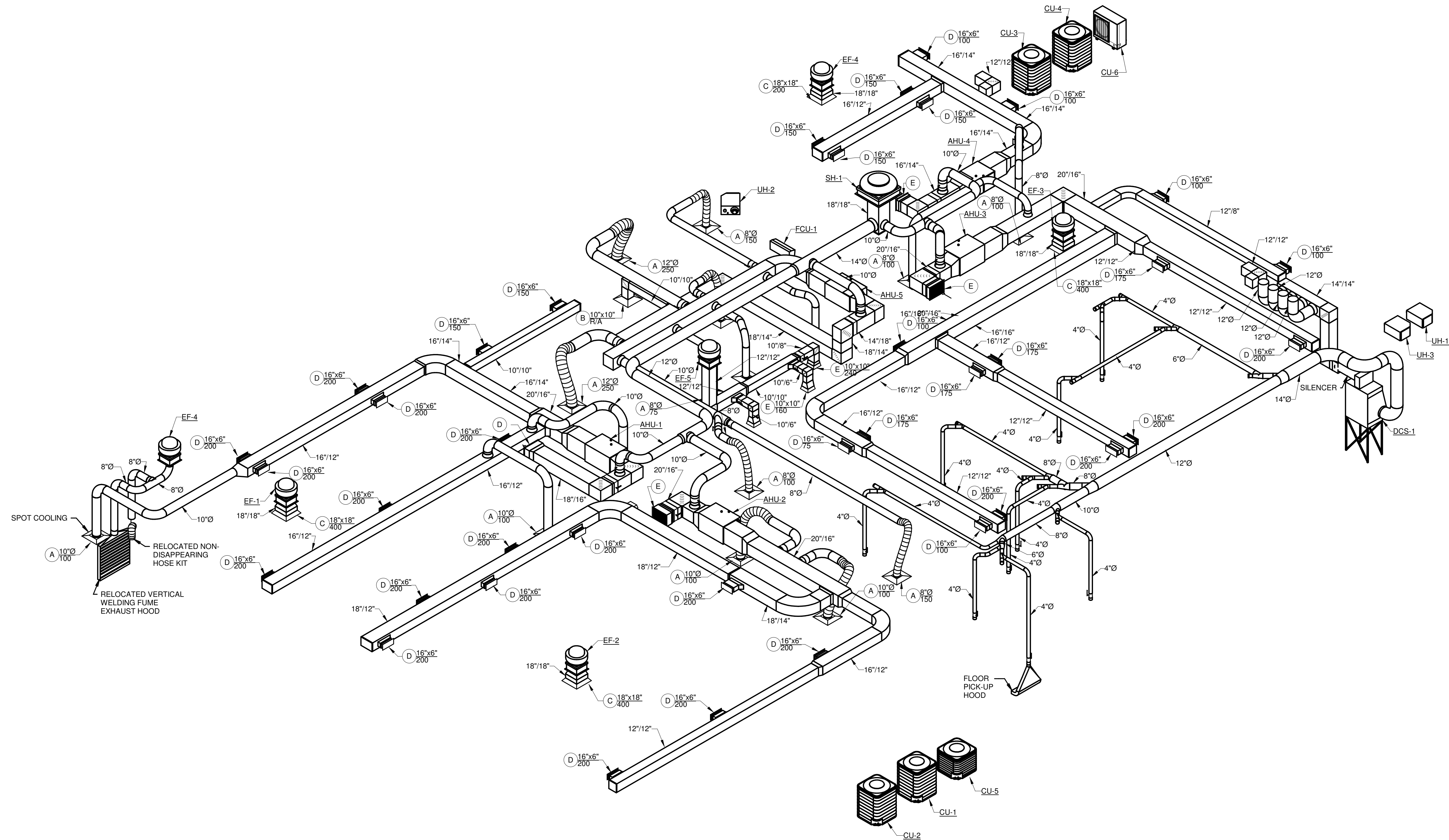
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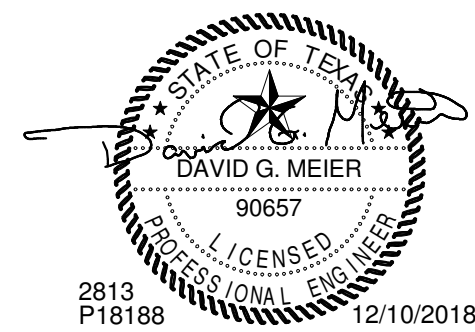
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GROUND FLOOR MECHANICAL PLAN

M201



1 building riser



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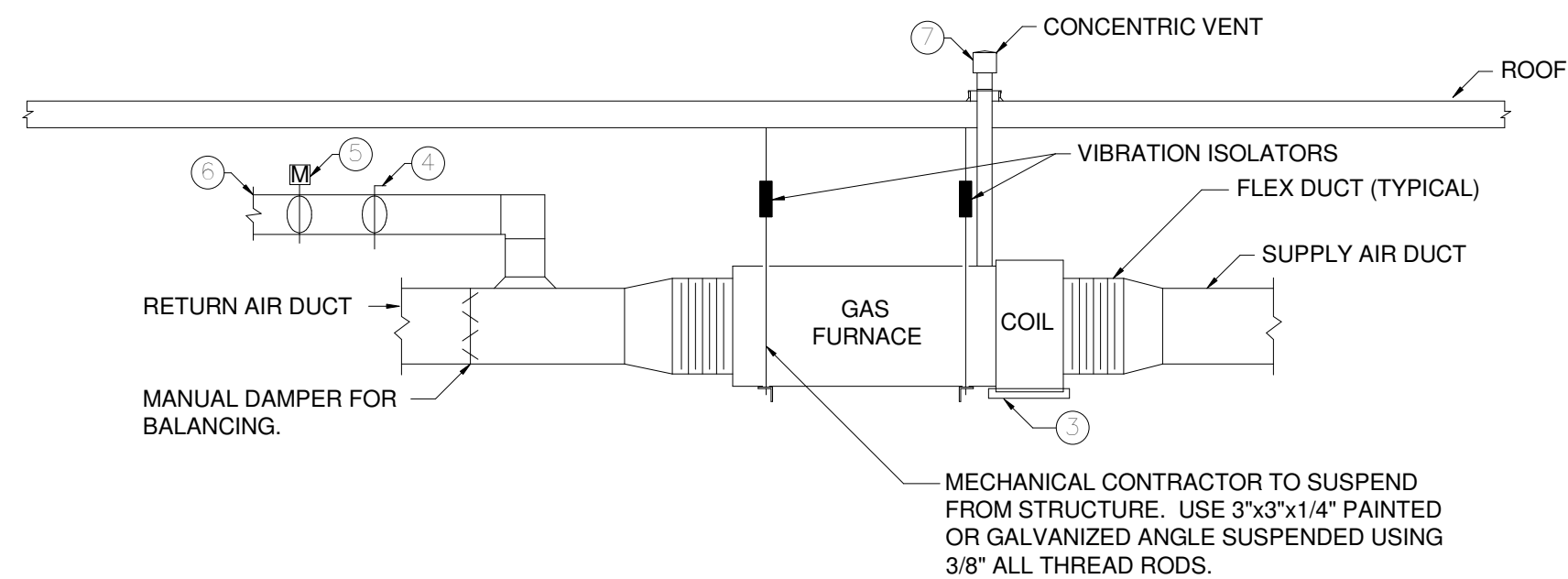
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MECHANICAL
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M202

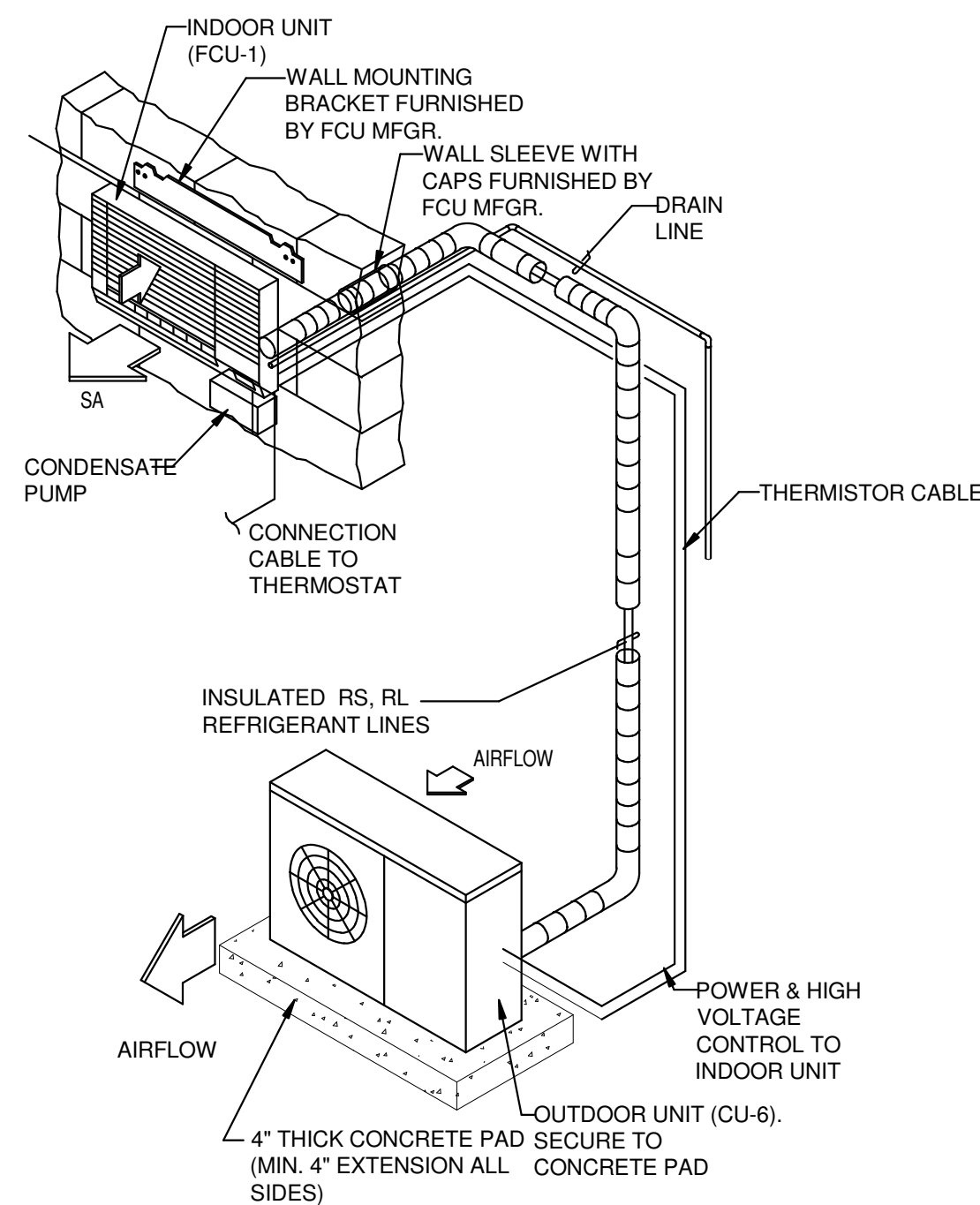


NOTES FOR DETAIL:

1. SIZE AND LOCATE OUTSIDE AIR INTAKE AS SHOWN ON FLOOR PLAN, BALANCE ACCORDING TO SCHEDULED OUTSIDE AIR.
2. SEAL ROOF AND WALL PENETRATIONS WEATHER TIGHT.
3. AUXILIARY DRAIN PAN. CONTRACTOR SHALL PROVIDE AND INSTALL A WATER SENSING DISK IN DRAIN PAN. DISK SHALL BE INTERLOCKED WITH AIR HANDLER UNIT STARTER TO TURN OFF AIR HANDLER UNIT WHEN DRAIN PAN FILLS WITH CONDENSATE. DISK SWITCH SHALL BE WIRED THROUGH AN INTERPOSING RELAY TO THE STARTER CIRCUIT.
4. MANUAL DAMPER, BALANCE O/A AS SCHEDULED.
5. MOTORIZED DAMPER. INTERLOCK WITH FURNACE FAN MOTOR TO OPEN WHEN FAN MOTOR IS ENERGIZED.
6. O/A INTAKE DUCT. CONNECT TO MAIN O/A SERVING AHUS ON 2ND FLOOR. REFER TO PLANS FOR SIZE AND ROUTING OF DUCT.
7. CONCENTRIC VENT THROUGH ROOF. REFER TO DETAIL 12/M6.1 FOR ADDITIONAL INFORMATION.

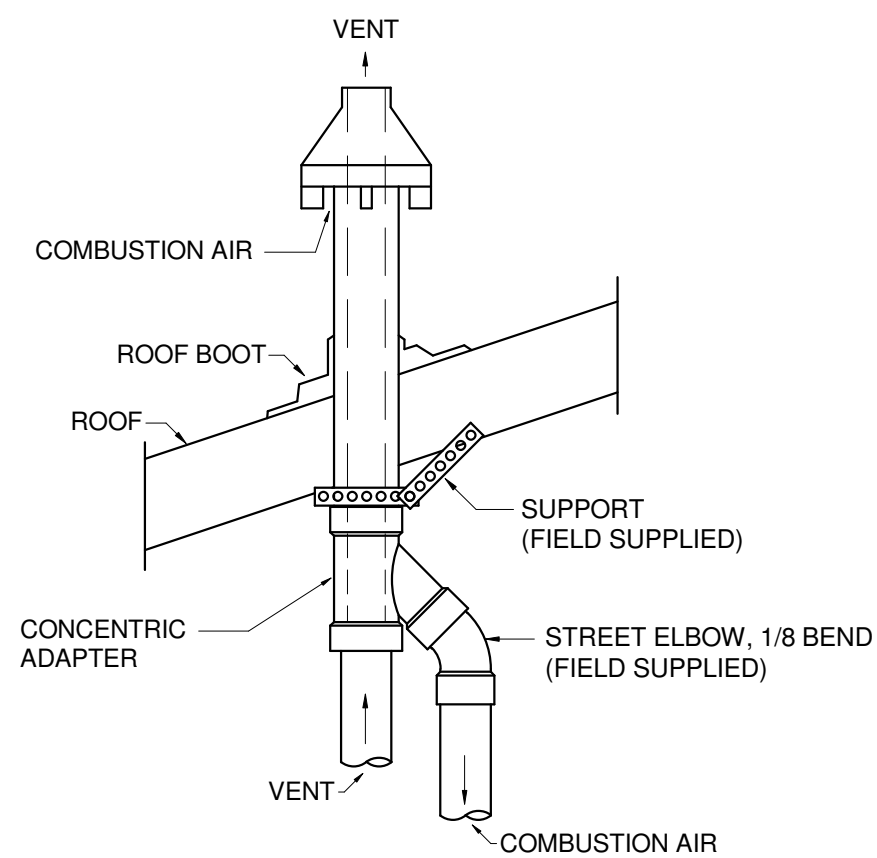
1 TYPICAL SUSPENDED GAS FURNACE WITH DX COIL, DUCTED O/A

SCALE: NO SCALE



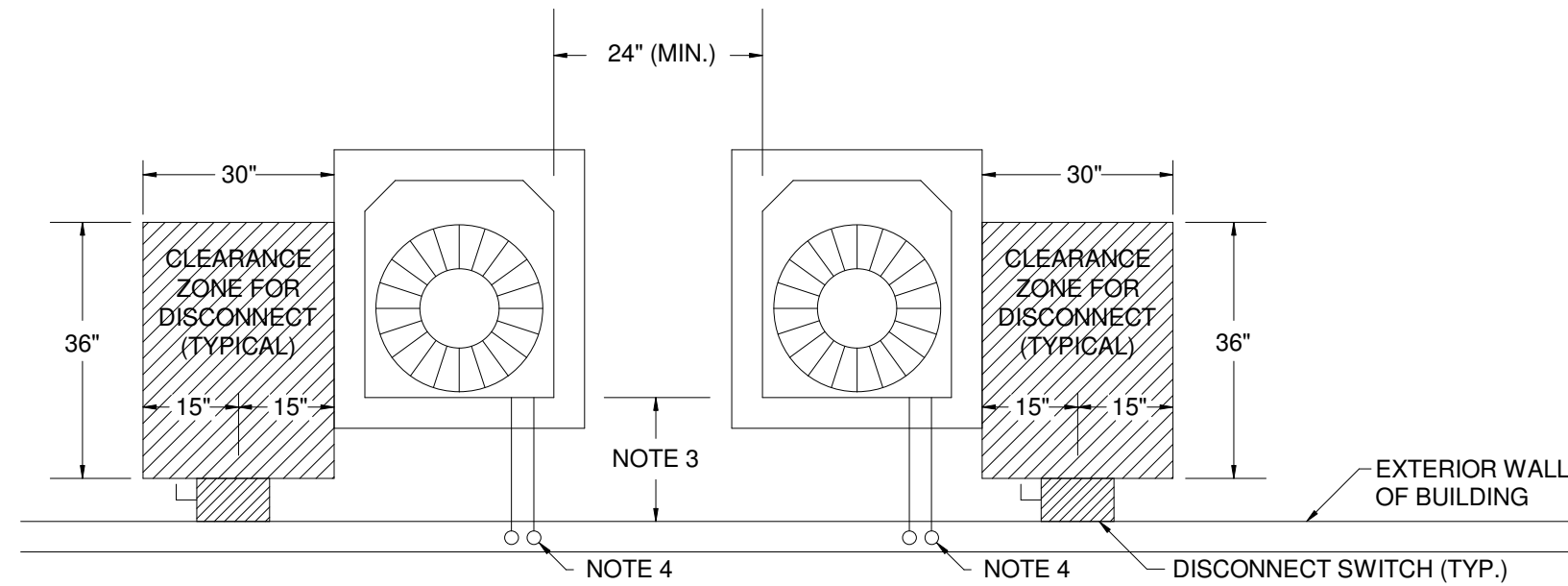
4 DUCTLESS AIR CONDITIONER DETAIL

SCALE: NO SCALE



7 TYPICAL CONCENTRIC VENT DETAIL FOR SEPARATED COMBUSTION GAS APPLIANCES

SCALE: NO SCALE

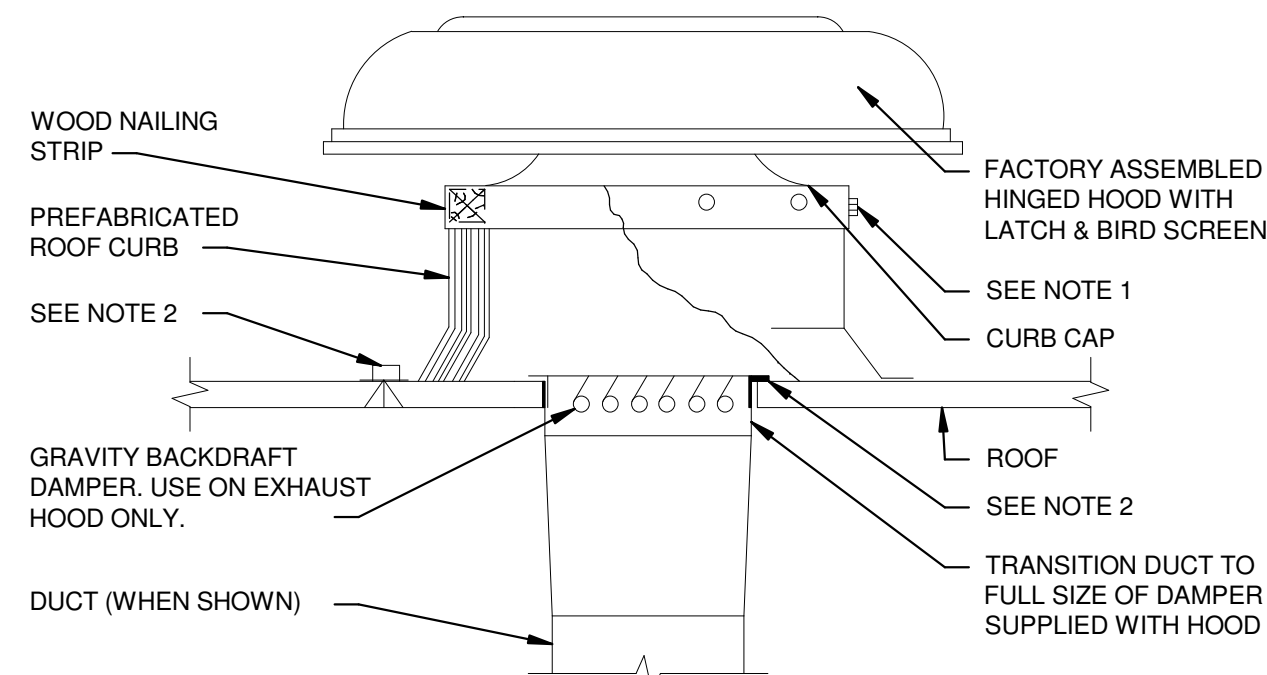


NOTES FOR DETAIL:

1. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR AT LEAST FIVE (5) FEET ABOVE UNIT. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT.
2. UNIT SHOULD BE UNOBSTRUCTED FOR 12\" (MIN.) ON ANY SIDE AND IN FRONT.
3. 12\" (MIN.) IF THE DISCONNECT SWITCH IS OFF TO THE SIDE OF UNIT. DISCONNECT SWITCH MAY BE PLACED BEHIND UNIT, IN THIS CASE THIS DIMENSION FROM THE FRONT OF THE DISCONNECT SWITCH TO THE BACK OF THE UNIT CAN BE NO SMALLER THAN 36\" FOR 208 V. AND 42\" FOR 480 V. UNITS.
4. REFRIGERANT PIPING TO RUN IN WALL UP TO MECHANICAL SPACE AND TO AIR HANDLER UNIT. SEAL WALL PENETRATION WEATHER TIGHT.
5. CONTROL WIRING TO CONDENSATE UNITS SHALL BE IN CONDUIT.

2 TYPICAL CONDENSING UNIT CLEARANCES

SCALE: NO SCALE

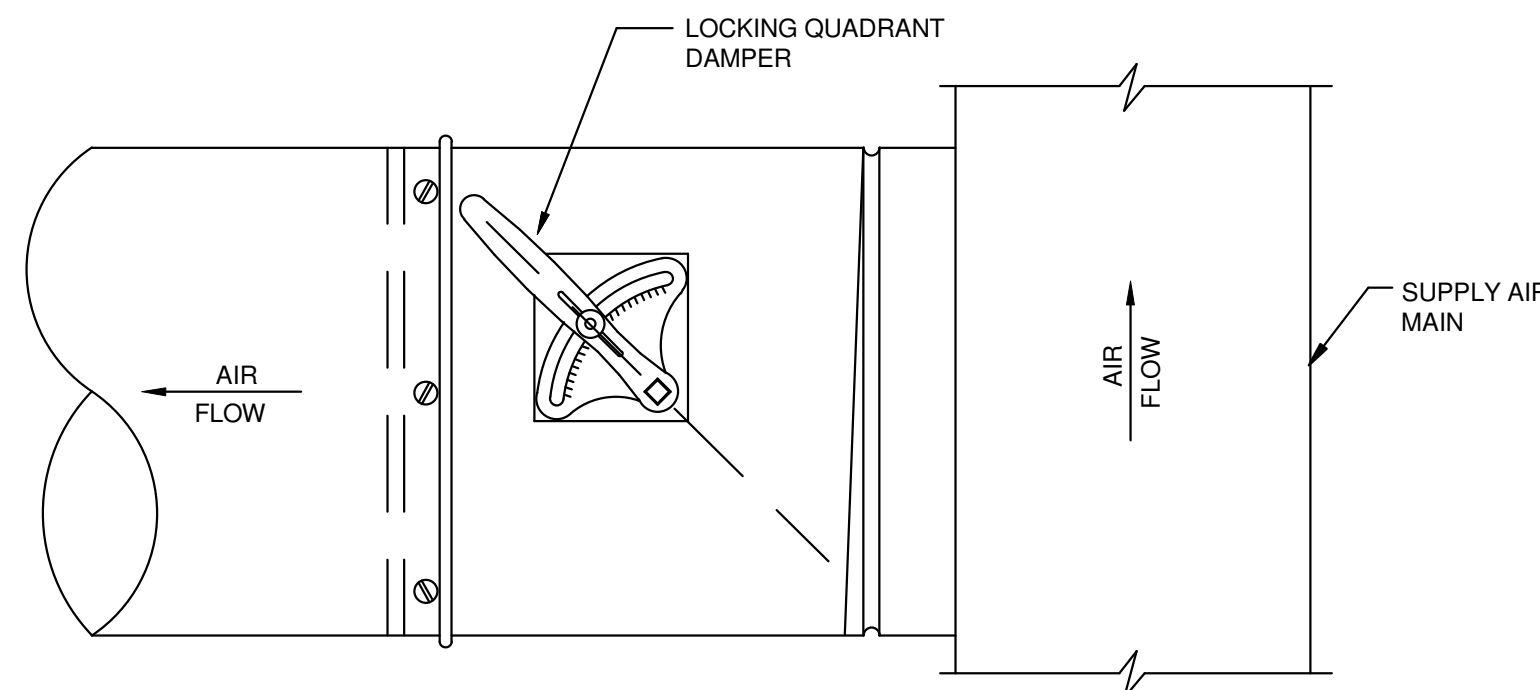


NOTE:

1. SECURE HOOD TO WOOD NAILING STRIP WITH 3/8\" [10mm] CADMIUM PLATED LAG BOLTS NOT OVER 12\" ON CENTER.
2. SECURE ROOF CURB, DUCTWORK AND DAMPER TO ROOF WITH EXPANSION BOLTS (CONCRETE ROOF) OR RUST RESISTANT BOLTS (MENTAL DECK & BAR JOIST ROOF).
3. SIZE OF DUCT THROUGH ROOF SHALL NOT BE LARGER THAN CURB SUPPLIED WITH HOOD.

5 TYPICAL LOW-SILHOUETTE INTAKE HOOD

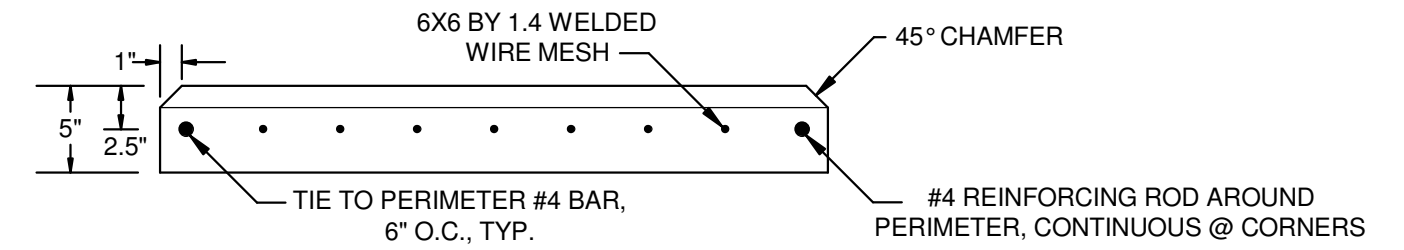
SCALE: NO SCALE



REQ'D AT EACH RUN-OUT TAP TO EVERY TERMINAL SUPPLY AIR DEVICE, AND OTHERWISE AS INDICATED.

8 SPIN-IN TAP

SCALE: NO SCALE

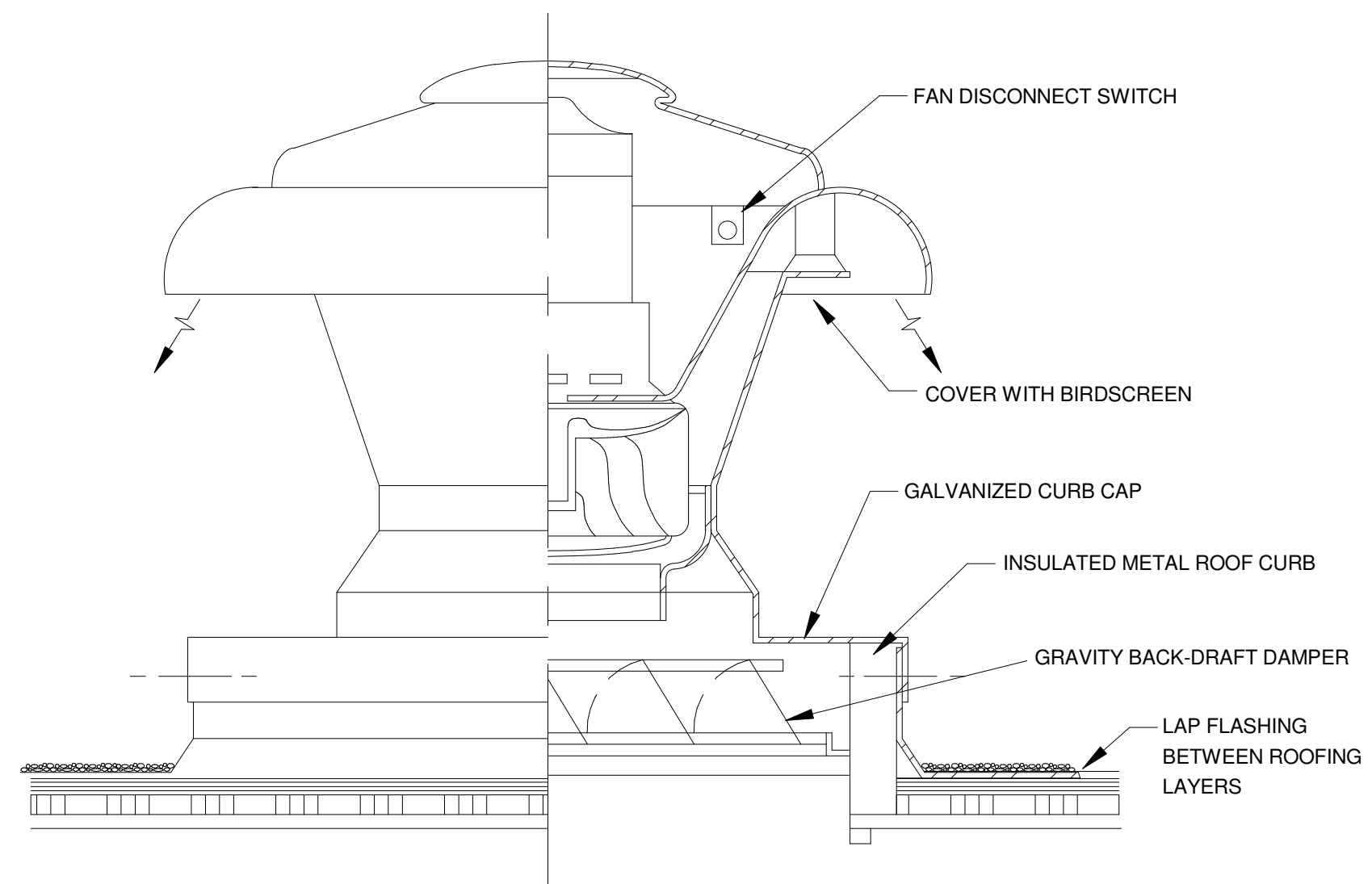


NOTES:

1. PAD SHALL EXTEND BEYOND EQUIPMENT 12\" (MIN.) IN ALL DIRECTIONS.
2. CONCRETE SHALL BE 2800 PSI TEST @ 28 DAYS, MIN.

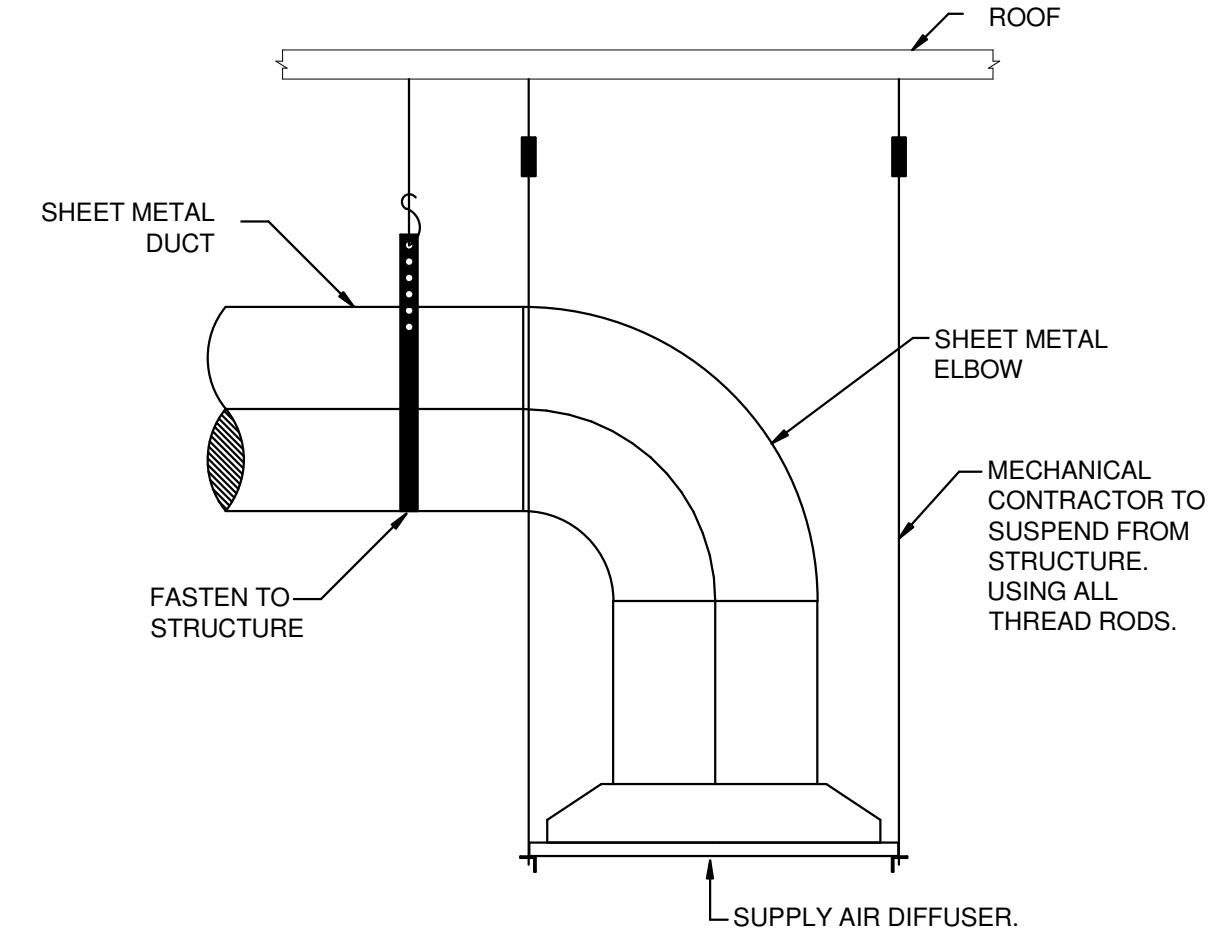
3 TYPICAL SECTION THROUGH CONDENSING UNIT CONCRETE PAD

SCALE: NO SCALE



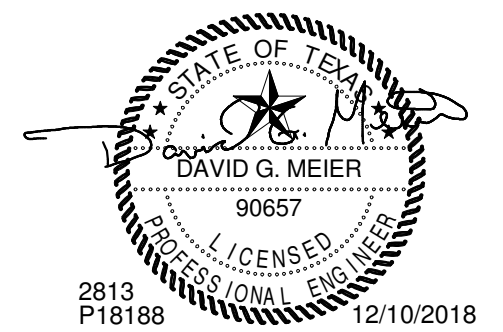
6 TYPICAL DOWNBLAST ROOF EXHAUST FAN

SCALE: NO SCALE



9 SUSPENDED DIFFUSER (SPOT COOLING)

SCALE: NO SCALE



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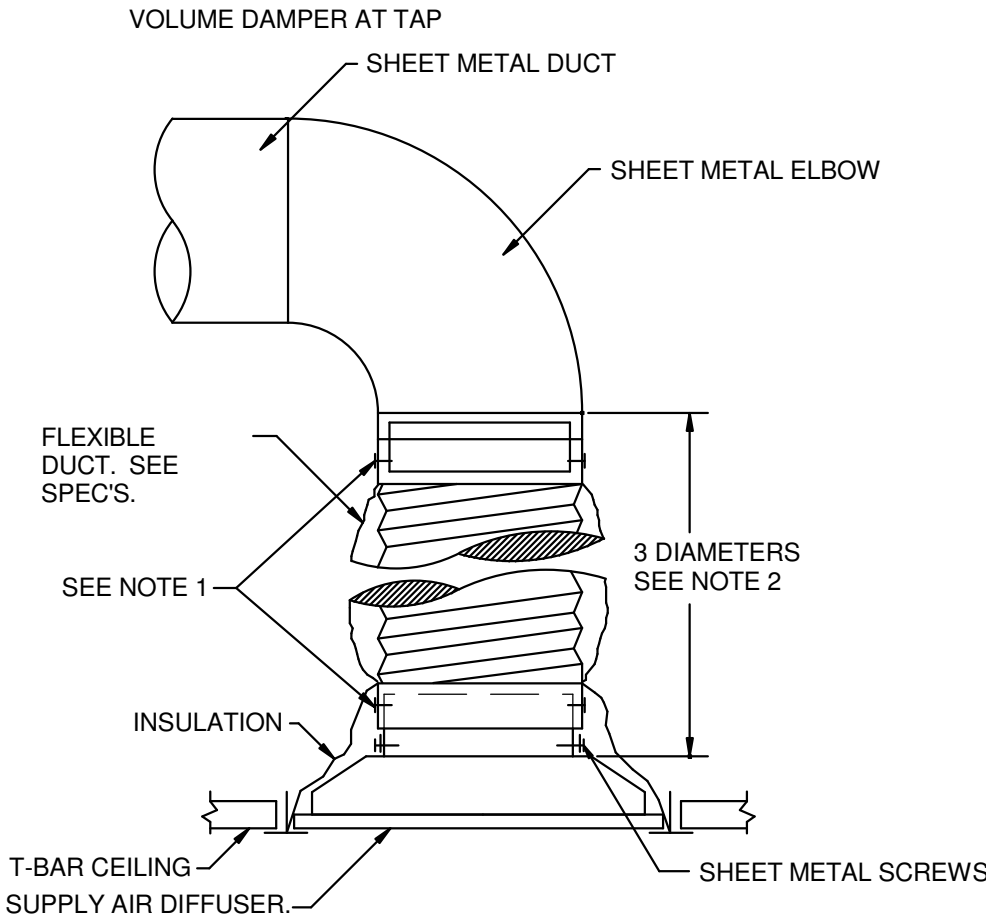
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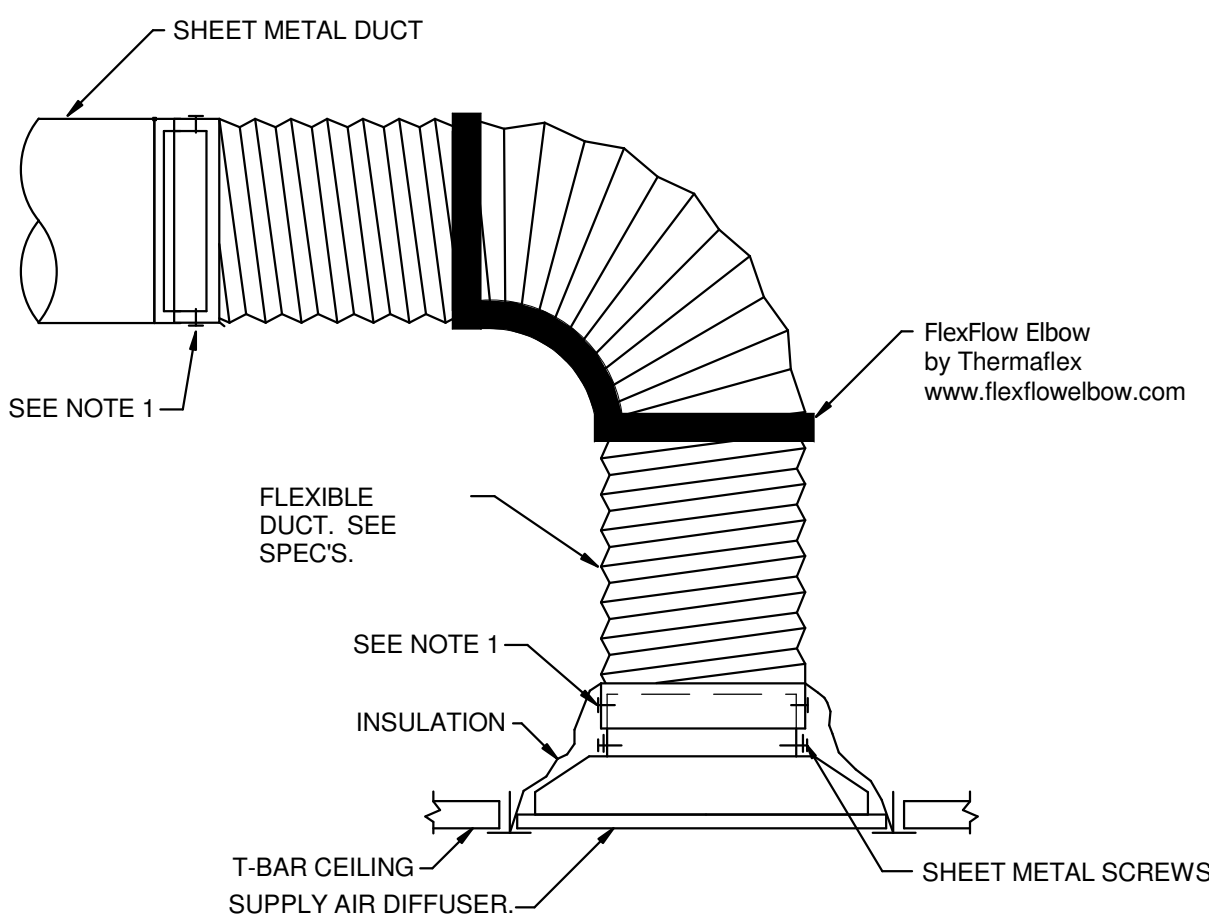
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MECHANICAL
DETAILS

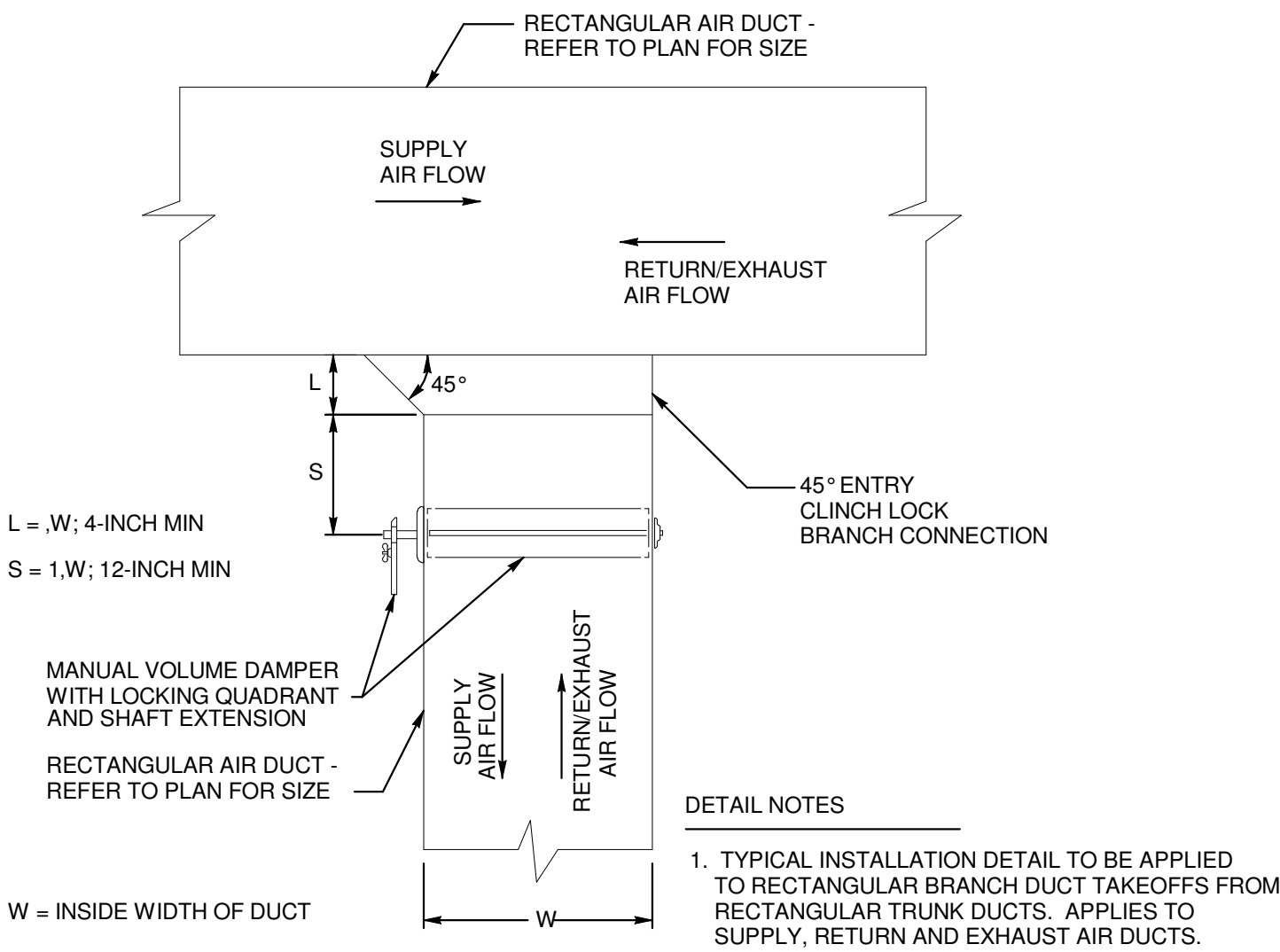
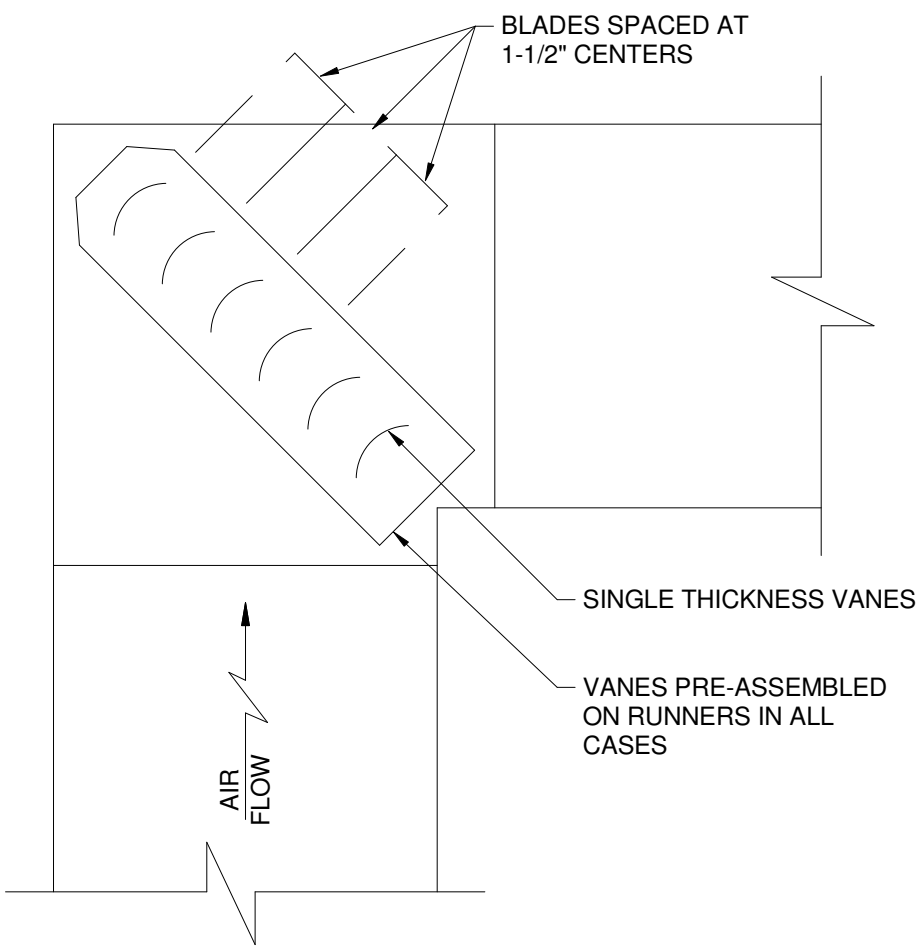
M301



- NOTES:
1. USE PLENUM COLLARS TO ATTACH FLEXIBLE DUCT . USE SHEET METAL SCREWS AND (2) WRAPS OF TAPE TO SECURE PLENUM COLLARS. ALTERNATE METHOD: BANDING DEVICE OR PANDUIT STRAP, IN LIEU OF SHEET METAL SCREWS. ALL TAPES AND SEALING MATERIALS SHALL COMPLY WITH UL181A FOR RIGID DUCT AND UL181B FOR FLEXIBLE DUCT.
 2. SECURE SHEET METAL DROP TO DIFFUSER NECK WITH A MIN. OF (3) SHEET METAL SCREWS AND (2) FULL WRAPS OF TAPE PER UL REQUIREMENTS LISTED IN NOTE 1.
 3. ALL FLEX DUCT SHALL BE INSTALLED WITHOUT KINKS, SAGGING, OR SHORT-RADIUS BENDS.



- NOTES:
1. USE PLENUM COLLARS TO ATTACH FLEXIBLE DUCT . USE SHEET METAL SCREWS AND (2) WRAPS OF TAPE TO SECURE PLENUM COLLARS. ALTERNATE METHOD: BANDING DEVICE OR PANDUIT STRAP, IN LIEU OF SHEET METAL SCREWS. ALL TAPES AND SEALING MATERIALS SHALL COMPLY WITH UL181A FOR RIGID DUCT AND UL181B FOR FLEXIBLE DUCT.
 2. IF A MINIMUM OF 2 DIAMETERS OF STRAIGHT RUN IS NOT AVAILABLE ABOVE THE REGISTER USE HARD DUCT SHORT RADIUS CONNECTION.
 3. ALL FLEX DUCT SHALL BE INSTALLED WITHOUT KINKS, SAGGING, OR SHORT-RADIUS BENDS.



10 TYPICAL FLEXDUCT CONNECTIONS

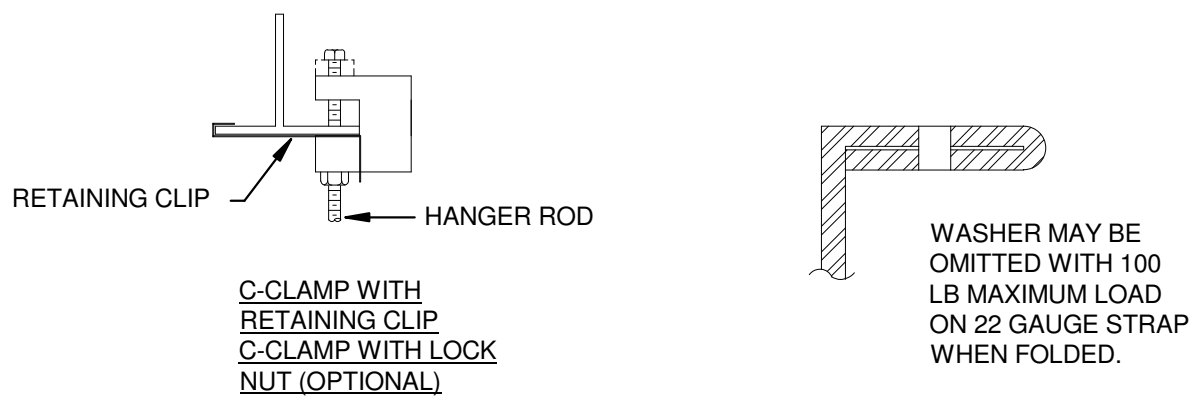
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11 TYPICAL SQUARE ELBOW

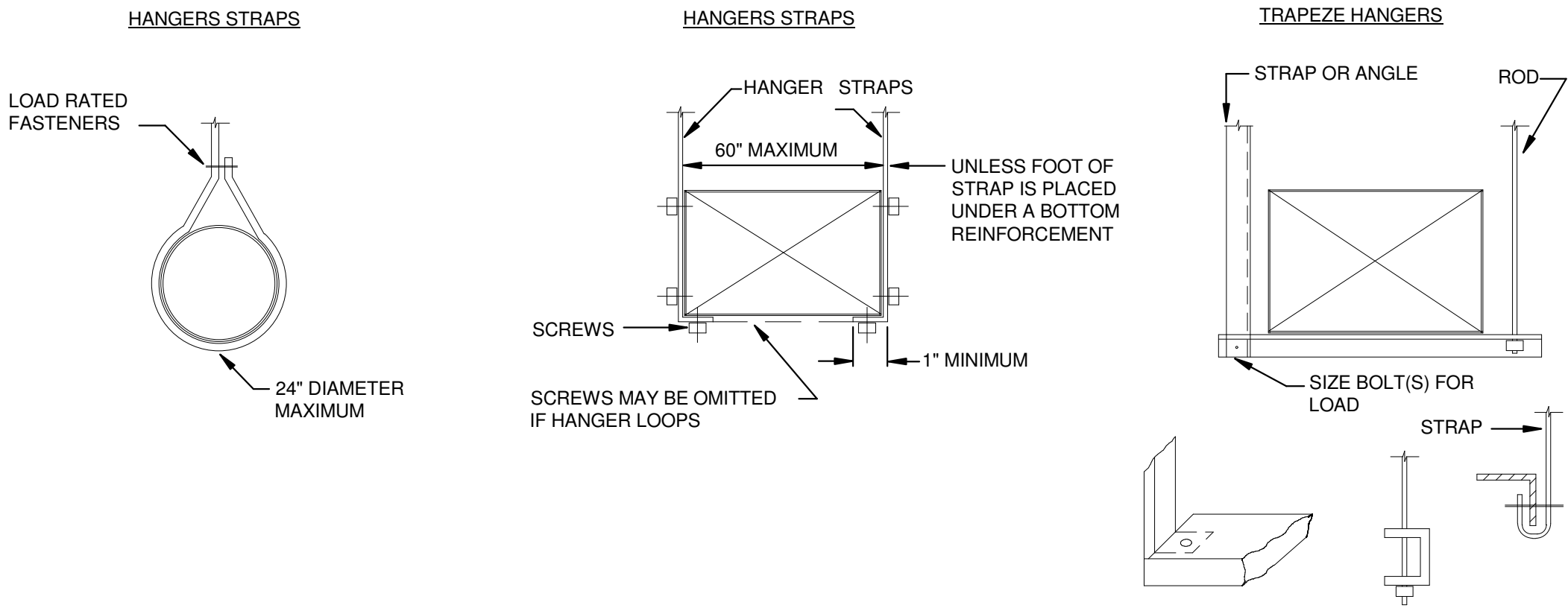
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12 TYPICAL RECTANGULAR BRANCH TAKEOFF DETAIL

SCALE: NO SCALE



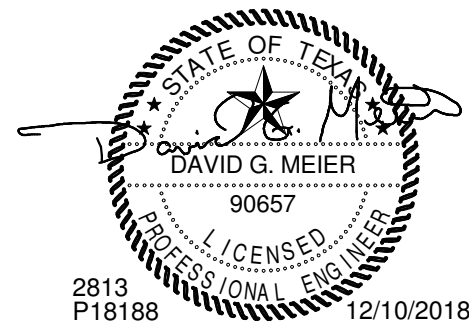
METHODS OF ATTACHMENT TO VARIOUS TYPES OF STRUCTURES - USE APPLICABLE TYPE



- NOTE:
1. HANGER STRAP GAUGE, WIDTH, AND SPACING SHALL BE PER SMACNA DUCT CONSTRUCTION STANDARDS. HANGER SPACING SHALL NOT EXCEED AN INTERVAL OF 12 FT. PERFORATED "PLUMBERS STRAP" SHALL NOT BE USED.
 2. SIZE ALL THREAD ROD AND TRAPEZE UNISTRUT CHANNEL FOR LOADS.
 3. CONCRETE ANCHORS SHALL BE RATED FOR USE IN CRACKED CONCRETE PER IBC.

13 TYPICAL DUCT HANGER DETAIL

SCALE: NO SCALE



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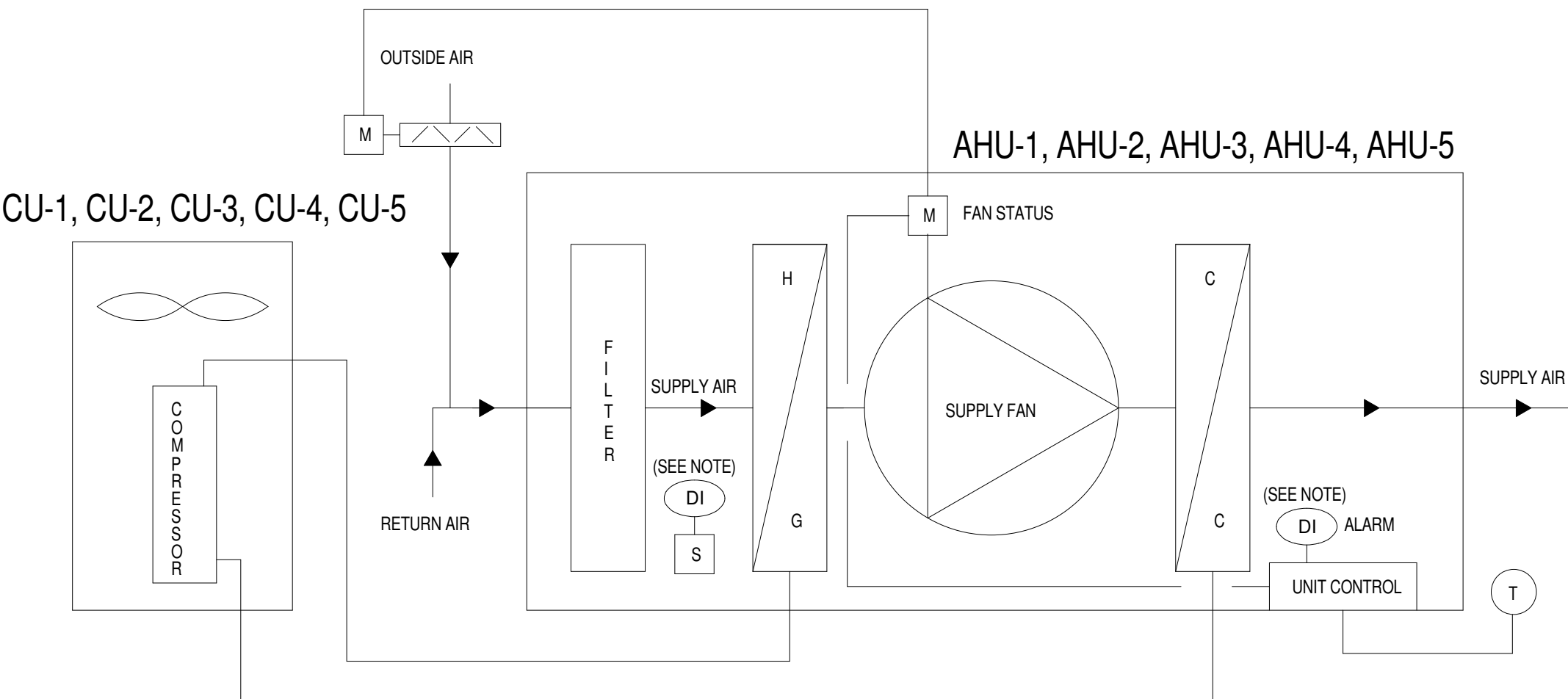
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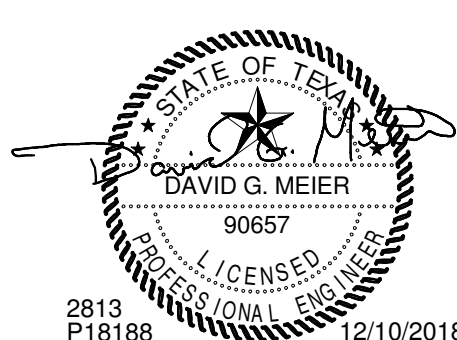
M302



1 TYPICAL CONTROL DIAGRAM FOR AHU-1, AHU-2, AHU-3, AHU-4, AHU-5
M303 NO SCALE

- SEQUENCE OF OPERATIONS FOR AHU/CU 1-5**
- SUPPLY FAN OFF. WHEN THE FAN IS OFF, THE COMPRESSORS AND GAS-FIRED HEAT ARE OFF. THE MOTORIZED OUTSIDE AIR LOUVER IS CLOSED.
 - SUPPLY FAN OPERATING. THE SUPPLY FANS SHALL CYCLE DURING OCCUPIED MODE TO MAINTAIN SPACE TEMPERATURE. THE MOTORIZED O/A DAMPER SHALL OPEN UPON OPERATION OF SUPPLY FAN.
 - SAFETY SHUTDOWN OF THE UNIT. THE CONTROL SYSTEM SHUTS DOWN THE UNIT IF THERE IS SMOKE IS DETECTED AT THE UNIT.
 - TEMPERATURE CONTROL: ALTERON CONTROL SYSTEM, REFER TO SPECIFICATIONS.

SYMBOLS	
SYMBOL	DESCRIPTION
	OPPOSED BLADE DAMPER
	HEATING OR COOLING COIL
	AUTOMATIC 2-WAY VALVE
	FAN OR PUMP MOTOR
	DIFFERENTIAL PRESSURE SWITCH
	THERMOSTAT
	SMOKE DETECTOR
	MOTORIZED DAMPER
	DDC DIGITAL INPUT POINT
	DDC DIGITAL OUTPUT POINT
	DDC ANALOG INPUT POINT
	DDC ANALOG OUTPUT POINT



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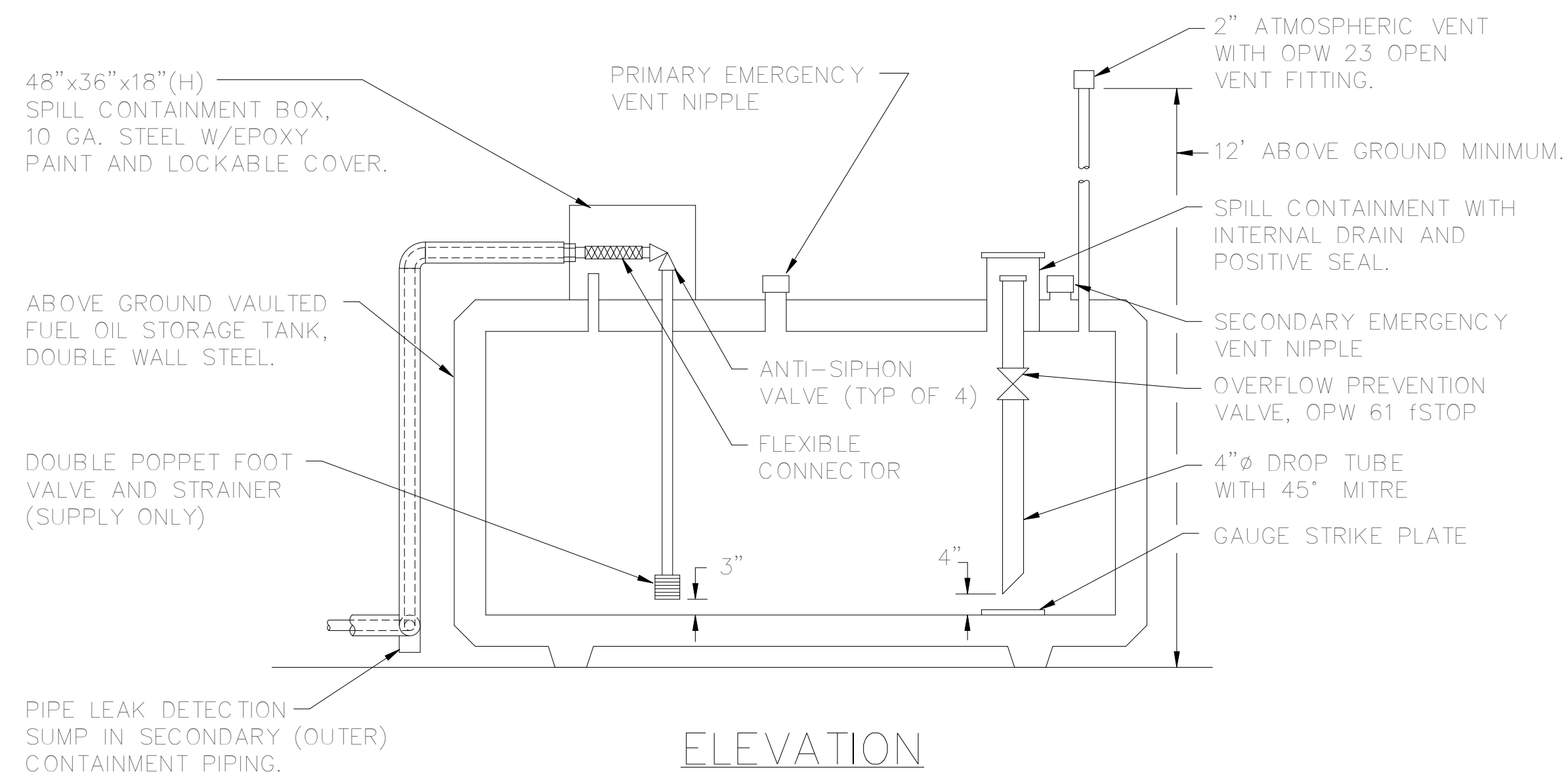
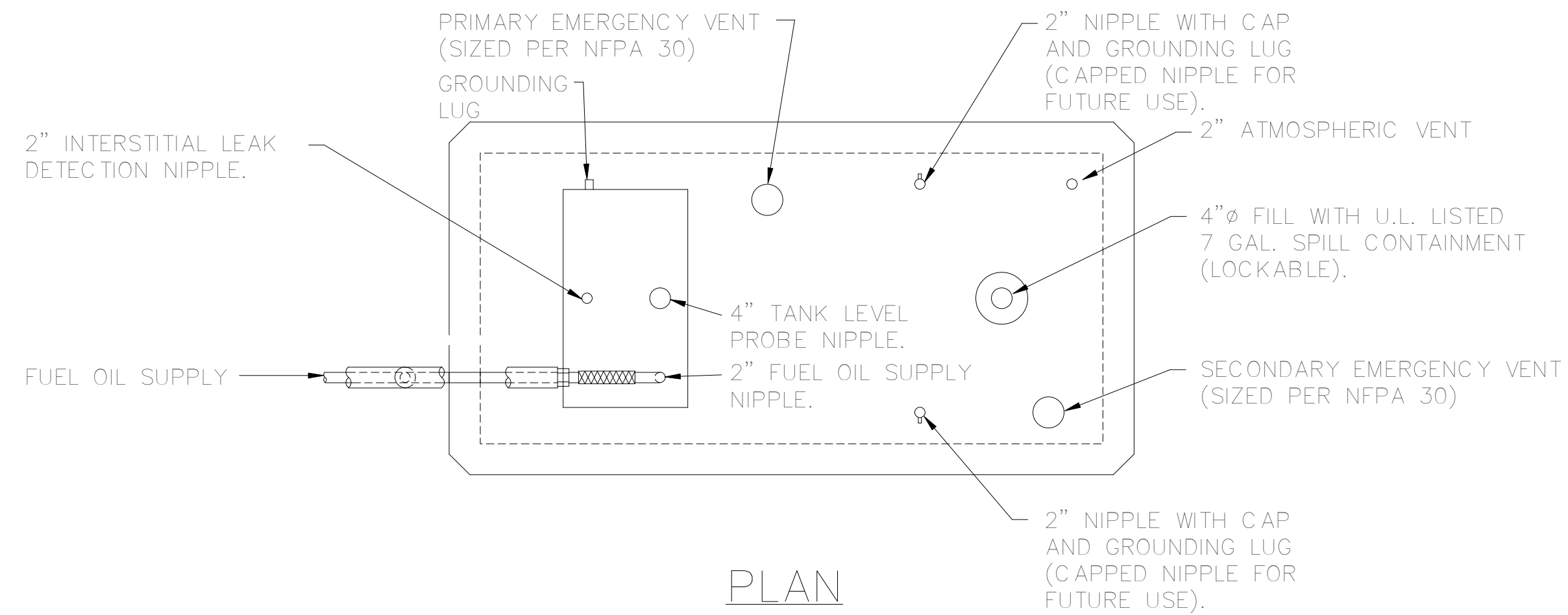
MECHANICAL
CONTROLS

M303

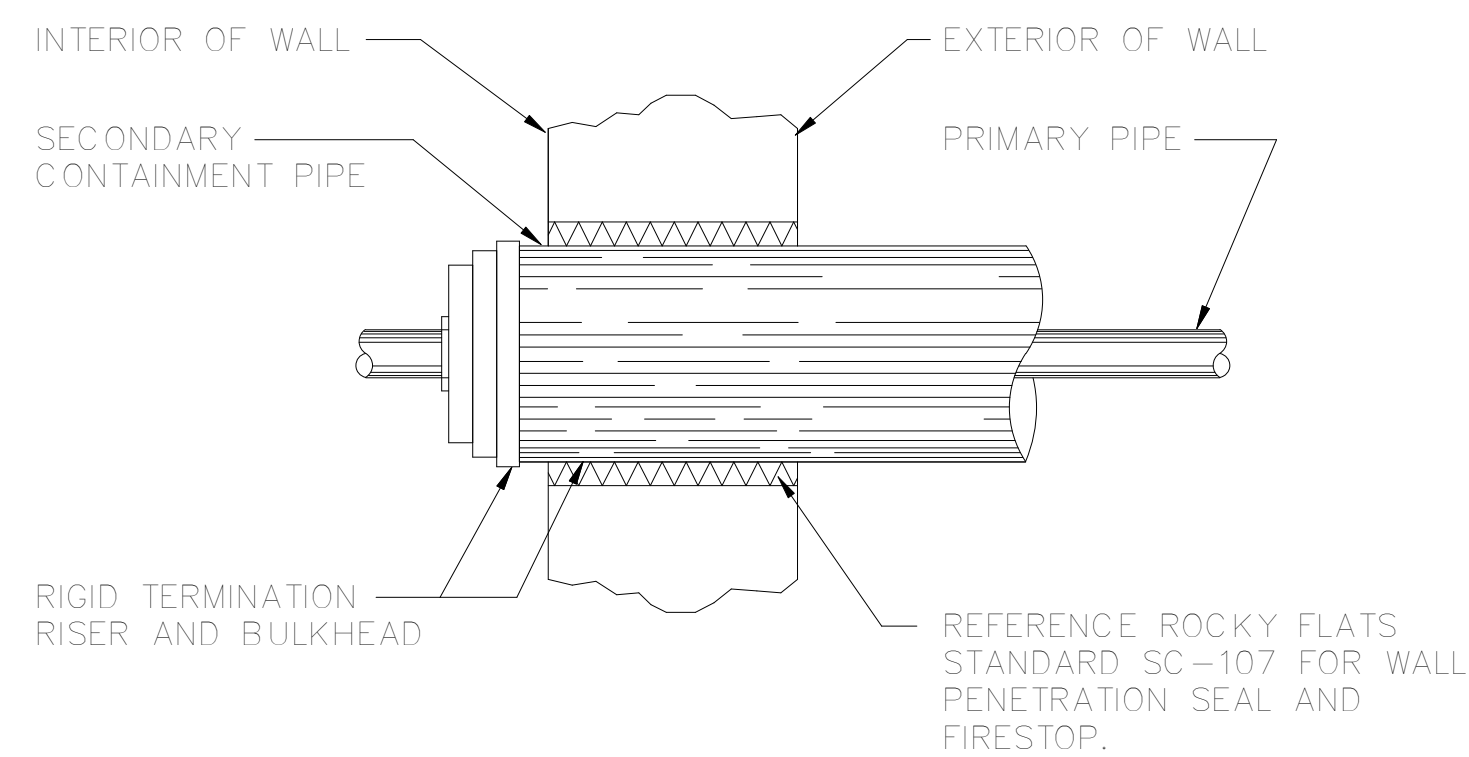
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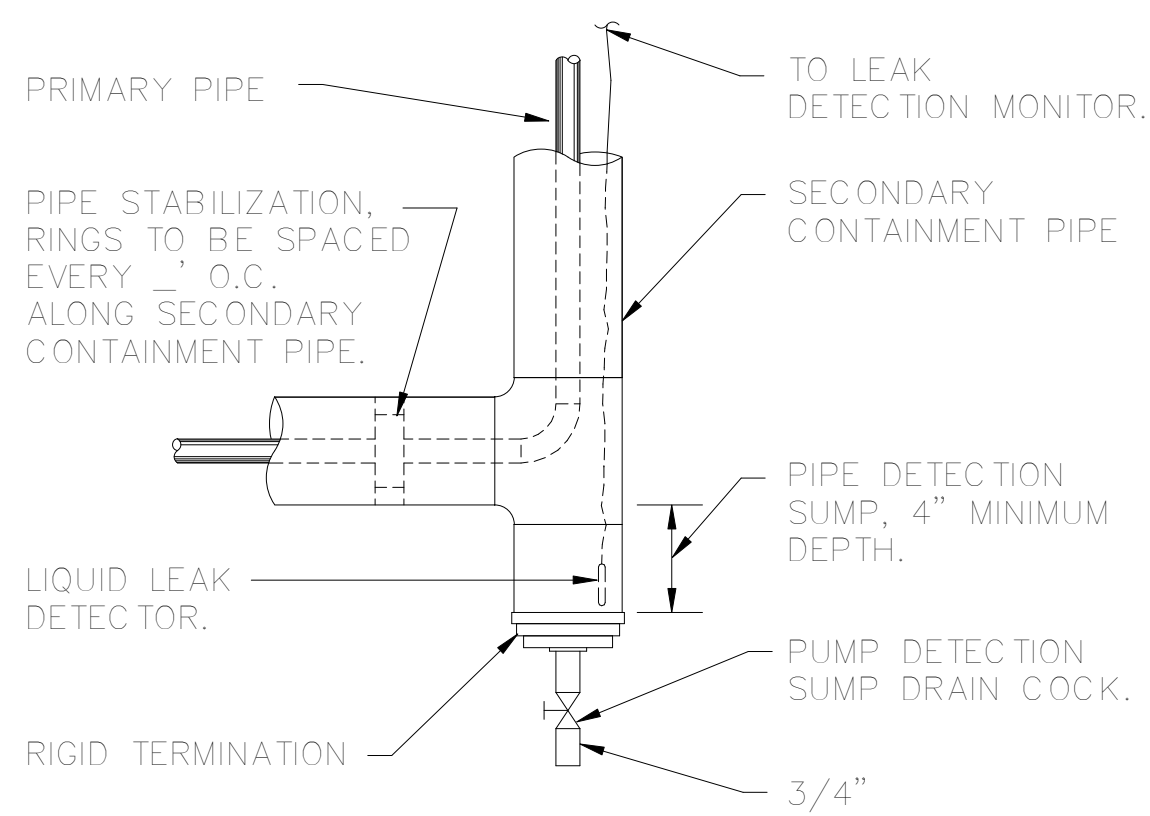
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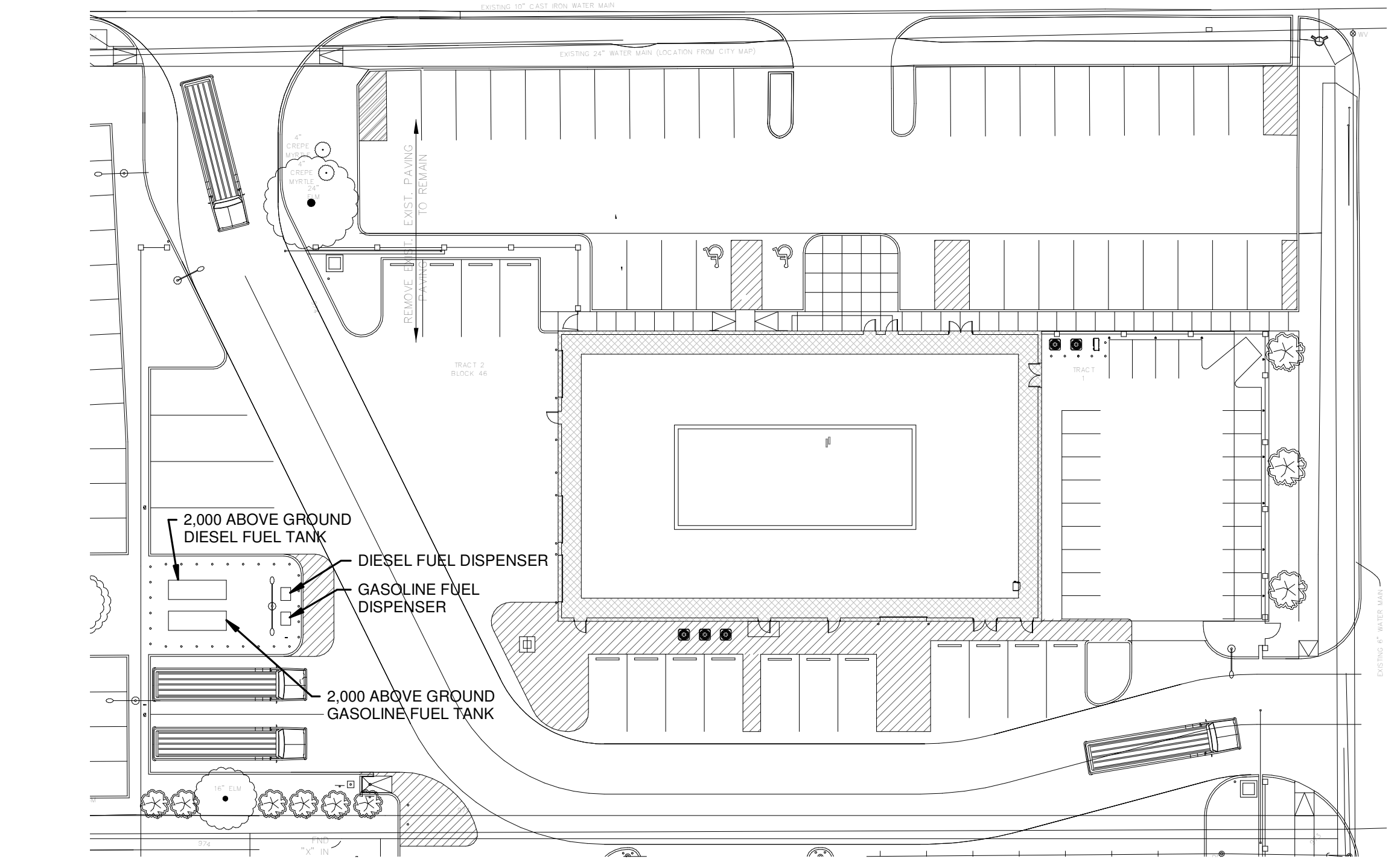
FUEL OIL STORAGE TANK PIPING DETAIL
NOT TO SCALE



SECONDARY PIPE TERMINATION
NOT TO SCALE

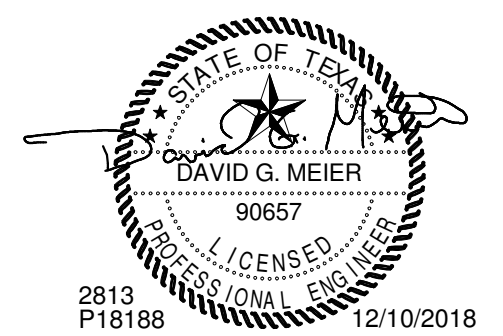
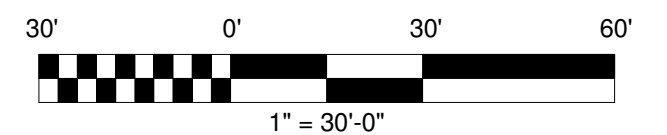


TYPICAL PIPE DETECTION SUMP DETAIL
NOT TO SCALE



1 SITE MECHANICAL PLAN
1" = 30'-0"

DELICATED DESIGN:
CONTRACTOR SHALL DESIGN AND INSTALL
FUEL OIL SYSTEMS AND DISPENSERS IN
ACCORDANCE WITH STATE AND FEDERAL
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FUEL OIL SYSTEMS

M401

PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

GENERAL NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.
3. EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.
5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, SHOCK ABSORBERS, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.
7. THE CONTRACTOR SHALL PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE PLUMBING EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.
8. THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF PLUMBING EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.
9. PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN PLUMBING EQUIPMENT UNLESS NOTED OTHERWISE. PROVIDE ISOLATION AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
10. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL CLEANOUTS, ACCESS DOORS, ETC WITH THE ARCHITECT AND ALL OTHER TRADES PRIOR TO INSTALLATION. IF A CONFLICT WITH MILLWORK, LIGHT SWITCHES, WINDOWS, ETC EXISTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE POTENTIAL INTERFERENCE PRIOR TO INSTALLATION.
11. PLUMBING VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 10 FEET FROM ALL OUTSIDE AIR INTAKES AND A MINIMUM OF 5 FEET FROM EXTERIOR PERIMETER WALLS.
12. SOME PIPES SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.
13. PLUMBING FIXTURES AND TRIM OF LIKE KIND SHALL BE OF THE SAME MANUFACTURER THROUGHOUT THE PROJECT. TYPICAL CATEGORIES INCLUDE THE FOLLOWING:
- A. WATER CLOSETS, LAVATORIES, URINALS

B. ELECTRIC WATER COOLERS, DRINKING FOUNTAINS

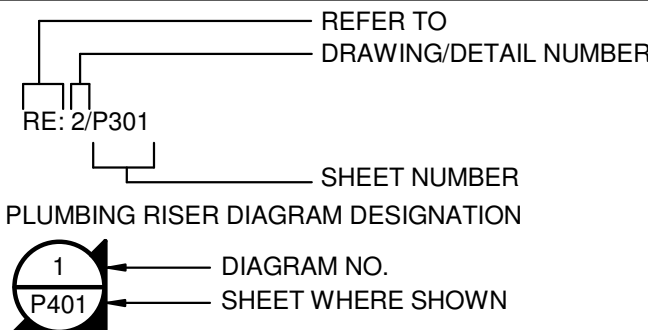
C. FAUCETS, MIXING VALVES

D. TAIL PIECE, FIXTURE TRAPS, ESCUTCHEONS, ARM EXTENSIONS, STRAINERS

E. FIXTURE CARRIERS, FLOOR DRAINS, FLOOR SINKS, ROOF DRAINS, OVERFLOW DRAINS

F. COUNTER TOP SINKS
14. PROVIDE WATER HAMMER ARRESTERS BETWEEN THE NEXT TO LAST AND LAST FIXTURE AT EACH BATTERY OF PLUMBING FIXTURES IN ACCORDANCE WITH THE WATER HAMMER ARRESTER SCHEDULE AND THE PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-WH-201. WATER HAMMER ARRESTORS LOCATED ABOVE THE CEILING RATHER THAN AS INDICATED ON THE DRAWINGS WILL NOT BE ACCEPTED.
15. ALL SANITARY WASTE PIPING WITHIN THE BUILDING ENVELOPE SHALL HAVE MINIMUM SLOPES AS REQUIRED BY THE LOCAL CODE AUTHORITY. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS INDICATED ON FLOOR PLANS PRIOR TO INSTALLATION OF ANY SITE UTILITIES AND CONNECTION INTO EXISTING SERVICES.
16. COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA). PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES WITH FLUSH VALVE HANDLES LOCATED ON THE WIDE SIDE OF EACH STALL.
17. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.
18. ALL FLOOR DRAIN TRAPS SHALL PROVIDED WITH REMOVABLE TRAP SEAL PRODUCT UNLESS INDICATED TO BE PROVIDED WITH LISTED TRAP PRIMERS.
19. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL NATURAL GAS UTILITY COMPANY TO EXTEND NATURAL GAS SERVICE TO LOCATION INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS ASSOCIATED/REQUIRED BY THE LOCAL GAS UTILITY COMPANY FOR THE EXTENSION OF THE GAS SERVICE. THE CONTRACTOR SHALL PROVIDE ALL PIPING, VALVES, ETC THAT ARE NOT PROVIDED BY THE LOCAL GAS UTILITY COMPANY AND THAT ARE REQUIRED FOR CONNECTION OF THE GAS METER AND REGULATOR(S) FOR A COMPLETE OPERATIONAL SYSTEM. THE CONTRACTOR SHALL VERIFY THE NATURAL GAS PRESSURE PROVIDED BY THE NATURAL GAS UTILITY COMPANY AND PROVIDE ADDITIONAL REGULATORS AS REQUIRED BY THE GAS FIRED EQUIPMENT INSTALLED

DRAWING/DETAIL REFERENCE



ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	LB	POUNDS
AFF	ABOVE FINISHED FLOOR	LRA	LOCKED ROTOR AMPS
AHU	AIR HANDLING UNIT	MAX	MAXIMUM
APPROX	APPROXIMATE	MCA	MINIMUM CIRCUIT AMPACITY
BD	BUILDING DRAIN (BELOW FLOOR)	MIN	MINIMUM
BS	BUILDING SEWER (OUTSIDE OF BLDG)	MSB	MOP SINK BASIN
CU	COPPER, CONDENSING UNIT	N/A	NOT APPLICABLE
DCW	DOMESTIC COLD WATER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
D	EQUIPMENT DRAIN	NFWH	NON-FREEZE WALL HYDRANT
DCO	TWO-WAY GRADE CLEANOUT	N/Q,N/C	NORMALLY OPEN, NORMALLY CLOSED
DEG	DEGREES	O/C	ON CENTER
DSN	DOWNSPOUT NOZZLE	OFD	ROOF OVERFLOW DRAIN
DHW	DOMESTIC HOT WATER	PCO	PLUG CLEANOUT
DHWR	DOMESTIC HOT WATER CIRCULATION LOOP	PH	PHASE
(E)	EXISTING	PROVIDE	FURNISH AND INSTALL
EQUIP	EQUIPMENT	PSI	POUNDS PER SQUARE INCH
EW	ELECTRIC WATER COOLER	RD	ROOF DRAIN
°F	DEGREES FAHRENHEIT	RE:	REFERENCE, REFER
FCO	FLOOR CLEANOUT	RLA	RUNNING LOAD AMPS
FCU	FAN COIL UNIT	RM	ROOM
FD	FLOOR DRAIN	RPBFP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
FS	FLOOR SINK	RPZ	REDUCED PRESSURE ZONE
FM	FORCE MAIN (SANITARY)	S	SINK
FVC	FIRE VALVE CABINET	SD	STORM DRAIN (BELOW FLOOR)
G	NATURAL GAS	ST	STORM WATER (ABOVE CEILING)
GCO	GRADE CLEANOUT	SSD	SUB-SURFACE DRAIN
GW	NATURAL GAS WATER HEATER	SFM	FORCE MAIN (STORM SYSTEMS)
H	HEIGHT	TP	TRAP PRIMER
HB	HOSE BIBB	TYP	TYPICAL
HP	HORSEPOWER	U	URINAL
HWTM	HOT WATER TEMPERATURE MAINTENANCE CABLE	UL	UNDERWRITERS LABORATORIES, INC.
HZ	HERTZ	V	SANITARY VENT
IE	INVERT ELEVATION	VTR	SANITARY VENT THRU ROOF
IN.	INCH, INCHES	W	SANITARY WASTE (ABOVE FLOOR)
J-BOX	JUNCTION BOX	WC	WATER CLOSET
KW	KILOWATT	WCO	WALL CLEANOUT
		W/	WITH
		W/O	WITHOUT

LINE TYPES

SYMBOL	DESCRIPTION
—(E)W—	EXISTING SANITARY SEWER (ABOVE CEILING)
—W—	SANITARY SEWER (ABOVE CEILING)
—(E)BD—	EXISTING SANITARY SEWER (BELOW FLOOR, BUILDING DRAIN)
—BD—	SANITARY SEWER (BELOW FLOOR, BUILDING DRAIN)
—BS—	SANITARY SEWER (OUTSIDE OF BUILDING, BUILDING SEWER)
—A—	COMPRESSED AIR
—D—	EQUIPMENT DRAIN (ABOVE CEILING)
—(E)ST—	EXISTING STORM WATER PIPING (ABOVE CEILING)
—ST—	STORM WATER PIPING (ABOVE CEILING)
—(E)SD—	EXISTING STORM WATER PIPING (BELOW FLOOR/GRADE)
—SD—	STORM WATER PIPING (BELOW FLOOR/GRADE)
—OFD—	OVERFLOW DRAIN (ABOVE CEILING)
—(E)V—	EXISTING SANITARY VENT
—V—	SANITARY VENT
—(E)DCW—	EXISTING DOMESTIC COLD WATER
—DCW—	DOMESTIC COLD WATER
—DHW—	DOMESTIC HOT WATER
—DHWR—	DOMESTIC HOT WATER CIRCULATION
—(E)G—	EXISTING NATURAL GAS
—G—	NATURAL GAS
(E)G(5-PSIG)–	EXISTING NATURAL GAS (5-PSIG)
–G(5-PSIG)–	NATURAL GAS (5-PSIG)
—FM—	FORCE MAIN (SANITARY SYSTEMS)
—SFM—	FORCE MAIN (STORM SYSTEMS)
→	DIRECTION OF FLOW
↘	DIRECTION OF PIPE SLOPE DOWN

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
Ⓜ	GAS PRESSURE REGULATOR
Ⓜ DCO	TWO WAY CLEANOUT
Ⓜ GCO	GRADE CLEANOUT
Ⓜ	NON-FREEZE WALL HYDRANT OR HOSE BIBB
Ⓜ FD	FLOOR DRAIN
Ⓜ FCO	FLOOR CLEANOUT
Ⓜ	CONNECT TO EXISTING

WATER HAMMER ARRESTER SCHEDULE

P.D.I. SIZE	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

- NOTES:
- ALL WHA'S SHALL HAVE AN ACCESS PANEL.
 - SIZE AND LOCATE WATER HAMMER ARRESTERS IN ACCORDANCE WITH PDI PAMPHLET PDI-WH-201

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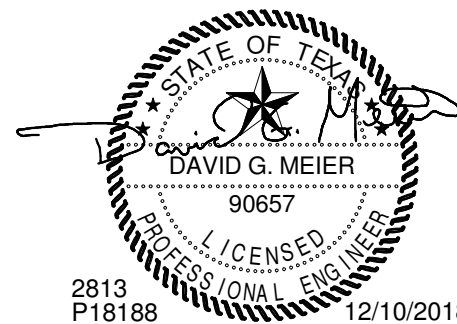
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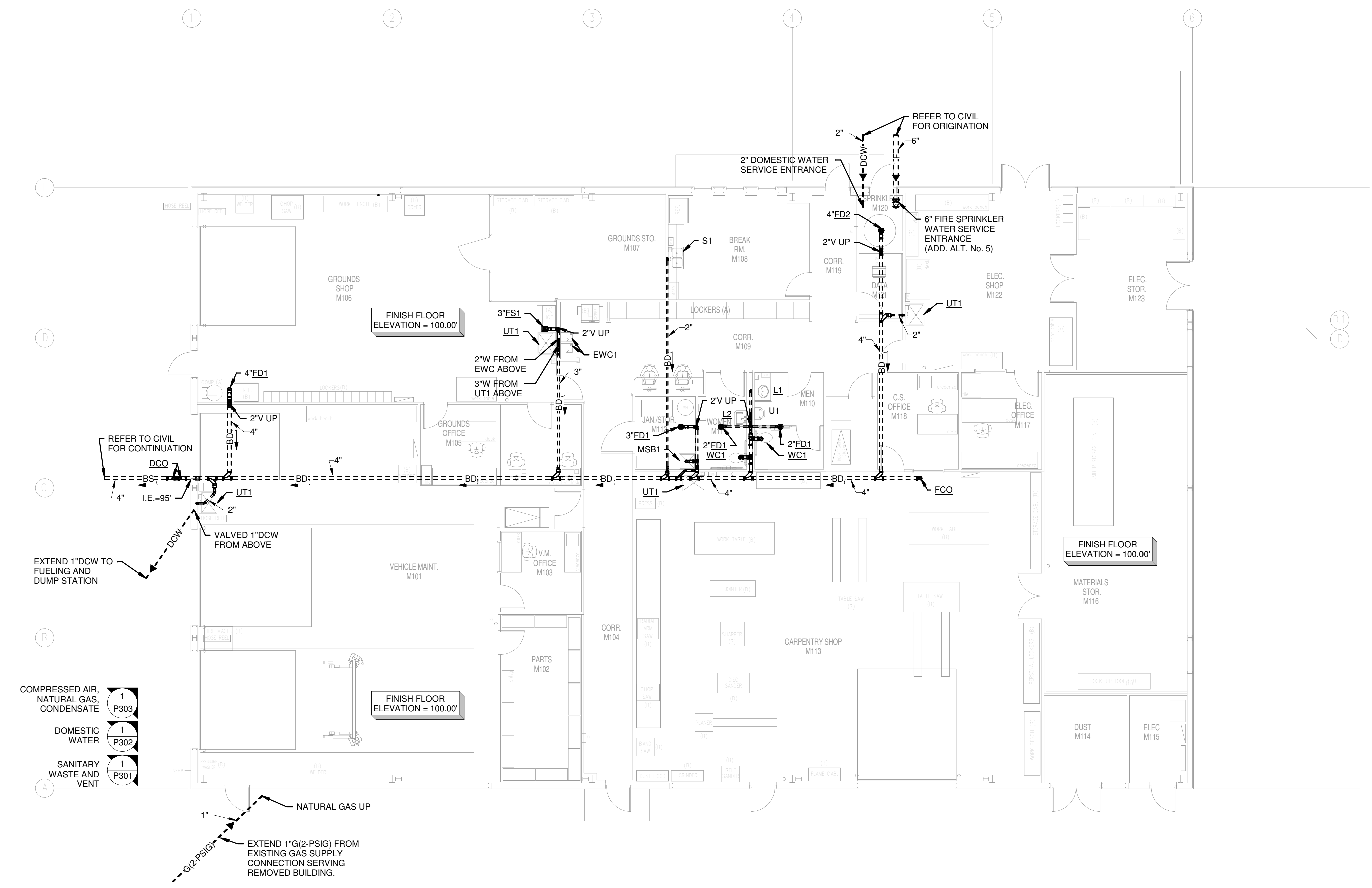
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PLUMBING LEGENDS,
NOTES

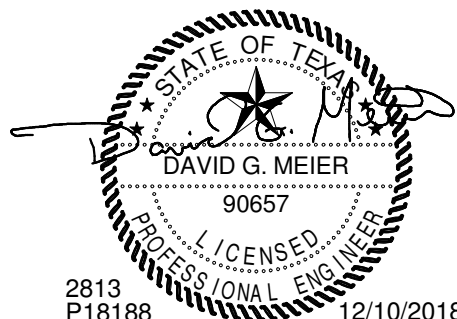
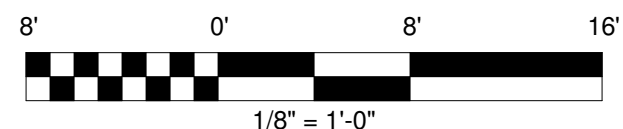
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1 UNDER FLOOR PLUMBING PLAN
1/8" = 1'-0"



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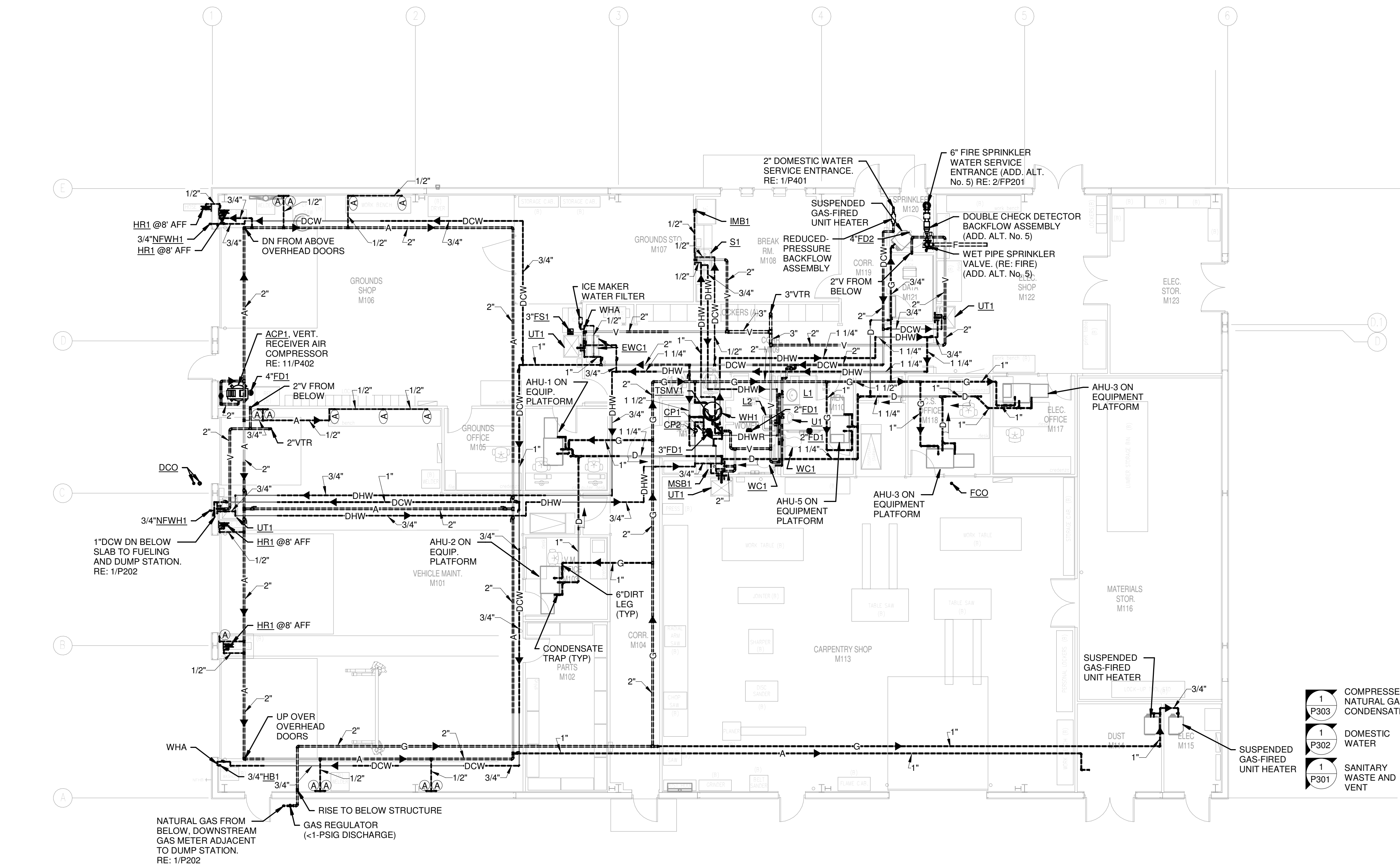


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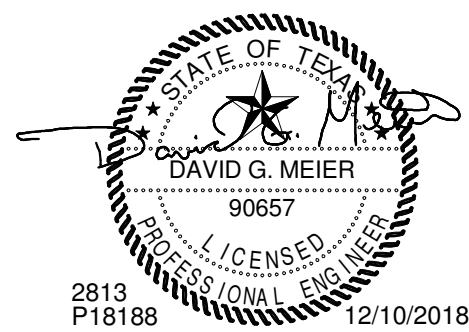
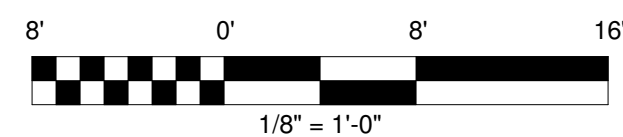
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UNDERFLOOR
PLUMBING PLAN

P200



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



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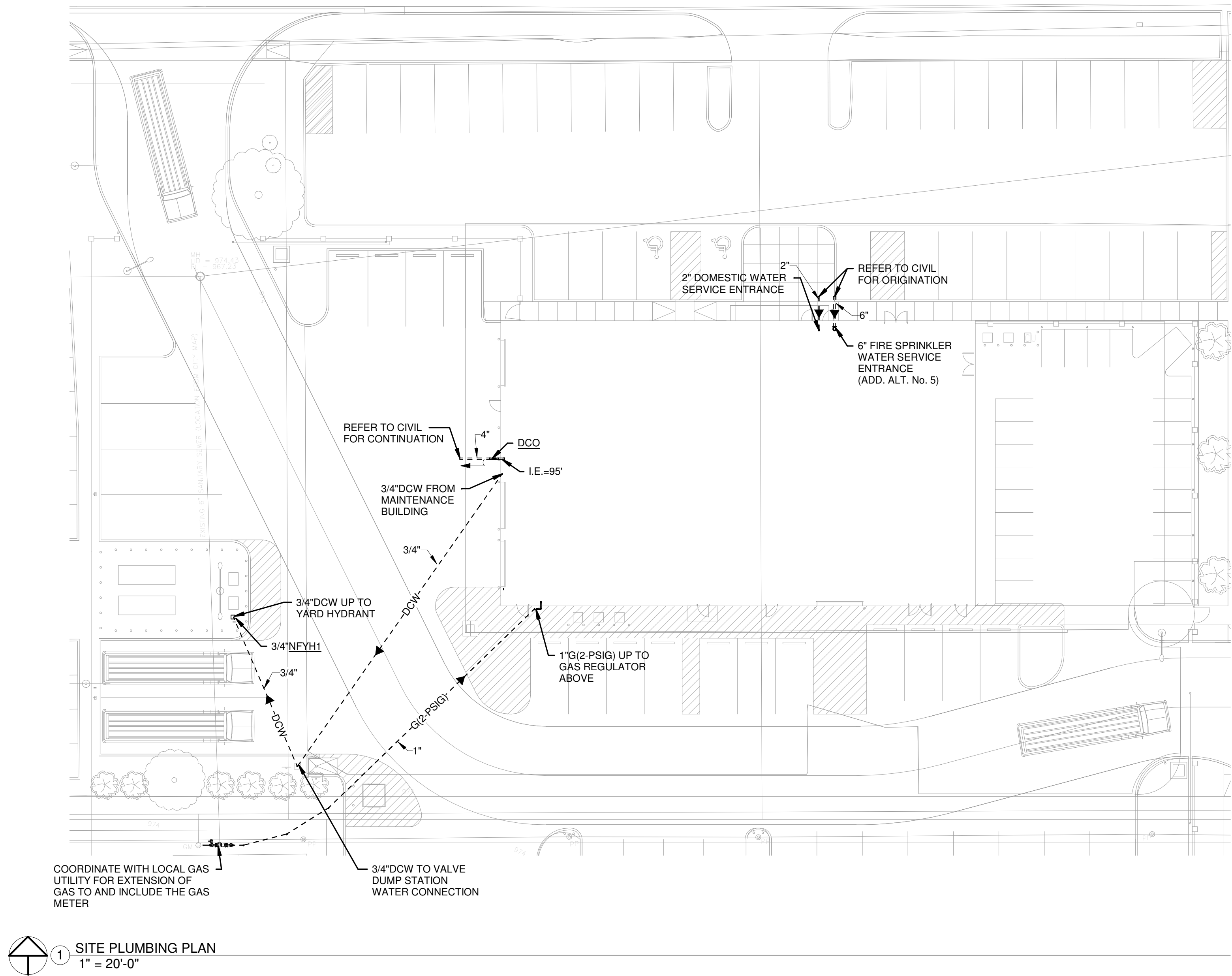
GROUND FLOOR
PLUMBING PLAN

P201

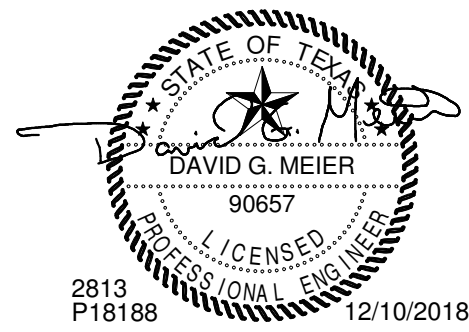
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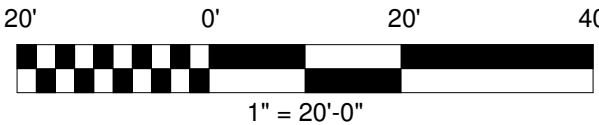
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1 SITE PLUMBING PLAN
1" = 20'-0"



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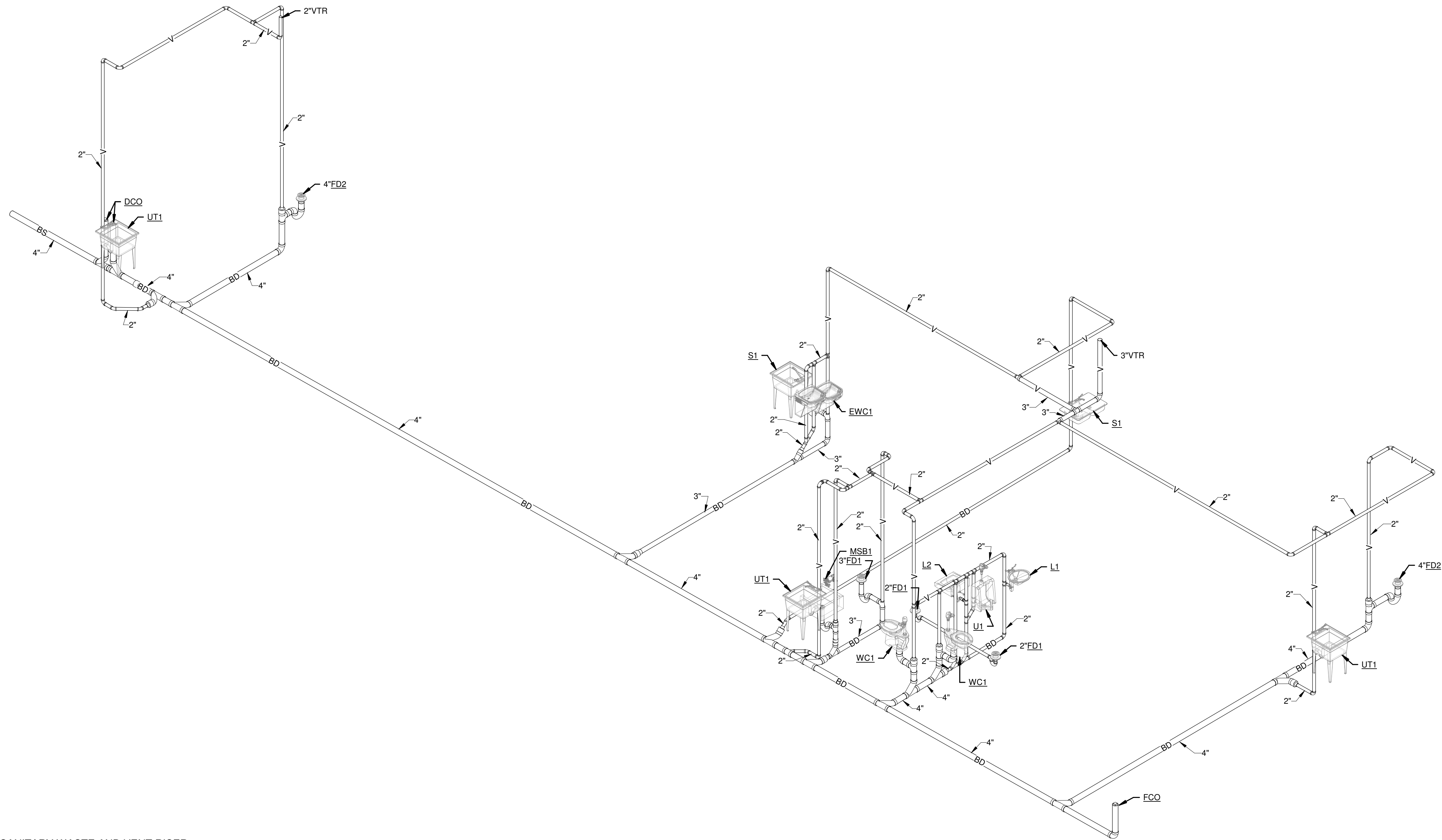
SITE PLUMBING PLAN

P202

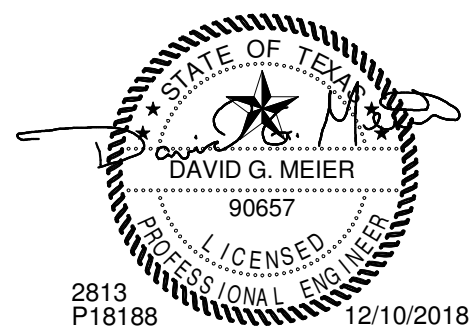
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1 SANITARY WASTE AND VENT RISER DIAGRAM



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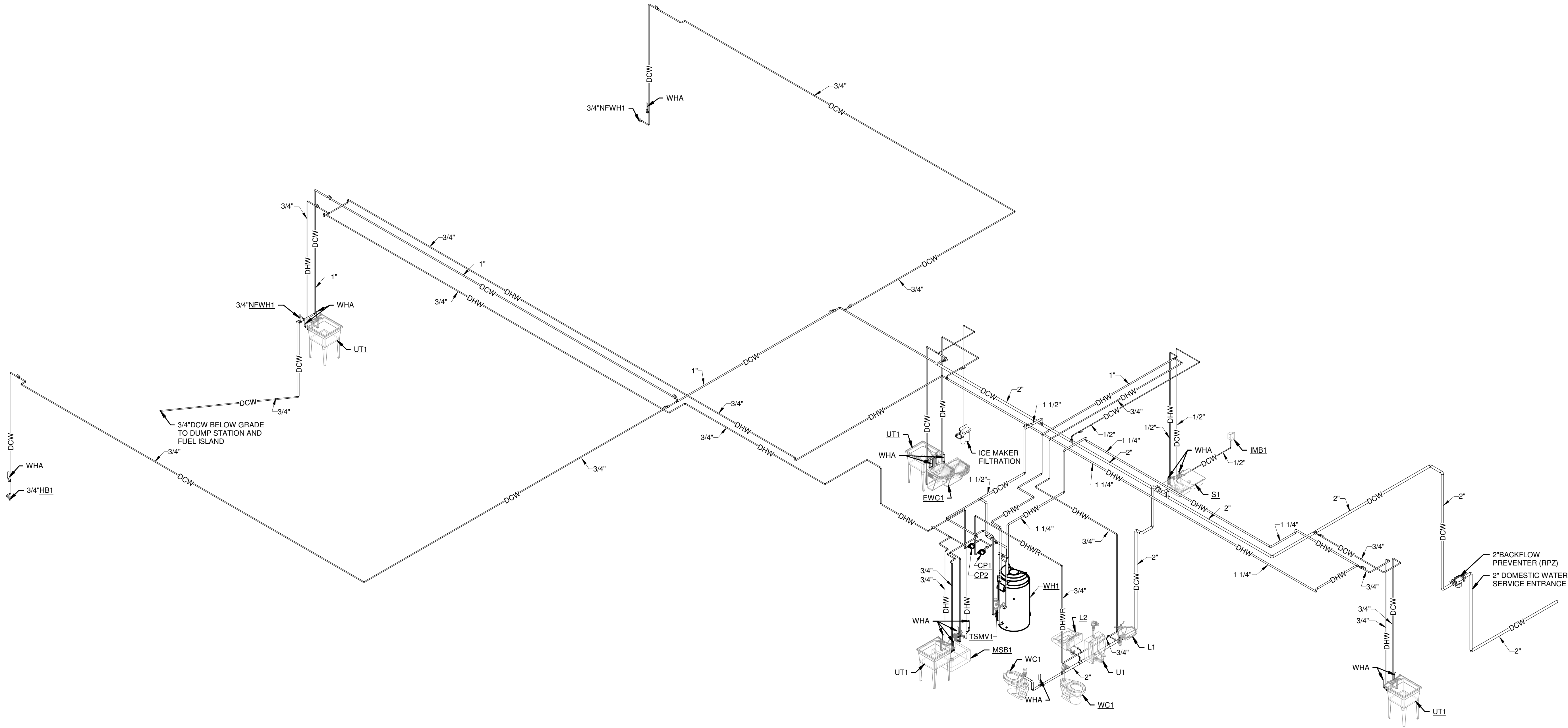
SANITARY WASTE&VENT RISER DIAGRAM

P301

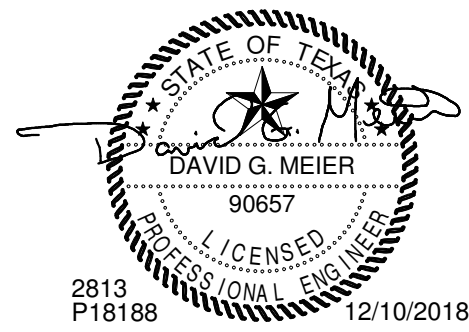
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1 DOMESTIC WATER RISER DIAGRAM



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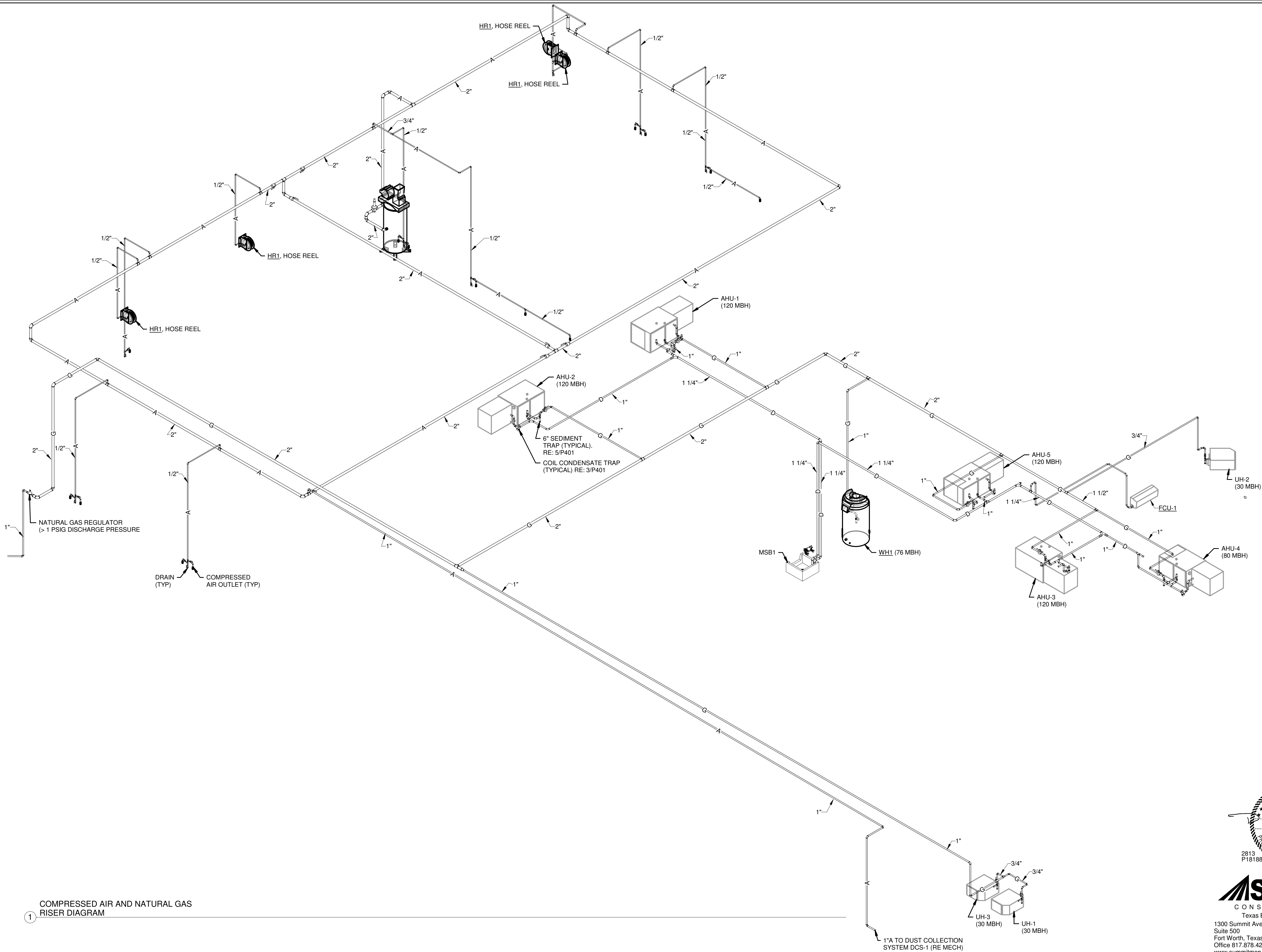
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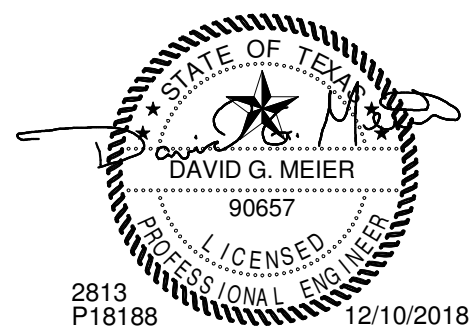
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DOMESTIC WATER
RISER DIAGRAM

P302



1 COMPRESSED AIR AND NATURAL GAS
RISER DIAGRAM



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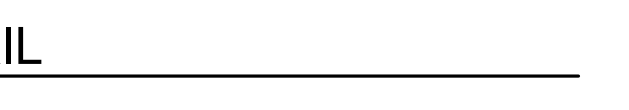


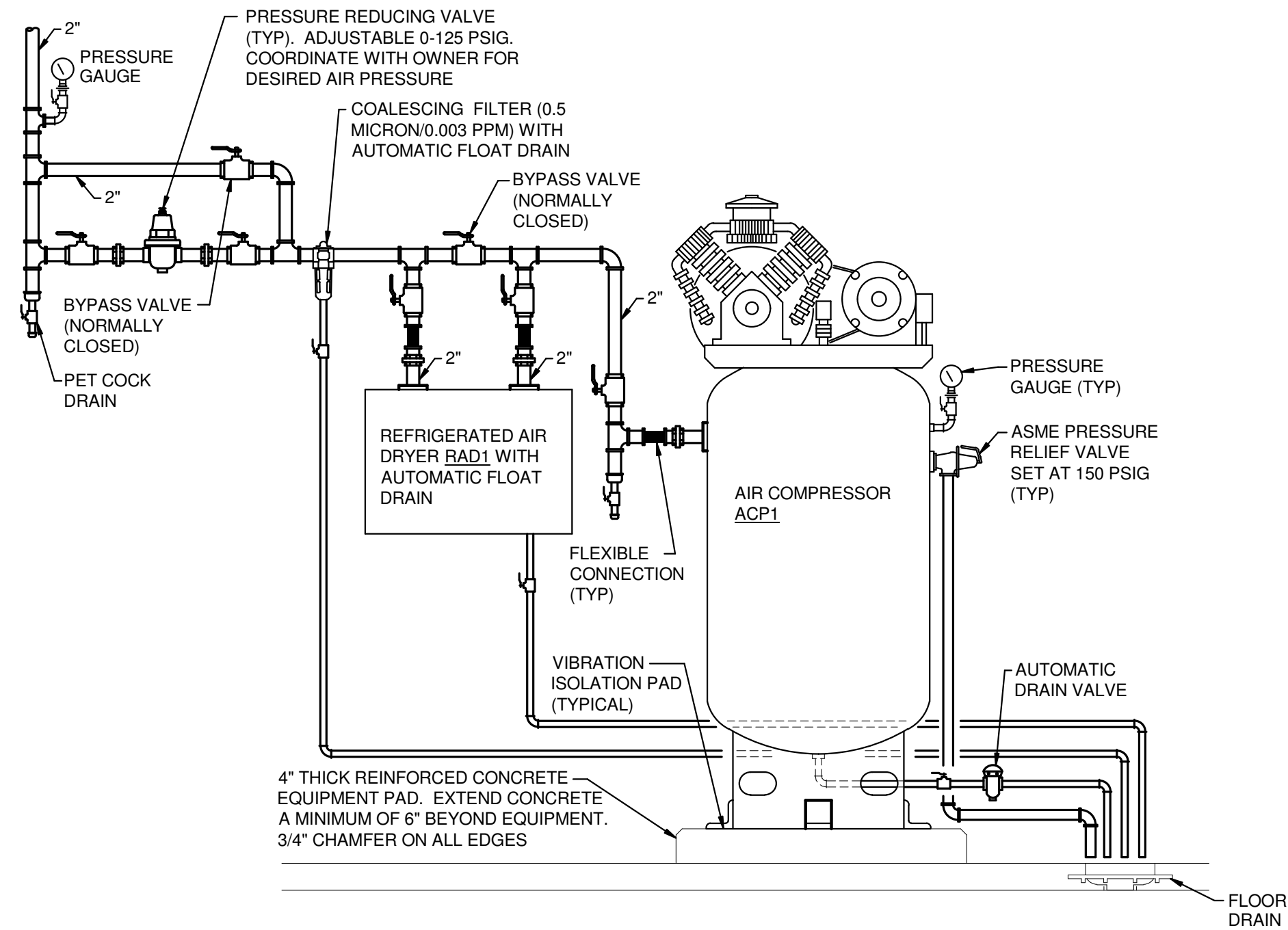
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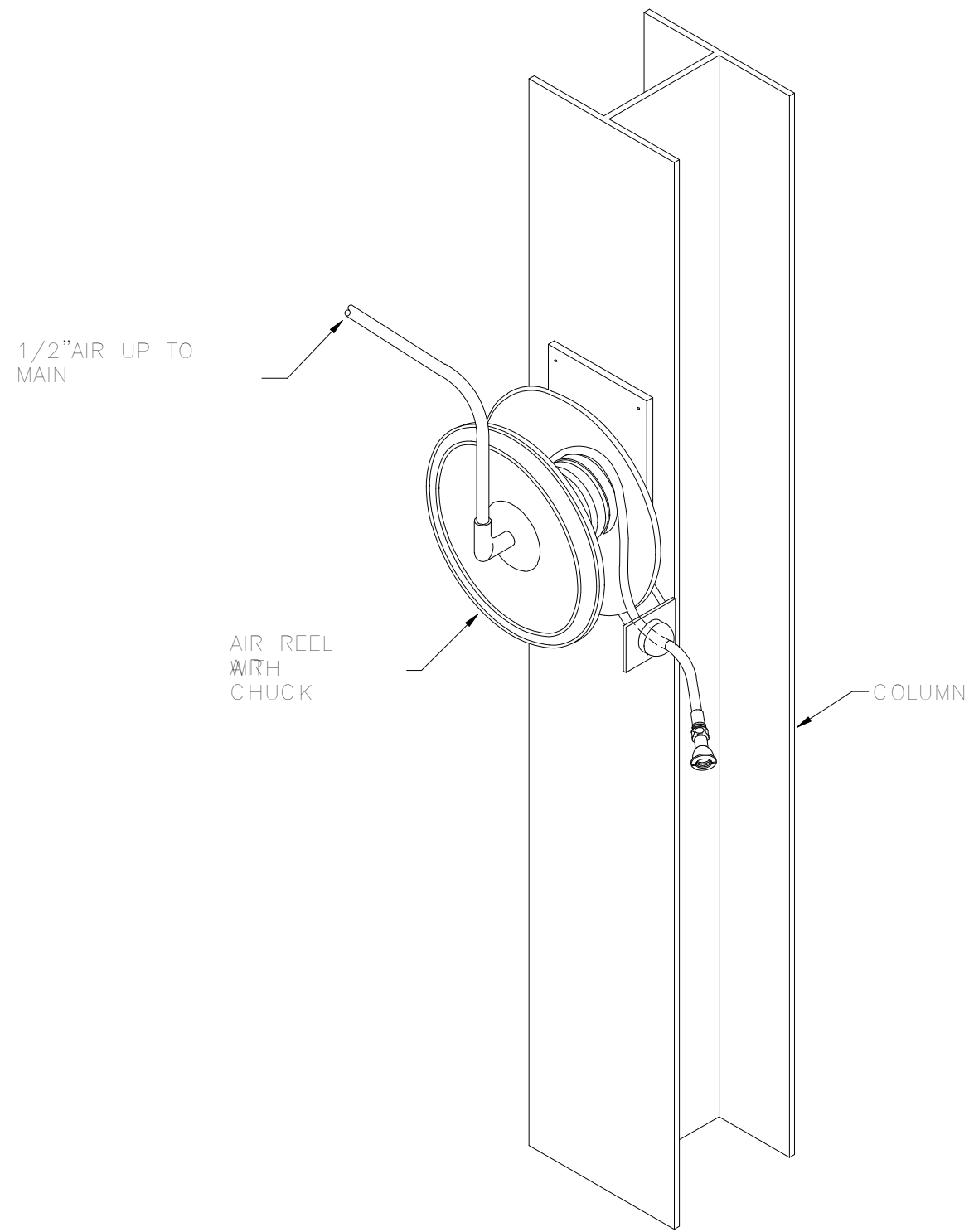
COMPRESSED AIR
AND NATURAL GAS
RISER DIAGRAM

P303

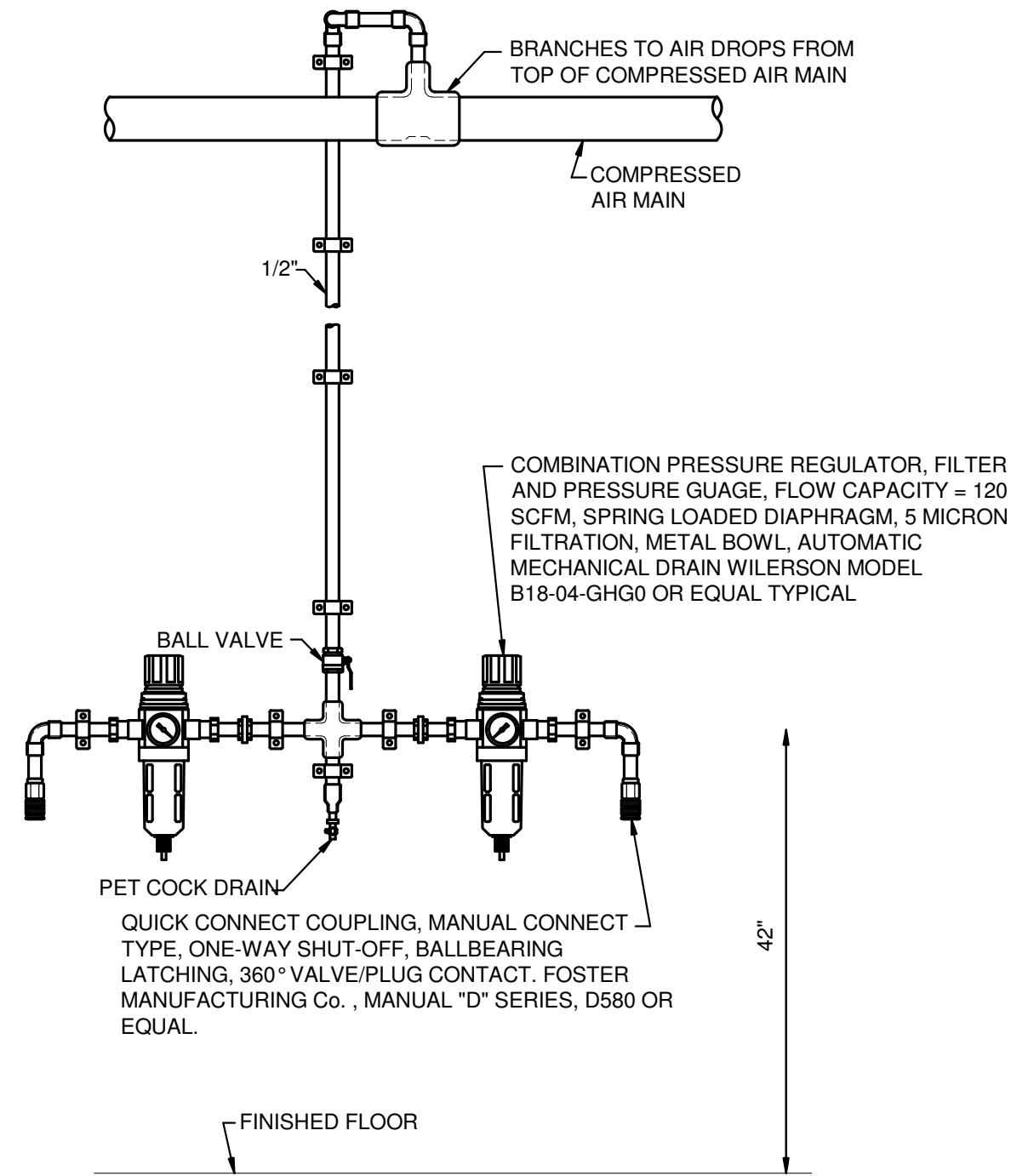




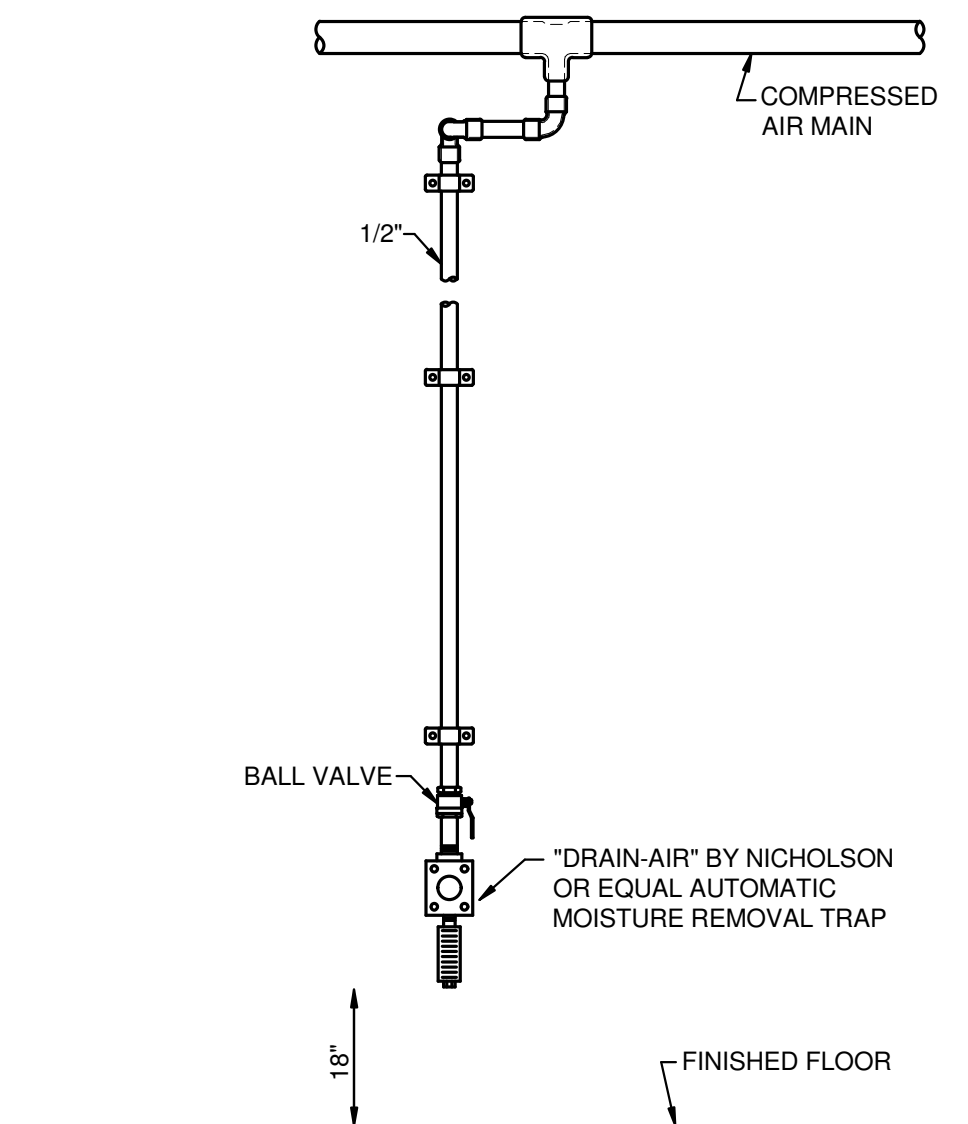
11
P402
AIR COMPRESSED PIPING DIAGRAM (MAINTENANCE SHOP)
NO SCALE



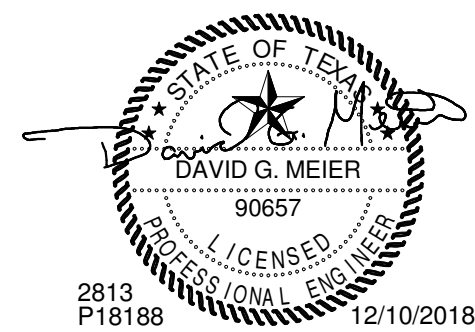
12
P402
AIR REEL DETAIL
NO SCALE



13
P402
COMPRESSED AIR DROP DETAIL (A)
NO SCALE



14
P402
COMPRESSED AIR AUTOMATIC DRAIN DETAIL
NO SCALE



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PLUMBING
DETAILS

P402

FIRE SUPPRESSION SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

- GENERAL NOTES
1.

PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.

2.

THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.

3.

EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.

4.

BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.

5.

THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.

6.

THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.

7.

THE CONTRACTOR SHALL PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE FIRE SPRINKLER EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.

8.

THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF FIRE SPRINKLER EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.

9.

PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN FIRE SPRINKLER EQUIPMENT UNLESS NOTED OTHERWISE. PROVIDE ISOLATION AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

10.

SOME PIPES SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.

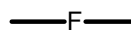
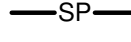
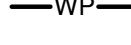

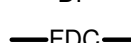
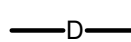

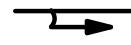
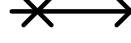
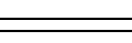
11.

SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.





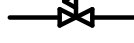





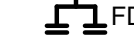







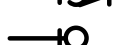
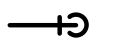
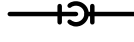


ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LB	POUNDS
AHU	AIR HANDLING UNIT	LRA	LOCKED ROTOR AMPS
APPROX	APPROXIMATE	MAX	MAXIMUM
BD	BUILDING DRAIN (BELOW FLOOR)	MCA	MINIMUM CIRCUIT AMPACITY
B.F.G.	BELOW FINISHED GRADE	MIN	MINIMUM
BS	BUILDING SEWER (OUTSIDE OF BLDG)	MSB	MOP SINK BASIN
CU	COPPER, CONDENSING UNIT	N/A	NOT APPLICABLE
CW	DOMESTIC COLD WATER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
D	EQUIPMENT DRAIN	NFWH	NON-FREEZE WALL HYDRANT
DCO	TWO-WAY GRADE CLEANOUT	N/O.N/C	NORMALLY OPEN, NORMALLY CLOSED
DEG	DEGREES	O/C	ON CENTER
DSN	DOWNSPOUT NOZZLE	OFD	ROOF OVERFLOW DRAIN
(E)	EXISTING	PCO	PLUG CLEANOUT
EQUIP	EQUIPMENT	PH	PHASE
EWC	ELECTRIC WATER COOLER	PROVIDE	FURNISH AND INSTALL
'F	DEGREES FAHRENHEIT	PSI	POUNDS PER SQUARE INCH
FCO	FLOOR CLEANOUT	RD	ROOF DRAIN
FCU	FAN COIL UNIT	RE:	REFERENCE, REFER
FD	FLOOR DRAIN	RLA	RUNNING LOAD AMPS
FS	FLOOR SINK	RM	ROOM
FT	FOOT, FEET	RPBFP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
FVC	FIRE VALVE CABINET	RPZ	REDUCED PRESSURE ZONE
G	NATURAL GAS	S	SINK
GCO	GRADE CLEANOUT	SD	STORM DRAIN (BELOW FLOOR)
GWH	NATURAL GAS WATER HEATER	ST	STORM WATER (ABOVE CEILING)
H	HEIGHT	SSD	SUBSURFACE DRAIN
HB	HOSE BIBB	THRU	THROUGH
HP	HORSEPOWER	TP	TRAP PRIMER
HW	DOMESTIC HOT WATER	TYP	TYPICAL
HWC	CIRCULATION LOOP	U	URINAL
HWTM	HOT WATER TEMPERATURE MAINTENANCE CABLE	UL	UNDERWRITERS LABORATORIES, INC.
HZ	HERTZ	V	SANITARY VENT
IE	INVERT ELEVATION	VTR	SANITARY VENT THRU ROOF
IN.	INCH, INCHES	W	SANITARY WASTE (ABOVE FLOOR)
J-BOX	JUNCTION BOX	WC	WATER CLOSET
KW	KILOWATT	WCO	WALL CLEANOUT
		W/	WITH
		W/O	WITHOUT

LINE TYPES

SYMBOL	DESCRIPTION
	FIRE PROTECTION MAIN WATER SUPPLY
	STANDPIPE FIRE PROTECTION WATER
	AUTOMATIC FIRE SPRINKLER (WET)
	AUTOMATIC FIRE SPRINKLER (PRE-ACTION)
	AUTOMATIC FIRE SPRINKLER (DRY)
	FIRE DEPARTMENT CONNECTION MAIN
	INDIRECT DRAIN
	DIRECTION OF FLOW
	DIRECTION OF PIPE SLOPE DOWN
	PIPE DEMOLITION

VALVES AND FITTINGS

SYMBOL	DESCRIPTION
	SHUT-OFF / ISOLATION VALVE
	OS&Y GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	SUPERVISED VALVE (TYPE AS NOTED)
	PRESSURE REDUCING VALVE
	CHECK VALVE
	STRAINER
	FLOW SWITCH
	UNION (DIELECTRIC)
	FIRE DEPARTMENT SIAMESE CONNECTION (WALL)
	FIRE DEPARTMENT SIAMESE CONNECTION (FREE STANDING)
	PRESSURE GAUGE
	ALARM CHECK VALVE
	DRY ALARM CHECK VALVE
	DRY ALARM CHECK VALVE WITH QUICK OPENING DEVICE
	DELUGE OR PRE-ACTION ALARM CHECK VALVE
	VALVE IN RISER
	END RISE (90° ELL)
	END DROP (90° ELL)
	RISE OR DROP
	TEE OUT OF TOP OF PIPE
	TEE OUT OF BOTTOM OF PIPE

- FIRE PROTECTION NOTES
1.

PROVIDE A COMPLETE AND OPERABLE WET PIPE FIRE SUPPRESSION SYSTEM ENGINEERED AND DESIGNED CONFORMING TO NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS; NFPA 24, PRIVATE SERVICE MAINS AND THEIR APPURTENANCES; ALL APPLICABLE CITY, STATE AND NATIONAL CODES AND THE CODES AND ORDINANCES OF ALL OTHER AUTHORITIES HAVING JURISDICTION. THE SYSTEM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE CITY FIRE DEPARTMENT.

2.

THE CONTRACTOR SHALL COORDINATE WITH THE CIVIL CONTRACTOR PRIOR TO CONSTRUCTION FOR REQUIRED CONNECTIONS POINTS AND MATERIAL CONNECTIONS. THIS INCLUDES THE VERIFICATION OF THE LOCATION OF THE TYPE FIRE DEPARTMENT CONNECTION WITH RESPECT TO CODE REQUIRED CONDITIONS.

3.

EXPOSED SPRINKLER PIPE WITH EXPOSED (FINISHED) STRUCTURE SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. COLOR SAMPLES SHALL BE MADE AVAILABLE FOR THE ARCHITECT TO REVIEW AND SELECT. PIPE ROUTING SHALL BE BASED UPON THE SPACE EXPOSED STRUCTURE, CENTERLINES AND AXES TO ESTABLISH A PATTERN COMPLIMENTARY TO EACH SPACE STRUCTURE.

4.

CONTRACTOR SHALL ARRANGE SPRINKLER HEADS COMPLIMENTARY TO EACH CEILING TYPE. SPRINKLER HEADS LOCATED IN LAY-IN CEILINGS SHALL BE CENTERED IN RESPECTIVE CEILING TILES (CENTERED IN THE SHORT AXES FOR 2x4 CEILING TILES).

5.

ALL SPRINKLER HEAD LOCATIONS IN ALL THE SHOP AREAS, OFFICES, ETC SHALL BE COORDINATED WITH THE STRUCTURE, LIGHT FIXTURES, HVAC ELEMENTS, PLUMBING ELEMENTS, ARCHITECTURAL CEILING TREATMENTS. LAYOUT SHALL BE COORDINATED WITH AND REVIEWED BY THE ARCHITECT.

6.

THE FIRE PROTECTION AREA DESCRIPTIONS SHOWN ON THE PLAN(S) ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY WITH THE OWNER AND THE AUTHORITY HAVING JURISDICTION ALL SPACE CLASSIFICATIONS, COMMODITY TYPES AND LOCATIONS OF OBSTACLES PRIOR TO PROVIDING DESIGN CALCULATIONS OR SPRINKLER SHOP DRAWINGS.

7.

LOCATIONS OF SYSTEM TEST AND DRAIN VALVES SHALL BE COORDINATED WITH THE OWNER BY SPECIFICALLY CALLING TO THE OWNERS ATTENTION THE LOCATIONS OF THESE SUB-SYSTEMS.

8.

THE FIRE SUPPRESSION SYSTEM SHALL CONFORM TO ALL APPLICABLE NFPA CODES IN ADDITION TO THE FOLLOWING:

A.

VELOCITIES IN MAINS SHALL NOT EXCEED 15 FEET PER SECOND.

B.

VELOCITIES IN BRANCHES AND BRANCH MAINS SHALL NOT EXCEED 20 FEET PER SECOND.

C.

HYDRAULIC CALCULATIONS SHALL SHOW THE ELEVATIONS OF INDIVIDUAL HEADS AND REFERENCE POINTS (NODES).

D.

HYDRAULIC CALCULATIONS SHALL DESCRIBE EACH INDIVIDUAL HEAD IN THE ZONE BEING CALCULATED. HYDRAULIC CALCULATIONS USING "K" FACTORS TO DESCRIBE WHOLE BRANCH LINES ARE NOT ACCEPTABLE.

E.

PROVIDE A SAFETY FACTOR OF 10 PSI OR 10 PERCENT OF SYSTEM DEMAND (WHICHEVER IS GREATER).

F.

SUBMITTALS SHALL BE COMPLETE AND INCLUDE: HYDRAULIC CALCULATIONS, SHOP DRAWINGS AND MATERIAL SUBMITTAL.

G.

SUBMITTALS SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO SUBMITTING HYDRAULIC CALCULATIONS, SHOP DRAWINGS AND MATERIALS TO THE ENGINEER FOR REVIEW.

9.

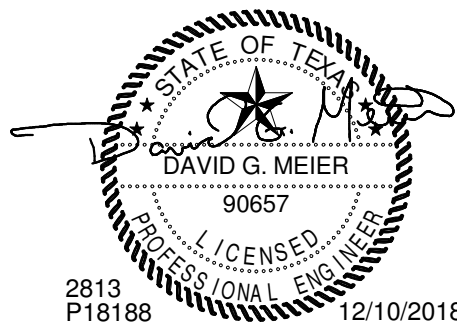
SUBMITTALS NOT CONFORMING TO THE ABOVE WILL BE REJECTED WITH NO COMMENT.

10.

REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR FUTURE EXPANSIONS/ADDITIONS TO THE BUILDING. ESTIMATED COVERAGE REQUIREMENTS FOR FUTURE EXPANSIONS/ADDITIONS, FACTOR ESTIMATES IN HYDRAULIC CALCULATIONS AND PROVIDE VALVED AND CAPPED CONNECTIONS FOR FUTURE.

11.

PROVIDE STORAGE CABINET PAINTED RED SIZED TO ACCOMMODATE SIX SPRINKLER HEADS OF EACH TYPE PROVIDED ON THE PROJECT. PROVIDE A PROPERLY SIZED WRENCH(S) TO FIT SPRINKLER HEADS (TO BE LOCATED IN THE CABINET). FASTEN CABINET TO WALL ADJACENT TO FIRE SPRINKLER VALVING AT 5'-0" AFF TO CENTERLINE OF CABINET.





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FIRE SPRINKLER
LEGENDS, NOTES -
ADD ALT. 5

FP101

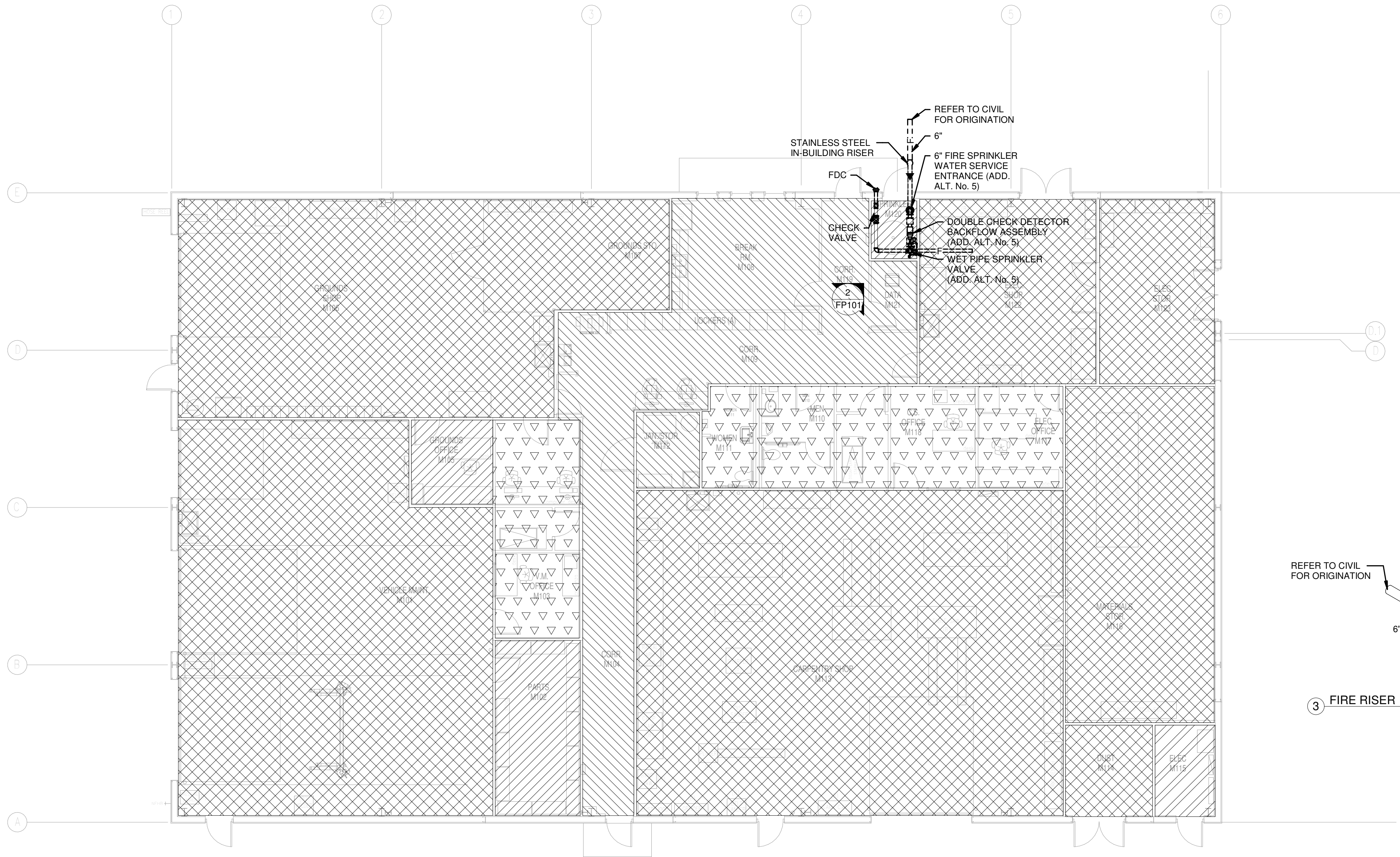
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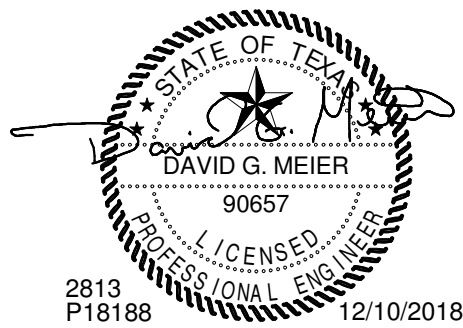
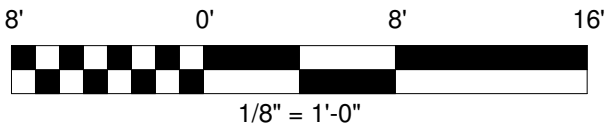
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FIRE SPRINKLER PLAN - ADD
ALTERNATE NO. 5
1/8" = 1'-0"

OCCUPANCY TYPE LEGEND							
▽ ▽	ABOVE EQUIPMENT PLATFORM ORDINARY HAZARD GROUP 1 OCCUPANCY WET PIPE UPRIGHT SPRINKLER QUICK RESPONSE, STANDARD COVERAGE DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.15 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 130 SQ.FT. 5.6K, 1/2" NPT, 155°F TEMPERATURE HEAD, BRASS FINISH HEAD (TYCO MODEL TY3131 OR EQUAL).			▨ ▨	ORDINARY HAZARD GROUP 1 OCCUPANCY WET PIPE UPRIGHT SPRINKLER QUICK RESPONSE, STANDARD COVERAGE DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.15 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 130 SQ.FT. 5.6K, 1/2" NPT, 155°F TEMPERATURE HEAD, BRASS FINISH HEAD (TYCO MODEL TY3131 OR EQUAL).		
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▽ ▽	BELOW EQUIPMENT PLATFORM LIGHT HAZARD OCCUPANCY WET PIPE RECESSED PENDENT QUICK RESPONSE, STANDARD COVERAGE DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.10 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 225 SQ.FT. 5.6K, 1/2" NPT 155°F TEMPERATURE HEAD, WHITE ESCUTCHEON AND WHITEHEAD (TYCO MODEL TY3231 OR EQUAL).			▨ ▨	ORDINARY HAZARD GROUP 2 OCCUPANCY WET PIPE UPRIGHT SPRINKLER QUICK RESPONSE, STANDARD COVERAGE DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.20 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 130 SQ.FT. 5.6K, 1/2" NPT, 155°F TEMPERATURE HEAD, BRASS FINISH HEAD (TYCO MODEL TY3131 OR EQUAL).		
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DATE 12/11/2018
PROJECT NO. 18002

FIRE SPRINKLER
PLAN - ADD ALT #5

FP201

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ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS






ABBREVIATIONS

A	AMPS	L	LENGTH
ACT	ABOVE COUNTERTOP	LB	POUNDS
AFF	ABOVE FINISHED FLOOR	LRA	LOCKED ROTOR AMPS
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AIC	AMPERE INTERRUPTING CURRENT	MAX	MAXIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MCA	MINIMUM CIRCUIT AMPACITY
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER
BKR	BREAKER	MH	METAL HALIDE
BLDG	BUILDING	MIN	MINIMUM
C	CONDUIT	MLO	MAIN LUGS ONLY
CKT	CIRCUIT	N/A	NOT APPLICABLE
CLG	CEILING	NEC	NATIONAL ELECTRICAL CODE
D	DEPTH	NEMA	NATIONAL ELECTRICAL
DEG	DEGREES		MANUFACTURER'S ASSOCIATION
DIS	DISCONNECT	NFPA	NATIONAL FIRE PROTECTION
DPDT	DOUBLE-POLE, DOUBLE-THROW		ASSOCIATION
DPST	DOUBLE-POLE, SINGLE-THROW	NO.	NUMBER
EA	EACH	N/O,N/C	NORMALLY OPEN, NORMALLY CLOSED
EPO	EMERGENCY POWER OFF	OC	ON CENTER
EWC	ELECTRIC WATER COOLER	OSHA	OCCUPATIONAL SAFETY AND HEALTH
FA	FIRE ALARM		ADMINISTRATION
FACP	FIRE ALARM CONTROL PANEL	PDU	POWER DISTRIBUTION UNIT
FLA	FULL LOAD AMPS	PF	POWER FACTOR
FT.	FOOT, FEET	PH	PHASE
FVNR	FULL-VOLTAGE, NON-REVERSING	PROVIDE	FURNISH AND INSTALL
G	GROUND	PVC	POLYVINYL CHLORIDE
GA.	GAUGE	RE:	REFERENCE, REFER
GFI	GROUND FAULT CIRCUIT	RLA	RUNNING LOAD AMPS
	INTERRUPTER	SPDT	SINGLE POLE DOUBLE THROW
GFR	GROUND FAULT RELAY	SPST	SINGLE POLE SINGLE THROW
GND	GROUND	THRU	THROUGH
GRS	GALVANIZED RIGID STEEL	TYP	TYPICAL
H	HEIGHT	U/F	UNDERFLOOR
HID	HIGH INTENSITY DISCHARGE	U/G	UNDERGROUND
HOA	HAND-OFF-AUTOMATIC	U/S	UNDERSLAB
HP	HORSEPOWER	UL	UNDERWRITERS LABORATORIES, INC.
HPS	HIGH PRESSURE SODIUM	U.O.N.	UNLESS OTHERWISE NOTED
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
		VOLT	VOLT
HZ	HERTZ	VA	VOLT-AMPERE
IER	INTEGRATED EQUIPMENT RATING	VAC	VOLTS ALTERNATING CURRENT
IG	ISOLATED GROUND		WATT, WIDTH
IN.	INCH, INCHES	W/	WITH
J-BOX	JUNCTION BOX	W/O	WITHOUT
kcmil	1000 CIRCULAR MILS	WP	WEATHERPROOF DEVICE, RECEPTACLES SHALL BE WEATHER-RESISTANT TYPE GFI RECEPTACLES IN WEATHERPROOF WHILE IN-USE BOX.
kV	KILOVOLT		TRANSFORMER
kVA	KILOVOLT-AMPS		
kVAR	KILOVOLT-AMPS REACTIVE	XFMR	
kW	KILOWATT		
kWH	KILOWATT-HOUR		




ELECTRICAL EQUIPMENT

	SWITCHBOARD OR DISTRIBUTION PANEL
	PANELBOARD - FLUSH OR SURFACE MOUNT AS INDICATED ON PLAN SCHEDULE
	DRY-TYPE TRANSFORMER
	PLYWOOD TERMINAL BOARD, FOR TELEPHONE SYSTEM UNLESS NOTED, 4' X 8' X 3/4" UNLESS OTHERWISE NOTED

MISCELLANEOUS

	DRAWING NOTE REFERENCE (I.E., NOTES BY SYMBOL)
	THERMOSTAT OUTLET BOX
	CARD READER, INSTALL JUNCTION BOX AT 48" AFF WITH 3/4" CONDUIT TO ACCESSIBLE AREA ABOVE CEILING.
	MAGNETIC CONTACTOR, SIZE, COIL VOLTAGE AND NUMBER OF POLES AS INDICATED
	CLOSED CIRCUIT TELEVISION CAMERA

SPECIFIC EQUIPMENT CONNECTIONS

	SUPPORT ELECTRICAL CONNECTION
	ALTERNATE NOTE BY SYMBOL FORMAT CIRCUIT (NAME)(LOAD)(VOLTAGE)(DISCONNECT)(WIRE)(AMPS) SPECIAL INSTRUCTIONS AND NOTES
	H1A-1,3,5 (PUMP-1)(5HP,16,7FLA)(208/3)/(60/3/35)(3#10,1#10G,3/4"C)(30AMPS) PROVIDE 1/2"C TO FIRE ALARM PANEL.
	DISCONNECT ABBREVIATIONS: 30/3/NF = AMPS/POLES/FUSE W/UNIT = PROVIDED WITH UNIT L/BKR = PROVIDE LOCKABLE CIRCUIT BREAKER REC = RECEPTACLE MRS = MOTOR RATED SWITCH LTS = TOGGLE SWITCH WITH LOCKING CLASP

DESIGN IS BASED ON INFORMATION PROVIDED BY OTHER DIVISIONS. CONTRACTOR SHALL CONFIRM
EQUIPMENT PURCHASED MEETS BASIS OF DESIGN SHOWN. COST ASSOCIATED WITH CHANGES TO
PROVIDED INFORMATION SHALL BE THE RESPONSIBILITY OF THE DIVISION PROVIDING THE
EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND DATA PRIOR TO ROUGH.

CODE SUMMARY

GOVERNING CODES:

BUILDING: 2015 INTERNATIONAL BUILDING CODE WITH CITY AMENDMENTS

ELECTRICAL: 2017 NATIONAL ELECTRICAL CODE WITH CITY AMENDMENT

FIRE: 2015 INTERNATIONAL FIRE CODE WITH CITY AMENDMENTS

ACCESSIBILITY: 2012 TEXAS ACCESSIBILITY STANDARDS

ENERGY: 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH CITY AMENDMENTS

GENERAL NOTES

- REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS OF ELECTRICAL CONSTRUCTION.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL
CEILING MOUNTED DEVICES.
- REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS, WHERE THE ARCHITECT HAS
DRAWN SUCH ELEVATIONS, FOR THE LOCATIONS OF ALL WALL MOUNTED DEVICES.
- COORDINATE EXACT LOCATION OF ALL LIGHTING FIXTURES IN ELECTRICAL/MECHANICAL
SPACES WITH EQUIPMENT, DUCTWORK AND PIPING.
- ALL RECEPTACLE OUTLETS LOCATED WITHIN 6'-0" OF A WET BAR OR SINK SHALL BE GFI TYPE.
ALL RECEPTACLE OUTLETS LOCATED OUTDOORS SHALL BE WP/GFI. ALL RECEPTACLES
SERVING VENDING MACHINES SHALL BE GFI TYPE. ALL RECEPTACLES SERVING ELECTRIC
WATER COOLERS SHALL BE GFI TYPE. ALL RECEPTACLES IN KITCHEN AREAS SHALL BE GFI
TYPE.
- ALL CONDUIT PENETRATIONS THROUGH THE ROOF TO SERVE MECHANICAL EQUIPMENT SHALL
BE WITHIN THE ASSOCIATED EQUIPMENT ROOF CURB. COORDINATE LOCATIONS OF
PENETRATIONS WITH THE MECHANICAL CONTRACTOR.
- PROVIDE THE TYPE OF MOUNTING HARDWARE AND TRIM NECESSARY FOR THE PROPER
INSTALLATION OF SPECIFIED LIGHTING FIXTURES IN THE TYPE OF CEILING WHERE INSTALLED.
- PROVIDE ACCESS DOORS IN WALLS AND CEILINGS WHERE ACCESS TO CONCEALED
ELECTRICAL BOXES AND DEVICES IS REQUIRED.
- EACH BRANCH AND FEEDER CIRCUIT SHALL BE PROVIDED WITH A GROUND CONDUCTOR SIZED
PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NFPA 70), WHERE A CONDUIT
CONTAINS MULTIPLE BRANCH CIRCUITS, PROVIDE A SINGLE GROUND CONDUCTOR UNLESS
OTHERWISE NOTED.
- CONDUIT, LIGHT FIXTURES, AND OTHER COMPONENTS MAY BE SHOWN LARGER THAN ACTUAL
SIZE. CONDUIT ROUTING IS SHOWN WITH AN EXAGGERATED SPACING FOR CLARITY.
ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL CONTRACTORS TO ENSURE CONDUIT
PLACEMENT DOES NOT CONFLICT WITH LOCATION SENSITIVE COMPONENTS SUCH AS LIGHT
FIXTURES.
- INTEGRATED EQUIPMENT RATINGS SHOWN ARE MINIMUMS. CONTRACTOR SHALL PROVIDE
MANUFACTURER'S EQUAL OR NEXT HIGHER STANDARD RATINGS.
- ALL PULL CORD/WIRE PROVIDED FOR EMPTY RACEWAY/CONDUIT SYSTEMS SHALL HAVE A
MINIMUM STRENGTH OF 200 LBS TENSILE STRENGTH. ALL EMPTY CONDUITS SHALL HAVE A
PULL CORD.
- PROVIDE LUGS AS REQUIRED FOR ALL ELECTRICAL EQUIPMENT TO ACCEPT THE SIZE AND
NUMBER OF CONDUCTORS SHOWN IN THESE DOCUMENTS.
- THE LIGHTING PLANS INDICATE SWITCHING AND BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING
FIXTURES. LOWER CASE LETTERS AT SWITCHES AND LIGHTING FIXTURES INDICATE
SWITCHING WHERE THE CONTROL PATTERN IS NOT OBVIOUS. INSTALL BRANCH CIRCUIT
WIRING IN RACEWAY TO ALL RIGIDLY ATTACHED LIGHTING FIXTURES, AND TO JUNCTION
BOXES FOR ALL LAY-IN LIGHTING FIXTURES, AS REQUIRED TO PROVIDE SWITCHING AND
CIRCUITING AS SHOWN ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR ADDITIONAL
INFORMATION.
- ALL LAY-IN LIGHTING FIXTURES SHALL BE CONNECTED TO A BRANCH CIRCUIT JUNCTION BOX
WITH A FLEXIBLE FIXTURE TAIL. A MAXIMUM OF FOUR FIXTURE TAILS SHALL BE CONNECTED
TO A SINGLE JUNCTION BOX. FIXTURE TO FIXTURE WIRING OF LAY-IN LIGHTING FIXTURES IS
NOT PERMITTED, EXCEPT WHERE MASTER/SLAVE FIXTURE PAIRS ARE INDICATED OR
SPECIFIED.
- THERE SHALL BE NO SPLICES OF WIRING INSIDE PANELBOARDS OR DISCONNECT SWITCHES.
ONLY ONE WIRE SHALL BE TERMINATED TO ANY SINGLE LUG ON A CIRCUIT BREAKER.
- ALL WIRING AND CONDUIT SIZES SHALL BE BASED ON THE REQUIREMENTS OF THE NATIONAL
ELECTRICAL CODE UNLESS OTHERWISE NOTED SPECIFICALLY.
- UNLESS OTHERWISE NOTED, FOR LIGHTING AND RECEPTACLE HOMERUNS HAVING A TOTAL
LENGTH OF 100' TO 200', USE #10 CONDUCTORS; FOR HOMERUNS HAVING A TOTAL LENGTH OF
200' OR GREATER, USE #8 CONDUCTORS.
- COORDINATE THE REQUIREMENTS FOR OVERCURRENT PROTECTIVE DEVICE SIZE,
DISCONNECT SWITCH SIZE, AND CONDUCTOR AND CONDUIT SIZES WITH THE REQUIREMENTS
OF THE MECHANICAL EQUIPMENT THAT IS ACTUALLY TO BE INSTALLED AND PROVIDE AND
INSTALL ALL ELECTRICAL COMPONENTS AS REQUIRED. THE ELECTRICAL COMPONENT SIZING
SHOWN ON THESE DRAWINGS IS BASED UPON THE REQUIREMENTS FOR THE SPECIFIED
MECHANICAL EQUIPMENT AVAILABLE AT THE TIME OF DESIGN. VARIATIONS IN REQUIREMENTS
MAY OCCUR AS A RESULT OF THE PROVISION OF OTHER MANUFACTURER'S EQUIPMENT OR IN
CHANGES TO THE SPECIFIED EQUIPMENT. SUCH REVISED REQUIREMENTS ARE A PART OF
THIS CONTRACT AND SHALL BE ACCOMMODATED WITHOUT ADDITIONAL CHARGE.
- FOR COORDINATION PURPOSES, LIGHTING FIXTURES AND DEVICES MAY BE MOVED A
MAXIMUM DISTANCE OF FIVE FEET. PRIOR TO INSTALLATION, AT NO COST TO THE OWNER,
UPON INSTRUCTION BY THE ARCHITECT OR ENGINEER.
- COORDINATE THE EXACT LOCATION OF ALL THERMOSTATS, STARTERS, DISCONNECTS, ETC.
AND COORDINATE ALL REQUIREMENTS FOR CONTROL AND POWER WIRING WITH THE
MECHANICAL CONTRACTOR OR THE TRADE PROVIDING THE EQUIPMENT.
- WHERE RECEPTACLES ARE SHOWN BACK-TO-BACK ON A COMMON WALL, OFFSET THE TWO
BOXES AT LEAST SIX INCHES.
- ALL CONDUCTORS SHALL BE THWN/THHN UNLESS OTHERWISE INDICATED. CONDUCTORS
SHALL BE RATED FOR 75 DEGREES C. TERMINATIONS SHALL BE RATED FOR 75 DEGREES C.
DEVIATIONS SHALL COMPLY WITH NEC ARTICLE 110-14(c) FOR EXACT EQUIPMENT BEING
PROVIDED.
- VERIFY DEVICE PLATE COLORS WITH ARCHITECT.
- COORDINATE WITH AND PAY ALL FEES ASSOCIATED WITH OBTAINING SERVICE FORM ANY OF
THE FOLLOWING UTILITIES RELATED TO THIS PROJECT.
POWER COMPANY
TELEPHONE COMPANY
CABLE TELEVISION PROVIDER
- ALL CIRCUITS FEEDING LOADS FROM VFD CONTROLLERS SHALL UTILIZE BELDEN VFD RATED
CABLE SIZED AS RECOMMENDED BY THE MANUFACTURER BUT NOT LESS THAN THE RATING OF
THE FEEDER SERVING THE VFD. RACEWAY SIZES FOR THE BELDEN CABLE SHALL BE IN
COMPLIANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE NATIONAL
ELECTRICAL CODE. CONTRACTOR SHALL VERIFY MOTOR BEING SERVED IS NEMA MG-31 RATED
PRIOR TO FINAL TERMINATIONS AND NOTIFY A/E IF DISCREPANCIES ARE FOUND.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING NEW ELECTRIC SERVICE VOLTAGE AND
AMP REQUIREMENTS WITH ELECTRIC UTILITY. COORDINATION REQUIRED BY ENGINEER
EARLY IN DESIGN PROCESS IS PRELIMINARY IN NATURE AND THEREFORE SUBJECT TO
CHANGE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING FINAL SERVICE REQUIREMENTS
INCLUDING METERING REQUIREMENTS, VOLTAGE AND AMPACITY.



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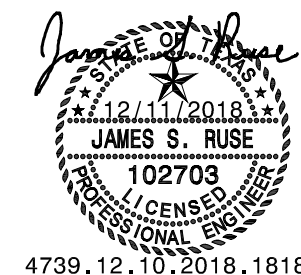
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DESCRIPTION

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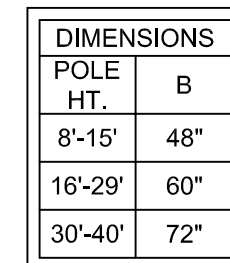
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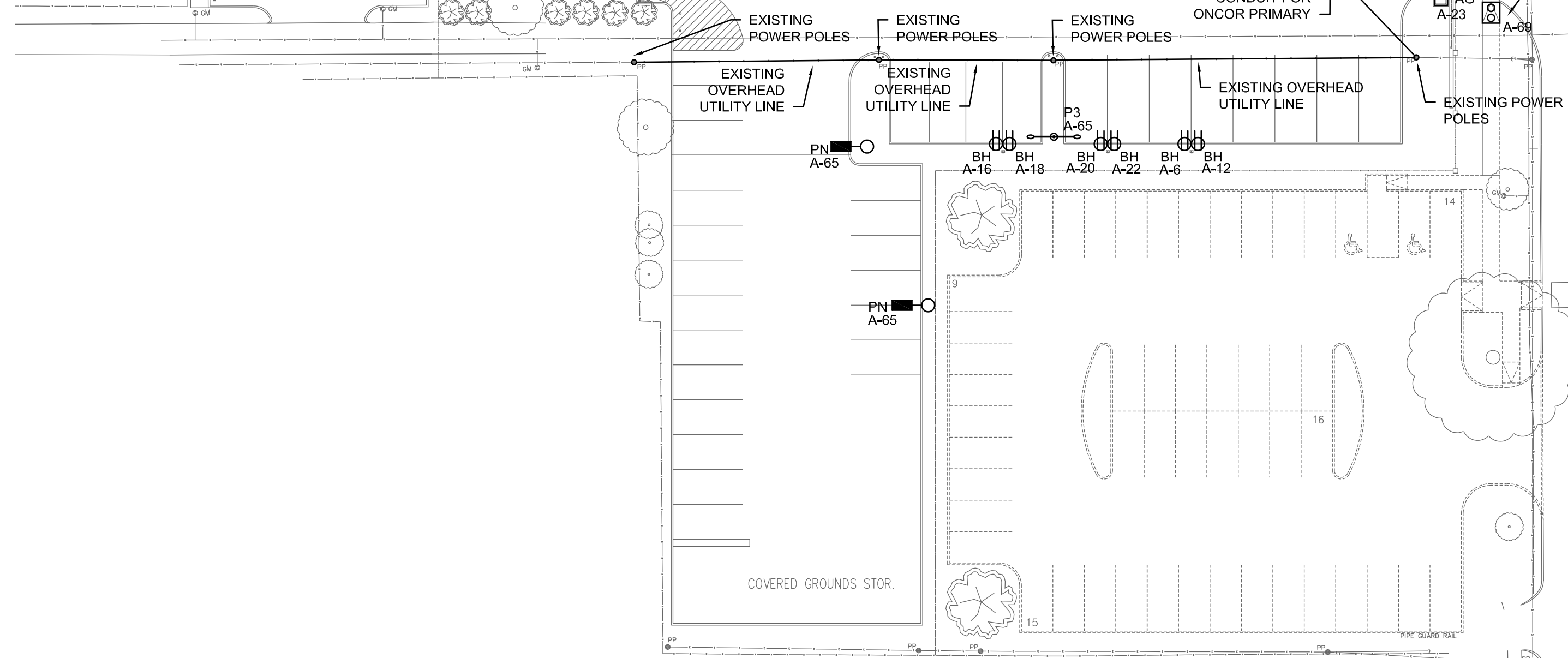
ELECTRICAL
ABBREVIATIONS AND
SYMBOLS

E001

1. ALL EXTERIOR FIXTURES WILL BE CONTROLLED VIA NETWORK TIMECLOCK.
2. CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY FOR ALL DETAILS OF NEW ELECTRIC SERVICE. CONTRACTOR SHALL USE UTILITY'S DETAIL DRAWINGS FOR ALL TRENCHING, BACKFILL, PRIMARY CONDUIT ROUTING, RADIIUSES, TRANSFORMER PAD DETAILS, AND OTHER UTILITY SPECIFIC INFORMATION. PRIMARY CONDUIT ROUTING SHOWN IS CONCEPTUAL AND PRELIMINARY. EXACT ROUTING AND ROUTING SHALL BE PROVIDED BY ELECTRIC UTILITY AND CIVIL ENGINEER. ALL INSTALLATION SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS.
COORDINATE WITH ANGELA FORRESTER OF ONCOR
PHONE: (940) 765-5482
EMAIL: angela.forrester@oncor.com



SCALE: N.T.S



SCALE: 1" = 30'-0"

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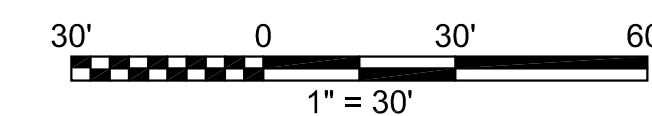
ELECTRICAL SITE
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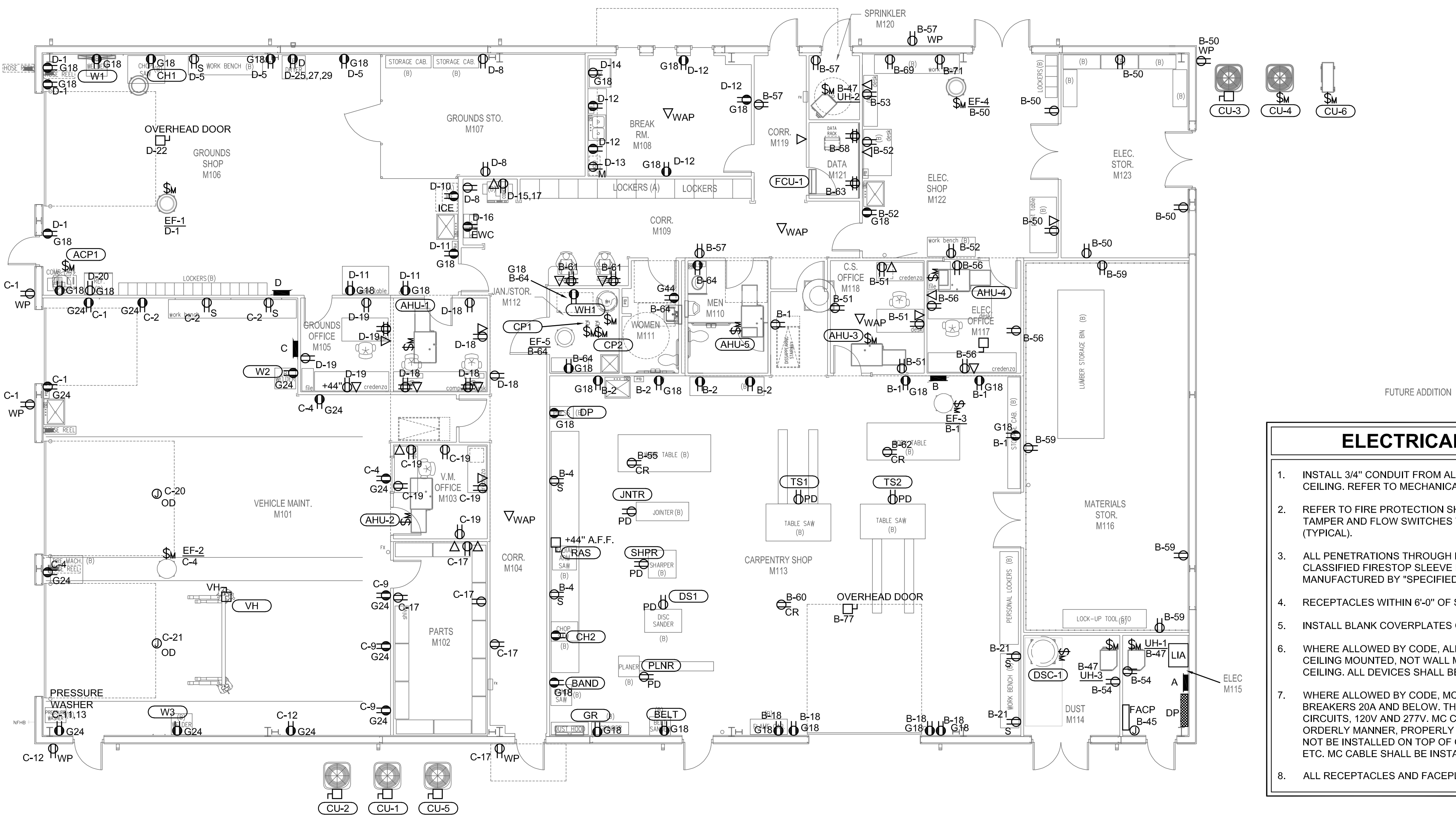
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SHEET SIZE = ANSI D 22x34

EQUIPMENT ELECTRICAL CONNECTION SCHEDULE						
SYMBOL	EQUIPMENT DESCRIPTION OR MODEL	VOLTAGE	PHASE	AMPS	WIRE SIZE	CIRCUIT NUMBER
TS1	TABLE SAW	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-37,39,41
TS2	TABLE SAW	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-36,38,40
JNTR	JOINTER	208	1PH/2W	16	2#12,#12GND, 3/4" C	B-31,33
DS1	DISC SANDER	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-23,25,27
BELT	BELT SANDER	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-13,15,17
PLNR	PLANER	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-20,22,24
SHPR	SHAPER	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-28,30,32
DP	DRILL PRESS	120	1PH/2W	16	2#12,#12GND, 3/4" C	B-3
RAS	RADIAL ARM SAW	208	3PH/4W	24	4#10,#10GND, 3/4" C	B-5,7,9
CH1	CHOP SAW	120	1PH/2W	16	2#12,#12GND, 3/4" C	D-3
BAND	BAND SAW	120	1PH/2W	16	2#12,#12GND, 3/4" C	B-8
GR	GRINDER	208	3PH/4W	16	4#12,#12GND, 3/4" C	B-10,12,14
CH2	CHOP SAW	120	1PH/2W	16	2#12,#12GND, 3/4" C	B-6
W1	WELDER	208	1PH/2W	40	2#6,#10GND, 1" C	D-2,4
W2	WELDER	208	1PH/2W	40	2#6,#10GND, 1" C	C-3,5
W3	WELDER	208	1PH/2W	40	2#6,#10GND, 1" C	C-14,16
ACP1	AIR COMPRESSOR	120	1PH/2W	16	2#12,#12GND, 3/4" C	D-24,26,28
VH	VEHICLE LIFT	208	1PH/2W	24	2#10,#10GND, 3/4" C	C-6,8
NOTES:						
1. VERIFY WITH ARCHITECT FOR EXACT LOCATION AND MOUNTING HEIGHT OF EQUIPMENT CONNECTIONS						

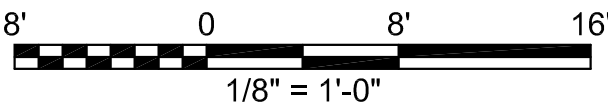
EQUIPMENT SCHEDULE BY SYMBOL				
SYMBOL	INFORMATION PROVIDED (NAME)(LOAD)(VOLTAGE)	CONNECTION (DISCONNECT)(WIRE)(FEEDER AMPS)	CIRCUIT	SEE NOTES BELOW:
CU-1	(CONDENSING UNIT)(28MCA,45MOCP)(208/1)	(60/2/NF)(2#6,1#10G,1"C)	C-22,24	
CU-2	(CONDENSING UNIT)(31MCA,45MOCP)(208/1)	(60/2/NF)(2#6,1#10G,1"C)	C-23,25	
CU-3	(CONDENSING UNIT)(31MCA,45MOCP)(208/1)	(60/2/NF)(2#6,1#10G,1"C)	B-65,67	
CU-4	(CONDENSING UNIT)(12MCA,20MOCP)(208/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-66,68	
CU-5	(CONDENSING UNIT)(23MCA,40MOCP)(208/1)	(60/2/NF)(2#8,1#10G,1"C)	C-27,29	
CU-6	(CONDENSING UNIT)(12MCA,20MOCP)(208/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-70,72	
FCU-1	(FAN COIL UNIT)(208/1)			SERVED BY CU-6
AHU-1	(AIR HANDLING UNIT)(13.5MCA,20MOCP)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	C-26	
AHU-2	(AIR HANDLING UNIT)(17MCA,20MOCP)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	C-28	
AHU-3	(AIR HANDLING UNIT)(17MCA,20MOCP)(120/1)	(30/2/NF)(2#12,1#12G,1"C)	B-73	
AHU-4	(AIR HANDLING UNIT)(11.1MCA,15MOCP)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-74	
AHU-5	(AIR HANDLING UNIT)(12.4MCA,15MOCP)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	C-30	
WH1	(WATER HEATER)(5AMPS)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-78	
CP1	(CIRC PUMP)(30VA)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-64	
CP2	(CIRC PUMP)(30VA)(120/1)	(30/2/NF)(2#12,1#12G,1/2"C)	B-64	
DSC-1	(DUST COLLECTION)(7.5HP)(208/3)	(30/3/NF)(3#12,1#12G,1/2"C)	B-78	
GENERAL NOTES APPLY TO ALL:				
VERIFY ALL MOUNTING REQUIREMENTS WITH EQUIPMENT PROVIDER.				
VERIFY ACTUAL EQUIPMENT LOADS AND CONNECTION REQUIREMENTS WITH EQUIPMENT BEING PROVIDED.				

POWER DEVICE SCHEDULE	
SYMBOL	DEVICE TYPE
20A	20A DUPLEX RECEPTACLE 24" A.F.F. UNLESS NOTED OTHERWISE
20A	20A DUPLEX RECEPTACLE ABOVE COUNTER BACK SPLASH
20A	20A GFCI DUPLEX RECEPTACLE FOR REFRIGERATOR MOUNTED AT 48" A.F.F. UNLESS OTHERWISE SPECIFIED
20A	20A GFCI DUPLEX RECEPTACLE FOR MICROWAVE ABOVE COUNTER BACK SPLASH
20A	20A WEATHERPROOF GFCI DUPLEX RECEPTACLE
20A	20A GFCI DUPLEX RECEPTACLE MOUNTED AT 48" A.F.F.
20A	20A WEATHERPROOF SINGLE RECEPTACLE FOR GOLF CART CHARGING STATION ON GFCI BREAKER. MOUNT AT 24" A.F.F. PROVIDE #10 THHN
20A	NEMA 3R GFCI RECEPTACLE FOR BLOCK HEATER.
45"	45" GFCI DUPLEX BOX REELCRAFT #L-4545-123-7SB CORD REEL OR APPROVED EQUAL. INSTALL ON UNISTRUT ABOVE FOR POWER TO EQUIPMENT. PROVIDE 2#10, #12G, 1/2"C CIRCUIT. COORDINATE FINAL LOCATION WITH OWNER
POWER DROP	POWER DROP FROM STRUCTURE FOR EQUIPMENT. INSTALL SO CABLE DOWN FOR CONNECTION OF EQUIPMENT. INSTALL WIRE MESH STRAIN RELIEF ON CABLE AT JUNCTION BOX
20A	20A SIMPLEX RECEPTACLE 24" AFF UNLESS NOTED OTHERWISE
20A	20A QUADRAPLEX RECEPTACLE 24" AFF UNLESS NOTED OTHERWISE
20A	20A GFCI DUPLEX RECEPTACLE ABOVE COUNTER BACK SPLASH
3#10, #10G	3#10, #10G, NEMA 14-30R RECEPTACLE. MOUNT AT 30" A.F.F., FEED FROM GFCI BREAKER
20A	20A GFCI DUPLEX RECEPTACLE MOUNTED AT 18" A.F.F. UNLESS OTHERWISE SPECIFIED
20A	20A GFCI DUPLEX RECEPTACLE MOUNTED AT 24" A.F.F. UNLESS OTHERWISE SPECIFIED
20A	20A GFCI DUPLEX RECEPTACLE MOUNTED AT 44" A.F.F. UNLESS OTHERWISE SPECIFIED
20A	20A GFCI DUPLEX RECEPTACLE FOR ICE MACHINE MOUNTED AT 24" A.F.F.
20A	20A GFCI DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER MOUNTED AT 24" A.F.F.
	SPECIAL PURPOSE RECEPTACLE AS NOTED IN PLAN VIEWS
	FLOOR RECEPTACLE
	JUNCTION BOX FOR DIRECT CONNECTION AS NOTED IN PLAN VIEWS
	POWER FOR OVERHEAD DOORS. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT
	NEMA 3R DISCONNECT SWITCH FOR FUEL TANKS. VERIFY EXACT LOCATION WITH ARCHITECT
	NEMA 3R DISCONNECT SWITCH FOR FUEL PUMPS. VERIFY EXACT LOCATION WITH ARCHITECT
	DISCONNECT SWITCH FOR VEHICLE LIFT. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT
	POWER FOR AUTOMATIC GATE. INSTALL 3/4" CONDUIT FOR COMMUNICATIONS
	CONTRACTOR SHALL INSTALL 1" CONDUIT TO 4"x4" BOX FOR COMMUNICATIONS OUTLET, WITH 2"x4" MUD RING. ROUTE CONDUIT TO ACCESSIBLE AREA OVERHEAD. CONTRACTOR SHALL PROVIDE, INSTALL, AND TERMINATE ONE CAT-6 CABLE FROM I.T. ROOM TO EACH BOX
	WIRELESS ACCESS POINT TO BE INSTALLED BY OWNER. CONTRACTOR SHALL INSTALL ONE CAT-6 CABLE FROM I.T. ROOM TO WAP AND TERMINATE WITH 10' SLACK LOOP AT WAP
	MOTOR LOCATION AS NOTED IN PLAN VIEWS
	DISCONNECT SWITCH - (200/3/150) DENOTES (AMPS/POLE/FUSE); "NF" DENOTES NON-FUSED, NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE
	COMBINATION STARTER DISCONNECT SWITCH - (200/3/150) DENOTES (AMPS/POLE/FUSE); "NF" DENOTES NON-FUSED, NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE, NEMA STARTER AS INDICATED IN PLAN VIEW
	MOTOR RATED SWITCH, MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
	PUSH BUTTON CONTROL AS NOTED IN PLAN VIEW
	FLOOR BOX WITH TWO DUPLEX POWER RECEPTACLES AND SEPARATE DATA COMPARTMENTS. FINISH TO BE SELECTED BY ARCHITECT. PROVIDE WIREMOLD #RFB4E-OG FOR SLAB ON-GRADE LOCATIONS AND #6ATC FOR ABOVE-GRADE LOCATIONS. POKE THROUGH BOX SHALL MATCH FLOOR FIRE RATINGS. PROVIDE 1-1/4"C FOR COMMUNICATIONS TO ACCESSIBLE AREA ABOVE CEILING.
	FLOOR BOX WITH FURNITURE FEED FOR POWER AND COMMUNICATIONS, FINISH TO BE SELECTED BY ARCHITECT. PROVIDE WIREMOLD #RFB4E-OG FOR SLAB ON-GRADE LOCATIONS AND #6ATC FOR ABOVE-GRADE LOCATIONS. POKE THROUGH BOX SHALL MATCH FLOOR FIRE RATINGS. PROVIDE TWO(2) 1-1/4"C FOR COMMUNICATIONS TO ACCESSIBLE AREA ABOVE CEILING.
	HIGH CAPACITY FLOOR BOX WITH TWO INTERNAL RECESSED RECEPTACLES FOR POWER AND COMMUNICATIONS, FINISH TO BE SELECTED BY ARCHITECT. PROVIDE WIREMOLD #RFB6E-OG FOR SLAB ON GRADE AND #8ATC FOR ABOVE GRADE POKE THROUGH LOCATIONS. POKE THROUGH SHALL MATCH FLOOR FIRE RATINGS. PROVIDE TWO(2) 1-1/4"C FOR COMMUNICATIONS TO ACCESSIBLE AREA ABOVE CEILING.
GENERAL NOTES APPLY TO ALL DEVICES:	
1. ALL DEVICES USED TO SUPPORT SPECIFIC EQUIPMENT PROVIDED BY OTHERS ARE TO BE COORDINATED WITH PROVIDER OF EQUIPMENT FOR NEMA PLUG CONFIGURATION AND WIRING.	

ELECTRICAL GENERAL NOTES	
1.	INSTALL 3/4" CONDUIT FROM ALL THERMOSTATS TO ACCESSIBLE AREA ABOVE CEILING. REFER TO MECHANICAL FOR LOCATIONS OF THERMOSTATS.
2.	REFER TO FIRE PROTECTION SHEETS FOR LOCATIONS OF FIRE SPRINKLER TAMPER AND FLOW SWITCHES TO BE INSTALLED BY FIRE ALARM CONTRACTOR (TYPICAL).
3.	ALL PENETRATIONS THROUGH FIRE OR SMOKE WALLS SHALL BE MADE USING A UL CLASSIFIED FIRESTOP SLEEVE KIT OF THE APPROPRIATE SIZE (AS MANUFACTURED BY "SPECIFIED TECHNOLOGIES" www.stifirestop.com).
4.	RECEPTACLES WITHIN 6'-0" OF SINKS SHALL BE GFCI TYPE.
5.	INSTALL BLANK COVERPLATES ON ALL EMPTY JUNCTION BOXES.
6.	WHERE ALLOWED BY CODE, ALL FIRE ALARM NOTIFICATIONS DEVICES SHALL BE CEILING MOUNTED, NOT WALL MOUNTED EXCEPT FOR THE LOBBY / BRIDGE CEILING. ALL DEVICES SHALL BE WHITE WITH RED LETTERING.
7.	WHERE ALLOWED BY CODE, MC CABLE SHALL BE USED FOR CIRCUITS SERVED BY BREAKERS 20A AND BELOW. THIS INCLUDES LIGHTING AND RECEPTACLE CIRCUITS, 120V AND 277V. MC CABLE SHALL BE INSTALLED IN A NEAT AND ORDERLY MANNER, PROPERLY SUPPORTED FROM STRUCTURE. MC CABLE SHALL NOT BE INSTALLED ON TOP OF OR SUPPORTED BY CEILINGS, DUCTWORK, PIPING, ETC. MC CABLE SHALL BE INSTALLED AT RIGHT ANGLES TO BUILDING STRUCTURE.
8.	ALL RECEPTACLES AND FACEPLATES ARE TO BE WHITE IN COLOR.



1 ELECTRICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"



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NEW FACILITIES
SERVICES
MSU MAINTENANCE
BUILDING
MIDWESTERN STATE UNIVERSITY

BYS architects

DRAWN BY
CHECKED BY
DATE
PROJECT NO.

ELECTRICAL
FLOOR PLAN
E301

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SHEET SIZE: A3510 22x34

PARTIAL ENERGY CODE REQUIREMENTS

GENERAL ENERGY CODE REQUIREMENTS:

ALL AREAS LISTED BELOW ARE TO HAVE OCCUPANCY SENSOR CONTROLS:
CLASSROOMS/LECTURE/TRAINING ROOMS
CONFERENCE/MEETING/MULTIPURPOSE ROOMS
COPY/PRINT ROOMS
LOUNGES
LUNCH AND BREAK ROOMS
PRIVATE OFFICES
RESTROOMS
STORAGE ROOMS
JANITORIAL CLOSETS
LOCKER ROOMS
OTHER ENCLOSED SPACES 300 SQ.FT. OR LESS
WAREHOUSES (WAREHOUSE TO BE SENSORED BY AISLEWAY)

ALL SENSORS SHALL FUNCTION MANUAL ON AUTOMATIC OFF. AUTOMATIC ON MAY BE USED IF AUTO-ON LEVEL IS LESS THAN 50%. AUTO-ON TO 100% IS ALLOWED FOR PUBLIC CORRIDORS, STAIRS, RESTROOMS LOBBIES OR WHERE MANUAL-ON CONTROL WOULD ENDANGER OCCUPANTS.

AREAS NOT PROVIDED WITH OCCUPANCY SENSORS AS LISTED ABOVE SHALL BE CONTROLLED BY TIME BASED SCHEDULE. TIME SWITCH CONTROLS SHALL PROVIDE MAXIMUM 2-HOUR OVERRIDE (MAXIMUM 5000SQ.FT EACH OVERRIDE) WITHIN SPACE CONTROLLED OR HAVE A PILOT LIGHT AND MAP OF LIGHTING CONTROLLED.

MALLS, ARCADES, AUDITORIUMS, SINGLE TENANT RETAIL, INDUSTRIAL FACILITIES AND ARENA ARE EXEMPT FROM THE 2-HOUR LIMIT ON OVERRIDE TIME AND MAY CONTROL SPACES UP TO 20,000 SQ.FT.

AREAS NOT EXEMPTED FROM TIME BASED CONTROLS SHALL HAVE REDUCTION CONTROLS LOCATED IN SPACE FOR MINIMUM 50% REDUCTION BY OCCUPANT. LIGHTING REDUCTION IS NOT REQUIRED FOR ROOMS WITH ONLY ONE LIGHT FIXTURE, ROOMS USING LESS THAN .5W/SQ.FT. CORRIDORS, EQUIPMENT ROOMS, PUBLIC LOBBIES.

TIME CONTROLS MUST BE CAPABLE OF 7-DAY CLOCK WITH DIFFERENT SCHEDULE EACH DAY, INCLUDE HOLIDAY SCHEDULING CAPABILITY AND 10 HOUR BACKUP FOR PROGRAMMING.

AREAS THAT HAVE SPECIAL EXEMPTIONS THAT MUST BE EVALUATED ON CASE BY CASE BASIS:
SLEEPING AREAS RESIDENTIAL OR FIREMAN TYPE SLEEPING AREAS.
PATIENT CARE AREAS.
AREAS WHERE AUTOMATIC LIGHTING SHUTOFF WOULD ENDANGER LIFE SAFETY.
DWELLING UNITS WITHIN COMMERCIAL BUILDINGS.
WALK-IN COOLER AND FREEZERS.

EXTERIOR LIGHTING ENERGY CODE REQUIREMENTS:

ALL EXTERIOR LIGHTING SHALL BE CONTROLLED AS A FUNCTION OF AVAILABLE LIGHT. LIGHTING SHALL BE REDUCED BY MINIMUM OF 30% AFTER MIDNIGHT AT THE LATEST TO 6AM. OR 1-HOUR AFTER CLOSING AND 1 HOUR BEFORE BUSINESS OPENING. OR ANYTIME OF INACTIVITY OF MORE THAN 15 MINUTES.

EXEMPTIONS TO EXTERIOR LIGHTING:
EMERGENCY EGRESS LIGHTING
COVERED VEHICLE ENTRANCES TO PARKING STRUCTURES.
BUILDING FACADE(AFFECT LIGHTING) OR LANDSCAPE LIGHTING MAY BE PHOTOCELL ONLY.

AREAS DETERMINED TO BE SAFETY RELATED WHICH AUTOMATIC LIGHTING CONTROLS WOULD ENDANGER LIFE SAFETY OR ARE EXEMPT FOR EGRESS RELATED LIFE SAFETY CONCERNS ARE INDICATED IN THE ROOM BY THE FOLLOWING SYMBOL:

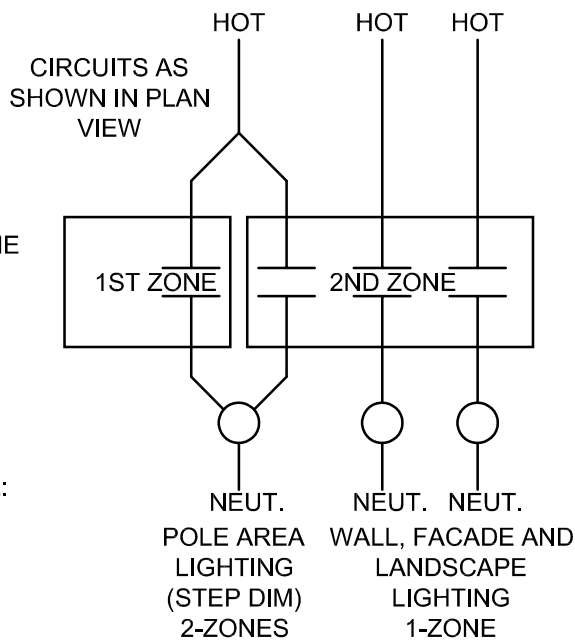
(SR)

LIGHTING CONTROL DEVICE SCHEDULE

SYMBOL	TYPE OF CONTROL
\$	LINE VOLTAGE TOGGLE SWITCH
\$3	LINE VOLTAGE 3-WAY TOGGLE SWITCH
\$4	LINE VOLTAGE 4-WAY TOGGLE SWITCH
\$D	LINE VOLTAGE SLIDE DIMMER SWITCH WITH ON/OFF BUTTON.
\$T	LINE VOLTAGE TIMER SWITCH
\$O	WALL MOUNTED LINE VOLTAGE OCCUPANCY SENSOR, 3-BUTTON (ON/OFF,RAISE,LOWER) DIMMING SENSOR. PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
\$V	WALL MOUNTED LINE VOLTAGE VACANCY SENSOR 1 BUTTON (ON/OFF). PROGRAM TO MANUAL 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
\$F	WALL MOUNTED LINE VOLTAGE FULL ON OCCUPANCY 1 BUTTON (ON/OFF). PROGRAM TO AUTOMATIC 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
BD	WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON 3-BUTTON PER ZONE (ON/OFF,RAISE,LOWER). PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
BDV	WALL MOUNTED LOW VOLTAGE DIGITAL 1 BUTTON PER ZONE (ON/OFF). PROGRAM TO MANUAL 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY VACANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
BF	WALL MOUNTED LOW VOLTAGE DIGITAL 1 BUTTON PER ZONE (ON/OFF). PROGRAM TO AUTOMATIC 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
DT PI US	CEILING MOUNTED DIGITAL OCCUPANCY SENSORS COMPATIBLE WITH DIGITAL BUTTON CONTROL SHOWN. PI= PASSIVE INFRARED, US=ULTRASONIC, DT=DUAL TECH.
DT PI US	WALL MOUNTED DIGITAL OCCUPANCY SENSORS COMPATIBLE WITH DIGITAL BUTTON CONTROL SHOWN. PI= PASSIVE INFRARED, US=ULTRASONIC, DT=DUAL TECH.
BT	NETWORK TIME BASED DIGITAL CONTROL, SCHEDULE PROGRAMMING PER OWNERS DIRECTIVE. WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON PER ZONE (ON/OFF). ALL BUTTONS TO FUNCTION DURING OPERATIONAL TIME AS ON/OFF. AFTER HOURS BUTTONS ARE TO PROVIDE SAME FUNCTION BUT BE LIMITED TO 2-HOUR MAXIMUM ON.
ECa	CEILING MOUNTED DIGITAL DAY-LIGHTING SENSOR. SENSOR TO AUTOMATICALLY DIM FIXTURES LOCATED WITHIN ZONE SHOWN IN RESPONSE TO AMBIENT LIGHT LEVELS. EXEMPT ZONES LESS THAN 150W PER SPACE ARE NOT SHOWN IN PLAN.
HOa	TIME CLOCK EXTERIOR CONTROLS. LOWER CASE LETTER INDICATES ASSOCIATED ZONE. EACH ZONE TO GET DEDICATED TIME CONTROL. TIME CLOCKS MAY BE COMBINED INTO SINGLE DEVICE WITH INDEPENDENT SCHEDULES. COMBINED DEVICES SHALL PROVIDE A MINIMUM 20% SPARES.

EXTERIOR LIGHTING CONTROL:

- PROVIDE TORK 2100 SERIES ASTRONOMIC TIME CONTROL WITH OVERRIDE ON/OFF AND MINIMUM 2 DAY PERMANENT SCHEDULE RETENTION.
- PROVIDE ONE RELAY OR CONTACT PER ZONE REQUIRED.
- FIXTURES LIGHTING FACADE AND LANDSCAPE:
- TIME SCHEDULE TO BE ON DUSK TO DAWN, STEP DIMMING NOT REQUIRED.

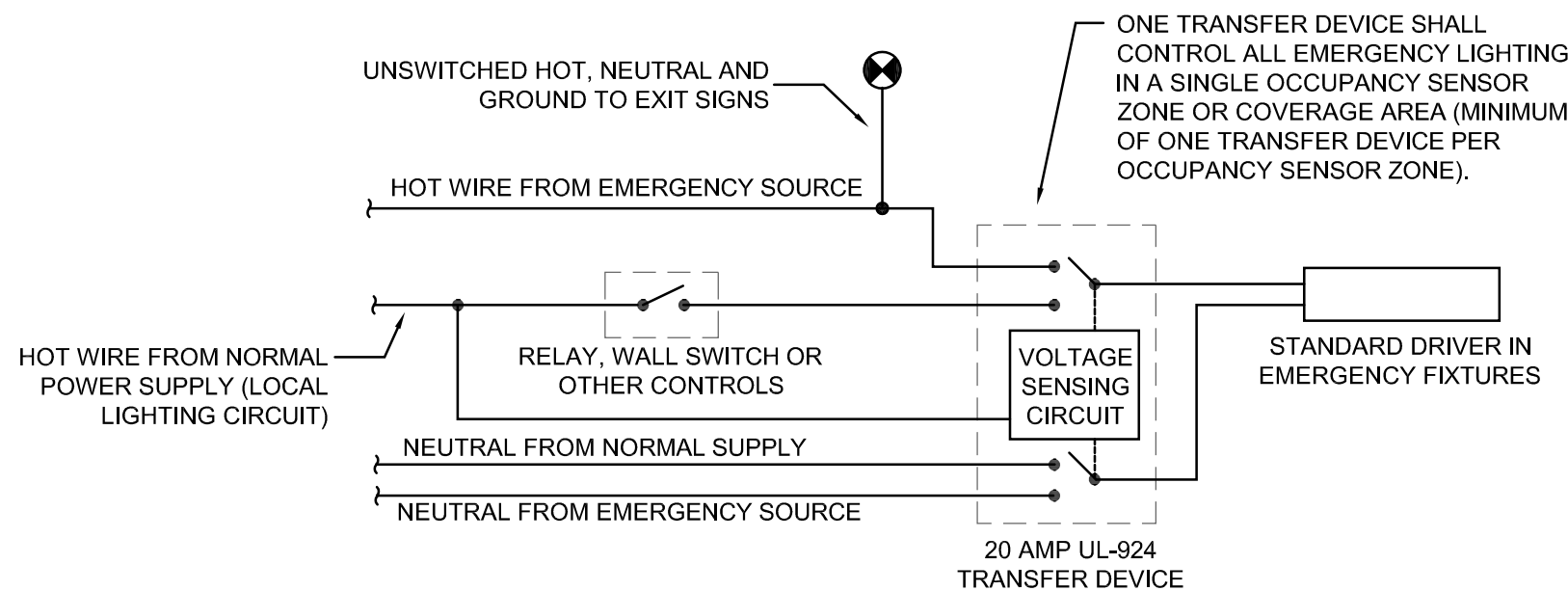


EXTERIOR LIGHTING DETAIL

SCALE: N.T.S.

EMERGENCY LIGHTING CONTROL NOTES:

- FOR 0-10V DIMMED FIXTURES, TRANSFER DEVICE SHALL HAVE ADDITIONAL INTERNAL RELAY TO BREAK 0-10V DIMMING SIGNAL TO ENSURE FIXTURES TURN ON WHEN NORMAL POWER FAILS. LVS LIGHTING CONTROLS MODEL "EPC-1-D" IS BASIS OF DESIGN FOR CIRCUITS WITH 0-10V DIMMING. <http://www.lvscontrols.com>
- FOR FIXTURES WITHOUT DIMMING, BODINE 'BLCD-20B' IS THE BASIS OF DESIGN.

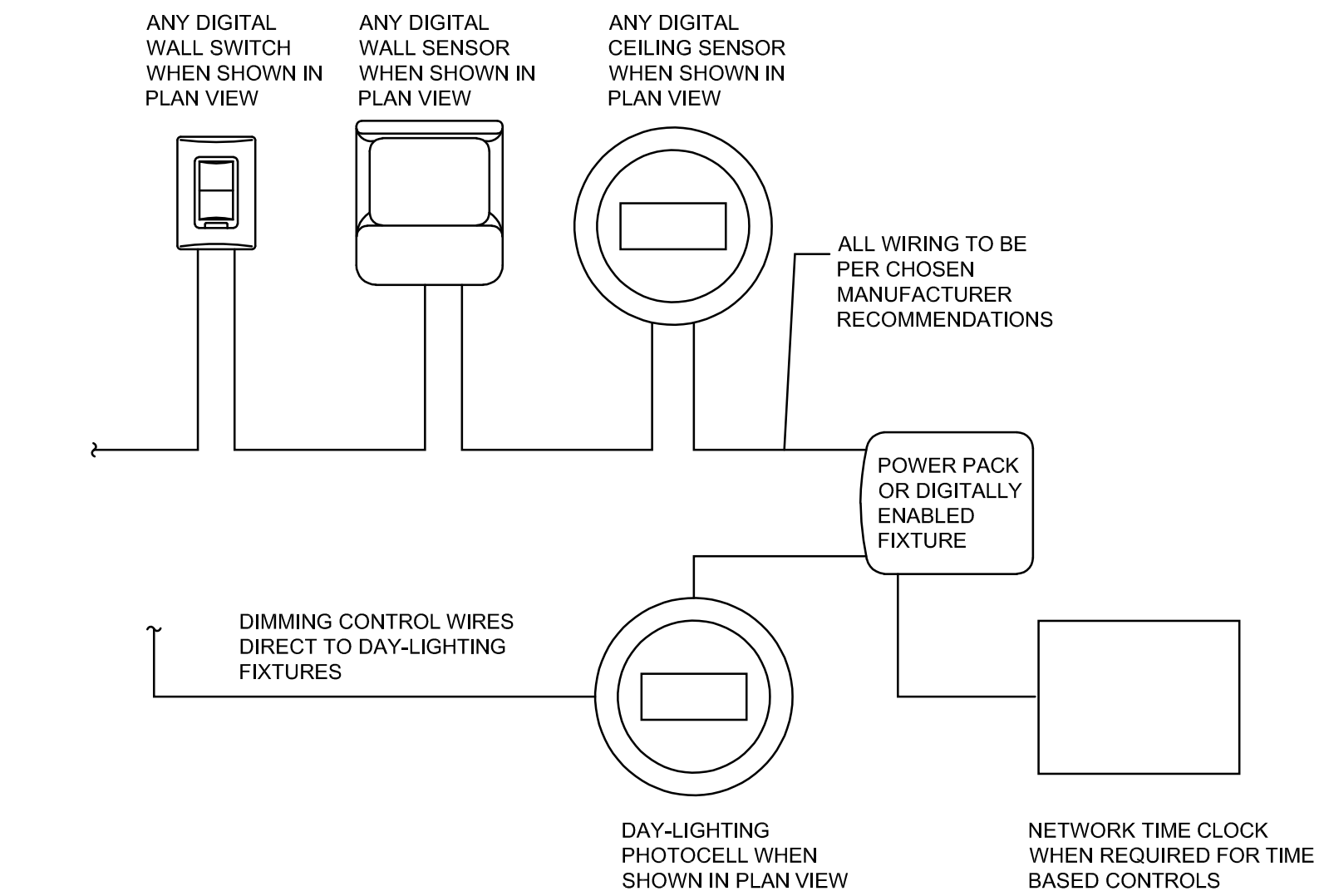


EMERGENCY LIGHTING CONTROL DETAIL

SCALE: N.T.S.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION MANUFACTURER: MODEL #	VOLTAGE	MOUNTING	WATTAGE	LUMENS	COLOR TEMP
A	2X4 LED TROFFER LITHONIA: 2BLT4-43LHE-ADP-EZ1-LP840	120VOLT	RECESSED	35	4,770	40K
AE	SAME AS TYPE 'A' FIXTURE BUT ON EMERGENCY CIRCUIT SEE ABOVE	120VOLT	RECESSED	35	4,770	40K
B	HIGH BAY LED (MOUNT BELOW DUCTWORK) LITHONIA: IBG-12000LM-HEF-AFL-WD-MVOLT-GZ10-40K-80CRI + IBAC120 M20	120VOLT	SUSPENDED	70	11,746	40K
B3	HIGH BAY LED (MOUNT BELOW DUCTWORK) LITHONIA: IBG-18000LM-HEF-AFL-WD-MVOLT-GZ10-40K-80CRI + IBAC120 M20	120VOLT	SUSPENDED	102	17,752	40K
EW	LED EMERGENCY EGRESS LIGHTING LITHONIA: ELM2-LED	120VOLT	WALL	3		40K
FL	LED FLOODLIGHT LITHONIA: CSXW-LED-700-40K-T3M-DOBXD (COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT)	120VOLT	WALL	69	7,973	40K
P3	EXISTING RELOCATED POLE MOUNTED LED FIXTURE (CONTRACTOR SHALL REMOVE EXISTING (BASE, THEN POUR NEW CONCRETE BASE. PROVIDE NEW CONDUIT AND WIRING) GE: ERS10F1X40DGRAY (EXISTING HEAD) KW: RTSU25-6-1-11-BRZ18S-BC (EXISTING POLE)	120VOLT	POLE	80		40K
PN	NEW POLE MOUNTED LED FIXTURE LITHONIA: DSX0 LED-P2-40K-T3M-MVOLT-RPA-BL30-DNAXD (NEW HEAD) LITHONIA: RTS-6-6-6-6B-DM19-DOBXD	120VOLT	POLE	49	6,011	40K
S	LED STRIP LITHONIA: ZL1N-L48-5000LM-FST-MVOLT-40K-80CRI + HC36	120VOLT	SUSPENDED	34	4,585	40K
W	LED WALL PACK LITHONIA: TRW2 LED-P1-40K-MVOLT-DOBXTD (COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT)	120VOLT	WALL	69	8,150	40K
WE	SAME AS TYPE 'W' BUT ON EMERGENCY CIRCUIT SEE ABOVE (COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT)	120VOLT	WALL	69	8,150	40K
X	SINGLE-FACE EXIT SIGN (REFER TO PLAN VIEW FOR FACE LOCATIONS AND ARROW INDICATORS) LITHONIA: LQM-S-W-3-R-120/277 + MOUNTING	120VOLT	CEILING / WALL	1		
X2	DOUBLE-FACE EXIT SIGN (REFER TO PLAN VIEW FOR FACE LOCATIONS AND ARROW INDICATORS) LITHONIA: LQM-S-W-3-R-120/277 + MOUNTING	120VOLT	CEILING / WALL	1		



NOTES:

- ALL POWER PACKS SHALL BE MOUNTED ABOVE CEILING NEAREST THE FIRST WALL SWITCH SERVING THE ASSOCIATED ROOM. PLAN VIEW SHOWS QUANTITY OF ZONES REQUIRED MANUFACTURER MAY COMBINE POWER PACKS WHERE POSSIBLE INTO MULTI ZONE POWER PACKS.
- ALL EMERGENCY BATTERY PACK FIXTURES ARE TO TURN ON/OFF WITH ASSOCIATED ROOM, BUT OVERRIDE TO ON IF POWER IS LOST.
- ALL EXIT LIGHTING AND BATTERY PACK ONLY FIXTURES ARE TO BE WIRED TO UN-SWITCHED LEG OF CIRCUITS SHOWN FOR CONSTANT POWER.
- DETAIL IS GENERIC IN NATURE. PLAN VIEWS WILL INDICATE NUMBER OF ZONES WITH NUMBER/TYPE OF POWER PACK ZONES REQUIRED. PLAN VIEW WILL INDICATE LOCATION OF DIGITAL WALL SWITCHES WITH NUMBER OF BUTTONS REQUIRED. EACH MANUFACTURER IS DIFFERENT IN DEVICES AVAILABLE AND WIRING. ACCEPTABLE MANUFACTURERS ARE WATT STOPPER, LUTRON AND ACUITY CONTROLS. OTHERS WILL BE CONSIDERED WITH PRE-APPROVAL PRIOR TO BIDDING.
- EMERGENCY LIGHTING SHALL OPERATE WITH NORMAL LIGHTING WHEN NORMAL POWER IS AVAILABLE BE FORCED ON IN THE EVENT OF NORMAL POWER LOSS.
- SENSOR LOCATIONS ARE MINIMUMS. CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 10% ADDITIONAL DEVICES TO COVER DARK SPOTS DISCOVERED DURING CONSTRUCTION FROM FIELD INSTALLED OBSTRUCTIONS. CONTRACTOR SHALL ALSO ALLOW FOR A MOVE OF UP TO 5'-0" IN ANY DIRECTION FOR ALL SENSORS AT NO ADDITIONAL COST TO THE OWNER, TO ALLOW FOR FIELD ADJUSTMENT OF SENSOR PLACEMENTS TO ACHIEVE OPTIMUM PERFORMANCE.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 SITE VISITS BY FACTORY TRAINED PERSONNEL TO ADJUST AND TRAIN THE OWNER ON USE AND MAINTENANCE OF ALL LIGHTING CONTROL COMPONENTS.

"DLC" SEQUENCE OF OPERATION:

- SENSOR SHALL TURN LIGHTS OFF IF ROOM IS VACANT FOR MORE THAN 30 MIN.
- SENSOR WILL TURN LIGHTS ON WHEN WALL SWITCH IS ACTIVATED.
- EACH ZONE INDICATED REQUIRES 1 BUTTON FOR ON/OFF CONTROL.

COMMISSIONING NOTES:

- AFTER COMMISSIONING LIGHTING CONTROLS, CONTRACTOR SHALL PROVIDE A WRITTEN TEST REPORT INDICATING THAT ALL LIGHTING CONTROL SYSTEMS HAVE BEEN COMMISSIONED AND TESTED, AND FOUND TO BE FUNCTIONING IN ACCORDANCE WITH CONTRACT DOCUMENT AND CODE REQUIREMENTS. CONTRACTOR SHALL ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE MANUFACTURER'S INSTRUCTIONS AND CODE REQUIREMENTS. FUNCTIONAL TESTING SHALL BE IN ACCORDANCE WITH IECC SECTIONS C408.3.1.1 AND C408.3.1.2 FOR THE APPLICABLE CONTROL TYPES.

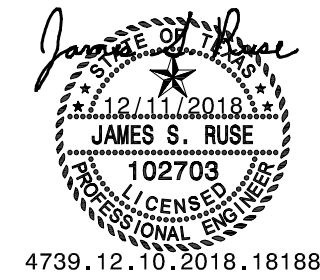
DIGITAL LIGHTING CONTROL DETAIL

SCALE: N.T.S.

DESCRIPTION

DATE

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DRAWN BY

CHECKED BY

DATE 12/11/18

PROJECT NO. 18002

LIGHTING DETAILS AND SCHEDULES

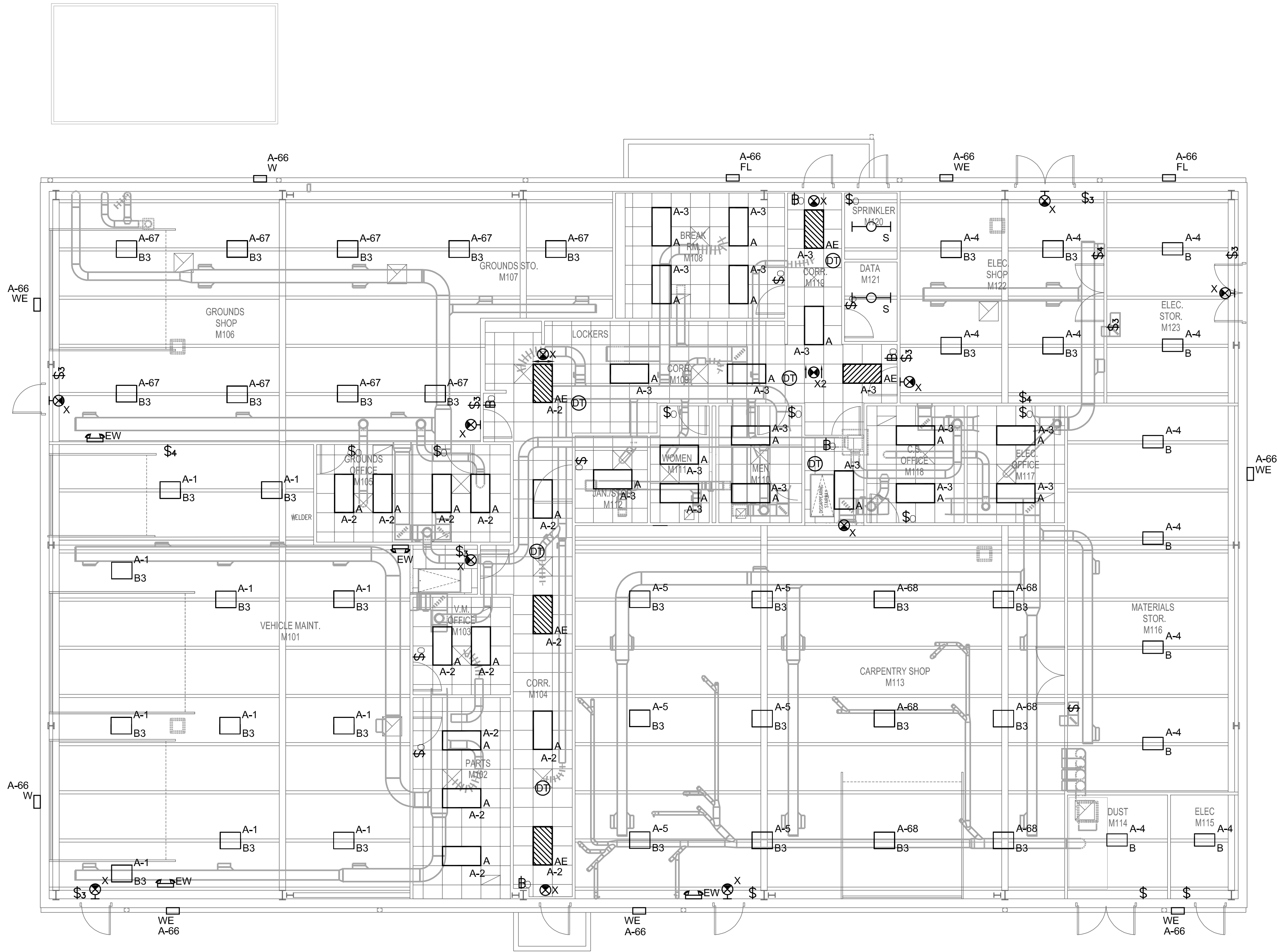
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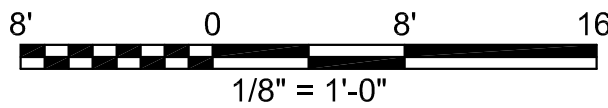
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LIGHTING GENERAL NOTES

- ALL EXIT SIGNS SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.
- ELECTRICAL CONTRACTOR SHALL SET ALL OCCUPANCY AND VACANCY SENSORS THROUGHOUT BUILDING IN ACCORDANCE WITH OCCUPANCY SENSOR SETTING SCHEDULE ON PLANS.



1 LIGHTING FLOOR PLAN
SCALE: 1/8" = 1'-0"



Summit
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REV	DATE	DESCRIPTION

James S. Ruse
JAMES S. RUSE
102703
Professional Engineer
4739.12.10.2018.18188

NEW FACILITIES
SERVICES
MAINTENANCE
BUILDING
MSU TEXAS
MIDWESTERN STATE UNIVERSITY

BYSP architects
1005 Ninth Street - Suite 200 Wichita Falls, Texas 76301 (940) 761-2404
Member American Institute of Architects

DRAWN BY	
CHECKED BY	
DATE	12/11/18
PROJECT NO.	18002

LIGHTING
FLOOR PLAN
E401

S:\P18188\MSU\Architect\Single Line and Panelboard Schedules.dwg - E5.1 - ELECTRICAL SINGLE LINE AND PANELBOARD SCHEDULES.dwg - E5.1 - 12/10/18 - E553:18 bmk
SHEET SIZE: ANSI D 22x34

PANEL [DP] SCHEDULE

(VOLT-AMPS)										PHASE		(VOLT-AMPS)								AREA (SF)			
DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COOLING	OTHER	CIRCUIT	OTHER	COOLING	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION			
[A	3	200	2633	25867	1200	6400	0	0	1200	1 A 2	0	0	0	0	6733	25367	0	3	175	[B			
[			2633	25867	1200	6400	0	0	1200	3 B 4	0	0	0	0	6733	25367	0			[
[			2633	25867	1200	6400	0	0	1200	5 C 6	0	0	0	0	6733	25367	0			[
[C	3	125	0	10167	7733	0	0	0	0	7 A 8	0	0	0	0	1867	10834	0	3	100	[D			
[			0	10167	7733	0	0	0	0	9 B 10	0	0	0	0	1867	10834	0			[
[			0	10167	7733	0	0	0	0	11 C 12	0	0	0	0	1867	10834	0			[
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	13 A 14	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	15 B 16	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	17 C 18	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	19 A 20	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	21 B 22	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	23 C 24	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	25 A 26	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	27 B 28	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
SPARE	1	20	_____	_____	_____	_____	_____	_____	_____	29 C 30	_____	_____	_____	_____	_____	_____	_____	1	20	SPARE			
TOTALS			7899	108102	26799	19200	0	0	3600		0	0	0	0	25800	108603	0			TOTALS			
LOAD SUMMARY			CON KVA	CON AMP	C W/SF	DEM. FAC	DEM KVA	DEM AMP	D W/SF	NOTES:				JOB NM:				SUMMARY					
1.LIGHTING			7.9	21.9	0.0	1.25	9.9	27.5	0.0	1.MINIMUM INTEGRATED EQUIPMENT RATING				UPSTREAM O.C.P.D.				VOLTAGE:				208	
2.RECEPTACLES			216.7	601.5	0.0	0.52	113.4	314.8	0.0	35KAIC								MCB/MLO:				MCB	
3.MOTORS			52.6	146.0	0.0	1.00	52.6	146.0	0.0	2.PROVIDE FULL SIZE NEUTRAL AND GROUND								AMPS:				600	
4.ELECTRIC HEAT			19.2	53.3	0.0	1.00	19.2	53.3	0.0	BUS				NOTE: CONTRACTOR TO BALANCE PHASES WITHIN +/- 10%				# POLES:				30	
5.KITCHEN EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									MOUNT:					
6.COOLING EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									BY:					
7.OTHER			3.6	10.0	0.0	1.00	3.6	10.0	0.0									TIME:				3:20:31 PM	
8.SPARE			36.0				0.30	10.8	30.0	0.0									DATE:				12/10/18
9.SPARE			0.0				0.30	0.0	0.0	0.0									SHEET NAME:				DP
TOTAL:			300	833	0		210	582	0					JOB # P18188				FORM NO.				PNLSCHED.XLS	

PANEL [A] SCHEDULE

			(VOLT-AMPS)							PHASE	(VOLT-AMPS)								AREA (SF):				
DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COOLING	OTHER	CIRCUIT	OTHER	COOLING	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION			
LIGHTING	1	20	1122							1 A 2							980	1	20	LIGHTING			
LIGHTING	1	20	1295							3 B 4							968	1	20	LIGHTING			
LIGHTING	1	20	612							5 C 6				1920				1	20	BLOCK HEATER			
SPARE	1	20								7 A 8	1800							1	20	FUEL TANK			
FUEL TANK	1	20								9 B 10						1000		1	20	RECEPTACLE			
FUEL PUMP CONT	1	20		1800						11 C 12				1920				1	20	BLOCK HEATER			
FUEL PUMP	1	20			1800					13 A 14					1800			1	20	FUEL PUMP			
BLOCK HEATER	1	20				1920				15 B 16				1920				1	20	BLOCK HEATER			
BLOCK HEATER	1	20				1920				17 C 18				1920				1	20	BLOCK HEATER			
BLOCK HEATER	1	20				1920				19 A 20				1920				1	20	BLOCK HEATER			
BLOCK HEATER	1	20				1920				21 B 22				1920				1	20	BLOCK HEATER			
GATE CONTROL	1	20	500							23 C 24						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						25 A 26						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						27 B 28						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						29 C 30						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						31 A 32						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						33 B 34						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						35 C 36						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						37 A 38						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						39 B 40						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						41 C 42						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						43 A 44						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						45 B 46						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						47 C 48						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						49 A 50						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						51 B 52						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						53 C 54						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						55 A 56						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						57 B 58						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						59 C 60						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						61 A 62						1800		1	20	CART CHARGER			
CART CHARGER	1	20		1800						63 B 64						500		1	20	GATE CONTROL			
SITE LIGHTING	1	20	738							65 C 66							690	1	20	LIGHTING			
LIGHTING	1	20	918							67 A 68							612	1	20	LIGHTING			
EXISTING SIGN	1	20		1800						69 B 70								1	20	SPARE			
SPARE	1	20								71 C 72								1	20	SPARE			
SPARE	1	20								73 A 74								1	20	SPARE			
SPARE	1	20								75 B 76								1	20	SPARE			
SPARE	1	20								77 C 78								1	20	SPARE			
SPARE	1	20								79 A 80								1	20	SPARE			
SPARE	1	20								81 B 82								1	20	SPARE			
SPARE	1	20								83 C 84								1	20	SPARE			
TOTALS			4685	40100	1800	7680	0	0	1800		1800	0	0	11520	1800	37500	3250			TOTALS			
LOAD SUMMARY			CON KVA	CON AMP	C W/SF	DEM. FAC	DEM KVA	DEM AMP	D W/SF	NOTES:	JOB NM:								SUMMARY				
1.LIGHTING			7.9	21.9	0.0	1.25	9.9	27.5	0.0	1.MINIMUM INTEGRATED EQUIPMENT RATING	UPSTREAM O.C.P.D.								VOLTAGE:				208
2.RECEPTACLES			77.6	215.4	0.0	0.56	43.8	121.6	0.0	35KAIC									MCB/MLO:				MCB
3.MOTORS			3.6	10.0	0.0	1.00	3.6	10.0	0.0	2.PROVIDE FULL SIZE NEUTRAL AND GROUND									AMPS:				200
4.ELECTRIC HEAT			19.2	53.3	0.0	1.00	19.2	53.3	0.0	BUS									# POLES:				84
5.KITCHEN EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0		NOTE: CONTRACTOR TO BALANCE PHASES WITHIN +/- 10%								MOUNT:				
6.COOLING EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0										BY:				
7.OTHER			3.6	10.0	0.0	1.00	3.6	10.0	0.0										TIME:				3:20:31 PM
8.SPARE			32.0			0.10	3.2	8.9	0.0										DATE:				12/10/18
9.SPARE			0.0			0.10	0.0	0.0	0.0		JOB # P18188								SHEET NAME:				L1
TOTAL:			112	311	0		83	231	0										FORM NO.				PNLSCHED.XLS

RISER GENERAL NOTES

- SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT IN ACCORDANCE WITH NEC 110.24.

TABLE 250.66

GROUNDING ELECTRODE CONDUCTOR SIZE	LARGEST SERVICE CONDUCTOR (TOTAL EQUIVALENT AREA)
#8	#2 OR SMALLER
#6	#1 OR #1/0
#4	#2/0 OR #3/0
#2	OVER 3/0 THROUGH 350 MCM
#1/0	OVER 350 THROUGH 600 MCM
#2/0	OVER 600 THROUGH 1100 MCM
#3/0	OVER 1100 MCM

BREAKER / FEEDER SCHEDULE

3 CONDUCTOR			COPPER CONDUCTORS (B)			4 CONDUCTOR		
CODE	WIRES	CONDUIT	AMPACITY	BRKR	DEG.	CODE	WIRES	CONDUIT
(45)	3 #12, 1 #12	3/4"	20	20A/3P	60 C	(67)	4 #12, 1 #12	3/4"
(46)	3 #10, 1 #10	3/4"	30	30A/3P		(68)	4 #10, 1 #10	3/4"
(47)	3 #8, 1 #10	3/4"	40	40A/3P		(69)	4 #8, 1 #10	1"
(48)	3 #6, 1 #10	1"	55	50A/3P		(70)	4 #6, 1 #10	1"
(49)	3 #4, 1 #8	1-1/4"	70	70A/3P		(71)	4 #4, 1 #8	1-1/4"
(50)	3 #3, 1 #8	1-1/4"	85	90A/3P	(72)	4 #3, 1 #8	1-1/4"	
(51)	3 #2, 1 #8	1-1/4"	95	100A/3P	(73)	4 #2, 1 #8	1-1/2"	
(52)	3 #1, 1 #6	1-1/2"	110	110A/3P	(74)	4 #1, 1 #6	2"	
(53)	3 #2, 1 #6	1-1/4"	115		75 C	(75)	4 #2, 1 #6	1-1/2"
(54)	3 #1, 1 #6	1-1/2"	130	125A/3P		(76)	4 #1, 1 #6	2"
(55)	3 #1/0, 1 #6	1-1/2"	150	150A/3P		(77)	4 #1/0, 1 #6	2"
(56)	3 #2/0, 1 #6	2"	175	175A/3P		(78)	4 #2/0, 1 #6	2"
(57)	3 #3/0, 1 #6	2"	200	200A/3P		(79)	4 #3/0, 1 #6	2-1/2"
(58)	3 #4/0, 1 #4	2"	230	225A/3P		(80)	4 #4/0, 1 #4	2-1/2"
(59)	3 #250MCM, 1 #4	2-1/2"	255	250A/3P		(81)	4 #250MCM, 1 #4	3"
(60)	3 #300MCM, 1 #4	2-1/2"	285	275A/3P		(82)	4 #300MCM, 1 #4	3"
(61)	3 #350MCM, 1 #3	3"	310	300A/3P		(83)	4 #350MCM, 1 #3	3"
(62)	3 #400MCM, 1 #3	3"	335			(84)	4 #400MCM, 1 #3	3"
(63)	3 #500MCM, 1 #3	3"	380	350A/3P	(85)	4 #500MCM, 1 #3	4"	
(64)	3 #600MCM, 1 #2	4"	420	400A/3P	(86)	4 #600MCM, 1 #2	4"	
(65)	3 #700MCM, 1 #2	4"	460	450A/3P	(87)	4 #700MCM, 1 #2	4"	
(66)	3 #750MCM, 1 #2	4"	475	500/3P	(88)	4 #750MCM, 1 #2	4"	

S:\P18188 Main\Sheet\Sched\Elec\P18188 - E52 - ELECTRICAL PANELBOARD SCHEDULES.dwg : E0.1 12/10/18 15:55:00 bkh
SHEET SIZE: ANSI D 22x34

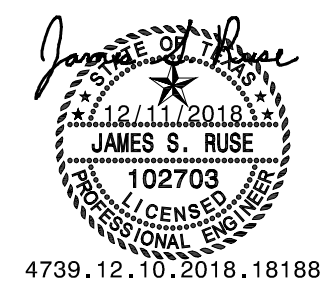
PANEL [B] SCHEDULE

			(VOLT-AMPS)							PHASE	(VOLT-AMPS)								AREA (SF)				
DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COOLING	OTHER	CIRCUIT	OTHER	COOLING	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION			
RECEPTACLE	1	20		720	30					1 A 2						720		1	20	RECEPTACLE			
DRILL PRESS	1	20		1920						3 B 4						360		1	20	RECEPTACLE			
[RADIAL ARM SAW	3	30		2882						5 C 6						1920		1	20	CHOP SAW			
[				2882						7 A 8						1920		1	20	BAND SAW
[				2882						9 B 10						1921		3	20	[GRINDER
[										11 C 12						1921				[
[SPACE FOR GFCI										13 A 14						1921				[
[BELT SANDER	3	20		1921						15 B 16										[SPACE FOR GFCI			
[				1921						17 C 18						720		1	20	RECEPTACLE
[				1921						19 A 20						1921		3	20	[PLANER
[SPACE FOR GFCI										21 B 22						1921				[
RECEPTACLE	1	20		360						23 C 24						1921				[
[DISC SANDER	3	20		1921						25 A 26						1921				[SPACE FOR GFCI			
[				1921						27 B 28						1921		3	20	[SHAPER
[				1921						29 C 30						1921				[
[SPACE FOR GFCI										31 A 32						1921				[
[JOINTER	2	20		1664						33 B 34										[SPACE FOR GFCI			
[				1664						35 C 36						1921		3	20	[TABLE SAW
[SPACE FOR GFCI										37 A 38						1921				[
[TABLE SAW	3	20		1921						39 B 40						1921				[
[				1921						41 C 42										[SPACE FOR GFCI
[				1921						43 A 44								3	20	[DSC-1
[SPACE FOR GFCI										45 B 46					1864					[
FACP	1	20		1000						47 C 48					1864					[
UH-1, UH-2, UH-3	1	20		540						49 A 50					38	1080		1	20	RECEPTACLE			
SPARE	1	20								51 B 52						500		1	20	RECEPTACLE			
RECEPTACLE	1	20		720						53 C 54						360		1	20	RECEPTACLE			
RECEPTACLE	1	20		500						55 A 56						720		1	20	RECEPTACLE			
RECEPTACLE	1	20		1000						57 B 58						500		1	20	RECEPTACLE			
RECEPTACLE	1	20		720						59 C 60						1000		1	20	RECEPTACLE			
RECEPTACLE	1	20		720						61 A 62						1000		1	20	RECEPTACLE			
RECEPTACLE	1	20		500						63 B 64					154	720		1	20	RECEPTACLE			
[CU-3	2	45			3224					65 C 66					1248			2	20	[CU-4			
[					3224					67 A 68					1248					[
RECEPTACLE	1	20		500						69 B 70					720			2	20	[CU-6			
RECEPTACLE	1	20		500						71 C 72					720					[
AHU-3	1	20			2040					73 A 74					1332			1	20	AHU-4			
SPARE	1	20								75 B 76								1	20	SPARE			
OVERHEAD DOOR	1	20		1800						77 C 78					600			1	20	WH1			
SPARE	1	20								79 A 80								1	20	SPARE			
SPARE	1	20								81 B 82								1	20	SPARE			
SPARE	1	20								83 C 84								1	20	SPARE			
SPARE	1	20								85 A 86								1	20	SPARE			
SPARE	1	20								87 B 88								1	20	SPARE			
SPARE	1	20								89 C 90								1	20	SPARE			
SPARE	1	20								91 A 92								1	20	SPARE			
SPARE	1	20								93 B 94								1	20	SPARE			
SPARE	1	20								95 C 96								1	20	SPARE			
SPARE	1	20								97 A 98								1	20	SPARE			
SPARE	1	20								99B100								1	20	SPARE			
SPARE	1	20								101C102								1	20	SPARE			
SPARE	1	20								103A104								1	20	SPARE			
SPARE	1	20								105B106								1	20	SPARE			
SPARE	1	20								107C108								1	20	SPARE			
TOTALS			0	41483	8518	0	0	0	0		0	0	0	0	11652	34572	0			TOTALS			
LOAD SUMMARY			CON KVA	CON AMP	C W/SF	DEM. FAC	DEM KVA	DEM AMP	D W/SF	NOTES:						JOB NM:				SUMMARY			
1.LIGHTING			0.0	0.0	0.0	1.25	0.0	0.0	0.0	1.MINIMUM INTEGRATED EQUIPMENT RATING										VOLTAGE: 208			
2.RECEPTACLES			76.1	211.2	0.0	0.57	43.1	119.6	0.0	18KAIC						UPSTREAM O.C.P.D.				MCB/MLO: MCB			
3.MOTORS			20.2	56.1	0.0	1.00	20.2	56.1	0.0	2.PROVIDE FULL SIZE NEUTRAL AND GROUND										AMPS: 175			
4.ELECTRIC HEAT			0.0	0.0	0.0	1.00	0.0	0.0	0.0	BUS										# POLES: 108			
5.KITCHEN EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0											MOUNT:			
6.COOLING EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0											BY: -			
7.OTHER			0.0	0.0	0.0	1.00	0.0	0.0	0.0											TIME: 3:20:31 PM			
8.SPARE			66.0			0.10	6.6	18.3	0.0											DATE: 12/10/18			
9.SPARE			18.0			0.10	1.8	5.0	0.0											SHEET NAME: Bx			
TOTAL:			96	267	0		72	199	0							JOB # P18188				FORM NO. PNLSCHED.XLS			

DESCRIPTION

DATE

REV



4739.12.10.2018.18188



DRAWN BY	
CHECKED BY	
DATE	12/11/18
PROJECT NO.	18002



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ELECTRICAL
PANELBOARD
SCHEDULES

E502

S:\P18188 Main\Sheet\Sched\Elec\P18188 - E503 - ELECTRICAL PANELBOARD SCHEDULES.dwg - E01 12/10/18 15:56:35 bth
SHEET SIZE: ANSI D 22x34

PANEL [C] SCHEDULE

			(VOLT-AMPS)							PHASE		(VOLT-AMPS)							AREA (SF)		
DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COOLING	OTHER	CIRCUIT	OTHER	COOLING	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION	
RECEPTACLE	1	20		720						1 A 2						540		1	20	RECEPTACLE	
[WELDER	2	50		4160						3 B 4					30	540		1	20	RECEPTACLE	
[				4160						5 C 6						2496		2	30	[VEHICLE LIFT
[SPACE FOR GFCI										7 A 8						2496				[
RECEPTACLE	1	20		540						9 B 10										[SPACE FOR GFCI	
[PRESSURE	2	20		1664						11 C 12						360		1	20	RECEPTACLE	
[WASHER				1664						13 A 14						4160		2	50	[WELDER	
[SPACE FOR GFCI										15 B 16						4160				[
RECEPTACLE	1	20		900						17 C 18										[SPACE FOR GFCI	
RECEPTACLE	1	20		900						19 A 20						1000		1	20	OVERHEAD DOOR	
OVERHEAD DOOR	1	20			1000					21 B 22					2912			1	20		
[CU-2	2	45			3224					23 C 24					2912			2	45	[CU-1	
[					3224					25 A 26					1620			1	20	AHU-1
[CU-5	2	40			2392					27 B 28					2040			1	20	AHU-2	
[					2392					29 C 30					1488			1	20	AHU-5
SPARE	1	20								31 A 32								1	20	SPARE	
SPARE	1	20								33 B 34								1	20	SPARE	
SPARE	1	20								35 C 36								1	20	SPARE	
SPARE	1	20								37 A 38								1	20	SPARE	
SPARE	1	20								39 B 40								1	20	SPARE	
SPARE	1	20								41 C 42								1	20	SPARE	
TOTALS			0	14708	12232	0	0	0	0		0	0	0	0	11002	15752	0			TOTALS	
LOAD SUMMARY			CON KVA	CON AMP	C W/SF	DEM. FAC	DEM KVA	DEM AMP	D W/SF	NOTES:					JOB NM:			SUMMARY			
1.LIGHTING			0.0	0.0	0.0	1.25	0.0	0.0	0.0	1.MINIMUM INTEGRATED EQUIPMENT RATING								VOLTAGE:		208	
2.RECEPTACLES			30.5	84.7	0.0	0.67	20.3	56.3	0.0	10KAIC								MCB/MLO:		MCB	
3.MOTORS			23.2	64.4	0.0	1.00	23.2	64.4	0.0	2.PROVIDE FULL SIZE NEUTRAL AND GROUND								AMPS:		125	
4.ELECTRIC HEAT			0.0	0.0	0.0	1.00	0.0	0.0	0.0	BUS								# POLES:		42	
5.KITCHEN EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									MOUNT:			
6.COOLING EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									NOTE: CONTRACTOR TO			
7.OTHER			0.0	0.0	0.0	1.00	0.0	0.0	0.0									BALANCE PHASES			
8.SPARE			24.0			0.10	2.4	6.7	0.0									WITHIN +/- 10%			
9.SPACE			8.0			0.10	0.8	2.2	0.0												
TOTAL:			54	149	0		47	130	0									JOB #: P18188			
																		SHEET NAME:		L3	
																		FORM NO.		PNLSCHED.XLS	

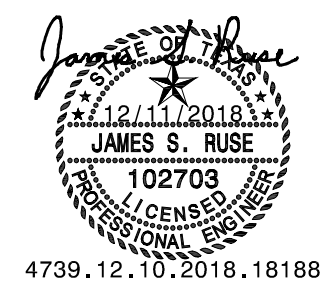
PANEL [D] SCHEDULE

			(VOLT-AMPS)							PHASE	(VOLT-AMPS)							AREA (SF)			
DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COOLING	OTHER	CIRCUIT	OTHER	COOLING	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION	
RECEPTACLE	1	20		540	30					1 A 2						4160		2	50	[WELDER	
CHOP SAW	1	20		1920						3 B 4						4160				{	
RECEPTACLE	1	20		540						5 C 6										[SPACE FOR GFCI	
SPARE	1	20								7 A 8								1	20	RECEPTACLE	
SPARE	1	20								9 B 10						1000		1	20	ICE MAKER	
RECEPTACLE	1	20		540						11 C 12						900		1	20	RECEPTACLE	
MICROWAVE	1	20		1000						13 A 14						1000		1	20	REFRIGERATOR	
[COPIER	2	20		1040						15 B 16						500		1	20	EWC	
{				1040						17 C 18						1260		1	20	RECEPTACLE	
RECEPTACLE	1	20		900						19 A 20						1000		1	20	REFRIGERATOR	
SPARE	1	20								21 B 22						1800		1	20	OVERHEAD DOOR	
SPARE	1	20								23 C 24					1864			3	20	[ACP1	
[DRYER	3	30		2882						25 A 26					1864					{	
{				2882						27 B 28					1864					{	
{				2882						29 C 30										[SPACE FOR GFCI	
[SPACE FOR GFCI										31 A 32								1	20	SPARE	
SPARE	1	20								33 B 34								1	20	SPARE	
SPARE	1	20								35 C 36								1	20	SPARE	
SPARE	1	20								37 A 38								1	20	SPARE	
SPARE	1	20								39 B 40								1	20	SPARE	
SPARE	1	20								41 C 42								1	20	SPARE	
TOTALS			0	16166	30	0	0	0	0		0	0	0	0	5592	16320	0			TOTALS	
LOAD SUMMARY			CON KVA	CON AMP	C W/SF	DEM. FAC	DEM KVA	DEM AMP	D W/SF	NOTES:					JOB NM:			SUMMARY			
1.LIGHTING			0.0	0.0	0.0	1.25	0.0	0.0	0.0	1.MINIMUM INTEGRATED EQUIPMENT RATING								VOLTAGE:			
2.RECEPTACLES			32.5	90.2	0.0	0.66	21.3	59.1	0.0	10KAIC								MCB/MLO:			
3.MOTORS			5.6	15.5	0.0	1.00	5.6	15.5	0.0	2.PROVIDE FULL SIZE NEUTRAL AND GROUND					UPSTREAM O.C.P.D.			AMPS:			
4.ELECTRIC HEAT			0.0	0.0	0.0	1.00	0.0	0.0	0.0	BUS								# POLES:			
5.KITCHEN EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									MOUNT:			
6.COOLING EQUIPMENT			0.0	0.0	0.0	1.00	0.0	0.0	0.0									BY:			
7.OTHER			0.0	0.0	0.0	1.00	0.0	0.0	0.0									TIME:			
8.SPARE			30.0			0.10	3.0	8.3	0.0									DATE:			
9.SPACE			6.0			0.10	0.6	1.7	0.0									SHEET NAME:			
TOTAL:			38	106	0		31	85	0						JOB # P18188			FORM NO. PNLSCHEG.XLS			

DESCRIPTION

DATE

REV



4739.12.10.2018.18188

NEW FACILITIES
SERVICES
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