

# NEW RACECO CONVENIENCE STORE AND CARWASH FOR SAIR ENTERPRISES 11005 JEFFERSON AVE. NEWPORT NEWS, VA 23601

## CODE DATA 101.1 APPLICABLE CODE - VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC), 2003 (IBC 2003 WITH AMENDMENTS)

ADDITIONAL CODE REFERENCES:  
 ACCESSIBILITY GUIDELINES ICC/ANSI A117.1, 2003  
 THE INTERNATIONAL MECHANICAL CODE (IMC), 2003  
 THE INTERNATIONAL PLUMBING CODE (IPC), 2003  
 THE NATIONAL ELECTRICAL CODE (NEC), 2002  
 THE INTERNATIONAL FIRE CODE (IFC), 2003, AND NFPA-13, 2002

NEWPORT NEWS, VIRGINIA	
SNOW LOAD	15 PSF
SEISMIC CONDITION	ZONE B
WIND SPEED	105 MPH (3 SECOND GUST)
WEATHERING	SEVERE
FROST LINE DEPTH	12 INCHES
TERMITE	MODERATE TO SEVERE

## USE GROUP/OCCUPANCY

MIXED USE SEPARATED 6,576 SF (3-HR TENANT SEPARATION TABLE 302.3.2)

OFFICES = USE GROUP B  
 WOODWORKING = USE GROUP F-1 (FACTORY)  
 WAREHOUSE MODERATE-HAZARD = USE GROUP (S-1)

OFFICE (B)	
FACTORY (WOODWORKING) (F-1) SPACE "A"	954 SF ± 100 SF GROSS = 10 OCCUPANTS
WAREHOUSE (S-1) / FACTORY (F-1) SPACE "B"	2,403 SF ± 100 SF GROSS = 24 OCCUPANTS
WAREHOUSE (S-1) / FACTORY (F-1) SPACE "C"	1,396 SF ± 100 SF GROSS = 14 OCCUPANTS
WAREHOUSE (S-1) / FACTORY (F-1) SPACE "C"	2,220 SF ± 100 SF GROSS = 23 OCCUPANTS
TOTAL AREA AND OCCUPANCY	6,973 SF 71 TOTAL OCCUPANTS

## CONSTRUCTION TYPE

TYPE 5B COMBUSTIBLE NOT PROTECTED AND REQUIREMENTS FOR FIRE RESISTIVE ASSEMBLIES

FLOOR-CEILING ASSEMBLY 0-HR  
 STAIRS AND EXIT PASSAGEWAY 1-HR

NO ADDITIONAL PROVISIONS COMPLIANCE STATED IN IBC SECTION 704

## ALLOWABLE AREA PER FLOOR FOR TYPE (TABLE 503)

WITHOUT SPRINKLER SYSTEM:	9,000 SF MAX. FOR EA. FLOOR USE B (OFFICES)	ACTUAL 954 GROSS SF
	8,500 SF MAX. FOR EA. FLOOR USE F-1 (FACTORY)	ACTUAL 2,403 GROSS SF
	9,000 SF MAX. FOR EA. FLOOR USE S-1 (STORAGE)	ACTUAL 3,616 GROSS SF

## MAXIMUM HEIGHT OF BUILDING:

A. ALLOWED BY CODE:	1 STORY, 40 FEET (IBC TABLE 503 MOST STRINGENT USE GROUP S-1 AND F-1)
B. PROVIDED BY DESIGN:	1 STORY, 19'-6" MEAN ROOF HEIGHT

## FIRE RESISTIVE RATING REQUIREMENTS 5B

STRUCTURAL FRAME (COLUMNS, GIRDERS, TRUSSES) (TABLE 601, CONSTRUCTION 5B)	0 HR
BEARING WALLS: LESS THAN 5 FT FROM PROPERTY LINE (TABLE 602)	
EXTERIOR	1 HR
INTERIOR	0 HR
NON-BEARING WALLS AND PARTITIONS: MORE THAN 10 FT FROM PROPERTY LINE (TABLE 602)	
EXTERIOR	0 HR
INTERIOR	0 HR
704.8 MAX. AREA OF EXTERIOR WALL OPENINGS FOR DISTANCE 3-5 FT.	PROTECTED 15%
704.14 FOUNDATION VENTS INSTALLED ACCORDING TO 1203.3 UNDER FLOOR VENTILATION	YES
715.3 FIRE DOOR FIRE PROTECTION RATING FOR EXIT	1 HR
715.4.8 EXTERIOR FIRE WINDOW ASSEMBLIES FOR 1-HR EXTERIOR WALL	¾ HR

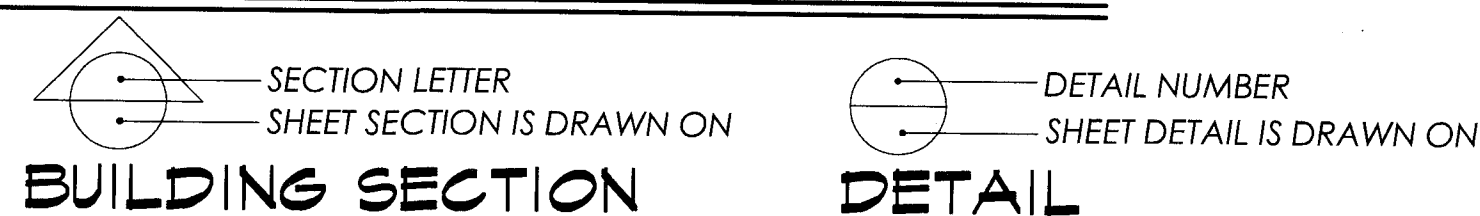
### CONCEALED SPACES (EAVE, FASCIA & ATTIC)

717.2.1 FIREBLOCKING MATERIAL SHALL BE ½" GYPSUM BOARD.	
717.2 FIREBLOCKING SHALL BE PROVIDED IN FASCIA SPACES AT MAXIMUM INTERVALS OF	20 FT. O.C
717.3 DRAFTSTOPPING MATERIAL SHALL BE ½" GYPSUM BOARD OR ¾" PLYWOOD	
717.4 DRAFTSTOPPING IN ATTIC SPACES FOR USE B, 5B CONSTRUCTION SHALL SEAL AREAS WHERE THEY DO NOT EXCEED 3,000 S.F.	
1011.4 FIRE PARTITIONS: EXIT ACCESS CORRIDORS	1-HR N/A
SMOKE BARRIERS	1-HR N/A
EGRESS	
1015.1 MAXIMUM LENGTH OF EXIT ACCESS TRAVEL (B) W/O SPRINKLER	200 FT.
1016.2 MINIMUM CORRIDOR WIDTH	44 INCHES
1016.3 MAX. "DEAD END" CORRIDOR LENGTH (N/A FOR 1-EXIT BLDG.)	20 FT. (N/A)
1018.2 MAXIMUM TRAVEL DISTANCE FOR ONE EXIT	75 FT.
1019.1 EXCEPTION 1: OPEN STAIRS SERVING LESS THAN 10 OCCUPANTS AND NOT MORE THAN ONE STORY ABOVE DISCHARGE.	
1020.3 EXIT PASSAGEWAY CONSTRUCTION (WALL, FLOOR, CEILING)	1-HR N/A

## OWNER:

AZIZ SAIR (SAIR ENTERPRISES)  
 6004 INDIAN RIVER ROAD  
 VIRGINIA BEACH, VIRGINIA 23452  
 757-420-6766

## SYMBOL DESIGNATIONS



LIVE LOADS 1607.1 UNIFORM LIVE LOADS = 125 PSF MINIMUM

WIND/LOADS EXPOSURE C, 105 MPH FOR DESIGN WIND PRESSURE ON OVERHEAD DOORS SEE SHEET

## ACCESSIBILITY

50% OF ALL ENTRANCES ARE TO BE ACCESSIBLE.

CABINETS, COUNTERS (I.E., RECEPTION AND KITCHENETTE), AND OTHER MISCELLANEOUS FURNISHINGS SHALL BE DESIGNED AND INSTALLED AT HEIGHTS THAT WILL BE ACCESSIBLE, AS REQUIRED BY ANSI A117.1.

## CONTRACTOR TO PROVIDE:

- A PLAN FOR DURING CONSTRUCTION TEMPORARY AND PERMANENT LOCATION IN THE BUILDING OF PORTABLE FIRE EXTINGUISHERS PER IFC 906.
- OVERHEAD DOOR MANUFACTURER'S WIND LOAD SPECIFICATIONS PRIOR TO REQUESTING A BUILDING PERMIT.
- CEILING CLEARANCE OF 2' OR MORE IN ALL AREAS, ESPECIALLY IN STORAGE CLOSETS & UNDER STAIRS.
- ENTRANCE SIGN SHOWING USE GROUP AND THE APPROVED OCCUPANCY LOAD.
- POSTED SIGNS WHERE THE STRUCTURAL LOADS EXCEED 50 POUNDS PSF (SEE STRUCT. DWGS)

## NOTES TO CONSULTANTS AND SUBCONTRACTORS:

THE STRUCT. ENGINEER/MFG. IS TO PROVIDE ALL IBC 2003 SEC. 1603 DESIGN LOADS & DATA.

IF THERE ARE PENETRATION THROUGH THE FIRE-RESISTANCE-RATED STAIR AND EXIT PASSAGEWAY ASSEMBLIES, THE PROTECTION OF THESE ASSEMBLIES PER IBC 712.3.1.2 SHALL BE SHOWN.

MECHANICAL AND ELECTRICAL CONSULTANTS / SUBCONTRACTORS SHALL PROVIDE IECC MECHANICAL AND ELECTRICAL COMPLIANCE CERTIFICATE PER IBC 1301.1.1

NEW OR REPAIRED POTABLE WATER SYSTEM SHALL BE PURGED OR DELETERIOUS MATERIAL DISINFECTED PRIOR TO UTILIZATION PER IBC CHAPTER 29.

MECH. SYSTEM CAN NOT USE HALLWAYS OR SPACE ABOVE THE HALLWAYS AS RETURN PLENUMS.

## SHEET LIST

# IN SET	SHEET #	DESCRIPTION
1	T-1	TITLE SHEET, CODE DATA & SHEET LIST

### ARCHITECTURAL DRAWINGS

2	A-1	CONSTRUCTION PLAN & DOOR SCHEDULE
3	A-1.1	DETAIL PLANS
4	A-2	REFLECTED CEILING PLAN & DETAILS
5	A-3	FINISH FLOOR PLAN, LEGEND AND SCHEDULE
6	A-4	EXTERIOR & CANOPY ELEVATIONS
7	A-5	BUILDING SECTIONS
8	A-6	BUILDING SECTIONS
9	A-7	BUILDING SECTIONS
10	A-8	WALL SECTIONS
11	A-9	WALL SECTIONS
12	A-10	ROOF PLAN & DETAILS
13	A-11	INTERIOR ELEVATIONS & TOILET DETAILS
14	EQ-1	EQUIPMENT PLAN
15	EQ-2	EQUIPMENT SCHEDULE
16	A-12	CAR WASH FLOOR PLAN
17	A-13	CAR WASH ROOF PLAN
18	A-14	CAR WASH EXTERIOR ELEVATIONS
19	A-15	CAR WASH BUILDING SECTIONS
20	A-16	EQUIP. BUILDING FLOOR & ROOF PLANS
21	A-17	EQUIP. BUILDING EXTERIOR ELEVATIONS & SECTIONS
22	A-18	DUMPSTER ENCLOSURE & RETAINING WALL DETAILS

### STRUCTURAL DRAWINGS

SEE SHEETS G.G. CORNWELL

### PLUMBING & MECHANICAL DRAWINGS

SEE SHEETS FROM INFINITY DESIGN GROUP

### ELECTRICAL DRAWINGS

SEE SHEETS FROM DESIGN ENGINEERING SERVICES

### SITE DRAWINGS

SEE SHEETS FROM SPECTRA GROUP

## IECC ENVELOPE COMPLIANCE (SEE CERTIFICATE)

### GENERAL INFORMATION:

BUILDING LOCATION (FOR WEATHER DATA)	NEWPORT NEWS, VIRGINIA
CLIMATE ZONE:	8
HEATING DEGREE DAYS (BASE 65 DEGREES F)	3,578
COOLING DEGREE DAYS (BASE 65 DEGREES F)	1,458
PROJECT TYPE	NEW CONSTRUCTION
VERTICAL GLAZING / WALL AREA PCT.:	6%
BUILDING TYPE	FLOOR AREA
RETAIL SALES, WHOLESALE SHOWROOM	5,400

### REQUIREMENTS CHECKLIST

#### ENVELOPE PASSES

### CLIMATE-SPECIFIC REQUIREMENTS:

COMPONENT NAME/DESCRIPTION	CAVITY R-VALUE	CONT. R-VALUE	GLAZING U-FACTOR
ROOF: ALL-WOOD JOIST/RAFTER/TRUSS		19	
WALL: WOOD FRAME, ANY SPACING		13	
WINDOW: METAL FRAME, 2 PANE W/ LOW-E, CLEAR SHGC 0.40	---	---	0.40
DOOR: GLASS (OVER 50% GLAZING) CLEAR SHGC 0.40	---	---	0.40
FLOOR: UNHEATED SLAB-ON-GRADE	---	---	---

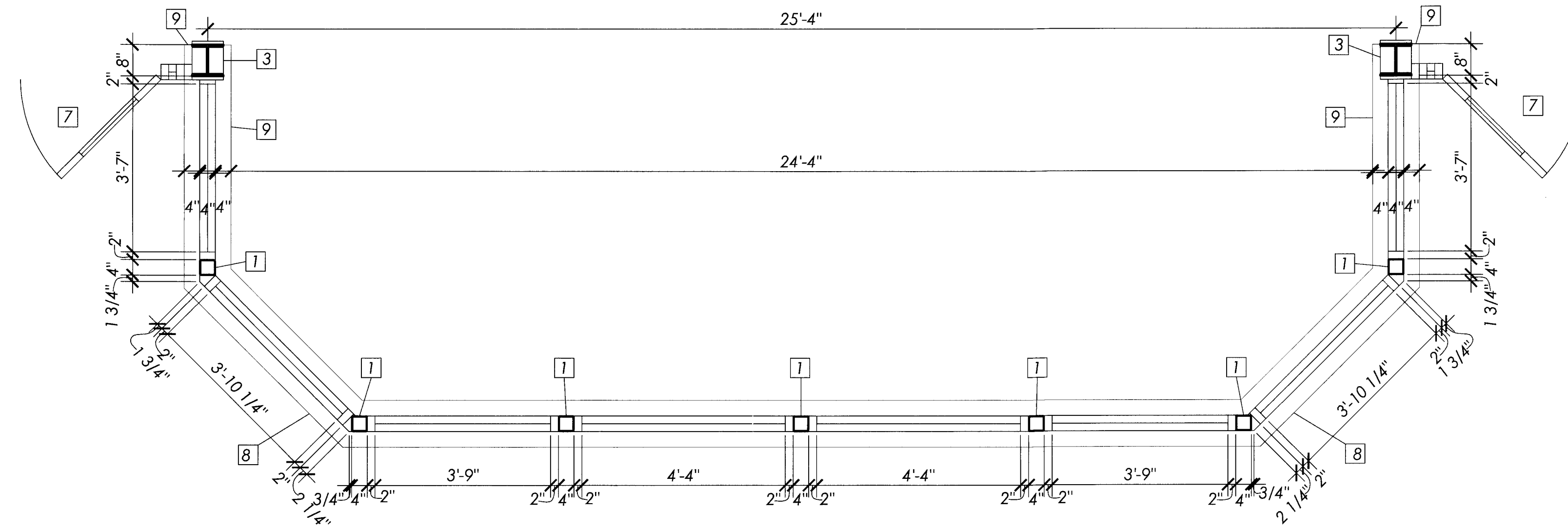
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DATE: 26 SEP 07	CHECKED BY: CMH

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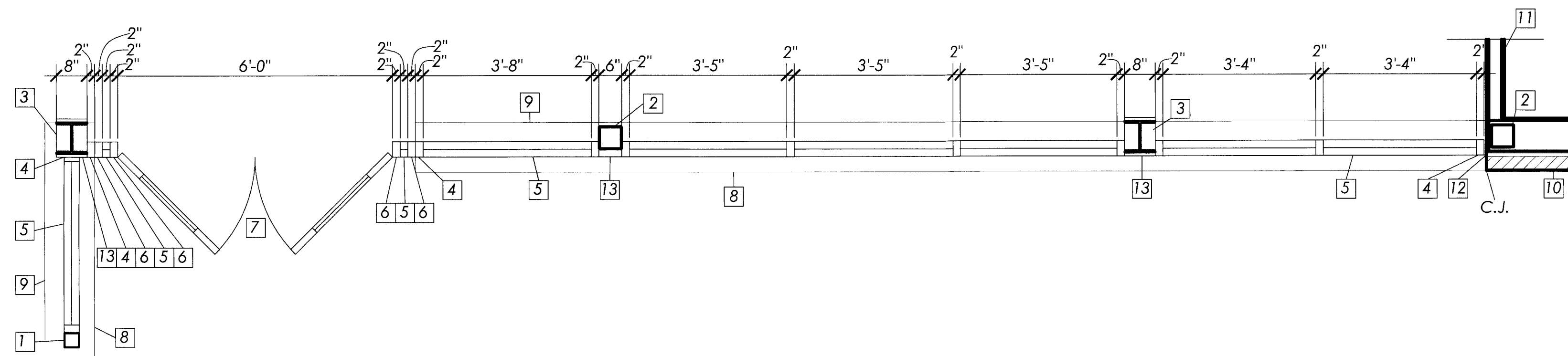
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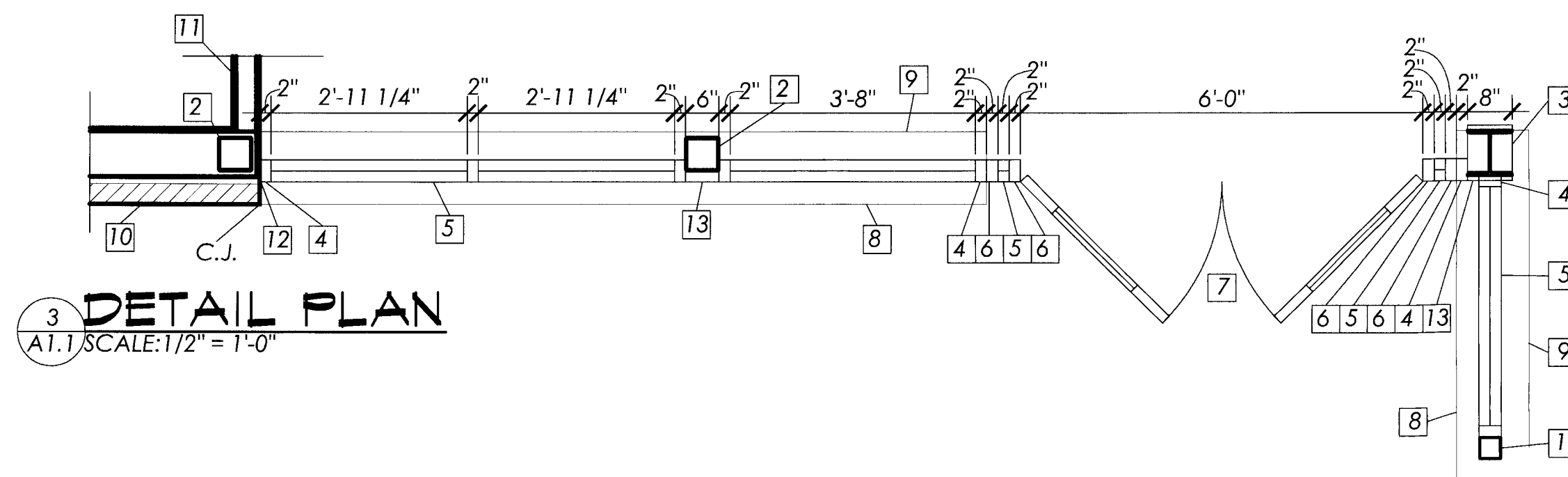


**1 DETAIL PLAN**  
 A1.1 SCALE: 1/2" = 1'-0"

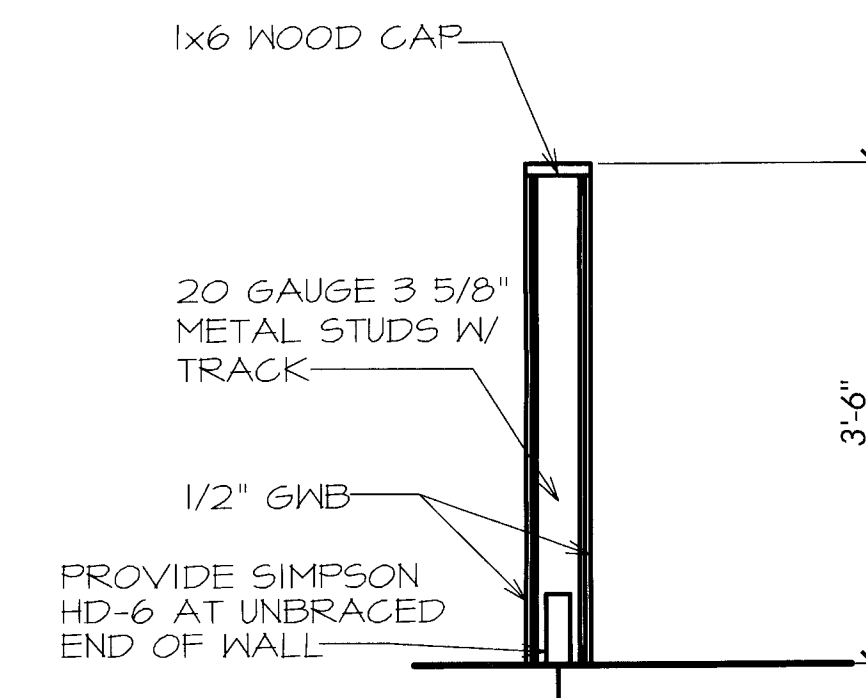
- # DETAIL PLAN NOTES:
1. 4x4 TUBE STEEL COLUMN (SEE STRUCT.)
  2. 6x6 TUBE STEEL COLUMN (SEE STRUCT.)
  3. 8" W-SHAPE STEEL COLUMN (SEE STRUCT.)
  4. ENCLOSE WITH PREFINISHED METAL TO MATCH STOREFRONT
  5. STOREFRONT FRAME ON STEAM WALL
  6. STOREFRONT GLAZING
  7. STOREFRONT FRAME ON SLAB
  8. DOOR PER PLAN
  9. EXTERIOR BRICK ROWLOCK SILL
  10. INTERIOR MARBLE SILL
  11. EXTERIOR WALL
  12. INTERIOR PARTITION
  13. BACKER ROD AND SEALANT
  14. METAL CLOSURE (MATCH S.F.)



**2 DETAIL PLAN**  
 A1.1 SCALE: 1/2" = 1'-0"



**3 DETAIL PLAN**  
 A1.1 SCALE: 1/2" = 1'-0"



**4 SECTION**  
 A1.1 SCALE: 3/4" = 1'-0"

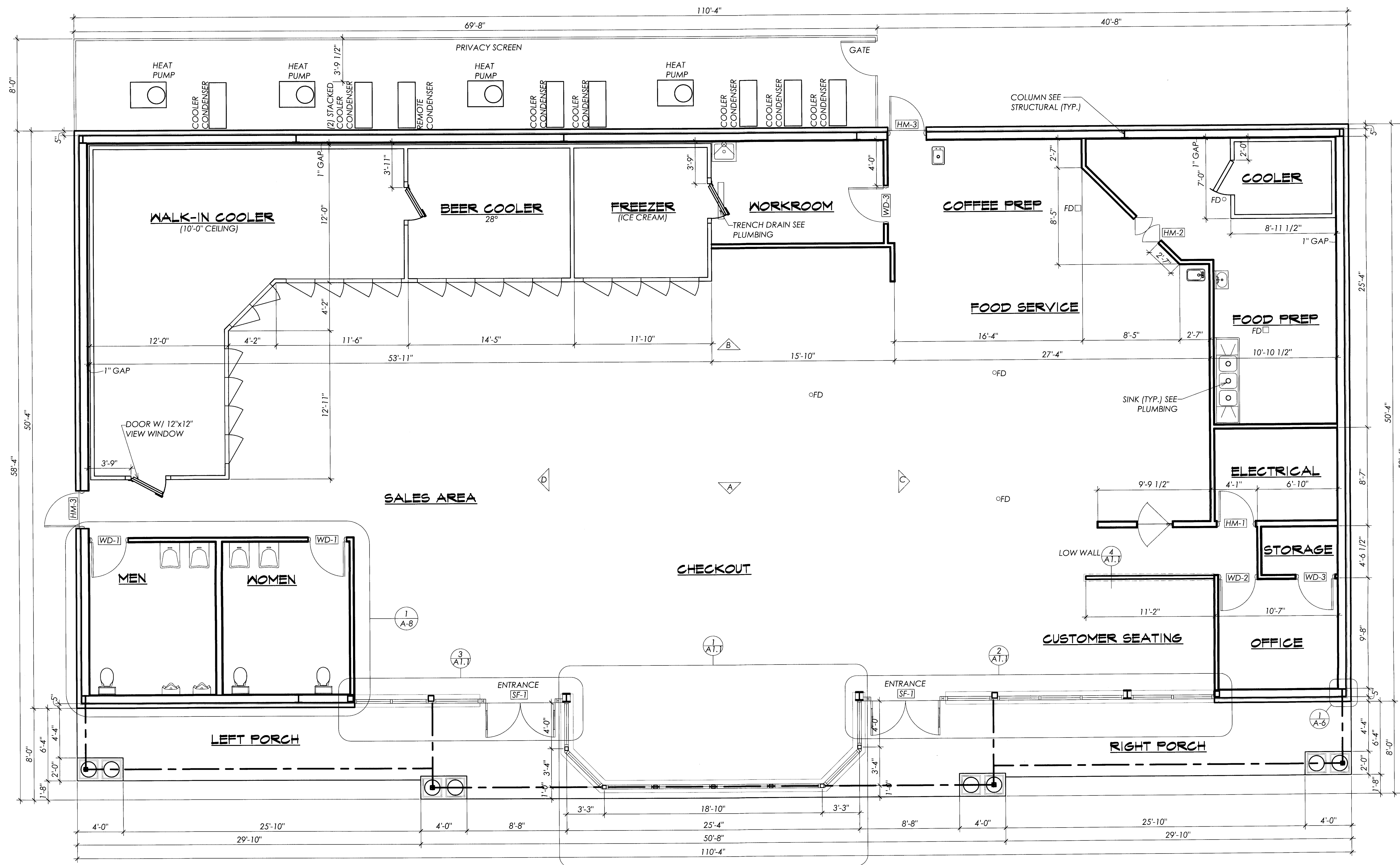
PROJECT NAME: SAIR ENTERPRISES  
 NEW RACECO C-STORE AND CAR WASH  
 11005 JEFFERSON AVE  
 NEWPORT NEWS, VA 23601  
 DWG TITLE: DETAIL PLANS

NO.	DATE	REVISION	BY

FILE NAME: 0751	OTSI
DATE: 26 SEP 07	DRM
DRAWN BY: DRM	CHEKED BY: CMH

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JOB NO: 0751  
**A-1.1**  
 SHEET 3 of 22



**CONSTRUCTION PLAN**  
SCALE: 1/4" = 1'-0"

**DOOR SCHEDULE**

MARK	DOOR	WIDTH	HEIGHT	MAT'L	TYPE	THK.	FRAME	FIRE RATING	NOTES	HWDR SET
WD-1	3'0" x 7'0"	3'0"	7'0"	WOOD	FLUSH	1-3/4"	H.M.	0	INTERIOR/UNDERCUT 1"/SOLID CORE	3
WD-2	3'0" x 7'0"	3'0"	7'0"	WOOD	FLUSH	1-3/4"	H.M.	0	INTERIOR/UNDERCUT 1"/SOLID CORE	2
WD-3	3'0" x 7'0"	3'0"	7'0"	WOOD	FLUSH	1-3/4"	H.M.	0	INTERIOR/SOLID CORE	4
SF-1	(2) 3'0" x 7'0"	3'0"	7'0"	AL + GL	K19D	11-3/4"	ALUM.	0	PAIR ENTRANCE / STOREFRONT	(1)
HM-1	3'0" x 7'0"	3'0"	7'0"	H.M.	---	---	H.M.	90 MIN	EXTERIOR / RATED & SEAL	5
HM-2	(2) 1'6" x 7'0"	1'6"	7'0"	H.M.	---	---	H.M.	---	INTERIOR / BI-SWING	---
HM-3	3'0" x 7'0"	3'0"	7'0"	H.M.	---	---	H.M.	---	EXTERIOR	(2)

ALL STOREFRONT & HARDWARE: KAWNEER BRONZE  
NOTE 1: DOORS SHALL HAVE 12" HIGH BOTTOM RAIL  
NOTE 2: PROVIDE ALARM AND 20-SECOND DELAY ON LOCK. POST SIGN "EMERGENCY EXIT ONLY"

**DOOR HARDWARE SCHEDULE**

HWDR SET NO.	HINGES	CLOS.	LOCKSETS	STOPS, ETC.	PULLS	MISCELLANEOUS	REMARKS
1	B-1	C-1	L-1	S-1	P-1	M-1	RAISE THRESHOLD 1/2" TO CLEAR FLOOR MAT
2	B-2	C-2	L-2	S-2	P-2	M-2	INTERIOR DOOR W/ OFFICE LOCK SET
3	B-1	C-1	L-1	S-1	P-1	M-1	INTERIOR DOOR W/ PUSH-PULL SET
4	B-1	C-1	L-1	S-1	P-1	M-1	INTERIOR DOOR W/ PASSAGE LOCK
5	B-1	C-1	L-1	S-1	P-1	M-1	INTERIOR HM DOOR W/ ASTRAGAL
6	B-1	C-1	L-1	S-1	P-1	M-1	EXTERIOR H.M. DOOR W/ PANIC & CLOSER

**HARDWARE LEGEND**

- HINGES**  
B-1 STANLEY, FBB-179, BUTT HINGE (652)  
B-2 KAWNEER, 4-1/2"x4" BALL BEARING BUTT HINGE, NRP, DARK OXIDIZED COPPER, FINISH W/ LACQUER COATING
- CLOSERS**  
C-1 CORBIN RUSSWIN DC2210 689  
C-2 KAWNEER, SAM-11, SINGLE ACTING MANUAL CONCEALED OVERHEAD CLOSER
- LOCKSETS**  
L-1 SCHLAGE AL53PD SAT 626 OFFICE LOCKS  
L-2 SCHLAGE AL605 SAT 626 PRIVACY SETS  
DB-1 SCHLAGE B660 626 DEADLOCKS
- STOPS, SILENCERS, ETC.**  
S-1 SILENCERS, TRIMCO  
S-2 FLOOR STOP, TRIMCO 1213ES, US260
- PULLS**  
P-1 KAWNEER, STYLE C09, US32D  
P-2 TRIMCO 1017 PUSH-PULL COMBINATION
- MISCELLANEOUS**  
M-1 SARGENT ARMED PANIC BAR, #5805 (OUTSIDE KEY CONTROL) WITH FULL TRIM AND SCHLAGE CYLINDER  
M-2 THRU-DOOR VIEWER, BALDWIN #0150  
M-3 THRESHOLD, NATIONAL GUARD 804, ALUM. (OR EQUAL BY PEMCO)  
M-4 WEATHER-STRIPPING, NATIONAL GUARD 36A, ALUM. (OR EQUAL BY PEMCO)  
M-5 KICK PLATE, 12" HIGH x DOOR WIDTH LESS 2" STAINLESS STEEL, IVES 8500-826D  
M-6 PANIC BAR, KAWNEER "PANELINE" CR-9D CONCEALED ROD EXPT. DEVICE W/ KAWNEER STANDARD MORTISE CYLINDER  
M-7 THRESHOLD, KAWNEER, 4"x1/2", MILL FINISH  
M-8 KAWNEER STANDARD MORTISE CYLINDER WITH THUMB LATCH  
M-9 SARGENT PANIC BAR, #5805 (OUTSIDE KEY CONTROL) WITH FULL TRIM AND SCHLAGE CYLINDER  
M-10 TRIMCO 3910 SURFACE FLUSH BOLTS

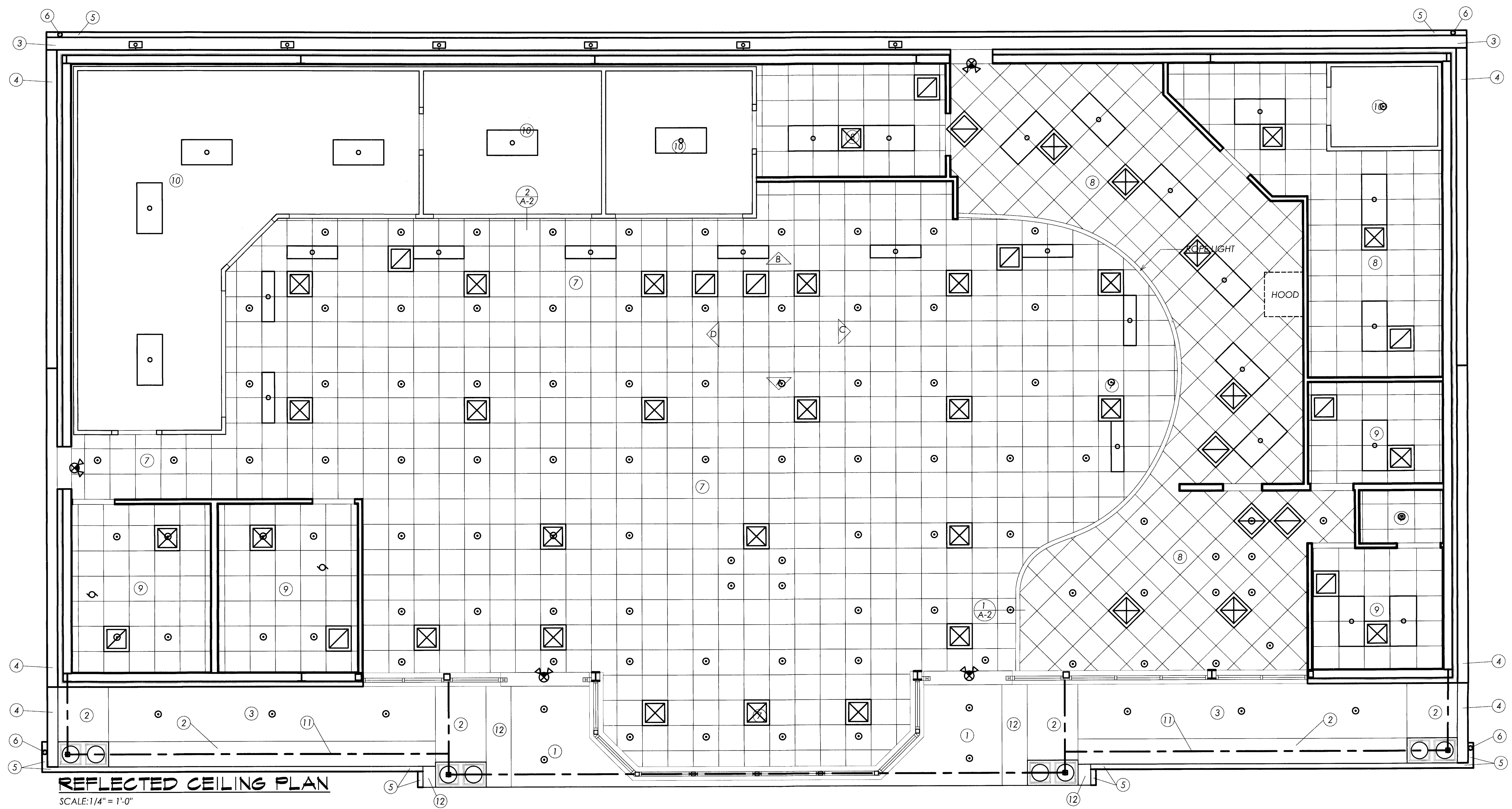
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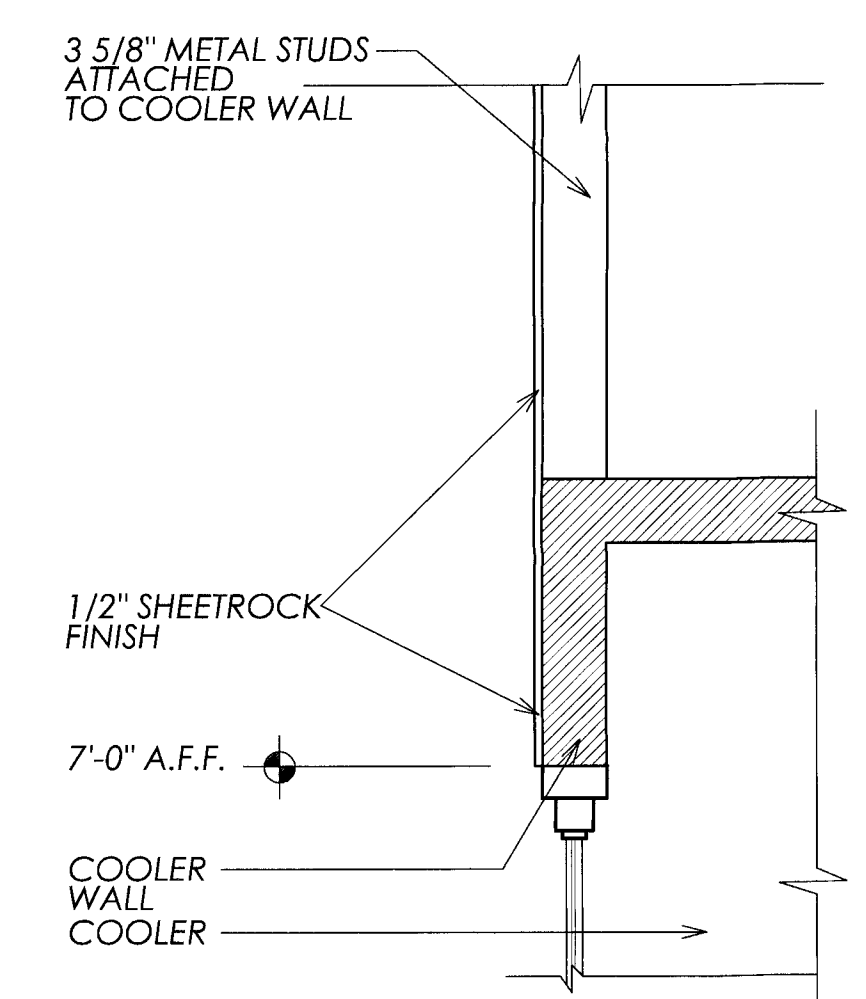
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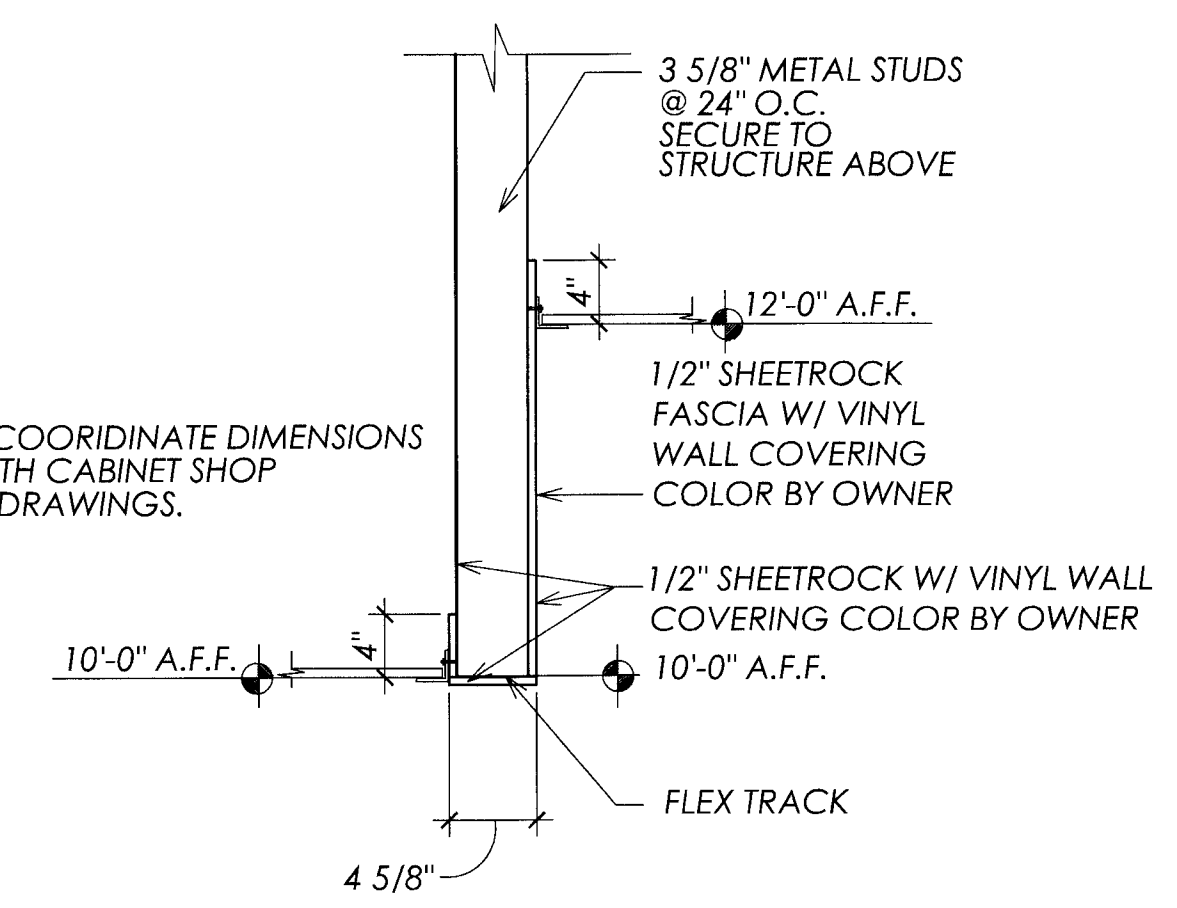


**REFLECTED CEILING PLAN**  
 SCALE: 1/4" = 1'-0"

- # NOTES:
1. CURVED E.I.F.S.; SEE D/A-6
  2. E.I.F.S. BEAM WRAP
  3. PRE-FINISHED 6" V-GROOVE WHITE ALUMINUM SOFFIT
  4. PRE-FINISHED 6" V-GROOVE WHITE ALUMINUM RAKE
  5. GUTTER
  6. DOWNSPOUT
  7. SATC #1 @ 12'-0" A.F.F.
  8. SATC #2 @ 12'-0" A.F.F.
  9. SATC #1 @ 9'-0" A.F.F.
  10. NO CEILING ABOVE COOLER OR FREEZER
  11. LINE OF STEEL FRAME ABOVE SEE STRUCTURAL
  12. E.I.F.S. SOFFIT



**FASCIA**  
 SCALE: 1" = 1'-0"



**FASCIA**  
 SCALE: 1" = 1'-0"

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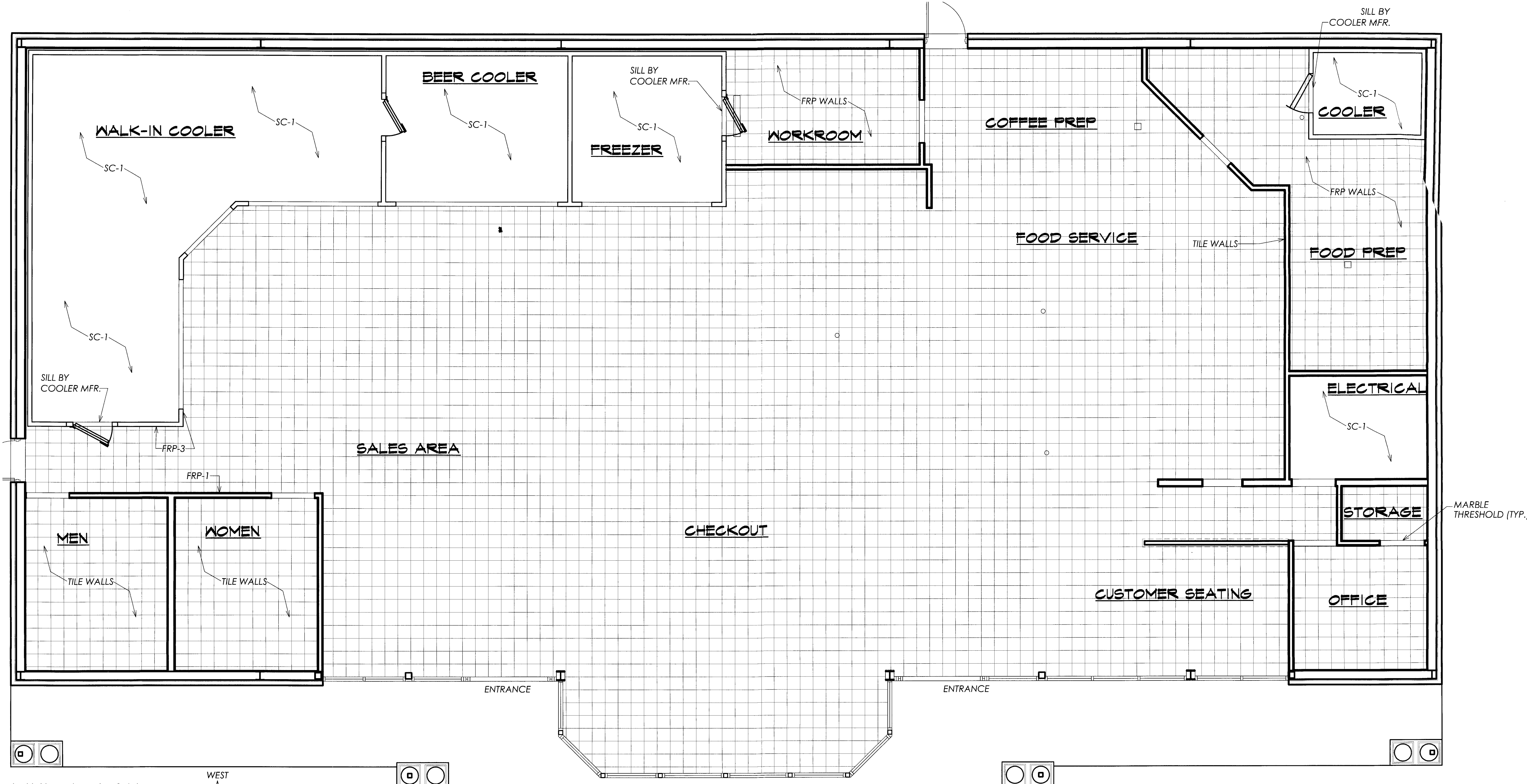
**A-2**



BY	
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**FINISH PLAN**  
 SCALE: 1/4" = 1'-0"  
 SOUTH ← → NORTH  
 WEST ↑ ↓ EAST

**FINISH SCHEDULE**

ROOM NAME	FLOOR	BASE	WALLS				CEILING	MILLWORK/TRIM	REMARKS/NOTES
			N	S	W	E			
FOOD PREP	CT-1	R-1	FRP-2	FRP-2	FRP-2	SATC-2	P-3	FRP-2, VNC-142	
SALES	CT-1	CT-2	P-1	W-1	FRP-1	P-1	SATC-1	FRP-3, VNC-142	
MEN	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	SATC-2	MT@ 1 DOOR	
WOMEN	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	SATC-2	MT@ 1 DOOR	
OFFICE	CT-1	R-1	P-1	P-1	P-1	P-1	SATC-1	MT@ 1 DOOR	
STORAGE	CT-1	R-1	P-1	P-1	P-1	P-1	SATC-1	FRP-2, VNC-142	
ELECTRICAL	CT-1	R-1	P-2	P-2	P-2	P-2	SATC-1	FRP-2, VNC-142	
COOLER	SC-1	MFR	MFR	MFR	MFR	MFR	MFR	SEE COOLER MFR.	
COFFEE PREP	CT-1	CT-2	CT-3	FRP-3	CT-3	--	SATC-2	FRP-2, VNC-142	
FOOD SERVICE	CT-1	CT-2	CT-3	--	--	CT-3	SATC-2	FRP-2, VNC-142	
CHECK OUT	CT-1	CT-2	--	--	--	--	SATC-1	FRP-2, VNC-142	
WORK ROOM	CT-1	R-1	FRP-2	FRP-2	FRP-2	FRP-2	SATC-1	FRP-2, VNC-142	
FREEZER	SC-1	MFR	MFR	MFR	MFR	MFR	MFR	SEE COOLER MFR.	
BEER COOLER	SC-1	MFR	MFR	MFR	MFR	MFR	MFR	SEE COOLER MFR.	
WALK-IN COOLER	SC-1	MFR	MFR	MFR	MFR	MFR	MFR	SEE COOLER MFR.	
CUST. SEATING	CT-1	CT-2	VNC-1	--	VNC-1	VNC-1	SATC-1	VNC FULL HT.	

**FLOOR FINISHES**

- CT-1 CERAMIC TILE 12" x 12", UNPOLISHED WITH GROUT, ALL WITH MINIMUM SLIP RESISTANCE PER ASTM D 2047 MINIMUM STATIC LOAD LIMIT OF 125 PSI. X.0.45 GRF.
- SC-1 SEALED CONCRETE, SMOOTH TROWELED FINISH
- VCT-1 VINYL COMPOSITION TILE TARKETT 12"x12"x1/8" (OR SIMILAR)
- BASES**
- R-1 ROPPE RESILIENT COVE BASE, 4" HIGH AT CABINETS
- CT-2 CERAMIC BASE 6"x6"
- MILLWORK/TRIM FINISHES**
- P-3 DEVOE ACRYLIC LATEX GLOSS ON DOOR FRAMES AND TRIM TO MATCH WALL COLOR.
- PL-1 PLASTIC LAMINATE.
- CEILING (SEE CLG. PLAN)**
- SATC-1 2x2 FISSURE
- SATC-2 2x2 VINYL COOLER PANEL

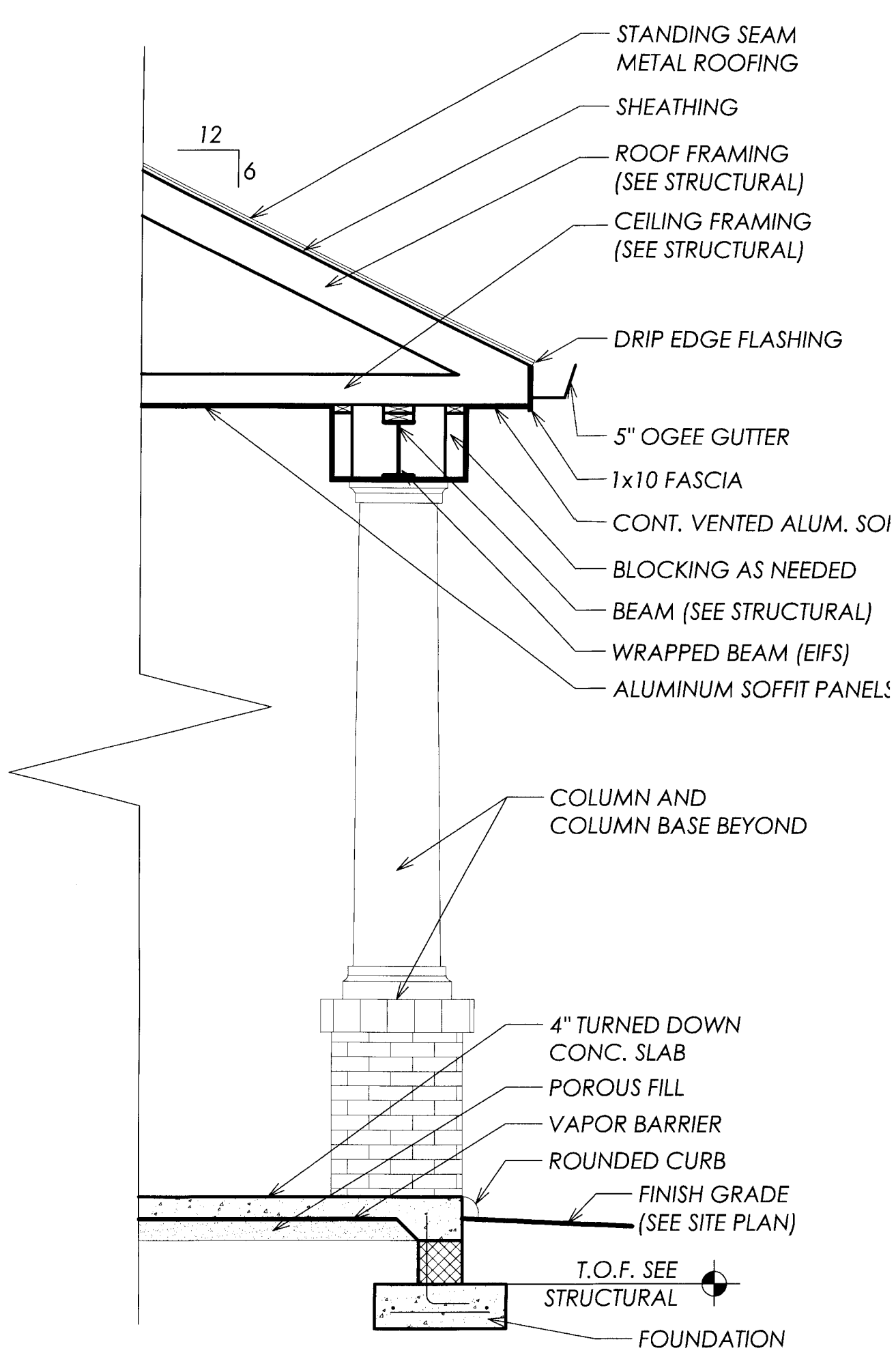
**WALL FINISHES**

- P-1 DEVOE ACRYLIC LATEX BRIGHT WHITE OVER 1/2" G.N.B.
- P-2 DEVOE ACRYLIC LATEX BRIGHT WHITE OVER 3/4" ACX PLYWOOD
- FRP-1 KEMLITE "FIRE-X GLASSBORD" FIBERGLASS WALL PANELS, EMBOSSED SURFACE, OVER 5/8" G.N.B.
- FRP-2 KEMLITE "FIRE-X GLASSBORD" FIBERGLASS WALL PANELS, EMBOSSED SURFACE, OVER 3/4" CDX PLYWOOD
- FRP-3 KEMLITE "FIRE-X GLASSBORD" FIBERGLASS WALL PANELS, EMBOSSED SURFACE, OVER EXPOSED SURFACES OF WALK-IN COOLER
- VNC-1 HEAVY VINYL WALL COVERING FROM 8' TO CLG. UNLESS NOTED COLOR BY OWNER.
- VNC-2 HEAVY VINYL WALL COVERING COLOR BY OWNER.
- CT-3 CERAMIC TILE 4x8 GLAZED PORCELAIN COLOR BY OWNER.

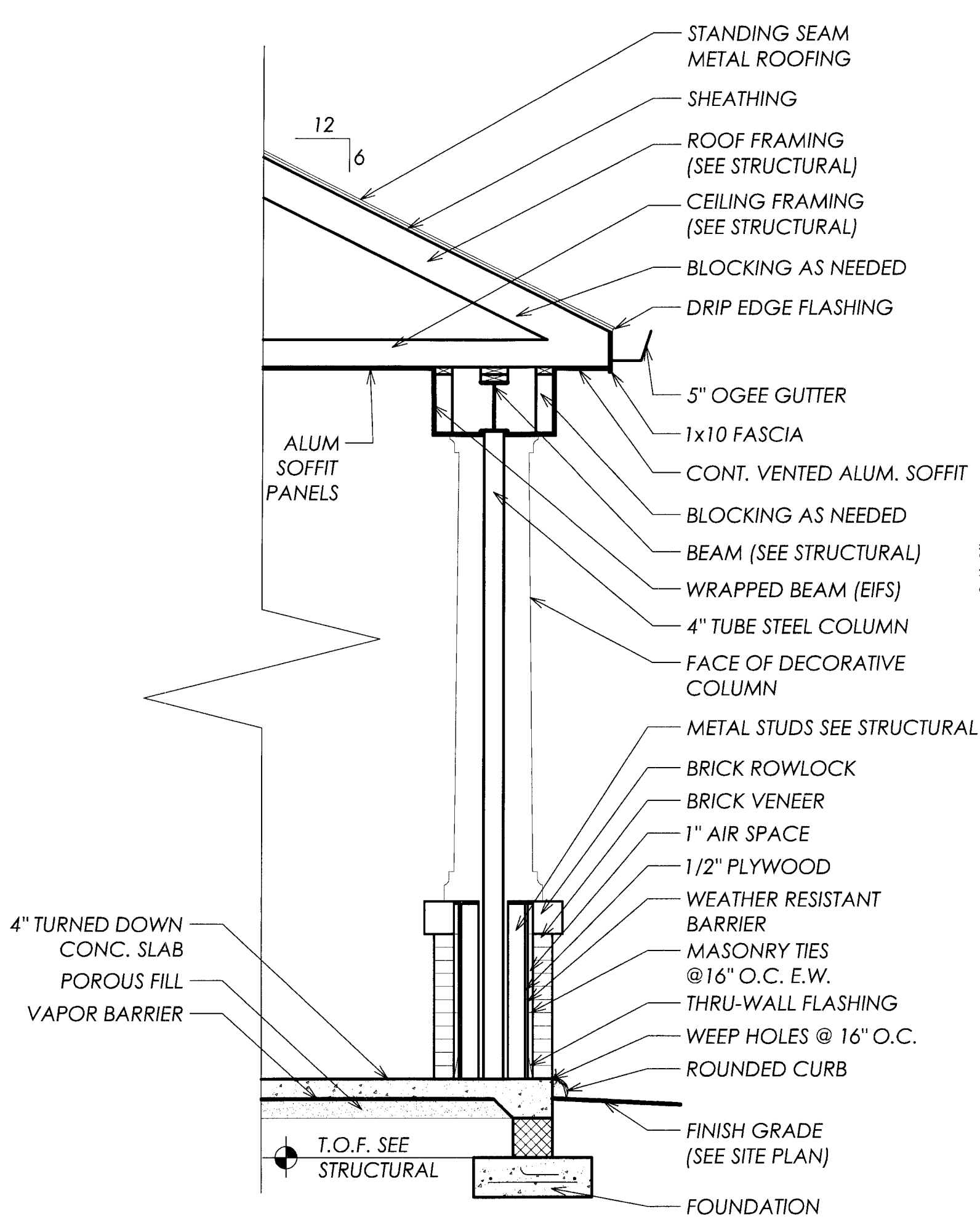
**NOTES**

- MT 1/2"x4" MARBLE THRESHOLD CUT TO FIT DOOR FRAME
- W-1 P-1 TO 8' AFF
- VNC-1 8' AFF TO CLG

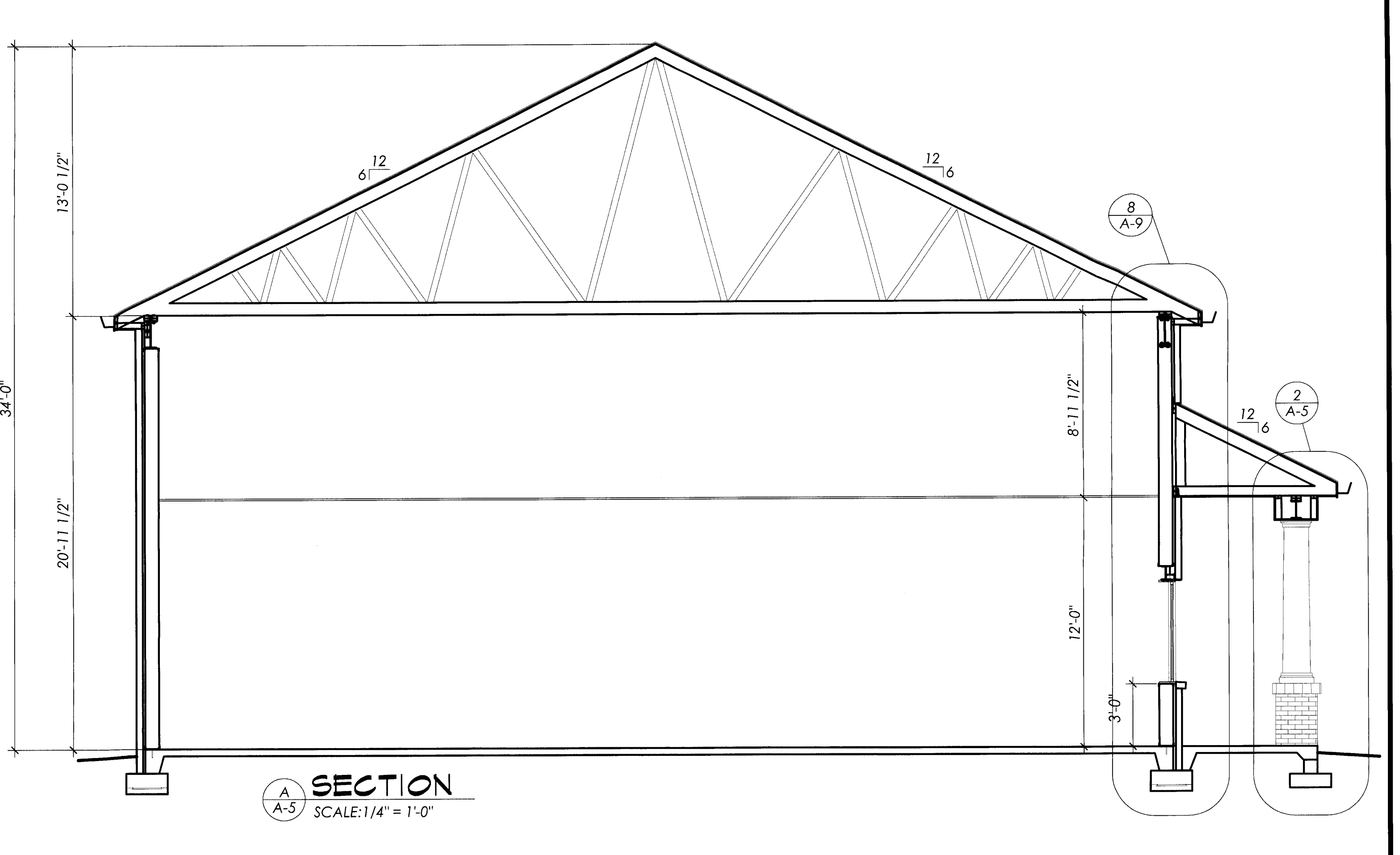
**NOTE: ALL COLORS TO BE SELECTED BY OWNER**



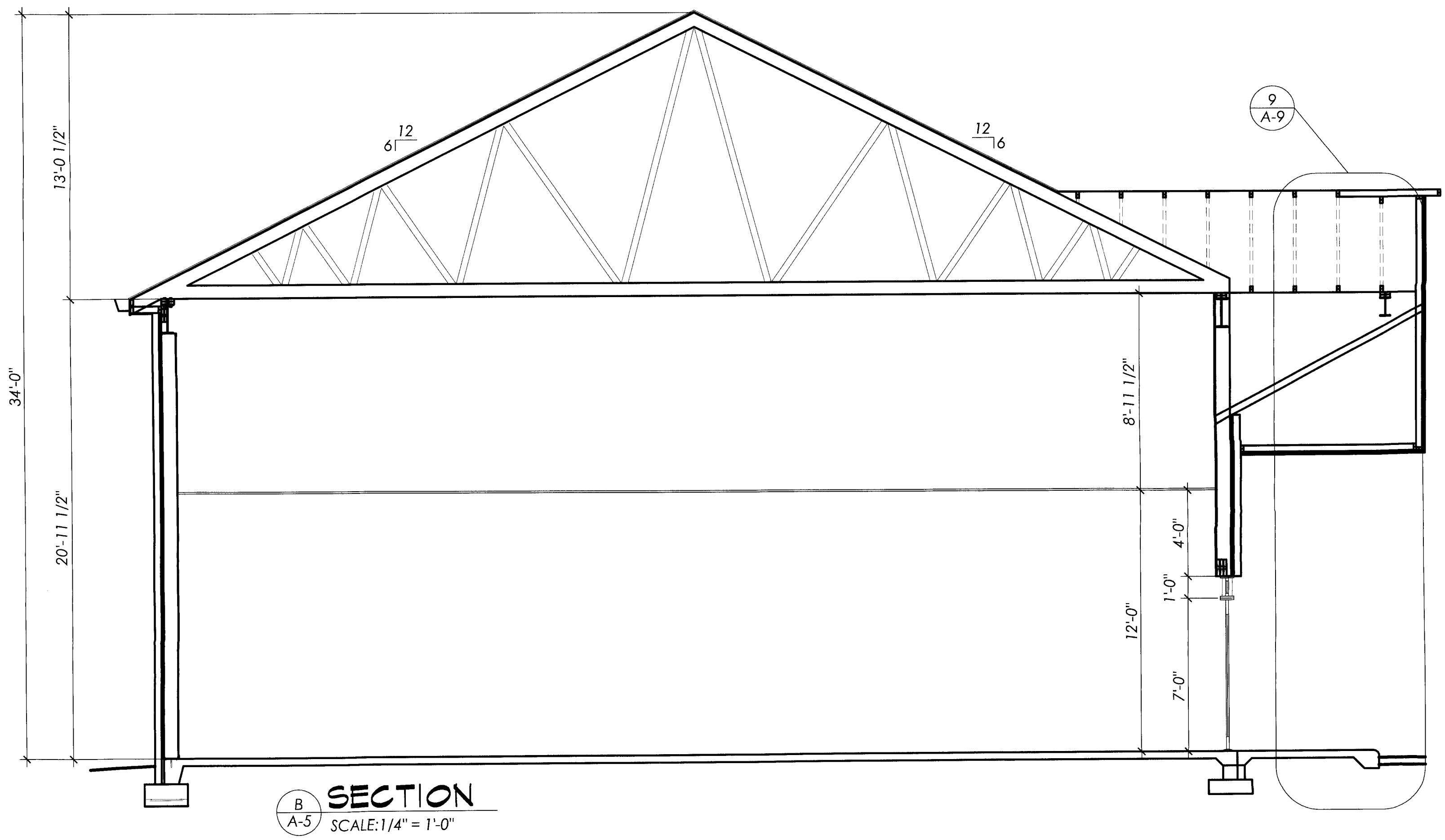
**2 WALL SECTION**  
 A-5 SCALE: 1/2" = 1'-0"



**1 WALL SECTION**  
 A-5 SCALE: 1/2" = 1'-0"



**SECTION A-A**  
 SCALE: 1/4" = 1'-0"



**SECTION B-B**  
 A-5 SCALE: 1/4" = 1'-0"

PROJECT NAME: SAIR ENTERPRISES  
 NEW RACECO  
 INDOOR CAR WASH  
 NEWPORT NEWS, VA 23601  
 DWG TITLE: BUILDING SECTIONS

NO.	DATE	REVISION

FILE NAME: 0751  
 DATE: 26 SEP 07  
 DRAWN BY: DRM  
 CHECKED BY: CMH

**BID SET**

NOT TO BE USED FOR CONSTRUCTION

JOB NO.: 0751  
**A-5**  
 SHEET 7 of 22



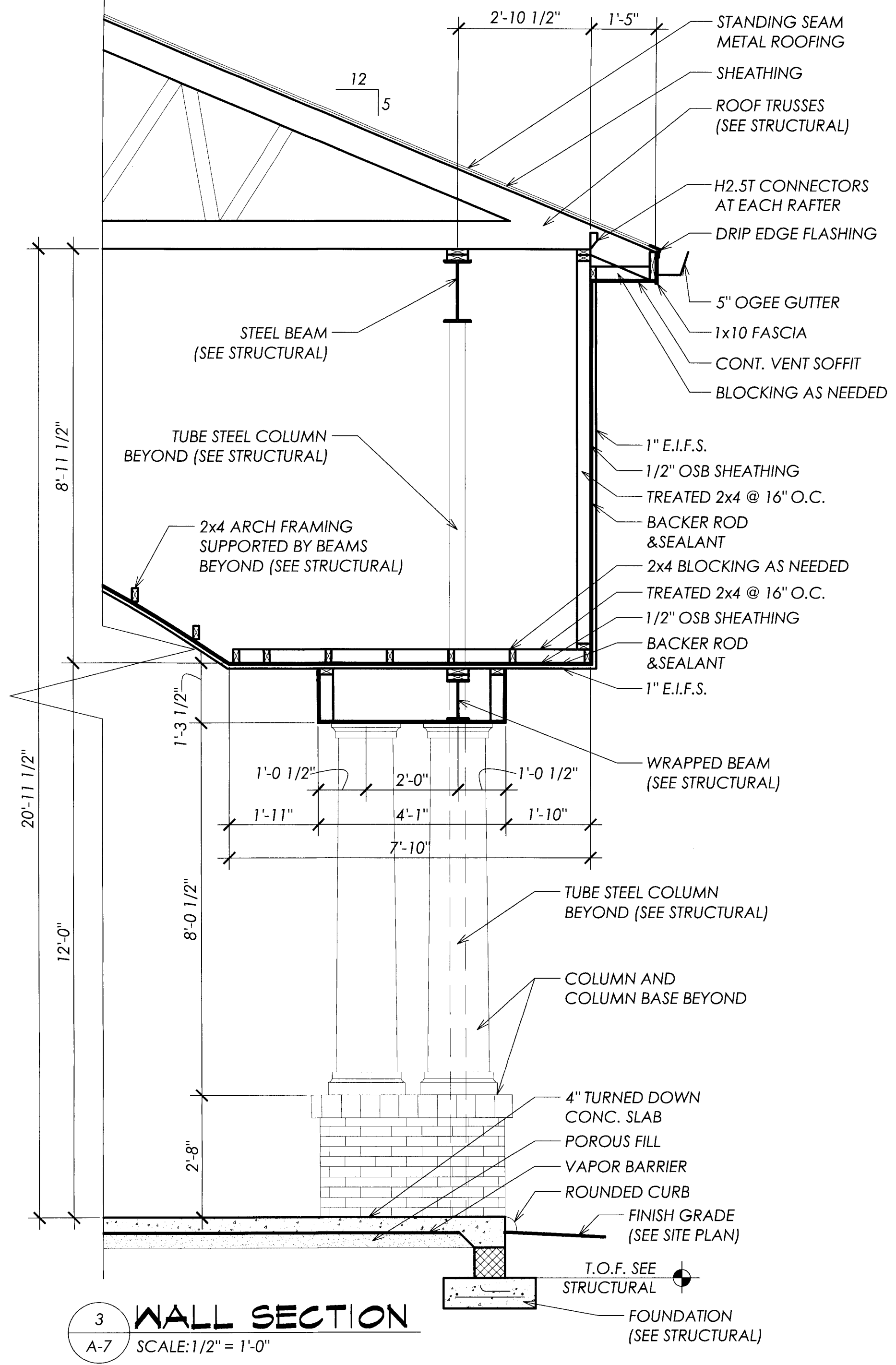


NO.	DATE	REVISION

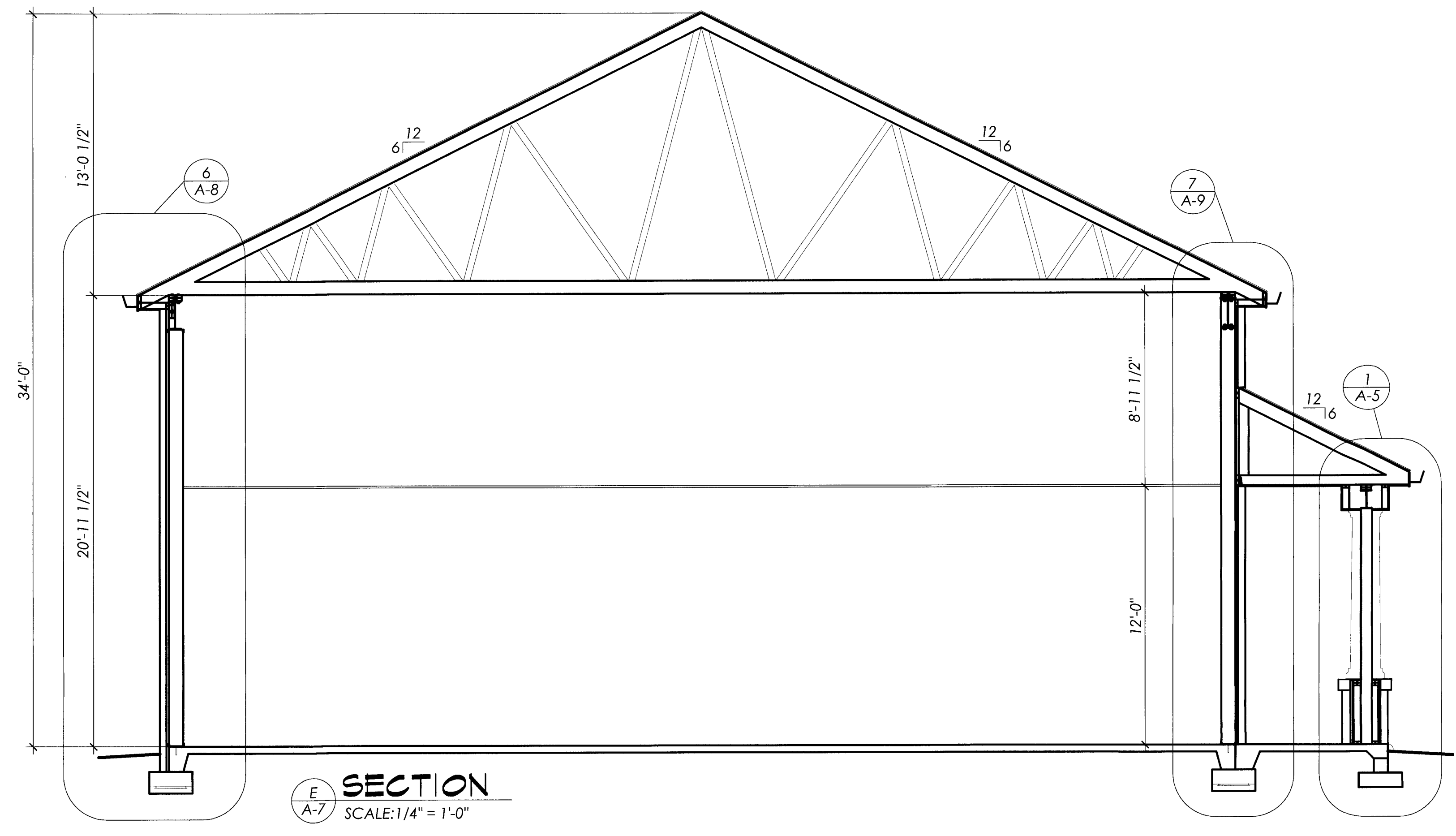
FILE NAME: 0751  
 DATE: 26 SEP 07  
 DRAWN BY: DRM  
 CHECKED BY: CMH

JOB NO.: 0751

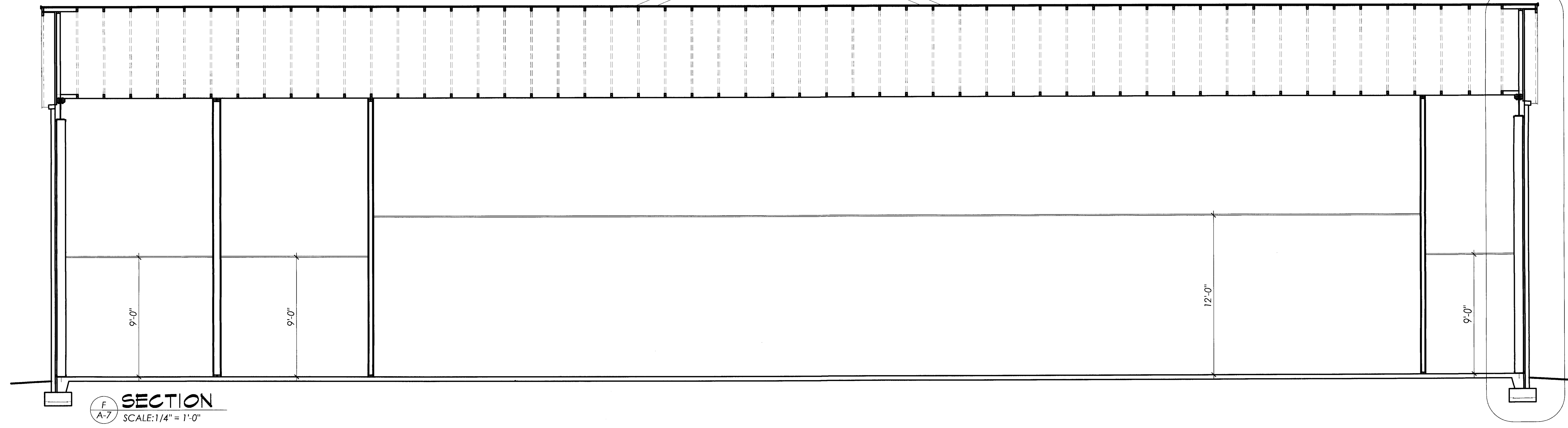
**A-7**  
 SHEET 9 of 22



**3 WALL SECTION**  
 SCALE: 1/2" = 1'-0"



**6 SECTION**  
 SCALE: 1/4" = 1'-0"



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

N:\data\07\_08\SS\0751\_Sair\_Raceco\_NN\Drawings\Architectural\Sheets\0751-A1.dwg, 9/27/2007 12:42:08 PM, Nathan Siskelofse, Michael Henry - Architect

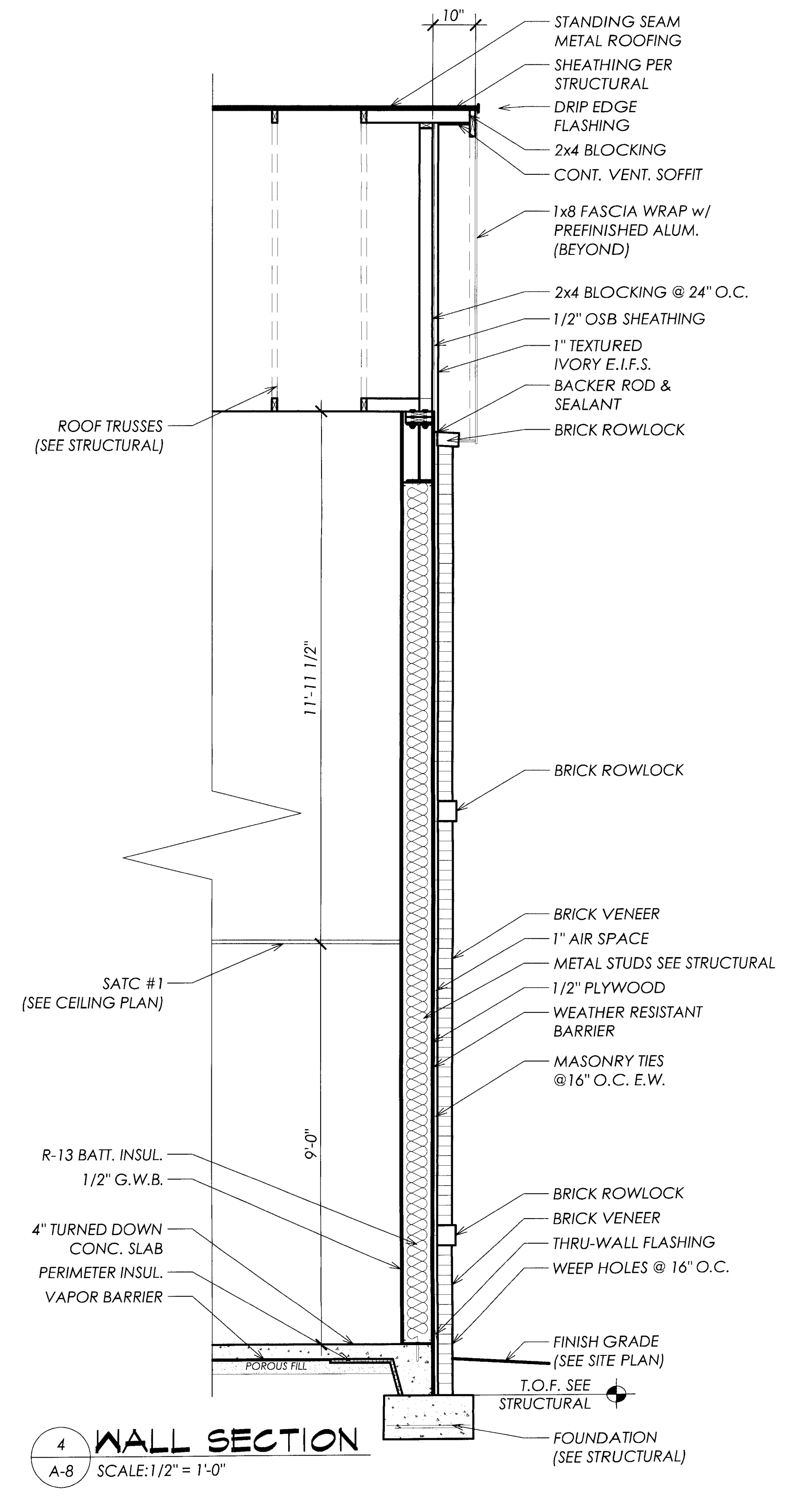
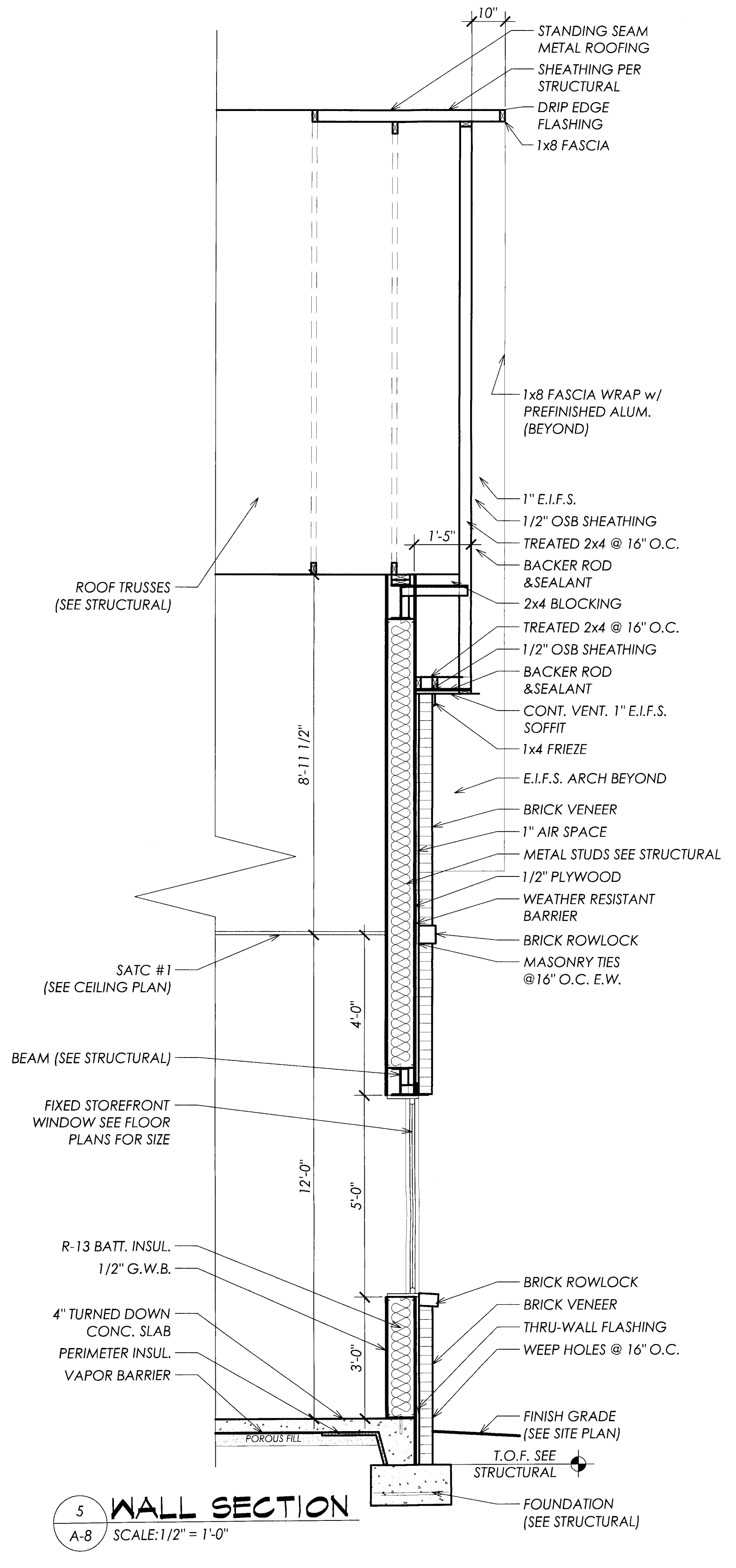
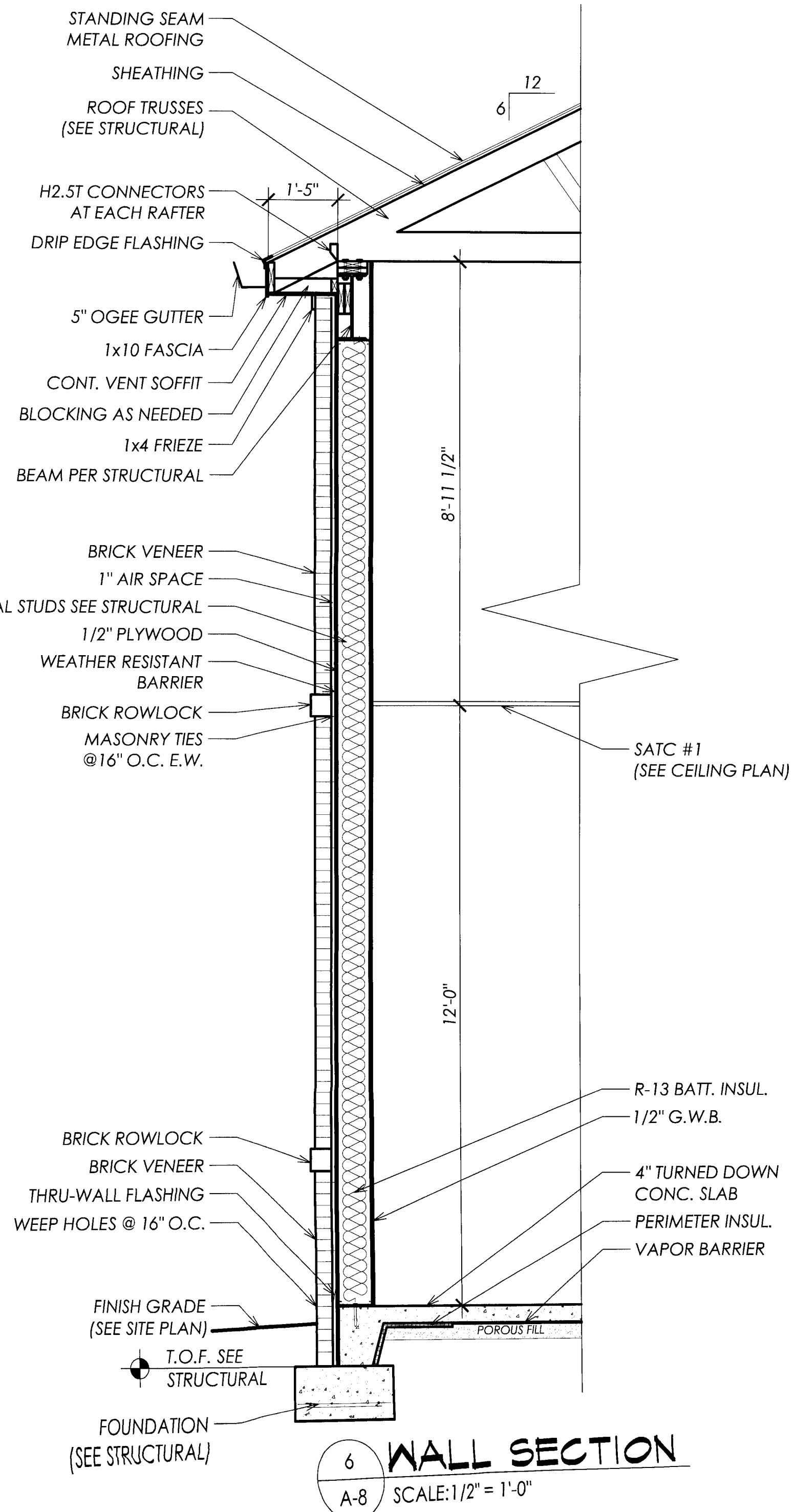
NO.	DATE	REVISION	BY

FILE NAME: 0751	DRAWN BY: DRYM	CHECKED BY: CMH
DATE: 26 SEP 07		

**BID SET**  
 NOT TO BE USED FOR CONSTRUCTION

JOB NO: 0751

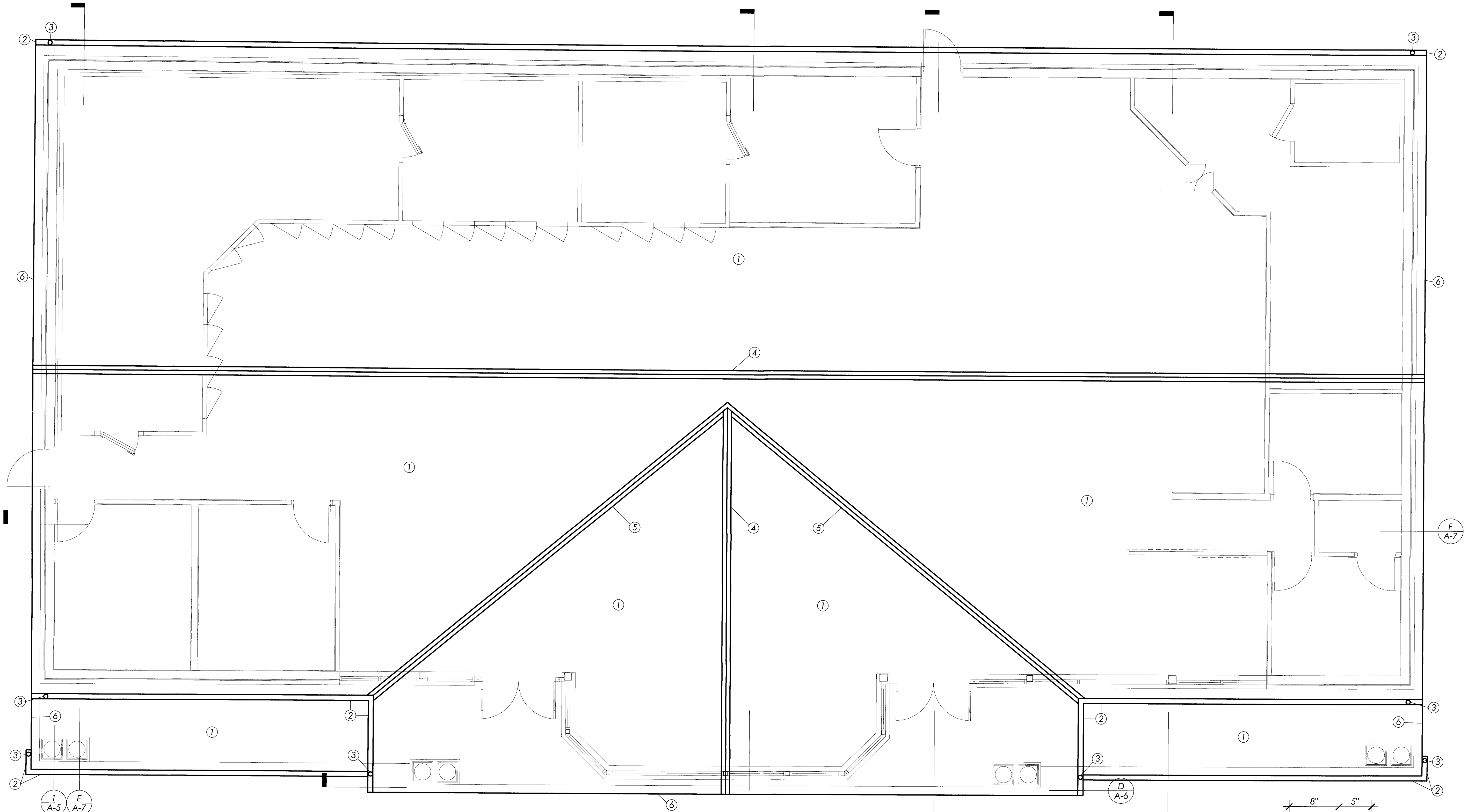
**A-8**



I:\Drawings\Architectural\Sheets\0751-A1.dwg, 9/27/2007 12:42:29 PM, Nathan Sledge, nsa



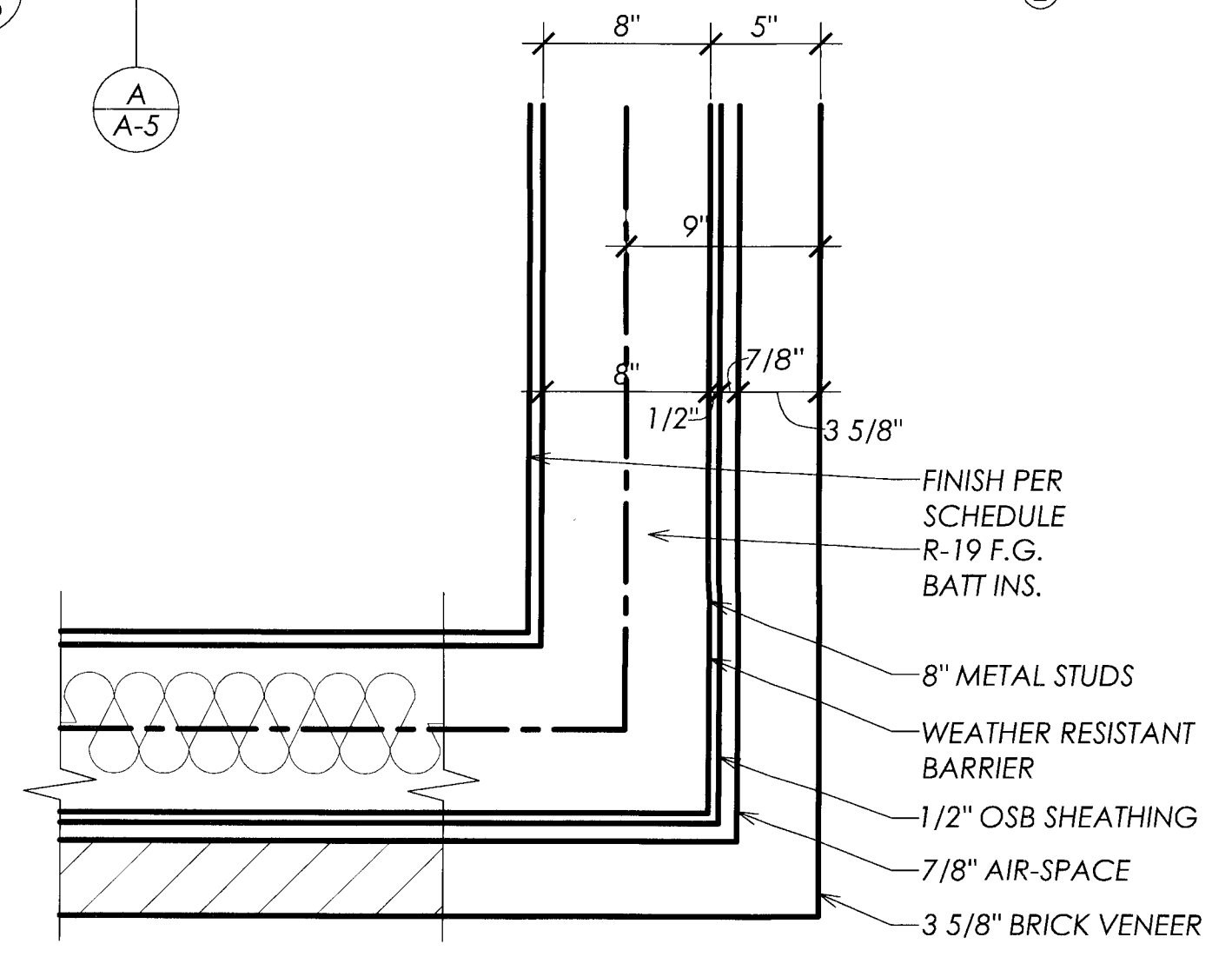




**ROOF VENT CALCULATIONS:**  
 REQUIRED 6281 SF / 300 = 20.93 SF  
 142'-10" RV x 18 = 2571 SQ IN/144 = 17.85 SF  
 221'-8" SV x 13.2 = 2926 SQ IN/144 = 20.31 SF  
 TOTAL PROVIDED = 38.16 SF

**ROOF PLAN**  
 SCALE: 1/4" = 1'-0"

- NOTES:**
1. STANDING SEAM METAL ROOF (ATAS SILVERSMITH #28)
  2. 6" OGEE GUTTER (WHITE PREFINISHED)
  3. 4"x6" DOWNSPOUT (WHITE PREFINISHED)
  4. RIDGE CAP (ATAS SILVERSMITH #28)
  5. VALLEY FLASHING (ATAS SILVERSMITH #28)
  6. EDGE TRIM (ATAS SILVERSMITH #28)

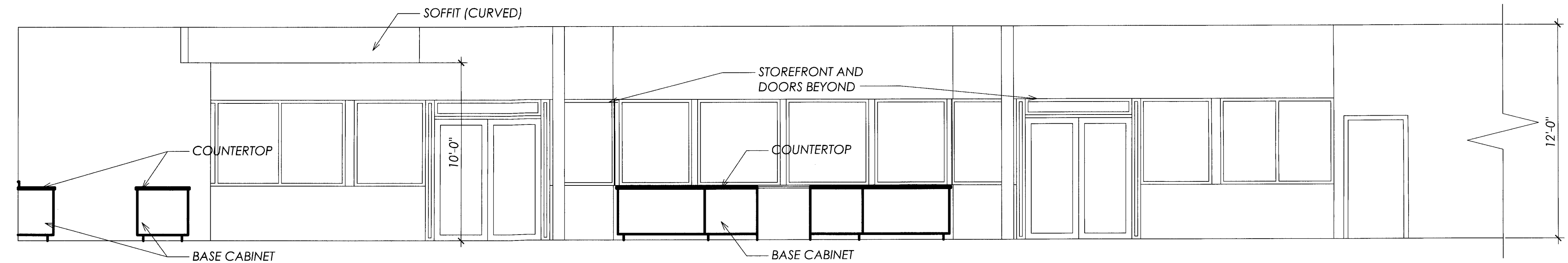


**WALL DETAIL**  
 SCALE: 1 1/2" = 1'-0"

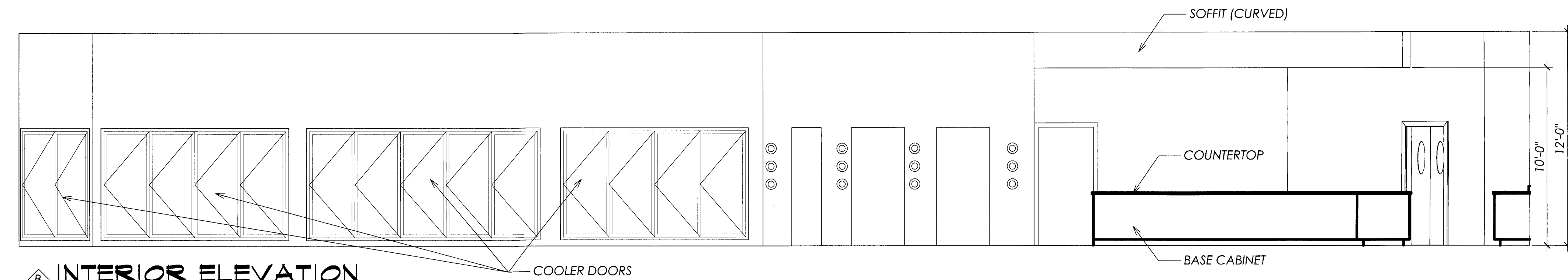
NO.	DATE	REVISION	BY

FILE NAME: 0751	DATE: 26 SEP 07	DRAWN BY: DRM	CHECKED BY: CMH
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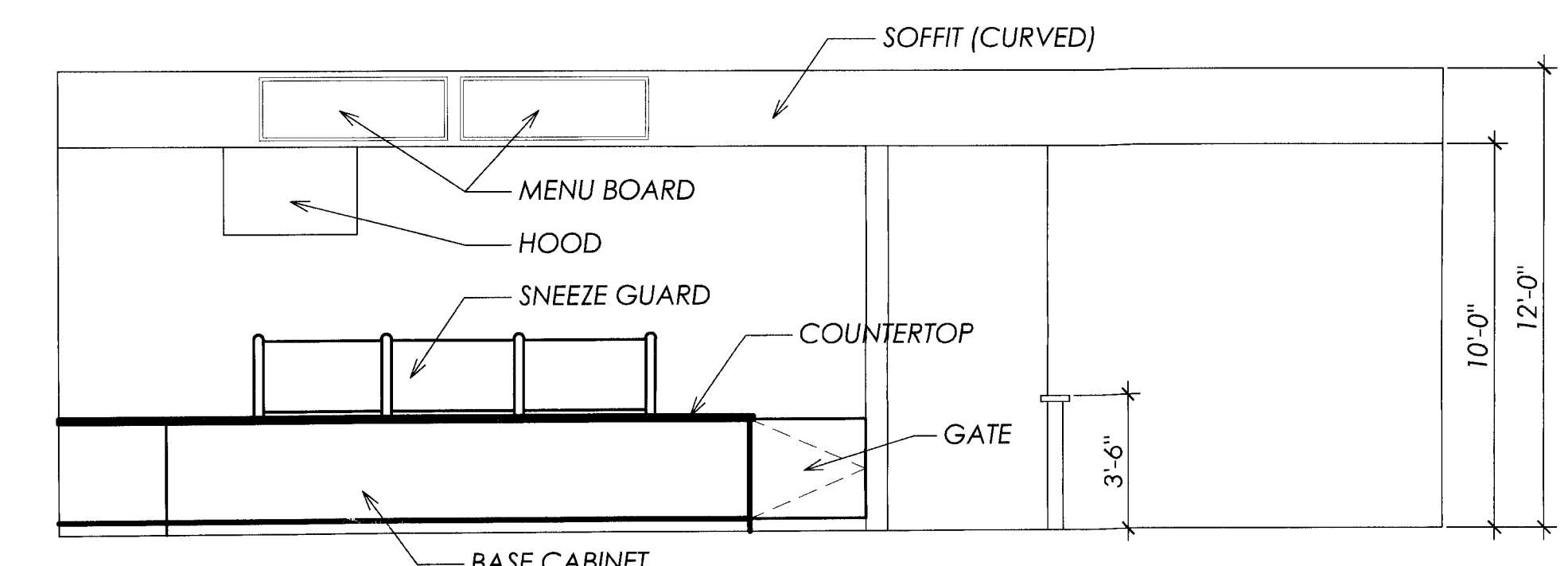
**BID SET**  
 NOT TO BE USED FOR CONSTRUCTION



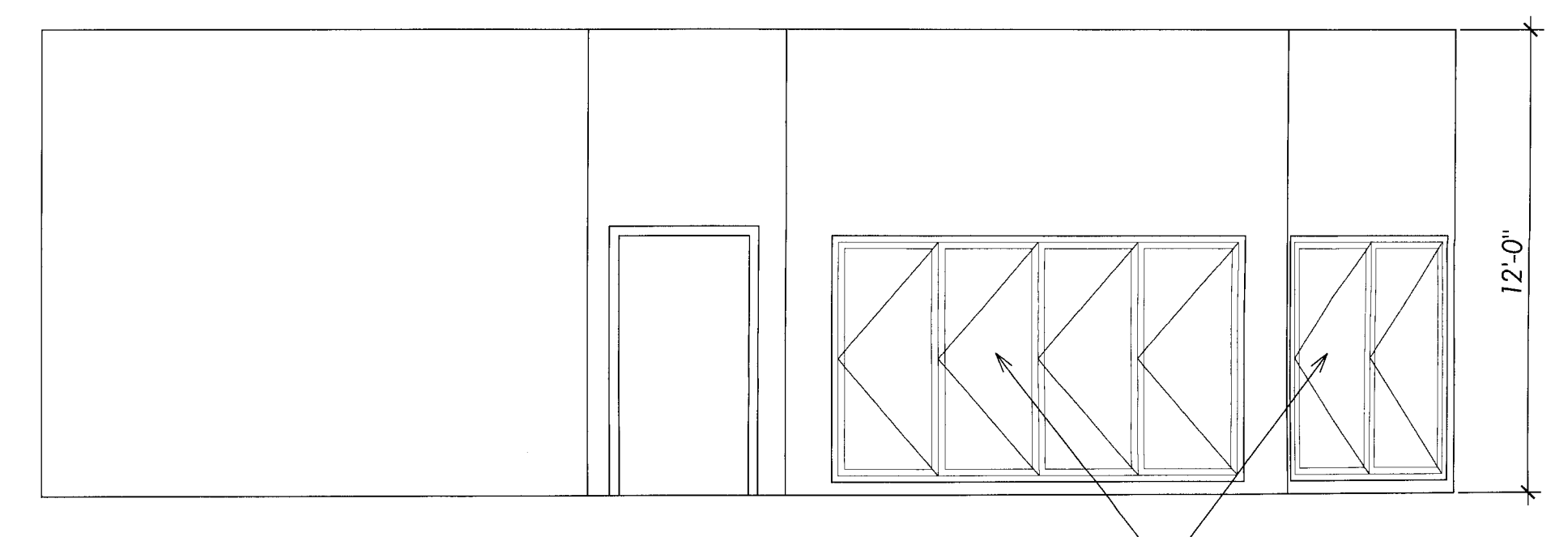
**A INTERIOR ELEVATION**  
 SCALE: 1/4" = 1'-0"



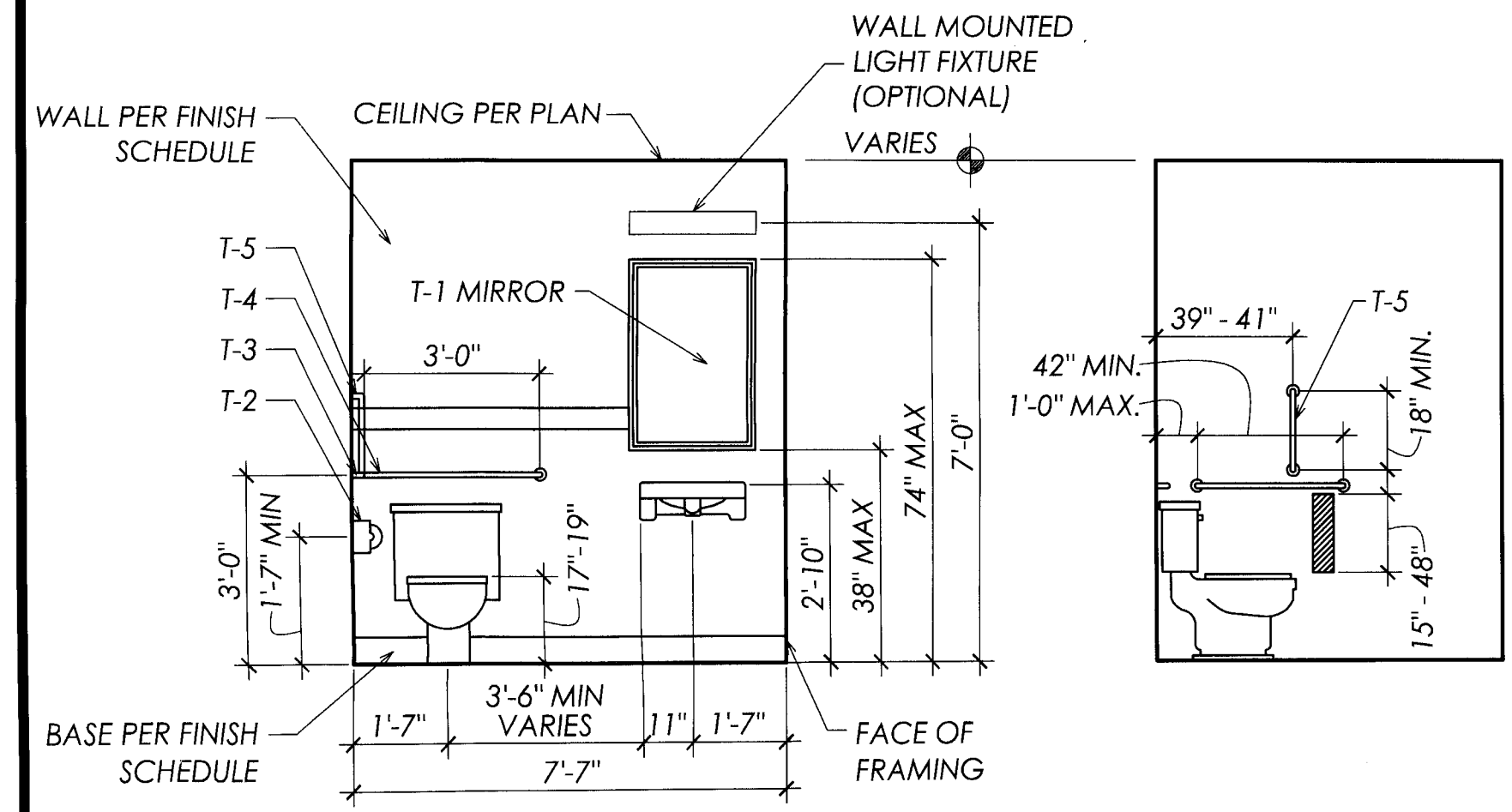
**B INTERIOR ELEVATION**  
 SCALE: 1/4" = 1'-0"



**C INTERIOR ELEVATION**  
 SCALE: 1/4" = 1'-0"



**D INTERIOR ELEVATION**  
 SCALE: 1/4" = 1'-0"



**2 ELEVATION (FOR MOUNTING HEIGHTS ONLY)**  
 A-8 SCALE: 1/4" = 1'-0"

NOTE: GRAB BAR ON SIDE WALL (T-3) TO BE OFFSET 12" FROM THE REAR WALL (T-4). ALL GRAB BARS ARE TO WITHSTAND A STRESS FORCE OF 250 LBS. IN ANY DIRECTION.

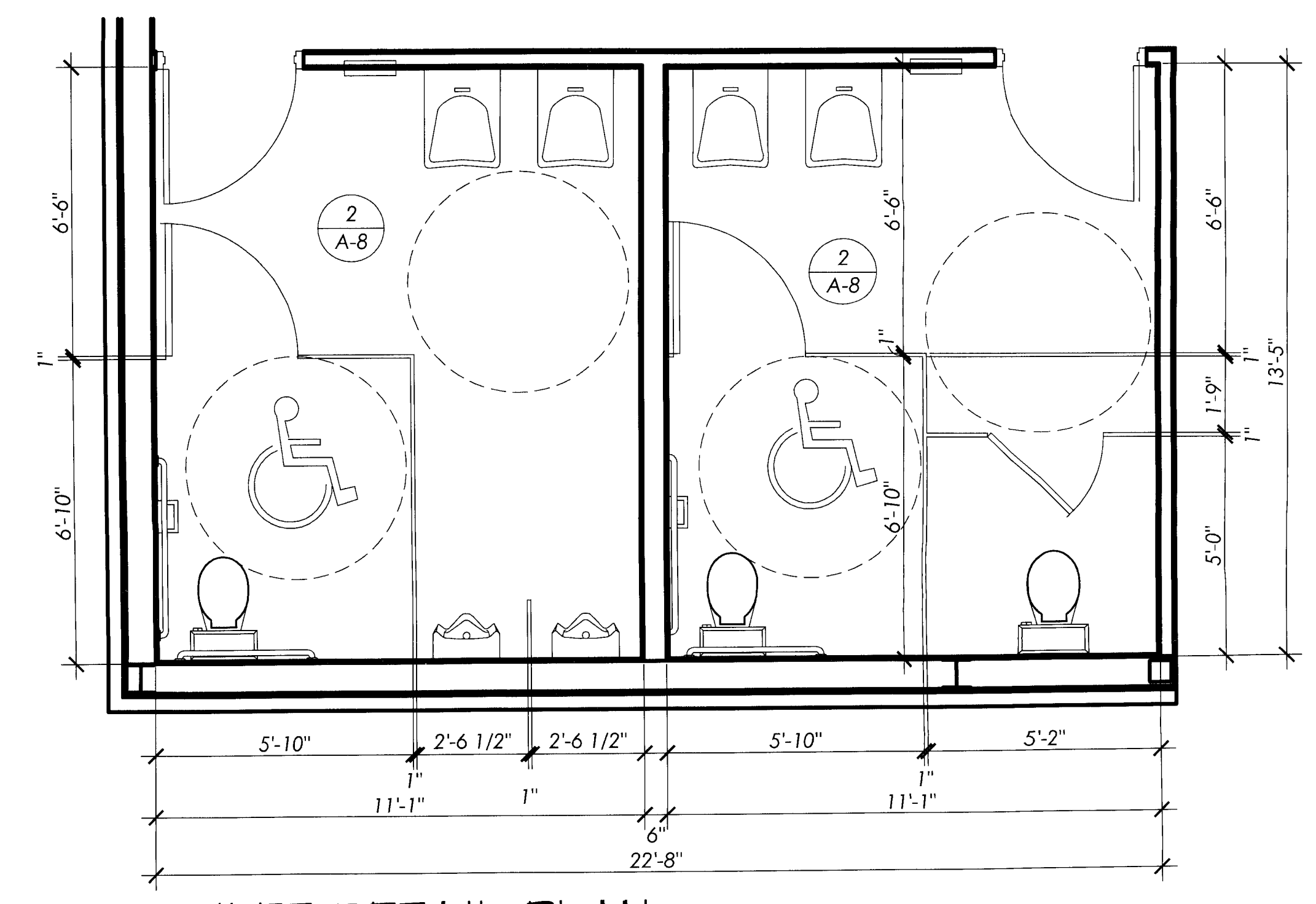
INTERNATIONAL PLUMBING CODE TABLE 404.1 MIN. NO. OF PLUMBING FACILITIES FOR BUSINESS:

WATER CLOSETS	= 1 PER 25
LAVATORIES	= 1 PER 40
DRINKING FOUNTAINS	= 1 PER 100
OTHER	= 1 SERVICE SINK

**TOILET ACCESSORIES SCHEDULE**

MARK	ITEM	MANUFACTURER	MODEL	REMARKS
T1	MIRROR	ASI	0620	18 x 30
T2	TISSUE DISPENSER	ASI	0263-1A	
T3	GRAB BAR (48")	ASI	3201	
T4	GRAB BAR (36")	ASI	3201	
T5	SOAP DISPENSER	BOBRICK B-8221	B-829	WALL MOUNTED (OR EQUAL BY ASI)

- NOTES:
- ALL TOILET ACCESSORIES ARE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR.
  - WHERE NOT SHOWN, MOUNT ALL TOILET ACCESSORIES AT THE MANUFACTURER'S RECOMMENDED MOUNTING HEIGHTS AND IN COMPLIANCE WITH ALL LOCAL AND NATIONAL ACCESSIBILITY REQUIREMENTS.
  - PROVIDE BLOCKING IN WALLS FOR MOUNTING OF ALL TOILET ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER.



**1 TOILET DETAIL PLAN**  
 A-8 SCALE: 3/8" = 1'-0"

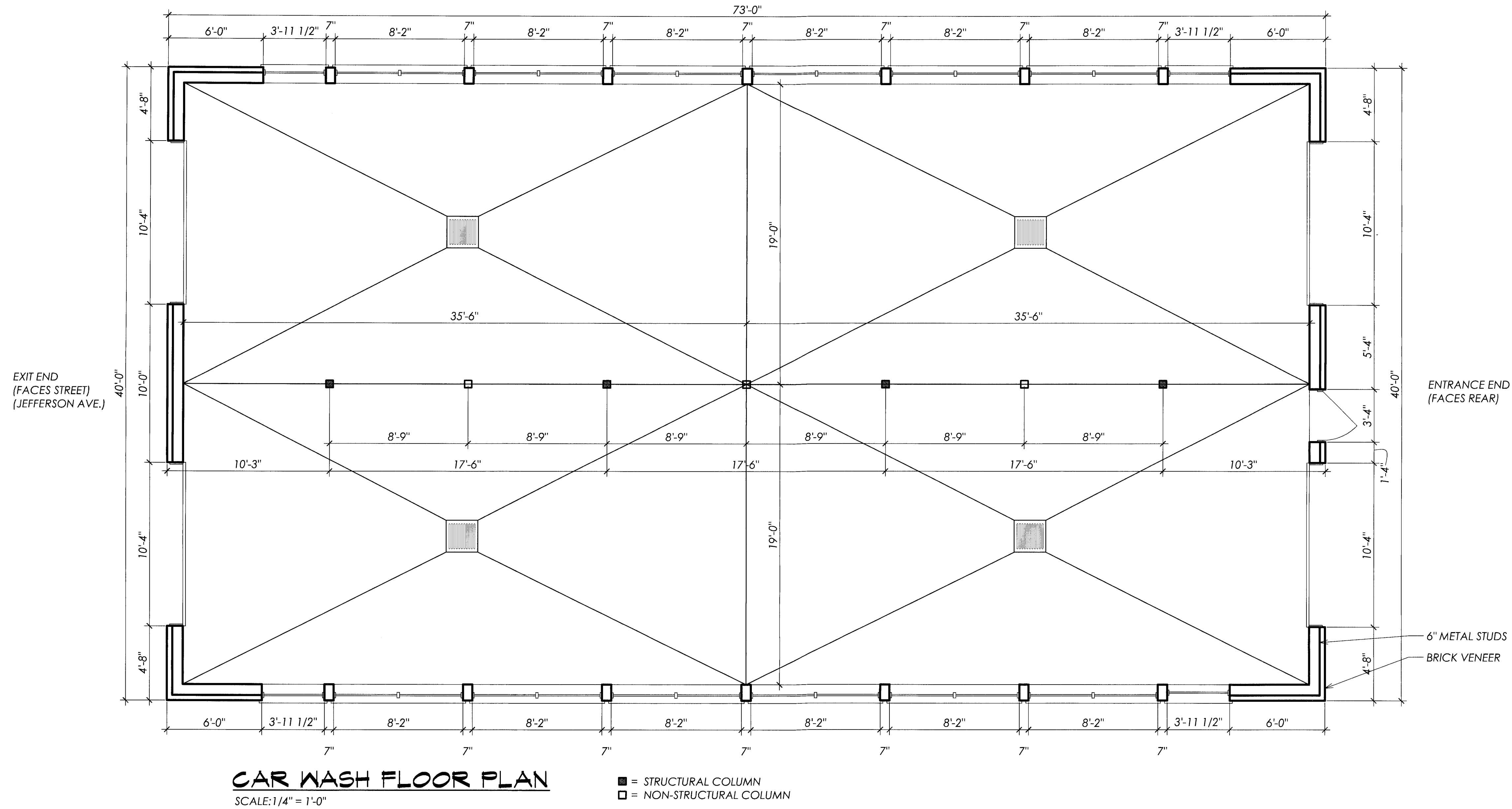
NO.	DATE	REVISION
FILE NAME: 0751	DATE: 26 SEP 07	DRAWN BY: DRM
CHECKED BY: CMH		
 NOT TO BE USED FOR CONSTRUCTION		
JOB NO: 0751		
SHEET 13 OF 22		

S:\air Racoco NNDrawings\Architectural\Sheets\0751-A1.dwg, 9/27/2007 12:43:38 PM, Nathan Siskatouse, Architect









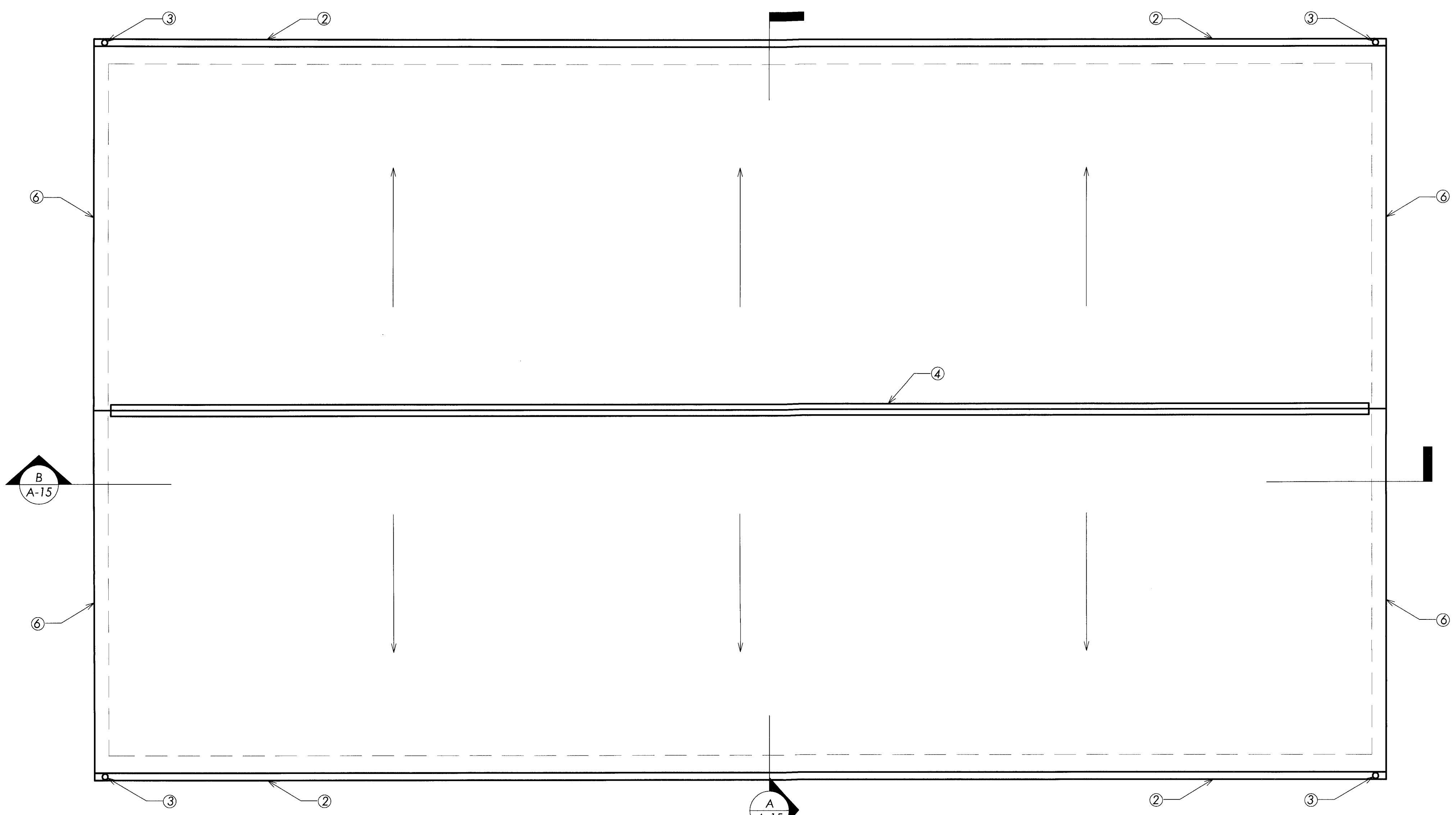
NO.	DATE	REVISION

FILE NAME: 0751-A12	DATE: 26 SEP 07	DRAWN BY: DRM	CHECKED BY: CMH
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**BID SET**

NOT TO BE USED FOR CONSTRUCTION

PROJECT NAME  
 SAIR ENTERPRISES  
 NEW RACECO C-STORE AND CAR WASH  
 11005 JEFFERSON AVE  
 NEWPORT NEWS, VA 23601  
 DWG TITLE  
 CAR WASH ROOF PLAN



**CAR WASH ROOF PLAN**

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

- NOTES:
1. STANDING SEAM METAL ROOF (ATAS SILVERSMITH #28)
  2. 6" OGEE GUTTER (WHITE PREFINISHED)
  3. 4"x6" DOWNSPOUT (WHITE PREFINISHED)
  4. RIDGE CAP (ATAS SILVERSMITH #28)
  5. NOT USED
  6. EDGE TRIM (ATAS SILVERSMITH #28)

NO.	DATE	REVISION	BY

FILE NAME: 0751-A12  
 DATE: 26 SEP 07  
 DRAWN BY: DRM  
 CHECKED BY: CMH

**BID**  
**SET**  
 NOT TO BE USED FOR CONSTRUCTION

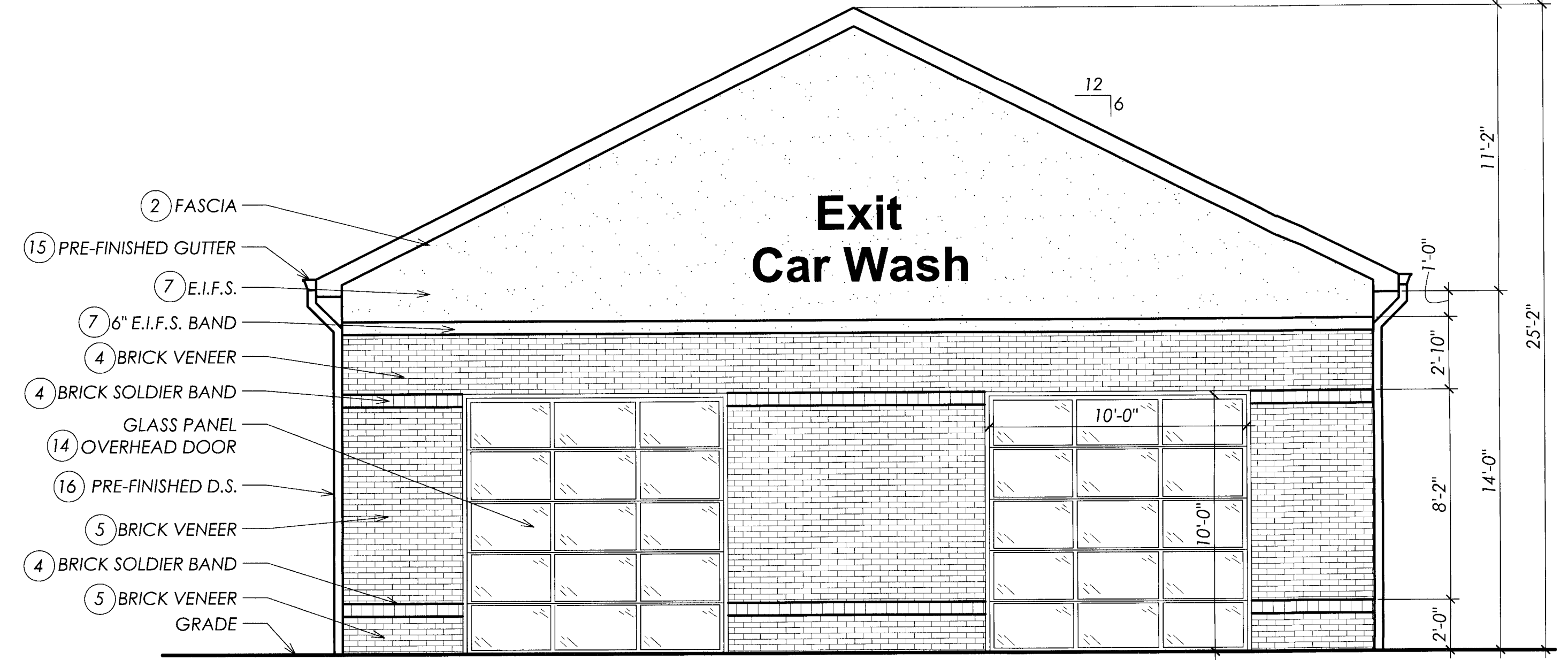
JOB NO: 0751  
**A-13**  
 SHEET 17 OF 22





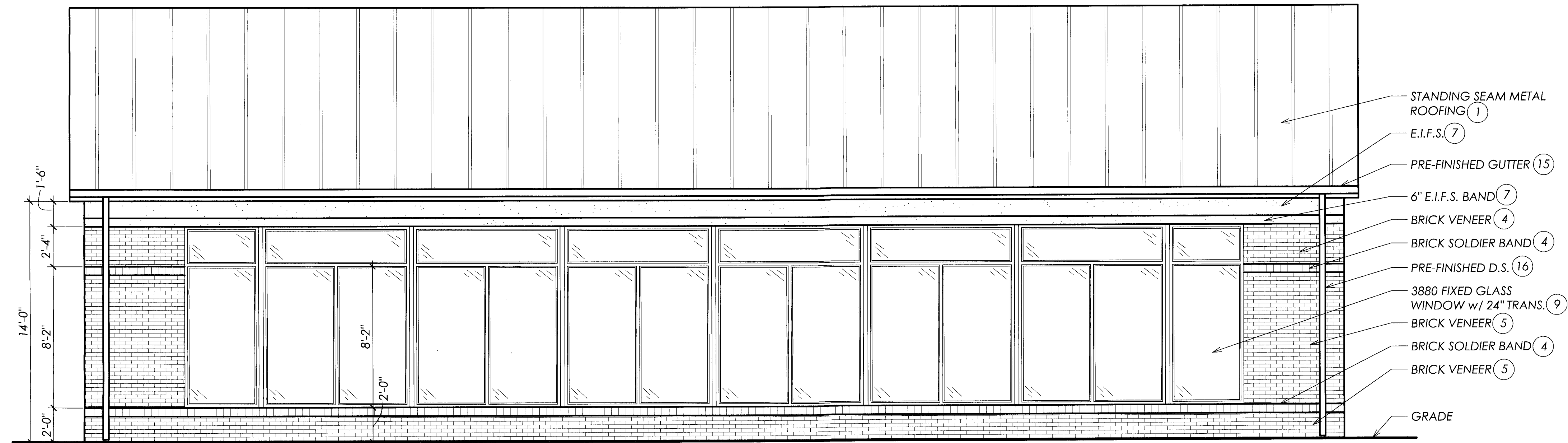
**CAR WASH  
 REAR ELEVATION**

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



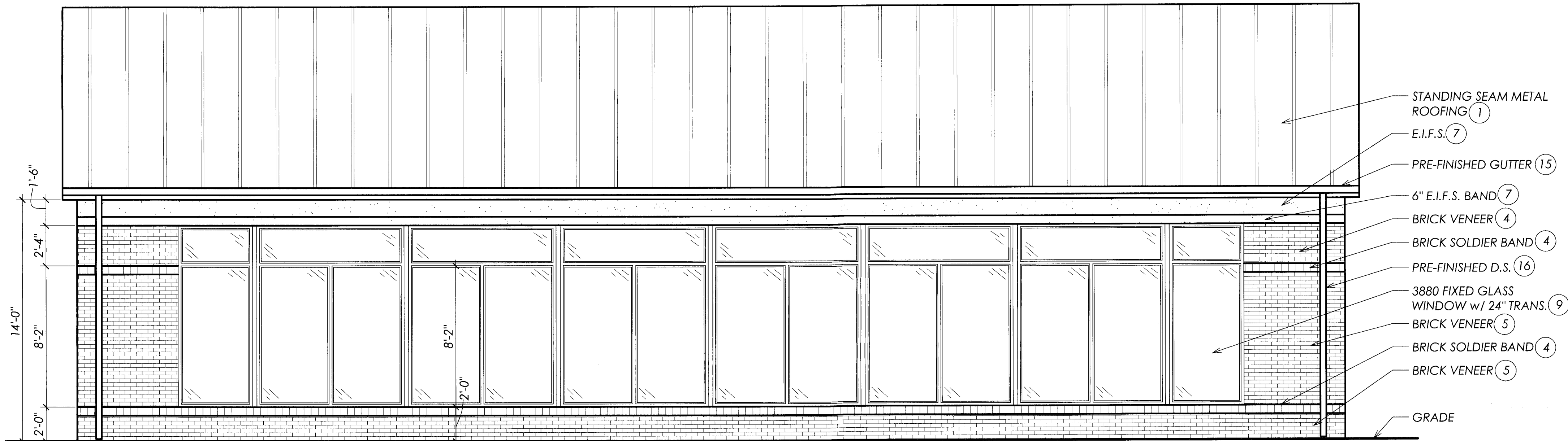
**CAR WASH  
 FRONT ELEVATION**

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



**CAR WASH  
 RIGHT SIDE ELEVATION**

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



**CAR WASH  
 LEFT SIDE ELEVATION**

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

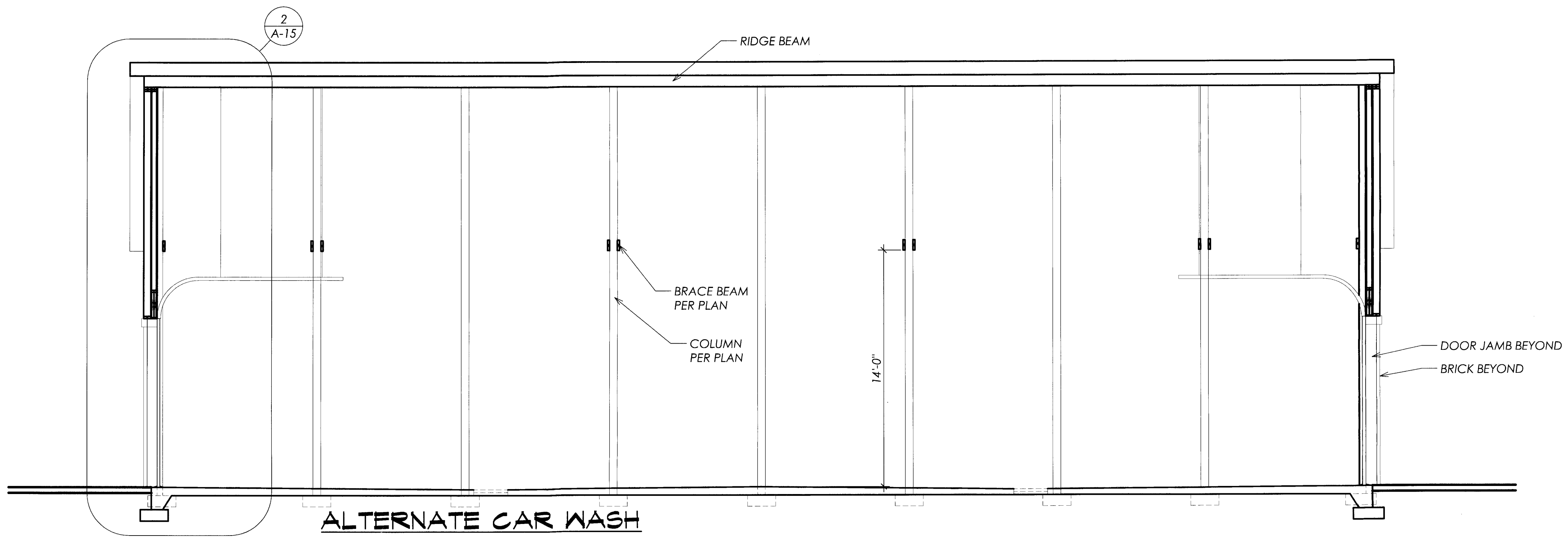
- # EXTERIOR FINISH MATERIALS:
1. ATAS SILVERSMITH #28 METAL ROOF
  2. WHITE PVC FASCIA
  3. WHITE ALUMINUM LOUVER
  4. 301 TAYLOR WHITE BRICK
  5. 306 TAYLOR PINK BRICK (TAN)
  6. SMOOTH WHITE E.I.F.S.
  7. TEXTURED IVORY E.I.F.S.
  8. WHITE E.I.F.S. COLUMNS
  9. MILL FINISH ALUMINUM STOREFRONT
  10. DARK BRONZE ALUMINUM FENCE
  11. BLUE ACRYLIC FASCIA
  12. RED ACRYLIC FASCIA
  13. WHITE PLASTIC COVER OVER CONC. FILLED STEEL PIPE BOLLARD
  14. MILL FINISH ALUMINUM DOOR RAILS
  15. WHITE PRE-FINISHED GUTTER
  16. WHITE PRE-FINISHED D.S.

PROJECT NAME: INTERPRISES  
 STORE FRONT  
 NEW RACECO C-STORE AND CAR WASH  
 11005 JEFFERSON AVE  
 NEWPORT NEWS, VA 23601  
 DWG TITLE: CAR WASH EXTERIOR ELEVATIONS

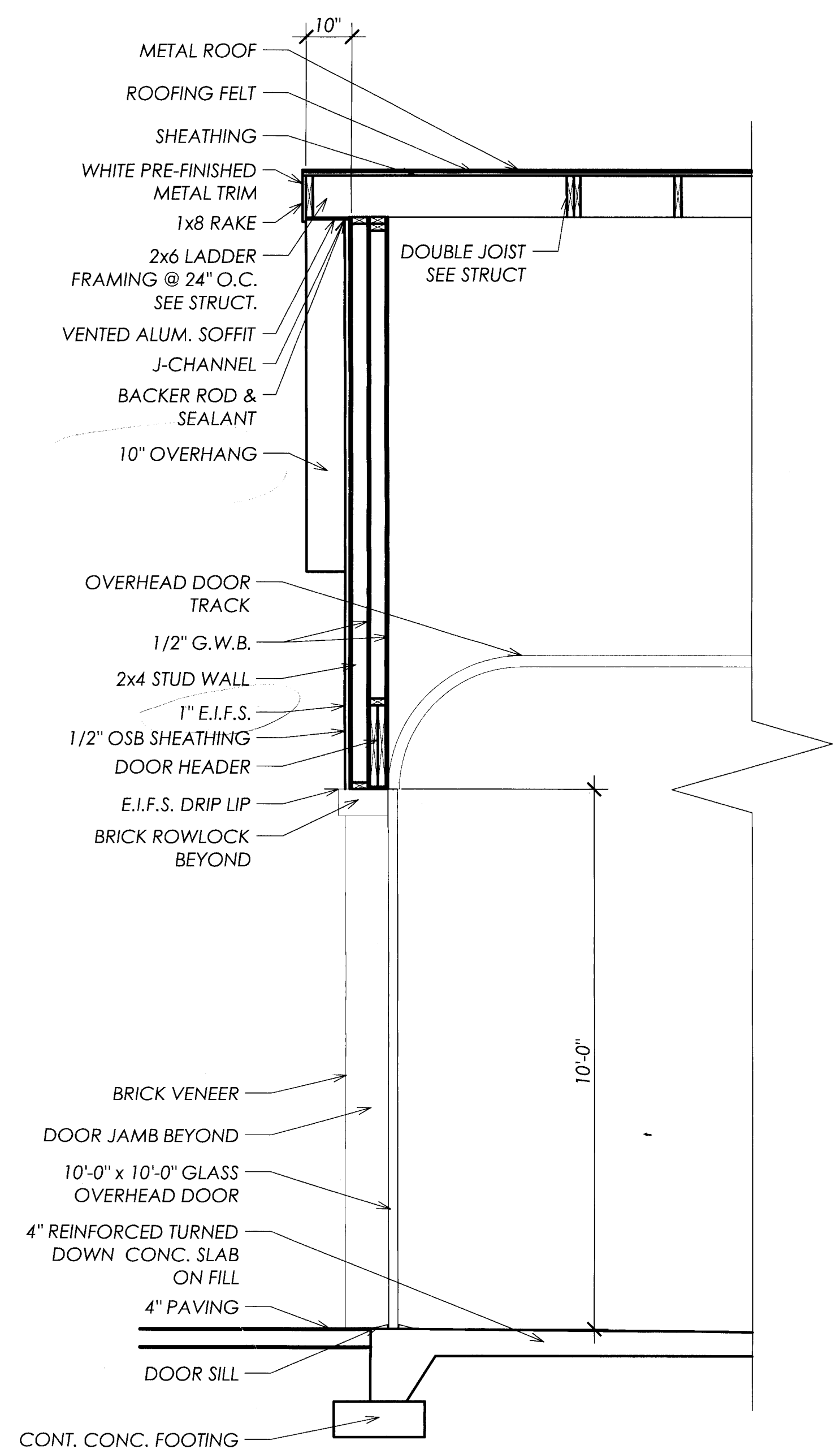
NO.	DATE	REVISION	BY

FILE NAME: 0751-A12	DATE: 26 SEP 07	DRAWN BY: DRYM	CHECKED BY: CVH
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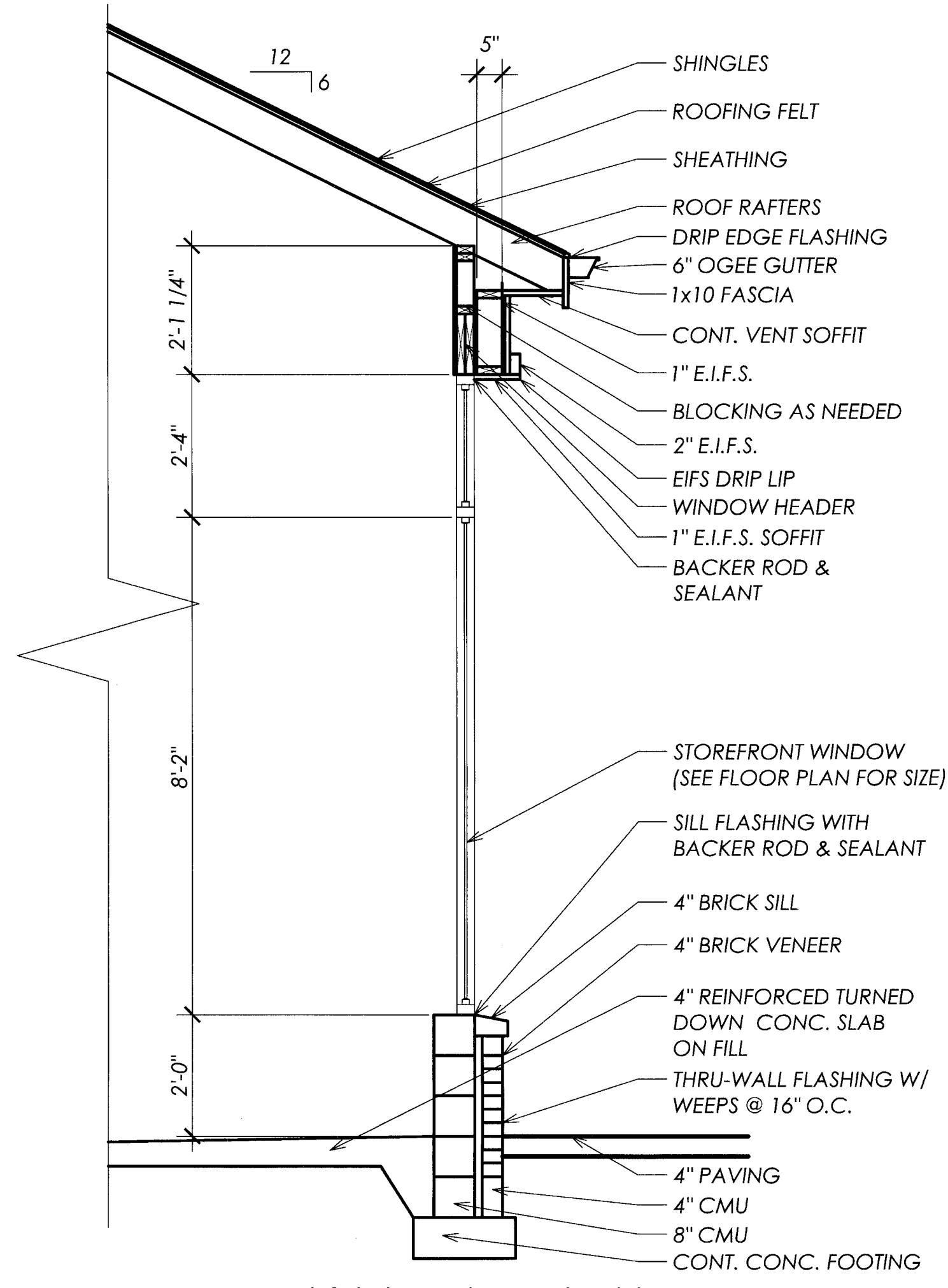
**BID  
 SET**  
 NOT TO BE USED  
 FOR CONSTRUCTION



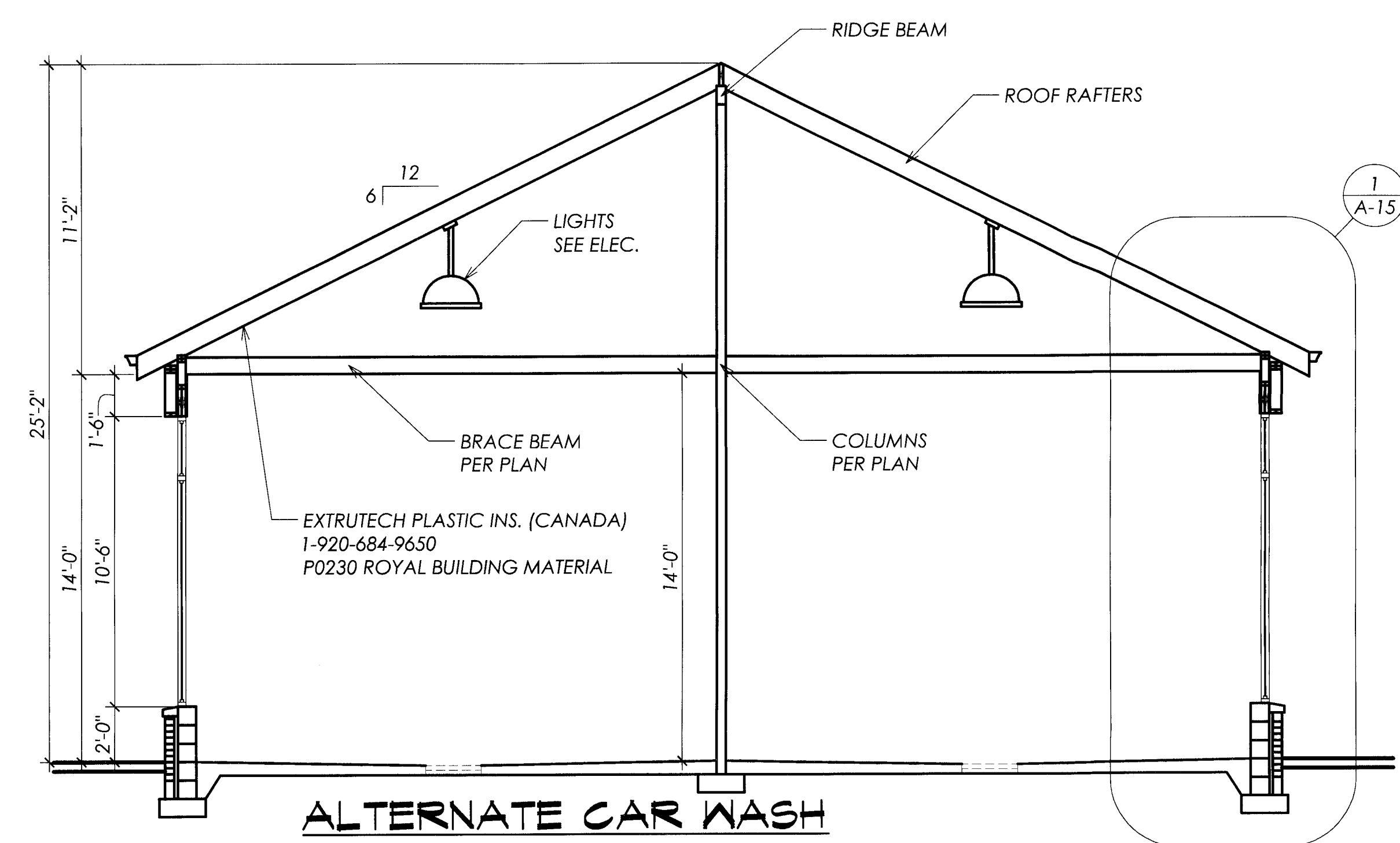
**ALTERNATE CAR WASH BUILDING SECTION**  
 (2) A-15 SCALE: 1/4" = 1'-0"



**WALL SECTION**  
 (2) A-15 SCALE: 1/2" = 1'-0"



**WALL SECTION**  
 (1) A-15 SCALE: 1/2" = 1'-0"



**ALTERNATE CAR WASH BUILDING SECTION**  
 (A) A-15 SCALE: 1/4" = 1'-0"

*Call 9-1- of  
 Mike.  
 C/MU w/ Interior  
 Finishing.  
 Call Bret  
 for Office Circling  
 Cavalier?*

PROJECT NAME: SAIR ENTERPRISES  
 NEW RACECO C-STORE AND CAR WASH  
 11005 JEFFERSON AVE  
 NEWPORT NEWS, VA 23601  
 DWG TITLE: CAR WASH BUILDING SECTIONS

NO.	DATE	REVISION

FILE NAME: 0751-A12	DATE: 26 SEP 07	DRAWN BY: DRY	CHECKED BY: CMH
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**BID SET**  
 NOT TO BE USED FOR CONSTRUCTION

JOB NO: 075

**A-15**

NO.	REVISION	DATE

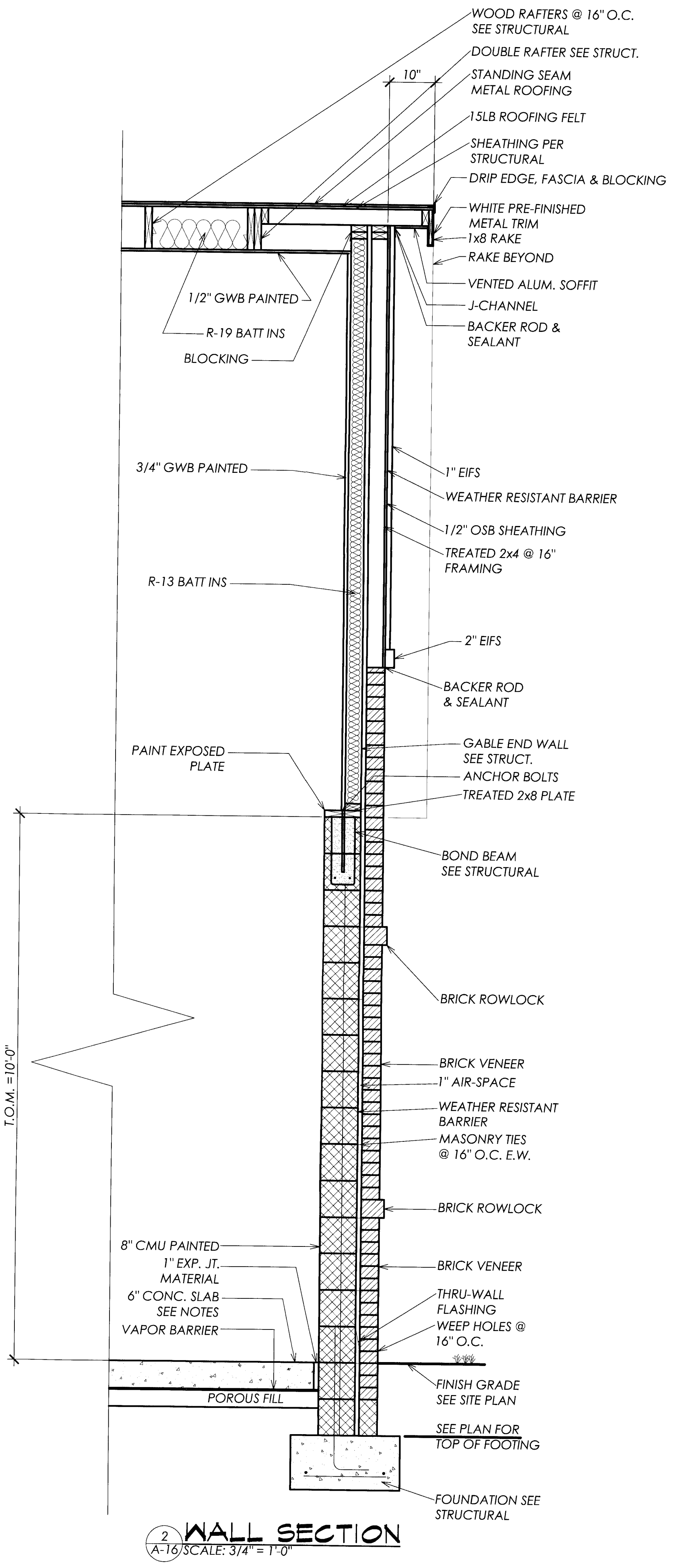
FILE NAME: 0751-A16	DATE: 26 SEP 07	DRAWN BY: DRYM	CHECKED BY: CMH
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BID SET

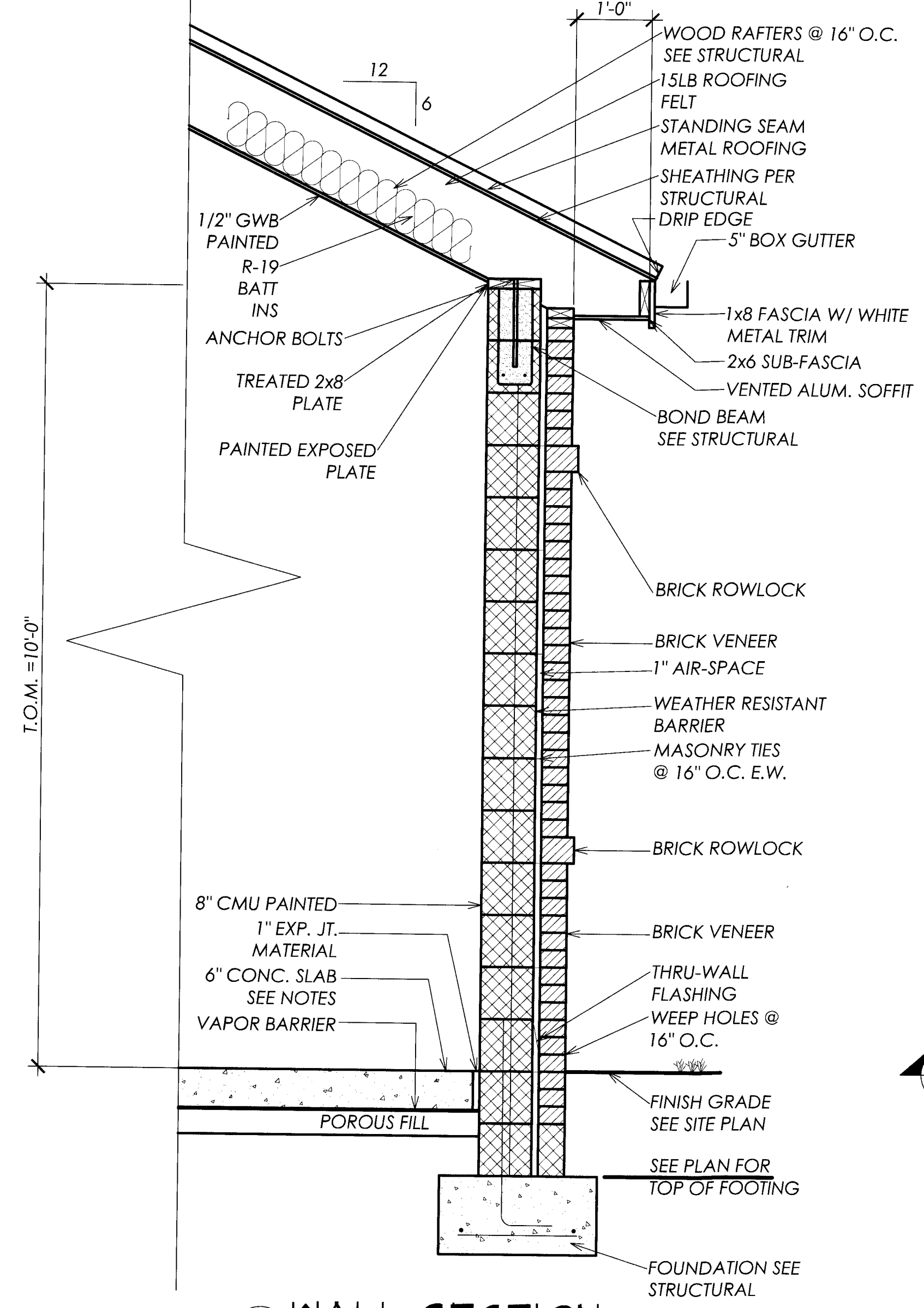
NOT TO BE USED FOR CONSTRUCTION

JOB NO.: 0751

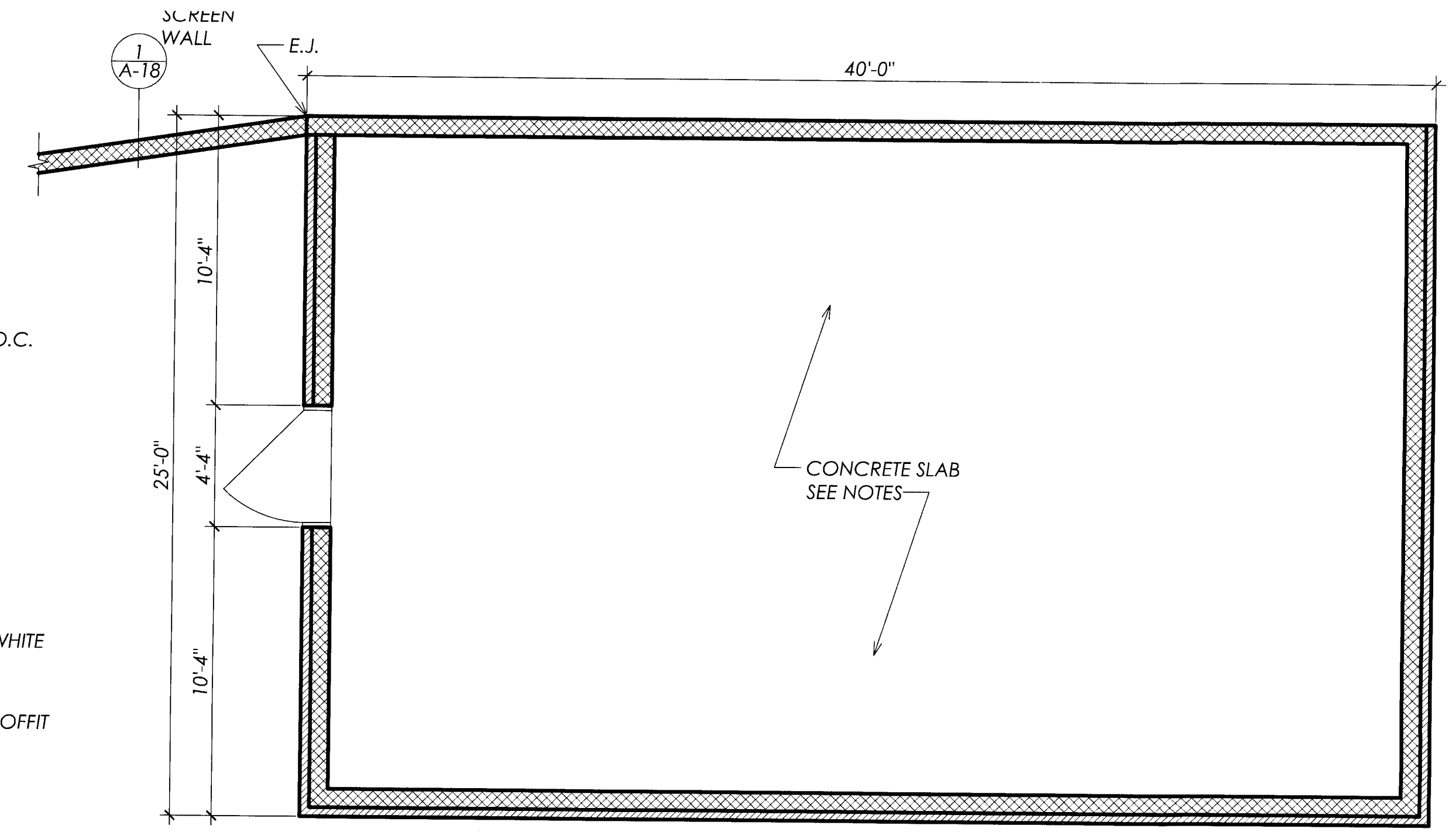
A-16



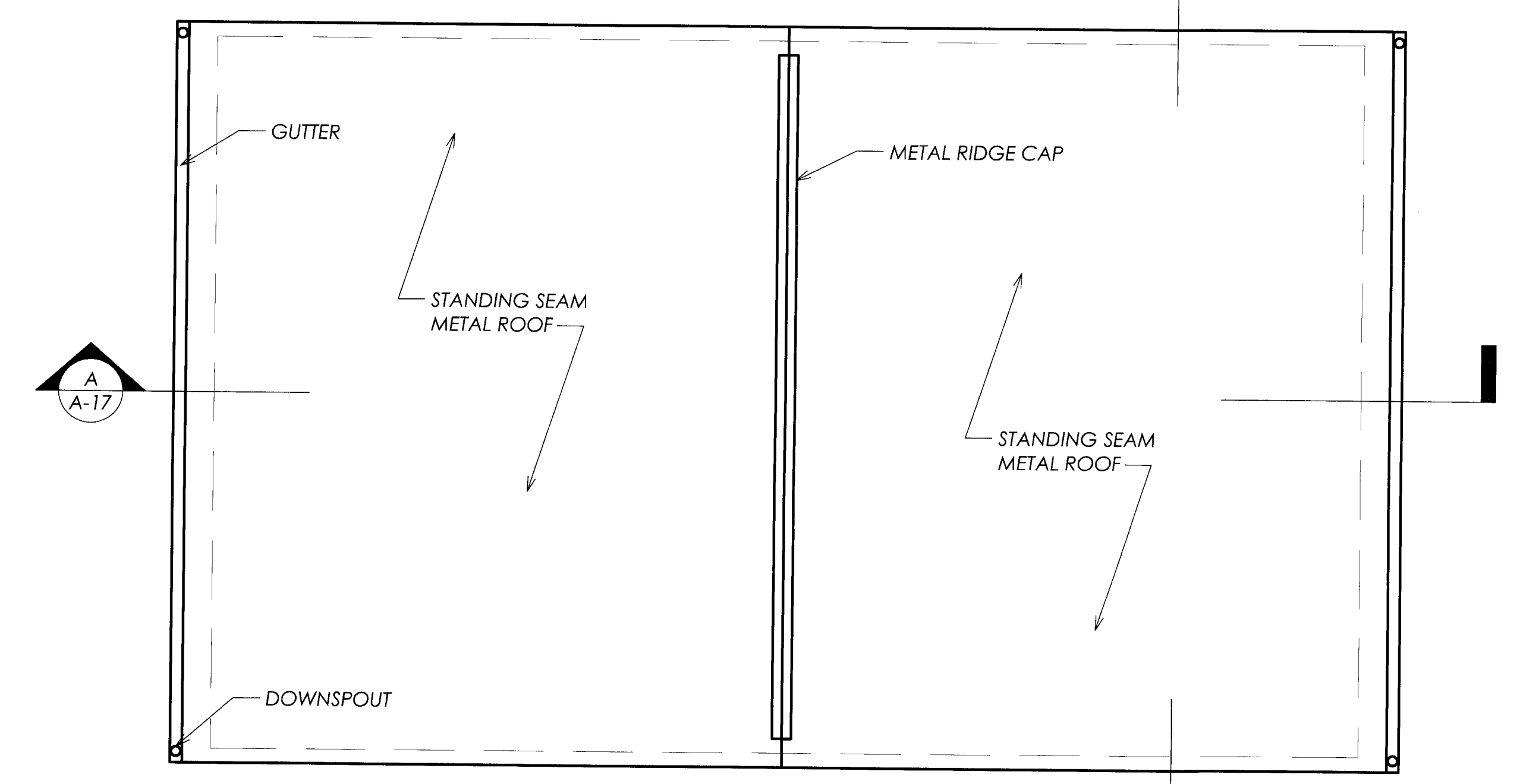
**2 WALL SECTION**  
 A-16 SCALE: 3/4" = 1'-0"



**1 WALL SECTION**  
 A-16 SCALE: 3/4" = 1'-0"



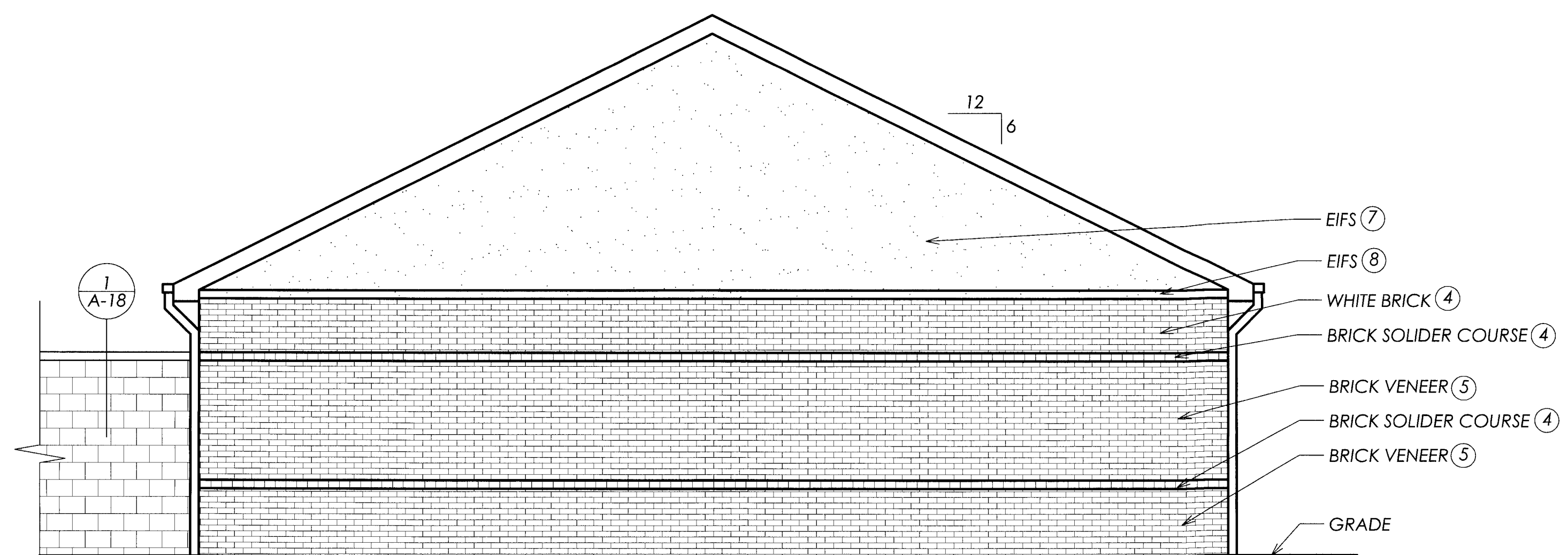
**EQUIPMENT BUILDING FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"



**EQUIPMENT BUILDING ROOF PLAN**  
 SCALE: 1/4" = 1'-0"

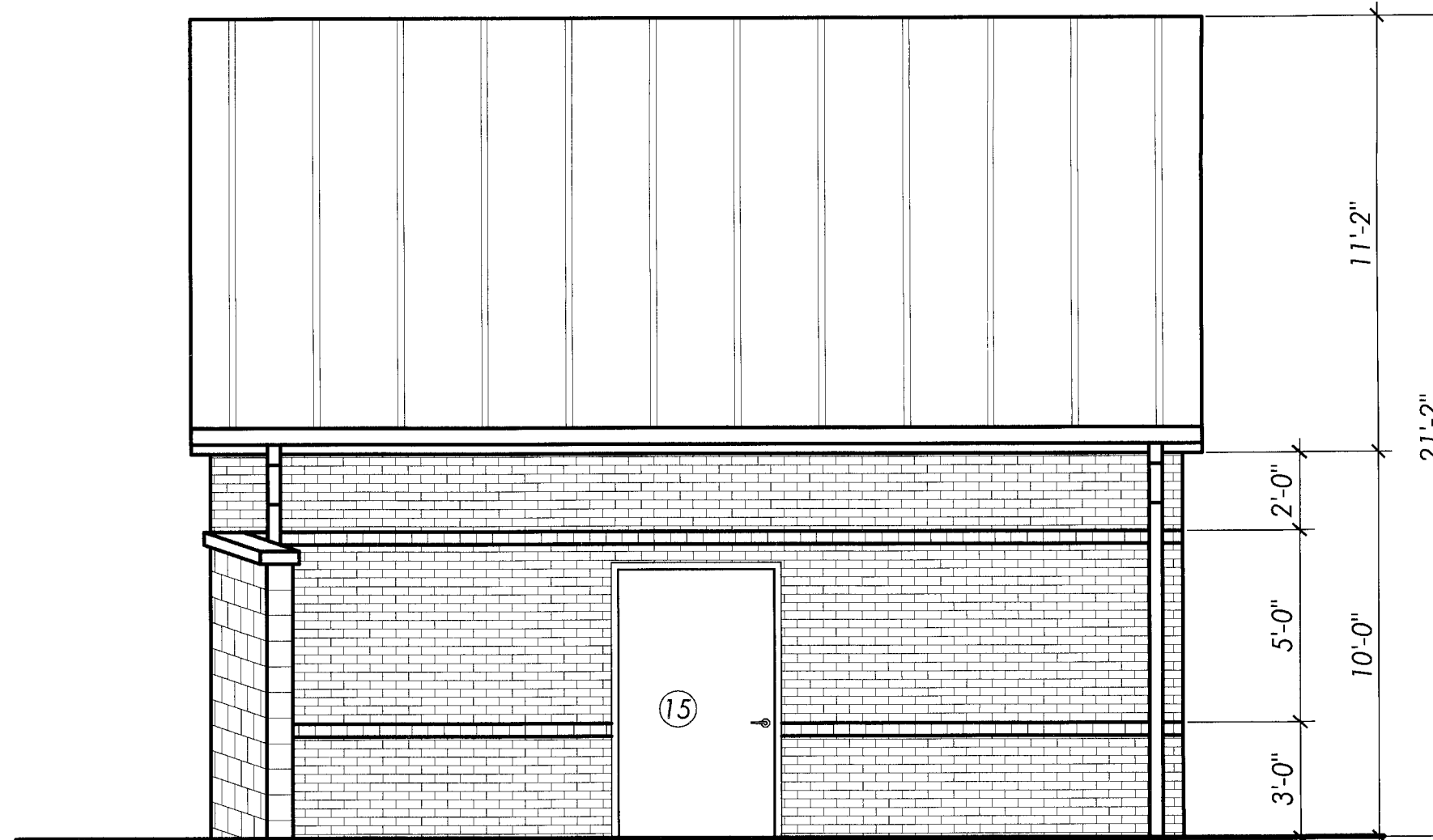
- NOTES:
1. STANDING SEAM METAL ROOF (ATAS SILVERSMITH #28)
  2. 6" OGEE GUTTER (WHITE PREFINISHED)
  3. 4"x6" DOWNSPOUT (WHITE PREFINISHED)
  4. RIDGE CAP (ATAS SILVERSMITH #28)
  5. VALLEY FLASHING (ATAS SILVERSMITH #28)





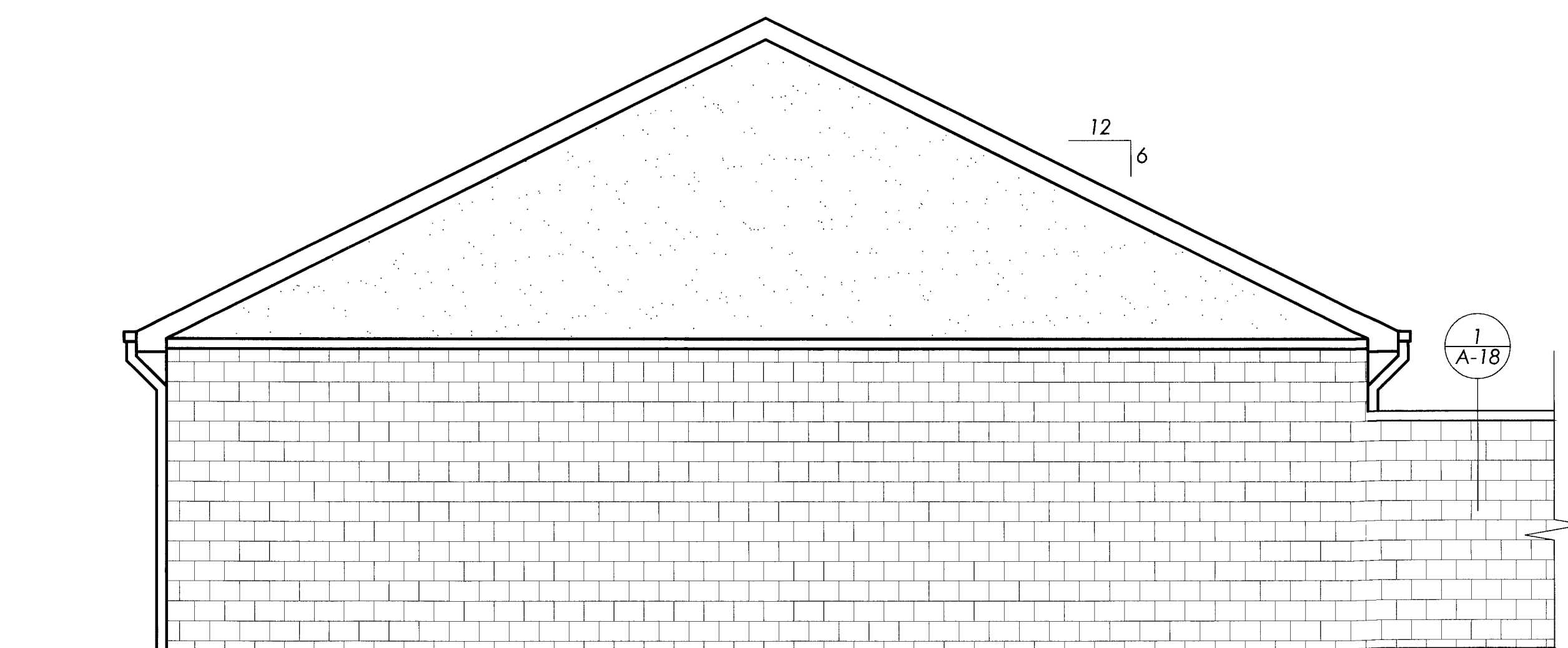
**EQUIPMENT BUILDING FRONT ELEVATION**

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



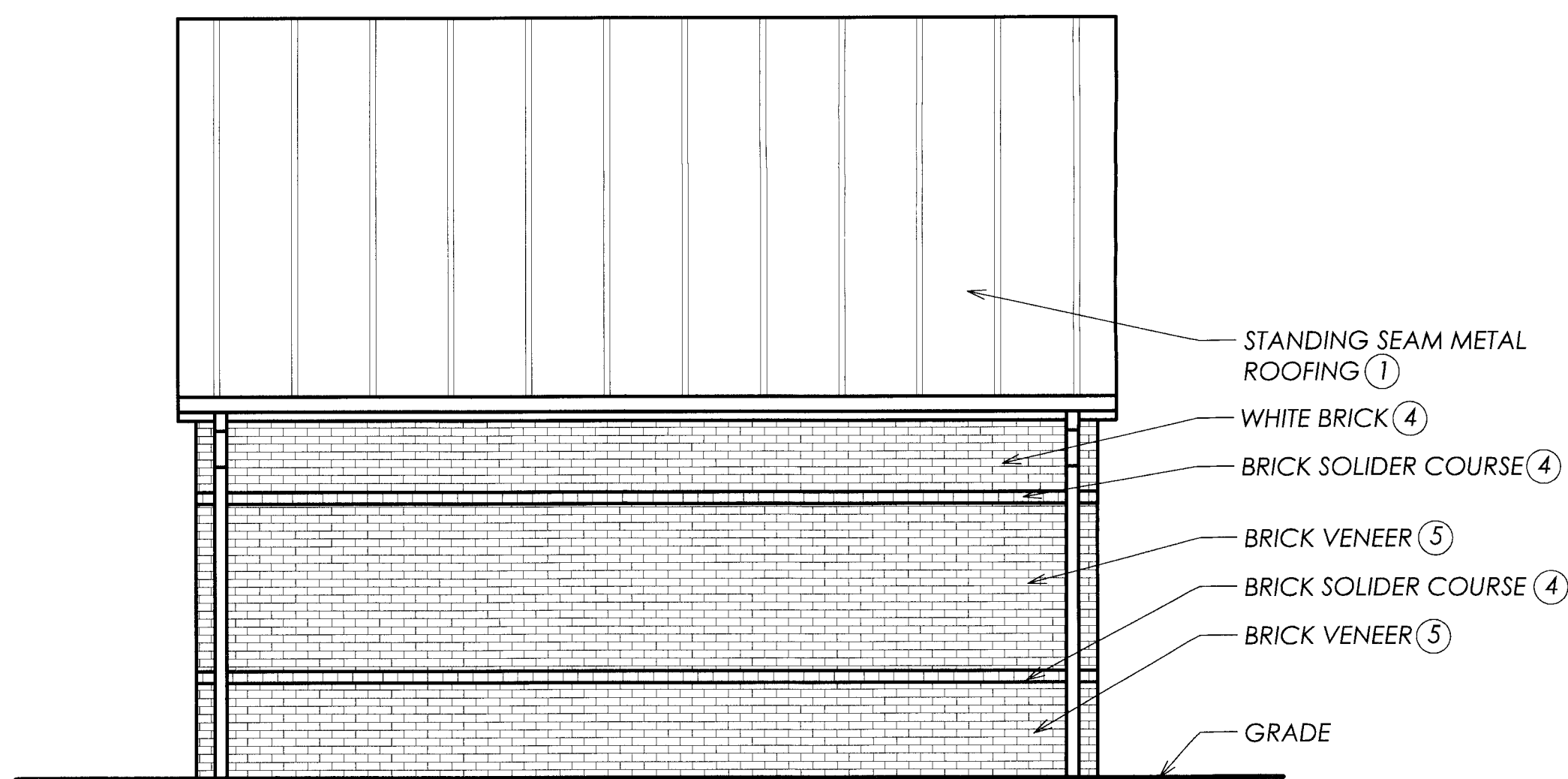
**EQUIPMENT BUILDING LEFT SIDE ELEVATION**

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



**EQUIPMENT BUILDING REAR ELEVATION**

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

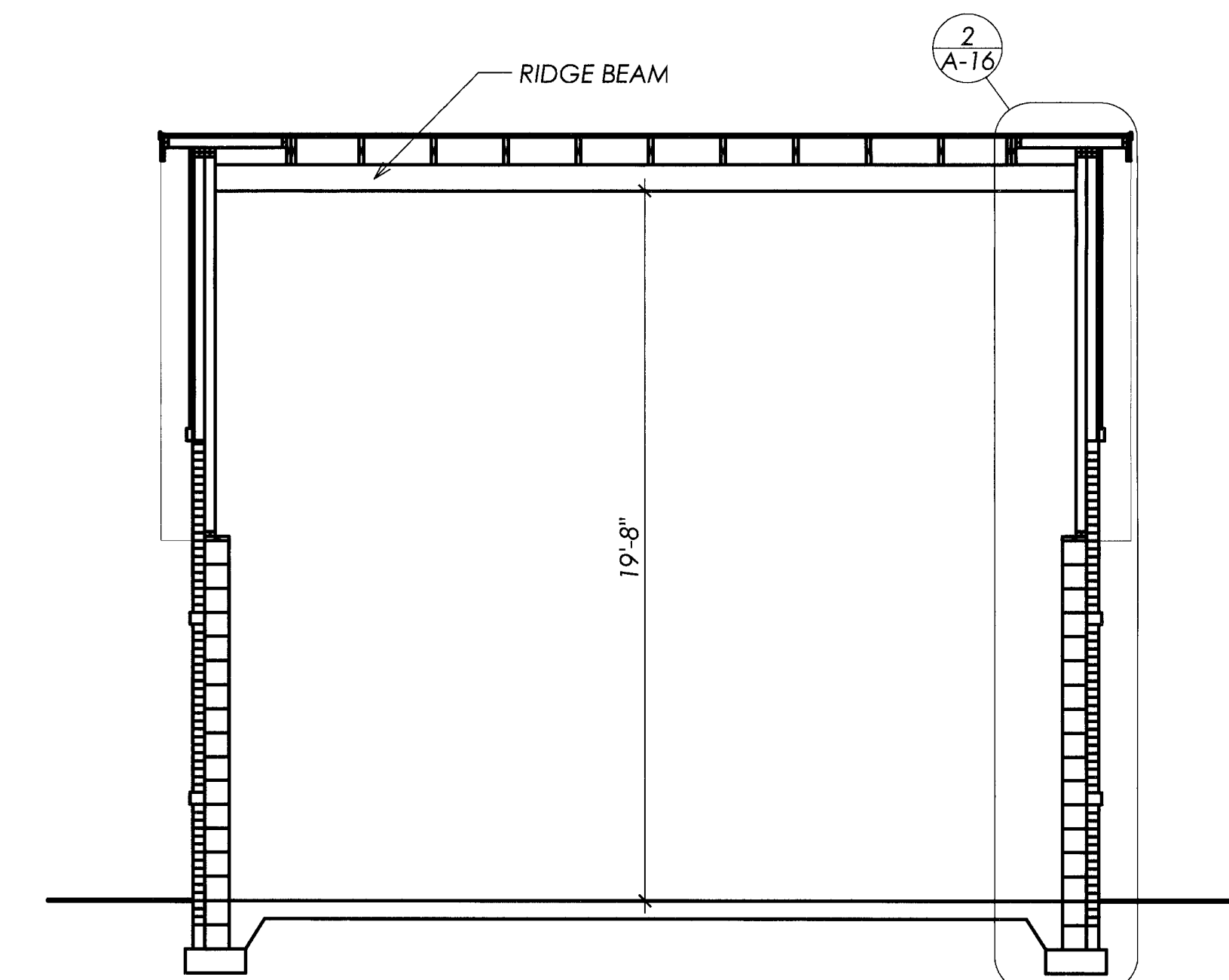


**EQUIPMENT BUILDING RIGHT SIDE ELEVATION**

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

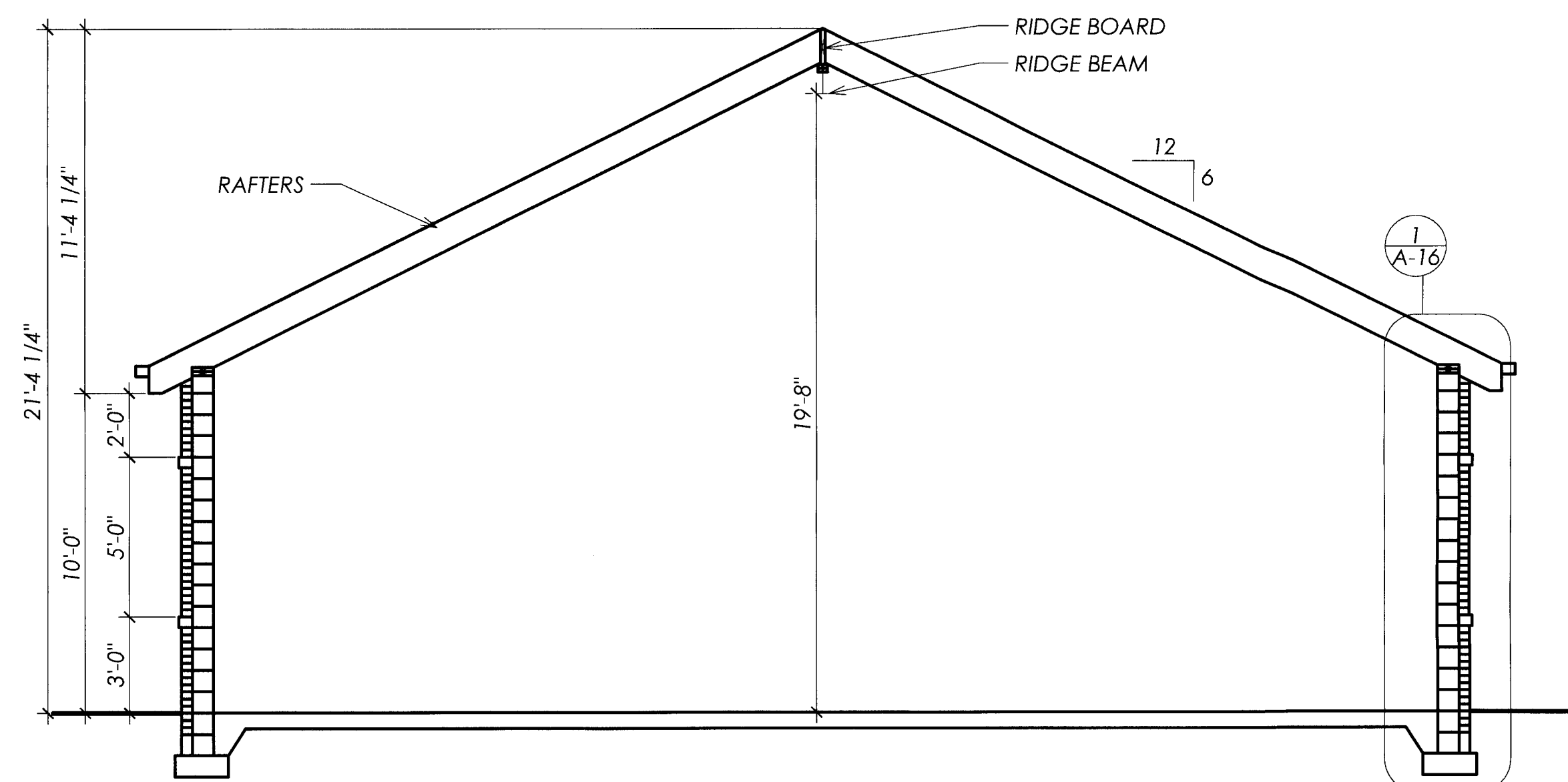
# EXTERIOR FINISH MATERIALS:

1. ATAS SILVERSMITH #28 METAL ROOF
2. WHITE PVC FASCIA
3. WHITE ALUMINUM LOUVER
4. 301 TAYLOR WHITE BRICK
5. 306 TAYLOR PINK BRICK (TAN)
6. SMOOTH WHITE E.I.F.S.
7. TEXTURED IVORY E.I.F.S.
8. WHITE E.I.F.S. COLUMNS
9. MILL FINISH ALUMINUM STOREFRONT
10. DARK BRONZE ALUMINUM FENCE
11. BLUE ACRYLIC FASCIA
12. RED ACRYLIC FASCIA
13. WHITE PLASTIC COVER OVER CONC. FILLED STEEL PIPE BOLLARD
14. MILL FINISH ALUMINUM DOOR RAILS
15. HM DOOR AND FRAME PAINTED TO MATCH DARK BRONZE FENCE



**EQUIPMENT BUILDING SECTION**

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



**EQUIPMENT BUILDING SECTION**

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

PROJECT NAME: SAIR ENTERPRISES  
 NEW RACECO C-STORE AND CAR WASH  
 11005 JEFFERSON AVE  
 NEWPORT NEWS, VA 23601  
 DWG TITLE: EQUIPMENT BUILDING EXTERIOR ELEVATIONS & SECTION

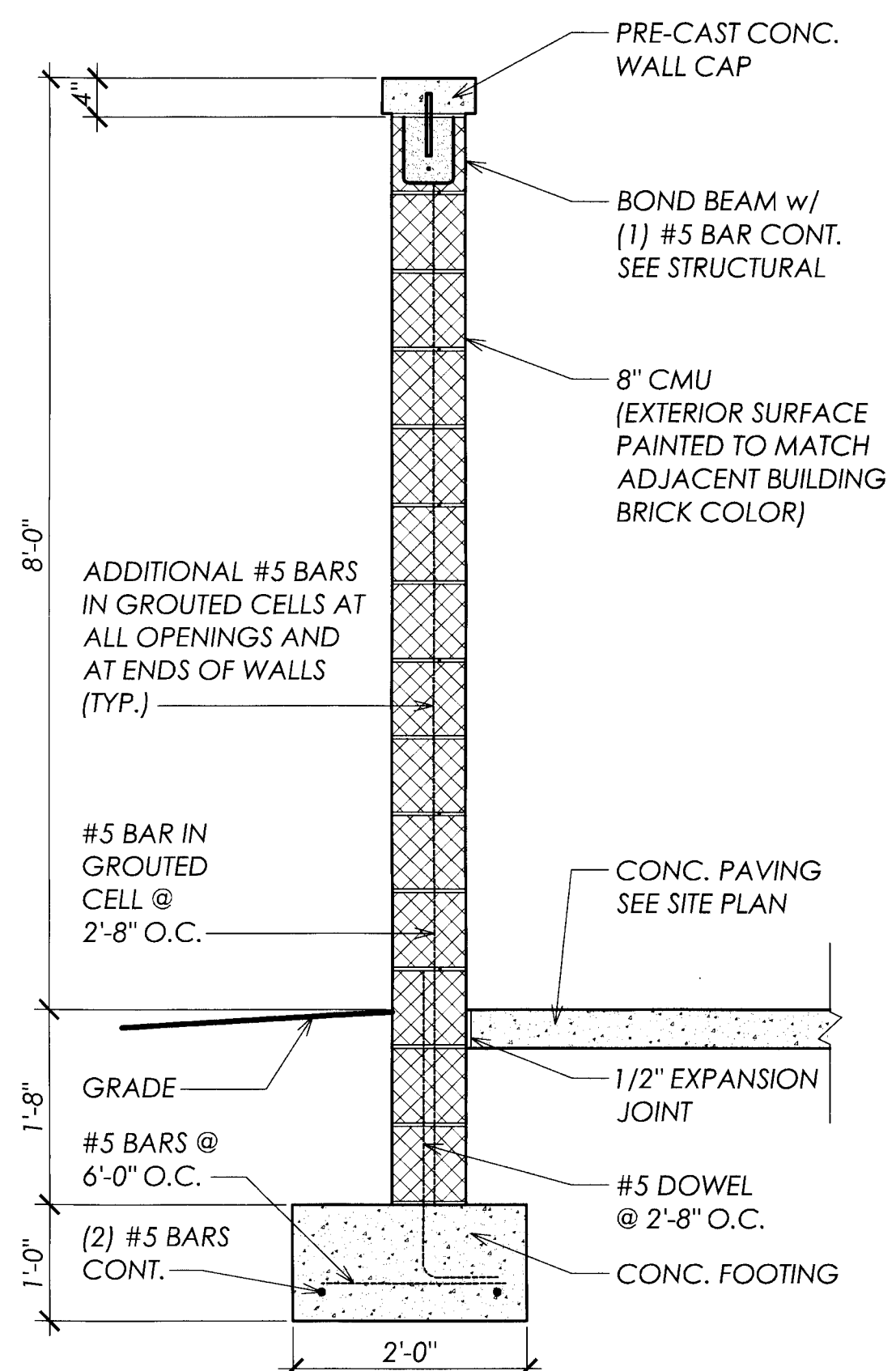
NO.	DATE	REVISION	BY

FILE NAME: 0751-A16	DATE: 26 SEP 07	DRAWN BY: DRYM	CHECKED BY: CMH
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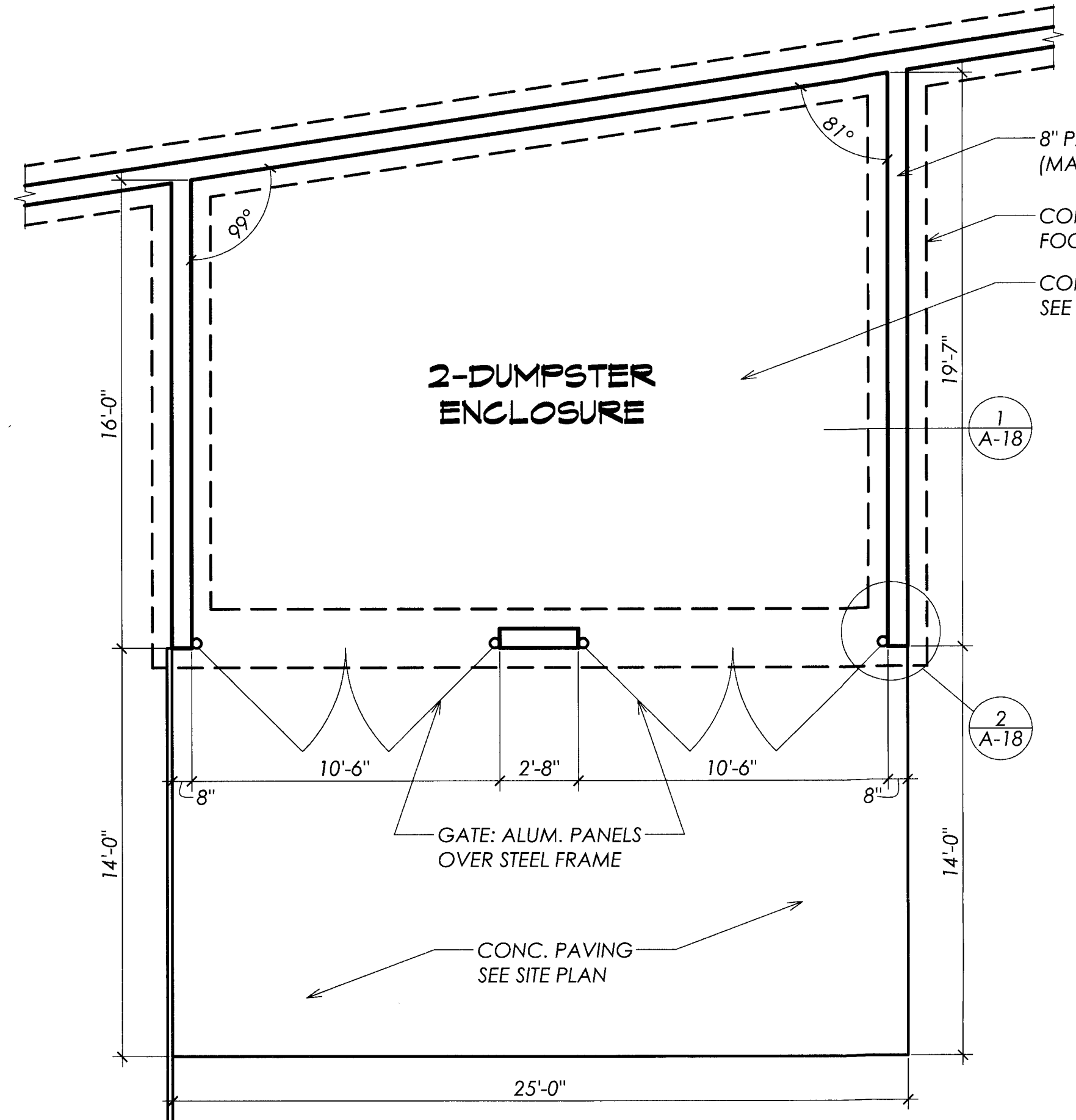
**BID SET**  
 NOT TO BE USED FOR CONSTRUCTION

N:\data\07\_JOBS\0751\_Sair\_Raceco NNDrawings\Architectural\Sheets\0751-A16.dwg, 9/27/2007 12:46:56 PM, Nathan Sklaroose, Michael Henry - Architect

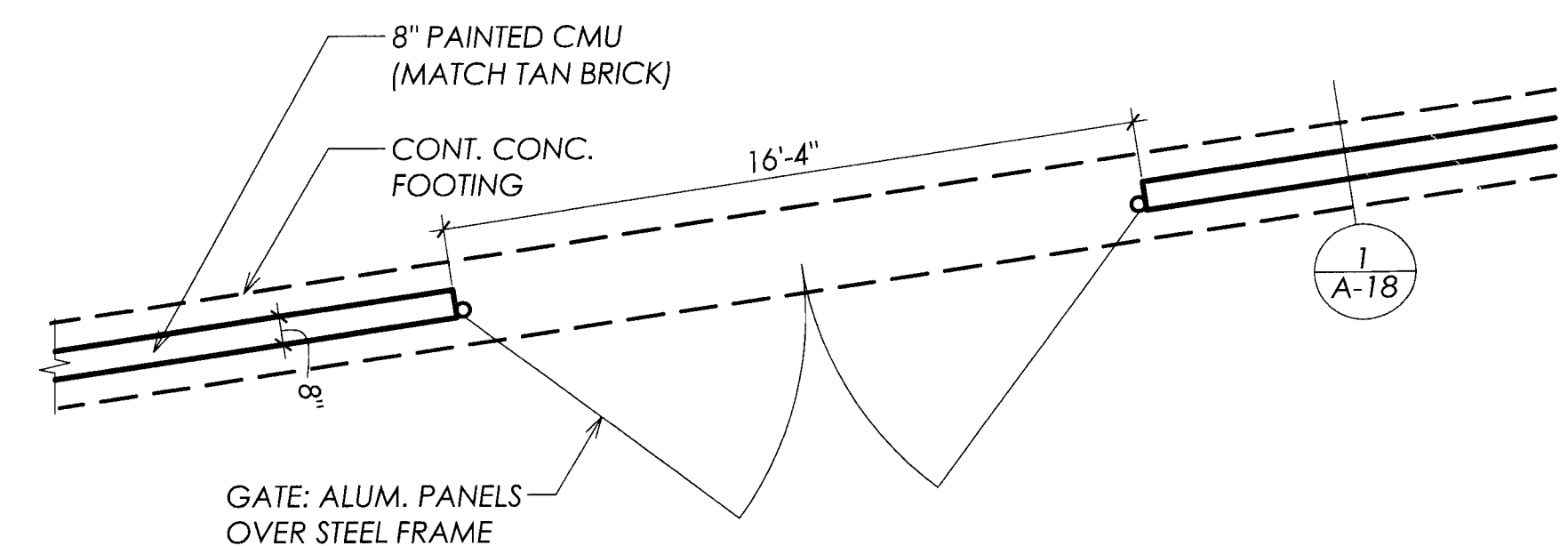




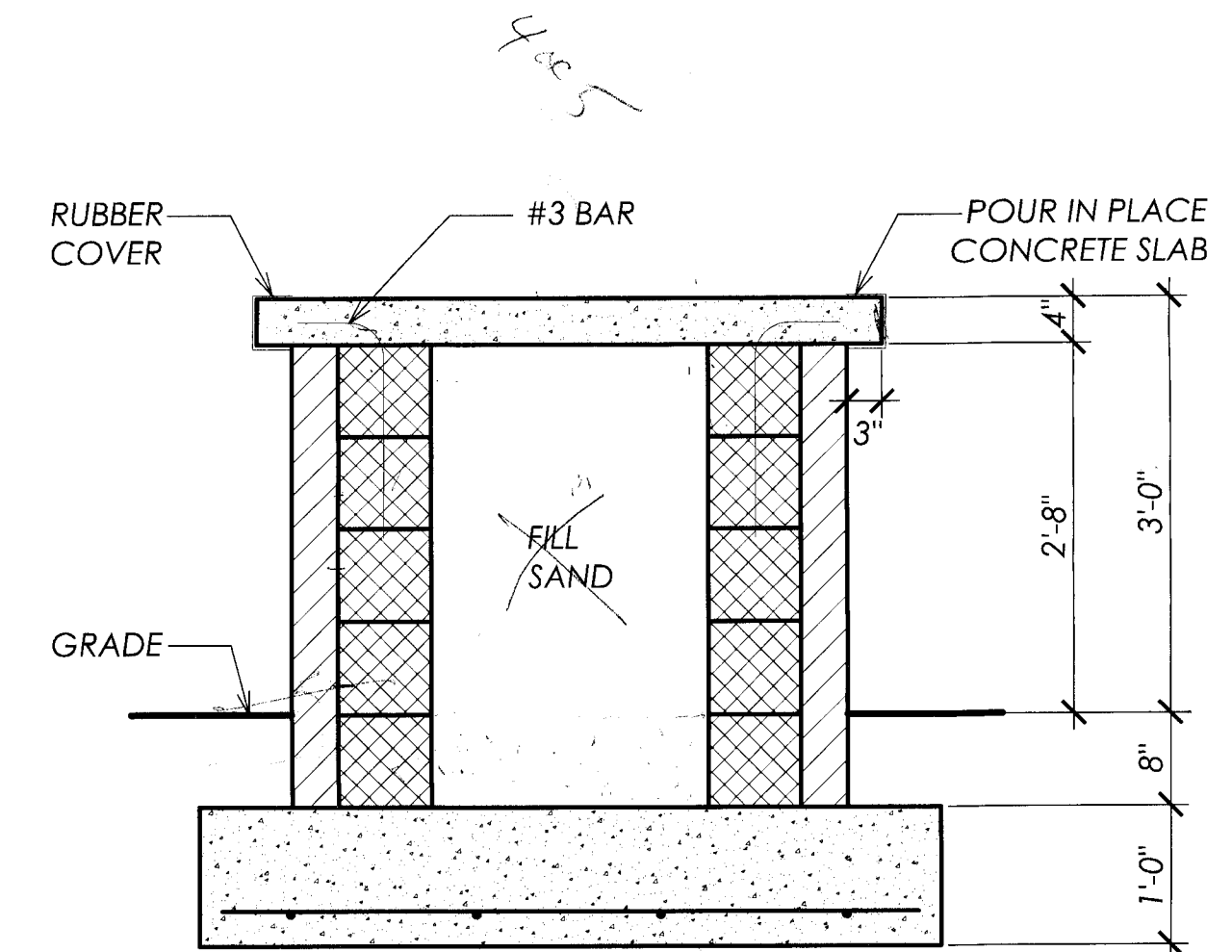
1 DUMPSTER SCREEN SECTION  
SCALE: 3/4" = 1'-0"



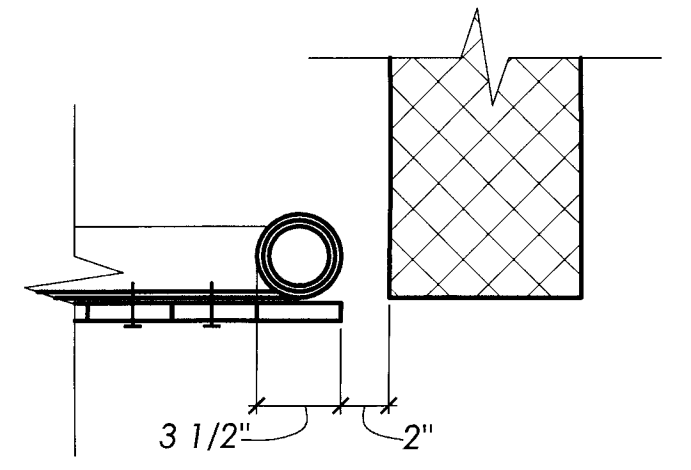
DUMPSTER ENCLOSURE PLAN  
SCALE: 1/4" = 1'-0"



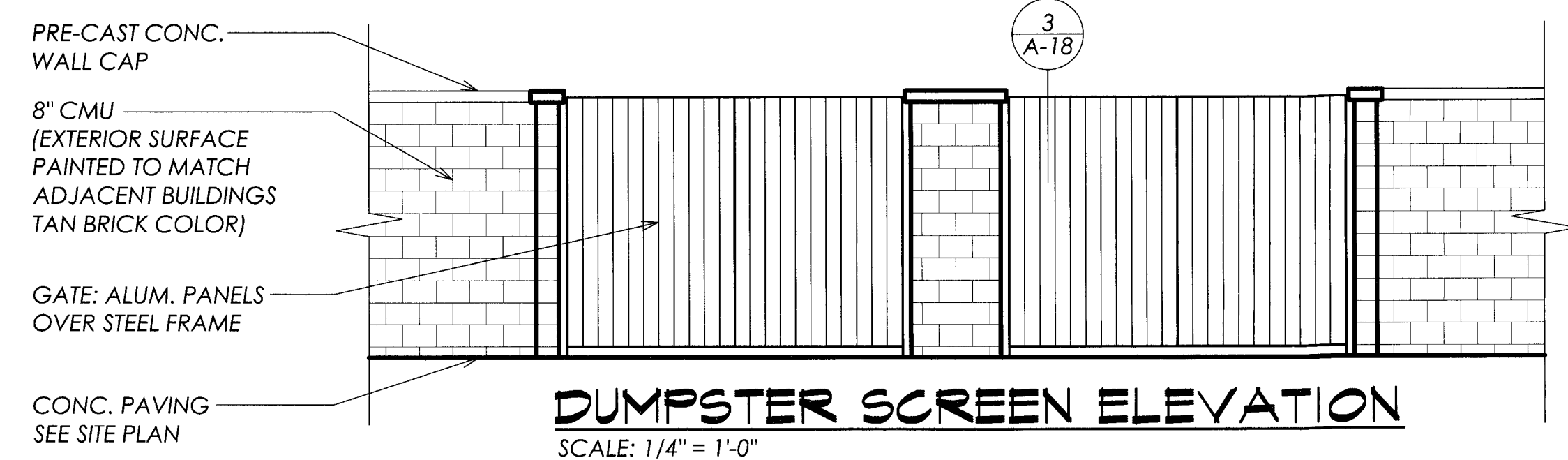
REAR SCREEN WALL W/ GATE PLAN  
SCALE: 1/4" = 1'-0"



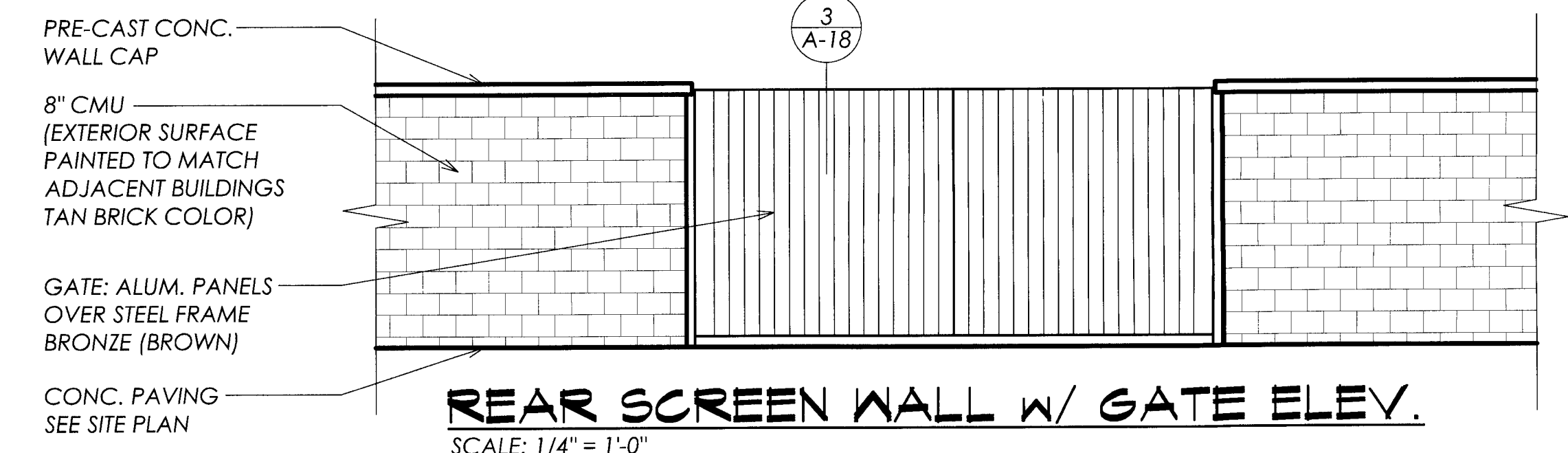
5 VACUUM/AIR ISLAND  
SCALE: 3/4" = 1'-0"



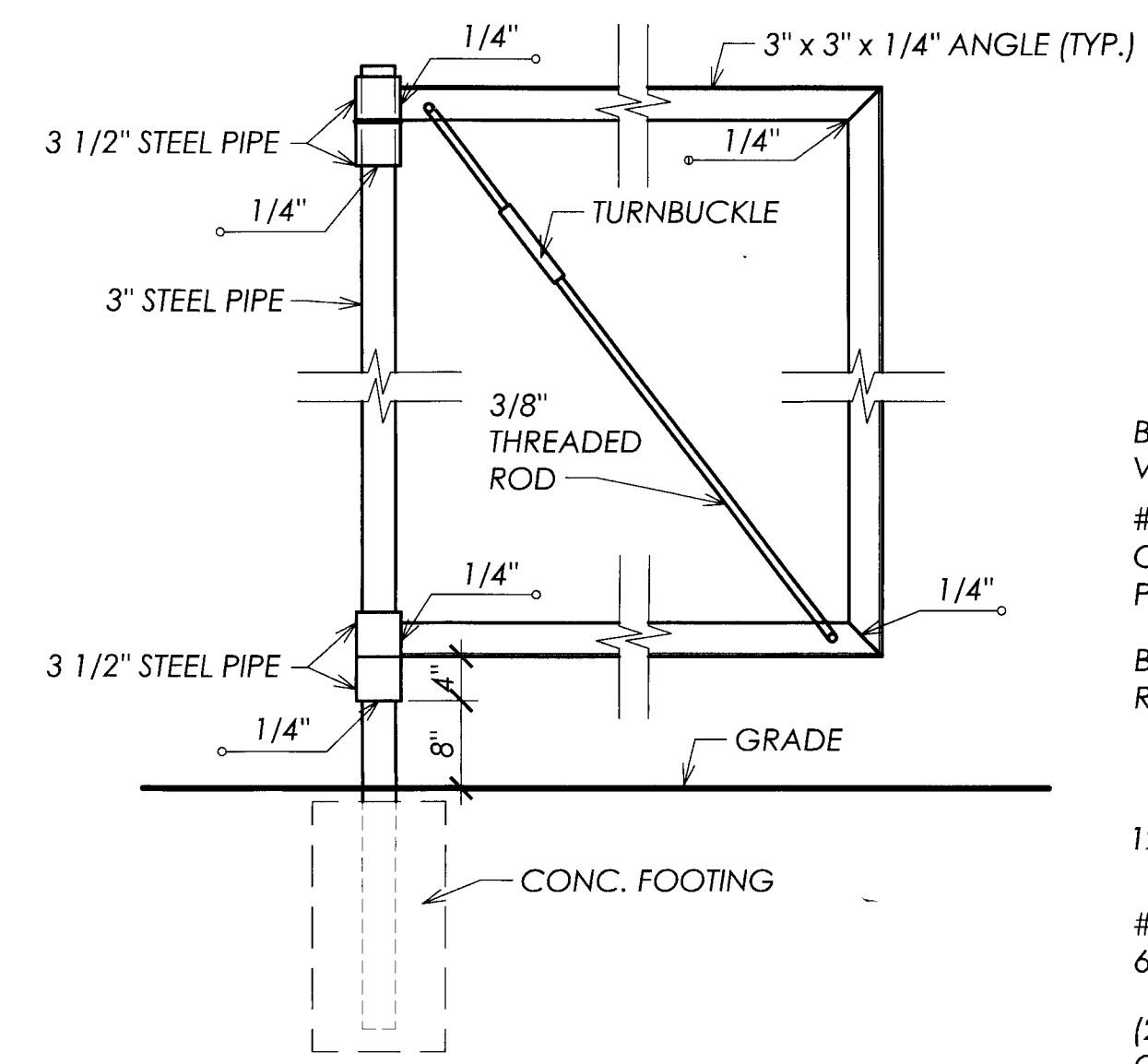
2 GATE POST  
SCALE: 1 1/2" = 1'-0"



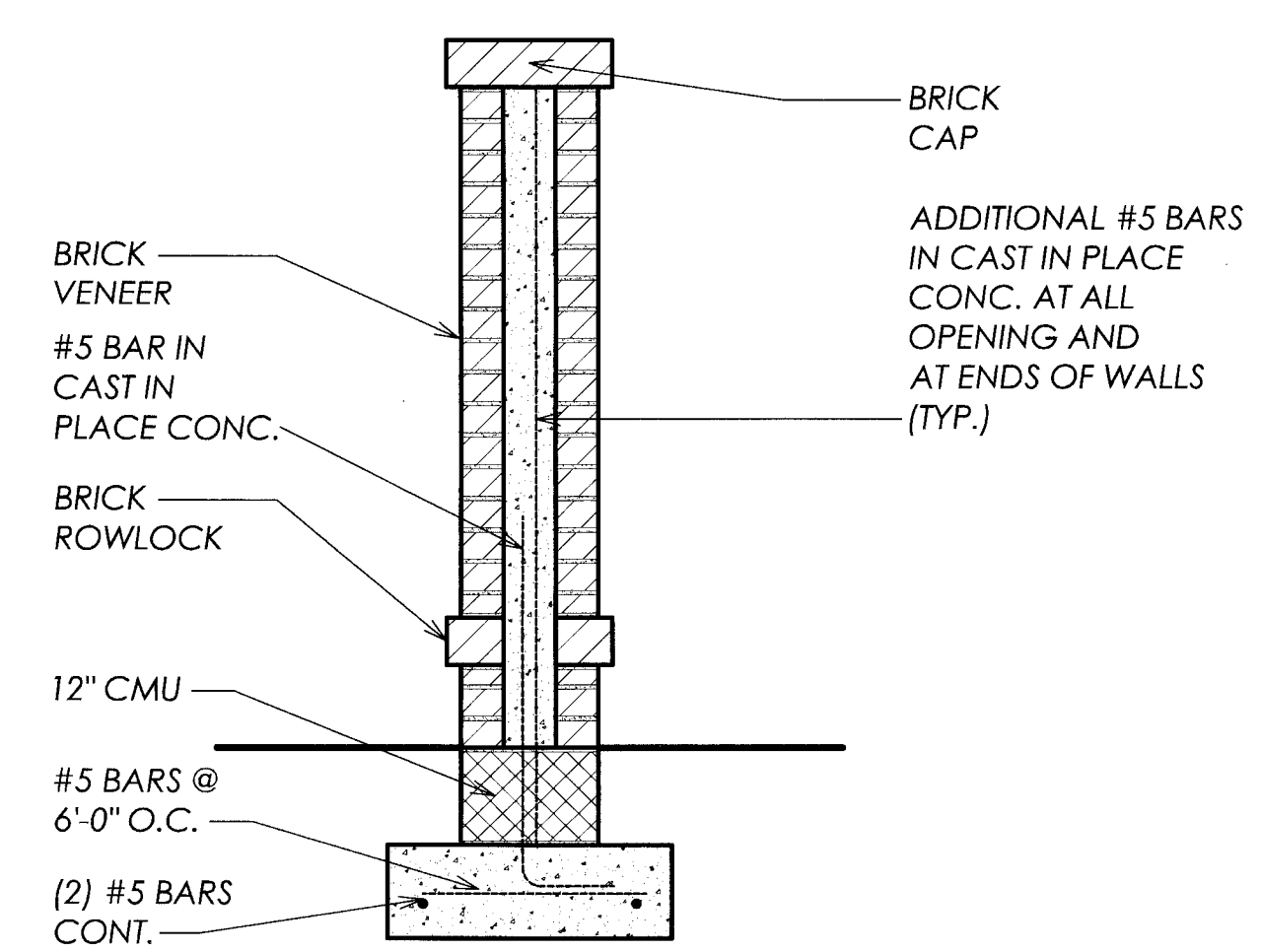
DUMPSTER SCREEN ELEVATION  
SCALE: 1/4" = 1'-0"



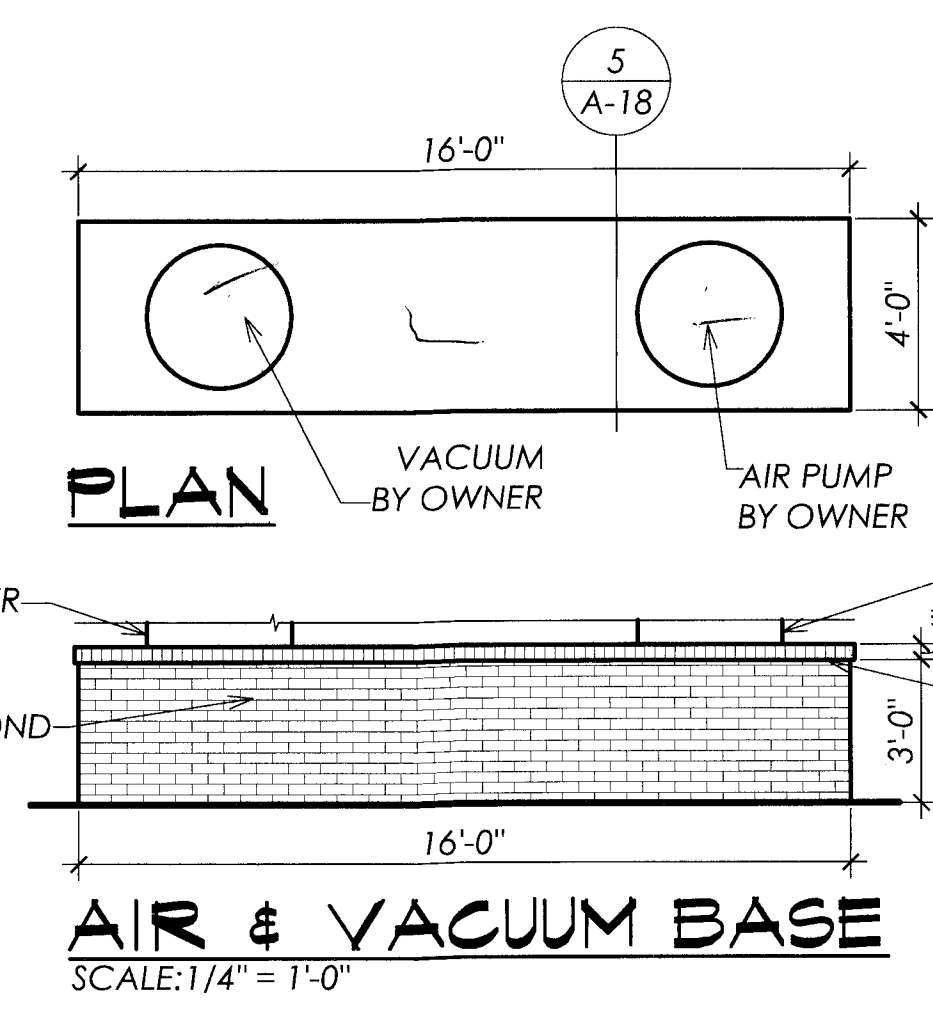
REAR SCREEN WALL W/ GATE ELEV.  
SCALE: 1/4" = 1'-0"



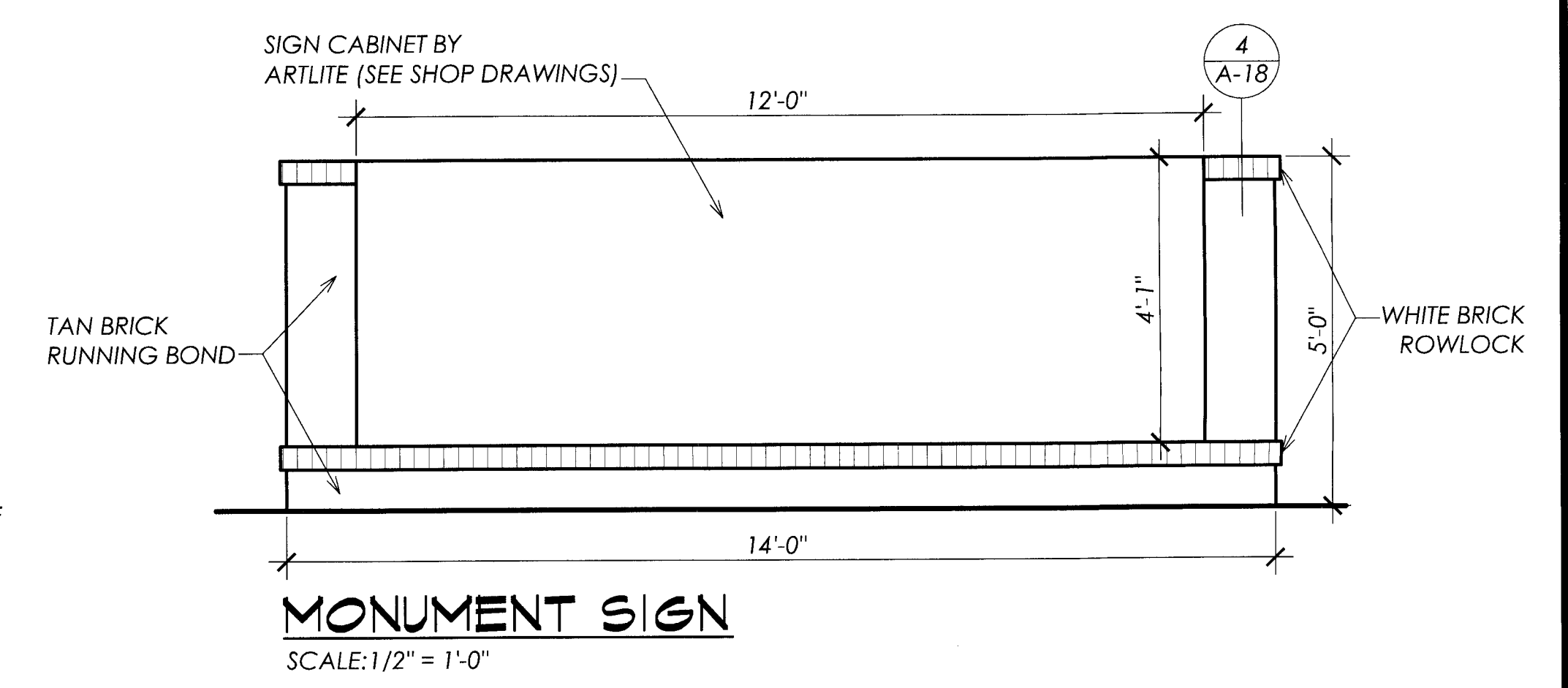
3 GATE FRAME DETAIL  
SCALE: 3/4" = 1'-0"



4 MONUMENT SIGN SECTION  
SCALE: 3/4" = 1'-0"



AIR & VACUUM BASE  
SCALE: 1/4" = 1'-0"



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

NO.	DATE	REVISION

FILE NAME: 0751-A16	DATE: 26 SEP 07	DRAWN BY: DRM	CHECKED BY: CMH
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**BID SET**  
NOT TO BE USED FOR CONSTRUCTION

**EARTHWORK NOTES:**

- THE SITE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT NO. ETS-07E149-1 DATED 7/31/07 PREPARED BY ETS, INC.

**FOUNDATION & CONCRETE NOTES:**

- FOOTINGS SHALL BE PLACED ON SUITABLE GRADE OR COMPACTED STRUCTURAL FILL HAVING A MINIMUM SAFE BEARING CAPACITY OF 2,000 PSF (CONFIRMED BY A GEOTECHNICAL ENGINEER).
- TOP OF FOOTING ELEVATIONS ARE SHOWN THUS (-0'-0") ON PLAN, INDICATING THE DISTANCE BELOW FINISHED FLOOR. (NOTE DATUM REFERENCE FOR EACH BUILDING) UNDER NO CIRCUMSTANCES SHALL THE TOP OF FOOTINGS BE LESS THAN 8" BELOW THE FINISHED GRADE.
- CONCRETE USED FOR FOUNDATION WORK SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
- REINFORCING STEEL LABELED CONTINUOUS SHALL BE LAPPED 40 X THE BAR DIAMETER, UNLESS NOTED OTHERWISE. SEE TYPICAL CONTINUOUS REINFORCING STEEL DETAIL FOR CORNERS AND INTERSECTIONS.
- CONVENIENCE STORE AND EQPT. BUILDING: PROVIDE A 4" THICK CONCRETE FLOOR SLAB ON 6 MIL POLYETHYLENE VAPOR BARRIER ON 4" (MIN) POROUS FILL (SEE GEOTECH REPORT) ON COMPACTED FILL. SLAB CONCRETE SHALL BE PROVIDED WITH GRADED, COLLATED, FIBRILLATED POLYPROPYLENE FIBERS ('FIBERMESH') AT A RATE OF 1.5 LBS/CUBIC YARD OF CONCRETE.
- CARWASH: PROVIDE A 5" THICK REINFORCED CONCRETE SLAB ON 6 MIL POLYETHYLENE VAPOR BARRIER ON 4" (MIN) POROUS FILL (SEE GEOTECH REPORT) ON COMPACTED FILL. INSTALL REINFORCING IN THE CONCRETE AS SHOWN IN SECTIONS AND DETAILS.
- SLAB CRACK CONTROL JOINTS ARE INDICATED THUS, C.J., ON PLAN. JOINTS SHALL BE SAWS JOINTS AND SHALL BE IN PLACE AS SOON AS PRACTICABLE. CONSTRUCTION JOINTS SHALL BE PLACED AT CONTROL JOINT LOCATIONS. SEE TYPICAL SLAB JOINT DETAILS.
- WALL ANCHOR BOLTS SHALL CONFORM TO ASTM A307 AND SHALL BE HOT DIP GALVANIZED.

**MASONRY NOTES:**

- MASONRY WALLS SHALL BE LAID WITH TYPE 'S' (HIGH STRENGTH) MORTAR AND ASTM C90, GRADE N UNITS. GROUT SHALL HAVE A 28 DAY STRENGTH OF 2,500 PSI AND SHALL CONFORM TO ASTM C476.
- MASONRY SHALL OBTAIN A COMPRESSIVE STRENGTH (F'M) OF 1,500 PSI.
- MASONRY REINFORCING SHALL BE ASTM A615 GRADE 60.
- COLD WEATHER REQUIREMENTS: DO NOT USE FROZEN MATERIALS MIXED OR COATED WITH ICE OR FROST. DO NOT BUILD ON FROZEN SUBSTRATES. REMOVE AND REPLACE UNIT MASONRY DAMAGED BY FROST OR BY FREEZING CONDITIONS. COMPLY WITH COLD-WEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1/ASCE 6/TMS 602.
- HOT WEATHER REQUIREMENTS: COMPLY WITH HOT WEATHER CONSTRUCTION REQUIREMENTS CONTAINED IN ACI 530.1/ASCE 6/TMS 602.

**STRUCTURAL STEEL NOTES:**

- FABRICATOR CERTIFICATE OF COMPLIANCE: AT THE COMPLETION OF FABRICATION, THE FABRICATOR SHALL SUBMIT A 'CERTIFICATE OF COMPLIANCE' TO THE STRUCTURAL ENGINEER OF RECORD THAT ALL MATERIALS AND FABRICATION ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- FABRICATOR QUALIFICATIONS: PRIOR TO FABRICATION, THE FABRICATOR SHALL SUBMIT THEIR IN HOUSE QUALITY CONTROL PROGRAM AND PROCEDURES, INCLUDING WELDER CERTIFICATIONS, FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATIONS, (CURRENT EDITION). MATERIALS:  
ANCHOR BOLTS ————— ASTM F1554 (GR 36)  
PLATES & MISC. SHAPES ————— ASTM A36  
WIDE FLANGE SHAPES ————— ASTM A992  
HOLLOW STRUCTURAL STEEL (HSS) —————  
SQUARE/RECTANGULAR SHAPES ————— ASTM A500  
GRADE B  
ROUND SHAPES ————— ASTM A53  
TYPE E OR S
- GROUT FOR BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE.
- CONNECTIONS FOR STEEL BEAMS SHALL HAVE THE CAPACITY TO SUPPORT THE MAXIMUM UNIFORM LOAD FOR THE MEMBER, SPAN, AND STEEL GRADE AS TABULATED UNDER THE LOAD CONSTANTS FOR BRACED SIMPLE SPAN BEAMS IN THE A.I.S.C. MANUAL. CONNECTIONS SHALL BE SYMMETRICAL STANDARD TYPES WHERE POSSIBLE.
- BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A325 HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS. SHOP CONNECTIONS SHALL BE WELDED WHEREVER POSSIBLE WITH E70 ELECTRODES.
- HOLES REQUIRED IN STRUCTURAL STEEL MEMBERS FOR PIPING OR CONDUIT, ETC., WILL REQUIRE THE APPROVAL OF THE ENGINEER. NO FIELD CUTS SHALL BE MADE WITHOUT PRIOR APPROVAL.
- TOP OF STEEL ELEVATIONS ARE INDICATED THUS (+0'-0") ON PLAN WHICH INDICATES THE VERTICAL DISTANCE MEASURED ABOVE THE FINISHED FIRST FLOOR ELEVATION.

**LIGHT GAGE STEEL FRAMING NOTES:**

- MEMBER SIZES ARE GIVEN BY STEEL STUD MANUFACTURER ASSOCIATION DESIGNATION. (EXAMPLE: 600S162-54)  
WHERE: 600 = MEMBER DEPTH IN 1/100 INCH  
S = SECTION TYPE: S = STUD  
T = TRACK  
U = CHANNEL  
F = FURRING (HAT)  
162 = FLANGE WIDTH IN 1/100 INCH  
54 = MINIMUM MATERIAL BASE METAL THICKNESS IN MILS-FOR REFERENCE:  

MILS	GAUGE	F <sub>y</sub>
18	25	33
27	22	33
30	20 NON-STRUCTURAL	33
33	20 STRUCTURAL	33
43	18	33
54	16	50
68	14	50
97	12	50
- ALL MEMBERS SHALL BE FORMED FROM GALVANIZED (G60) STEEL.
- FASTENERS - UNLESS NOTED PROVIDE:  
SCREWS - NO. 8 - 0.164 DIA.  
% EDGE DISTANCE  
MIN. PENETRATION THRU - 3 THREADS  
WELDS - E60 XX ELECTRODE ON 43 MIL AND THICKER ONLY.  
\*SUBMIT FASTENER DATA FOR APPROVAL.\*
- PROVIDE BRIDGING, BRACING AND BLOCKING AS RECOMMENDED BY THE MANUFACTURER.
- ALL STUDS SHALL BE SPACED AT 16" O.C. UNLESS NOTED OTHERWISE.
- RUNNER TRACK SHALL MATCH THE GAGE OF WALL STUDS, UNLESS NOTED OTHERWISE.
- SILL ANCHORS - FASTEN TRACK W/ 2 PAF AT 16" O.C.
- MEMBER SIZE SUBSTITUTIONS AND CONNECTION MODIFICATIONS SHALL NOT BE MADE WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

**WOOD TRUSS NOTES:**

- PROVIDE CONTINUOUS 2 X 4 AT 48" O.C. BOTTOM CHORD BRIDGING WHERE CEILINGS ARE NOT DIRECTLY APPLIED TO THE BOTTOM CHORD OF THE TRUSSES UNLESS NOTED OTHERWISE ON THE TRUSS DIAGRAMS.
- TRUSSES SHALL BE SHIPPED AND STORED TO AVOID OUT-OF-PLANE BENDING. STORAGE SHALL BE ABOVE GROUND, COVERED AND VENTILATED.
- DESIGN TRUSSES FOR AN ADDITIONAL 5 PSF DEAD LOAD IN WAY OF OVERFRAMING.
- COORDINATE TRUSS LAYOUT WITH MECHANICAL DRAWINGS: DESIGN TRUSSES FOR IMPOSED MECHANICAL LOADS AND PROVIDE LAYOUT TO SUIT MECHANICAL REQUIREMENTS.
- TRUSS ERECTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING OF TRUSSES DURING ERECTION UNTIL PERMANENT BRACING AND SHEATHING ARE IN PLACE. TEMPORARY BRACING SHALL BE SECURED TO THE GROUND AT EACH END AND SHALL MAINTAIN THE TRUSSES ERECT AND PROPERLY SPACED.
- SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL. DRAWINGS SHALL INCLUDE AN OVERALL ERECTION PLAN AND DETAILS OF EACH TRUSS TYPE INDEXED TO THE ERECTION PLAN, AS WELL AS INFORMATION LISTED IN 2003 IBC SECTION 2303.4.1.
- THE TRUSS HOLDOWNS INDICATED ON THE DRAWINGS ARE FOR ESTIMATING PURPOSES ONLY. THE ENGINEER WILL CONFIRM THE ADEQUACY OF THE SPECIFIED HOLDOWNS AFTER REVIEW OF THE SUBMITTED TRUSS DESIGNS AND WILL MAKE ADJUSTMENTS ACCORDINGLY.

**TRUSS ERECTION & PERMANENT BRACING NOTES:**

- ERECTION BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH 'TRUSS PLATE INSTITUTE' PUBLICATION HIB-91.
- CONTRACTOR SHALL SUBMIT A BRACING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO ERECTION.
- PERMANENT BRACING REQUIRED BY THE TRUSS MANUFACTURER SHALL BE INSTALLED IN ACCORDANCE WITH 'TRUSS PLATE INSTITUTE' PUBLICATION BCSI-1-03. THE ENGINEER WILL FORWARD BRACING INSTALLATION REQUIREMENTS TO THE CONTRACTOR FOLLOWING REVIEW OF THE TRUSS SUBMITTAL. THE INSTALLATION OF BRACING SHALL BE INSPECTED BY THE 'SPECIAL INSPECTOR.'

**DESIGN LIVE LOADS: (PER IBC SECTION 1603)**

BUILDING CLASSIFICATION CATEGORY II (TABLE 1604.5)

1603.1.1 — FLOOR LIVE LOADS

FIRST FLOOR:

SLAB ON GRADE ————— 150 PSF (2,000 LB CONC.)

1603.1.2 — ROOF LIVE LOAD

ROOF TRUSS TOP CHORD ————— 20 PSF

ROOF TRUSS BOT. CHORD ————— 20 PSF

1603.1.3 — ROOF SNOW LOAD

GROUND SNOW LOAD ————— 20 PSF

FLAT ROOF LOAD

(P<sub>f</sub>) = 0.7 X C<sub>e</sub> X C<sub>t</sub> X I<sub>s</sub> X P<sub>g</sub> ————— 14 PSF

C<sub>e</sub> (TERRAIN CATEGORY 'B') ————— 1.0

C<sub>t</sub> ————— 1.0

I<sub>s</sub> (CATEGORY I, TABLE 1604.5) ————— 1.0

1603.1.4 — WIND LOADS

WIND LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH IBC 1609.6, 'SIMPLIFIED PROVISIONS FOR LOW-RISE BUILDINGS' AND THE FOLLOWING CRITERIA:

VELOCITY (3 SEC. GUST) ————— 108 MPH (AS PER VAUSBC)

I<sub>w</sub> ————— 1.0

EXPOSURE ————— 'B'

MEAN ROOF HEIGHT ————— STORE 27'-0" ± CARWASH 16'-0" ± EQPT. BUILDING 14'-0" ±

INTERNAL PRESSURE COEFFICIENT NOT USED FOR SIMPLIFIED ANALYSIS

MAIN WINDFORCE RESISTING SYSTEM (MWFRS) ROOF ANGLE (45' MAX.) ————— USE IBC TABLE 1609.6.2.1(1) FOR LOADS

COMPONENTS & CLADDING ROOF ANGLE (7'-27' MAX.) ————— PER IBC TABLE 1609.6.2.1(2)

ROOF:

ZONE

1 ————— 18.6 PSF

2 ————— 28.2 PSF

3 ————— 43.5 PSF

WALLS:

ZONE

4 ————— 21.3 PSF

5 ————— 24.6 PSF

1603.1.5 — SEISMIC

ANALYSIS PROCEDURE ————— 'SIMPLIFIED' (1616.6.1)

USE GROUP (1616.2) ————— I

DESIGN CATEGORY (TABLE 1616.3) ————— 'A'

I<sub>e</sub> ————— 1.0

S<sub>s</sub> (FIG. 1615) ————— .15

S<sub>1</sub> (FIG. 1615) ————— .07

C<sub>s</sub> ————— NOT USED FOR SIMPLIFIED ANALYSIS

R (TABLE 1617.6) ————— STORE 4 CARWASH 4 EQPT. BUILDING 2.5

S<sub>as</sub> (EQ. 16-18) ————— 0.251g 0.251g 0.251g

S<sub>ds</sub> (EQ. 16-19) ————— 0.164g 0.164g 0.164g

SITE CLASS (TABLE 1615.1.1) ————— D D D

RESISTING SYSTEM ————— STEEL MOMENT FRAMES STEEL MOMENT FRAMES REIN. MASONRY SHEAR WALLS

BASE SHEAR (EQ. 16-34) ————— 31.4 K 12.2 K 14.0 K

**STRUCTURAL SPECIAL INSPECTIONS**

STRUCTURAL "SPECIAL INSPECTIONS" ARE REQUIRED FOR THIS PROJECT AS PER THE VAUSBC/IBC 2003 STATE BUILDING CODE. REFER TO THE STATEMENT OF SPECIAL INSPECTIONS AS PREPARED FOR THIS PROJECT BY THE STRUCTURAL ENGINEER OF RECORD (SER). THE GENERAL CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SPECIAL INSPECTOR OF RECORD (SIR) WHEN ITEMS REQUIRING INSPECTION ARE READY FOR INSPECTION. DO NOT BEGIN WORK ON ANY COMPONENTS WITHOUT FIRST SCHEDULING A PRE-CONSTRUCTION MEETING WITH THE (SER) AND THE APPROPRIATE SUBS.

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**STRUCTURAL ABBREVIATIONS:**

ABBREV.	DEFINITION	ABBREV.	DEFINITION	ABBREV.	DEFINITION	ABBREV.	DEFINITION	ABBREV.	DEFINITION	ABBREV.	DEFINITION
AFF	ABOVE FINISHED FLOOR	EOD	EDGE OF DECK	LLV	LONG LEG VERTICAL	NIC	NOT IN CONTRACT	SIM	SIMILAR		
ARCH	ARCHITECT	EQ	EQUAL	LSH	LONG SIDE HORIZONTAL	NTS	NOT TO SCALE	\$	STRUCTURE LINE		
BOTT	BOTTOM	EW	EACH WAY	LSV	LONG SIDE VERTICAL	OC	ON CENTER	T&G	TONGUE AND GROOVE		
BRG	BEARING	FIN FLR	FINISHED FLOOR	LWC	LIGHT WEIGHT CONCRETE	OPH	OPPOSITE HAND	THK	THICK, THICKNESS		
CJ	CONTROL JOINT	FIN GR	FINISHED GRADE	MAS	MASONRY	OPNG	OPENING	TOF	TOP OF FOOTING		
CMU	CENTRE LINE	FNDN	FOUNDATION	MTL	MATERIAL	PAF	POWDER ACTUATED FASTENER	TOM	TOP OF MASONRY		
CONC	CONCRETE MASONRY UNIT	FOB	FACE OF BUILDING/BRICK	MAX	MAXIMUM	R	RADIUS	TOS	TOP OF STEEL		
DBL	DOUBLE	FOC	FACE OF CONCRETE	MECH	MECHANICAL	REF	REFERENCE, REFERENCED	TYP	TYPICAL		
DWGS	DRAWINGS	FOM	FACE OF CMU	MFR	MANUFACTURER	REIN	REINFORCED, REINFORCING	UON	UNLESS OTHERWISE NOTED		
EA	EACH	FOS	FACE OF STUD	MOS	MIDDLE OF SLAB	REQ'D	REQUIRED	VERT	VERTICAL		
ELEV	ELEVATION	FRMG	FRAMING	MIN	MINIMUM			WTB	WATER TABLE BRICK		
								WWF	WELDED WIRE FABRIC		

**STRUCTURAL PLAN LEGEND:**

(-0'-0") = TOP OF FOOTING ELEVATION MEASURED FROM REF FIN FLR = (0'-0")

(X) = COLUMN GRID LINE

WFX = WALL FOOTING MARK

FX = COLUMN FOOTING MARK

CJ = CONTROL JOINT (SAWED OR FORMED)

STEP = STEPPED FOOTING

CHANGE IN FLOOR ELEVATION

(-x") = DEPRESSION IN FLOOR SLAB MEASURED FROM FIN FLR ELEV = (0'-0")

(+0'-0") = TOP OF STEEL/ TOP OF WALL/ JOIST BRG ELEV. - MEASURED FROM REF. FIN FLR ELEV = (0'-0")

CANTILEVERED BEAM

FLOOR/ROOF OPENING

**G.G. CORNWELL AND COMPANY**

CONSULTING STRUCTURAL ENGINEERS  
107 HERMAN MELVILLE AVENUE  
NEWPORT NEWS, VIRGINIA 23606  
(757) 873-8858 FAX (757) 873-3080

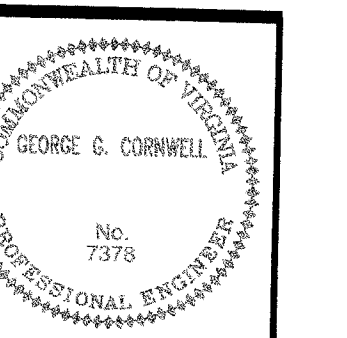


**ARCHITECT**  
757.599.1212  
FAX (757) 599-4555  
Mh@mhba-nc.com  
780 Pied House Drive  
Suite 100-B  
Newport News, VA 23606

PROJECT NAME: NEW CONSTRUCTION FOR RACECO IN NEWPORT NEWS  
DWG TITLE: GENERAL NOTES

NO.	DATE	REVISION

FILE NAME:   
 DATE: 29 SEPT 07  
 DRAWN BY: JFC  
 CHECKED BY: GGC



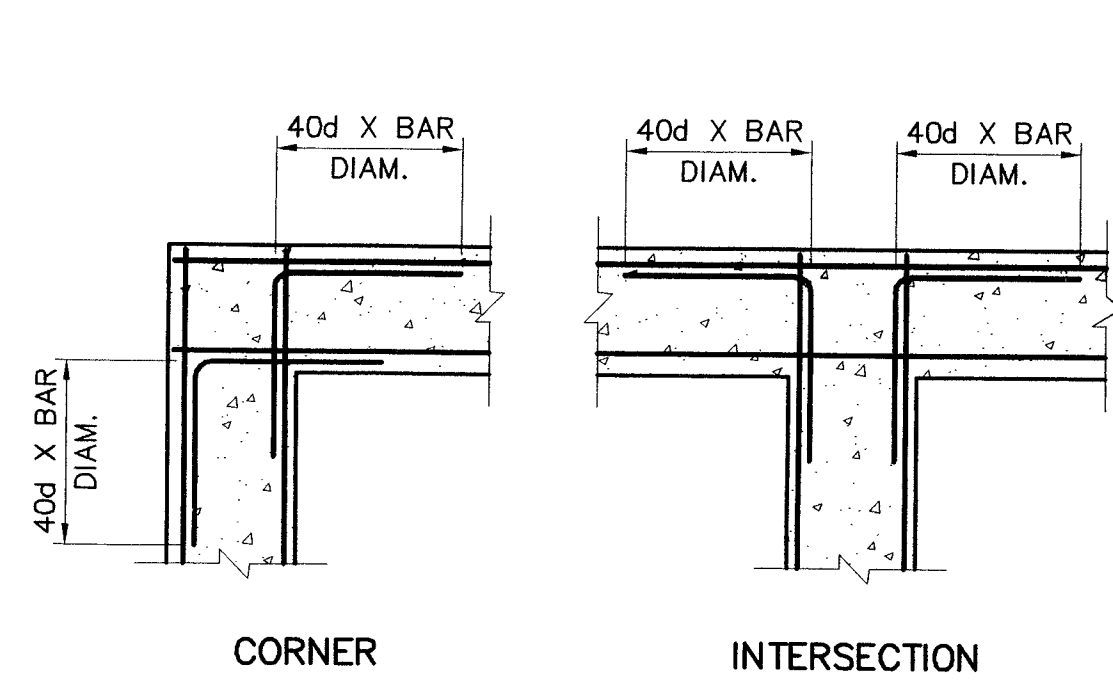
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SO.1

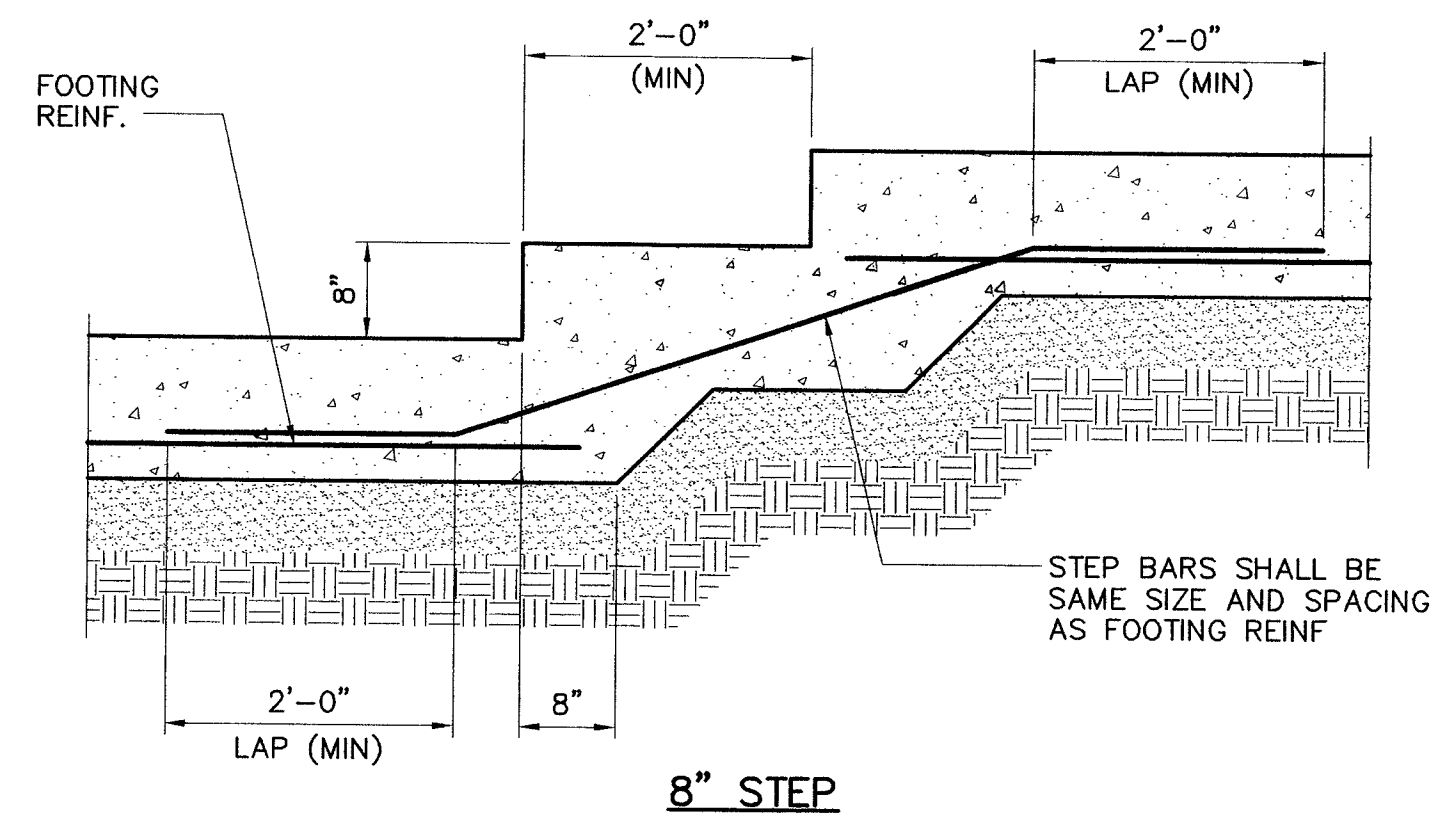
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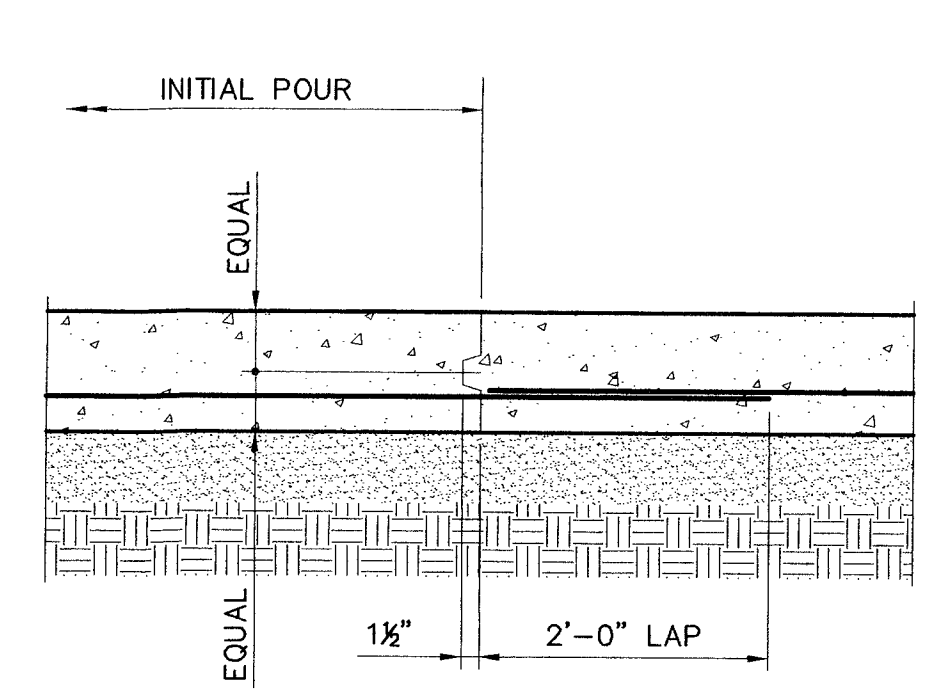




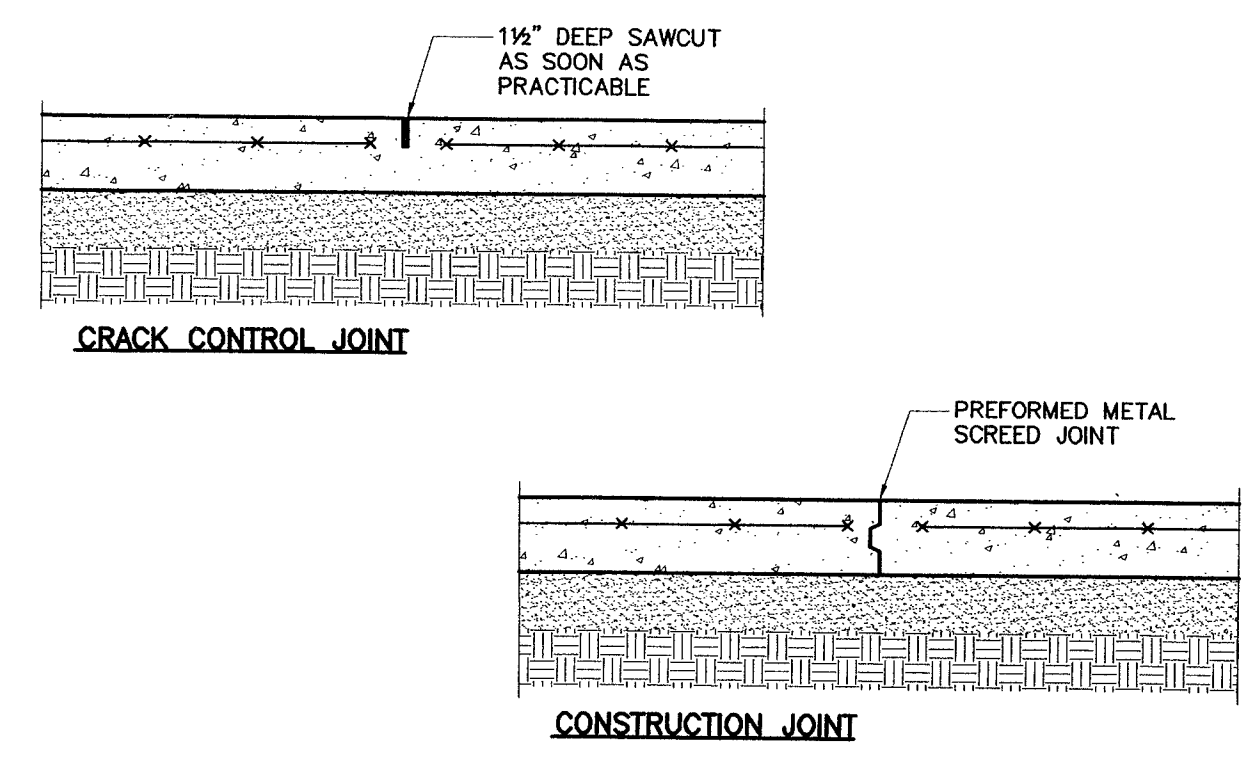
1 TYPICAL CONTINUOUS REINF. DETAIL  
S0.2/S0.2 N.T.S.



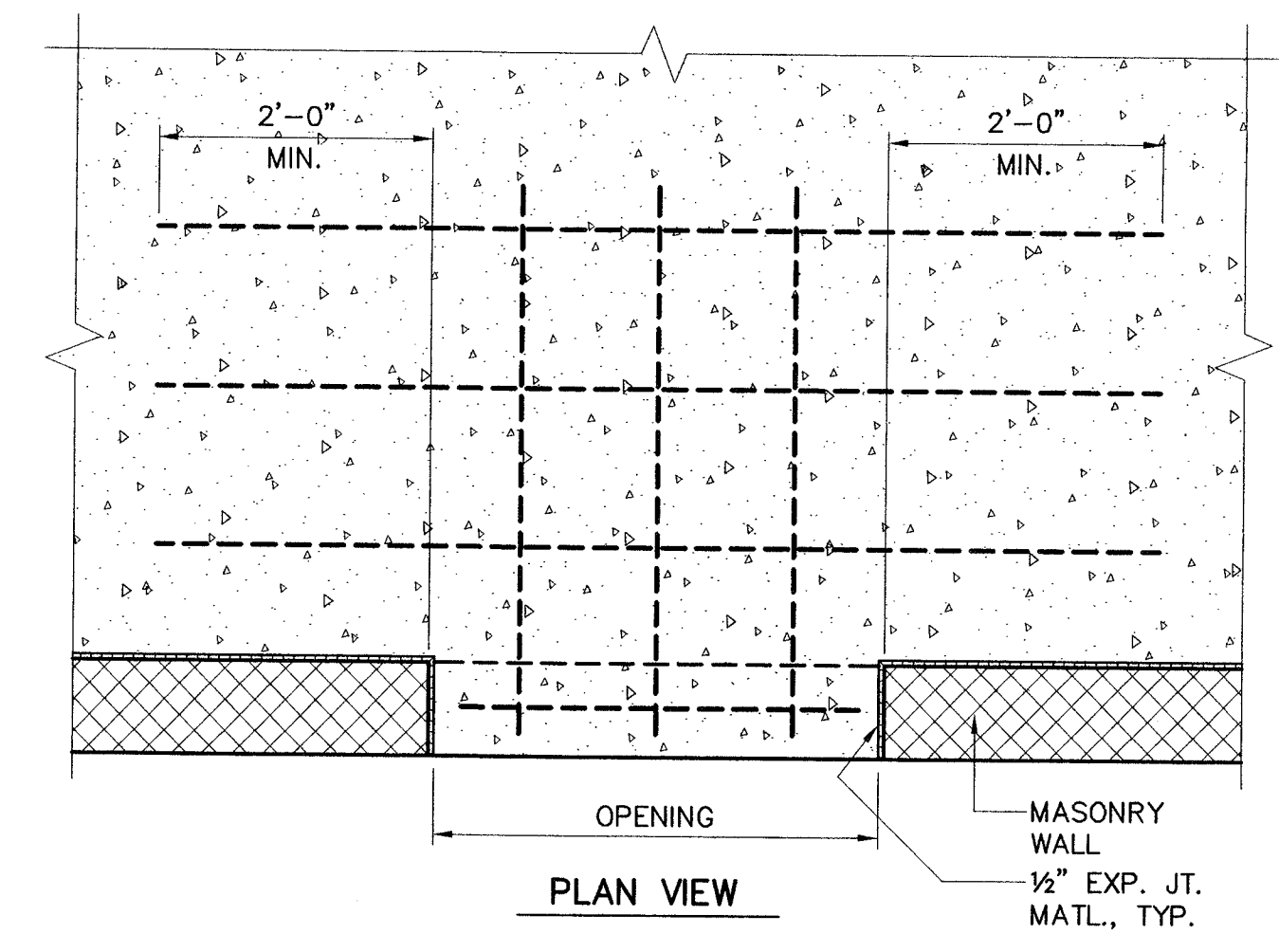
2 TYPICAL STEPPED FOOTING DETAIL  
S0.2/S0.2 N.T.S.



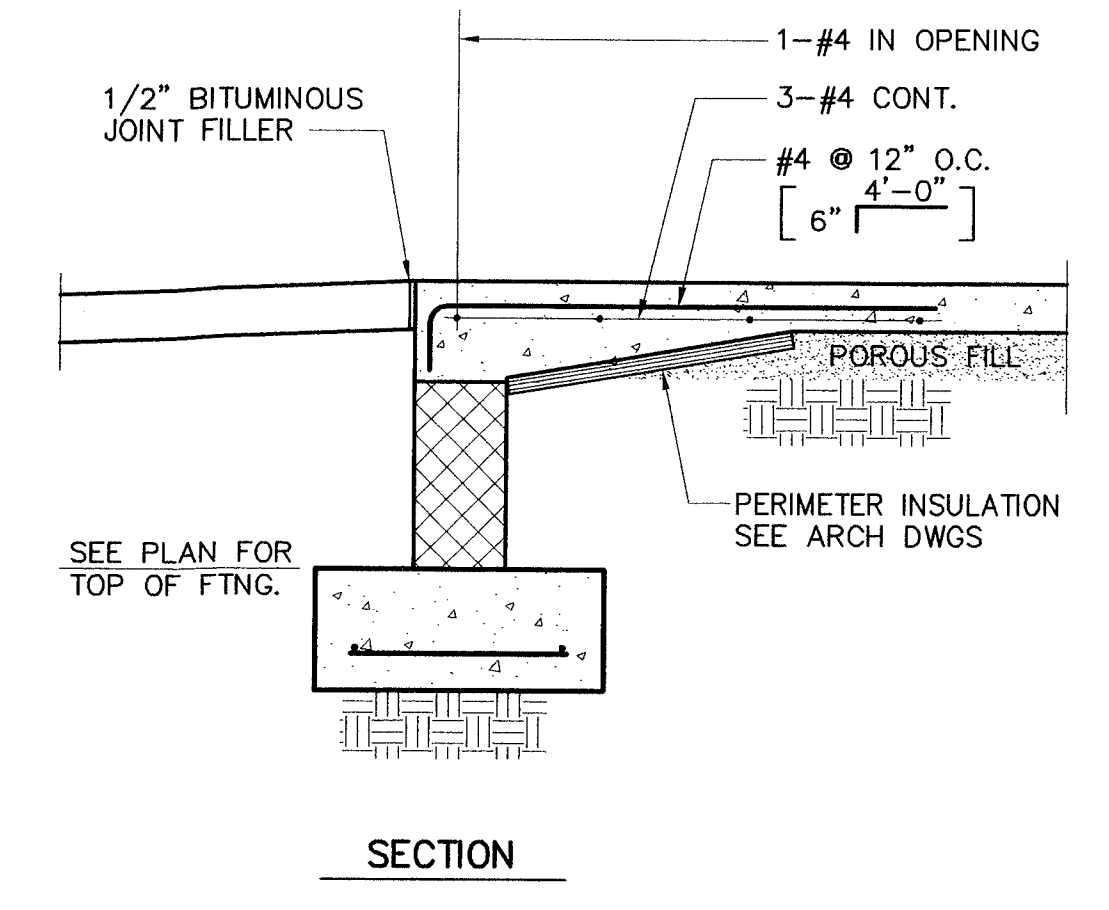
3 TYPICAL FOOTING CONST. JOINT  
S0.2/S0.2 N.T.S.



4 TYPICAL SLAB JOINT DETAILS (C.J.)  
S0.2/S0.2 N.T.S.



5 TYPICAL SLAB REINFORCING AT EXTERIOR DOORS (EQPT. BUILDING)  
S0.2/S0.2 3/4" = 1'-0"

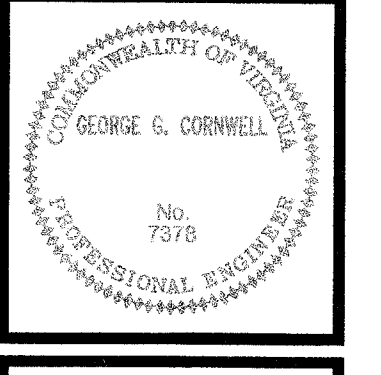


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PROJECT NAME: NEW CONSTRUCTION FOR RACECO IN NEWPORT NEWS  
DWG TITLE: TYPICAL DETAILS

NO.	DATE	REVISION	BY

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DATE: 28 SEPT 07  
DRAWN BY: JFC  
CHECKED BY: GGC

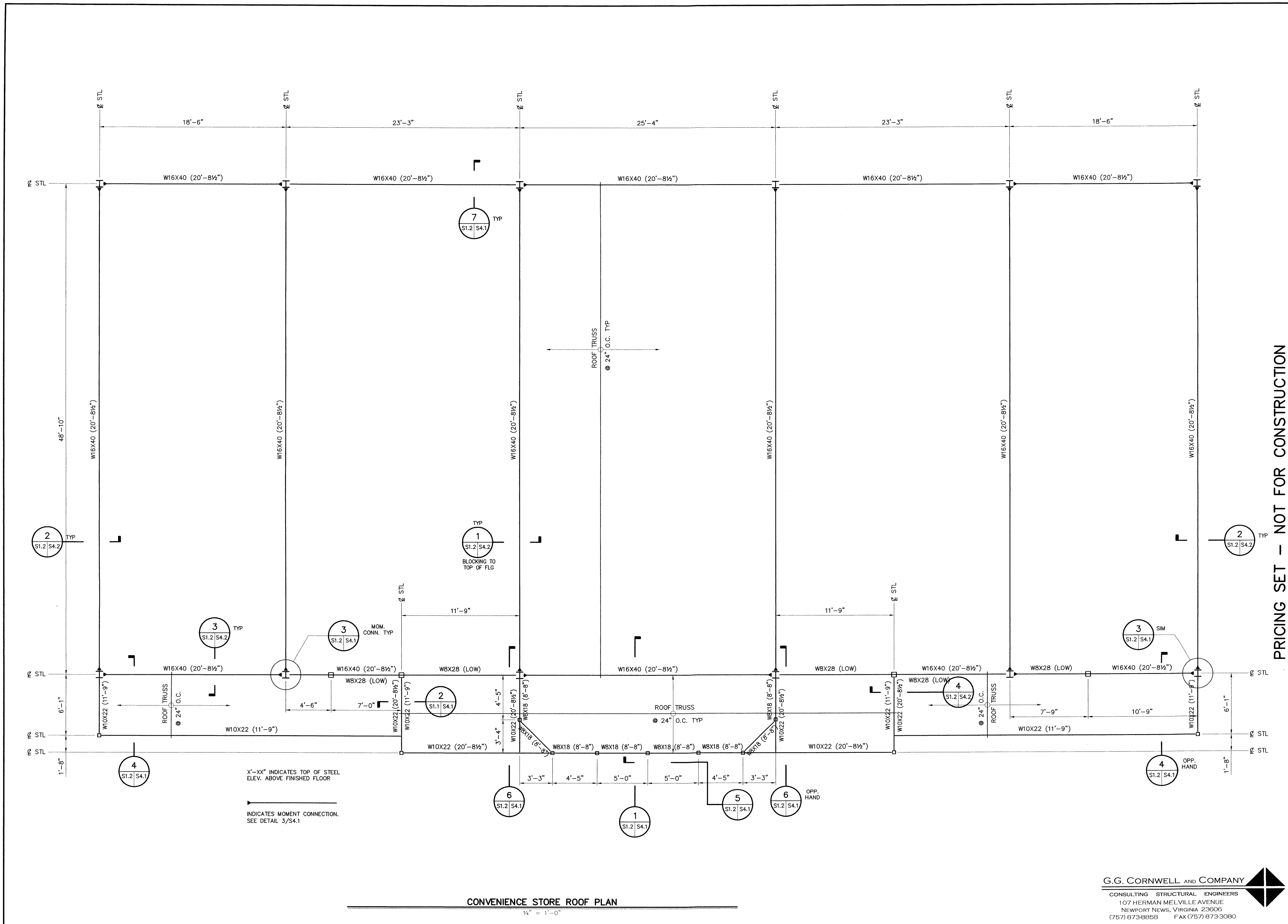
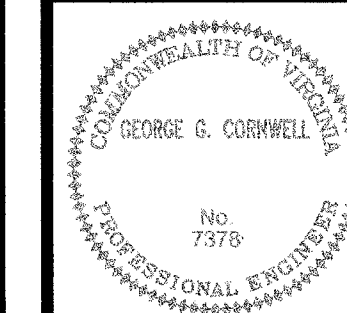






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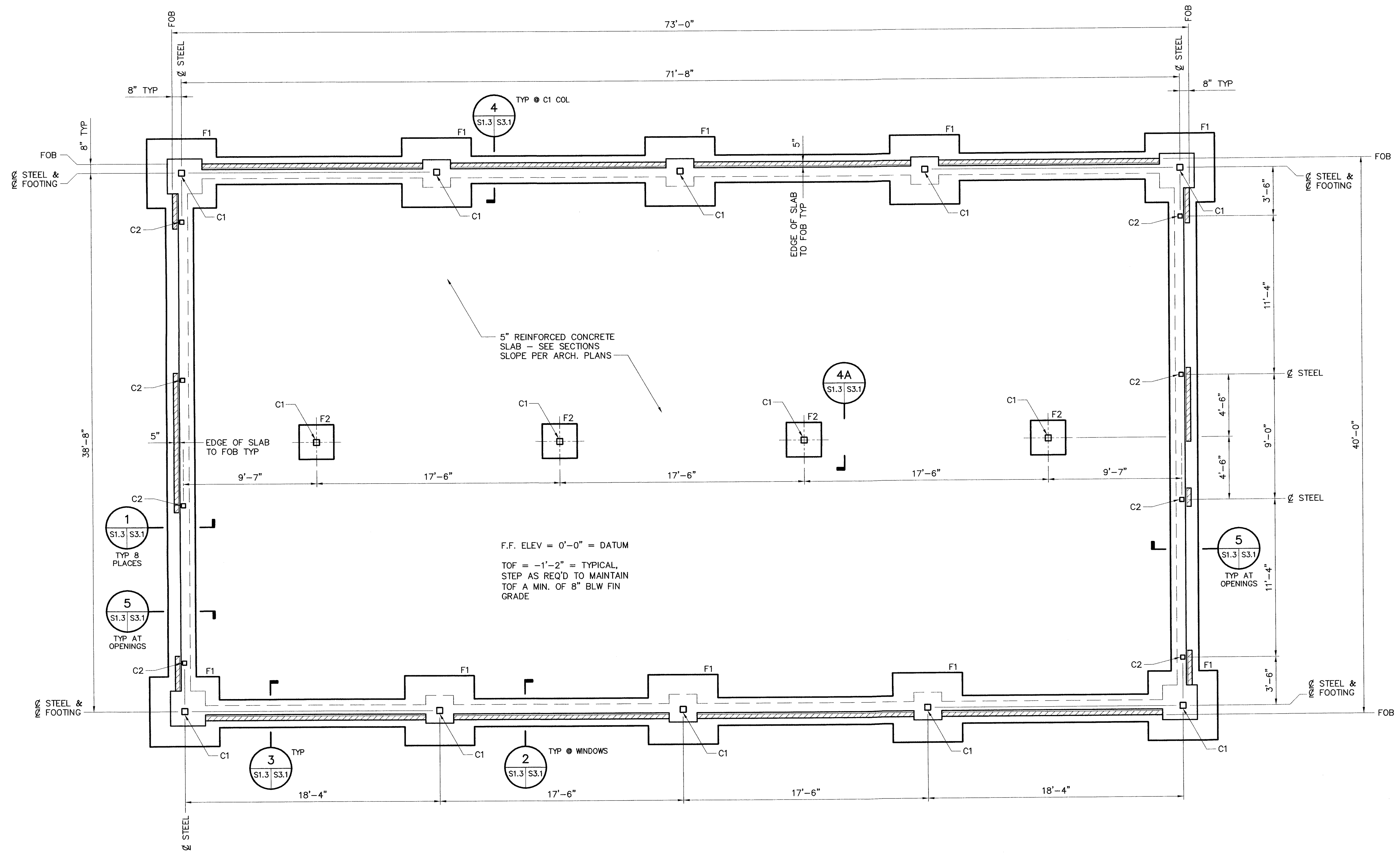
FILE NAME:  
 DATE: 28 SEPT 04  
 DRAWN BY: JFC  
 CHECKED BY: GGC



**PRICING SET - NOT FOR CONSTRUCTION**

**CONVENIENCE STORE ROOF PLAN**

**G.G. CORNWELL AND COMPANY**  
 CONSULTING STRUCTURAL ENGINEERS  
 107 HERMAN MELVILLE AVENUE  
 NEWPORT NEWS, VIRGINIA 23606  
 (757) 873-8858 FAX (757) 873-3080



F.F. ELEV = 0'-0" = DATUM  
 TOF = -1'-2" = TYPICAL,  
 STEP AS REQ'D TO MAINTAIN  
 TOF A MIN. OF 8" BLW FIN  
 GRADE

COLUMN FOOTING SCHEDULE				
MARK	SIZE	DEPTH	REMARKS	
F1	5'-0" X 5'-0"	1'-0"	6-#5 EW TOP & BOTTOM	
F1	2'-6" X 2'-6"	1'-0"	3-#5 EW BOTTOM	

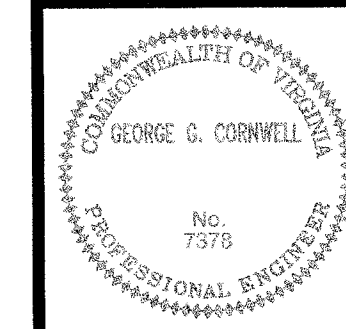
COLUMN SCHEDULE		
MARK	SIZE/DESCRIPTION	BASE PLATE
C1	5 1/2" X 5 1/2" X 3/8" HSS	SEE DET. 4/S3.1 & 4A/S3.1
C2	4" X 4" X 3/8" HSS	SEE DET. 1/S3.1

PRICING SET - NOT FOR CONSTRUCTION

PROJECT TITLE: NEW CONSTRUCTION FOR RACECO IN NEWPORT NEWS  
 DWG TITLE: CARNASH FOUNDATION PLAN

NO.	DATE	REVISION

FILE NAME: \_\_\_\_\_  
 DATE: 28 SEPT 01  
 DRAWN BY: JFC  
 CHECKED BY: GSC



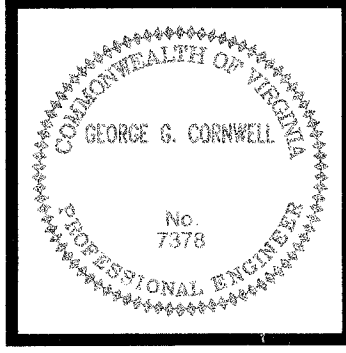
JOB NO: 0751  
 S1.3  
 SHEET OF ?

**FOUNDATION PLAN**  
 1/4" = 1'-0"

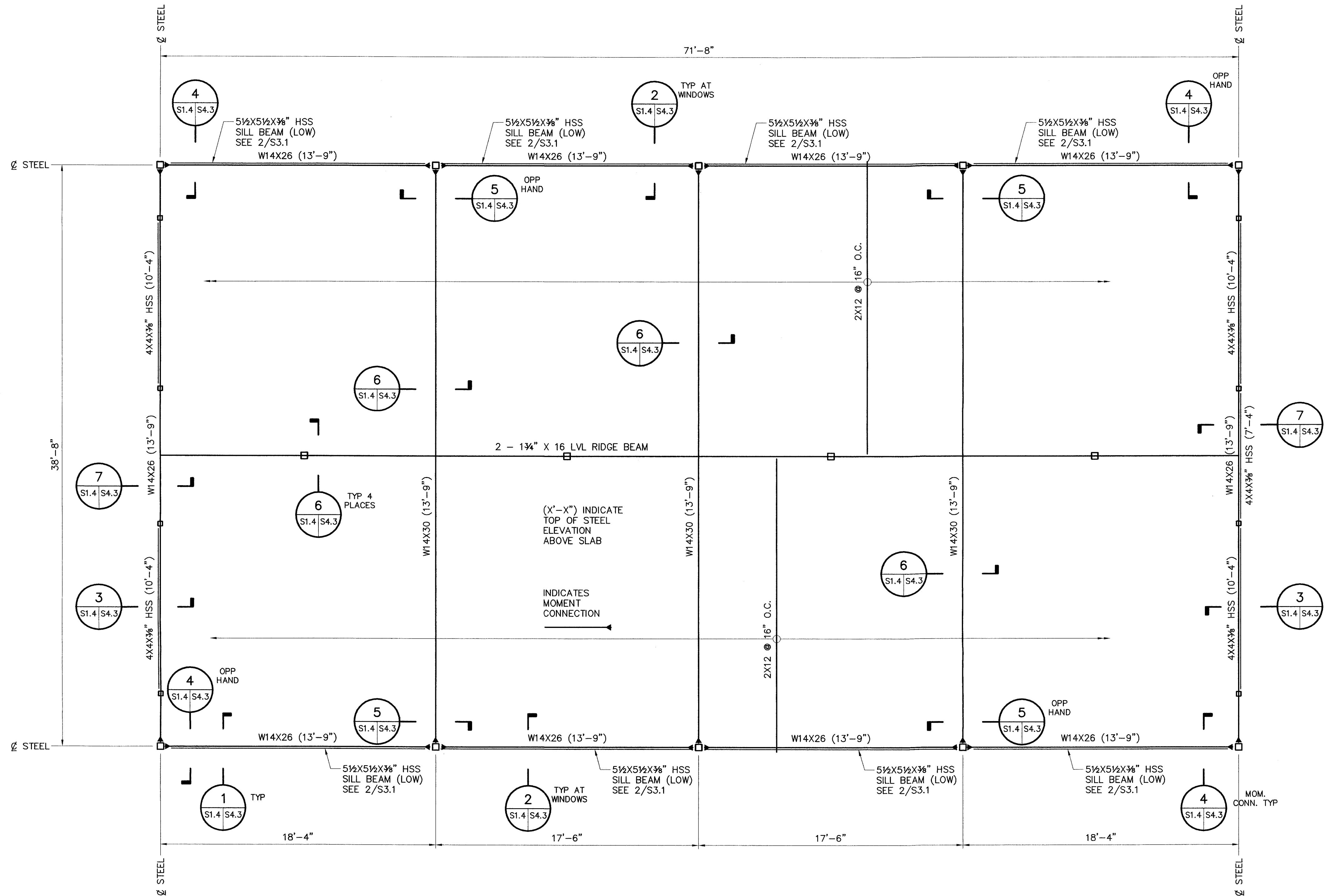
PROJECT NAME: NEW CONSTRUCTION FOR RACECO IN NEWPORT NEWS  
 DWG TITLE: CARWASH ROOF FRAMING PLAN

NO.	DATE	REVISION

FILE NAME:   
 DATE: 25 SEPT 07  
 DRAWN BY: JFC  
 CHECKED BY: GGC



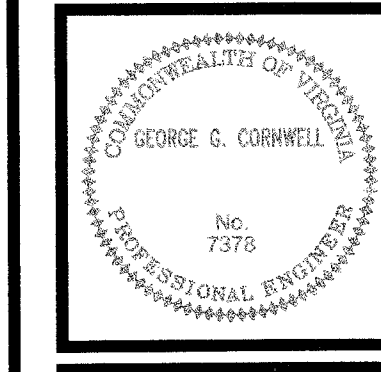
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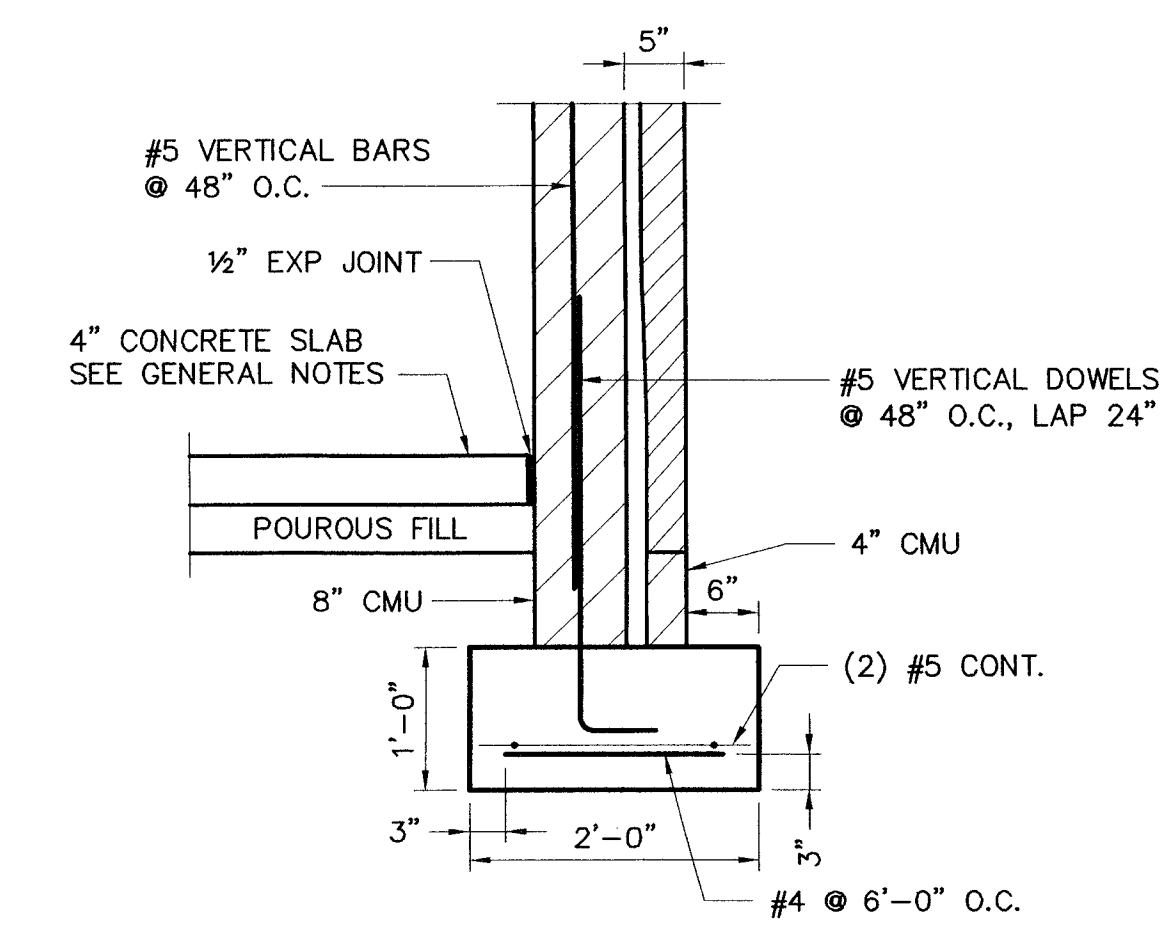
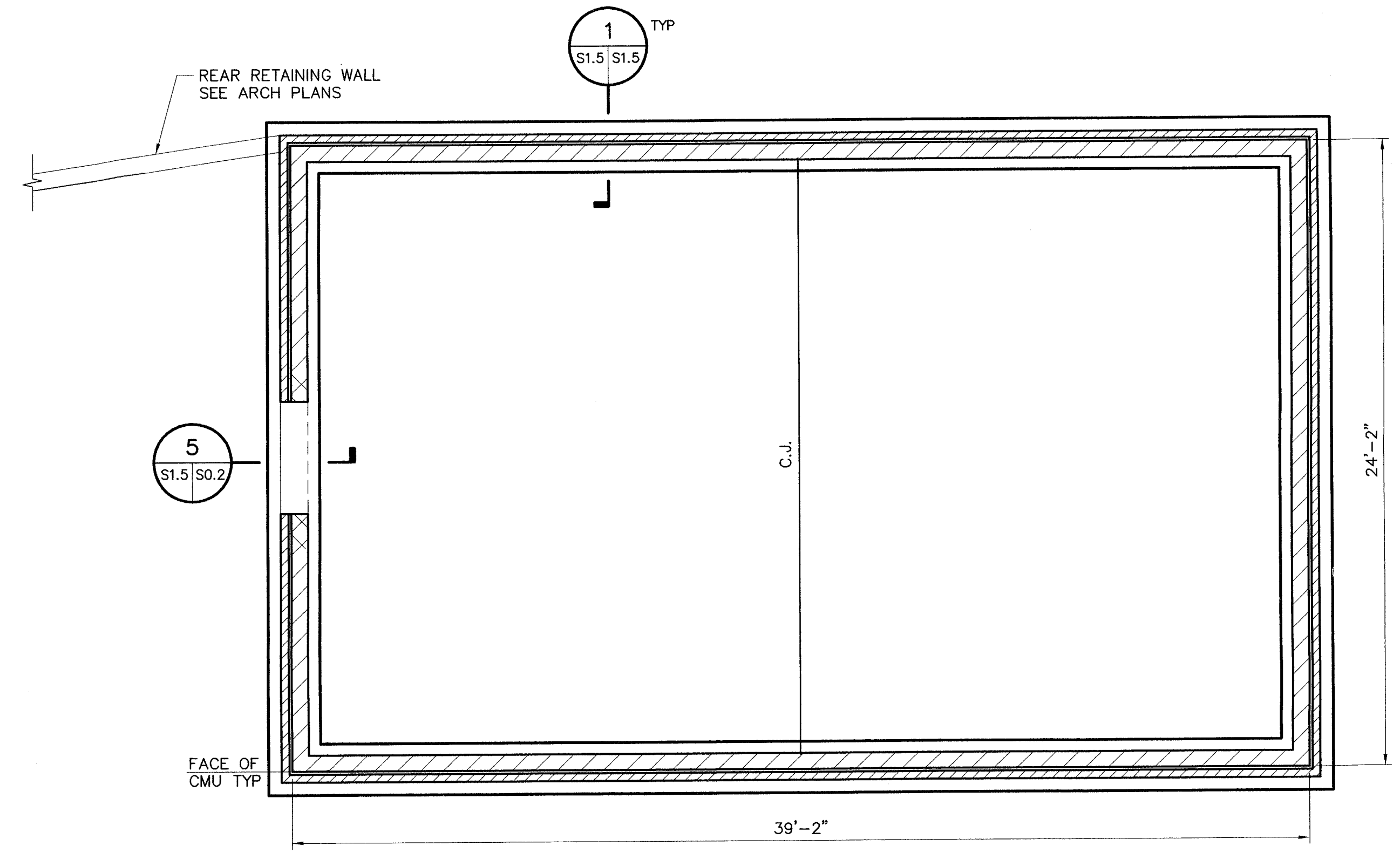
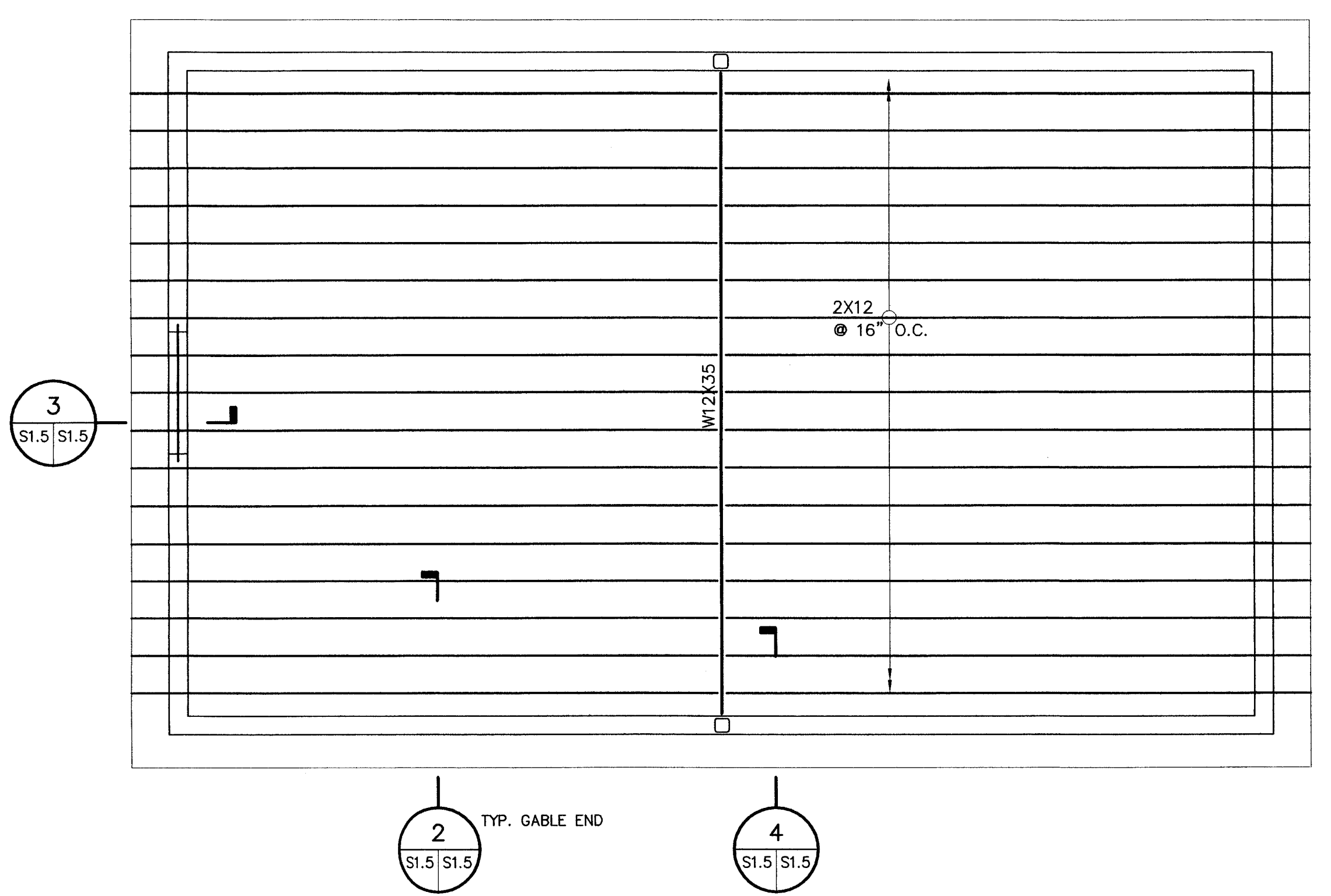
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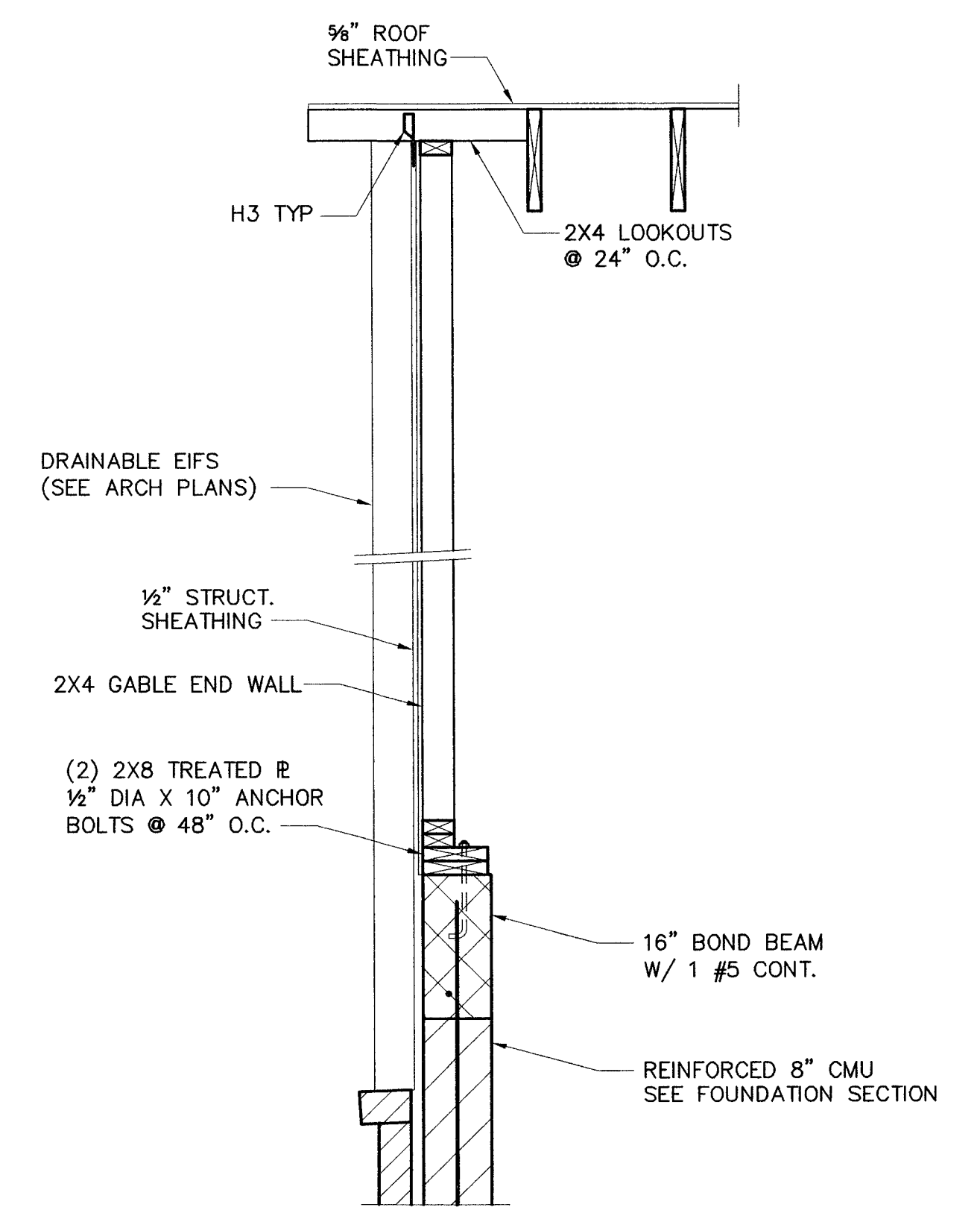
FILE NAME:	DATE: 28 SEPT 07	DRAWN BY: JFC	CHECKED BY: GGC
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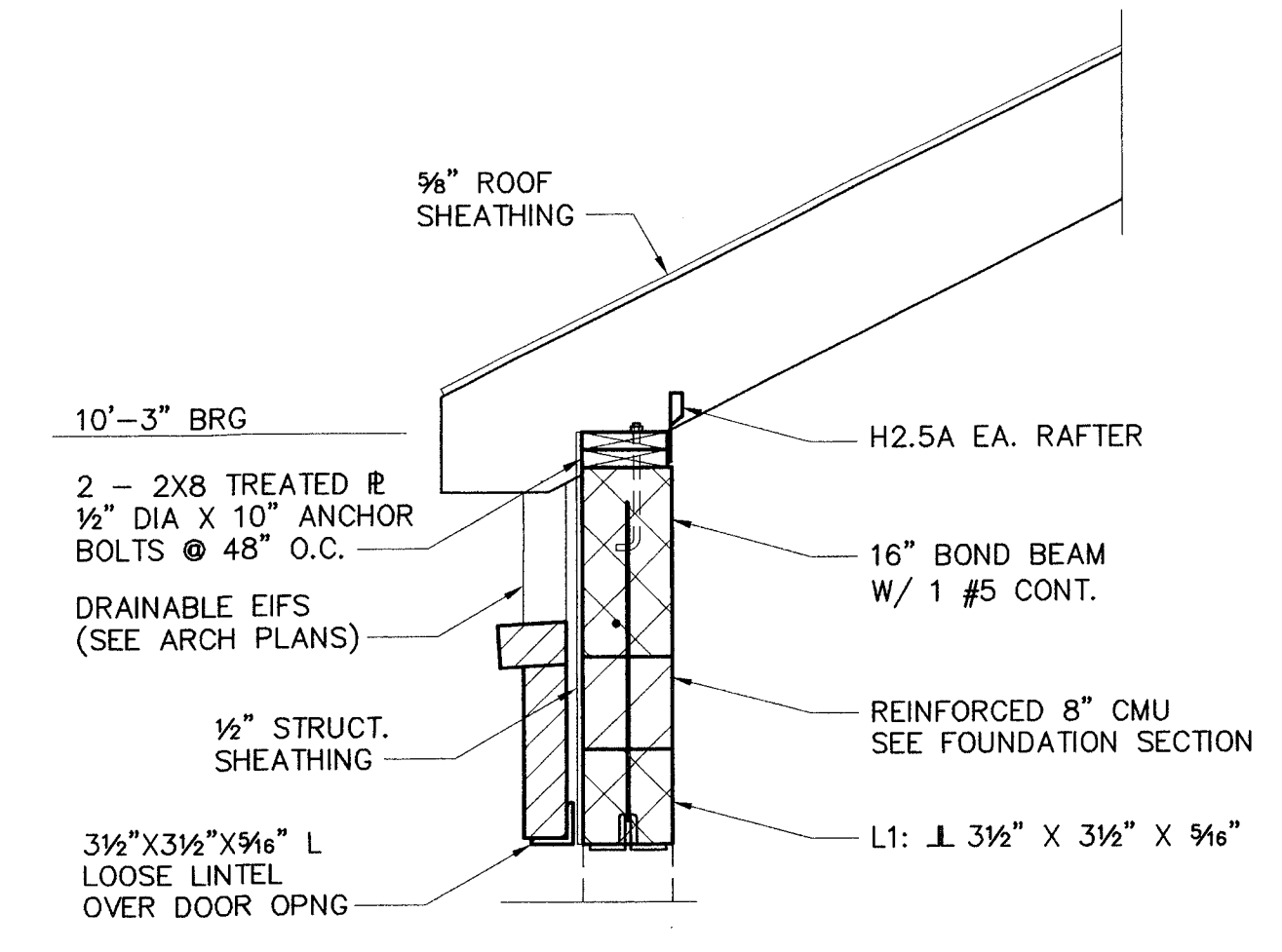
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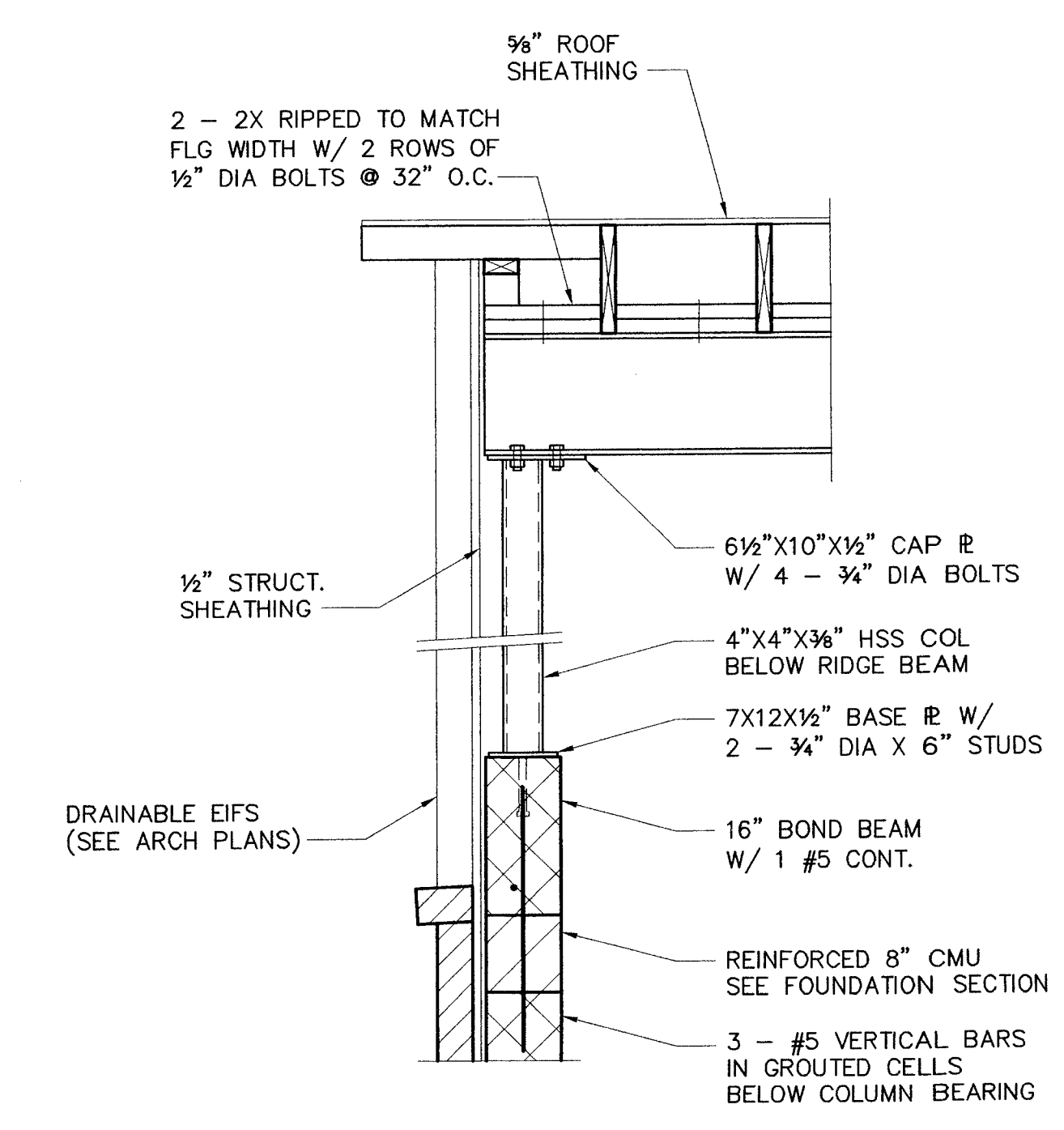
**1 SECTION**  
 S1.5/S1.5 3/4" = 1'-0"



**2 SECTION**  
 S1.5/S1.5 3/4" = 1'-0"

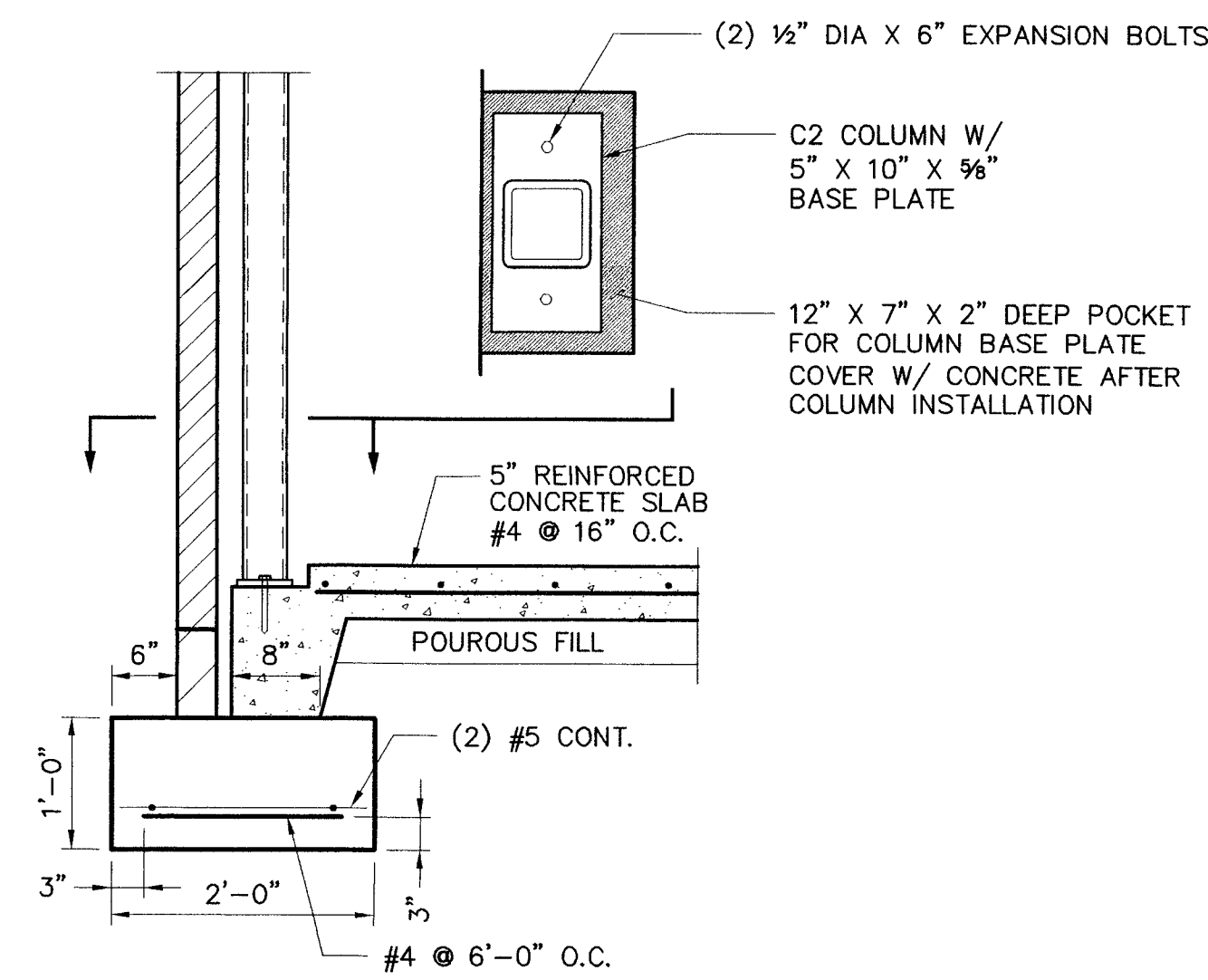


**3 SECTION**  
 S1.5/S1.5 3/4" = 1'-0"

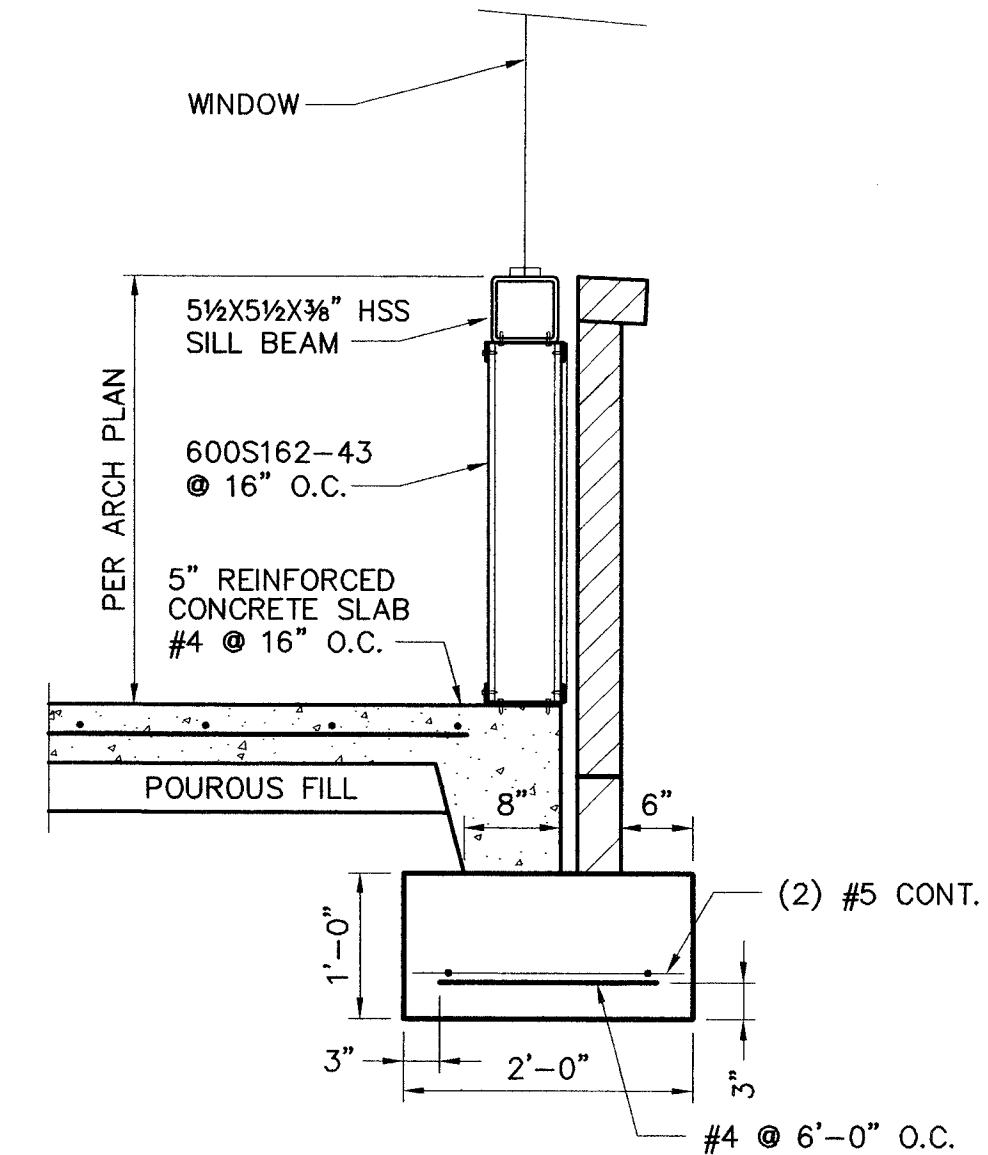


**4 SECTION**  
 S1.5/S1.5 3/4" = 1'-0"

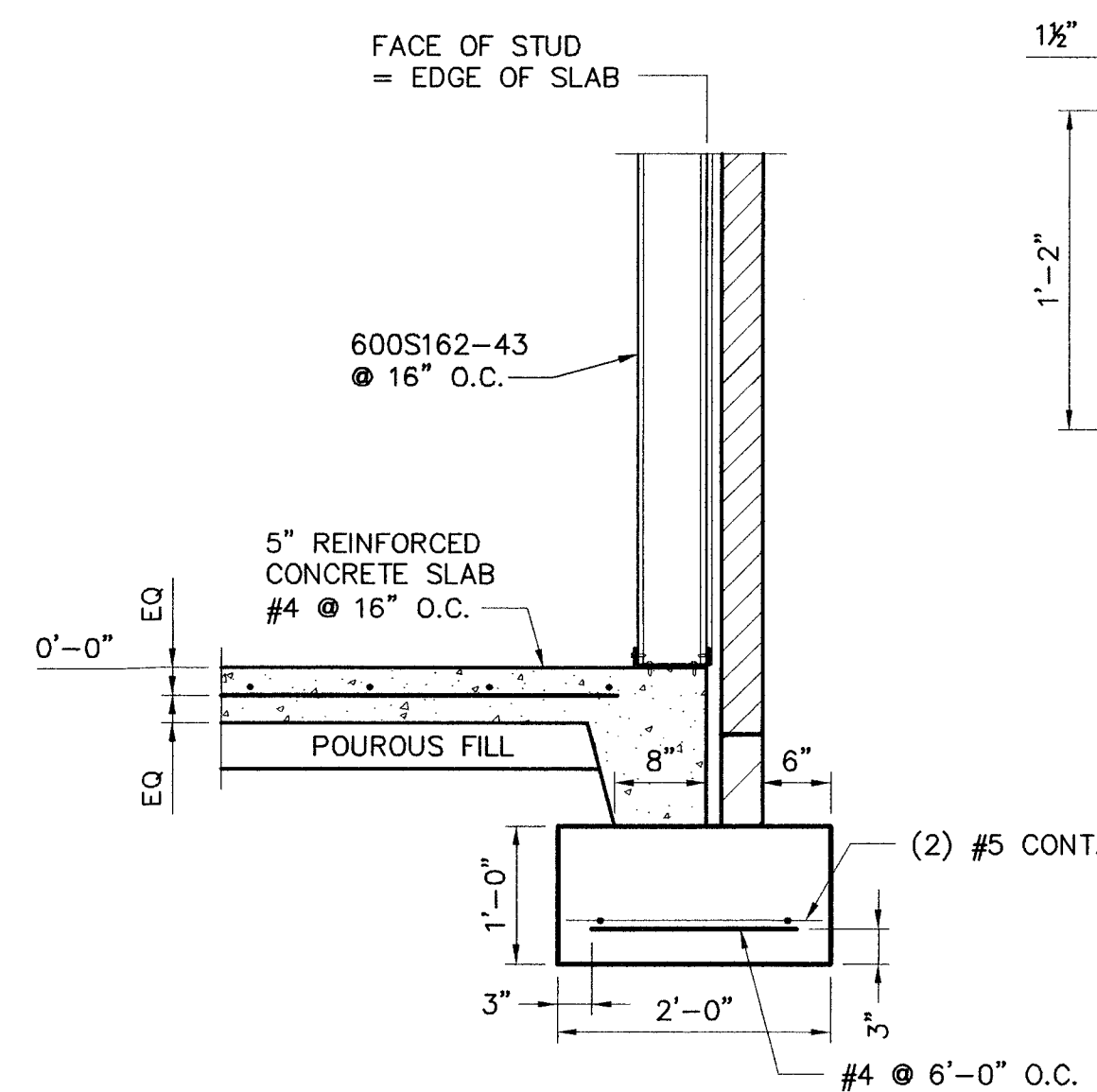




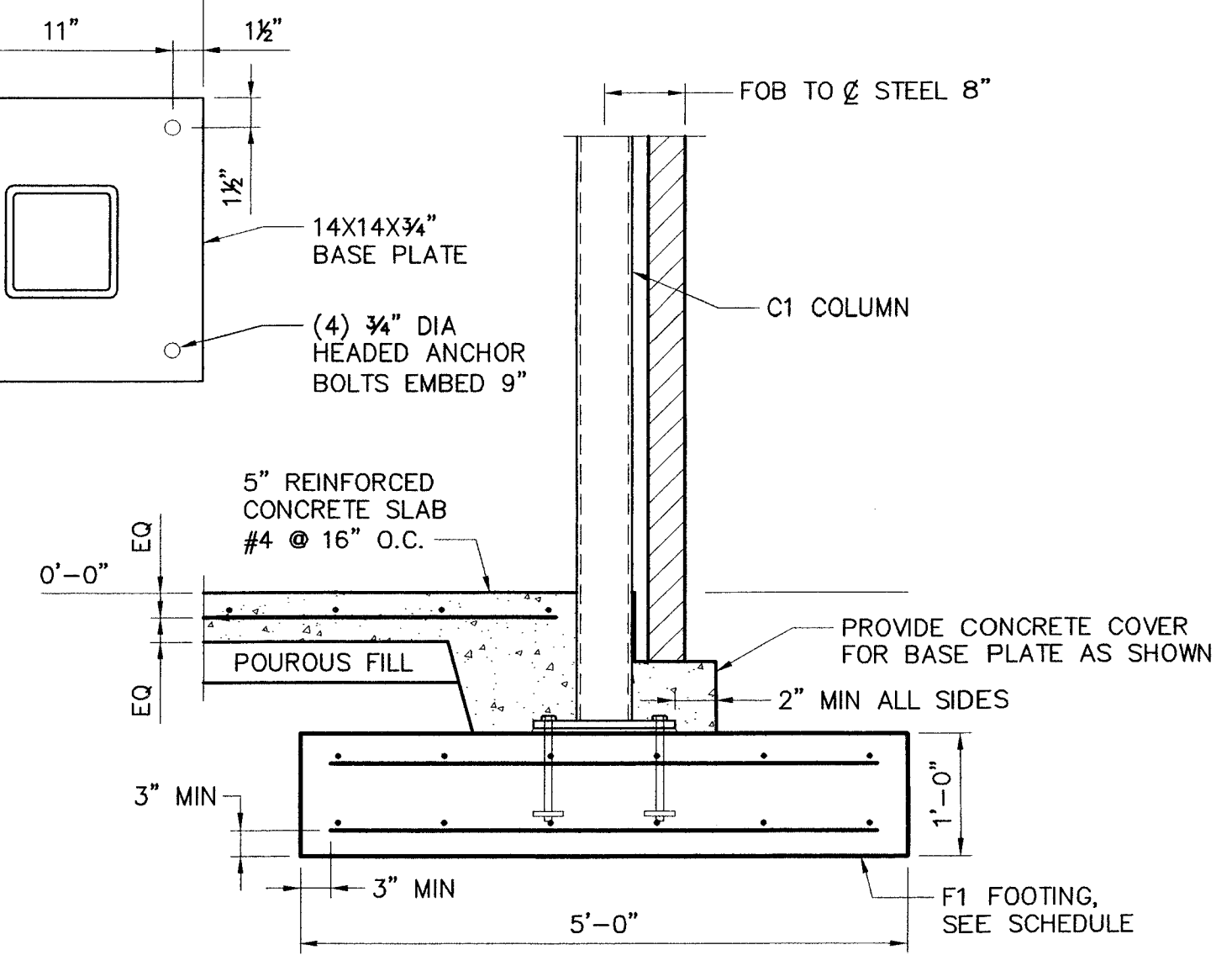
**1 SECTION - C2 COLUMN BASE**  
 S1.3|S3.1 3/4" = 1'-0"



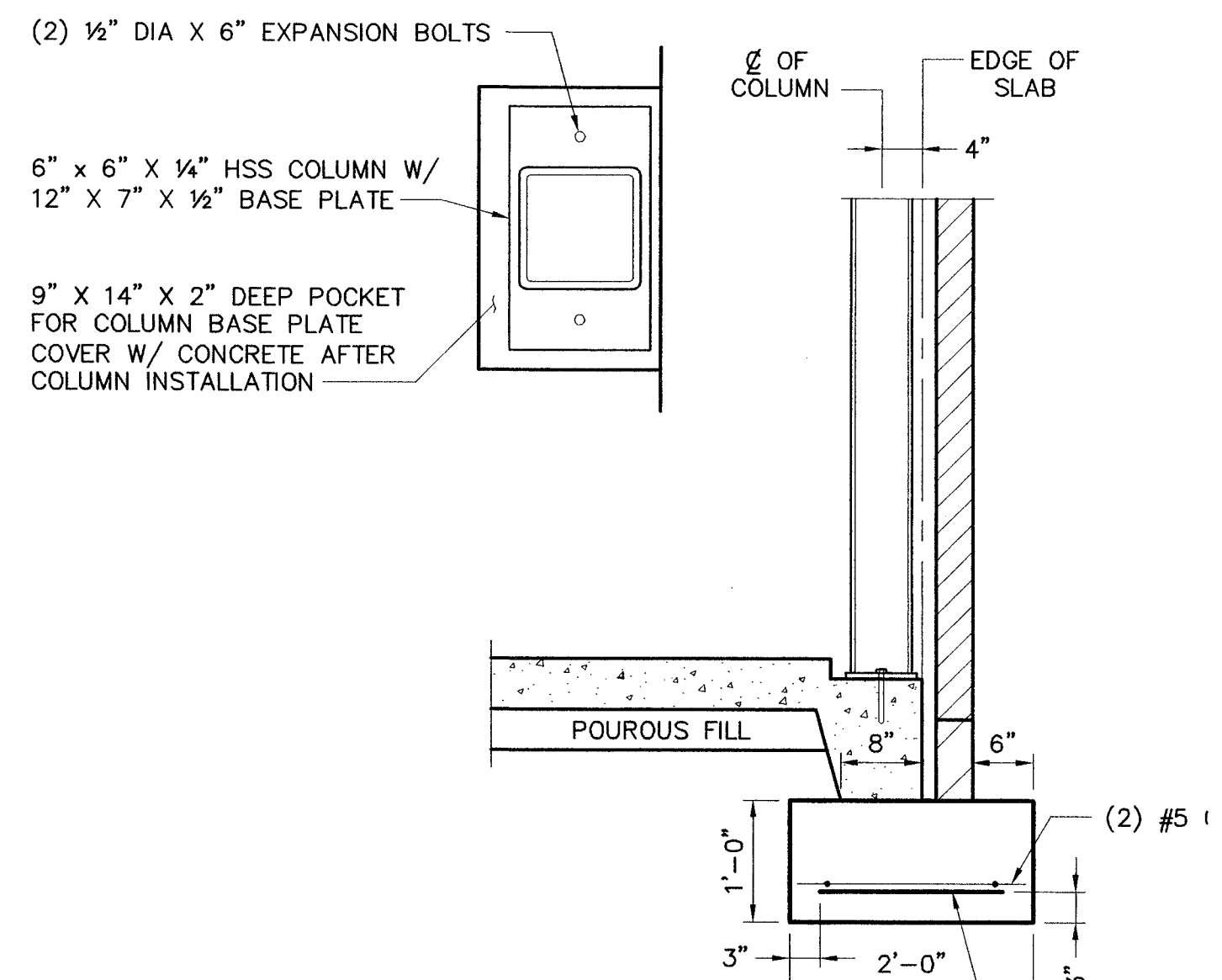
**2 SECTION - WINDOWS**  
 S1.3|S3.1 3/4" = 1'-0"



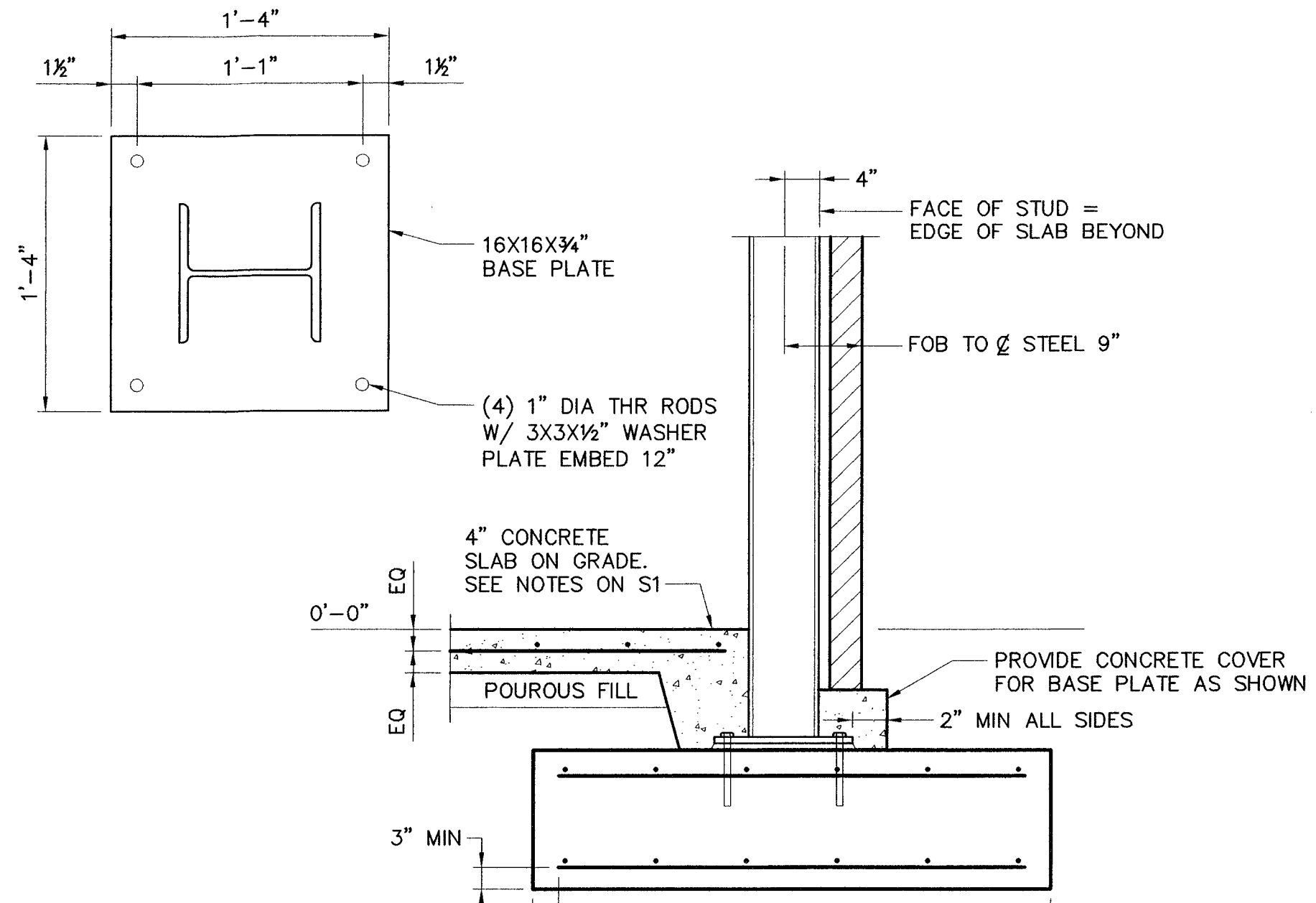
**3 SECTION - TYPICAL, CARWASH**  
 S1.3|S3.1 3/4" = 1'-0"



**4 SECTION - C1 COLUMN BASE**  
 S1.3|S3.1 3/4" = 1'-0"

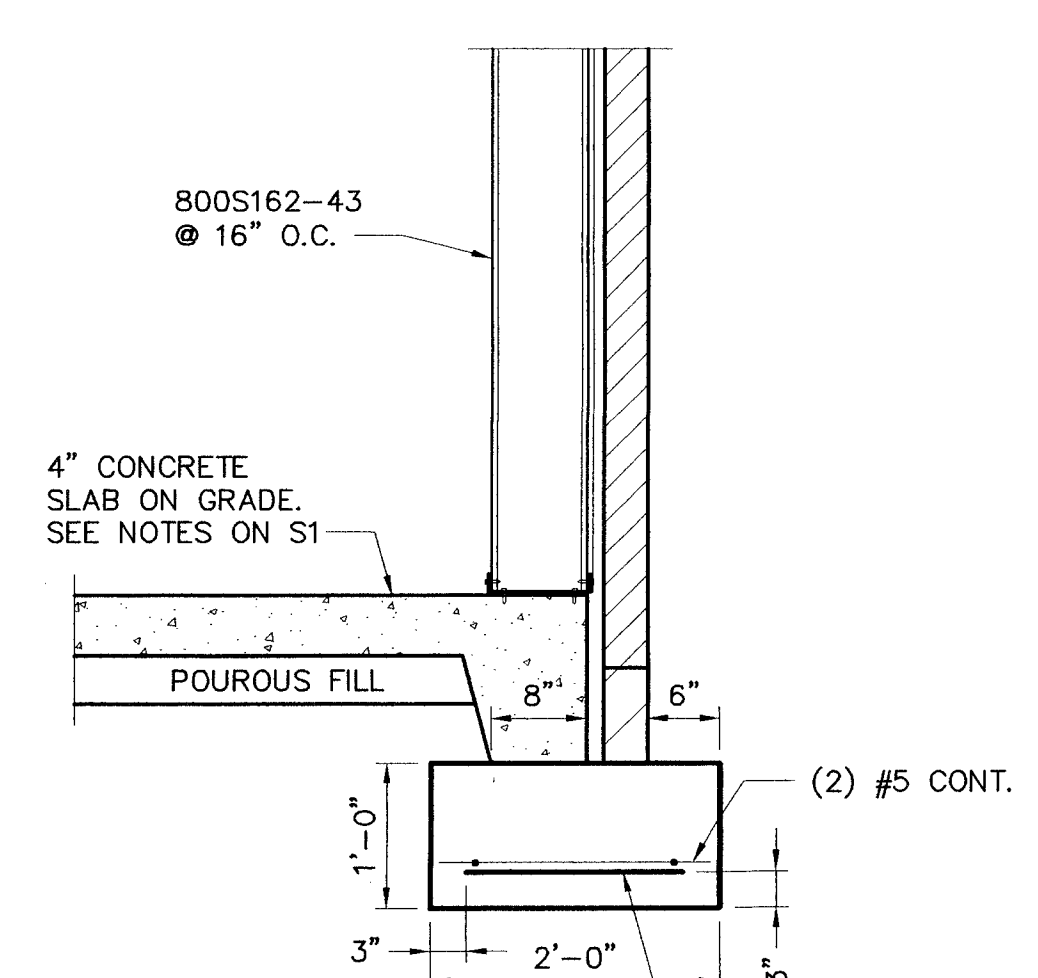


**5 SECTION**  
 S1.3|S3.1 3/4" = 1'-0"

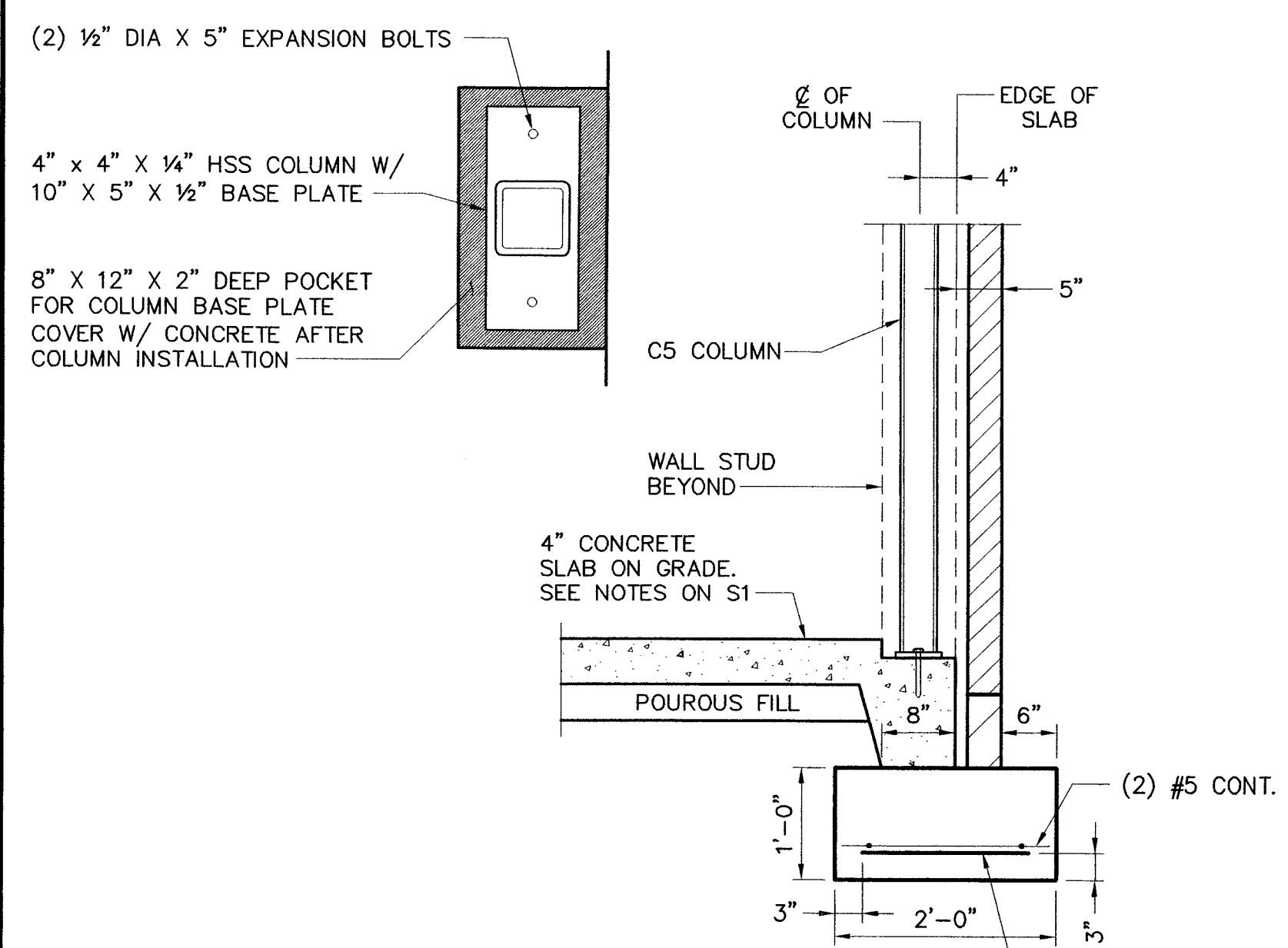


**6 SECTION**  
 S1.1|S3.1 3/4" = 1'-0"

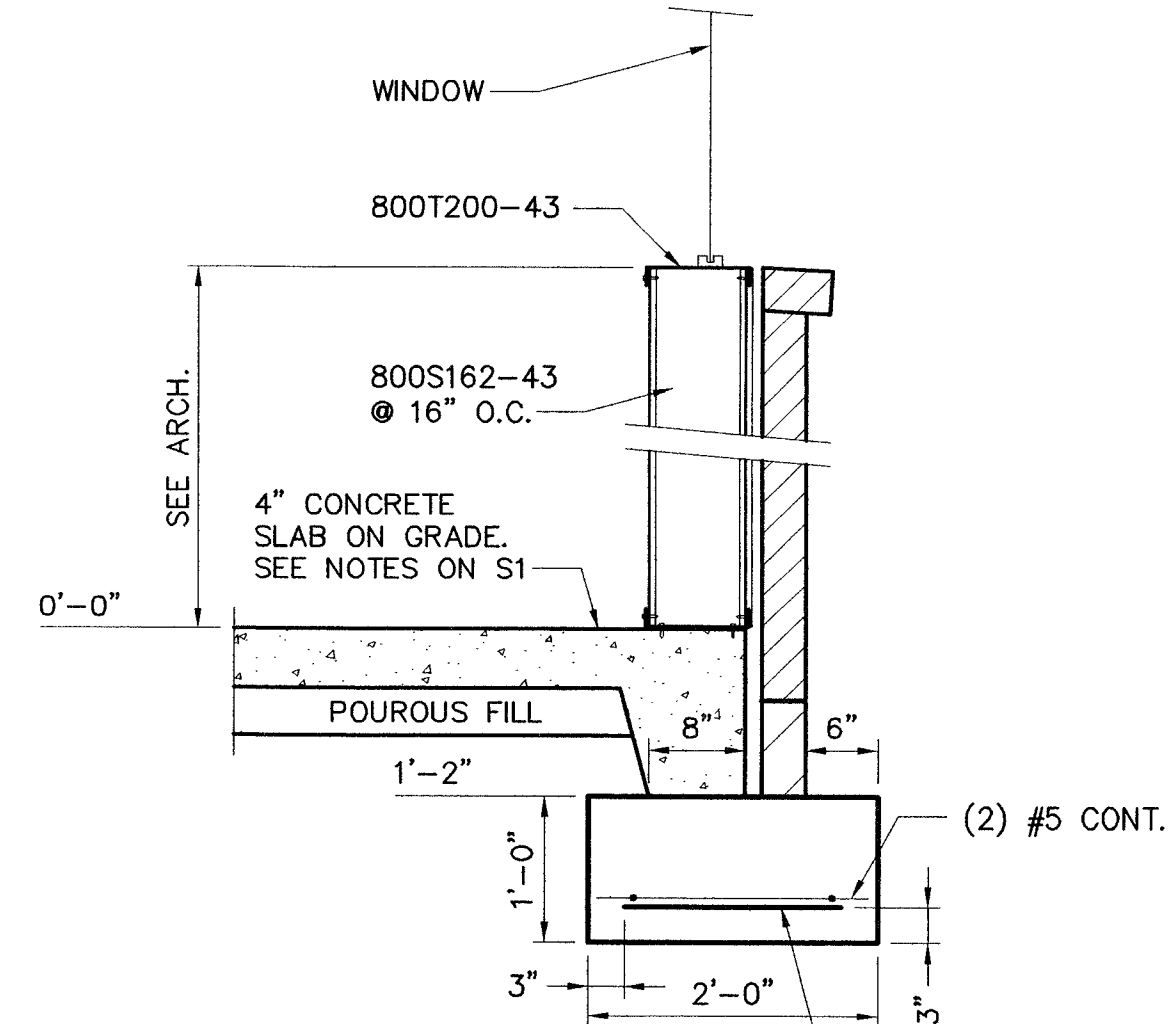
**7 SECTION - C3 COLUMN**  
 S1.1|S3.1 3/4" = 1'-0"



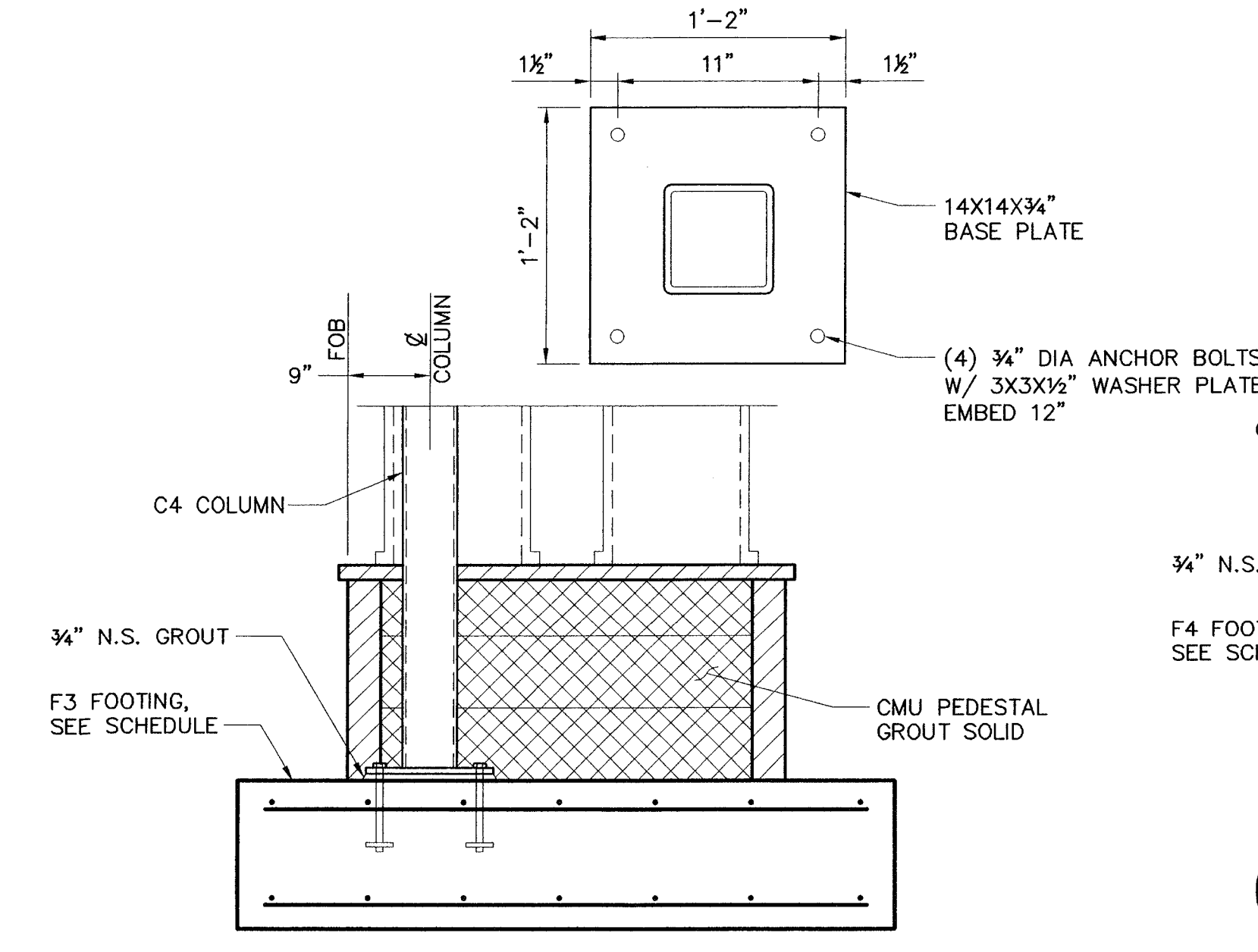
**8 SECTION - TYPICAL, CONV. STORE**  
 S1.1|S3.1 3/4" = 1'-0"



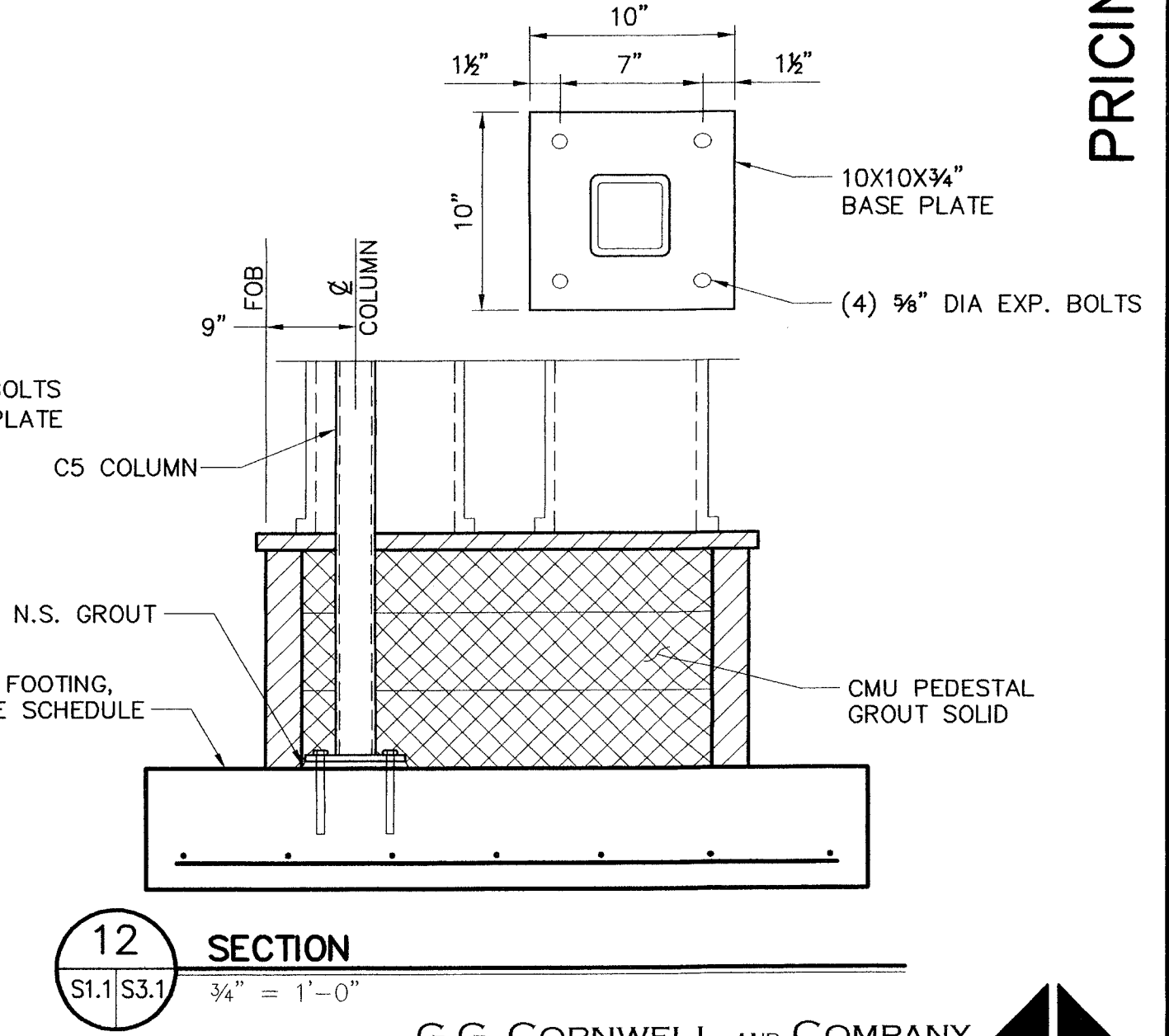
**9 SECTION**  
 S1.1|S3.1 3/4" = 1'-0"



**10 SECTION**  
 S1.1|S3.1 3/4" = 1'-0"



**11 SECTION**  
 S1.1|S3.1 3/4" = 1'-0"



**12 SECTION**  
 S1.1|S3.1 3/4" = 1'-0"

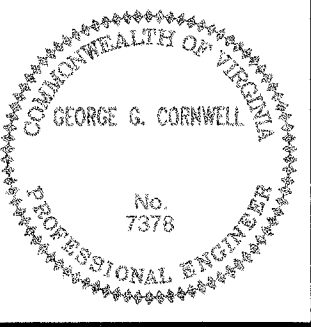
**G.G. CORNWELL AND COMPANY**  
 CONSULTING STRUCTURAL ENGINEERS  
 107 HERMAN MELVILLE AVENUE  
 NEWPORT NEWS, VIRGINIA 23606  
 (757) 873-9858 FAX (757) 873-3080

**PRICING SET - NOT FOR CONSTRUCTION**

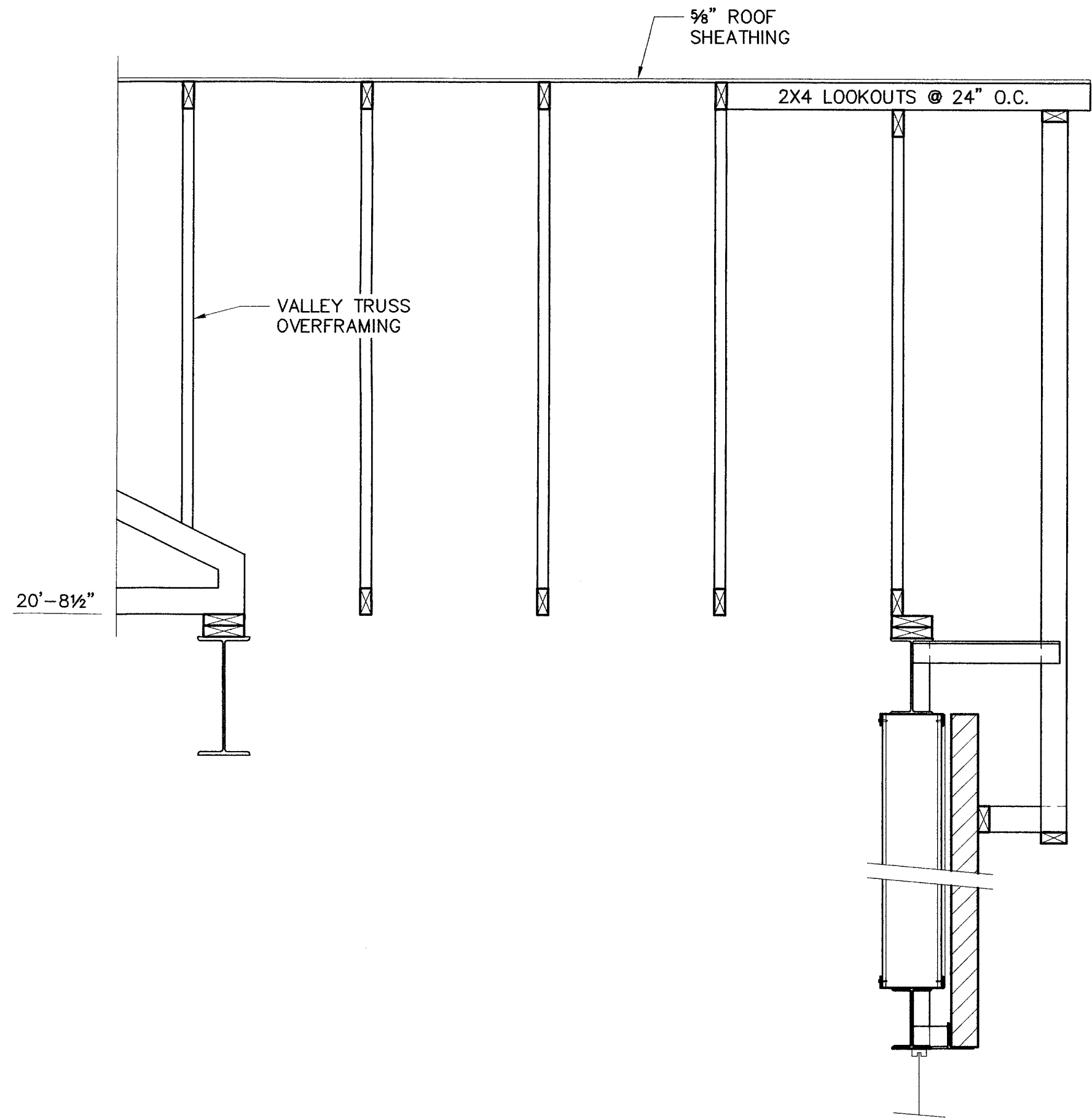
PROJECT NAME: NEW CONSTRUCTION FOR RACECO IN NEWPORT NEWS  
 DWG TITLE: FOUNDATION SECTIONS

NO.	DATE	REVISION

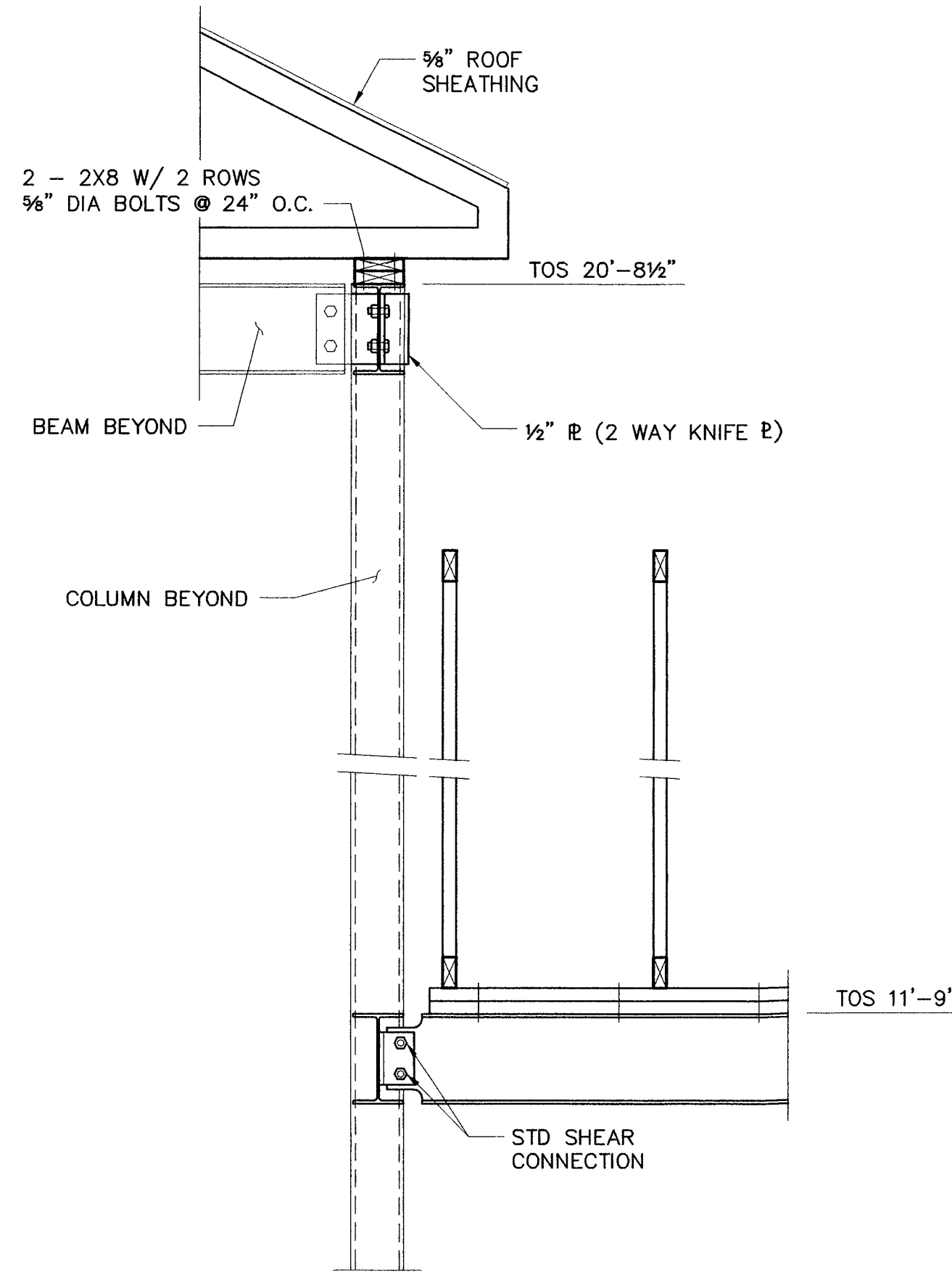
FILE NAME:  
 DATE: 28 SEPT 07  
 DRAWN BY: JFC  
 CHECKED BY: GGC



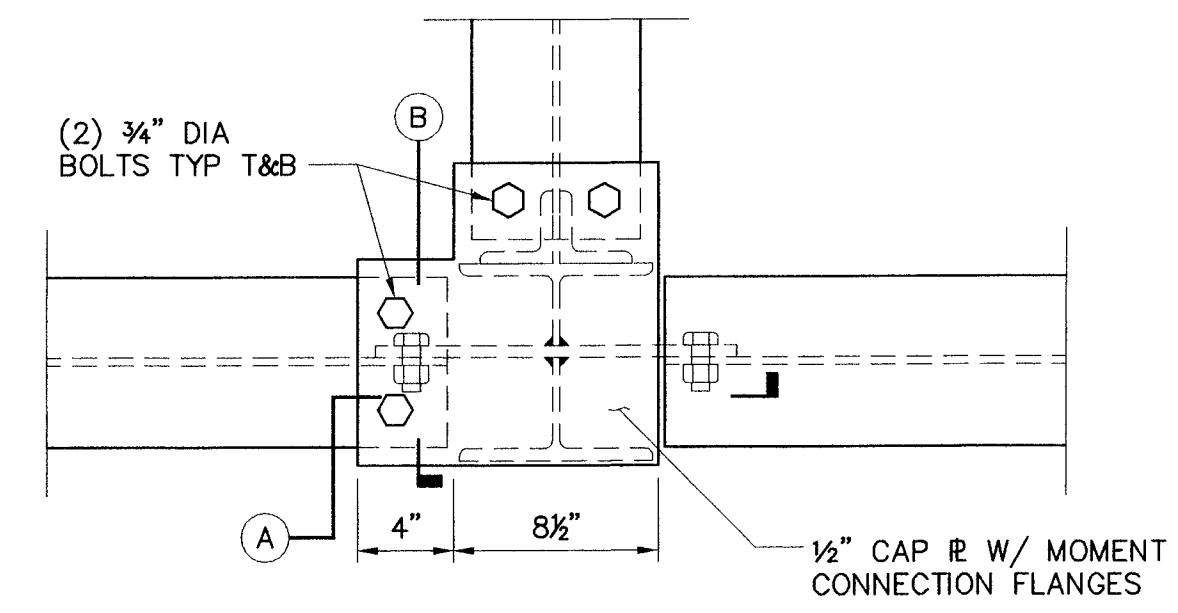
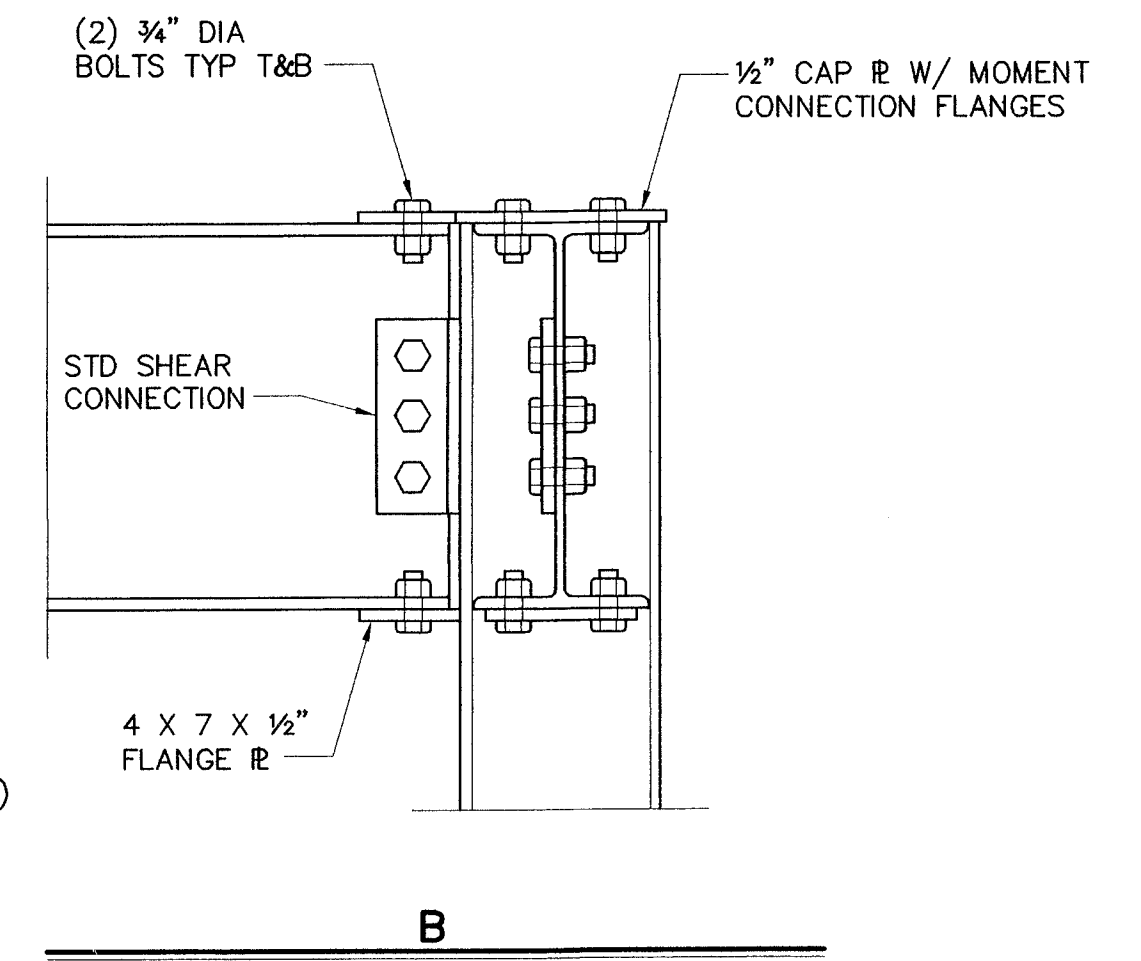
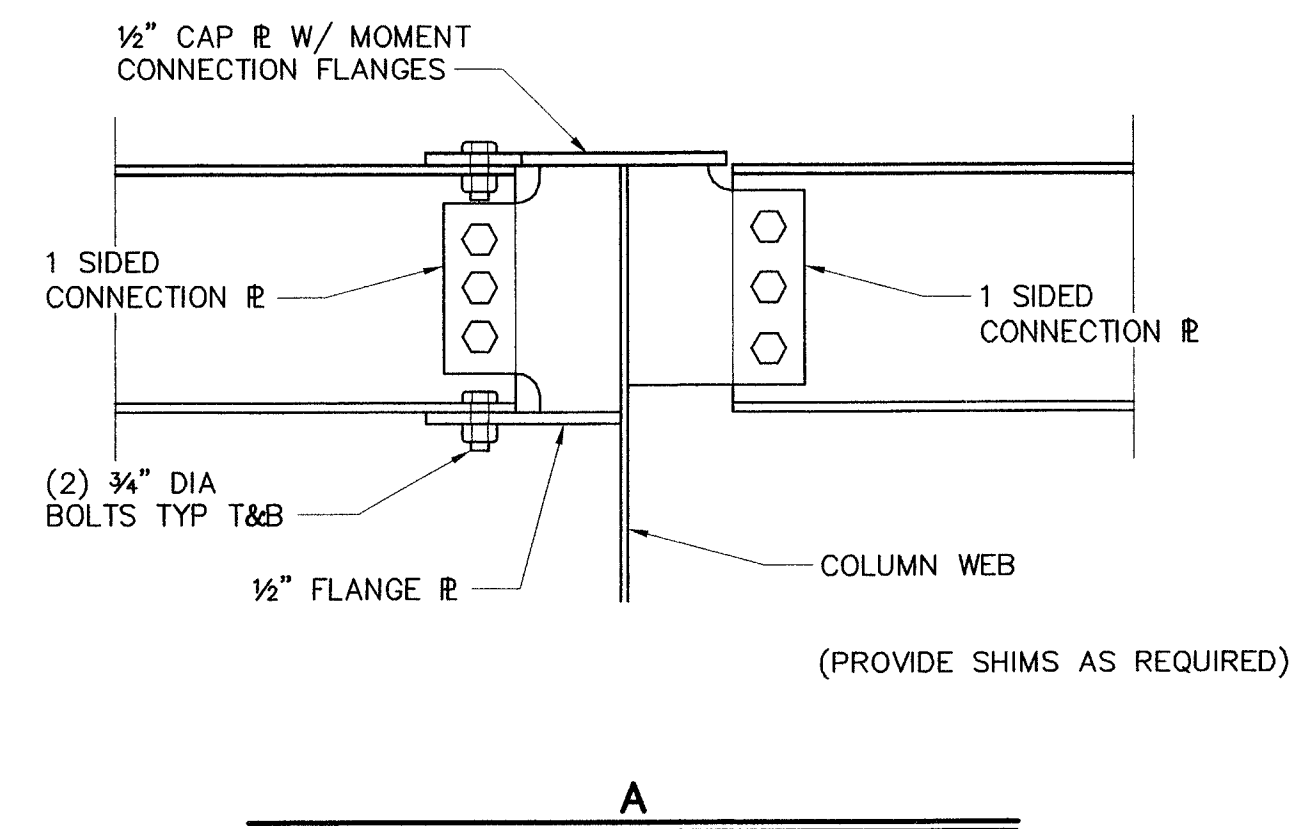
JOB NO.: 0751  
**S3.1**  
 SHEET OF 2



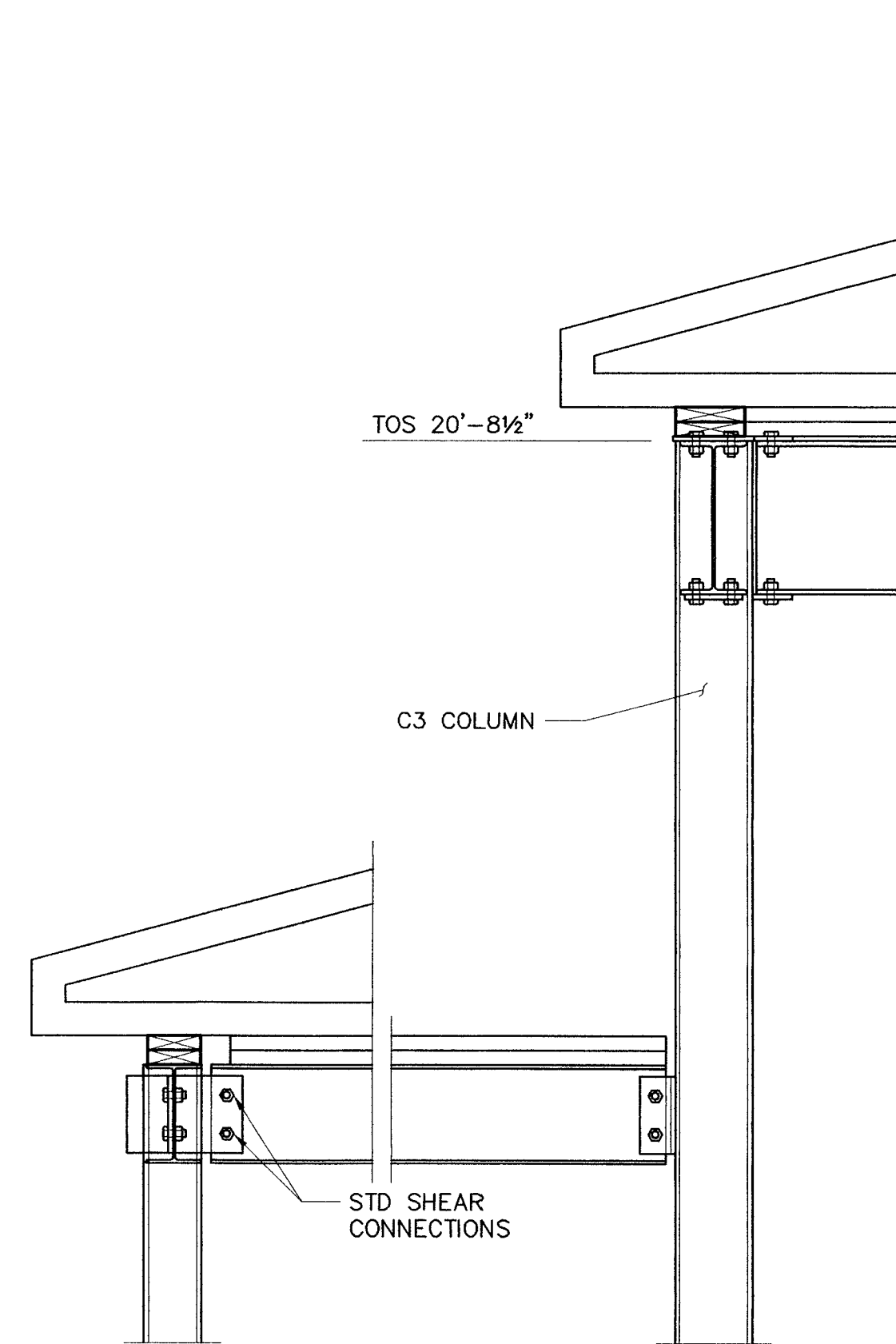
**1 SECTION**  
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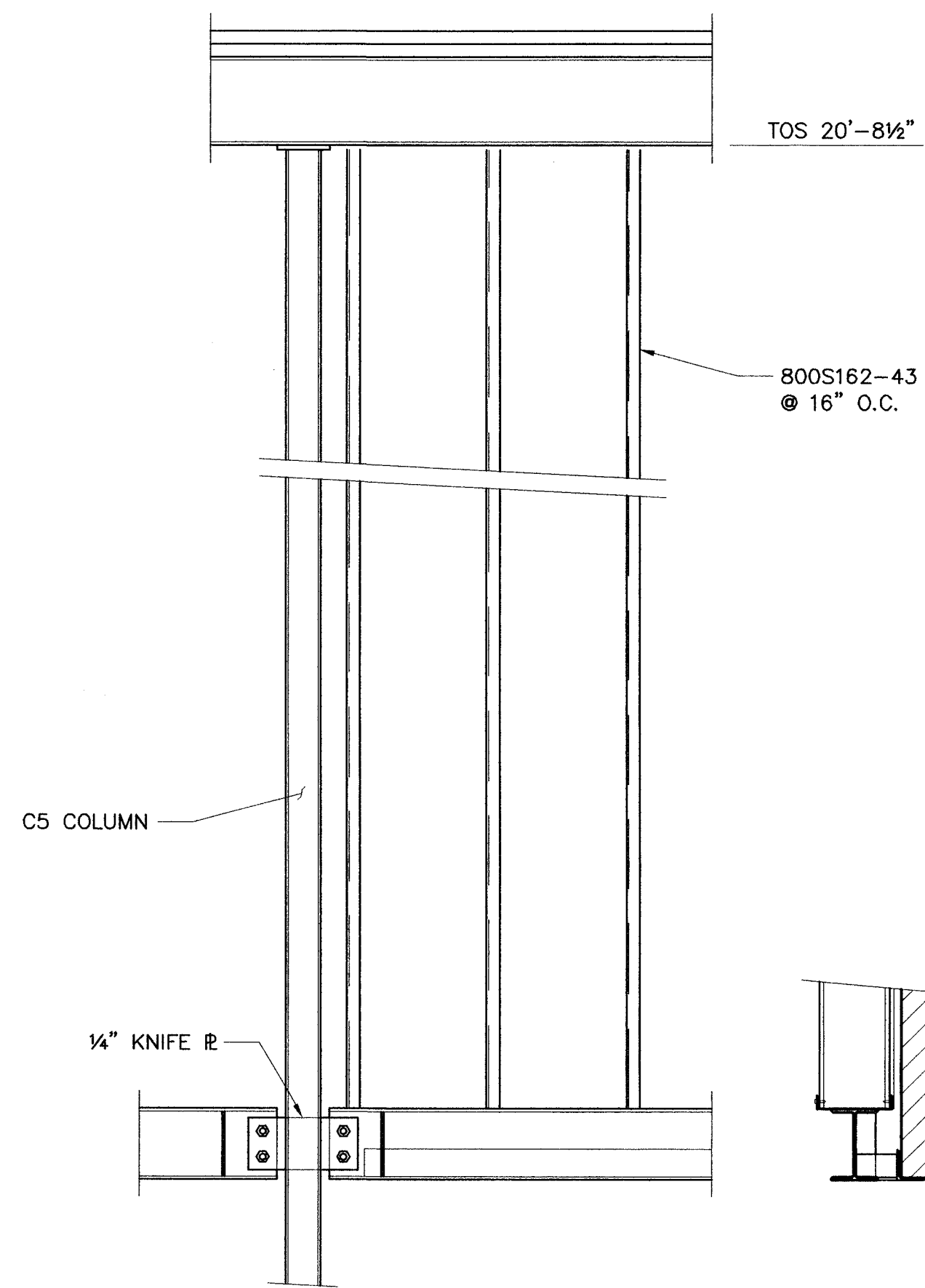
**2 SECTION**  
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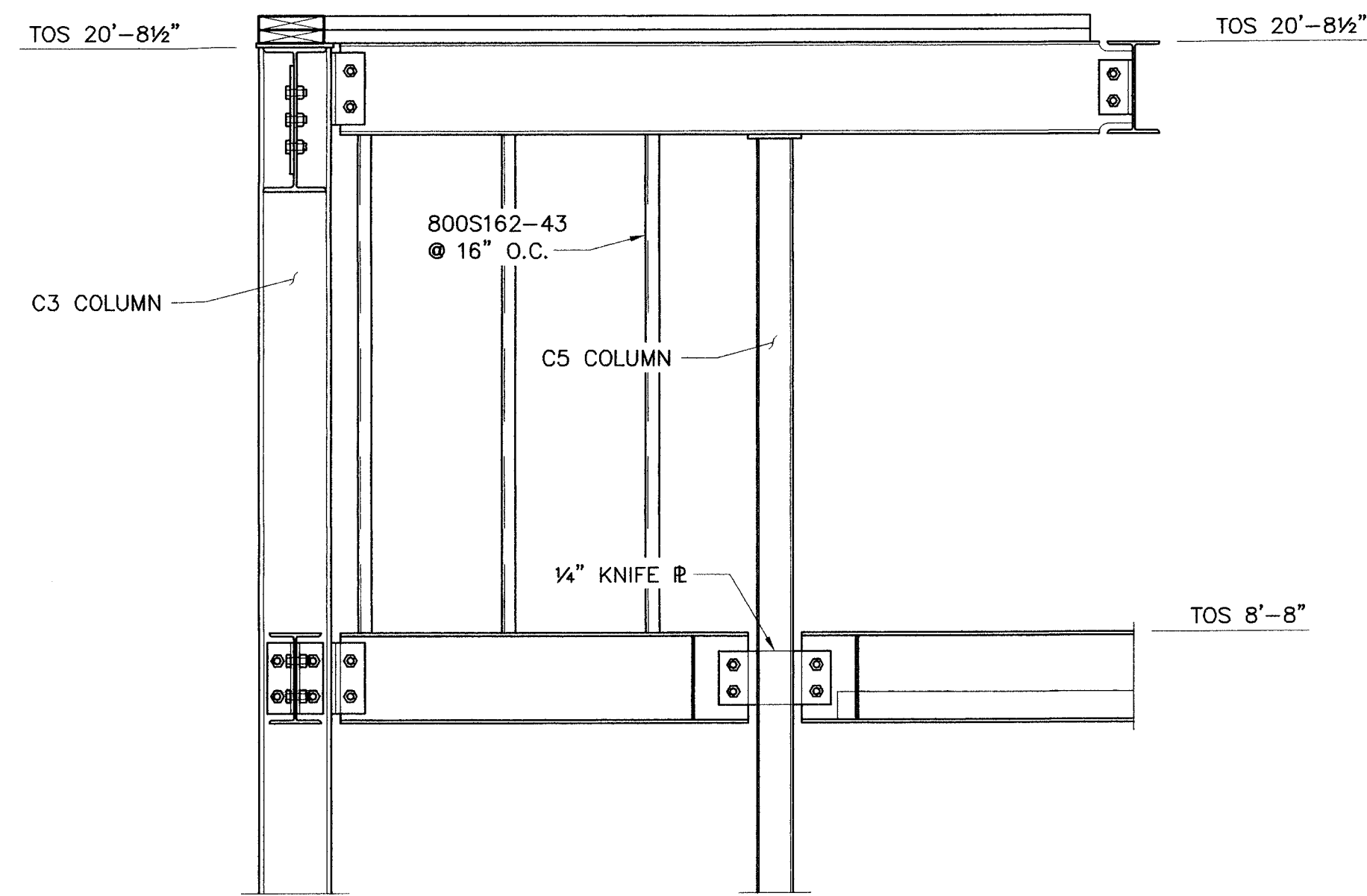
**3 DETAIL - TYPICAL MOMENT CONNECTION**  
 S1.2/S4.1 3/4" = 1'-0"



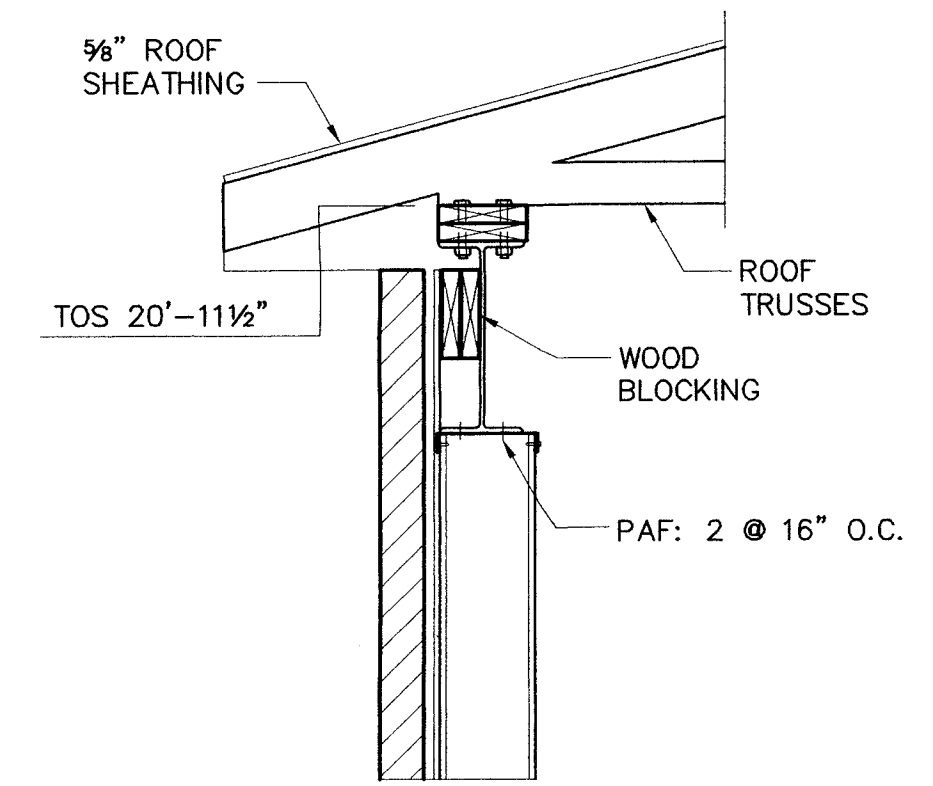
**4 SECTION**  
 S1.2/S4.1 3/4" = 1'-0"



**5 SECTION**  
 S1.2/S4.1 3/4" = 1'-0"



**6 SECTION**  
 S1.2/S4.1 3/4" = 1'-0"

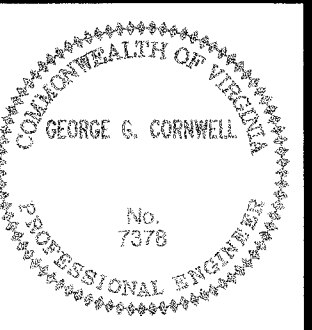


**7 SECTION**  
 S1.2/S4.1 3/4" = 1'-0"

PRICING SET - NOT FOR CONSTRUCTION

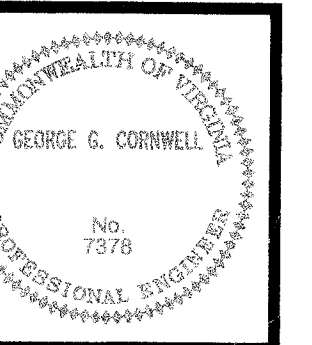
NO.	DATE	REVISION

FILE NAME:	DATE: 28 SEPT 07	DRAWN BY: JFC	CHECKED BY: GOC
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NO.	DATE	REVISION

FILE NAME:	DATE: 28 SEPT 07
DRAWN BY: JFC	CHECKED BY: GGC

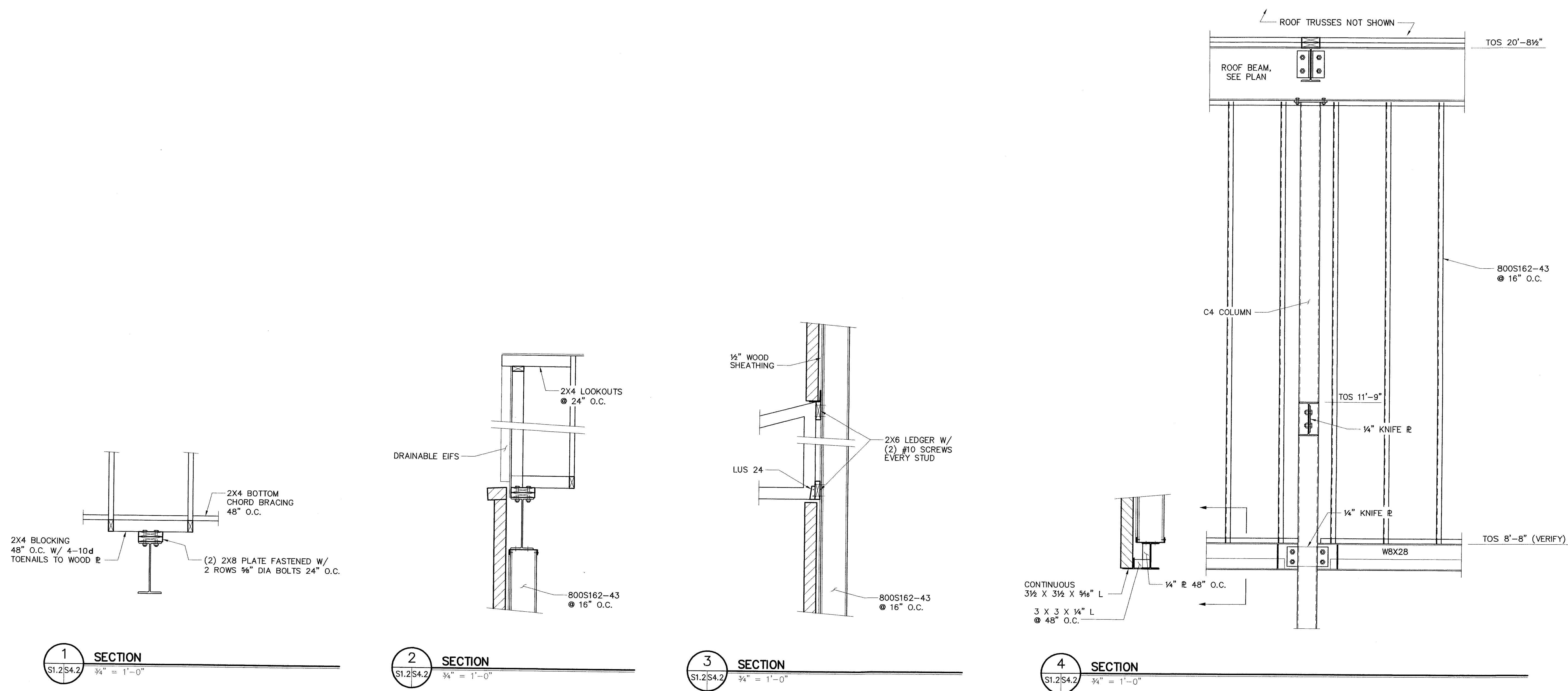


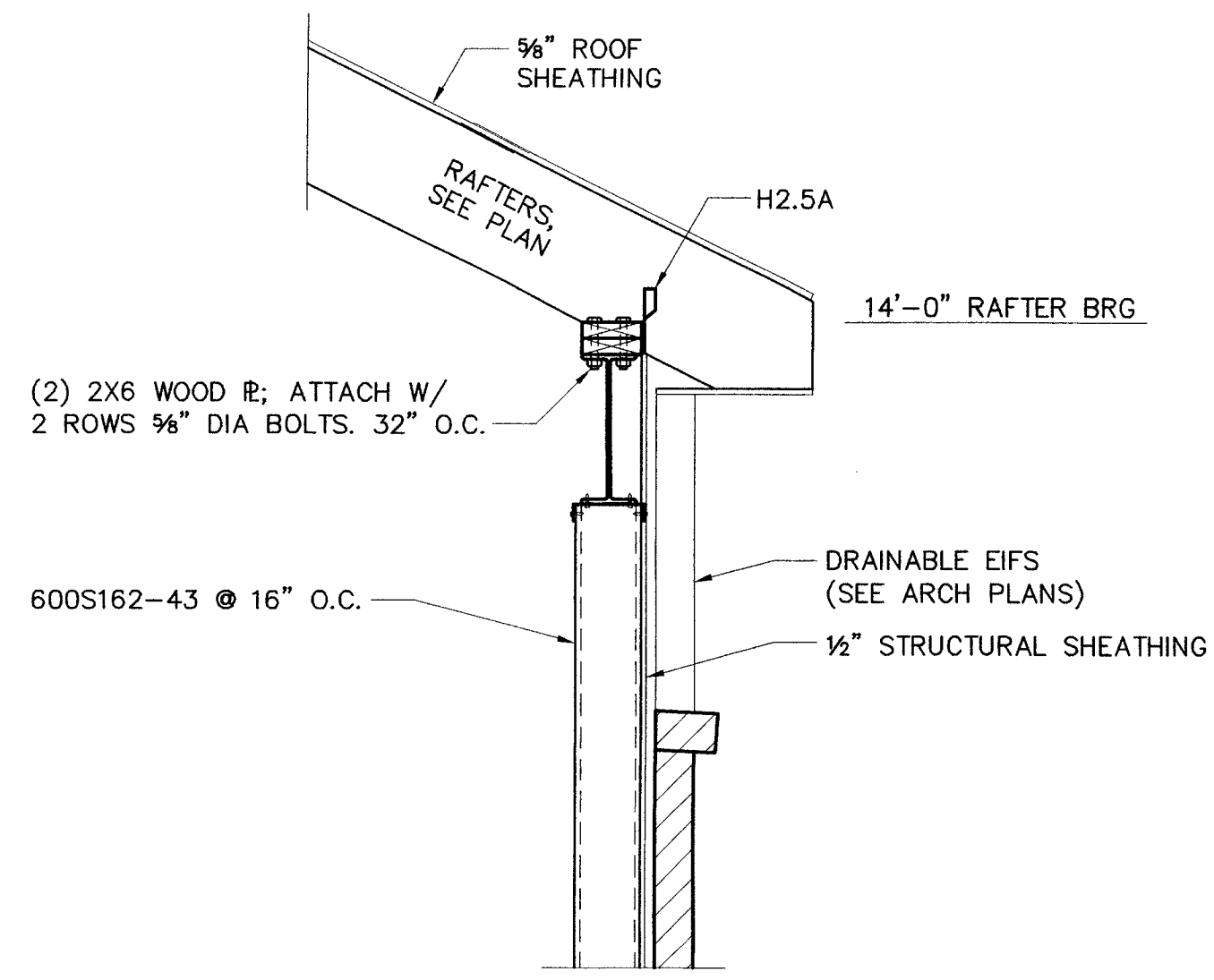
JOB NO.: 0751

**S4.2**

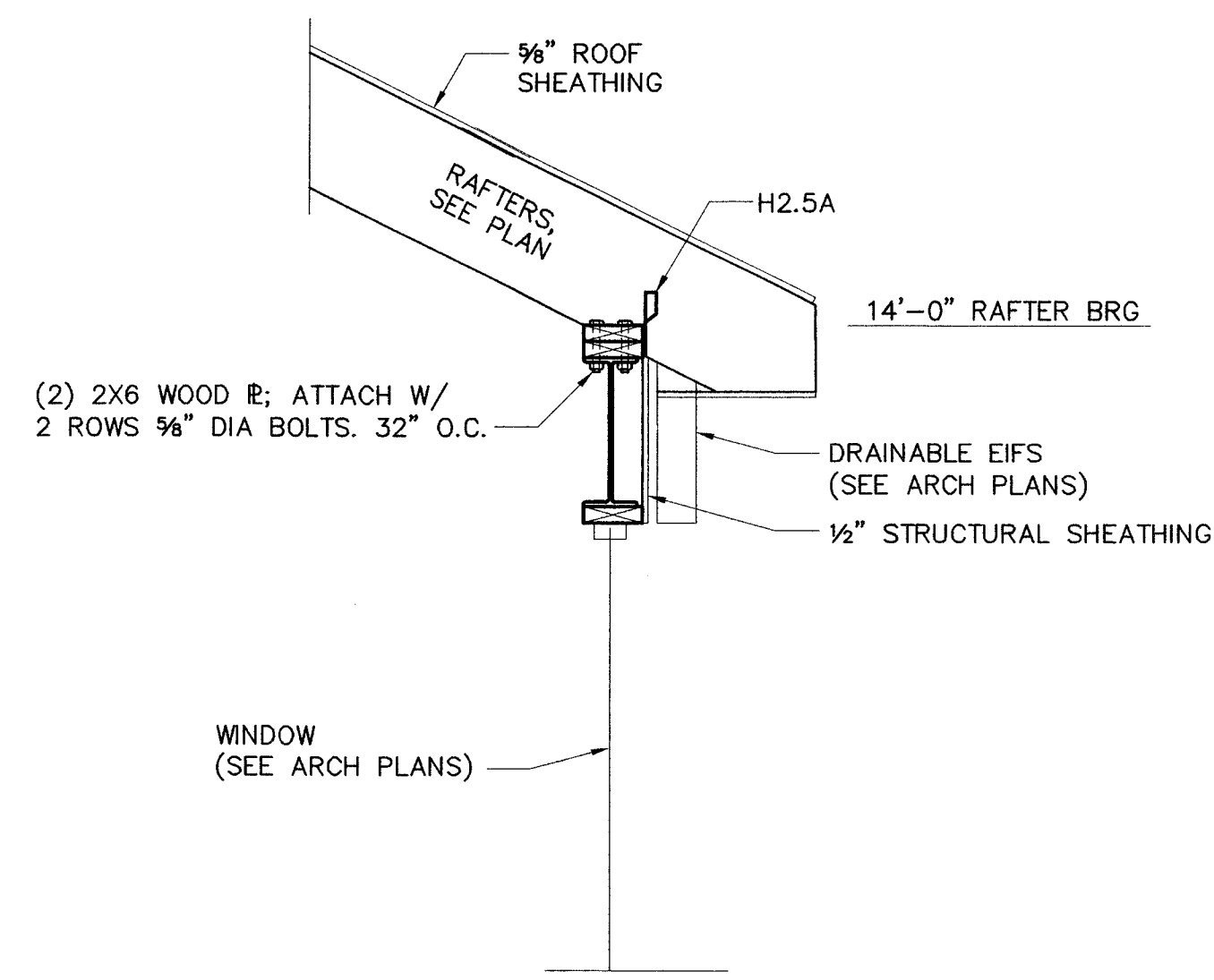
SHEET OF 2

PRICING SET - NOT FOR CONSTRUCTION

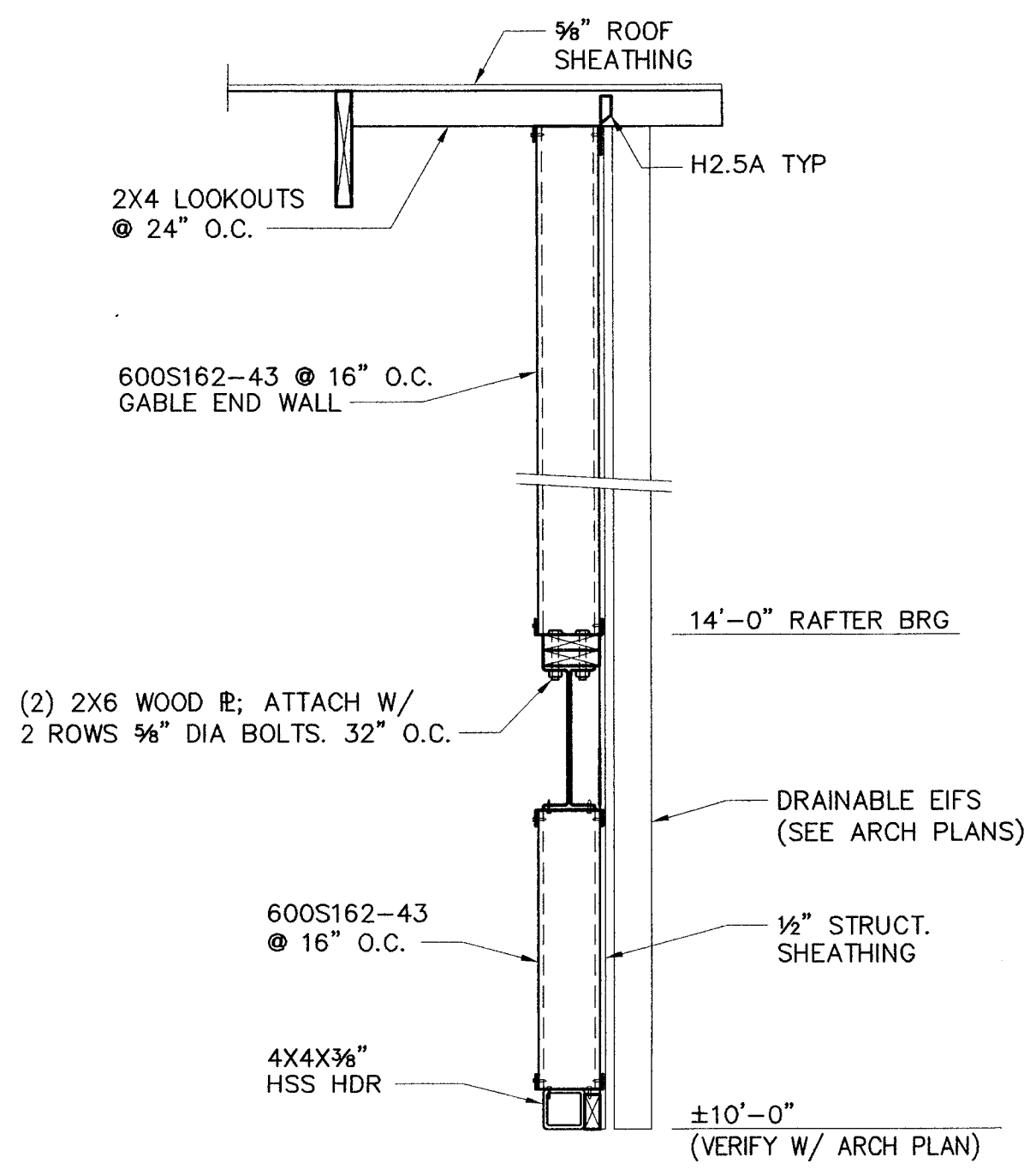




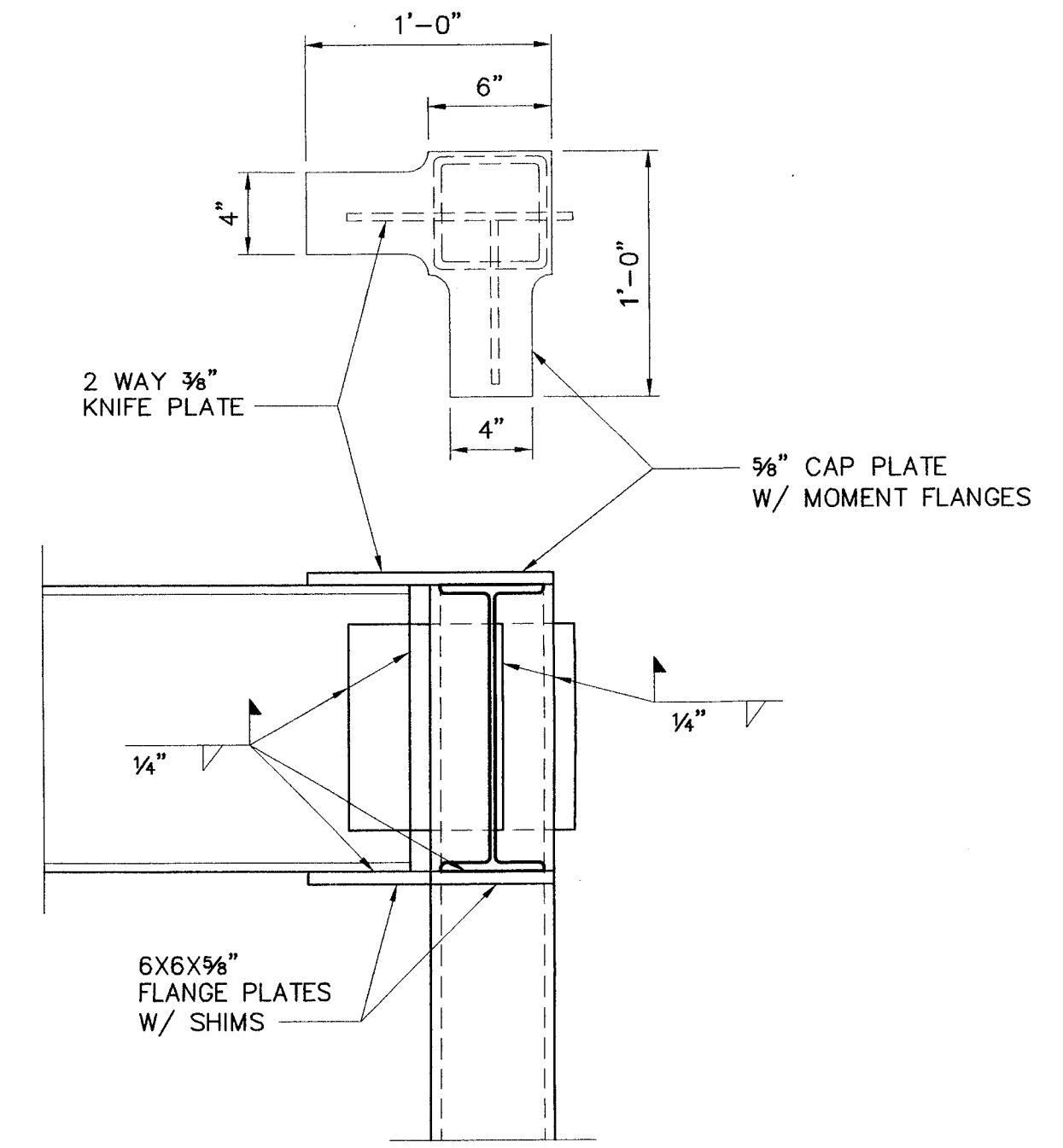
**1 SECTION**  
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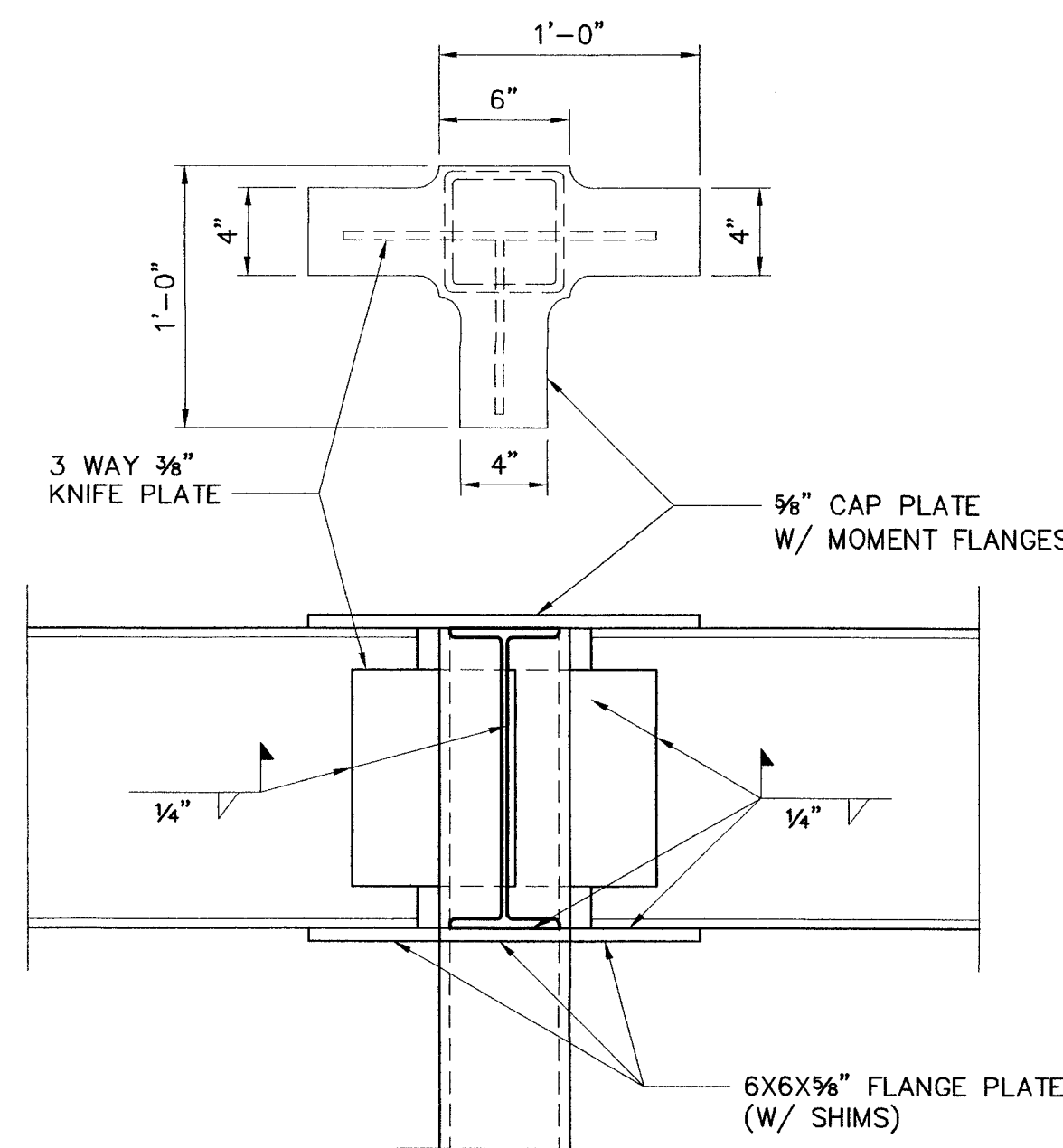
**2 SECTION**  
 S1.4/S4.3 3/4" = 1'-0"



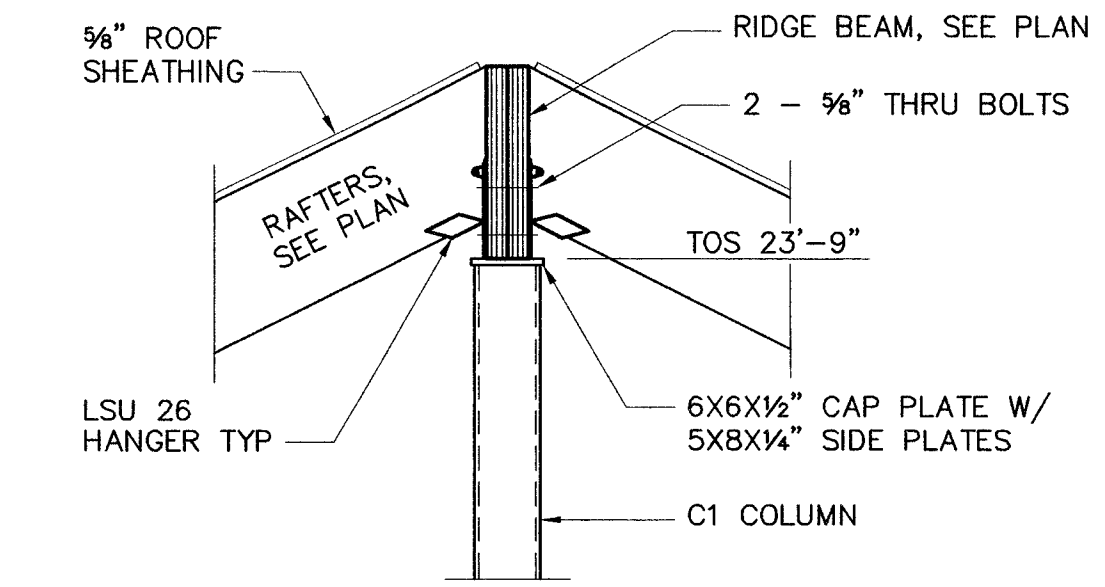
**3 SECTION**  
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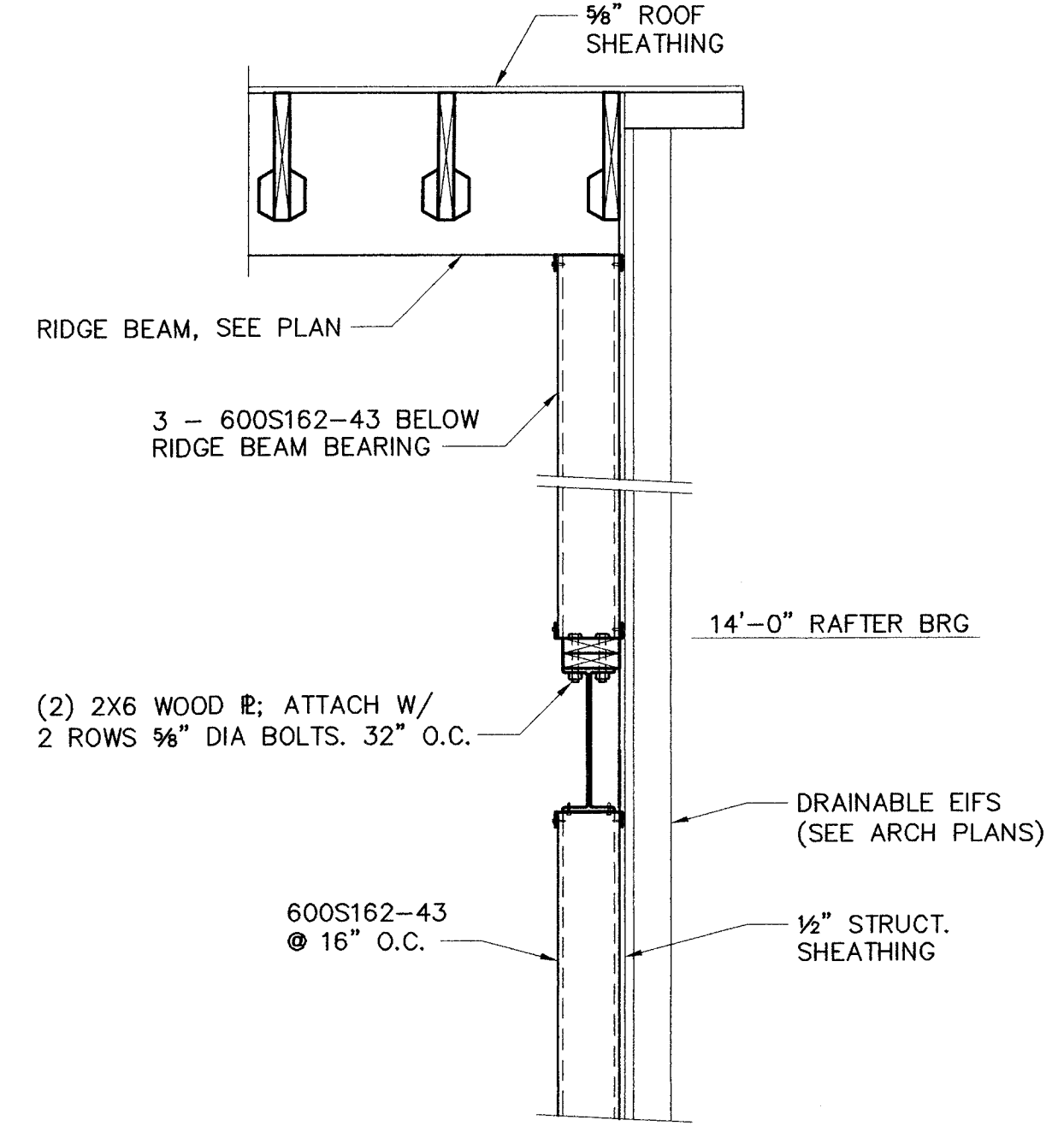
**4 SECTION - MOMENT CONNECTION**  
 S1.4/S4.3 3/4" = 1'-0"



**5 SECTION - MOMENT CONNECTION**  
 S1.4/S4.3 3/4" = 1'-0"



**6 SECTION**  
 S1.4/S4.3 3/4" = 1'-0"

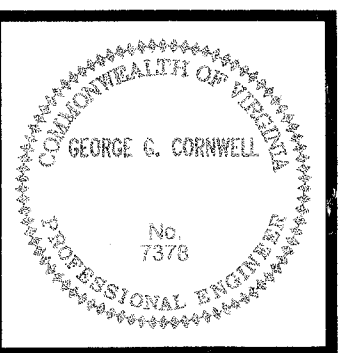


**7 SECTION**  
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PRICING SET - NOT FOR CONSTRUCTION

NO.	DATE	REVISION

FILE NAME:	DATE: 28 SEPT 07	DRAWN BY: JFC	CHECKED BY: GGC
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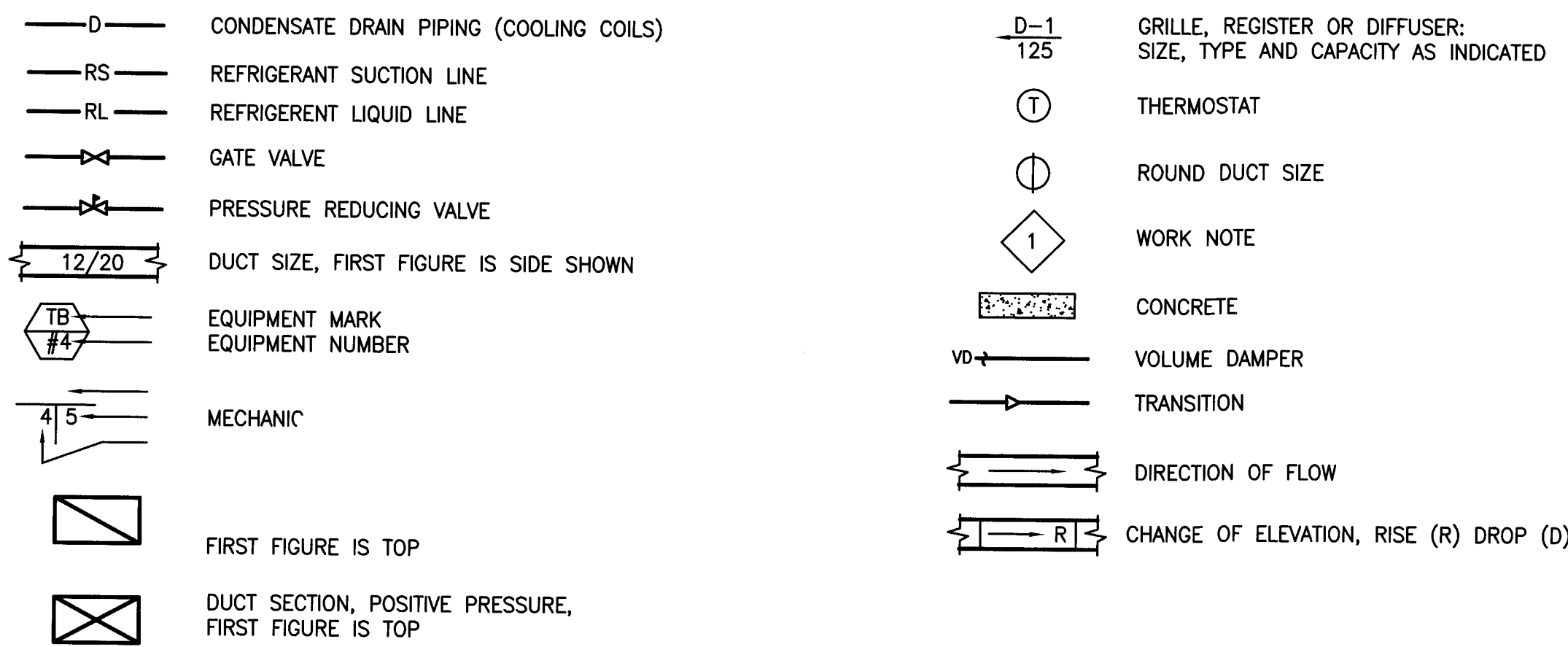




# MECHANICAL ABBREVIATIONS

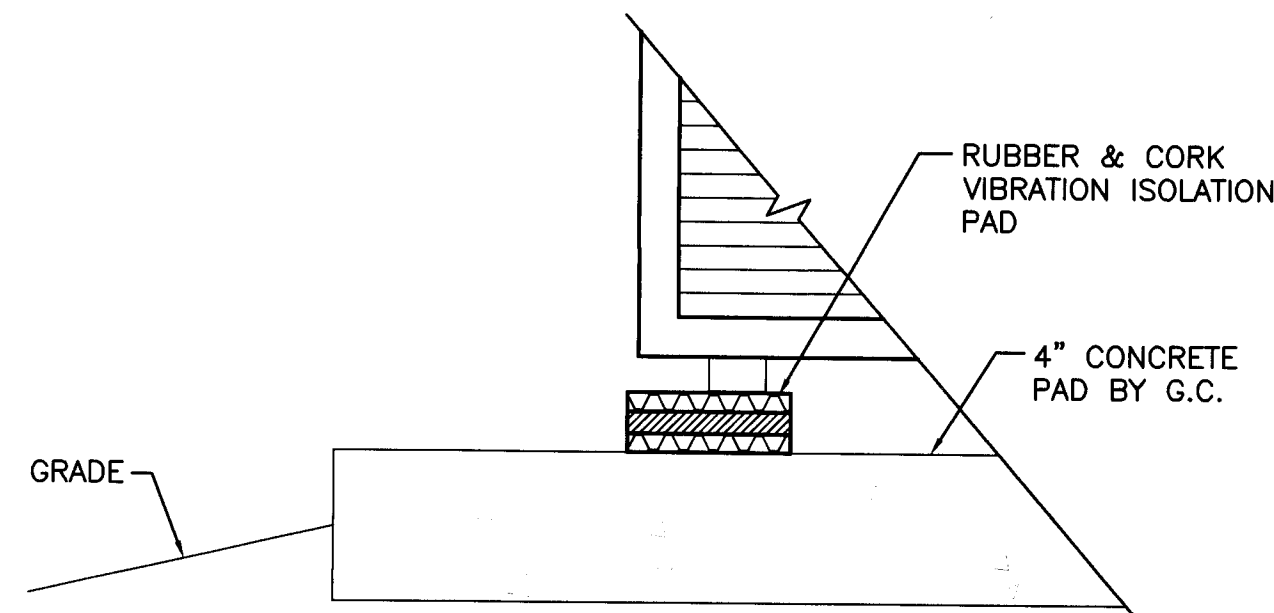
AHU	AIR HANDLING UNIT	N/A	NOT APPLICABLE
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR
CONT	CONTINUATION	O.D.	OUTSIDE DIAMETER
D	CONDENSATE DRAIN	PH	PHASE (ELECTRICAL)
DWGS	DRAWINGS		RETURN AIR
DB	DRY BULB		REVOLUTIONS PER MINUTE
		SF	REQUIRED SUPPLY FAN SHEET
FS	FIRE SUPPRESSION		STANDARD STATIC PRESSURE
			SUPPLY AIR THERMOSTAT
H	HOOD		TONS OF REFRIGERANT TYPICAL
HP	HORSE POWER OR HEAT PUMP		UNLESS OTHERWISE NOTED
IN	INCHES	V	ROOF VENTILATOR
L	LOUVER		WET BULB
LAT	LEAVING AIR TEMPERATURE	W/O	WITH
LBS	POUNDS	W/O	WITHOUT
MAX	MAXIMUM	W.G.	WATER GAUGE
MECH	MECHANICAL		

# MECHANICAL LEGEND



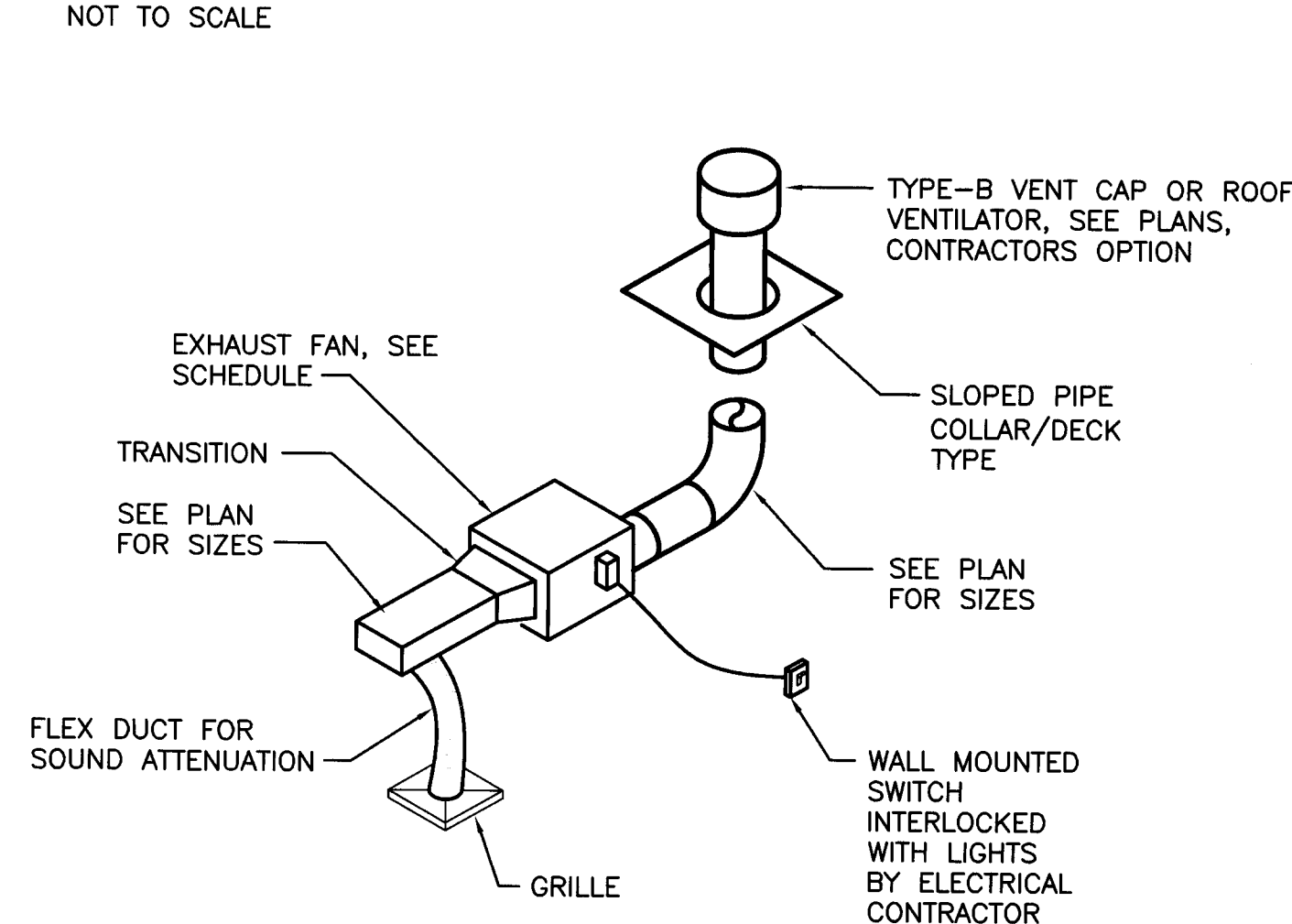
# MECHANICAL NOTES

- PROVIDE THE OWNER WITH MANUALS AND OPERATING INSTRUCTIONS OF ALL EQUIPMENT
- BEFORE INSTALLATION AND ERECTION OF PIPING AND DUCTWORK, ALL DIMENSIONS AND ROUTING SHALL BE VERIFIED IN FIELD.
- CONTRACTOR SHALL COORDINATE LOCATION OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT.
- INSTALL PIPING AND DUCTWORK SO THAT ALL VALVES AND DAMPERS ARE ACCESSIBLE.
- CONTRACTOR SHALL PROVIDE 4 COPIES OF SHOP DRAWINGS/O&M MANUALS (CUT SHEETS) OF ALL EQUIPMENT AND CONTROLS.
- LOCATE AIR HANDLING EQUIPMENT TO ALLOW FOR PROPER CONDENSATE SLOPE.
- CONTRACTOR SHALL NOT SCALE THESE DRAWINGS. VERIFY ALL DIMENSIONS IN FIELD BEFORE BEGINNING ANY CONSTRUCTION.
- ALL DUCT DIMENSIONS ARE IN INCHES AND ARE INSIDE CLEAR.
- ALL NEW CONSTRUCTION SHALL MEET ALL APPLICABLE NATIONAL, STATE, AND LOCAL BUILDING CODES, LATEST ADOPTED EDITIONS.
- PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL AHU'S.
- WORKMANSHIP SHALL BE FIRST CLASS. NEW MATERIALS SHALL BE USED THROUGHOUT.
- ALL PIPING & DUCTWORK TO BE SUPPORTED ON MAXIMUM OF 8'-0" CENTERS.
- CONTRACTOR SHALL INSTALL DUCTWORK AS HIGH AS POSSIBLE.
- INSTALL TRAPS IN ALL AHU'S CONDENSATE DRAIN LINES TO PROVIDE A MINIMUM OF 4" SEAL. PROVIDE A 4" DEEP DRAIN PAN BENEATH AHU. THE DRAIN PAN SHALL BE 6" LARGER ALL AROUND THAN AHU.
- PROVIDE FINAL CONN. TO ALL EQUIPMENT FURNISHED BY OWNER AND/OR OTHERS.
- THE H.V.A.C. CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR REQUIRED FOR THE COMPLETE MECHANICAL SYSTEM AS INDICATED ON THE DRAWINGS. THE SYSTEM SHALL BE COMPLETE.
- FOR EXACT LOCATION OF REGISTERS, GRILLES AND DIFFUSERS, SEE REFLECTED CEILING PLAN.
- PROVIDE PERFORMANCE TEST AND AIR BALANCE. (CFM, TEMP. DIFF., ETC., DOES NOT HAVE TO BE DONE BY AN INDEPENDENT CONTRACTOR)
- SEE SPECIFICATION FOR ADDITIONAL INFORMATION.



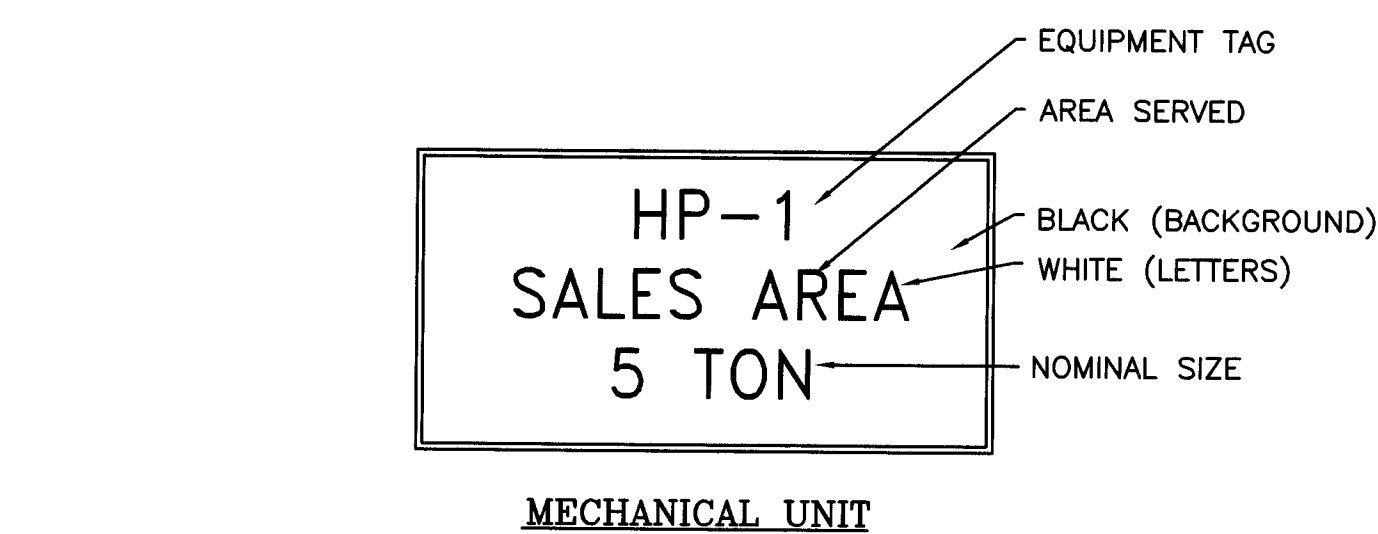
# CONDENSING UNIT MOUNTING DETAIL

NOT TO SCALE



# EXHAUST FAN DETAIL

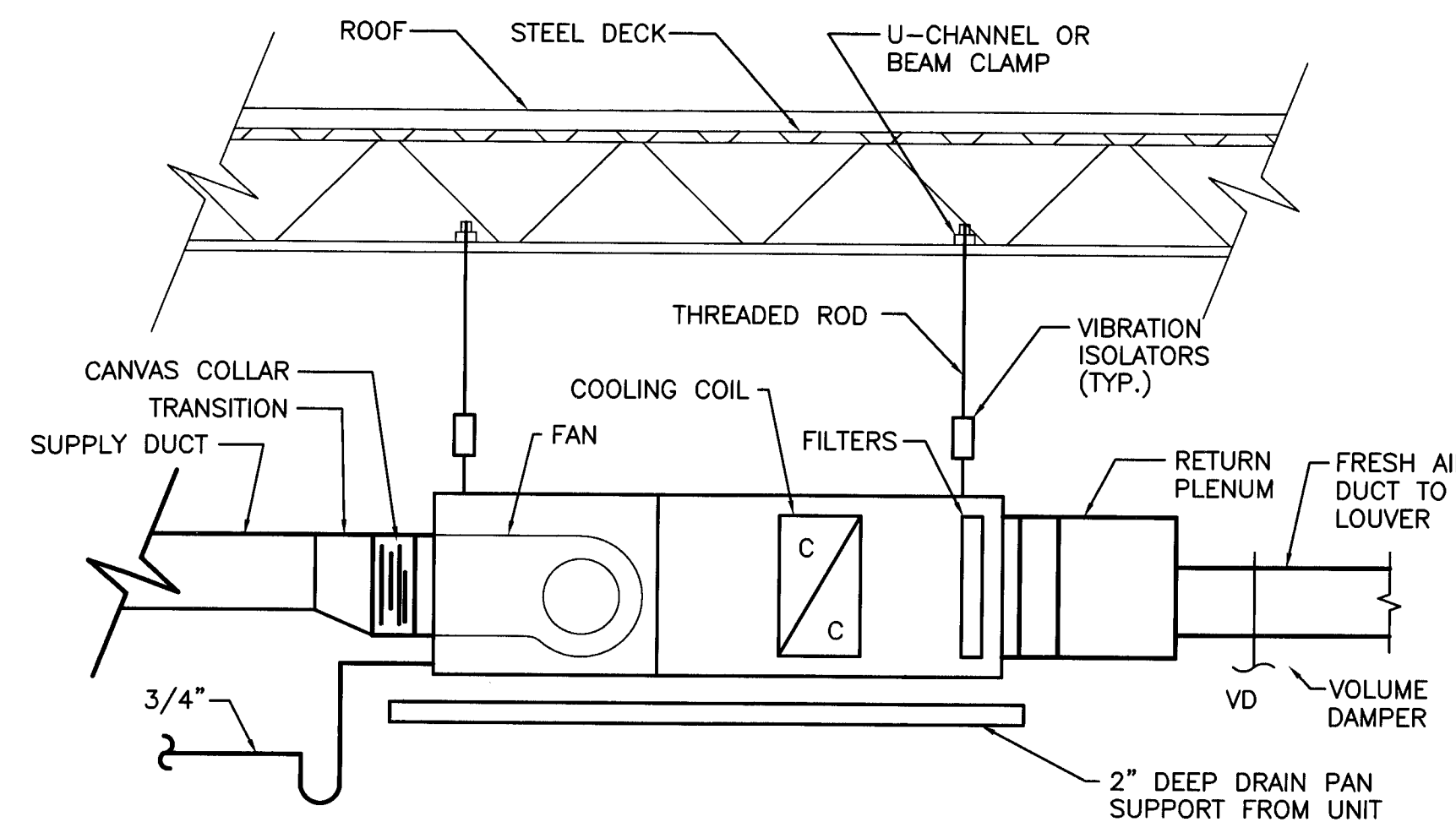
NOT TO SCALE



- SPECIFICATIONS:**
- MAKE: 1/16" ENGRAVING MATERIAL
  - SIZE: 1/4" LETTERS (MIN.) PLATE SIZE MAY VARY
  - COLOR: COAL BLACK/WHITE
- NOTES:**
- SELF-ADHESIVE
  - SEE MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
  - VERIFY PLATE SIZE WILL FIT ON EQUIPMENT BEFORE ORDERING.

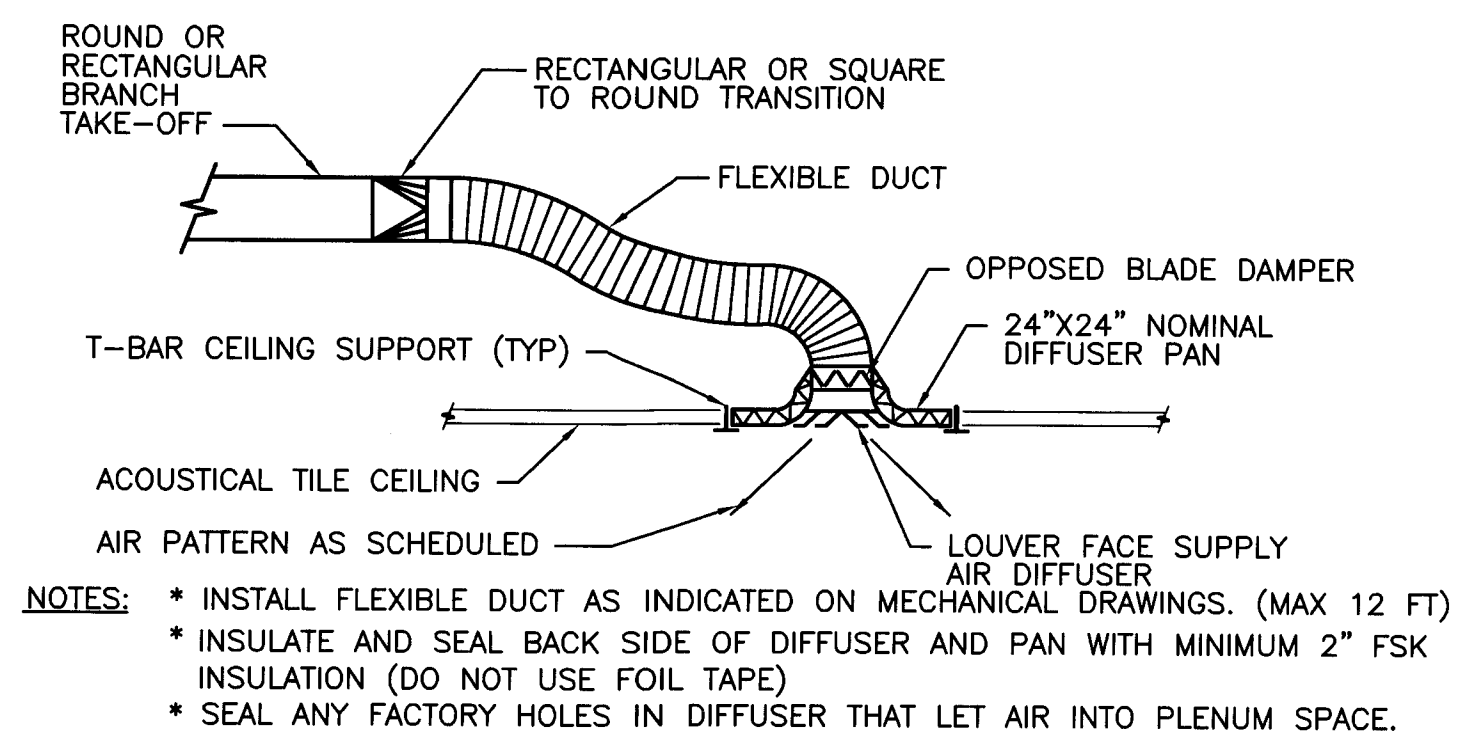
# EQUIPMENT IDENTIFICATION DETAIL

SCALE: 1:1



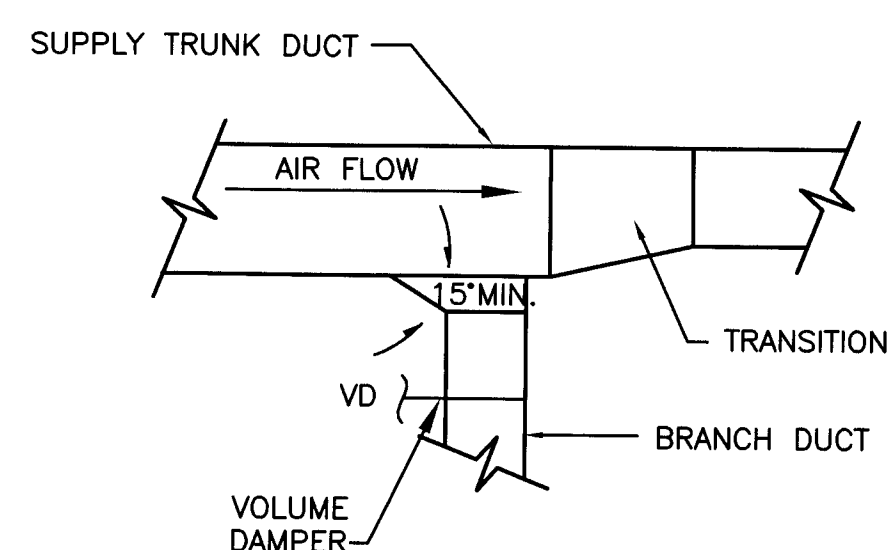
# AIR HANDLING UNIT DETAIL

NOT TO SCALE



# TYPICAL ROUND NECK DIFFUSER DETAIL

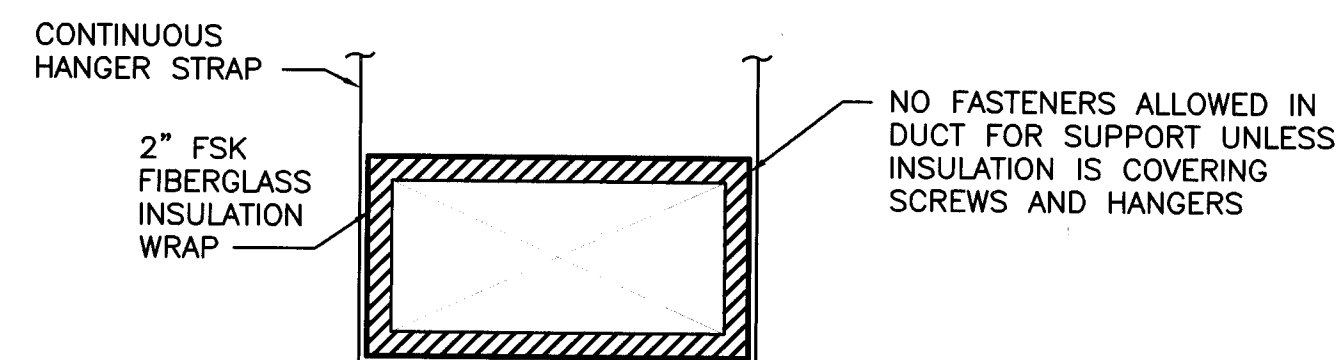
NOT TO SCALE



- NOTES:**
- PROVIDE STAND-OFF FOR VOLUME DAMPER, SO HANDLE EXTENDS OUT FROM INSULATION.
  - DAMPER HANDLE SHALL BE IN SAME DIRECTION AS DAMPER BLADE.
  - NO FOIL TAPE ON INSULATION, ONLY FSK.
  - USE SEAM SEALER ON ALL JOINTS.

# TAKE-OFF DETAIL

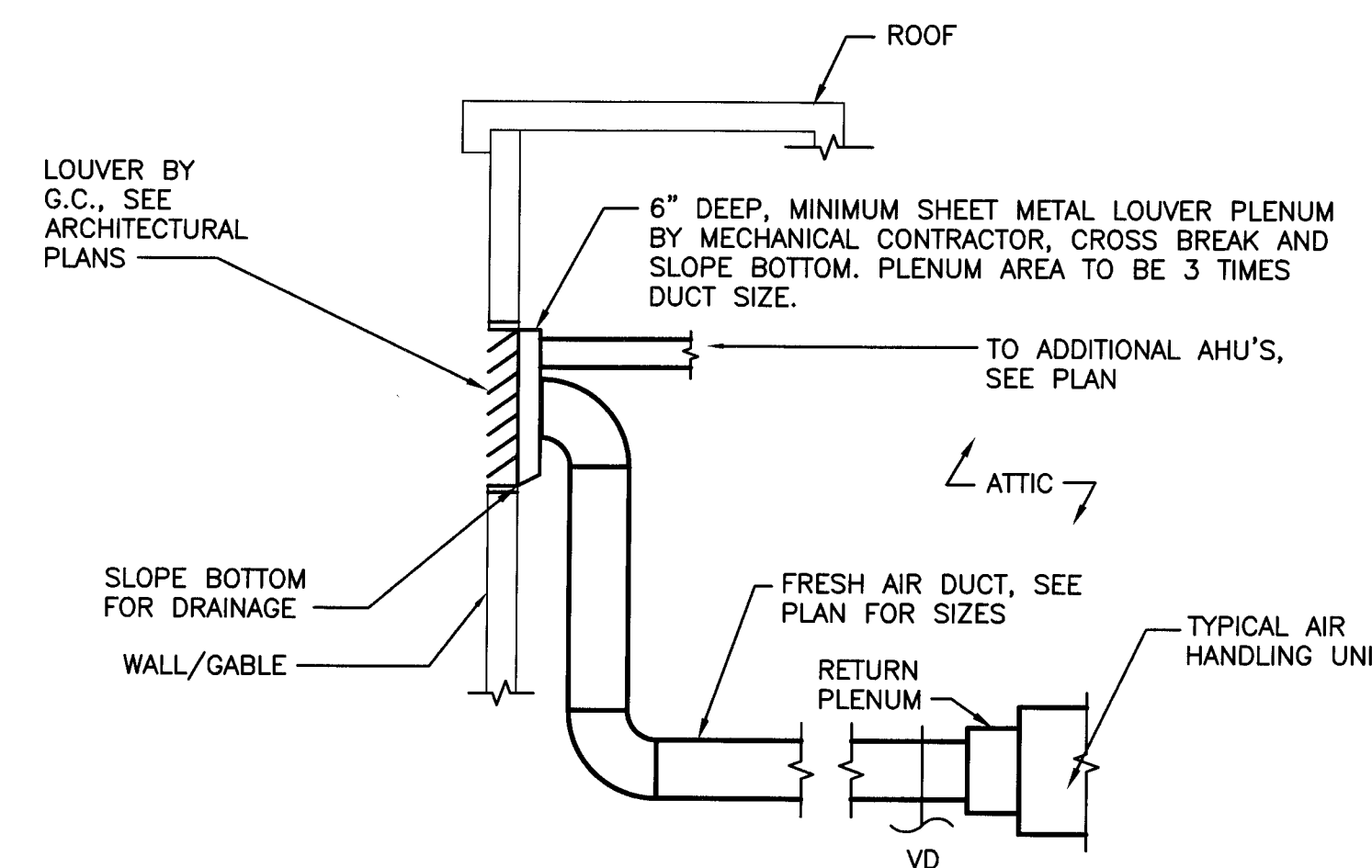
NOT TO SCALE



- LOW PRESSURE DUCT**
- NOTE:**
- ALL DUCT SHEET METAL GAGE THICKNESSES AND INSTALLATION METHODS SHALL CONFORM TO THE MOST RECENT SMACNA STANDARDS UNLESS NOTED OTHERWISE.
  - ALL SCREWS AND HANGERS IN CONTACT WITH DUCT SHALL BE INSULATED.

# RECTANGULAR DUCT DETAIL

NOT TO SCALE



# AIR HANDLING UNIT LOUVER DETAIL

NOT TO SCALE

M-1

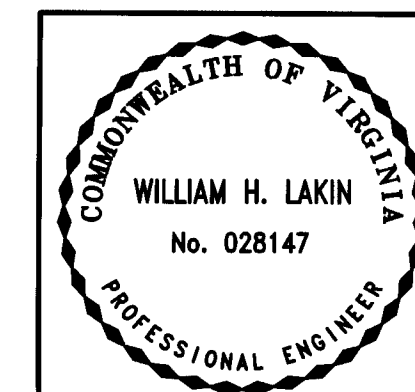
REV	DATE	DESCRIPTION	BY	APPROVED

**RACECO CONVENIENCE STORE**  
JEFFERSON AVE.  
NEWPORT NEWS, VIRGINIA

# MECHANICAL NOTES & DETAILS

**IDG INFINITY DESIGN GROUP, INC.**

839 LIPTON DRIVE  
N.N., VA 23608  
(757) 877-9833



CHECKED BY WHL	DRAWN BY JWH	DATE 9/26/07	SCALE AS NOTED
PROJECT No. 27-033	DRAWING No. 27-033 M-1		

9/26/2007 11:15:28 AM

# WORK NOTES

- ① ADJUST HVAC UNIT CFM TO VALUE SCHEDULED. SEE VENTILATION CALCULATIONS. AIR BALANCING MAY BE DONE BY MECHANICAL CONTRACTOR. PROVIDE REPORT AND PERFORMANCE TESTING TO GENERAL CONTRACTOR.
- ② RUN FULL SIZE EXHAUST DUCT TO ROOF CAP. (SEE DETAIL)
- ③ UNDERCUT DOOR FOR TRANSFER AIR.
- ④ PROVIDE WALL MOUNT LOW VOLTAGE THERMOSTAT WITH LOCK BOX, COORDINATE FINAL LOCATION WITH OWNER.
- ⑤ COORDINATE DUCTWORK AND MECHANICAL EQUIPMENT WITH ROOF FRAMING, LIGHTS, SIGN SUPPORTS, PLUMBING VENTS, ELECTRICAL CONDUITS, ETC. (SEE SECTION)
- ⑥ PROVIDE CONDENSATE DRAIN LINE (3/4" SCH. 40 PVC) WITH TRAP. EXTEND PIPE TO BUILDING EXTERIOR, SEE SHEET M-3 FOR PIPING.
- ⑦ RUN REFRIGERANT LIQUID AND SUCTION PIPING FOR WALK-IN COOLER TO CONDENSING UNITS LOCATED IN BACK OF BUILDING. SEE MANUFACTURER RECOMMENDATIONS FOR ADDITIONAL PIPING DESIGN CONSIDERATIONS. NOT ALL REFRIGERANT LINES SHOWN FOR CLARITY. WALK-IN BOX SYSTEM IS A SEPARATE BID ITEM. APPROXIMATE LOCATION SHOWN.
- ⑧ RUN DUCT BETWEEN JOIST OR IN JOIST SPACING, WHEN REQUIRED. (SEE SECTION)
- ⑨ PROVIDE 12" Ø OR 10/12 EXHAUST DUCT UP TO EXHAUST FAN #3, VERIFY LOCATION.
- ⑩ COOLER/ICEMAKER REFRIGERATION EQUIPMENT SUPPLIED AND INSTALLED BY COMMERCIAL REFRIGERATION CONTRACTOR. (VERIFY) COORDINATE WITH GENERAL CONTRACTOR, OWNER AND ALL TRADES. (VERIFY QUANTITY) SEPARATE BID ITEM.
- ⑪ EQUIPMENT PAD AND SCREEN BY GENERAL CONTRACTOR.
- ⑫ LOUVER PROVIDED BY GC.
- ⑬ VENTLESS OVEN; TURBO CHEF (HIGH-H) HAS BEEN TESTED AS PER UL 923 AND DOES NOT REQUIRE A HOOD, THIS APPLIANCE IS VERY SIMILAR TO MICROWAVE. OWNER/GC TO PROVIDE SHOP DRAWINGS AND SUT SHEETS SHOWING UL923 TEST, ETC.
- ⑭ ELECTRO RETHERMALIZER USED FOR WARMING PRECOOKED PREPACKAGED PRODUCTS LIKE SOUP, VEGETABLES, MEAT, ENTREES, SAUCES, ETC. IT USES A COVERED TANK WITH WARM WATER AND DOES NOT BOIL THE WATER.

# VENTILATION CALCULATIONS

**SALES AREA:** 2871 SF TOTAL  
**REQUIRED RATE:** .30 CFM/SF  
**VENTILATION CALCULATION:** 861 CFM

**FOOD PREP**  
**NET AREA:** 361 SF  
**OCCUPANCY:** 20 PEOPLE/1,000 SF  
**QTY. OF PEOPLE:** 7 PEOPLE  
**VENTILATION RATE:** 15 CFM/P  
**FRESH AIR REQUIRED:** 105 CFM

**CHECKOUT AREA:**  
**NET AREA:** 356 SF  
**VENTILATION RATE:** .30 CFM/SF  
**FRESH AIR REQUIRED:** 106 CFM

**MECHANICAL ROOM**  
**NET AREA:** 83 SF  
**VENTILATION RATE:** .15 CFM/SF  
**FRESH AIR REQUIRED:** 15 CFM (ROUNDED UP)

**OFFICE:**  
**NET AREA:** 97 SF  
**OCCUPANCY:** 7 PEOPLE/1,000 SF  
**QTY. OF PEOPLE:** 1 PERSON  
**VENTILATION RATE:** 20 CFM/P  
**FRESH AIR REQUIRED:** 20 CFM

**WORK ROOM**  
**NET AREA:** 142 SF  
**OCCUPANCY:** 7 PEOPLE/1,000 SF  
**QTY. OF PEOPLE:** 1 PERSON  
**VENTILATION RATE:** 20 CFM/P  
**FRESH AIR REQUIRED:** 20 CFM

**TOTAL FRESH AIR REQUIRED:** 1127 CFM  
**SOURCE:** FRESH AIR VENTILATION IS PROVIDED BY INTAKES ON ROOF TOP HVAC UNIT.  
**NOTES:**

- \* ASHRAE 62-89
- \* 2003 INTERNATIONAL MECHANICAL CODE.

# DIFFUSER & GRILLE SIZE SCHEDULE

MARK	CFM RANGE	SIZE	NOTES
D-1	1-100 CFM 101-200 CFM 201-400 CFM 401-600 CFM	12"x12" W/ 6" Ø NECK 12"x12" W/ 8" Ø NECK 22"x22" W/ 10" Ø NECK 22"x22" W/ 12" Ø NECK	4-WAY (T-BAR CEILING W/ FULL 24x24 PANEL)
R-1, E-1 & T-1	75-200 CFM 201-1000 CFM	12"x12" W/ 6" OR 8" Ø NECK 22"x22" W/ ROUND NECK	FIXED BLADE, CEILING (SURFACE MOUNT OR T-BAR MOUNT)

# EQUIVALENT ROUND DUCT SIZES

8/8	=	8"
8/10	=	10"
10/10 OR 14/8	=	11"
12/10 OR 16/8	=	12"
14/10 OR 20/8	=	13"
18/10	=	14"
20/10 OR 16/12	=	15"
24/10 OR 20/12	=	16"

**NOTE:** IF ROUND DUCT IS TALLER, THEN CONTRACTOR SHALL VERIFY AVAILABLE SPACE, ETC. BEFORE SUBSTITUTING TO ROUND DUCT.

### THERMOSTAT AND CONTROL NOTES:

- \* THERMOSTATS TO BE MOUNTED NO HIGHER THAN 48" AFF.
- \* ALL THERMOSTATS TO BE PROGRAMMED SO SYSTEM FAN IS ON TO BRING VENTILATION AIR INTO SYSTEM DURING ALL PERIODS BUILDING IS OCCUPIED.

### FLEX SIZE SCHEDULE

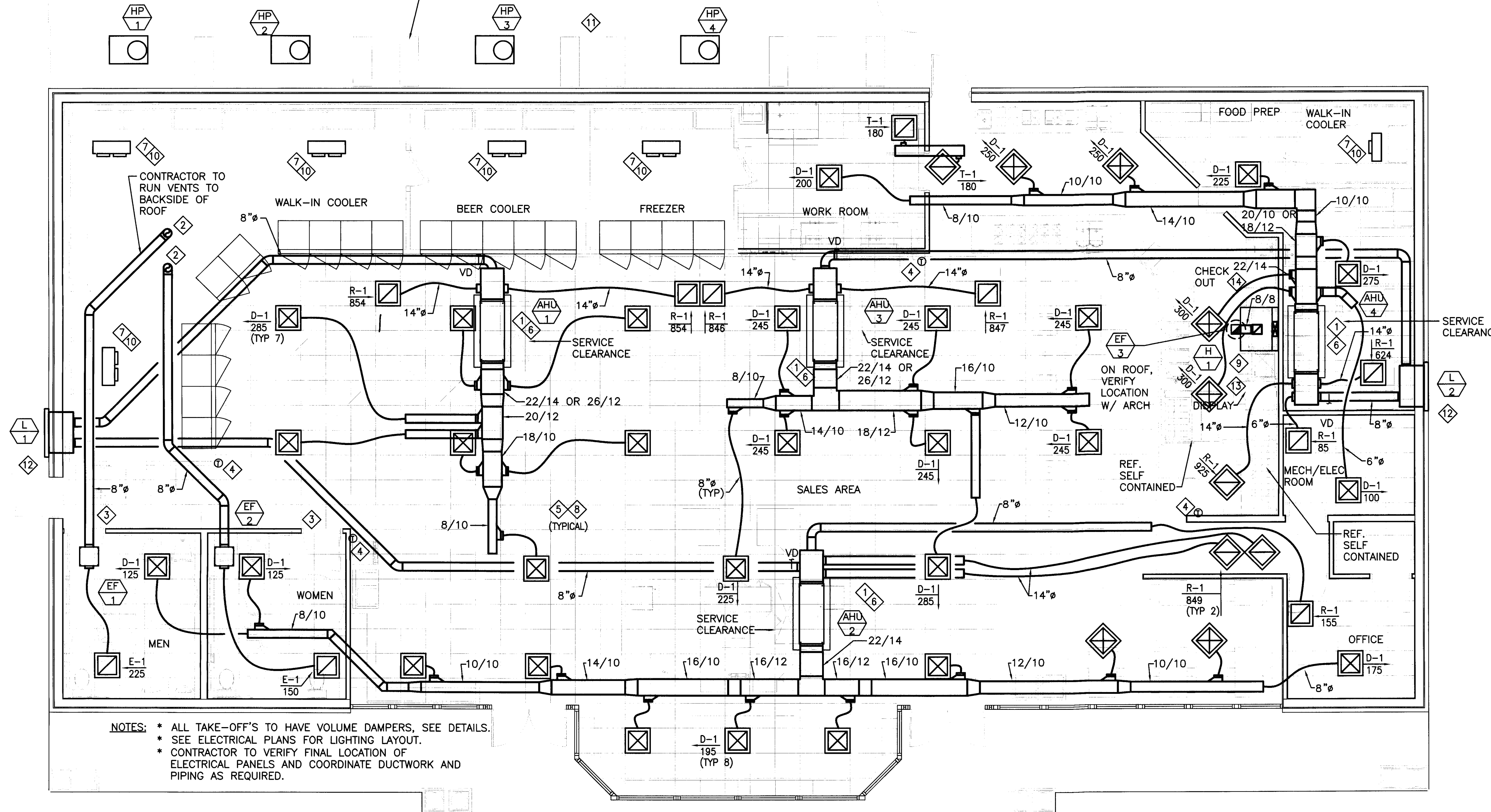
FLEX SIZE	CFM RANGE
6" DIA	0-100 CFM
7" DIA	101-140 CFM
8" DIA	141-260 CFM
10" DIA	261-400 CFM
12" DIA	401-600 CFM
14" DIA	601-900 CFM

**NOTE:** SIZE ALL FLEX DUCT ACCORDING TO CHART UNLESS OTHERWISE INDICATED.

### HP UNIT DIMENSIONS:

LENGTH: 37"  
 WIDTH: 27"  
 HEIGHT: 33" TO 39"  
**NOTE:** BASED ON YORK EQUIPMENT.

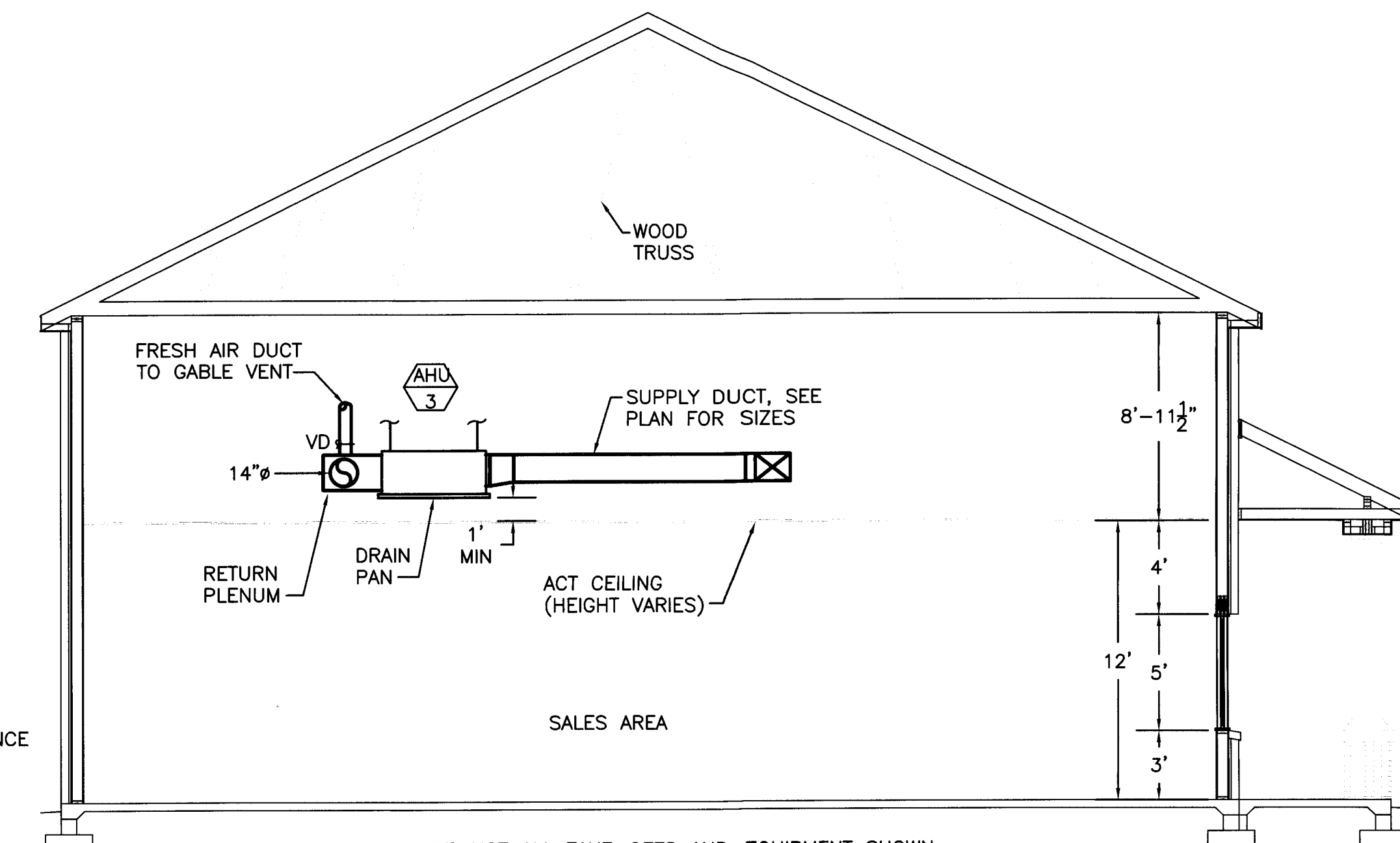
APPROXIMATE SIZE OF WALK-IN BOX CONDENSING UNIT (9 TOTAL, SOME ARE STACKED)



- NOTES:**
- \* ALL TAKE-OFF'S TO HAVE VOLUME DAMPERS, SEE DETAILS.
  - \* SEE ELECTRICAL PLANS FOR LIGHTING LAYOUT.
  - \* CONTRACTOR TO VERIFY FINAL LOCATION OF ELECTRICAL PANELS AND COORDINATE DUCTWORK AND PIPING AS REQUIRED.

# MECHANICAL FLOOR PLAN

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



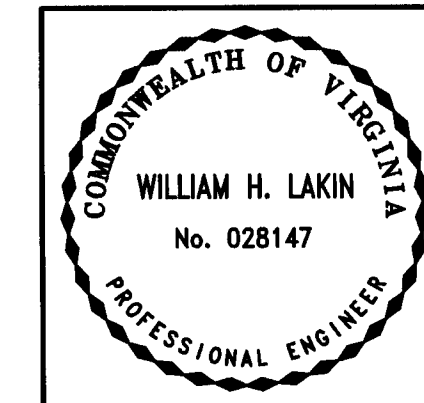
**NOTE:** NOT ALL TAKE-OFFS AND EQUIPMENT SHOWN.

# MECHANICAL SECTION

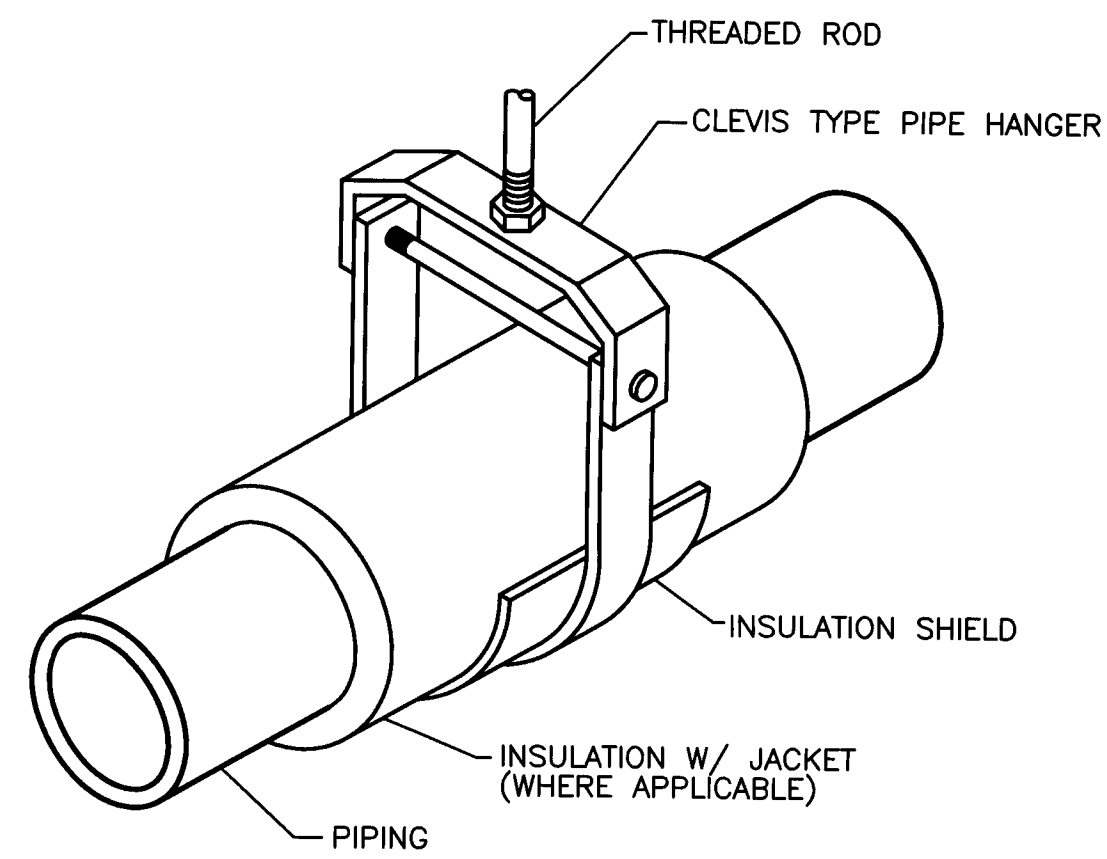
SCALE: 3/16" = 1'-0"

M-2

REV	DATE	DESCRIPTION	BY	APPROVED
<b>RACECO CONVENIENCE STORE</b> JEFFERSON AVE. NEWPORT NEWS, VIRGINIA				
<b>MECHANICAL FLOOR PLAN</b>				
<b>IDG</b>		<b>INFINITY DESIGN GROUP, INC.</b>		
839 LIPTON DRIVE N.N., VA 23608 (757) 877-9833		INFINITY DESIGN GROUP		
CHECKED BY WHL	DRAWN BY JWH	DATE 9/26/07	SCALE AS NOTED	
PROJECT No. 27-033	DRAWING No. 27-033 M-2			



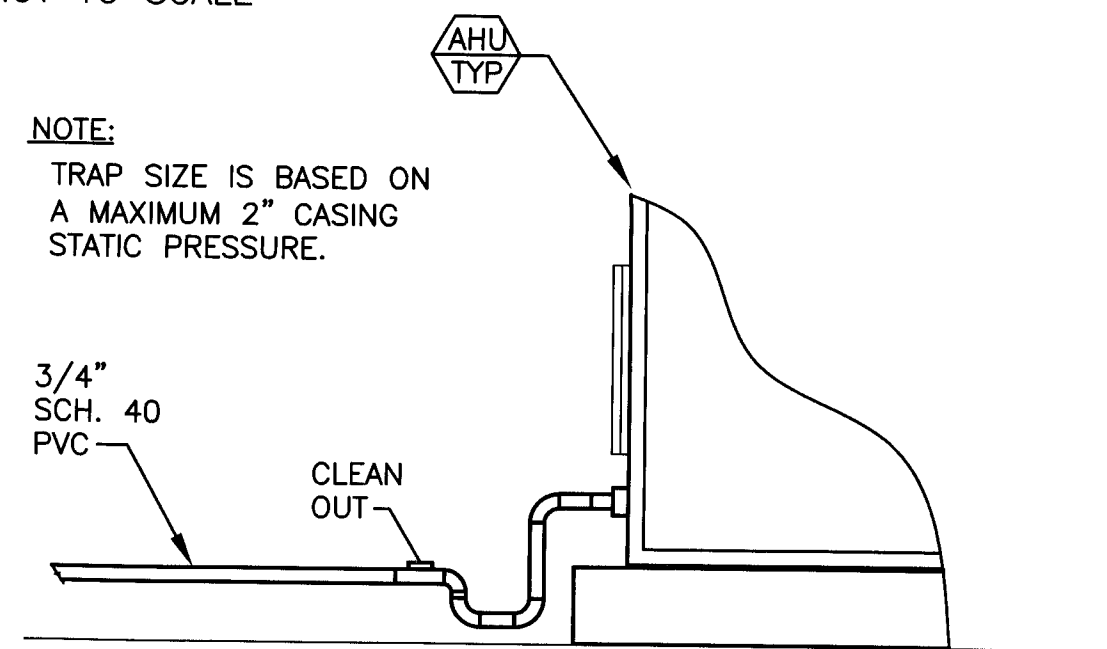




NOTES: \* ALL HANGING EQUIPMENT SHALL BE GRINNELL OR APPROVED EQUAL.  
 \* SUPPORT PIPE EVERY 8 FEET MAXIMUM  
 \* FOR WALK-IN COOLER REFRIGERATION PIPING.

### SINGLE PIPE HANGER DETAIL

NOT TO SCALE

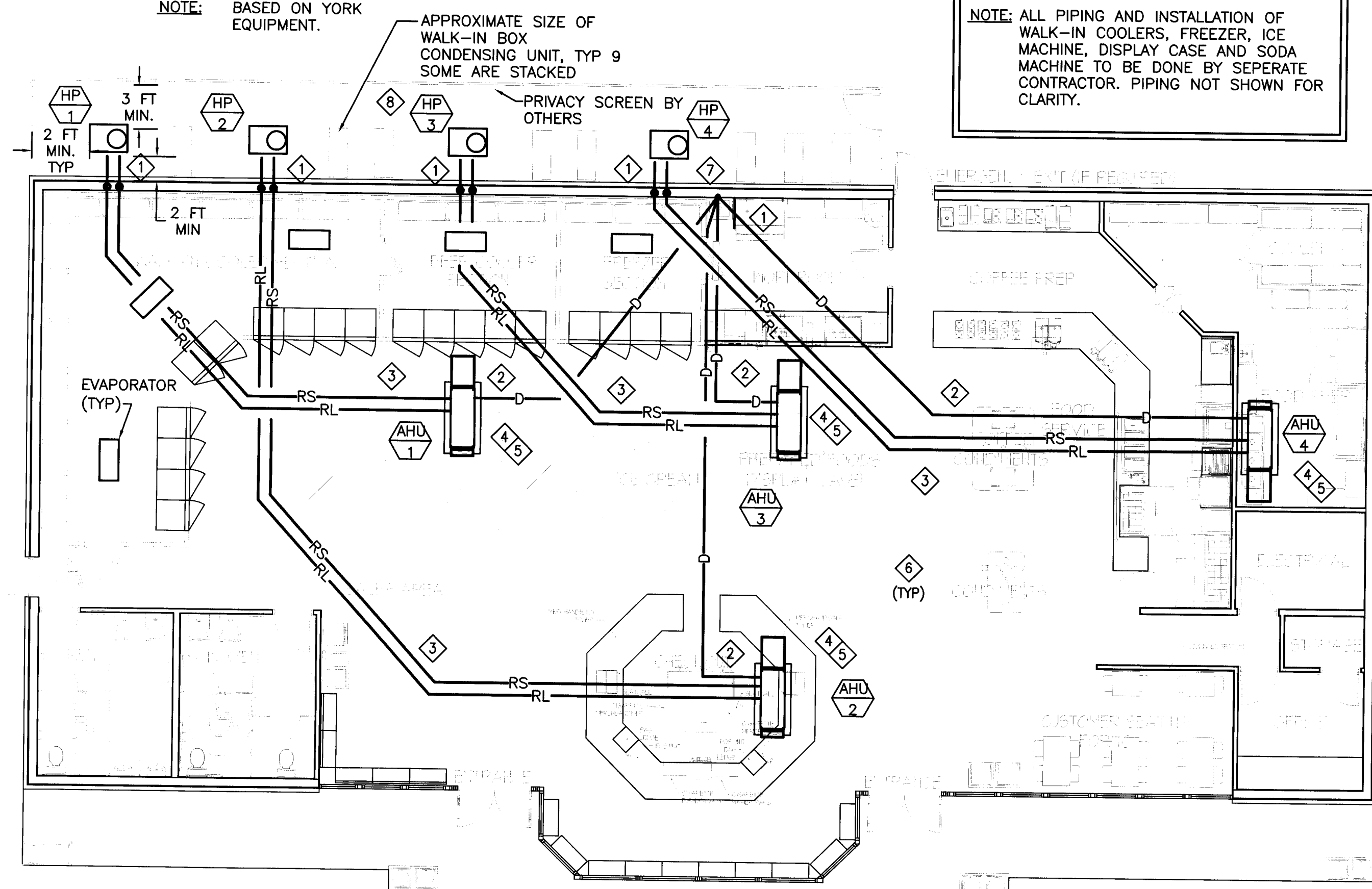


NOTE: TRAP SIZE IS BASED ON A MAXIMUM 2" CASING STATIC PRESSURE.

### AHU CONDENSATE TRAP DETAIL

NOT TO SCALE

HP UNIT DIMENSIONS:  
 LENGTH: 37"  
 WIDTH: 27"  
 HEIGHT: 33" TO 39"  
 NOTE: BASED ON YORK EQUIPMENT.



### MECHANICAL PIPING PLAN

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

## MECHANICAL SPECIFICATIONS

### MECHANICAL SYSTEMS

#### A. SCOPE

- FURNISH ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, ETC., FOR THE COMPLETE HVAC SYSTEM. INSTALL COMPLETE AND PLACE IN OPERATION.
- HVAC SYSTEM ESSENTIALLY CONSISTS OF THE FOLLOWING:
  - SPLIT SYSTEM HEAT PUMPS.
  - WALK-IN BOX INSTALLATION AND REFRIGERATION PIPING. (SEPERATE BID ITEM)
  - DUCTWORK, GRILLES, DIFFUSERS, DAMPERS AND OTHER ACCESSORIES.
  - INSULATION OF HVAC ITEMS.
  - TEMPERATURE CONTROL SYSTEM. (LOW VOLTAGE)
  - CONDENSATE PIPING
  - EXHAUST SYSTEMS.
  - ELECTRIC HEATERS
  - DAMPERS. (VOLUME, FIRE & RADIATION)
  - AIR BALANCE, TESTING AND START-UP. (BID OPTION)
  - REFRIGERATION PIPING.

#### B. DUCTWORK

- FABRICATE AND ERECT ALL DUCTWORK TO ASHRAE AND SMACNA STANDARDS FROM NO. 1 GALVANIZED STEEL. COMPLY WITH NFPA BULLETIN 90A REQUIREMENTS.
- DUCTWORK SHALL BE SMACNA LOW PRESSURE CONSTRUCTION 2" STATIC PRESSURE RATING WITH SEAL CLASS B SEAMS AND JOINTS.
- FLEXIBLE DUCTS SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE AND CONNECTED WITH PLASTIC DRAW BANDS TIGHTENED WITH MANUFACTURERS' TOOL. FLEXIBLE DUCTS SHALL BE LIMITED TO A MAXIMUM OF 8 FOOT LENGTHS PER RUNOUT. FLEXIBLE DUCTS SHALL BE THERMA-FLEX, 2" INSULATION AND RATED AT 10" W.C. FOR SIZES THROUGH 14". FLEXIBLE DUCTS SHALL BE U.L. LISTED AND MEET 25/50 FLAME AND SMOKE TEST. FLEXIBLE DUCTS ARE NOT PERMITTED IN ROOMS WITHOUT CEILINGS.
- INCLUDE ALL TURNING VANES, MANUAL DAMPERS, FLEXIBLE CONNECTORS, GRILLES AND DIFFUSERS, ACOUSTIC LINING AND OTHER SHEET METAL ACCESSORIES FOR THE PROJECT. PROVIDE VOLUME DAMPERS AT ALL BRANCH TAKE OFF'S.
- ALL BRANCH CONNECTION FITTINGS IN RECTANGULAR DUCTWORK SHALL BE 45 DEGREE TRANSITION TYPE AND CONICAL FITTINGS IN ROUND DUCTWORK. BUTT FITTINGS ARE NOT ACCEPTABLE.

#### C. FIRE AND RADIATION DAMPERS

- CONTRACTOR TO VERIFY LOCATION AND RATING OF FIRE RATED WALLS, CEILINGS, FLOORS, ETC. AND PROVIDE DAMPER AS REQUIRED BY CODE.
- CONTRACTOR TO VERIFY LAYOUT AND INSTALLATION METHOD WITH CODE OFFICIAL / INSPECTOR FOR COMPLIANCE WITH LOCAL INTERPRETATION.

#### D. INSULATION

- INSULATE ALL EXHAUST AND SUPPLY AIR DUCTS ABOVE CEILINGS WITH 2" THICK FOIL FACED REINFORCED KRAFT JACKET, FIBERGLASS DUCT WRAP FULLY SECURED TO DUCT, LAP AND TAPE SEAMS AND SECURE TIGHTLY TO THE DUCTS WITH WIRE OR STICK PINS.
- ALL INSULATION TO BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
- ALL INSULATION SHALL HAVE A FIRE/SMOKE RATING LESS THAN 25/50

#### E. CONDENSATE AND OTHER DRAINS

- PIPING ON THE EXTERIOR OF THE BUILDING SHALL BE COPPER (DW) ASTM B-306-83 WITH WROUGHT COPPER FITTINGS OR SCH 40 PVC.
- EACH AIR CONDITIONING UNIT, INSTALLED SEALED TRAPPED CONDENSATE DRAIN WITH CLEANOUT. EXTEND TO EXTERIOR OF BUILDING. SOME CONDENSATE DRAINS ARE GROUPED OR STACKED, SEE PLANS AND DETAILS.

#### F. REFRIGERANT PIPING

- REFRIGERANT PIPING SHALL BE THE MANUFACTURER'S TYPE "L" COPPER TUBING. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 1/2" CLOSED CELL INSULATION.
- FOLLOW MANUFACTURER'S BULLETIN FOR PROPER REFRIGERANT LINE INSTALLATION.
- CONCEAL ALL REFRIGERANT PIPING IN WALLS AND CEILING SPACE.

#### G. EQUIPMENT

- HVAC CONTRACTOR TO FURNISH ALL HVAC EQUIPMENT INDICATED AND/OR SCHEDULED ON THE DRAWINGS COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES.
- INSTALL COMPLETE AND PLACE IN PROPER OPERATION PER MANUFACTURERS' RECOMMENDATIONS. LUBRICATE AND ADJUST AS REQUIRED. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING.
- EQUIPMENT TO BE MAKE AND MODEL AS SCHEDULED.

#### H. BALANCING, START-UP AND INSTRUCTIONS

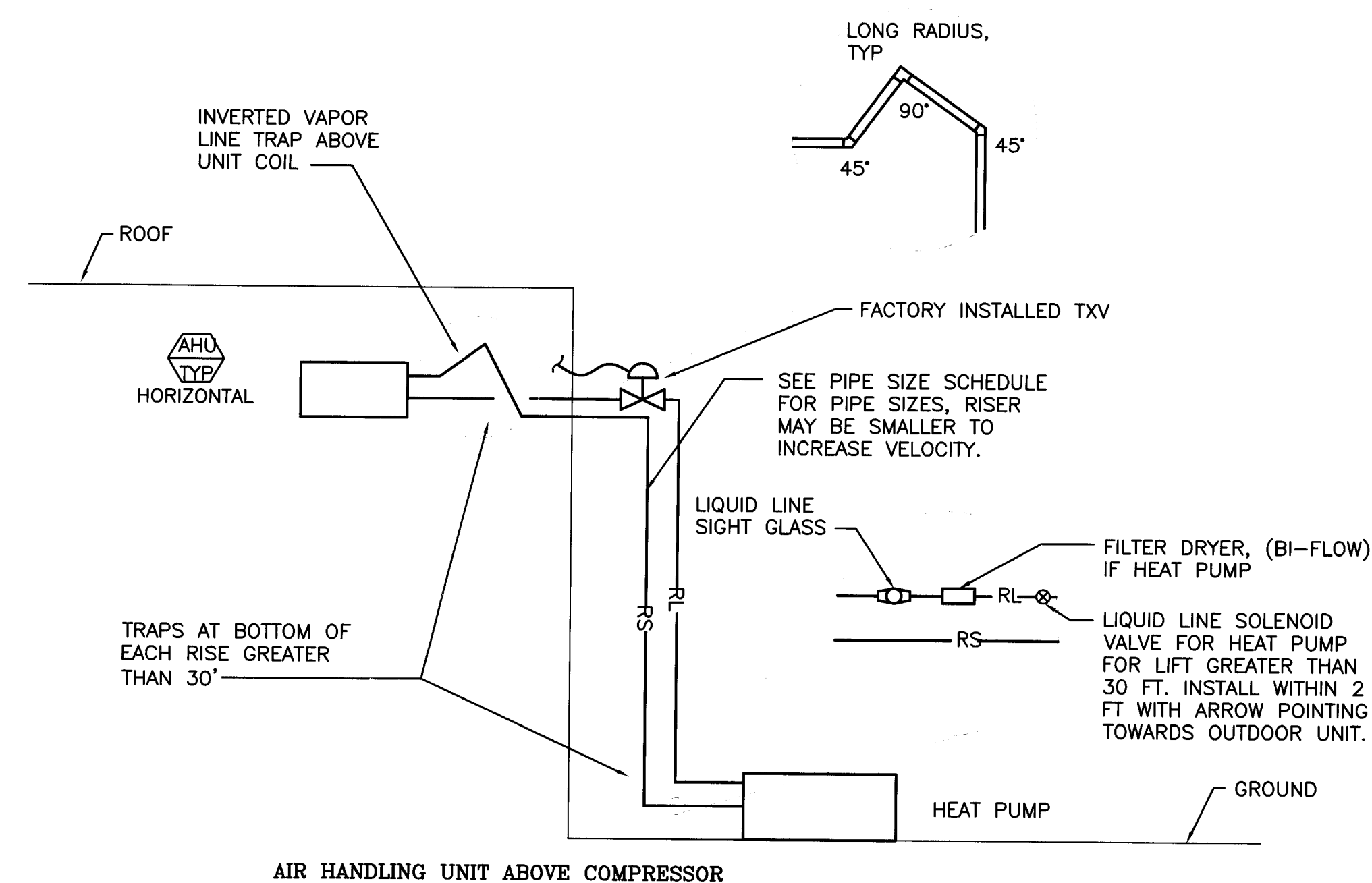
- AFTER INSTALLATION AND SERVICING, AND EQUIPMENT IS PLACED IN OPERATION, HVAC CONTRACTOR IS RESPONSIBLE FOR HIRING AN INDEPENDENT CERTIFIED AIR BALANCING CONTRACTOR. SUBMIT 3 REPORTS TO OWNER.
- START UP AND PLACE ALL SYSTEMS IN OPERATION AND TAG ALL SWITCHES AND CONTROLS WITH PERMANENT LABELS.
- INSTRUCT OWNER ON PROPER OPERATION AND MAINTENANCE OF ALL SYSTEMS.

#### I. CONTROLS

- FURNISH AND INSTALL ALL CONTROLS FOR HVAC SYSTEMS. PROVIDE ALL RELAYS AND DEVICES REQUIRED FOR COMPLETE OPERATION. MOUNT ALL CONTROLS FURNISHED AS ACCESSORIES TO EQUIPMENT AND PROVIDE ALL CONTROL WIRING REQUIRED FOR PROPER OPERATION WHERE NOT SPECIFICALLY SHOWN ON ELECTRICAL PLANS. ALL WIRING SHALL BE IN CONDUIT PER N.E.C.. NO THERMOSTATS SHALL BE INSTALLED ABOVE ANY HEAT PRODUCING EQUIPMENT.
- CONTROL SEQUENCE SHALL BE AS FOLLOWS: AIR CONDITIONING SYSTEM SHALL BE CONTROLLED BY A STANDARD LOW VOLTAGE THERMOSTAT.

### ELECTRICAL SYSTEMS

SEE ELECTRICAL DRAWINGS



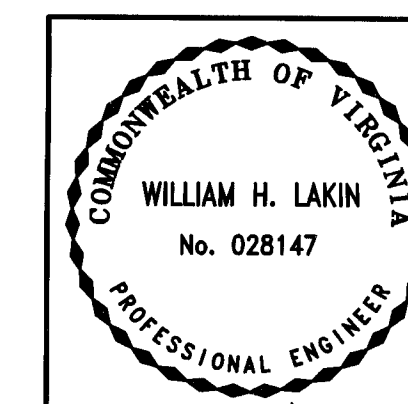
#### NOTES:

- ≤ 30' INVERTED TRAP
- > 30' ADD LIQUID LINE SOLENOID VALVE OUTDOOR UNIT
- SLOPE SUCTION AND LIQUID LINES TOWARDS CONDENSING UNIT, 1" EVERY 10 FT. ON CONDENSING UNITS, NOT HEAT PUMPS.
- USE LONG RADIUS FITTINGS
- VERTICAL PIPING MUST BE SIZED TO OBTAIN 1000 FPM MINIMUM TO GET OIL BACK TO COMPRESSOR.
- PROVIDE LIQUID LINE SOLENOID VALVE WHEN VERTICAL DISTANCE EXCEEDS 30 FEET.
- ALL COMPRESSORS TO HAVE FACTORY INSTALLED CRANK CASE HEATERS.
- PROVIDE FIELD INSTALLED UPSIZED REFRIGERANT ACCUMULATOR FOR RUNS GREATER THAN 75
- FACTORY INSTALLED THERMAL EXPANSION VALVES ARE REQUIRED FOR ALL AHU'S.

### REFRIGERANT PIPING DETAIL

NOT TO SCALE

REV	DATE	DESCRIPTION	BY	APPROVED
<b>RACECO CONVENIENCE STORE</b> JEFFERSON AVE. NEWPORT NEWS, VIRGINIA				
<b>SECTION, ROOF PLAN &amp; SCHEDULES</b>				
		<b>INFINITY DESIGN GROUP, INC.</b> 839 LIPTON DRIVE N.N., VA 23608 (757) 877-9833		
CHECKED BY WHL	DRAWN BY JWH	DATE 9/26/07	SCALE AS NOTED	
PROJECT No. 27-018	DRAWING No. 27-018 M-3			



M-3

# SPLIT SYSTEM HEAT PUMP WITH AIR HANDLING UNIT SCHEDULE

MARK	AREA SERVED	NOMINAL TONS	MIN. COMP. WARR.	TOTAL AIR	OUTSIDE AIR	TOTAL STATIC	NUMBER OF REFRIGERANT CIRCUITS	NOMINAL COOLING CAPACITY				HEATING CAPACITY				ELECTRICAL DATA				MANUFACTURER	MODEL NUMBERS		NOTES	
								TOTAL HEAT (MBH)	SENSIBLE HEAT (MBH)	MIN. EFFICIENCY	OUTSIDE DESIGN TEMP (DB/WB)	HEAT PUMP @ 47°F (MBH)	MIN. ELEC. HEAT (KW)	MIN. ELEC. HEAT (MBH)	MIN COP	INDOOR UNIT		OUTDOOR UNIT			HEAT PUMP	AIR HANDLING UNIT		
																(MFS)	VOLTS/PH	FAN HP	(MFS)					VOLTS/PH
HP 1 / AHU 1	SALES AREA	5.0	5 YEARS	1995	287	.75"	1	59.0	44.0	10 BASE 13 OPTION	93/97	61.5	10.8	36.9	3.0	43.5/45	208/3	1	24.5/40	208/3	YORK	E1RA060	MA20D & MC60D	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
HP 2 / AHU 2	SALES AREA	5.0	5 YEARS	1985	287	.75"	1	59.0	44.0	10 BASE 13 OPTION	93/97	61.5	10.8	36.9	3.0	43.5/45	208/3	1	24.5/40	208/3	YORK	E1RA060	MA20D & MC60D	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
HP 3 / AHU 3	SALES AREA	5.0	5 YEARS	1980	287	.75"	1	59.0	44.0	10 BASE 13 OPTION	93/97	61.5	10.8	36.9	3.0	43.5/45	208/3	1	24.5/40	208/3	YORK	E1RA060	MA20D & MC60D	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
HP 4 / AHU 4	SUPPORT	5.0	5 YEARS	1900	266	.75"	1	59.0	44.0	10 BASE 13 OPTION	93/97	61.5	10.8	36.9	3.0	43.5/45	208/3	1	24.5/40	208/3	YORK	E1RA060	MA20D & MC60D	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

NOTES: ① PROVIDE LOW VOLTAGE THERMOSTAT. ② PROVIDE VIBRATION ISOLATION FOR OUTDOOR AND INDOOR UNIT. ③ VERIFY ELECTRICAL BEFORE ORDERING. ④ PROVIDE ANTI-SHORT CYCLE TIMER. ⑤ INSTALL EQUIPMENT USING MANUFACTURERS RECOMMENDATIONS AS A MINIMUM. ⑥ AIR CONDITIONING SYSTEM TO BE HIGH EFFICIENCY TYPE WITH FACTORY INSTALLED THERMAL EXPANSION VALVES. ⑦ APPROVED SUBSTITUTIONS ARE CARRIER AND TRANE. ⑧ WEIGHTS: HP = 246 LBS, AHU = 243 LBS. ⑨ PROVIDE MATCHED COIL AND EXPANSION DEVICE. ⑩ 10 SEER BAS BID, 13 SEER BID OPTION.

## FAN SCHEDULE

MARK	AREA SERVED	FAN LOCATION/TYPE	CAPACITY CFM	STATIC PRESSURE IN. W.G.	RPM	DUTY	FAN MOTOR			METHOD OF CONTROL	MANUFACTURER & MODEL NO.	NOTES
							HP / WATTS	VOLTS	PHASE			
EF 1	MEN	CABINET FAN	225	.375"	1186	EXHAUST	60	120	1	INTERLOCK WITH LIGHTS	COOK GN520	① ② ③ ④ ⑤ ⑥
EF 2	WOMEN	CABINET FAN	150	.375"	1186	EXHAUST	108	108	1	INTERLOCK WITH LIGHTS	COOK GN180	① ② ③ ④ ⑤ ⑥
EF 3	KITCHEN HOOD #1	ROOF	525	.87"	1385	EXHAUST	1/4 HP DEDICATED CIRCUIT	120	1	SEE HOOD SHOP DRAWINGS	CAPTIVE AIRE DU25HFA	⑤ SEE HOOD SHOP DRAWINGS, SEPERATE BID ITEM

NOTES: ① PROVIDE MEANS OF ELECTRICAL DISCONNECT. ② COOK & PENN ARE APPROVED EQUAL. ③ PROVIDE RUBBER VIBRATION SUPPORTS. ④ PROVIDE BACK DRAFT DAMPER AND INSECT SCREEN. ⑤ HOOD FANS SUPPLIED BY OTHERS. ⑥ PROVIDE ROOF CAP.

## GRILLE, REGISTER & DIFFUSER SCHEDULE

MARK	SERVICE	MANUFACTURER	MODEL NO.	CONSTR.	FINISH	NOTES
D-1	SUPPLY AIR (4-WAY BLOW)	PRICE	SCD	STEEL	WHITE ENAMEL	① ② ③ ⑤ ⑥
R-1	RETURN AIR	PRICE	530-TBP	STEEL	WHITE ENAMEL	② ③ ④ ⑤
E-1	EXHAUST	PRICE	530FL	STEEL	WHITE ENAMEL	② ③ ④ ⑤
T-1	TRANSFER AIR	PRICE	530FL	STEEL	WHITE ENAMEL	④ ⑥

NOTES: ① PROVIDE OPPOSED BLADE OR BUTTERFLY DAMPER. ② PROVIDE ROUND ADAPTER AS REQUIRED. ③ PROVIDE FRAME SUITABLE FOR LAY-IN CEILING. ④ FIXED BLADE GRILLE. ⑤ TITUS AND CARNES ARE APPROVED EQUAL.

## VENTILATION HOOD SCHEDULE (SEPERATE BID ITEM)

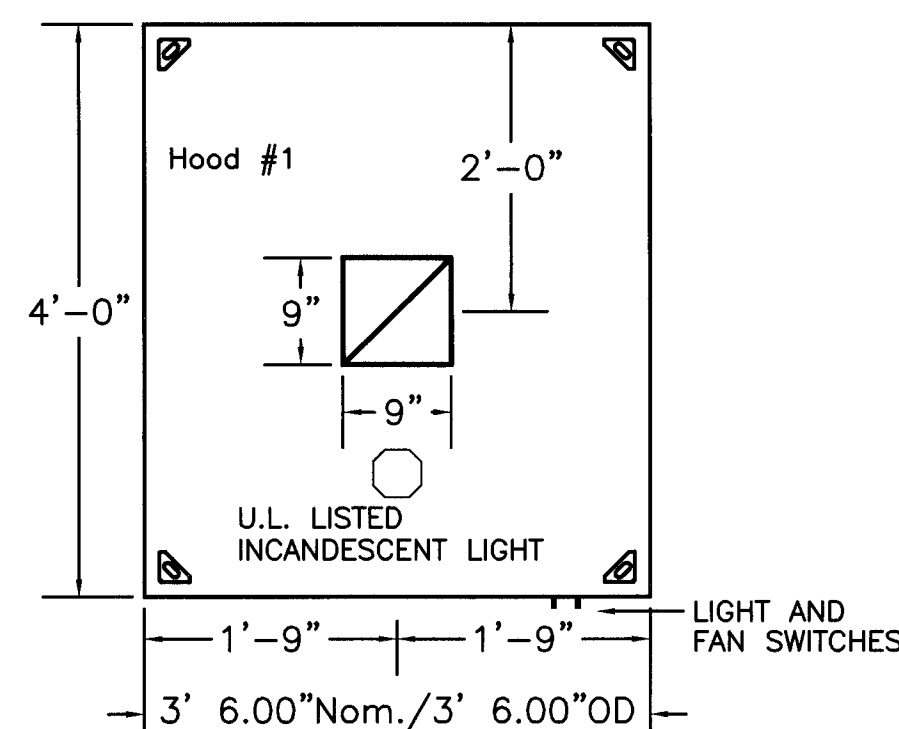
MARK	EXHAUST (CFM)	SUPPLY (CFM)	HOOD SIZE			DUCT COLLAR CONN.		ELECTRICAL			MATERIAL	MANUFACTURER & MODEL
			LENGTH	DEPTH	WEIGHT	EXHAUST (INCH)	MAKE-UP (INCH)	VOLTS	PH	HZ		
H 1	525	N/A	3'-6"	4' + PLENUM	179 LBS	9"x9"	N/A	120	1	60	STAINLESS STEEL-430	CAPTIVE AIRE - 4824VHB

NOTES: ① PROVIDE STAINLESS BAFFLE/FILTERS. ② PROVIDE UL LISTED INCANDESCENT LIGHTS. ③ SEE FAN SCHEDULE FOR ADDITIONAL INFORMATION. ④ PROVIDED AND INSTALLED BY HOOD CONTRACTOR. ⑤ HOOD SHALL BE CAPABLE OF FITTING THROUGH STANDARD THREE FOOT DOOR. ⑥ PROVIDE FACTORY MOUNTED CONTROL PANEL FOR LIGHTS AND FANS. ⑦ PROVIDE STAINLESS STEEL BACKSPLASH. ⑧ SEE SHOP DRAWINGS & SPECS. ⑨ CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR HOOD TO LOCAL CODES DEPARTMENT. ⑩ NO-HEAT TYPE HOOD. ⑪ HOOD SHALL A FACTORY FABRICATED SYSTEM, UL LISTED, NFPA APPROVED, AND BOCA COMPLIANT. ALL AIR QUANTITIES DETERMINED BY FACTORY. ⑫ SHIP HOOD WITH LOOSE EXHAUST COLLAR, (CONTRACTOR OPTION). ⑬ PROVIDE STAINLESS STEEL SKIRT TO CEILING LEVEL. ⑭ TYPE-I HEAT REMOVAL HOOD.

## LOUVER SCHEDULE

MARK	SERVICE	SIZE INCHES	AIR QUANTITY CFM	MIN. FREE AREA SQ FT	MAX FREE AREA VELOCITY FPM	MAX PRESSURE DROP IN. W.G.	MANUFACTURER	MODEL NO.	NOTES
L 1	OUTSIDE AIR EXHAUST AIR	SEE ARCH. DWGS	574	N/A	900	.04"	BY GC	BY GC	① ② ③ ④ ⑤
L 2	OUTSIDE AIR EXHAUST AIR	SEE ARCH. DWGS	553	N/A	900	.04"	BY GC	BY GC	① ② ③ ④ ⑤

NOTES: ① INSECT SCREEN. ② EXTRUDED ALUMINUM ALLOY CONSTRUCTION. ③ STANDARD ANODIZED FINISHED. ④ SEE DETAIL, PROVIDE PLENUM. ⑤ VERIFY OPENINGS IN FIELD BEFORE ORDERING.



NOTES: \* THIS DETAIL IS FOR INFORMATION ONLY. SEE SHOP DRAWINGS FROM CAPTIVE AIRE. \* HOODS TO BE PROVIDED WITH STAINLESS STEEL BACK AND SIDE SPLASH.

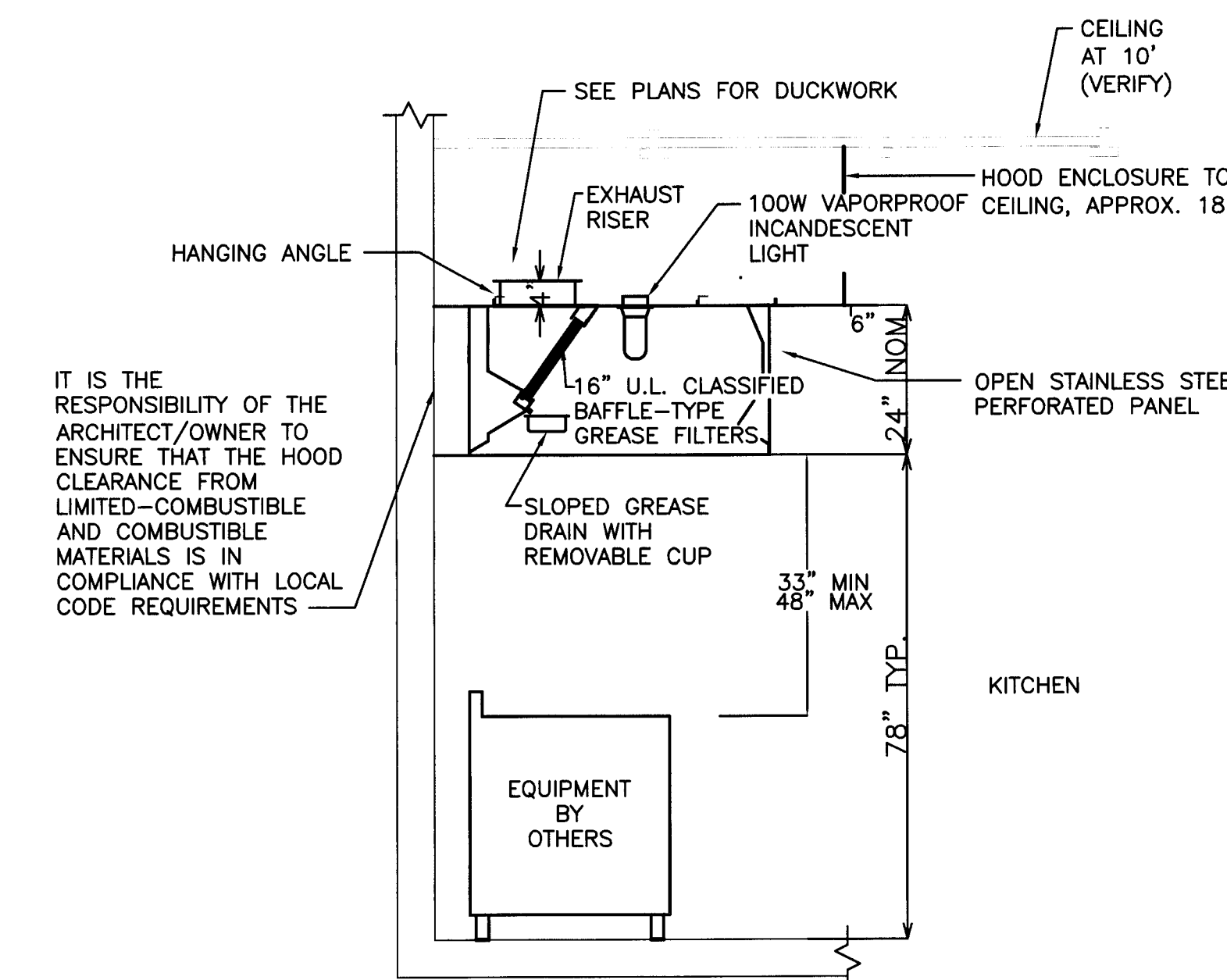
### HOOD PLAN VIEW

NOT TO SCALE

## REFRIGERANT PIPE SIZE SCHEDULE

NOMINAL TONS	SUCTION LINE		LIQUID LINE		NUMBER OF CIRCUITS	INSULATION	PIPE MATERIAL	NOTES
	HORIZ.	RISER	HORIZ.	RISER				
5.0	1-1/8"	1-1/8"	3/8"	3/8"	1	1/2" JOHNS MANVILLE AEROTUBE	TYPE "L" COPPER TUBING	SEE BELOW & DETAIL

NOTES: \* FOLLOW MANUFACTURERS BULLETIN FOR PROPER REFRIGERANT LINE INSTALLATION. \* PROVIDE BI-FLOW LIQUID LINE FILTER DRYER. \* CONCEAL ALL REFRIGERANT PIPING IN WALLS AND ATTIC. VERIFY UNIT LOCATIONS AND PIPE LOCATIONS WITH OWNER BEFORE INSTALLATION. \* LIMIT OVERALL LINE LENGTH TO LIMIT LOSS OF SUB-COOLING. \* PROVIDE LIQUID LINE SIGHT GLASS. \* PROVIDE ONLY LOW PRESSURE DROP COMPONENTS, LONG RADIUS ELBOWS, FITTINGS, ETC.



NOTES: \* THIS DETAIL IS FOR INFORMATION ONLY. SEE SHOP DRAWINGS FROM CAPTIVE AIRE. \* HOODS TO BE PROVIDED WITH STAINLESS STEEL BACK AND SIDE SPLASH.

### SECTION @ HOOD #1

NOT TO SCALE

## VENTILATION CALCULATIONS

### HOOD CALCULATIONS

HOOD	MAKE-UP		EXHAUST		DIFFERENCE
	EACH	TOTAL	EACH	TOTAL	
#1	420	420	525	525	105 CFM
BATHROOMS	N/A	N/A	N/A	375	375 CFM
<b>TOTAL:</b>					<b>480 CFM</b>

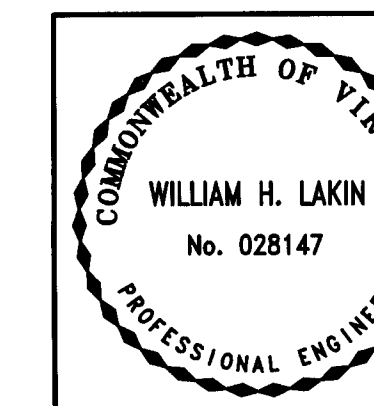
## HEATING & AIR CONDITIONING

MARK	CAPACITY	FRESH AIR/MAKE-UP
AHU 1	5.0 TONS	287 CFM
AHU 2	5.0 TONS	287 CFM
AHU 3	5.0 TONS	287 CFM
AHU 4	5.0 TONS	266 CFM
<b>TOTALS:</b>	<b>20 TONS</b>	<b>1127 CFM</b>

NOTES: ① 2003 INTERNATIONAL MECHANICAL CODE. ② BUILDING AT POSITIVE PRESSURE SUPPLY AIR > EXHAUST AIR. ③ HOOD SYSTEM PROVIDED AND INSTALLED BY OTHERS.

M-4

<b>RACECO CONVENIENCE STORE</b> JEFFERSON AVE. NEWPORT NEWS, VIRGINIA	BY: _____ APPROVED: _____
<b>SECTION, ROOF PLAN &amp; SCHEDULES</b>	
839 LIPTON DRIVE N.N., VA 23608 (757) 877-9833	
CHECKED BY: WHL PROJECT No.: 27-033	DRAWN BY: JWH DRAWING No.: 27-033 M-4
DATE: 9/26/07	SCALE: AS NOTED





**PLUMBING FIXTURE SCHEDULE**

MARK	PROVIDED BY:	FIXTURE	MANUFACTURER	MODEL NO.	MATERIAL	MTG. HGT.	SEAT	FAUCET FITTINGS	TRAP	PIPE SIZES				NOTES / ACCESSORIES
										W.	V.	HW.	CW.	
P-1	PLUMBING CONTRACTOR	WATER CLOSET	TOTO	CT705	VITREOUS CHINA	FLOOR	BEMIS 1955C	SLOAN REGAL FLUSH VALVE # 111YB	INTERNAL	3"	1 1/2"	1/2"	N/A	WAX SEAL, CLOSET BOLTS, QUOTE AS ALTERNATE FLUSH VALVE - TOTO- TH71NNC-32
P-2	PLUMBING CONTRACTOR	WATER CLOSET ADA	TOTO	CT705L	VITREOUS CHINA	FLOOR	BEMIS 1955C	SLOAN REGAL FLUSH VALVE # 111XL	INTERNAL	3"	1 1/2"	1/2"	N/A	WAX SEAL, CLOSET BOLTS, BRASS CRAFT, RIGHT OR LEFT FLUSH HANDLE, GRAB BARS B/O QUOTE AS ALTERNATE FLUSH VALVE - TOTO- TMU-12 1.0 GPC
P-3	PLUMBING CONTRACTOR	URINAL	TOTO	UT447	VITREOUS CHINA	WALL	N/A	SLOAN REGAL FLUSH VALVE # 186-1YB	INTERNAL	2"	1 1/2"	3/4"	N/A	
P-3A	PLUMBING CONTRACTOR	URINAL ADA	TOTO	UT447	VITREOUS CHINA	WALL	N/A	SLOAN REGAL FLUSH VALVE # 186XL-1	INTERNAL	2"	1 1/2"	3/4"	N/A	RIGHT & LEFT HANDLE PER ADA
P-4	PLUMBING CONTRACTOR	LAVATORY	TOTO	LT307	VITREOUS CHINA	WALL	N/A	DELTA #523 HDF	17 GA METAL 1 1/4 x 1 1/2	1 1/2"	1 1/2"	1/2"	1/2"	BRASS CRAFT CR 1912-AC SUPPLIES W/ STOP
P-4A	PLUMBING CONTRACTOR	LAVATORY ADA	TOTO	LT307	VITREOUS CHINA	WALL	N/A	DELTA #523 HDF	17 GA METAL 1 1/4 x 1 1/2	1 1/2"	1 1/2"	1/2"	1/2"	BRASS CRAFT CR 1912-AC SUPPLIES W/ STOP, TRAP WRAP KIT - PRO FLO # PF201WH
P-5	PLUMBING CONTRACTOR	SERVICE SINK	ELJER	#242-0150	VITREOUS CHINA	WALL	N/A	KOHLER K8906	3"	3"	1 1/2"	1/2"	1/2"	PROVIDE 3" TRAP STANDARD ZURN # TS2900-IP3
P-6	PLUMBING CONTRACTOR	WALL HYDRANT, FREEZE PROOF	ZURN	Z-1321	BRASS	18" / 24" AFG	N/A	N/A	N/A	N/A	N/A	N/A	3/4"	ZURN NO. Z1321
K-12	OTHERS	SINK DROP-IN	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	N/A	COUNTER	N/A	DELTA #523 HDF	17 GA METAL 1 1/4 x 1 1/2	1 1/2"	1 1/2"	1/2"	1/2"	W/ VALVE & SUPPLY TUBE
K-13	OTHERS	HAND SINK	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	N/A	COUNTER	N/A	DELTA #523 HDF	17 GA METAL 1 1/4 x 1 1/2	1 1/2"	1 1/2"	1/2"	1/2"	W/ VALVE & SUPPLY TUBE
K-15	OTHERS	3-COMPARTMENT SINK	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	VARIES	BELOW COUNT-ER	N/A	N/A	N/A	2"	1 1/2"	1/2"	1/2"	W/ VALVE - DRAIN TO FS AND SUPPLY TUBE
F	OTHERS	WATER FILTER	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	VARIES	ABOVE SINK	N/A	N/A	N/A	N/A	N/A	N/A	3/4"	SEE DETAIL
K-20	OTHERS	ICE MACHINE	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	N/A	N/A	N/A	BY OTHERS	N/A	I.W. TO HUB DRAIN	N/A	N/A	N/A	FURNISH SUPPLY TUBE WITH STOP AND ESCUTION
K-19	OTHERS	DROP IN FOUR WELL HOT	SEE EQUIPMENT CUT SHEETS	SEE EQUIPMENT CUT SHEETS	N/A	N/A	N/A	BY OTHERS	N/A	I.W. TO HUB DRAIN	N/A	N/A	N/A	

NOTES: ① CONTRACTOR IS RESPONSIBLE FOR ALL SUPPLIES, VALVES, AND CONNECTIONS FOR EQUIPMENT PROVIDED BY OTHERS.  
 ② NO SUBSTITUTIONS WITHOUT PRE-APPROVAL.  
 ③ SEE EQUIPMENT PLANS, DETAILS, CUT SHEETS, ETC. FOR PLUMBING IN KITCHEN AND SURROUNDING AREAS

**WATER HEATER SCHEDULE**

MARK	MANUFACTURER	MODEL NO.	STORAGE (GAL.)	ELECTRICAL			FUEL	CAPACITY (KW)	TANK WEIGHT (LBS)	LOCATION
				VOLTS	PHASE	HERTZ				
WH 1	A.O. SMITH	DEL50	50	240	1	60	ELECTRIC	2@4.5 *	120	

NOTES: COORDINATE MODEL AND DIMENSIONS OPTIONS (LOW STYLE) WITH GC TO SAVE SPACE.  
 \* = NON - SIMULTANEOUS

**HOT WATER RECIRCULATING PUMP SCHEDULE**

MARK	MANUFACTURER	MODEL NO.	ELECTRICAL			HEAD (FT.)	GPM	LOCATION	NOTES
			VOLTS	PHASE	WATTS				
HWP 1	GRUNDFOS	UP15-10SU7P	120	1	25	3.5"	3.4	FURTHEST FIXTURE SEE DETAIL	SEE BELOW

NOTES: \* PROVIDE BY-PASS BRIDGE AT FURTHEST FIXTURE, SEE DETAIL. \* GOULD & ZOELLER ARE APPROVED EQUAL \* PROVIDE 10 FT CORD WITH PLUG. \* BUILT-IN TIMER \* INTERGRAL CHECK VALVE \* BID OPTION.

**POTABLE WATER DIAPHRAGM EXPANSION TANK SCHEDULE**

MARK	TYPE	SERVICE	OPERATING PRESSURE (PSIG)	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	DIMENSIONS		MAKE	MODEL NUMBER
						HEIGHT (IN)	DIAMETER (IN)		
ET 1	PRECHARGED DIAPHRAGM TYPE VESSELS	DOMESTIC POTABLE WATER SYSTEM	SEE INSTALLATION GUIDE	4.2	2.4	12-1/2"	12"	BELL & GOSSETT	PTA-12

NOTES: ① USE MANUFACTURERS RECOMMENDED INSTRUCTIONS FOR CHARGING AND INSTALLATION. ② ASME RATED TANK. ③ AST-12 IS APPROVED EQUAL.

**FLOOR DRAIN AND CLEAN OUT SCHEDULE**

MARK	MANUFACTURER	MODEL/SERIES NUMBER	TYPE	MATERIAL	PIPE SIZE	NOTES
FD-1	SMITH FLOOR DRAIN	2005A-P050	ROUND GRATE	CAST IRON	2"	PROVIDE NIKALOY ROUND SUPER-FLO STRAINER W/ TRAP PRIMER - WATTS A200TD
FS-1	SMITH FLOOR SINK	3120Y	12x12-8" D	CAST IRON	2"	W/ GRATE
FS-2	SMITH FLOOR SINK	3160Y	12x12-10" D	CAST IRON	2"	W/ GRATE
CO	SMITH	#4020	ROUND	CAST IRON	VARIES	
TD	SMITH TRENCH DRAIN	9832-0100	39" SECTION	POLY CAST	2"	INSTALL PER MANUFACTURERS INSTRUCTIONS WITH GRATE # 9870-450-SS STAINLESS STEEL, END CAPS AND 4" DRAIN FITTING

**PLUMBING ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR	ELEV.	ELEVATION	MIN	MINIMUM	TYP	TYPICAL
AFG	ABOVE FINISHED GRADE	FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	U.O.N.	UNLESS OTHERWISE NOTED
BLDG	BUILDING	FLR	FLOOR	NTS	NOT TO SCALE	V	VALVE
CD	CONDENSATE DRAIN	FT	FEET	O.D.	OUTSIDE DIAMETER	VP	VENT PIPE
C.O.	CLEAN OUT	HGT	HEIGHT	O.H.D.	OPEN HUB DRAIN	VTR	VENT THROUGH ROOF
CONN	CONNECTION	HW	HOT WATER	PSIG	POUNDS PER SQUARE INCH GAGE	W.C.O.	WALL CLEAN OUT
CONT	CONTINUATION	IN	INCHES	SHT	SHEET	WH	WATER HEATER
DIA	DIAMETER	INV	INVERT ELEVATION	SAN	SANITARY	W/	WITH
DWGS	DRAWINGS	MAX	MAXIMUM				

**PIPE MATERIAL LEGEND**

**DOMESTIC WATER PIPING:**

- ABOVE GRADE: TYPE "L" HARD COPPER TUBING
- BELOW GRADE: TYPE "K" SOFT COPPER TUBING
- ASSEMBLED WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER
- WATER PIPING

**WASTE AND VENT PIPING:**

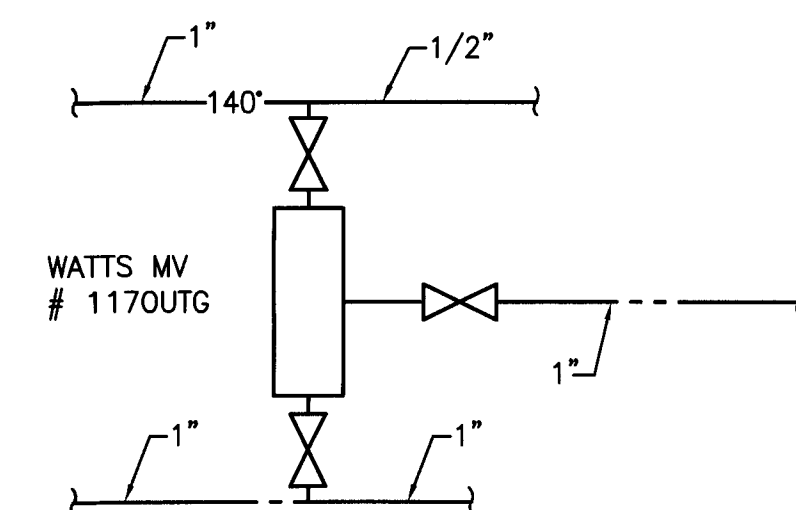
- ABOVE GRADE: PVC DWV PIPE AND FITTINGS
- BELOW GRADE: PVC DWV PIPE AND FITTINGS
- ASSEMBLE WITH APPROVED SOLVENT

**PLUMBING GENERAL NOTES**

- ALL PLUMBING AND PLUMBING MATERIALS SHALL MEET THE REQUIREMENTS OF THE STATE AND LOCAL BUILDING CODES.
- SLOPES AND INVERT ELEVATIONS SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE RUN TO AVOID CONFLICTS WITH ANY OTHER TRADES.
- ALL HOSE BIBBS SHALL BE MOUNTED 24" ABOVE FINISHED FLOOR UNLESS OTHERWISE SPECIFIED.
- ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
- SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING THE BUILDING.
- MAKE PROPER PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAINS, ELBOWS, AND CONNECTIONS ARE NOT SHOWN.
- COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING FIXTURES.
- COORDINATE THE LOCATION OF ALL PIPING WITH LIGHTING FIXTURES, DUCTS, GRILLES, HEATING PIPING, ETC.

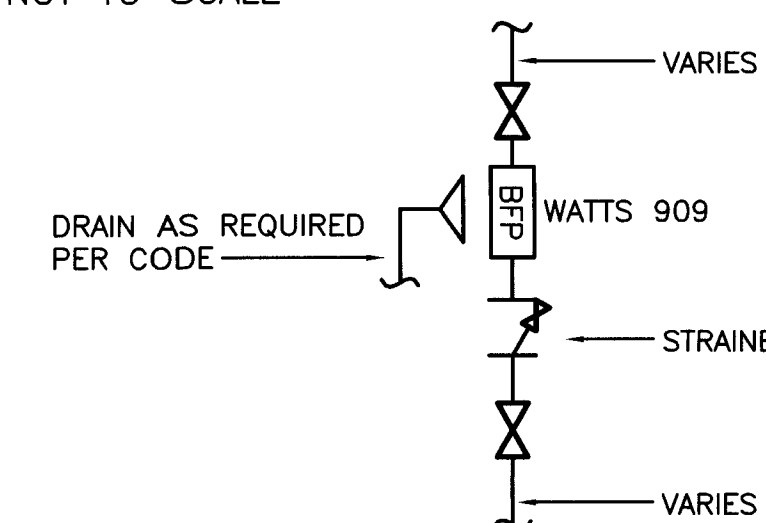
**PLUMBING LEGEND**

- DOMESTIC COLD WATER PIPING - C.W.
- DOMESTIC HOT WATER PIPING - H.W.
- F - FILTERED WATER
- SANITARY VENT PIPING - V.
- SAN - SANITARY DRAIN ABOVE FLOOR OR GRADE
- > GATE VALVE
- > BALL VALVE
- > CHECK VALVE
- > WH WALL HYDRANT
- > IN-LINE BACKFLOW PREVENTER WATTS # N-9 OR EQUAL
- CONCRETE



**MIXING VALVE DETAIL**

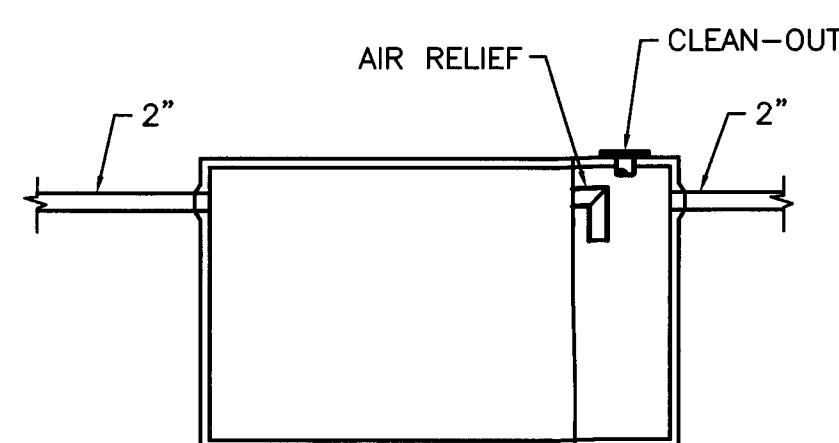
NOT TO SCALE



NOTE: MOUNT 24" AFF - SEE PLANS FOR SIZES

**VERTICAL BFP DETAIL**

NOT TO SCALE



**SECTION**

NOTE: THE GREASE TRAP SHALL BE VENTED AS REQUIRED, AND CONNECTED TO AN APPROVED TYPE FLOW RESTRICTOR IN THE TAIL PIECE OR DRAIN OUTLET. FLOW RESTRICTORS SHALL BE LOCATED SUCH THAT THEY ARE READILY ACCESSIBLE AND VISIBLE. FLOW RESTRICTORS SHALL BE DESIGNED SO THAT THE FLOW THROUGH THEM SHALL AT NO TIME BE GREATER THAN THE RATED CAPACITY OF THE GREASE TRAP. TRAP SHALL CONFORM TO UPC SECT. 711(b)(c)(d). TABLE 7-2

**GREASE INTERCEPTOR DETAIL**

NOT TO SCALE

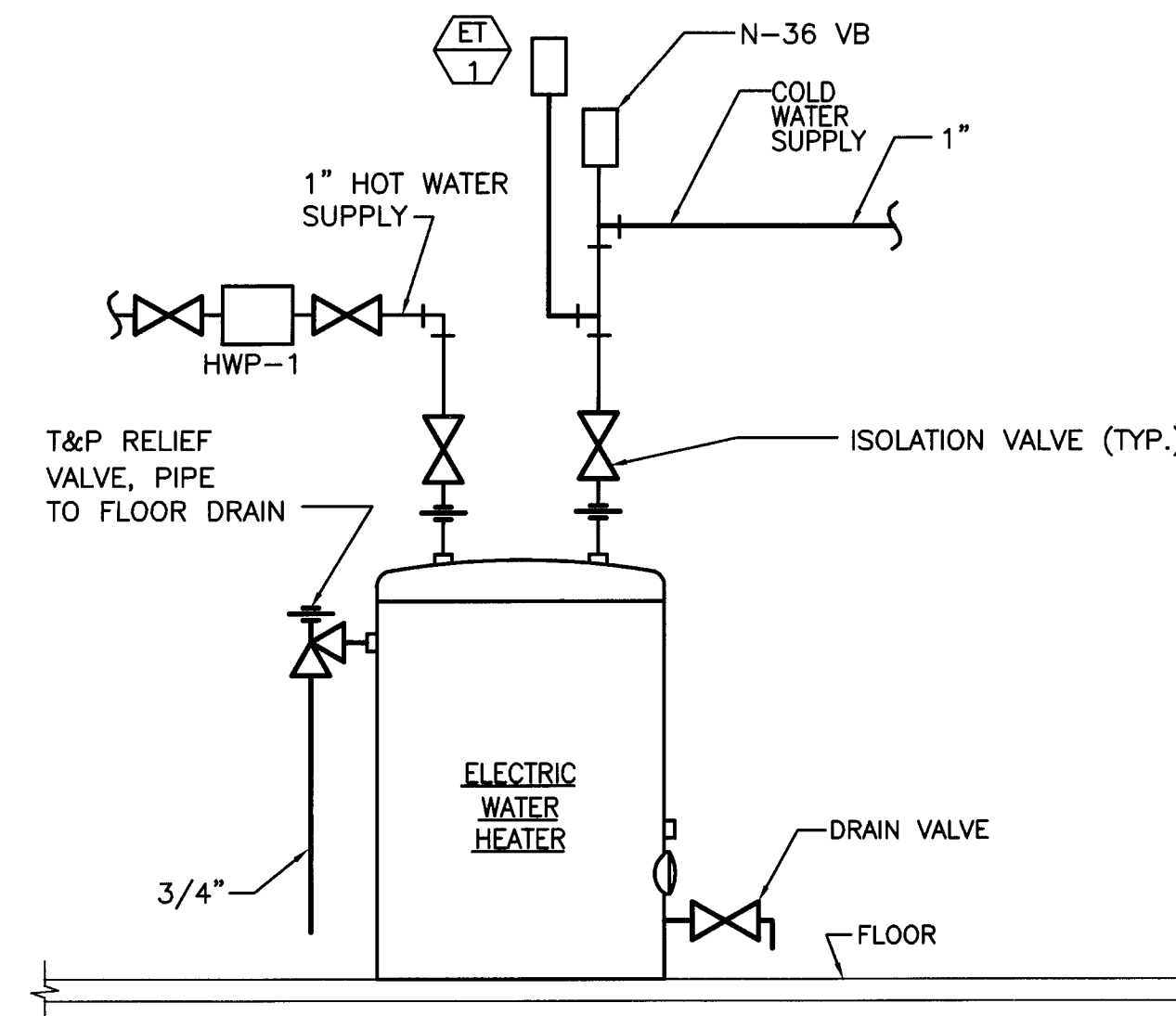
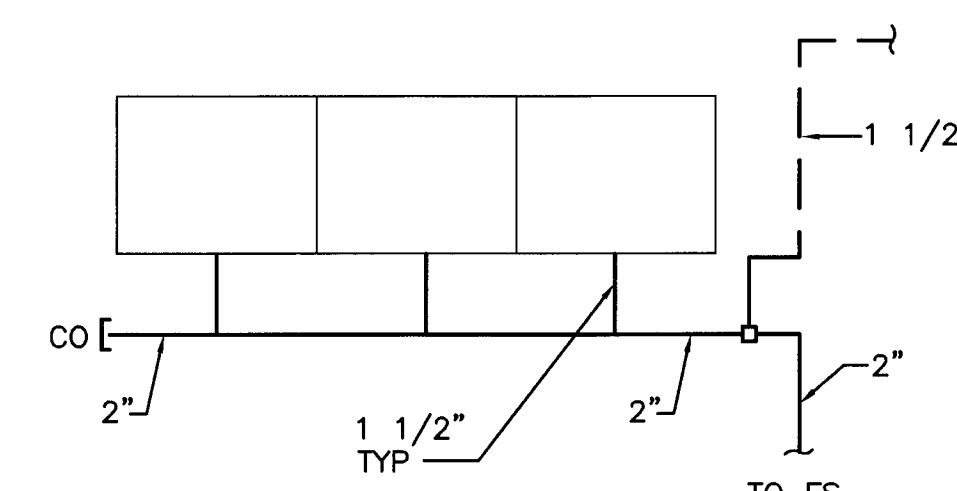
**GREASE INTERCEPTOR SPEC:**

MAKE: SMITH MFG. CO. OR APPROVED EQUAL  
 MATERIAL: STEEL  
 MODEL NO.: 8235-E06  
 MIN. FLOW: 35 GPM  
 GREASE CAPACITY: 70 LBS.  
 PIPE SIZE: 3"  
 APPROVAL: PLUMBING AND DRAINAGE INSTITUTE

- FEATURES / OPTIONS: ONE PIECE COVER
- W/ SINGLE LOCK AND LIFT RING
  - INSIDE AND OUTSIDE FLOW CONTROL FITTINGS.
  - W/ CRATLE

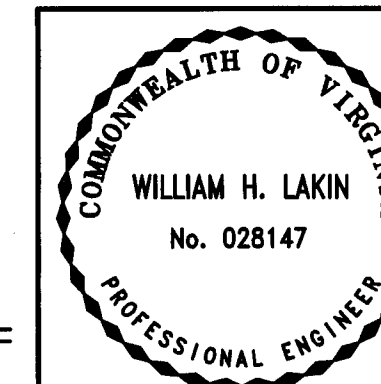
**3-COMPARTMENT SINK DETAIL**

NOT TO SCALE



**WATER HEATER PIPING DIAGRAM**

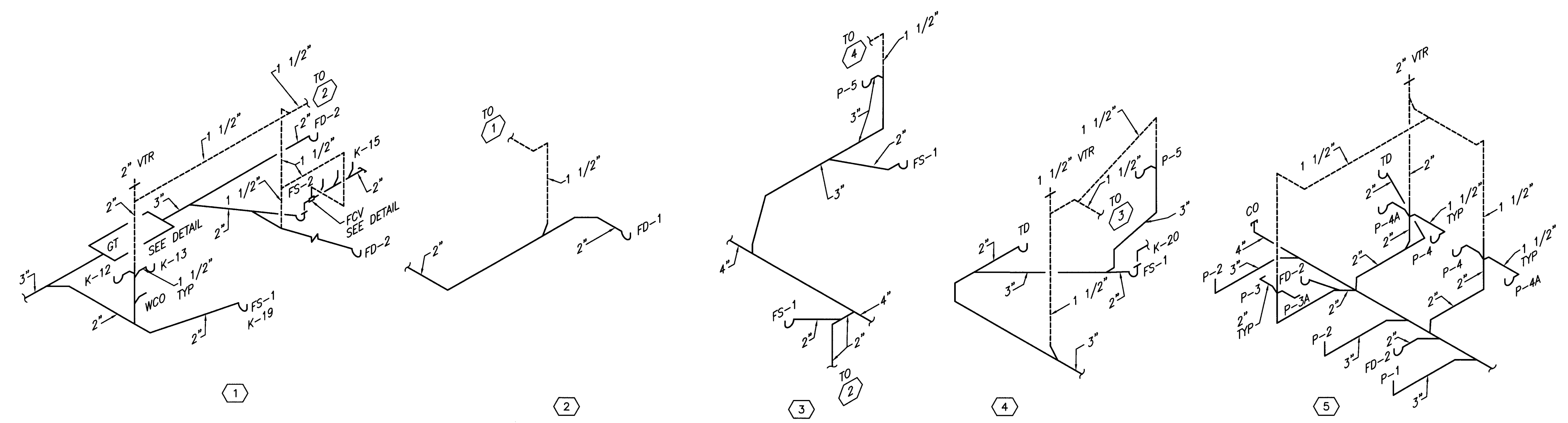
NOT TO SCALE



<b>P-1</b>			
REV	DATE	DESCRIPTION	BY / APPROVED
<b>RACECO CONVENIENCE STORE</b> JEFFERSON AVE. NEWPORT NEWS, VIRGINIA			
<b>PLUMBING SCHEDULES &amp; DETAILS</b>			
		<b>INFINITY DESIGN GROUP, INC.</b> 839 LIPTON DRIVE N.N., VA 23608 (757) 877-9833	
CHECKED BY: WHL	DRAWN BY: JWH	DATE: 9/26/07	SCALE: AS NOTED
PROJECT No. 27-033	DRAWING No. 27-033 P-1		

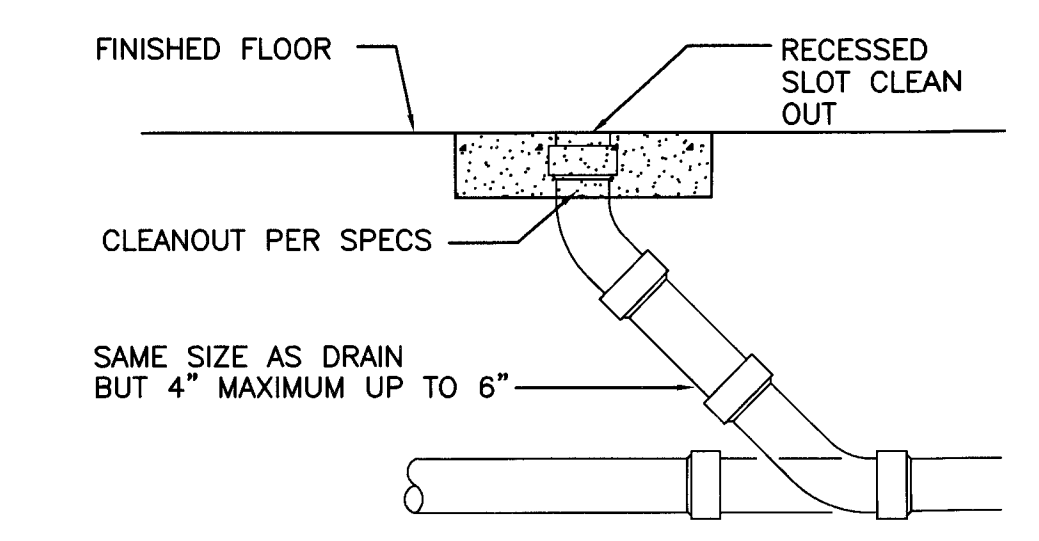
EQUIPMENT SCHEDULE

Qty	Item No	Equipment Category
1	K-1	Warmer, Buffet
1	K-2	Warmer, Buffet
1	K-3	Refrigerator, Sandwich/Salad Prep
1	K-4	Refrigerator, Sandwich/Salad Prep
1	K-5	Oven, Rapid Cook
1	K-6	Hot Dog Roller/Warmer
1	K-7	Warmer, Bun
1	K-8	Baking Center, Electric
1	K-9	Hood, Condensate
1	K-10	Drop-In, Hot Wells
1	K-11	Cart, Tray Transport, Enclosed
1	K-12	Sink, Drop-In
1	K-13	Sink, Hand, Wall Mount
1	K-14	Table, Work
1	K-15	Sink, Scullery, 3 Compartments
1	K-16	Freezer, Reach-In
5	K-17	WIRE SHELVING
3	K-18	WIRE SHELVING
1	K-19	RE THERMALIZING UNIT/WARMER
1	K-20	ICE MACHINE



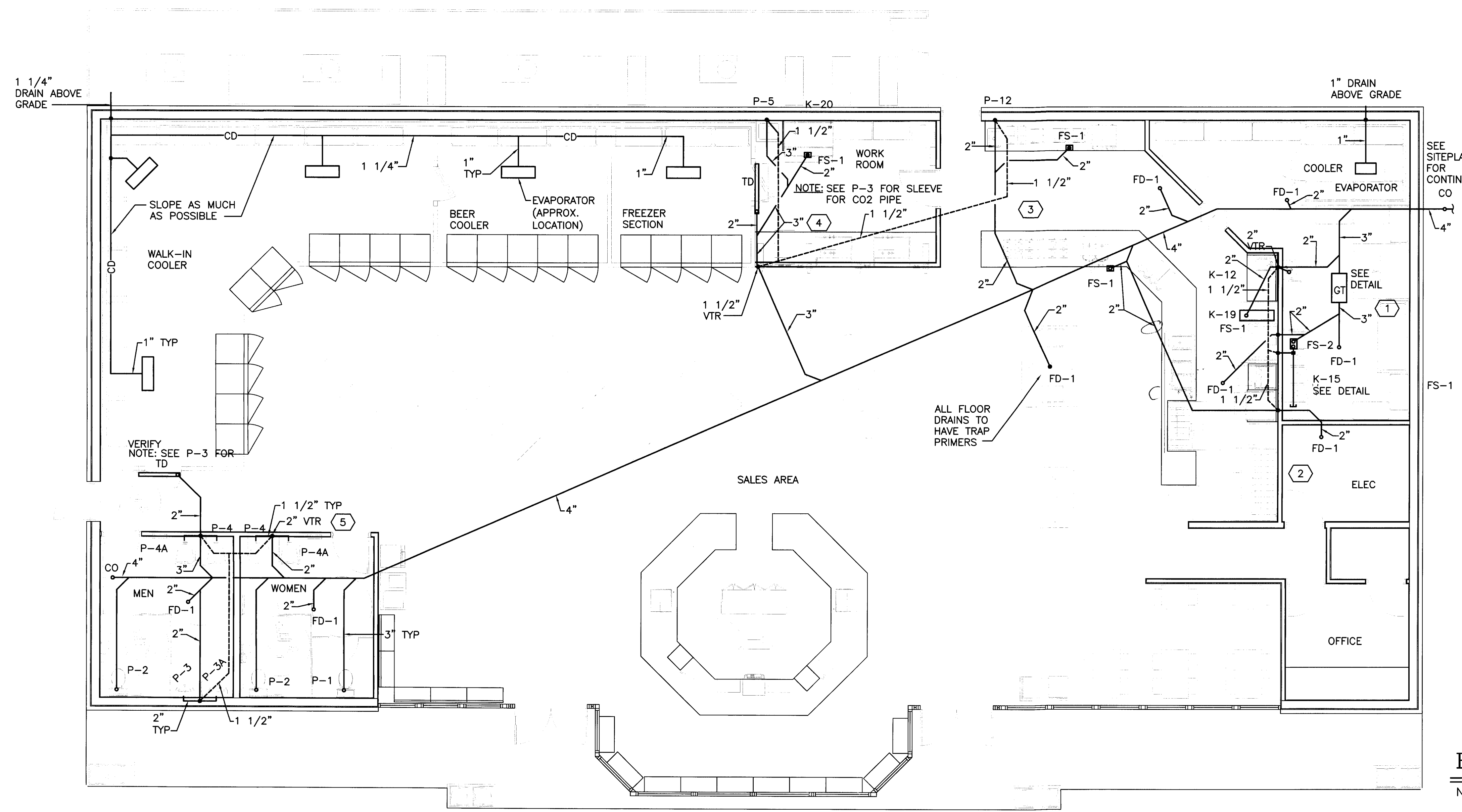
WASTE AND VENT ISOMETRICS

NOT TO SCALE



INTERIOR CLEANOUT DETAIL

NOT TO SCALE



1 1/4\"/>

SEE SITEPLAN FOR CONTINUATION

FS-1

ELEC

FINISHED GRADE

SAME SIZE AS DRAIN BUT 4\"/>

EXTERIOR CLEANOUT DETAIL

NOT TO SCALE

WASTE AND VENT PIPING PLAN

SCALE: 3/16\"/>

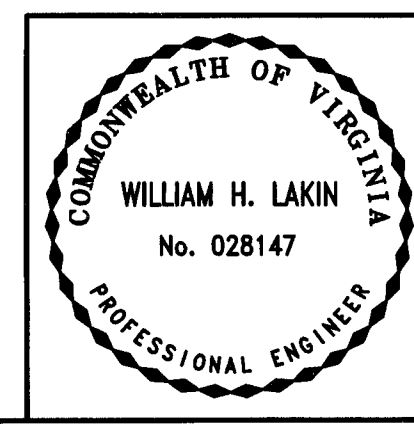
P-2

REV	DATE	DESCRIPTION	BY	APPROVED

**RACECO CONVENIENCE STORE**  
 JEFFERSON AVE.  
 NEWPORT NEWS, VIRGINIA

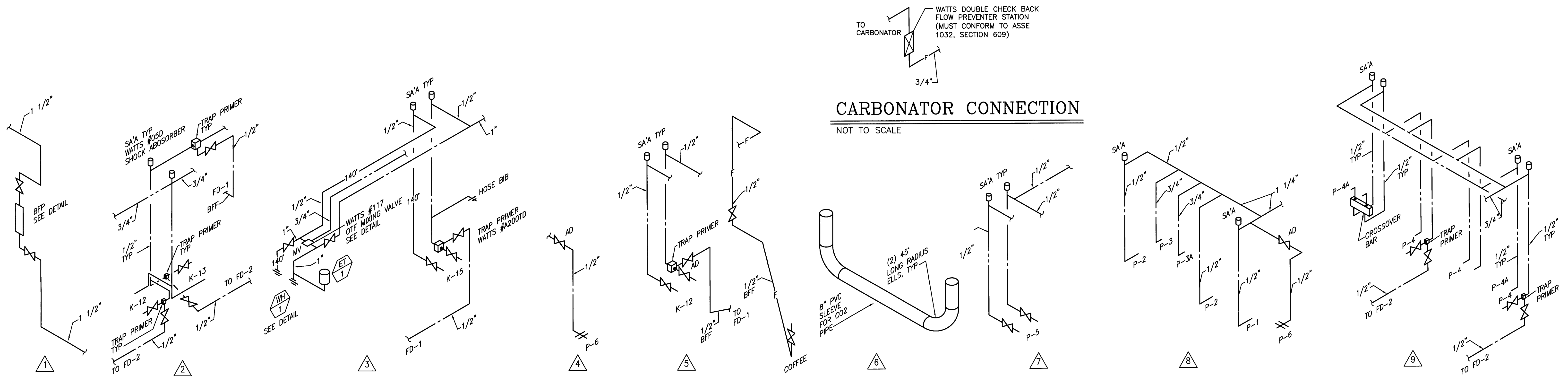
WASTE AND VENT PIPING PLAN

**IDG INFINITY DESIGN GROUP, INC.**  
 839 LIPTON DRIVE  
 N.N., VA 23608  
 (757) 877-9833



CHECKED BY WHL	DRAWN BY JWH	DATE 9/26/07	SCALE AS NOTED
PROJECT No. 27-033	DRAWING No. 27-033 P-2		

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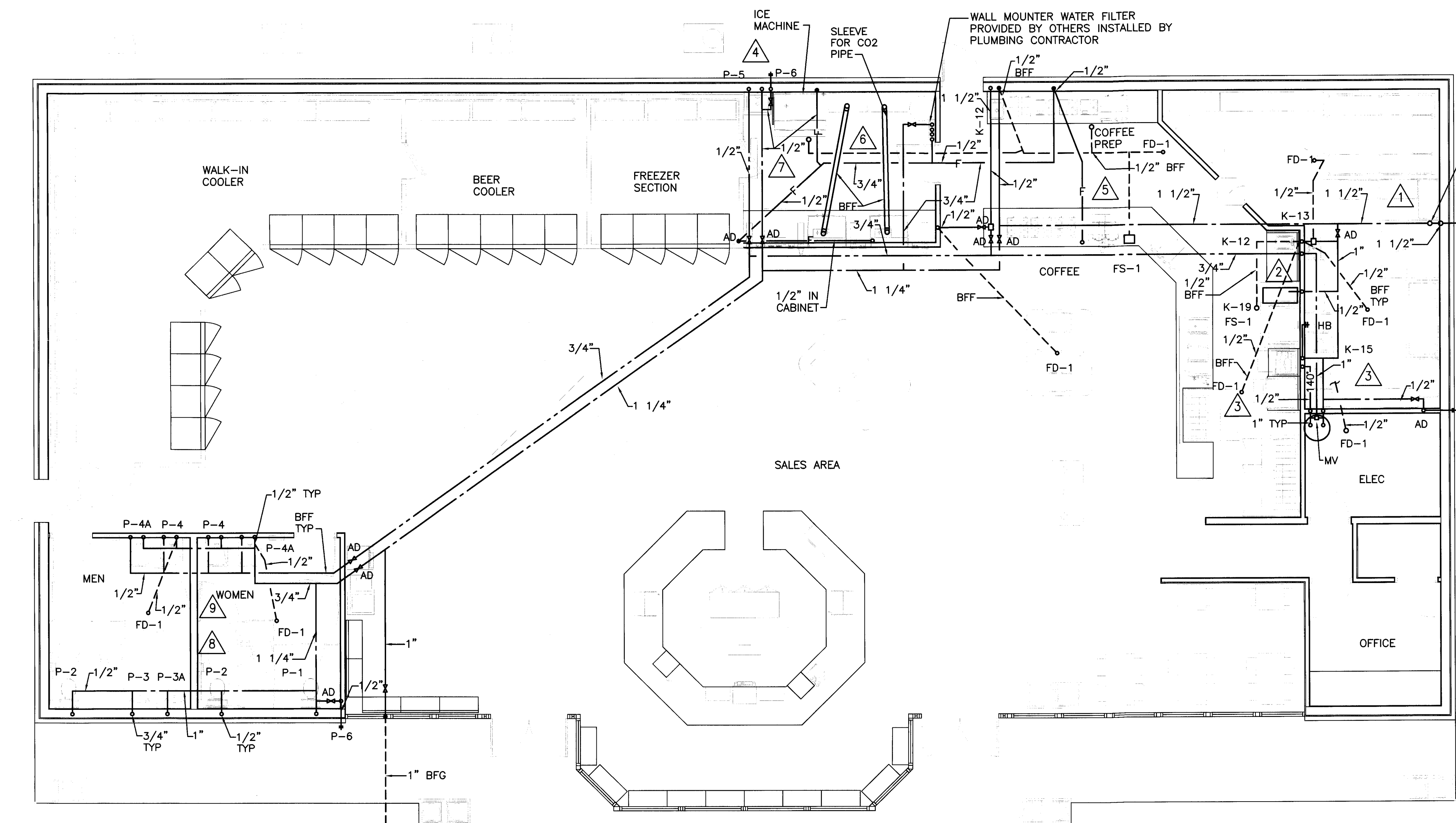


**CARBONATOR CONNECTION**

NOT TO SCALE

**WATER PIPING ISOMETRIC**

NOT TO SCALE



**EQUIPMENT SCHEDULE**

Qty	Item No	Equipment Category
1	K-1	Warmer, Buffet
1	K-2	Warmer, Buffet
1	K-3	Refrigerator, Sandwich/Salad Prep
1	K-4	Refrigerator, Sandwich/Salad Prep
1	K-5	Oven, Rapid Cook
1	K-6	Hot Dog Roller/Warmer
1	K-7	Warmer, Bun
1	K-8	Baking Center, Electric
1	K-9	Hood, Condensate
1	K-10	Drop-In, Hot Wells
1	K-11	Cart, Tray Transport, Enclosed
1	K-12	Sink, Drop-In
1	K-13	Sink, Hand, Wall Mount
1	K-14	Table, Work
1	K-15	Sink, Scullery, 3 Compartments
1	K-16	Freezer, Reach-In
5	K-17	WIRE SHELVING
3	K-18	WIRE SHELVING
1	K-19	RETHERMALIZING UNIT/WARMER
1	K-20	ICE MACHINE

PROVIDE 1" UNDERGROUND WATER PIPE TO GAS FILL ISLAND WITH LOCKABLE/KEYED FREEZE PROOF WALL HYDRANT. (VERIFY LOCATION WITH OWNER) PIPING ABOVE GRADE TO BE PROTECTED WITH HEAT TRACING BY ELECTRICAL CONTRACTOR

**WATER PIPING PLAN**

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

P-3

REV	DATE	DESCRIPTION	BY	APPROVED

**RACECO CONVENIENCE STORE**  
JEFFERSON AVE.  
NEWPORT NEWS, VIRGINIA

**WATER PIPING PLANS**

**IDG INFINITY DESIGN GROUP, INC.**  
839 LIPTON DRIVE  
N.N., VA 23608  
(757) 877-9833

INFINITY DESIGN GROUP

COMMONWEALTH OF VIRGINIA  
WILLIAM H. LAKIN  
No. 028147  
PROFESSIONAL ENGINEER

CHECKED BY WHL	DRAWN BY JWH	DATE 7/26/07	SCALE AS NOTED
PROJECT No. 27-033	DRAWING No. 27-033 P-3		

9/26/2007 11:15:56 AM



# PLUMBING SYSTEM

## A. SCOPE

- FURNISH ALL PLUMBING FIXTURES, EQUIPMENT AND MATERIAL INDICATED AND SHOWN ON DRAWINGS AND INSTALL COMPLETE AND PLACE IN PROPER OPERATION.
- PLUMBING SYSTEMS TO ESSENTIALLY CONSIST OF THE FOLLOWING:
  - SANITARY WASTE AND SANITARY SEWER EXTENDED TO 5'-0" OUTSIDE BUILDING.
  - DOMESTIC WATER SERVICE EXTENDED FROM 5'-0" OUTSIDE BUILDING INTO BUILDING THROUGH BACKFLOW PREVENTER AND DISTRIBUTION SYSTEM TO NEW FIXTURES.
  - PLUMBING FIXTURES WITH ALL REQUIRED TRIM AND EQUIPMENT.
  - INSULATION OF PLUMBING ITEMS.
  - OTHER PLUMBING ITEMS THAT MAY BE INDICATED OR SPECIFIED.

## B. EXCAVATION AND BACKFILL

- PERFORM ALL EXCAVATION AND BACKFILL REQUIRED FOR INSTALLATION OF BELOW-GRADE PIPING.
- EXCAVATE TO DEPTH REQUIRED TO INSTALL PIPING AT REQUIRED LEVEL AND PITCH. PIPE TO BE LAID ON SAND BEDDING TO GIVE UNIFORM BEARING ALONG LENGTH OF PIPE INSIDE BUILDING.
- BACKFILL WITH BEDDING MATERIAL TO A MINIMUM OF TWELVE (12) INCHES ABOVE TOP OF PIPES AND COMPACT. BALANCE OF BACKFILL SHALL BE SAND. ALL BACKFILL SHALL BE COMPACTED IN MAXIMUM TWELVE (12) INCH LAYERS.

## C. SANITARY AND STORM SEWERS

- INSTALL SANITARY DRAINS, STACKS, VENTS, FLOOR DRAINS AND CLEANOUTS FOR PROJECT AND EXTEND INTO EXISTING BUILDING FACILITIES AS INDICATED ON THE DRAWINGS.
- SEWERS TO BE PITCHED A MINIMUM OF 1/4" PER FOOT FOR 3" SIZES AND UNDER AND 1/8" PER FOOT FOR 4" SIZES OR TO GRADES INDICATED ON DRAWINGS.
- CHANGES IN DIRECTION AND BRANCH CONNECTIONS SHALL BE MADE WITH APPROVED DRAINAGE FITTINGS COMPATIBLE WITH THE PIPING SYSTEM IN WHICH IT IS INSTALLED.
- ALL FIXTURES AND SANITARY DRAINS SHALL BE VENTED AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH CODE. VENTS AND ROOF DRAINS ARE TO BE EXTENDED THROUGH ROOF AS INDICATED ON DRAWING AND FLASHED IN PLACE TO MAINTAIN ROOF WARRANTY.
- SEWER AND VENT MATERIAL SHALL BE AS FOLLOWS:
  - ABOVE AND BELOW GRADE INSIDE BUILDING - PVC-DWV PLASTIC ASTM D-1785 WITH ASTM D-2665 DWV SOCKET FITTINGS SOLVENT WELD.

## D. CLEANOUTS

- CLEANOUTS SHALL BE INSTALLED FLUSH WITH FINISHED FLOOR WITH PLATED COVERS.
- CLEANOUTS TO BE AS FOLLOWS:

MARK	ITEM	DESCRIPTION
	CLEANOUT	FLOOR TYPE, WITH SATIN FINISH BRONZE TOP (SEE SCHEDULE)

## E. FIXTURES AND EQUIPMENT

- FURNISH ALL FIXTURES AND EQUIPMENT INDICATED AND SCHEDULED ON DRAWINGS, COMPLETE WITH ALL ACCESSORIES, CONTROLS AND INSTALLATION ITEMS REQUIRED.
  - INSTALL WITH FULL ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS AND PLACE IN SATISFACTORY OPERATION.
  - FIXTURES AND EQUIPMENT SHALL BE AS FOLLOWS:
- ### F. WATER PIPING
- EXTEND DOMESTIC WATER PIPING FROM 5'-0" OUTSIDE BUILDING, COMPLETE WITH BACKFLOW PREVENTION.
  - INCLUDE UNIONS, OR OTHER DISCONNECT MEANS, STOPS OR VALVES FOR ISOLATION OF FIXTURES AND EQUIPMENT. VALVES TO BE FULLY COMPATIBLE WITH PIPING FOR SERVICE INTENDED AS MANUFACTURED BY NIBCO, CRANE OR OTHER APPROVED MANUFACTURER. INCLUDE HOSE OR DRAIN VALVES AT LOW POINTS WHERE FIXTURES CANNOT BE USED FOR DRAINAGE.
  - INSTALL SHOCK ABSORBERS AT EACH FIXTURE OR WHERE REQUIRED TO PREVENT WATER HAMMER. SHOCK ABSORBERS TO BE PRECISION PLUMBING PRODUCTS SC SERIES OR EQUAL.
  - HANGERS ON INSULATED PIPE TO BE OUTSIDE OF INSULATION, SIZED ACCORDINGLY AND WITH SUFFICIENT SADDLE TO PROTECT INSULATION.
  - WATER PIPING ABOVE GRADE SHALL BE TYPE "M" HARD COPPER ASTM B 88-832 WITH WROUGHT COPPER FITTINGS ASTM B 16.22-1980 AND NON-LEAD OR ANTIMONY SOLDER JOINTS AND TYPE "L" COPPER ASTM B-88 WITH WROUGHT COPPER BRAZED JOINTS BELOW GRADE.
  - FLUSH, VENT AND SANITIZE ALL WATER PIPING UPON COMPLETION.

## G. SUPPORTS AND HANGERS

- HANGERS AND SUPPORTS ARE TO BE PROVIDED TO PROPERLY SUPPORT, SECURE AND ALIGN PIPING AND TO MEET CONDITIONS. SPACING TO COMPLY WITH PLUMBING CODE REQUIREMENTS.

## H. INSULATION

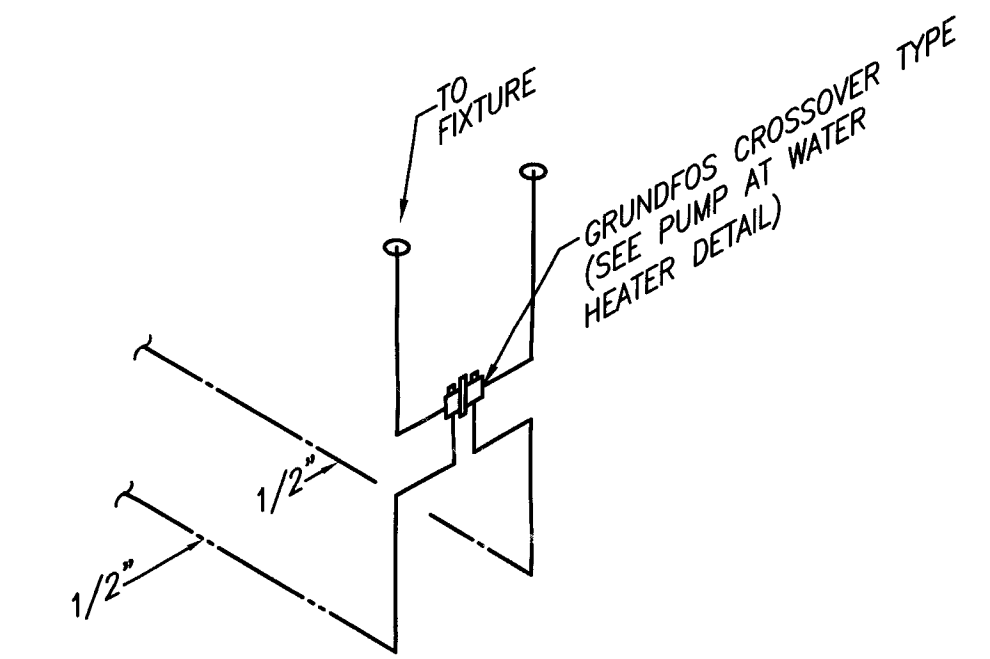
- INSULATE ALL ABOVE GRADE HOT WATER AND COLD WATER PIPING WITHIN CEILING PLENUMS & OUTSIDE WALLS WITH ONE INCH (1") INCH THICK MOLDED FIBERGLASS HAVING TYPE ASJ JACKET AND MANUFACTURED BY OWENS-CORNING FIBERGLAS COMPANY OR APPROVED EQUAL. INSTALL PER CODE.
- INSULATE HOT AND COLD WATER SUPPLIES AND P-TRAP, INCLUDING TAIL PIECE AND TRAP ARM UNDER ALL LAVATORIES WITH VINYL CLOSED CELL INSULATION, TRUEBRO MODEL 102 HANDI LAV-GUARD KIT.
- INCLUDE INSULATION OF FITTINGS AND VALVES. KEEP VAPOR BARRIERS INTACT. APPLY TO MANUFACTURERS' RECOMMENDATIONS.

## I. GAS PIPING

SHOWN ON MECHANICAL PLANS

## J. FIRE STOPPING

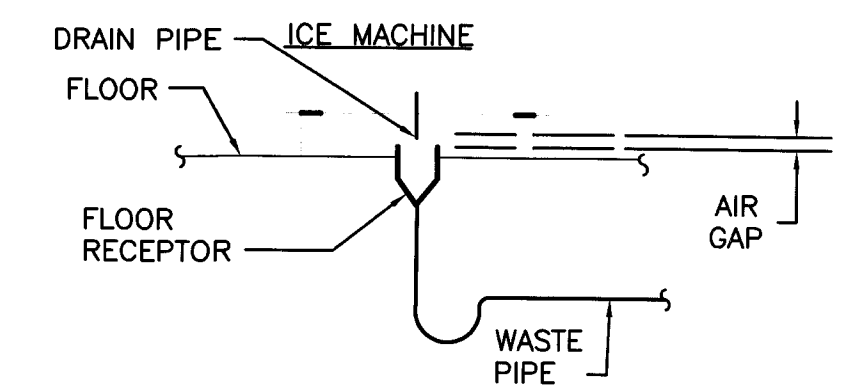
ALL OPENINGS THROUGH WALLS SHALL BE FIRE STOPPED PER CODE USING APPROVED MATERIALS, APPROVAL SHALL BE CODE AUTHORITY OR MECHANICAL ENGINEER.



- NOTES:
- \* SEE PLAN TO VERIFY PIPE SIZES.
  - \* SEE MANUFACTURERS INSTALLATION INSTRUCTIONS FOR ADDITION IF INFORMATION.
  - \* NO RETURN LINE REQUIRED.
  - \* LOCATE AT 26

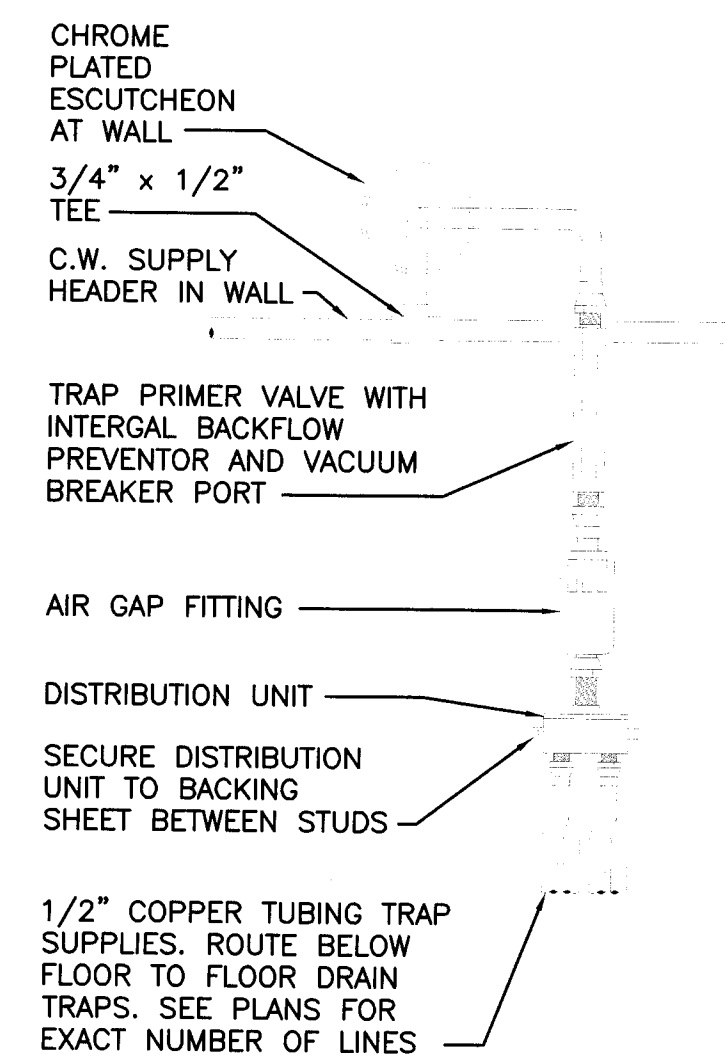
## HW RECIRC PUMP DETAIL

NOT TO SCALE



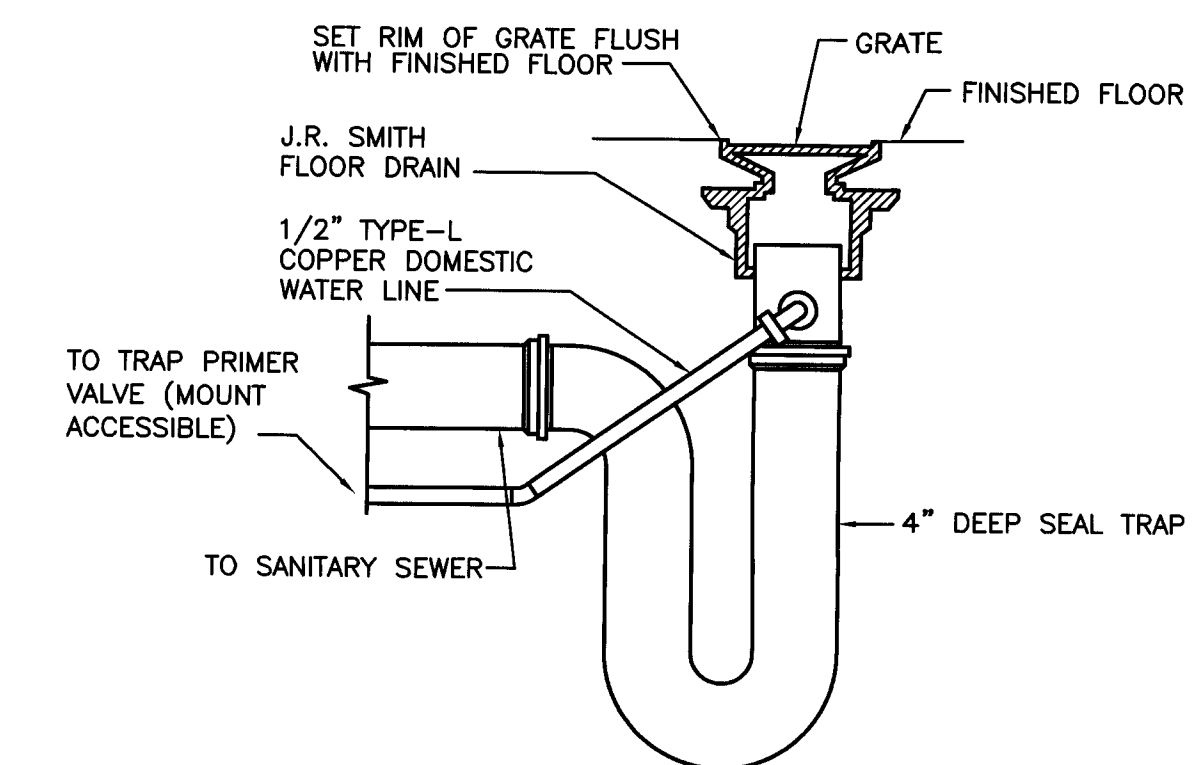
## ICE MACHINE DRAIN DETAIL

NOT TO SCALE



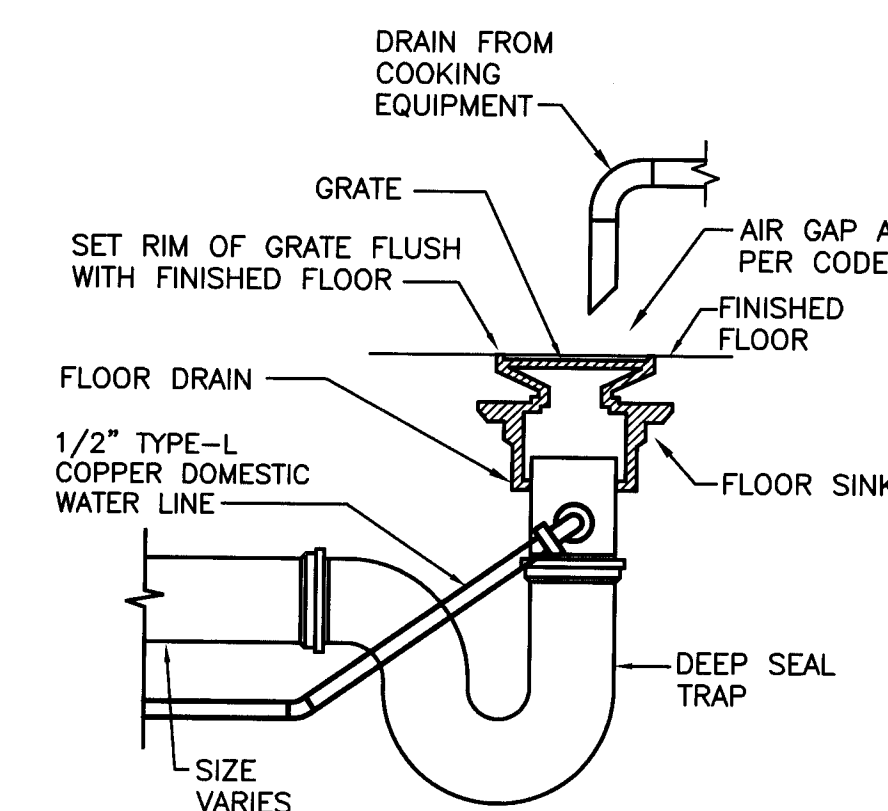
## TRAP PRIMER DETAIL

NOT TO SCALE



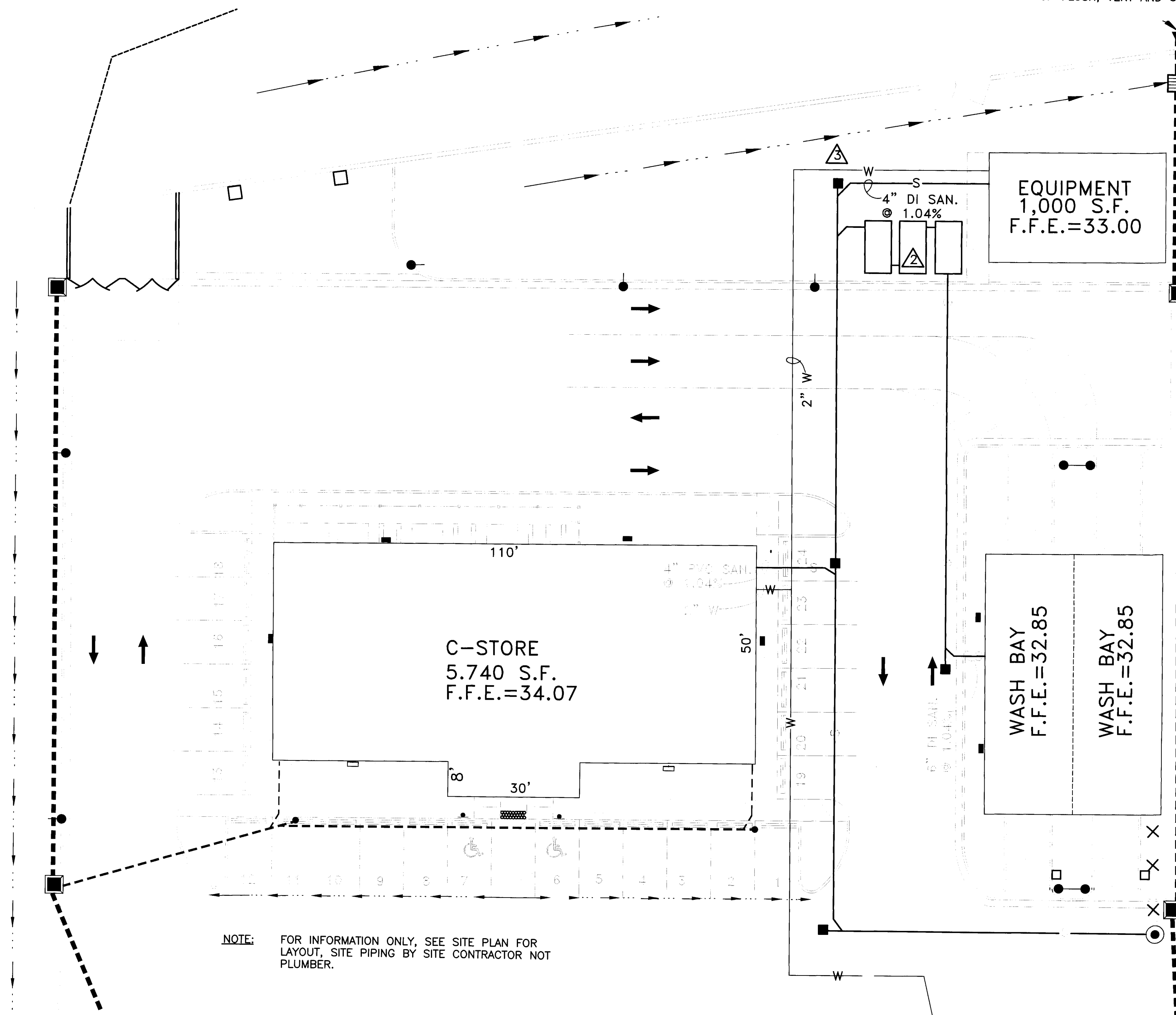
## FLOOR DRAIN WITH TRAP PRIMER DETAIL

NOT TO SCALE



## FLOOR SINK DETAIL

NOT TO SCALE



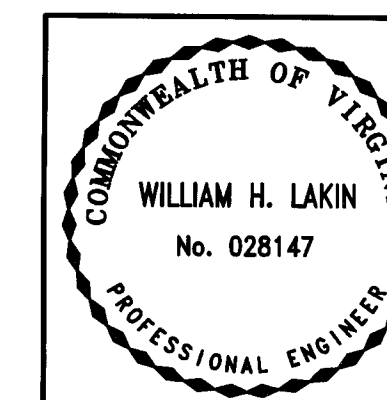
NOTE: FOR INFORMATION ONLY, SEE SITE PLAN FOR LAYOUT, SITE PIPING BY SITE CONTRACTOR NOT PLUMBER.

## CAR WASH PLAN

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

P-4

REV	DATE	DESCRIPTION	BY	APPROVED
<b>RACECO CONVENIENCE STORE</b> JEFFERSON AVE. NEWPORT NEWS, VIRGINIA				
<b>SPECIFICATIONS AND DETAILS</b>				
		INFINITY DESIGN GROUP 839 LIPTON DRIVE N.N., VA 23608 (757) 877-9833		
CHECKED BY WHL	DRAWN BY JWH	DATE 9/26/07	SCALE AS NOTED	
PROJECT No. 27-033	DRAWING No. 27-033 P-4			





## GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL CODES, THE UNIFORM STATE WIDE BUILDING CODE, THE 2002 NATIONAL ELECTRICAL CODE, AND THE City of Newport News ELECTRICAL CODE REGULATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED.
- THE WORD "PROVIDE" AS USED ON THE DRAWINGS MEANS TO FURNISH & INSTALL.
- LOCATIONS WHERE CONDUITS PENETRATE FIRE-RATED WALLS, FLOORS, OR CEILING SHALL BE SLEEVED & FIREPROOFED USING MINERAL WOOL AND A FIREPROOFING CAULK.
- ALL JUNCTION BOXES SHALL BE PRINTED WITH CIRCUIT NUMBERS CONTAINED WITHIN.
- MATERIALS, PRODUCTS, AND EQUIPMENT. (INCLUDING ALL COMPONENTS THEREOF) SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IEEE.
- CONTRACTOR SHALL SUBMIT 4 COPIES OF SHOP DRAWINGS OR CUT SHEETS OF PANELS, TRANSFORMER, DEVICES, CONDUIT, CONDUCTORS AND OTHER ELECTRICAL ITEMS TO THE ENGINEER FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL REMOVE AND REPLACE CEILING TILES AS REQUIRED TO INSTALL CIRCUITRY, PULL BOXES, ETC. PROVIDE NEW MATCHING TILES TO REPLACE ANY DAMAGED DURING WORK.
- THE CONTRACTOR SHALL EXAMINE THE SITE DESIGNATED ON THE DRAWINGS AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WITHIN THE SCOPE OF THIS WORK AND TO HAVE ACCEPTED SUCH CONDITIONS AND WILL MAKE ALL ALLOWANCES THEREFORE IN PREPARING HIS BID.
- ALL WIRING SHALL BE IN CONDUIT OR BE TYPE MC CABLE.
- ALL CONDUCTORS ARE SIZED BASED ON COPPER.
- CONTRACTOR SHALL BE FULLY BONDED, AND SHALL PROVIDE A WRITTEN 1-YEAR WARRANTY OF ALL INSTALLED WORK AND MATERIALS.
- CONTRACTOR SHALL CLEAN ALL WORK DEBRIS AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL MAKE RIGHT ANY DAMAGE TO EXISTING MATERIALS/SURFACES TO MATCH EXISTING CONDITION, AS DIRECTED BY THE PROJECT ENGINEER.
- CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS AND SHALL COORDINATE WITH City of Newport News INSPECTOR FOR INSPECTIONS.
- MEASUREMENTS SHALL BE VERIFIED BEFORE COMMENCING WORK AND ANY DISCREPANCIES IN MEASUREMENTS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER.
- CONTRACTOR TO VERIFY AVAILABLE FAULT CURRENT AND SERVICE CHARACTERISTICS WITH THE LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION. PROVIDE EQUIPMENT RATED FOR AVAILABLE FAULT CURRENT. SERIES RATING OF EQUIPMENT IS ALLOWED, INDICATE WITH PERMANENT LABELS ON AFFECTED EQUIPMENT.

## ABBREVIATIONS

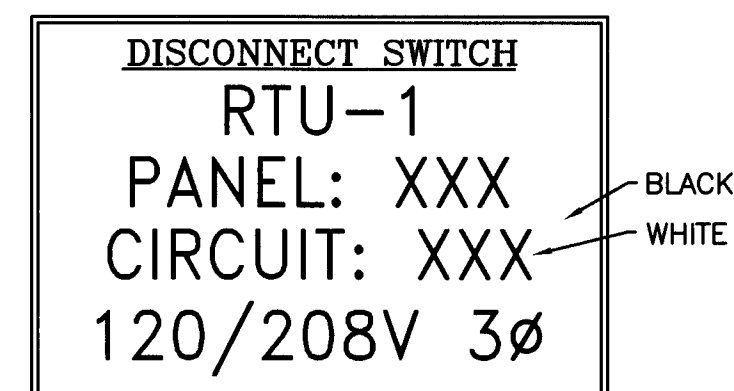
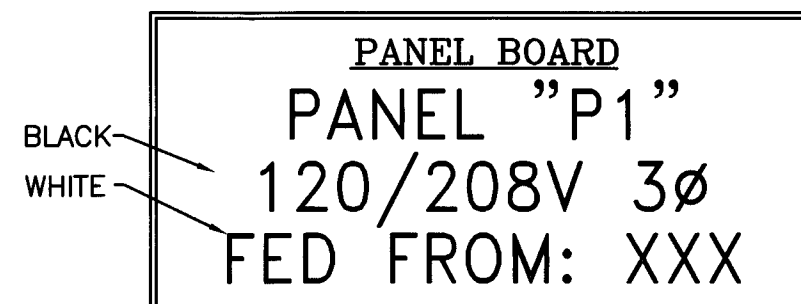
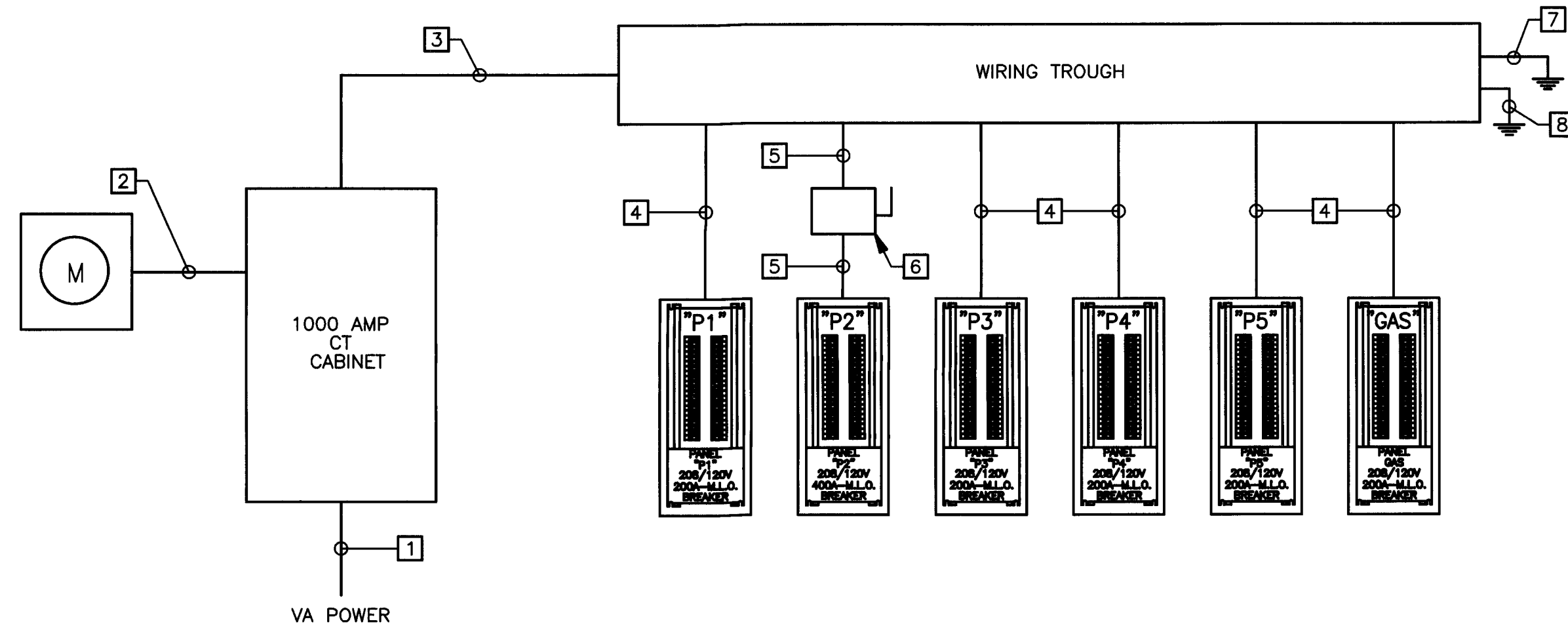
⊙	AT	KVA	KILO VOLT-AMPERES
∅	PHASE	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	LED	LIGHT EMITTING DIODE
AFG	ABOVE FINISHED GRADE	LC	LIGHTING CONTACTOR
AHU	AIR HANDLING UNIT	LTG	LIGHTING
BLDG	BUILDING	MCB	MAIN CIRCUIT BREAKER
C	CONDUIT	MIN	MINIMUM
CB	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY
CKT	CIRCUIT	NEC	NATIONAL ELECTRICAL CODE
CLG.	CEILING	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CU	COPPER	NIC	NOT IN CONTRACT
DIA.	DIAMETER	N.O.	NORMALLY OPEN
DIST.	DISTRIBUTION	P	POLE
DWG	DRAWING	PNL	PANEL
EF	EXHAUST FAN	PVC	POLYVINYL CHLORIDE
ELEC	ELECTRICAL	REC	RECEPTACLE
EXIST	EXISTING	RM	ROOM
FACP	FIRE ALARM CONTROL PANEL	SE	SERVICE ENTRANCE
FLA	FULL LOAD AMPS	SN	SOLID NEUTRAL
GFI	GROUND FAULT CIRCUIT INTERRUPT	TYP	TYPICAL
GND	GROUND	UON	UNLESS OTHERWISE NOTED
HD	HEAVY DUTY	V	VOLTS
HP	HORSEPOWER / HEAT PUMP	W	WATTS
KAIC	KILO-AMPERES (SYMMETRICAL) INTERRUPTING CAPACITY	W/	WITH
KCMIL	THOUSAND CIRCULAR MILS	WP	WEATHER PROOF
		XFMR	TRANSFORMER

## ELECTRICAL SYMBOL LEGEND

—	CONDUIT RUN CONCEALED IN WALL, ABOVE CLG, OR BELOW SLAB.	⊠	DISCONNECT SWITCH - HEAVY DUTY, CHARACTERISTICS AS INDICATED.
----	CONDUIT REQUIRED TO BE RUN BELOW GRADE OR SLAB.	▩	PANELBOARD - 208/120 VOLTS
—EC—	EMPTY CONDUIT - 3/4" UNLESS OTHERWISE NOTED. PROVIDE WITH NYLON PULL CORD.	Ⓜ	ELECTRICAL SERVICE METER
⊙	DUPLEX RECEPTACLE - 20A-1P, 125V, MOUNTED 18" AFF, U.O.N. MOUNT 6" ABOVE COUNTER WHEN AT COUNTER, U.O.N.	Ⓣ	TRANSFORMER.
⊙ 1/2	DUPLEX RECEPTACLE - HUBBELL 5362-1 OR EQUAL, MOUNTED 16" AFF, UON. BOTTOM OUTLET SWITCHED, TOP UNSWITCHED.	⊕	ELECTRICAL CONNECTION TO MOTORS. MOTORS ARE PROVIDED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.
⊙ GFI WP	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTOR. HUBBELL GFS362-1 OR EQUAL, MOUNTED 16" AFF, UON. "WP" WHEN PRESENT INDICATES WEATHERPROOF COVER. MOUNT 6" ABOVE BACKSPASH WHERE SHOWN AT KITCHEN COUNTER OR BATHROOM LAVATORY.	Ⓛ	TELEPHONE OUTLET BOX - SINGLE GANG FLUSH MOUNTED AT 48" AFF WITH WALL SUPPORT PLATE FOR PHONE. PROVIDE CABLE RUN CONCEALED, FROM ALL PHONE JACK AND COMBO OUTLETS, TERMINATED AT TELCO EQUIPMENT IN MECHANICAL ROOM. PROVIDE RJ11 JACK AT EACH BOX.
⊙	SPECIAL RECEPTACLE, VERIFY REQUIRED CHARACTERISTICS.	Ⓛ	CABLE TV OUTLET BOX - SINGLE GANG FLUSH MOUNTED AT 16" AFF. PROVIDE DEDICATED RG6 COAX CABLE RUN CONCEALED IN WALLS, FLOOR, OR CEILING. TERMINATE AT CATV UTILITY BOX AT MECHANICAL ROOM. PROVIDE SINGLE RG6 "F" CONNECTOR AND COVERPLATE AT EACH BOX.
⊙	QUADPLEX RECEPTACLE - 20A-1P, 125V, MOUNTED 18" AFF, UON.	Ⓛ	COMBO TELEPHONE/CABLE TV OUTLET BOX - SINGLE GANG FLUSH MOUNTED AT 16" AFF. PROVIDE ONE EACH RJ11 PHONE JACK AND CATV F CONNECTOR AND CABLING AS NOTED ABOVE.
Ⓛ	BRANCH CIRCUIT HOMERUN(S). ARROW(S) INDICATE NUMBER OF HOMERUN(S). LETTERS AND NUMBERS INDICATE PANEL AND CIRCUIT NUMBER. HASH MARKS INDICATE NUMBER OF PHASE AND NEUTRAL CONDUCTORS IF GREATER THAN TWO. "L" INDICATES INSULATED GROUNDING WIRE.	Ⓛ	FLUORESCENT LIGHTING FIXTURE.
Ⓛ	ELECTRICAL CONNECTION TO EQUIPMENT. EQUIPMENT IS PROVIDED ON OTHER DRAWINGS.	○	HID, INCANDESCENT, OR COMPACT FLUORESCENT DOWNLIGHT.
Ⓛ	JUNCTION BOX - 4" X 4" X 2-1/8" - MOUNTED ABOVE CEILING TO BUILDING STRUCTURE UNLESS OTHERWISE NOTED.	●	HID, INCANDESCENT, OR COMPACT FLUORESCENT WALL WASHER DOWNLIGHT.
S	TOGGLE SWITCH - HUBBELL CS120-1 OR EQUAL, 48" AFF.	Ⓛ	HID, INCANDESCENT, OR COMPACT FLUORESCENT FIXTURE - WALL MOUNTED
S <sub>3</sub>	THREE-WAY TOGGLE SWITCH - HUBBELL CS315-1 OR EQUAL, 48" AFF.	Ⓛ	CEILING MOUNTED ILLUMINATED EXIT SIGN WITH ARROWS AS INDICATED ON THE DRAWINGS. SIGN FACE ON SHADED SIDE.
S <sub>4</sub>	FOUR-WAY TOGGLE SWITCH - HUBBELL CSB415-1 OR EQUAL, 48" AFF.	Ⓛ	WALL MOUNTED ILLUMINATED EXIT SIGN WITH ARROWS AS INDICATED ON THE DRAWINGS. SIGN FACE ON SHADED SIDE.
S <sub>D</sub>	DIMMER SWITCH WITH SLIDER CONTROL 120V, 600W, WALL MOUNTED 48" AFF.	Ⓛ	CEILING MOUNTED ILLUMINATED EXIT SIGN AND EMERGENCY BATTERY PACK LIGHT WITH ARROWS AS INDICATED ON THE DRAWINGS. SIGN FACE ON SHADED SIDE.
S <sub>F</sub>	CEILING PADDLE FAN SPEED CONTROL SWITCH, 48" AFF, SUPPLIED WITH FAN, INSTALLED AND WIRED BY CONTRACTOR.	Ⓛ	WALL MOUNTED EMERGENCY BATTERY PACK LIGHT PACK.
Ⓛ	TIME CLOCK	Ⓛ	TRACK LIGHTING.
Ⓛ	LIGHTING CONTACTOR	Ⓛ	LOW VOLTAGE BUZZER
Ⓛ	CONSTRUCTION NOTE REFERRAL		

## RISER NOTES (THIS SHEET)

- PROVIDE (4) EMPTY 4" CONDUITS WITH NYLON PULLSTRING, 2'-0" BELOW GRADE & OUT TO 5'-0" BEYOND THE BUILDING EXTERIOR, FOR USE BY VA DOMINION POWER, FOR SERVICE ENTRANCE CABLES.
- 1 1/4" CONDUIT TO METER BASE.
- (4 SETS) 4-400 KCMIL, 3" C.
- 4#3/0, 1#6 GND, 2" C.
- 4-500 KCMIL, 1#2 GND, 3" C.
- 400 AMP SAFETY SWITCH NEMA 1, 3ϕ FUSED AT 400 AMPS.
- 1#6 TO GROUND ROD.
- 1#3/0 TO BUILDING STEEL.



### SPECIFICATIONS:

- MAKE: 1/16" ENGRAVING MATERIAL
- SIZE: 1/4" LETTERS (MIN.) PLATE SIZE MAY VARY
- COLOR: COAL BLACK / WHITE

### NOTES:

- SELF ADHESIVE
- SEE MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
- VERIFY PLATE SIZE WILL FIT ON EQUIPMENT BEFORE ORDERING.

## EQUIPMENT IDENTIFICATION DETAIL

SCALE: NONE

## EQUIPMENT

SYMBOL	DESCRIPTION	QTY.	VOLTAGE	PHASE	AMPS
Ⓛ	BUFFET WARMER	2	120V	1ϕ	13.8
Ⓛ	SANDWICH/SALAD PREP. REF.	1	120V	1ϕ	11.5
Ⓛ	SANDWICH/SALAD PREP. REF.	1	120V	1ϕ	8.6
Ⓛ	RAPID COOK OVEN	1	208V	1ϕ	35.0
Ⓛ	HOT DOG WARMER	1	120V	1ϕ	8.3
Ⓛ	BUN WARMER	1	120V	1ϕ	3.3
Ⓛ	ELECTRIC BANKING CENTER	1	120/208V	3ϕ	35.0
Ⓛ	CONDENSATE HOOD	1	120V	1ϕ	3.4
Ⓛ	DROP-IN HOT WELLS	1	120V	1ϕ	20.8
Ⓛ	REACH-IN FREEZER	1	120V	1ϕ	13.2
Ⓛ	RETHEMALIZING UNIT	1	208V	3ϕ	22.0
Ⓛ	CONDENSING UNIT FOR WALK-IN COOLER	1	208/230V	3ϕ	20
Ⓛ	EVAPORATOR COIL(S) FOR WALK-IN COOLER	1	115V	1ϕ	6
Ⓛ	CONDENSING UNIT FOR BEER COOLER	1	208/230V	3ϕ	20
Ⓛ	EVAPORATOR COIL(S) FOR BEER COOLER	1	220V	1ϕ	23.3
Ⓛ	CONDENSING UNIT FOR WALK-IN COOLER	1	230V	3ϕ	38.9
Ⓛ	EVAPORATOR COIL(S) FOR WALK-IN COOLER	1	230V	1ϕ	6.4
Ⓛ	SET OF (4) 30" X 79" FREEZER DOORS W/ HT GLASS	1	120V	1ϕ	11.33
Ⓛ	SET OF (5) 30" X 79" BEER COOLER DOORS W/ HT GLASS	1	120V	1ϕ	14.57
Ⓛ	SET OF (4) 30" X 79" COOLER DOORS W/ HT GLASS	1	120V	1ϕ	11.33
Ⓛ	SET OF (2) 30" X 79" COOLER DOORS W/ HT GLASS	1	120V	1ϕ	5.93
Ⓛ	SET OF (4) 30" X 79" COOLER DOORS W/ HT GLASS	1	120V	1ϕ	11.33
Ⓛ	CONDENSING UNIT FOR WALK-IN PREP COOLER	1	208/230V	3ϕ	15.0
Ⓛ	EVAPORATOR COIL(S) FOR WALK-IN PREP COOLER	1	115V	1ϕ	4.0
Ⓛ	NON CARBONATED BEVERAGE DISPENSER	1	115V	1ϕ	5.2
Ⓛ	CARBONATED BEVERAGE DISPENSER	1	115V	1ϕ	5.2
Ⓛ	REMOTE ICE MAKER	2	220V	1ϕ	20.0
Ⓛ	REMOTE CONDENSER	2	208/230V	1ϕ	2.0
Ⓛ	FROZEN BEVERAGE DISPENSER	1	-	-	-
Ⓛ	ICE MAKER W/O BIN	1	115V	1ϕ	1.1
Ⓛ		1	208V	1ϕ	19.6
Ⓛ	ICEMAKER CONDENSER, REMOTE	1	208V	1ϕ	19.6
Ⓛ	SAFE	1	115V	1ϕ	1.0
Ⓛ	8' DELI CASE	1	120/240V	1ϕ	30
Ⓛ	REMOTE CONDENSER	1	208/230V	3ϕ	10.3
Ⓛ	ICE CREAM CASE	1	115V	1ϕ	15.0
Ⓛ	BUNN LOW PROFILE GRINDER	?	120V	1ϕ	3
Ⓛ	AUTOMATIC COFFEE BREWER	?	120V	1ϕ	13.9
Ⓛ	FRESH MIX DISPENSER	?	120V	1ϕ	15
Ⓛ	(2) HOPPER GOURMET ICE SYSETEM	?	120V	1ϕ	12

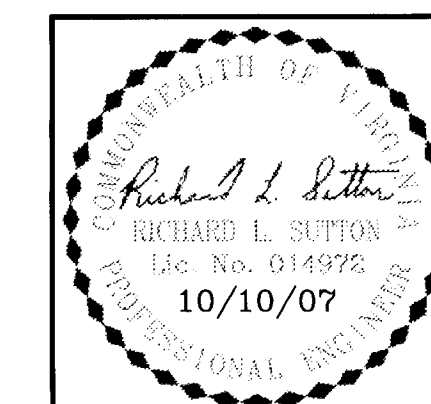
## RACECO CONVENIENCE STORE

JEFFERSON AVE  
NEWPORT NEWS, VIRGINIA

### TITLE SHEET

DESIGN  
ENGINEERING  
SERVICES, P.C.

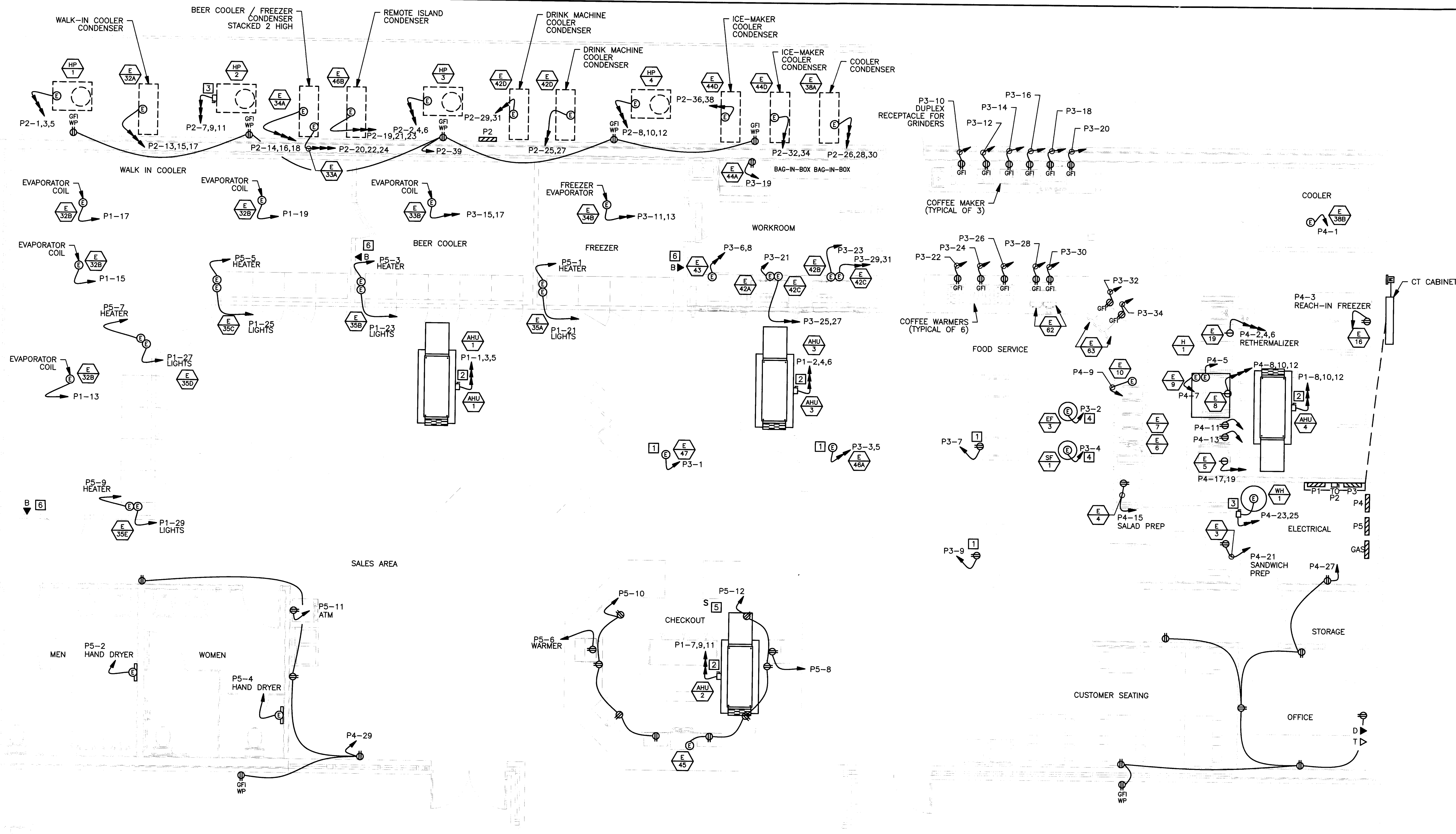
20415 BREWERS NECK BLVD.  
CARROLLTON, VA 23314-9724  
(757) 784-1348



CHECKED BY B.M.A.	DRAWN BY J.A.P.	DATE 10/10/07	SCALE AS SHOWN	E-1
PROJECT No. 07B22	DRAWING No. 07B22_E1			

## RACECO CONVENIENCE STORE POWER RISER DIAGRAM

NOT TO SCALE



# NEW WORK POWER PLAN

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

## WORK NOTES (THIS SHEET)

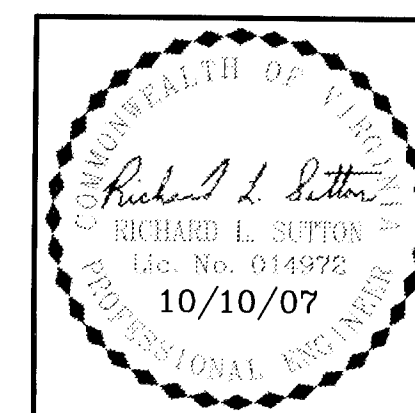
- 1 COORDINATE FLOOR ELECTRICAL LOCATIONS WITH EQUIPMENT LOCATION, PRIOR TO INSTALLATION, TO ENSURE NO CONFLICTS WITH EQUIPMENT FEET & DRAIN PLACEMENT.
- 2 PROVIDE 60A-3P, 240V, NEMA 1 DISCONNECT SWITCH FUSED PER MANUFACTURER'S RECOMMENDATION (PROVIDE FUSE ADAPTER WHEN REQUIRED). USE WEATHERPROOF FLEX CONDUIT FROM SWITCH TO AIR HANDLING UNIT (AHU). MOUNT TO SIDE OF UNIT, AVOIDING OBSTRUCTION OF ACCESS PANELS. PROVIDE ALL CONNECTIONS. PROVIDE NAME PLATE, SEE IDENTIFICATION DETAIL ON SHEET E-1.
- 3 PROVIDE 30A-3P, 240V, NEMA 1 DISCONNECT SWITCH FUSED AT 30 AMPS (PROVIDE FUSE ADAPTER WHEN REQUIRED). USE FLEX CONDUIT FROM SWITCH TO WATER HEATER (WH). MOUNT TO WALL NEAR UNIT. PROVIDE ALL CONNECTIONS. PROVIDE NAME PLATE, SEE IDENTIFICATION DETAIL ON SHEET E-1.
- 4 FAN LOCATED ON ROOF. SHOWN HERE FOR CLARITY. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- 5 PROVIDE SWITCH FOR ASSISTANCE BUZZERS LOCATED IN COOLERS/FREEZERS.
- 6 ASSISTANCE BUZZER FOR COOLERS/FREEZERS WIRED TO SWITCH AT CHECKOUT DESK.

## RACECO CONVENIENCE STORE

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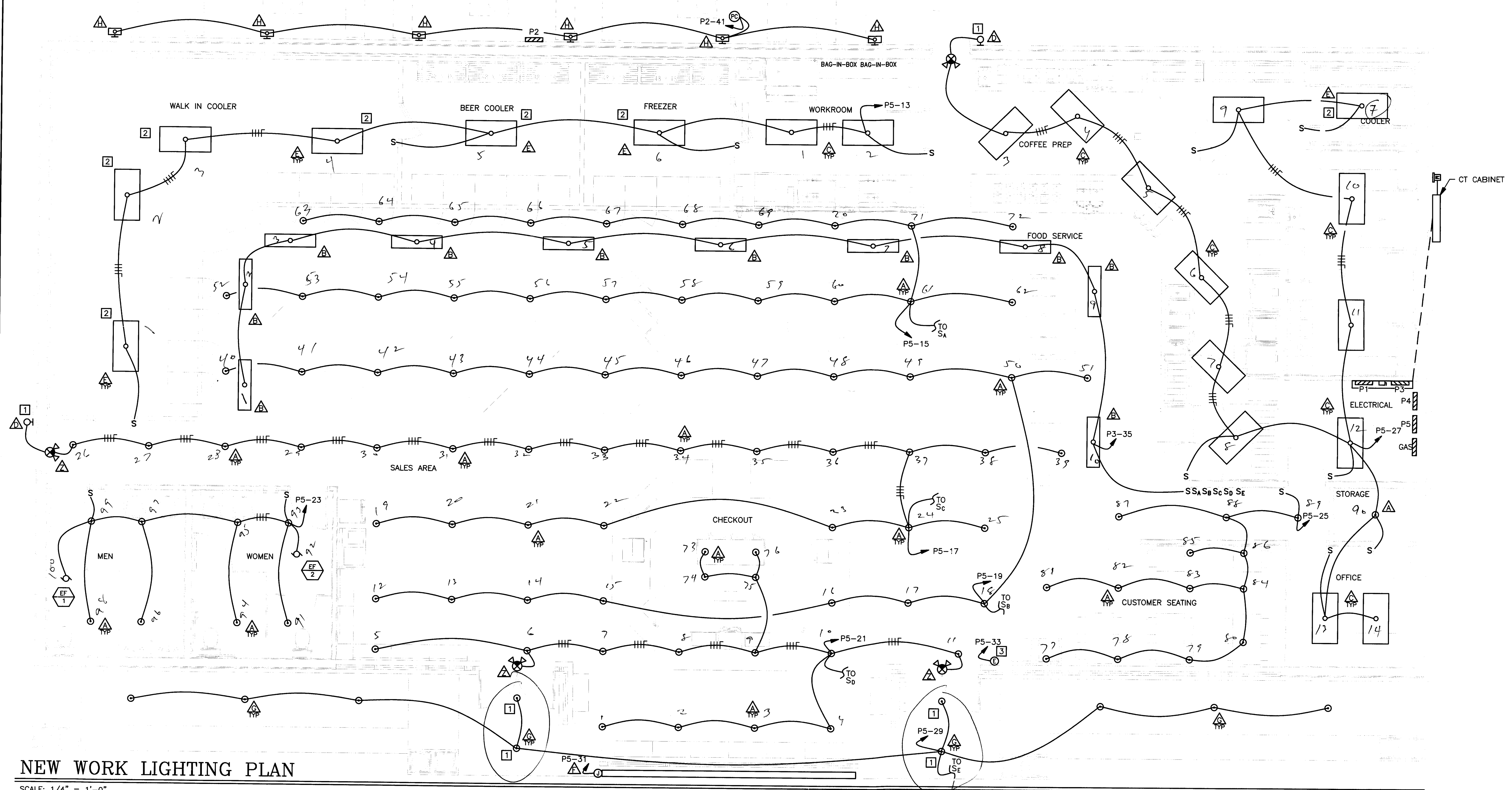
## NEW WORK POWER PLAN

DESIGN  
ENGINEERING  
SERVICES, P.C.  
20415 BREWER'S NECK BLVD.  
CARROLLTON, VA 23314-9724  
(757) 784-1348



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PROJECT No. 07B22	DRAWING No. 07B22_E2	E-2	

GATE



### NEW WORK LIGHTING PLAN

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

### WORK NOTES (THIS SHEET)

- 1. FIXTURE CONTAINS A BATTERY PACK FOR EMERGENCY EGRESS OPERATION.
- 2. RUN CONDUIT FOR COOLER & FREEZER LIGHTING ABOVE THE COOLER/FREEZER CEILING. CONTRACTOR TO VERIFY LIGHTING PLACEMENT BEFORE INSTALLATION TO ENSURE FIXTURE DOES NOT INTERFERE WITH COOLER EVAPORATORS.
- 3. CONNECTION FOR ROPE LIGHT. VERIFY LOCATION WITH OWNER PRIOR TO INSTALLATION.

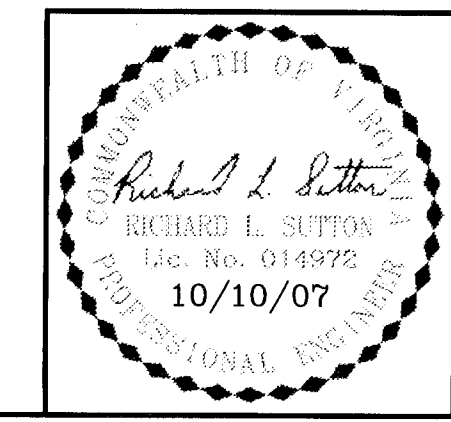
Total Can Lt = 100  
 Front entrance = 4  
 Fluorescent Lt = 10 (1 Bulb)  
 Cooler Lt = 07 (2 Bulb)  
 Pool Lt = 14 (4 Bulb)

6-23-08 RUN NAT WIRE TO THE Can Lt. DIRECT.

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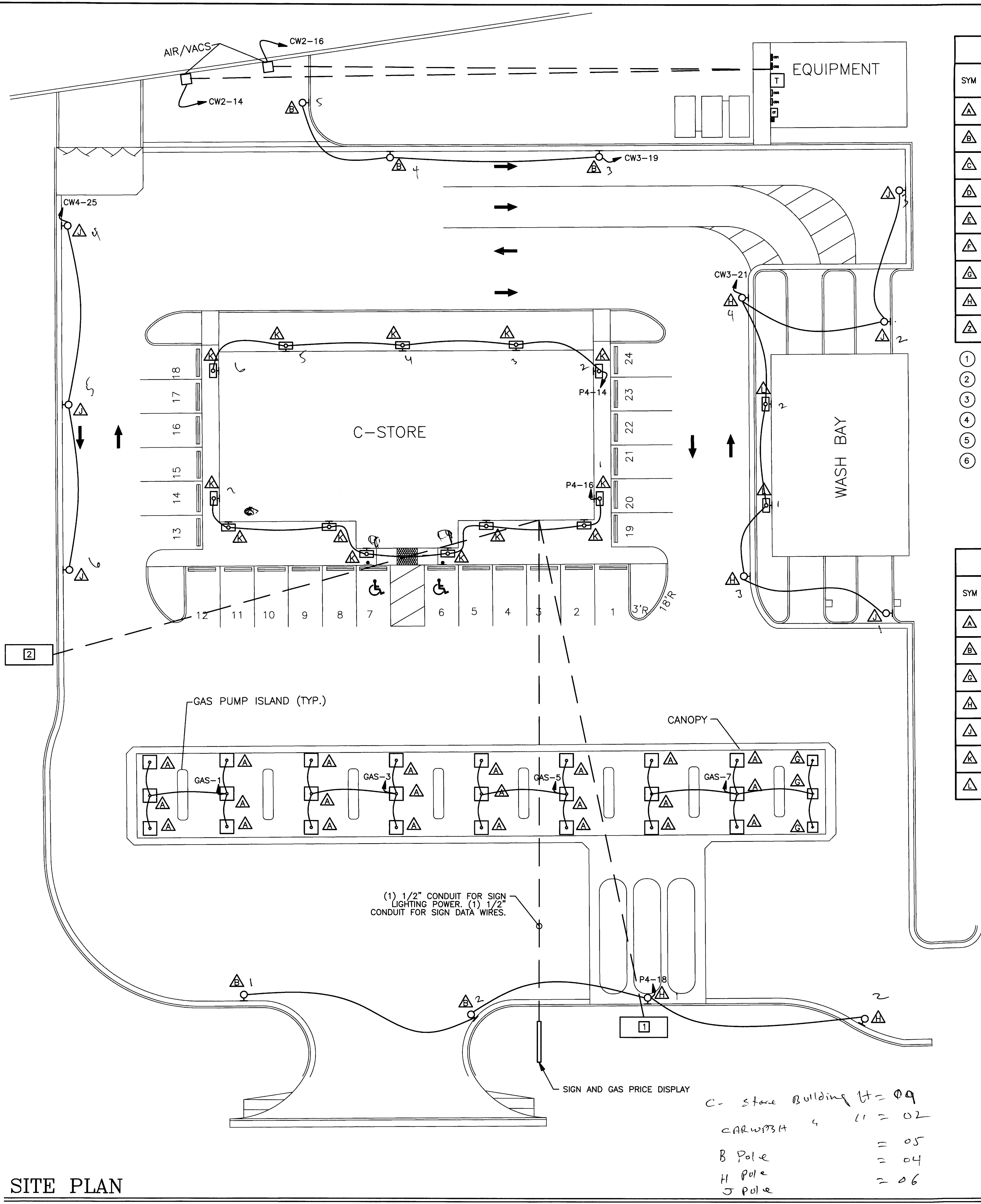
### NEW WORK LIGHTING PLAN

DESIGN ENGINEERING SERVICES, P.C.  
 20415 BREWER'S NECK BLVD.  
 CARROLLTON, VA 23814-9724  
 (757) 784-1348



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PROJECT No. 07B22	DRAWING No. 07B22_E3	E-3	





**SITE PLAN**

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

**BUILDING LIGHTING FIXTURE SCHEDULE**

SYM	DESCRIPTION	LOCATION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMPS	MOUNTING	NOTES
△	6" ADJUSTABLE INCANDESCENT BULBED WITH FLUORESCENT	GENERAL LIGHTING	LSI	206 J I 1 75W FUS SCIK	120	(1) 16W EDXR-30-16	RECESSED	
△	LINEAR FOR RETAIL FLUORESCENT	ACCENT LIGHTING	LSI	LFR PMK4 4 1 28 S55 UE	120	(1) 28W T5	PENDANT	①
△	2' x 4' FLUORESCENT TROFFER	KITCHEN & OFFICE LIGHTING	LSI	G A 232 SD S5010	120	(2) 32W T8	LAY-IN	
△	FLUORESCENT WALL PACK	EXITS SIDE & REAR	LITHONIA	WSR 42TRT MD MVOLT ELDW PE LPI	120	(1) 42W TRT	WALL	② ③
△	FLUORESCENT SURFACE MOUNTED FIXTURE WITH COLD STAT BALLAST	COOLERS	SELECTED BY OWNER	TO BE SELECTED BY OWNER	120	(2) 32W T8	SURFACE	④
△	BUILDING SIGN	FRONT OF BUILDING	SELECTED BY OWNER	TO BE SELECTED BY OWNER	120	TBD	WALL	⑤
△	6" FLUORESCENT CAN LIGHT DAMP RATED	BUILDING AWNING	LITHONIA	LF6 1/42TRT F6L8 MVOLT GEB	120	(1) 42W TRT	RECESSED	⑥ ③
△	WALL MOUNTED FLUORESCENT UTILITY LIGHT	REAR OF BUILDING	LITHONIA	TWAC 42TRT MVOLT LPI	120	(1) 42W TRT	WALL	③
△	LED EXIT SIGN WITH BATTERY BACKUP	EGRESS PATHWAYS	LITHONIA	LHQM S W 3 R 120/277 N	120	INCLUDED	UNIVERSAL	③

- ① VERIFY REFLECTOR TRIM CHARACTERISTICS WITH OWNER PRIOR TO INSTALLATION.
- ② OR APPROVED EQUAL SELECTED BY OWNER, THAT MEETS CODE REQUIREMENTS.
- ③ FIXTURE MUST CONTAIN A BATTERY PACK AND PHOTOCCELL.
- ④ FIXTURE MUST CONTAIN A BALLAST SUITABLE FOR COLD START CONDITIONS, AND FIXTURE SHOULD BE SUITABLE FOR THE MOIST CONDITIONS INSIDE OF THE COOLERS.
- ⑤ VERIFY SIGN POWER REQUIREMENTS BEFORE INSTALLATION.
- ⑥ FOR FIXTURES LISTED ON SHEET E-3 AS REQUIRING A BATTERY PACK, APPEND EL TO THE CATALOG NUMBER.

**SITE LIGHTING FIXTURE SCHEDULE**

SYM	DESCRIPTION	LOCATION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMPS	MOUNTING	NOTES
△	PULSE START METAL HALIDE	GAS CANOPY	LSI	ECTA S 250 MT C73	120	250W MH	SURFACE	
△	PULSE START METAL HALIDE ON 20' POLE	PARKING LOT LIGHTING	LSI	HFR FP 320 F	277	320W MH	POLE	
△	SURFACE MOUNT METAL HALIDE	GAS CANOPY	LSI	ECTA SP 70 T6MH F	277	????	SURFACE	
△	PULSE START METAL HALIDE ON 20' POLE	PARKING LOT LIGHTING	LSI	HFR FP 175 F	277	175W MH	POLE	
△	PULSE START METAL HALIDE ON 20' POLE	PARKING LOT LIGHTING	LSI	HFSV FP 175 F HSS	277	175W MH	POLE	
△	BUILDING MOUNTED METAL HALIDE	BUILDING MOUNTED	LSI	HIWS 310 70 MH F	120	????	WALL	
△	BUILDING MOUNTED METAL HALIDE	CAR WASH MOUNTED	LSI	HIWS 175 MH F	277	175W MH	WALL	

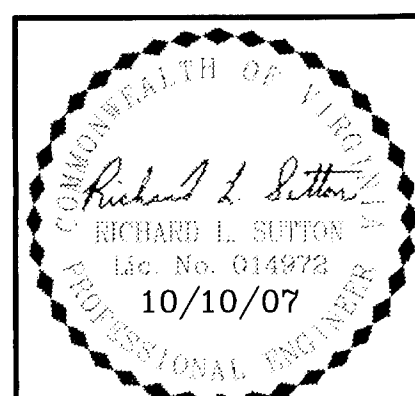
**SITE PLAN WORK NOTES (THIS SHEET)**

- ① PROVIDE (2 SETS) OF EMPTY 3/4" CONDUIT WITH NYLON PULLSTRING TO ISLAND LOCATION OF CONCRETE SLABS FOR FUTURE ADDITION OF AIR / VAC STATIONS.
- ② PROVIDE 1 EMPTY 3/4" CONDUIT WITH NYLON PULLSTRING TO ISLAND LOCATION OF CONCRETE SLABS FOR FUTURE ADDITION OF AIR / VAC STATIONS.
- ③ PROVIDE 1/2" CONDUIT WITH NYLON PULLSTRING TO ISLAND LOCATION OF CONCRETE SLABS FOR AIR / VAC STATIONS. WIRE AS SHOWN.
- ④ ALL SITE LIGHTING TO BE CONTROLLED THROUGH A TIMER CONTROLLED CONTRACTOR WITH OVERRIDE SWITCH LOCATED IN MAIN BUILDING. VERIFY SWITCH LOCATION WITH OWNER PRIOR TO INSTALLATION.

**RACECO CONVENIENCE STORE**  
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ENLARGED KITCHEN POWER PLAN

DESIGN  
 ENGINEERING  
 SERVICES, P.C.  
 20415 BREWER'S NECK BLVD.  
 CARROLLTON, VA 23314-9724  
 (757) 784-1348



CHECKED BY: B.M.A. DATE: 10/10/07 SCALE: AS SHOWN  
 DRAWN BY: J.A.P. PROJECT No. 07B22 DRAWING No. 07B22\_E4



TYPE: NEW NEMA 1 PANEL		208/120		VOLTS		3		PHASE		200		A M.L.O.		PANELBOARD ASSEMBLY RATED AT				
NAME: P1		SURFACE		MTD.		4		WIRE				A M.C.B.		VERIFY K.A.I.C. MIN. WITH GROUND BUS				
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	
		A	B	C							A	B	C					
1	AHU 1	34.8			50-3P	6	10	1"	2	AHU 3	34.8			50-3P	6	10	1"	
			34.8									34.8						
				34.8									34.8					
7	AHU 2	34.8			50-3P	6	10	1"	8	AHU 4	34.8			50-3P	6	10	1"	
			34.8									34.8						
				34.8									34.8					
13	E-32B EVAPORATOR COIL	6			15-1P	14	14	1/2"	14									
15	E-32B EVAPORATOR COIL	6			15-1P	14	14	1/2"	16									
17	E-32B EVAPORATOR COIL	6			15-1P	14	14	1/2"	18									
19	E-32B EVAPORATOR COIL	6			15-1P	14	14	1/2"	20									
21	E-35A LIGHTS	2.8			15-1P	14	14	1/2"	22									
23	E-35B LIGHTS	3.9			15-1P	14	14	1/2"	24									
25	E-35C LIGHTS	2.8			15-1P	14	14	1/2"	26									
27	E-35D LIGHTS	1.7			15-1P	14	14	1/2"	28									
29	E-35E LIGHTS	2.8			15-1P	14	14	1/2"	30									
31					15-1P				32									
33					15-1P				34									
35					15-1P				36									
37					15-1P				38									
39					15-1P				40									
41					15-1P				42									
SUBTOTAL		84.4	80.1	82.3					SUBTOTAL		69.6	69.6	69.6					
														TOTAL		154	149.7	151.9

TYPE: NEW NEMA 1 PANEL		208/120		VOLTS		3		PHASE		200		A M.L.O.		PANELBOARD ASSEMBLY RATED AT				
NAME: P4		SURFACE		MTD.		4		WIRE				A M.C.B.		VERIFY K.A.I.C. MIN. WITH GROUND BUS				
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	
		A	B	C							A	B	C					
1	E-38B COOLER	4			15-1P	14	14	1/2"	2	REETHERMALIZER	22			30-3P	10	10	1/2"	
3	E-16 REACH-IN FREEZER	13.2			20-1P	12	12	1/2"										
	H1 HOOD			5	15-1P	14	14	1/2"				22						
7	E-9 CONDENSATE HOOD	3.4			15-1P	14	14	1/2"	8	E-8 OVEN	35			45-3P	6	10	1"	
9	E-10 HOT WELLS	20.8			30-1P	10	10	1/2"				35						
11	E-7 BUN WARMER	3.3			15-1P	14	14	1/2"										
13	E-6 HOT DOG WARMER	8.3			15-1P	14	14	1/2"	14	BUILDING SITE LIGHTING	7			20-1P	12	12	1/2"	
15	E-4 SALAD PREP	8.6			15-1P	14	14	1/2"	16	BUILDING SITE LIGHTING	7			20-1P	12	12	1/2"	
17	E-5 RAPID COOK OVEN	35			45-2P	6	10	3/4"	18	FRONT ENTRANCE LIGHTING	7			20-1P	12	12	1/2"	
									20	MAIN SIGN LIGHTING	7			20-1P	12	12	1/2"	
21	E-3 SANDWICH PREP	11.5			15-1P	14	14	1/2"	22									
23	WH 1	21.6			30-2P	10	10	1/2"	24									
									26									
27	RECEPTACLES	12			20-1P	12	12	1/2"	28									
29	BATHROOM RECEPTACLES	6			20-1P	12	12	1/2"	30									
31									32									
33									34									
35									36									
37									38									
39									40									
41									42									
SUBTOTAL		72.3	66.1	70.9					SUBTOTAL		71	64	64					
														TOTAL		143	130	135

TYPE: NEW NEMA 3R PANEL		208/120		VOLTS		3		PHASE		400		A M.L.O.		PANELBOARD ASSEMBLY RATED AT				
NAME: P2		SURFACE		MTD.		4		WIRE				A M.C.B.		VERIFY K.A.I.C. MIN. WITH GROUND BUS				
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	
		A	B	C							A	B	C					
1	HP 1	19.6			30-3P	10	10	1/2"	2	HP 3	19.6			30-3P	10	10	1/2"	
			19.6									19.6						
				19.6									19.6					
7	HP 2	19.6			30-3P	10	10	1/2"	8	HP 4	19.6			30-3P	10	10	1/2"	
			19.6									19.6						
				19.6									19.6					
13	E-32A CONDENSER	20			30-3P	10	10	1/2"	14	E-34A CONDENSER	20			30-3P	10	10	1/2"	
			20									20						
				20									20					
19	E-46B REMOTE ISLAND CONDENSER	10.3			15-3P	14	14	1/2"	20	E-33A CONDENSER	38.9			50-3P	6	10	1"	
			10.3									38.9						
				10.3									38.9					
25	E-42D DRINK MACHINE CONDENSER	2			15-2P	14	14	1/2"	26	E-38A CONDENSER	15			70-3P	12	12	1/2"	
			2									15						
				2									15					
29	E-42D DRINK MACHINE CONDENSER	2			15-2P	14	14	1/2"	32	E-44D	19.6			30-2P	10	10	1/2"	
			2									19.6						
				2									19.6					
33									36	E-44D	19.6			30-2P	10	10	1/2"	
35												19.6						
37									40									
39	UTILITY RECEPTACLES	7.5			15-1P	14	14	1/2"	42									
41	LIGHTS	3			15-1P	14	14	1/2"										
SUBTOTAL		73.5	79	74.5					SUBTOTAL		152.3	132.7	132.7					
														TOTAL		226	212	207

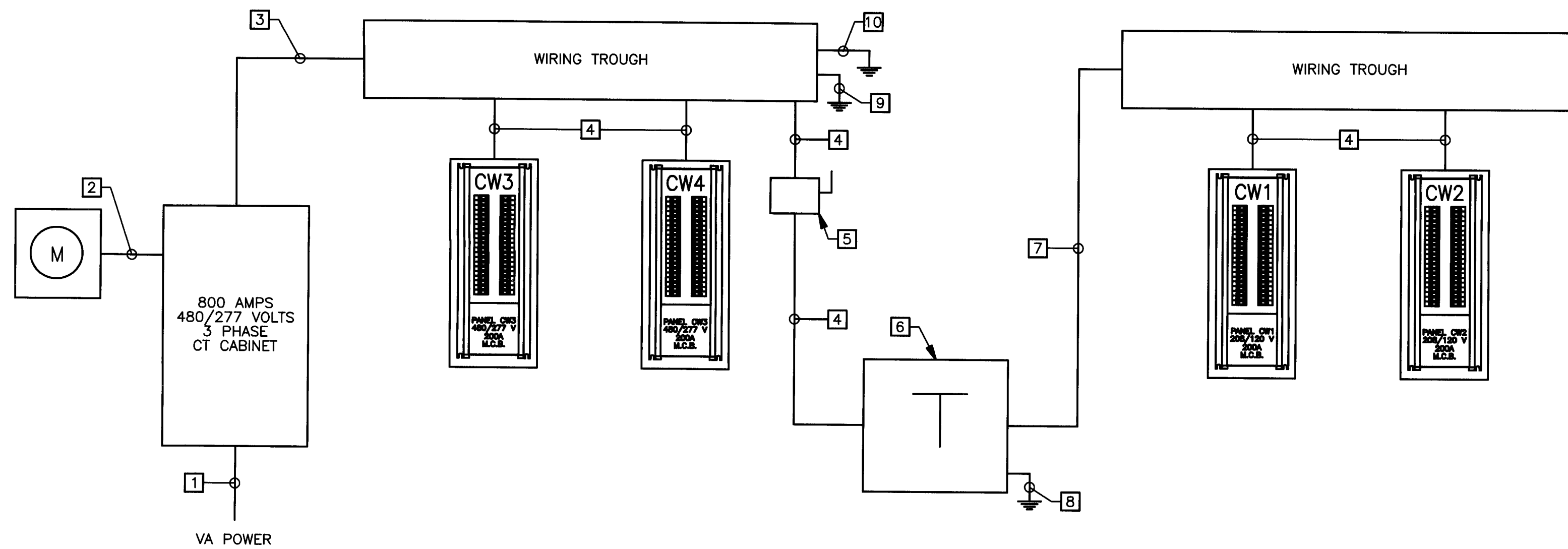
TYPE: NEW NEMA 1 PANEL		208/120		VOLTS		3		PHASE		200		A M.L.O.		PANELBOARD ASSEMBLY RATED AT			
NAME: P5		SURFACE		MTD.		4		WIRE				A M.C.B.		VERIFY K.A.I.C. MIN. WITH GROUND BUS			
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.
		A	B	C							A	B	C				
1	E-35 A HEATER	8.6			15-1P	14	14	1/2"	2	HAND DRYER	12.5			20-1P	12	12	1/2"
3	E-35 B HEATER	10.7			15-1P	14	14	1/2"	4	HAND DRYER	12.5			20-1P	12	12	1/2"
5	E-35 C HEATER	8.6			15-1P	14	14	1/2"	6	WARMER	13.8			20-1P	12	12	1/2"
7	E-35 D HEATER	4.3			15-1P	14	14	1/2"	8	WARMER	13.8			20-1P	12	12	1/2"
9	E-35 E HEATER	8.9			15-1P	14	14	1/2"	10	RECEPTACLES	15			20-1P	12	12	1/2"
11	ATM	5			15-1P	14	14	1/2"	12	RECEPTACLES & SAFE	15			20-1P	12	12	1/2"
13	COOLER LIGHTING	2.8			20-1P	12	12	1/2"	14	VACUUM	24			20-1P	12	12	1/2"
15	SALES AREA LIGHTING	13.1			20-1P	12	12	1/2"	16	VACUUM	24			20-1P	12	12	1/2"
17	SALES AREA LIGHTING	13.6			20-1P	12	12	1/2"	18	VACUUM	24			20-1P	12	12	1/2"
19	SALES AREA LIGHTING	11.9			20-1P	12	12	1/2"	20	VACUUM	24			20-1P	12	12	1/2"
21	SALES AREA LIGHTING	9.4			15-1P	14	14	1/2"	22	AIR PUMP	16			20-1P	12	12	1/2"
23	BATHROOM LIGHTING	6			15-1P	14	14	1/2"	24	AIR PUMP	16			20-1P	12	12	

TYPE: NEW CAR WASH PANEL, NEMA 3R												208/120 VOLTS			3 PHASE			A M.L.O.			PANELBOARD ASSEMBLY RATED AT		
NAME: CW1												SURFACE MTD.			4 WIRE			200 A M.C.B.			VERIFY K.A.I.C. MIN. WITH GROUND BUS		
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.						
		A	B	C							A	B	C										
1	MOTOR CONTROL UNIT	31.7	31.7		80-3P	3	8	1 1/4"	2	HIGH PRESSURE PUMPS	58	58		80-3P	3	8	1 1/4"						
7	ENTRANCE CONSOLE	12			15-1P	14	14	1/2"	8	BAY HEATER CONTROL	12			15-1P	14	14	1/2"						
9	MAIN TUNNEL/LIGHT CONTROL PNL	16			20-2P	3	8	1 1/4"	10	BAY DOORS	16			20-1P	12	12	1/2"						
13	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	12	SERVICE OUTLET (GFI)	12	1.5		15-1P	14	14	1/2"						
15	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	14	MENU SIGNS	12			15-1P	14	14	1/2"						
17	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	18														
19	RECLAIM CONTROL	16			20-1P	12	12	1/2"	20														
21	WATER SOFTENER	12			15-1P	14	14	1/2"	22														
23	ICS SERVER PC	12			15-1P	14	14	1/2"	24														
25					15-1P	14	14	1/2"	26														
27									28														
29									30														
31									32														
33									34														
35									36														
37									38														
39									40														
41									42														
SUBTOTAL		75.7	75.7	75.7					SUBTOTAL		82	74	59.5										
TOTAL																	158	150	135				

TYPE: NEW CAR WASH PANEL, NEMA 1												480/277 VOLTS			3 PHASE			A M.L.O.			PANELBOARD ASSEMBLY RATED AT		
NAME: CW3												SURFACE MTD.			4 WIRE			200 A M.C.B.			VERIFY K.A.I.C. MIN. WITH GROUND BUS		
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.						
		A	B	C							A	B	C										
1	BLOWER MOTOR	34	34		50-3P	6	10	1"	2	BLOWER MOTOR	34	34		50-3P	6	10	1"						
7	BLOWER MOTOR	34	34		50-3P	6	10	1"	8	BLOWER MOTOR	34	34		50-3P	6	10	1"						
13	RECLAIM SYSTEM	7.8	7.8		15-3P	14	14	1/2"	14	R.O. PRESSURIZATION	4.8	4.8		15-2P	14	14	1/2"						
19	SITE LIGHTING	7			20-1P	12	12	1/2"	18	AIR COMPRESSOR	7.8	7.8		15-3P	14	14	1/2"						
21	SITE LIGHTING	7			20-1P	12	12	1/2"	24														
23									26														
25									28														
27									30														
29									32														
31									34														
33									36														
35									38														
37									40														
39									42														
41									SUBTOTAL		82.6	82.6	75.6										
TOTAL																	163	163	151.2				

TYPE: NEW CAR WASH PANEL, NEMA 3R												208/120 VOLTS			3 PHASE			A M.L.O.			PANELBOARD ASSEMBLY RATED AT		
NAME: CW2												SURFACE MTD.			4 WIRE			200 A M.C.B.			VERIFY K.A.I.C. MIN. WITH GROUND BUS		
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.						
		A	B	C							A	B	C										
1	MOTOR CONTROL UNIT	31.7	31.7		80-3P	3	8	1 1/4"	2	HIGH PRESSURE PUMPS	58	58		80-3P	3	8	1 1/4"						
7	ENTRANCE CONSOLE	12			15-1P	14	14	1/2"	8	BAY HEATER CONTROL	12			15-1P	14	14	1/2"						
9	MAIN TUNNEL	16			20-2P	3	8	1 1/4"	10	BAY DOORS	16			20-1P	12	12	1/2"						
13	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	12	SERVICE OUTLET (GFI)	12	1.5		15-1P	14	14	1/2"						
15	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	14	AIR / VAC	16			20-1P	12	12	1/2"						
17	MAIN TUNNEL/LIGHT CONTROL PRKNG	16			20-1P	12	12	1/2"	18	AIR / VAC	16			20-1P	12	12	1/2"						
19									20														
21									22														
23									24														
25									26														
27									28														
29									30														
31									32														
33									34														
35									36														
37									38														
39									40														
41									42														
SUBTOTAL		58.7	63.7	63.7					SUBTOTAL		86	90	59.5										
TOTAL																	148	154	123				

TYPE: NEW CAR WASH PANEL, NEMA 1												480/277 VOLTS			3 PHASE			A M.L.O.			PANELBOARD ASSEMBLY RATED AT		
NAME: CW4												SURFACE MTD.			4 WIRE			200 A M.C.B.			VERIFY K.A.I.C. MIN. WITH GROUND BUS		
CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.	CIR. NO.	TO FEED	LOAD (AMPS)			BREAKER	WIRE	GND.	COND.						
		A	B	C							A	B	C										
1	BLOWER MOTOR	34	34		50-3P	6	10	1"	2	BLOWER MOTOR	34	34		50-3P	6	10	1"						
7	BLOWER MOTOR	34	34		50-3P	6	10	1"	8	BLOWER MOTOR	34	34		50-3P	6	10	1"						
13	R.O. PUMP	2.8	2.8		15-2P	14	14	1/2"	14	R.O. PRESSURIZATION	4.8	4.8		15-2P	14	14	1/2"						
17	R.O. REJECT	4.8	4.8		15-3P	14	14	1/2"	18	AIR COMPRESSOR	7.8	7.8		15-3P	14	14	1/2"						
23	SITE LIGHTING	7			20-1P	12	12	1/2"	24														
25	SITE LIGHTING	7			20-1P	12	12	1/2"	26														
27									28														
29									30														
31									32														
33									34														
35									36														
37									38														
39									40														
41									42														
SUBTOTAL		82.4	75.4	78.8					SUBTOTAL		80.4	80.4	75.6										
TOTAL																	162.8	155.8	155.4				



### RISER NOTES (THIS SHEET)

- PROVIDE (2) 4" CONDUITS WITH NYLON PULL STRING FOR USE BY VIRGINIA DOMINION POWER FOR INCOMING SERVICE LATERAL.
- 1 1/4" C TO METER SOCKET.
- (2 SETS) 4-500 KCMIL, 3°C.
- 4#3/0, 1#6 GND, 2°C.
- 200 AMP HEAVY DUTY SAFETY SWITCH, 3φ, NEMA 1, 600 VOLT FUSE AT 200 AMPS.
- 150 KVA 480 VOLT TO 208/120V STEP-DOWN TRANSFORMER.
- 4-500 KCMIL, 1#2 GND, 3°C.
- 1#1/0 GND TO GROUND ROD.
- 1#6 GND TO GROUND ROD.
- 1#2/0 GND TO FIRST 5'-0" OF EXPOSED METAL WATER PIPING WHICH EXTENDS IN THE SOIL.

## CAR WASH POWER RISER DIAGRAM

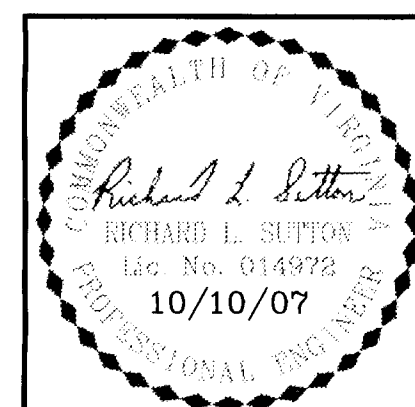
SCALE: NONE

## RACECO CONVENIENCE STORE

JEFFERSON AVE  
NEWPORT NEWS, VIRGINIA

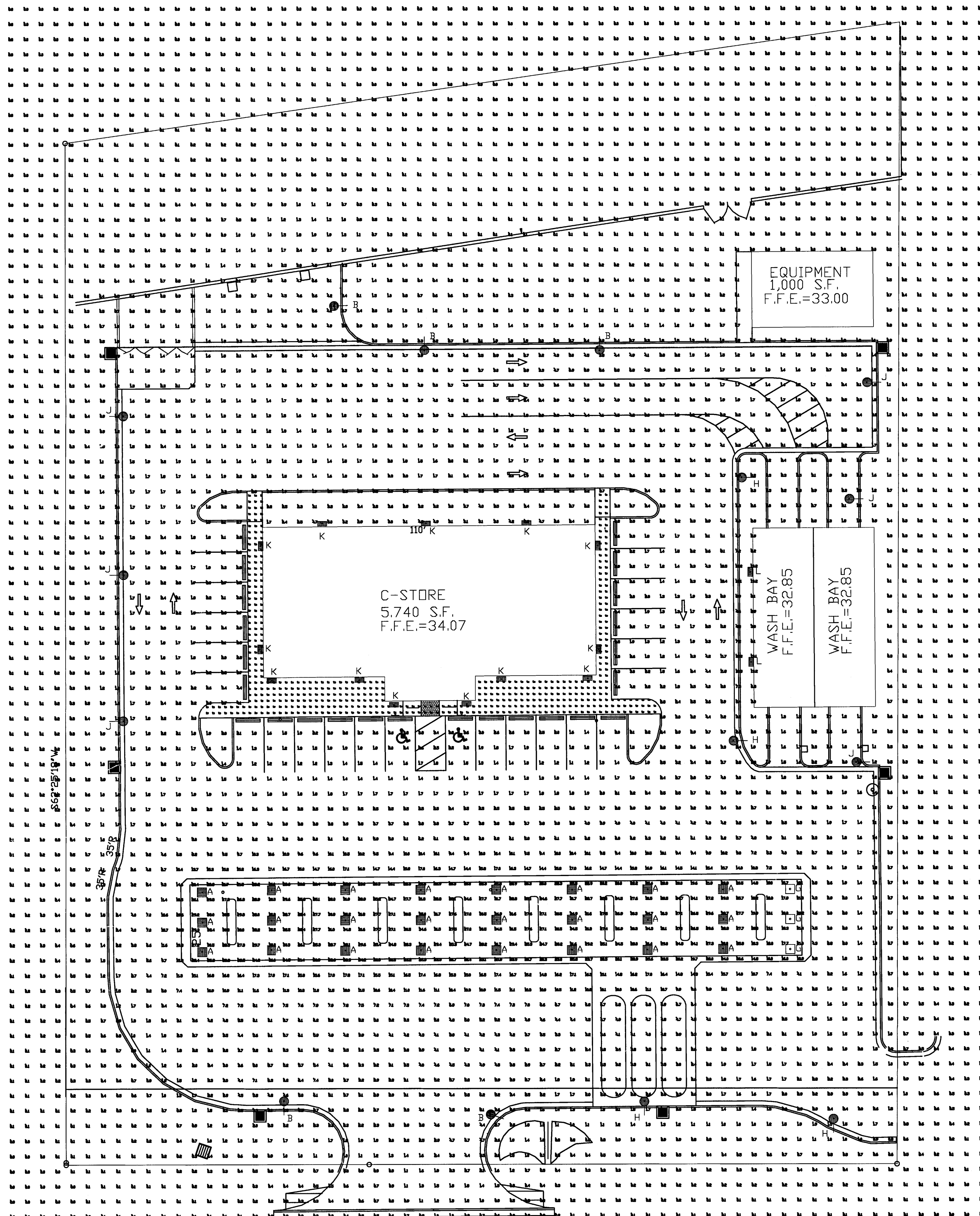
## CAR WASH PANEL SCHEDULES

DESIGN  
ENGINEERING  
SERVICES, P.C.  
2015 BREWER'S NECK BLVD.  
CROLLTTON, VA 23314-9724  
(757) 784-1348



CHECKED BY E.M.A.	DRAWN BY J.A.	DATE 10/10/07	SCALE AS SHOWN	E-6
PROJECT No. 07B22	DRAWING No. 07B22_E6			





Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lumens	LLF	Description	Total Watts
	24	A	SINGLE	23500	0.720	ECTA S 250 PULSE START METAL HALIDE MT C73	288
	5	B	SINGLE	32000	0.720	HFR FP 320 PULSE START METAL HALIDE F SINGLE DN 20' POLE	368
	3	G	SINGLE	6600	0.720	ECTA-SP-70-T6MH-F	70
	4	H	SINGLE	16000	0.720	HFR FP 175 PULSE START METAL HALIDE F SINGLE DN 20' POLE	210
	6	J	SINGLE	16000	0.720	HFSV FP 175 PULSE START METAL HALIDE F HSS SINGLE DN 20' POLE	210
	13	K	SINGLE	5200	0.720	HIWS-310-70-METAL HALIDE-F	90
	2	L	SINGLE	12800	0.720	HIWS-FT-175-METAL HALIDE-F	210

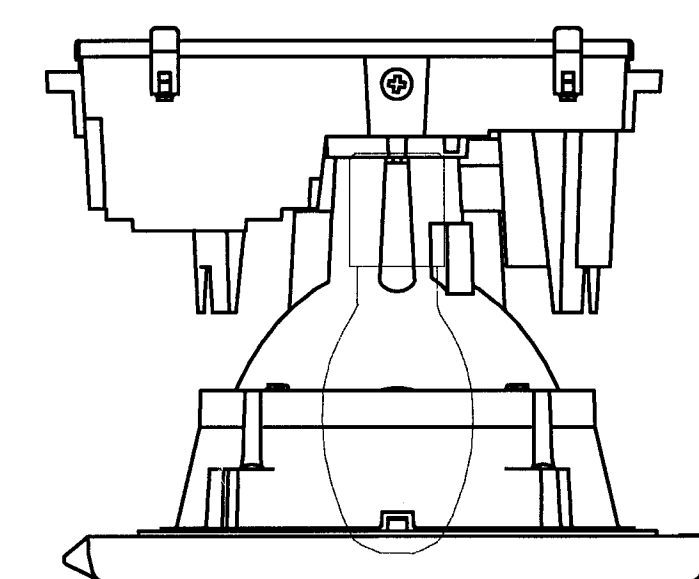
Statistical Area Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
INSIDE PROPERTY LINE	4.15	35.8	0.0	N.A.	N.A.
SPILLAGE	0.24	2.7	0.0	N.A.	N.A.
CANOPY	25.93	35.8	10.0	2.59	3.58
INSIDE CURB	3.85	20.8	1.0	3.85	20.80
OPEN WALKWAY	3.96	6.8	2.2	1.80	3.09

Maintained Footcandle levels.

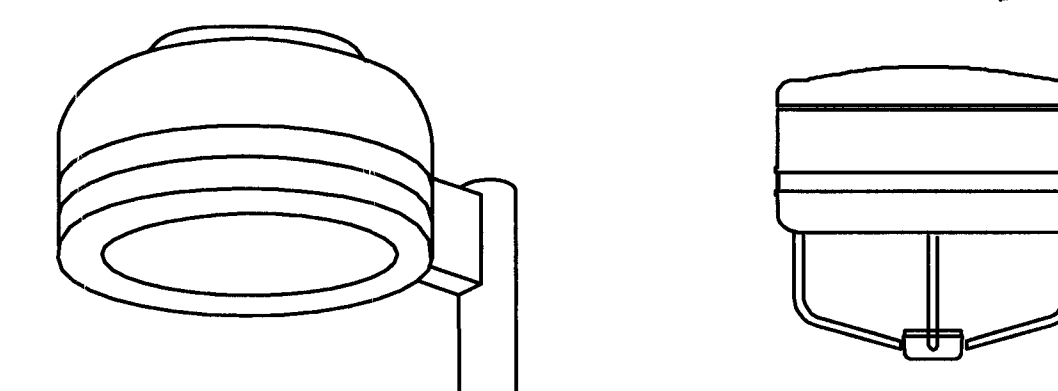
ALL OF THE FIXTURES USED HAVE A TILT FACTOR OF 0.  
 ALL AREA LIGHTS ARE MOUNTED AT 22' ABOVE GRADE.  
 ALL CANOPY LIGHTS ARE MOUNTED AT 14.5' ABOVE GRADE.  
 ALL WALL UNITS ARE MOUNTED AT 12' ABOVE GRADE.

GRID READINGS FOR LOT AREA ARE 5' ON CENTERS.  
 GRID READINGS FOR OPEN WALKWAY ARE ON 2' CENTERS.

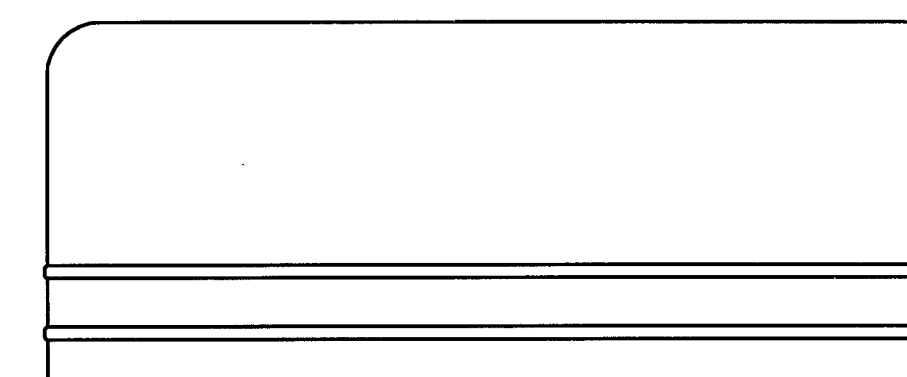
ECTA LOW FLAT LENS



ECTA 175/250/320W F/C73  
 IESNA FULL-CUTOFF CLASSIFIED

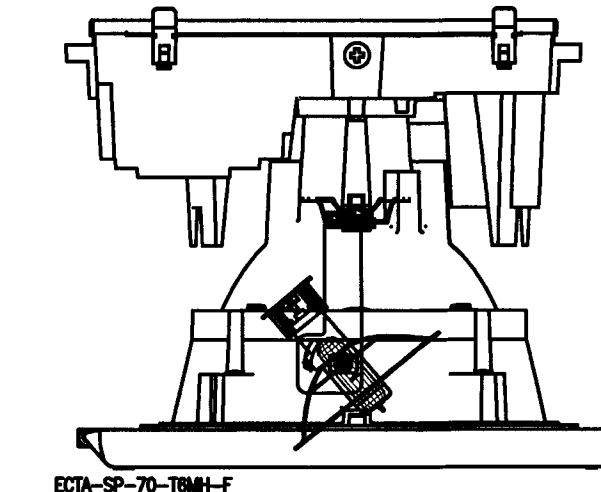


**HILTON**



HILTON  
 WALL SCONCE

ECTA FLAT LENS



ECTA-SP-70-T6MH-F

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine applicability of the layout to existing or future field conditions.

This lighting pattern represents illumination levels calculated from laboratory data taken under controlled conditions utilizing current industry standard lamp ratings in accordance with Illuminating Engineering Society approved methods. Actual performance of any manufacturer's luminaire may vary due to variation in electrical voltage, tolerance in lamps and other variable field conditions.

JEFFERSON AVENUE - 110' R/W  
 U.S. ROUTE 17 - VA. ROUTE 143

5	9-21-07	MVE
4	9-15-07	MVE
3	8-30-07	MVE
2	8-23-07	MVE
1	7-19-07	MVE
Rev.	Date	By
Revisions		
LIGHTING PROPOSAL FOR		
RACECO GAS		
NEWPORT NEWS, VA		
SCALE: 1/8"=1'-0"	LD- 85815-5	
DATE: 6/6/07		
BY: LLS	SHEET 1 OF 1	

Total Watts = 12652

- METEOROLOGICAL SURVEY NOTES:**
- THE CITY HORIZONTAL CONTROL NETWORK IS THE VIRGINIA COORDINATE SYSTEM OF 1983-SCOTT STATE (NAD83).
  - ELEVATIONS AS SHOWN HEREON ARE BASED ON THE CITY OF NEWPORT NEWS, VIRGINIA 1992 GEODETIC CONTROL NETWORK. ELEVATIONS REFER TO NATIONAL VERTICAL DATUM (1929).
  - PROPERTY OWNER HEREBY APPLIES TO LOCATED UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN. DISTURBANCE SHALL BE MADE TO LOCATED UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN. DISTURBANCE SHALL BE MADE TO LOCATED UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN.
  - THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL VERIFY THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND UTILITIES BY CONTACTING "MISS UTILITIES" AT 1-800-552-7001.
  - LEGAL REFERENCES: LOT 16-A, LOT 16-B, AS SHOWN ON PLAT ENTITLED "SUBDIVISION OF LOT 16-A AND LOT 16-B, 50' PARCELS, ACCORDING TO WHICH SECTION 1843 AT PAGE 548 OF THE CHIEF OF THE CIRCUIT COURT FOR THE CITY OF NEWPORT NEWS, VIRGINIA.
  - PROPERTY DATA:  
 LOT 16-A - ADDRESS: 11005 JEFFERSON AVENUE  
 PARCEL ID: 247000640  
 LOT 16-B - ADDRESS: 11011 JEFFERSON AVENUE  
 PARCEL ID: 247000641  
 PARCELS ARE ZONED C-1.
  - THIS SURVEY WAS PREPARED FOR THE PURPOSE OF A SITE PERMIT AND INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN. DISTURBANCE SHALL BE MADE TO LOCATED UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN.
  - TOTAL AREA OF SURVEYED LOT: 98,489 S.F. = 2.261 ACRES.

- LEGEND:**
- 1 HANDICAP RAMP / W/ TRUNCATED DOME DETECTABLE WARNING SURFACE
  - 2 PARKING BLOCKS
  - 3 RAISED HC SIGN
  - 4 CG-2
  - 5 3' VALLEY GUTTER
  - 6 6" COMBINATION CURB & GUTTER
  - 8 CG-10A-NN
  - 9 CONC. SIDEWALK
  - 7 7" 3500 PSI CONCRETE w/5%-7% AIR ENTRAINMENT
  - 10 4" HT. DARK BRONZE ALUMINUM RAIL-SEE ARCH. DWG. FOR DETAILS
  - 11 8" VINYL PRIVACY FENCE
  - 12 3'x5' CONC. PADS FOR AIR AND WATER

**SANITARY SEWER SCHEDULE**

SC0	RIM=32.70	INV.=30.90
90'-6" D.I. SAN. @ 0.63%	INV. IN=30.90	INV. OUT=30.33
CAR WASH RECLAIM TANKS (SEE CAR WASH PLANS)		
SC0	RIM=32.40	INV.=30.32
85'-6" D.I. SAN. @ 0.63%	INV. IN=30.32	INV. OUT=29.78
SC0	RIM=33.25	INV.=29.78
85'-6" PVC SAN. @ 0.63%	INV. IN=29.78	INV. OUT=29.24
SC0	RIM=32.80	INV.=29.24
72'-6" SAN. @ 0.63%	INV. IN=29.24	INV. OUT=28.79
SMH	RIM=32.15	INV.=28.69±
(MATCH EXIST. 8" SAN. INV.)		

- WATER SCHEDULE**
- 1 2" WATER METER
  - 2 2" CORR STOP
  - 2 2" TYPE 'K' CU WATER SERVICE
  - 2 2" RPZ BACKFLOW PREVENTER INSTALLED 12" ABOVE GRADE IN APPROVED STRUCTURE. INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

**SITE STATISTICS**

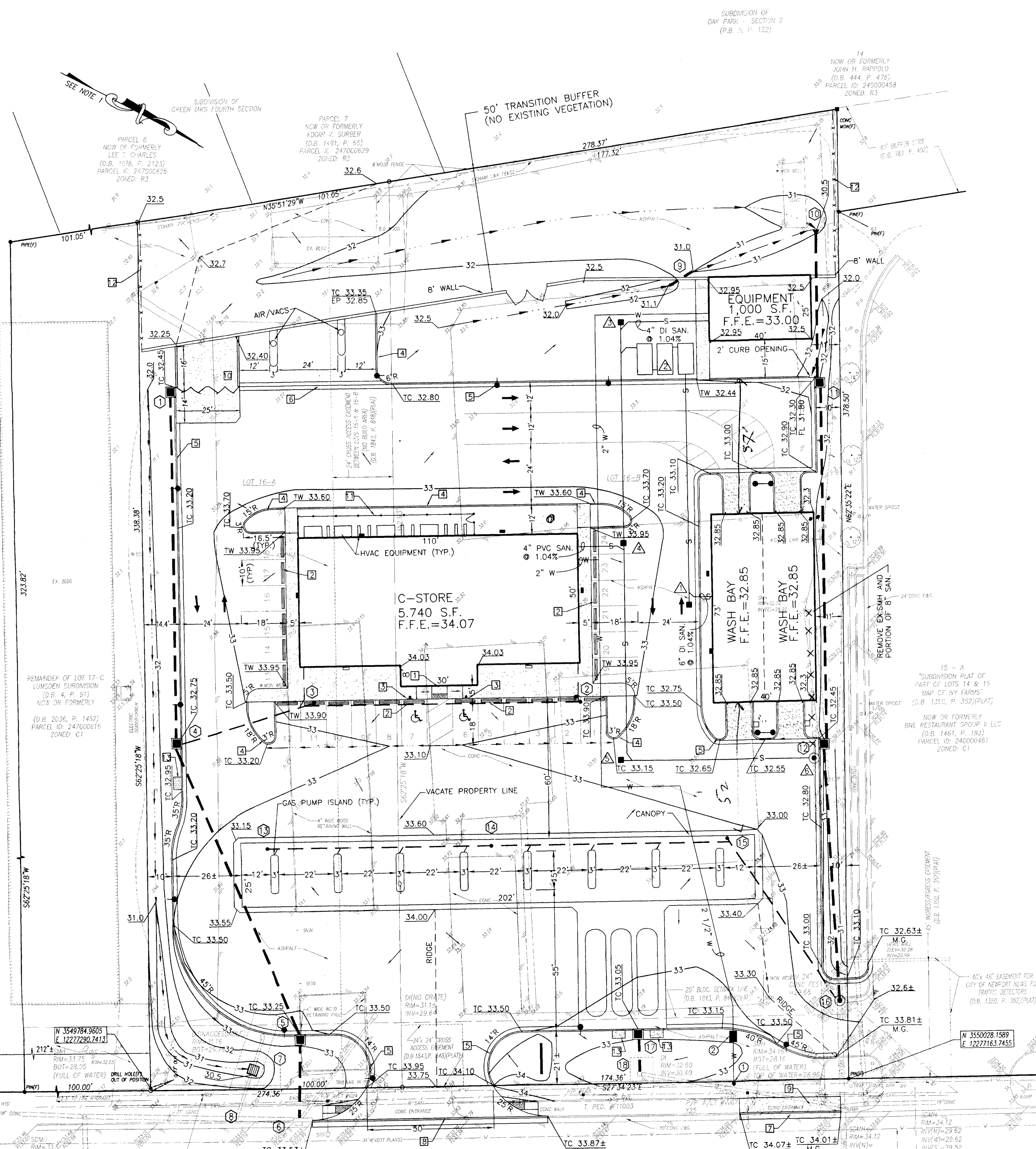
SITE AREA=2.261 AC  
 DISTURBED AREA = 2.261 AC  
 EXISTING IMPERVIOUS AREA=88,104 SF  
 PROPOSED IMPERVIOUS AREA=64,809 SF

**PARKING REQUIRED:**

C-STORE: 1 SP/200 SF (5,740 SF) = 28.7 (MAX)  
 CAR WASH: 1 SP/500 SF (2,580 SF) = 4.8  
 EQUIPMENT: 1 SP/500 SF (1,000 SF) = 2  
 SUBTOTAL = 35.5 SPACES  
 30% INCREASE (0.3)(35.5) = 10.6  
 TOTAL = 46.1 SPACES (MAX)

**PARKING PROVIDED:**

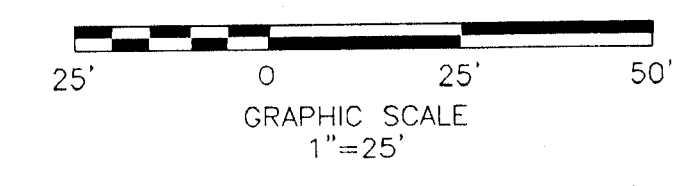
AT PUMP ISLANDS = 16  
 AT CAR WASH = 2  
 AT C-STORE = 24  
 TOTAL = 42 SPACES



**STORM DRAINAGE**

1	NN STD CB	RIM = 32.45	INV = 30.50
1-4	138'-12" RCP @ 0.22%	INV IN = 30.50	INV OUT = 30.20
2	CO	RIM = 33.40	INV = 32.00
2-3	110'-4" PVC @ 1.00%	INV IN = 32.00	INV OUT = 30.90
3	CO	RIM = 33.40	INV = 30.80
3-4	53'-6" PVC @ 1.13%	INV IN = 30.80	INV OUT = 30.20
4	NN STD CB	RIM = 32.75	INV = 30.20
4-5	120'-15" RCP @ 0.33%	INV IN = 30.20	INV OUT = 29.80
5	NN STD CB	RIM = 32.95	INV = 29.80
5-6	30'-15" RCP @ 0.33%	INV IN = 29.80	INV OUT = 29.70±
6	EX. CD	RIM = 32.90±	INV = 29.70±
7	NN STD YD	RIM = 30.50	INV = 29.74 (MATCH EX 12" PIPE INV)
7-8	18'-EXIST 12" RCP	INV IN = 29.74	INV OUT = 29.65±
8	EXIST 21" X 15" TEE (PLANS)	INV = 29.65±	
8	10'-6" PVC @ 1.00%	INV. IN = 31.10	INV. OUT = 31.00
9	12" FES	INV = 30.50	
9-10	58'-12" RCP (INCL 12" FES) @ 0.67%	INV IN = 30.50	INV OUT = 30.11
10	NN STD CB	RIM = 32.30	INV = 30.11
10-11	140'-15" RCP @ 0.13%	INV IN = 30.11	INV OUT = 29.92
11	NN STD CB	RIM = 32.45	INV = 29.92
11-12	100'-18" RCP @ 0.26%	INV IN = 29.92	INV OUT = 29.66
12	CO	RIM = 33.30	INV = 31.80
12-13	90'-6" PVC @ 0.63%	INV IN = 31.80	INV OUT = 31.23
13	CO	RIM = 33.55	INV = 31.23
13-14	90'-6" PVC @ 0.94%	INV IN = 31.23	INV OUT = 30.38
14	CO	RIM = 33.10	INV = 30.38
14-15	77'-8" PVC @ 0.94%	INV IN = 30.38	INV OUT = 29.66±
15	REMOVE 6" EX 24" FES AND INSTALL MH - 1	RIM = 32.86	INV = 29.66± (MATCH EX 24" PIPE INV)
15-16	NN STD CB	RIM = 33.05	INV = 31.00
16	14'-12" RCP @ 2.86%	INV IN = 31.00	INV OUT = 30.60
16-17	EXIST D'	RIM = 32.60	INV = 30.40

- NOTES:**
- THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF OR THE NON-EXISTENCE OF UNDERGROUND UTILITIES BY CONTACTING "MISS UTILITIES" AT 1-800-552-7001.
  - THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OF PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.
  - ELEVATIONS SHOWN HEREON ARE BASED ON CITY OF NEWPORT NEWS, VIRGINIA 1992 GEODETIC CONTROL NETWORK. ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM (1929).
  - AREA OF SITE: 98,489 SF (2.261 AC); DISTURBED 98,489 SF (2.261 AC)
  - PROPERTY ZONED C-1
  - FEE HYDRANTS ARE LOCATED AS SHOWN ON PLAN.
  - PROPERTY DATA:  
 LOT 16-A-(ADDRESS 11005 JEFFERSON AVENUE)  
 PARCEL ID: 247000640  
 LOT 16-B-(ADDRESS 11011 JEFFERSON AVENUE)  
 PARCEL ID: 247000641
  - NO EVIDENCE OF HUMAN GRAVES, BURIAL SITES, OR MONUMENTS OR MARKERS OF HUMAN BURIAL SITES WERE FOUND ON THE PROPERTY.
  - ALL UTILITIES SHALL BE PLACED UNDERGROUND.
  - MINIMUM ON-SITE PAVEMENT DESIGN TO BE:  
 1 1/2" SMA ASPHALT CONCRETE SURFACE  
 2 1/2" BM-2 ASPHALT CONCRETE BASE  
 8" GRADED AGGREGATE BASE  
 SUBGRADE COMPACTED TO 98% MAX. THEORETICAL DENSITY AT OPTIMUM MOISTURE CONTENT. (MIN. CBR=20)
  - PRIOR TO CONSTRUCTION WITHIN ANY CITY RIGHT-OF-WAY, CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE ENGINEERING DEPARTMENT. A TRAFFIC CONTROL PLAN SHALL BE PROVIDED FOR REVIEW AND APPROVAL. THE WORK HOUR RESTRICTIONS ON JEFFERSON AVENUE ARE BETWEEN 8:00 AM - 3:00 PM AND 7:00 PM - 6:00 AM MONDAY THRU FRIDAY. IF AND WHEN A TRAVEL LANE IS TO BE CLOSED, THE OWNER/DEVELOPER OR THEIR REPRESENTATIVE SHALL PROVIDE A FEMORIZED COST OF ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
  - EXTERIOR LIGHTING SHALL PROVIDE A MINIMUM ILLUMINATION LEVEL OF 0.9 FOOT-CANDELS FOR PARKING/DRIVING AREAS, 2.2 FOOT-CANDELS FOR OPEN WALKWAYS AND 4.3 FOOT-CANDELS FOR ENCLOSED WALKWAYS. LIGHTING TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CURRENT NEWPORT NEWS REGULATIONS. LIGHTING SHALL BE DIRECTED INWARD TO THE SITE AND SHIELDED SO AS NOT TO ILLUMINATE OR PROVIDE CLARE ONTO ADJACENT PROPERTIES AND/OR CITY RIGHT-OF-WAYS.
  - ON-SITE EXTERIOR CONCRETE IS TO BE A MINIMUM OF 3500 P.S.I. WITH 5% - 7% AIR ENTRAINMENT.
  - A PRECONSTRUCTION MEETING IS REQUIRED. CONTRACTOR TO CONTACT THE CONSTRUCTION INSPECTION DIVISION OF THE DEPARTMENT OF ENGINEERING AT 269-2470. CONSTRUCTION INSPECTION IS TO INSPECT THE SITE BEFORE ANY CLEARING BEGINS.
  - ALL PROPOSED ON-SITE PAVEMENT MARKINGS SHOULD BE RECOLORIZED TYPE A (PAINT) OR TYPE B (REFLECTOR OR THERMOPLASTIC MATERIAL) IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. PARKING SPACES SHALL BE DELINEATED BY 4" WHITE LINES, FEDERAL STANDARD COLOR #595-17866 OR EQUIVALENT. HANDICAPPED PARKING SPACES SHALL BE DELINEATED BY 4" BLUE LINES (BENNETT'S PAINT BLUE WAVE Q15-287 OR EQUIVALENT) FOR SPACES AND SYMBOLS, FIRE LANES AND PARCEL PICK-UP MARKINGS SHALL BE 4" YELLOW (FEDERAL STANDARD COLOR #595-13538 OR EQUIVALENT).
  - THE PROPERTY OWNER OR DEVELOPER IS RESPONSIBLE FOR MAINTENANCE OF ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPING, AS SHOWN ON THE APPROVED SITE PLAN.
  - ANY OBSTRUCTIONS (POLES, TELEPHONE PEDESTALS, GUY WIRES, ETC.) IN THE PROPOSED SIDEWALK SPACE MUST BE RELOCATED AT THE OWNER/DEVELOPER'S EXPENSE.
  - ANY AND ALL UTILITIES AND/OR OBSTRUCTIONS (POWER POLES, TELEPHONE PEDESTALS, GUY WIRES, WATER METERS, ETC.) THAT ARE REQUIRED TO BE RELOCATED OR ADJUSTED, DUE TO CONSTRUCTION SHALL BE DONE SO AT THE OWNERS/DEVELOPERS EXPENSE.
  - THE NORTHING (N) & EASTING (E) COORDINATES SHOW HEREON ARE FIELD-TIED TO THE CITY OF NEWPORT NEWS, VIRGINIA 1992 GEODETIC CONTROL NETWORK. (NAD 1983-VIRGINIA STATE COORDINATE SYSTEM)
  - EXISTING USE OF SITE: ABANDONED HOTEL/MOTEL SITES  
 PROPOSED USE OF SITE: GAS STATION, CONVENIENCE STORE, AND CAR WASH
  - ALL SIGNS TO BE APPROVED UNDER A SEPARATE PERMIT. SITE PLAN APPROVAL DOES NOT CONSTITUTE APPROVAL OF SIGNAGE.
  - THE APPROVED SITE PLAN SHALL BE KEPT ON SITE DURING CONSTRUCTION.
  - ESTIMATED SEWAGE FLOWS: [(100 GPD/1000 SF)(5,740 SF)] + 720 MN/DAY + 1.60 GPM (CAR WASH BAYS) = 3.99 GPM (AVG) 3.99 GPM (2.50) = 9.98 GPM (PEAK)
  - A LAND DISTURBANCE PERMIT IS REQUIRED. PRIOR TO ANY LAND DISTURBANCE ACTIVITY ALL TREE PROTECTION FENCING MUST BE IN PLACE AND INSPECTED BY A DEPARTMENT OF ENGINEERING INSPECTOR.
  - ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THE CURRENT CITY OF NEWPORT NEWS DEPARTMENT OF ENGINEERING STANDARDS AND SPECIFICATIONS, VIRGINIA DEPARTMENT OF HIGHWAY AND TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND ANY OTHER APPLICABLE CITY OR STATE ORDINANCES, CODES, AND LAWS.
  - PROPERTY APPEARS TO LIE IN FLOOD ZONE 'C' (AREAS OUTSIDE 500-YR FLOOD) ACCORDING TO FIRM CONFORM NO. 510133A PANEL H & I-12 & 14 DATED MAY 2, 1977.
  - WITHIN LANDSCAPING AND GREEN AREAS, HEALTHY EXISTING TREES OF A MINIMUM 6" DIAMETER AT BREAST HEIGHT, MEASURED AT LEAST 4.5' ABOVE GRADE, FOR SINGLE STEMMED, DECIDUOUS TREES, AND A MINIMUM OF 8" IN HEIGHT FOR MULTI-STEMMED OR EVERGREEN TREES, SHALL BE RETAINED, PRESERVED AND PROTECTED DURING CONSTRUCTION.
  - THE PROPERTY OWNER OR DEVELOPER, AS APPLICABLE, SHALL BE RESPONSIBLE FOR THE PERPETUATION AND MAINTENANCE OF ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPING, REQUIRED BY CHAPTER 33.02 SITE REGULATIONS AND AS SHOWN ON THE APPROVAL PLAN.
  - ALL EXISTING TREES TO REMAIN, LOCATED WITHIN 50' OF THE LIMITS OF CONSTRUCTION, MUST BE TREE PROTECTED IN ACCORDANCE WITH SECTION 33.02-516(1)(e) SITE REGULATIONS OF THE CITY OF NEWPORT NEWS, VIRGINIA.
  - PRIOR TO INSTALLATION OF THE LANDSCAPING MATERIALS, AN INSPECTION WITH THE DEPARTMENT OF ENGINEERING INSPECTOR IS REQUIRED. PLEASE CONTACT MARK LINKENHOKER OF CONSTRUCTION INSPECTION AT 269-2470.
  - THE DIRECTOR OF ENGINEERING OR HIS AUTHORIZED REPRESENTATIVE SHALL STOP ALL SITE CONSTRUCTION, IMPROVEMENTS AND/OR ALTERATIONS IN THE EVENT OF ANY DEVIATION FROM THE APPROVED PLAN OR UPON THE DISCOVERY OF UNEXPECTED ADVERSE IMPACTS OF THE DEVELOPMENT ON THE ADJACENT PROPERTIES OR PUBLIC FACILITIES.



**THE SPECTRA GROUP, INC.**  
 563 Control Drive  
 Virginia Beach, Virginia 23454  
 Ph: (757)497-5862  
 Fax: (757)456-0017  
 www.spectragroup.com

Plan Prepared For:  
 SAIR ENTERPRISES  
 3096 S. LYNNHAVEN ROAD  
 VIRGINIA BEACH, VA 23452

**RACECO AVENUE  
 JEFFERSON AVENUE  
 SITE PLAN**

VIRGINIA  
 NEWPORT NEWS

No.	Date	Description
1	16/7/07	REV'D. PER CITY LTR. OF 4/30/07.
2	7/16/07	REV'D. PER CITY LTR. OF 7/3/07.

Christopher A. Taylor  
 No. 018688  
 PROFESSIONAL ENGINEER

Designed By: CAT  
 Cadd Tech: SAH  
 Checked By: CAT  
 Date: 3/30/07  
 Scale: 1"=25'  
 Project No:  
**06-2155**  
 Sheet No  
**1 OF 6**