



File Name: N:\030240509-THUS11\_HARPER WOODS, MI DTD (RBI)\DOCS\CAD\G0.1 RESPONSIBILITY SCHEDULE.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:17 PM

**RESPONSIBILITY SCHEDULE**

ITEM	FURNISHED			INSTALLED			NOTES:
	OWNER	G.C.	LANDLORD	OWNER	G.C.	LANDLORD	
<p><b>DIVISION 01 - GENERAL REQUIREMENTS</b></p> <p>PERMITS, FEES, INSURANCE CERTIFICATES, ETC. •</p> <p>TEMP. UTILITIES AND EQUIPMENT •</p> <p>RECEIVING AND UNLOADING OWNER SUPPLIED MATERIALS •</p> <p>FINAL PROFESSIONAL CLEANUP AND TRASH REMOVAL •</p> <p>CERTIFICATE OF OCCUPANCY •</p> <p><b>DIVISION 02 - EXISTING CONDITIONS</b></p> <p>DEMOLITION AND HAUL OFF •</p> <p>IRRIGATION SYSTEM •</p> <p>LANDSCAPE PLANT MATERIAL •</p> <p>CONCRETE SIGNAGE FOUNDATIONS •</p> <p>SIGNAGE FASCIA •</p> <p><b>DIVISION 03 - CONCRETE</b></p> <p>CONCRETE FOUNDATIONS &amp; FLOOR SLABS / INFILL (BUILDING) •</p> <p>CONCRETE SLAB CUTTING, PATCHING/INFILL, AND LEVELING •</p> <p>CONCRETE CURBS &amp; SIDEWALK PAVING •</p> <p>OUTDOOR DIGITAL MENU BOARD FOUNDATIONS •</p> <p><b>DIVISION 04 - MASONRY</b></p> <p>MASONRY</p> <p>STONE VENEER</p> <p><b>DIVISION 05 - METALS</b></p> <p>STRUCTURAL AND LIGHT GAUGE METAL FRAMING •</p> <p><b>DIVISION 06 - WOODS, PLASTICS AND COMPOSITES</b></p> <p>ROUGH FRAMING, BLOCKING AND FURRING •</p> <p>STAINLESS STEEL CABINETS •</p> <p>SHEATHING •</p> <p>WOOD TRUSSES •</p> <p><b>DIVISION 07 - THERMAL AND MOISTURE PROTECTION</b></p> <p>BATT INSULATION •</p> <p>SOUND / ATTENUATION •</p> <p>ROOFING, FLASHINGS, AND TRIM •</p> <p>FIRE PROOFING / STOPPING •</p> <p>SEALANTS •</p> <p>FLUID APPLIED MEMBRANE AIR BARRIER •</p> <p>MEMBRANE ROOFING •</p> <p>BOARD AND BATTEN SIDING •</p> <p>EXTRUDED ALUMINUM SIDING •</p> <p>MINERAL- FIBER CEMENT SIDING •</p> <p><b>DIVISION 08 - OPENINGS</b></p> <p>DOORS, FRAMES AND HARDWARE •</p> <p>ACCESS PANELS •</p> <p>STOREFRONT GLAZING SYSTEM •</p> <p>LOCK CORES (EXTERIOR AND INTERIOR DOORS) •</p> <p>WALK-UP WINDOW •</p> <p>DRIVE THRU WINDOW •</p> <p><b>DIVISION 09 - FINISHES</b></p> <p>CEILINGS •</p> <p>PAINT •</p> <p>FIBERGLASS-REINFORCED PANELS •</p> <p>TILE •</p> <p>WALL BASE •</p> <p>WALL TRIMS •</p> <p>SPECIAL FINISHES •</p> <p>GYPSON BOARD •</p> <p>CEMENT BOARD •</p> <p>CORNER GUARDS •</p> <p>INTERIOR WINDOW FILM •</p> <p><b>DIVISION 10 - SPECIALTIES</b></p> <p>SIGNAGE AND AWNINGS •</p> <p>DRIVE-THRU CANOPY •</p> <p>BLOCKING FOR SIGNAGE AND DRIVE-THRU CANOPY •</p> <p>TOILET ROOM ACCESSORIES •</p> <p>SHELVING / HANGING SYSTEM •</p> <p>FIRE EXTINGUISHER(S) •</p> <p>MENU BOARD FOUNDATIONS •</p>							
<p>ALL ITEMS NOT FOUND IN THIS MATRIX ARE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR</p> <p>G.C. TO SUPPLY AND INSTALL ALL BLOCKING AND ATTACHMENTS AS REQUIRED FOR INSTALLATION OF ALL OWNER SUPPLIED ITEMS</p> <p>ALL BLOCKING TO BE FIRE RETARDANT TREATED</p> <p>G.C. REQUIRED TO NOTIFY OWNER W/ IN 24 HOURS IF DAMAGED PARTS ARE RECEIVED OR IF PARTS ARE MISSING</p> <p>G.C. TO REFER TO OWNER SUPPLIED MATERIALS FOR CONTACT NAME AND PHONE NUMBER</p>							
<p><b>PROPRIETARY VENDOR / COMMENTS</b></p> <p>PERMIT APPLIED FOR BY OWNER / PICKED UP AND PAID FOR BY G.C.</p> <p>INCLUDE 3 CLEANINGS IN BID ( 1 MAJOR FOR PUNCH, 2 LIGHT FOR TOUCH-UP AT TURNOVER AND OPENING)</p> <p>INCLUDE 6" Ø PLAN STORAGE TUBE</p> <p>POSTED IN 8 1/2" X 11" FRAME</p> <p>G.C TO REMEDIATE BASE FOR EXISTING SIGNAGE FOUNDATIONS AS REQUIRED IF SITE IS AN EXISTING TIM HORTONS SITE ONLY</p> <p>OWNER'S SIGNAGE VENDOR TO INSTALL NEW SIGNAGE FACES ON EXISTING LOCATIONS</p> <p>CREATE SMOOTH LEVEL SURFACE (G.C. TO CARRY ALLOWANCE IN BID FOR FLOOR PREP.)</p> <p>G.C TO REMOVE EXISTING FOUNDATIONS AND TO INSTALL NEW FOUNDATION AND ANCHOR BOLTS FOR EXTERIOR MENU BOARD, PRE-SELL MENU BOARD, SPEAKER POST AND QDMB CANOPY FOUNDATIONS &amp; ANCHOR BOLTS</p> <p>NOT APPLICABLE</p> <p>NOT APPLICABLE</p> <p>REFER TO PLANS AND DETAILS FOR LOCATION, HEIGHT AND TYPE</p> <p>STAINLESS STEEL WORKTABLES- PURCHASED THROUGH SCHEDULE A, INSTALLED BY G.C.</p> <p>PROVIDE AT EXPOSED EXTERIOR WALLS</p> <p>FIRE RATED SEALANT - PER LOCAL CODE</p> <p>PURCHASED THROUGH STO CORP. AND INSTALLED BY APPROVED INSTALLER</p> <p>PURCHASED THROUGH JAMES HARDIE AND INSTALLED BY APPROVED INSTALLER</p> <p>PURCHASED THROUGH KNOTWOOD AND INSTALLED BY APPROVED INSTALLER</p> <p>PURCHASED THROUGH JAMES HARDIE AND INSTALLED BY APPROVED INSTALLER</p> <p>REFER TO DOOR SCHEDULE</p> <p>PURCHASED FROM QUICKSERV</p> <p>PURCHASED FROM QUICKSERV</p> <p>SIGNAGE AND AWNINGS F/ BY TDL APPROVED SIGN VENDOR (ALLEN, CAPITAL OR CUSTOM), VENDOR MUST BE APPROVED BY TDL</p> <p>SIGNAGE AND AWNINGS F/ BY TDL APPROVED SIGN VENDOR (ALLEN, CAPITAL OR CUSTOM), VENDOR MUST BE APPROVED BY TDL</p> <p>SCHEDULE 'A' ITEM</p> <p>OWNER TO PURCHASE MENU BOARDS FROM TDL SUPPLIER "N&amp;WAY"</p> <p>SUPPLIED BY SOLAR TINT</p>							

ITEM	FURNISHED			INSTALLED			NOTES:
	OWNER	G.C.	LANDLORD	OWNER	G.C.	LANDLORD	
<p><b>DIVISION 11 - EQUIPMENT</b></p> <p>KITCHEN EQUIPMENT •</p> <p><b>DIVISION 12 - FURNISHINGS</b></p> <p>PATIO FURNITURE •</p> <p><b>DIVISION 13 - SPECIAL CONSTRUCTION - (NOT USED)</b></p> <p><b>DIVISION 14 / DIVISION 20 - (NOT USED)</b></p> <p><b>DIVISION 22 - PLUMBING / DIVISION 23 - HVAC</b></p> <p>GAS SERVICE •</p> <p>PLUMBING STUBS ( SAN, DCW, VENT) •</p> <p>PLUMBING WORK &amp; FIXTURES/APPURTENANCES REQUIRED FOR ROUGH-IN •</p> <p>PLUMBING FIXTURES •</p> <p>WATER METER •</p> <p>MECHANICAL EQUIPMENT / HVAC UNIT / EXHAUST FAN •</p> <p>ROOF CURBS •</p> <p>ALL DUCTWORK (LOW AND MEDIUM PRESSURE,FLEXIBLE DUCT, ETC.) •</p> <p>AIR DEVICES - DIFFUSERS GRILLES AND BAFFLES •</p> <p>MANUAL BALANCING DAMPER •</p> <p>HVAC PIPING / REFRIGERANT LINES •</p> <p>DUCT SMOKE DETECTORS •</p> <p>TEMPERATURE CONTROL SYSTEM •</p> <p>TOILET EXHAUST FAN •</p> <p>TOILET EXHAUST DUCTWORK AND ROOF CAP •</p> <p>AIR BALANCE REPORT •</p> <p>HOT WATER TANK OR IHWH •</p> <p>CARBON MONOXIDE DETECTORS •</p> <p>WATER FILTRATION SYSTEM &amp; WATER TEST •</p> <p>PIPE PORTAL FOR PCL LINES •</p> <p><b>DIVISION 24 / DIVISION 25 - (NOT USED)</b></p> <p><b>DIVISION 26 - ELECTRICAL / DIVISION 27 - COMMUNICATIONS / DIVISION 28 - ELECTRONIC SAFETY AND SECURITY</b></p> <p>SWITCH GEAR •</p> <p>ELECTRICAL METER / SERVICES •</p> <p>TELEPHONE SERVICE TO THE BUILDING •</p> <p>TELEPHONE WIRING / CONDUIT •</p> <p>ELECTRICAL PANELS •</p> <p>ELECTRICAL TRANSFORMERS •</p> <p>HVAC POWER CONNECTION •</p> <p>HVAC DISCONNECT •</p> <p>CONDUIT, WIRING AND DEVICES FOR HVAC •</p> <p>LIGHTING FIXTURES / LAMPS •</p> <p>LIGHTING AND SIGNAGE CONTROLS •</p> <p>VEHICLE DETECTOR LOOP •</p> <p>C-CHANNEL LIGHT BAND •</p> <p>DATA CONDUIT •</p> <p>TELEPHONE AND DATA CABLING QUICK SERVE (WIRE ONLY) •</p> <p>DATA WIRE PULL &amp; TERMINATE FROM INTERIOR MENU BOARDS TO MEDIA CABINET •</p> <p>SOUND SYSTEM &amp; WIRING •</p> <p>FIRE ALARM SYSTEM •</p> <p>CLOSED CIRCUIT SECURITY SYSTEM EQUIPMENT •</p> <p>CLOSED CIRCUIT SECURITY SYSTEM CONDUIT WIRING •</p> <p>DIGITAL MENU BOARDS (INTERIOR &amp; EXTERIOR) •</p> <p>CAT 6 CABLE/ ELECTRICAL FOR DIGITAL MENU BOARDS •</p> <p>ELECTRICAL FOR EXTERIOR BUILDING SIGNAGE •</p> <p>ELECTRICAL SITE CONDUIT WIRING FOR SIGNAGE •</p> <p>WIFI ACCESS POINT •</p> <p>OWNER PURCHASED THROUGH SCHEDULE A AND WASSERSTROM, GC TO SET EQUIPMENT IN PLACE. GC TO HOOK UP EQUIPMENT, START UP AND CALIBRATION BY OWNER</p> <p>OWNER PURCHASED. G.C TO INSTALL. ALL ITEMS MUST BE APPROVED BY TDL</p> <p>PROVIDED BY LOCAL GAS COMPANY</p> <p>PROVIDED BY "CITY WATER DEPARTMENT" TO BE VERIFIED BY G.C. OR OTHERWISE INDICATED</p> <p>RATIONAL OVEN HOOD AND/OR TOASTER HOOD PURCHASED BY OWNER THROUGH SCHEDULE A. GC TO INSTALL</p> <p>PROVIDE CUT SHEETS WITH AIR BALANCE REPORT</p> <p>FACTORY INSTALLED IN RETURN AIR</p> <p>INSTALLED BY G.C</p> <p>WATER TEST TO BE DONE BY OWNER, WATER FILTRATION PREP AND INSTALLATION OF FILTRATION SYSTEM TO BE COMPLETED BY G.C. PURCHASED BY OWNER THROUGH WASSERSTROM</p> <p>PROVIDED BY LOCAL POWER COMPANY</p> <p>OWNER TO COORDINATE WITH TELEPHONE COMPANY</p> <p>MOST FIXTURES ORDERED DIRECT FROM VISO</p> <p>INCLUDE DIGITAL MENU BOARD</p> <p>BOTH CL-1W AND CL-2 ARE ORDERED ON SCHEDULES A</p> <p>POS, MONITORS &amp; EXTERIOR MENU BOARDS</p> <p>LOCATION TO ALIGN WITH APPROVED SIGNAGE VENDOR DRAWINGS</p>							
<p>ALL ITEMS NOT FOUND IN THIS MATRIX ARE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR</p> <p>G.C. TO SUPPLY AND INSTALL ALL BLOCKING AND ATTACHMENTS AS REQUIRED FOR INSTALLATION OF ALL OWNER SUPPLIED ITEMS</p> <p>ALL BLOCKING TO BE FIRE RETARDANT TREATED</p> <p>G.C. REQUIRED TO NOTIFY OWNER W/ IN 24 HOURS IF DAMAGED PARTS ARE RECEIVED OR IF PARTS ARE MISSING</p> <p>G.C. TO REFER TO OWNER SUPPLIED MATERIALS FOR CONTACT NAME AND PHONE NUMBER</p>							
<p><b>PROPRIETARY VENDOR / COMMENTS</b></p>							

**GENERAL NOTES**

- THIS RESPONSIBILITY MATRIX DELINEATES:
  - OWNER, LANDLORD AND GC SUPPLIED ITEMS
  - OWNER, LANDLORD AND GC INSTALLED ITEMS
  - ITEMS TO BE PURCHASED THROUGH DESIGNATED NATIONAL SUPPLIER
  - EXISTING LANDLORD WORK TO BE VERIFIED BY G.C.
- SEE M.E.P. DRAWINGS FOR ADDITIONAL INFORMATION
- NO SUBSTITUTIONS OF ANY MATERIALS OR ITEMS SPECIFIED IN THE DOCUMENTS ARE PERMITTED, U.N.O. & APPROVED BY THE OWNER.
- REFER TO SHEET A2 - EQUIPMENT PLAN AND SCHEDULES FOR FURTHER CLARIFICATIONS AND NOTES.

**DEFINITIONS**

- FURNISHED/SUPPLIED - MEANS SUPPLY AND DELIVER TO PROJECT, FREIGHT ON BOARD TRUCK UNLESS OTHERWISE DEFINED IN GREATER DETAIL.
- INSTALLED - DESCRIBES OPERATIONS AT PROJECT FROM INSPECTION AND UNLOADING TO COMPLETION IN PLACE, READY FOR INTENDED USE.
- PROVIDE - MEANS FURNISH, INSTALL AND MAKE READY FOR SERVICE.

**KEYNOTES**

- G.C. TO VERIFY EXISTING CONDITION IS ACCEPTABLE FOR ALL NEW WORK.
- G.C. IS RESPONSIBLE FOR UNLOADING OWNER SUPPLIED CONSTRUCTION ITEMS. G.C. TO COORDINATE SCHEDULE AND DELIVERY WITH SUPPLIER. STANDARD SHIPPING PROVIDED BY OWNER.G.C. IS RESPONSIBLE FOR ANY EXPEDITED SHIPPING COSTS AND PROVIDING LABOR AND EQUIPMENT ITEMS. ALL DELIVERIES REQUIRED TO HAVE LIFT GATES BY OWNER.
- G.C. REQUIRED TO PURCHASE FROM SPECIFIED VENDOR AND RESPONSIBLE FOR COORDINATION AND DELIVERY
- G.C. TO PROVIDE CONDUIT AND J-BOXES AS REQUIRED - REFER TO ELECTRICAL DRAWINGS.
- NO SUBSTITUTIONS OF ANY MATERIALS OR ITEMS SPECIFIED IN THE DOCUMENTS ARE PERMITTED UNLESS THEY HAVE BEEN REVIEWED AND APPROVED BY TDL.
- G.C. IS REQUIRED TO UNWRAP & INSPECT ALL OWNER SUPPLIED MATERIAL, FIXTURES & HARDWARE IMMEDIATELY UPON RECEIPT & REPORT DAMAGES, IMPERFECTIONS OR MISSING ITEMS WITHIN 24 HOURS OF RECEIPT - FAILURE TO DO SO CAN RESULT IN BACKCHARGE.
- UTILITY SET-UP BY G.C. REQUIRED TO BE COMPLETED BY WEEK 1 OF POSSESSION. ALL UTILITIES INCLUDING GAS MUST BE TURNED ON PRIOR TO CERTIFICATE OF OCCUPANCY. SCHEDULE TO BE DETERMINED BY G.C. AND COORDINATED WITH R.O.

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CHECKED BY AMD/MAR

ISSUE DATE 07/12/2022

**ISSUE**

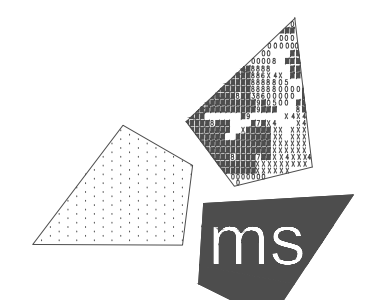
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**REVISIONS**

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**NOTICE**

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**PROJECT:**  
 19353 VERNIER ROAD  
 HARPER WOODS, MI 48225  
**STORE # 919728**



PROFESSIONAL OF RECORD:  
 CHARLES M. BUSCH No. 1301068763  
 EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**RESPONSIBILITY SCHEDULE**

SHEET: G0.1

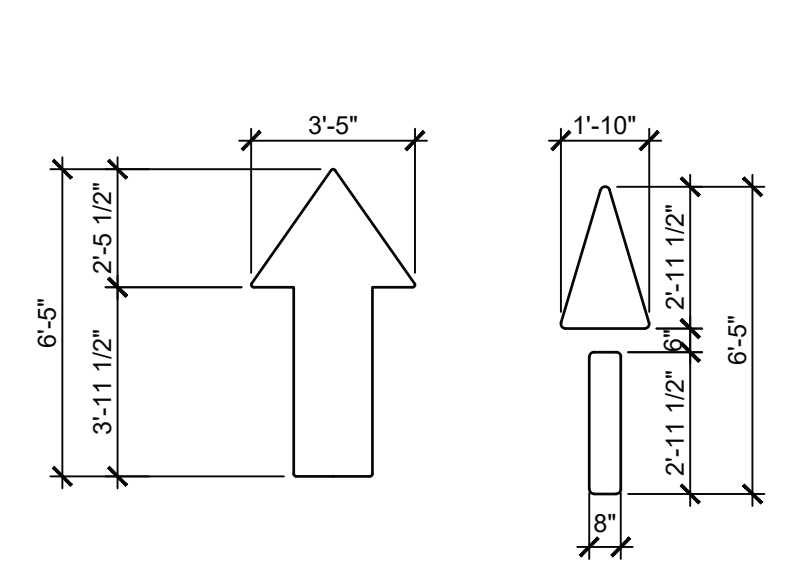
File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\AS1.1\_ARCH SITE PLAN.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:18 PM

**NOTES**

- 1 DT DIGITAL PRE-SELL MENU BOARD LOCATION. SEE INSTALLATION DETAILS ON SHEET AS2.1.
- 2 DT DIGITAL MENU BOARD LOCATION. SEE INSTALLATION DETAILS ON SHEET AS2.1.
- 3 TIM HORTON'S RESTAURANT DRIVE THRU WINDOW LOCATION. SEE FLOOR PLAN ON SHEET A1 FOR ADDITIONAL INFORMATION.
- 4 6" STEEL PIPE BOLLARD. SEE DETAIL ON SHEET 5/AS2.2, FLOOR PLAN A1 AND EXTERIOR ELEVATIONS A5.1.
- 5 TIM HORTON'S RESTAURANT WALK-UP WINDOW LOCATION. SEE FLOOR PLAN ON SHEET A1 FOR ADDITIONAL INFORMATION.
- 6 APPROXIMATE LOCATION OF GREASE INTERCEPTOR BELOW SITE PAVING. COORDINATE WITH PLUMBING & CIVIL DRAWINGS.
- 7 TIM HORTON'S DUMPSTER ENCLOSURE. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS. REFER TO ARCHITECTURAL SITE DETAILS AS2.2 FOR CONSTRUCTION.
- 8 PATIO SEATING / SLAB. REFER TO CIVIL SITE PLAN DRAWINGS FOR LOCATION AND DIMENSIONS.
- 9 VEHICLE LOOP. SEE AS2.1 FOR DETAIL.
- 10 ALL PATIO AND LANDSCAPE DESIGN BY CIVIL ENGINEER TO BE APPROVED BY TIM HORTONS DESIGN.
- 11 EXISTING PLYON SIGN
- 12 DRIVE THRU DIRECTIONAL SIGNAGE GRAPHIC. NOTE: AOR/CIVIL TO NOT PLACE GRAPHICS ON TURNS. REFER TO DETAIL 2/AS1.1.
- 13 SPEAKER POST. REFER TO DETAILS ON SHEET AS2.1.
- 14 SIGN POLE 15' MIN. MOBILE ORDER PICKUP FOR A PARKING SPOT.
- 15 CANOPY OVER THE DRIVE THRU WINDOW.
- 16 THUS CLEARANCE BAR AT 9'-4". REFER TO DETAILS ON SHEET 11/AS2.1.
- 17 GRAPHIC SHOULD NOT BE PLACED WHERE WHEELS ARE TURNING ONLY WHERE CARS ARE ADVANCING FORWARD IN A STRAIGHT LINE.
- 18 HATCHED AREA INDICATES PAINTED LINES. NOTE: PEOPLE NEED TO BE ABLE TO ENTER THE SECOND LANE FROM THE MAIN AREA.
- 19 NOT USED
- 20 CURB CUTS/RAMP FOR ADA SPOTS AND DELIVERIES.
- 21 HOT BOX LOCATION TO BE COORDINATED WITH SITE SPECIFIC CIVIL DRAWINGS. PAINT P-24. SEE PLUMBING DRAWINGS FOR MORE INFORMATION

**GENERAL NOTE**

ARCHITECTURAL SITE PLAN IS TO BE USED FOR GUIDELINE REFERENCE ONLY. ALL SITE SPECIFIC INFORMATION AND REQUIREMENTS IS TO BE COORDINATED WITH ARCHITECT, MECHANICAL/ELECTRICAL AND CIVIL ENGINEER OF RECORD. CIVIL ENGINEER/ARCHITECT TO PROVIDE TIM HORTONS DESIGN COMPLETE CIVIL PACKAGE WITH LANDSCAPE PLAN FOR APPROVALS.



PAVEMENT DIRECTIONAL ARROWS:  
PROVIDE PAINTED DIRECTIONAL ARROWS AT STREET ENTRANCES AND EXITS, AT DRIVE THRU LANES, AND IN PARKING LOT TO GUIDE TRAFFIC FLOW. CUSTOM STENCIL TO BE MADE FOR THE SITE. ALL ARROWS TO BE PAINTED WHITE. COLOR TO MATCH P-01.

**2 DRIVE THRU SIGNAGE**  
SCALE: 1/4" = 1'-0"

**ODMB BEST PRACTICE RECOMMENDATION GUIDE**

- INSTALL NEW FOUNDATIONS PER SPECIFICATIONS IF NEEDED.  
- SPEAKER POST IS 18" OFF CURB FACE TO SPEAKER POST.
- INSTALL 3/4" AND 2" CONDUIT FROM BUILDING TO FOUNDATION LOCATIONS PER NEC, LOCAL CODES, SPECIFICATIONS, AND ODMB CONDUIT REQUIREMENTS.
- INSTALL THE REQUIRED CONDUIT TO SPEAKER FOUNDATION.
- INSTALL A 20-AMP DEDICATED CIRCUIT FOR EACH ODMB FROM CIRCUIT PANEL TO ODMBS.
- INSTALL 7 OUTDOOR CAT6 CABLES FROM NETWORK SWITCH TO MENU BOARD.
- INSTALL 5 OUTDOOR CAT6 CABLES FROM NETWORK SWITCH TO PRE-SALE.
- RETURN SITE TO AS CLOSE AS POSSIBLE OF THE CONDITION PRIOR TO START OF WORK.
- ELECTRICIAN WILL NEED TO BE ON-SITE DAY OF INSTALL TO COMPLETE ELECTRICAL WORK.

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ISSUE DATE 07/12/2022

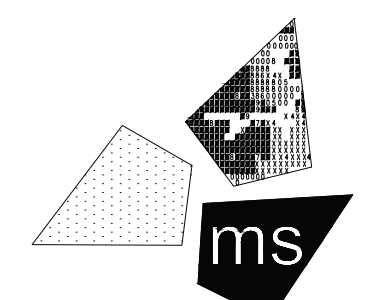
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**REVISIONS**

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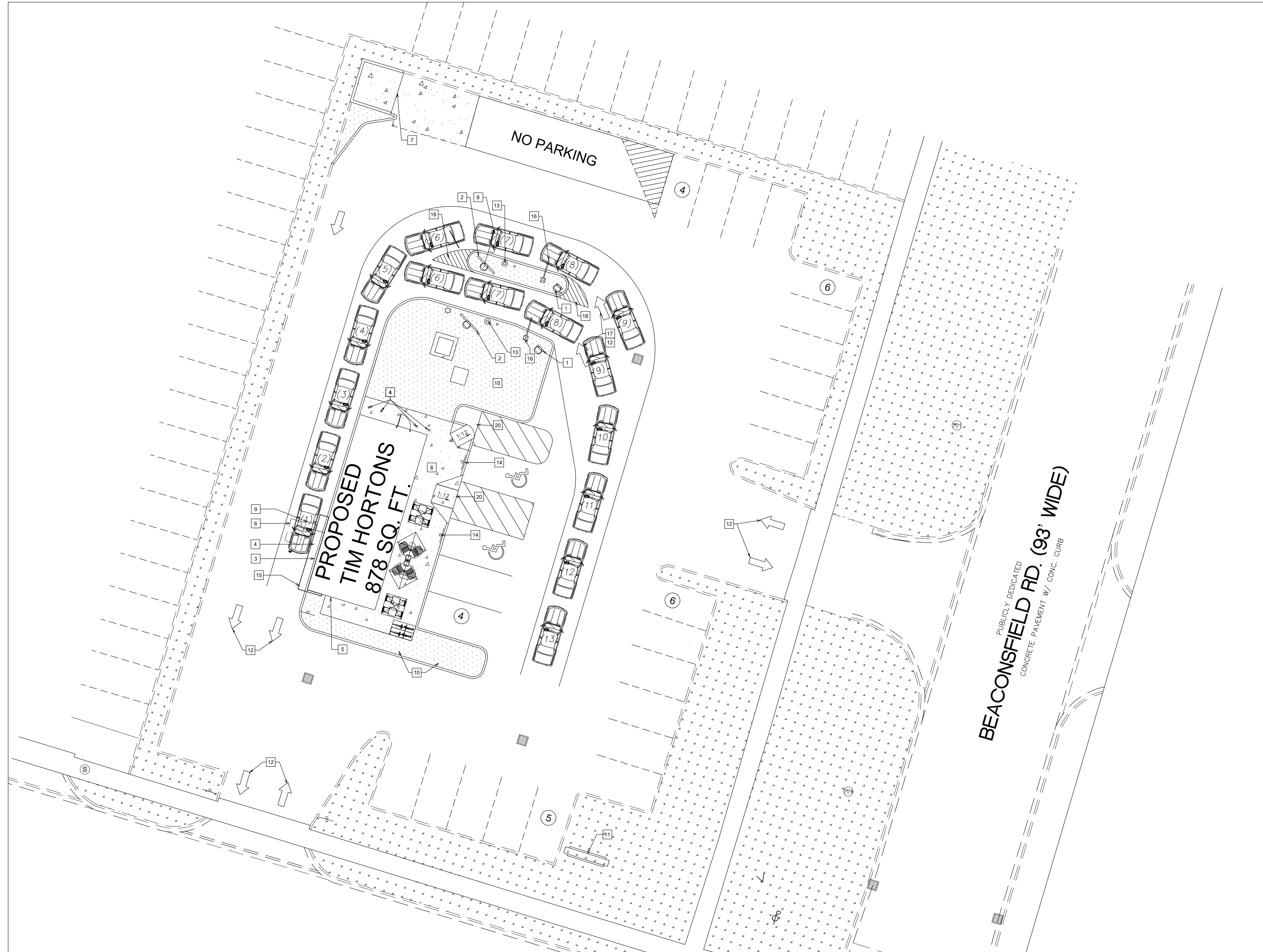


PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**ARCHITECTURAL SITE PLAN**

SHEET: AS1.1

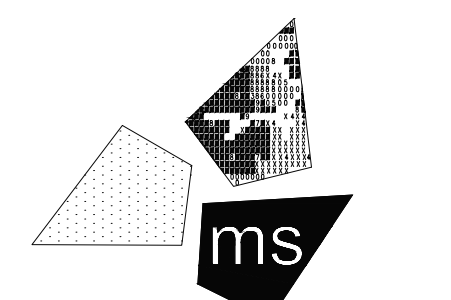


**1 SITE PLAN**  
SCALE: 1/16" = 1'-0"

ISSUE		
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REVISIONS		
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SHEET TITLE:  
**MENU SIGN DETAILS  
DRIVE-THRU**

SHEET: AS2.1

**CRITICAL NOTES**

ODMB, SPEAKER POST AND PRESELL MENU BOARD ALL COME FROM NUWAY AND IS NOT PART OF SCHEDULE A. RESPONSIBILITY OF R.O. TO ORDER. SHIPPED TO SITE FROM VENDOR TO BE ORDERED 12 WEEKS AHEAD OF INSTALL

INSTALLED BY BAILIWICK (BW), SCHEDULED BY GC. RESPONSIBILITY OF R.O. TO ORDER FROM BAILIWICK. INSTALL TO BE SCHEDULE A MIN OF 4 WEEKS BEFORE DESIRED DATE

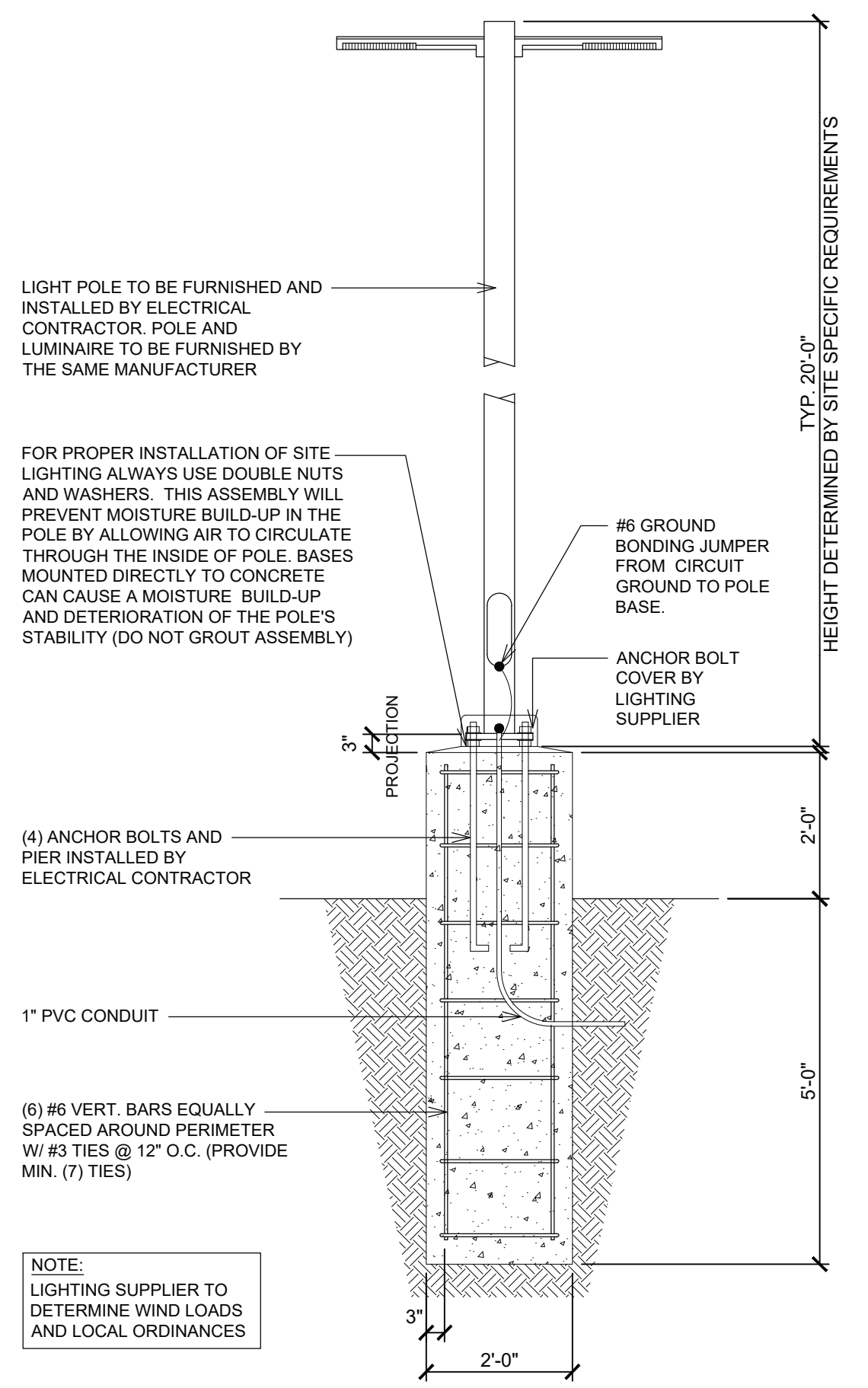
FOUNDATION, DATA AND ELECTRICAL BY CIVIL/GC. FOUNDATION MUST BE 2'-4" ABOVE GRADE

ANCHOR BOLTS TO BE IN AN 8X8 PATTERN, INSTALL BY GC. TO BE COMPLETED PRIOR TO HAVING BW ON SITE

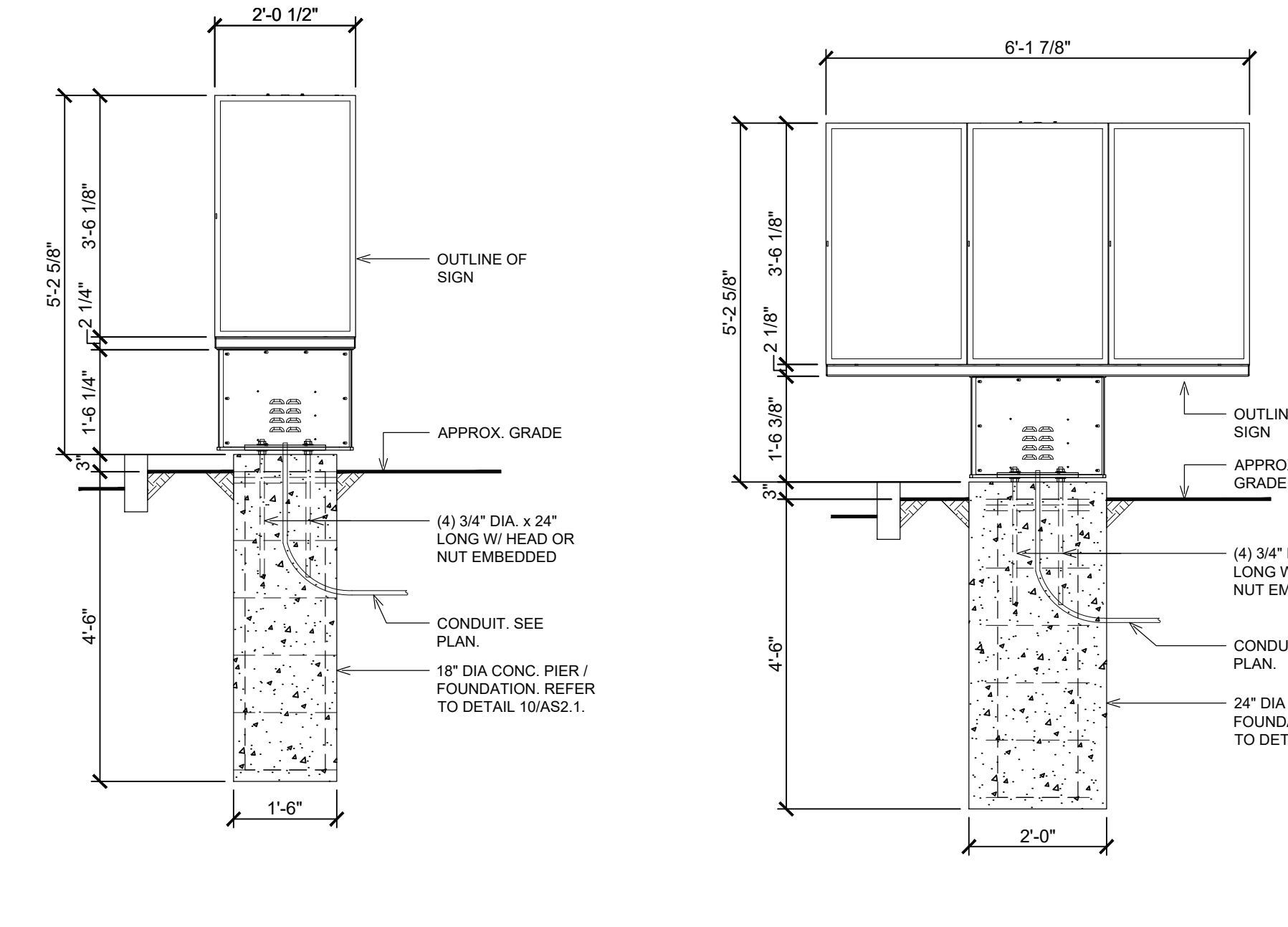
THESE DRAWINGS ARE INTENDED TO BE REVIEWED IN CONJUNCTION WITH THE ODMB INSTALL DETAILS. YOU CANNOT RELY ON THESE DRAWINGS ALONE FOR A SUCCESSFUL INSTALLATION

**NOTES:**

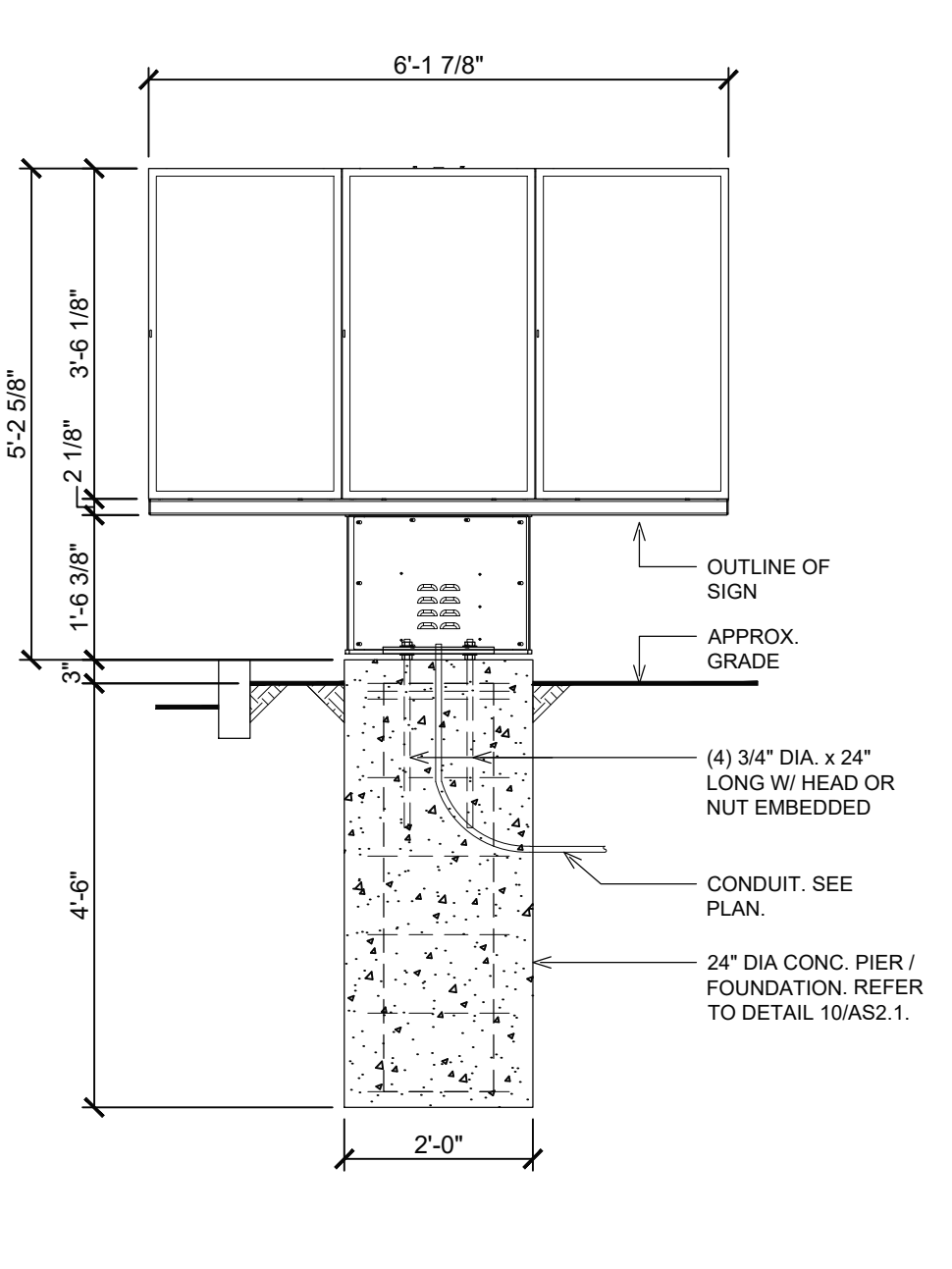
- SIGNAGE VENDOR TO DETERMINE NUMBER OF DIRECTIONAL SIGNS AND LOCATIONS (SITE VERIFY)
- EXISTING POST FOR PYLON SIGN TO BE RE-USED AND REPAINTED. COLOR: PAINTED BLACK GLOSS



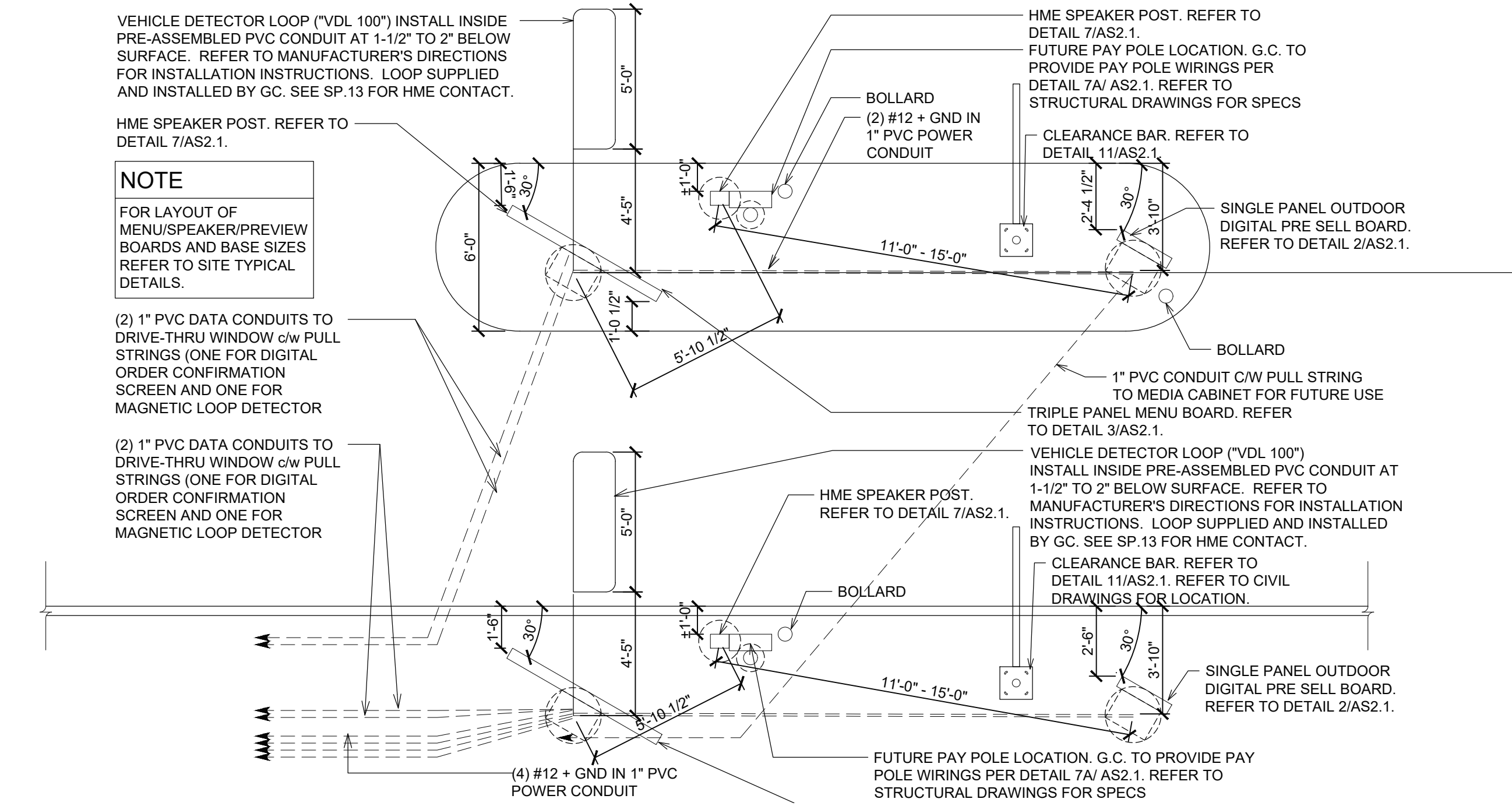
**1 EXTERIOR POLE LIGHTS**  
AS2.1 SCALE: 1/2" = 1'-0"



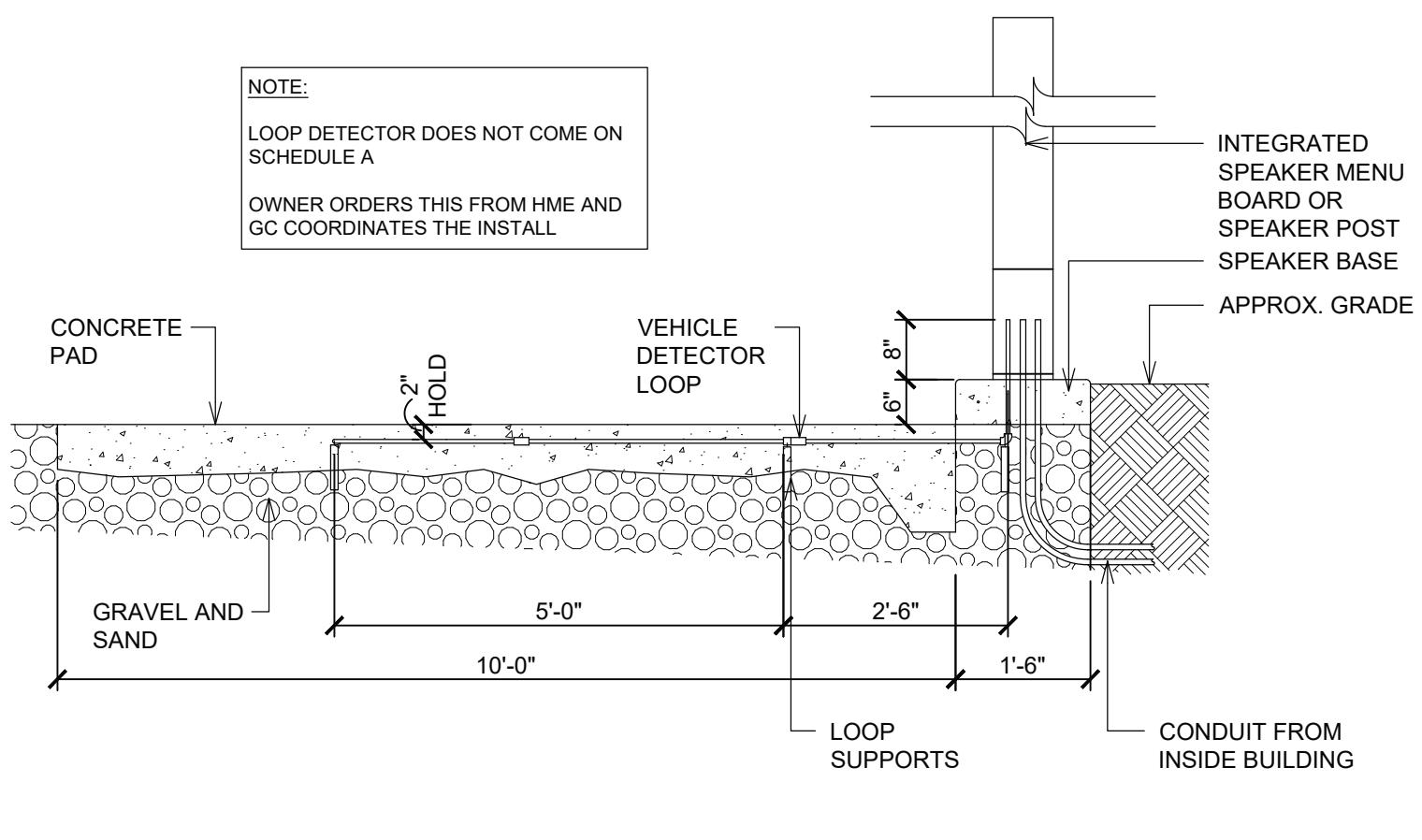
**2 DT DIGITAL PRE-SELL MENU BOARD**  
AS2.1 SCALE: 1/2" = 1'-0"



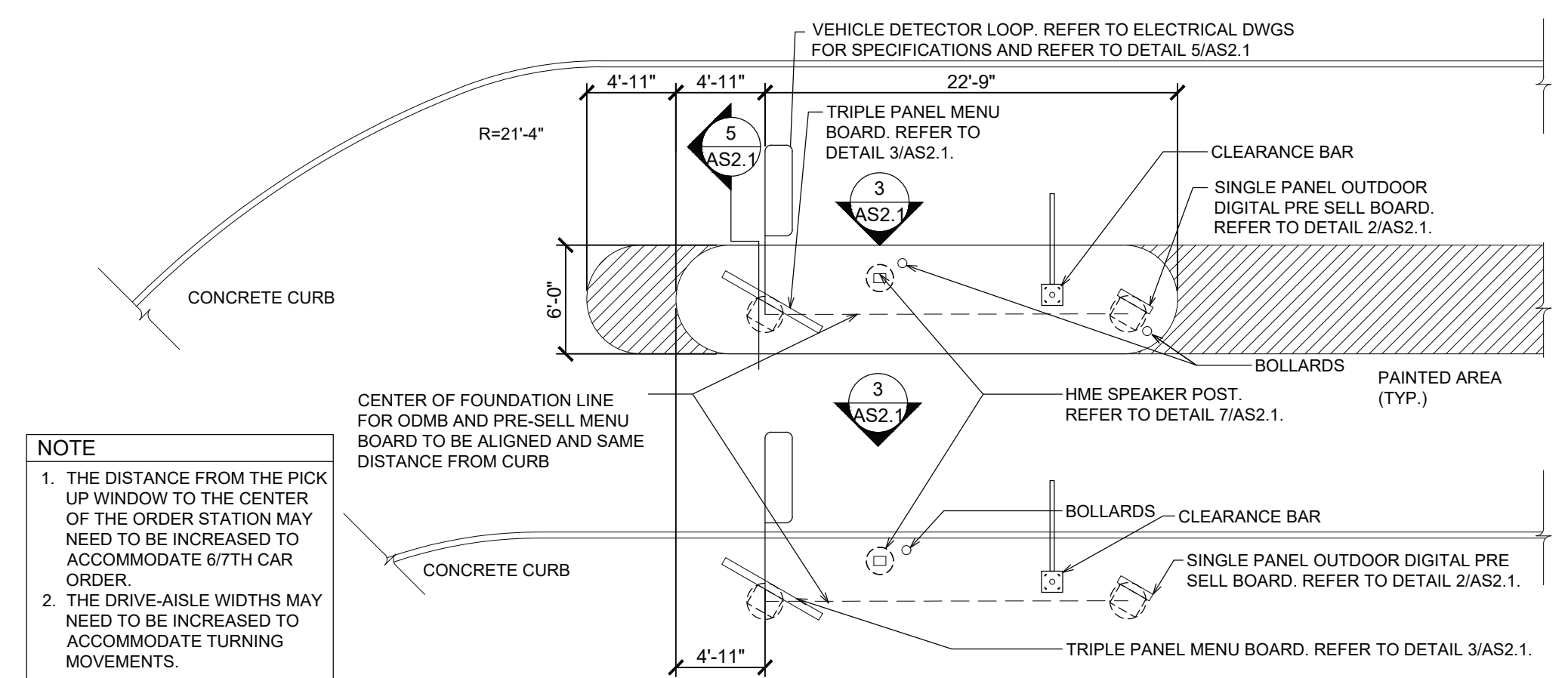
**3 DT DIGITAL MENU BOARD**  
AS2.1 SCALE: 1/2" = 1'-0"



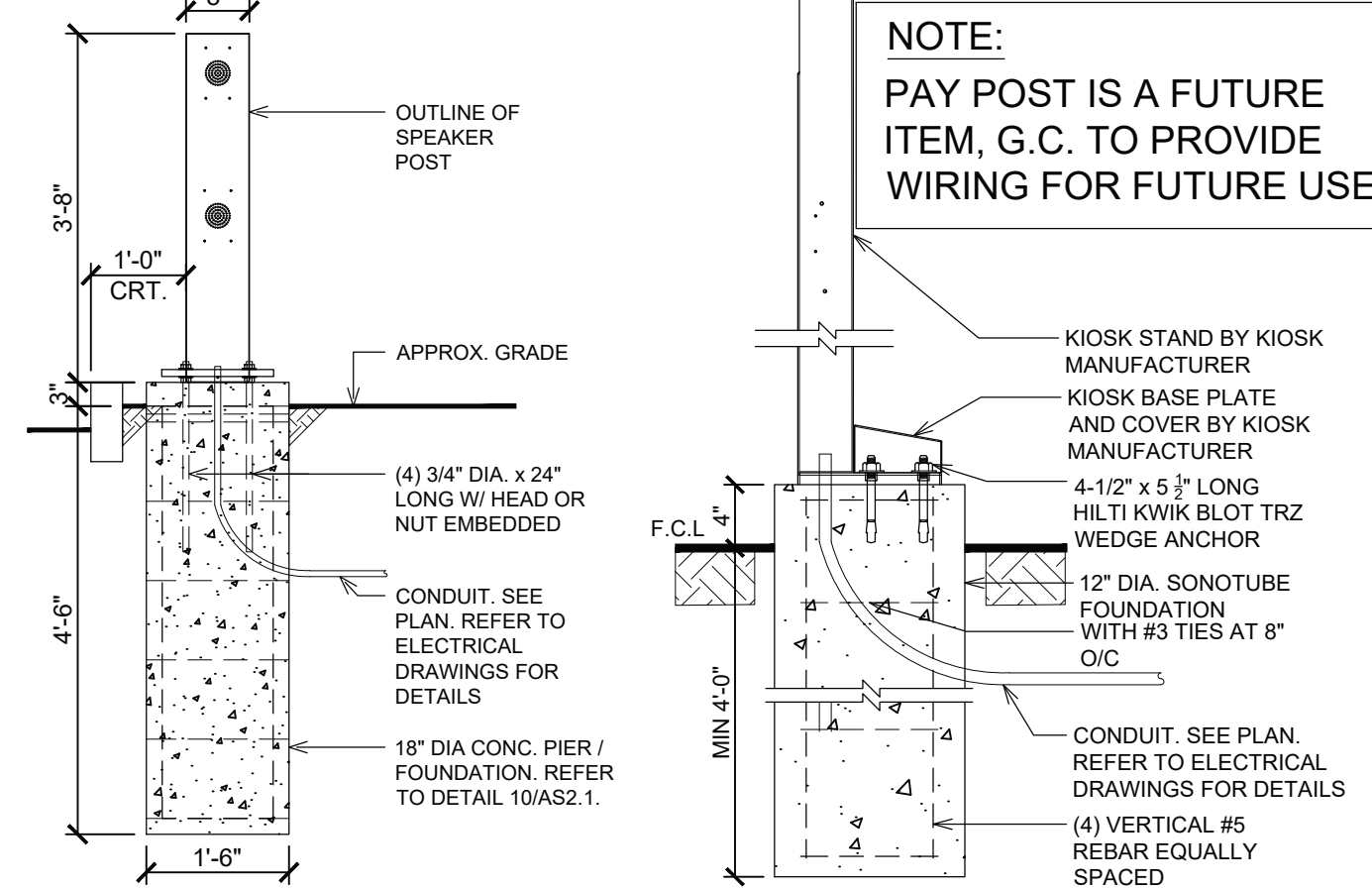
**4 DOUBLE DT ELECTRICAL DETAILS**  
AS2.1 SCALE: 1/4" = 1'-0"



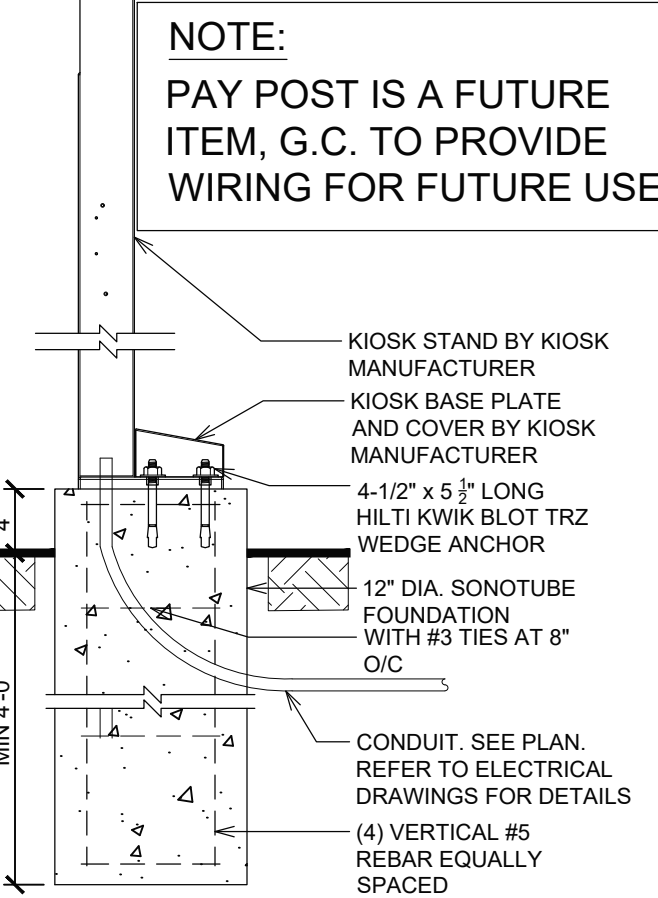
**5 VEHICLE DETECTOR LOOP SECTION**  
AS2.1 SCALE: 1/2" = 1'-0"



**6 TYPICAL DOUBLE DT MENU BOARD LAYOUT**  
AS2.1 SCALE: 1/8" = 1'-0"



**7 SPEAKER POST DETAIL**  
AS2.1 SCALE: 1/2" = 1'-0"



**7A PAY POST DETAIL**  
AS2.1 SCALE: 1" = 1'-0"

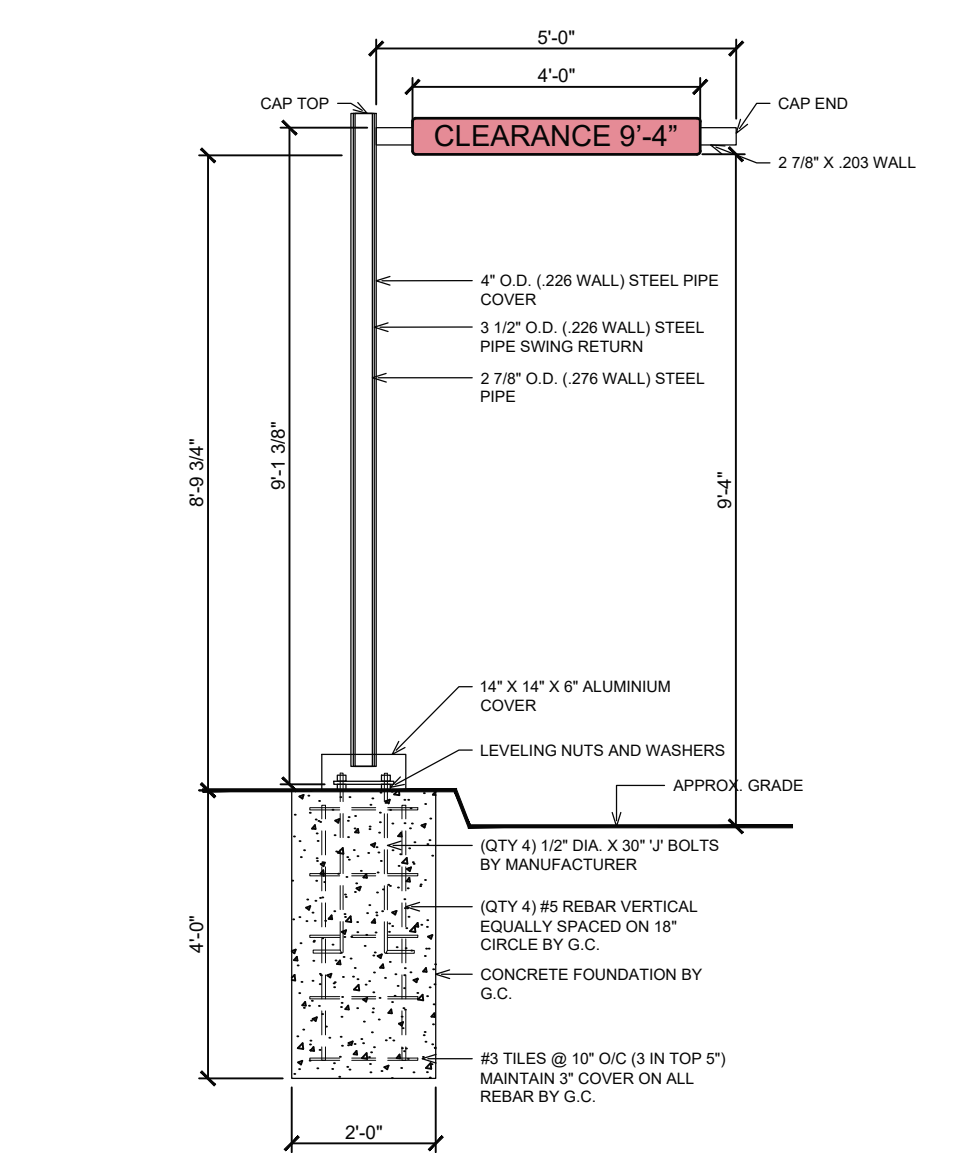
**GENERAL NOTES**

- ALL SIGNS SHALL BE ERRECTED IN ACCORDANCE WITH ALL LOCAL CODES AND SOIL CONDITIONS.
- DESIGNS ARE PER 15 PSF WIND LOADS (VERIFY LOCAL WIND AND SOIL CONDITIONS).
- ALL PAINTED PAVEMENT MARKERS ARE TO BE SOLID YELLOW AND FURNISHED BY GENERAL CONTRACTOR.
- WHEN UNABLE TO VIEW CARS PLACING ORDERS DIRECTLY FROM PICK-UP WINDOW A 24" CONVEX MIRROR SHALL BE PLACED IN AN APPROPRIATE LOCATION TO VIEW CUSTOMERS ORDER AT STATION.

**NOTES:**  
DETAILS FOR REFERENCE ONLY. COORDINATE WITH SITE PLAN DRAWING FOR EXACT REQUIREMENTS.

SOIL CLASS 5		SOIL CLASS 5		SOIL CLASS 5	
WIND LOAD: 90 MPH (ASCE 7-05) 115 MPH (ASCE 7-10)		WIND LOAD: 120 MPH (ASCE 7-05) 153 MPH (ASCE 7-10)		WIND LOAD: 150 MPH (ASCE 7-05) 192 MPH (ASCE 7-10)	
<p><b>DESIGN PARAMETERS:</b> 2009 INTERNATIONAL BUILDING CODE ASCE 7-05 WIND SPEED DATA 1. BASIC WIND SPEED = 90 MPH (3 SEC. GUST) 2. WIND IMPORTANCE FACTOR 1.0 3. WIND EXPOSURE C 4. INTERNAL PRESSURE COEF. N/A 4. COMPONENT AND CLADDING N/A ASCE 7-10 SPEC RATED APPX. 28% HIGHER OVER ASCE 7-05 SPEC.</p> <p><b>MATERIALS:</b> GRADE F1554 G3 36 ANCHOR BOLTS GRADE #615 60 KSI REBAR 3000 PSI CONCRETE @ 28 DAYS</p> <p><b>CLASS 5 SOIL:</b> 100 PSF/LF SOIL BEARING 100 PSF/LF SOIL LATERAL BEARING UNDISTURBED SOIL</p>	<p><b>FOUNDATION DETAIL:</b></p> <p>TOP OF CURB BASE PLATE SLOPE TO SHED WATER FINISHED GRADE #3 TIES (18" OD) SPACE @ 10" O.C. (3) #3 TIES IN TOP 5" (4) 3/4" DIA. x 24" LONG W/ HEAD OR NUT EMBEDDED (4) VERTICAL #5 REBAR EQUALLY SPACED CONCRETE FOUNDATION</p> <p>NOTES: 1. MAINTAIN 3" COVER ON ALL REBAR 2. ALL STRUCTURAL DETAILING TO BE ASSUMED BY DMB ENGINEER</p>	<p><b>DESIGN PARAMETERS:</b> 2009 INTERNATIONAL BUILDING CODE ASCE 7-09 WIND SPEED DATA 1. BASIC WIND SPEED = 120 MPH (3 SEC. GUST) 2. WIND IMPORTANCE FACTOR 1.0 3. WIND EXPOSURE C 4. INTERNAL PRESSURE COEF. N/A 4. COMPONENT AND CLADDING N/A ASCE 7-10 SPEC RATED APPX. 28% HIGHER OVER ASCE 7-05 SPEC.</p> <p><b>MATERIALS:</b> GRADE F1554 G3 36 ANCHOR BOLTS GRADE #615 60 KSI REBAR 3000 PSI CONCRETE @ 28 DAYS</p> <p><b>CLASS 5 SOIL:</b> 100 PSF/LF SOIL BEARING 100 PSF/LF SOIL LATERAL BEARING UNDISTURBED SOIL</p>	<p><b>FOUNDATION DETAIL:</b></p> <p>TOP OF CURB BASE PLATE SLOPE TO SHED WATER FINISHED GRADE #3 TIES (18" OD) SPACE @ 10" O.C. (3) #3 TIES IN TOP 5" (4) 3/4" DIA. x 24" LONG W/ HEAD OR NUT EMBEDDED (4) VERTICAL #5 REBAR EQUALLY SPACED CONCRETE FOUNDATION</p> <p>NOTES: 1. MAINTAIN 3" COVER ON ALL REBAR 2. ALL STRUCTURAL DETAILING TO BE ASSUMED BY DMB ENGINEER</p>	<p><b>DESIGN PARAMETERS:</b> 2009 INTERNATIONAL BUILDING CODE ASCE 7-10 WIND SPEED DATA 1. BASIC WIND SPEED = 150 MPH (3 SEC. GUST) 2. WIND IMPORTANCE FACTOR 1.0 3. WIND EXPOSURE C 4. INTERNAL PRESSURE COEF. N/A 4. COMPONENT AND CLADDING N/A ASCE 7-10 SPEC RATED APPX. 28% HIGHER OVER ASCE 7-05 SPEC.</p> <p><b>MATERIALS:</b> GRADE F1554 G3 36 ANCHOR BOLTS GRADE #615 60 KSI REBAR 3000 PSI CONCRETE @ 28 DAYS</p> <p><b>CLASS 5 SOIL:</b> 100 PSF/LF SOIL BEARING 100 PSF/LF SOIL LATERAL BEARING UNDISTURBED SOIL</p>	<p><b>FOUNDATION DETAIL:</b></p> <p>TOP OF CURB BASE PLATE SLOPE TO SHED WATER FINISHED GRADE #3 TIES (18" OD) SPACE @ 10" O.C. (3) #3 TIES IN TOP 5" (4) 3/4" DIA. x 24" LONG W/ HEAD OR NUT EMBEDDED (4) VERTICAL #5 REBAR EQUALLY SPACED CONCRETE FOUNDATION</p> <p>NOTES: 1. MAINTAIN 3" COVER ON ALL REBAR 2. ALL STRUCTURAL DETAILING TO BE ASSUMED BY DMB ENGINEER</p>

**10 FOUNDATION DETAIL @ DIGITAL MENU BOARD**  
AS2.1 SCALE: 1/2" = 1'-0"



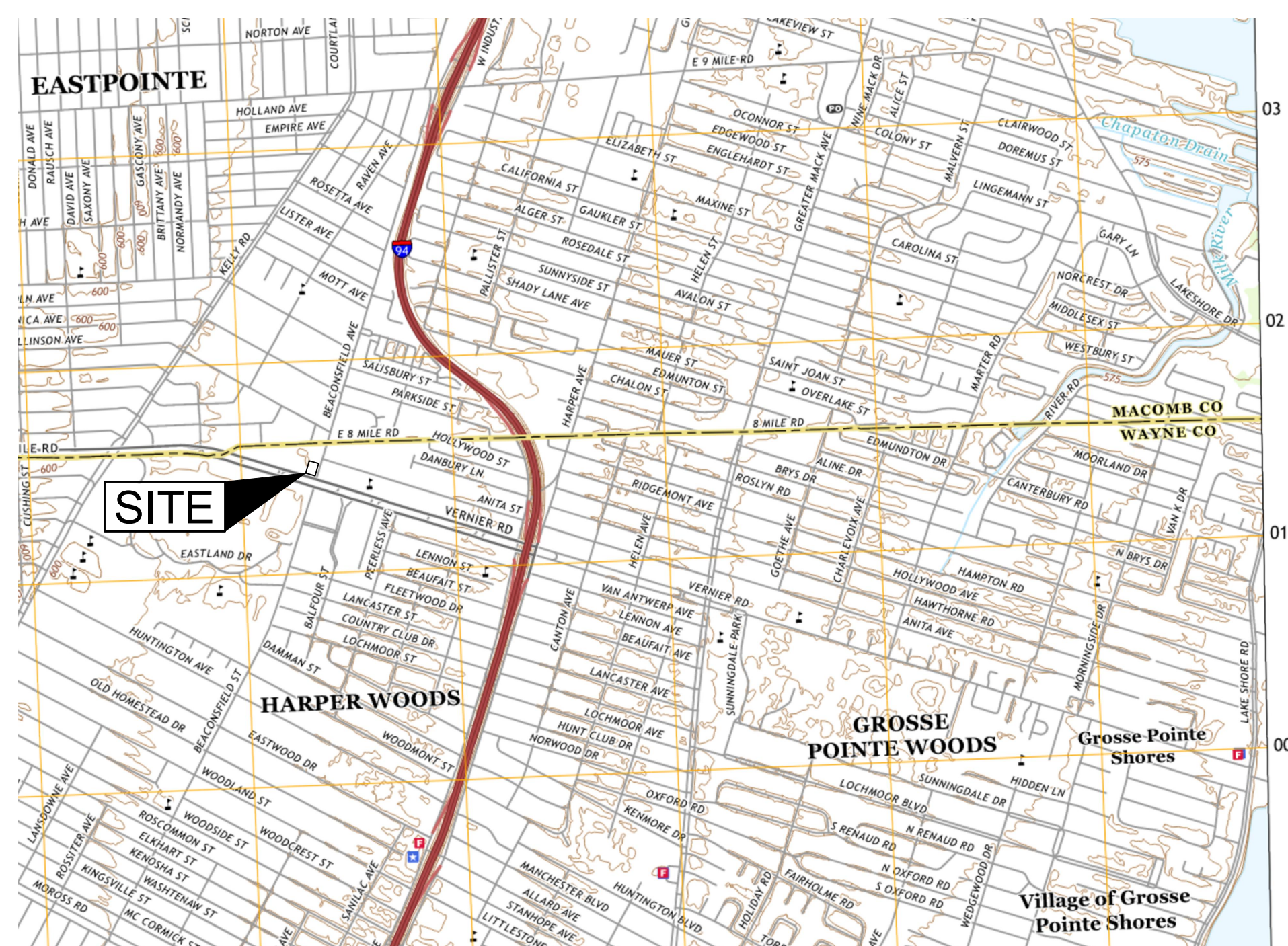
**11 FOUNDATION DETAIL @ THUS CLEARANCE BAR**  
AS2.1 SCALE: 1/2" = 1'-0"

# TIM HORTONS

## 19353 VERNIER RD HARPER WOODS, MI 48225 WAYNE COUNTY

### LEGEND

EXISTING	PROPOSED	DESCRIPTION
— P/L —	— P/L —	CONSTRUCTION LIMITS
— ESMT —	— ESMT —	BOUNDARY LINE
— X —	— X —	EASEMENT
⊗	⊗	FENCE
⊙	⊙	LIGHT POLE
⊙	⊙	UTILITY POLE
— OE —	— OE —	OVERHEAD ELECTRIC LINE
— UE —	— UE —	UNDERGROUND ELECTRIC LINE
⊕	⊕	ELECTRICAL STRUCTURE
— UT —	— UT —	UNDERGROUND TELECOMMUNICATION LINE
— GAS —	— GAS —	GAS LINE
⊕	⊕	GAS METER
— W —	— W —	WATER LINE
⊕	⊕	WATER STRUCTURE
⊕	⊕	FIRE HYDRANT
— SAN —	— SAN —	SANITARY LINE
⊕	⊕	SANITARY STRUCTURE
⊕	⊕	SANITARY GREASE TRAP
— ST —	— ST —	STORM LINE
⊕	⊕	STORM STRUCTURE
— RD —	— RD —	ROOFDRAIN / UNDERDRAIN
— 950 —	— 950 —	CONTOUR
X 950.00 EX.	X 950.00	TOP OF CURB
X 949.50 EX.	X 949.50	TOP OF PAVEMENT
X 950.00 EX.	X 950.00	FINISHED GRADE SPOT ELEVATION
1.00%	1.00%	GRADE SLOPE
HP	HP	HIGH POINT
[Pattern]	[Pattern]	SEEDING/LANDSCAPE AREA
[Pattern]	[Pattern]	CONCRETE
[Pattern]	[Pattern]	HEAVY DUTY ASPHALT PAVEMENT
[Pattern]	[Pattern]	HEAVY DUTY CONCRETE PAVEMENT
[Pattern]	[Pattern]	ROCK AREA
[Pattern]	[Pattern]	PERVIOUS CONCRETE

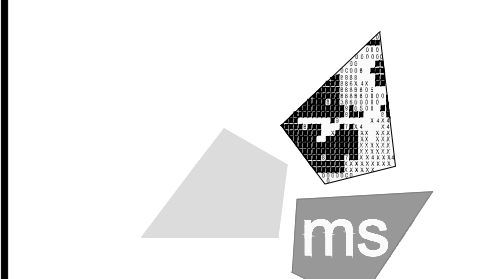


**VICINITY MAP**  
 USGS GROSSE POINTE 7.5' QUADRANGLE  
 MICHIGAN - WAYNE COUNTY  
 1" = 2000'

SHEET INDEX	
COVER SHEET	C-1.0
SURVEY	1 OF 1
SITE DEMOLITION PLAN	C-3.0
SITE DIMENSION PLAN	C-4.0
SITE GRADING AND DRAINAGE PLAN	C-5.0
SITE UTILITY PLAN	C-6.0
SITE NOTES AND DETAILS	C-7.0
SITE NOTES AND DETAILS	C-7.1
SITE NOTES AND DETAILS	C-7.2
SITE NOTES AND DETAILS	C-7.3
SITE NOTES AND DETAILS	C-7.4
SWPPP PLAN	C-8.0
SWPPP NOTES & DETAILS	C-9.0
LANDSCAPE PLAN	L-1.1
SITE SPECIFICATIONS AND LANDSCAPE NOTES	SD500
PHOTOMET PLAN	1 OF 1

### NOTICE

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**MOSURE L.L.C.**  
 engineers, architects, planners  
 2221 Schrock Road  
 Columbus, OH 43229-1547  
 p 614.898.7100  
 f 614.898.7570

PROJECT  
**TIM HORTONS  
 HARPER WOODS, MI**

19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

SHEET TITLE  
**COVER SHEET**



DRAWN BY: JJC  
 CHECKED BY: SEG

PROJECT NO: 40509-11

DRAWING  
**C-1.0**

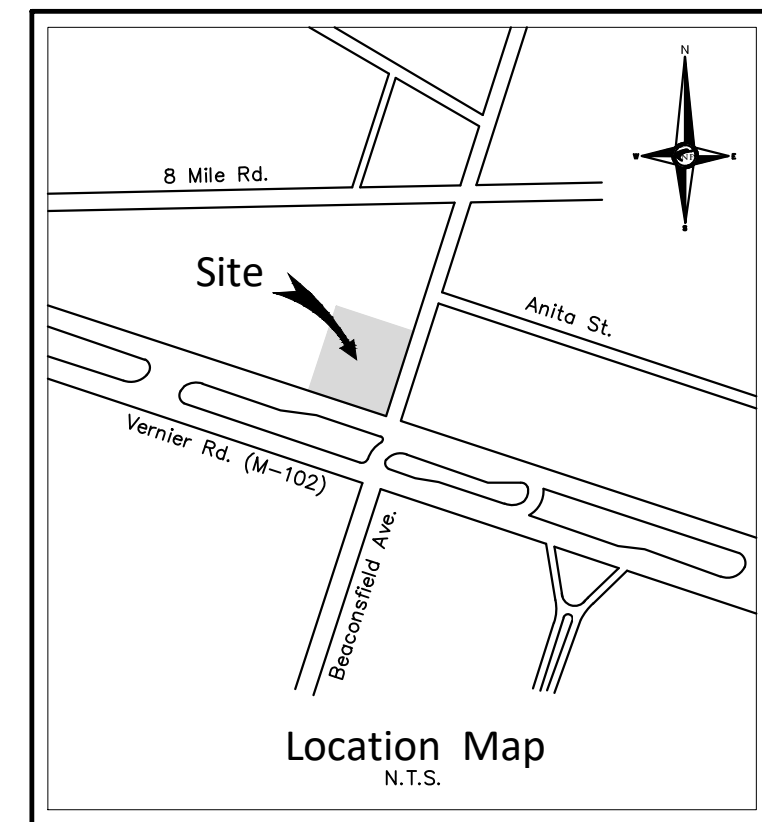
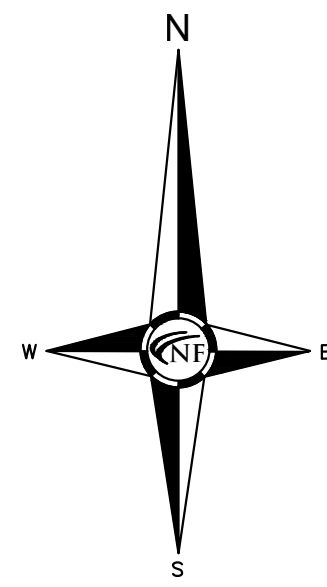
**OWNER**  
 TIM HORTONS US,  
 RESTAURANT BRANDS INTERNATIONAL INC.  
 5707 BLUE LAGOON DR  
 MIAMI, FL 33126  
 PHONE: (614) 791-4200  
 CONTACT: NICOLAS HENRICH  
 EMAIL: nhenrich@rbi.com

**ENGINEER**  
 Mosure L.L.C.  
 2221 SCHROCK RD  
 COLUMBUS, OH 43229-1547  
 PHONE: (614) 898-7100  
 CONTACT: IAN AULTMAN  
 EMAIL: iaaultman@msconsultants.com

**BENCHMARK**  
 CHX NE BOLT LP BASE:  
 NORTHING: 349274.3620  
 EASTING: 13511088.2950  
 ELEVATION = 594.82  
 BASIS OF BEARINGS:  
 GRID NORTH SPC (3103 NY W)  
 NAD\_83 (2011) (EPOCH:2010.0000)  
 NAVD 88 FROM GNSS OBSERVATIONS  
 AND OPUS POST PROCESSING  
 AVERAGE COMBINED FACTOR: 0.99991677  
 DISTANCES SHOWN HEREIN ARE GRID DISTANCES

**SURVEYOR**  
 NOWAK & FRAUS ENGINEERS  
 46777 WOODWARD AVE  
 PONTIAC, MI 48342-5032  
 PHONE: (248) 332-7931  
 FAX: (248) 332-8257

**FLOOD INFORMATION**  
 THIS PROPERTY IS LOCATED WITHIN AN AREA HAVING ZONE DESIGNATIONS OF "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO. 26163C0135F, WITH A MAP EFFECTIVE DATE OF OCTOBER 21, 2021 IN WAYNE COUNTY, STATE OF MICHIGAN, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.



**LEGEND**

	CLEAN-OUT		EXISTING SANITARY SEWER
	HYDRANT		EXISTING WATER MAIN
	INLET		EXISTING STORM SEWER
	MANHOLE		EXISTING BURIED CABLES
	RYCB		EXISTING GAS MAIN
	UTILITY POLE		EXISTING OVERHEAD LINES
	EXISTING LIGHT POLE		EXISTING SIGN
	C.O.		PR. SANITARY SEWER
	HYDRANT		PROPOSED WATER MAIN
	INLET		PROPOSED STORM SEWER
	COMPACT TO 95% MAX. DENSITY		PR. SAND BACKFILL
	A		UTILITY CROSSING
	TC 600.00		PR. TOP OF CURB ELEVATION
	GU 600.00		PROPOSED GUTTER ELEVATION
	TW 600.00		PR. TOP OF WALK ELEVATION
	TP 600.00		PR. TOP OF PAVEMENT ELEV.
	FC 600.00		PROPOSED FINISH GRADE
	600		PROPOSED CONTOUR
	PROPOSED SWALE		PR. DRAINAGE DIRECTION
	PROPOSED INLET FILTER		DRAINAGE AREA LIMITS
	PROPOSED SILT FENCE		LIMITS OF SOIL DISRUPTION

**LEGAL DESCRIPTION**

LAND BEING PART OF PRIVATE CLAIM #F-F, GRATIOT TWP. (NOW CITY OF HARPER WOODS), WAYNE COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS:

PART OF LOTS 63 TO 74, ALSO PART OF LOTS 82 AND 83 AND VACATED ALLEYS OF "OBENAUER-BARGER-LAING CO.'S LAFAYETTE SUBDIVISION," AS RECORDED IN LIBER 59 OF PLATS, PAGE 19, WAYNE COUNTY RECORDS, BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF VERNIER RD. (204 FEET WIDE) AND THE WEST LINE OF BEACONSFIELD AVE. (63 FEET WIDE).

ALSO DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF LOT 67; THENCE NORTH 70 DEGREES 04 MINUTES 15 SECONDS WEST, 150.00 FEET; THENCE NORTH 19 DEGREES 29 MINUTES 05 SECONDS EAST, 200.00 FEET; THENCE SOUTH 70 DEGREES 04 MINUTES 15 SECONDS EAST, 150.00 FEET; THENCE SOUTH 19 DEGREES 29 MINUTES 05 SECONDS WEST, 200.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.69 ACRES.

**FLOOD HAZARD NOTE**

THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE X OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NO. 26163C00150E BEARING AN EFFECTIVE DATE OF 02-02-2012.

**COVID-19 PANDEMIC CONDITION**

DUE TO THE UNPRECEDENTED COVID-19 PANDEMIC CONDITION AND RESTRICTIONS THE STANDARD DATA WHICH IS OBTAINED FROM MISS DIG / CALL 811 HAS BEEN RESTRICTED TO CRITICAL INFRASTRUCTURE ONLY. NFE WILL MAKE EVERY EFFORT TO OBTAIN CURRENT REFERENCE DATA FROM THE GOVERNING AGENCIES; HOWEVER, THIS DATA MAY BE PARTIAL OR INCOMPLETE. NFE WILL ISSUE THIS SURVEY WITH THE BEST AVAILABLE INFORMATION FROM OUR FIELD SURVEY AND OTHER AVAILABLE REFERENCE DATA. NFE WILL NOT BE RESPONSIBLE FOR INCOMPLETE OR PARTIAL DATA PROVIDED BY THIRD PARTY FACILITY OWNERS.

**MISS DIG / UTILITY DISCLAIMER NOTE**

A MISS DIG TICKET NUMBER A003000146, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON NOVEMBER 23, 2020. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISHED PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

**TOPOGRAPHIC SURVEY NOTES**

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

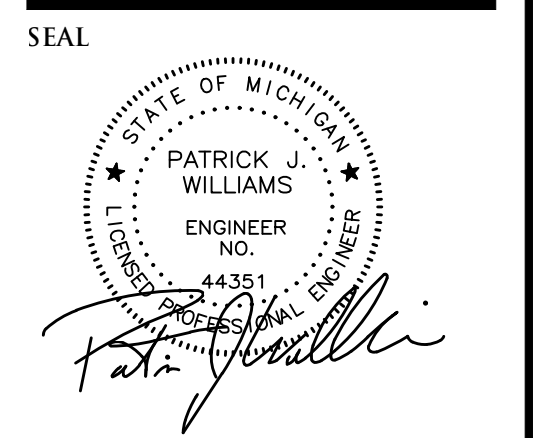
THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

**50 NF ENGINEERS**  
1969 - 2019

**NOWAK & FRAUS ENGINEERS**

CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

NOWAK & FRAUS ENGINEERS  
46777 WOODWARD AVE.  
PONTIAC, MI 48342-5032  
TEL. (248) 332-7931  
FAX. (248) 332-8257  
WWW.NOWAKFRAUS.COM



**PROJECT**  
Tim Hortons  
19353 Vernier Rd.

**CLIENT**  
Arkinetics  
3723 Pearl Road  
Cleveland, OH 44109

Contact: Cynthia Ivary  
Ph: (216) 749-7800

**PROJECT LOCATION**  
Part of P.C. #F-F  
City of Harper Woods,  
Wayne County, Michigan

**SHEET**  
Boundary / Topographic /  
Tree Survey

**811**  
Know what's below  
Call before you dig.

**DATE ISSUED/REVISED**  
02-18-21 Revised per Owner

**DRAWN BY:**  
A. Eizember

**DESIGNED BY:**  
A. Wiseman

**APPROVED BY:**  
P. Williams

**DATE:**  
January 18, 2021

**SCALE:** 1" = 20'

**NFE JOB NO.** M063 **SHEET NO.** C-01

**NOTICE**  
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**MOSURE L.L.C.**  
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 2221 Schrock Road  
 Columbus, OH 43229-1547  
 p 614.898.7100  
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**PROJECT**  
 TIM HORTONS  
 HARPER WOODS, MI

19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

**SHEET TITLE**  
 SITE DEMOLITION  
 PLAN



**DRAWN BY:** JJC  
**CHECKED BY:** SEG  
**PROJECT NO:** 40509-11  
**DRAWING**

**GENERAL NOTES:**

- A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF HARPER WOODS, COUNTY OF WAYNE AND STATE OF MICHIGAN, BY SURVEYOR: NOWAK & FRAUS ENGINEERS, 46777 WOODWARD AVE., PONTIAC, MI 48342, PHONE: (248) 332-7931.
- B. AT START OF PROJECT AND PRIOR TO DEMOLITION OF EXISTING CONDITIONS, CONTRACTOR SHALL BE IN CONTACT WITH ADJACENT PROPERTY OWNERS, CITY REPRESENTATIVE, UTILITY REPRESENTATIVE, AND OWNER REPRESENTATIVE TO COORDINATE DEMOLITION TIMING.
- C. CONTRACTOR TO REMOVE AND DISPOSE OF ALL DEBRIS AND OTHER MATERIALS RESULTING FROM DEMOLITION AND CONSTRUCTION OPERATIONS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- D. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DAMAGE TO NEIGHBORING PROPERTIES OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES.
- E. ALL EXISTING UTILITIES ARE SHOWN HEREIN AS REFERENCE ONLY AND ARE BASED ON RECORD OF THE VARIOUS UTILITY COMPANIES, A FIELD SURVEY AND EXISTING PLANS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF ALL UTILITIES PRIOR TO DEMOLITION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION.
- F. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATION IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
- G. CONTRACTOR SHALL CONFINE ALL STOCKPILING OF DEMOLITION MATERIAL TO WITHIN THE LIMITS OF THE SUBJECT PROPERTY.

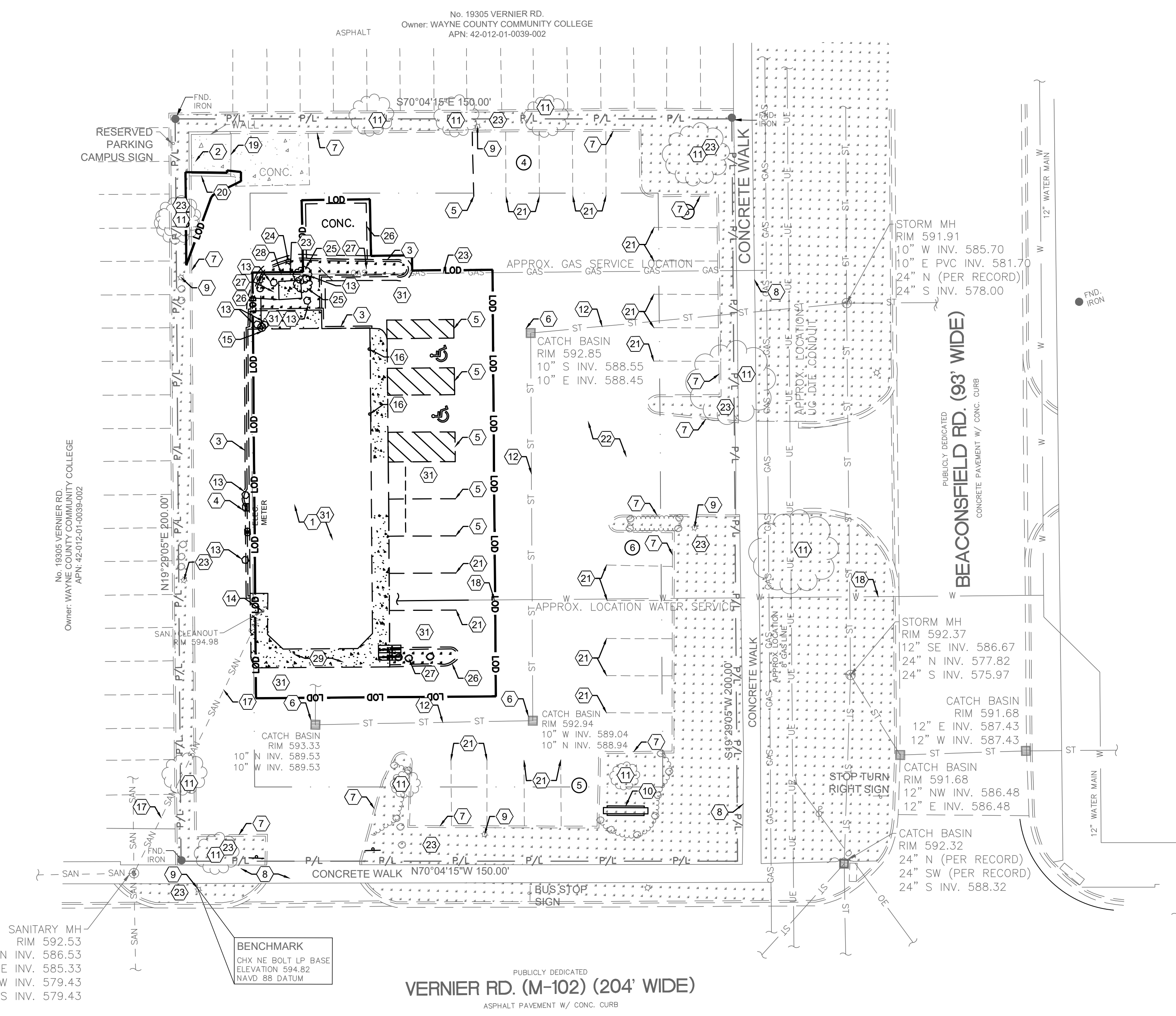
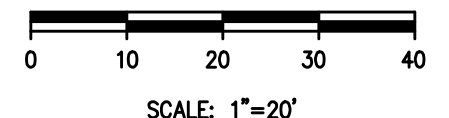
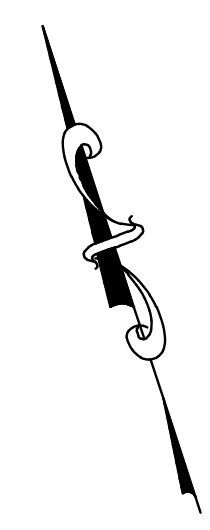
**NOTE: CONTRACTOR SHALL SALVAGE THE EXISTING ELECTRIC PANELS DURING THE DEMO OF THE BUILDING. NOTIFY THE ENGINEER WHEN THE PANELS HAVE BEEN REMOVED, DOCUMENTING THEIR TYPE AND CONDITION.**

**KEYED NOTES:**

- ① EXISTING ONE-STORY BUILDING AND FOUNDATION TO BE REMOVED AND DISPOSED OF.
- ② EXISTING DUMPSTER TO REMAIN.
- ③ EXISTING CONCRETE CURB TO BE REMOVED AND DISPOSED OF.
- ④ EXISTING ELECTRIC METER TO BE REMOVED AND DISPOSED OF.
- ⑤ EXISTING PAVEMENT MARKINGS TO BE REMOVED (TYP.).
- ⑥ EXISTING INLETS TO REMAIN.
- ⑦ EXISTING CONCRETE CURB TO REMAIN.
- ⑧ EXISTING CONCRETE SIDEWALK TO REMAIN.
- ⑨ EXISTING LIGHTPOLE TO REMAIN. FIXTURES TO BE REPLACED, SEE LIGHTING PLAN.
- ⑩ EXISTING PYLON SIGN TO BE REPLACED AND DISPOSED OF. BASE TO REMAIN.
- ⑪ EXISTING TREE TO REMAIN (TYP.).
- ⑫ EXISTING STORM LINE TO REMAIN.
- ⑬ EXISTING BOLLARDS TO BE REMOVED AND DISPOSED OF (TYP.).
- ⑭ EXISTING CLEANOUT TO REMAIN.
- ⑮ EXISTING GAS METER TO REMAIN.
- ⑯ ADA PARKING SIGN TO BE REMOVED AND REPLACED.
- ⑰ EXISTING SANITARY SEWER LINE TO REMAIN. CONTRACTOR TO VERIFY LOCATION IN THE FIELD.
- ⑱ EXISTING WATER LINE PER ARCHITECTURAL AS-BUILT TO REMAIN. CONTRACTOR TO VERIFY LOCATION IN THE FIELD.
- ⑲ DUMPSTER WOOD FENCING TO REMAIN.
- ⑳ EXISTING DUMPSTER ENCLOSURE TO REMAIN.
- ㉑ EXISTING PAVEMENT MARKINGS TO REMAIN (TYP.).
- ㉒ EXISTING ASPHALT TO REMAIN.
- ㉓ EXISTING GAS LINE TO REMAIN.
- ㉔ EXISTING LIGHTPOLE TO BE RELOCATED.
- ㉕ EXISTING TREE TO BE REMOVED AND DISPOSED OF.
- ㉖ EXISTING CONCRETE TO BE REMOVED AND DISPOSED OF.
- ㉗ EXISTING LANDSCAPING TO BE REMOVED AND DISPOSED OF.
- ㉘ EXISTING GAS LINE TO BE REMOVED AND DISPOSED OF.
- ㉙ EXISTING CONCRETE SIDEWALK TO BE REMOVED AND DISPOSED OF.
- ㉚ EXISTING BUMPER BLOCKS TO BE REMOVED AND DISPOSED OF.
- ㉛ EXISTING PAVEMENT WITHIN CONSTRUCTION LIMITS TO BE REMOVED AND DISPOSED OF.

**LEGEND**

EXISTING	DESCRIPTION
— OE — OE —	OVERHEAD ELECTRIC LINE
— UE — UE —	UNDERGROUND ELECTRIC LINE
—	CURB
— GAS — GAS —	GAS LINE
— SAN — SAN — SAN —	SANITARY SEWER
— ST — ST —	STORM SEWER
— W —	WATER MAIN
— ESMT — ESMT —	PAVEMENT MARKINGS
— LOD — LOD —	EASEMENT
— LOD — LOD —	CONSTRUCTION LIMITS
—	BUILDING OUTLINE
—	SANITARY STRUCTURE
—	STORM STRUCTURE
—	WATER STRUCTURE
—	FIRE HYDRANT
—	GAS METER
—	LIGHT POLE
—	UTILITY POLE
—	TREES AND SHUBBERY
—	ELECTRIC METER
—	BOLLARD
—	CONCRETE PAVEMENT
—	GRASS/ LANDSCAPE



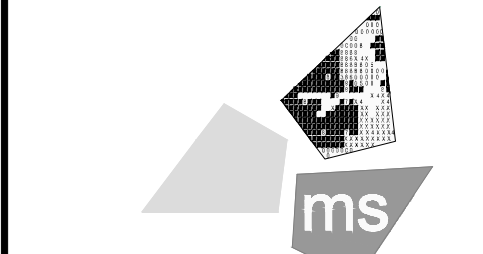
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100% SET	05/05/22
PERMIT SET	07/12/22

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**MOSURE L.L.C.**  
 engineers, architects, planners  
 2221 Schrock Road  
 Columbus, OH 43229-1547  
 p 614.898.7100  
 f 614.898.7570

**PROJECT**  
 TIM HORTONS  
 HARPER WOODS, MI

19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

**SHEET TITLE**  
 SITE GRADING  
 PLAN



**DRAWN BY:** JJC  
**CHECKED BY:** SEG  
**PROJECT NO:** 40509-11  
**DRAWING**

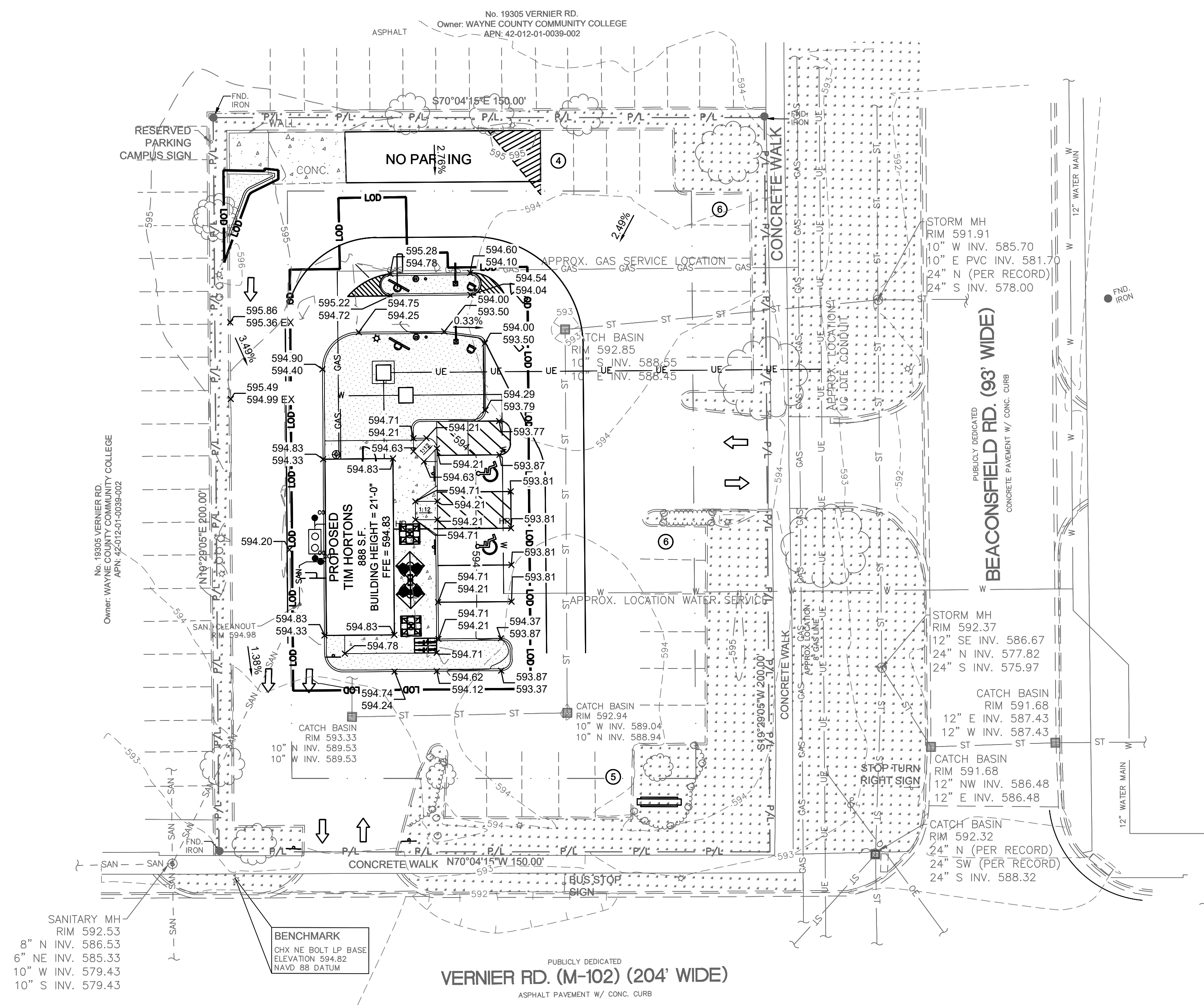
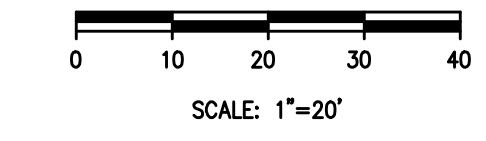
C-5.0

**GENERAL NOTES:**

- A. BY GRAPHICAL PLOTTING ONLY. THIS SITE IS SITUATED IN FEMA FLOOD ZONE X PER FIRM #39049C0152K, EFFECTIVE JUNE 17, 2008.
- B. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF HARPER WOODS, COUNTY OF WAYNE AND STATE OF MICHIGAN, BY SURVEYOR: NOWAK & FRAUS ENGINEERS, 46777 WOODWARD AVE., PONTIAC, MI 48342, PHONE: (248) 332-7931.
- C. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.
- D. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- E. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT CITY OF DAYTON CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL.
- F. ALL EXCAVATED AREAS TO BE SEEDED AND/OR SODDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEWLY SEEDED/SODDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL. HOLD SOIL DOWN 1" FROM PAVEMENT ELEVATION. CONTRACTOR TO SUPPLY STRAW MULCH WHERE GRASS SEED HAS BEEN PLANTED.
- G. THE ABOVE DISTURBANCE IS UNDER THE MINIMUM REQUIREMENTS FOR DETENTION OF CREATING 10,000 SQ.FT. OR LESS OF DISTURBANCE AND/OR NOT CREATING MORE THAN 2,000 SQ.FT. OF NEW, NET IMPERVIOUS AREA. HOWEVER, FOR ANY FUTURE DEVELOPMENTS ON THIS SITE, THE ABOVE DISTURBANCE WILL BE ADDED TO ANY NEW DISTURBANCE PROPOSED, AND HENCE ALL DEVELOPMENT WILL BE CUMULATIVE.

**LEGEND**

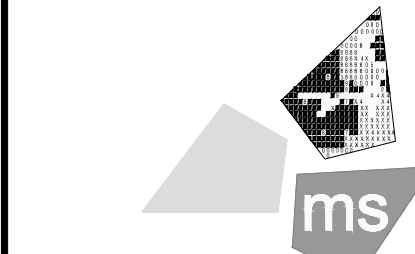
EXISTING	PROPOSED	DESCRIPTION
X 950.00 EX. X 949.50 EX.	X 950.00 X 949.50	TOP OF CURB TOP OF PAVEMENT
X 950.00 EX.	X 950.00	FINISHED GRADE SPOT ELEVATION
	1.00%	GRADE SLOPE
	HP	HIGH POINT
ST	ST	STORM MAIN
	RD	ROOF DRAIN / UNDER DRAIN
	LOD	CONSTRUCTION LIMITS
950	950	MAJOR CONTOUR LINES
	950	MINOR CONTOUR LINES
		INLET
		CATCH BASIN
		STORM STRUCTURE
		MAJOR FLOOD ROUTING



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**PROJECT**

**TIM HORTONS  
 HARPER WOODS, MI**

19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

**SHEET TITLE**

**SITE UTILITY PLAN**



DRAWN BY: JJC

CHECKED BY: SEG

PROJECT NO: 40509-11

DRAWING

**C-6.0**

**GENERAL NOTES:**

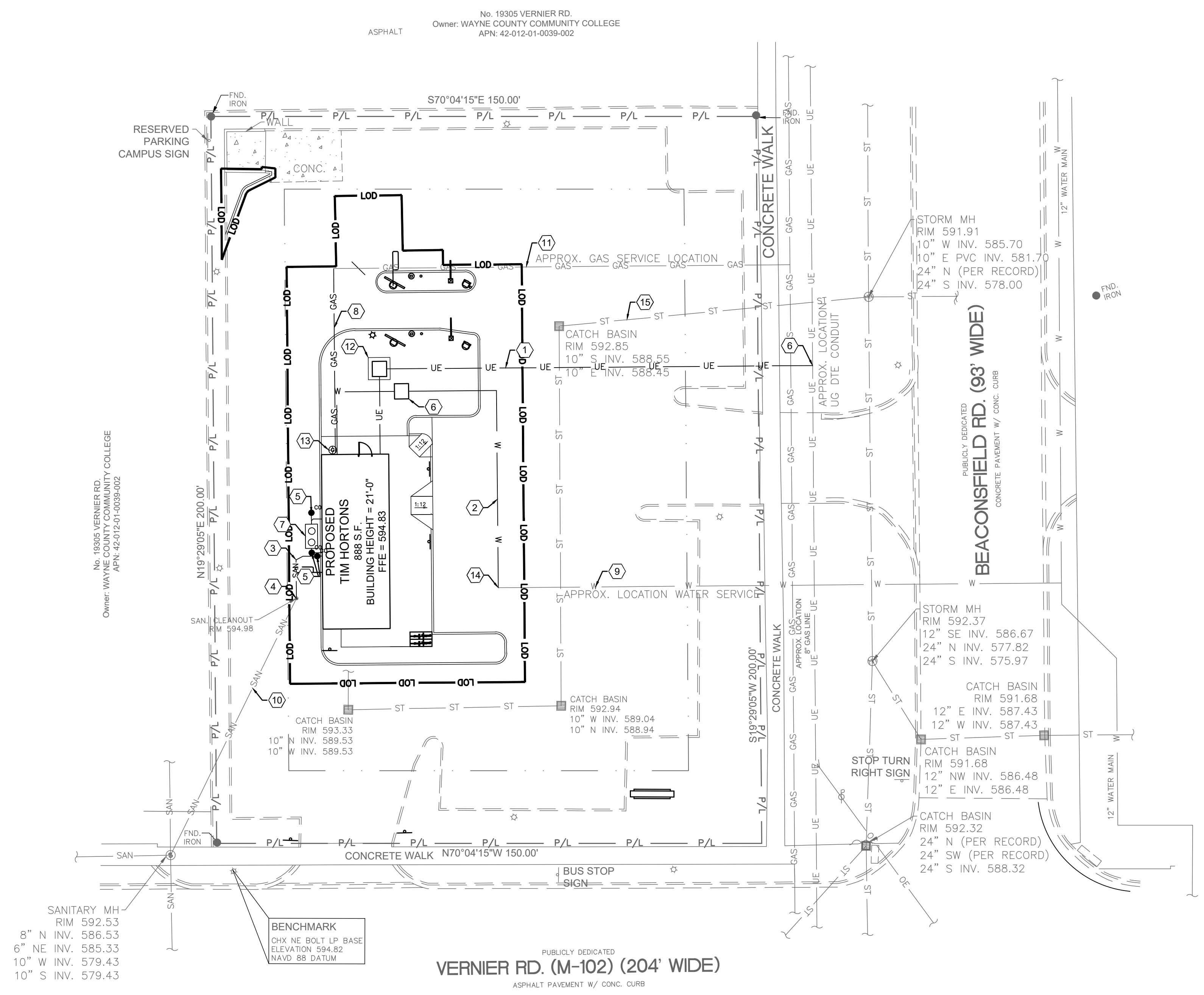
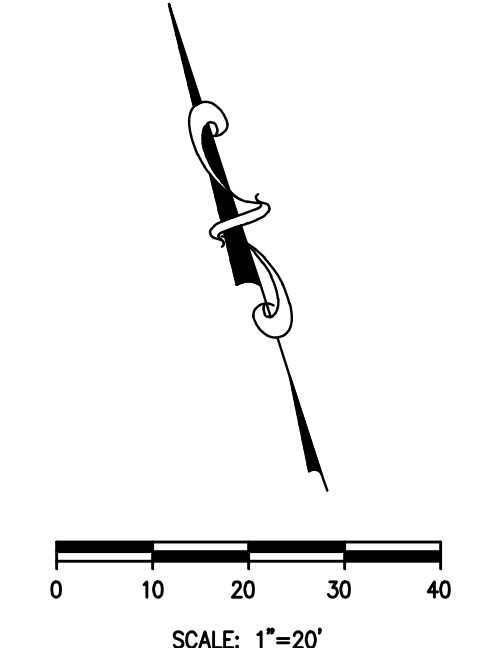
- A. ALL EXISTING UTILITIES, ARE TAKEN FROM SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON PREMISES SHOWN ON PLAN.
- B. CONTRACTOR RESPONSIBLE FOR MAINTAINING A MIN. COVER OF 4' OVER PROPOSED WATER SERVICE.
- C. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.
- D. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A MINIMUM VERTICAL CLEARANCE OF 18" AND HORIZONTAL CLEARANCE OF 10' BETWEEN WATERLINE AND SANITARY SEWER LINES.
- E. ALL CLEANOUTS IN PAVEMENT AREAS ARE TO BE H-20 RATED. CLEANOUTS SHALL COMPLY WITH APPLICABLE STANDARD DRAWINGS.
- F. CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING UTILITY LINES. PROPOSED UTILITIES SHOULD TIE INTO EXISTING UTILITIES AT A POINT INDICATED ON PLANS. COORDINATE UTILITY CONNECTIONS WITH UTILITY OWNERS.
- G. SEE MEP PLANS FOR CONTINUATION OF UTILITY LINES INTO BUILDING.
- H. STORM SEWER SHOWN HERE FOR REFERENCE ONLY.
- I. CONTRACTOR TO COORDINATE NEW LIGHT POLE FIXTURE CONNECTIONS WITH ARCHITECTURAL AND ELECTRICAL PLANS.
- J. SEE PLUMBING PLANS FOR CONTINUATION OF UTILITY LINES INTO BUILDING. PLUMBING CONTRACTOR IS RESPONSIBLE TO A POINT 5' OUTSIDE OF BUILDING.
- K. SEE ELECTRICAL PLANS FOR DETAILED CONDUIT LAYOUT.
- L. ALL WATER SERVICE TO BE PER ALL GOVERNING CODES. CONTRACTOR MUST VERIFY REQUIREMENTS OF LOCAL CODES, UTILITY COMPANY, AND GOVERNING OFFICIALS. INCLUDE IN BASE BID ALL ADDITIONAL VALVES, PIPES, STRUCTURES, ETC. THAT WILL BE REQUIRED. SEE PLUMBING PLANS FOR CONTINUATION INTO BUILDING.
- M. WATER METER/BACKFLOW LOCATED IN THE BUILDING. SEE MECHANICAL/PLUMBING PLANS.
- N. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION AND ALL DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER OR CITY.
- O. ALL CONSTRUCTION METHODS AND MATERIAL MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- P. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.
- Q. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS BEFORE CONSTRUCTION IS TO START. TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATION IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.

**KEYED NOTES:**

- ① PROPOSED PRIMARY UNDERGROUND ELECTRICAL SERVICE. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY OWNER.
- ② PROPOSED TYPE K COPPER 1.5" DOMESTIC WATER SERVICE LINE. INCLUDE IN BASE BID ALL VALVES, PIPING, STRUCTURES, ETC. THAT WILL BE REQUIRED. SEE MEP PLANS FOR CONTINUATION INTO BUILDING.
- ③ PROPOSED 6" SANITARY SEWER. ASTM D3034, SDR-26. SEWER TO HAVE MINIMUM SLOPE PER HARPER WOODS DESIGN STANDARDS. CONTRACTOR TO MAINTAIN A MINIMUM OF 48" OF COVER OVER SEWER LINES.
- ④ PROPOSED SANITARY SEWER SERVICE CONNECTION TO EXISTING CLEANOUT PER CITY OF HARPER WOODS STANDARDS.
- ⑤ PROPOSED SANITARY CLEANOUT (TYP.). SEE DETAIL ON SHEET C-7.0.
- ⑥ PROPOSED ELECTRICAL CONNECTION.
- ⑦ PROPOSED GREASE TRAP. SEE PLUMBING PLANS FOR DETAILS.
- ⑧ PROPOSED GAS LINE.
- ⑨ EXISTING DOMESTIC WATER LINE.
- ⑩ EXISTING 6" SANITARY SEWER LINE.
- ⑪ EXISTING GAS LINE.
- ⑫ PROPOSED ELECTRICAL TRANSFORMER.
- ⑬ PROPOSED GAS METER.
- ⑭ PROPOSED CONNECTION TO EXISTING WATERLINE
- ⑮ EXISTING 10" STORM SEWER LINE.

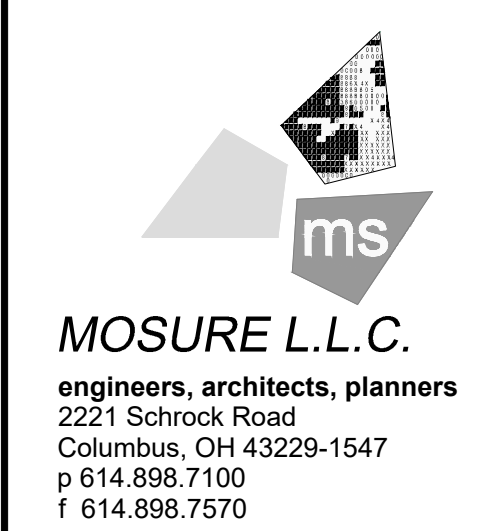
**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
---	---	CONSTRUCTION LIMITS
--- ST ---	--- ST ---	STORM LINE
---	---	ROOFDRAIN/UNDERDRAIN
---	---	SANITARY LINE
•	•	SANITARY CLEANOUT
⊙	⊙	SANITARY MANHOLE
⊠	⊠	SANITARY GREASE TRAP
---	---	WATER LINE
⊕	⊕	FIRE HYDRANT
⊙	⊙	WATER METER
---	---	UNDERGROUND ELECTRIC LINE
---	---	ELECTRIC TRANSFORMER
---	---	UNDERGROUND TELEPHONE LINE
⊕	⊕	UTILITY POLE
⊕	⊕	LIGHT POLE



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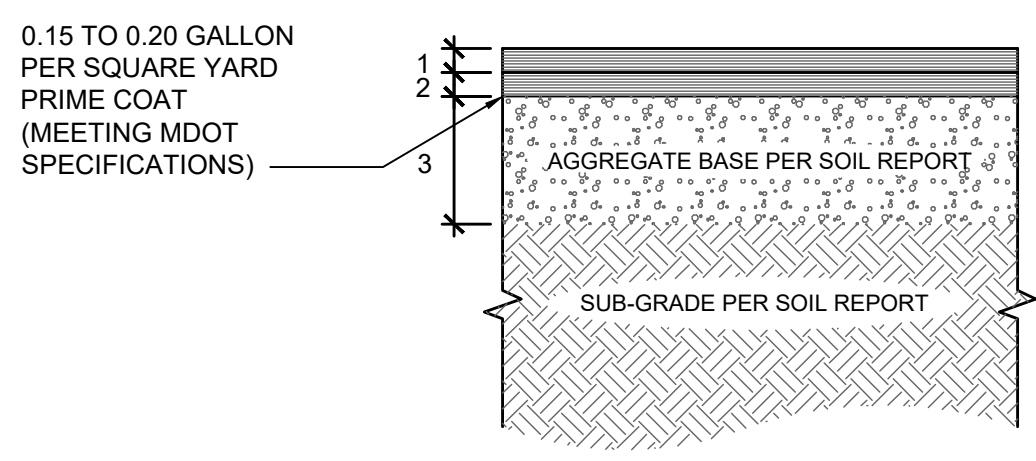
PROJECT  
TIM HORTONS  
HARPER WOODS, MI  
  
19353 VERNIER RD  
HARPER WOODS, MI 48225  
WAYNE COUNTY

SHEET TITLE  
SITE DETAILS



DRAWN BY: JJC  
CHECKED BY: SEG  
PROJECT NO: 40509-11

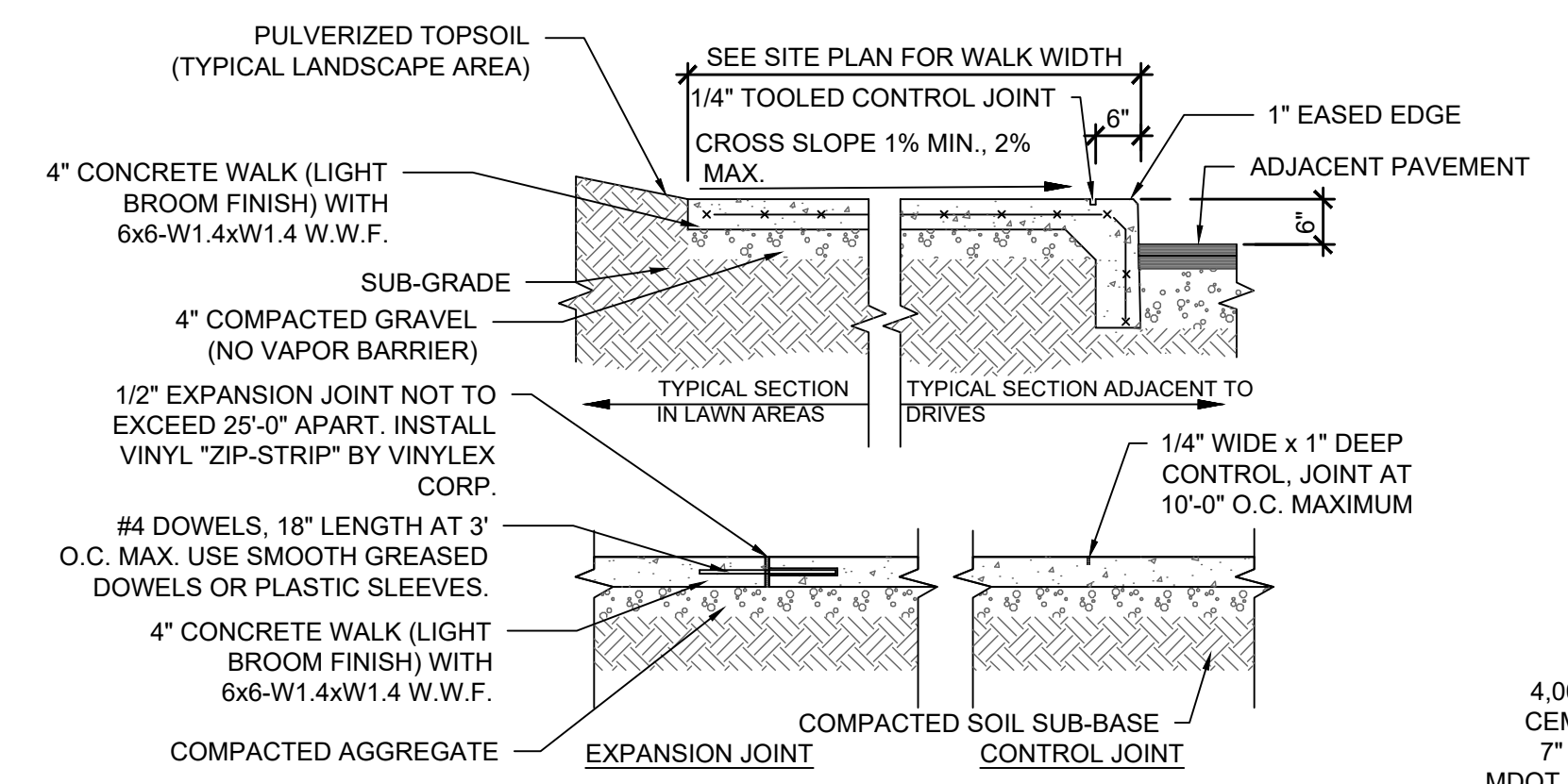
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C-7.0



**PAVING**  
1 = 1.5" SURFACE COURSE (MEETING MDOT SPECIFICATIONS)  
2 = 2.5" INTERMEDIATE COURSE (MEETING MDOT SPECIFICATIONS)  
3 = 8" OF AGGREGATE BASE (MEETING MDOT SPECIFICATIONS)

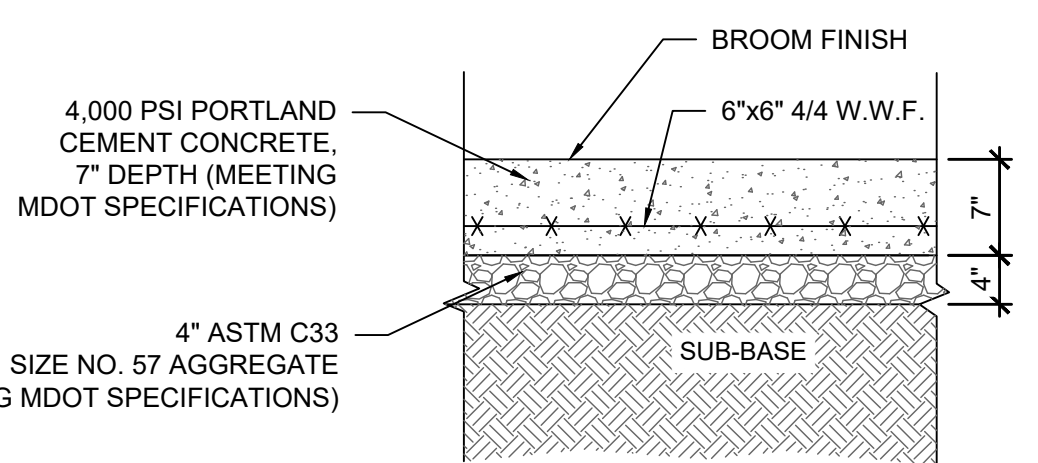
**NOTES**  
A. SUB-GRADE COMPACTION: CBR=3  
B. BASE COURSE TO CONFORM TO MDOT STANDARDS FOR BASE COURSE COMPACTION TO 100% OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY  
C. ALL SUB-GRADE AND PAVEMENT OPERATIONS AND MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS OF THE SOILS REPORT

**A ASPHALT PAVING SECTION**  
C7.0 / N.T.S.

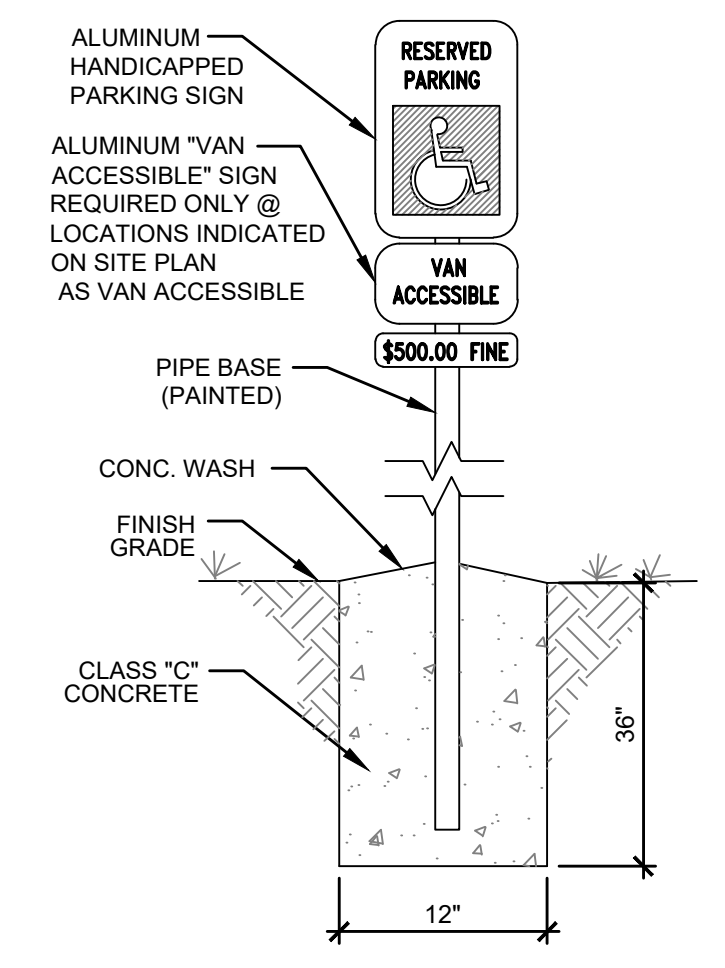


**CONCRETE SIDEWALK NOTES**  
A. LOCATE CONTROL JOINTS AS SHOWN ON PLAN OR 10' O.C. MAXIMUM. VERIFY WITH SITE REPRESENTATIVE.  
B. CONCRETE WALKS AGAINST THE BUILDING OR CONCRETE PAVEMENT SHALL HAVE 1/2" PREFORMED EXPANSION JOINT BETWEEN WALK AND BUILDING OR WALK AND CONCRETE PAVEMENT.  
C. CONCRETE PADS OVER 4" THICK REQUIRE CONTROL JOINTS TO BE 12' O.C. MAXIMUM.

**B CONCRETE SIDEWALK**  
C7.0 / N.T.S.

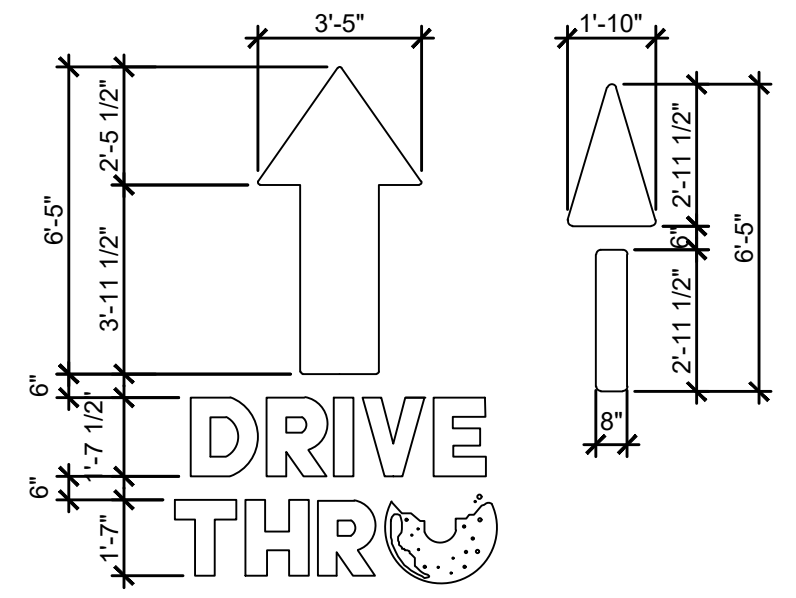


**C TRASH ENCLOSURE APRON DETAIL**  
C7.0 / N.T.S.

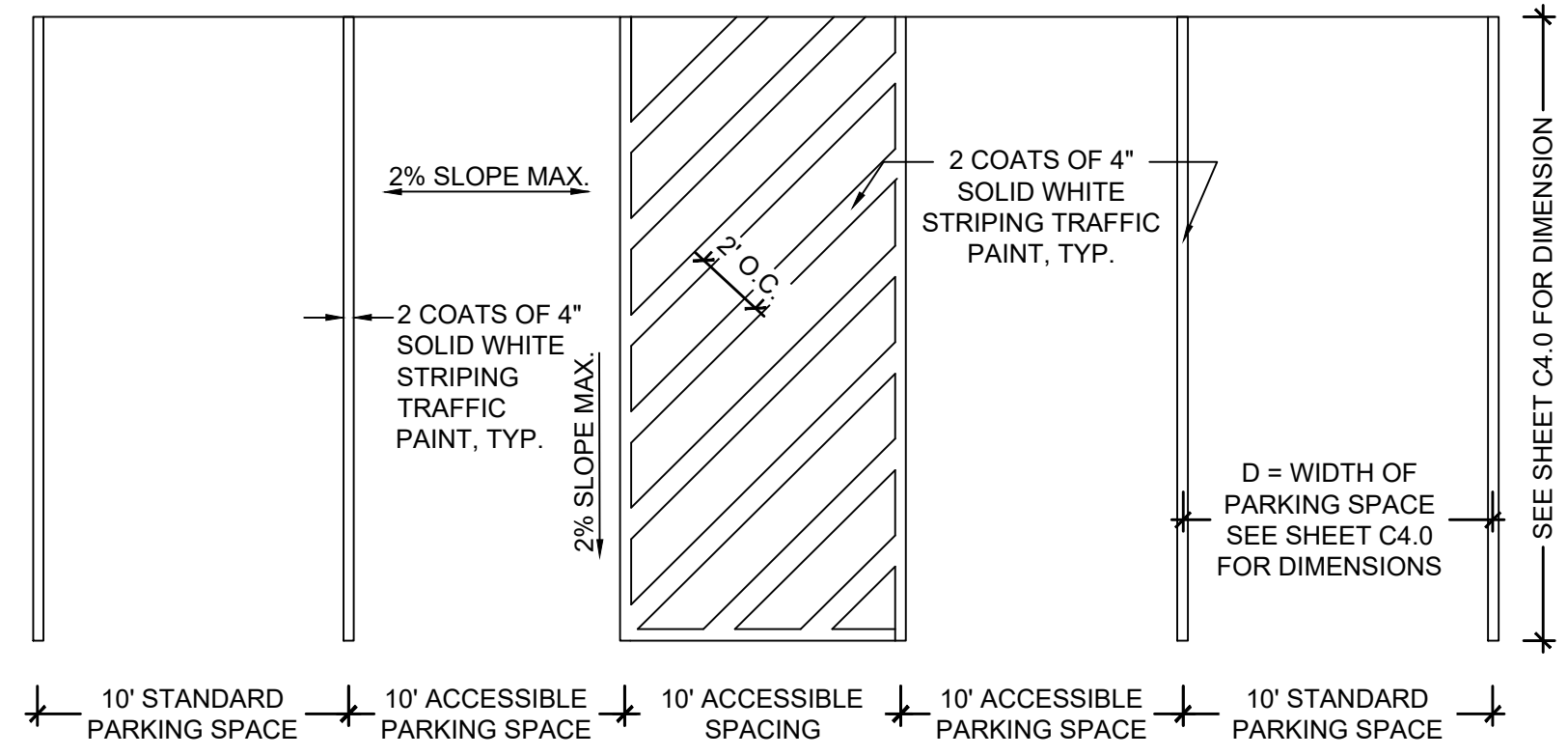


**D HANDICAP PARKING SIGN**  
C7.0 / N.T.S.

**PAVEMENT DIRECTIONAL ARROWS:**  
PROVIDE PAINTED DIRECTIONAL ARROWS AT STREET ENTRANCES AND EXITS, AT DRIVE THRU LANES, AND IN PARKING LOT TO GUIDE TRAFFIC FLOW. CUSTOM STENCIL TO BE MADE FOR THE SITE. ALL ARROWS TO BE PAINTED WHITE, COLOR TO MATCH P-01.

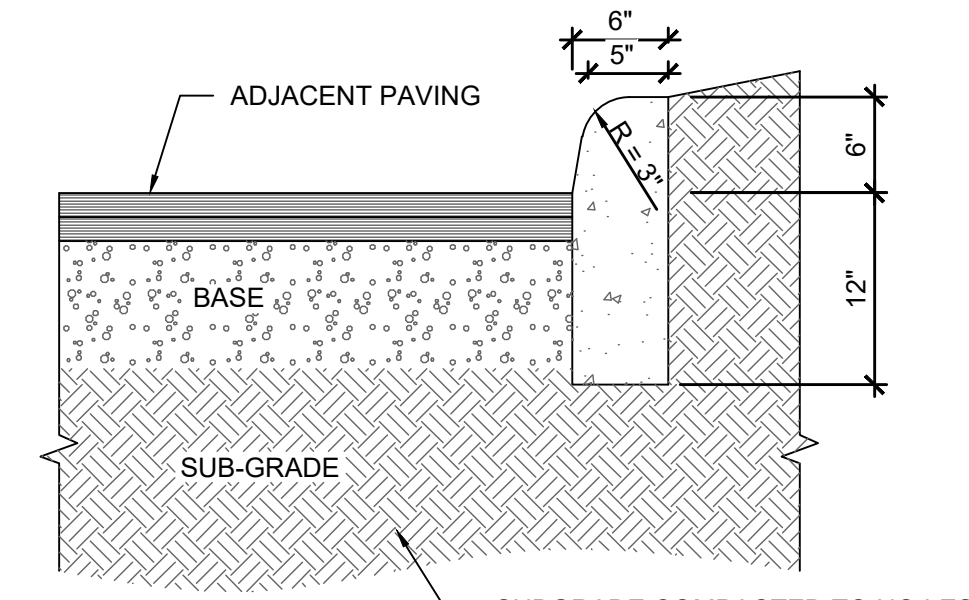


**E DRIVE THRU MARKINGS**  
C7.0 SCALE: 1/4" = 1'-0"

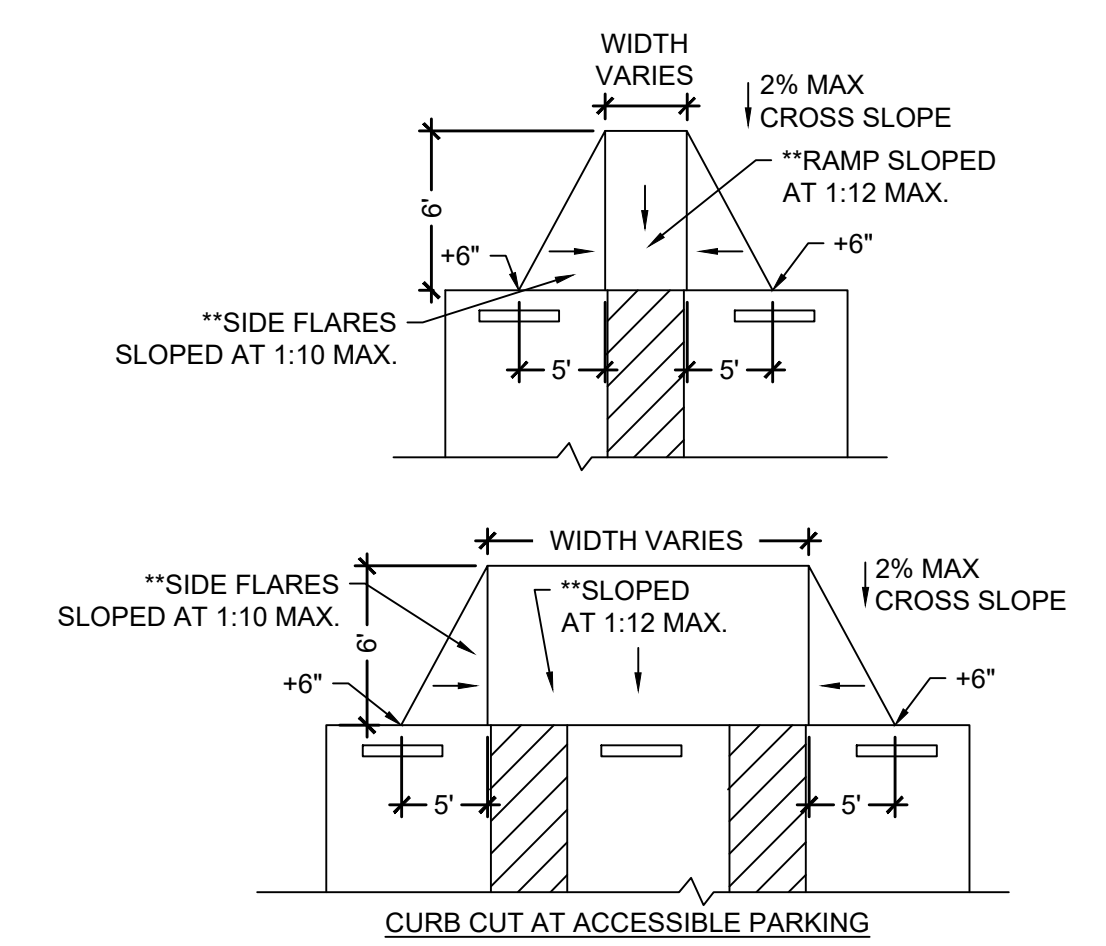


**NOTE:** SEE DIMENSIONAL CONTROL PLAN FOR PARKING DIMENSIONS. DIMENSIONS SHOWN ARE MINIMUM REQUIRED.  
**SLOPE NOTE:** IF CIVIL GRADING PLAN INDICATES A CROSS SLOPE GREATER THAN 2% AT ADA SPACES, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER FOR CLARIFICATION AND PLAN REVISION.

**F PARKING STRIPING**  
C7.0 / N.T.S.

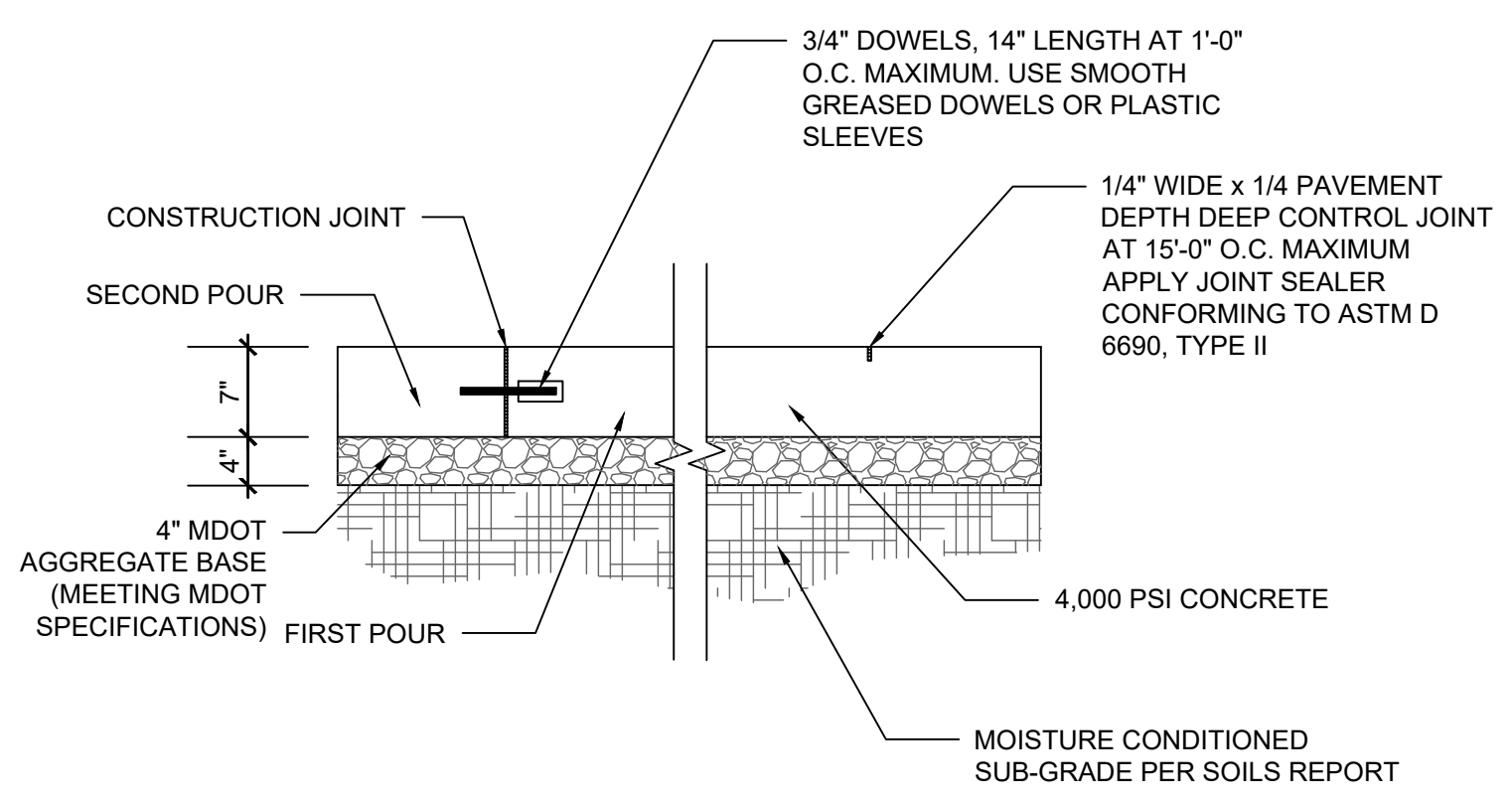


**G CURB DETAIL**  
C7.0 / N.T.S.



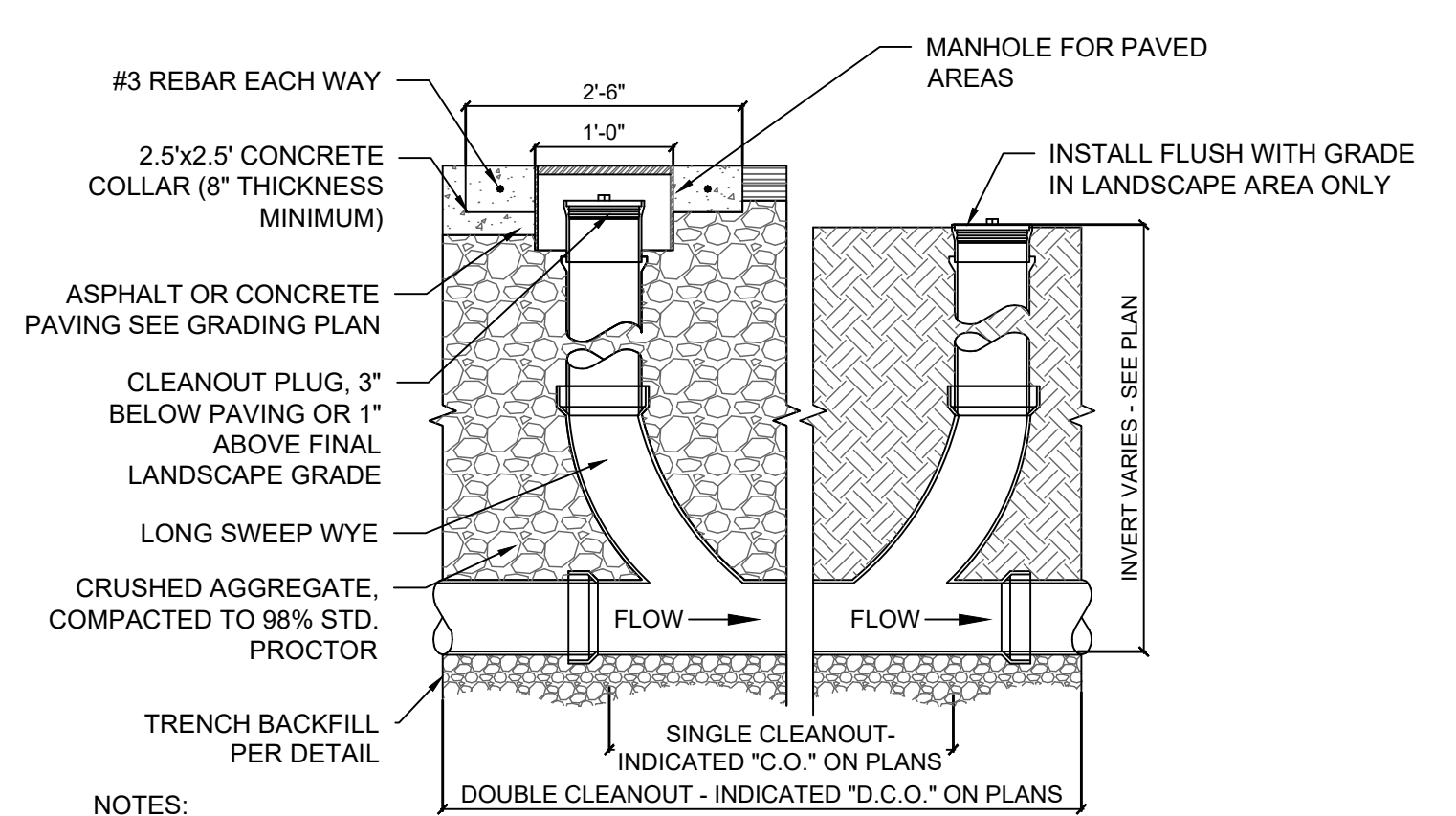
**\*\*NOTE:**  
1. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES PER CURRENT ADA SPECIFICATIONS. COLOR: TERRA COTTA OR APPROVED COLOR BY OWNER.  
2. SLOPE NOTE: IF CIVIL GRADING PLAN INDICATES A CROSS SLOPE GREATER THAN 2% AT ADA SPACES, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER FOR CLARIFICATION AND PLAN REVISION.

**H CURB RAMP**  
C7.0 / N.T.S.



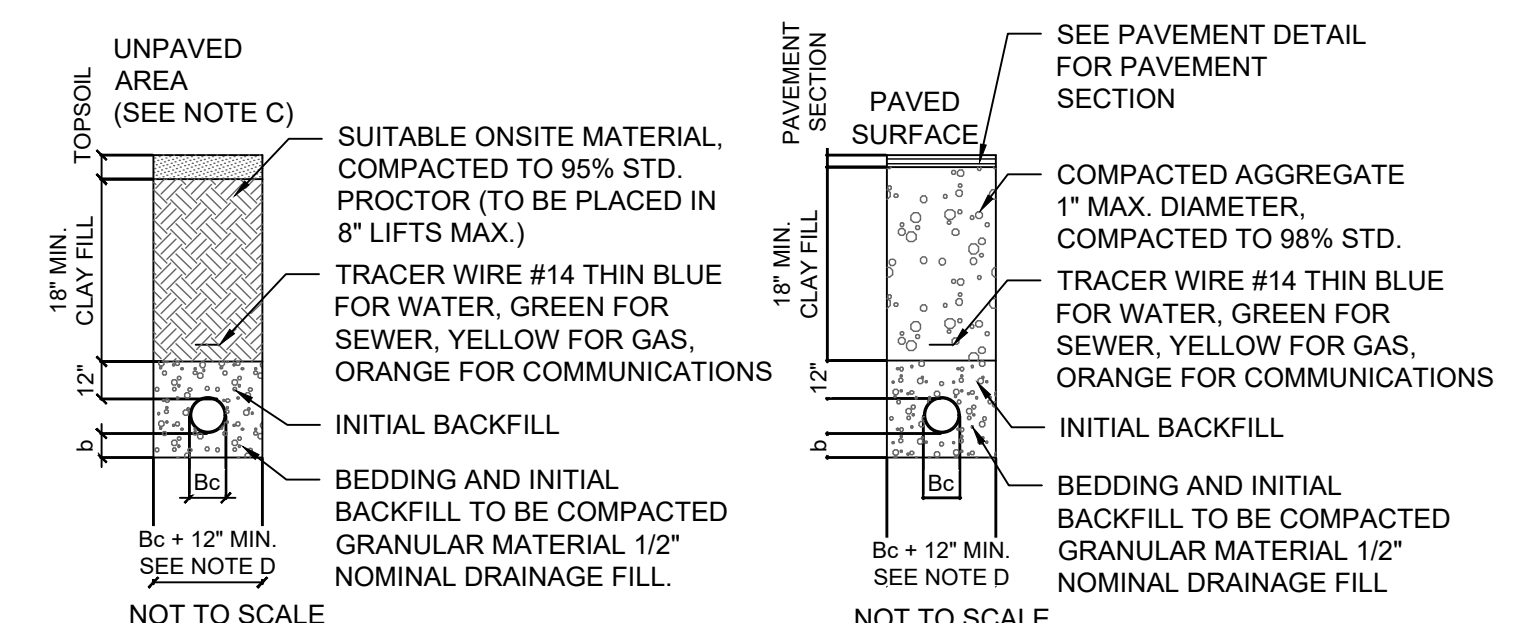
**NOTES**  
A. SUB-GRADE COMPACTION PER SOILS REPORT.  
B. ALL SUB-GRADE AND PAVEMENT OPERATIONS AND MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS OF THE CURRENT MDOT SPECIFICATIONS.  
C. ANY CONCRETE WITHIN PUBLIC RIGHT-OF-WAY SHALL MEET MDOT SPECIFICATIONS.

**I HEAVY DUTY CONCRETE PAVEMENT**  
C7.0 / N.T.S.



**NOTES:**  
A. CLEANOUT LOCATIONS INDICATED ON GRADING AND UTILITY PLANS AS "CO" FOR SINGLE CLEANOUT AND "DCO" FOR DOUBLE CLEAN OUT.  
B. PROVIDE CLEANOUTS AS SPECIFIED:  
1. ZURN Z-1400 CLEANOUTS IN NON-TRAFFIC AREAS AND SIDEWALKS  
2. ZURN-1449 CLEANOUTS IN LANDSCAPED AREAS  
3. ZURN Z-1400 HD CLEANOUTS IN TRAFFIC AREAS WITH A "SERVICE STATION" TYPE MANHOLE, OPW #104 A12 - DOVER CORP./OPW DIV.

**J PIPE CLEANOUT DETAIL**  
C7.0 / N.T.S.



**TRENCH / BACKFILL NOTES**  
A. BEDDING THICKNESS UNDER PIPE BARREL b, SHALL BE 1/8 OF Bc; 6" MIN. Bc IS OUTSIDE DIAMETER OF PIPE AT BELL.  
B. THE HAUNCH AREA OF THE PIPE MUST BE FULLY SUPPORTED; THEREFORE THE BEDDING MATERIAL SHALL BE HAND PLACED AND COMPACTED UNDER THE PIPE HAUNCH.  
C. IF UNPAVED AREA IS WITHIN 10' OF PAVEMENT OR STRUCTURE THEN FOLLOW TRENCH GUIDELINES FOR PAVED AREA.  
D. PIPE DIAMETER OF 4" OR SMALLER SHALL HAVE A MAXIMUM TRENCH WIDTH OF 12".  
E. BEDDING AND INITIAL BACKFILL SHALL BE SAND FOR ALL UTILITY CONDUIT CARRYING WATER, ELECTRIC, GAS, AND TELEPHONE.

**K TRENCH BACKFILL DETAIL**  
C7.0 / N.T.S.

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**GENERAL NOTES**

- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND REGULATIONS.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO BID TO DETERMINE THE EXTENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BIDDING.
- ALL EXISTING MATERIALS TO REMAIN WHICH ARE DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE PATCHED OR REPAIRED TO MATCH THE EXISTING ADJACENT MATERIALS, SO THAT THE REPAIR IS IMPERCEPTIBLE.
- DURING THE COURSE OF CONSTRUCTION, IF THE CONTRACTOR UNCOVERS ANY CODE VIOLATION KNOWN TO HIM OR ANY DISCREPANCY WITH THE DESIGN, CONTRACTOR SHALL NOTIFY THE ARCHITECT OF SUCH IMMEDIATELY.
- CONTRACTOR SHALL ASSEMBLE AND INSTALL MATERIALS/ PRODUCTS IN STRICT ACCORDANCE WITH THE MANUF'S RECOMMENDATIONS AND INDUSTRIAL/ASSOCIATION STANDARDS.
- CONTACT ARCHITECT AND COORDINATE WITH TENANT ANY ADDITIONAL SPECIFICATIONS NOT SPECIFIED HEREIN AND/OR CLARIFICATIONS REGARDING THE CONTRACT DOCUMENTS.
- NO CURRENT SURVEY WAS PERFORMED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE CONSTRUCTION DOCUMENTS (PS&E), WHICH NEGATIVELY IMPACT THE PROJECT. THE ENGINEER AND OWNER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COST WHICH MAY RESULT FROM THE CONTRACTOR'S FAILURE TO NOTIFY THE ENGINEER AND OWNER.
- IT IS STRONGLY RECOMMENDED THAT NO CONTRACTUAL AGREEMENT OF ANY KIND BE SIGNED PRIOR TO RECEIVING AND THOROUGHLY REVIEWING ALL APPROVALS FROM ALL OF THE REGULATORY AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT.

**BUILDING CODE SUMMARY**

APPLICABLE BUILDING CODE:	MICHIGAN BUILDING CODE, 2015 EDITION
APPLICABLE ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE, 2017 EDITION
USE GROUP:	A2 - ASSEMBLY
BUILDING DEPARTMENT PHONE NO:	(937) 748-9791
EXISTING SIGNAGE AREA TO BE REMOVED:	0 SQ FT
NEW SIGNAGE AREA TO BE ADDED:	0 SQ FT
PROJECT ADDRESS:	19353 VERNIER RD HARPER WOODS, MI 48225

**SITE NOTES**

- ALL DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
- BASES, ANCHOR BOLTS, CONDUIT, AND WIRING FOR ALL SIGNS ARE BY THE GENERAL CONTRACTOR.
- EXISTING MENU BOARDS AND PRE-SALE BOARDS TO BE REMOVED FROM BASES, REMOVED FROM SITE, AND DISPOSED UNLESS DIRECTED BY BAILIWICK. CONDUITS TO BE CAPPED TO PREVENT MOISTURE ENTRANCE.

**UTILITY NOTES**

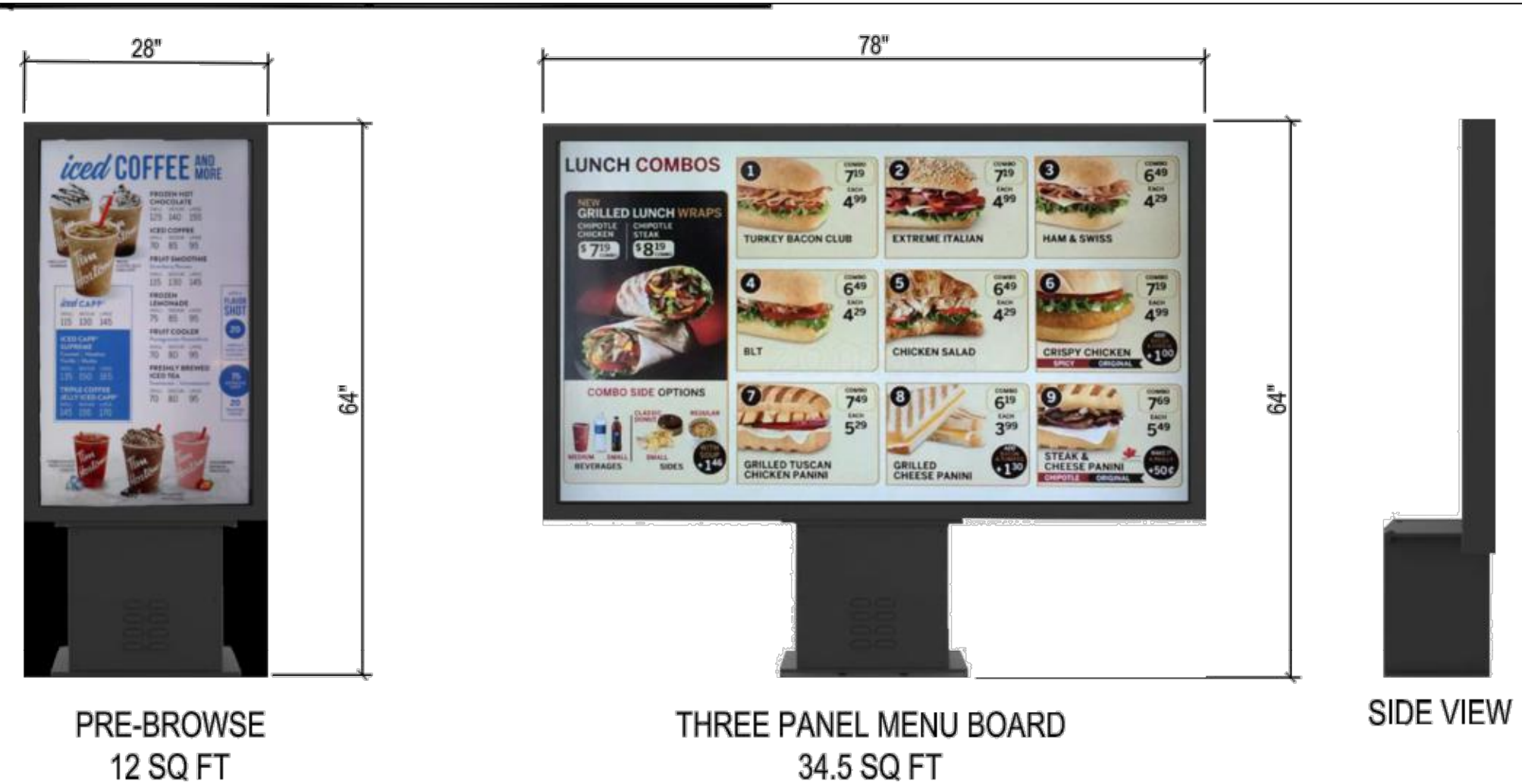
- ALL ELECTRICAL/CONDUIT RUNS ARE SCHEMATIC ONLY. CONDUIT SIZES AND ROUTING PROVIDED BY BAILIWICK.
- IT SHALL BE THE SIGN INSTALLER'S RESPONSIBILITY TO ENSURE THE PROPOSED SIGN LOCATION DOES NOT INTERFERE WITH ANY UTILITIES AND COMPLIES WITH ALL APPLICABLE CITY CODES. SIGN INSTALLER SHALL ALSO OBTAIN APPROVAL FROM THE APPROPRIATE ENTITIES PRIOR TO INSTALLING THE SIGN OVER ANY EXISTING EASEMENTS.
- REFER TO THE BUILDING ELECTRICAL DRAWINGS FOR UTILITY SERVICE ENTRANCE LOCATIONS, SIZES, AND CIRCUITING.

**DEMOLITION NOTES**

- CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO: DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
- ALL WORK ON THIS PLAN SHALL BE DONE IN STRICT ACCORDANCE WITH SITE WORK SPECIFICATIONS.
- CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURE. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, OR OTHER MEANS OF PROTECTION, INCLUDING BUT IS NOT LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE PUBLIC DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO: CONSTRUCTION FENCING, BARRICADES, SIGNAGE, ETC.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

**SCOPE OF WORK**

REMOVE EXISTING MENU BOARDS AND CAP CONDUIT PER SITE NOTES. INSTALL NEW MENU BOARDS AND ALL REQUIRED CONDUIT AND WIRING. REFER TO MANUFACTURERS BOARD PUBLISHED INSTALLATION INSTRUCTIONS.



**NEW MENU BOARDS AND PRE-BROWSE BOARDS**  
NOT TO SCALE



**EXISTING MENU BOARDS TO BE REMOVED**  
NOT TO SCALE

REVISION / DATE / DESCRIPTION

100% SET	05/05/22
PERMIT SET	07/12/22

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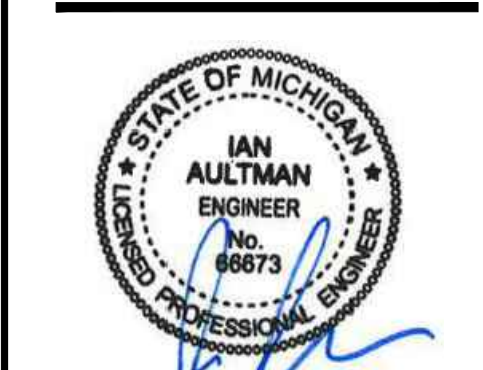
**PROJECT**

TIM HORTONS  
HARPER WOODS, MI

19353 VERNIER RD  
HARPER WOODS, MI 48225  
WAYNE COUNTY

**SHEET TITLE**

SITE DETAILS AND NOTES



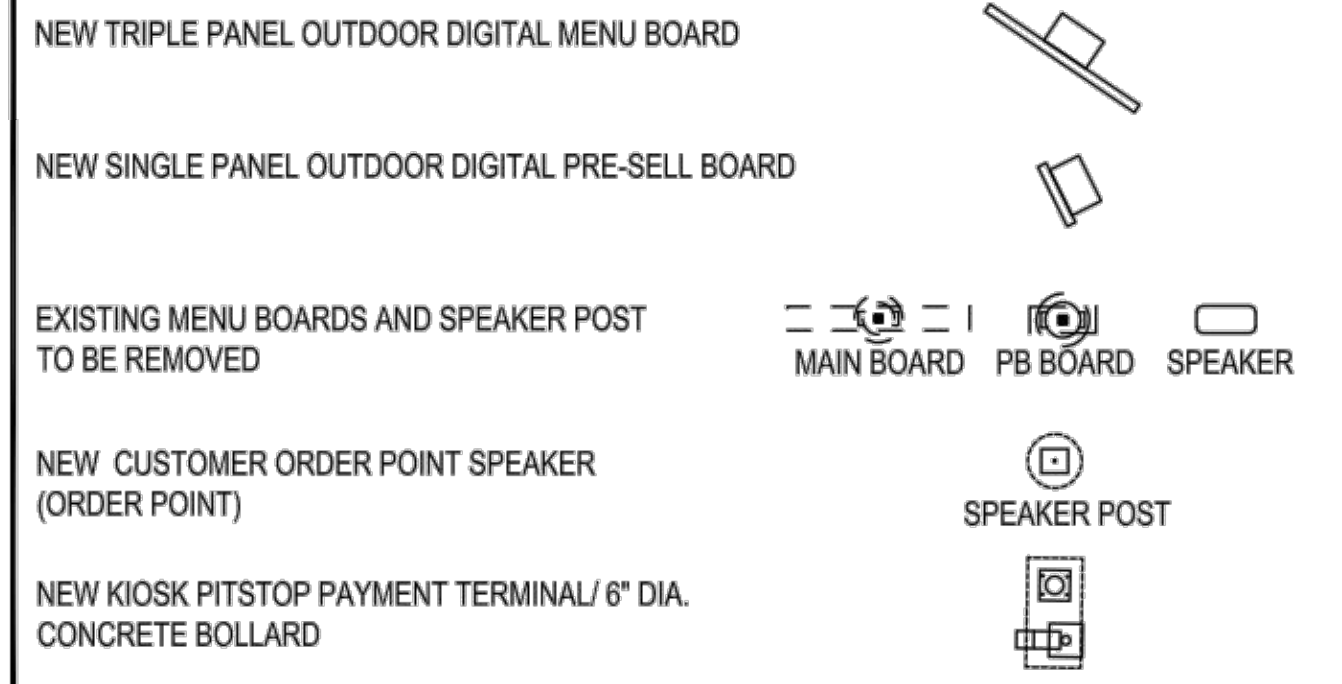
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**CHECKED BY:** SEG

**PROJECT NO:** 40509-11

**DRAWING**

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**SITE PLAN LEGEND**



**SITE PLAN KEY NOTES**

- 1 REMOVE EXISTING MENU BOARDS. SEE SITE NOTE #3
- 2 REMOVE EXISTING SPEAKER POST. SEE SITE NOTE #3
- 3 HME SPEAKER POST REFER TO STRUCTURAL FOR FOOTING INFORMATION
- 4 TRIPLE PANEL MENU BOARD. REFER TO STRUCTURAL SHEET FOR FOOTING INFORMATION.
- 5 SINGLE PANEL MENU BOARD. REFER TO STRUCTURAL SHEET FOR FOOTING INFORMATION.
- 6 KIOSK PITSTOP PAYMENT TERMINAL REFER TO STRUCTURAL FOR FOOTING INFORMATION.
- 7 6" DIA. CONCRETE FILLED 36" MIN HIGH STD. PIPE BOLLARD.

**ELECTRICAL PLAN NOTES**

1. INTENT OF DESIGN: DISCONNECT POWER AND DATA FEEDS FROM EXISTING MENU BARDS AND PRE-SALE BOARDS, REMOVE AND DISPOSE.
2. CONTRACTORS ARE TO INSTALL NEW CONDUIT, ELECTRICAL WIRE AND DATA CABLE.
3. NOTED CIRCUIT NUMBERS DERIVED FROM EXISTING PANEL DIRECTORY INSERTS, CONTRACTOR TO FIELD VERIFY AND UTILIZE EXISTING BRANCH CIRCUITS FEEDING THE PRIMARY (BRANCH CIRCUIT 1) AND SECONDARY (BRANCH CIRCUIT 2) MENU BOARDS AND PRE-BROWSE BOARDS.
4. COORDINATE ALL CONDUIT AND CIRCUITING SIZE REQUIREMENTS WITH MANUFACTURERS INSTALL REQUIREMENTS
5. ALL NEW PULLBOXES / HANDHOLDS SHALL BE A MINIMUM OF TIER 8 QUAZITES BOX OR APPROVED EQUAL.
6. PROVIDE DEDICATED NEUTRAL FOR ALL CIRCUITS, NO SHARED NEUTRALS ALLOWED.

**CONDUIT PLAN KEY NOTES**

- 1 ONE 3/4" PVC CONDUIT (4-#12, 1-#12 GRD, 1-#12 IG) FROM PANEL CP TO J-BOX
- 2 ONE 3/4" PVC CONDUIT (2-#12, 1-#12 GRD, 1-#12 IG) FROM J-BOX TO NEW PRE-SELL BOARD
- 3 ONE 3/4" PVC CONDUIT (2-#12, 1-#12 GRD, 1-#12 IG) FROM J-BOX TO NEW MAIN MENU BOARD
- 4 ONE 2" PVC CONDUIT (CAT6 DATA CABLES) FROM BUILDING TO J-BOX
- 5 ONE 2" PVC CONDUIT (CAT6 DATA CABLES) FROM J-BOX TO MENU BOARD
- 6 ONE 2" PVC CONDUIT (CAT6 DATA CABLES) FROM J-BOX TO PRE-SALE BOARD
- 7 NOT USED
- 8 ONE 3/4" PVC CONDUIT (SPEAKER WIRE) FROM EXIST SPEAKER TO NEW SPEAKER LOCATION
- 9 ONE 2" PVC CONDUIT (CAT6 DATA CABLES) FROM KIOSK TO J-BOX

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PROJECT  
**TIM HORTONS  
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 HARPER WOODS, MI 48225  
 WAYNE COUNTY

SHEET TITLE  
**SITE DETAILS AND  
 NOTES**



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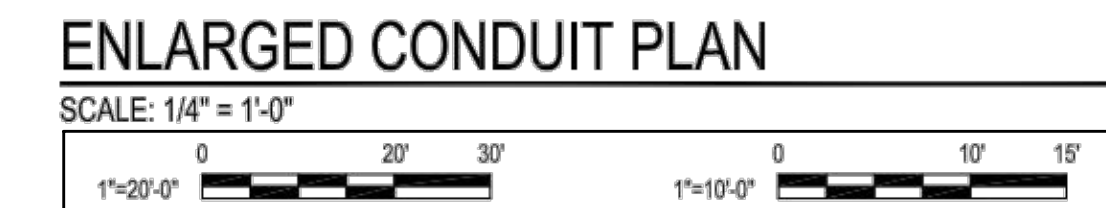
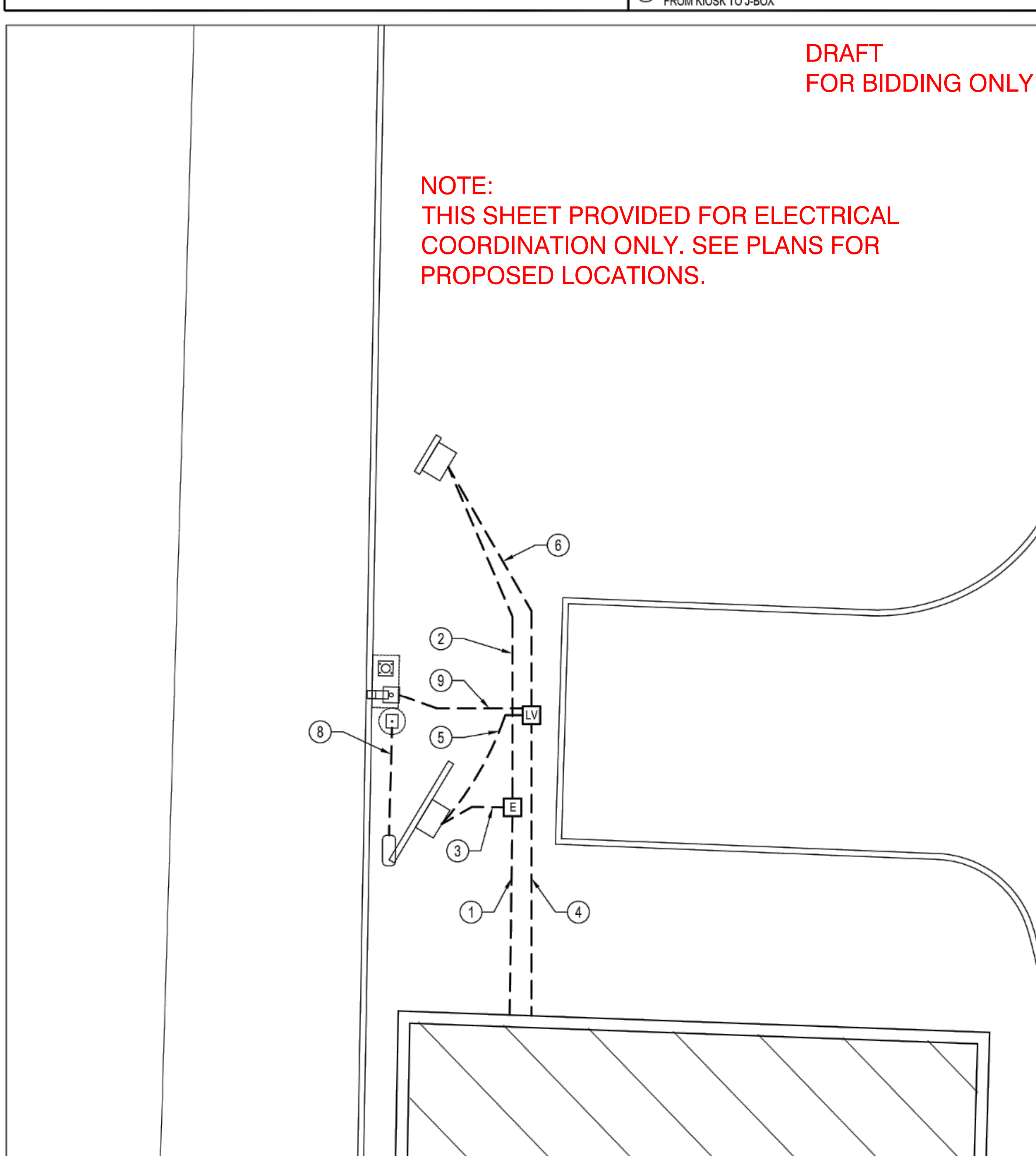
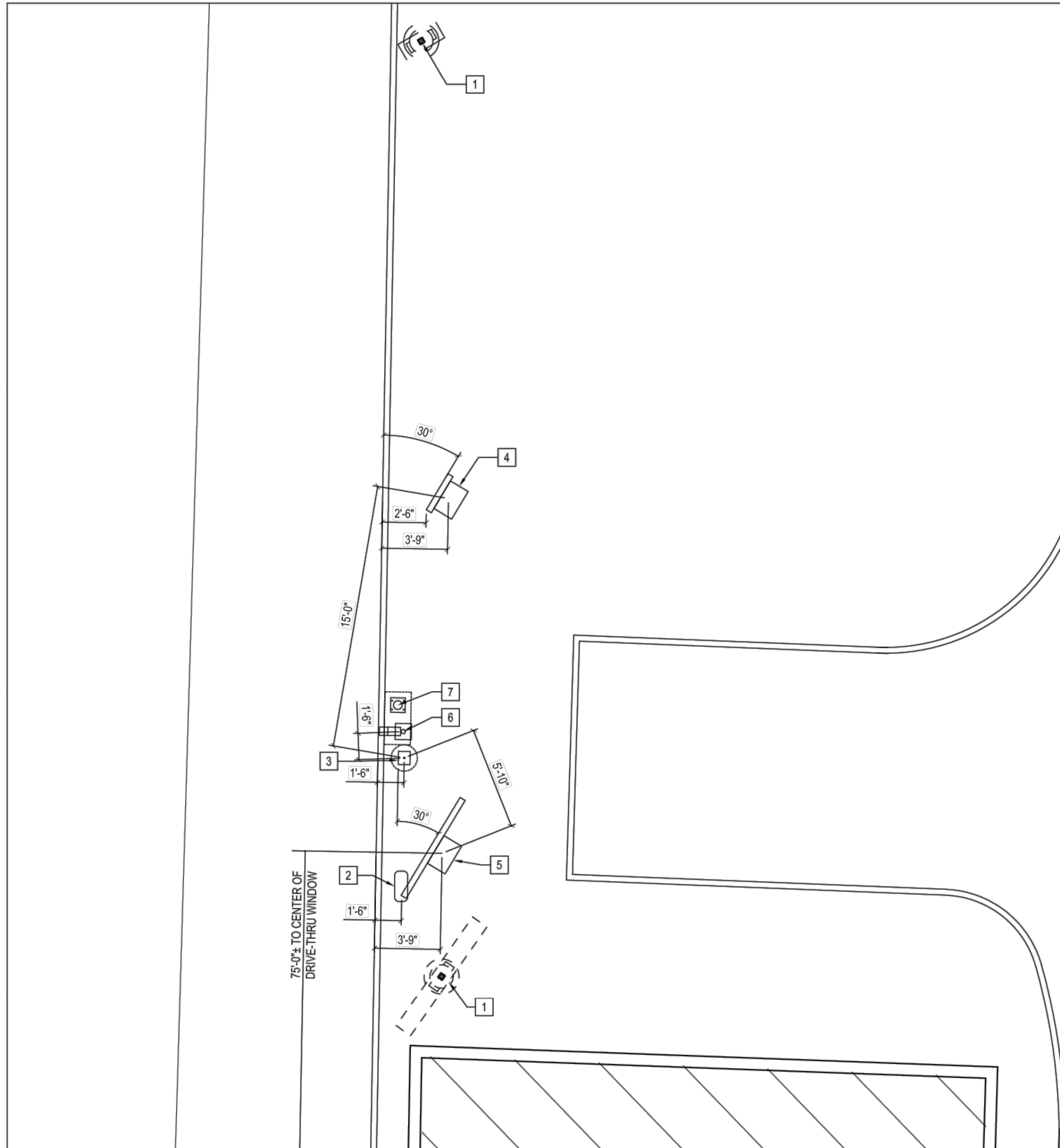
PROJECT NO: 40509-11

DRAWING

**C-7.2**

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 FOR BIDDING ONLY**

**NOTE:  
 THIS SHEET PROVIDED FOR ELECTRICAL  
 COORDINATION ONLY. SEE PLANS FOR  
 PROPOSED LOCATIONS.**



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SHEET TITLE  
**SITE DETAILS AND NOTES**



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PROJECT NO: 40509-11  
DRAWING

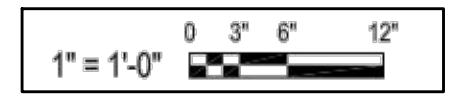
**GENERAL NOTES:**

- THE FOLLOWING CODES WERE USED IN DESIGN:  
2017 OHIO BUILDING CODE WITH AUGUST 2018 UPDATE ERRATA 02-08-19, IBC 2015 AND ASCE-7 (2010).
- STRUCTURAL LOADINGS:  
WIND:  
WIND (3 SECOND GUST)..... $V_{ULT} = 115$  MPH  
 $V_{ASD} = 90$  MPH  
EXPOSURE..... C  
RISK CATEGORY..... II  
WIND BASE SHEAR..... $V_b = 400$  LBS (PRE-SELL BOARD)  
 $V_b = 700$  LBS (MENU BOARD)  
SEISMIC:  
SEISMIC IMPORTANCE FACTOR ( $I_e$ )..... 1.0  
MAPPED SPECTRAL RESPONSE ACCELERATIONS..... $S_s = 0.145g$   
 $S_1 = 0.073g$   
DESIGN SPECTRAL RESPONSE ACCELERATIONS..... $S_{DS} = 0.155g$   
 $S_{D1} = 0.117g$   
SITE CLASS..... D  
SEISMIC DESIGN CATEGORY..... B  
SEISMIC RESPONSE COEFFICIENT ( $C_s$ )..... 0.044  
COMPONENT RESPONSE MODIFICATION FACTOR ( $R_p$ )..... 3.5  
SEISMIC DESIGN FORCE ( $F_p$ )..... 0.01 KIPS (PRE-SELL BOARD)  
0.03 KIPS (MENU BOARD)  
FROST DEPTH..... 2'-8"
- ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE.
- PRESUMPTIVE MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE ( $S_u$ ) OF 100 PSF. CONTRACTOR SHALL CONFIRM AN ALLOWABLE BEARING PRESSURE ( $S_u$ ) OF 1500 PSF. ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED PRIOR TO CONCRETE PLACEMENT.
- FOUNDATION SHALL NOT BE PLACED ON OR AT THE TOP OF A SLOPE EXCEEDING 3:1 WITHOUT EVALUATION BY A PROFESSIONAL LICENSED IN THAT STATE. DO NOT PLACE FOUNDATION IN FILL MATERIAL.
- DEPTH OF PIER FOUNDATIONS MAY BE LOWERED IF NEEDED TO OBTAIN LOCAL FROST DEPTH ELEVATIONS OR IF REQUIRED DUE TO POOR SOIL CONDITIONS. VERIFY FROST DEPTH ELEVATIONS WITH LOCAL CODE OFFICIAL.
- ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS AND CONTRACTOR (INSTALLER) SHALL COORDINATE PLACEMENT TO MAINTAIN 2" CLEAR TO ANCHOR BOLTS.
- COORDINATE LOCATIONS OF SIGNS AND FOUNDATIONS WITH SITE PLAN.
- CONTRACTOR SHALL CUT EXCESS SONOTUBE FROM AROUND THE PERIMETER OF THE PIER FOUNDATION AFTER PLACEMENT OF BOARD (PRIOR TO LEAVING SITE).
- CONTRACTOR SHALL NOT DEVIATE FROM STRUCTURAL DRAWING WITHOUT PRIOR WRITTEN CONSENT AND INSTRUCTIONS REGARDING ANY CHANGE TO THE CONTRACT DRAWINGS. ANY DEVIATION FROM THIS DESIGN OR FROM ANY PART OF THIS DRAWING WITHOUT PRIOR WRITTEN CONSENT OF THIS ENGINEER SHALL VOID ALL LIABILITY ASSOCIATED WITH THIS WORK.
- SPECIAL INSPECTIONS ARE NOT REQUIRED FOR THESE SIGN FOUNDATIONS.

**CONCRETE NOTES:**

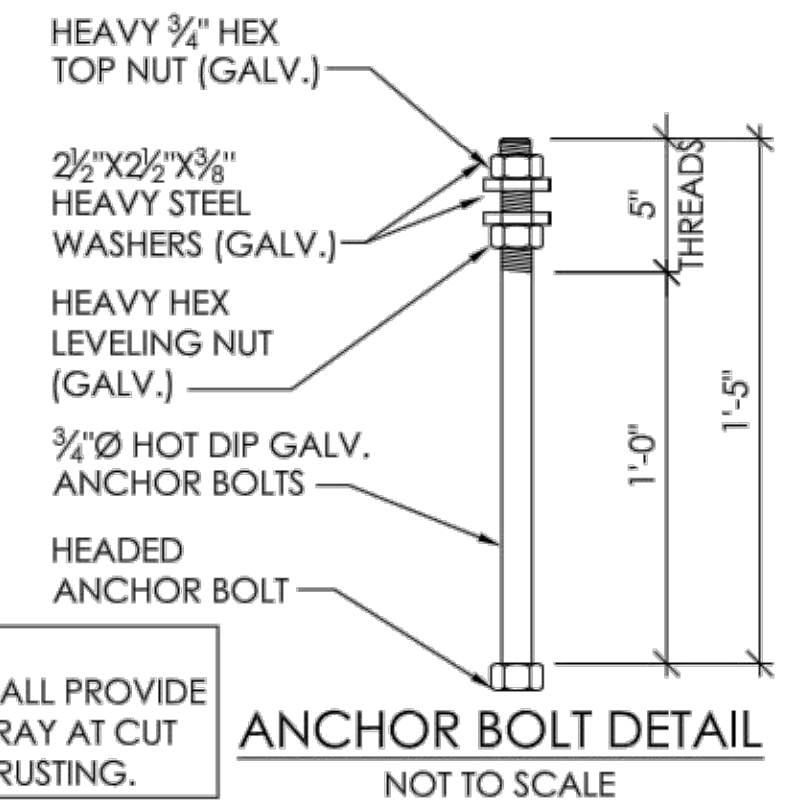
- ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR EARTH FILL COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D698 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE. CONTRACTOR SHALL CONFIRM SOIL CAPACITY PRIOR TO CONCRETE PLACEMENT.
- ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION. VERIFY WITH LOCAL BUILDING OFFICIAL.
- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
- ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 "STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- ALL CAST-IN-PLACE CONCRETE SHALL ATTAIN AN ULTIMATE COMPRESSIVE STRENGTH ( $f_c$ ) OF 3000 PSI AT AN AGE OF 28 DAYS UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60 DEFORMED BARS, UNLESS OTHERWISE NOTED.
- CONCRETE PROTECTION FOR REINFORCING AS WELL AS PLACING AND FABRICATION OF REINFORCING SHALL BE IN ACCORDANCE WITH THE "THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS" (ACI 318).
- ALL CAST-IN-PLACE CONCRETE SHALL BE AIR-ENTRAINED TO 6% ( $\pm 1\frac{1}{2}\%$ ). WATER/CEMENT RATIO SHALL NOT EXCEED 0.48.
- THE MINIMUM CONCRETE COVER FOR THE PROTECTION OF REINFORCEMENT SHALL BE AS NOTED.
- BEFORE PLACING CONCRETE, ALL EMBEDDED ITEMS SHALL BE PROPERLY PLACED, ACCURATELY POSITIONED, AND MAINTAINED SECURELY IN PLACE. NO "WET SETTING" IS ALLOWED.
- AGGREGATES IN NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (HARDROCK).
- PORTLAND CEMENT SHALL BE TYPE II FOR ALL CONCRETE CONFORMING TO ASTM C150, LOW ALKALI.
- FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS N OR F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 25% TOTAL CEMENTITIOUS MATERIALS BE WEIGHT IF THE MIX DESIGN IS PROPORTIONED PER ACI318, SECTION 5.3. CONTRACTOR SHALL FORWARD DESIGN MIX TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
- CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.
- DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES. WATER USED IN MIX SHALL BE CLEAN AND POTABLE.

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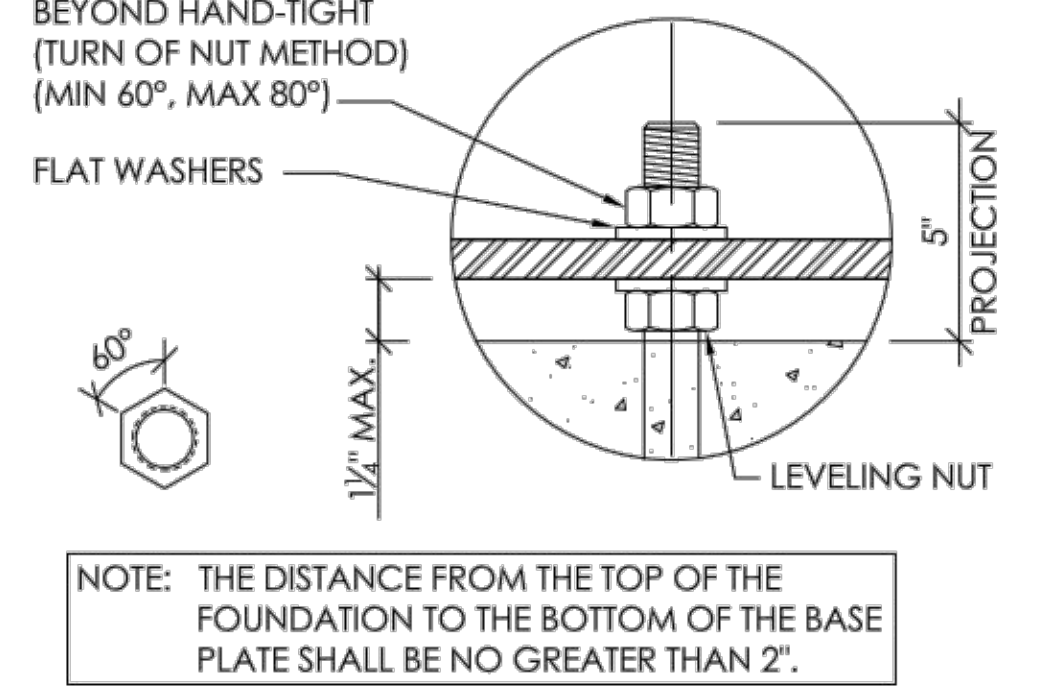


**ANCHOR BOLT, NUT AND WASHER NOTES:**

- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE ON TOP OF FOUNDATION.
- USE F1554 GRADE 36 BOLTS MINIMUM.
- USE HOT-DIP GALVANIZED BOLTS IN ACCORDANCE WITH ASTM A-123.
- ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE.
- ANCHOR BOLTS, NUTS AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER.
- DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF FRAME.

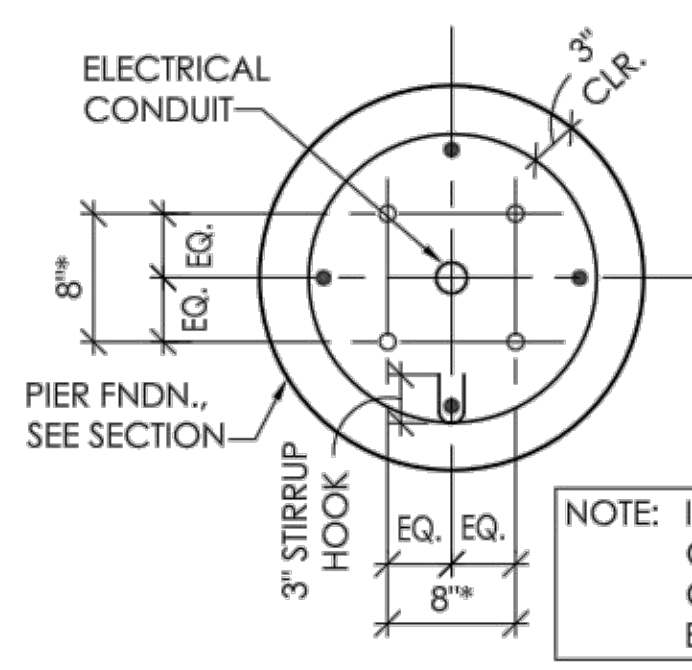


**ANCHOR BOLT DETAIL**  
NOT TO SCALE



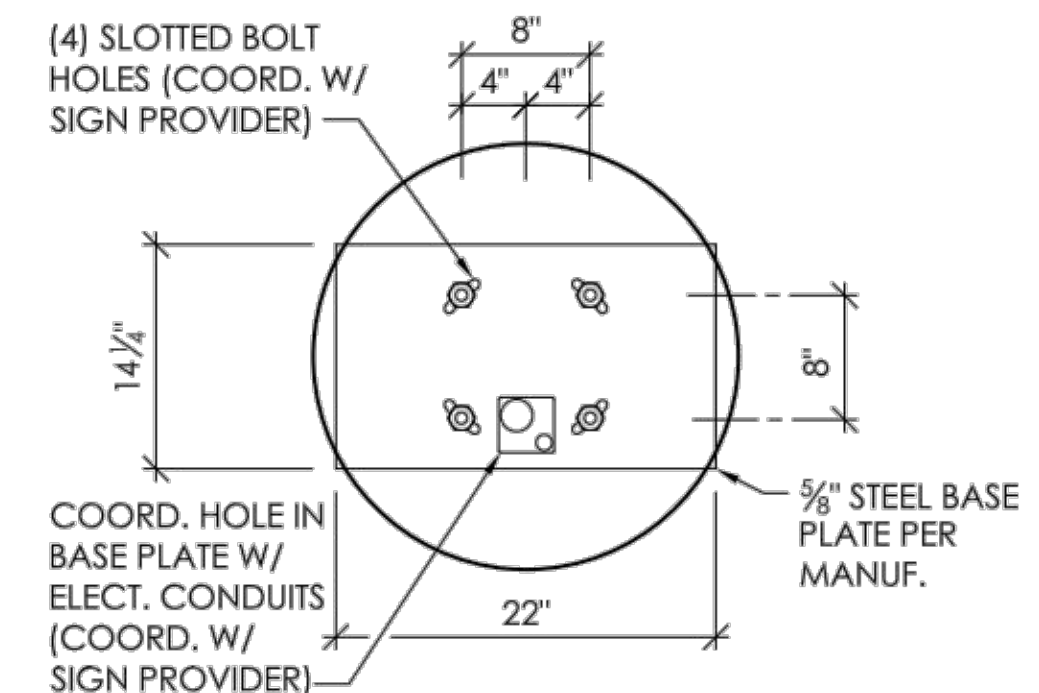
**TYPICAL CONNECTION DETAIL**  
NOT TO SCALE

NOTE: \*DIMENSIONS SHALL BE VERIFIED WITH SIGN FRAME AND BASE PLATE PRIOR TO CONCRETE PLACEMENT.

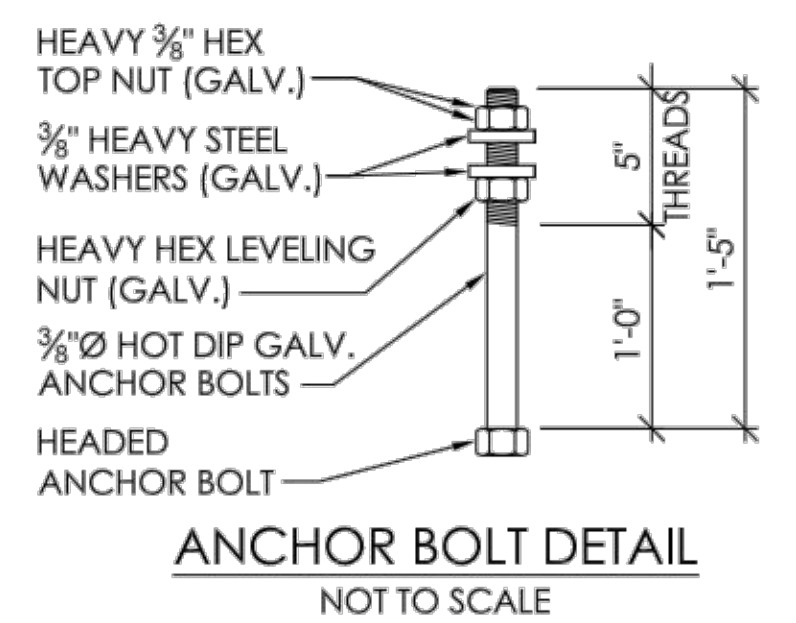


**TYPICAL ANCHOR BOLT PATTERN**  
NOT TO SCALE

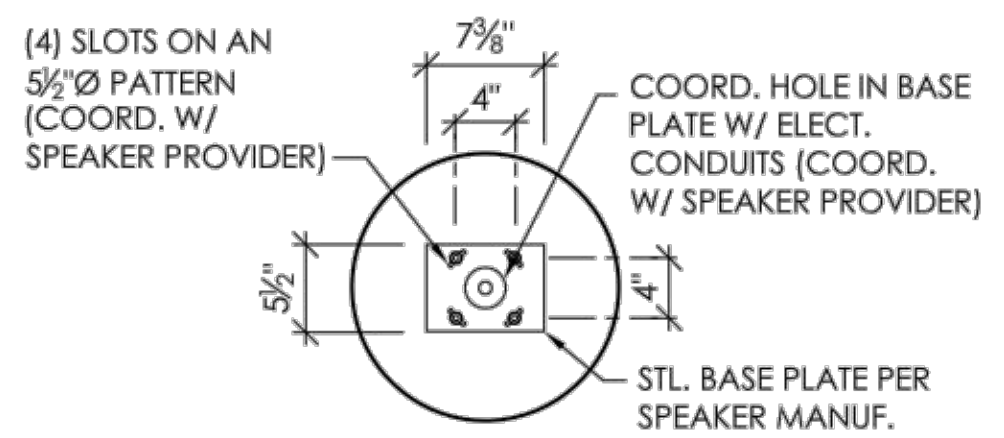
NOTE: COORDINATE CONDUIT PLACEMENT INSIDE SIGN BASE PRIOR TO CONCRETE PLACEMENT.



**TYPICAL SIGN BASE PLATE DETAIL**  
NOT TO SCALE

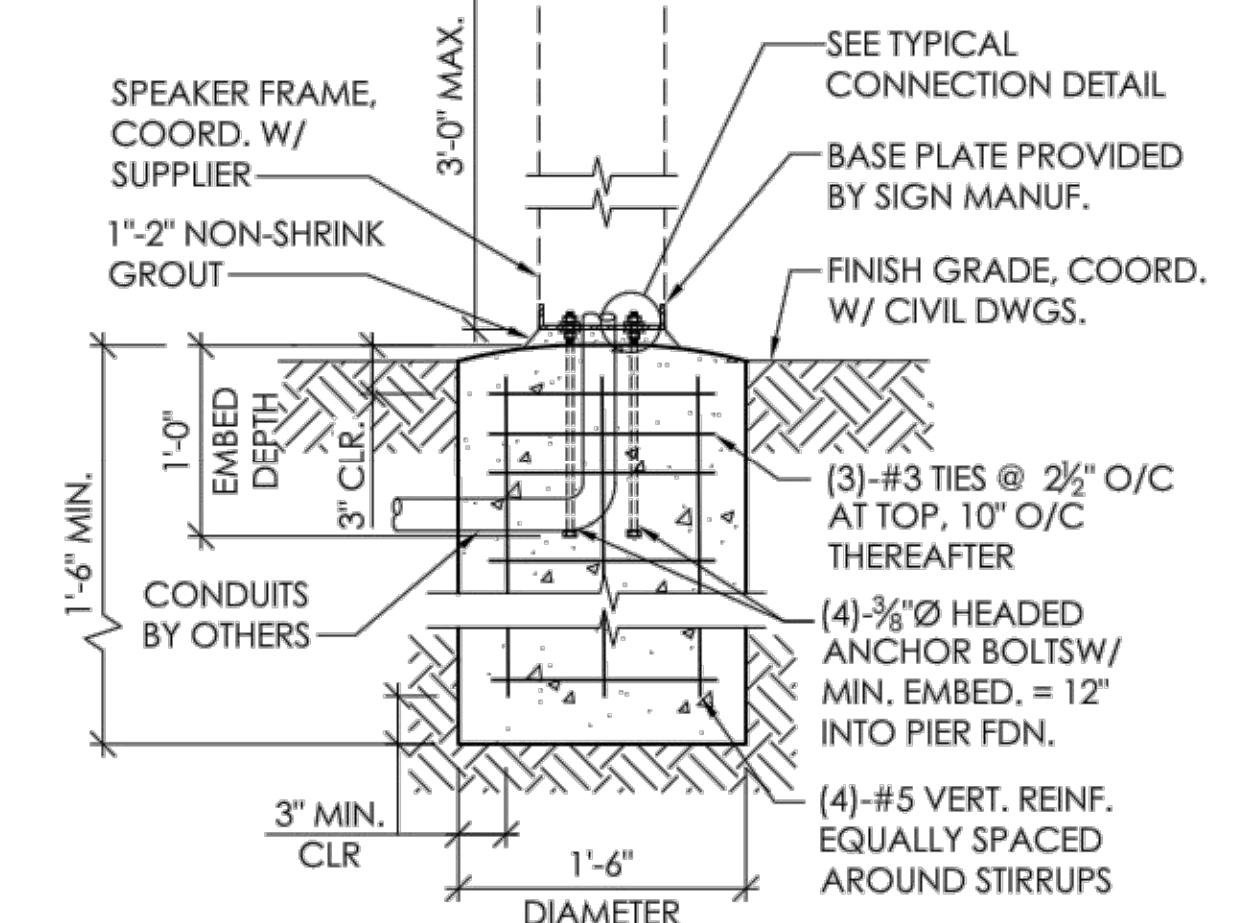


**ANCHOR BOLT DETAIL**  
NOT TO SCALE



**TYPICAL SPEAKER BASE PLATE DETAIL**  
NOT TO SCALE

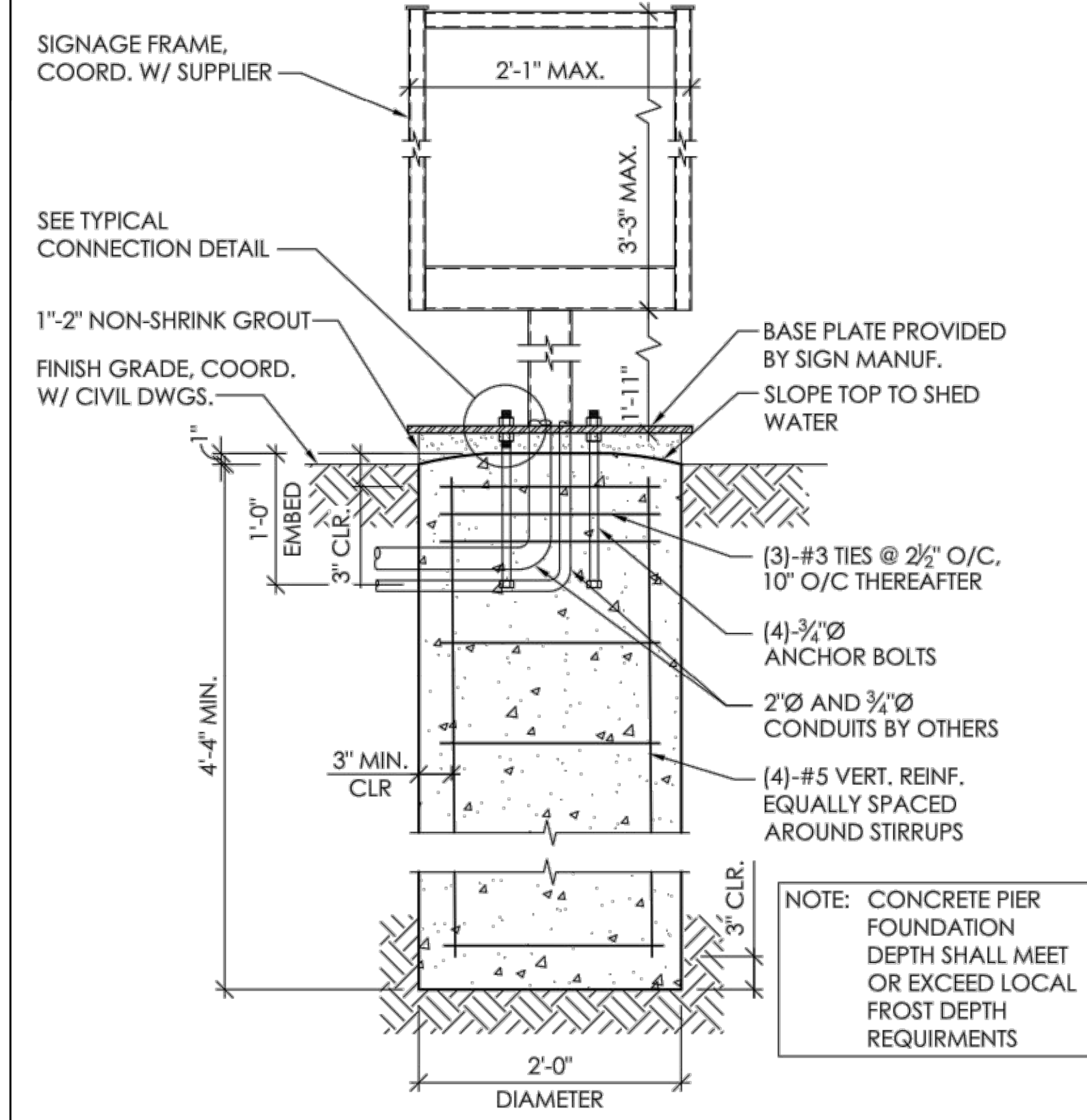
NOTE: CONCRETE PIER FOUNDATION DEPTH SHALL MEET OR EXCEED LOCAL FROST DEPTH REQUIREMENTS



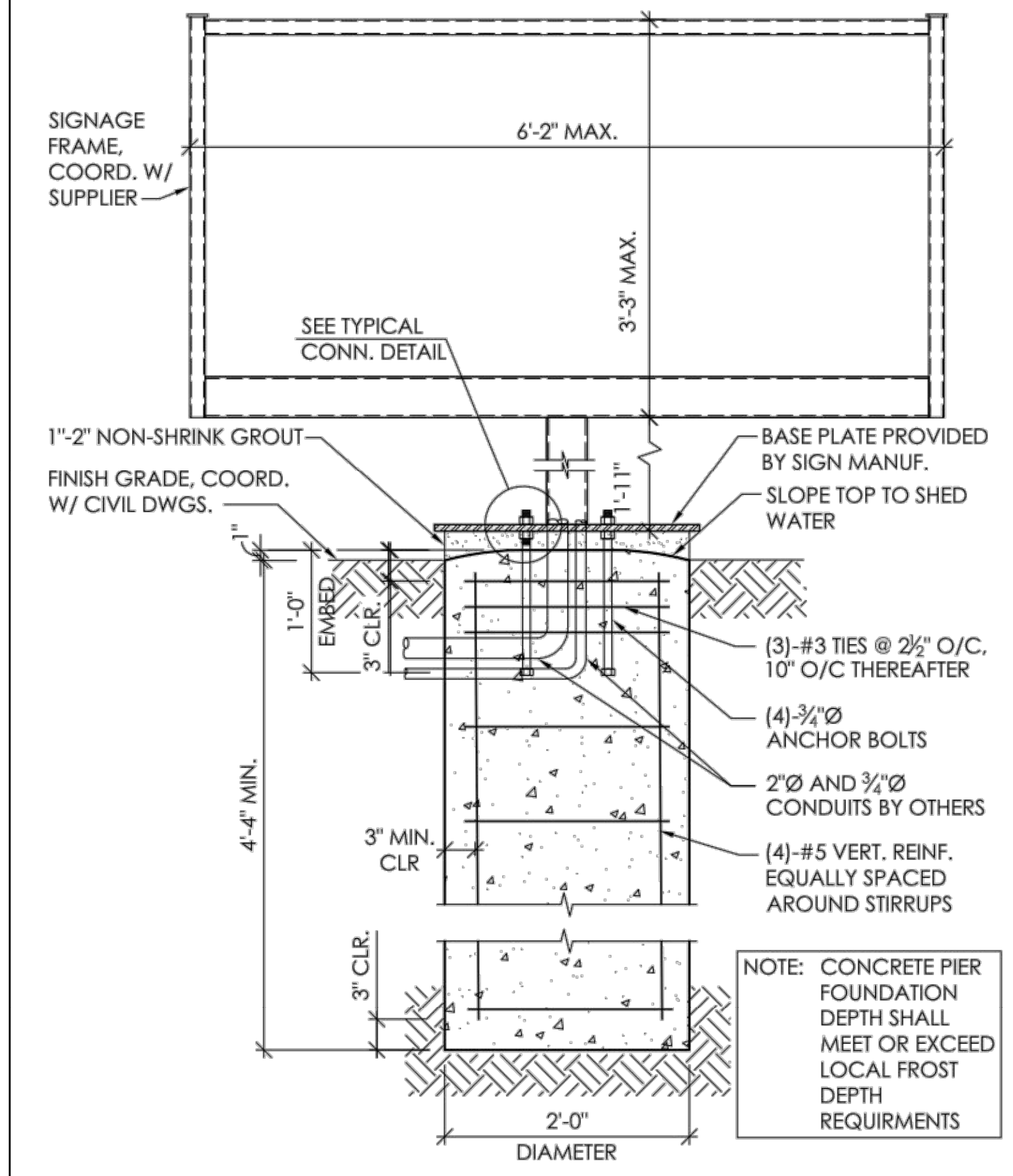
**FOUNDATION ELEVATION (SPEAKER)**  
1" = 1'-0"

**STEEL NOTES:**

- REINFORCEMENT: GRADE 60.
- ALL HARDWARE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123 UNLESS OTHERWISE NOTED.
- ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER. COORDINATE WITH MANUFACTURER.  
A. ANCHOR BOLTS: ASTM F1554, GRADE 36  
B. WASHERS: ASTM F-436  
C. NUTS: A563DH OR A194-2H
- FIELD HEATING TO BEND STEEL SHALL NOT BE ALLOWED.
- ANCHOR BOLTS TO BE CUT TO APPROPRIATE HEIGHT AFTER INSTALLATION OF POLE. APPLY COLD GALVANIZING TO CUT BOLT ENDS.
- CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
- STRUCTURAL SIGN FRAME AND BASE PLATE DETAILS ARE PROVIDED BY SIGN MANUFACTURER. COORDINATE ALL ATTACHMENTS OF SIGN WITH MANUFACTURER. REFER TO SIGN MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION.



**FOUNDATION SECTION (PRE-SELL BOARD)**  
1" = 1'-0"



**FOUNDATION SECTION (MENU BOARD)**  
1" = 1'-0"

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**PROJECT**  
 TIM HORTONS  
 HARPER WOODS, MI  
 19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

**SHEET TITLE**  
 STORMWATER  
 POLLUTION  
 PREVENTION PLAN



**DRAWN BY:** JJC  
**CHECKED BY:** SEG  
**PROJECT NO:** 40509-11  
**DRAWING**

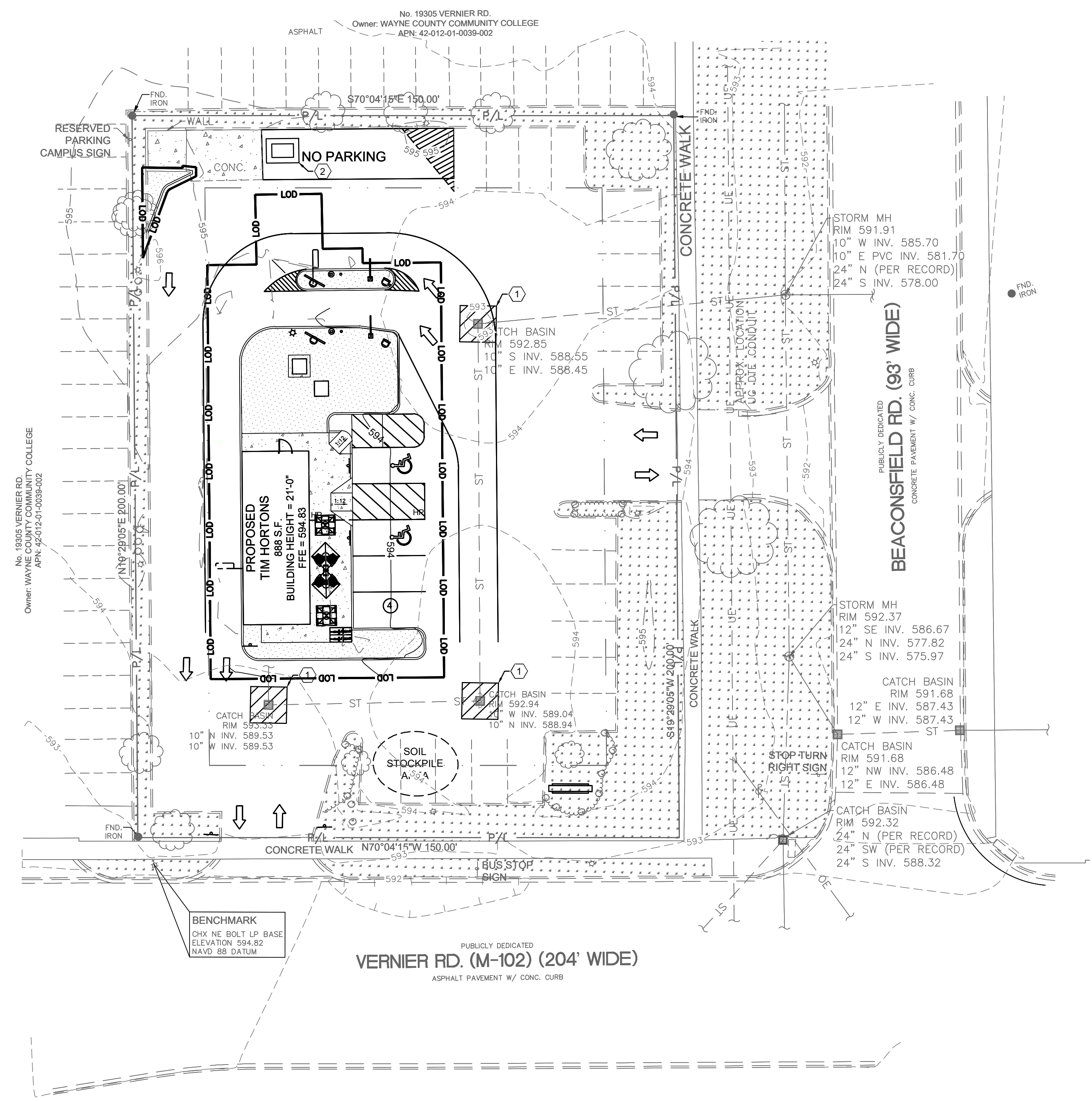
C-8.0

**KEYED NOTES:**

- ① INLET PROTECTION, SEE DETAIL B ON SHEET C-9.0.
- ② CONCRETE WASHOUT, SEE DETAIL ON SHEET C-9.0. A MANUFACTURED OUTPAK CONCRETE WASHOUT BIN OR OTHER APPROVED EQUAL MAY BE UTILIZED TO LIMIT DISTURBANCE OF SURROUNDING AREAS.

**LEGEND**

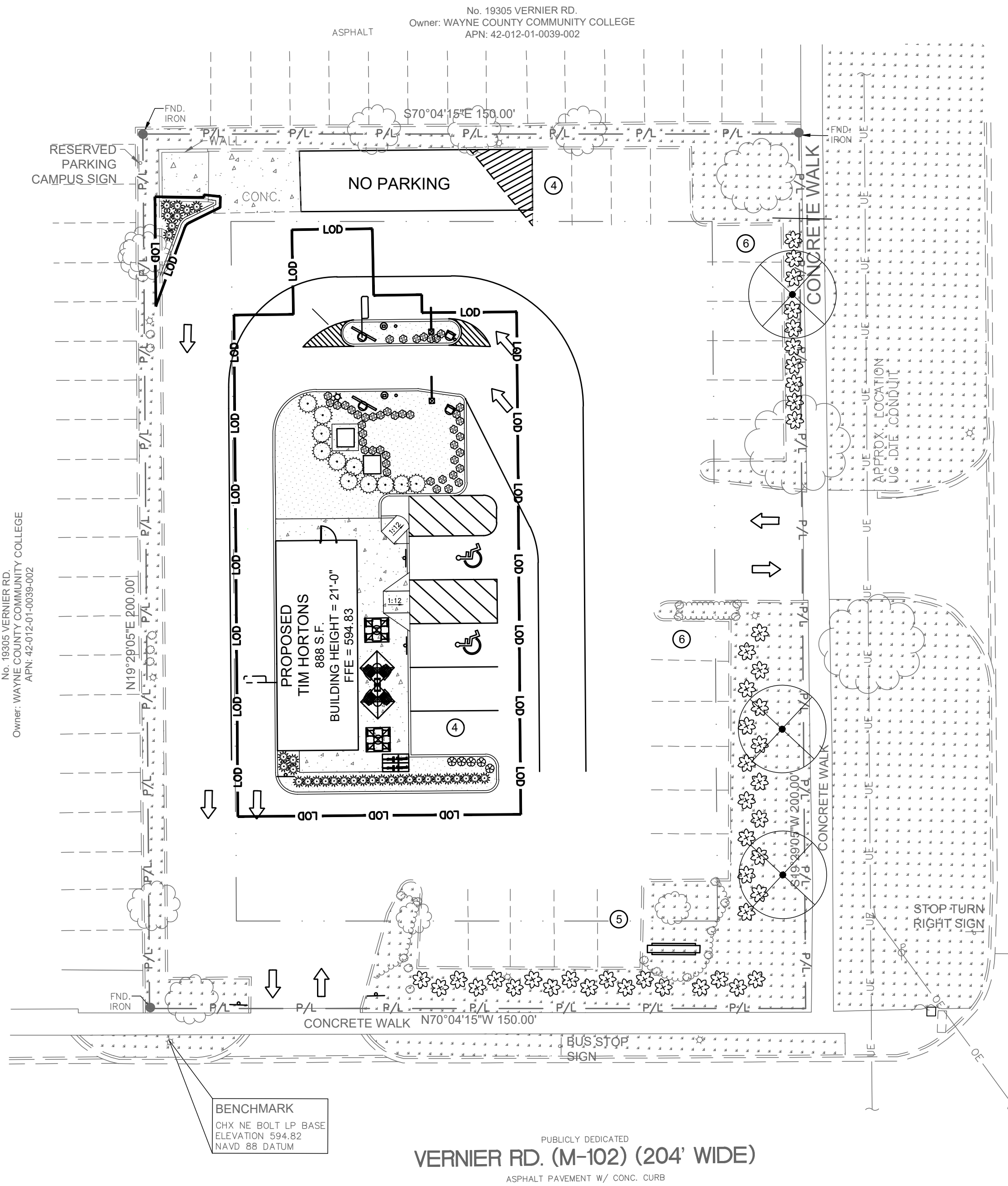
EXISTING	PROPOSED	DESCRIPTION
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		INLET PROTECTION
		CONCRETE WASHOUT



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### PROPOSED PLANT SCHEDULE

DECIDUOUS TREES	BOTANICAL NAME	QTY	SIZE	SPACING
AA	ACER RUBRUM 'ARMSTRONG' ARMSTRONG MAPLE	3	2.5" CAL	SEE PLAN
SHRUBS				
SB	SPIRAEA X B, 'ANTHONY WATERER' ANTHONY WATERER SPIRAEA	33	30" HT	30" OC
TE	THUJA OCCIDENTALIS 'SMARAGD' EMERALD GREEN ARBORVITAE	11	5' HT	3' OC
GROUND COVERS/PERENNIALS				
CA	CALAMGROSTIS A. 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS	33	3 GAL	30" OC
HR	HEMEROCALLIS 'HAPPY RETURNS' HAPPY RETURNS DAYLILY	5	2 GAL	18" OC
LS	LIRIOPE SPICATA CREEPING LILYTURF	44	1 GAL	12" OC

**GENERAL SOD NOTE:**

- ALL LAWN AREAS DESIGNATED TO BE SODDED, SHALL BE SODDED WITH A BLENDED DURABLE BLUEGRASS SOD, TYPICALLY GROWN IN THE REGION. ALL TURF SHALL BE PLACED ON A MINIMUM 3" PREPARED TOPSOIL, AND WATERED DAILY UNTIL ESTABLISHMENT. IN AREAS SUBJECT TO EROSION, SODDED LAWN SHALL BE STABILIZED WHERE NECESSARY, AND LAID PERPENDICULAR TO SLOPES
- SOD INSTALLATION SHALL OCCUR ONLY:  
 SPRING: APRIL 1 TO JUNE 1  
 FALL: AUGUST 15 TO OCTOBER 15

**GENERAL SEED NOTE:**

- ALL LAWN AREAS DESIGNATED TO BE SEEDED, SHALL BE HYDRO-SEEDED WITH SPECIFIED BLENDS, AND STABILIZED WITH WOOD CELLULOSE FIBER MULCH (2,000 LBS PER ACRE). IN AREAS SUBJECT TO EROSION, SEEDED LAWN SHALL BE FURTHER STABILIZED WHERE NECESSARY WITH BIODEGRADABLE EROSION BLANKET AND STAKED UNTIL ESTABLISHED.
- ALL SEED SHALL BE APPLIED OVER A MINIMUM 3" PREPARED TOPSOIL, AND SHALL BE KEPT MOIST AND WATERED DAILY UNTIL ESTABLISHED.
- SEEDING INSTALLATION SHALL OCCUR ONLY:  
 SPRING: APRIL 1 TO JUNE 1  
 FALL: AUGUST 15 TO OCTOBER 15

**TYPICAL SEEDED LAWN MIX:**

- ALL LAWN AREAS DESIGNATED TO BE SEEDED, SHALL BE HYDROSEEDED WITH TYPICAL DROUGHT TOLERANT, DURABLE BLENDED SEED MIX, AT A RATE OF 220 LBS PER ACRE.
- MIX IS COMPRISED OF:  
 30% NITE HAWK PERENNIAL RYE  
 30% KENTUCKY BLUEGRASS  
 20% CREEPING RED FESCUE  
 10% MERIT KENTUCKY BLUEGRASS  
 10% NEWPORT KENTUCKY BLUEGRASS

**NOTE:**  
 GUY DECIDUOUS TREES ABOVE 3" CALIPER, STAKE TREES BELOW 3" CALIPER STAKE TREES JUST BELOW FIRST BRANCH USING 2-3" WIDE BELT-LIKE NYLON OR PLASTIC STRAPS.

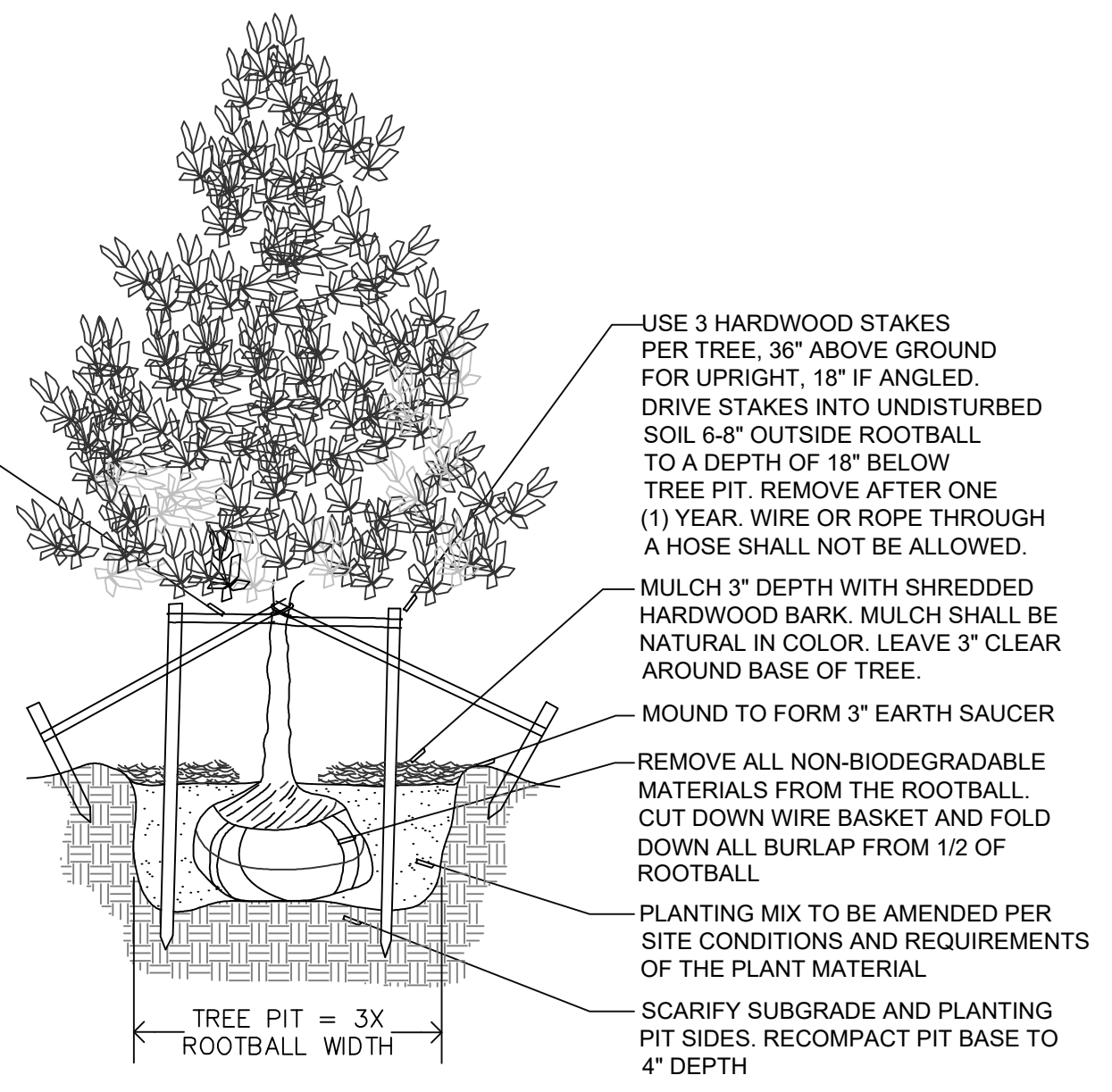
CONNECT FROM TREE TO STAKE OPPOSITE. ALLOW FOR SOME FLEXING. REMOVE AFTER ONE (1) YEAR.

**NOTES:**  
 TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOILS.

DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.

REMOVE ALL TAGS, STRING, PLASTIC AND OTHER MATERIALS.

**DECIDUOUS TREE PLANTING DETAIL**



**GENERAL LANDSCAPE NOTES**

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT THE LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES, AND SHALL REPORT ANY UNACCEPTABLE SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
- PLANTS SHALL BE FULL, WELL-BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.
- PLANTS SHALL BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE. ALL TREES MUST BE STAKED, FERTILIZED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST ONE (1) YEAR FOLLOWING PLANTING.
- ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE "AMERICAN STANDARDS FOR NURSERY STOCK".
- CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY PLANT MIX DEPTH IN ALL PLANTING BEDS AS INDICATED IN PLANT DETAILS AND A DEPTH OF 4" IN ALL LAWN AREAS. PROVIDE CLEAN BACKFILL SOIL, USING MATERIAL STOCKPILED ON-SITE. SOIL SHALL BE SCREENED AND FREE OF DEBRIS, FOREIGN MATERIAL, AND STONE.
- SLOW-RELEASE FERTILIZER SHALL BE ADDED TO THE PLANT PITS BEFORE BEING BACKFILLED. APPLICATION SHALL BE AT THE MANUFACTURERS RECOMMENDED RATES.
- AMENDED PLANT MIX (PREPARED TOPSOIL) SHALL CONSIST OF 1/3 SCREENED TOPSOIL, 1/3 SAND, AND 1/3 "DAIRY DOO" COMPOST, MIXED WELL AND SPREAD TO A DEPTH AS INDICATED IN PLANTING DETAILS.
- ALL PLANTINGS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A DEPTH OF 3" FOR TREES AND SHRUBS, AND 2" ON ANNUALS, PERENNIALS, AND GROUND COVER PLANTINGS. MULCH SHALL BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND PIECES ON INCONSISTENT SIZE.
- NO SUBSTITUTIONS OR CHANGES OF LOCATION, OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE.
- THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS PRIOR TO INSTALLATION.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A VERTICAL CONDITION THROUGHOUT THE GUARANTEED PERIOD.
- THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS AND/OR SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR SHALL SEED AND MULCH OR SOD (AS INDICATED ON PLANS) ALL AREAS DESIGNATED AS SUCH ON THE PLANS, THROUGHOUT THE CONTRACT LIMITS. FURTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING AREAS DISTURBED DURING CONSTRUCTION, NOT IN THE CONTRACT LIMITS, TO EQUAL OR GREATER CONDITION.
- ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESSIVE WATER FROM PONDING ON LAWN AREAS OR AROUND TREES AND SHRUBS.
- ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM.

**LANDSCAPE REQUIREMENTS**

EXISTING SITE ZONING: C-2  
 EXISTING SITE AREA: 30,000 S.F. OR 0.69 ACRES

LANDSCAPE ABUTTING A R.O.W.  
 1 TREE AND 6 SHRUBS PER 40 L.F. OF ROAD FRONTAGE

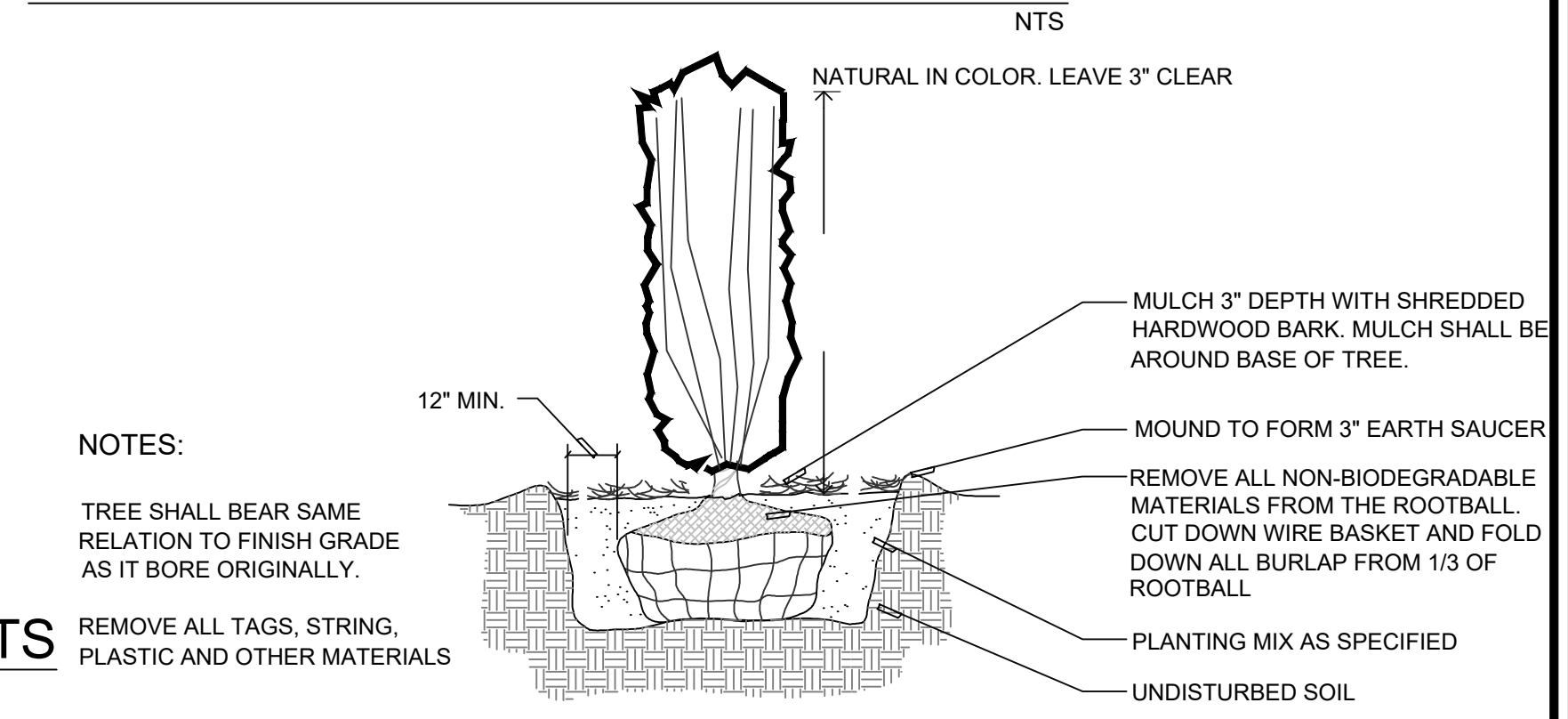
REQUIRED:  
 VERNIER ROAD:  
 REQUIRED: 150 L.F. - 25 L.F. (DRIVEWAY) / 40 L.F. = 3 TREES REQUIRED  
 150 L.F. - 25 L.F. / 40 L.F. X 6 = 19 SHRUBS REQUIRED  
 PROVIDED: 1 EXISTING TREE, 2 PROPOSED TREES, 1 EXISTING SHRUB, 18 PROPOSED SHRUBS

BEACONSFIELD ROAD:  
 REQUIRED: 200 L.F. - 25 L.F. (DRIVEWAY) / 40 L.F. = 4 TREES REQUIRED  
 200 L.F. - 25 L.F. / 40 L.F. X 6 = 26 SHRUBS REQUIRED  
 PROVIDED: 1 EXISTING TREE, 3 PROPOSED TREES, 26 PROPOSED SHRUBS

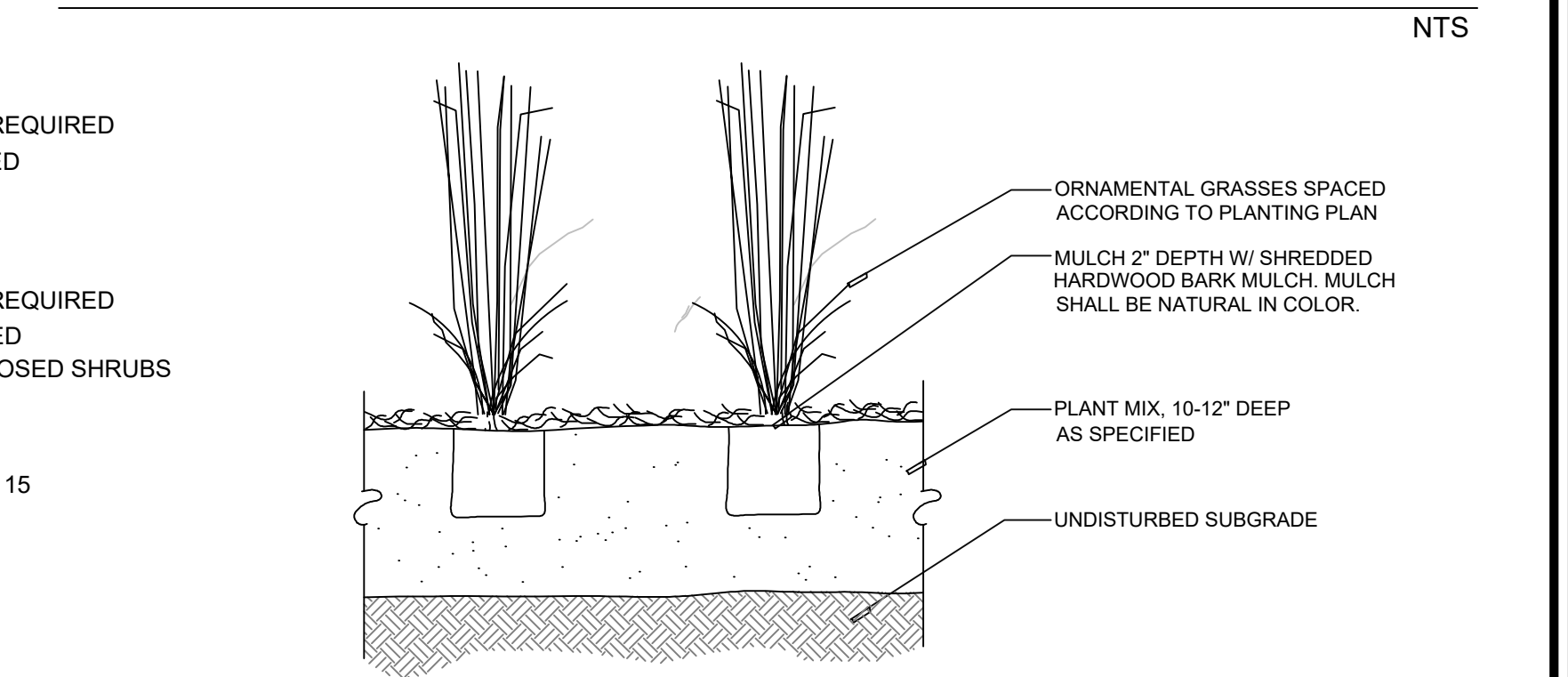
PARKING LOT LANDSCAPE REQUIREMENTS  
 20 S.F. OF INTERIOR LANDSCAPING FOR EACH SPACE OVER 15  
 1 TREE PER 100 S.F. OF REQUIRED AREA  
 25 PKG SPACES - 15 = 10 SPACES X 20 S.F. = 200 S.F.  
 200 S.F. / 100 S.F. = 2 TREES REQUIRED  
 PROVIDED: 3 EXISTING TREES

GENERAL SITE LANDSCAPE AREA  
 6% OF SITE AREA SHALL BE LANDSCAPE W/ 1 TREE PER 2,000 S.F.  
 REQUIRED:  
 30,000 X 6% = 1,800 S.F.  
 1,800 / 2,000 = 1 TREE  
 PROVIDED:  
 6,438 S.F. AND 2 EXISTING TREES

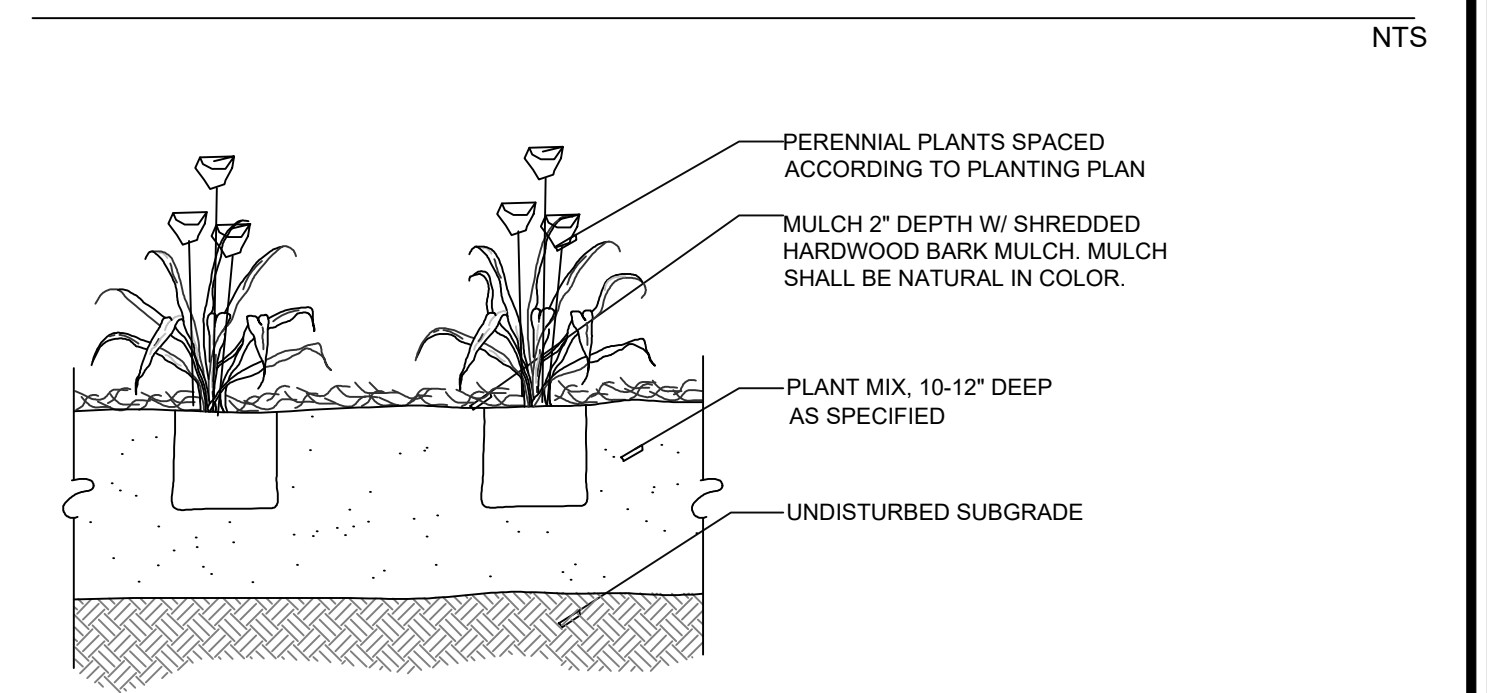
**HEDGE PLANTING DETAIL**



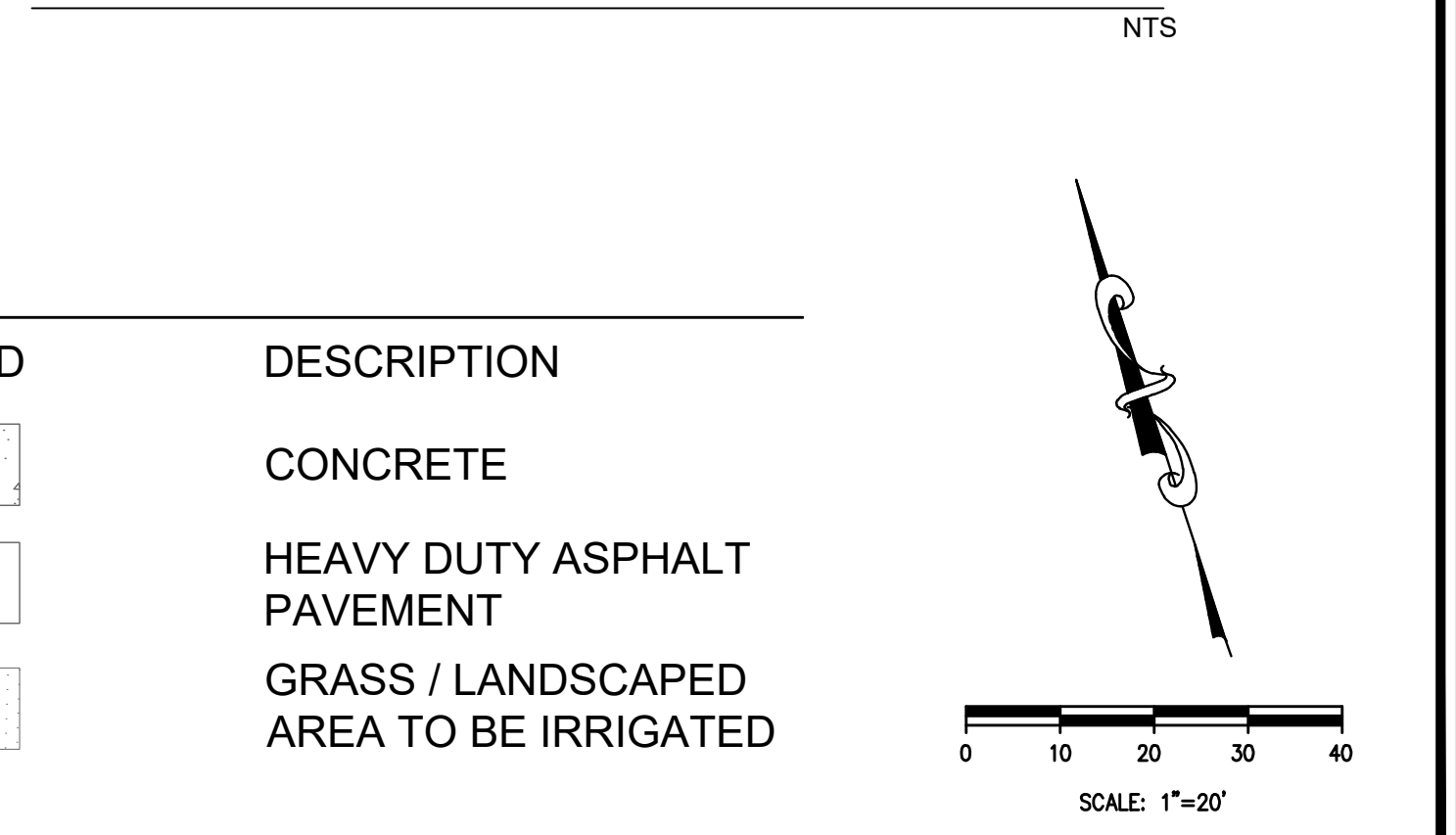
**UPRIGHT EVERGREEN SHRUB PLANTING DETAIL**



**ORNAMENTAL GRASS PLANTING DETAIL**

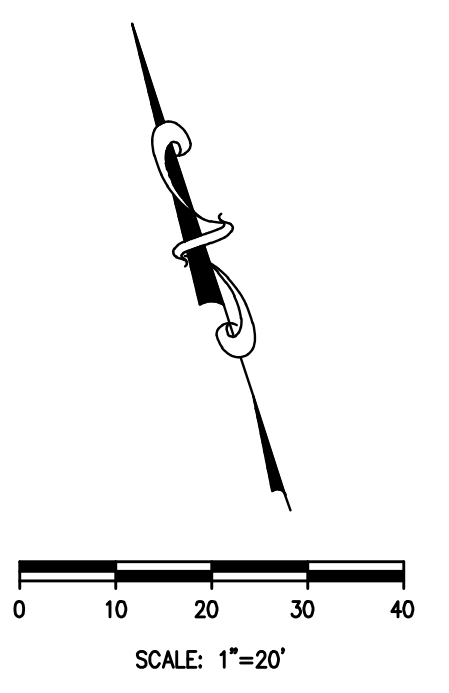


**PERENNIAL PLANTING DETAIL**

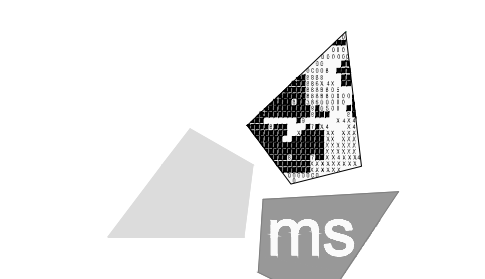


**LEGEND**

PROPOSED	DESCRIPTION
[Pattern]	CONCRETE
[Pattern]	HEAVY DUTY ASPHALT PAVEMENT
[Pattern]	GRASS / LANDSCAPED AREA TO BE IRRIGATED



**NOTICE**  
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 Columbus, OH 43229-1547  
 p 614.898.7100  
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PROJECT  
**TIM HORTONS**  
 HARPER WOODS, MI

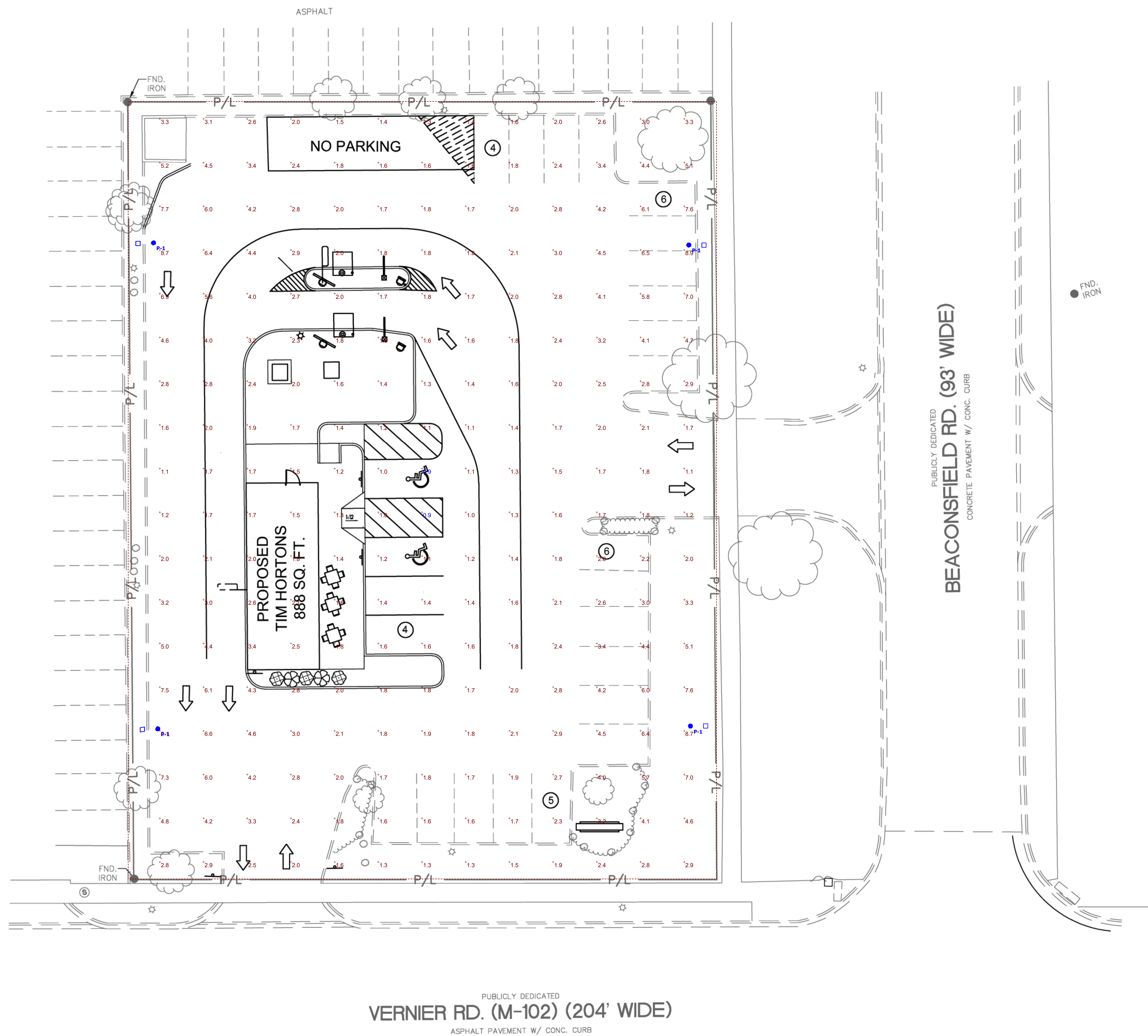
19353 VERNIER RD  
 HARPER WOODS, MI 48225  
 WAYNE COUNTY

SHEET TITLE  
**LANDSCAPE PLAN**



DRAWN BY: JJC  
 CHECKED BY: SEG  
 PROJECT NO: 40509-11  
 DRAWING  
**L-1.0**



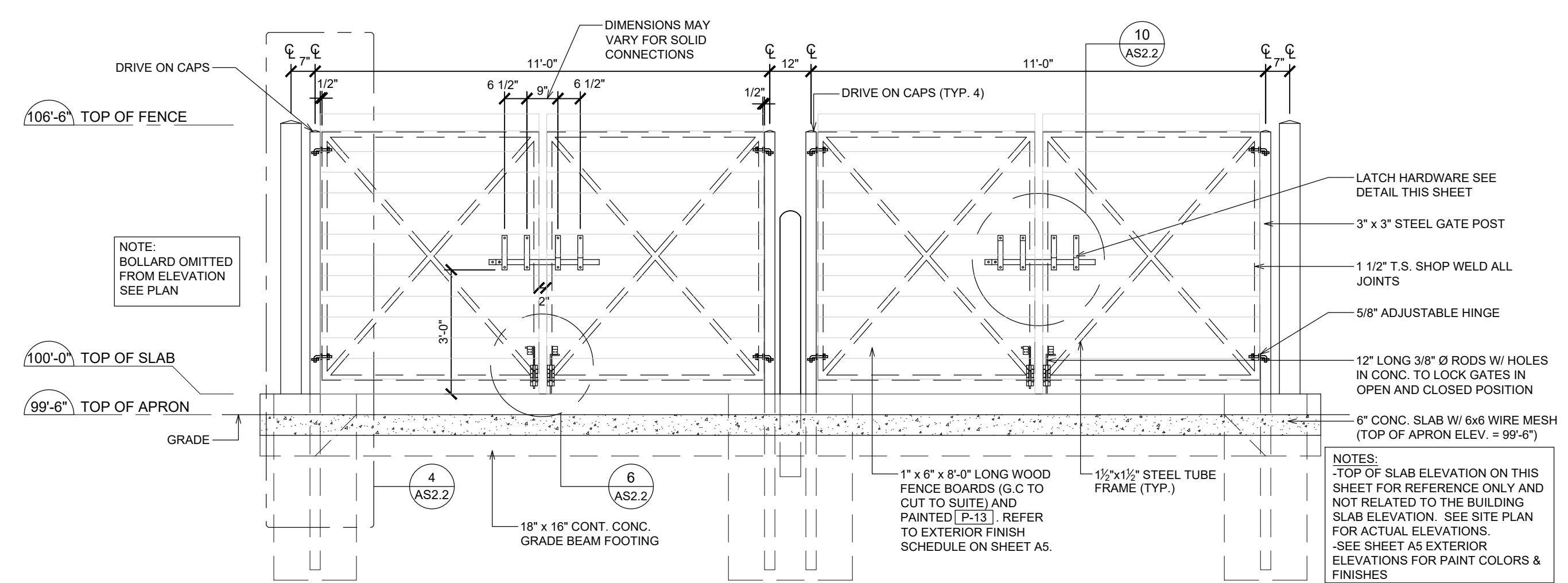


Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
□	P-1	4	SIGNIFY GARDCO	ECF-S-48L-1.2A-NW-G2-4	EcoForm Area LED ECF - Small, 48 LED's, 4000K CCT, TYPE 4 OPTIC, No Shield	(3) LEDGINE SLD LIGHT ARRAY(S) DRIVEN AT 1200mA	1	ecf-s-48l-1.2a-nw-g2-4.ies	23178	0.95	182.71

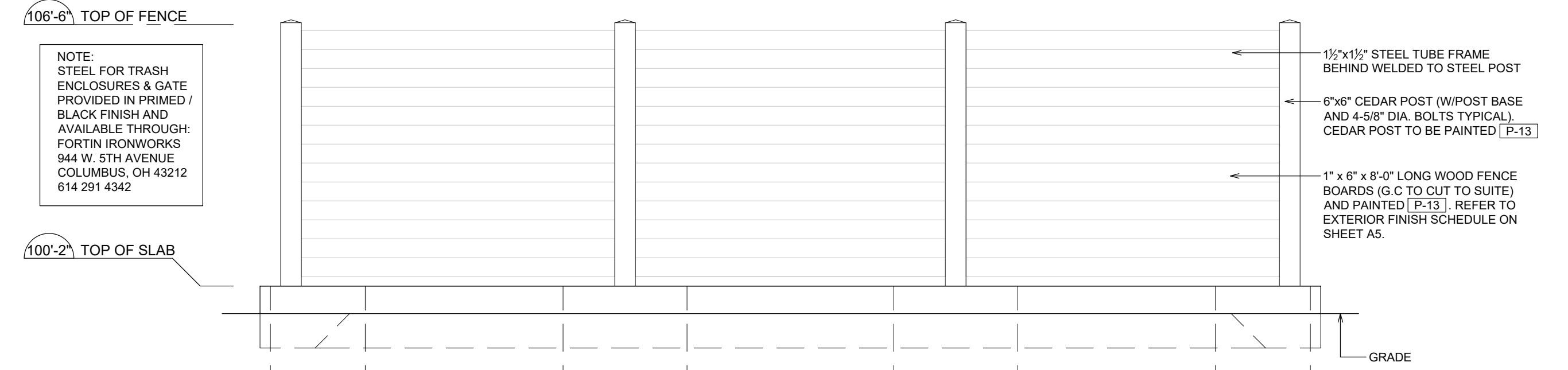
Plan View  
Scale - 1" = 12'

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	2.8 fc	9.1 fc	0.9 fc	10.1:1	3.1:1

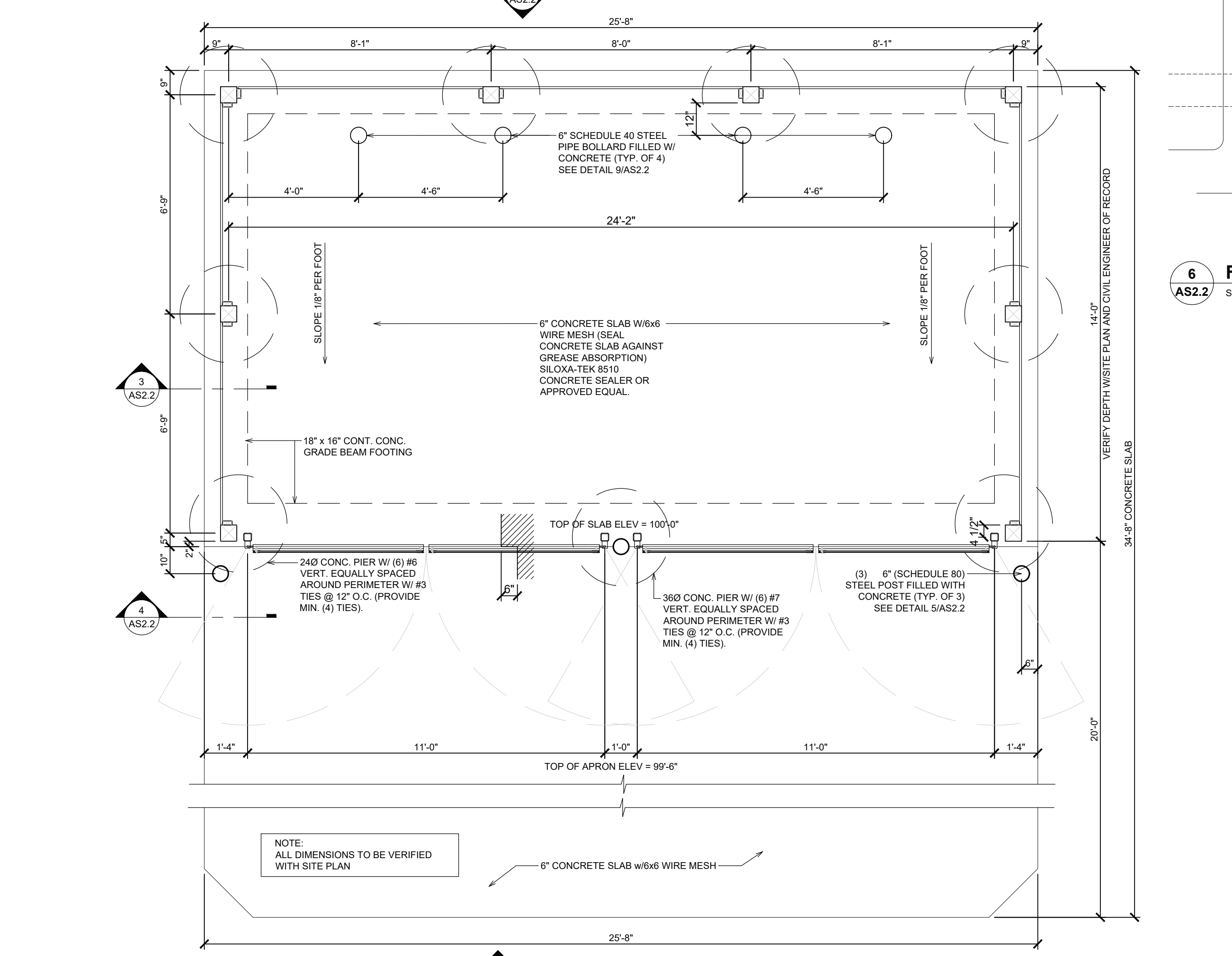
File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTD (RTO)\DCCS\CAD\AS2.2 SITE DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:18 PM



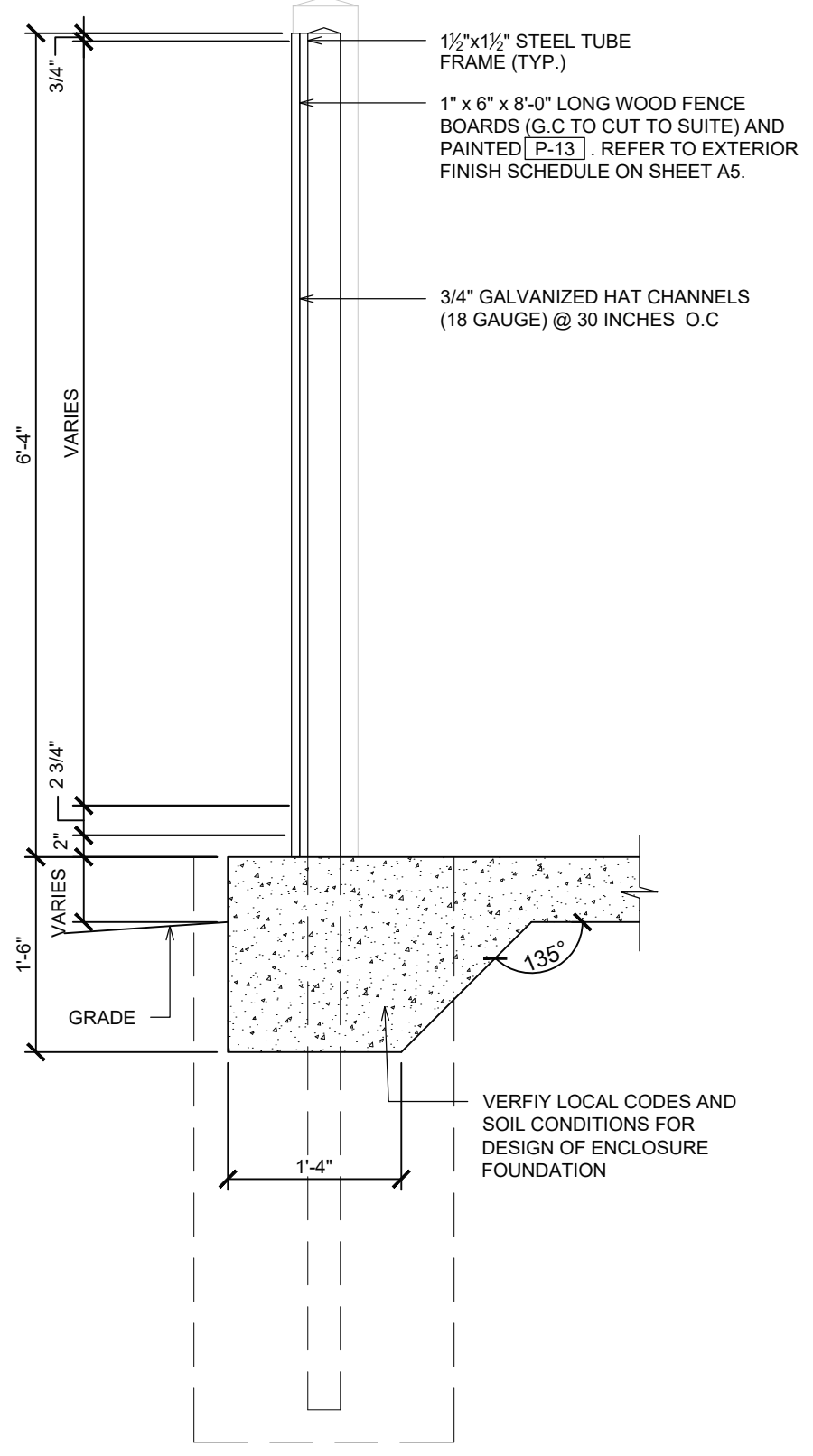
**1 FRONT ELEVATION**  
AS2.2 SCALE: 3/8" = 1'-0"



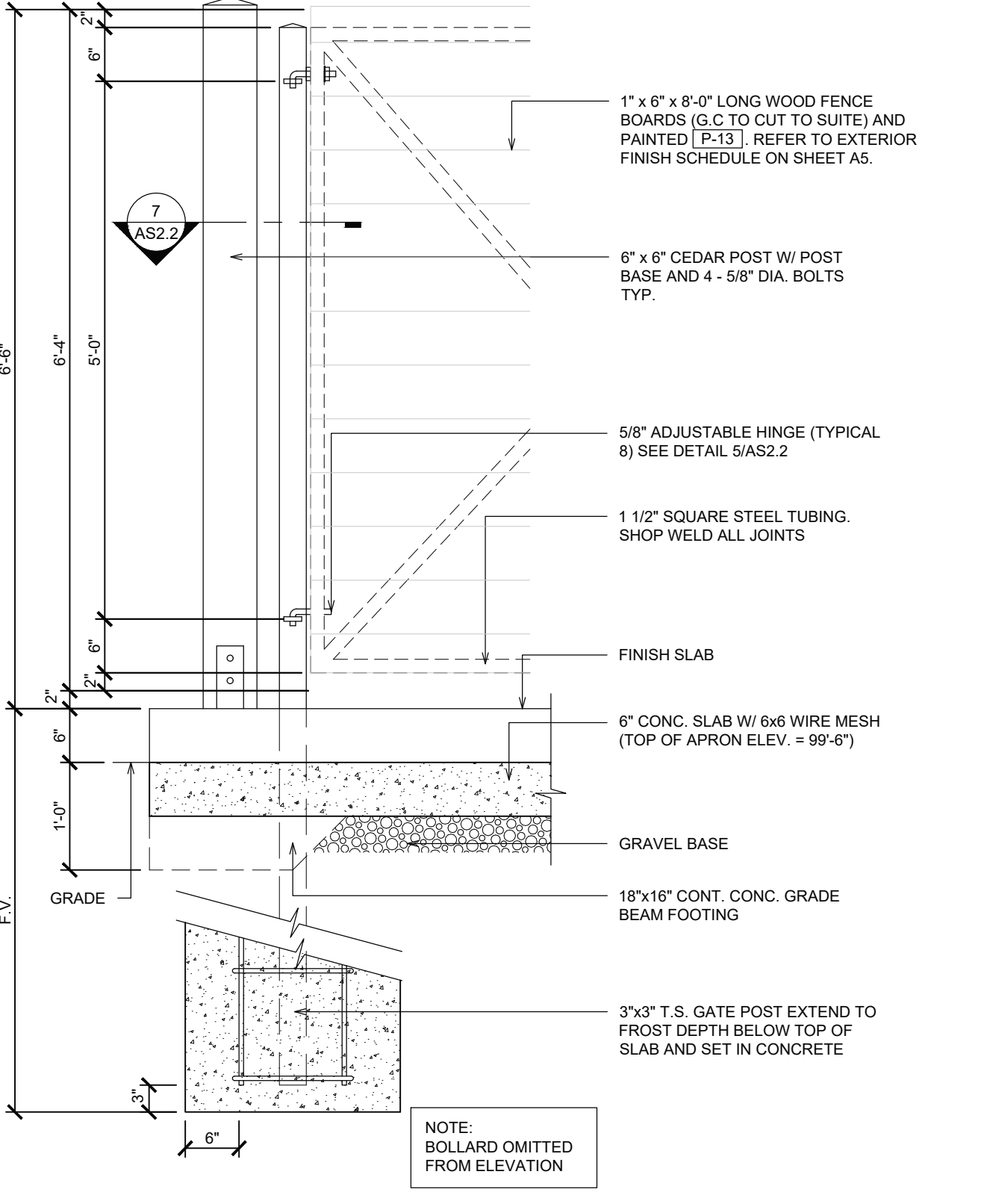
**1A TYPICAL ELEVATION**  
AS2.2 SCALE: 3/8" = 1'-0"



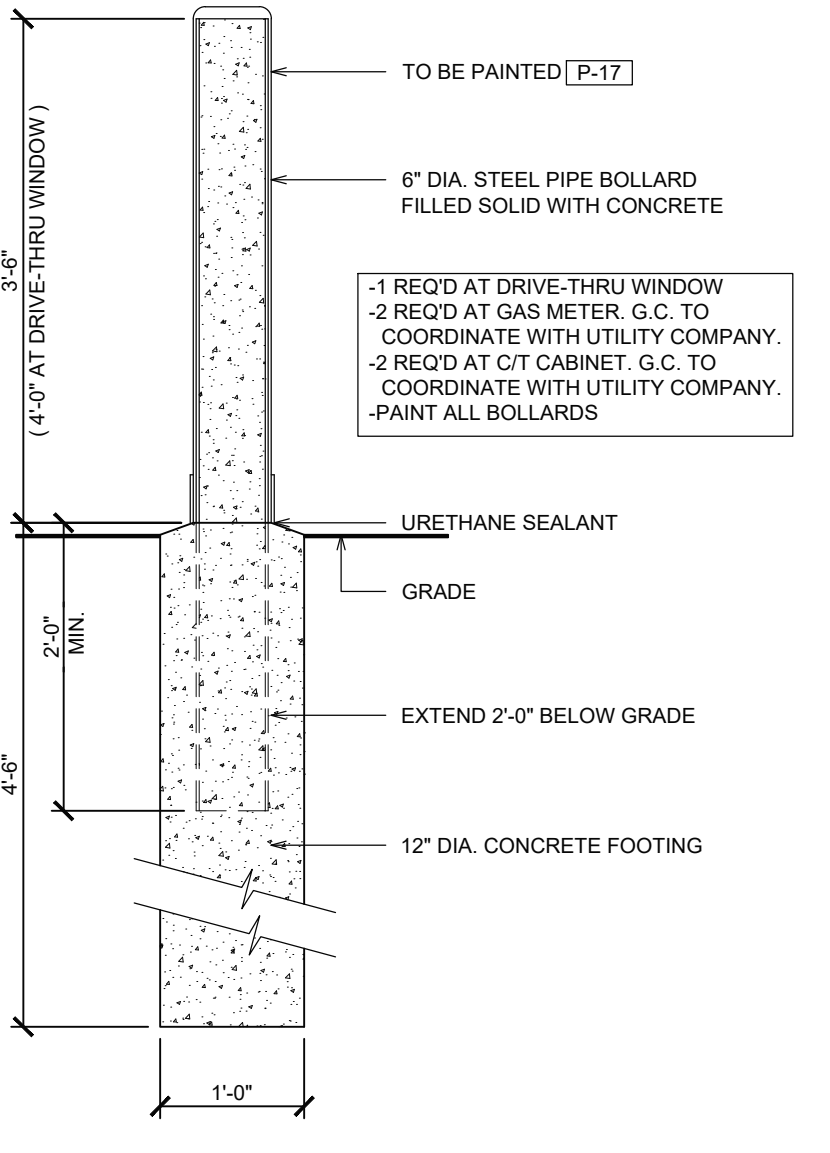
**2 TRASH ENCLOSURE PLAN**  
AS2.2 SCALE: 3/8" = 1'-0"



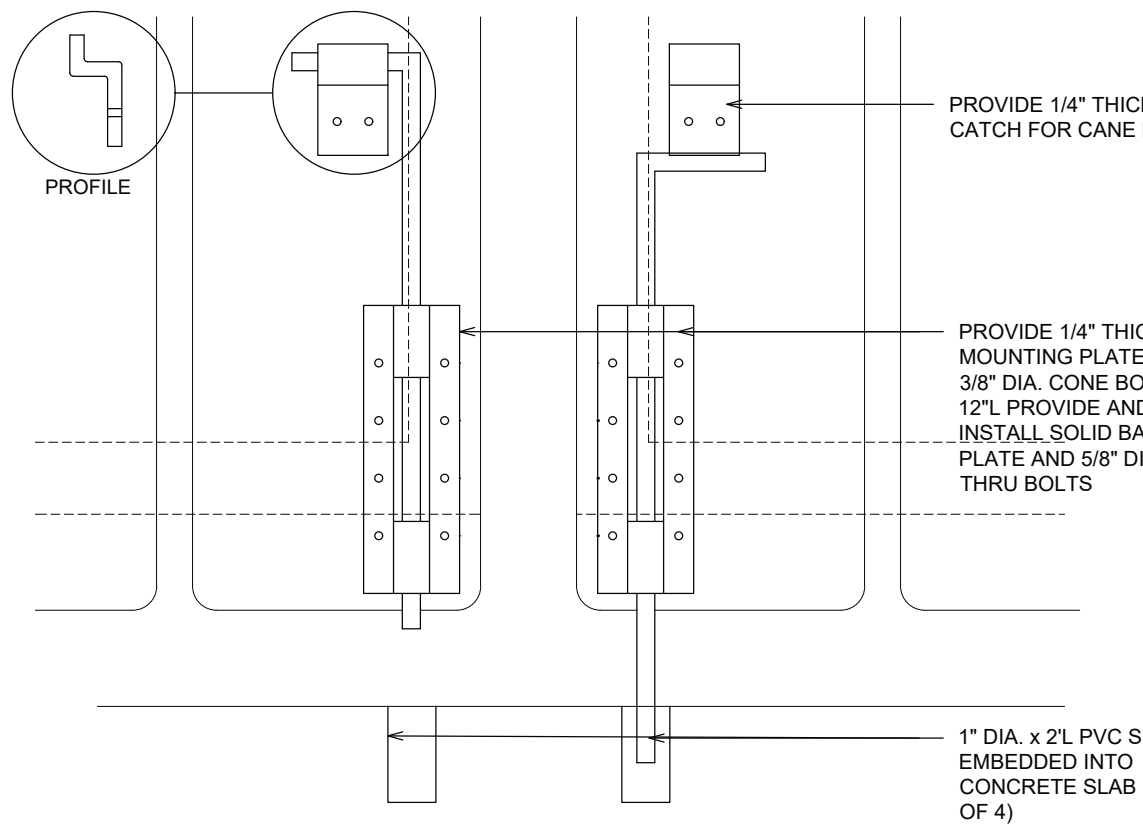
**3 WALL SECTION**  
AS2.2 SCALE: 3/4" = 1'-0"



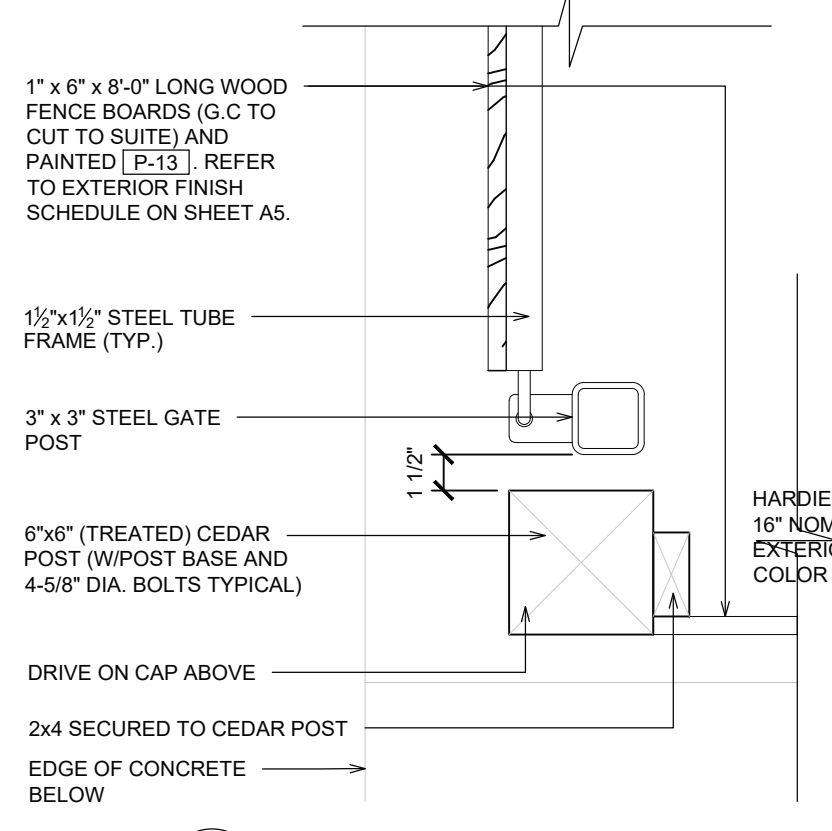
**4 HINGE POST**  
AS2.2 SCALE: 3/4" = 1'-0"



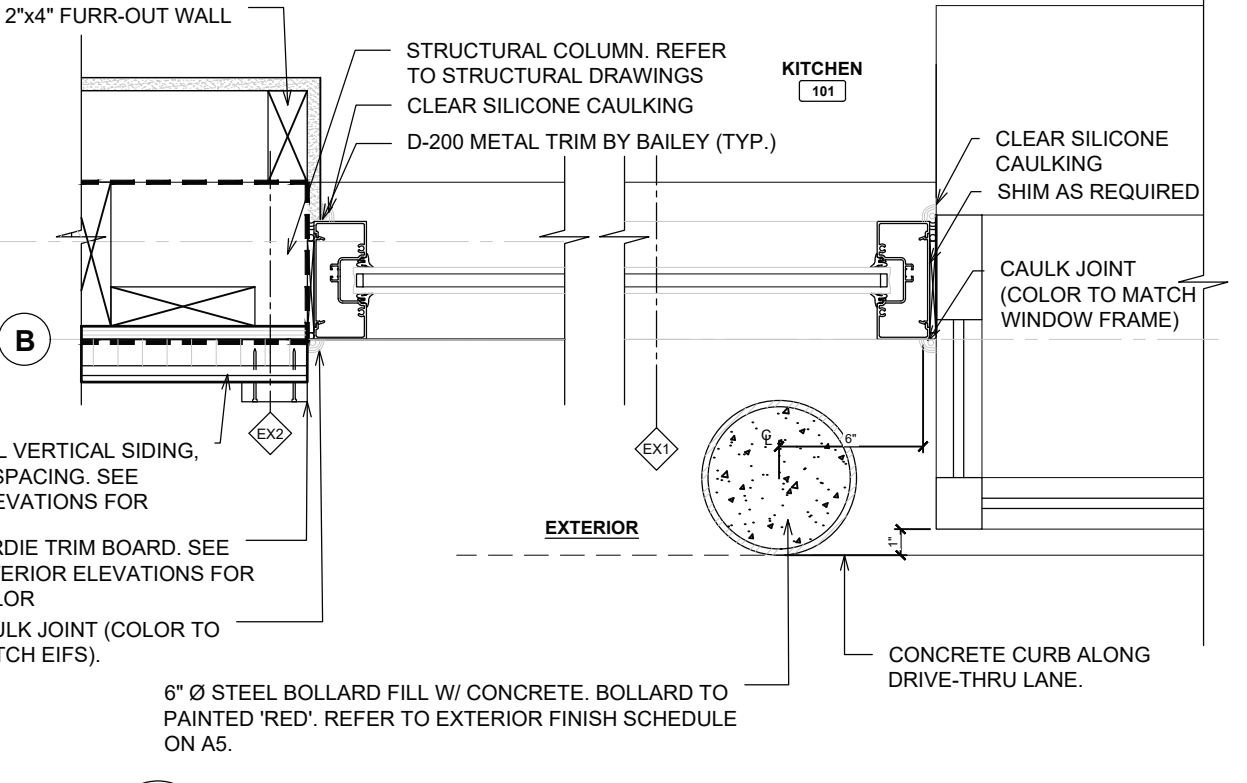
**5 BOLLARD DETAIL**  
AS2.2 SCALE: 3/4" = 1'-0"



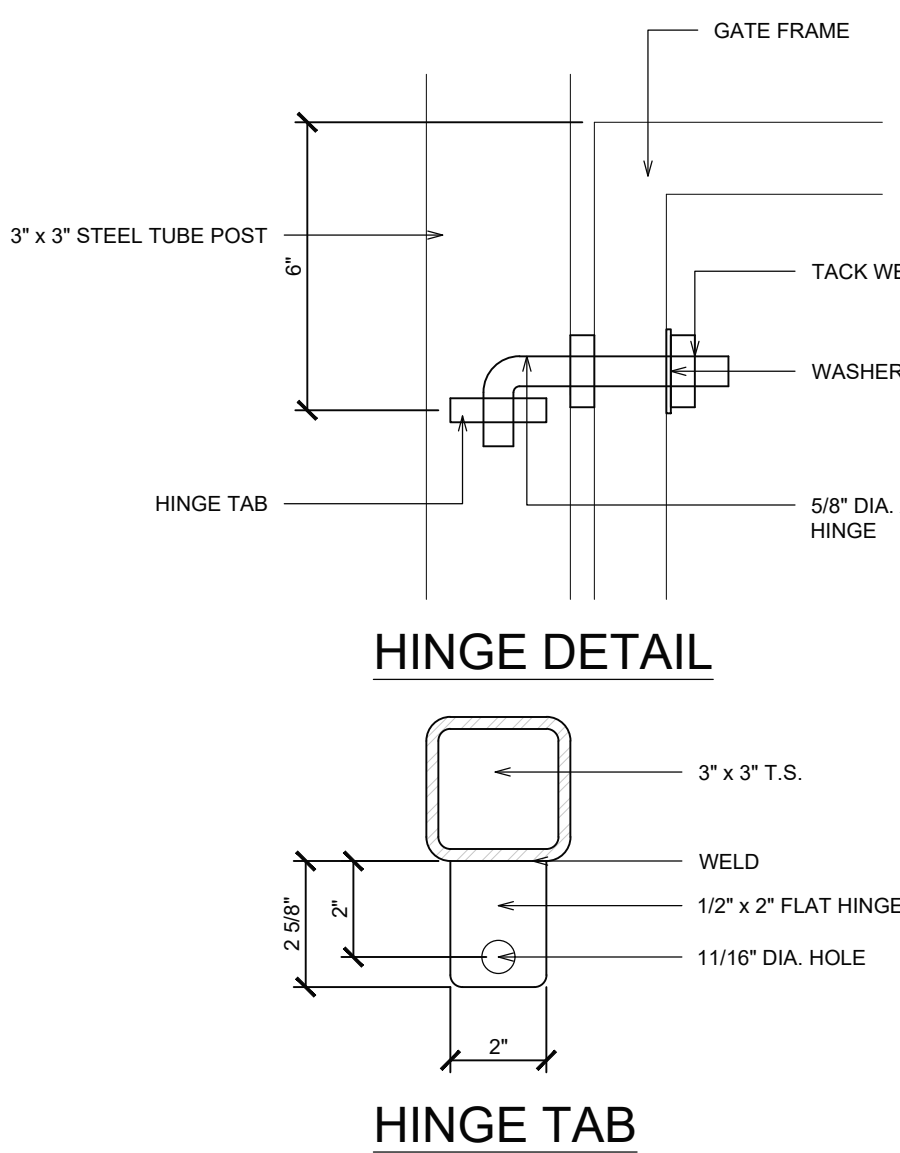
**6 FLOOR BOLT DETAIL**  
AS2.2 SCALE: 3" = 1'-0"



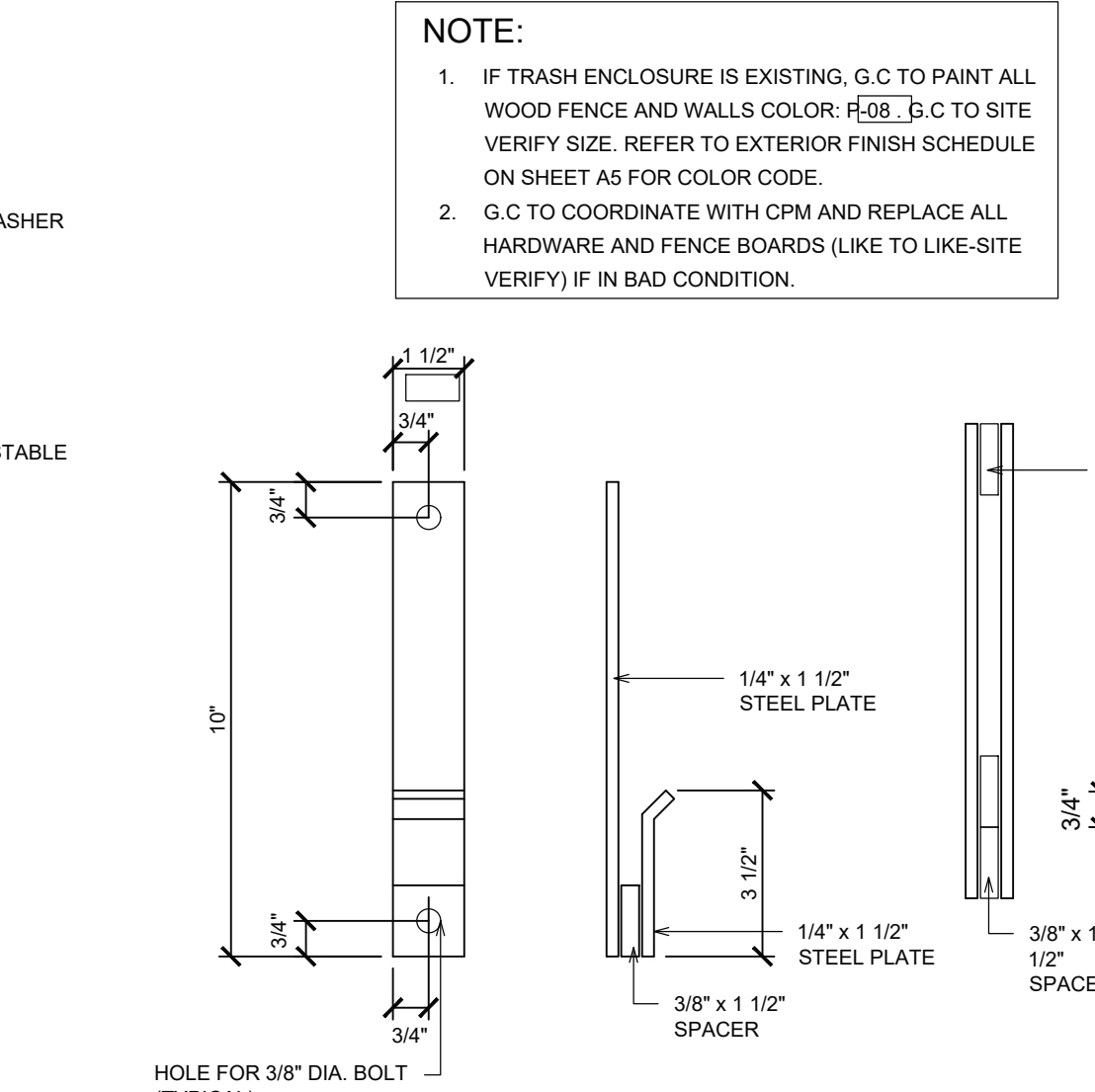
**7 CORNER DETAIL**  
AS2.2 SCALE: 1-1/2" = 1'-0"



**8 BOLLARD PLACEMENT DETAIL**  
AS2.2 SCALE: 1-1/2" = 1'-0"



**9 HINGE DETAILS**  
AS2.2 SCALE: 3" = 1'-0"



**10 LATCH DETAIL**  
AS2.2 SCALE: 3" = 1'-0"

**NOTES:**  
DETAILS FOR REFERENCE ONLY.  
COORDINATE WITH SITE PLAN DRAWING  
FOR EXACT REQUIREMENTS.

DRAWN BY: LRK

CHECKED BY: AMD/MAR

APPROVED BY:

ISSUE DATE: 07/12/2022

ISSUE:

#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

REVISIONS:

#	DATE	DESCRIPTION
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Columbus, Ohio 43229-1547  
phone 614.898.7100  
fax 614.898.7570



**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225

**STORE # 919728**



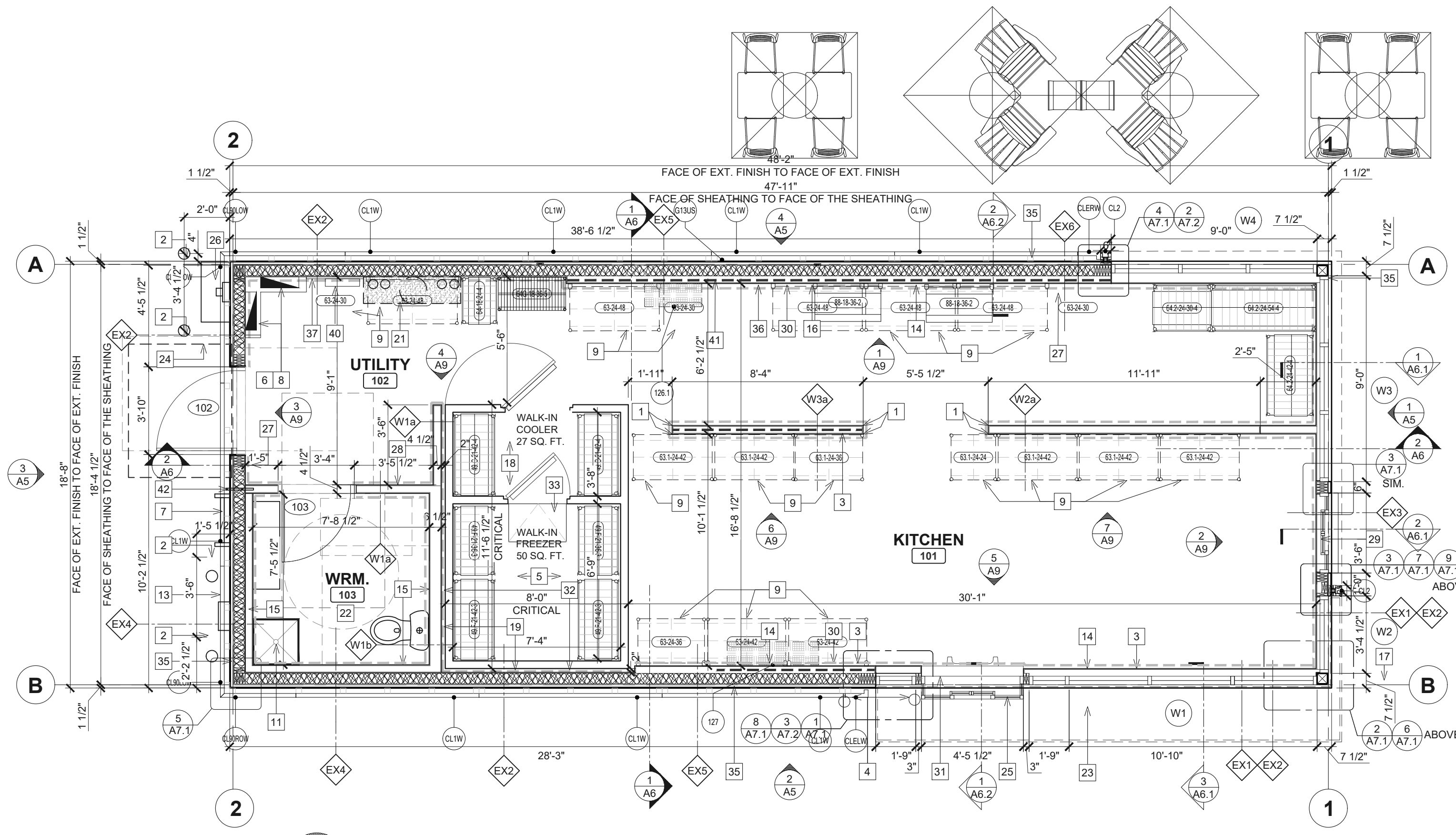
PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE: **SITE DETAILS - TRASH ENCLOSURE**

SHEET: AS2.2

File Name: N:\03240509-THUS11\_HARPER WOODS, MI DTD (RBI)\DOCS\CAD1 FLOOR PLAN AND SCHEDULES.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:18 PM



**1 FLOOR PLAN**  
A1 SCALE: 1/4"=1'-0"  
NORTH

WALL TYPE LEGEND	
	<p>EXTERIOR WALL AT ALUMINUM SIDING (KNOTWOOD):</p> <ul style="list-style-type: none"> <li>- KNOTWOOD ALUMINUM SIDING WITH 1/2" REVEAL JOINTS (STAGGERED) C/W PRE FINISHED TRIM PIECES. REFER TO EXTERIOR ELEVATIONS FOR COLOR.</li> <li>- 2"x4" WOOD STUDS LAID FLAT AND PLACED VERTICALLY @ 32" O.C.</li> <li>- STO GOLD COAT FLUID APPLIED MEMBRANE AIR BARRIER. ALL TRANSITIONS AT FOUNDATION, ROUGH OPENINGS, SHEATHING JOINTS, FLASHINGS, WALL PENETRATIONS AND PARAPETS TO BE SEALED W/ STO RAPID GUARD PER MANUFACTURERS SPECS PRIOR TO APPLICATION OF FLUID APPLIED MEMBRANE AIR BARRIER.</li> <li>- 1 LAYER 1/2" EXTERIOR GRADE PLYWOOD</li> <li>- 2"x6" WOOD STUDS @ 16" O.C.</li> <li>- UNFACED BATT INSULATION (R-20) UP TO 10'-0" MAX C/W 2"x6" FIRE STOP.</li> <li>- FSK FOIL FACED FLAME SPREAD 25 BATT INSULATION (R-20) FROM 10'-0" TO US OF DECK C/W 2"x6" FIRE STOP.</li> <li>- UNFACED BATT INSULATION (R-20) FROM US OF DECK TO 18" MIN. ABOVE DECK.</li> <li>- 1 LAYER OF 1/2" GYPSUM BOARD SHEATHING ON CONTINUOUS 6 MIL. POLYETHYLENE VAPOR BARRIER TO (US OF DECK).</li> <li>- PROVIDE 1/2" CEMENTITIOUS BACKER BOARD INSTEAD OF GYPSUM BOARD TO 2'-0" ABOVE FLOOR SLAB C/W ACOUSTICAL SEALANT AT BASE.</li> </ul>
	<p>EXTERIOR WALL AT JAMES HARDIE VERTICAL SIDING</p> <ul style="list-style-type: none"> <li>- HARDIE PANEL VERTICAL SIDING AT 16" O.C.</li> <li>- 3/8" VERTICAL WOOD FURRING 16" O.C.</li> <li>- 1" RIGID INSULATION</li> <li>- STO GOLD COAT FLUID APPLIED MEMBRANE AIR BARRIER. ALL TRANSITIONS AT FOUNDATION, ROUGH OPENINGS, SHEATHING JOINTS, FLASHINGS, WALL PENETRATIONS AND PARAPETS TO BE SEALED W/ STO RAPID GUARD PER MANUFACTURERS SPECS PRIOR TO APPLICATION OF FLUID APPLIED MEMBRANE AIR BARRIER.</li> <li>- 1 LAYER 1/2" EXTERIOR GRADE PLYWOOD</li> <li>- 2"x6" WOOD STUDS @ 16" O.C.</li> <li>- UNFACED BATT INSULATION (R-20) UP TO 10'-0" MAX C/W 2"x6" FIRE STOP.</li> <li>- FSK FOIL FACED FLAME SPREAD 25 BATT INSULATION (R-20) FROM 10'-0" TO US OF DECK C/W 2"x6" FIRE STOP.</li> <li>- UNFACED BATT INSULATION (R-20) FROM US OF DECK TO 18" MIN. ABOVE DECK.</li> <li>- 1 LAYER OF 1/2" GYPSUM BOARD SHEATHING ON CONTINUOUS 6 MIL. POLYETHYLENE VAPOR BARRIER TO (US OF DECK).</li> <li>- PROVIDE 1/2" CEMENTITIOUS BACKER BOARD INSTEAD OF GYPSUM BOARD TO 2'-0" ABOVE FLOOR SLAB C/W ACOUSTICAL SEALANT AT BASE.</li> </ul>
	<p>EXTERIOR WALL AT ALUMINUM SIDING (KNOTWOOD):</p> <ul style="list-style-type: none"> <li>- KNOTWOOD ALUMINUM SIDING WITH 1/2" REVEAL JOINTS (STAGGERED) C/W PRE FINISHED TRIM PIECES. REFER TO EXTERIOR ELEVATIONS FOR COLOR.</li> <li>- 2"x4" WOOD STUDS LAID FLAT AND PLACED VERTICALLY @ 32" O.C.</li> <li>- STO GOLD COAT FLUID APPLIED MEMBRANE AIR BARRIER. ALL TRANSITIONS AT FOUNDATION, ROUGH OPENINGS, SHEATHING JOINTS, FLASHINGS, WALL PENETRATIONS AND PARAPETS TO BE SEALED W/ STO RAPID GUARD PER MANUFACTURERS SPECS PRIOR TO APPLICATION OF FLUID APPLIED MEMBRANE AIR BARRIER.</li> <li>- 1 LAYER 1/2" EXTERIOR GRADE PLYWOOD</li> <li>- 2"x6" WOOD STUDS @ 16" O.C.</li> <li>- UNFACED BATT INSULATION (R-20) UP TO 10'-0" MAX C/W 2"x6" FIRE STOP.</li> <li>- FSK FOIL FACED FLAME SPREAD 25 BATT INSULATION (R-20) FROM 10'-0" TO US OF DECK C/W 2"x6" FIRE STOP.</li> <li>- UNFACED BATT INSULATION (R-20) FROM US OF DECK TO 18" MIN. ABOVE DECK.</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD UP TO 2'-0" A.F.F. AND 1/2" MOLD RESISTANT GYPSUM BOARD FROM 2'-0" A.F.F.</li> </ul>
	<p>EXTERIOR WALL AT JAMES HARDIE HORIZONTAL SIDING</p> <ul style="list-style-type: none"> <li>- HORIZONTAL 24" PANELS WITH 1/2" REVEAL CHANNEL</li> <li>- 3/8" VERTICAL WOOD FURRING 16" O.C.</li> <li>- 1" RIGID INSULATION</li> <li>- STO GOLD COAT FLUID APPLIED MEMBRANE AIR BARRIER. ALL TRANSITIONS AT FOUNDATION, ROUGH OPENINGS, SHEATHING JOINTS, FLASHINGS, WALL PENETRATIONS AND PARAPETS TO BE SEALED W/ STO RAPID GUARD PER MANUFACTURERS SPECS PRIOR TO APPLICATION OF FLUID APPLIED MEMBRANE AIR BARRIER.</li> <li>- 1 LAYER 1/2" EXTERIOR GRADE PLYWOOD</li> <li>- 2"x6" WOOD STUDS @ 16" O.C.</li> <li>- UNFACED BATT INSULATION (R-20) UP TO 10'-0" MAX C/W 2"x6" FIRE STOP.</li> <li>- FSK FOIL FACED FLAME SPREAD 25 BATT INSULATION (R-20) FROM 10'-0" TO US OF DECK C/W 2"x6" FIRE STOP.</li> <li>- UNFACED BATT INSULATION (R-20) FROM US OF DECK TO 18" MIN. ABOVE DECK.</li> <li>- 1 LAYER OF 1/2" GYPSUM BOARD SHEATHING ON CONTINUOUS 6 MIL. POLYETHYLENE VAPOR BARRIER TO (US OF DECK).</li> <li>- PROVIDE 1/2" CEMENTITIOUS BACKER BOARD INSTEAD OF GYPSUM BOARD TO 2'-0" ABOVE FLOOR SLAB C/W ACOUSTICAL SEALANT AT BASE.</li> </ul>
	<p>EXTERIOR WALL AT JAMES HARDIE SIDING VERTICAL WIDING &amp; INTERIOR WALL</p> <ul style="list-style-type: none"> <li>- HARDIE PANEL VERTICAL SIDING AT 16" O.C.</li> <li>- 3/8" VERTICAL WOOD FURRING 16" O.C.</li> <li>- 1" RIGID INSULATION</li> <li>- STO GOLD COAT FLUID APPLIED MEMBRANE AIR BARRIER. ALL TRANSITIONS AT FOUNDATION, ROUGH OPENINGS, SHEATHING JOINTS, FLASHINGS, WALL PENETRATIONS AND PARAPETS TO BE SEALED W/ STO RAPID GUARD PER MANUFACTURERS SPECS PRIOR TO APPLICATION OF FLUID APPLIED MEMBRANE AIR BARRIER.</li> <li>- 1 LAYER 1/2" EXTERIOR GRADE PLYWOOD</li> <li>- 2"x6" WOOD STUDS @ 16" O.C.</li> <li>- UNFACED BATT INSULATION (R-20) UP TO 10'-0" MAX C/W 2"x6" FIRE STOP.</li> <li>- FSK FOIL FACED FLAME SPREAD 25 BATT INSULATION (R-20) FROM 10'-0" TO US OF DECK C/W 2"x6" FIRE STOP.</li> <li>- UNFACED BATT INSULATION (R-20) FROM US OF DECK TO 18" MIN. ABOVE DECK.</li> <li>- 1 LAYER OF 1/2" GYPSUM BOARD SHEATHING ON CONTINUOUS 6 MIL. POLYETHYLENE VAPOR BARRIER TO (US OF DECK).</li> <li>- PROVIDE 1/2" CEMENTITIOUS BACKER BOARD INSTEAD OF GYPSUM BOARD TO 2'-0" ABOVE FLOOR SLAB C/W ACOUSTICAL SEALANT AT BASE.</li> <li>- 2"x4" WOOD STUDS @ 16" O.C. TO US OF DECK</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD (WASHROOM SIDE)</li> </ul>
	<p>INTERIOR WALL AT WASHROOM:</p> <ul style="list-style-type: none"> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD (WASHROOM SIDE)</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- WOOD STUDS @ 16" O.C.</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD UP TO 2'-0" A.F.F. AND 1/2" MOLD RESISTANT GYPSUM BOARD FROM 2'-0" A.F.F. (KITCHEN SIDE)</li> </ul>
	<p>INTERIOR 48" HALF HEIGHT WALL WITH DROPPED SECTION AT FRONT WINDOWS</p> <ul style="list-style-type: none"> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- WOOD STUDS @ 16" O.C.</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD UP TO 2'-0" A.F.F. AND 1/2" MOLD RESISTANT GYPSUM BOARD FROM 2'-0" A.F.F.</li> </ul>
	<p>INTERIOR 78" HALF HEIGHT WALL</p> <ul style="list-style-type: none"> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- WOOD STUDS @ 16" O.C.</li> <li>- 1/2" PLYWOOD BACKING (BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENTS)</li> <li>- 1/2" DUROCK NEXT GEN CEMENT BOARD UP TO 2'-0" A.F.F. AND 1/2" MOLD RESISTANT GYPSUM BOARD FROM 2'-0" A.F.F.</li> </ul>
	DOTTED LINE INDICATES LOCATION OF FIBERGLASS REINFORCED PANEL (FRP) LOCATION.
	HIDDEN LINE INDICATES LOCATION OF BLOCKING IN BETWEEN THE STUDS FOR WALL MOUNTED EQUIPMENT. REFER TO INTERIOR ELEVATIONS FOR LOCATION
	"a" DENOTES 2 X 4 WOOD STUDS
	"b" DENOTES 2 X 6 WOOD STUDS

SYMBOL LEGEND	
	DETAIL NUMBER DRAWING
	SECTION NUMBER DRAWING
	BUILDING SECTION NUMBER DRAWING
	NOTE REFERENCE
	ELEVATION NUMBER DRAWING
	DOOR NUMBER
	WINDOW NUMBER
	ROOM NAME & NUMBER
	STORAGE

**FLOOR PLAN NOTES**

- G.C. TO PROVIDE AND INSTALL 2" X 2" (4FT LIGHT DUTY 20 GAUGE #4 BRUSHED) S/S CORNER GUARDS FROM 4" A.F.F. AND 1 1/2" X 1 1/2" PLASTIC CORNER GUARDS (FROM FRP SUPPLIER) FROM 4'-4" TO US OF CEILINGS AND BULKHEADS ON ALL OUTSIDE CORNERS.
- G.C. TO COORDINATE WITH UTILITY COMPANIES FOR PLACEMENT / LOCATION OF BOLLARDS. G.C. TO PROVIDE 6" DIA. METAL BOLLARD FILL W/ CONCRETE AND PAINTED. REFER TO DETAIL 1/A7.1 & EXTERIOR ELEVATIONS AS/AS.1 FOR PAINT COLOR AND TYPE.
- PROVIDE PLYWOOD BACKING / BLOCKING IN WALL AS REQUIRED TO SUPPORT WALL MOUNTED MONITOR. REFER TO INTERIOR ELEVATION 5/A9 & 6/A9
- 6" DIA. METAL BOLLARD FILL W/ CONCRETE AND PAINTED. REFER TO DETAIL 1/A7.1 & EXTERIOR ELEVATIONS AS/AS.1 FOR PAINT COLOR AND TYPE.
- NO TILE FLOORING REQUIRED ON FLOOR AT FREEZER. FREEZER TO HAVE INSULATED FLOOR. G.C. TO PROVIDE & INSTALL 2" RIGID INSULATION UNDER SLAB FOR ENTIRE AREA OF COOLER / FREEZER. G.C. TO COORDINATE SIZE WITH WALK-IN MANUFACTURER.
- PROVIDE 1/2" PLYWOOD FROM FINISHED FLOOR TO 8'-0" BEHIND ELECTRICAL PANEL. PAINT PLYWOOD W/ 1 COAT OF PRIMERX PEEL BONDING PRIMER & 2 FINISH COATS OF WHITE LATEX PAINT W/ CLASS A RATING (BY SHERWIN WILLIAMS).
- ROOF LADDER. REFER TO DETAIL 1/A8.
- 8" DEEP X 4'-2" WIDE X 6" HIGH CONCRETE HOUSE KEEPING PAD @ LOCATION OF ELECTRICAL PANELS. PROVIDE TILE FLOORING ON HORIZONTAL & VERTICAL SURFACES OF CONCRETE PAD. PROVIDE SAME FINISH AS ADJACENT FLOORING
- OVERHEAD SHELVING. REFER TO DETAILS 11/A8 & 12/A8 FOR SHELVING SUPPORT. REFER TO STRUCTURAL DRAWINGS. RESTAURANT OWNER TO ENSURE IN A NON-SPRINKLER BUILDING ALL BOXES STACKED ON OVERHEAD SHELVING SHOULD LEAVE A SPACE OF MIN. 18" FROM FINISHED CEILING (TYP.)
- TANKLESS WALL MOUNTED WATER HEATER. REFER TO PLUMBING DRAWINGS.
- G.C. TO PROVIDE AND INSTALL SURFACE MOUNTED MOP SINK. WALLS AROUND MOP SINK TO RECEIVE 1/2" CEMENTITIOUS BACKER BOARD FROM FLOOR TO 4'-0" A.F.F. REFER TO MECHANICAL DWGS.
- NOT USED
- GAS METER. REFER TO MECHANICAL DRAWINGS. COORDINATE LOCATION WITH CIVIL DRAWINGS AND LOCAL UTILITY COMPANY.
- FURR OUT WALL W/ 1 LAYER 1/2" CEMENTITIOUS BACKER BOARD ON 2"x4" WOOD STUDS @ 24" O.C. COMPLETE WITH 1/2" PLYWOOD BACKING BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENT. CARRY STUDS & CEMENT BOARD 4" ABOVE CEILING.
- FURR OUT WALL W/ 1 LAYER 1/2" DUROCK NEXT GEN CEMENT BOARD ON 2"x4" WOOD STUDS @ 24" O.C. COMPLETE WITH 1/2" PLYWOOD BACKING BETWEEN STUDS @ LOCATION OF WALL MOUNTED EQUIPMENT. CARRY STUDS & CEMENT BOARD TO CEILING.
- PROVIDE PLYWOOD BACKING IN WALL AS REQUIRED TO SUPPORT WALL MOUNTED BRACKETS FOR EXHAUST HOOD 72.14. REFER TO ELEVATION 6/A9, 11/A9 & DETAIL 5/A8.
- METAL RAILING SUPPLIED AND INSTALLED BY G.C. (ONLY IF REQUIRED) ARCHITECT TO COORDINATE WITH CIVIL ENGINEER ON THE SITE PLAN. REFER TO DETAIL 9/A8.
- INSTALL FLOOR TILE AFTER INSTALLATION OF COOLER UNIT. G.C. TO COORDINATE WITH COOLER/ FREEZER MANUFACTURER.
- PROVIDE & INSTALL 10'-6" STRIP OF CONCRETE BOARD (C/W MOLD RESISTANT TAPE AND COMPOUND) INSTEAD OF GYPSUM BOARD AT THE BASE OF EXTERIOR/INTERIOR WALL AROUND COOLER/ FREEZER LOCATION TO PREVENT MOLD GROWTH.
- NOT USED
- ADVANCED WATER FILTRATION SYSTEM. WATER FILTRATION SYSTEM TO BE INSTALLED TIGHT AGAINST WALL TO MAXIMIZE FLOOR SPACE.
- REFER TO SHEET A9.2 FOR WASHROOM ELEVATIONS.
- PREFABRICATED CANOPY AT DRIVE-THRU WINDOW. REFER TO EXTERIOR ELEVATIONS ON SHEETS A5 & A5.1 AND TO DETAIL 1/A7.2.
- DASHED LINE INDICATES LOCATION OF FROST SLAB. REFER TO STRUCTURAL DRAWINGS FOR SIZE.
- G.C. TO PROVIDE CONCRETE CURB ALONG DRIVE-THRU LANE. CURB TO PROJECT 8" FROM FACE OF SIDING AND LENGTH OF CURB IS EXTENT OF FEATURE WALL. REFER TO DETAIL 12/A7.
- CT CABINET & ELECTRICAL METER. REFER TO ELECTRICAL DRAWINGS. COORDINATE ACCESS WITH LOCAL UTILITY COMPANY AND VERIFY EQUIPMENT TO BE INSTALLED.
- WALL MOUNTED FIRE EXTINGUISHER TO BE SUPPLIED BY G.C. G.C. TO VERIFY LOCATION WITH FIRE MARSHALL.
- PROVIDE PLYWOOD BEHIND PORTAL OFFICE CABINET. REFER TO INTERIOR ELEVATION 1/A9.
- MANUAL WALK-UP WINDOW. G.C. TO SUPPLY AND INSTALL.
- G.C. TO PROVIDE AND INSTALL WOOD BLOCKING BEHIND WALL MOUNTED EQUIPMENT. REFER TO INTERIOR ELEVATION ON A9.
- AUTOMATIC DRIVE THRU WINDOW C/W BODY SENSOR. G.C. TO COORDINATE WITH EQUIPMENT SUPPLIER. G.C. TO COORDINATE WITH RESTAURANT OWNER TO IDENTIFY WHICH DRIVE-THRU WINDOW TO BE INSTALLED (MANUAL OR AUTOMATIC). REFER TO DRIVE-THRU SPECS ON SHEET A11.
- PROVIDE MIN. 2" AIR SPACE BETWEEN COOLER / FREEZER AND FACE OF WALL.
- COOLER / FREEZER UNIT PROVIDED & INSTALLED BY MANUFACTURER. INTERIOR RAMP TO BE PROVIDED INSIDE FREEZER UNIT BY MANUFACTURER. G.C. TO COORDINATE.
- NOT USED
- CROSS HATCH INDICATES LOCATION OF SHEAR WALLS. REFER TO STRUCTURAL DRAWINGS.
- G.C. TO PROVIDE AND INSTALL SIS PANELS BEHIND AND BESIDE RATIONAL OVENS/ EGG STATION AS INDICATED. REFER TO DETAIL 4/A8 AND INTERIOR ELEVATIONS 1/A9.
- TELEPHONE PANEL BOARD. REFER TO ELECTRICAL DRAWINGS.
- NOT USED
- NOT USED
- NOT USED
- G.C. TO PROVIDE AND INSTALL WOOD BLOCKING BEHIND EGG STATION SHELVING. REFER TO INTERIOR ELEVATION ON 1/A9.
- HOSE BIB. REFER TO EXTERIOR ELEVATIONS AND MECHANICAL DRAWINGS.

**GENERAL NOTES:**

- IN ADDITION TO THESE GENERAL NOTES, THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR OTHER SPECIFIC INSTRUCTIONS AS THEY MAY AFFECT THE GENERAL CONSTRUCTION OF THIS PROJECT. DISCREPANCIES BETWEEN PORTIONS OF THE CONTRACT DOCUMENTS ARE NOT INTENDED. THE CONTRACTOR IS TO CLARIFY WITH THE ARCHITECT AND OWNER ANY SUCH DISCREPANCIES PRIOR TO COMMENCING WORK.
- ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE BUILDING CODES AND LOCAL RESTRICTIONS. CONTRACTORS MUST COMPLY WITH CONTRACTOR REGISTRATION REQUIREMENTS OF ALL GOVERNING AUTHORITIES. ALL REQUIRED CITY / COUNTY / STATE PERMITS SHALL BE ACQUIRED BEFORE COMMENCING ANY CONSTRUCTION.
- APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT SAME INFORMATION. CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS IN GOOD CONDITION ON THE PREMISES AT ALL TIMES.
- THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS AND OWNER.
- STATED DIMENSIONS TAKE PRECEDENCE OVER GRAPHICS. DO NOT SCALE DRAWINGS TO DETERMINE LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED PRIOR TO CONTINUING WITH WORK IF ANY DISCREPANCIES OCCUR.
- CONTRACTOR SHALL REFER AND CONFORM TO ALL RECOMMENDATIONS AND FINDINGS AS SET FORTH IN GEOTECHNICAL REPORT. THE OWNER AND/OR ARCHITECT ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THE FINDINGS OR FOR THE FINAL RECOMMENDATIONS, GRADING, TRENCHING, ETC. CONTACT OWNER FOR INSTRUCTIONS PRIOR TO THE CONTINUATION OF WORK SHOULD ANY UNUSUAL CONDITIONS BECOME APPARENT DURING GRADING OR FOUNDATION CONSTRUCTION. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINTED SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREIN OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK.
- IF CODE INFORMATION INDICATES THAT BUILDING IS FIRE SPRINKLERED, PROVIDE FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 AND SHOW HEREIN. FIRE SPRINKLER CONTRACTOR IS TO SUBMIT COMPLETE SHOP DRAWINGS, HYDRAULIC CALCULATIONS, LAYOUT AND RELATED DATA TO FIRE MARSHAL FOR APPROVAL PRIOR TO INSTALLATION. SHOP DRAWINGS SHALL BE CERTIFIED BY LICENSED ENGINEER IN STATE WITH JURISDICTION.
- MEANS, METHODS, SAFETY MEASURES AND TEMPORARY SERVICES REQUIRED DURING CONSTRUCTION SHALL BE AT THE SOLE EXPENSE/ RESPONSIBILITY OF G.C.
- ALL INTERIOR NON-STRUCTURAL PARTITION SHALL BE 2 X 4 WOOD STUDS @ 24" O.C. FROM SLAB TO 6" ABOVE FINISHED CEILING, UNLESS NOTED OTHERWISE. DIAGONALLY BRACE TOP OF WALL TO ROOF STRUCTURE AS REQUIRED TO SUPPORT ADDITIONAL LOADS.
- REFER TO SITE PLAN FOR LOCATION & EXTENTS OF SIDEWALKS ETC.
- ALL EXTERIOR WALLS SHALL BE FRAMED WITH 2 X 6 STUDS @ 16" O.C. REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR LAYOUT, DIMENSIONS, DETAILS, MATERIAL INFORMATION & SPECIFIC STRUCTURAL DESIGN REQUIREMENTS.
- G.C. TO PROVIDE SOLID WOOD BLOCKING BEHIND ALL WALL MOUNTED FIXTURES AND ACCESSORIES.
- FOR ANOMALIES, REFER TO WALL SECTIONS REFERENCE KEYED ON PLANS.
- GYPSUM BOARD, PLYWOOD & CEMENTITIOUS BACKER BOARD TO EXTEND TO 4" ABOVE T-BAR CEILING & TO US OF CEILING IN LOCATIONS WITH GYPSUM BOARD CEILING.
- FINISH WALLS AS PER FINISH SCHEDULE ON SHEET A10.
- REFER TO MANUFACTURE SPECIFICATIONS FOR ALL INSTALLATION PROCEDURE.
- G.C. TO PERFORM AN AIR BARRIER TEST (LEAKAGE TEST) ON THE BUILDING ENVELOPE PRIOR TO THE COMPLETION OF CONSTRUCTION, IN ACCORDANCE WITH THE NYS ENERGY CODE.
- G.C. TO SEAL CAULK ALL BUILDING PENETRATIONS PRIOR TO PERFORMING AN AIR BARRIER TEST.
- PROVIDE FIRE CAULKING ALL PIPES, CONDUITS, WIRES AND FRAMING PENETRATIONS THROUGH FIRE RATED SEPARATIONS. FIRE CAULK TOP & BOTTOM OF FIRE RATED SEPARATIONS. HILTI USA FS-ONE MAX FIRESTOP INTUMESCENT SEALANT, HILTI USA 1-800-879-8000 FIRE CAULK TOP & BOTTOM OF FIRE RATED SEPARATIONS.
- G.C. TO PROVIDE & INSTALL 1/2" CEMENTITIOUS BACKER BOARD INSTEAD OF GYPSUM BOARD TO 2'-0" ABOVE FLOOR SLAB (FOR ALL INTERIOR PARTITIONS).
- EXTERIOR DIMENSIONS ARE FROM FACE OF SHEATHING TO FACE OF SHEATHING UNLESS NOTED OTHERWISE.
- REFER TO STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
- THE SANITARY AND WATER ON THE PLUMBING PLANS NEED TO GO OUT TO THE SITE SANITARY AND WATER. THE ELECTRIC AND DATA CONDUITS TO THE MENU BOARDS SHOULD GO OUT THE BACK OF THE BUILDING TOWARDS THOSE BOARDS. NOT OUT AT THE DRIVE THRU WINDOW SIDE AND WRAP AROUND THE BUILDING.
- PROVIDE FULL PLYWOOD BACKING INSTEAD OF DRYWALL IN BACK OF HOUSE WHERE PERMITTED BY CODE.
- G.C. TO ENSURE THE FOLLOWING SHOP DRAWINGS ARE SUBMITTED:
  - ROOF ACCESS LADDER/CAGE/ROOF HATCH (P. ENG. STAMPED)
  - LIST OF HARDWARE / DOORS
  - DRIVE THRU WINDOW
  - ROOFING MATERIALS
- REFER ALSO TO SPECIFICATION SECTIONS FOR SHOP DRAWINGS REQUIREMENTS.
- PRIME CONSULTANT TO REQUEST THE FOLLOWING SHOP DRAWINGS TO THE RELATED VENDOR FOR REVIEW:
  - REFRIGERATION BOXES
  - MILLWORK
- REFER TO MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS FOR MECHANICAL, ELECTRICAL AND STRUCTURAL REQUIREMENTS
- ALL BUTT JOINTS IN THE MILLWORK (VERTICAL AND HORIZONTAL) BETWEEN MILLWORK AND ADJACENT WALLS WILL BE CAULKED WILL CLEAR SILICONE CAULKING BY MILLWORK INSTALLER.

DRAWN BY: LRK

CHECKED BY: AMD/MAR

APPROVED BY: AMD/MAR

ISSUE DATE: 07/12/2022

ISSUE DESCRIPTION:

#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

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#	DATE	DESCRIPTION
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PROJECT:  
19355 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728



PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

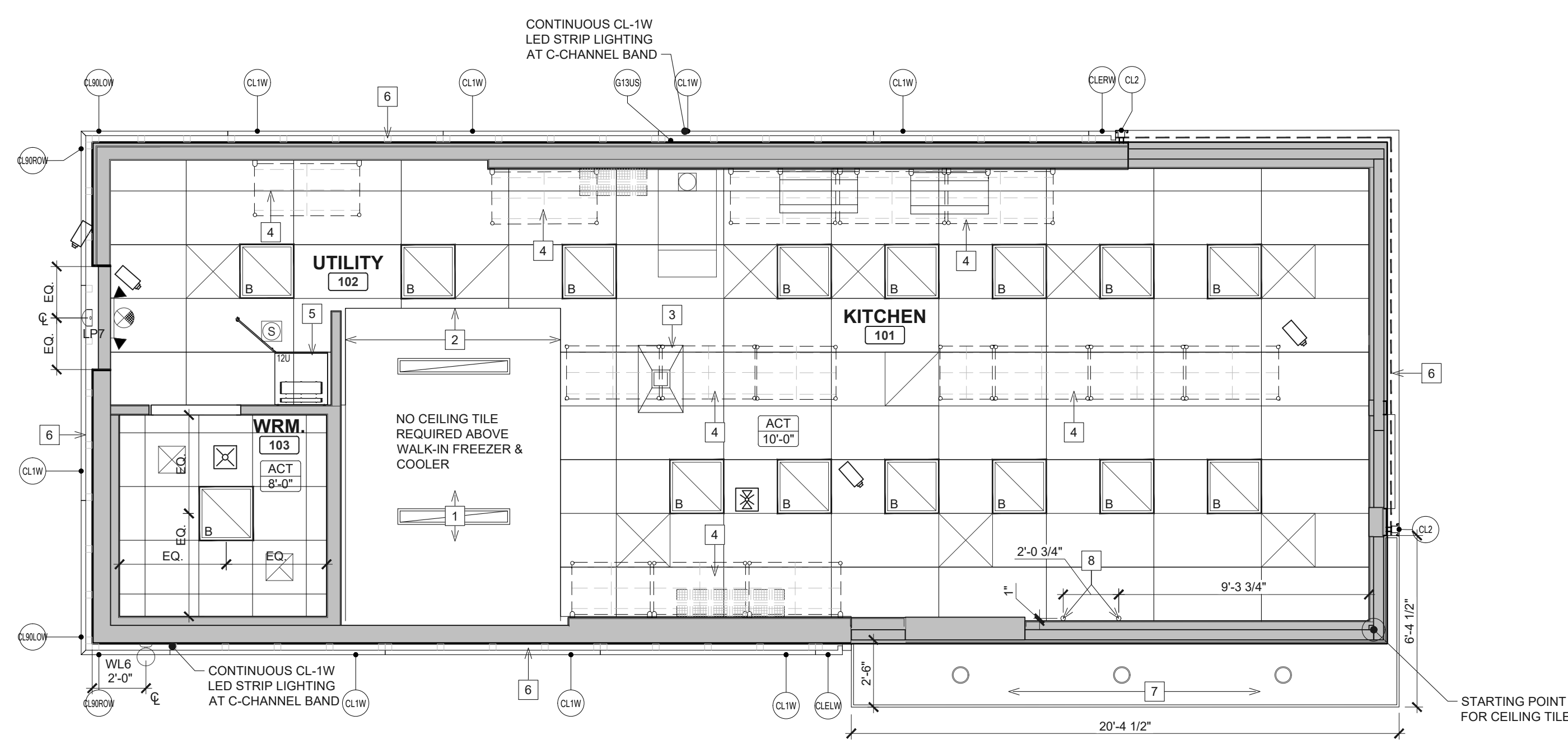
PROJECT NO.: 40509-11

SHEET TITLE: **FLOOR PLAN AND SCHEDULES**

SHEET: **A1**



File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\A3 REFLECTED CEILING PLAN AND DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:18 PM



### CEILING PLAN NOTES

- NO CEILING TILE REQUIRED ABOVE WALK-IN FREEZER & COOLER.
- G.C. TO PROVIDE ACT EDGE 'L' SUPPORT ALONG FACE OF WALK-IN FREEZER AND COOLER AT T-BAR CEILING. SEE DETAIL 2/A3.
- FUTURE EXHAUST HOODS #72.3 (IF REQUIRED). REFER TO DETAIL 4/A8 & 5/A8. REFER TO MECHANICAL DRAWINGS. EXACT LOCATION OF BAGEL TOASTER TO BE CONFIRMED PRIOR TO INSTALLATION OF HOOD.
- OVERHEAD SHELVING. REFER TO DETAILS 11/A8 & 12/A8 FOR SHELVING SUPPORT. REFER TO STRUCTURAL DRAWINGS. RESTAURANT OWNER TO ENSURE IN A NON-SPRINKLER BUILDING ALL BOXES STACKED ON OVERHEAD SHELVING SHOULD LEAVE A SPACE OF MIN. 18" FROM FINISHED CEILING (TYP.)
- LOCATION OF MEDIA CABINET. REFER TO DETAIL 9/A8.
- G.C. TO INSTALL CL-2 AND CL-1W. BRACKET SUPPORT, LED STRIP LIGHTS AND DRIVERS.
- PREFABRICATED CANOPY AT DRIVE-THRU WINDOW C/W DOWN LIGHT. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING SPECS. REFER TO EXTERIOR ELEVATIONS ON SHEETS A5 & A5.1 AND TO DETAIL 11A7.2.
- LOCATION OF MONITOR MOUNTS. SEE DETAIL 3/A3

### NOTE:

- THE GENERAL CONTRACTOR IS TO ENSURE THE FOLLOWING ITEMS ARE BUILT IN ACCORDANCE WITH STRUCTURAL DRAWINGS AND TO MEET CODE REQUIREMENTS (INCLUDING SEISMIC AND LATERAL RESTRAINT) AS REQUIRED:
  - SUSPENDED SHELVING SUPPORTS
  - SEISMIC AND LATERAL RESTRAINT FOR DUCTWORK
  - SUSPENDED CEILING PANELS, GYPSUM BOARD / T-BAR CEILINGS IN RELATION TO SEISMIC AND LATER RESTRAINT.
- THE GENERAL CONTRACTOR IS RESPONSIBLE THAT ALL SUB-TRADES HAVE RETAINED A QUALIFIED STRUCTURAL ENGINEER TO REVIEW THEIR APPROPRIATE WORK. STRUCTURAL ENGINEER(S) TO ISSUE LETTER (ON THEIR LETTERHEAD) STATING THAT ALL WORK MEETS THE REQUIREMENT OF BUILDING CODE FOR SEISMIC RESTRAINTS.

### SYMBOL LEGEND

	SECTION NUMBER DRAWING NUMBER
	NOTE REFERENCE
	DENOTES CEILING HT & MATERIAL LGB LAY-IN GYPSUM BOARD
	HVAC DUCTWORK WITH AIR GRILLE. REFER TO MECHANICAL DRAWINGS.
	RETURN AIR GRILLE. REFER TO MECHANICAL DRAWINGS.
	SUPPLY AIR GRILLE. REFER TO MECHANICAL DRAWINGS.
	EXHAUST FAN. REFER TO MECHANICAL DRAWINGS.
	RADIO & AMPLIFIER. REFER TO ELECTRICAL DRAWINGS.
	AIR TRANSFER DUCT. REFER TO MECHANICAL DRAWINGS.
	CEILING MOUNTED HORN / STROBE INDICATING DEVICE. REFER TO ELECTRICAL DRAWINGS.
	CEILING MOUNTED STROBE ONLY DEVICE. REFER TO ELECTRICAL DRAWINGS.

### SECURITY CAMERA LEGEND (16.3)

CAP INDEX	SECURITY PACKAGE #	CAMERA #S
0<100	1	1-4
100<250	2	1-8
>250	3	1-12

NOTES:  
 \* WITH PACKAGE #2 AND #3, 4 EXTRA CAMERAS ARE AVAILABLE TO BE LOCATED AT THE OWNERS DISCRETION  
 \* IF A CAMERA IS INSTALLED IN STAFF AREA, OWNER IS TO INFORM STAFF.

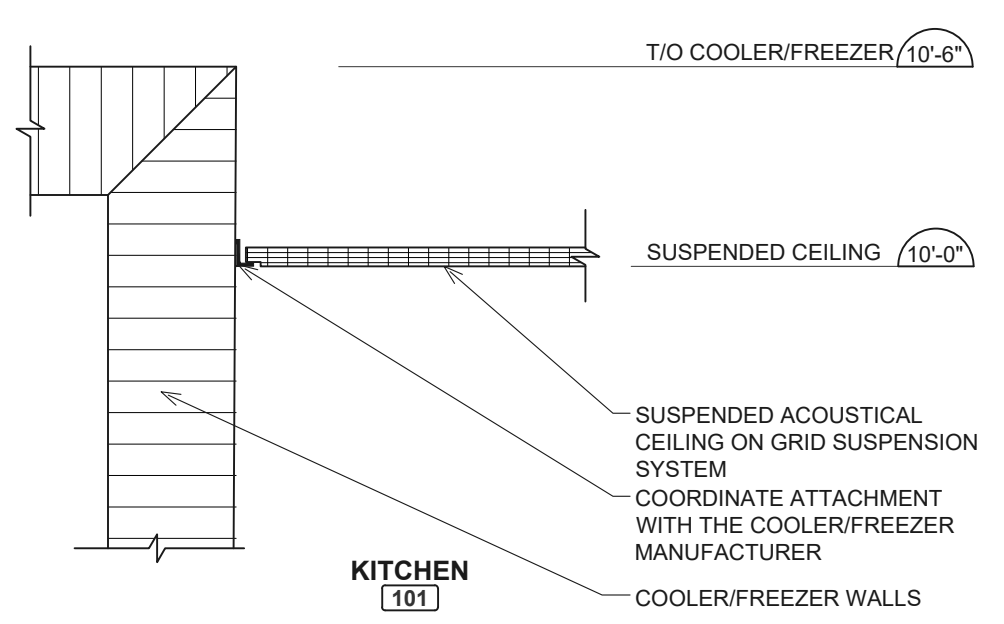
CAMERAS # NUMBER OF CAMERAS

### ELECTRICAL SCHEDULE

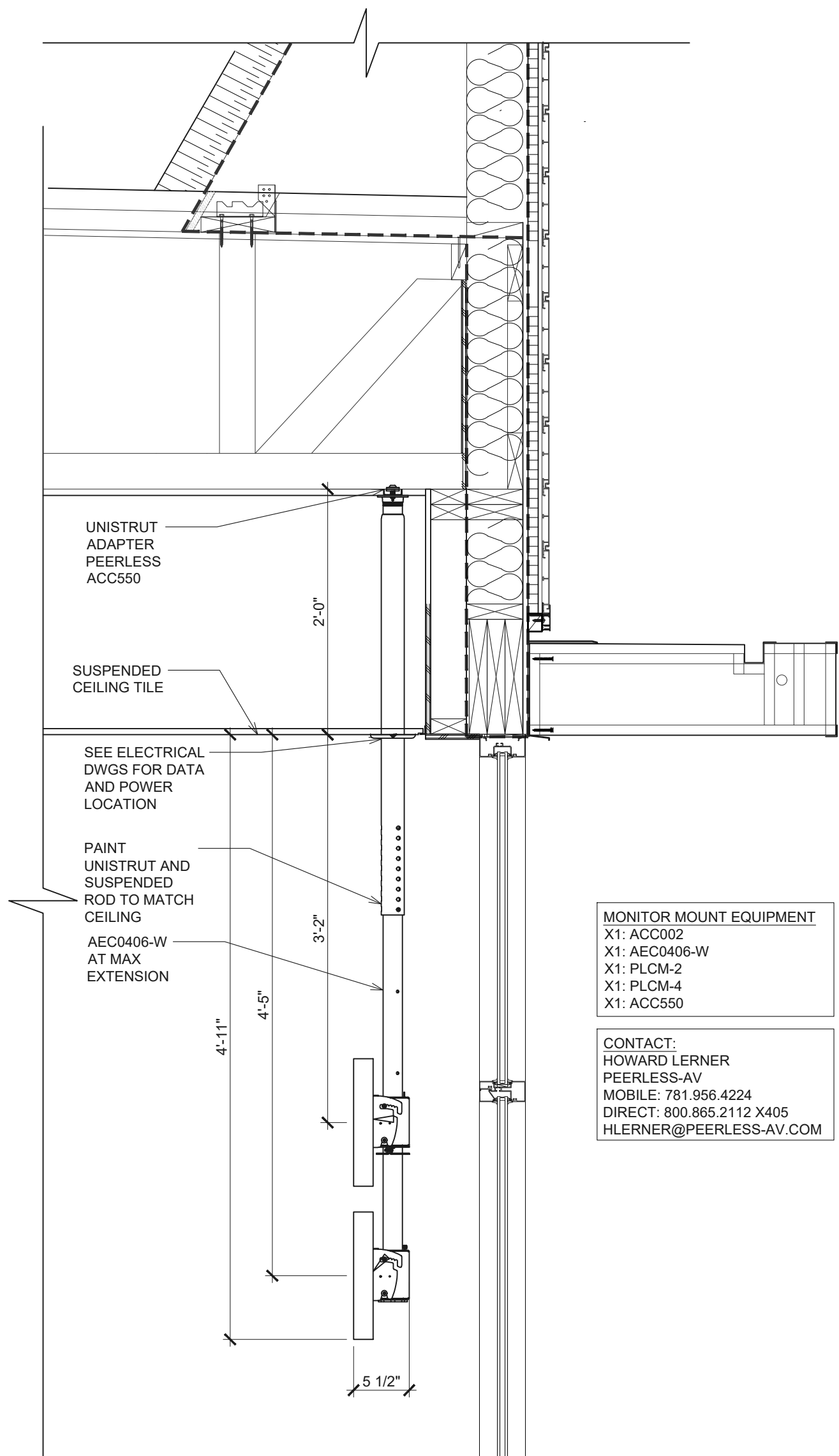
	2'-0" X 2'-0" RECESSED FIXTURE
	EXTERIOR SPOTLIGHT. REFER TO ELECTRICAL DRAWINGS.
	EXTERIOR LIGHTING. REFER TO ELECTRICAL DRAWINGS.
	EMERGENCY LIGHTING. REFER TO ELECTRICAL DRAWINGS.
	EMERGENCY LIGHTING. REFER TO ELECTRICAL DRAWINGS.
	EMERGENCY LIGHTING. REFER TO ELECTRICAL DRAWINGS.

REFER TO SPECIFICATIONS ON SHEET SP13 FOR CONTACT INFORMATION

**1**  
A3  
**REFLECTED CEILING PLAN**  
SCALE: 1/4"=1'-0"  
NORTH



**2**  
A3  
**SUSPENDED CEILING @ COOLER/FREEZER**  
SCALE: 2"=1'-0"



MONITOR MOUNT EQUIPMENT  
 X1: ACC002  
 X1: AEC0406-W  
 X1: PLCM-2  
 X1: PLCM-4  
 X1: ACC550

CONTACT:  
 HOWARD LERNER  
 PEERLESS-AV  
 MOBILE: 781.956.4224  
 DIRECT: 800.865.2112 X405  
 HLERNER@PEERLESS-AV.COM

**4**  
A3  
**DTO MONITOR MOUNT DETAIL**  
SCALE: 1"=1'-0"

DRAWN BY: LRK

CHECKED BY: AMD/MAR

APPROVED BY:

ISSUE DATE: 07/12/2022

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#	DATE	DESCRIPTION

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 STORE # 919728



PROFESSIONAL OF RECORD:  
 CHARLES M. BUSCH No. 1301068763  
 EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**REFLECTED CEILING PLAN AND DETAILS**

SHEET:  
**A3**



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PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**ROOF PLAN AND DETAILS**

SHEET: A4

**ROOF PLAN NOTES**

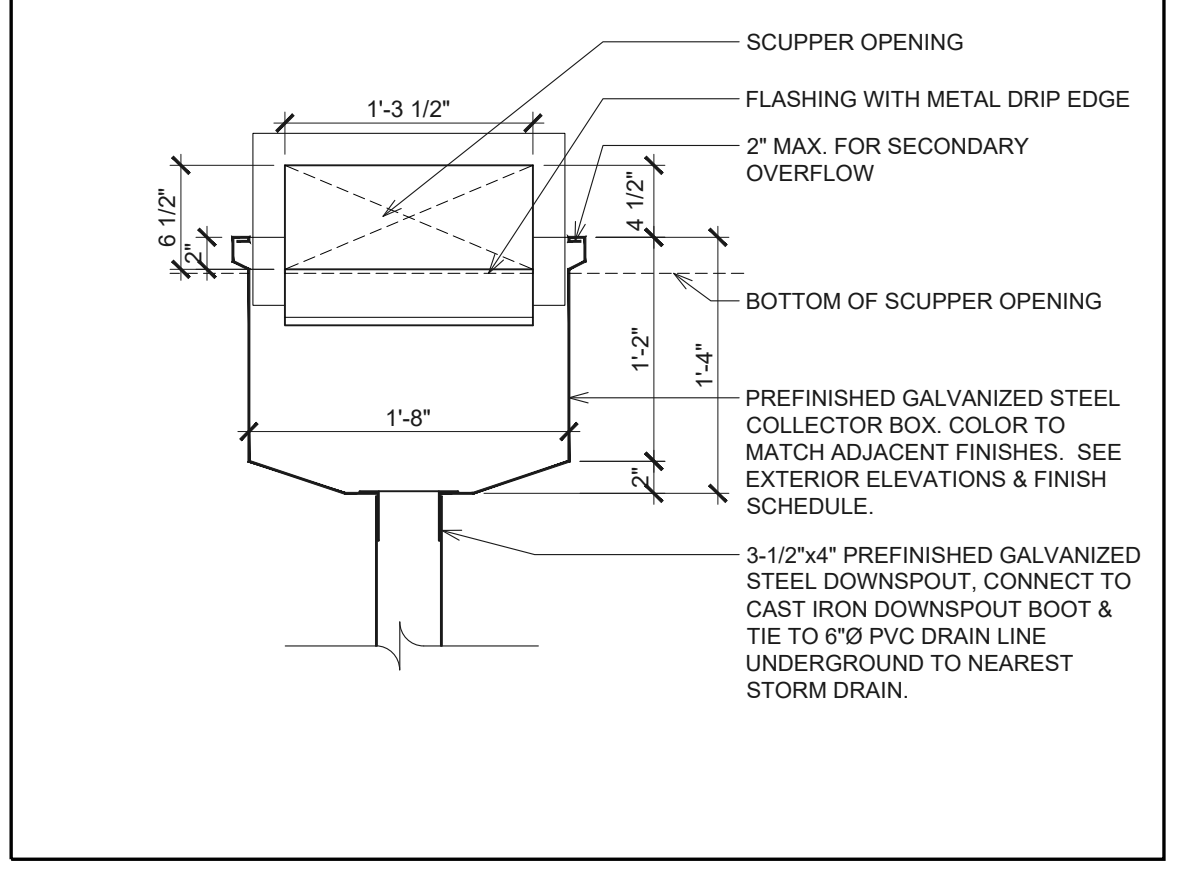
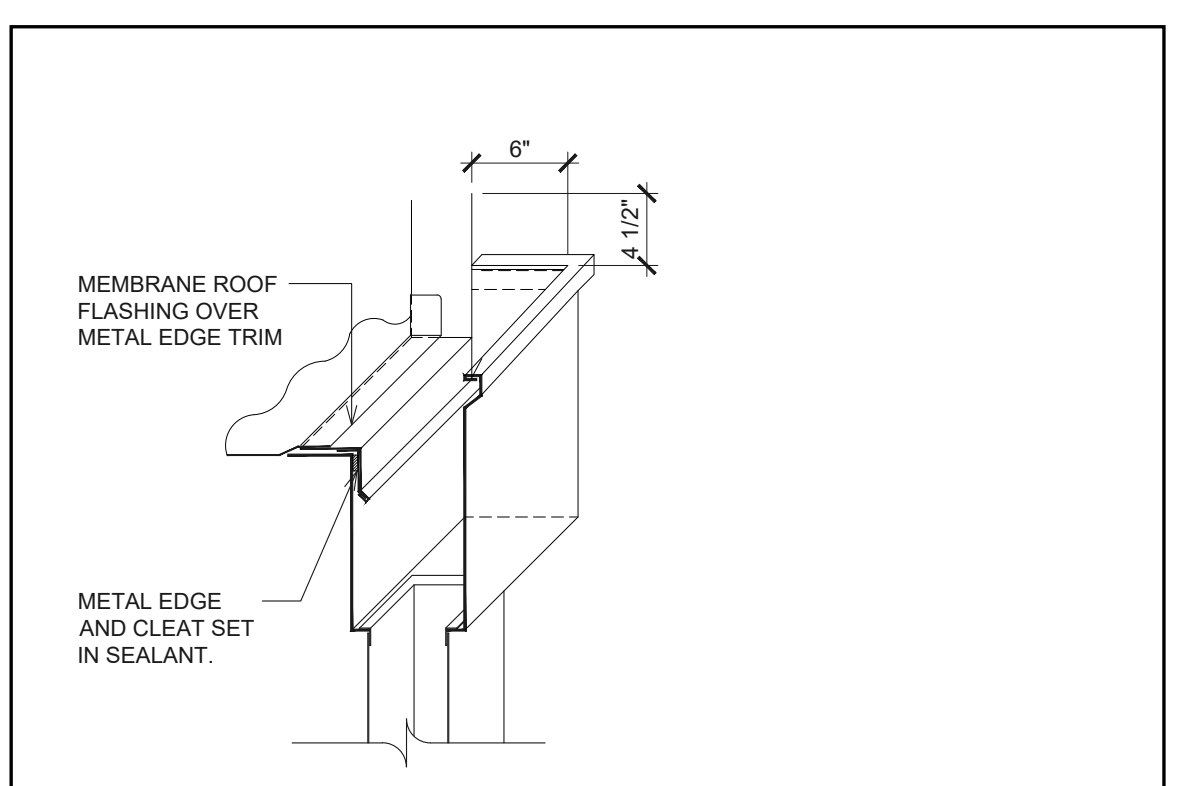
- ROOF LADDER TO MATCH PRE-FINISHED METAL CAP FLASHING. REFER TO DETAIL 1/A4.
- PREFABRICATED CANOPY AT DRIVE-THRU WINDOW. REFER TO EXTERIOR ELEVATIONS ON SHEETS A5 & A5.1 AND TO DETAIL 1/A7.2. REFER TO STRUCTURAL DRAWINGS FOR DRIVE-THRU CANOPY STRUCTURAL BLOCKING/BACKING SUPPORT.
- LINE OF PARAPET. REFER TO DETAIL ON SHEET A7.2.
- LINE OF TOWER PARAPET. REFER TO DETAIL ON SHEET A7.2.
- LINE OF WALL BELOW.
- WHITE ULTRAPLY TPO MEMBRANE BY FIRESTONE (OR APPROVED EQUAL). REFER TO ROOF TYPE SCHEDULE & SPECIFICATIONS.
- PREFINISHED COLLECTOR BOX & DOWNSPOUT. REFER TO DETAIL 2/A4.
- H.V.A.C UNITS AND EXHAUST FANS AS PER MECHANICAL DRAWINGS. PROVIDE CURB WHERE REQUIRED. REFER TO DETAIL 3/A4.
- PREFINISHED METAL CAP FLASHING. REFER TO EXTERIOR FINISH SCHEDULE ON SHEET A5 FOR COLOR AND TYPE.
- PROVIDE SLEEPERS FOR WALK-IN COOLER/FREEZER CONDENSER. SLEEPERS TO SPAN ACROSS JOISTS BELOW. REFER TO DETAIL 4/A4 & STRUCTURAL DRAWINGS.
- G.C TO PROVIDE AND INSTALL DOUBLE PIPE PORTAL (PART NO. 36002) C/W C-126 & C-212 CAP FOR PCL LINES FOR WALK-INS. ROOF OPENING (2'-3" x 1'-0") AND ROOF CURBS TO BE PROVIDED AND FURNISHED BY G.C. REFER TO DETAIL 3/A4 & 6/A4.
- PROVIDE & INSTALL 3M NON-SLIP TAPE ON FLASHING AT LADDER LOCATION.
- HARDIE HORIZONTAL SIDING PANELS TO WRAP ON ALL TOWER WALL SIDES. REFER TO EXTERIOR ELEVATIONS AND DETAILS 15/A7.
- EXTEND ROOF MEMBRANE UP PARAPET WALL AND OVER TOP OF FRAMING (TYP.). SECURE PREFABRICATED ROOF EDGE CLEATS THROUGH MEMBRANE AS SPECIFIED BY MANUFACTURER. REFER TO WALL SECTIONS AND DETAILS.
- CROSS HATCH INDICATES TAPERED INSULATION OVER SPECIFIED RIGID THERMAL INSULATION (TYP.) FIELD VERIFY ROOF DRAIN LOCATIONS PRIOR TO INSTALLATION & INSTALL PER ROOF MANUFACTURER SPECIFICATIONS. G.C. TO COORDINATE ACTUAL EXTENTS OF TAPERED INSULATION MATERIALS WITH ROOF INSTALLER & VERIFY INSTALLED COUNTER SLOPE OF 1/2" PER FOOT (MIN., AS MEASURED FROM LEVEL PLANE) TO DIRECT STORM WATER TOWARD ROOF DRAINS AS INDICATED ON PLAN.
- VENTS. REFER TO MECHANICAL DRAWINGS & DETAIL 5/A4.
- TPO WALK WAY PADS OR X-TREDS. REFER TO SPECIFICATIONS. CUT TPO WALK WAY PAD ROLLS TO MAXIMUM OF 9'-10". LEAVE A GAP OF 1" BETWEEN PIECES TO ALLOW FOR WATER DRAINAGE.
- THRU-WALL SCUPPER W/ METAL FLANGE BY ROOFING MANUFACTURER. HOLD TOP OF COLLECTOR BOX 1" BELOW ROOF DECK TO ALLOW FOR SECONDARY OVERFLOW DRAINAGE. SECONDARY SYSTEMS SHALL HAVE THE END POINT OF DISCHARGE SEPARATE FROM THE PRIMARY SYSTEM. DISCHARGE SHALL BE ABOVE GRADE. VERIFY OPENING REQUIREMENTS WITH LOCAL CONDITIONS.
- APPROX. LOCATION OF ROOF KICKERS. REFER TO STRUCTURAL DRAWINGS

NOTE:  
ALL ROOFING TO BE IN STRICT ACCORDANCE WITH THE NATIONAL ROOFING CONTRACTORS ASSOCIATION ROOFING MANUAL

G.C IS RESPONSIBLE FOR SEALING ALL ROOF PENETRATIONS UPON COMPLETION OF THE PROJECT.

**ROOF TYPE LEGEND**

**ROOF ASSEMBLY:**  
- MAS 60mil WHITE ULTRAPLY TPO MEMBRANE (OR APPROVED EQUAL)  
- 2 LAYERS OF RIGID INSULATION (R-27.7 MIN.)  
- 10mil VAPOUR RETARDER  
- WOOD ROOF DECK  
- WOOD TRUSS  
(AS PER NRCA STANDARDS)



**2 SCUPPER COLLECTOR DETAIL**  
SCALE: 1"=1'-0"

**CALCULATED ROOF AREA**

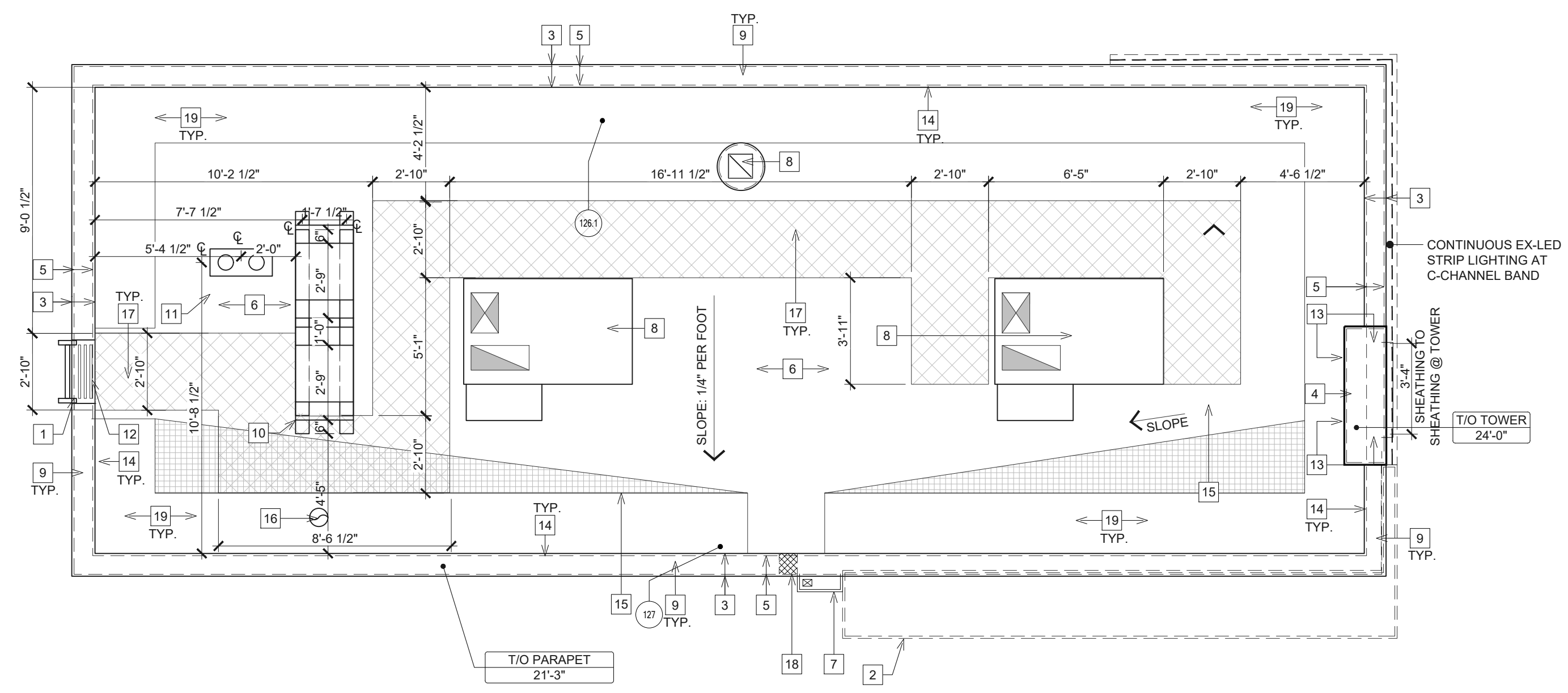
HORIZONTAL ROOF SURFACE (S.F)	800
VERTICAL SURFACE AREA (S.F)	934
TOTAL PROJECTED ROOF AREA (S.F)	1734

**DRAINAGE CALCULATIONS:**  
(SIZE OF VERTICAL CONDUCTORS AND LEADERS)

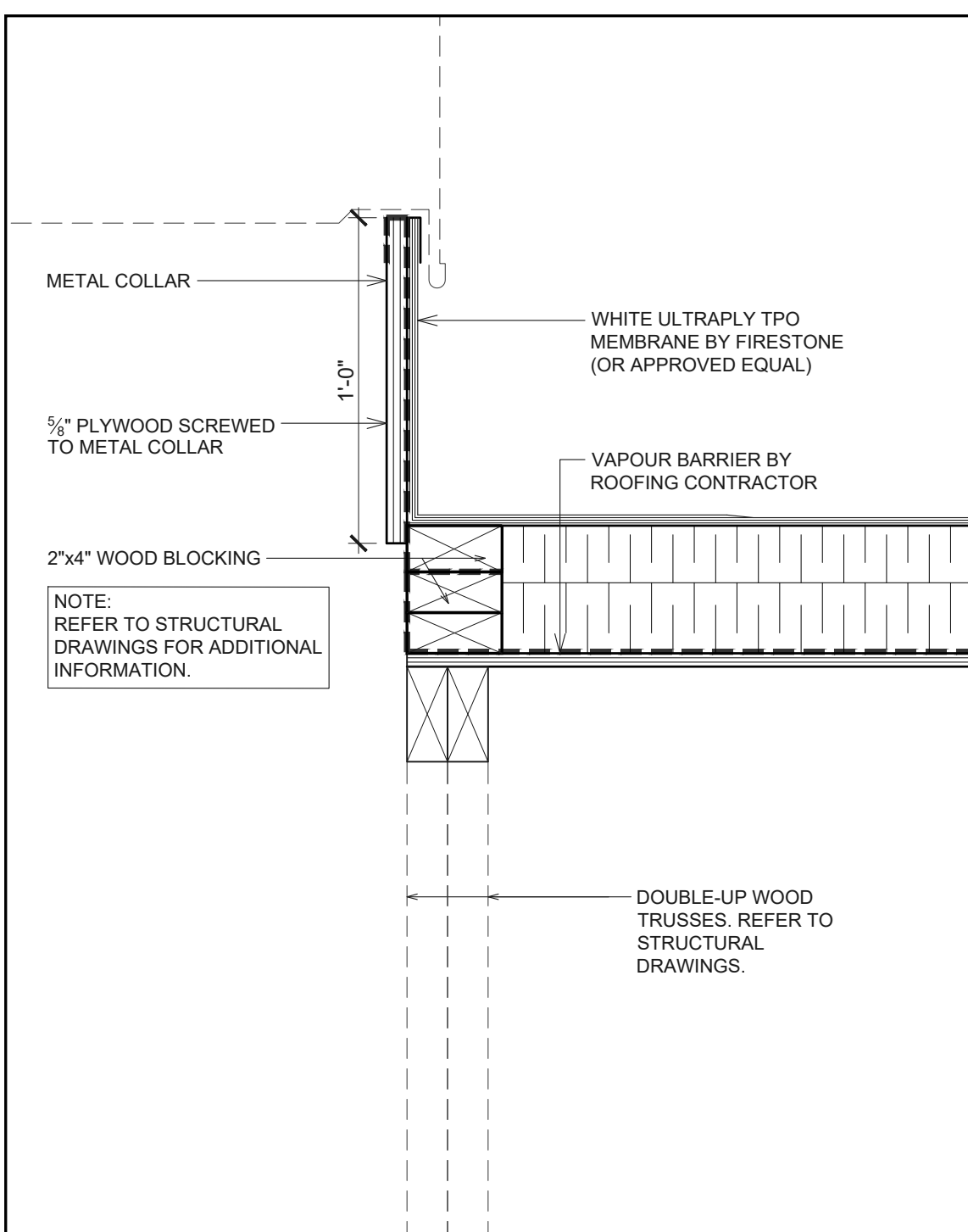
100 YEAR, 1 HOUR RAIN FALL (IN.)	3"
(PER FIGURE 1106.1, OHIO PLUMBING CODE)	
VERTICAL LEADER SIZE (RECTANGULAR)	3-1/2" X 4"
SPECIFIED LEADER CAPACITY (SINGLE)	5300 S.F
(PER TABLE 1106.2(2), OHIO PLUMBING CODE)	
REQUIRED OVERFLOW SCUPPER SIZE (SINGLE)	1' X 10.7"

**SYMBOL LEGEND**

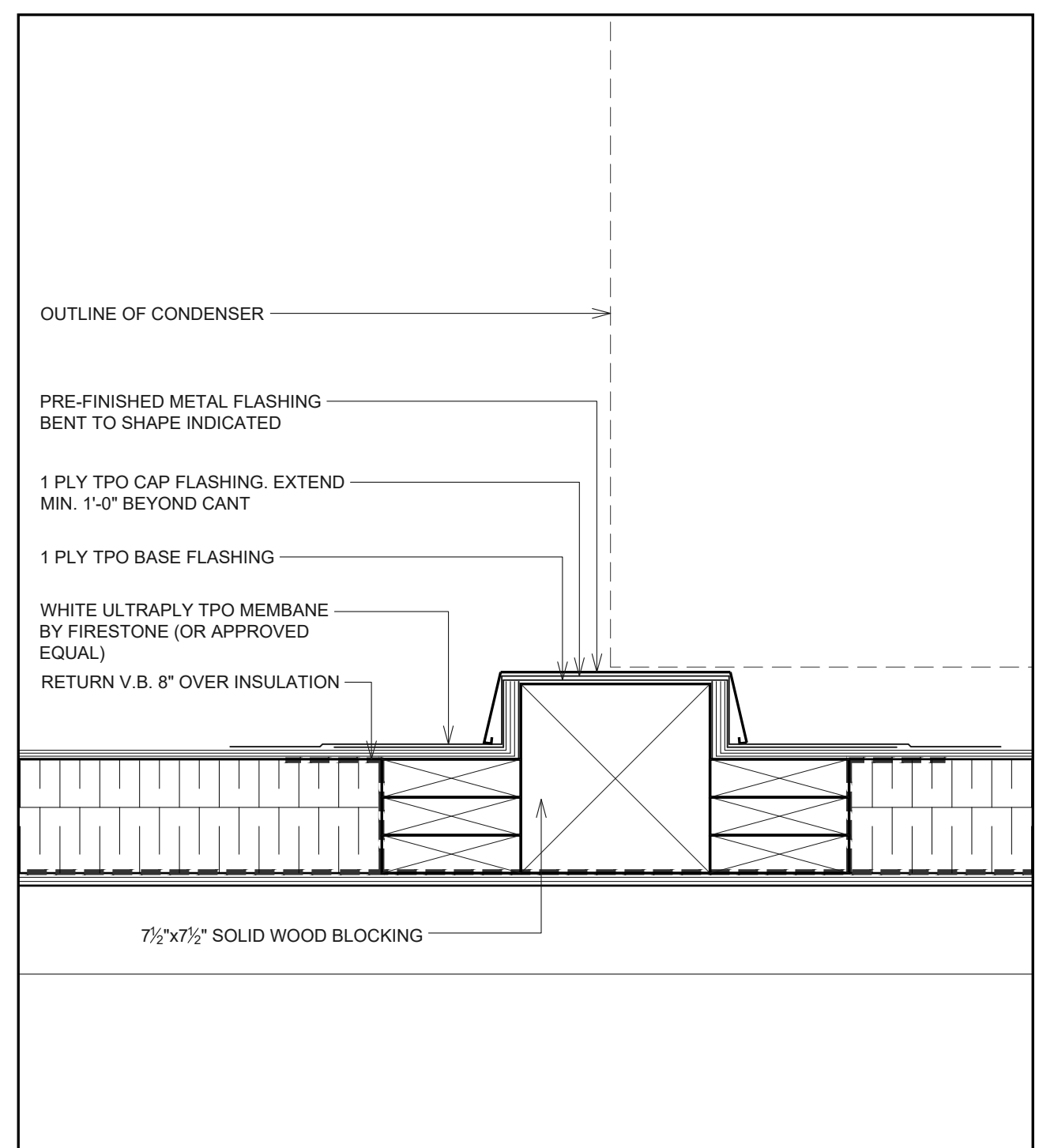
1/A1	DETAIL NUMBER DRAWING NUMBER
1	NOTE REFERENCE



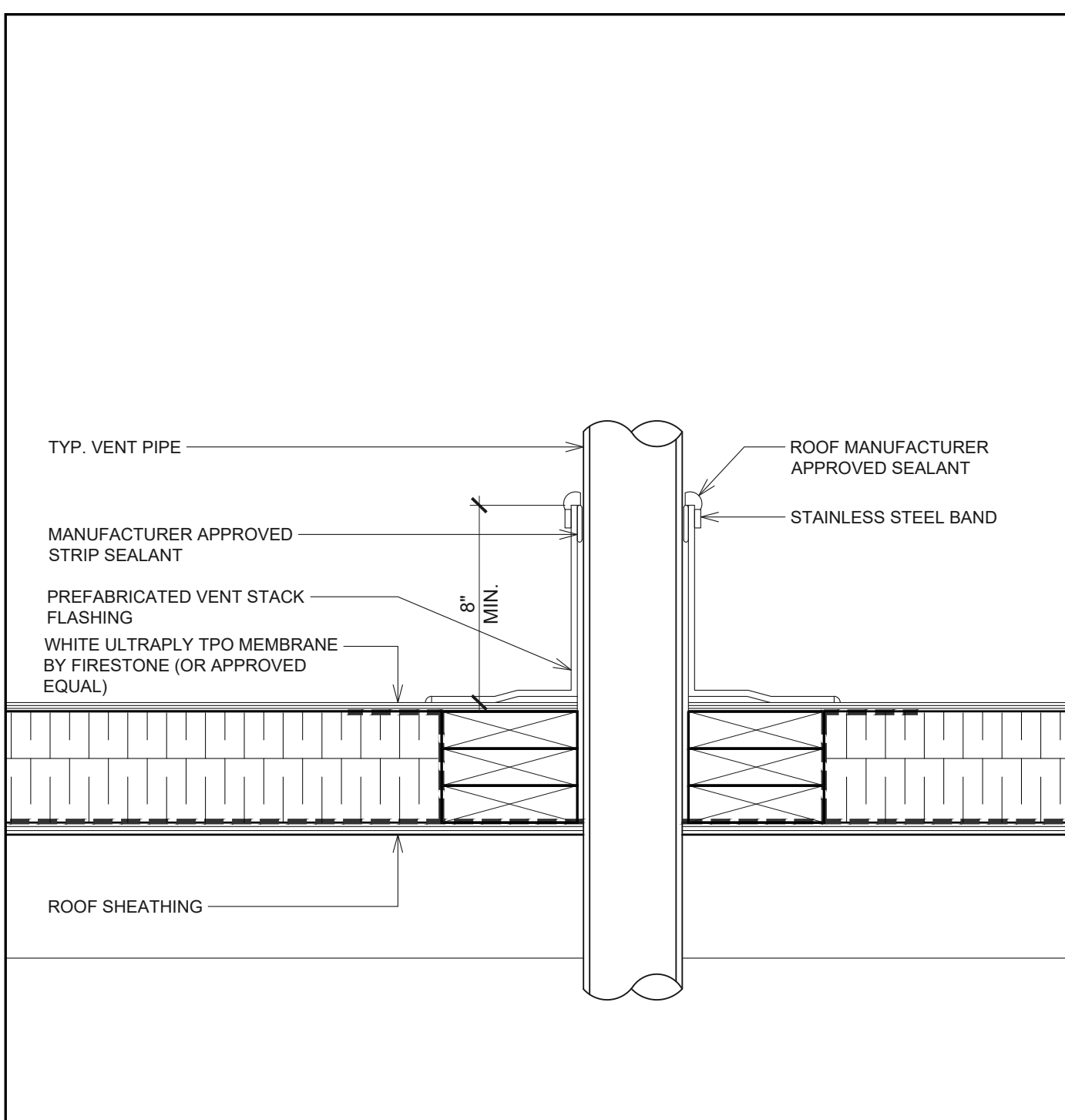
**1 ROOF PLAN**  
SCALE: 1/4"=1'-0"



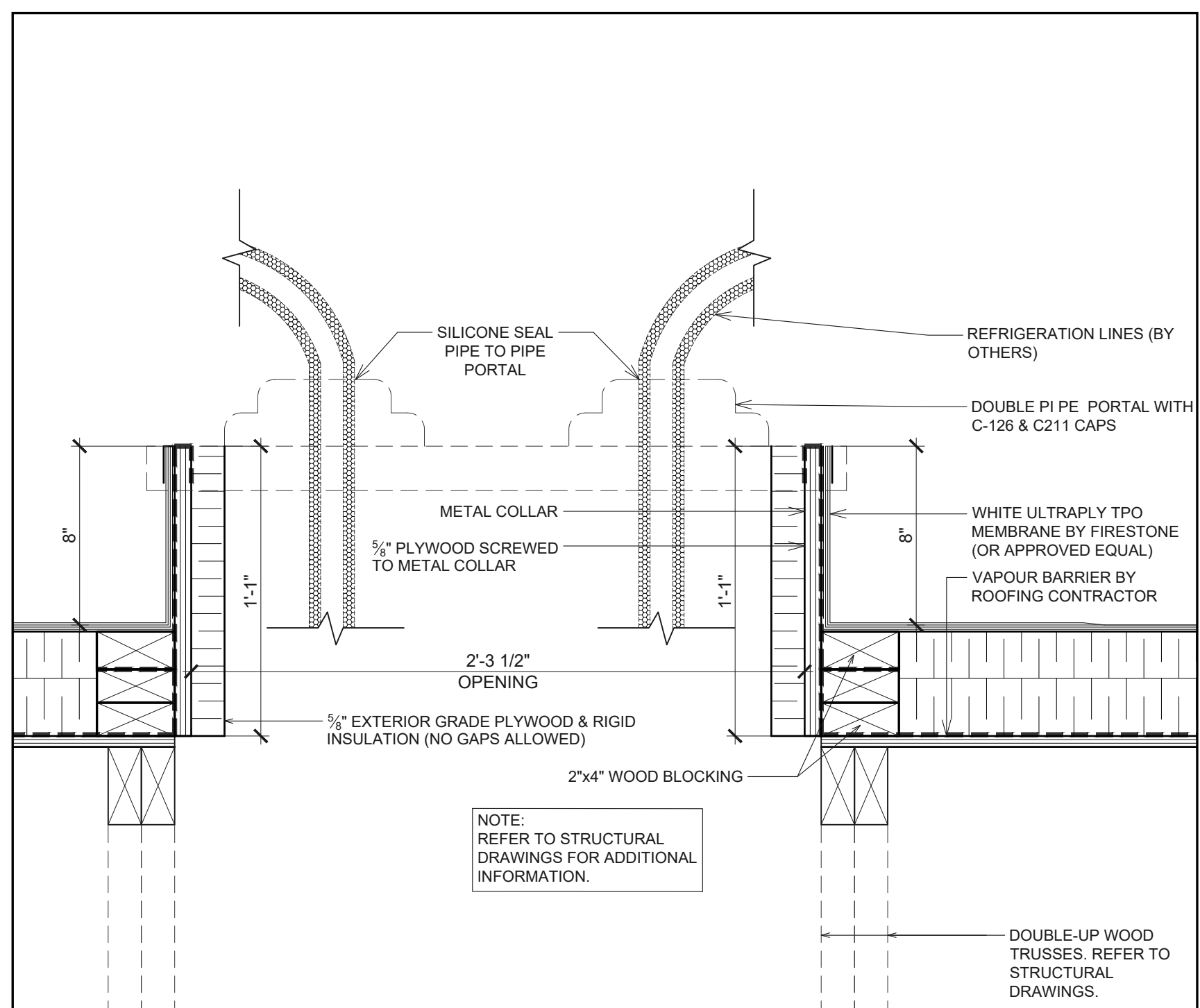
**3 TYPICAL ROOF CURB DETAIL**  
SCALE: 2"=1'-0"



**4 TYPICAL SLEEPER DETAIL**  
SCALE: 2"=1'-0"

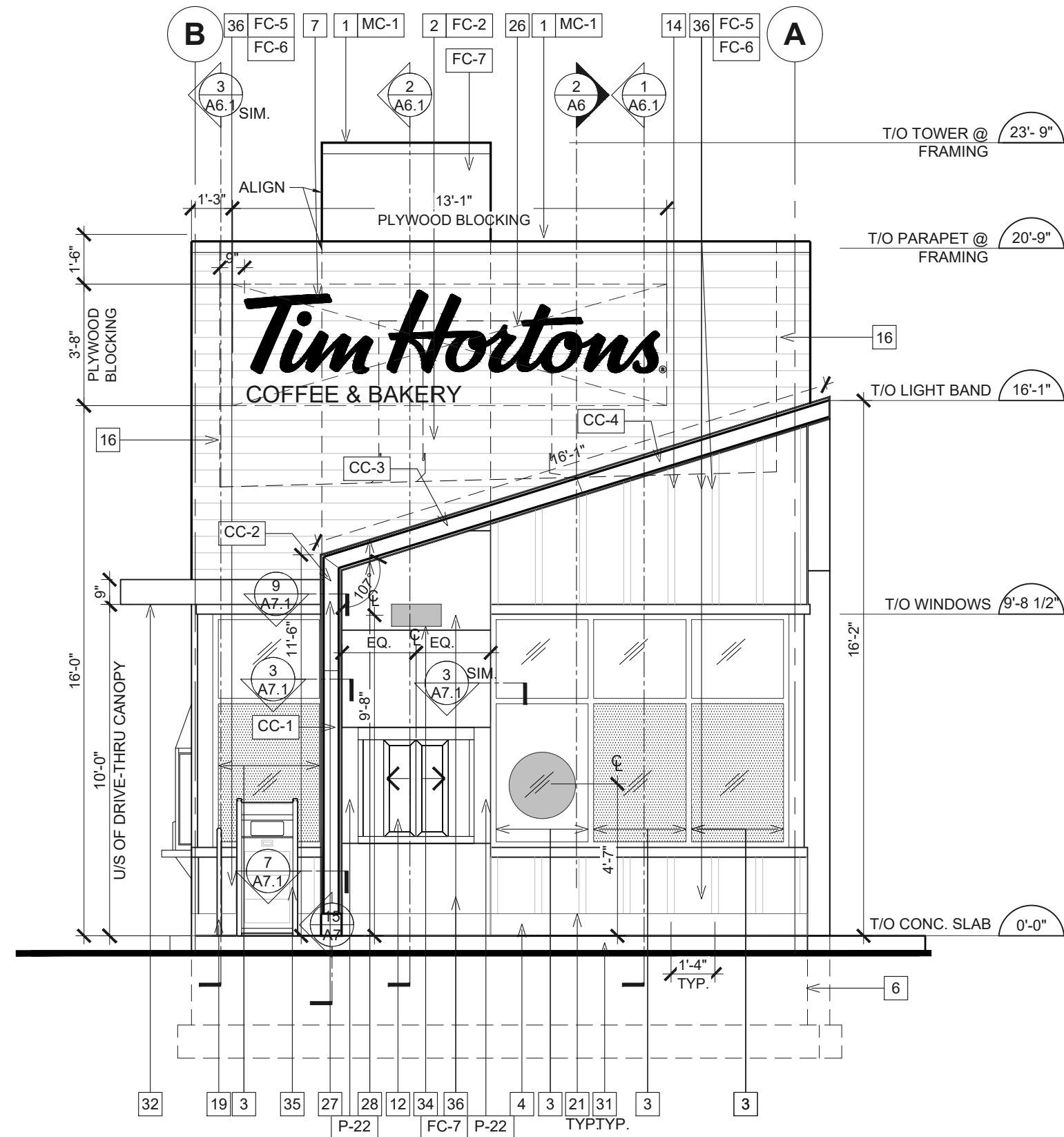


**5 VENT PENETRATION DETAIL**  
SCALE: 2"=1'-0"

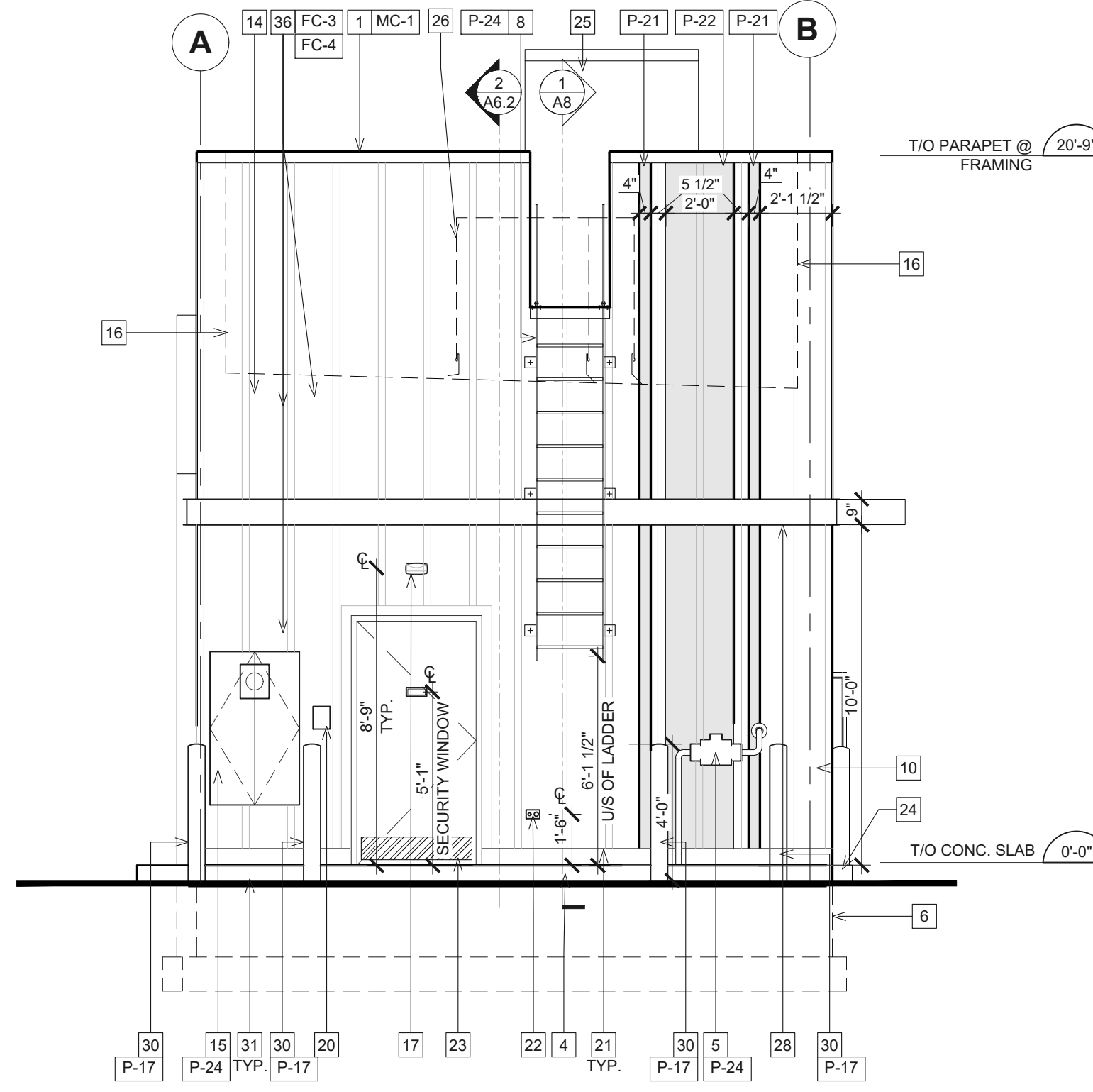


**6 TYPICAL ROOF OPENING DETAIL AT PIPE PORTAL**  
SCALE: 2"=1'-0"

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTD (RBI)\DCCS\CAD\A4 ROOF PLAN AND DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 1:08 PM



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



**3 BACK ELEVATION**  
SCALE: 1/4"=1'-0"

SIGNAGE SCHEDULE	
SIGNAGE	QTY.
15 MIN. MOBILE ORDER PICKUP (QUANTITY PENDING SITE PLAN)	2
TIM HORTONS MAPLE LEAF (3'-7" x 3'-5 1/2") (WITH LOGO)	1
STORE ADDRESS NUMBER VINYL ADHESIVE	1
TIM HORTONS (2'-0" DIA.) VINYL ADHESIVE	1
TIM HORTONS SCRIPT (36") WITH COFFEE AND BAKERY (8")	2
WASHROOM SIGNAGE STAFF	1

CL-2 LIGHTBAND PANEL SCHEDULE	
PANEL	QTY.
CC-1 8'-0" PANEL	2
CC-2 3'-5" PANEL (ANGLE CUT)	2
CC-3 8'-0" PANEL (ANGLE CUT)	1
CC-4 7'-8" PANEL (ANGLE CUT)	1
CC-5 7'-10" PANEL (ANGLE CUT)	1
CC-6 3'-9" PANEL	1
CL-2 100'-0" RUNNING LENGTH	1

ALL ANGLES AND CUTS FOR LEKTRON LIGHTBAND CL-2 TO BE CUT ON SITE BY GC

CL-1W LIGHTBAND PANEL SCHEDULE	
PANEL	QTY.
CL1W - 8FT SECTION	8
CL90LW - 90deg LEFT OUTSIDE CORNER	2
CL90RW - 90deg RIGHT OUTSIDE CORNER	2
CLELW - LEFT END SECTION	1
CLERW - RIGHT END SECTION	1
CL1W - 86'-8" RUNNING LENGTH	1

MOUNTING BRACKETS 68  
MOUNTING BRACKETS TO BE LOCATED 16" O.C. ON APPLIED HARDIE TRIM

SYMBOL LEGEND	
1	NOTE REFERENCE REFER TO ELEVATION NOTES
FNW	FINISH TYPE

- GENERAL NOTES**
- SEALANT / CAULKING AROUND DOOR / WINDOW FRAMES. COLOR: TO MATCH WINDOW / DOOR FRAMES.
  - THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DRAWINGS AND SPECIFICATIONS.

EXTERIOR FINISH SCHEDULE				
TAG	PRODUCT	MANUF.	PATTERN & COLOR	SUPPLIER / CONTACT
P-17	BOLLARD	SHERWIN WILLIAMS	COLOR: #SW6868 'REAL RED' MIN. 2 COATS SPRAY APPLICATION	SHERWIN WILLIAMS (NORTH AMERICA) CONTACT: DEAN GIVELAD EMAIL: DEAN.GIVELAS@SHERWIN.COM TEL: 416-432-6975
P-21	HARDIE VERTICAL SIDING AND TRIM BOARDS	SHERWIN WILLIAMS	COLOR: #SW7006 'EXTRA WHITE' HIGH GLOSS FINISH, MIN. 2 COATS SPRAY APPLICATION	
P-22	HARDIE VERTICAL SIDING AND TRIM BOARDS / PANEL SIDING	SHERWIN WILLIAMS	COLOR: #SW6868 'REAL RED' MIN. 2 COATS SPRAY APPLICATION BUILDING STRIPING TO BE HIGH GLOSS FINISH	
P-24	EXTERIOR METAL PAINTS & METAL RAILING	SHERWIN WILLIAMS	PAINT FOR FASCIAE AND/OR EXTERIOR METALS (SOFFITS, TRIM, ETC.) TO MATCH SURROUNDING COLORS WHERE NECESSARY. COLOR: SW 7067 CITYSCAPE	
FC-2	EXTRUDED ALUMINUM SIDING	KNOTWOOD	SIZE: 6" NOMINAL SPACING WITH 1/2" REVEAL JOINTS, COLOR: CANADIAN SHIELD (G.C. TO TOUCH UP IN FIELD), PATTERN: STACKED AT VERTICAL BUMP OUTS AND STAGGERED AT HORIZONTAL BUMP OUTS. NOTE: SIDING TO BE INSTALLED WITH KNOTWOOD ALUMINUM TRIM PIECES, STARTER CLIPS & JOINTS (COLOR: MATCH 'CANADIAN SHIELD')	HAINES, JONES & CADBURY LLC CONTACT: BARRY BRYANT TEL: (800)459-7099, (C) 479-899-3555 BARRY.BRYANT@HJCINC.COM
FC-3	HARDIE PANEL VERTICAL SIDING	JAMES HARDIE	SURFACE: SMOOTH COLOR: GRAY SLATE CORRESPONDING TRIM COLOR TO MATCH.	JAMES HARDIE BUILDING PRODUCTS, INC. CONTACT: DAN OZELLO TEL: (440) 570-8071 DANIEL.OZELLO@JAMESHARDIE.COM
FC-4	HARDIE TRIM BOARDS	JAMES HARDIE	SMOOTH BATTEN BOARDS. SIZE: 2.5" WIDE SPACED 16" OC. COLOR: GRAY SLATE CORRESPONDING VERTICAL SIDING COLOR TO MATCH.	
FC-5	HARDIE PANEL VERTICAL SIDING	JAMES HARDIE	SURFACE: SMOOTH COLOR: ARTIC WHITE. CORRESPONDING TRIM COLOR TO MATCH.	
FC-6	HARDIE TRIM BOARDS	JAMES HARDIE	SMOOTH BATTEN BOARDS. SIZE: 2.5" WIDE SPACED 16" OC. COLOR: ARTIC WHITE. CORRESPONDING VERTICAL SIDING COLOR TO MATCH.	
FC-7	HARDIE PANEL SIDING	JAMES HARDIE	SIZE: 36" TALL PANELS WITH 1/2" REVEALS, SURFACE: SMOOTH. COLOR: GRAY SLATE. REFER TO WALL SECTIONS FOR SPACING.	
MC-1	PREFINISHED METAL FLASHING	FIRESTONE BUILDING PRODUCTS	COLOR: MATTE BLACK *SEALANT: TITEBOND WEATHER MASTER SEALANT COLOR: 61121 BLACK	
MC-2	PREFINISHED METAL FLASHING	FIRESTONE BUILDING PRODUCTS	COLOR: TO MATCH WINDOW MULLION, WHITE *SEALANT: TITEBOND WEATHER MASTER SEALANT COLOR: WHITE	
WL-8	WALL SPOTLIGHT	KVO INC.	LED EXTERIOR SPOTLIGHT. FINISH: BLACK MATTE	EMAIL: FILIPE2@VISOINC.COM
	ANODIZED ALUMINUM (EXTERIOR STOREFRONT)	KAWNEER (OR APPROVED ALT. PER SP4)	KAWNEER TRIFAB VERSAGLAZE 451T, THERMALLY BROKEN 2"x4 1/2" WITH 1" INSULATED CLASS LOW E GLASS UNIT (BONE WHITE)	KAWNEER ATTENTION: CHERYL WILKERSON TEL: (770)449-5555
	ANODIZED ALUMINUM (DRIVE-THRU WINDOW)	QUIKSERV	BI-PARTING WINDOW WITH 2 CENTERED MOVING PANELS AND 2 SIDELITES 'PW-54E-TH', COLOR: PAINTED TIM HORTONS RED #870/C47D ORDER LEAD TIME: 10 WEEKS	CONTACT: BRIAN MCCLOSKEY TEL: (713)849-5882
	ANODIZED ALUMINUM (WALK-UP WINDOW)	QUIKSERV	MANUAL BI-PARTING WINDOW WITH 2 CENTERED MOVING PANELS AND 2 SIDELITES, SELF-CLOSING SLIDER, COLOR: PAINTED TIM HORTONS RED #870/C47D ORDER LEAD TIME: 10 WEEKS	CONTACT: BRIAN MCCLOSKEY TEL: (713)849-5882
CL-1W	C-CHANNEL PERIMETER INTEGRATED LIGHTING	LEKTRON BRANDING SOLUTIONS	CUSTOM LENGTH ALL ANGLES AND CUTS FOR LEKTRON LIGHTBAND CL-2 TO BE CUT ON SITE BY GC. COLOR: WHITE.	
CL-2	C-CHANNEL PERIMETER INTEGRATED LIGHTING	LEKTRON BRANDING SOLUTIONS	CUSTOM LENGTH ALL ANGLES AND CUTS FOR LEKTRON LIGHTBAND CL-2 TO BE CUT ON SITE BY GC. COLOR: BLACK.	
	DRIVE-THRU CANOPY	CUSTOM SIGN CENTER		CONTACT: CHRISTINA GREEN CHRISTINA@CUSTOMSIGNCENTER.COM

- EXTERIOR ELEVATION NOTES**
- PRE-FINISHED METAL CAP FLASHING C/W DRIP.
  - EXTRUDED ALUMINUM SIDING. REFER TO EXTERIOR FINISH SCHEDULE.
  - PRE-FINISHED 'BONE WHITE' ALUMINUM STOREFRONT SYSTEM WITH INSULATED GLAZING.
  - EXPOSED FOUNDATION TO BE PARGED AND FREE OF IMPERFECTIONS. TO BE PAINTED BLACK ON AREAS ADJACENT TO FC-5 AND PAINTED TO MATCH FC-3 ON AREAS ADJACENT TO FC-3
  - GAS UTILITY METER.
  - REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION WALL AND FOOTING DETAILS.
  - INTERNALLY ILLUMINATED BUILDING SIGNAGE PROVIDED AND INSTALLED BY SIGN COMPANY 'COFFEE AND BAKERY' SCRIPT LETTERS ARE 'WHITE'. G.C. TO PROVIDE AND INSTALL 3" EXTERIOR GRADE PRESSURE TREATED PLYWOOD BACKING AND ALL FINAL ELECTRICAL CONNECTION. SIGN MANUFACTURER SHALL OBTAIN STRUCTURALLY SEALED DRAWINGS AND SIGNAGE PERMITS FROM THE CITY BASED ON LOCAL REQUIREMENTS. G.C. SHALL VERIFY ACTUAL LOCATION & SIZE OF SIGNS WITH SIGN MANUFACTURER'S APPROVED DRAWINGS AND COORDINATE LOCATIONS OF BLOCKING AND UTILITIES. G.C. TO COORDINATE WITH SIGN INSTALLER TO USE VHM DRILL BIT WHILE DRILLING FOR ELECTRICAL FEED LINES AND SIGNAGE FASTENERS. ALL ELEMENTS PROVIDED BY SIGNAGE FABRICATOR TO BE REVIEWED AND APPROVED BY TDL PRIOR TO PRODUCTION.
  - GALVANIZED STEEL ROOF ACCESS LADDER TO BE PRIMED AND PAINTED.
  - LOCATION OF STAMP GRAPHIC BY SIGN COMPANY. (TOWN NAME TO BE SPECIFIED PER LOCATION).
  - PROVIDE & INSTALL 6" DIAMETER STEEL PIPE BOLLARD AT DRIVE-THRU WINDOW. G.C. TO PAINT 'RED', REFER TO EXTERIOR FINISH SCHEDULE.
  - AUTOMATIC DRIVE THRU WINDOW C/W BODY SENSOR. G.C. TO COORDINATE WITH RESTAURANT OWNER TO IDENTIFY WHICH DRIVE-THRU WINDOW TO BE INSTALLED. COLOR TO MATCH POWDERCOAT TIM HORTONS RED #870/C47D BY INTERNATIONAL PAINT. CONTACT QUIKSERV FOR INTERNATIONAL PAINT REPRESENTATIVE. REFER TO DRIVE-THRU SPECS ON SHEET A11.
  - MANUAL WALK-UP WINDOW, POWDERCOAT TIM HORTONS RED #870/C47D BY INTERNATIONAL PAINT. CONTACT QUIKSERV FOR INTERNATIONAL PAINT REPRESENTATIVE. GC TO COORDINATE. REFER TO SPECS ON SHEET A11
  - PRE-FINISHED GALVANIZED STEEL DOWNSPOUT & COLLECTOR BOX. G.C. TO COORDINATE WITH CIVIL ENGINEERS TO CONFIRM IF DOWNSPOUTS ARE SPLASHING ON CONCRETE PAD OR TIED TO THE STORM SEWER LINE. REFER TO MECHANICAL DRAWINGS.
  - DASHED LINE INDICATES UIS OF DECK BEHIND PARAPET.
  - C/T CABINET/ DISCONNECT SWITCH AND ELECTRICAL METER.
  - LINE OF PARAPET WALLS BEYOND.
  - GENERAL PURPOSE EXTERIOR LIGHTING FIXTURES.
  - WRAP STRUCTURE IN BRAKE METAL TO MATCH STOREFRONT SYSTEM.
  - NOT USED.
  - KNOX BOX SUPPLIED AND INSTALLED BY G.C. TYPE AND LOCATION TBD BY LOCAL FIRE DEPARTMENT. G.C. TO COORDINATE.
  - ALL BASE FLASHING TO MATCH ADJACENT MATERIAL COLORS. BASE HEIGHT FOR ENTIRE BUILDING TO BE ADJUSTED BY ARCHITECT TO BEST SUIT LOCAL WEATHER CONDITIONS.
  - HOSE BIB. G.C. TO PAINT. COLOR TO MATCH ADJACENT SIDING COORDINATE EXACT LOCATION WITH G.C. REFER TO MECHANICAL DRAWINGS.
  - G.C. TO PROVIDE & INSTALL SIS KICK PLATES (AT BOTTOM PANELS) ON BOTH SIDES OF MAIN ENTRANCE/EXIT DOOR. REFER TO SHEET A11 FOR SPECS.
  - G.C. TO PROVIDE CONCRETE CURB ALONG DRIVE-THRU LANE. CURB TO PROJECT 8" FROM FACE OF PANELS AND LENGTH OF CURB IS EXTENT OF FEATURE WALL.
  - TPO ROOF MEMBRANE ON BACK OF PARAPET WALLS. REFER TO SPECIFICATIONS.
  - HVAC UNITS.
  - LIGHTBAND FURNISHED BY THUSA VIA SCH. A AND INSTALLED BY G.C. BRACKET SUPPORT, LED STRIP LIGHTS AND DRIVERS ( TO BE SUPPLIED BY LEKTRON BRANDING SOLUTIONS). G.C. TO PROVIDE AND INSTALL PRE FINISHED BRAKE METAL TRIM (COLOR: MATCH WINDOW FRAMES) BEHIND THE ENTIRE LENGTH OF LEKTRON BAND AND WIDTH TO BE MATCH LEKTRON BAND SIZE (5 7/8") TO PROVIDE POWER AND JUNCTION BOX FOR ELECTRICAL WIRING. G.C. TO COORDINATE DETAILS WITH MANUFACTURER.
  - G.C. TO PROVIDE & INSTALL APPROXIMATELY 100'-0" RUNNING LENGTH OF EXTERIOR ILLUMINATED C-CHANNEL LED STRIP LIGHTING ( CL-2 BY LEKTRON BRANDING SOLUTIONS ). REFER TO SHEET SP7 FOR CONTACT INFORMATION (COORDINATE WITH LEKTRON BRANDING SOLUTIONS) AND DETAIL 2/A7 FOR INSTALLATION OF LED STRIP LIGHT AND C-CHANNEL PANEL SCHEDULE ON A5.
  - WALL SPOTLIGHT. REFER TO EXTERIOR FINISH SCHEDULE. GC TO ADJUST BEAM SPREAD TO FEATURE THE DRIVE-THRU LOOKUP SIGN.
  - G.C. TO COORDINATE WITH UTILITY COMPANIES FOR PLACEMENT/ LOCATION FOR BOLLARDS. G.C. TO PROVIDE 6" DIA. METAL BOLLARD FILL W/ CONCRETE AND PAINTED. G.C. TO PAINT 'RED'. REFER TO EXTERIOR FINISH SCHEDULE.
  - CONCRETE SIDEWALK (BY G.C). REFER TO SITE PLAN.
  - PRE-FABRICATED DRIVE-THRU CANOPY. G.C. TO ENSURE THE CANOPY IS ALIGNED WITH C-CHANNEL. REFER TO EXTERIOR FINISH SCHEDULE FOR TYPE AND FINISH AND TO DETAIL 1/A7.2 FOR INSTALLATION. REFER TO STRUCTURAL DRAWINGS FOR CANOPY SUPPORT.
  - NOT USED.
  - SIGN FABRICATOR TO PROVIDE AND INSTALL (MIN. 8" HIGH) ADDRESS VINYL ADHESIVE. G.C. TO COORDINATE W/ SIGN FABRICATOR. ALL ELEMENTS PROVIDED BY SIGNAGE FABRICATOR TO BE REVIEWED AND APPROVED BY TDL PRIOR TO PRODUCTION.
  - EXTERIOR WASTE UNIT SUPPLIED BY TDL GROUP LTD. & INSTALLED BY G.C.
  - HARDIE VERTICAL SIDING BOARD AND BATTEN. SEE EXTERIOR FINISH SCHEDULE

DRAWN BY LRK

CHECKED BY AMD/MAR

ISSUE DATE 07/12/2022

ISSUE

#	DATE	DESCRIPTION
	07/12/22	PERMIT SET

REVISIONS

#	DATE	DESCRIPTION
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**Mosure L.L.C.**  
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Columbus, Ohio 43229-1547  
phone 614.898.7100  
fax 614.898.7570

*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728

PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

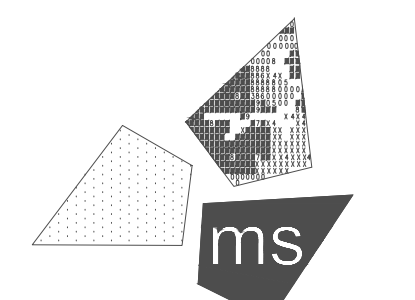
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SHEET: A5

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**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
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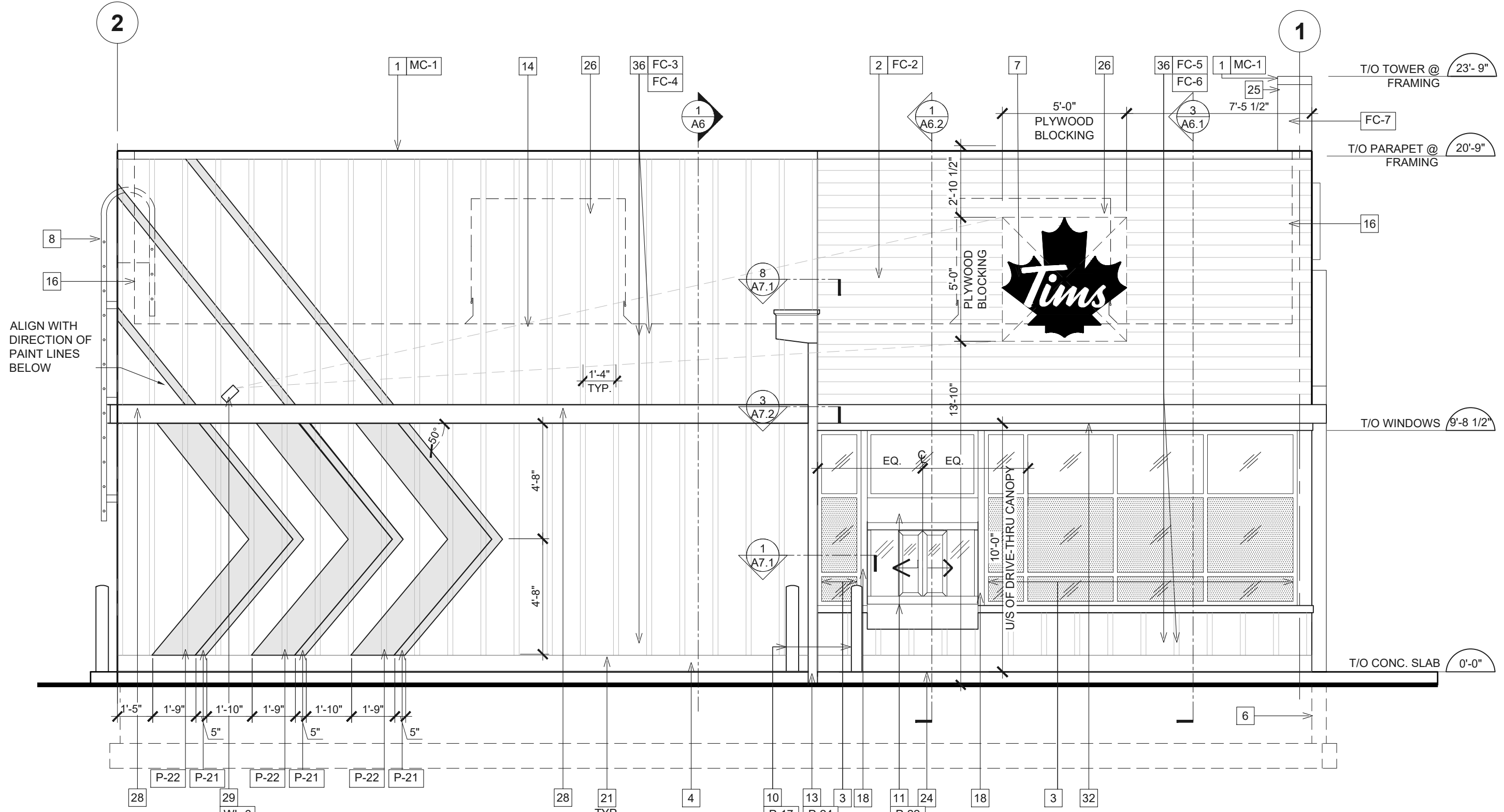
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**EXTERIOR ELEVATIONS**

SHEET: **A5.1**

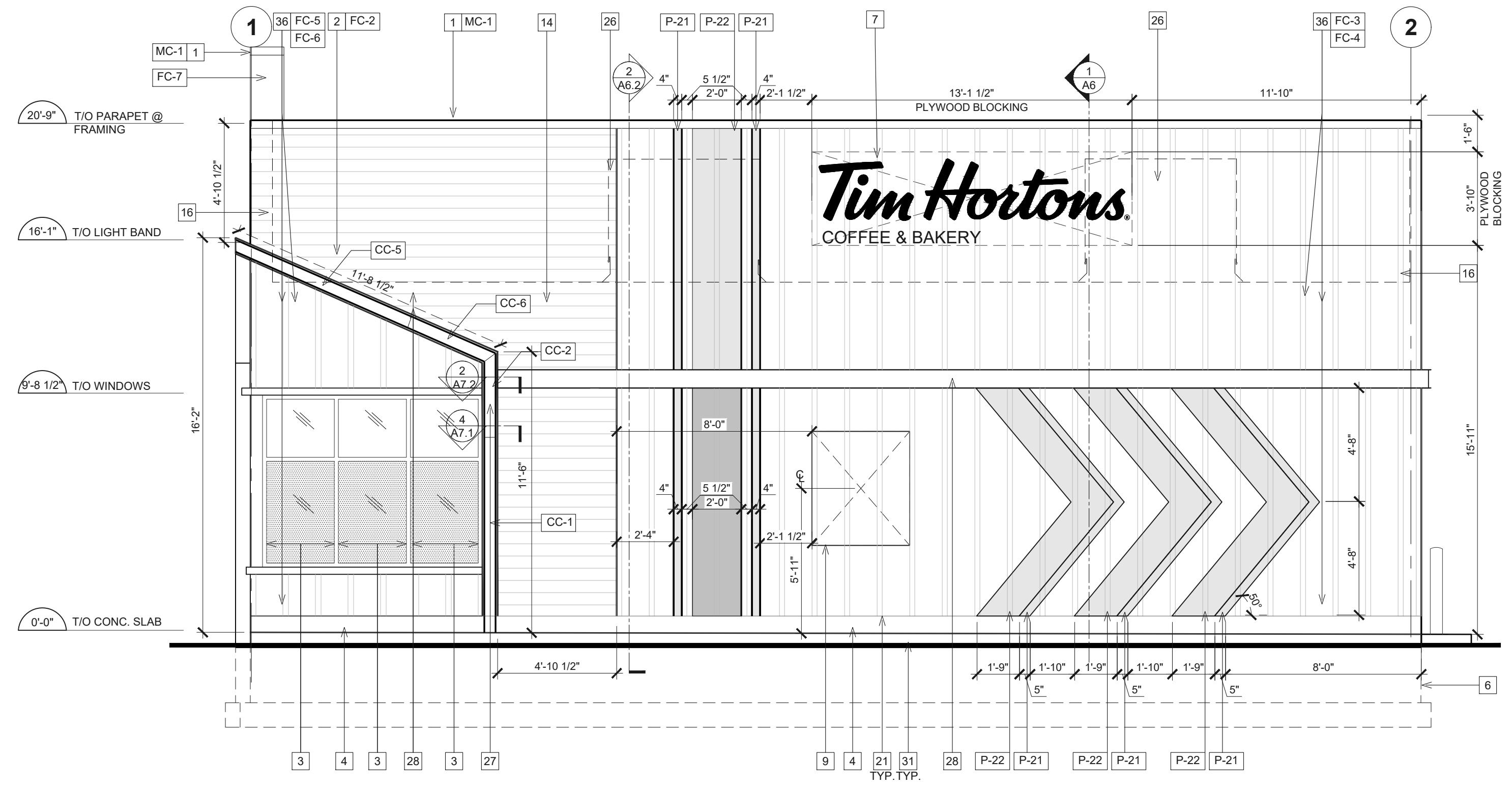
EXTERIOR FINISH SCHEDULE				
TAG	PRODUCT	MANUF.	PATTERN & COLOR	SUPPLIER/ CONTACT
P-17	BOLLARD	SHERWIN WILLIAMS	COLOR: #SW6888 'REAL RED' MIN. 2 COATS SPRAY APPLICATION	SHERWIN WILLIAMS (NORTH AMERICA) CONTACT: DEAN GIVELAS EMAIL: DEAN.GIVELAS@SHERWIN.COM TEL: 416-432-6975
P-21	HARDIE VERTICAL SIDING AND TRIM BOARDS	SHERWIN WILLIAMS	COLOR: #SW7006 'EXTRA WHITE' HIGH GLOSS FINISH, MIN. 2 COATS SPRAY APPLICATION	
P-22	HARDIE VERTICAL SIDING AND TRIM BOARDS / PANEL SIDING	SHERWIN WILLIAMS	COLOR: #SW6888 'REAL RED', MIN. 2 COATS SPRAY APPLICATION. BUILDING STRIPING TO BE HIGH GLOSS FINISH	
P-24	EXTERIOR METAL PAINTS & METAL RAILING	SHERWIN WILLIAMS	PAINT FOR FASCIAS AND/OR EXTERIOR METALS (SOFFITS, TRIM, ETC.) TO MATCH SURROUNDING COLORS WHERE NECESSARY. COLOR: SW 7067 CITYSCAPE	
FC-2	EXTRUDED ALUMINUM SIDING	KNOTWOOD	SIZE: 6" NOMINAL SPACING WITH 1/2" REVEAL JOINTS, COLOR: CANADIAN SHIELD (G.C. TO TOUCH UP IN FIELD). PATTERN: STACKED AT VERTICAL BUMP OUTS AND STAGGERED AT HORIZONTAL BUMP OUTS. NOTE: SIDING TO BE INSTALLED WITH KNOTWOOD ALUMINUM TRIM PIECES, STARTER CLIPS & JOINTS (COLOR: MATCH 'CANADIAN SHIELD')	HAINES, JONES & CADBURY LLC CONTACT: BARRY BRYANT TEL: (800)458-7099, (C) 478-899-3555 BARRY.BRYANT@HJCN.COM
FC-3	HARDIE PANEL VERTICAL SIDING	JAMES HARDIE	SURFACE: SMOOTH COLOR: GRAY SLATE CORRESPONDING TRIM COLOR TO MATCH.	JAMES HARDIE BUILDING PRODUCTS, INC. CONTACT: DAN OZELLO TEL: (440) 870-8071 DANIEL.OZELLO@JAMESHARDIE.COM
FC-4	HARDIE TRIM BOARDS	JAMES HARDIE	SMOOTH BATTEN BOARDS, SIZE: 2.5" WIDE SPACED 16" OC. COLOR: GRAY SLATE CORRESPONDING VERTICAL SIDING COLOR TO MATCH.	
FC-5	HARDIE PANEL VERTICAL SIDING	JAMES HARDIE	SURFACE: SMOOTH COLOR: ARTIC WHITE. CORRESPONDING TRIM COLOR TO MATCH.	
FC-6	HARDIE TRIM BOARDS	JAMES HARDIE	SMOOTH BATTEN BOARDS, SIZE: 2.5" WIDE SPACED 16" OC. COLOR: ARTIC WHITE. CORRESPONDING VERTICAL SIDING COLOR TO MATCH	
FC-7	HARDIE PANEL SIDING	JAMES HARDIE	SIZE: 36" TALL PANELS WITH 1/2" REVEALS, SURFACE: SMOOTH. COLOR: GRAY SLATE. REFER TO WALL SECTIONS FOR SPACING.	
MC-1	PREFINISHED METAL FLASHING	FIRESTONE BUILDING PRODUCTS	COLOR: MATTE BLACK *SEALANT: TITBOND WEATHER MASTER SEALANT COLOR: 61121 BLACK	
MC-2	PREFINISHED METAL FLASHING	FIRESTONE BUILDING PRODUCTS	COLOR: TO MATCH WINDOW MULLION, WHITE *SEALANT: TITBOND WEATHER MASTER SEALANT COLOR: WHITE	
WL6	WALL SPOTLIGHT	VISO INC.	LED EXTERIOR SPOTLIGHT. FINISH: BLACK MATTE	EMAIL: FILIPE2@VISOINC.COM
	ANODIZED ALUMINUM (EXTERIOR STOREFRONT)	KAWNEER (OR APPROVED ALT. PER SP4)	KAWNEER TRIFAB VERSAGLAZE 451T, THERMALLY BROKEN 2"x4 1/2" WITH 1" INSULATED CLASS LOW E GLASS UNIT (BONE WHITE)	KAWNEER ATTENTION: CHERYL WILKERSON TEL: (770)449-5555
	ANODIZED ALUMINUM (DRIVE-THRU WINDOW)	QUIKSERV	BI-PARTING WINDOW WITH 2 CENTERED MOVING PANELS AND 2 SIDELITES "PW-S4E-TH" COLOR: PAINTED TIM HORTONS RED #870C47D ORDER LEAD TIME: 10 WEEKS	CONTACT: BRIAN MCCLOSKEY TEL: (713)849-5882
	ANODIZED ALUMINUM (WALK-UP WINDOW)	QUIKSERV	MANUAL BI-PARTING WINDOW WITH 2 CENTERED MOVING PANELS AND 2 SIDELITES, SELF-CLOSING SLIDER, COLOR: PAINTED TIM HORTONS RED #870C47D ORDER LEAD TIME: 10 WEEKS	CONTACT: BRIAN MCCLOSKEY TEL: (713)849-5882
CL-1W	C-CHANNEL PERIMETER INTEGRATED LIGHTING	LEKTRON BRANDING SOLUTIONS	CUSTOM LENGTH, ALL ANGLES AND CUTS FOR LEKTRON LIGHTBAND CL-2 TO BE CUT ON SITE BY GC. COLOR: WHITE.	
CL-2	C-CHANNEL PERIMETER INTEGRATED LIGHTING	LEKTRON BRANDING SOLUTIONS	CUSTOM LENGTH, ALL ANGLES AND CUTS FOR LEKTRON LIGHTBAND CL-2 TO BE CUT ON SITE BY GC. COLOR: BLACK.	
	DRIVE-THRU CANOPY	CUSTOM SIGN CENTER		CONTACT: CHRISTINA GREEN CHRISTINA@CUSTOMSIGNCENTER.COM

**EXTERIOR ELEVATION NOTES**

- PRE-FINISHED METAL CAP FLASHING C/W DRIP.
- EXTRUDED ALUMINUM SIDING. REFER TO EXTERIOR FINISH SCHEDULE.
- PRE-FINISHED 'BONE WHITE' ALUMINUM STOREFRONT SYSTEM WITH INSULATED GLAZING.
- EXPOSED FOUNDATION TO BE PARGED AND FREE OF IMPERFECTIONS. TO BE PAINTED BLACK ON AREAS ADJACENT TO FC-5 AND PAINTED TO MATCH FC-3 ON AREAS ADJACENT TO FC-3
- GAS UTILITY METER.
- REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION WALL AND FOOTING DETAILS.
- INTERNALLY ILLUMINATED BUILDING SIGNAGE PROVIDED AND INSTALLED BY SIGN COMPANY "COFFEE AND BAKERY" SCRIPT LETTERS ARE "WHITE". G.C. TO PROVIDE AND INSTALL 1/2" EXTERIOR GRADE PRESSURE TREATED PLYWOOD BACKING AND ALL FINAL ELECTRICAL CONNECTION. SIGN MANUFACTURER SHALL OBTAIN STRUCTURALLY SEALED DRAWINGS AND SIGNAGE PERMITS FROM THE CITY BASED ON LOCAL REQUIREMENTS. G.C. SHALL VERIFY ACTUAL LOCATION & SIZE OF SIGNS WITH SIGN MANUFACTURER'S APPROVED DRAWINGS AND COORDINATE LOCATIONS OF BLOCKING AND UTILITIES. G.C. TO COORDINATE WITH SIGN INSTALLER TO USE VHM DRILL BIT WHILE DRILLING FOR ELECTRICAL FEED LINES AND SIGNAGE FASTENERS. ALL ELEMENTS PROVIDED BY SIGNAGE FABRICATOR TO BE REVIEWED AND APPROVED BY TDL PRIOR TO PRODUCTION.
- GALVANIZED STEEL ROOF ACCESS LADDER TO BE PRIMED AND PAINTED.
- LOCATION OF STAMP GRAPHIC BY SIGN COMPANY. (TOWN NAME TO BE SPECIFIED PER LOCATION).
- PROVIDE & INSTALL 6" DIAMETER STEEL PIPE BOLLARD AT DRIVE-THRU WINDOW. G.C. TO PAINT "RED" REFER TO EXTERIOR FINISH SCHEDULE.
- AUTOMATIC DRIVE THRU WINDOW C/W BODY SENSOR. G.C. TO COORDINATE WITH RESTAURANT OWNER TO IDENTIFY WHICH DRIVE-THRU WINDOW TO BE INSTALLED. COLOR TO MATCH POWDERCOAT TIM HORTONS RED #870C47D BY INTERNATIONAL PAINT. CONTACT QUIKSERV FOR INTERNATIONAL PAINT REPRESENTATIVE. REFER TO DRIVE-THRU SPECS ON SHEET A11.
- MANUAL WALK-UP WINDOW, POWDERCOAT TIM HORTONS RED #870C47D BY INTERNATIONAL PAINT. CONTACT QUIKSERV FOR INTERNATIONAL PAINT REPRESENTATIVE. GC TO COORDINATE. REFER TO SPECS ON SHEET A11
- PRE-FINISHED GALVANIZED STEEL DOWNSPOUT & COLLECTOR BOX. G.C. TO COORDINATE WITH CIVIL ENGINEERS TO CONFIRM IF DOWNSPOUTS ARE SPLASHING ON CONCRETE PAD OR TIED TO THE STORM SEWER LINE. REFER TO MECHANICAL DRAWINGS.
- DASHED LINE INDICATES U/S OF DECK BEHIND PARAPET.
- C/T CABINET/ DISCONNECT SWITCH AND ELECTRICAL METER.
- LINE OF PARAPET WALLS BEYOND.
- GENERAL PURPOSE EXTERIOR LIGHTING FIXTURES.
- WRAP STRUCTURE IN BRAKE METAL TO MATCH STOREFRONT SYSTEM.
- NOT USED
- KNOX BOX SUPPLIED AND INSTALLED BY G.C. TYPE AND LOCATION TBD BY LOCAL FIRE DEPARTMENT. G.C. TO COORDINATE.
- ALL BASE FLASHING TO MATCH ADJACENT MATERIAL COLORS. BASE HEIGHT FOR ENTIRE BUILDING TO BE ADJUSTED BY ARCHITECT TO BEST SUIT LOCAL WEATHER CONDITIONS.
- HOSE BIB. G.C. TO PAINT. COLOR TO MATCH ADJACENT SIDING COORDINATE EXACT LOCATION WITH G.C. REFER TO MECHANICAL DRAWINGS.
- G.C. TO PROVIDE & INSTALL S/S KICK PLATES (AT BOTTOM PANELS) ON BOTH SIDES OF MAIN ENTRANCE/EXIT DOOR. REFER TO SHEET A11 FOR SPECS.
- G.C. TO PROVIDE CONCRETE CURB ALONG DRIVE-THRU LANE. CURB TO PROJECT 8" FROM FACE OF PANELS AND LENGTH OF CURB IS EXTENT OF FEATURE WALL.
- TPO ROOF MEMBRANE ON BACK OF PARAPET WALLS. REFER TO SPECIFICATIONS.
- HVAC UNITS.
- LIGHTBAND FURNISHED BY THUSA VIA SCH. A AND INSTALLED BY G.C., BRACKET SUPPORT, LED STRIP LIGHTS AND DRIVERS ( TO BE SUPPLIED BY LEKTRON BRANDING SOLUTIONS). G.C. TO PROVIDE AND INSTALL PRE FINISHED BRAKE METAL TRIM (COLOR: MATCH WINDOW FRAMES) BEHIND THE ENTIRE LENGTH OF LEKTRON BAND AND WIDTH TO BE MATCH LEKTRON BAND SIZE (6") TO PROVIDE POWER AND JUNCTION BOX FOR ELECTRICAL WIRING. G.C. TO COORDINATE DETAILS WITH MANUFACTURER.
- G.C. TO PROVIDE & INSTALL APPROXIMATELY 100'-0" RUNNING LENGTH OF EXTERIOR ILLUMINATED C-CHANNEL LED STRIP LIGHTING ( CL-2 BY LEKTRON BRANDING SOLUTIONS ). REFER TO SHEET SPT FOR CONTACT INFORMATION (COORDINATE WITH LEKTRON BRANDING SOLUTIONS) AND DETAIL 2/A7 FOR INSTALLATION OF LED STRIP LIGHT AND C-CHANNEL PANEL. SCHEDULE ON AS.
- WALL SPOTLIGHT. REFER TO EXTERIOR FINISH SCHEDULE. GC TO ADJUST BEAM SPREAD TO FEATURE THE DRIVE-THRU LOCKUP SIGN.
- G.C. TO COORDINATE WITH UTILITY COMPANIES FOR PLACEMENT/ LOCATION FOR BOLLARDS. G.C. TO PROVIDE 6" DIA. METAL BOLLARD FILL W/ CONCRETE AND PAINTED. G.C. TO PAINT "RED". REFER TO EXTERIOR FINISH SCHEDULE.
- CONCRETE SIDEWALK (BY G.C.) REFER TO SITE PLAN.
- PREFABRICATED DRIVE-THRU CANOPY. G.C. TO ENSURE THE CANOPY IS ALIGNED WITH C-CHANNEL. REFER TO EXTERIOR FINISH SCHEDULE FOR TYPE AND FINISH AND TO DETAIL 1/A7.2 FOR INSTALLATION. REFER TO STRUCTURAL DRAWINGS FOR CANOPY SUPPORT.
- NOT USED.
- SIGN FABRICATOR TO PROVIDE AND INSTALL (MIN. 8" HIGH) ADDRESS VINYL ADHESIVE. G.C. TO COORDINATE W/ SIGN FABRICATOR. ALL ELEMENTS PROVIDED BY SIGNAGE FABRICATOR TO BE REVIEWED AND APPROVED BY TDL PRIOR TO PRODUCTION.
- EXTERIOR WASTE UNIT SUPPLIED BY TDL GROUP LTD. & INSTALLED BY G.C.
- HARDIE VERTICAL SIDING BOARD AND BATTEN. SEE EXTERIOR FINISH SCHEDULE



**2 SIDE ELEVATION**  
SCALE: 1/4"=1'-0"



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

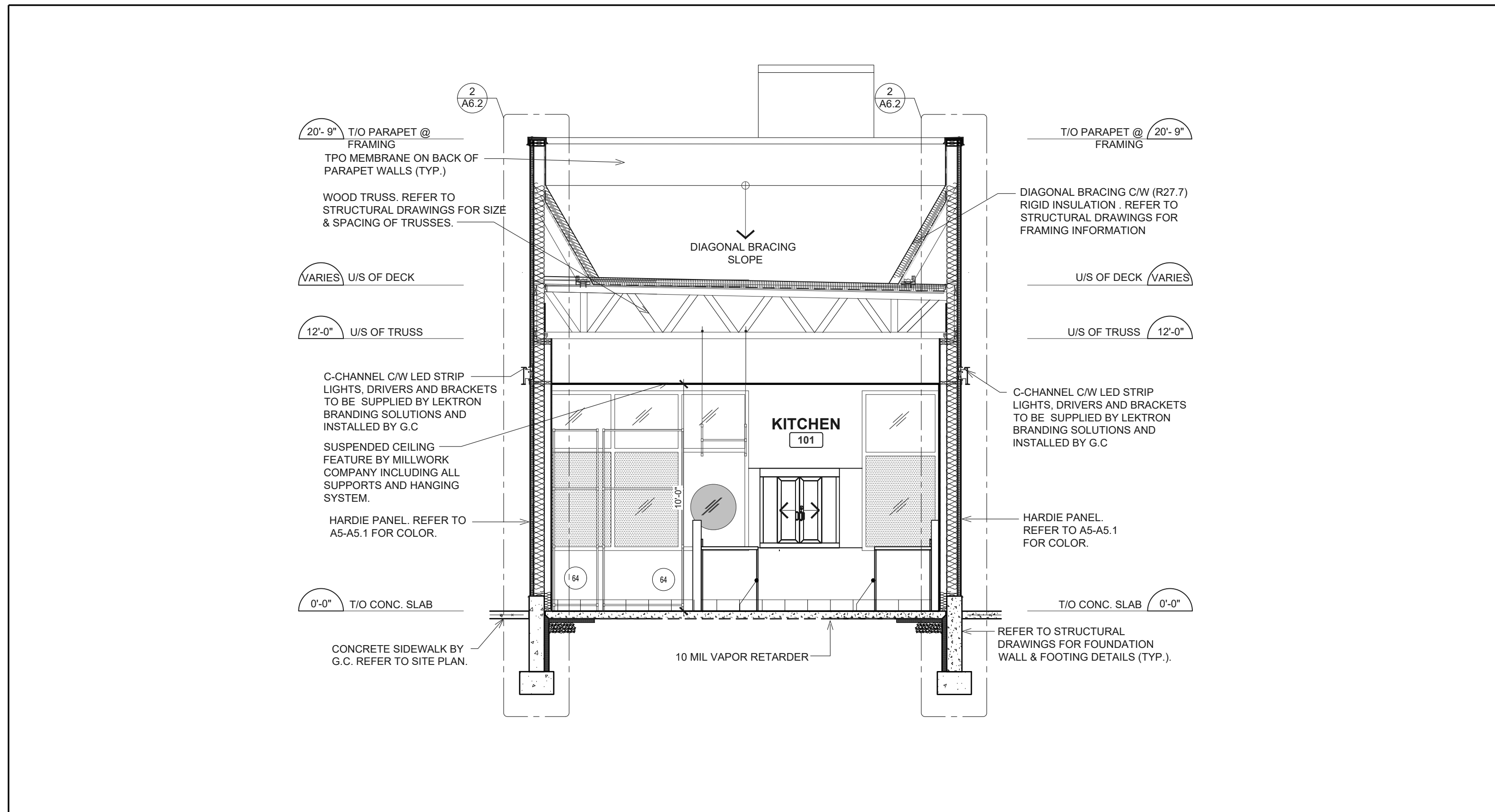
**GENERAL NOTES**

- SEALANT / CAULKING AROUND DOOR / WINDOW FRAMES. COLOR: TO MATCH WINDOW / DOOR FRAMES.
- THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DRAWINGS AND SPECIFICATIONS.

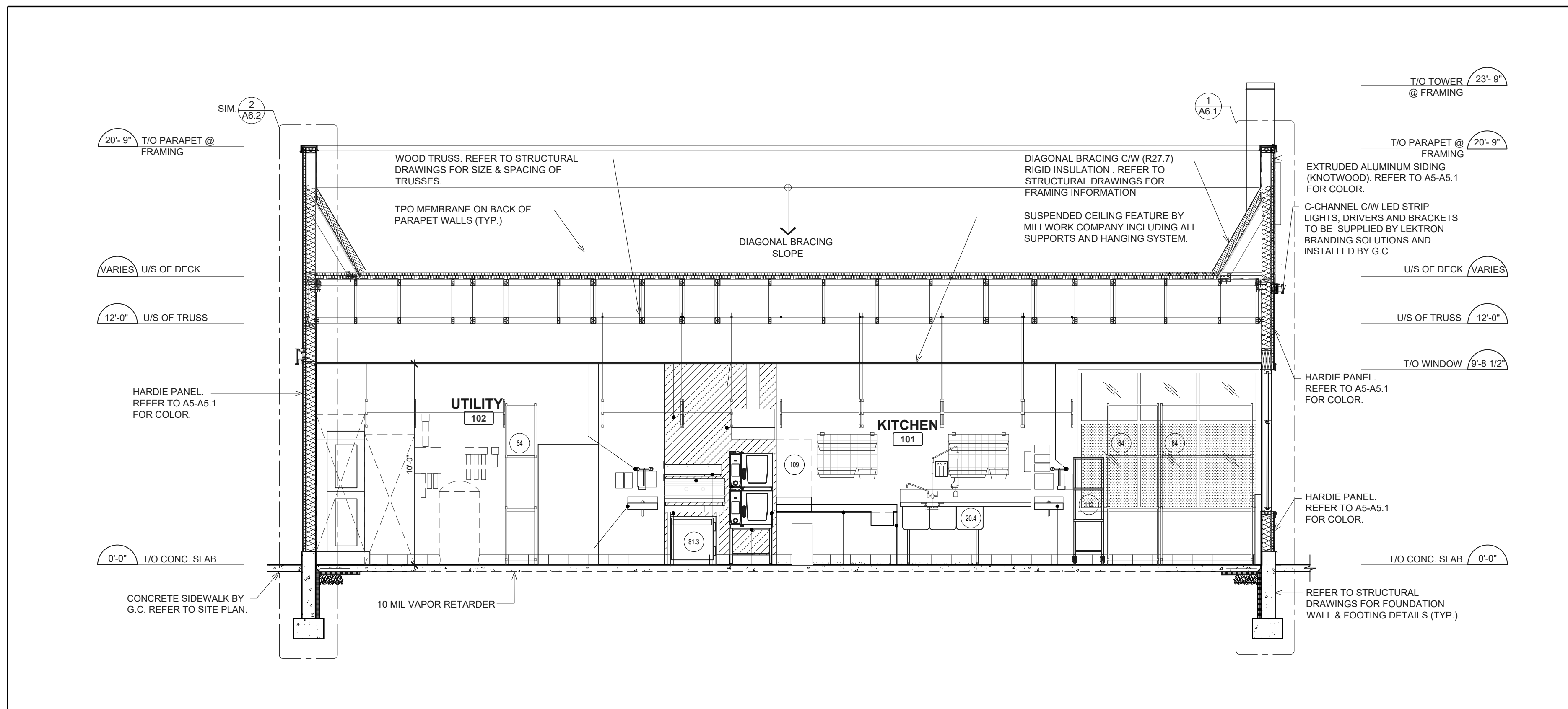
**SYMBOL LEGEND**

1	NOTE REFERENCE REFER TO ELEVATION NOTES
FN#	FINISH TYPE

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RB)\DCS\CAD\A6 BUILDING SECTIONS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:19 PM



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



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

**NOTE:**

**CONTINUE GYPSUM BOARD TO U/S OF DECK & BETWEEN TRUSSES AT EXTERIOR WALLS (TYP.).**

DRAWN BY LRK

CHECKED BY AMD/MAR

APPROVED BY

ISSUE DATE 07/12/2022

ISSUE		
#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

REVISIONS		
#	DATE	DESCRIPTION

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*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



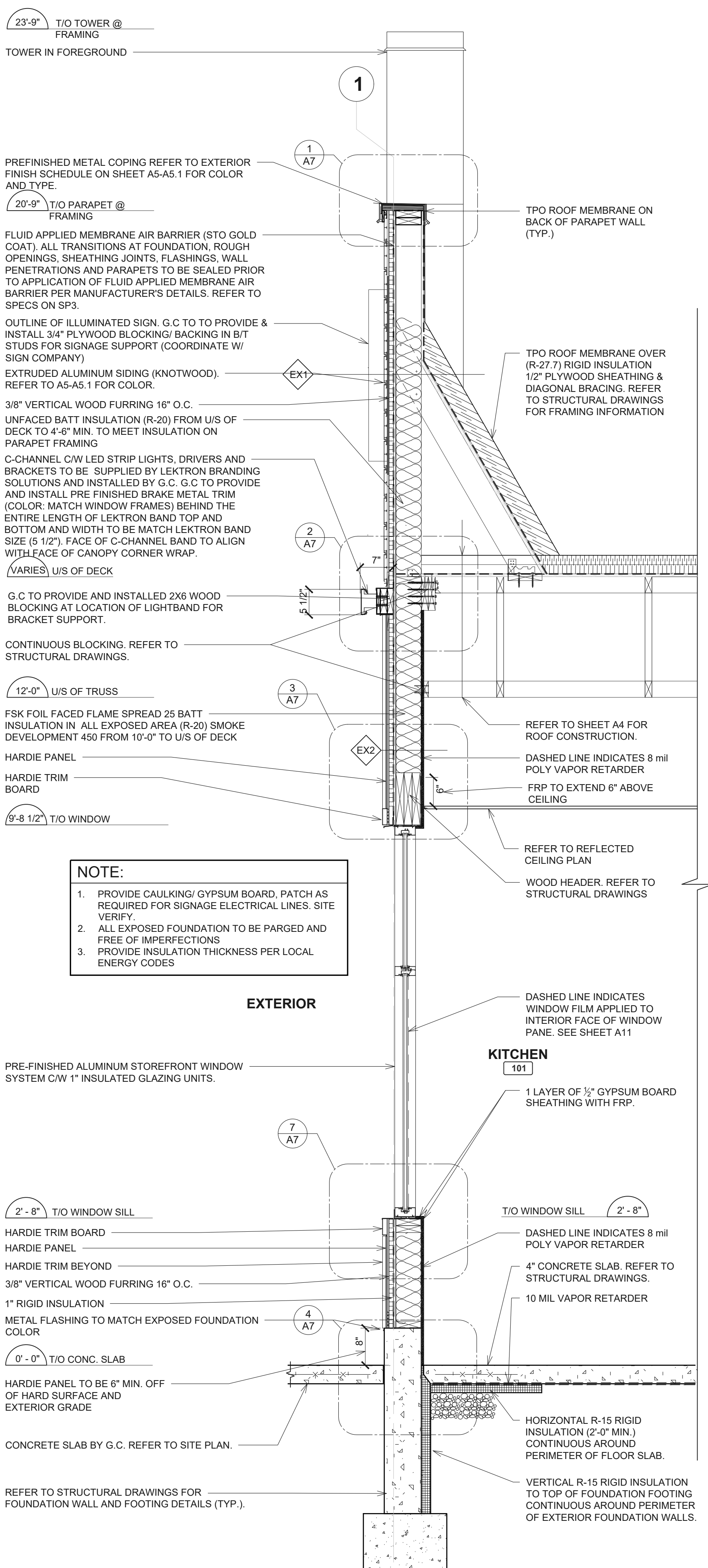
PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

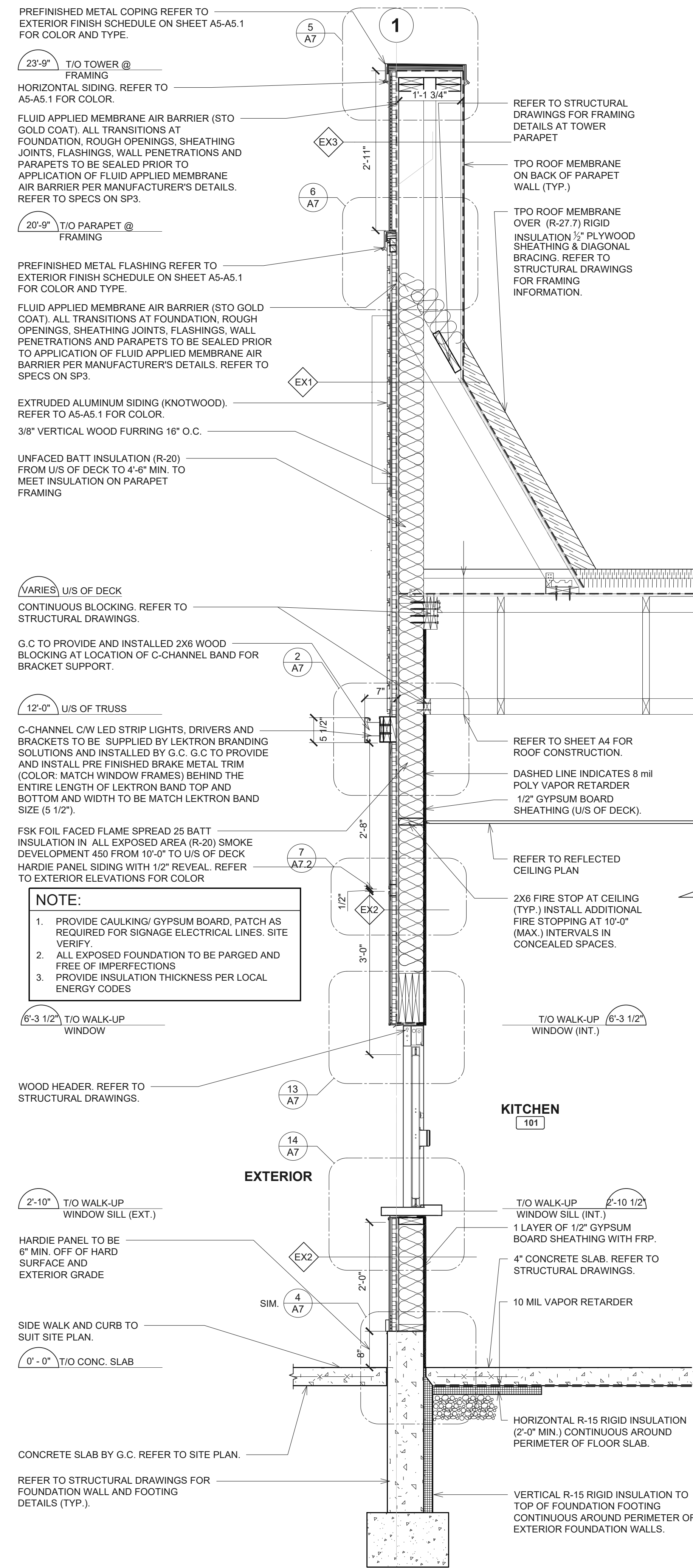
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**BUILDING SECTIONS**

SHEET:  
**A6**

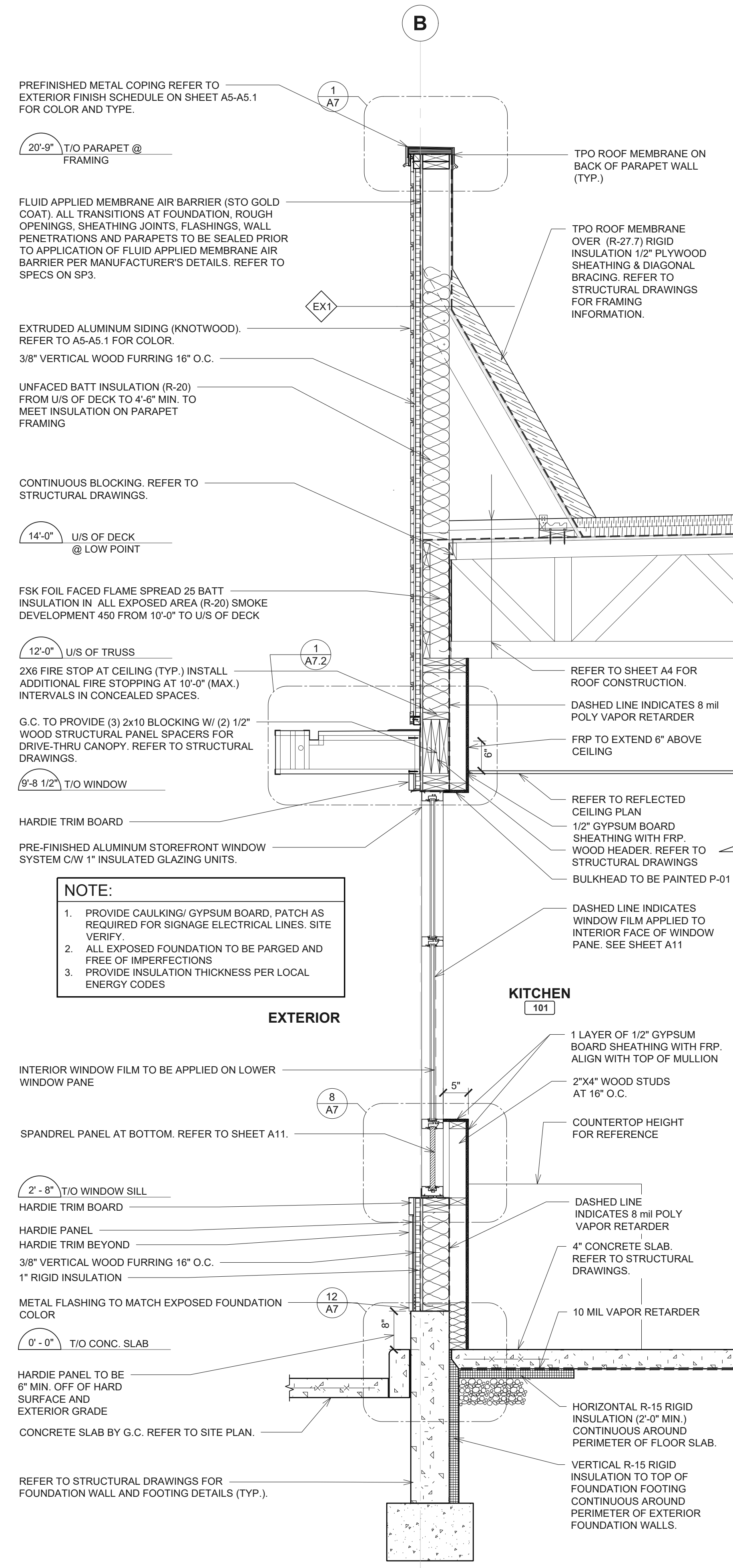
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**1 WALL SECTION @ WINDOW**  
SCALE: 3/4" = 1'-0"



**2 WALL SECTION @ WALK-UP WINDOW**  
SCALE: 3/4" = 1'-0"



**3 WALL SECTION @ DRIVE-THRU CANOPY**  
SCALE: 3/4" = 1'-0"

DRAWN BY  
**LRK**

CHECKED BY  
APPROVED BY  
**AMD/MAR**

ISSUE DATE  
**07/12/2022**

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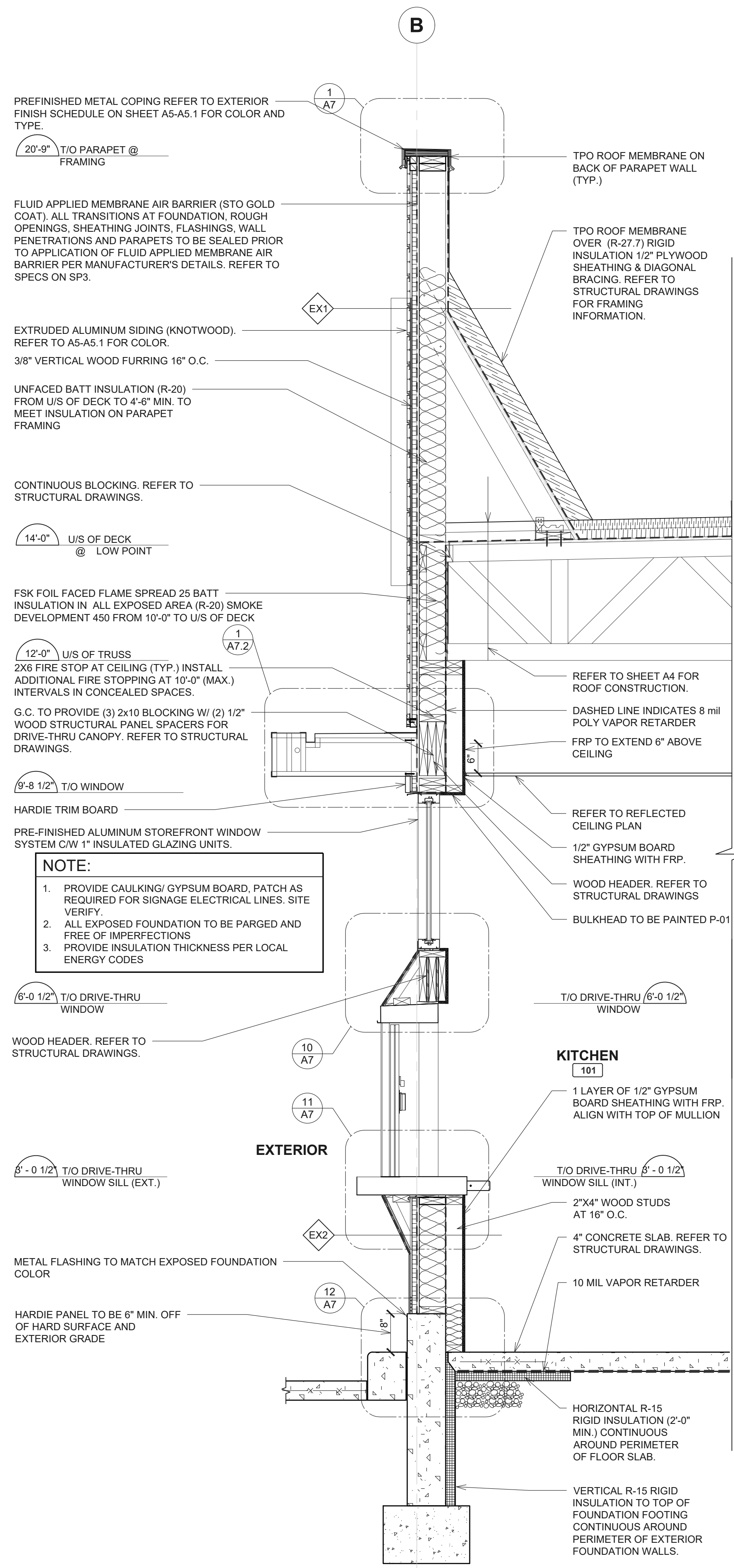
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CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

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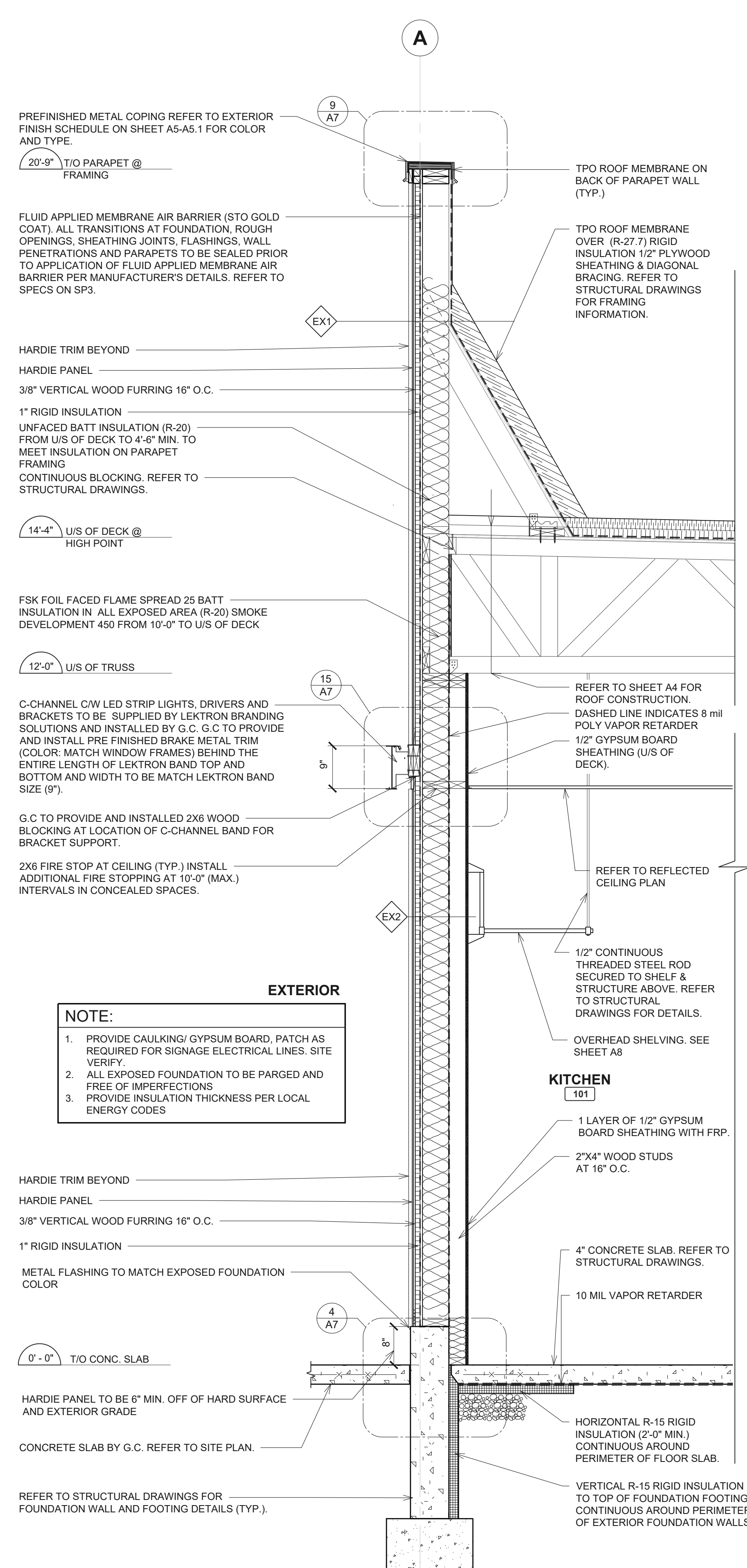
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**WALL SECTIONS**

SHEET:  
**A6.1**

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**1 WALL SECTION @ DRIVE-THRU WINDOW**  
SCALE: 3/4" = 1'-0"



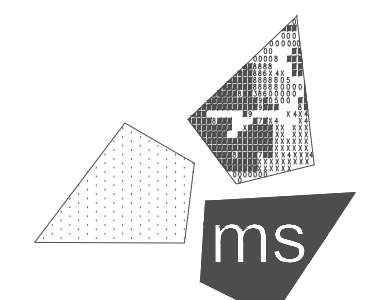
**2 WALL SECTION @ VERTICAL SIDING**  
SCALE: 3/4" = 1'-0"

DRAWN BY: LRK  
CHECKED BY: AMD/MAR  
APPROVED BY: AMD/MAR  
ISSUE DATE: 07/12/2022

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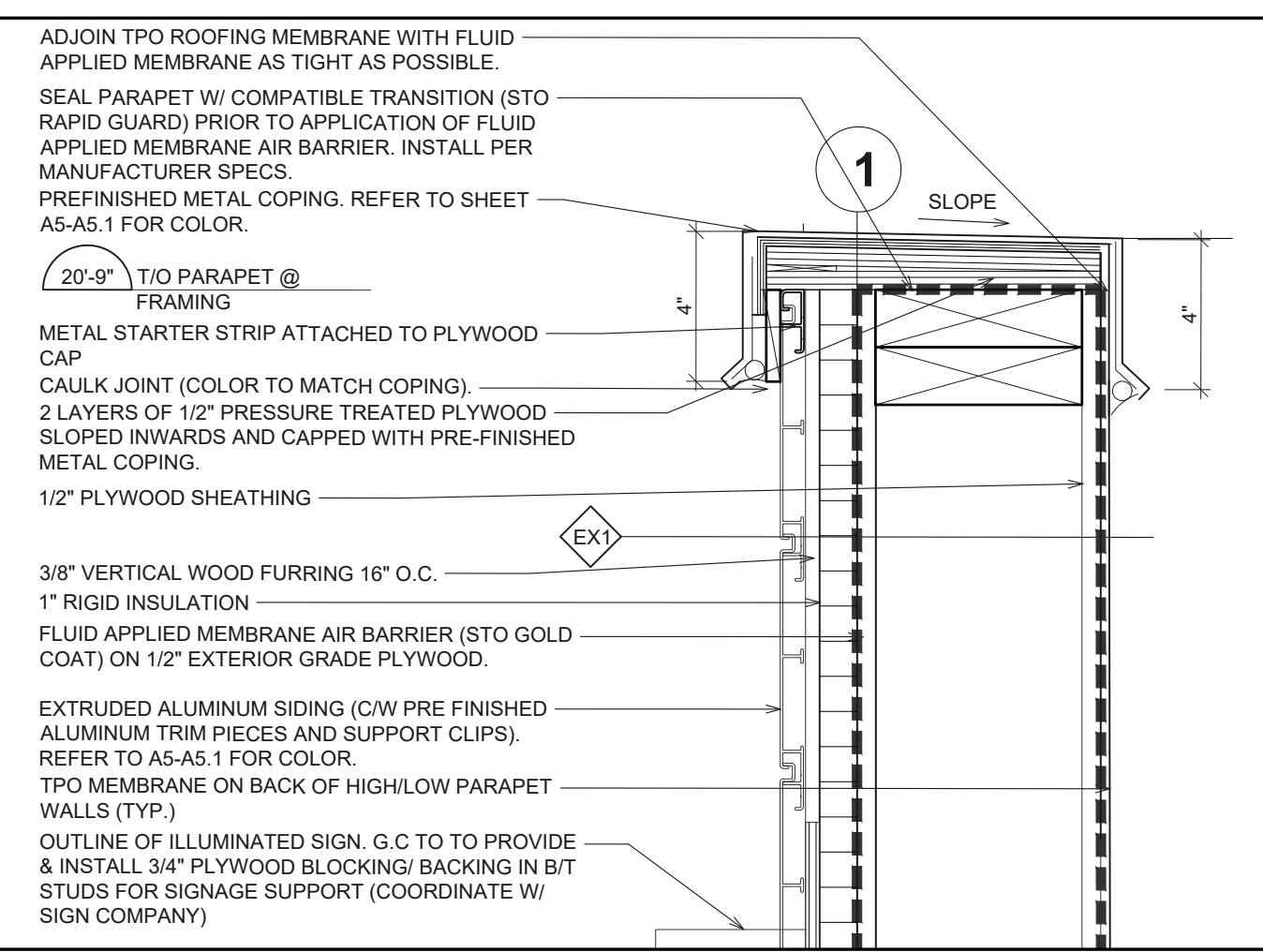
**PROJECT:**  
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**STORE # 919728**



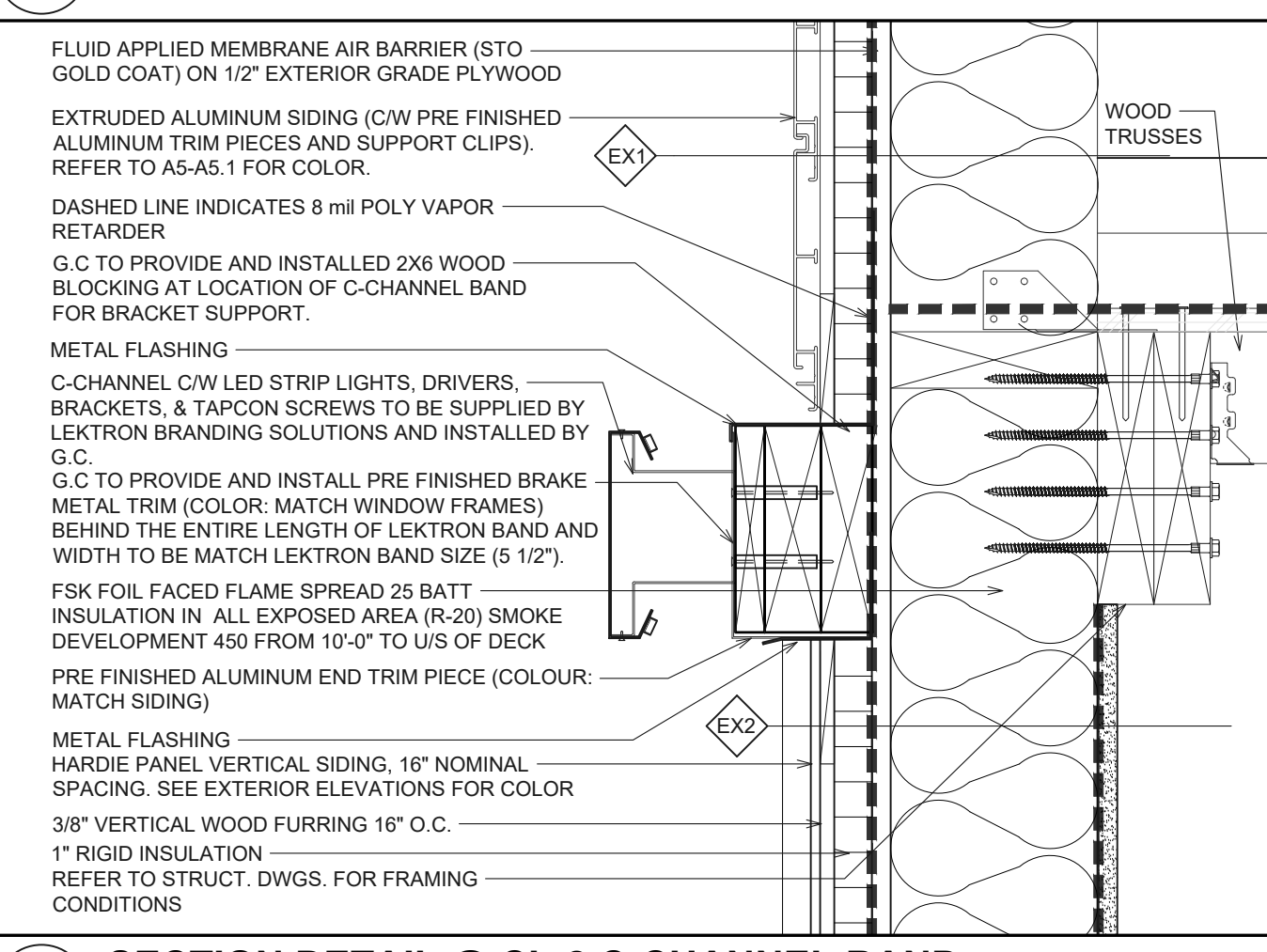
PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11  
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SHEET: **A6.2**

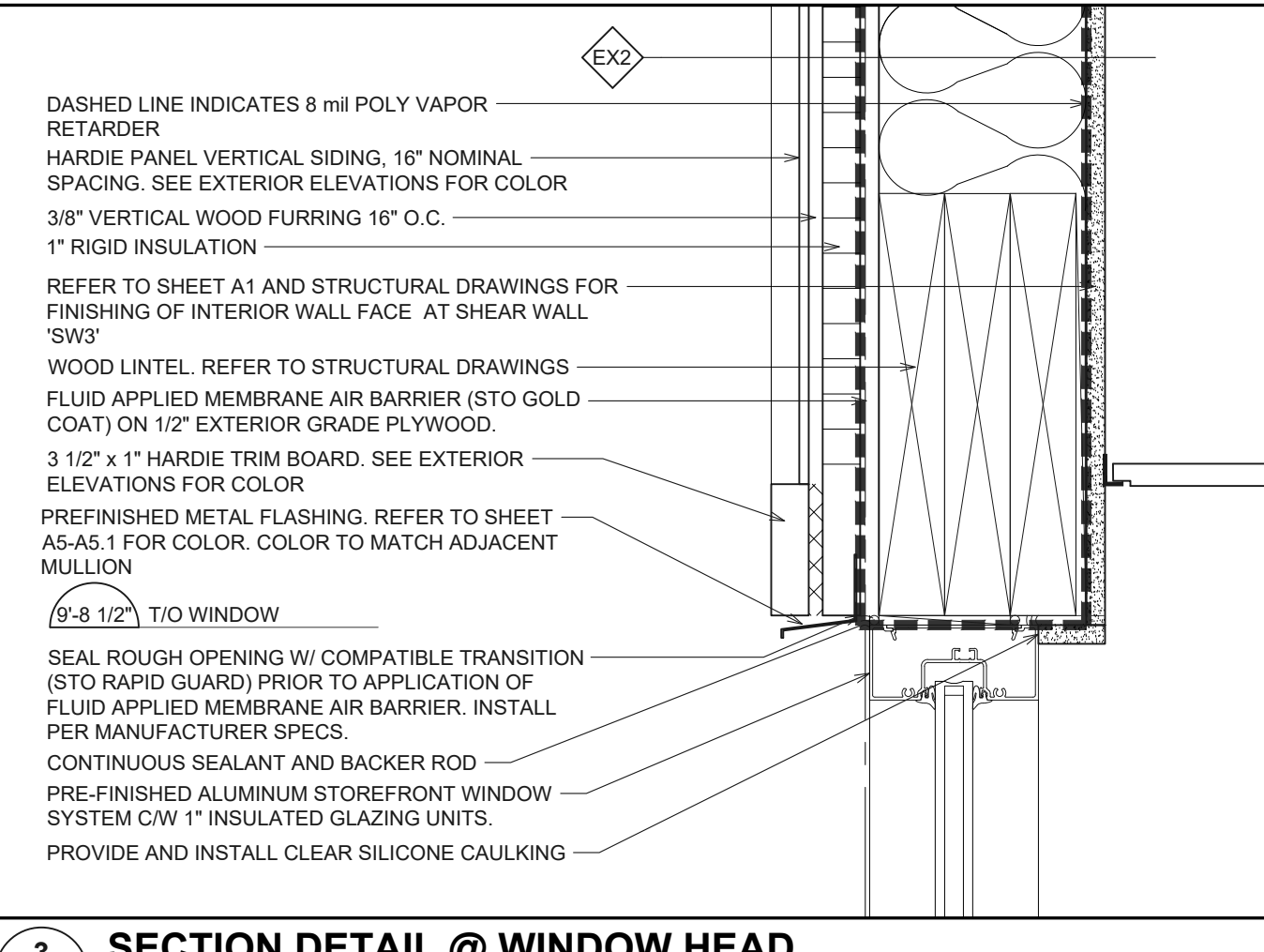
File Name: N:\03\0240509-THUS11\_HARPER WOODS, MI DTD (RBI)\DCS\CAD\A7 SECTION DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:24 PM



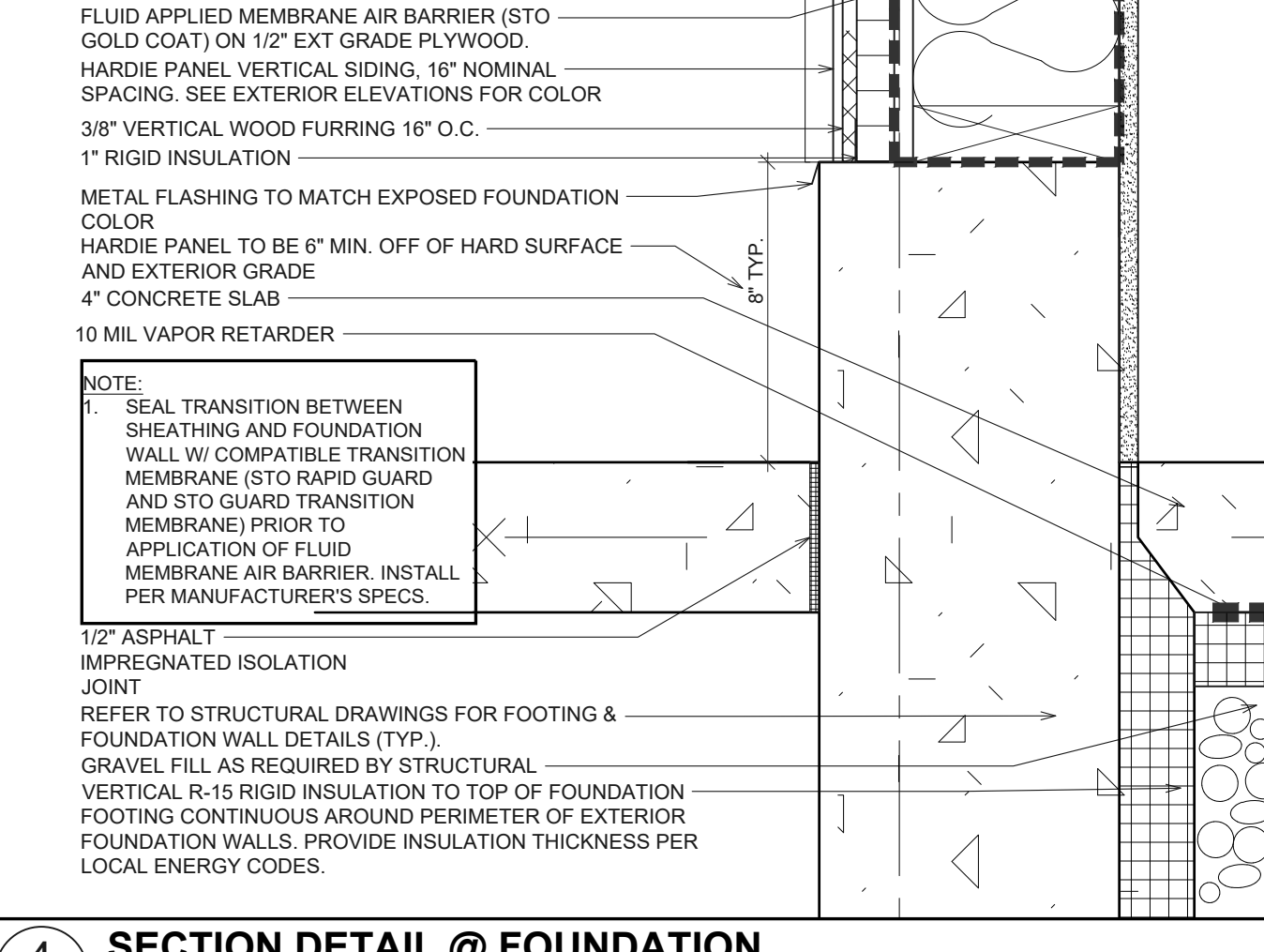
**1 SECTION DETAIL @ PARAPET (SIDING)**  
SCALE: 2-1/2" = 1'-0"



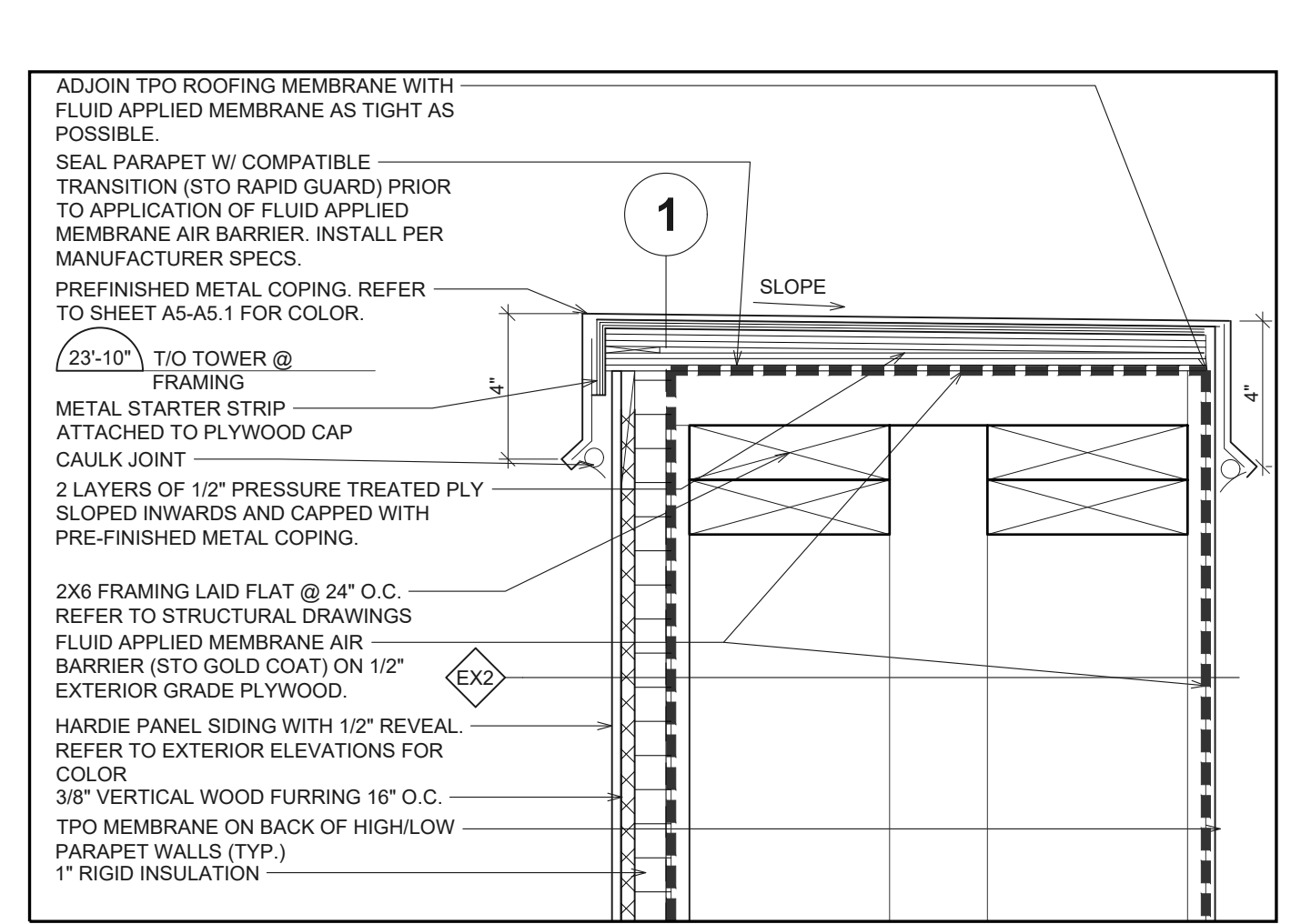
**2 SECTION DETAIL @ CL-2 C-CHANNEL BAND**  
SCALE: 2-1/2" = 1'-0"



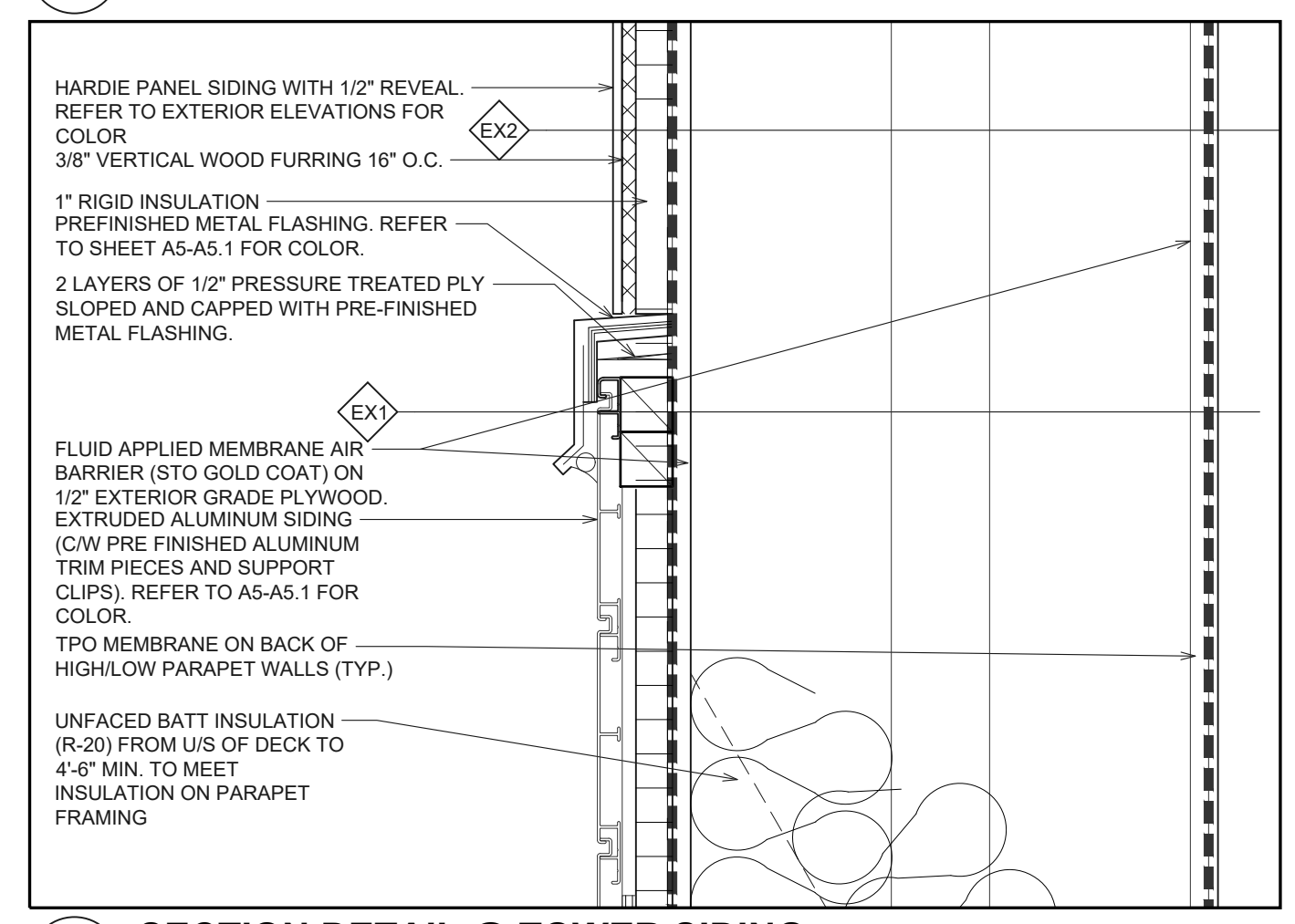
**3 SECTION DETAIL @ WINDOW HEAD**  
SCALE: 2-1/2" = 1'-0"



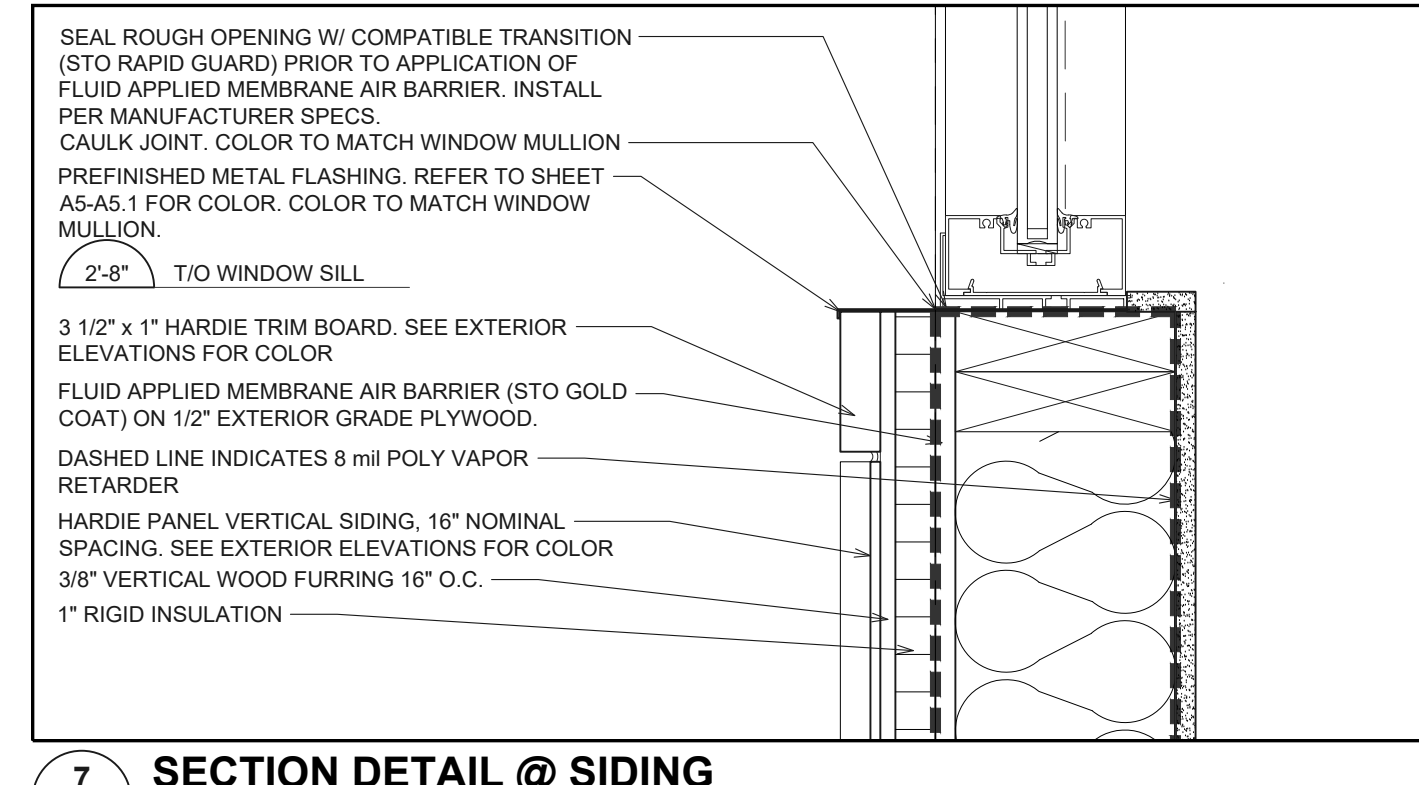
**4 SECTION DETAIL @ FOUNDATION**  
SCALE: 2-1/2" = 1'-0"



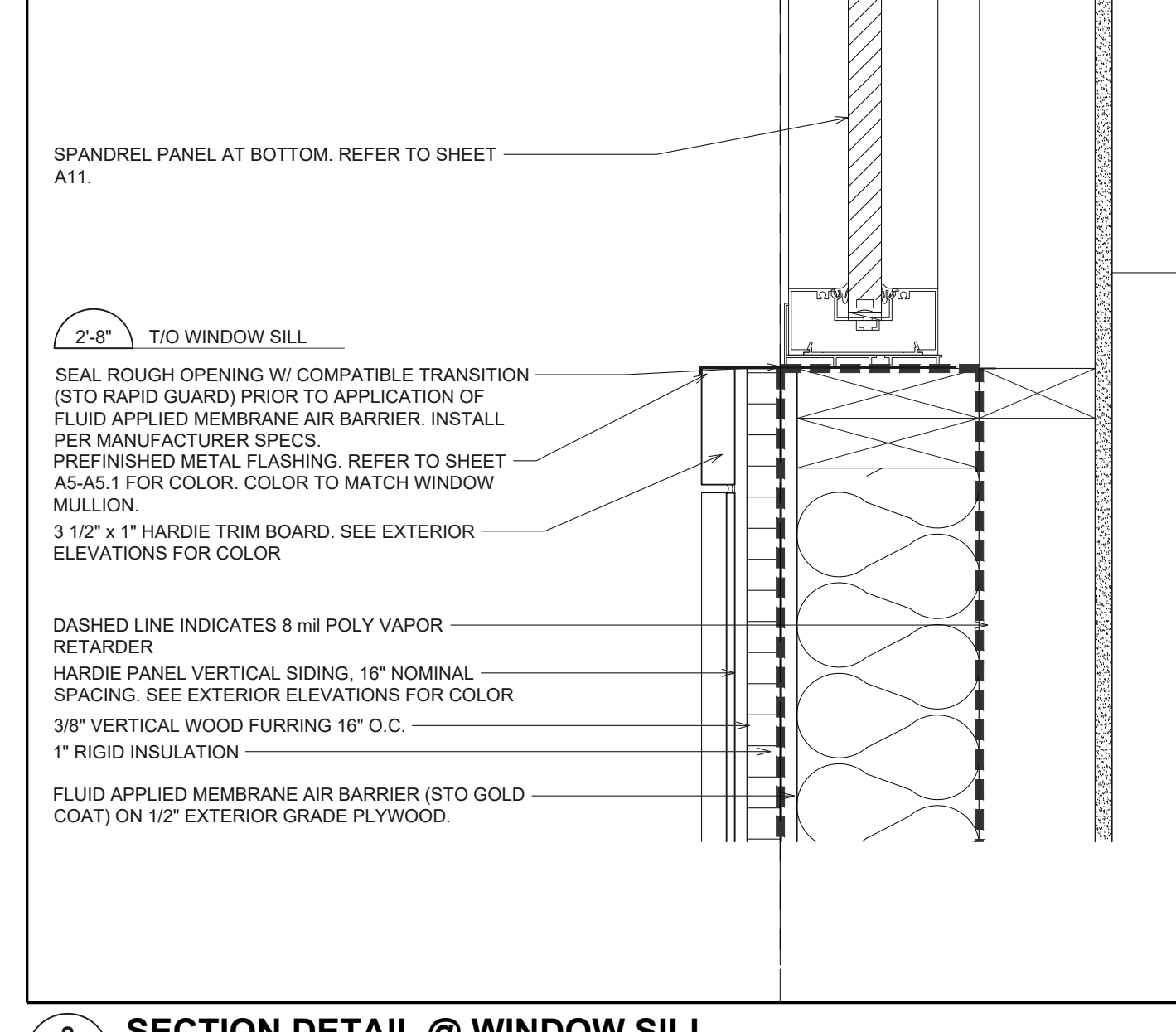
**5 SECTION DETAIL @ TOWER**  
SCALE: 2-1/2" = 1'-0"



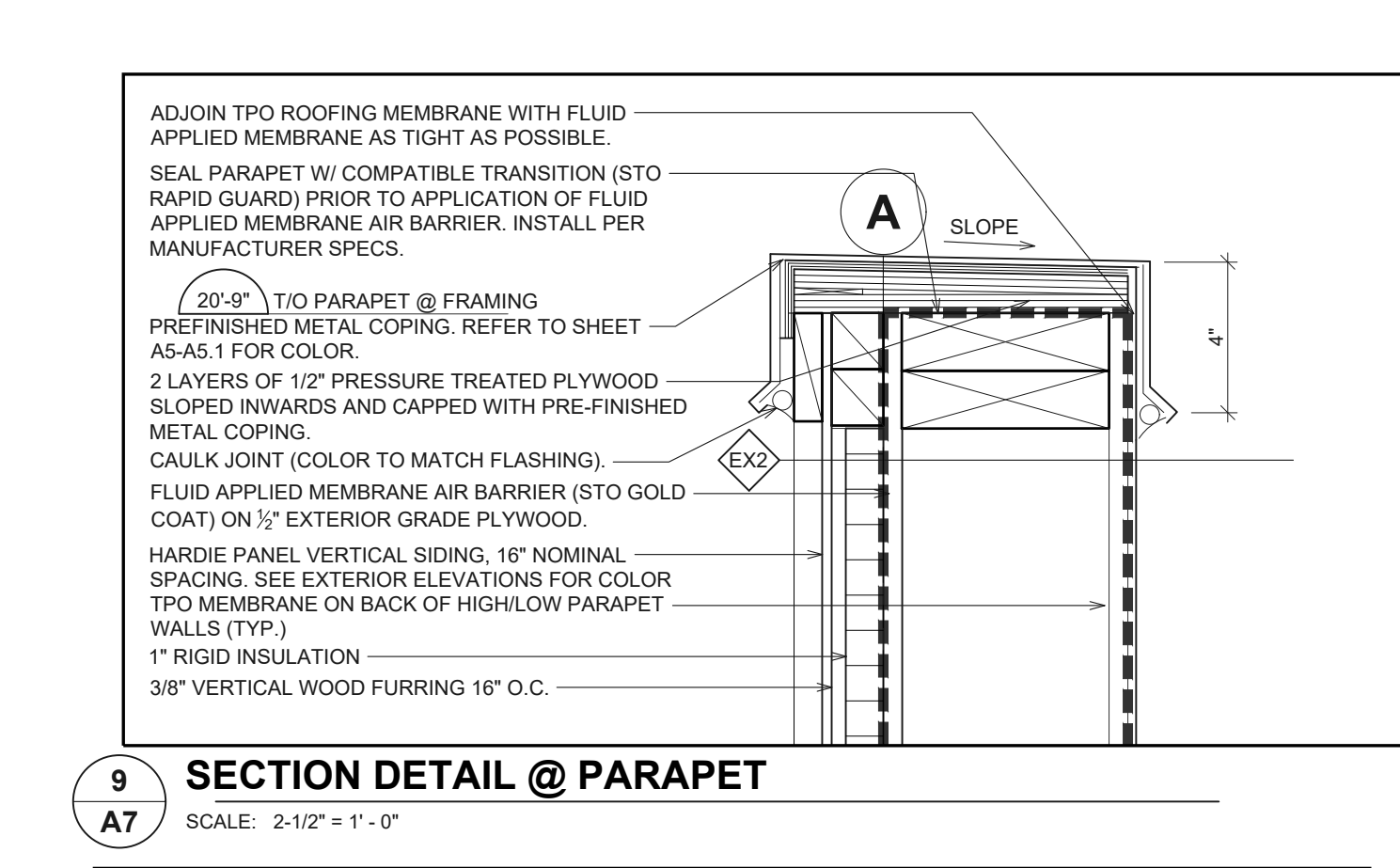
**6 SECTION DETAIL @ TOWER SIDING**  
SCALE: 2-1/2" = 1'-0"



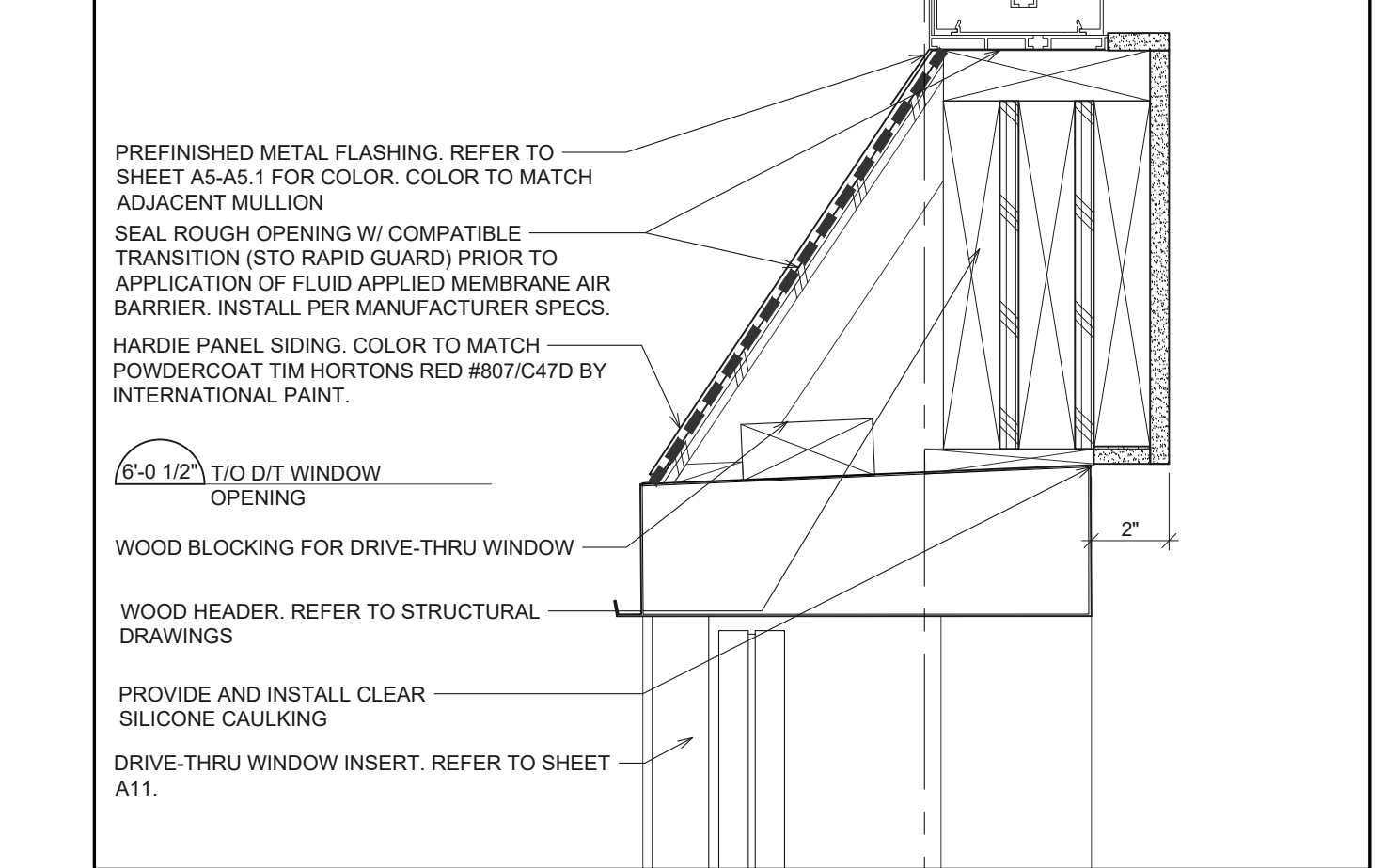
**7 SECTION DETAIL @ SIDING**  
SCALE: 2-1/2" = 1'-0"



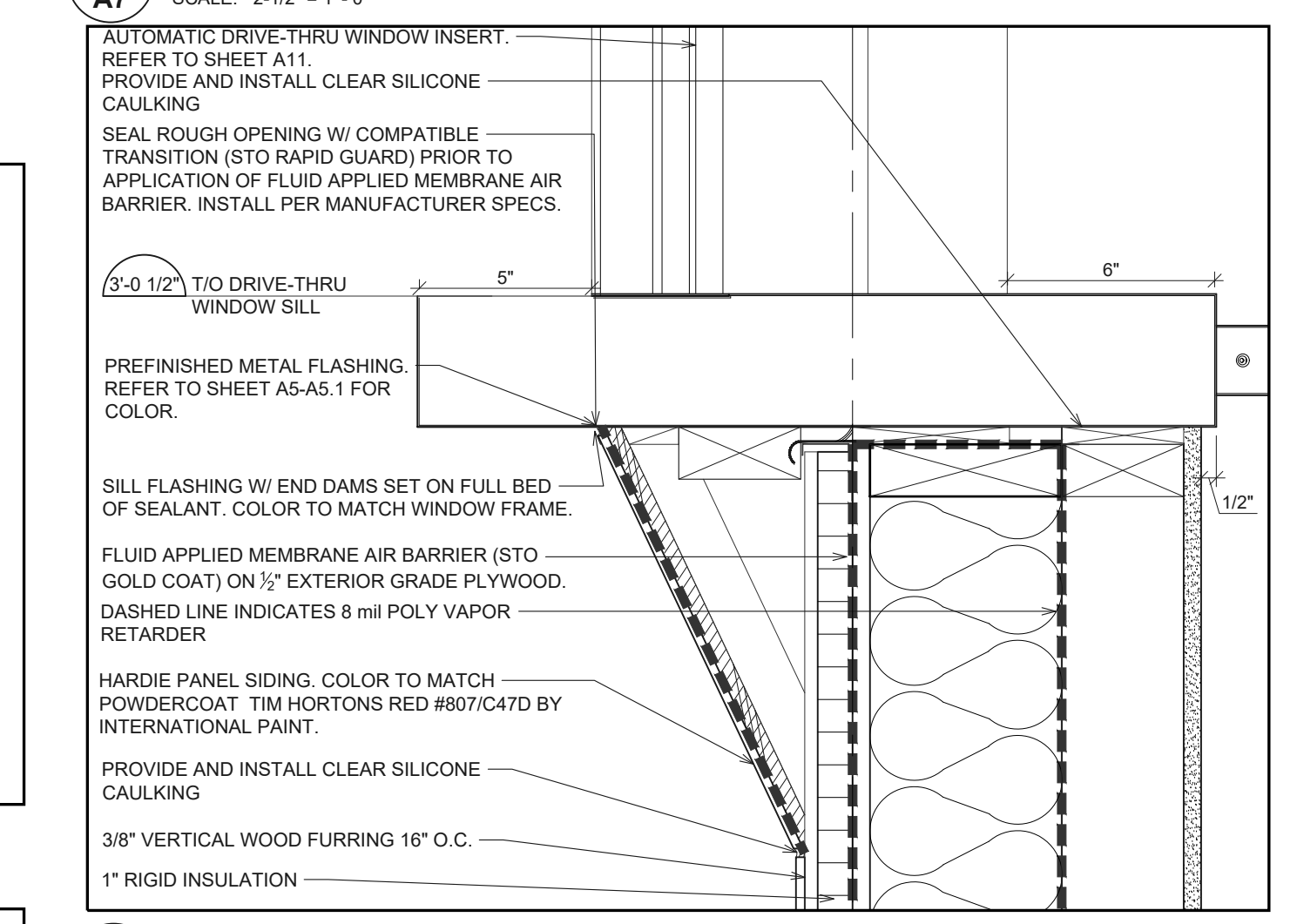
**8 SECTION DETAIL @ WINDOW SILL**  
SCALE: 2-1/2" = 1'-0"



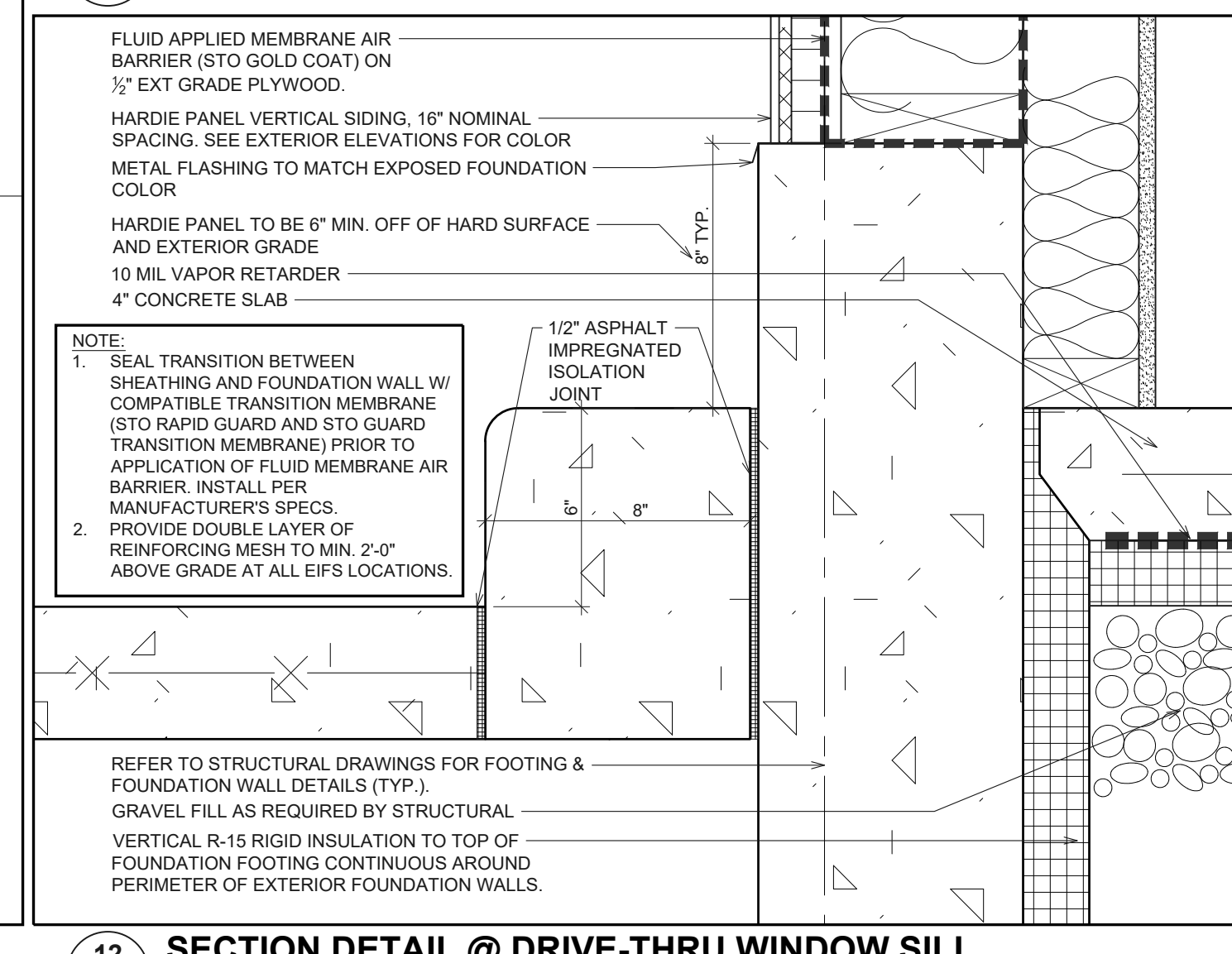
**9 SECTION DETAIL @ PARAPET**  
SCALE: 2-1/2" = 1'-0"



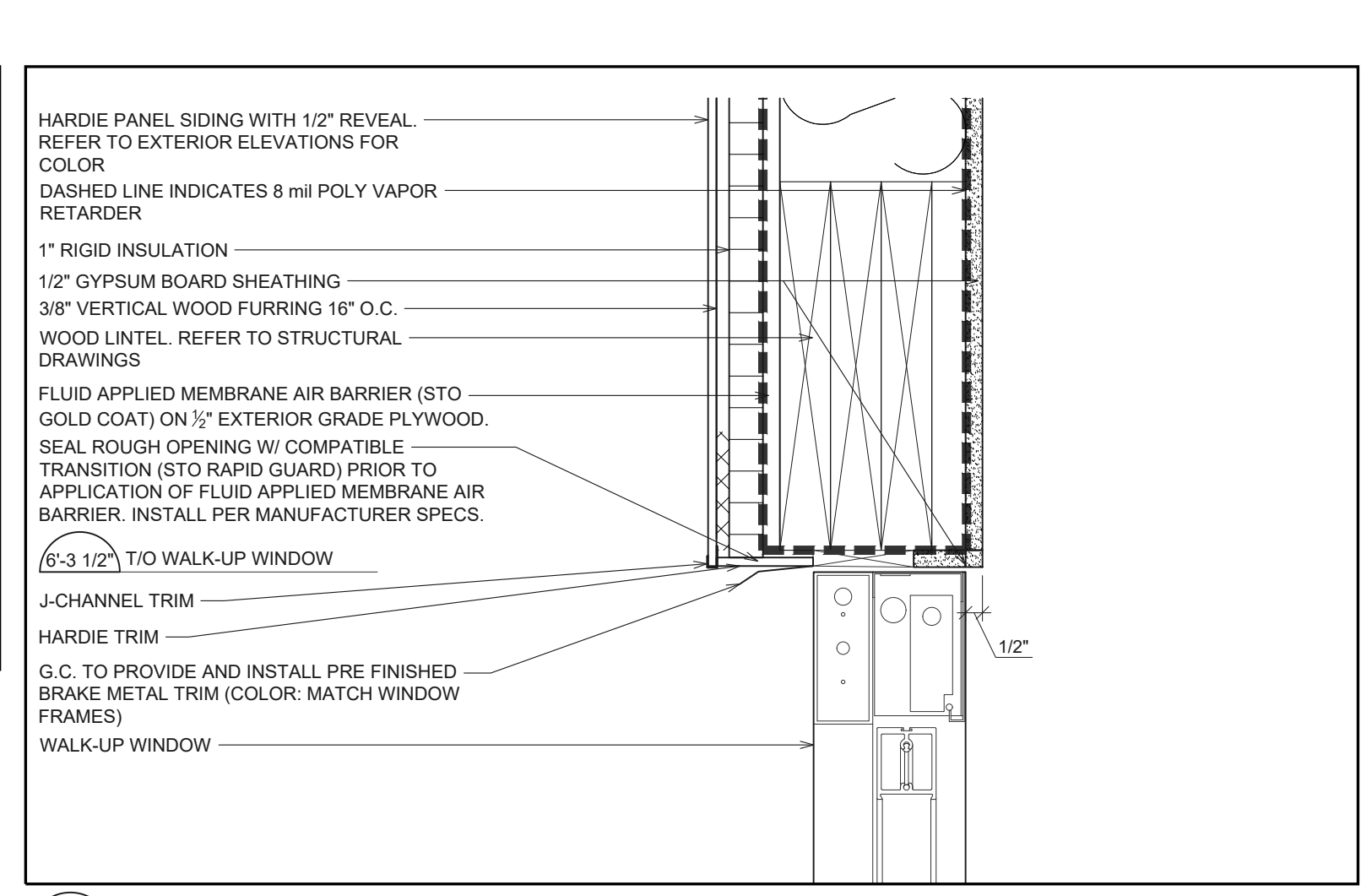
**10 SECTION DETAIL @ DRIVE-THRU HEADER**  
SCALE: 2-1/2" = 1'-0"



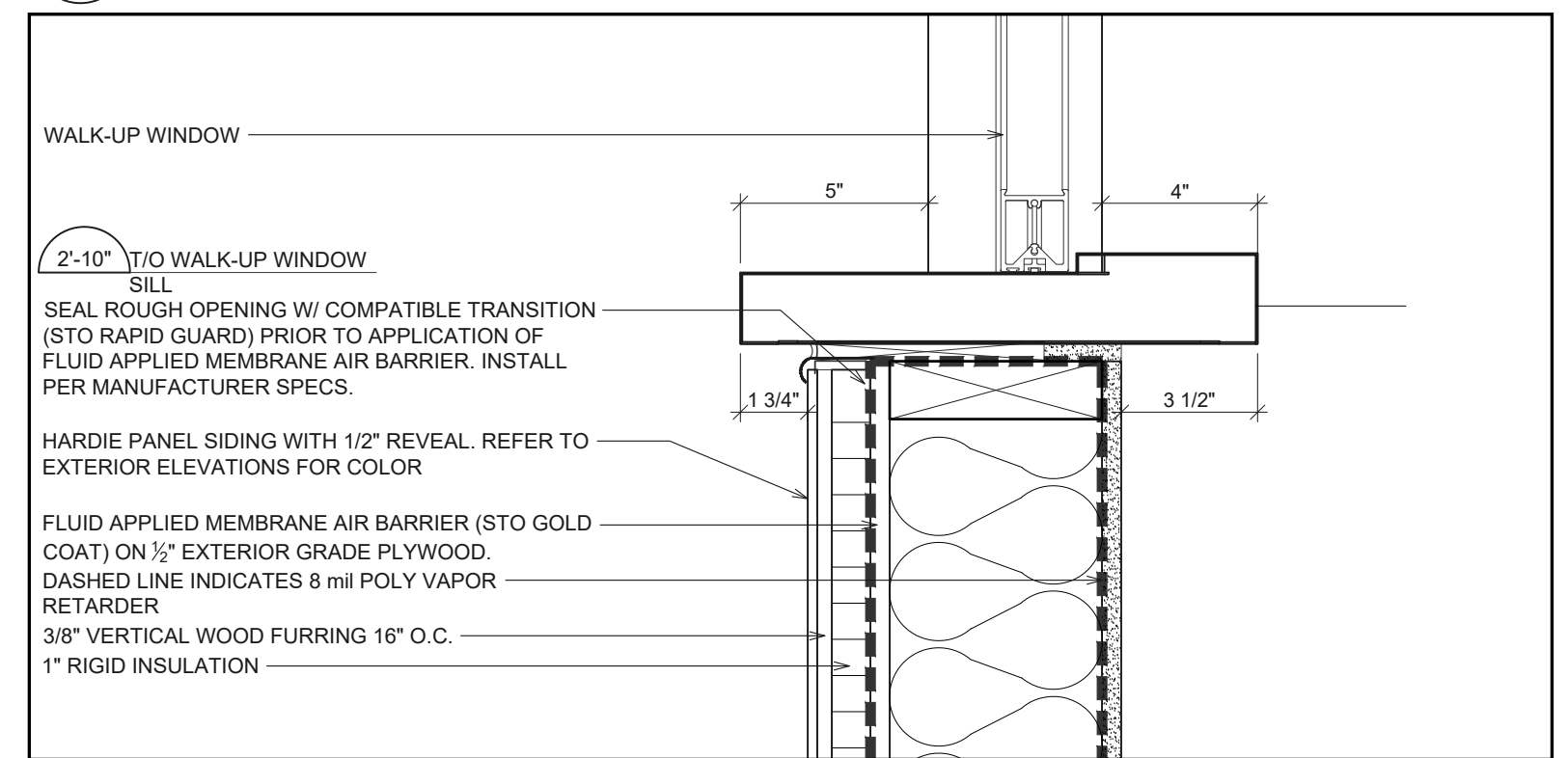
**11 SECTION DETAIL @ DRIVE-THRU WINDOW FOOTER**  
SCALE: 2-1/2" = 1'-0"



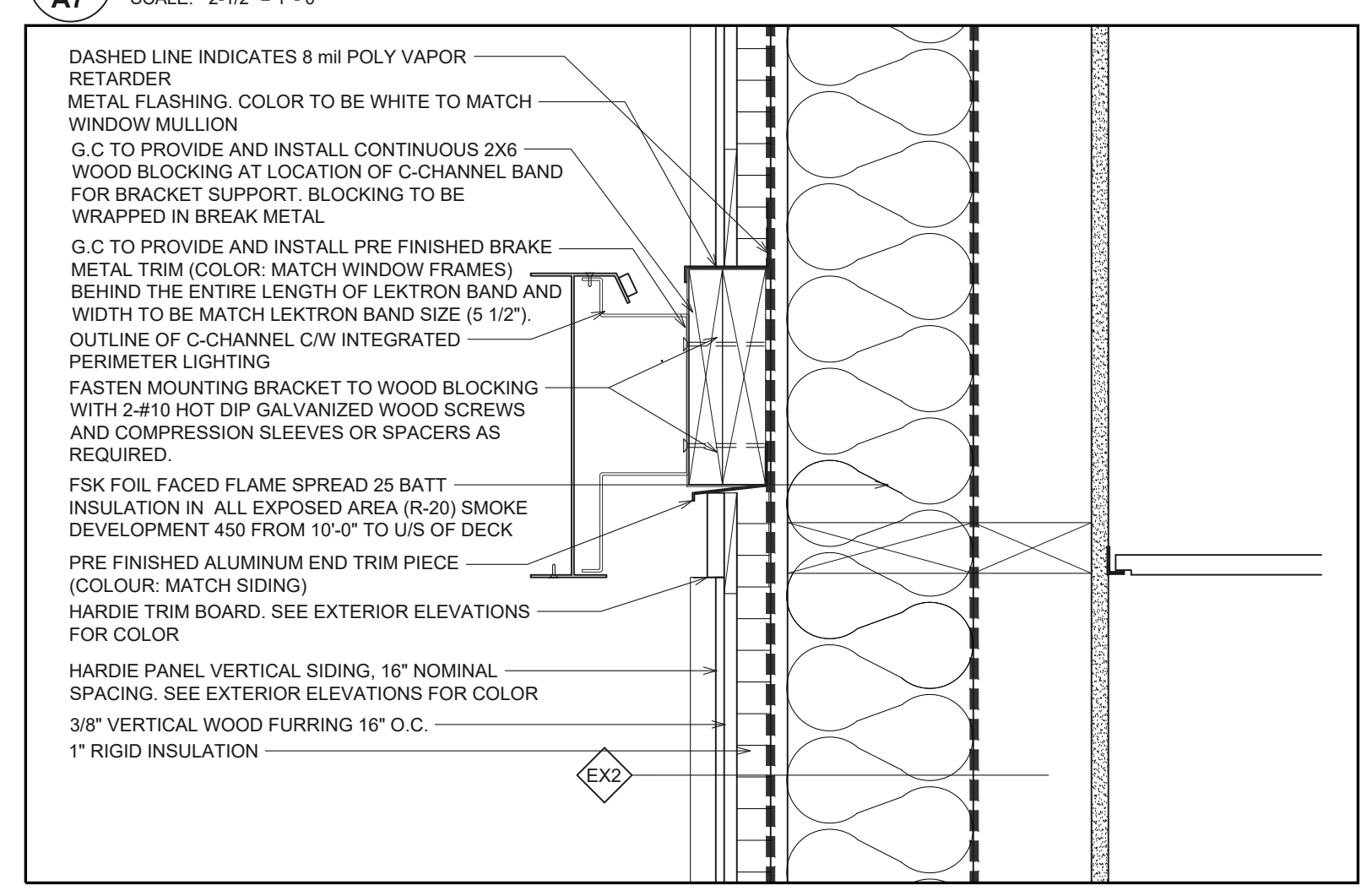
**12 SECTION DETAIL @ DRIVE-THRU WINDOW SILL**  
SCALE: 2-1/2" = 1'-0"



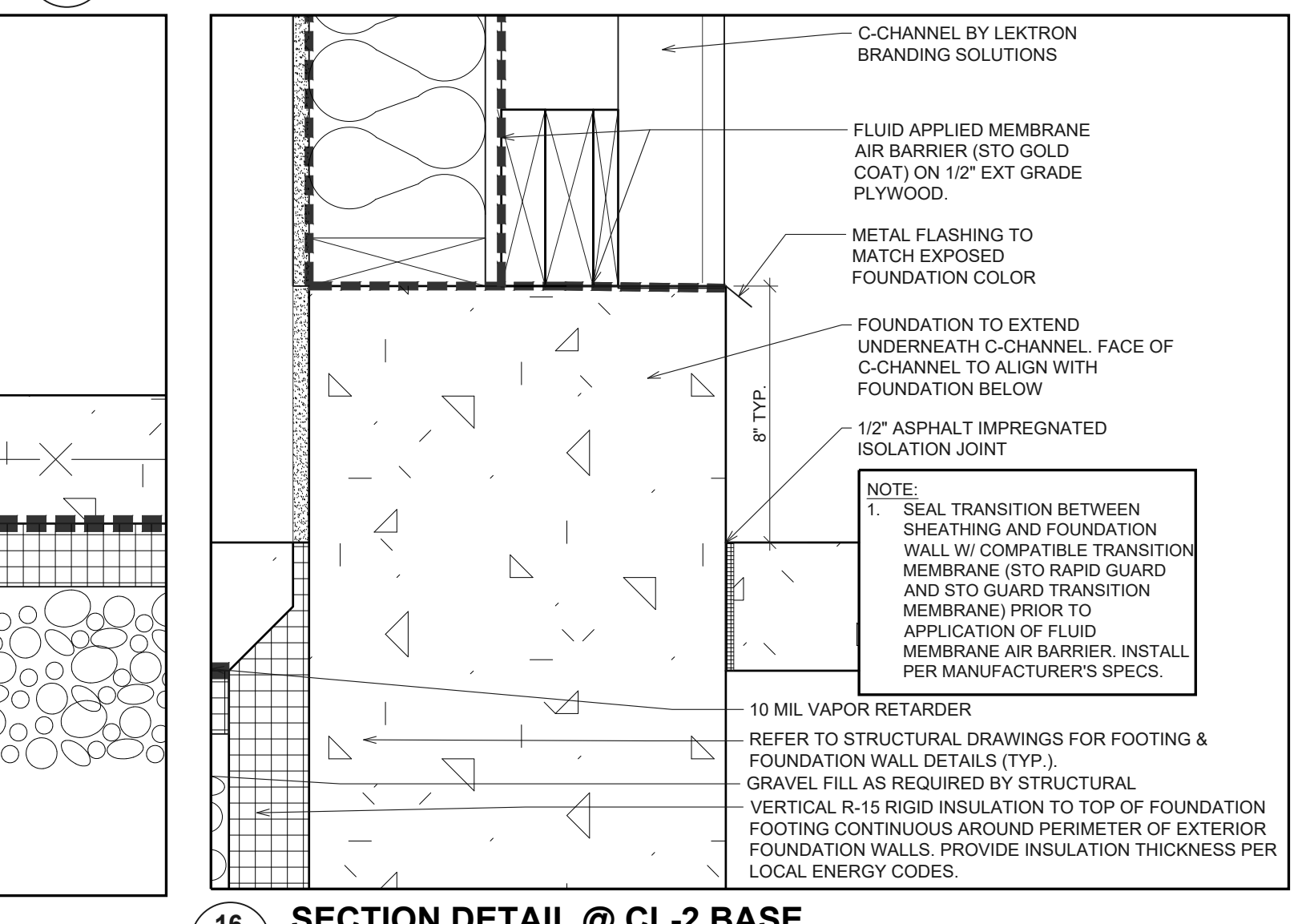
**13 SECTION DETAIL @ WALK-UP WINDOW**  
SCALE: 2-1/2" = 1'-0"



**14 SECTION DETAIL @ WALK-UP WINDOW SILL**  
SCALE: 2-1/2" = 1'-0"



**15 SECTION DETAIL @ PERIMETER CL-1W C-CHANNEL**  
SCALE: 2-1/2" = 1'-0"



**16 SECTION DETAIL @ CL-2 BASE**  
SCALE: 2-1/2" = 1'-0"

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STORE # 919728



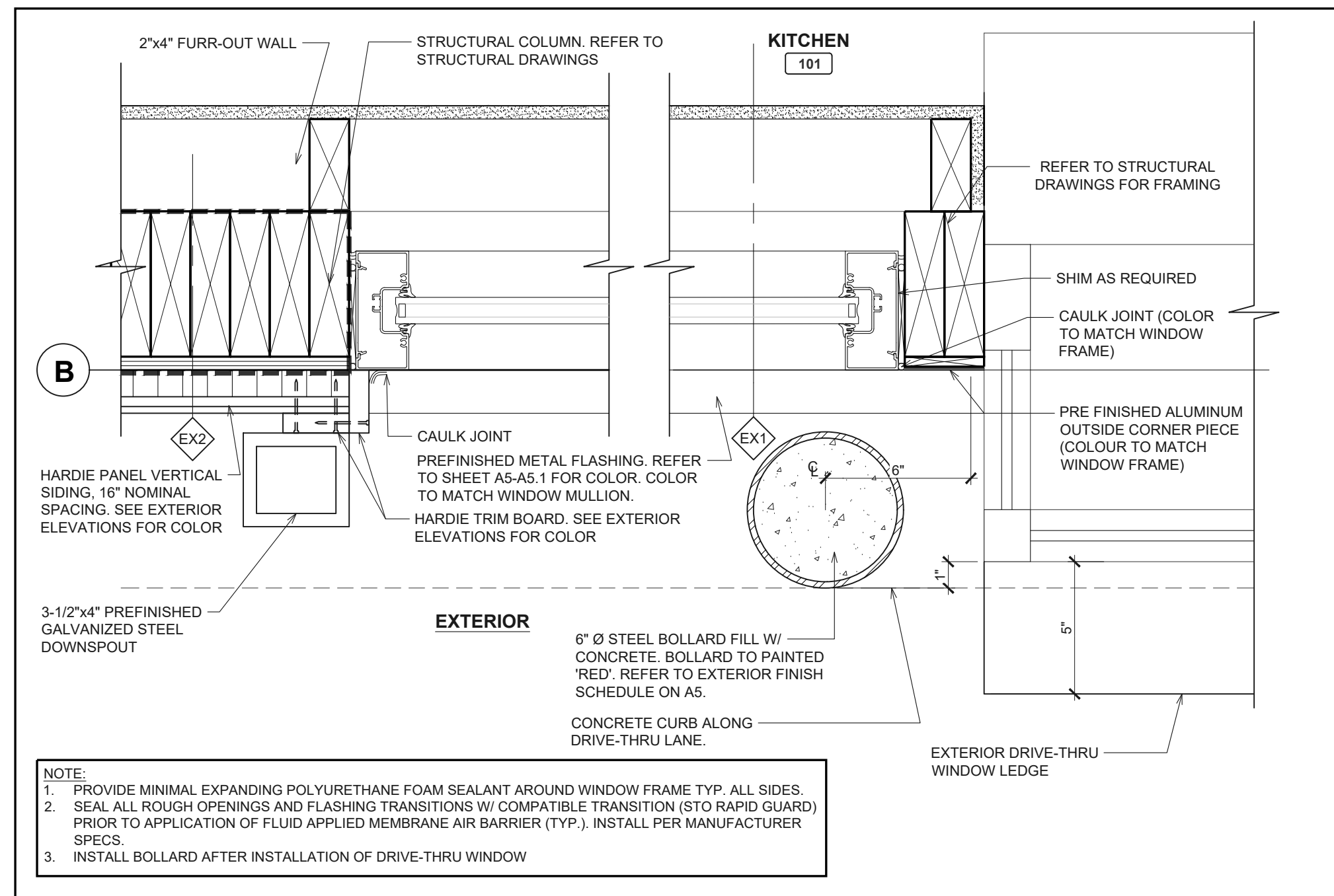
PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

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40509-11

SHEET TITLE:  
**SECTION DETAILS**

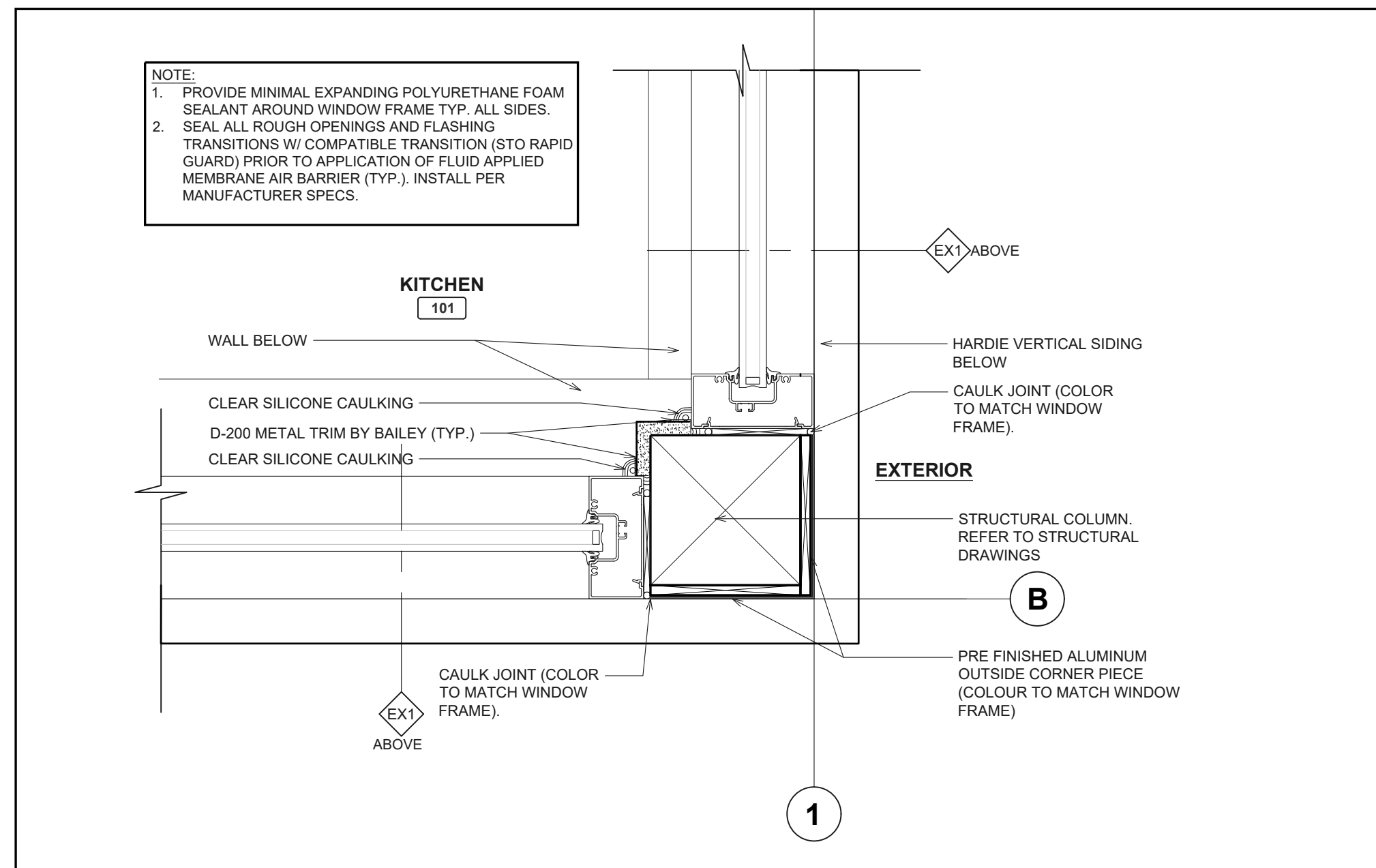
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A7

File Name: N:\03\6240509-THUS11\_HARPER WOODS, MI DTD (RBI)\DOCS\CAD\A7.1 & 7.2 PLAN AND SECTION DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:24 PM



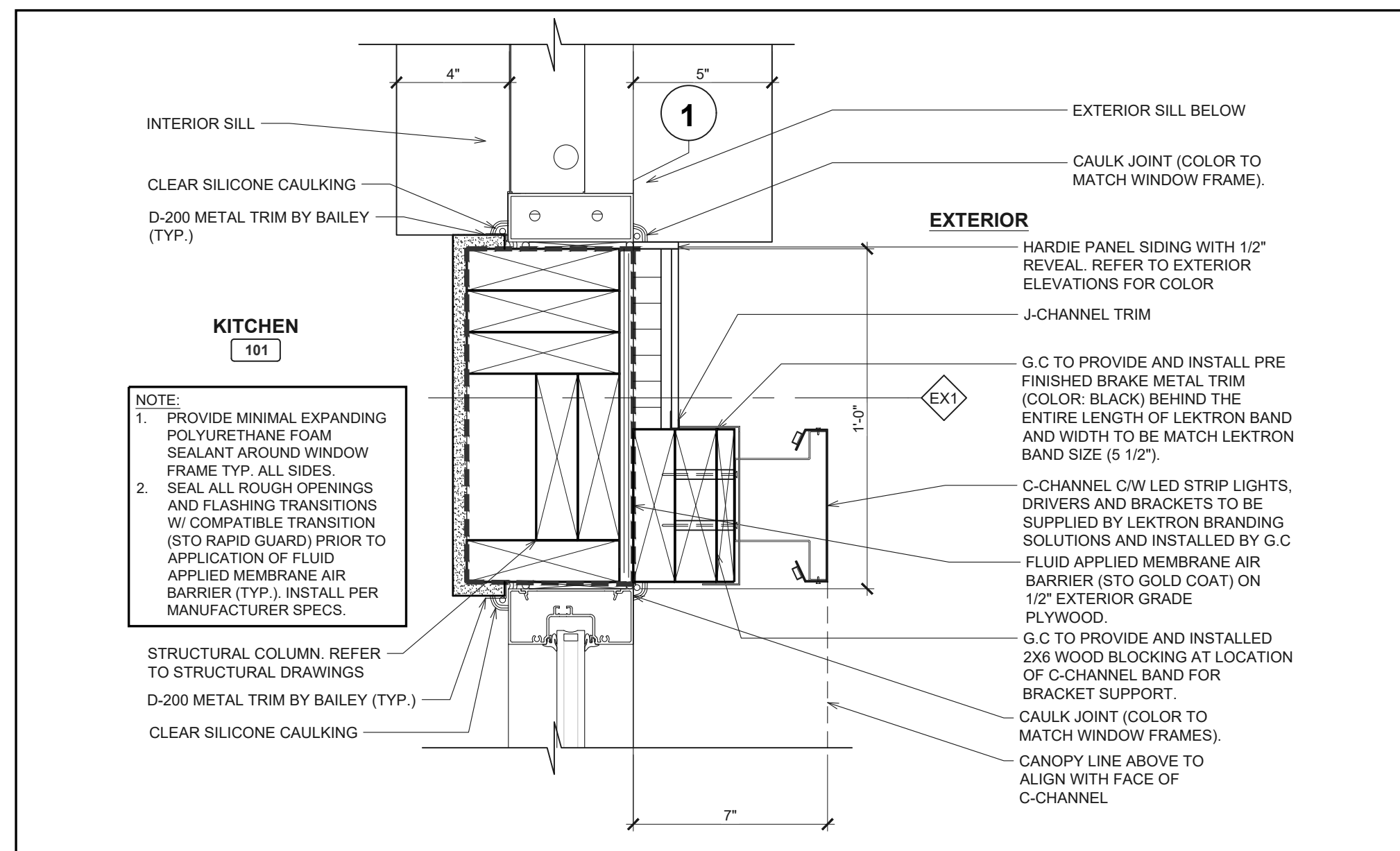
**1 PLAN DETAIL @ DRIVE-THRU WINDOW**

A7.1 SCALE: 2 1/2"=1'-0"



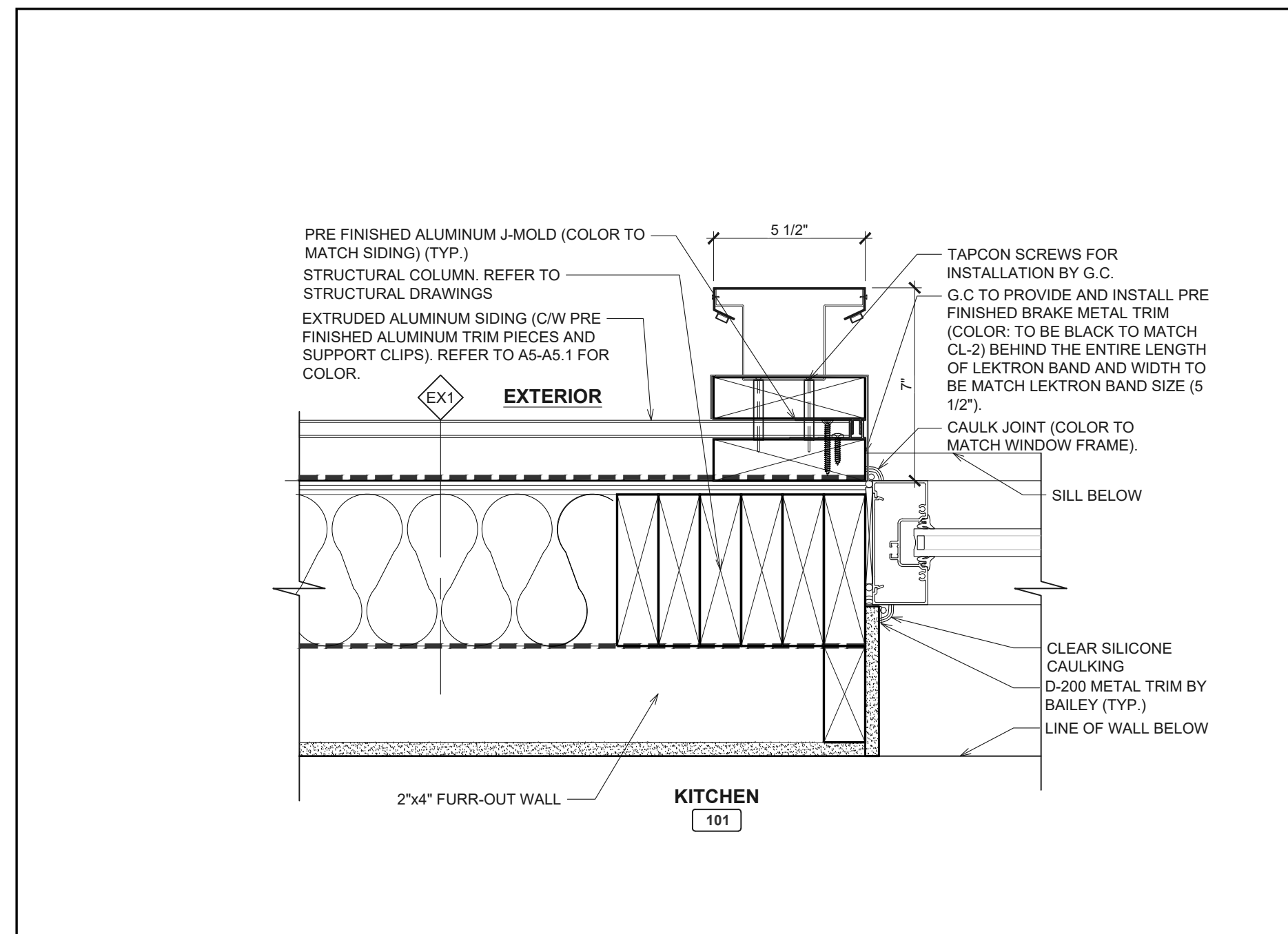
**2 PLAN DETAIL @ STOREFRONT**

A7.1 SCALE: 2 1/2"=1'-0"



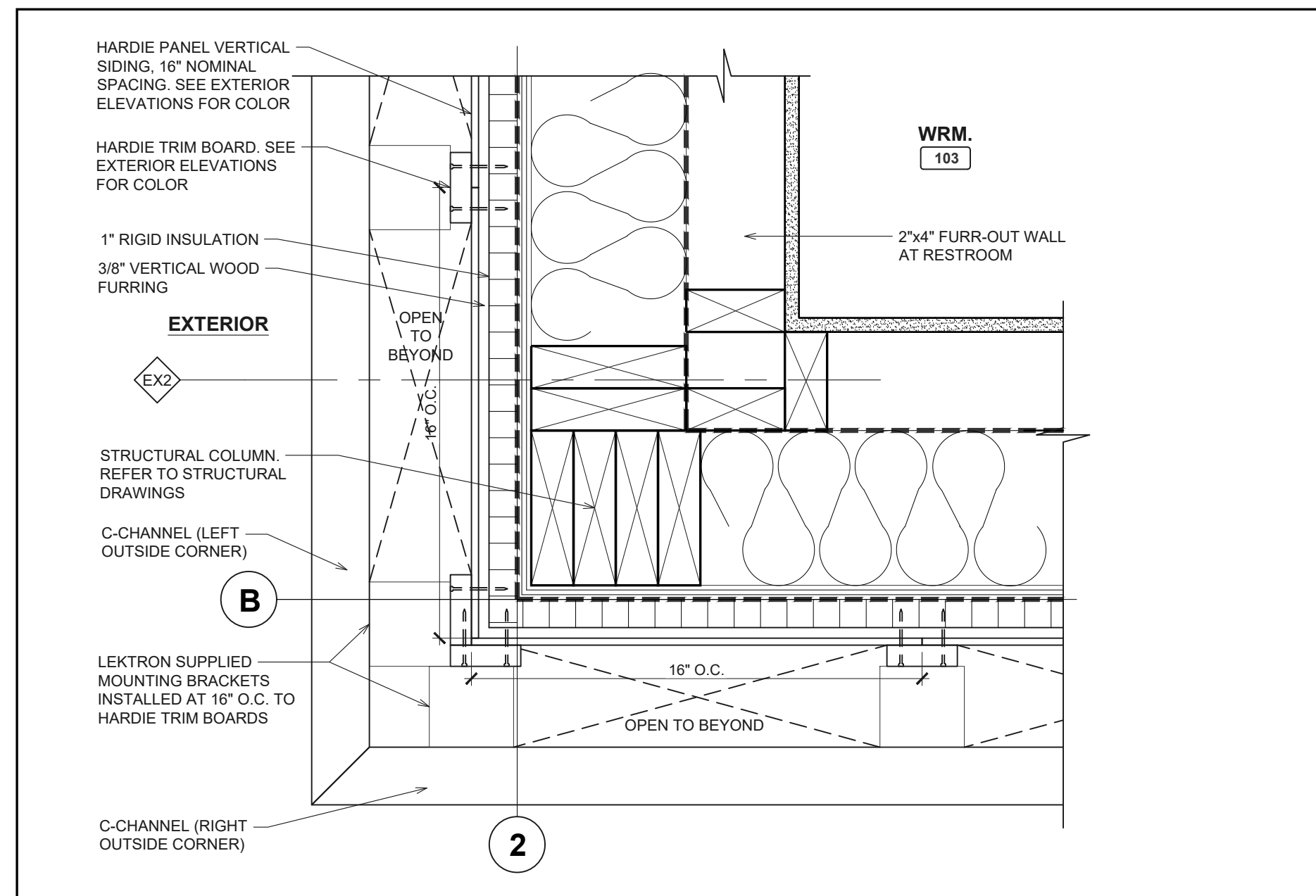
**3 PLAN DETAIL @ WINDOW TRIM (SIDING) / CL-2 C-CHANNEL BAND**

A7.1 SCALE: 2 1/2"=1'-0"



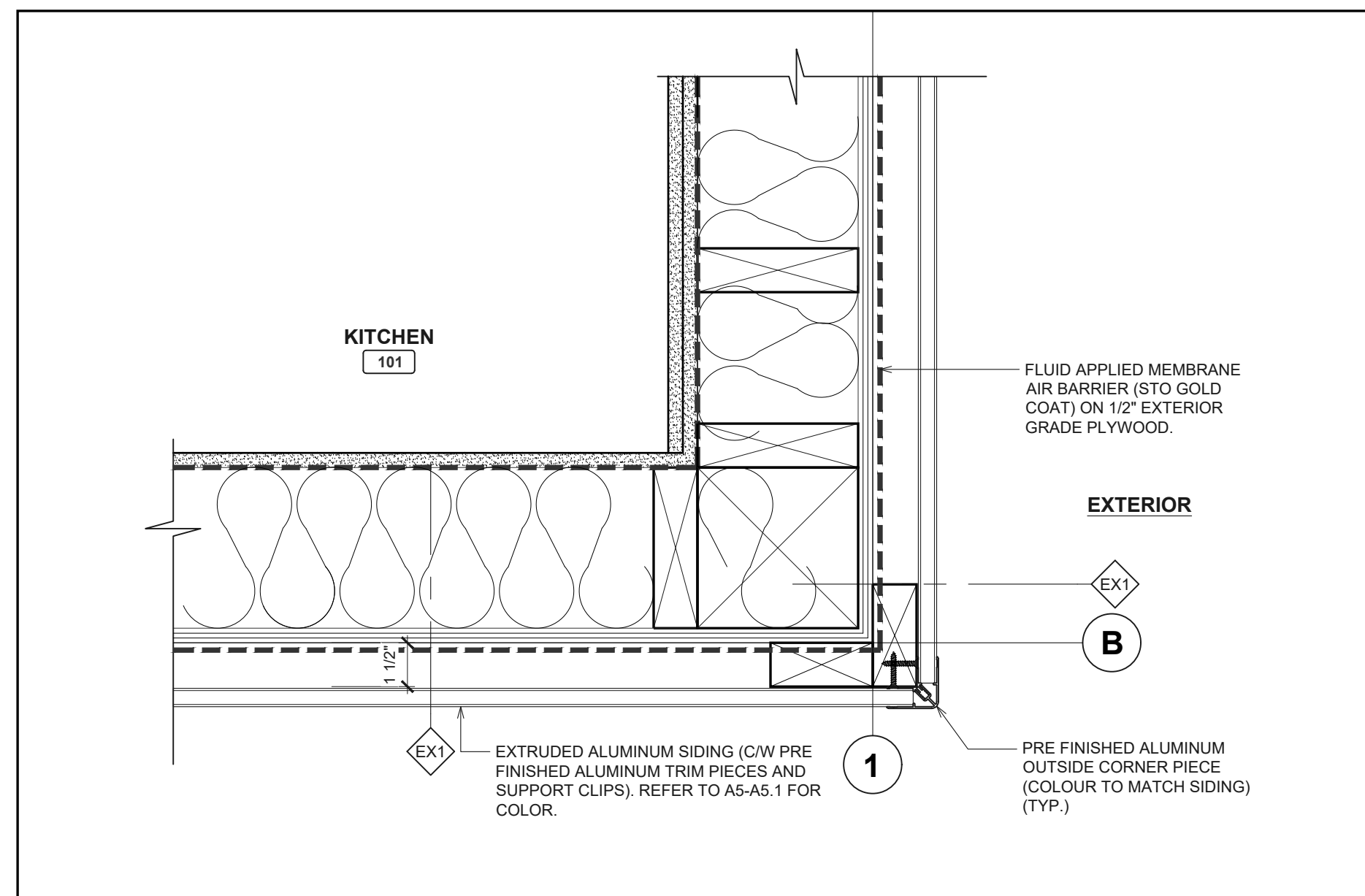
**4 PLAN DETAIL @ CL-2 C-CHANNEL**

A7.1 SCALE: 2 1/2"=1'-0"



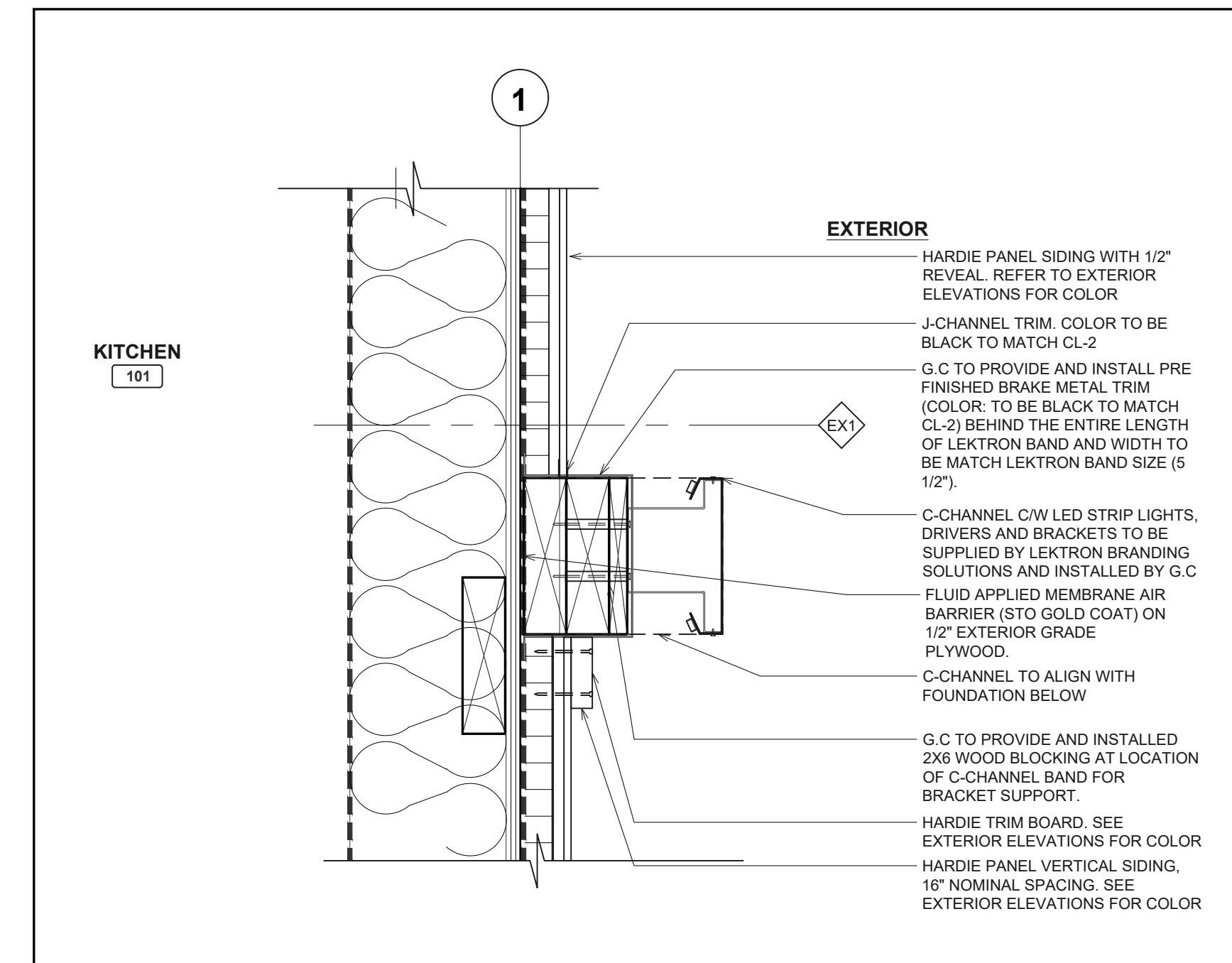
**5 PLAN DETAIL @ SIDING**

A7.1 SCALE: 2 1/2"=1'-0"



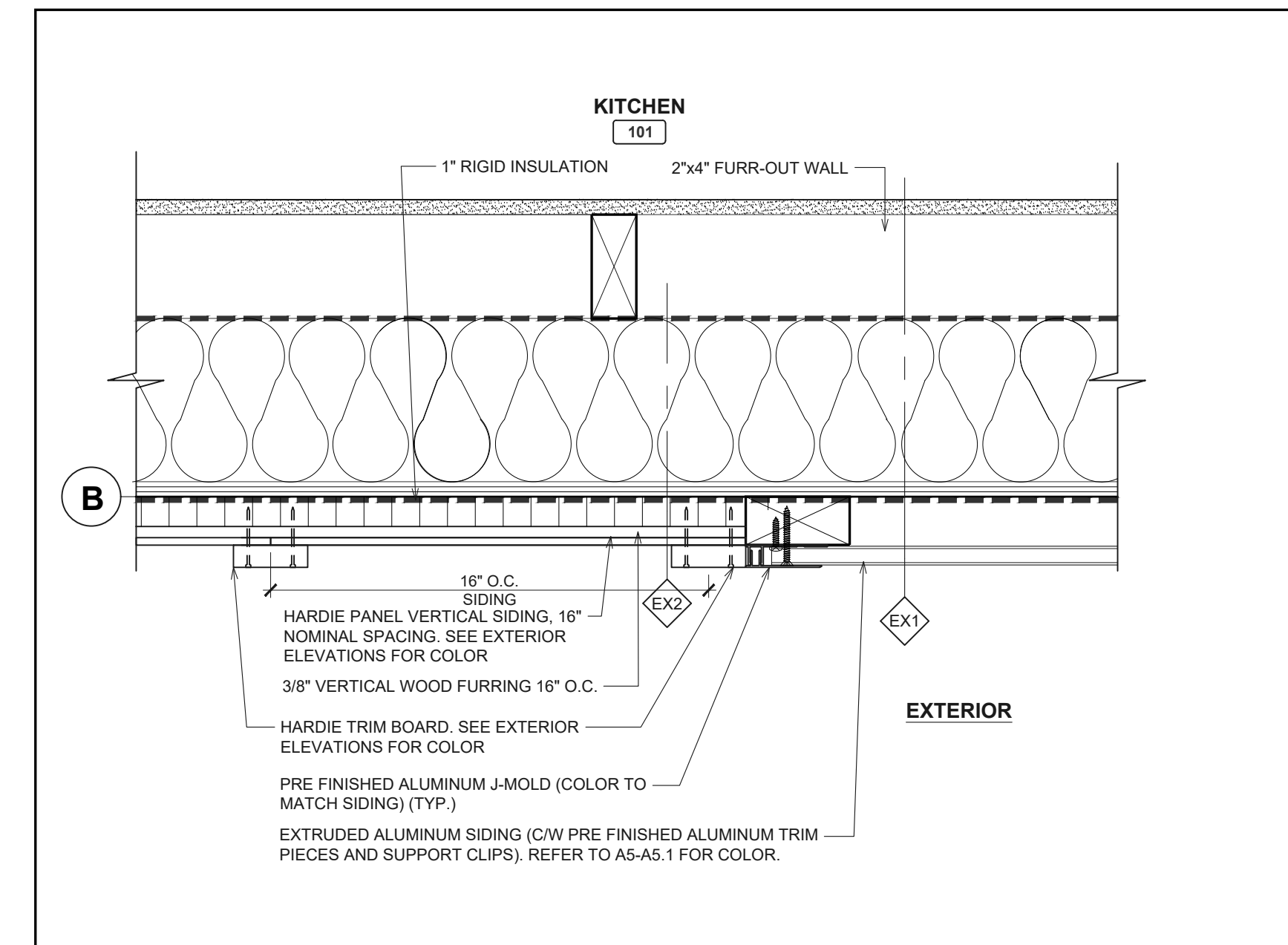
**6 PLAN DETAIL @ SIDING CORNER (TYP.)**

A7.1 SCALE: 2 1/2"=1'-0"



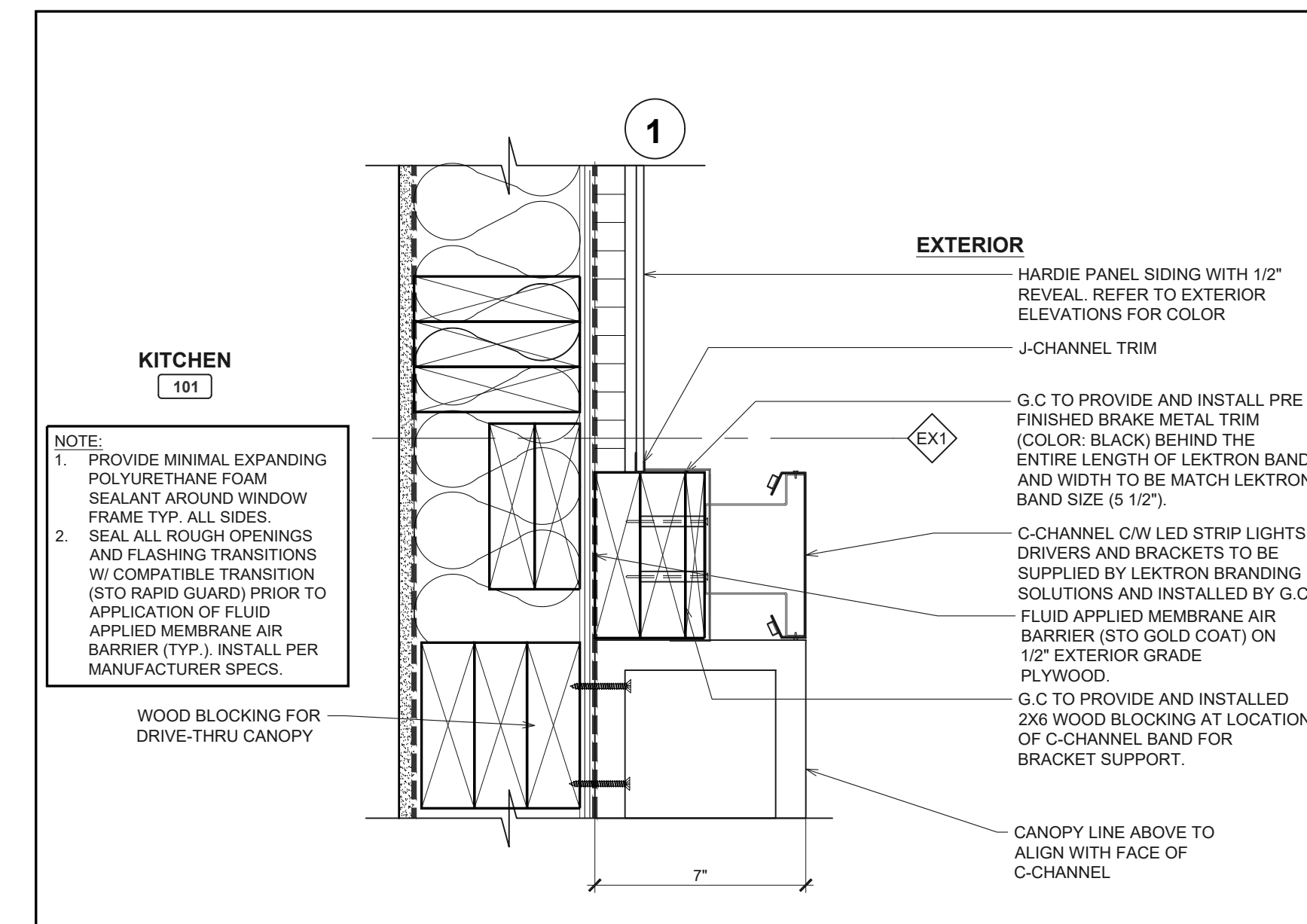
**7 PLAN DETAIL @ CL-2 C-CHANNEL BAND AND CANOPY**

A7.1 SCALE: 2 1/2"=1'-0"



**8 PLAN DETAIL @ SIDING**

A7.1 SCALE: 2 1/2"=1'-0"



**9 PLAN DETAIL @ CL-2 C-CHANNEL & DRIVE-THRU CANOPY**

A7.1 SCALE: 2 1/2"=1'-0"

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LRK

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AMD/MAR

ISSUE DATE

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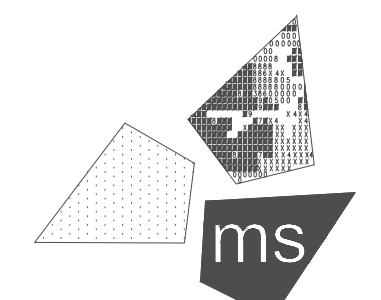
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STORE # 919728



PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.:

40509-11

SHEET TITLE:

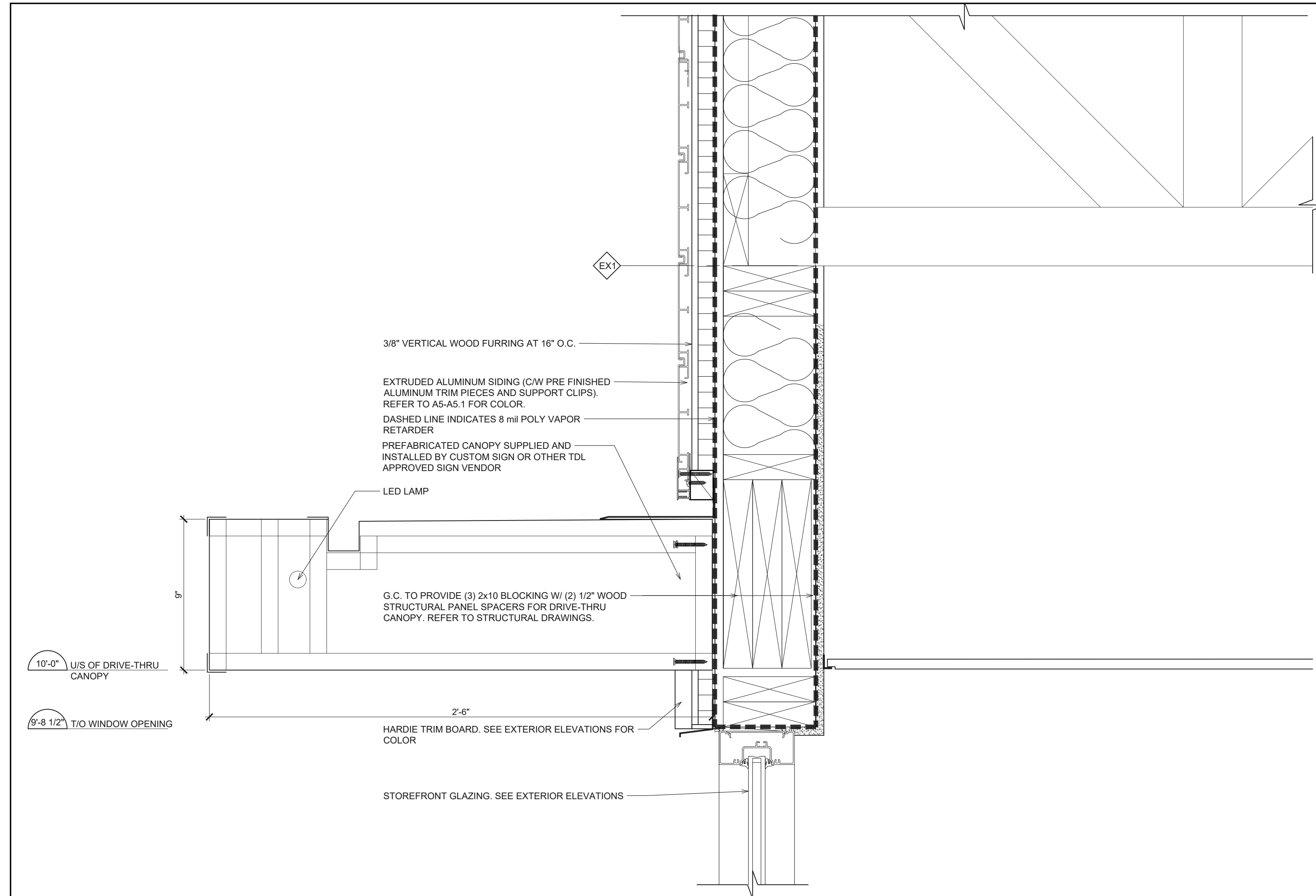
**PLAN DETAILS**

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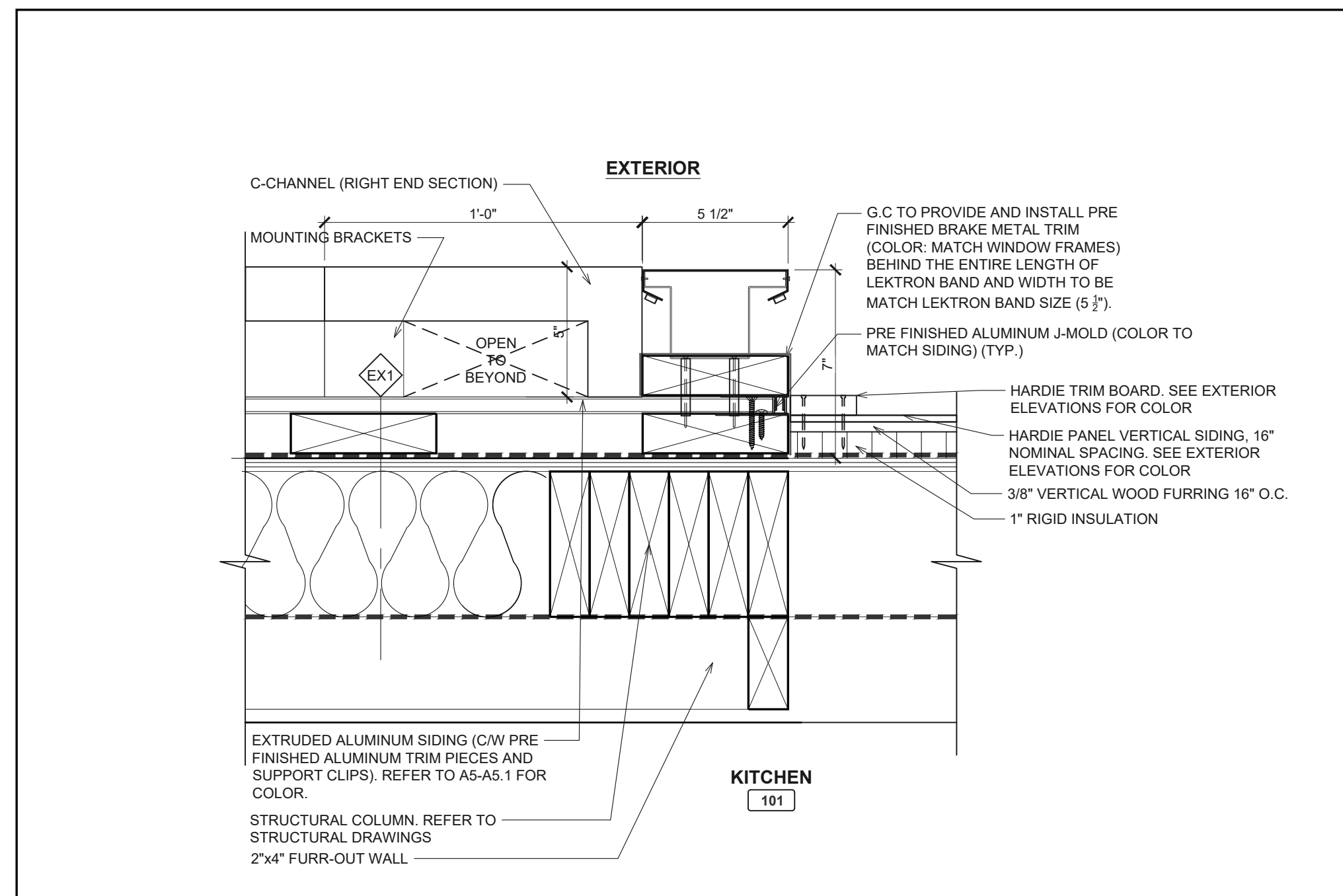
A7.1



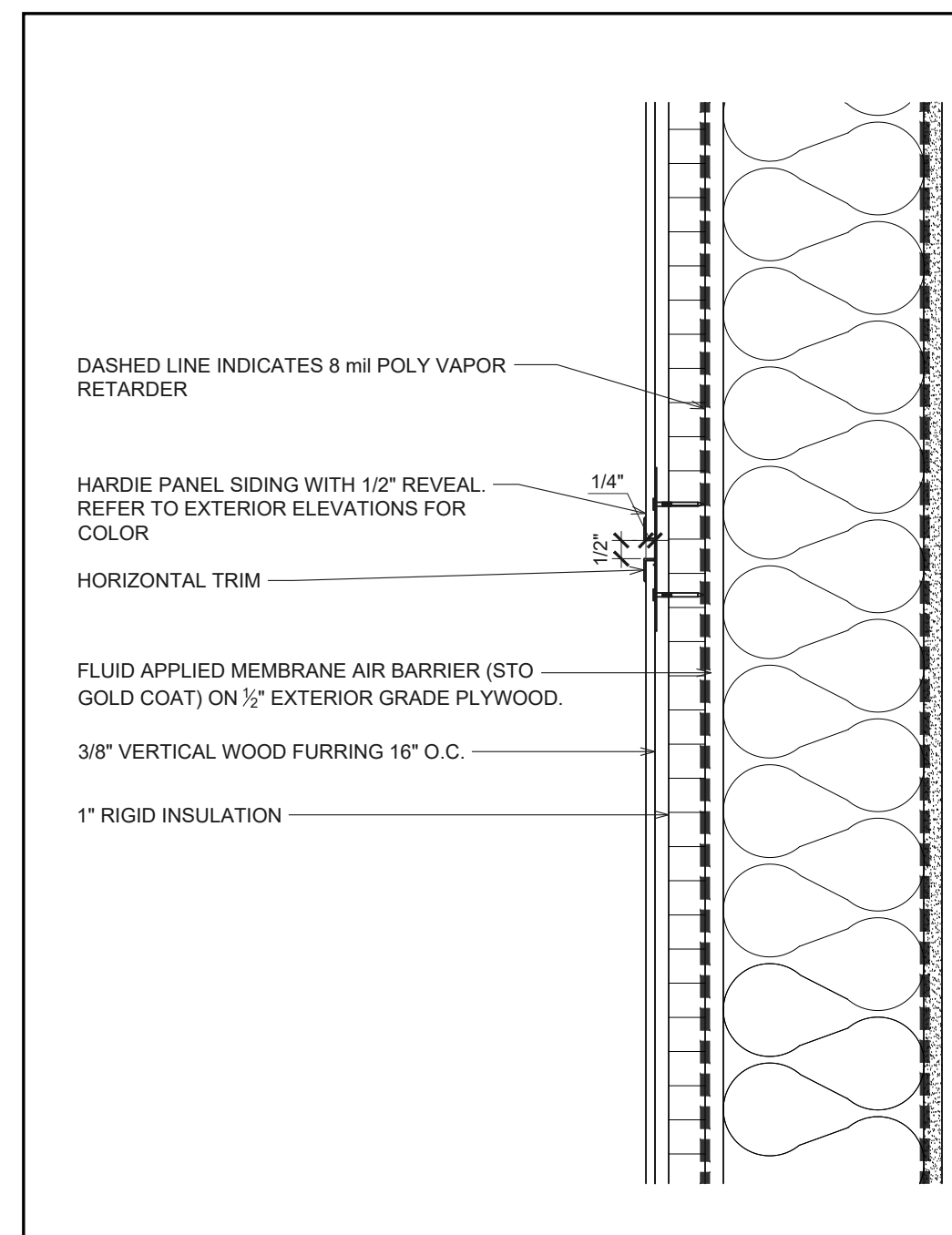
File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\A7.1 & 7.2 PLAN AND SECTION DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:24 PM



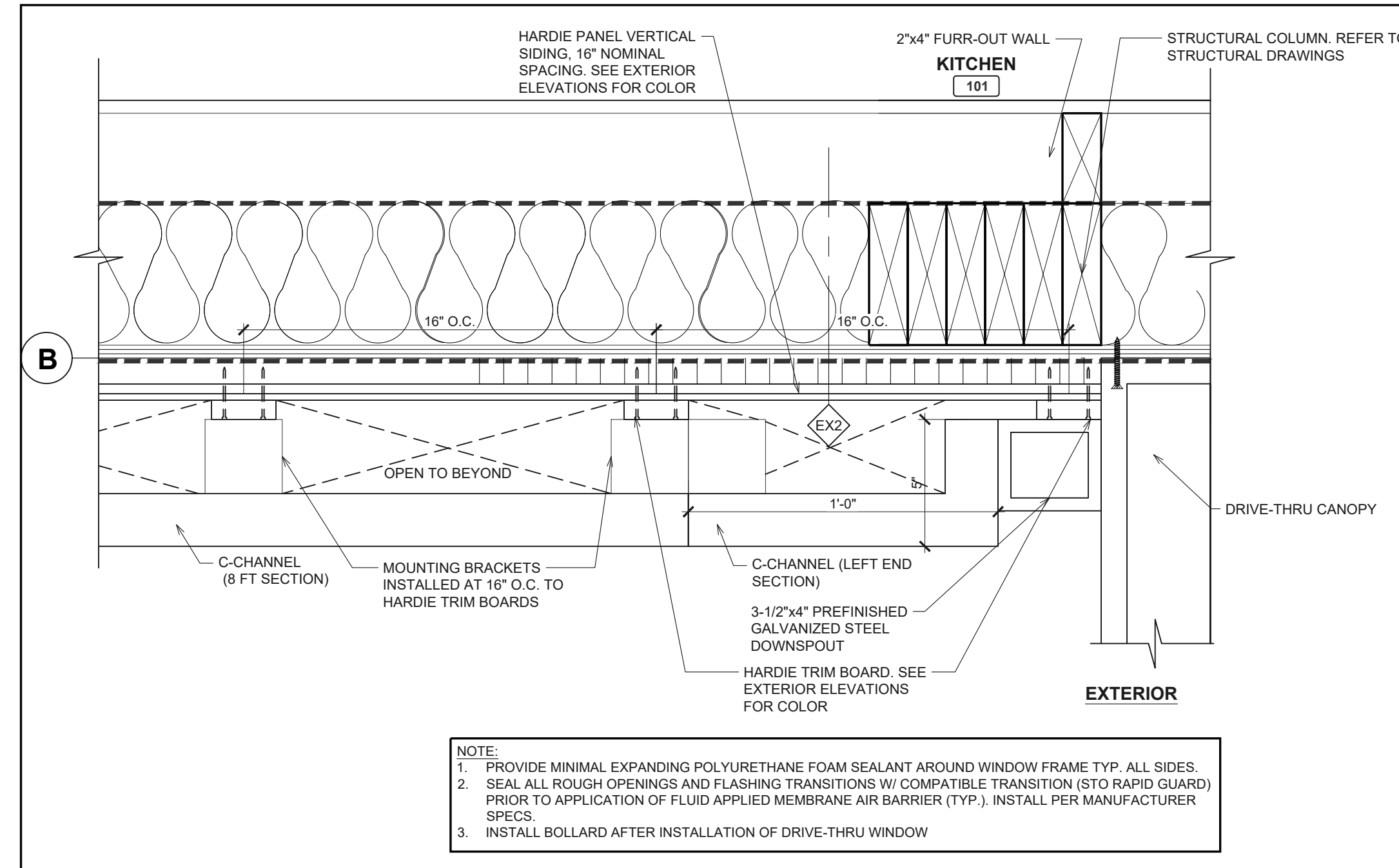
**1 SECTION DETAIL @ DRIVE-THRU CANOPY**  
A7.2 SCALE: 2 1/2"=1'-0"



**2 PLAN DETAIL @ CL-2 & CL-1W C-CHANNEL**  
A7.2 SCALE: 2 1/2"=1'-0"



**4 SECTION DETAIL @ HORIZONTAL PANEL REVEAL**  
A7.2 SCALE: 2 1/2"=1'-0"



**3 PLAN DETAIL @ CL-1W, DOWNSPOUT & CANOPY**  
A7.2 SCALE: 2 1/2"=1'-0"

DRAWN BY: LRK

CHECKED BY: AMD/MAR

APPROVED BY: AMD/MAR

ISSUE DATE: 07/12/2022

ISSUE

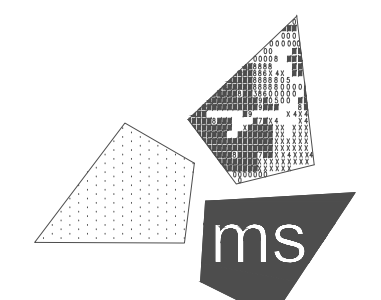
#	DATE	DESCRIPTION
07/12/22		PERMIT SET

REVISIONS

#	DATE	DESCRIPTION
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fax 614.898.7570



**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE: **PLAN AND SECTION DETAILS**

SHEET: **A7.2**

ISSUE		
#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

REVISIONS		
#	DATE	DESCRIPTION

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**PROJECT:**  
19353 VERNIER ROAD  
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**STORE # 919728**

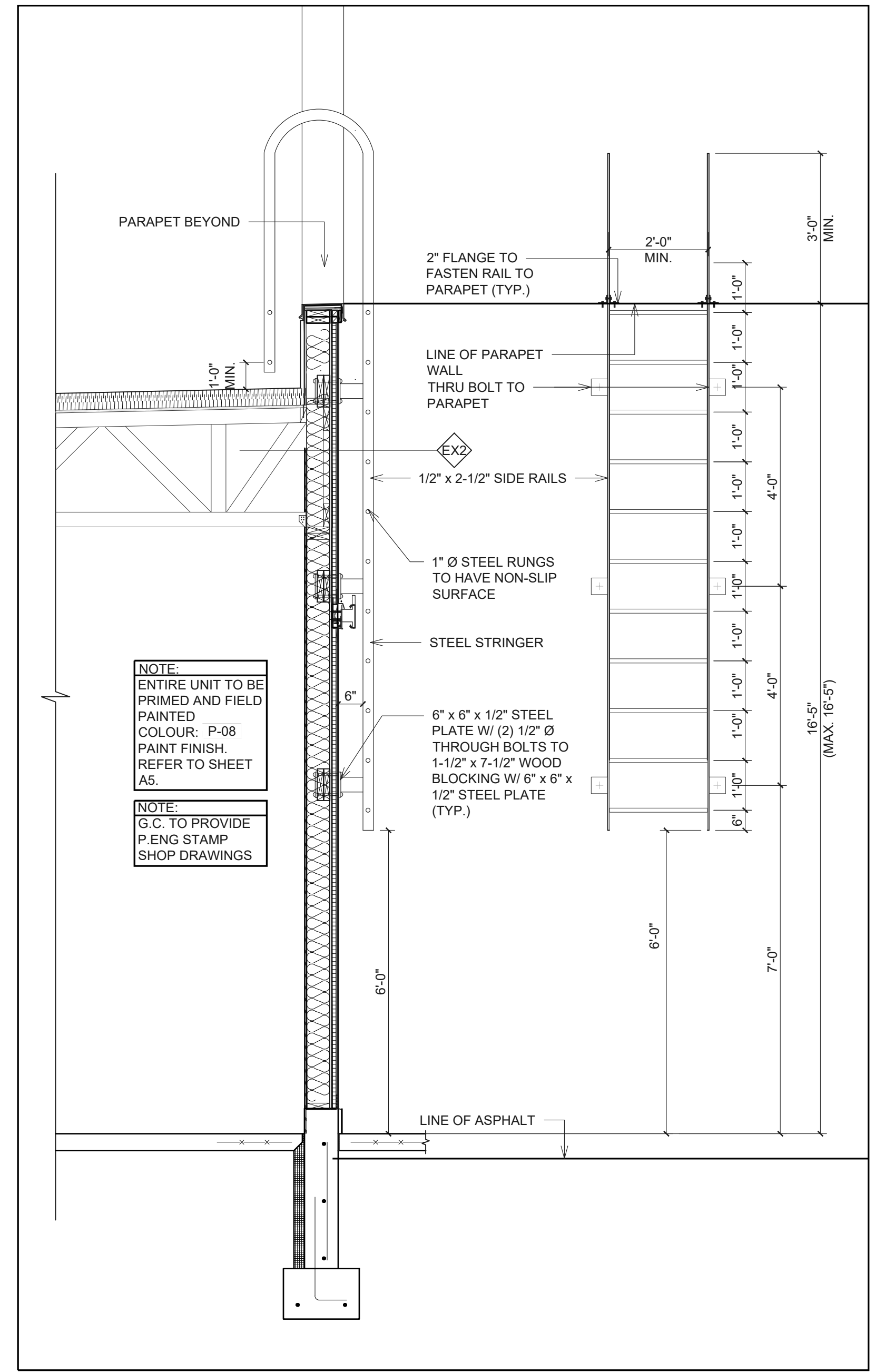


PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

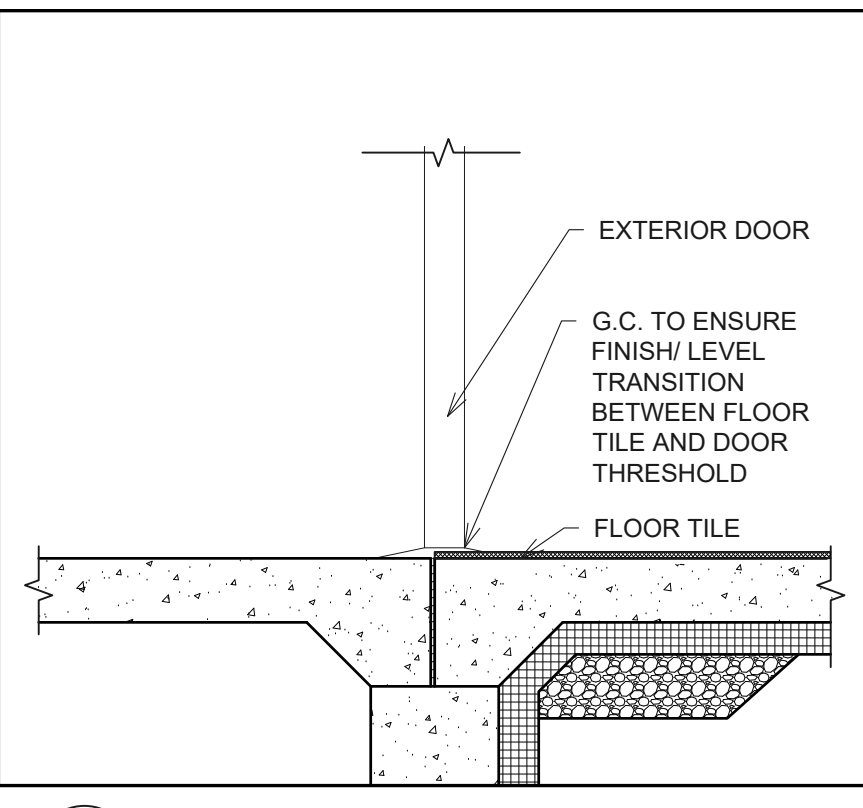
PROJECT NO.: 40509-11

SHEET TITLE: DETAILS

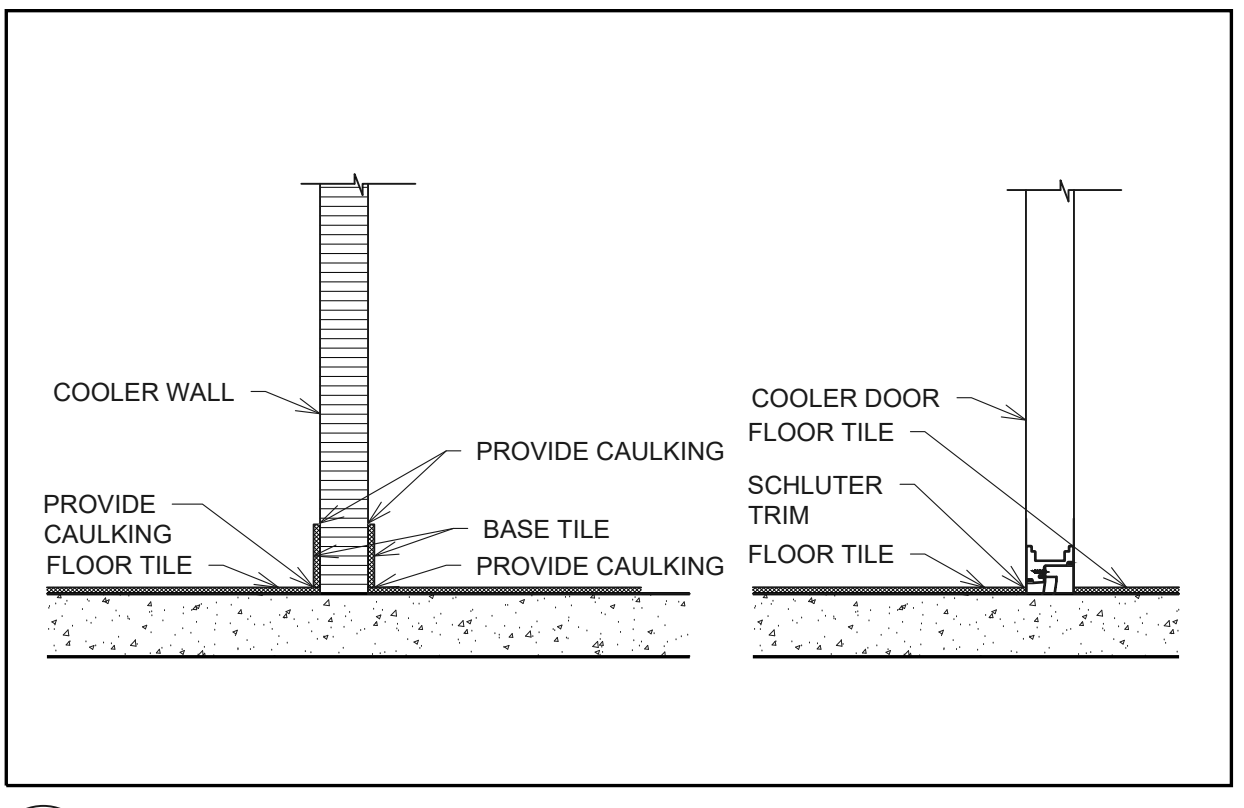
SHEET: A8



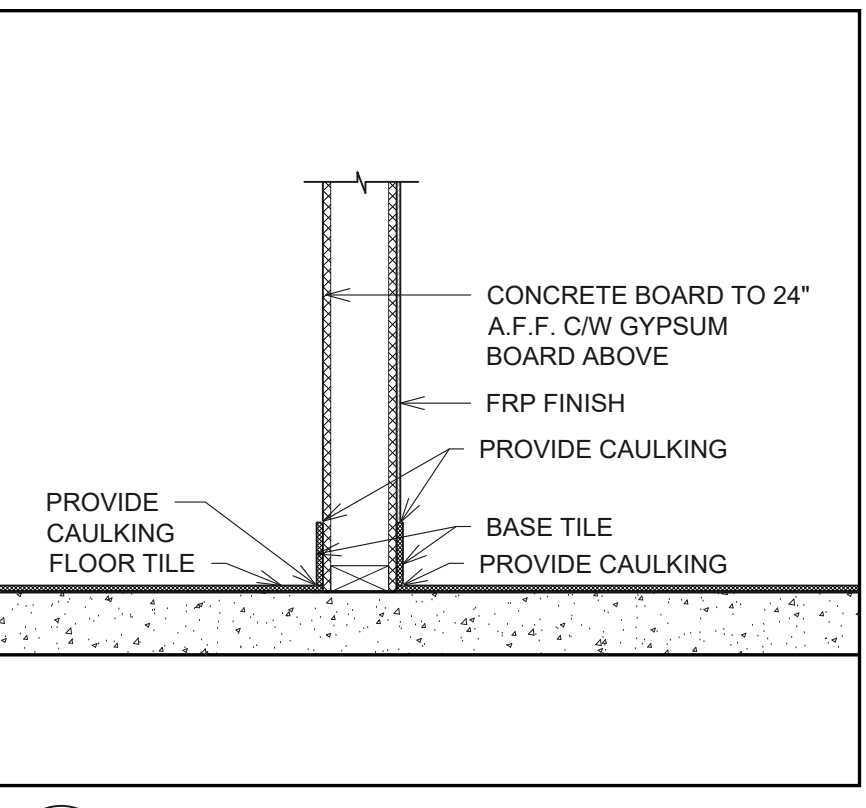
**1 ROOF LADDER DETAIL**  
A8 SCALE: 1/2" = 1'-0"



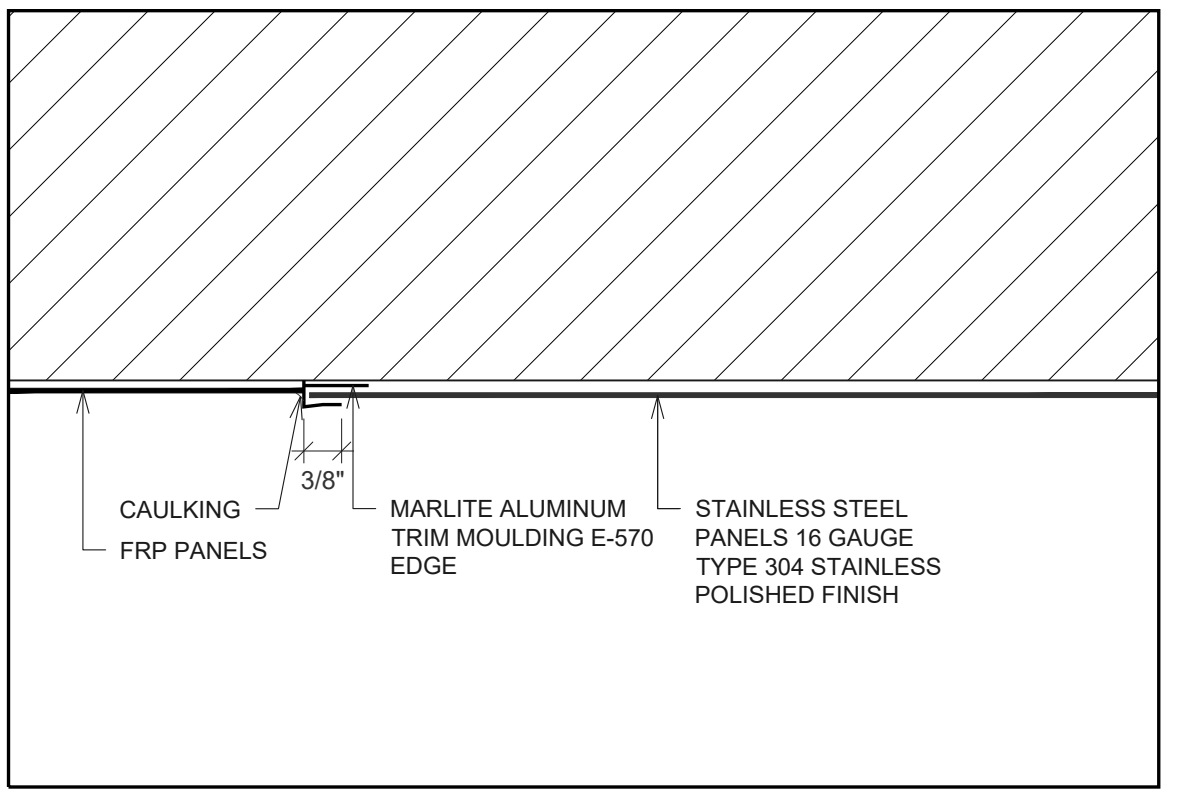
**3 TILE FLOOR @ EXT. DOOR**  
A8 SCALE: 1" = 1'-0"



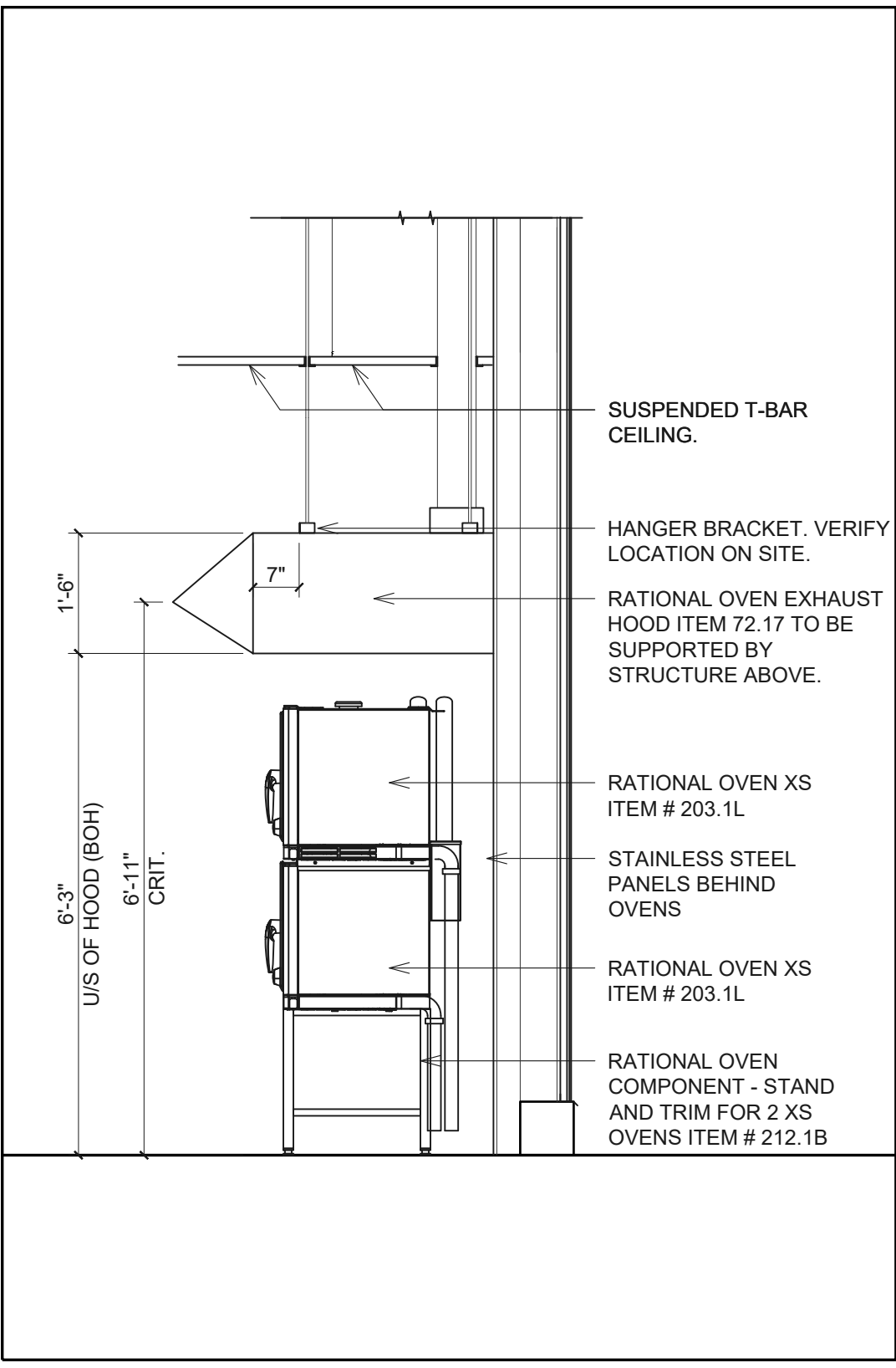
**4 TILE FLOOR @ COOLER WALL & DOOR**  
A8 SCALE: 1" = 1'-0"



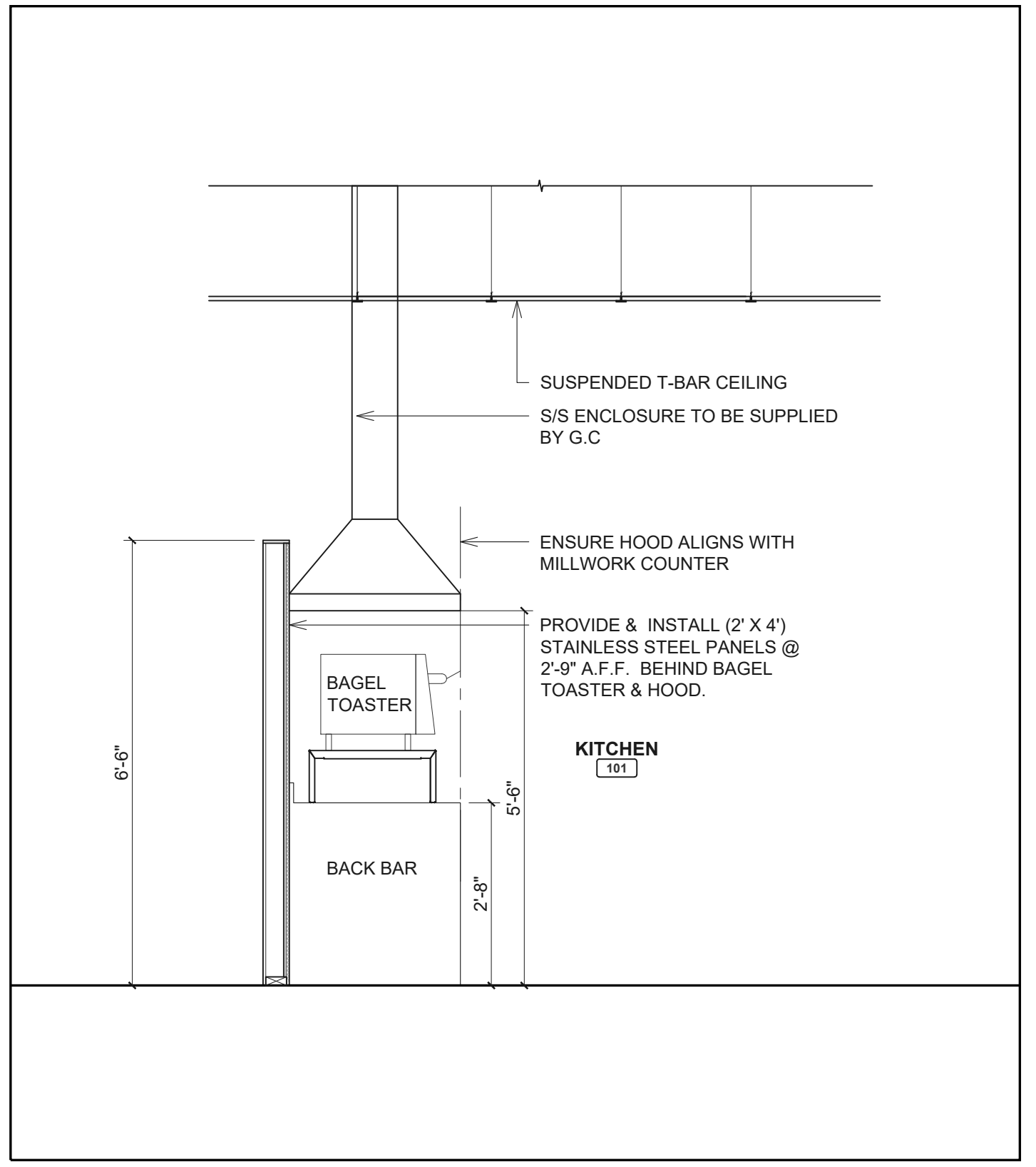
**7 BASE @ FRP & GYPSUM BOARD**  
A8 SCALE: 1" = 1'-0"



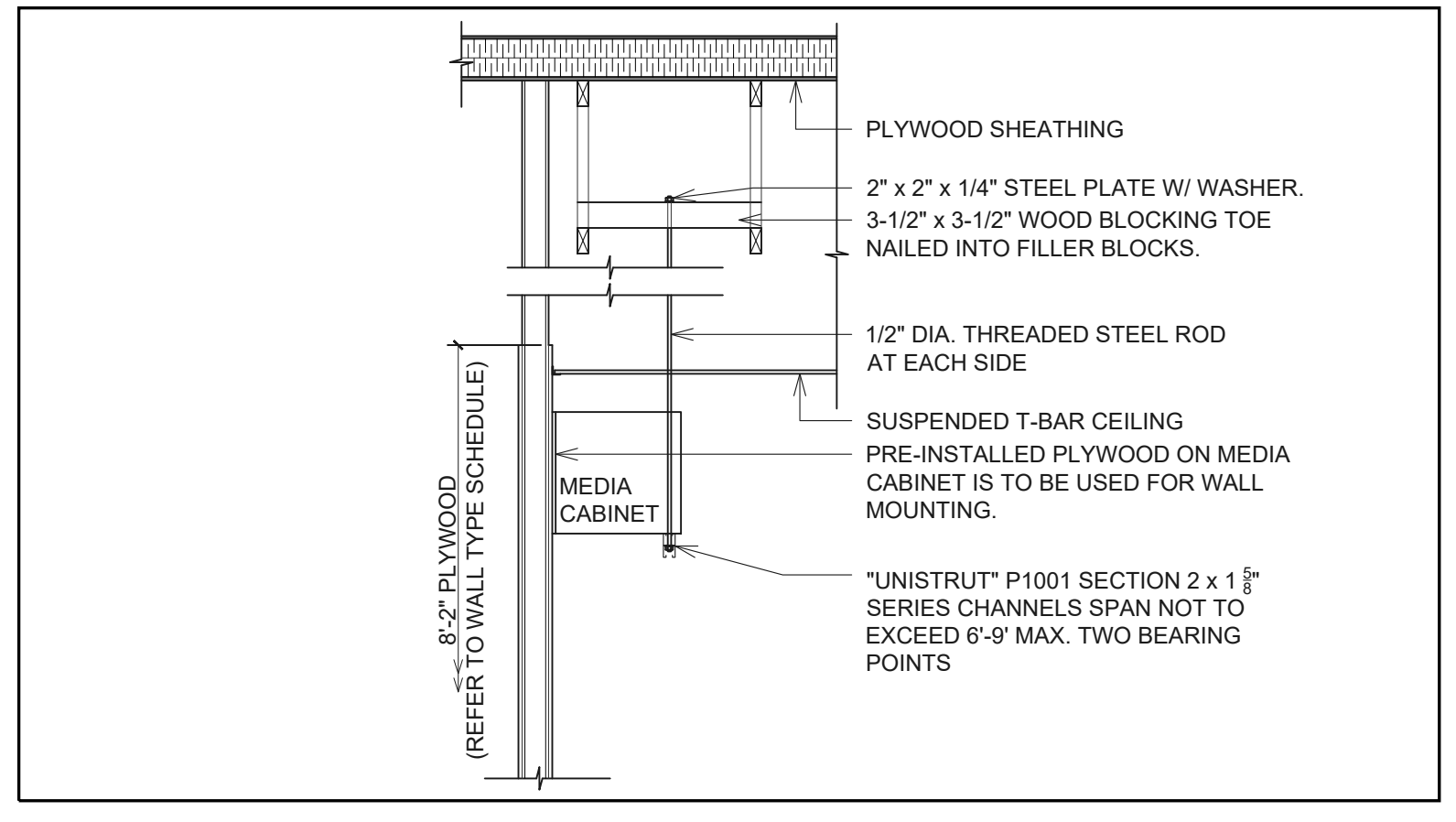
**8 FRP-STAINLESS STEEL TRIM DETAIL**  
A8 SCALE: 6" = 1'-0"



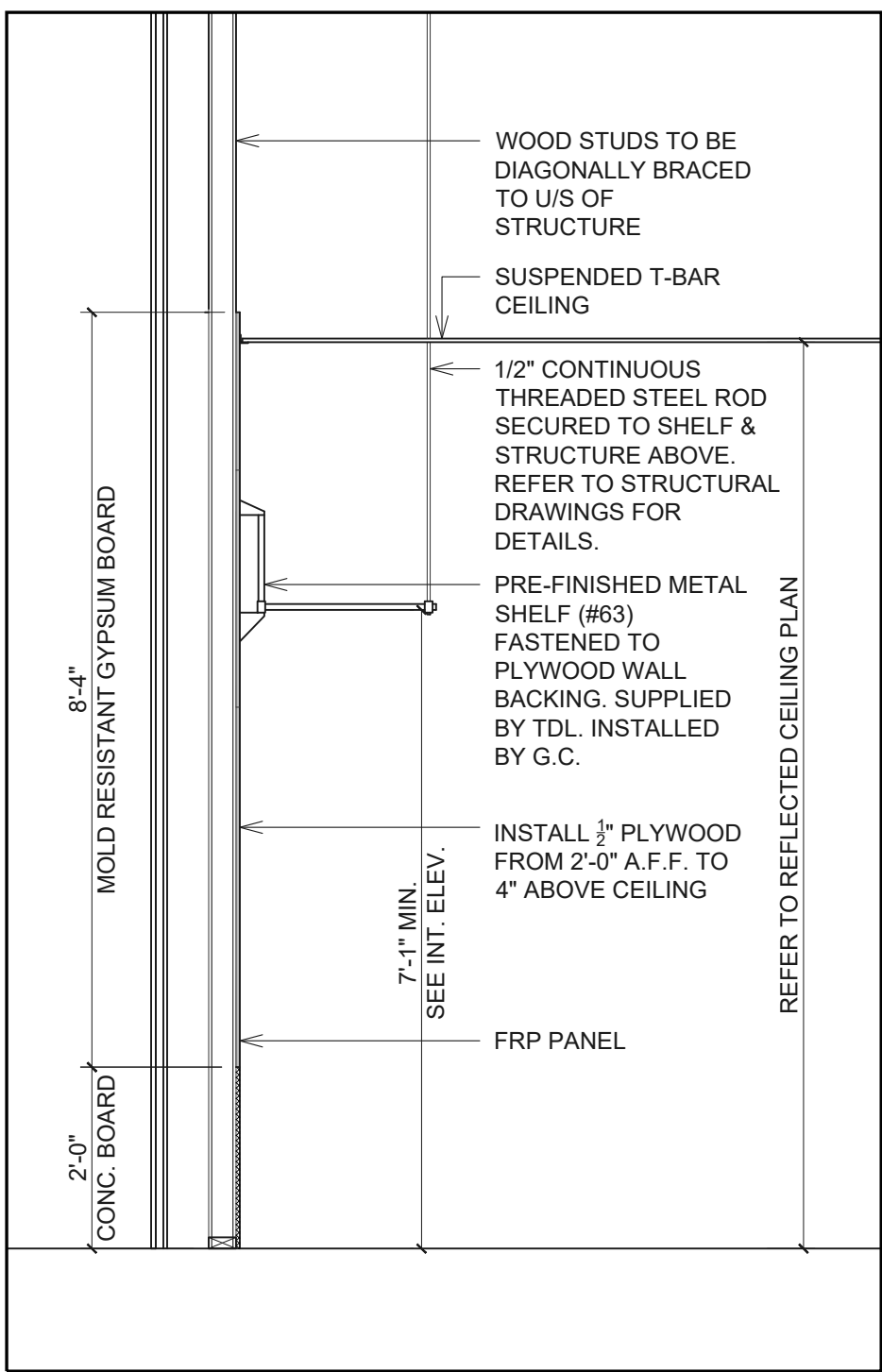
**4 SECTION THROUGH RATIONAL OVENS XS**  
A8 SCALE: 1/2" = 1'-0"



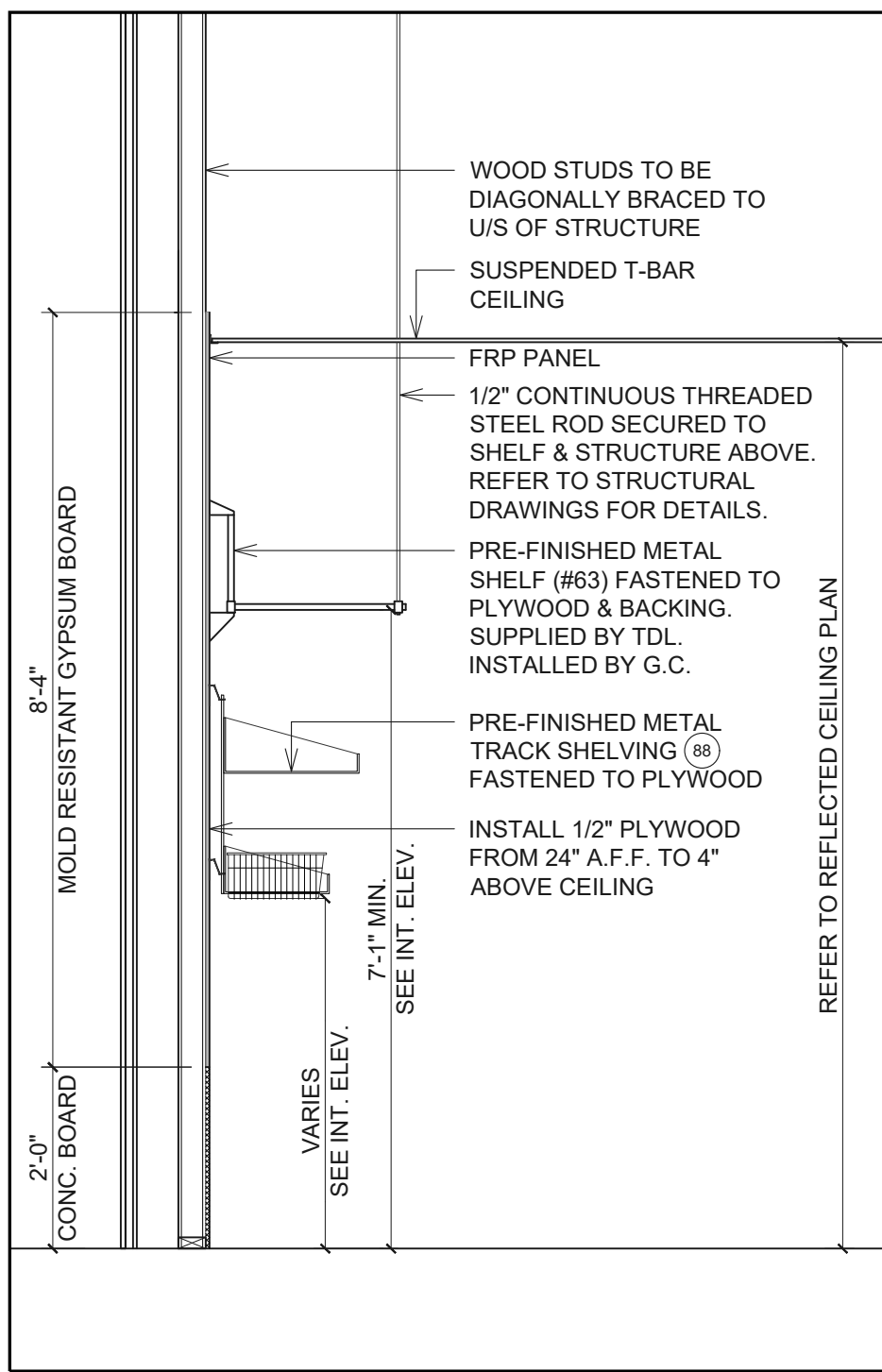
**5 DETAIL @ EXHAUST HOOD @ BAGEL TOASTER/MONITOR**  
A8 SCALE: 1/2" = 1'-0"



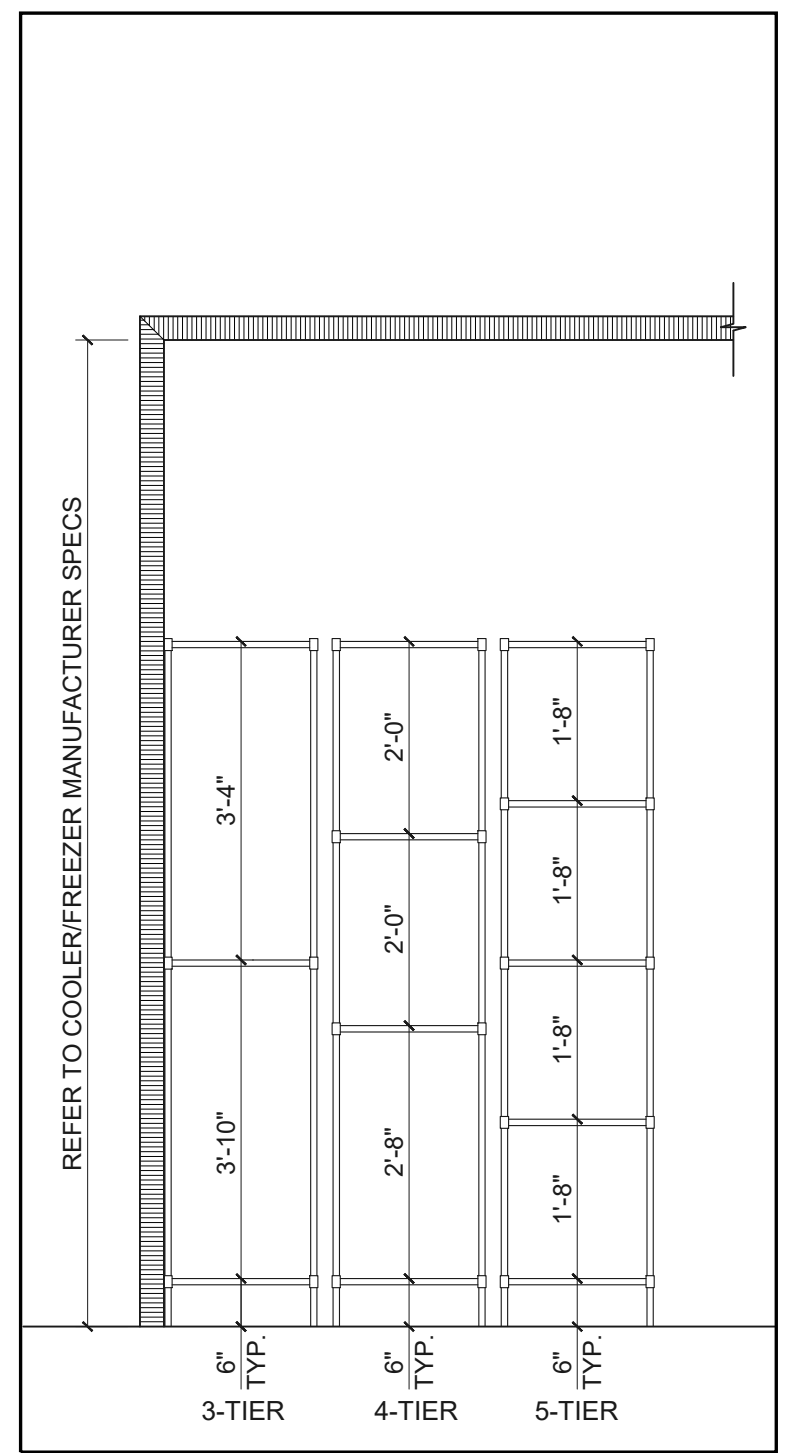
**9 DETAIL @ MEDIA CABINET SUPPORT**  
A8 SCALE: 1/2" = 1'-0"



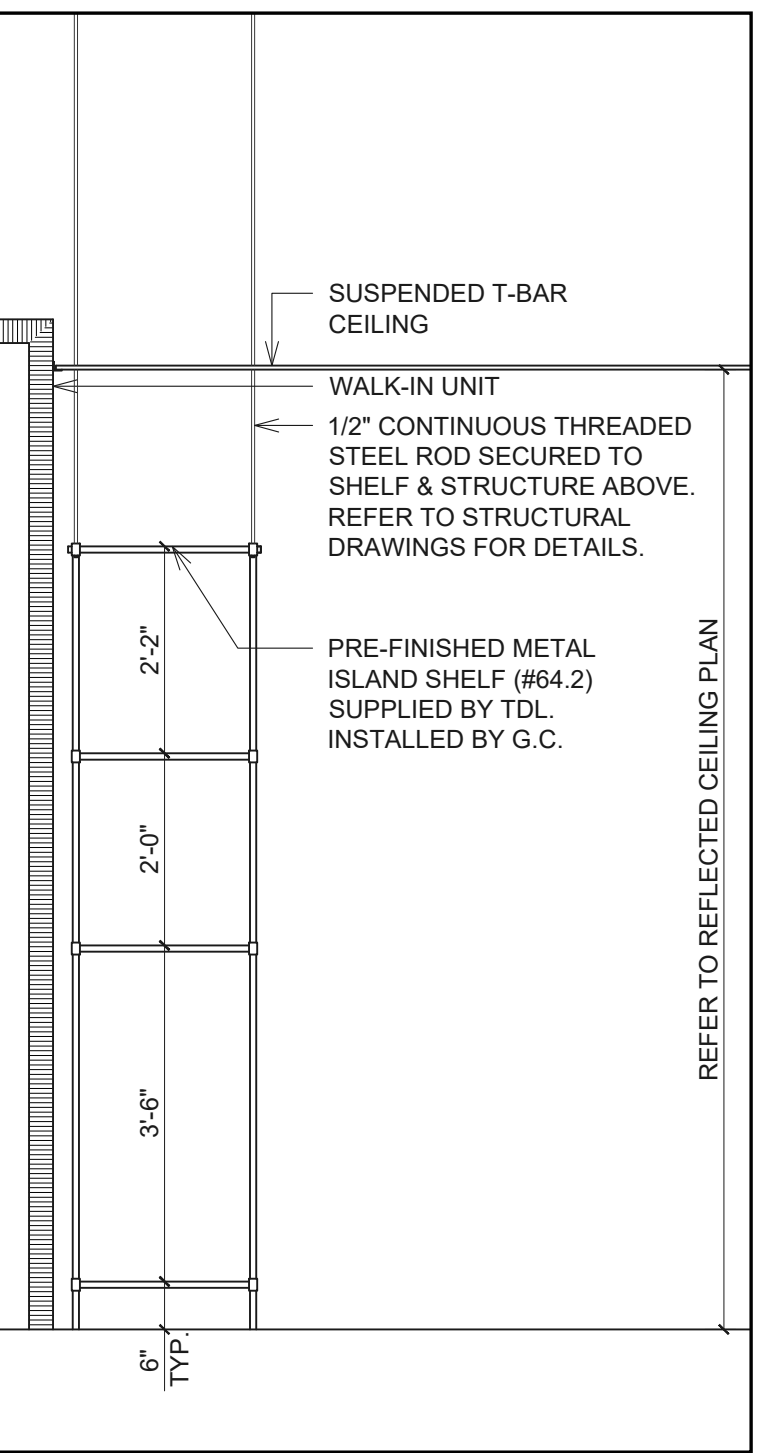
**11 DETAIL @ SHELVING #63**  
A8 SCALE: 1/2" = 1'-0"



**12 DETAIL @ SHELVING #43.1, #63 & #88**  
A8 SCALE: 1/2" = 1'-0"



**15 DETAIL @ SHELVING #49**  
A8 SCALE: 1/2" = 1'-0"

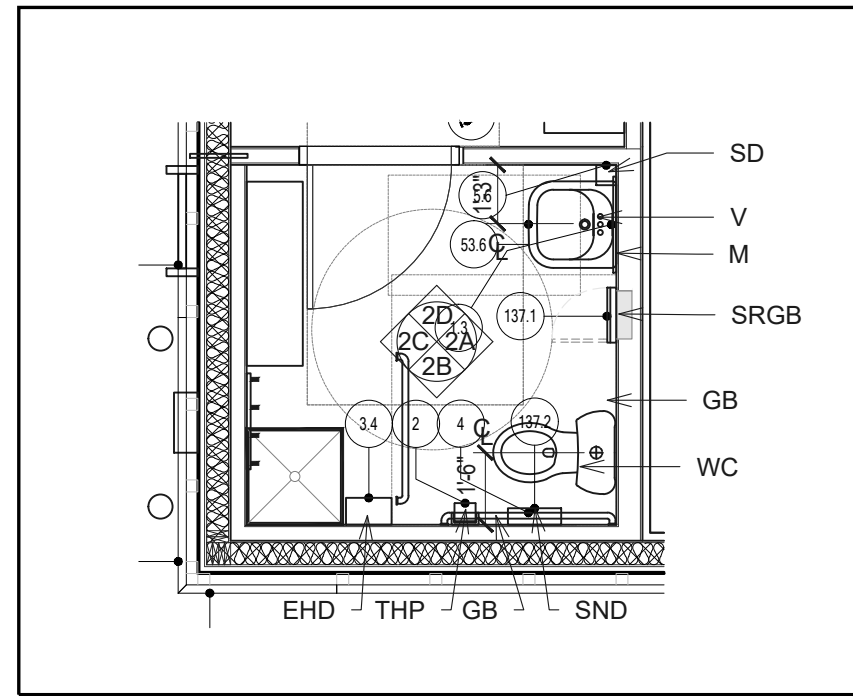


**16 DETAIL @ SHELVING #64.2**  
A8 SCALE: 1/2" = 1'-0"

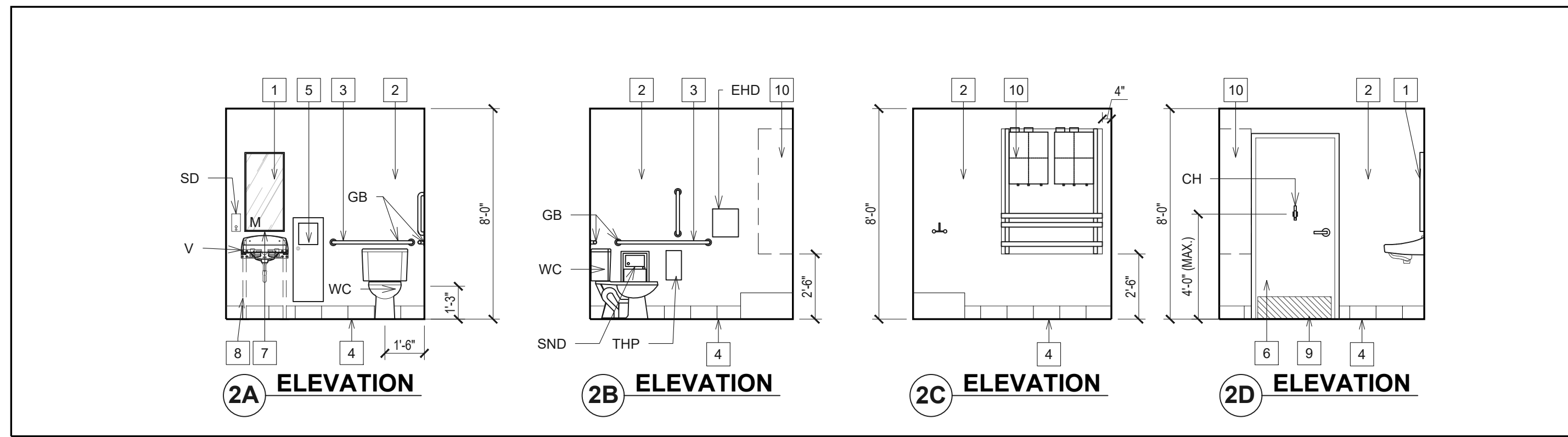
File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\A8 DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:24 PM



File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\A9.2 WASHROOM DETAILS.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:25 PM



**1 PLAN WASHROOM**  
A9.2 SCALE: 1/4" = 1'-0"



**2 ELEVATIONS WASHROOM**  
A9.2 SCALE: 1/4" = 1'-0"

**INTERIOR ELEVATION NOTES**

- 1 MIRROR IN PUBLIC WASHROOMS TO BE 1'-6" x 3'-0". MIRROR TO BE CENTERED ABOVE VANITIES & SURFACE MOUNTED ON WALL FINISH. SEE DRAWING A2 FOR SPECIFICATION. BOTTOM AND ONE OF THE VERTICAL SIDE FRAMES TO BE PRE-DRILLED & SCREWED TO WALL. REMAINDER OF FRAMES AND MIRROR TO BE ADHERED W/ APPROVED MIRROR ADHESIVE OR SILICONE. REFER TO DETAIL 14/A9.2
- 2 FLOOR TO CEILING FRP WALLS, TO BE INSTALLED BY GC PER MANUFACTURE
- 3 PROVIDE PLYWOOD BACKING IN BETWEEN STUDS TO ACCOMMODATE GRAB BARS. PROVIDE ADEQUATE SIZE. REFER TO DETAIL 12/A9.2.
- 4 COVE FLOOR TILE BASE - REFER TO FINISH SCHEDULES ON SHEET A10
- 5 PROVIDE OPENING IN WALL TO ACCOMMODATE SEMI-RECESSED GARBAGE. REFER TO DETAIL 9/A9.2.
- 6 DOORS & FRAMES. REFER TO FINISH SCHEDULES ON SHEET A10 FOR FINISHES & A11 FOR TYPE.
- 7 VANITY - REFER TO DETAIL 13/A9.2.
- 8 LAVATORY CARRIER - SEE PLUMBING SCHEDULE
- 9 G.C TO PROVIDE AND INSTALL KICK PLATE. REFER TO HARDWARE SCHEDULE ON SHEET A11.
- 10 TANKLESS WATER HEATER- REFER TO PLUMBING DRAWINGS

**SYMBOL LEGEND**

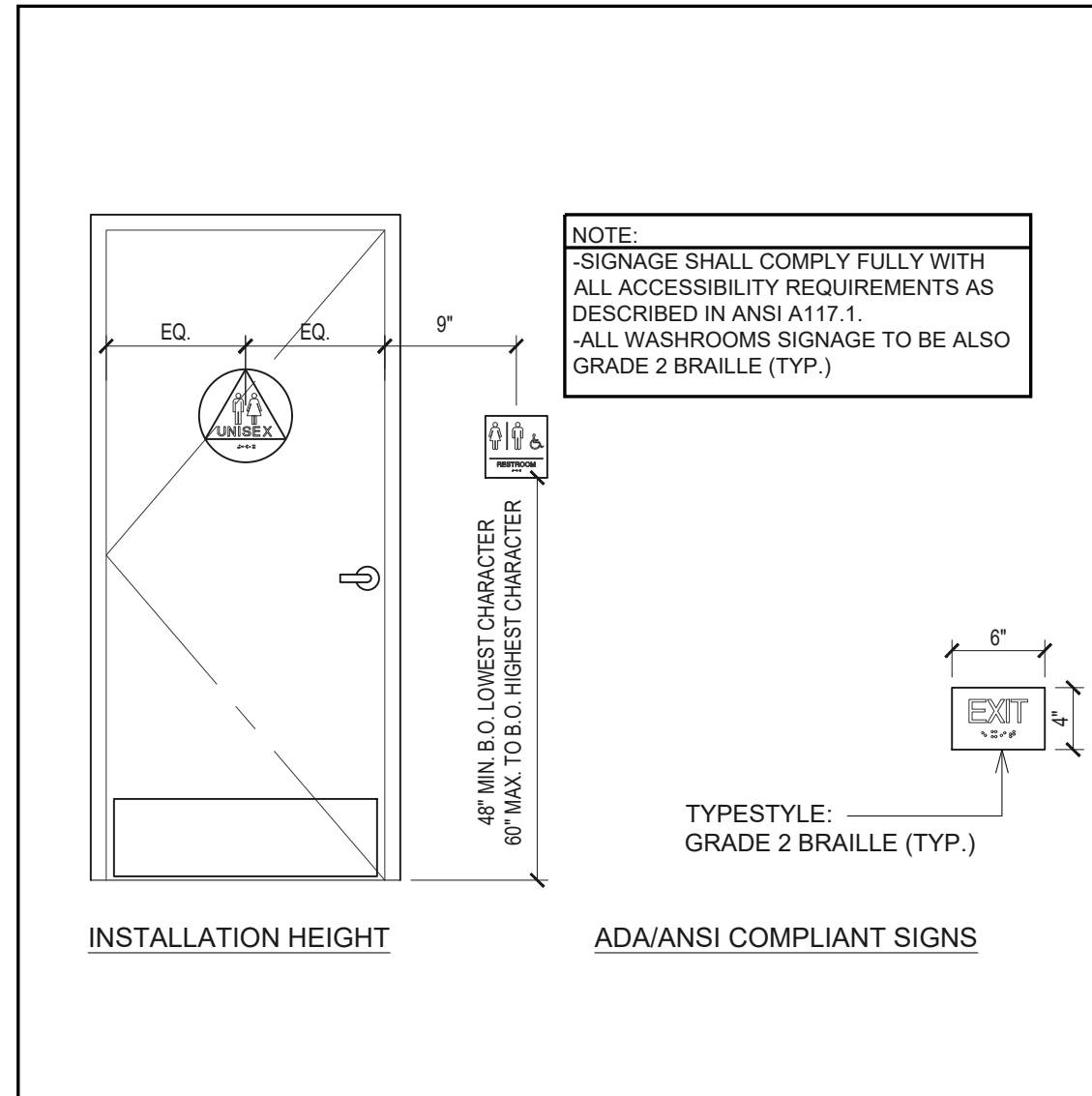
- 1 NOTE REFERENCE REFER TO ELEVATION NOTES

**WASHROOM ACCESSORIES**

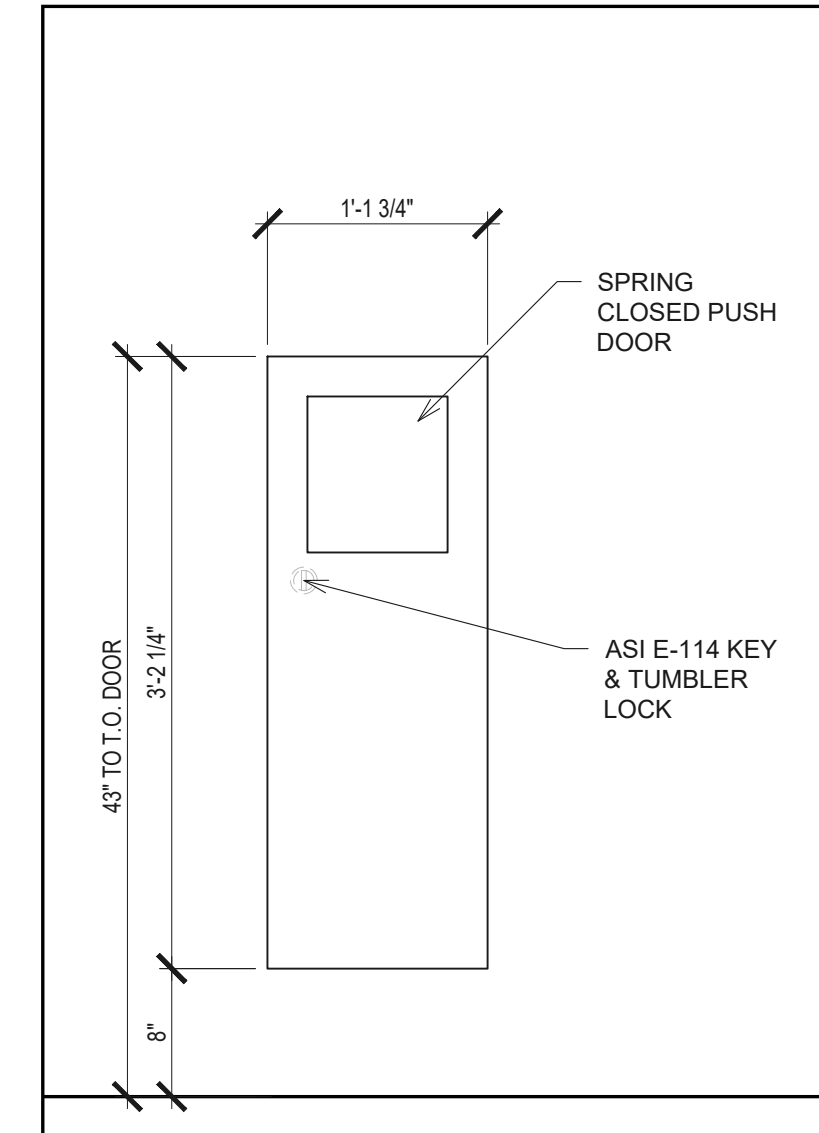
- TPH -TOILET PAPER HOLDER
- GB -GRAB BAR
- M -MIRROR
- SRGB -SEMI-RECESSED GARBAGE BIN
- EHD -ELECTRIC HAND DRYER
- SD -SOAP DISPENSER
- V -VANITY
- WC -WATER CLOSET
- CH -COAT HOOK
- SND -SANITARY NAPKIN DISPENSER

**NOTES**

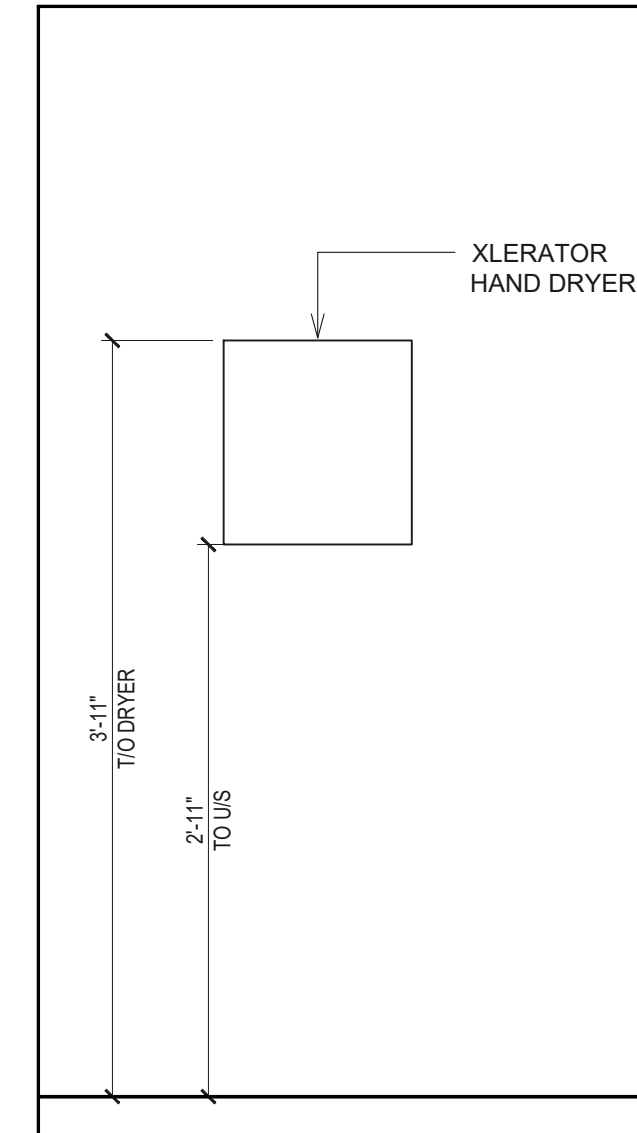
1. REFER TO TYPICAL ACCESSORIES DETAILS FOR MOUNTING HEIGHTS AND OTHER SPECIFIC DIMENSIONS.
2. REFER TO FINISHES SCHEDULE ON SHEET A10 FOR FINISHES.
3. G.C SHALL PROVIDE ADDITIONAL SOLID WOOD BLOCKING IN WALL AS NEEDED FOR PROPER INSTALLATION AND STRUCTURAL SUPPORT OF ACCESSORY ITEMS.
4. G.C TO PROVIDE CLEAR CAULKING AT ALL WASHROOM FIXTURES AND FILE INTERSECTIONS



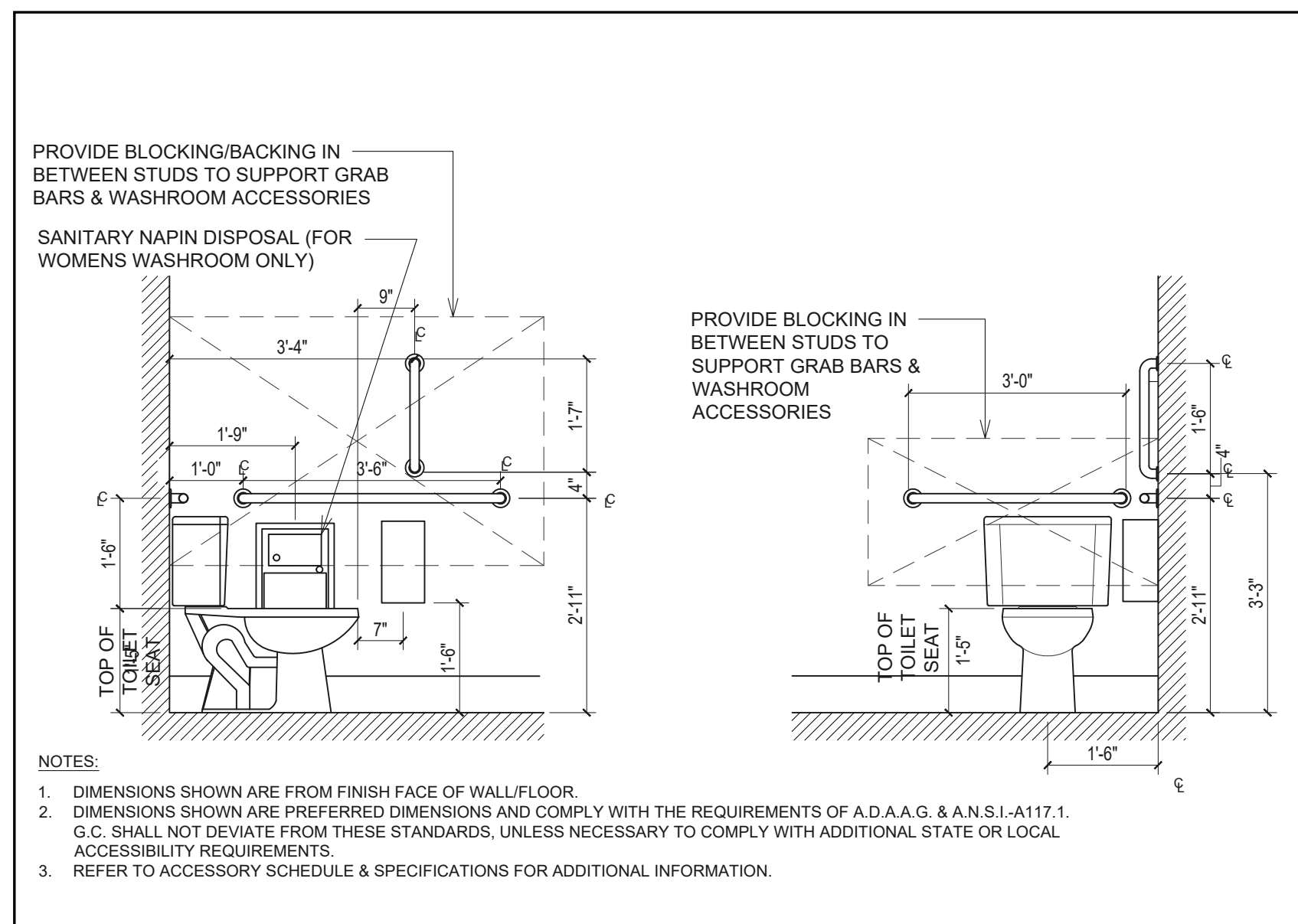
**3 ACCESSIBILITY SIGNAGE.**  
A9.2 SCALE: 1" = 1'-0"



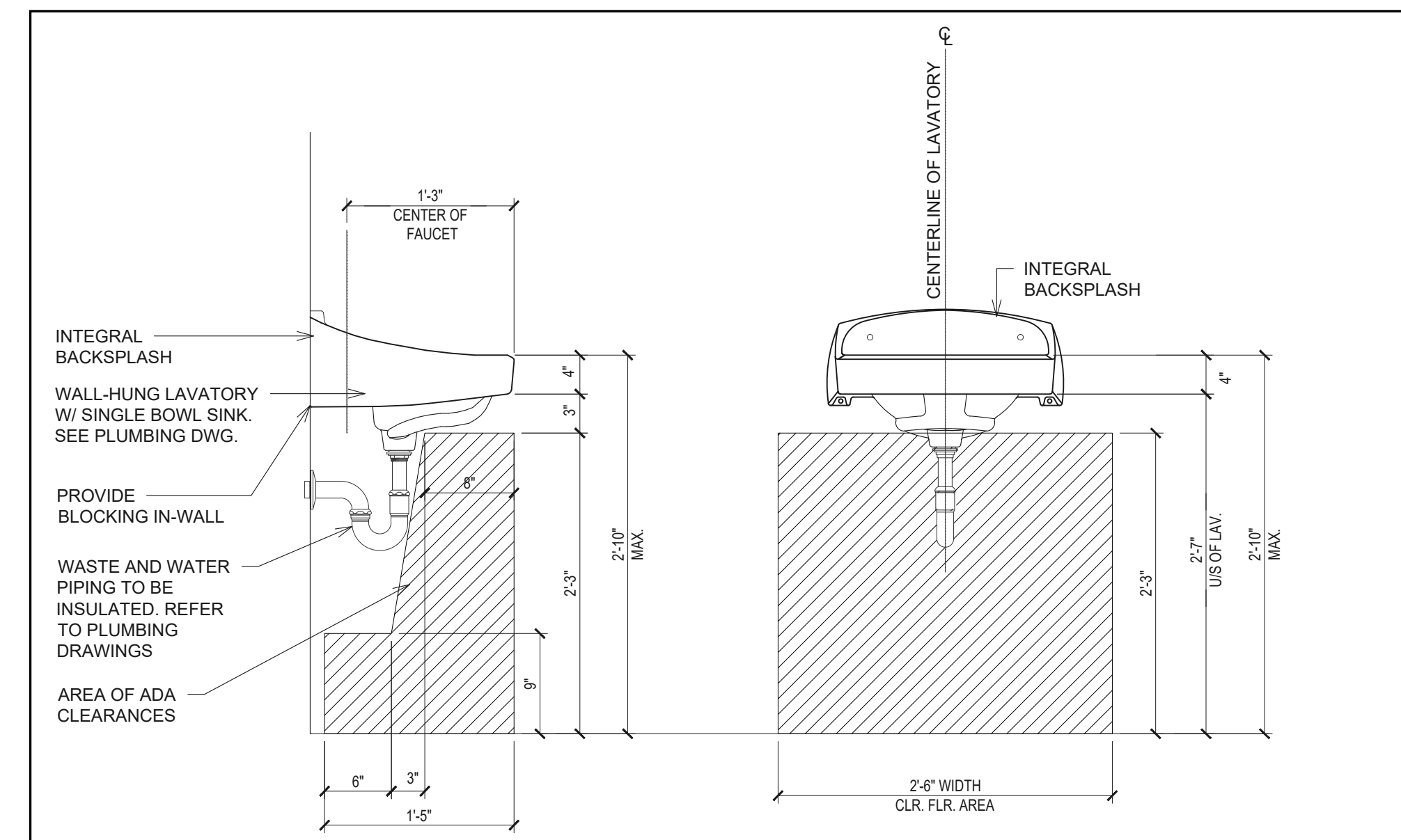
**4 DETAIL @ SEMI-RECESSED GARBAGE**  
A9.2 SCALE: 1" = 1'-0"



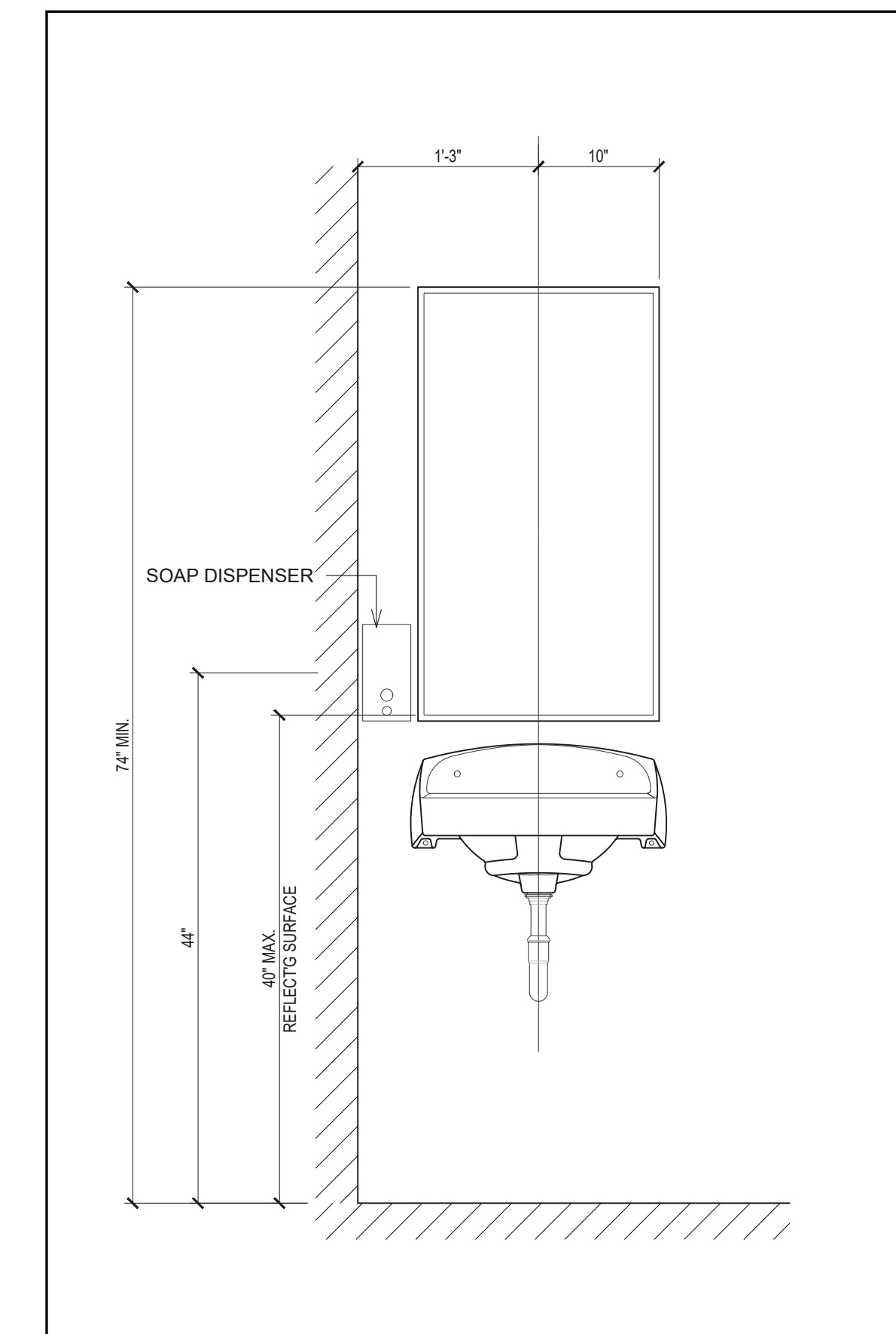
**5 DETAIL @ HAND DRYER**  
A9.2 SCALE: 1" = 1'-0"



**6 DETAIL @ GRAB BARS**  
A9.2 SCALE: 1/2" = 1'-0"



**7 DETAIL @ VANITY**  
A9.2 SCALE: 1" = 1'-0"



**9 MIRROR AND SOAP DISPENSER DETAIL**  
A9.2 SCALE: 1" = 1'-0"

**NOTES**

1. DIMENSIONS SHOWN ARE FROM FINISH FACE OF WALL/FLOOR.
2. DIMENSION SHOWN ARE PREFERRED DIMENSIONS AND COMPLY WITH THE REQUIREMENTS OF A.D.A.G AND A.N.S.I -A117.1 G.C SHALL NOT DEVIATE FROM THESE STANDARDS UNLESS NECESSARY TO COMPLY WITH ADDITIONAL STATE OR LOCAL ACCESSIBILITY REQUIREMENTS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION
4. G.C TO PROVIDE CLEAR CAULKING AT ALL WASHROOM FIXTURES AND WALL INTERSECTIONS.

DRAWN BY LRK

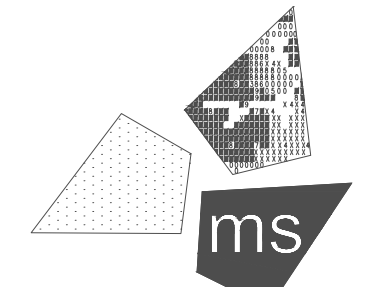
CHECKED BY AMD/MAR

ISSUE DATE 07/12/2022

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#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

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*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068783  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**WASHROOM DETAILS**

SHEET: A9.2

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\A10 FINISH PLAN AND SCHEDULE.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:25 PM

DRAWN BY LRK

CHECKED BY APPROVED BY AMD/MAR

ISSUE DATE 07/12/2022

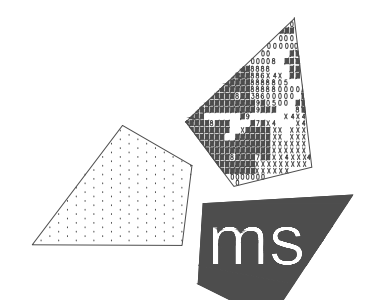
ISSUE

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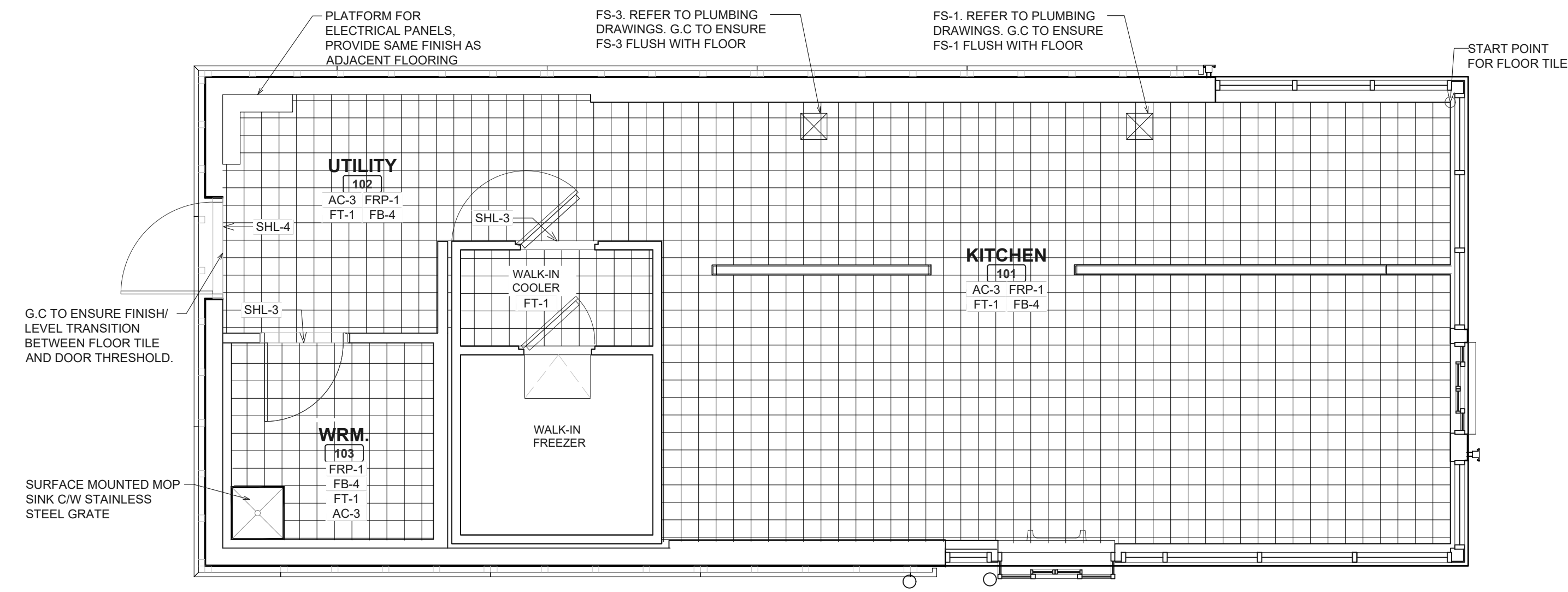
PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**FINISH PLAN AND SCHEDULE**

SHEET: A10

FINISHING SCHEDULE (WELCOME 2022)						
NO.	PRODUCT	MANUF.	PATTERN & COLOUR	#COATS	PAINT TYPE	SUPPLIER/CONTACT
[AC-3]	CEILING TILE	USG/CGC INC	LAY-IN CEILING TILES FOR BACK OF HOUSE (BOH), COLOUR: WHITE; SIZE: 24"x48" (NOMINAL), 15/16" GRID CLEANABLE/ WIPEABLE FINISH			USG/CGC INC SEAN GERTH SGERTH@USG.COM TEL: (416)804-8019
[P-01]	PAINT - BULKHEAD	SHERWIN WILLIAMS	COLOUR: 'SNOWBOUND' SW 7004	2 COAT, SPRAY APPLICATION	FINISH: EGGSHELL	SHERWIN WILLIAMS (NORTH AMERICA) CONTACT: DEAN GIVELAD EMAIL: DEAN.GIVELAS@SHERWIN.COM TEL: 416-432-6975
[P-05]	PAINT - WASHROOM DOOR		COLOUR: 'DOVETAIL' SW7018	2 COAT, SPRAY APPLICATION	FINISH: SEMI-GLOSS	
[P-13]	PAINT - GARBAGE ENCLOSURE		COLOUR: 'IRON ORE' SW 7069	2 COAT, SPRAY APPLICATION	FINISH: MATTE	
[P-17]	PAINT - BOLLARD PAINT		COLOUR: 'REAL RED' SW 6868	2 COAT, SPRAY APPLICATION		
[FB-4]	WALL BASE TILE - BOH BASE OF WALLS	KAREN PEARSE GLOBAL DIRECT	MATERIAL: GRAFITO COVEBASE; COMPOSITION: PORCELAIN; FINISH: NATURAL; SIZE: 8" X 8" X 1/8"; ITEM#: 5546 CER 03 00001-S			KAREN PEARSE GLOBAL DIRECT RIHAM LARUSSA EMAIL:RIHAM.LARUSSA@KPGD.COM T: 212-477-9330 X 203 & 631-241-7298
[FRP-1]	FRP PANEL	EM PLASTIC & ELECTRIC PRODUCTS	SERIES: PANOLAM FRP, PEBBLED (0.090"), CLASS 'A' FIRE RATING COLOUR: WHITE FOR PANELS AND WHITE FOR TRIMS SIZE: 14'-0" WIDE x 15'-0" HIGH TRIM ACCESSORIES: JOINER STRIP, INSIDE CORNER, OUTSIDE CORNER, CAP STRIP, WATER BASED ADHESIVE.			EM PLASTIC COREY GRAHAM CGRAHAM@EMPLASTIC.COM TEL: (905)913-3000 X 3011
[FT-1]	FLOOR TILE	KAREN PEARSE GLOBAL DIRECT	MATERIAL NAME: RODEO ; COLOR: GRAFITO; MATERIAL TYPE: PORCELAIN; FINISH: NATURAL; THICKNESS: 3/8" x 12" x 12"; ITEM CODE: 4714 PRC 03 00142-S;			KAREN PEARSE GLOBAL DIRECT RIHAM LARUSSA EMAIL:RIHAM.LARUSSA@KPGD.COM TEL: 212-477-9330 X 203 & 631-241-7298
[SHL-1]	SCHLUTER TRIM (BASE AT WALL TILE / FLOOR TILE)	SCHLUTER SYSTEMS	SCHLUTER - DILEX - AHK (ANODIZED ALUMINUM COVE)			SCHLUTER SYSTEMS CONTACT: JOHN HARRIGAN TEL: 1-800-267-0817 EXT. 3069 (C) 416-433-0061
[SHL-3]	SCHLUTER TRIM (FLOOR TILE TRANSITION)		SCHLUTER - DECO (ANODIZED ALUMINUM)			
[SHL-4]	SCHLUTER TRIM (MOVEMENT JOINT AT DELIVERY DOOR)	SCHLUTER SYSTEMS	SCHLUTER - DILEX - KSN			

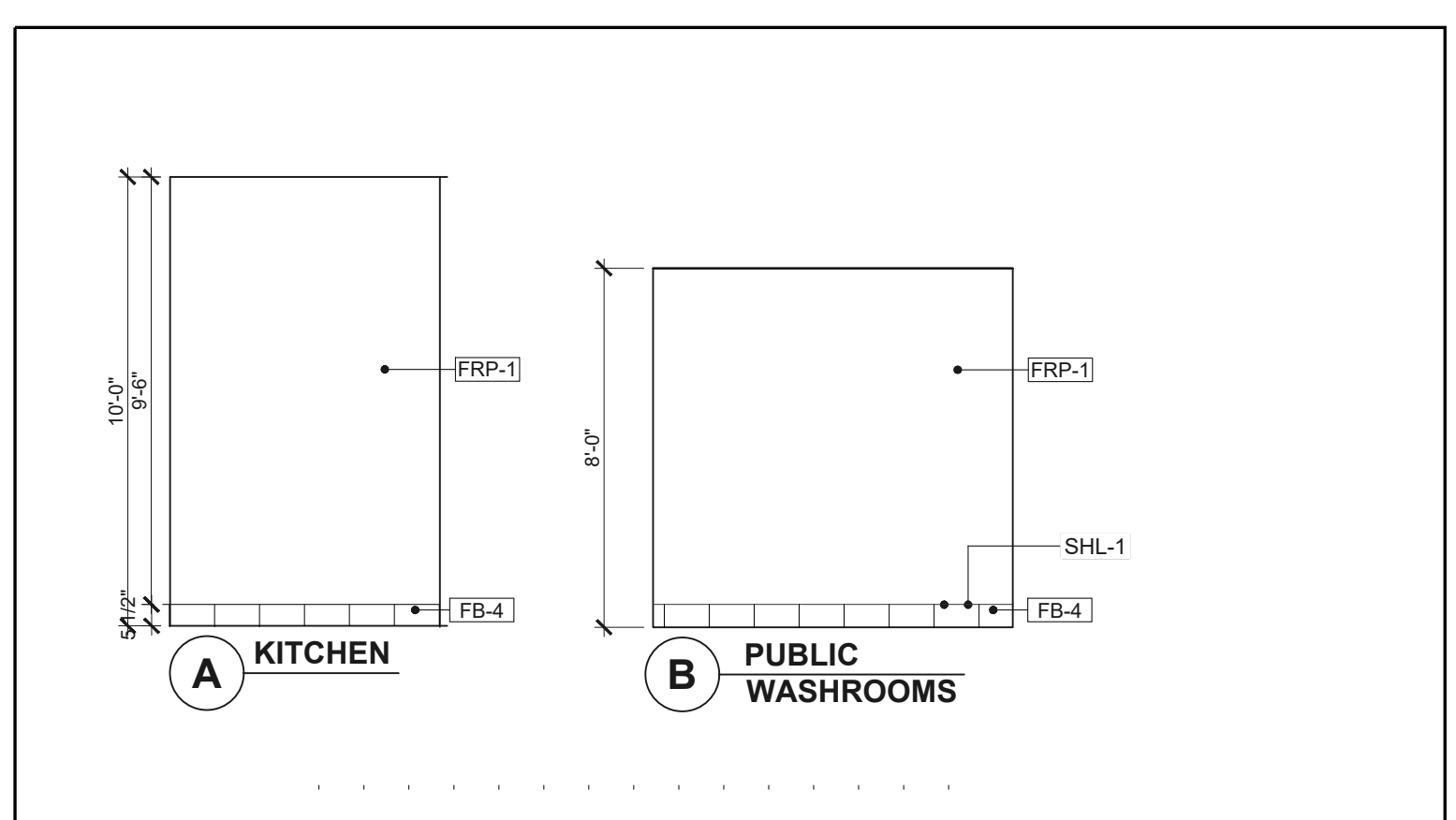


**1 FINISH PLAN**  
SCALE: 1/4"=1'-0"  
NORTH

ROOM FINISH SCHEDULE							
ROOM NO.	NAME	FLOORS		WALLS	CEILINGS		
		FINISH	BASE	FRP-1	P-01	AC-3	HEIGHT
[101]	KITCHEN	●	●	●	●	●	10'-0"
[102]	STORAGE	●	●	●	●	●	10'-0"
[103]	WASHROOM	●	●	●	●	●	8'-0"

NOTE: COOLER/FREEZER FINISHES BY G.C.

- NOTES**
- GENERAL CONTRACTOR TO PROVIDE MINIMUM 1 CASE OF EACH SET OF FLOOR TILES, CEILING TILES AND 1 GALLON OF EACH PAINT COLOUR FOR FUTURE USE. THESE MATERIALS ARE TO BE LEFT ON SITE WITH THE RESTAURANT OWNER.
  - PROVIDE & INSTALL SCHLUTER-DILEX-KSN AT LOCATION OF FLOOR AT DELIVERY DOOR. REFER TO FINISHING SCHEDULE.
  - G.C. TO SEAL ALL MILLWORK / MILLWORK AND GWB / MILLWORK JOINTS WITH CLEAR SILICONE CAULKING AFTER COMPLETION OF PAINTING, WAINSCOTING AND FINAL CLEANING.
  - PROVIDE & INSTALL SCHLUTER-DILEX-KSN AT LOCATION OF FLOOR TILE AT DELIVERY DOOR. REFER TO FINISHING SCHEDULE.



**2 TYPICAL INTERIOR ELEVATIONS**  
SCALE: 1/4"=1'-0"

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTD (RB)\DOCS\CAD\A11 DOOR AND WINDOW SCHEDULES.DWG Plotted By: KOVALSKI, LAURA Plot Date: 7/12/2022 12:25 PM

DOOR AND FRAME SCHEDULE										
DOORS					FRAMES			HARDWARE		REMARKS
NO.	SIZE	R.O SIZE	TYPE	MAT. FIN.	TYPE	MAT. FIN.	SET NO.			
102	3'-6" x 7'-0" x 1'-3/4"	3'-10" x 7'-2"	D3	HM/N	P-24 EXTERIOR P-05 INTERIOR	F2	HM/N	P-24 EXTERIOR P-05 INTERIOR	01	SECURITY WINDOW @ 5'-0" A.F.F. SECURITY STICKER BY TDL TO READ, "STOP. DO NOT OPEN WITHOUT MANAGER'S PERMISSION OR AFTER DARK."
103	3'-0" x 6'-8" x 1'-3/4"	DOOR WIDTH + 1'-1/4" x DOOR HEIGHT + 5/8"	D1	HM	P-05	F2	HM KNOCKDOWN	P-05	02	UNDERCUT DOOR 5/8". DOORS TO BE PAINTED P-05. TRANSITION TO OCCUR AT DOOR JAMB. G.C TO PAINT FRAME P-20.

ABBREVIATIONS									
AL	ALUMINUM	HM	HOLLOW METAL	PLY	PLYWOOD	P.LAM	PLASTIC LAMINATE	WD	WOOD
GL	GLASS	HMIN	HOLLOW METAL INSULATED	PM	PREFINISHED METAL	MILLWK	MILLWORK	●	PROVIDED BY DOOR MANUFACTURER

DOOR HARDWARE SCHEDULE					
QTY.	DESCRIPTION	MANUFACTURER	MODEL #	FINISH	REMARKS
<b>SET-01</b>					
1	CONTINUOUS ROTON HINGES	HAGER	780210HD	626	
1	NIGHT LATCH	DORMA	8PO3	626	
1	DORMA LATCH	DORMA	319 320	626	
6	HINGE PLATE FOR FRAME	DON-JO	FF45		
6	HINGE PLATE FOR DOOR	DON-JO	FF45		
1	THRESHOLD	PEMKO	2565A		
1	PANIC DEVICE	DORMA	8300B 0001		
1	CRASH CHAIN	IVES			
1	KICK PLATE	HAGER	190S 24X34 32D	S.S.	
1	LITE KIT				
1	SWEEP	PEMKO	315CN36		
1	PULL PLATE	HAGER	35DU5283.5X15		
1	CLOSER	DORMA	8916		
3	PERIMETER GASKETING	PEMKO	BULB TYPE		
<b>SET-02</b>					
1-1/2 PAIR	HINGES	BAHCO	BB0179	US26D	
1	PRIVACY LOCKSET	DORMA	CL540	626	
1	KICK PLATE	DON-JO	90	S.S.	
1	FLOOR STOP	DON-JO	1442	626	

ALL REMAINING HARDWARE TO BE DOOR MANUFACTURER'S STANDARD HARDWARE UNLESS OTHERWISE INDICATED: THRESHOLD, (1850 MS HOOK BOLT LOCK - CYLINDER THUMB TURN AND KEYPED), (DOR-O-MATIC / FALCON 1790 TOUCH BAR RIM EXIT DEVICE), OVERHEAD CONCEALED CLOSER, DOOR PULL, WEATHERSTRIPPING AND SWEEP, FLOOR MTD. STOP. STOREFRONT HARDWARE TO BE BLACK ANODIZED.

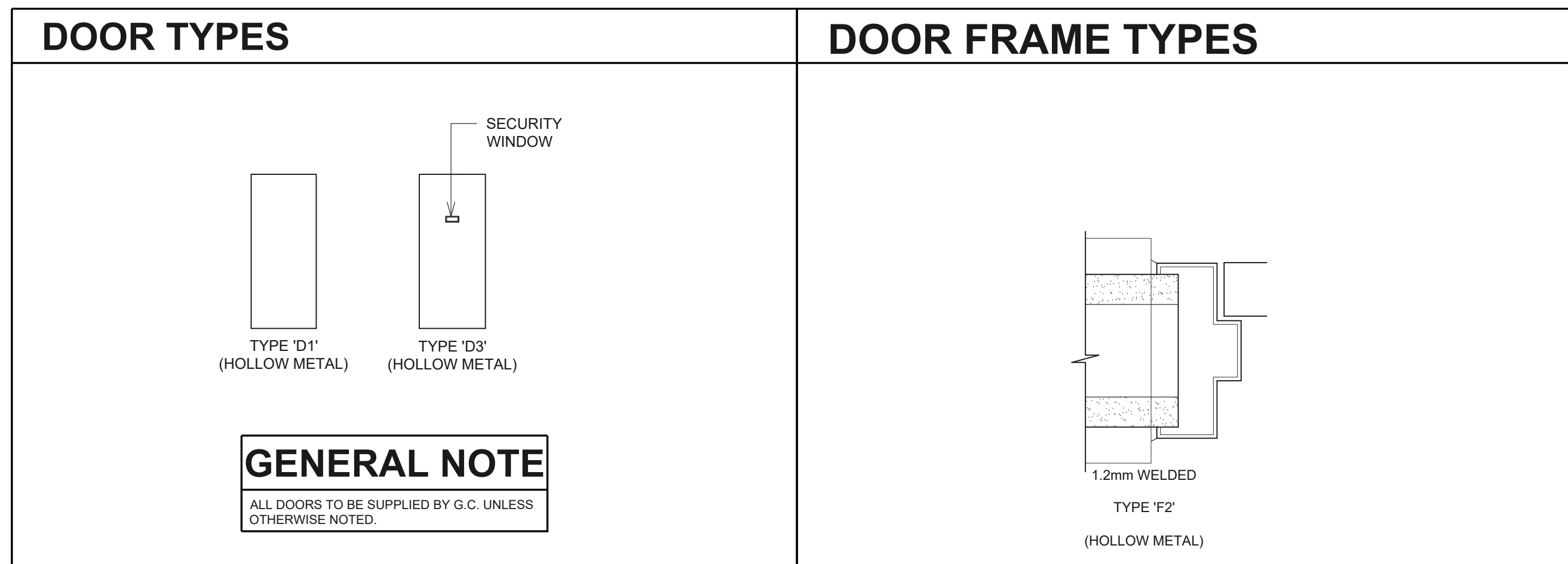
HARDWARE SCHEDULE NOTES:	
1.	ALL HARDWARE IS NEW UNLESS OTHERWISE NOTED.
2.	ALL DOOR LOCKSETS / LATCHES SHALL BE "LEVER TYPE" IN COMPLIANCE WITH A.D.A.A.G. SECTION 4.1.3.9).
3.	ALL DOOR HANDLES, PULLS, LATCHES, LOCKS, AND/OR OTHER OPERATING DEVICES SHALL BE INSTALLED BETWEEN 34" MINIMUM AND 48" MAXIMUM ABOVE FINISHED FLOOR.
4.	ALL DOOR THRESHOLDS SHALL BE IN 1/2" HIGH MAXIMUM.
5.	ALL DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 INCHES FROM THE LATCH, MEASURED TO THE LEAD EDGE (A.D.A.A.G. 4.13.10).

WINDOW SCHEDULE						
MARK	R.O. SIZE	TYPE	CONST.	GLASS TYPE	HEAD HEIGHT	REMARKS
W1	19'-4" x 7'-0 1/2"	2" x 4D" STOREFRONT	ALUM	GL-1	10'-0"	AAMA 2605: COLOR BONE WHITE
W2	3'-5" x 7'-0 1/2"	2" x 4D" STOREFRONT	ALUM	GL-1	10'-0"	AAMA 2605: COLOR BONE WHITE
W3	9'-0" x 7'-0 1/2"	2" x 4D" STOREFRONT	ALUM	GL-1	10'-0"	AAMA 2605: COLOR BONE WHITE
W4	9'-0" x 7'-0 1/2"	2" x 4D" STOREFRONT	ALUM	GL-1	10'-0"	AAMA 2605: COLOR BONE WHITE

WINDOW SCHEDULE NOTES:	
1.	REFER TO WINDOW ELEVATIONS FOR SPECIFIC DIMENSIONS AND ADDITIONAL DETAIL INFORMATION.
2.	WINDOW CONTRACTOR SHALL FIELD VERIFY ALL ROUGH OPENINGS FOR ALL WINDOWS PRIOR TO PREPARATION OF SHOP DRAWINGS.

DRIVE-THRU AND WALK-UP WINDOW SCHEDULE/DRIVE-THRU CANOPY SCHEDULE		
<p><b>DRIVE-THRU WINDOW:</b></p> <ul style="list-style-type: none"> <li>QUIKSERV AUTOMATIC WINDOW MODEL (TIM HORTONS PW-54E-TH)</li> <li>TIM HORTON'S RED #807/C47D BY INTERNATIONAL PAINT, ALUMINUM</li> <li>CUSTOM PW-54E-TH LEAD TIME IS 10 WEEKS AUTOMATIC WINDOW C/W BODY SENSOR</li> <li>G.C TO PURCHASE FROM QUIKSERV (INSIDE SALES CONTACT INFO) 713-849-5882</li> <li>RESTAURANT OWNER CAN SWITCH TO MANUAL WINDOW MODEL (BPS-5440) OR CUSTOM FRAMED FULL HEIGHT WINDOW, IF DESIRED</li> </ul>	<p><b>WALK-UP WINDOW:</b></p> <ul style="list-style-type: none"> <li>QUIKSERV MANUAL WALK-UP WINDOW MODEL (TIM HORTONS BPS-4242)</li> <li>TIM HORTON'S RED #807/C47D BY INTERNATIONAL PAINT, ALUMINUM</li> <li>G.S. TO COORDINATE SPECIALITY PAINT WITH 10 WEEK LEAD TIME</li> <li>G.C TO PURCHASE FROM QUIKSERV (INSIDE SALES CONTACT INFO) 713-849-5882.</li> <li>ALTERNATE OPTIONS AVAILABLE IF REQUESTED BY OWNER</li> </ul>	<p><b>DRIVE-THRU CANOPY:</b></p> <ul style="list-style-type: none"> <li>1' SQ. ALUMINUM TUBE FRAME</li> <li>150' FLAT POLYCARBONATE FACES WITH FLAT DECORATED GRAPHIC</li> <li>150' FORMED POLYCARBONATE TOP DRAIN CHANNEL</li> <li>ACM UNDERPINNING</li> <li>4000K LED ILLUMINATION</li> <li>WHITE AND PMS 199 COLOR MATCH</li> <li>UNDERSIDE OF CANOPY TO BE WHITE</li> <li>CUSTOM SIGN IS THE PREFERRED FABRICATOR. ALL FINAL DETAILS TO BE TO BE COORDINATED WITH SUPPLIER.</li> </ul>
<p>SECTION TO CONC SLAB SCALE: 1/2" = 1'-0"</p>	<p>TOP VIEW SIDE VIEW</p>	



DRAWN BY: LRK

CHECKED BY: AMD/MAR

APPROVED BY:

ISSUE DATE: 07/12/2022

ISSUE		
#	DATE	DESCRIPTION
1	07/12/22	PERMIT SET

REVISIONS		
#	DATE	DESCRIPTION

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*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
CHARLES M. BUSCH No. 1301068763  
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**DOOR AND WINDOW SCHEDULES**

SHEET: A11



File Name: \\MSCONSULTANTS\COMFILES\PRODUCTION\03\02\40509-THUS11\_1\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\S1.1 FOUNDATION PLAN CONC.DWG Plotted By: SHEROCK, DAVE Plot Date: 7/12/2022 10:43 AM

DRAWN BY: CLS

CHECKED BY: APPROVED BY: DMS

ISSUE DATE: 07/12/2022

ISSUE # DATE DESCRIPTION

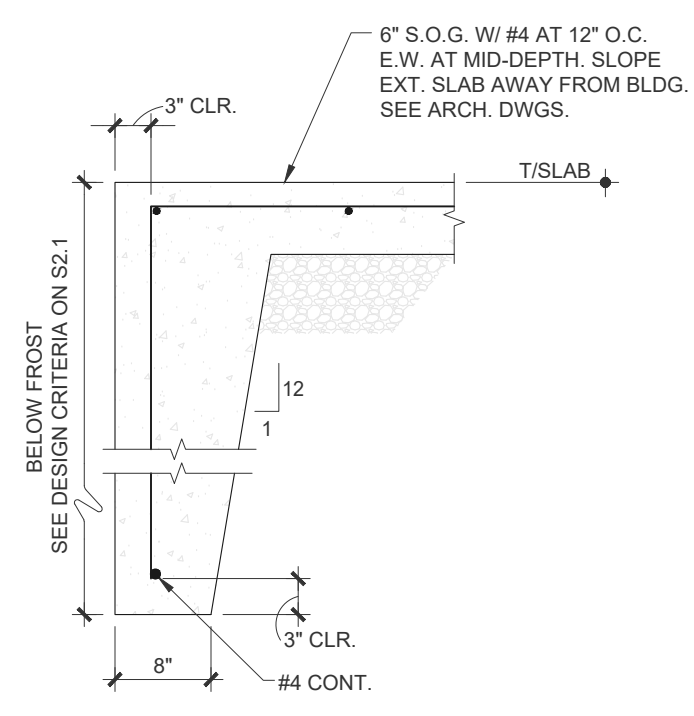
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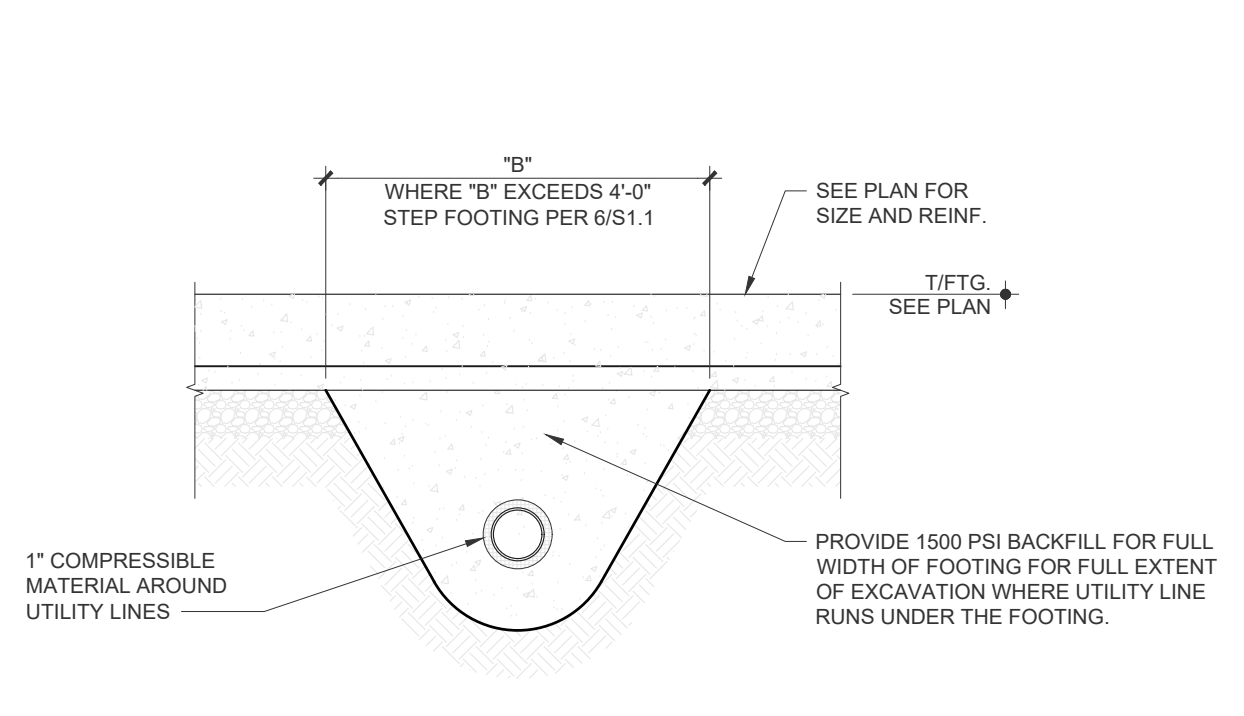
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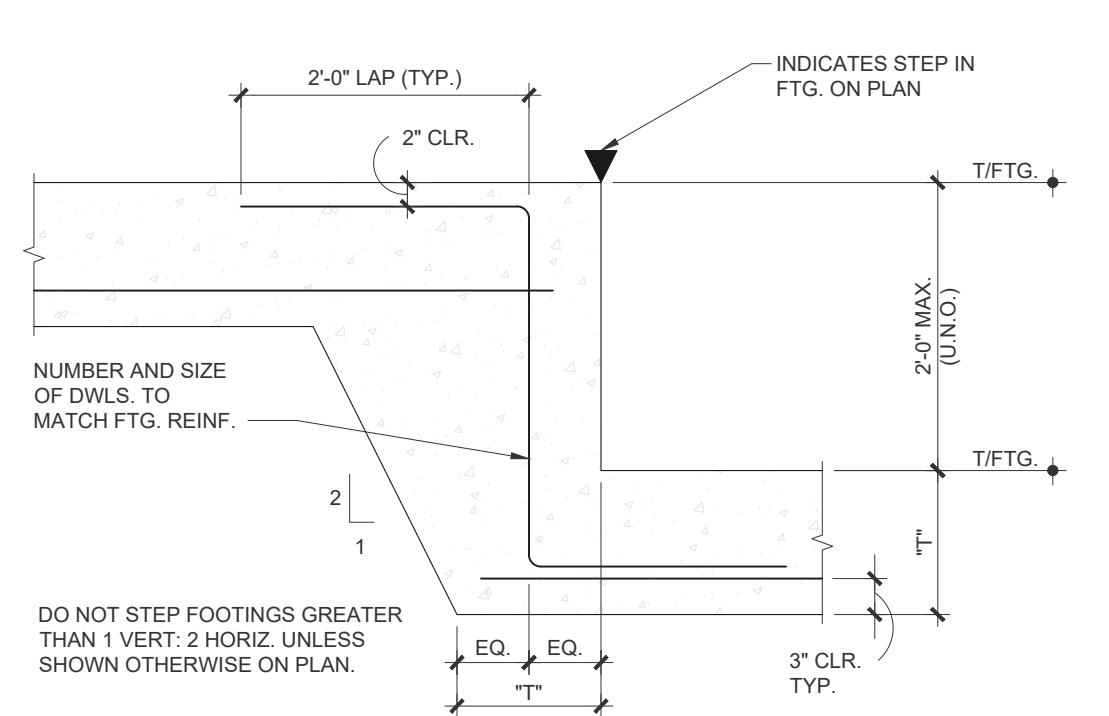
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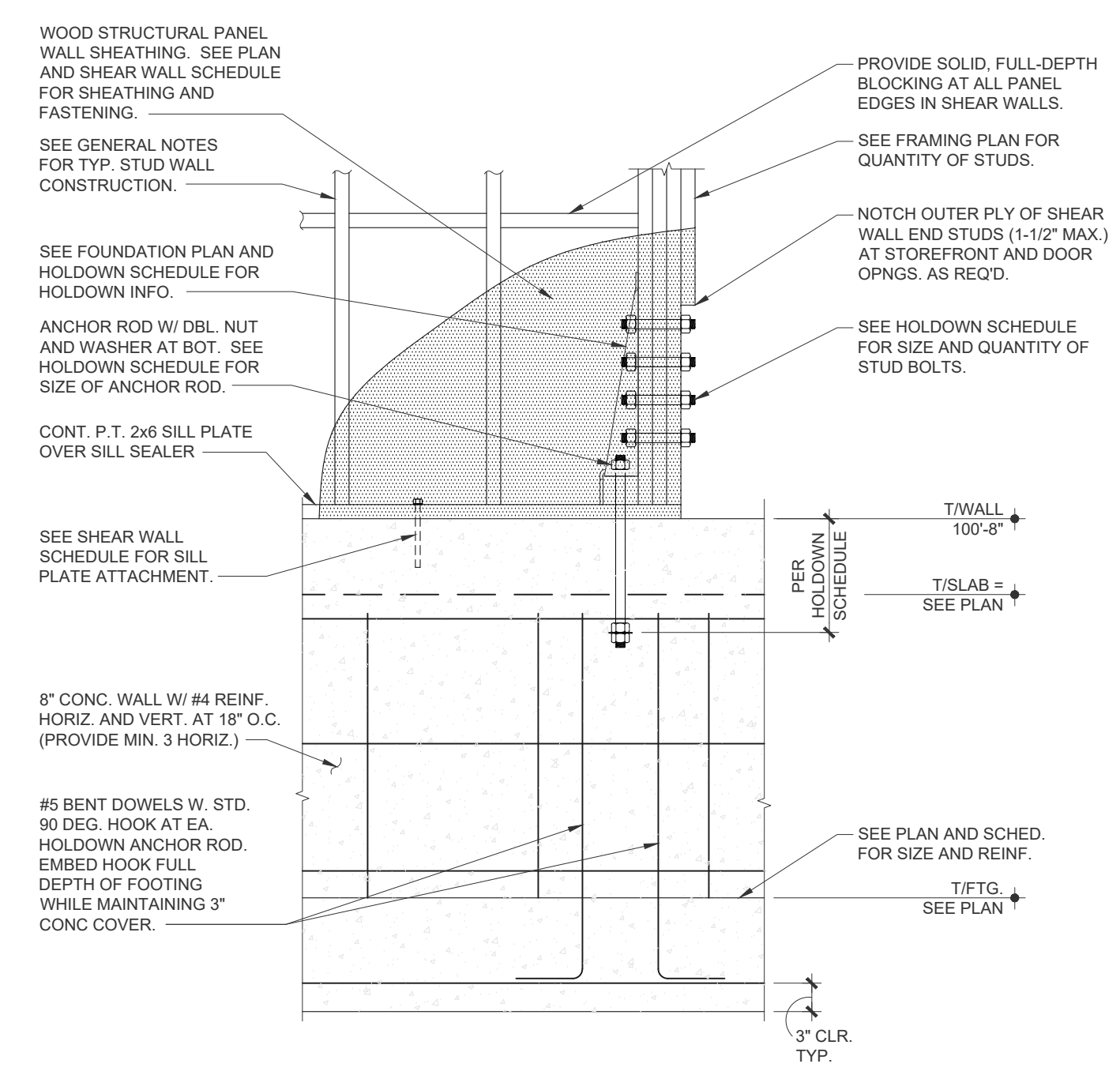
8 FROST SLAB SECTION  
3/4" = 1'-0"



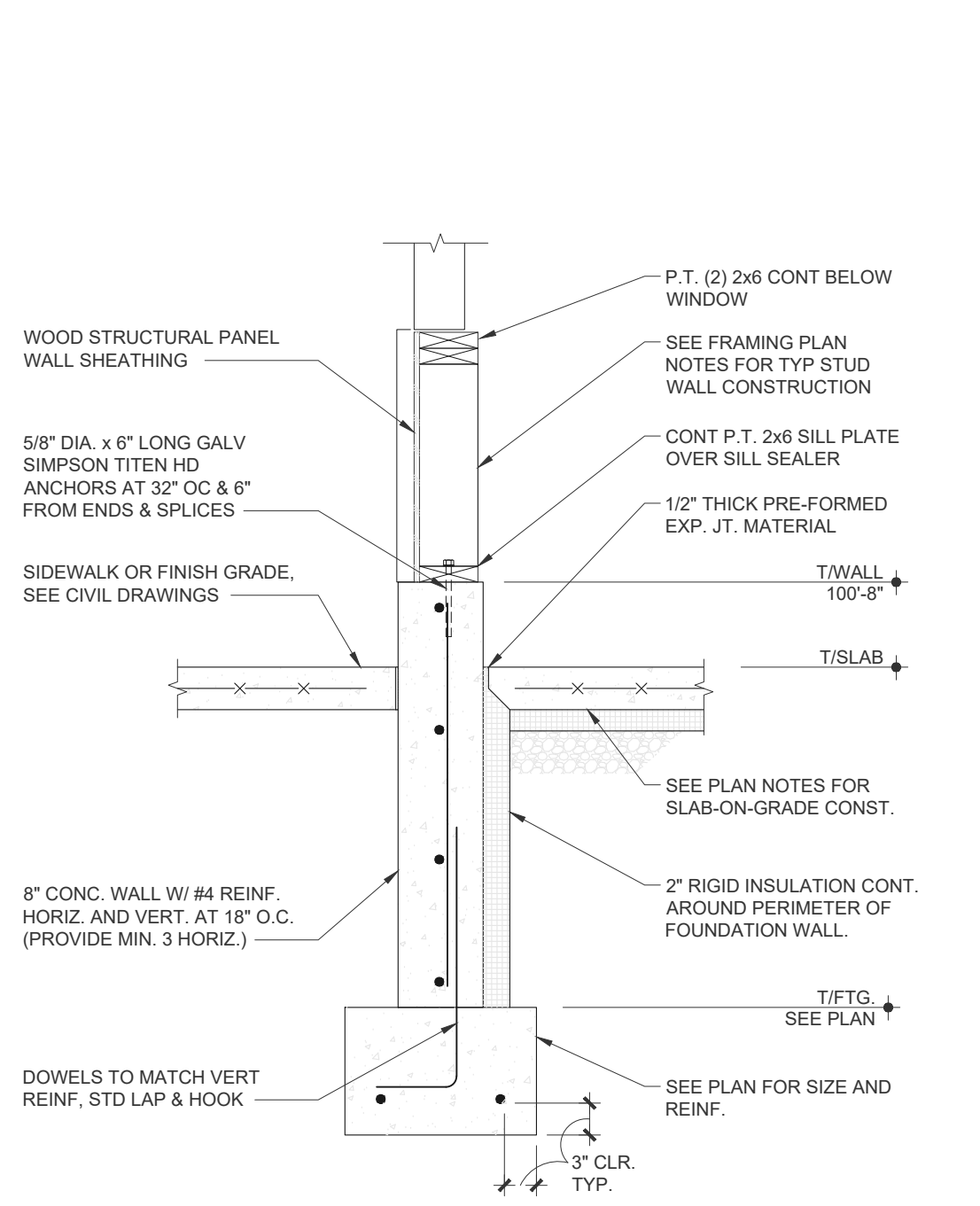
7 TYPICAL BACKFILL DETAIL BELOW WALL FOOTINGS AT UTILITY LINES  
1/2" = 1'-0"



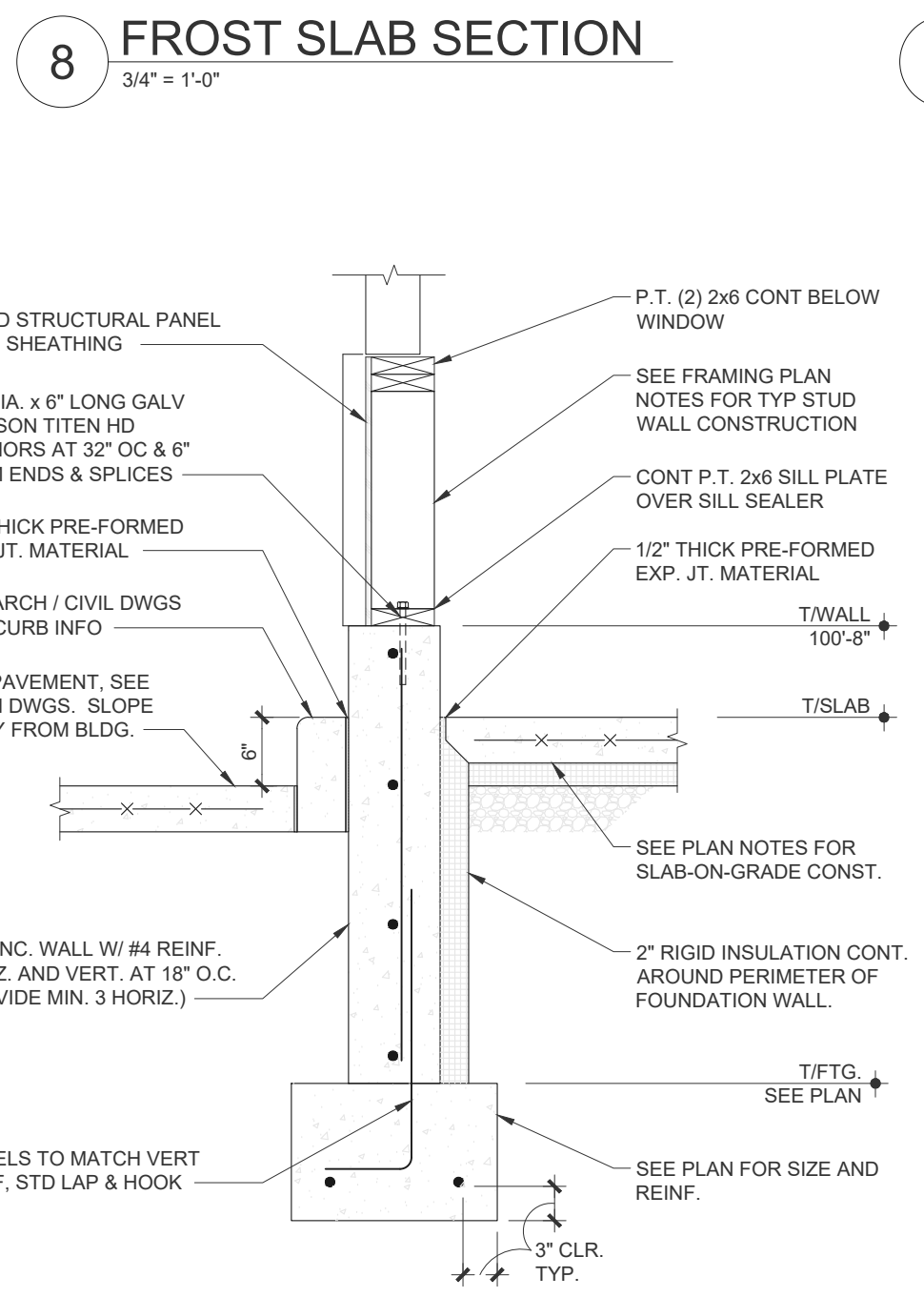
6 TYP FOOTING STEP  
N.T.S.



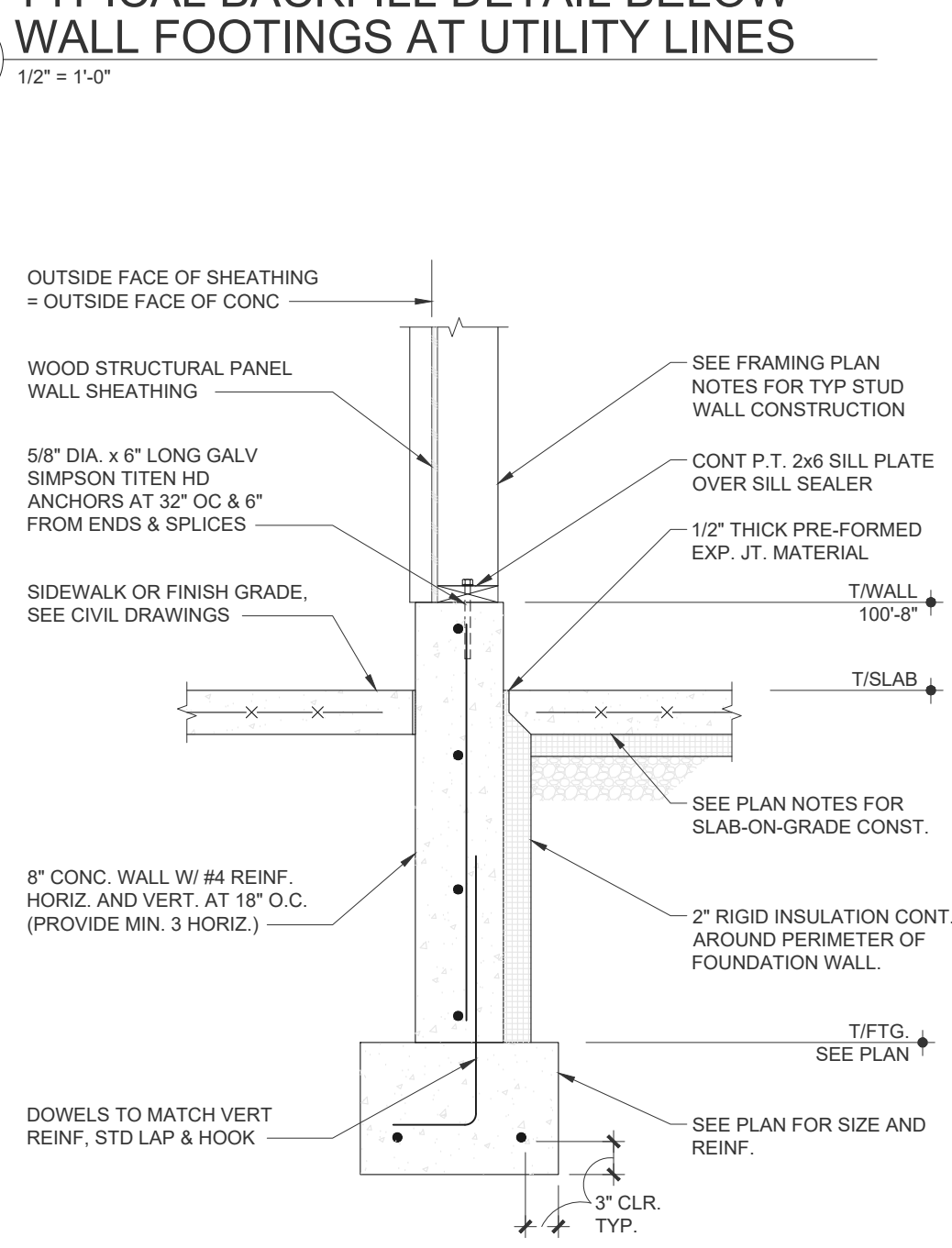
5 TYPICAL SHEAR WALL DETAIL  
3/4" = 1'-0"



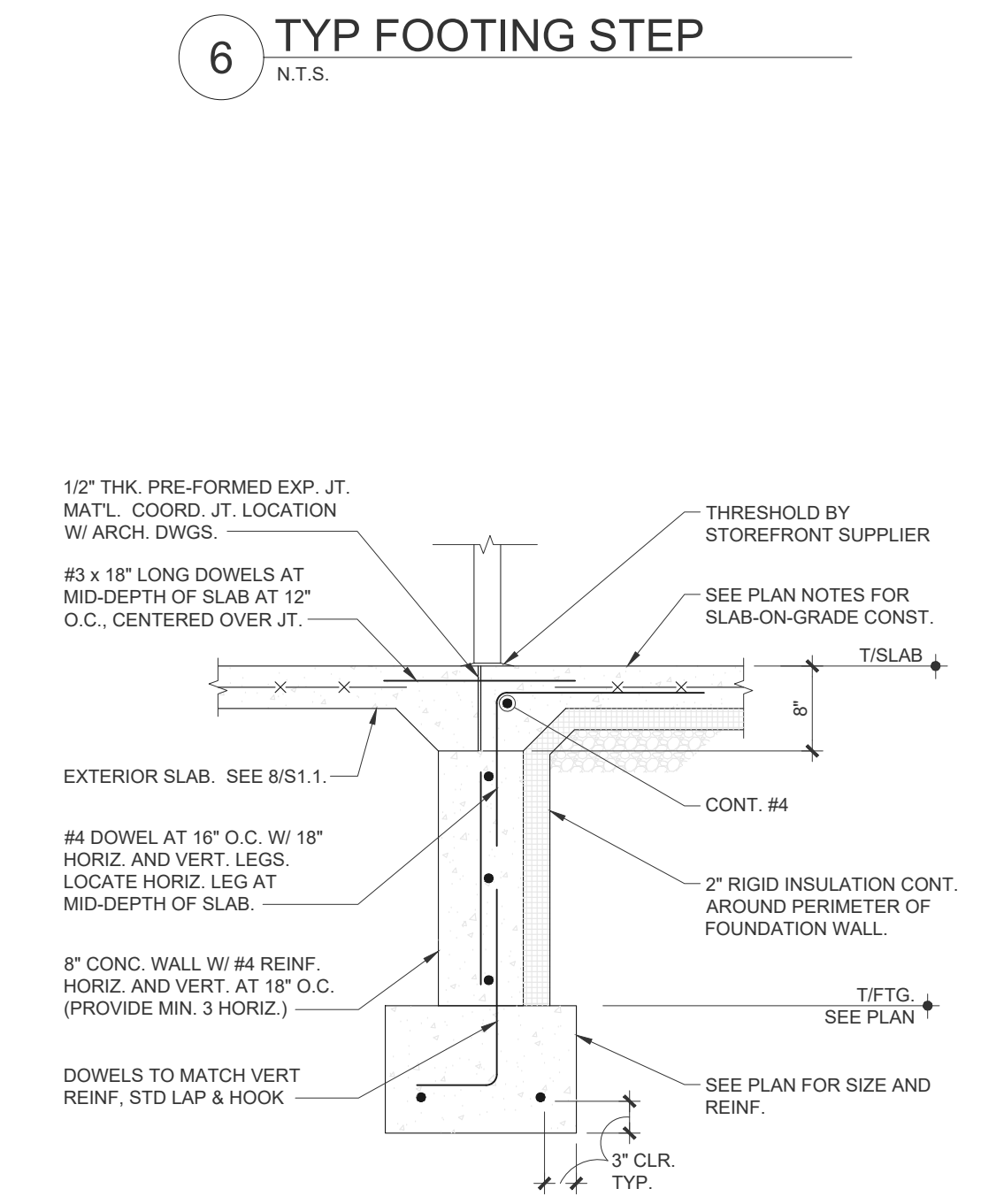
4 SECTION AT STOREFRONT  
3/4" = 1'-0"



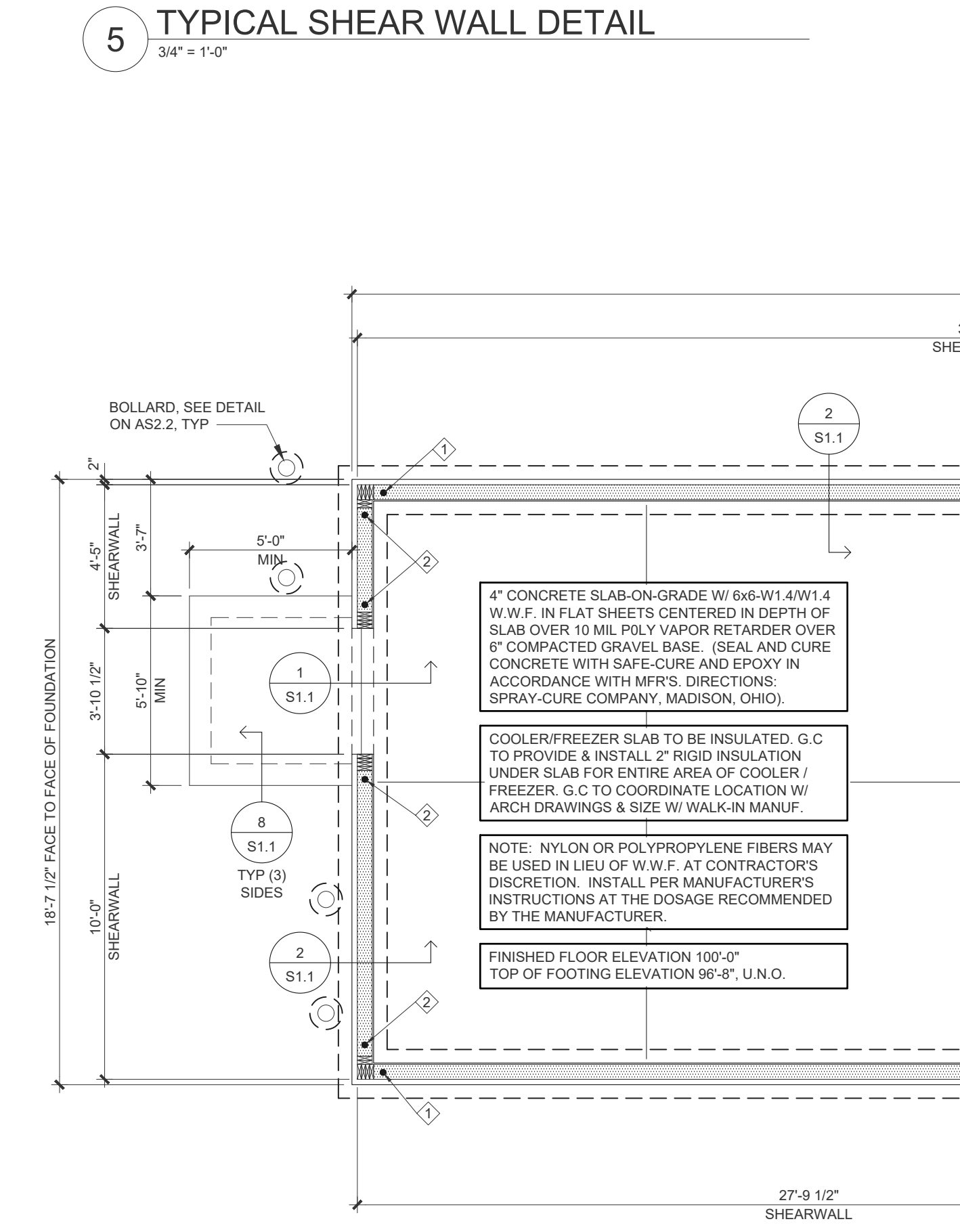
3 SECTION AT DRIVE-THRU  
3/4" = 1'-0"



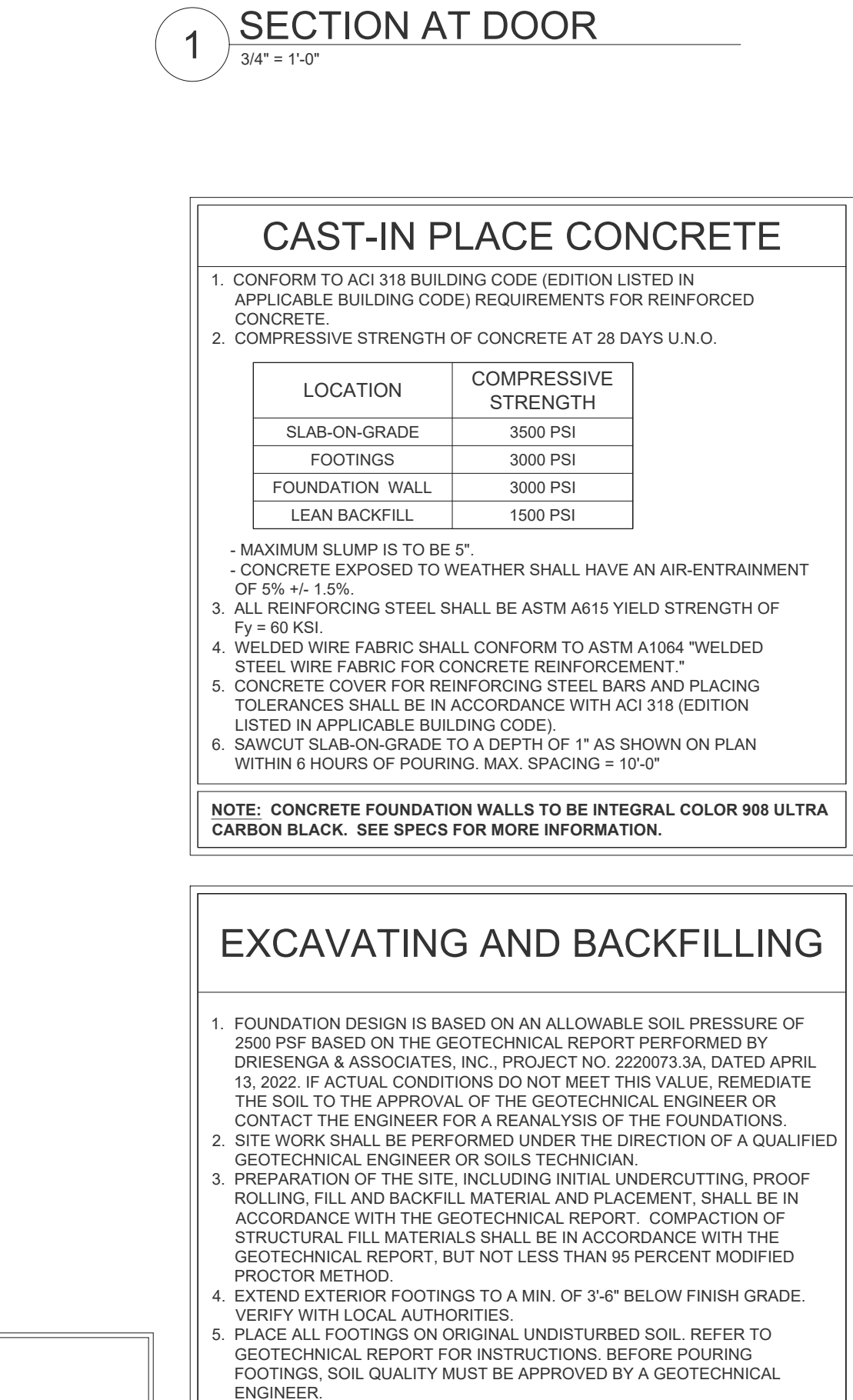
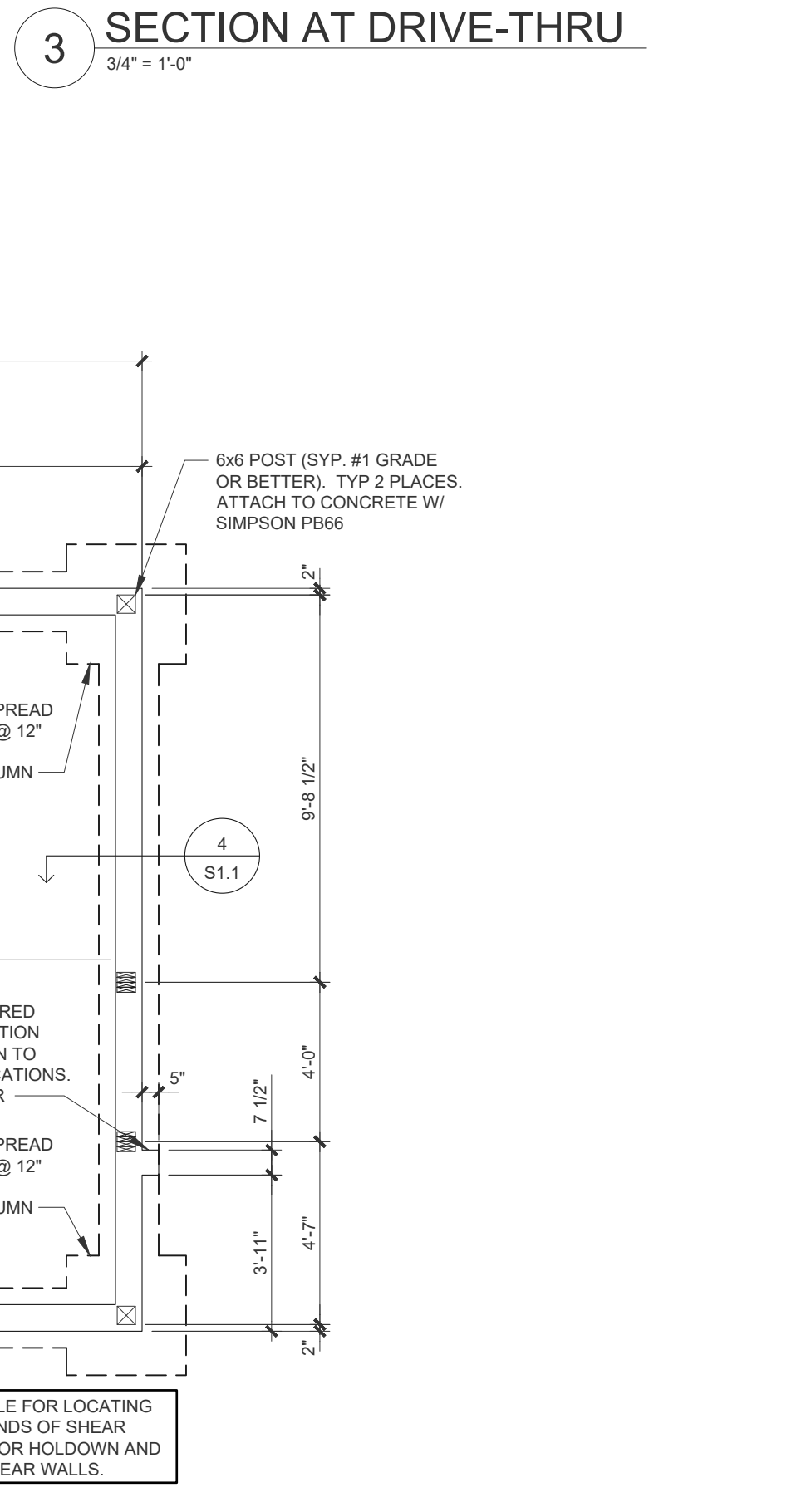
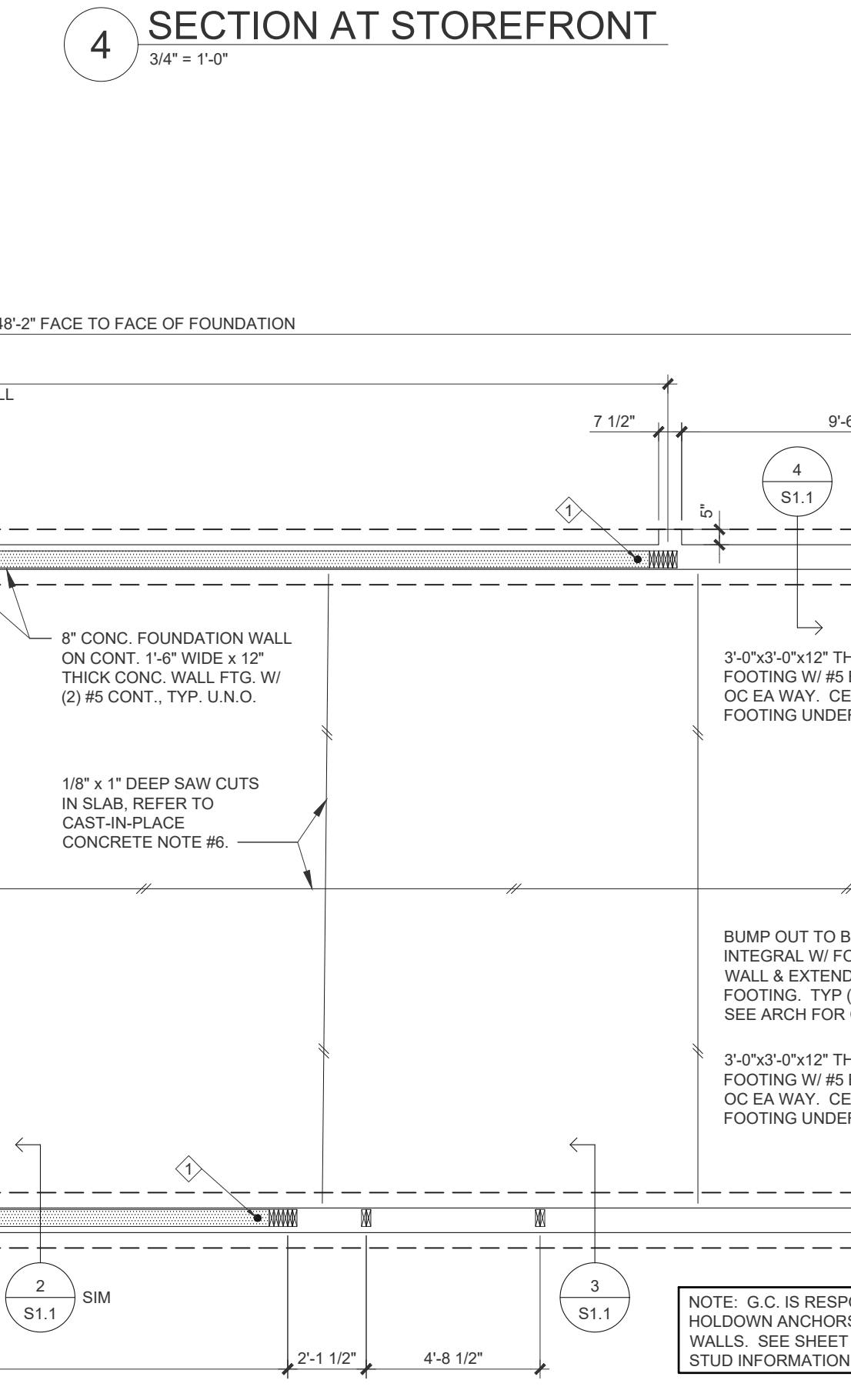
2 TYP WALL SECTION  
3/4" = 1'-0"



1 SECTION AT DOOR  
3/4" = 1'-0"



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



**CAST-IN PLACE CONCRETE**

- CONFORM TO ACI 318 BUILDING CODE (EDITION LISTED IN APPLICABLE BUILDING CODE) REQUIREMENTS FOR REINFORCED CONCRETE.
- COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS U.N.O.

LOCATION	COMPRESSIVE STRENGTH
SLAB-ON-GRADE	3500 PSI
FOOTINGS	3000 PSI
FOUNDATION WALL	3000 PSI
LEAN BACKFILL	1500 PSI

- MAXIMUM SLUMP IS TO BE 5"  
- CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR-ENTRAINMENT OF 5% +/- 1.5%  
3. ALL REINFORCING STEEL SHALL BE ASTM A615 YIELD STRENGTH OF  $F_y = 60$  KSI.  
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 "WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT."  
5. CONCRETE COVER FOR REINFORCING STEEL BARS AND PLACING TOLERANCES SHALL BE IN ACCORDANCE WITH ACI 318 (EDITION LISTED IN APPLICABLE BUILDING CODE).  
6. SAWCUT SLAB-ON-GRADE TO A DEPTH OF 1" AS SHOWN ON PLAN WITHIN 6 HOURS OF POURING. MAX. SPACING = 10'-0"

NOTE: CONCRETE FOUNDATION WALLS TO BE INTEGRAL COLOR 908 ULTRA CARBON BLACK. SEE SPECS FOR MORE INFORMATION.

**EXCAVATING AND BACKFILLING**

- FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL PRESSURE OF 2500 PSF BASED ON THE GEOTECHNICAL REPORT PERFORMED BY DRESBEN & ASSOCIATES, INC., PROJECT NO. 2220073.3A, DATED APRIL 13, 2022. IF ACTUAL CONDITIONS DO NOT MEET THIS VALUE, REMEDIATE THE SOIL TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER OR CONTACT THE ENGINEER FOR A REANALYSIS OF THE FOUNDATIONS.
- SITE WORK SHALL BE PERFORMED UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER OR SOILS TECHNICIAN.
- PREPARATION OF THE SITE, INCLUDING INITIAL UNDERCUTTING, PROOF ROLLING, FILL AND BACKFILL MATERIAL AND PLACEMENT, SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. COMPACTION OF STRUCTURAL FILL MATERIALS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, BUT NOT LESS THAN 95 PERCENT MODIFIED PROCTOR METHOD.
- EXTEND EXTERIOR FOOTINGS TO A MIN. OF 3'-6" BELOW FINISH GRADE. VERIFY WITH LOCAL AUTHORITIES.
- PLACE ALL FOOTINGS ON ORIGINAL UNDISTURBED SOIL. REFER TO GEOTECHNICAL REPORT FOR INSTRUCTIONS, BEFORE POURING FOOTINGS. SOIL QUALITY MUST BE APPROVED BY A GEOTECHNICAL ENGINEER.
- THE FOUNDATION WALL ELEVATIONS SHOWN ARE NOMINAL. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR EXTENDING THE BOTTOM OF THE FOOTING DOWN TO UNDISTURBED SUITABLE SOIL.
- THE LINE OF SLOPE BETWEEN THE ADJACENT EXCAVATIONS FOR FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN 1 IN A RUN OF 10'. MAXIMUM STEP APPROXIMATELY 24".
- SEE 7/S.1.1 FOR TYPICAL DETAIL WHERE UTILITY LINES PASS BELOW FOOTINGS AND 6/S.1.1 FOR TYPICAL FOOTING STEP DETAIL.

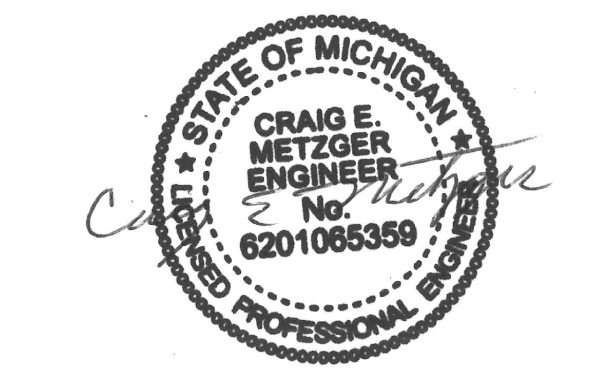
**HOLDOWN SCHEDULE**

MARK	TYPE	CONN. TO STUDS	ANCHOR ROD	ANCHOR ROD EMBEDMENT
	SIMPSON HD7B	(3) 3/4" DIA. STUD BOLTS	7/8" DIA. W/ HEAVY HEX NUT	12"
	SIMPSON HD12	(4) 1" DIA. STUD BOLTS	1-1/8" DIA. W/ HEAVY HEX NUT	12"

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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
CRAIG E. METZGER No. 6201065350  
EXP. DATE: 10/31/23

PROJECT NO.: 40509-11

SHEET TITLE:  
**FOUNDATION PLAN AND SECTIONS**

SHEET: **S1.1**

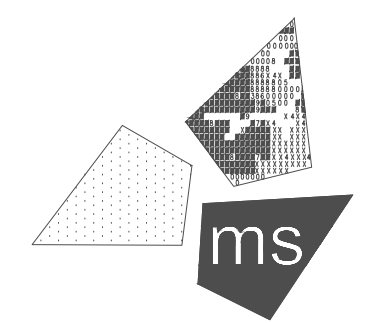


ISSUE		
#	DATE	DESCRIPTION
	07/12/22	PERMIT SET

REVISIONS		
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**NOTICE**

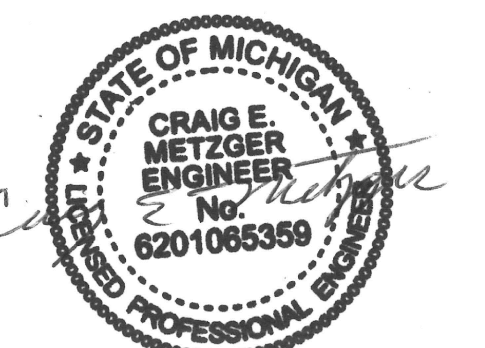
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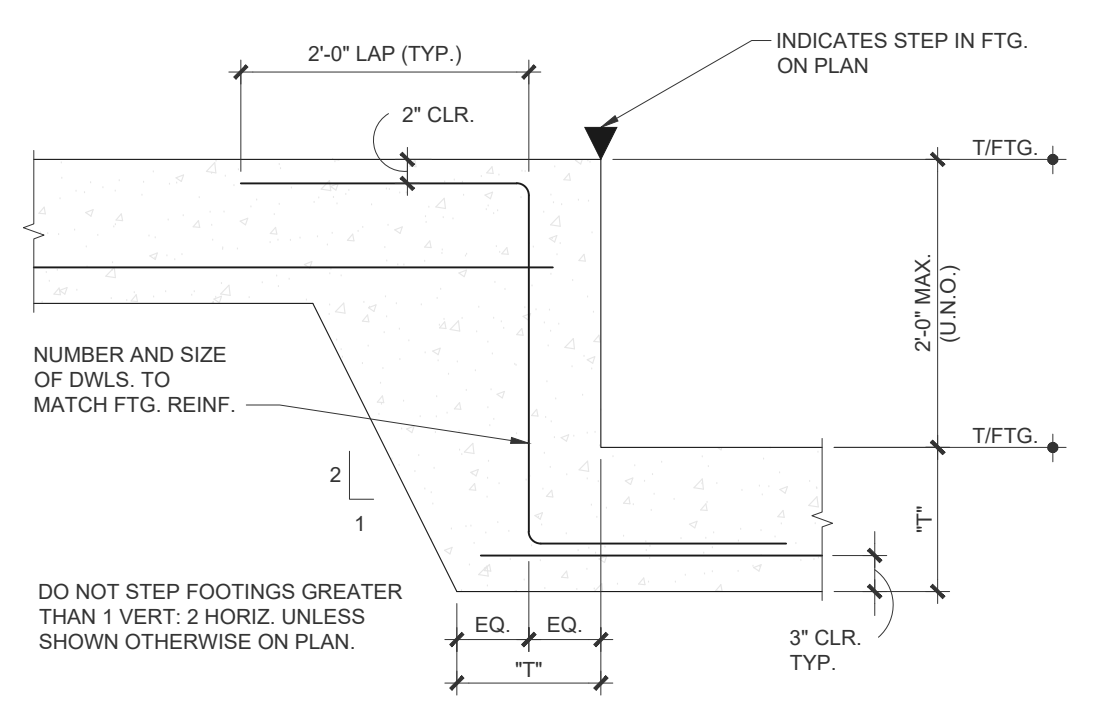


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CRAIG E. METZGER No. 6201065359  
EXP. DATE: 10/31/23

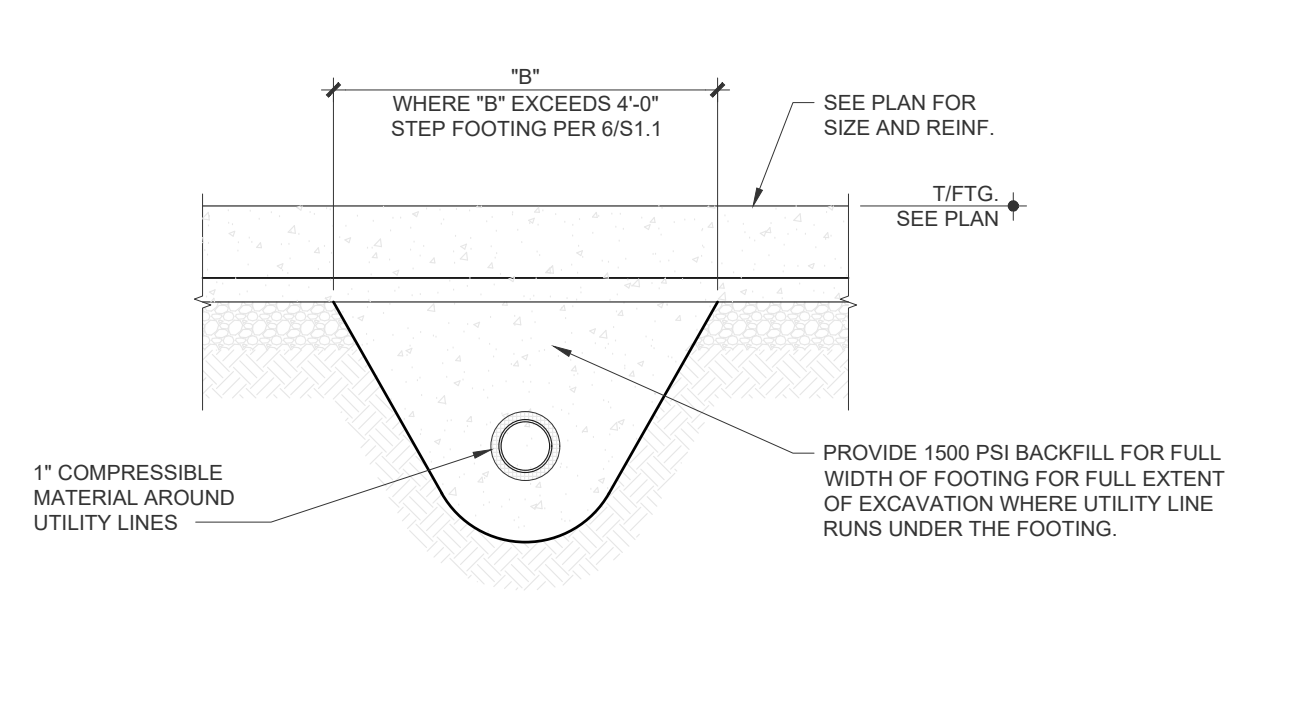
PROJECT NO.:  
40509-11

SHEET TITLE:  
**FOUNDATION PLAN AND SECTIONS**

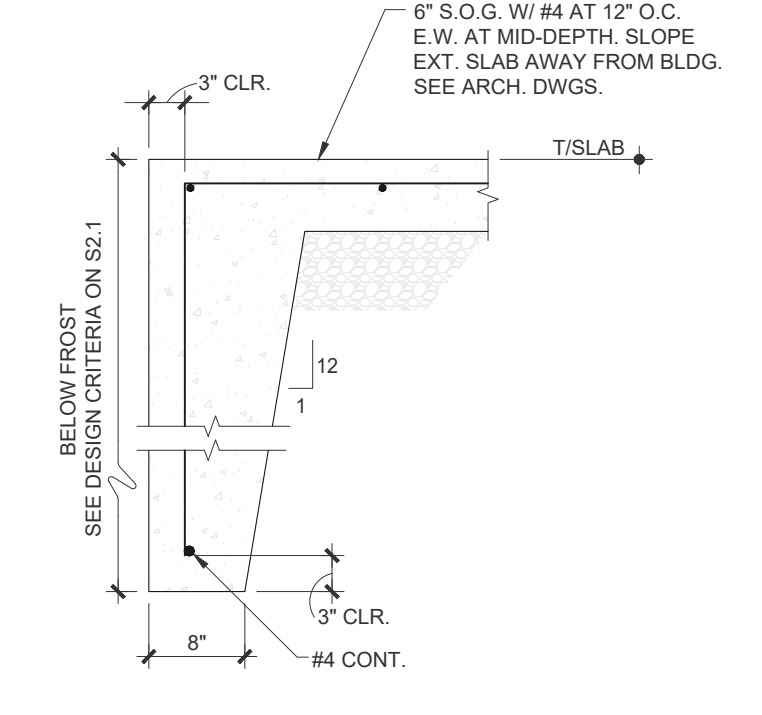
SHEET:  
**S1.1A**



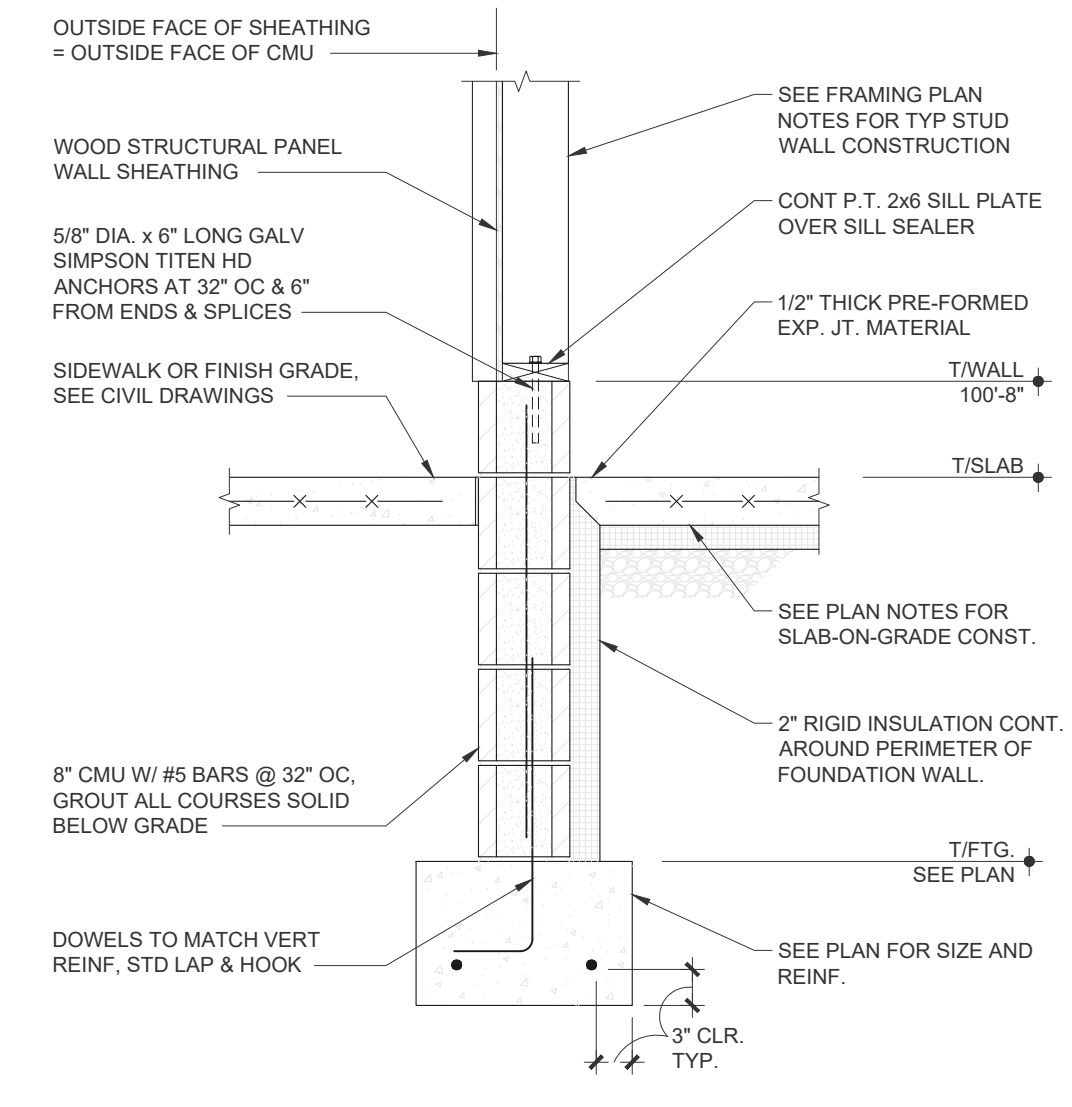
**6** TYP FOOTING STEP  
N.T.S.



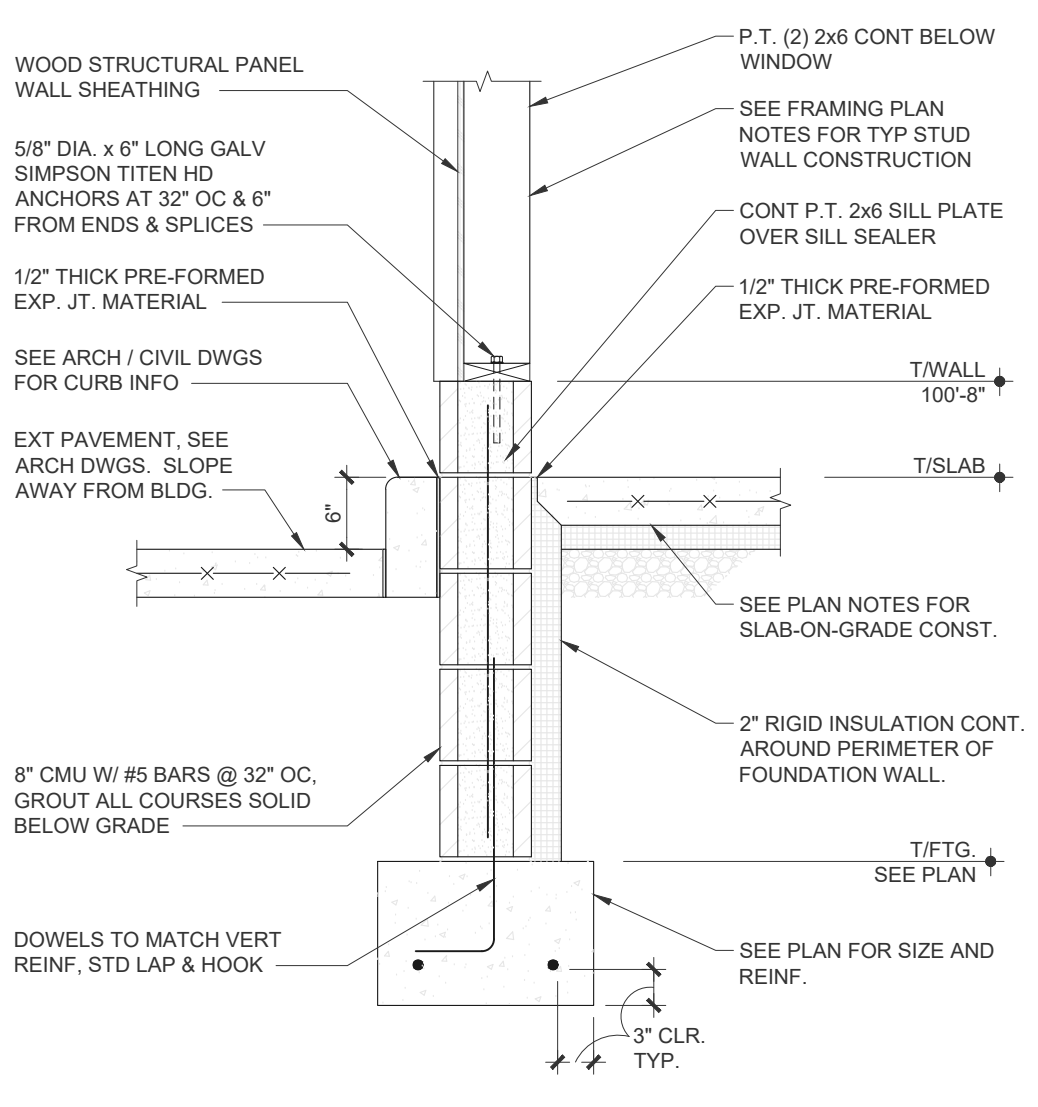
**7** TYPICAL BACKFILL DETAIL BELOW WALL FOOTINGS AT UTILITY LINES  
1/2" = 1'-0"



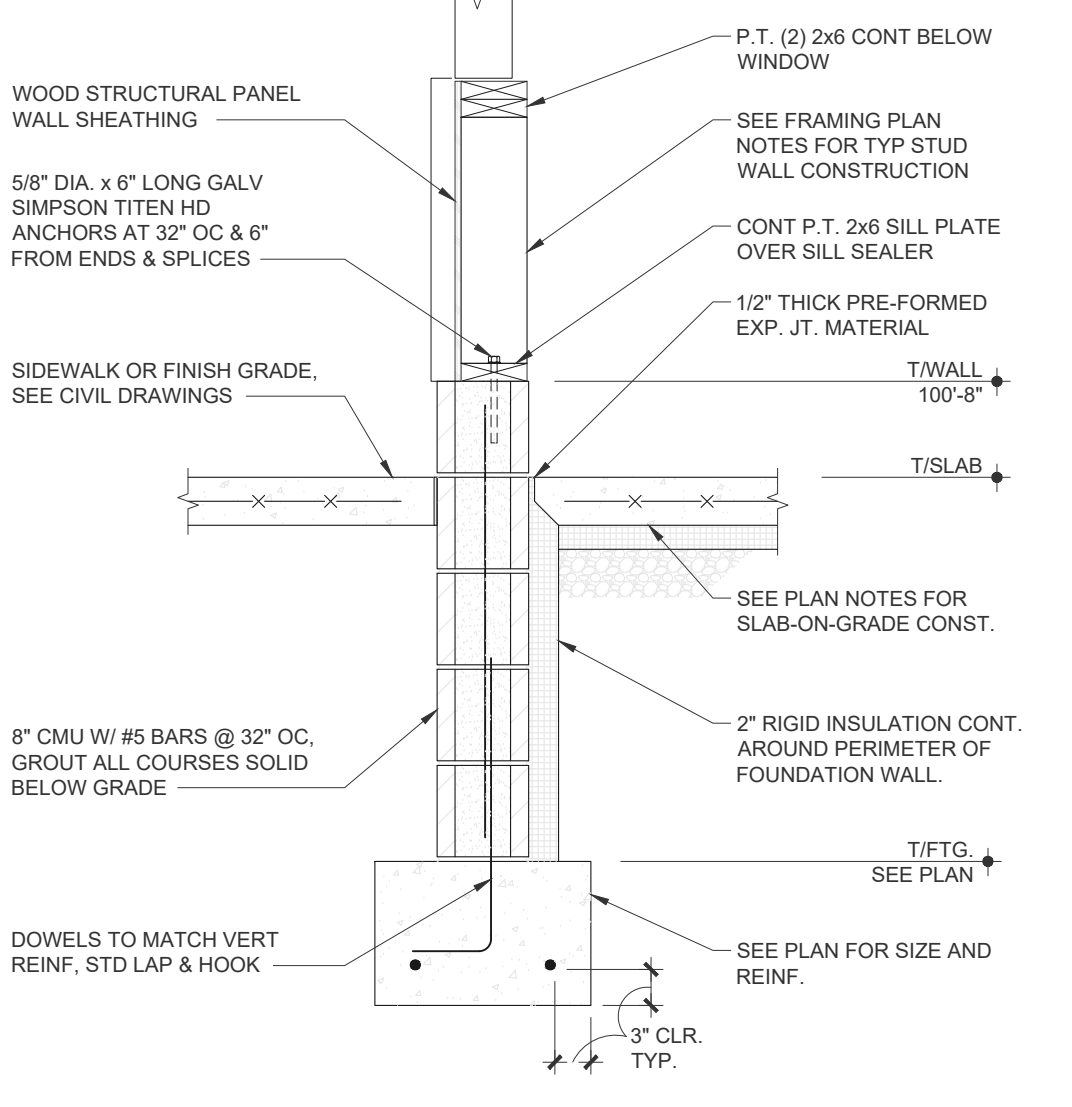
**8** FROST SLAB SECTION  
3/4" = 1'-0"



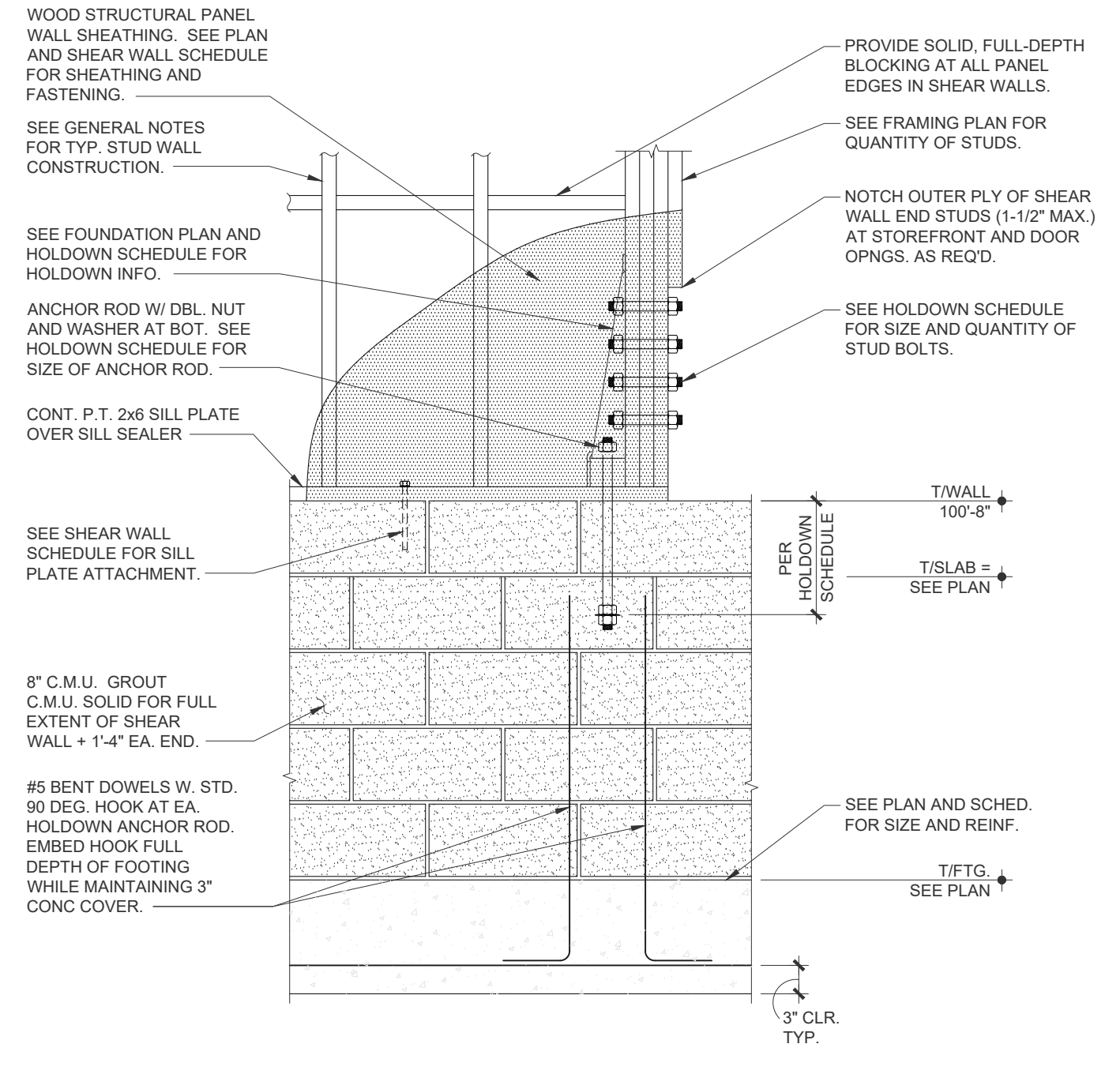
**2** TYP WALL SECTION  
3/4" = 1'-0"



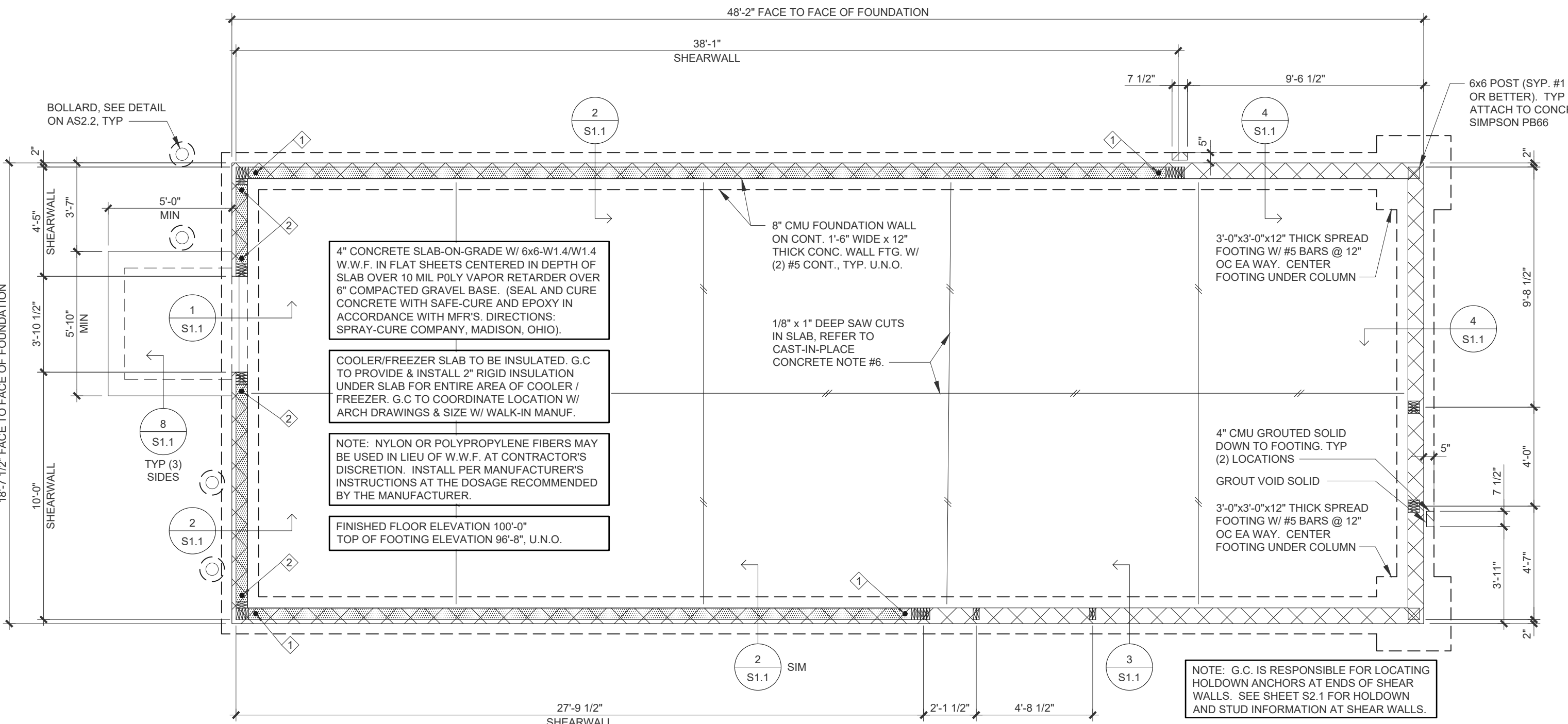
**3** SECTION AT DRIVE-THRU  
3/4" = 1'-0"



**4** SECTION AT STOREFRONT  
3/4" = 1'-0"



**5** TYPICAL SHEAR WALL DETAIL  
3/4" = 1'-0"



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

HOLDOWN SCHEDULE				
MARK	TYPE	CONN. TO STUDS	ANCHOR ROD	ANCHOR ROD EMBEDMENT
	SIMPSON HD7B	(3) 3/8\"/>		

**CAST-IN PLACE CONCRETE**

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LOCATION	COMPRESSIVE STRENGTH
SLAB-ON-GRADE	3500 PSI
FOOTINGS	3000 PSI
FOUNDATION WALL	3000 PSI
LEAN BACKFILL	1500 PSI
- MAXIMUM SLUMP IS TO BE 5\"/>

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- EXTEND EXTERIOR FOOTINGS TO A MIN. OF 3'-6\"/>

File Name: \\WSCONSULTANTS\COMFILES\PRODUCTION\03\62\40509-THUS11\_1\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\5.1A FOUNDATION PLAN CMU DWG Ploited By: SHEROCK, DAVE Plot Date: 7/12/2022 10:43 AM

File Name: \\MCONSULTANTS.COM\FILES\PRODUCTION\03\02\40509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\S2.1 ROOF FRAMING PLAN.DWG Plotted By: SHEROCK, DAVE Plot Date: 7/12/2022 10:43 AM

SHEAR WALL SCHEDULE						
MARK	SHEATHING TYPE AND THICKNESS	PANEL EDGES	FASTENER	NAIL SPACING EDGES	FIELD	BOTTOM PLATE FASTENING
SW1	15/32" APA RATED SHEATHING	BLOCKED	10d	6"	12"	5/8" DIA. x 6" LONG GALV. SIMPSON TITEN HD ANCHORS AT 24" O.C. AND 6" FROM ENDS AND SPLICES.
SW2	15/32" APA RATED SHEATHING BOTH SIDES	BLOCKED	10d	4"	12"	5/8" DIA. x 6" LONG GALV. SIMPSON TITEN HD ANCHORS AT 8" O.C. AND 6" FROM ENDS AND SPLICES.

- WHERE SHEATHING IS ONE SIDE ONLY, APPLY SHEATHING TO FACE OF WALL BY SYMBOL.
- LOCATE ALL PANEL EDGES ON STUDS, FULL-DEPTH BLOCKING OR TOP/BOTTOM PLATES.
- PROVIDE HOLD-DOWNS AND MULTIPLE STUDS AT ENDS OF SHEAR WALLS PER CODED NOTES AND SECTION 5/S1.1.

### GENERAL NOTES

- VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- X INDICATES NUMBER OF BEARING STUDS REQUIRED FOR BEAM END SUPPORT, TYPICAL UNLESS NOTED OTHERWISE.
  - XY INDICATES NUMBER OF JACK BEARING STUDS REQUIRED FOR HEADER SUPPORT.
  - Y INDICATES NUMBER OF FULL-HEIGHT KING STUDS REQUIRED FOR HEADER SUPPORT.
- WOOD STRUCTURAL PANEL ROOF SHEATHING TO BE 5/8" (NOMINAL) APA RATED SHEATHING, 4020, EXPOSURE 1. FASTEN SHEATHING TO FRAMING WITH 10d COMMON NAILS SPACED AT 6" O.C. UNLESS NOTED OTHERWISE, AT ALL PANEL EDGES AND SPACED AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS. INSTALL LONG DIMENSION OF ROOF SHEATHING PANELS PERPENDICULAR TO SPAN OF ROOF TRUSSES. STAGGER PANEL END JOINTS A MINIMUM OF (1) TRUSS SPACE.
- FRAME ALL EXTERIOR STUD WALLS WITH 2x6 AT 16" O.C.
- ALL WOOD FRAMING TO BE SPF No. 1 No. 2 GRADE.
- MAXIMUM DEFLECTION OF ROOF FRAMING UNDER TOTAL LOAD SHALL NOT EXCEED L/180 OF THE SPAN; DEFLECTION SHALL NOT EXCEED 1/240 OF THE SPAN UNDER LIVE LOAD.
- SAWN LUMBER SHALL CONFORM TO AMERICAN SOFTWOOD STANDARD PS20 (EDITION LISTED IN APPLICABLE BUILDING CODE).
- ROOF TRUSS AND LVL SHOP DRAWINGS SHALL BE SINGLE SOURCE AND SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR DESIGN AND LICENSED TO PRACTICE IN STATE OF THIS PROJECT.
- PROVIDE TEMPORARY HORIZONTAL AND CROSS BRACINGS TO HOLD TRUSSES PLUMB AND IN SAFE CONDITION UNTIL PERMANENT BRACING IS INSTALLED.
- INSTALL PERMANENT BRACING AND RELATED COMPONENTS PRIOR TO APPLICATION OF LOADS TO TRUSSES.
- DO NOT CUT OR REMOVE ANY TRUSS MEMBER.
- EACH TRUSS TO BE ANCHORED TO WOOD PLATES AND SHEATHING WITH TENSION ANCHORS BY SIMPSON OR EQUAL.
- FASTEN BUILT-UP WOOD POSTS AND BEAMS TOGETHER WITH 10d NAILS SPACED NOT MORE THAN 12" O.C. OR 3/8" DIAMETER BOLTS FITTED WITH WASHERS AND SPACED NOT MORE THAN 18" O.C.
- WOOD STRUCTURAL PANEL WALL SHEATHING TO BE 15/32" (1/2" NOMINAL) APA RATED SHEATHING, 3216, EXPOSURE 1. FASTEN SHEATHING TO FRAMING WITH 10d NAILS SPACED AT 6" O.C. AT ALL PANEL EDGES AND SPACED AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE.
- REFER TO ARCHITECTURAL DRAWINGS FOR ROOF SLOPES AND DRAINAGE.
- MAINTAIN MINIMUM CLEARANCE AROUND EXHAUST FAN OPENINGS. ADJUST TRUSS SPACING TO SUIT.
- SEE 1/S2.1 FOR TYPICAL SUSPENDED LOAD DETAIL.
- TYP. TRUSS BEARING ELEVATION = 12'-0" A.F.F.
- LVL (LAMINATED VENEER LUMBER) HEADERS DISTRIBUTED AS MICRO-LAM, PARALLAM AND TIMBER MAX LVL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. LVL HEADERS SHALL HAVE A MINIMUM DESIGN STRESS VALUE AS FOLLOWS:  
F<sub>b</sub> = 2600 PSI BENDING  
F<sub>v</sub> = 285 PSI HORIZONTAL SHEAR  
F<sub>c</sub> = 750 PSI COMPRESSION PERPENDICULAR TO GRAIN  
E = 1,900,000 PSI MODULUS OF ELASTICITY
- MULTIPLE LVL HEADERS SHALL BE FASTENED TOGETHER AS FOLLOWS:  
12" AND SMALLER MEMBERS, THREE PIECE MEMBERS  
2 ROWS OF 16d NAILS (3.5") AT 12" OC. NAIL FROM BOTH SIDES

DRAWN BY: CLS

CHECKED BY: APPROVED BY: DMS

ISSUE DATE: 07/12/2022

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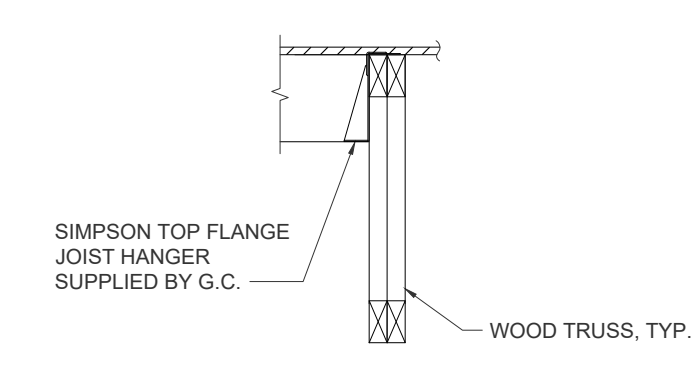
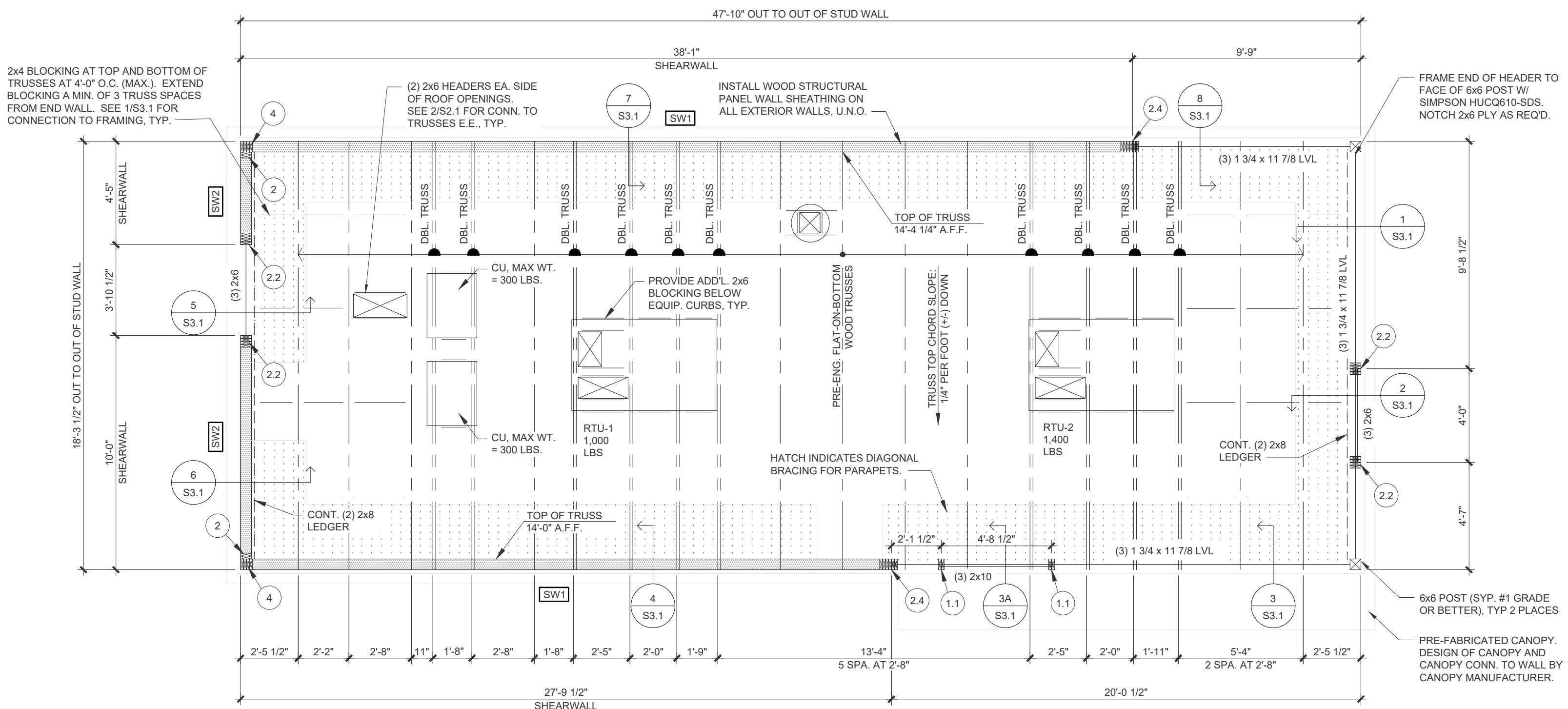
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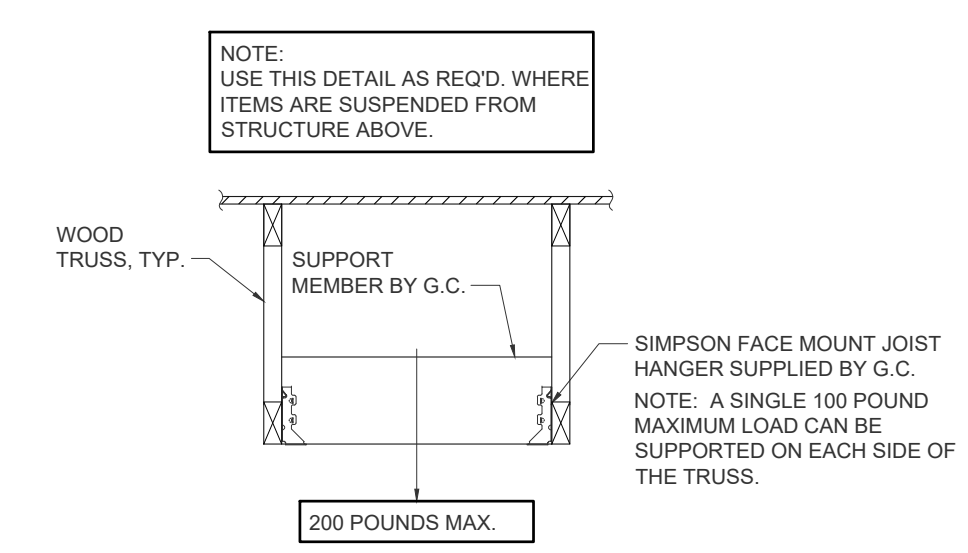
### DESIGN CRITERIA

- 2015 MICHIGAN BUILDING CODE  
MINIMUM DESIGN LOADS PER ASCE 7-10
- A. FLOOR LIVE LOADS (SLAB-ON-GRADE): 125 PSF
- B. ROOF LIVE LOAD (MINIMUM): 20 PSF
- C. ROOF SNOW LOAD:  
GROUND SNOW LOAD (P<sub>g</sub>): 20 PSF  
FLAT-ROOF SNOW LOAD (P<sub>f</sub>): 20 PSF PLUS DRIFTING PER ASCE 7  
SNOW EXPOSURE FACTOR (C<sub>e</sub>): 1.0  
SNOW LOAD IMPORTANCE FACTOR (C<sub>i</sub>): 1.0  
THERMAL FACTOR: 1.0
1. THE EFFECTS OF DRIFTING SNOW HAVE BEEN INCLUDED IN THE DESIGN.  
2. THE ROOF STRUCTURE HAS BEEN DESIGNED FOR THE ROOF LOADINGS INDICATED ABOVE SUCH THAT AN ADEQUATE ROOF SLOPE AND DRAINAGE SYSTEM ARE REQUIRED TO PREVENT PONDING LOADS WHICH MAY EXCEED THE DESIGN ROOF LOADS.
- D. WIND LOADING:  
BASIC WIND SPEED, V<sub>base</sub>/V<sub>ult</sub>: 90 MPH/115 MPH  
WIND IMPORTANCE FACTOR: 1.0  
RISK CATEGORY: II  
WIND EXPOSURE CATEGORY: C  
INTERNAL PRESSURE COEFFICIENT: +0.18, -0.18  
COMPONENTS AND CLADDING (PRESSURES INDICATED ARE EDGE ZONE (BUILDING CORNER) SERVICE LEVEL PRESSURES BASED ON A MINIMAL EFFECTIVE AREA AND MAY BE REDUCED ACCORDINGLY FOR INTERIOR ZONES AND LARGER EFFECTIVE AREAS):  
a. ROOF: 17.0 PSF, -45.0 PSF  
b. WALLS: 17.0 PSF, -22.0 PSF
- E. SEISMIC DESIGN CRITERIA  
SEISMIC IMPORTANCE FACTOR: 1.0  
RISK CATEGORY: II  
MAPPED SPECTRAL RESPONSE ACCELERATIONS:  
a. SHORT PERIODS: 0.093  
b. 1 SECOND PERIOD: 0.048 (D ASSUMED)  
SITE CLASS: D  
SPECTRAL RESPONSE COEFFICIENTS:  
a. DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS: 0.099  
b. DESIGN SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD: 0.074  
SEISMIC DESIGN CATEGORY: B  
BASIC SEISMIC-FORCE-RESISTING-SYSTEM: LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANEL RATED FOR SHEAR RESISTANCE  
DESIGN BASE SHEAR: 3 KIPS  
SEISMIC RESPONSE COEFFICIENT, C<sub>s</sub>: 0.015  
EQUIVALENT LATERAL FORCE PROCEDURE
- F. SPECIAL LOADS  
INTERIOR PARTITIONS: 5 PSF  
GUARDRAILS: 50 PLF / 200 POUNDS
- G. MIN. FROST DEPTH (BELOW GRADE): 42 INCHES

NOTE: TRUSS MANUFACTURER TO VERIFY TRUSS LAYOUT AND PROVIDE ENGINEERED SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED ENGINEER REGISTERED IN THE STATE OF THE PROJECT PRIOR TO INSTALLATION. CONTRACTOR SHALL INSTALL TRUSSES PER THE MANUFACTURER'S DRAWINGS. THIS SHEET IS PROVIDED FOR BIDDING PURPOSES ONLY.



2 HEADER DETAIL  
N.T.S.



1 SUSPENDED LOAD DETAIL  
N.T.S.

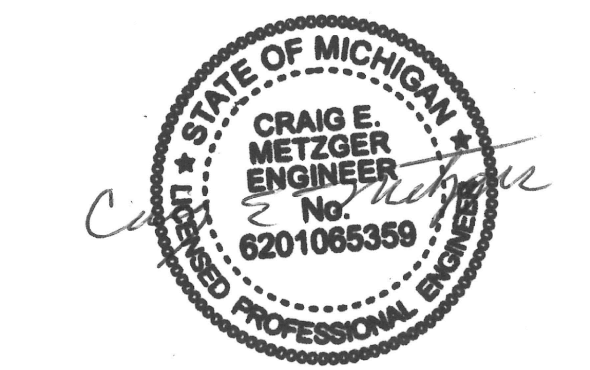
### A ROOF FRAMING PLAN

1/4" = 1'-0"

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*Tim Hortons*

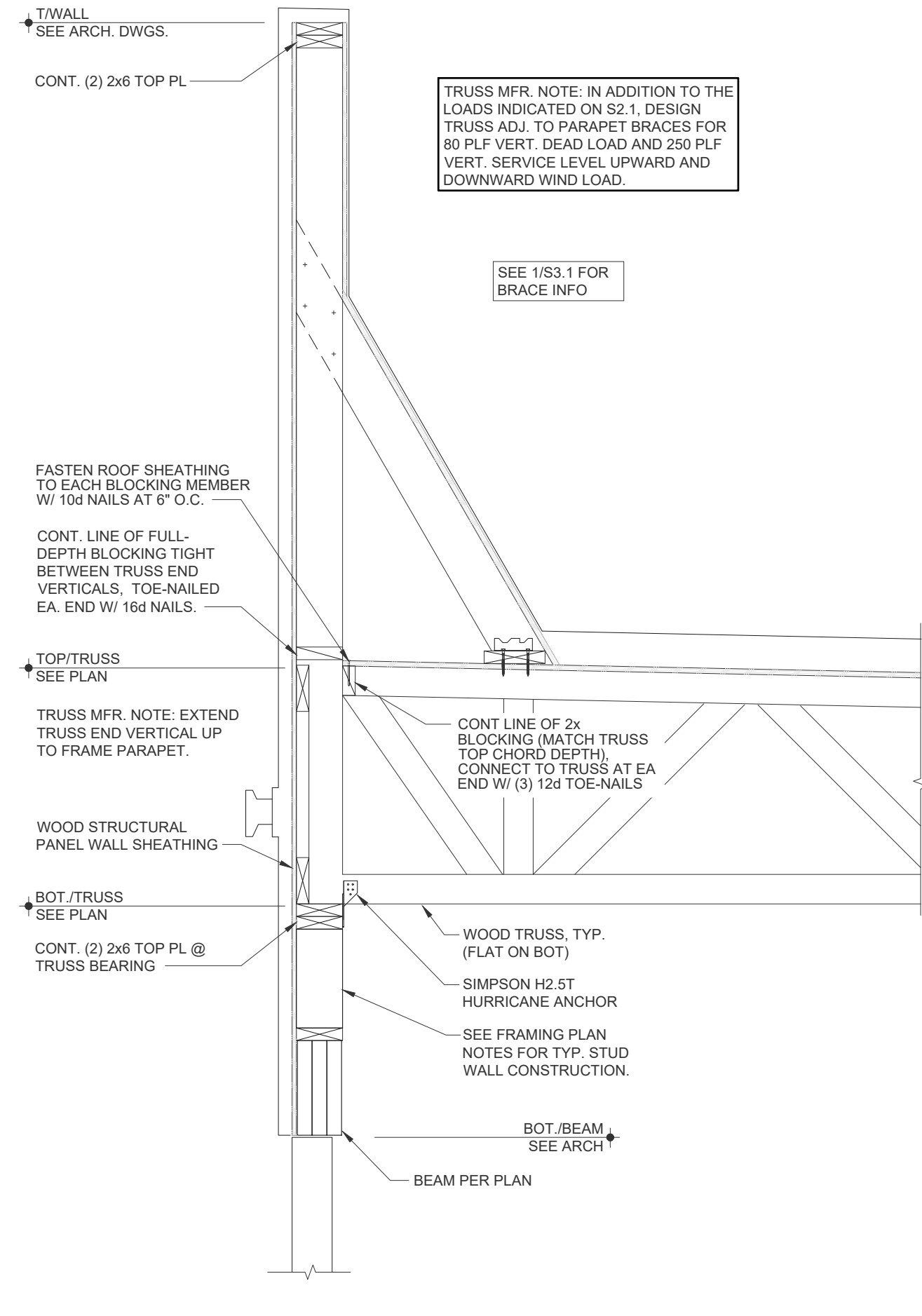
PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



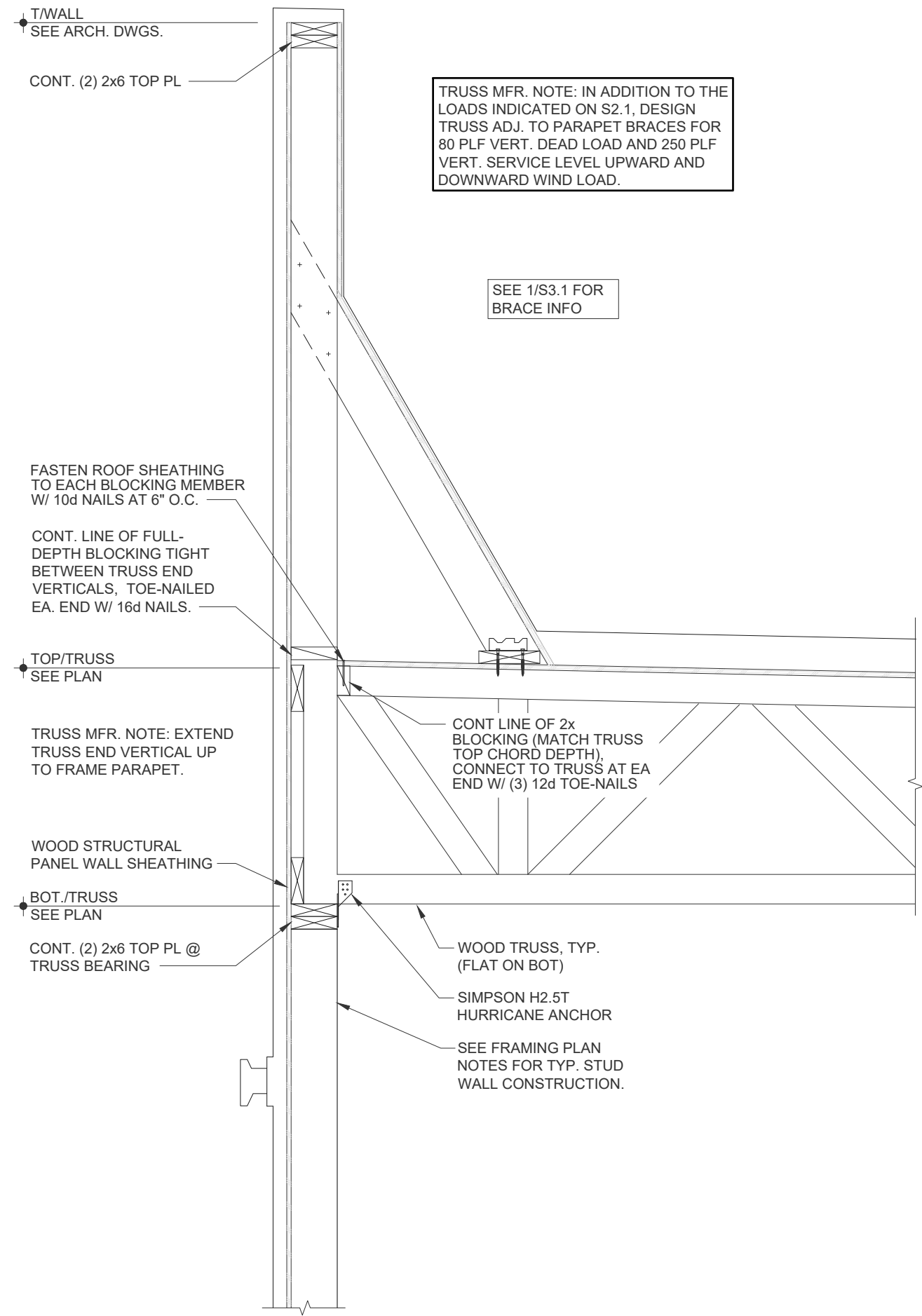
PROFESSIONAL OF RECORD:  
CRAIG E. METZGER No. 6201065350  
EXP. DATE: 10/31/23

PROJECT NO.: 40509-11  
SHEET TITLE: FRAMING PLAN, AND DESIGN CRITERIA  
SHEET: S2.1

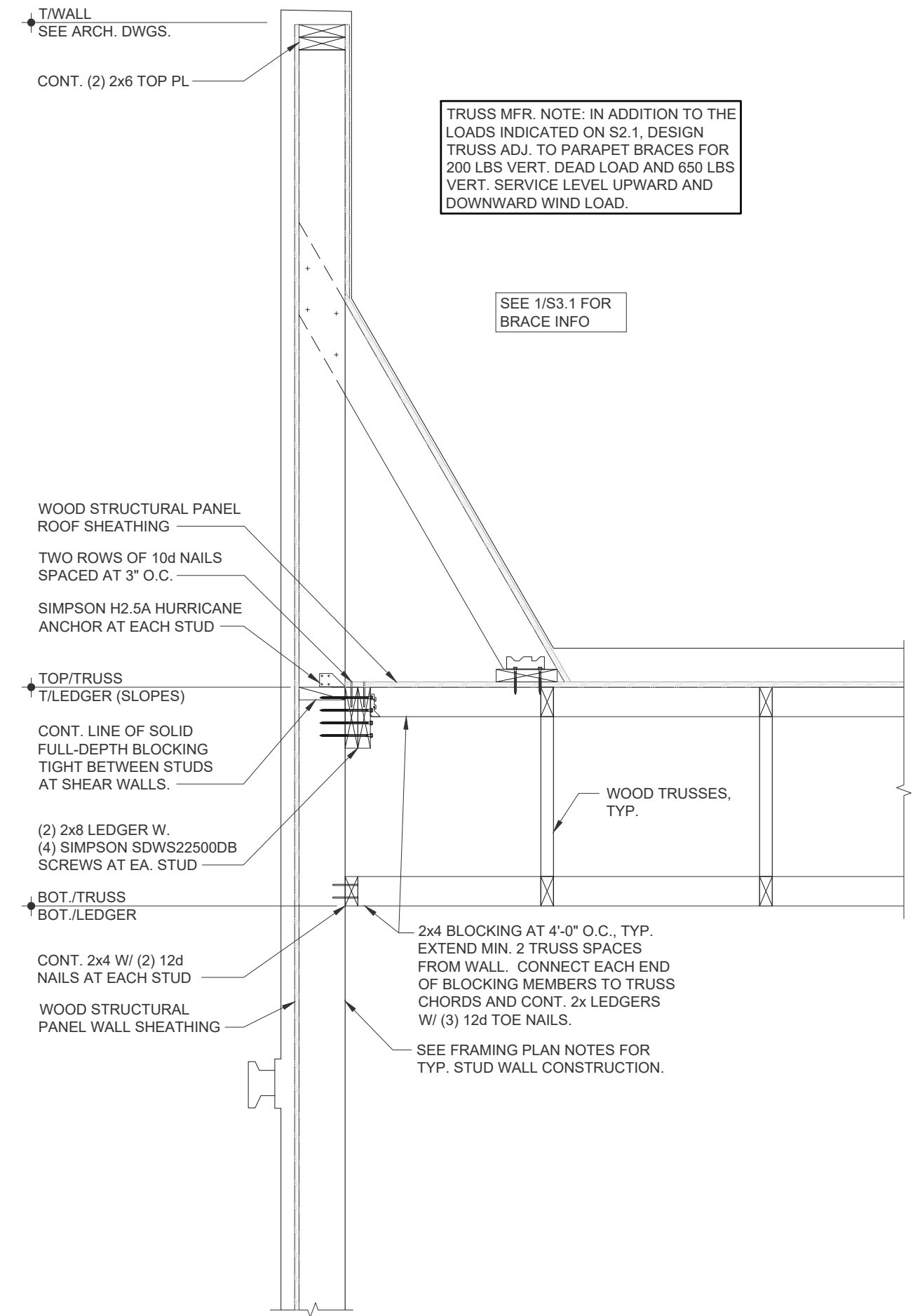
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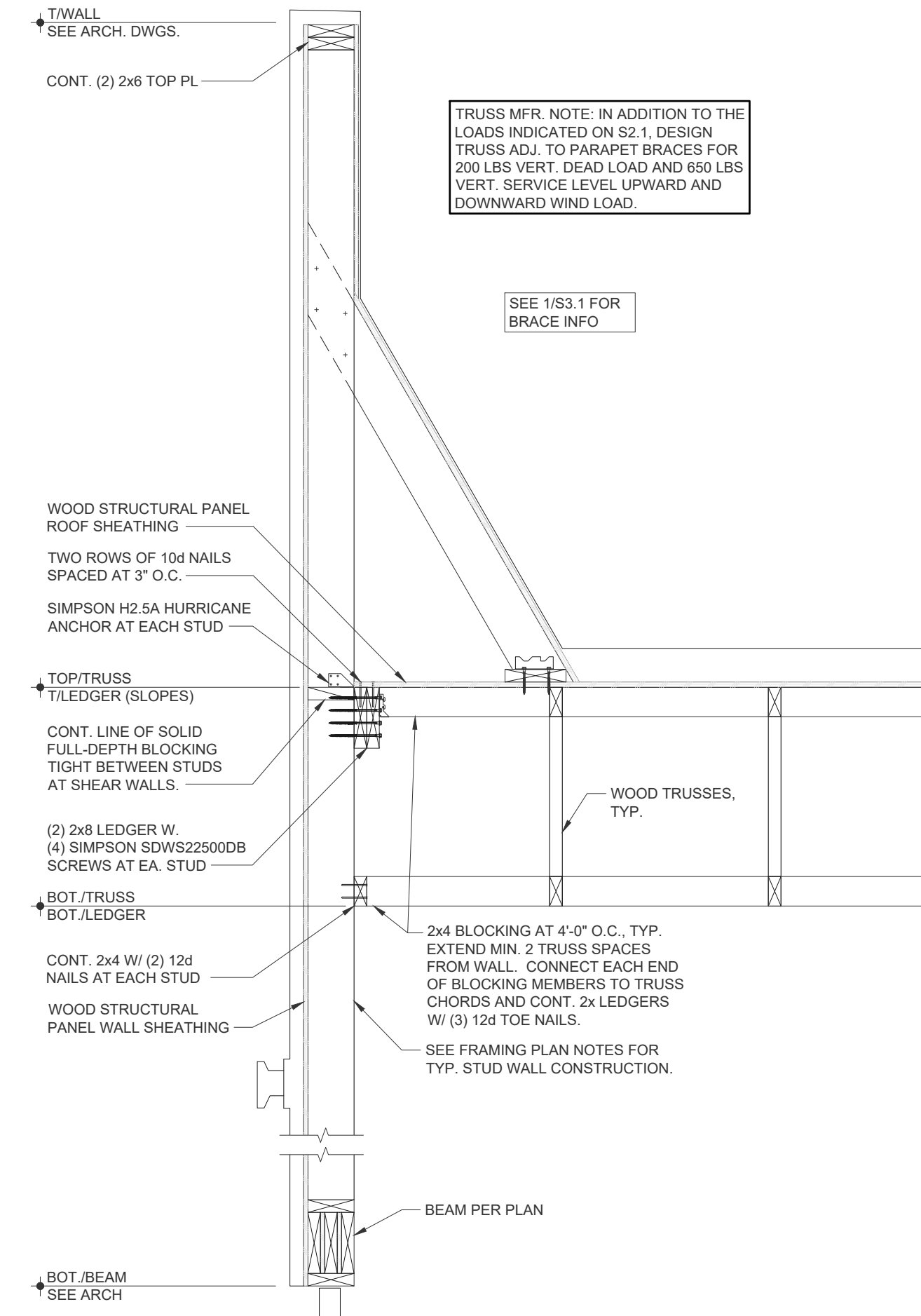
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3/4" = 1'-0"



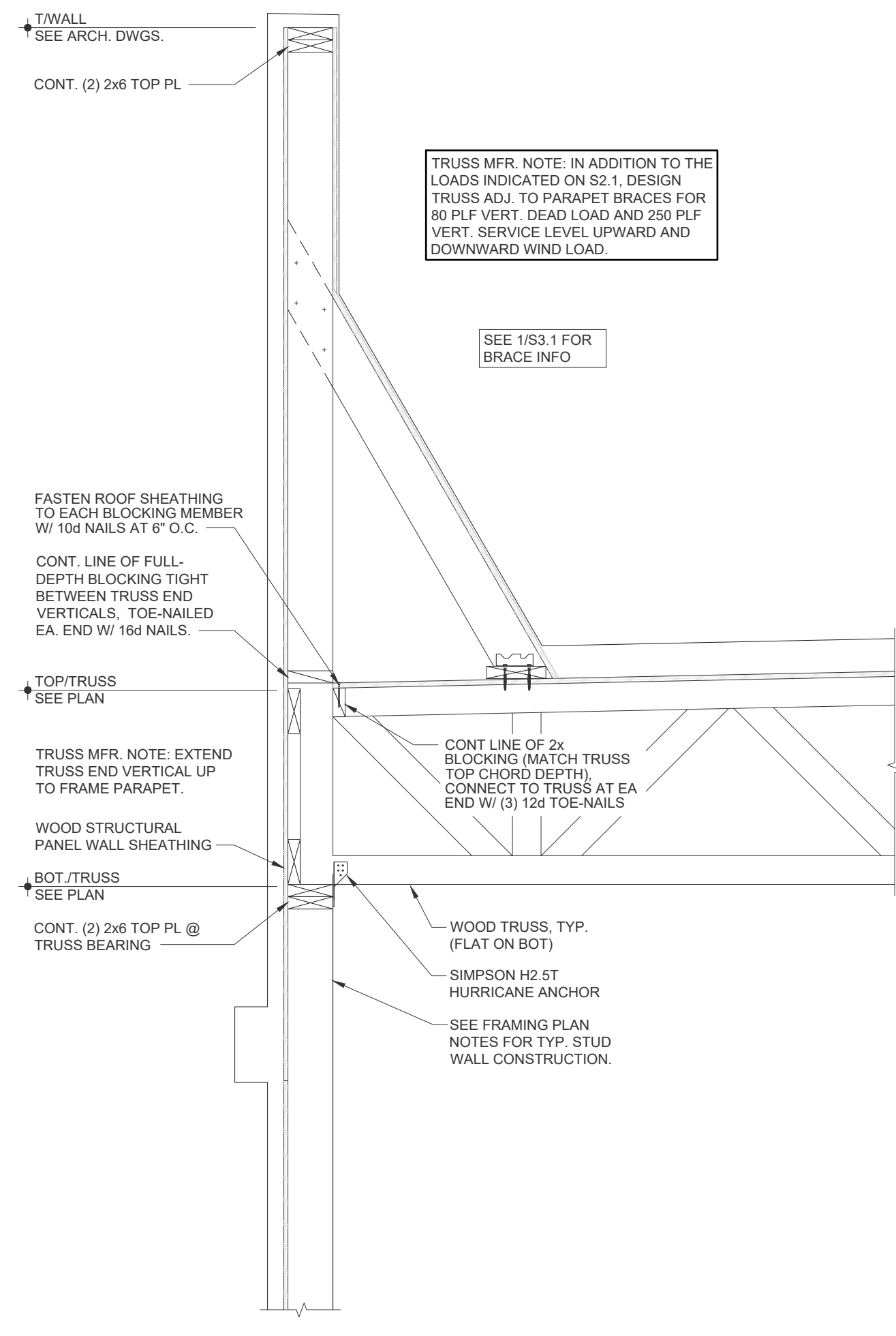
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3/4" = 1'-0"



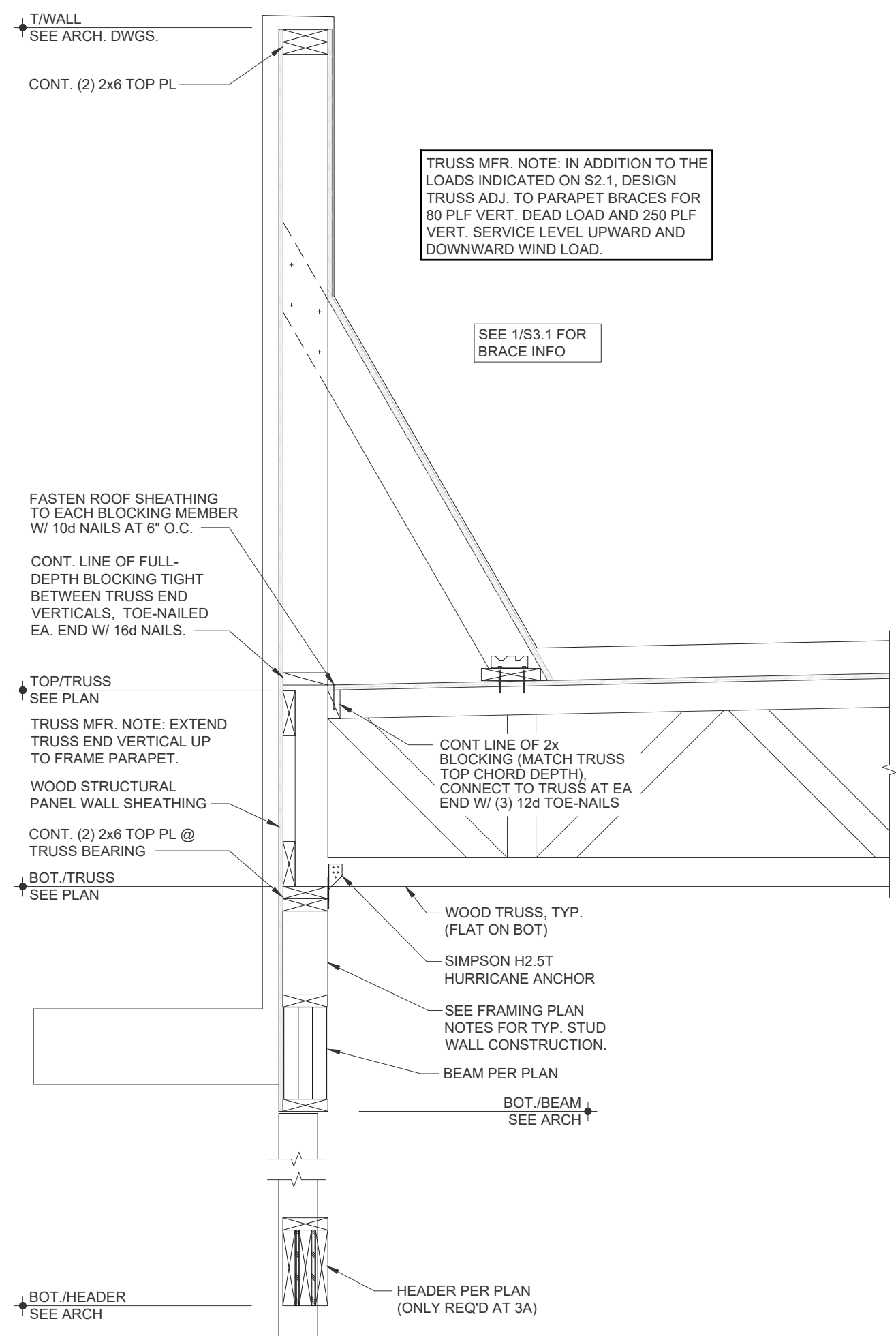
6 FRAMING SECTION  
3/4" = 1'-0"



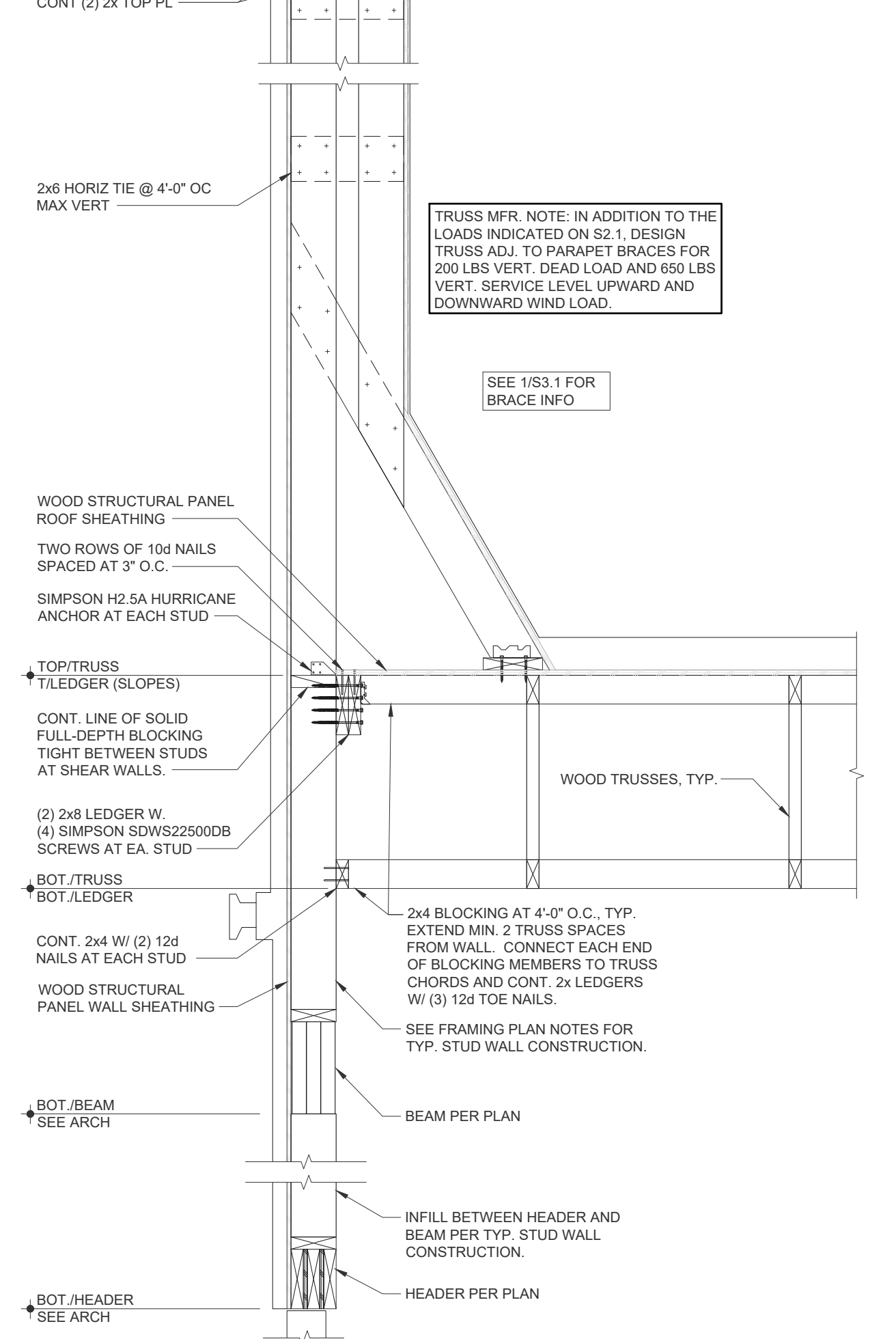
5 FRAMING SECTION  
3/4" = 1'-0"



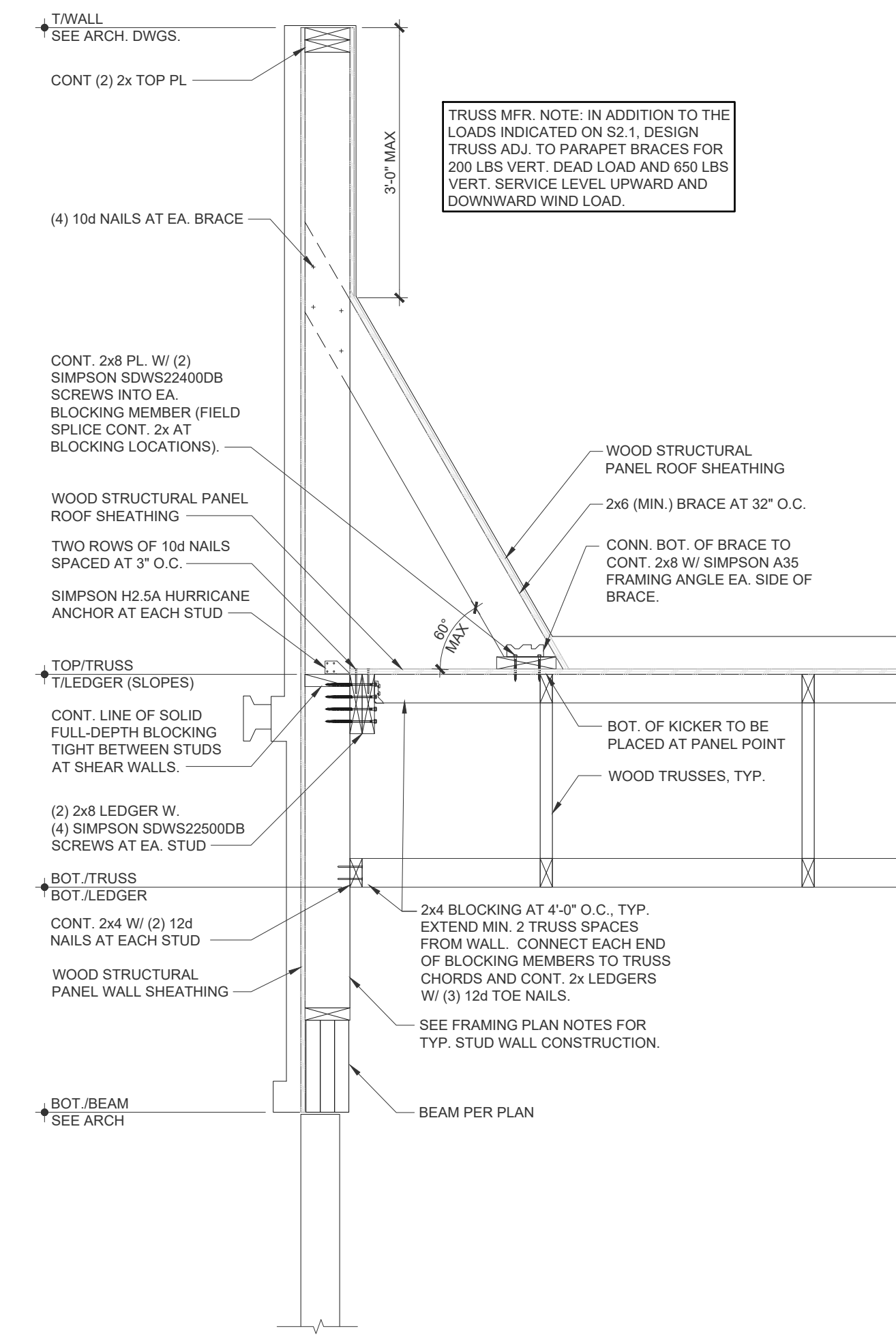
4 FRAMING SECTION  
3/4" = 1'-0"



3A 3 FRAMING SECTION  
3/4" = 1'-0"



2 FRAMING SECTION  
3/4" = 1'-0"



1 FRAMING SECTION  
3/4" = 1'-0"

DRAWN BY: CLS

CHECKED BY: DMS

APPROVED BY:

ISSUE DATE: 07/12/2022

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#	DATE	DESCRIPTION
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REVISIONS		
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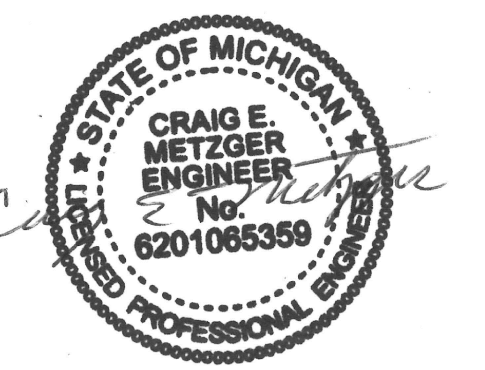
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19353 VERNIER ROAD  
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STORE # 919728



PROFESSIONAL OF RECORD:  
CRAIG E. METZGER No. 6201065359  
EXP. DATE: 10/31/23

PROJECT NO.: 40509-11






























SHEET TITLE: FRAMING SECTIONS
























SHEET: S3.1



### ELECTRICAL SYMBOLS

**NOTE:** ALL MOUNTING HEIGHTS SHALL BE AS INDICATED, UNLESS NOTED OTHERWISE. ALL MOUNTING HEIGHTS FOR KITCHEN EQUIPMENT SHALL BE AS INDICATED ON THE KITCHEN EQUIPMENT WIRING SCHEDULE, SHEET E4.1.

-  THERMOSTAT @ 48"
-  WALL MOUNTED PUSH BUTTON @ 48"
-  WALL MOUNTED OCCUPANCY SENSOR @ 48"
-  CEILING MOUNTED OCCUPANCY SENSOR.
-  CEILING MOUNTED PHOTOIONIZATION DETECTOR WITH CARBON MONOXIDE DETECTOR
-  DUCT MOUNTED PHOTOIONIZATION DETECTOR
-  CEILING MOUNTED HORN/STROBE
-  CEILING MOUNTED STROBE ONLY DEVICE
-  FIRE ALARM CONTROL PANEL
-  FIRE ALARM ANNUNCIATOR PANEL (REMOTE)
-  REMOTE ANNUNCIATOR/TEST STATION @ 60"
-  SINGLE PHASE MOTOR
-  THREE PHASE MOTOR
-  120 VOLT SIMPLEX RECEPTACLE @ 16"
-  120 VOLT DUPLEX RECEPTACLE @ 16"  
WP = WEATHERPROOF  
GFI = GROUND FAULT INTERRUPTER  
IG = ISOLATED GROUND
-  120 VOLT DOUBLE DUPLEX (QUAD) RECEPTACLE @ 16"
-  120 VOLT SIMPLEX CEILING MOUNTED RECEPTACLE
-  120 VOLT DUPLEX RECEPTACLE WITH 2-USB PORTS
-  DATA/TELEPHONE OUTLET BOX @ 16"
-  DATA OUTLET BOX @ 16"
-  TELEPHONE OUTLET BOX @ 16"
-  208V OR 120/208V RECEPTACLE @ 16"
-  JUNCTION OR PULL BOX
-  EQUIPMENT DISCONNECT SWITCH @ 60"
-  LIGHTING/POWER PANELBOARD, TOP BREAKER @ 72"
-  PHOTOCCELL MOUNTED ON ROOF FACING NORTH
-  TIMECLOCK
-  MUSIC SYSTEM RADIO, AMPLIFIER EQUIPMENT
-  CEILING MOUNTED AUDIO SYSTEM SPEAKER

-  CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE 1'x4'.
-  CEILING MOUNTED EMERGENCY EXIT SIGN SHADED QUADRANT INDICATES ILLUMINATED FACE ARROW INDICATES "DIRECTIONAL ARROW" POSITION(S).
-  WALL MOUNTED EMERGENCY EXIT SIGN SHADED QUADRANT INDICATES ILLUMINATED FACE ARROW INDICATES "DIRECTIONAL ARROW" POSITION(S).
-  WALL/CEILING MOUNTED COMBINATION EMERGENCY LIGHTING / EXIT SIGN FIXTURE-BATTERY TYPE. SHADED QUADRANT INDICATES ILLUMINATED FACE, ARROW INDICATES "DIRECTIONAL ARROW" POSITION(S).
-  WALL/CEILING MOUNTED EMERGENCY LIGHTING FIXTURE-BATTERY TYPE.
-  REMOTE MOUNTED EMERGENCY LIGHTING FIXTURE.
-  CEILING/WALL MOUNTED SURFACE TRACK LIGHTING FIXTURE ASSEMBLY.
-  CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. NIGHT LIGHT.
-  CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. NIGHT LIGHT.
-  CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. NIGHT LIGHT.
-  POLE MOUNTED LIGHTING FIXTURE
-  WALL SWITCH, NUMBER INDICATES 2, 3, OR 4 POLE, LETTER INDICATES FIXTURE(S) TO BE CONTROLLED BY SWITCH @ 48"
-  CIRCUIT RUN TO PANELBOARD
-  CIRCUIT RUN TO PANELBOARD DESIGNATION.
-  INDICATES CIRCUIT NUMBERS.
-  INDICATES PANEL DESIGNATION.
-  CONDUIT RUNS ABOVE GRADE.
-  CONDUIT RUN BELOW GRADE OR IN CONCRETE SLAB.
-  LOW-VOLTAGE CONDUIT RUN
-  N.T.S. NOT TO SCALE
-  A.F.F. ABOVE FINISHED FLOOR
-  NL NIGHT LIGHT
-  EM EMERGENCY

**NOTE:** ALL ELECTRICAL COVERPLATES SHALL MATCH ADJACENT WALL COLOR. REFER TO ARCHITECTURAL SHEET A10 FOR WALL COLORS.

### GENERAL NOTES

- A. UNLESS OTHERWISE NOTED, ALL CONDUITS SHALL BE 1-1/2" STEEL FLEX OR PLASTIC STUBBED OUT ABOVE THE WALL LINE AND TERMINATED INTO A STANDARD JUNCTION BOX FLUSH WITH WALL AND CAPABLE OF ACCEPTING A FACEPLATE COVER.
- B. ALL JUNCTION BOXES SHALL BE INSTALLED IN SUCH A WAY SO THAT THEY ARE NOT BLOCKED BY OTHER EQUIPMENT OR STRUCTURAL COMPONENTS.
- C. ALL CABLE ACCESS OPENINGS THROUGH STAINLESS STEEL SHALL HAVE RUBBER OR PLASTIC GROMMETS INSTALLED.
- D. INSTALL ALL COMMUNICATION AND DATA CONDUITS INCLUDING PULL WIRE BETWEEN CONNECTION POINTS.
- E. VERIFY WITH REGISTER SYSTEM SUPPLIER AND MENUBOARD SUPPLIER THE LOCATIONS AND SIZES OF ALL CONDUITS RELATING TO THAT SYSTEM.
- F. SEE SHEET AS2.1 FOR MENU BOARD, PREVIEW BOARD, AND SPEAKER MOUNTING DETAILS AND CONDUIT REQUIREMENTS.
- G. ACTUAL SITE CONDITIONS MAY CAUSE AN ADJUSTMENT OF LAYOUT. LAYOUT SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- H. VERIFY SIGN LOCATION AND LAYOUT WITH OWNER.
- I. RECEPTACLE LOCATIONS MAY BE ADJUSTED AS NECESSARY TO AVOID CONFLICTS WITH STUDS AND PLUMBING PIPING.
- J. PROVIDE A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN.
- K. ELECTRIC WORK SHALL COMPLY WITH THE LATEST LOCALLY ADOPTED NATIONAL ELECTRIC CODE AS WELL AS STATE AND LOCAL CODES.
- L. PAY FOR ALL PERMITS AND INSPECTIONS AND PROVIDE CERTIFICATE OF INSPECTION.
- M. PROVIDE REQUIRED SERVICE AND EQUIPMENT GROUNDING SYSTEMS. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND SHALL BE SAFELY GROUNDED AT THE DISTRIBUTION PANEL. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. PROVIDE A SEPARATE GROUNDING CONDUCTOR IN EACH CONDUIT, #12 MINIMUM OR AS SHOWN ON DRAWINGS.
- N. MATERIALS SHALL BE NEW WITH MANUFACTURER'S NAME PRINTED THEREON AND UNDERWRITER'S LABORATORY LISTED. THE SELECTION OF MATERIALS AND EQUIPMENT TO BE PROVIDED UNDER THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL 4 COPIES OF EQUIPMENT AS FOLLOWS: MAIN DISTRIBUTION PANEL, PANELBOARDS, DISCONNECT SWITCHES AND LIGHTING FIXTURES.
- O. IDENTIFY DISCONNECT SWITCHES WITH LAMINATED PHENOLIC NAMEPLATES WITH 1/4" MINIMUM HEIGHT LETTERS.
- P. PROVIDE POWER WIRING AND HOOKUP FOR EACH MECHANICAL AND KITCHEN EQUIPMENT ITEM. THIS CONTRACTOR SHALL MOUNT, PROVIDE WIRING, AND MAKE FINAL CONNECTIONS TO EQUIPMENT CONTROL PANELS (WHICH INCLUDE PREWIRED STARTERS, RELAYS, ETC.) PROVIDE ALL STARTERS WHICH ARE NOT FURNISHED AS PART OF MECHANICAL EQUIPMENT.
- Q. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE IN NEMA 1 ENCLOSURE OR EQUAL. BY SQUARE D OR EATON. SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERATED AND INTERLOCKED.
- R. SWITCHES SHALL BE 20 AMP HUBBELL 1221-1 SINGLE POLE OR 1223-1 THREE WAY. DUPLEX RECEPTACLES SHALL BE 20 AMP HUBBELL 5362-1. PASS AND SEYMOUR, AND ARROW-HART SHALL BE CONSIDERED AS EQUAL. GROUND FAULT INTERRUPTING SWITCH BE LEVITON GFTR2-T. COVER PLATES SHALL BE SIERRA (PASS AND SEYMOUR). SWITCH PLATES TO BE SERIES #5-IN. DUPLEX PLATES TO BE SERIES #4-IN. DUPLEX PLATES IN DINING ROOM TO BE #4-ETC. ALL COVER PLATES SHALL HAVE SATIN FINISH #302 STAINLESS STEEL (EXCEPT DINING ROOM PLATES).
- S. TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDERS AND BRANCH CIRCUIT WIRING. ENSURE LOW IMPEDANCE GROUND SYSTEM.
- T. VERIFY ELECTRICAL SERVICE TO SITE PRIOR TO BIDDING. PROVIDE CONDUIT, CABLE, CONCRETE, CONNECTIONS AND OTHER EQUIPMENT REQUIRED FOR AN UNDERGROUND ELECTRICAL SYSTEM FROM POWER COMPANY EQUIPMENT TO DISTRIBUTION SWITCHBOARD "DB1". COORDINATE ELECTRICAL SERVICE ENTRANCE WORK AND REQUIREMENTS WITH POWER COMPANY. SECURE CONTRACTS WITH POWER COMPANY FOR INSTALLATION OF PRIMARY ENTRANCE. INCLUDE CHARGES BY POWER COMPANY IN BID. PERFORM WORK REQUIRED BY POWER COMPANY IN ACCORDANCE WITH POWER COMPANY RULES AND REGULATIONS TO ENSURE A COMPLETE ELECTRICAL SERVICE.
- U. FOR SERVICE AND PANEL FEEDER WIRING, USE TYPE THHN/THWN CABLE. USE THHN CABLE FOR INTERIOR BRANCH CIRCUIT WIRING EXCEPT AS NOTED. DESIGN IS BASED ON COPPER CONDUCTORS AND ALL WIRING SHALL BE COPPER, MINIMUM #12 AWG. WIRING SHALL BE IN CONDUIT. SPLICE WIRES #6 AWG. AND LARGER WITH APPROVED SOLDERLESS CONNECTORS SUCH AS ILSCO PROPERLY TAPED AND INSULATED. SPLICE SMALLER WIRES WITH MECHANICAL CONNECTORS SUCH AS 3M "SCOTCHLOCK" TYPE R.
- V. PROVIDE RIGID GALVANIZED STEEL HEAVY WALL CONDUIT OR SCHEDULE 80 PLASTIC CONDUIT FOR SERVICE AND PANEL FEEDER CONDUITS. FITTINGS SHALL BE STEEL, THREADED, SET-SCREW TYPE WITH INSULATED THROATS. FURNISH EMT CONDUIT FOR INTERIOR WIRING WHERE PHYSICAL DAMAGE IS NOT A CONSIDERATION. MINIMUM CONDUIT SIZE IS 3/4" EXCEPT FOR FLEXIBLE RUNOUTS TO FIXTURES, MOTORS, ETC. WHICH MAY BE 1/2".
- W. CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE AND SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS AND CEILINGS.
- X. CONDUIT INSTALLED IN OR BELOW SLAB SHALL BE GALVANIZED RIGID CONDUIT OR PLASTIC CONDUIT. NO CONDUIT LARGER THAN 1 1/2" DIA. WILL BE INSTALLED IN SLAB.
- Y. PROVIDE STRUCTURAL STEEL FRAMEWORK AND HANGING RODS WITH BRACES AND ACCESSORIES WHERE REQUIRED TO HOLD EQUIPMENT IN FINAL POSITION. PROVIDE STEEL SHAPES AND FRAMES TO SUPPORT WALL MOUNTED EQUIPMENT WHERE NORMAL WALL STRENGTH MAY BE INADEQUATE.
- Z. ELECTRICAL DEVICES, MOTOR STARTERS, DISCONNECT SWITCHES, ETC. SHALL BE SUPPORTED INDEPENDENT OF AND ISOLATED FROM EQUIPMENT VIBRATION.
- AA. COORDINATE WITH KITCHEN EQUIPMENT SUPPLIER ALL INTERIOR WIRING CONNECTIONS NEEDED DURING ASSEMBLY OF KITCHEN EQUIPMENT.
- AB. PROVIDE FIXTURES AS LISTED ON LIGHTING FIXTURE SCHEDULE. PROVIDE NECESSARY MOUNTING HARDWARE FOR A COMPLETE INSTALLATION. PROVIDE LAMPS, BALLASTS AND SPECIAL CONTROLS.
- AC. PROVIDE EMPTY CONDUIT, OUTLETS AND BACKBOARD TO ACCOMMODATE TELEPHONE COMPANY WIRING AND EQUIPMENT AS SHOWN ON DRAWINGS. WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH TELEPHONE COMPANY REQUIREMENTS.
- AD. GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS. USUAL WEAR EXPECTED, AND SHOULD ANY SUCH DEFECTS OCCUR WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE BUILDING BY THE OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.

DRAWN BY  
NWO

CHECKED BY  
APPROVED BY  
KFF

ISSUE DATE  
07/12/2022

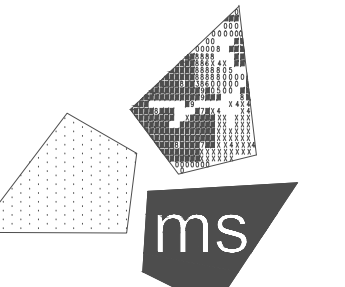
#### ISSUE

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**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
**STORE # 919728**



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
**ELECTRICAL SYMBOLS  
AND NOTES**

SHEET:  
**E1.0**

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### LIGHTING FIXTURE SCHEDULE

ALL LIGHTING FIXTURES TO BE PURCHASED FROM VISO, UNLESS NOTED OTHERWISE.

FIXTURE DESIGNATION	QUANTITY	MANUFACTURER	GENERAL DESCRIPTION	VISO CATALOG NUMBER	INPUT WATTAGE	REMARKS
A	0	VISO	ZX4 RECESSED LED TROFFER FOR T-BAR CEILING (TAA24-40W-FP-3500K) 120 DEGREE, 125 LMW, 80 CRI, 0.5A, 120V, 22 LBS	NA.TDL-VIS-A	40W	BOH ONLY.
B	15	VISO	ZX2 RECESSED LED TROFFER FOR T-BAR CEILING (TAA22-40W-FP-3500K) 120 DEGREE, 125 LMW, 80 CRI, 0.4A, 120V, 12 LBS	NA.TDL-VIS-B	40W	SERVICE AREA.
LP7	1	VISO	LED EXTERIOR PACK, 7.6" L X 4.4" D X 3.9" H, BRONZE FINISH, 1080LM, 4000K, 70-IP65 CRI, 7.1 LBS	NA.TDL-VIS-LP7	10W	
WL6	1	VISO	EXTERIOR LED SPOT LIGHT, 4.5" DIA X 8.2" H X 8.2" W, 4000K, 1600LM, 80 CRI, 120/277V, 6 LBS	NA.TDL-VIS-WL6	20W	COORDINATE MOUNTING HEIGHT AND FINAL AIMING WITH ARCHITECTURAL ELEVATIONS.
CL2-LED	102'-4"	LEKTRON BRANDING SOLUTIONS	LED NEON STRIP, EXTERIOR, DC24V, 2700/3000K, IP67 WITH CHANNEL PANELS AND DRIVERS INCLUDED. SEE SHOP DRAWINGS.	LEKTRON LUMILINE 600-10XX	3.7W/FT	COORDINATE EXACT FIXTURE LENGTH AND LOCATIONS WITH ARCHITECTURAL ELEVATIONS AND LIGHTING SUPPLIER SHOP DRAWINGS.
CL1W-LED	85'-6"	LEKTRON BRANDING SOLUTIONS	LED NEON STRIP, EXTERIOR, DC24V, 2700/3000K, IP67 WITH CHANNEL PANELS AND DRIVERS INCLUDED. SEE SHOP DRAWINGS.	LEKTRON LUMILINE 600-10XX	3.7W/FT	COORDINATE EXACT FIXTURE LENGTH AND LOCATIONS WITH ARCHITECTURAL ELEVATIONS AND LIGHTING SUPPLIER SHOP DRAWINGS.
US-EXT	1	VISO	EXIT SIGN, WHITE FINISH, 120V, 120 MIN EMERGENCY DURATION, SUITABLE FOR SINGLE OR DOUBLE-SIDED APPLICATIONS, 3.2 LBS	NA.TDL-VIS-US-EXT	2W	
-EM			WHERE LIGHT FIXTURE IS FOLLOWED BY "-EM" PROVIDE WITH EMERGENCY LIGHTING BATTERY PACK (90 MIN ILLUMINATION) FRONT OF HOUSE ONLY	NA.TDL-VIS-EBP	--	SEE GENERAL NOTE A.
Y	3	NORA LIGHTING	6" LED RECESSED DOWNLIGHT WITH SQUARE REFLECTOR, 3000K, BLACK FINISH	MODEL NHIC-6LMRAT HOUSING WITH NOXAC-563230WW REFLECTOR	12W	PROVIDED BY GENERAL CONTRACTOR. PURCHASE THROUGH ALLEN INDUSTRIES.
Z	2	KASON	SUPPLEMENTAL LED WALK-IN LIGHT FIXTURE	MODEL 1180900003	30W	PROVIDED BY GENERAL CONTRACTOR
P-1	4	SIGNIFY GARDCO	ECOFORM AREA LED ECF - SMALL, 48 LEDS, 4000K CCT, TYPE 4 OPTIC, NO SHIELD	ECF-S-48L-1.2A-NW-G2-4	182.71	FOR PRICING CONTACT ROBERT BRAHIER AT BRIGHT FOCUS SALES, BRAHIER@BRIGHTSALES.COM PHONE: 614-293-2611

### GENERAL NOTES

- "EM" UNITS SHALL OPERATE ON 120 VOLT SINGLE PHASE WITH NUMBER OF HEADS AS INDICATED ON PLAN. UNITS SHALL BE PLUG-IN TYPE WITH SEALED PURE LEAD BATTERIES. CHARGER SHALL BE COMPLETELY AUTOMATIC. SOLID STATE TYPE CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HOURS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF ON RETURN OF NORMAL POWER. UNITS SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
- CONNECT EXIT SIGNS, EMERGENCY AND NIGHT LIGHTS TO UNSWITCHED LIGHTING CIRCUIT, NOT CONTROLLED BY OCCUPANCY SENSORS, SWITCHES OR CONTACTORS.
- ALL CIRCUITS SHALL HAVE AN INDIVIDUAL NEUTRAL CONDUCTOR. NO SHARED NEUTRALS ARE PERMITTED.
- UPON COMPLETION OF ALL WORK (INCLUDING WORK BY TDL FORCES OR OTHER SYSTEM PROVIDERS), PROVIDE ALL STAINLESS STEEL COVER PLATES, INCLUDING BLANKS AND THOSE REQUIRED FOR DATA CABLES.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND DETAILS FOR LOCATION OF LIGHTING FIXTURES AND OTHER EQUIPMENT INSTALLED IN CEILING SYSTEM. VERIFY MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE (2) ADDITIONAL #12 CONDUCTORS FOR ALL 0-10V DIMMING CIRCUITS.

### CODED NOTES:

- NOTE NOT USED.
- CIRCUIT TO BE CONTROLLED BY LIGHTING CONTROL PANEL. REFER TO DETAIL 2 ON SHEET E3.1.
- NOTE NOT USED.
- PROVIDE WEATHERPROOF JUNCTION BOX WITH CONCEALED 20A/1P DISCONNECT FOR BUILDING SIGN. USE VHM DRILL BIT (SPECIALLY DESIGNED FOR PLASTICS, THERMOPLASTICS AND PLEXIGLASS) WHILE DRILLING FOR ELECTRICAL FEED LINES. JUNCTION BOX SHALL BE LOCATED UNDER ROOF DECK WITHIN 6" OF SIGN. COORDINATE EXACT LOCATION WITH SIGN SHOP DRAWINGS PRIOR TO ROUGH-IN.
- REMOTE POWER SUPPLIES (MEAN WELL HLG-185H-SPEC TYPE B OR EQUAL) WITH 0-10V DIMMING FOR EXTERIOR LED STRIP LIGHTING AT PERIMETER OVERHANG (ABOVE AND BELOW) AND CHANNEL LIGHTING. MOUNT IN ACCESSIBLE LOCATION AS HIGH AS POSSIBLE ON WALL ABOVE SUSPENDED CEILING FEATURE CONCEALED FROM PUBLIC VIEW BELOW. POWER SUPPLY MUST BE LOCATED WITHIN 64" OF END OF STRIP IT IS SUPPLYING. COORDINATE EXACT LOCATION WITH OWNER'S CONSTRUCTION MANAGER PRIOR TO ROUGH-IN. SEE SHEET AS SERIES FOR EXACT LOCATION OF LED STRIP LIGHTING. REFER TO DETAIL 3 ON SHEET E4.2.
- NOTE NOT USED.
- NOTE NOT USED.
- PROVIDE FINAL CONNECTION FOR CEILING MOUNTED EXHAUST FAN. FAN SHALL BE CONTROLLED BY ROOM LIGHT CONTROL. REFER TO DETAIL 2 ON SHEET E4.2.
- NOTE NOT USED.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL LED LIGHT FIXTURE(S) SHOWN. CONNECT FIXTURE(S) TO SAME CIRCUIT AS INTEGRAL WALK-IN LIGHTS. SEE POWER PLAN FOR ELECTRICAL CONNECTION OF WALK-IN LIGHT FIXTURES.
- CEILING MOUNTED MUSIC SYSTEM SPEAKER. COORDINATE SPEAKER INSTALLATION WITH CEILING TYPE. PROVIDE BACKBOX IF NEEDED AND 1/2" EMPTY CONDUIT WITH PULLSTRING ROUTED BACK TO MUSIC SYSTEM IN OFFICE AREA FOR SPEAKER CABLING.
- MUSIC SYSTEM MOUNTED IN OFFICE AREA. REFER TO DETAIL 4 ON SHEET E4.2.
- REMOTE DIMMER SWITCH FOR EXTERIOR LED STRIP LIGHTING AND TIMELOCK OVERRIDE SWITCH. REFER TO DETAIL 1 ON SHEET E3.1.
- PROVIDE WEATHERPROOF JUNCTION BOX WITH CONCEALED 20A/1P DISCONNECT FOR INTEGRAL CANOPY LIGHTING. USE VHM DRILL BIT (SPECIALLY DESIGNED FOR PLASTICS, THERMOPLASTICS AND PLEXIGLASS) WHILE DRILLING FOR ELECTRICAL FEED LINES. JUNCTION BOX SHALL BE LOCATED UNDER ROOF DECK WITHIN 6" OF SIGN. COORDINATE EXACT LOCATION WITH SIGN SHOP DRAWINGS PRIOR TO ROUGH-IN.

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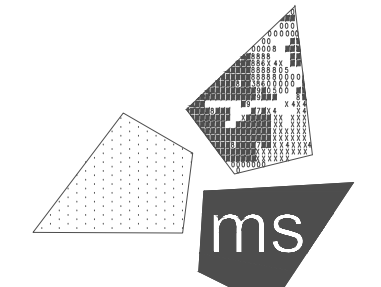
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*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728

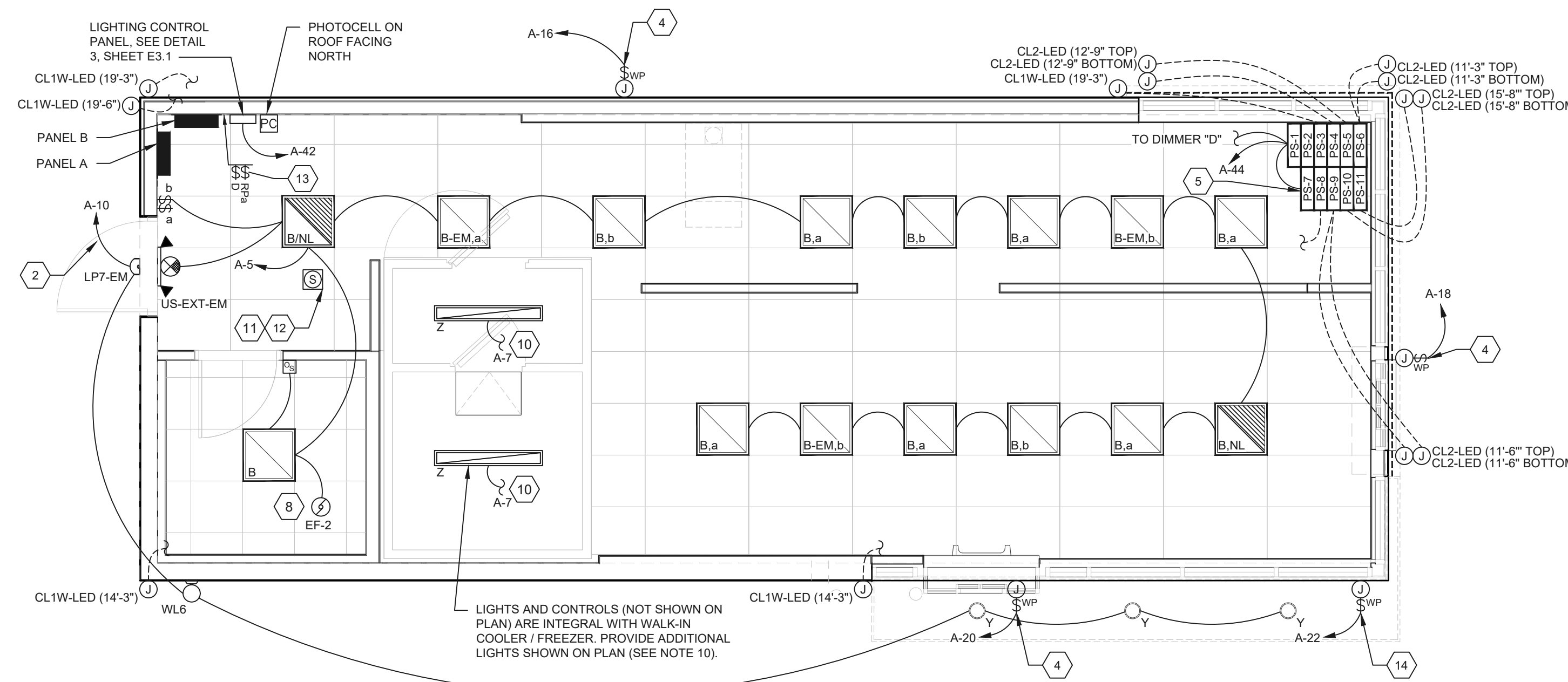


PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
LIGHTING PLAN

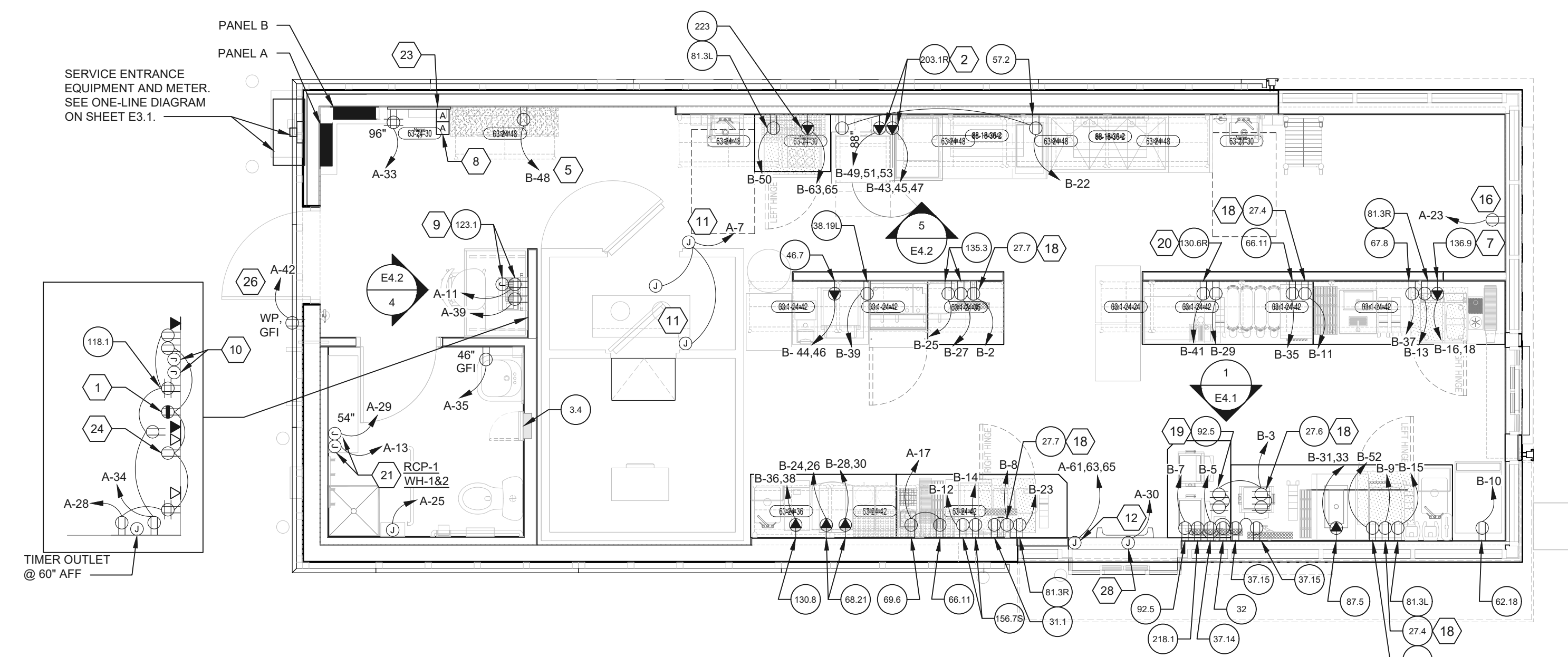
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E1.1



NOTE: ALL ELECTRICAL COVERPLATES SHALL MATCH ADJACENT WALL COLOR. REFER TO ARCHITECTURAL SHEET A10 FOR WALL COLORS.

LIGHTING PLAN 1  
1/4" = 1'-0"

File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\E2.1\_POWER PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:37 PM



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

**GENERAL NOTES**

- A. COORDINATE POWER REQUIREMENTS WITH ALL TRADES AND INCLUDE WORK REQUIRED TO POWER ALL KITCHEN EQUIPMENT, HVAC EQUIPMENT, COOLER/FREEZER, PLUMBING EQUIPMENT, SIGNAGE, LIGHTING, AND ALL OTHER EQUIPMENT/DEVICE REQUIRING POWER IN THE CONTRACT DOCUMENTS.
- B. VERIFY ALL ROUGH-IN DIMENSIONS AND POWER REQUIREMENTS WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
- C. VERIFY FAULT CURRENT FROM PRIMARY SERVICE AND ENSURE COMPATIBILITY OF DISTRIBUTION PANEL.
- D. ENSURE ADEQUATE CONDUIT SIZE FOR ELECTRICAL AND PHONE WIRING ON SITE AND INTO BUILDING.
- E. HEIGHTS INDICATED FOR RECEPTACLES AND JUNCTION BOXES ARE MEASURED FROM FINISHED FLOOR TO CENTER OF BOX.
- F. PROVIDE ALL TELEPHONE LINES. TELEPHONE LINES SHALL BE CATEGORY 6.
- G. ALL CIRCUITS MAY BE MODIFIED TO THE LEAST AMOUNT OF CONDUIT RUN UNLESS NOTED OTHERWISE.
- H. SEE SHEET E5.1 FOR REGISTER SYSTEM CONDUITS AND SHEET E4.1/2 FOR DETAILS.
- I. SEE KITCHEN EQUIPMENT WIRING SCHEDULE ON SHEET E3.2 FOR WIRING REQUIREMENTS AND MOUNTING HEIGHTS.
- J. ALL 120 VOLT, 15 AND 20 AMP RECEPTACLES IN THE KITCHEN SHALL BE GFCI PROTECTED PER CODE USING GFCI TYPE PERSONNEL PROTECTION BREAKERS.
- K. ALL CIRCUITS SHALL HAVE AN INDIVIDUAL NEUTRAL CONDUCTOR. NO SHARED NEUTRALS ARE PERMITTED.
- L. COLOR OF ALL PUBLIC AREA RECEPTACLES AND COVER PLATES SHALL MATCH ADJACENT WALL COLOR. REFER TO ARCHITECTURAL PLANS FOR WALL COLORS.
- M. ALL WIRING UNDER SLAB, IN WALLS, ABOVE INACCESSIBLE CEILINGS, OR AS REQUIRED BY CODE SHALL BE IN CONDUIT, WHERE LINE VOLTAGE WIRING IS NOT REQUIRED TO BE IN CONDUIT, PROVIDE JUNCTION BOX AND TRANSITION TO MC CABLE. WHERE LOW VOLTAGE WIRING IS NOT REQUIRED TO BE IN CONDUIT, PROVIDE BUSHING ON OPEN END OF CONDUIT.
- N. UPON COMPLETION OF ALL WORK (INCLUDES WORK BY TDL FORCES - SYSTEMS PROVIDER) PROVIDE ALL STAINLESS STEEL COVER PLATES, INCLUDING BLANKS AND THOSE REQUIRED FOR DATA CABLES.
- O. IF ALLOWED BY THE AUTHORITY HAVING JURISDICTION, MC CABLE MAY BE USED FOR BRANCH CIRCUIT RUNS, EXCEPT FIRST SEGMENT FROM ELECTRICAL PANEL TO NEAREST JUNCTION BOX. THIS SEGMENT SHALL USE HARD CONDUIT.
- P. DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLAN IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
- Q. ELECTRICAL RECEPTACLES MOUNTED BELOW COUNTER BEHIND FULL COUNTER-DEPTH KITCHEN EQUIPMENT (I.E. UNDERCOUNTER REFRIGERATORS, SANDWICH UNITS, ICE MACHINES, ETC) SHALL BE COUNTERSUNK INTO WALL TO ALLOW FRONT OF EQUIPMENT TO BE FLUSH WITH MILLWORK AND NOT STICK OUT BEYOND FRONT OF COUNTER.

**CODED NOTES:**

- 1. PROVIDE COMBINATION USB CHARGER, TAMPER-RESISTANT RECEPTACLES BY PASS & SEYMOUR MODEL #TR538USBLA OR APPROVED EQUAL. MOUNT VERTICALLY. COORDINATE EXACT LOCATION WITH OWNER'S CONSTRUCTION MANAGER PRIOR TO ROUGH-IN.
- 2. REFER TO DETAIL 5 ON SHEET E4.2 FOR MORE INFORMATION ON EQUIPMENT RECEPTACLE INSTALLATION.
- 3. NOTE NOT USED.
- 4. NOTE NOT USED.
- 5. PROVIDE RECEPTACLE FOR FILTRATION SYSTEM. COORDINATE REQUIREMENTS AND LOCATION WITH PLUMBING CONTRACTOR.
- 6. NOTE NOT USED.
- 7. RECEPTACLE FOR EQUIPMENT SHALL BE SURFACE-MOUNTED AND CONCEALED WITHIN MILLWORK. ROUTE CONDUIT CONCEALED WITHIN MILLWORK BACK TO NEAREST FULL-HEIGHT WALL AND BACK TO ELECTRICAL PANEL. COORDINATE RECEPTACLE LOCATIONS AND ROUTING OF CONDUIT WITH MILLWORK CONTRACTOR AND TIM HORTONS CONSTRUCTION MANAGER PRIOR TO COMMENCING WORK.
- 8. PROVIDE REMOTE ANNUNCIATOR FOR RTU DUCT SMOKE DETECTOR. COORDINATE LOCATION WITH AUTHORITY HAVING JURISDICTION. MAKE ALL REQUIRED INTERCONNECTIONS. COORDINATE ANNUNCIATOR REQUIREMENTS WITH RTU MANUFACTURER.
- 9. PROVIDE 20A RECEPTACLE AND SEPARATE JUNCTION BOX FOR MEDIA CABINET. VERIFY EXACT LOCATION IN FIELD. MOUNT APPROXIMATELY 9" BELOW CEILING. REFER TO DETAIL 6, SHEET E4.2.
- 10. 4"x4"x4" JUNCTION BOX. REFER TO DETAIL 4, SHEET E4.2 FOR MORE INFORMATION.
- 11. CONNECT 120 VOLT CIRCUIT FOR LIGHTING/HEATER CIRCUIT FROM PANEL TO JUNCTION BOX (FIELD LOCATE). CIRCUIT BREAKER SHALL BE GFCI TYPE. MAKE ALL REQUIRED CONNECTIONS IN JUNCTION BOX. LABEL JUNCTION BOX WITH CIRCUIT NUMBER.
- 12. PROVIDE ROUGH-IN FOR 20A, 200V, 3PH FUTURE AIR CURTAIN. ROUTE 3-#12 AND #12 GROUND IN 1/2" CONDUIT TO J-BOX WITH BLANK COVER PLATE. CAP AND LABEL CONDUCTORS ACCORDINGLY. FIELD VERIFY LOCATION PRIOR TO ROUGH-IN.
- 13. NOTE NOT USED.
- 14. NOTE NOT USED.
- 15. NOTE NOT USED.
- 16. RECEPTACLE SHALL BE WALL MOUNTED CENTERED 12" ABOVE WINDOW.
- 17. NOTE NOT USED.
- 18. PROVIDE DUPLEX RECEPTACLE, SINGLE GANG J-BOX FOR DATA AND SINGLE GANG OUTLET BOX FOR MONITOR. REFER TO "KITCHEN EQUIPMENT WIRING SCHEDULE" ON SHEET E3.2 FOR MOUNTING HEIGHT.
- 19. PROVIDE CEILING MOUNTED DUPLEX RECEPTACLE, SINGLE GANG J-BOX FOR DATA AND SINGLE GANG OUTLET BOX FOR MONITOR. REFER TO "KITCHEN EQUIPMENT WIRING SCHEDULE" ON SHEET E3.2 FOR ADDITIONAL INFORMATION.
- 20. LOCATE OUTLET FOR NITRO REFRIGERATOR AND TOWER CONCEALED WITHIN MILLWORK ON BACK WALL OF NITRO CUBBY ON SAME SIDE AS CUT OUT FOR TOWER ON BACK WALL UPPER CORNER - OPPOSITE CORNER WHERE FRIDGE WILL BE LOCATED, BUT NOT BEHIND CONTROL PANEL. COORDINATE WITH MILLWORK AND EQUIPMENT LAYOUT. COORDINATE LOCATION AND ELECTRICAL REQUIREMENTS FOR NITRO SYSTEM COMPRESSOR WITH MANUFACTURER'S INSTRUCTIONS IN FIELD.
- 21. PROVIDE (2) 20A, 120V CIRCUITS WITH 20A/1P TOGGLE DISCONNECTS FOR GAS WATER HEATERS AND RECIRCULATION PUMP. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
- 22. NOTE NOT USED.
- 23. PROVIDE 30" X 72" X 5/8" PLYWOOD SURFACE MOUNTED BACKBOARD ON WALL WITH QUAD RECEPTACLE MOUNTED AT BOTTOM OF BOARD. MOUNT TIGHT TO CEILING. PROVIDE #8 THHN GROUND CONDUCTOR, TERMINATED AT GROUNDING ELECTRODE CONDUCTOR, CONFORMING TO N.E.C. 800.40 AND LOCAL UTILITY REQUIREMENTS.
- 24. OFFICE PRINTER SHALL BE SOURCED, PROCURED AND INSTALLED BY THE OWNER. MOUNT RECEPTACLE FOR PRINTER AT +36" AFF.
- 25. NOTE NOT USED.
- 26. PROVIDE 20A, 120V WEATHERPROOF, GFI RECEPTACLE FOR BACKFLOW PREVENTER AND WATER METER HOT BOX. VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR AND CIVIL DRAWINGS PRIOR TO ROUGH-IN.
- 27. NOTE NOT USED.
- 28. PROVIDE 20A, 120V J-BOX WITH 20A/1P TOGGLE DISCONNECT MOUNTED AT +36" AFF FOR DRIVE-THRU WINDOW POWER.

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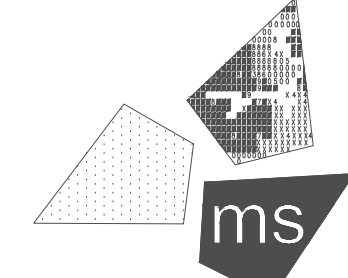
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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728

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PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

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PROJECT NO.:  
40509-11

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SHEET TITLE:  
**POWER PLAN**

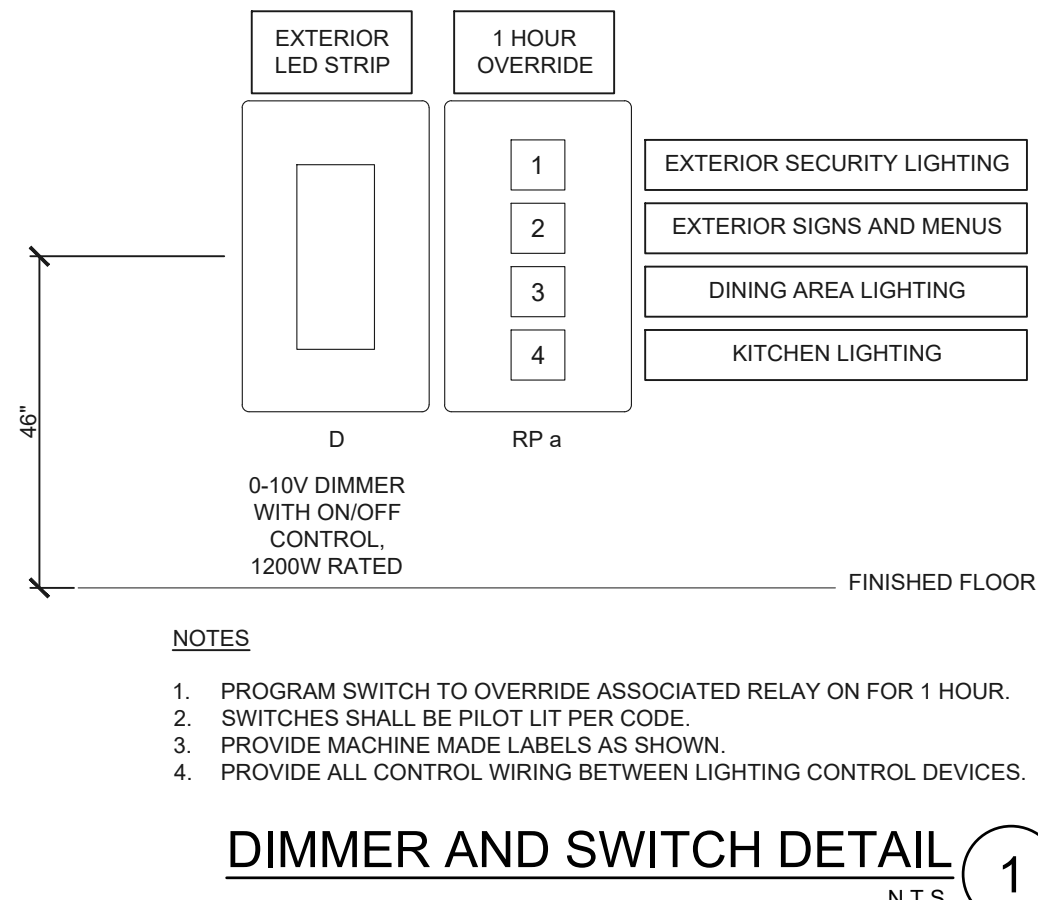
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**E2.1**

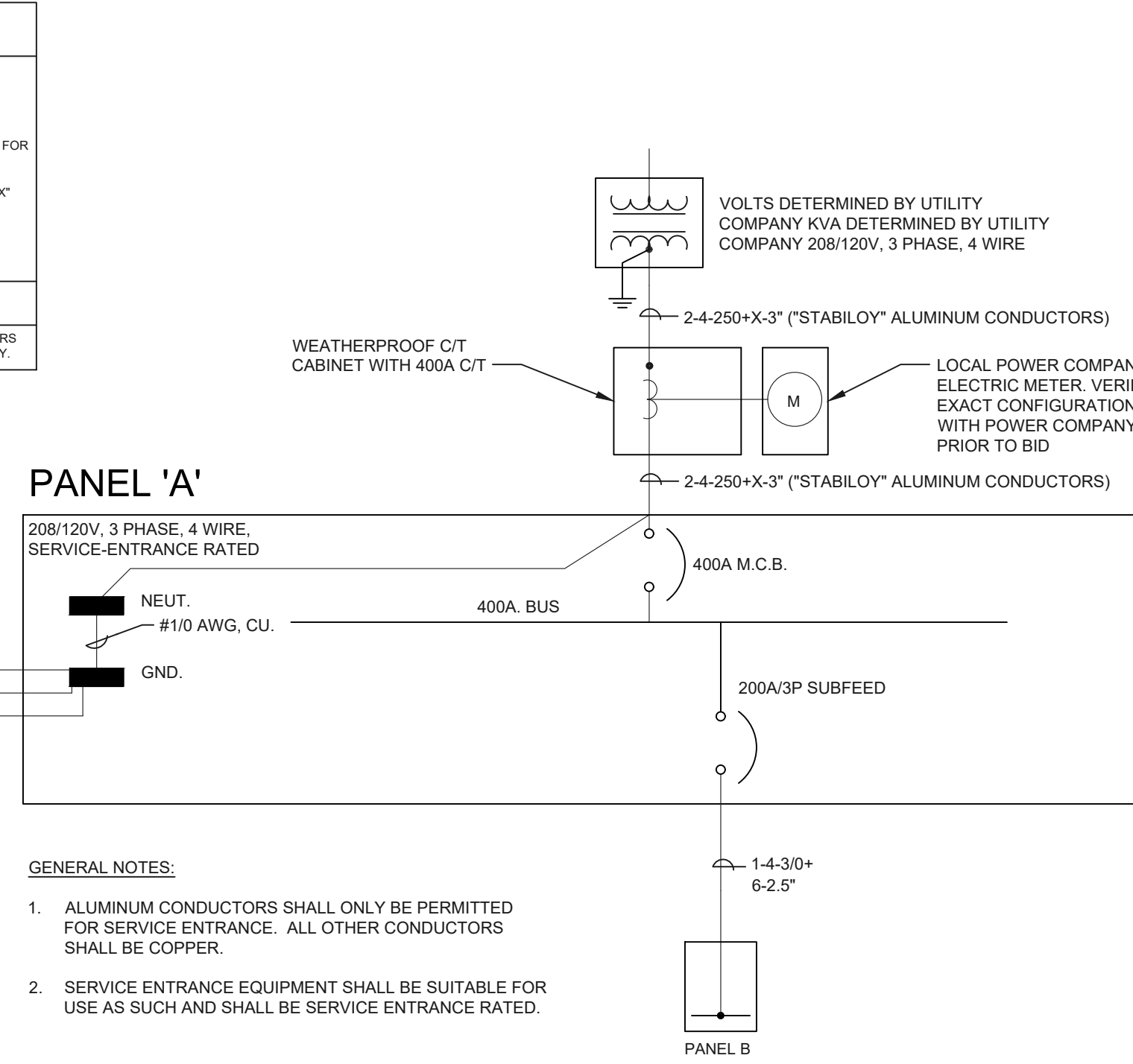
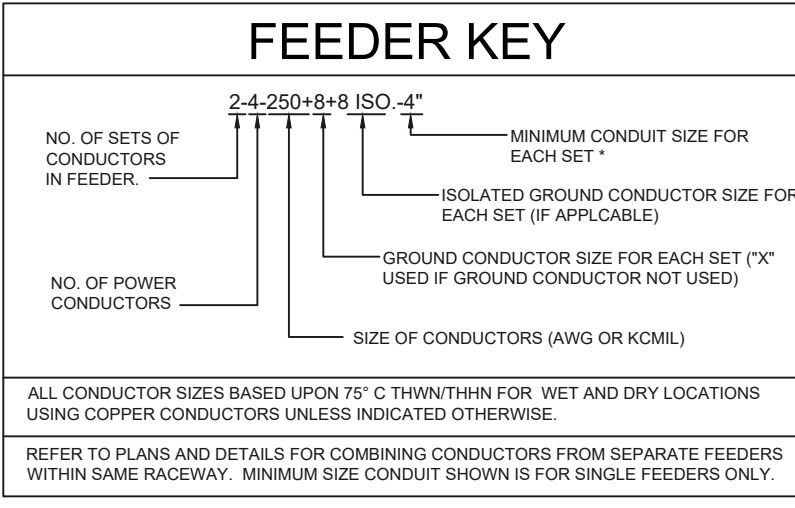




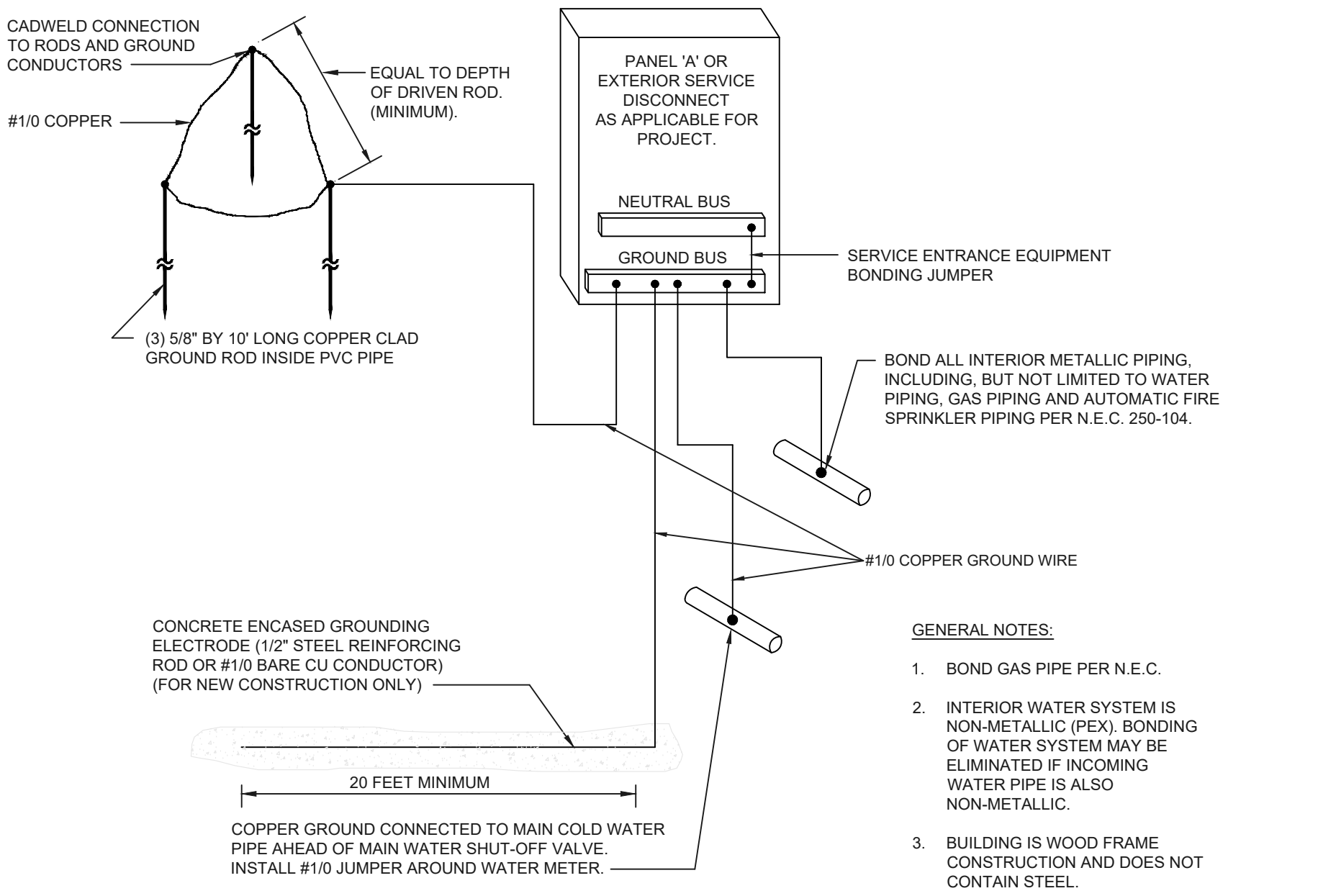
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DIMMER AND SWITCH DETAIL 1 N.T.S.



ELECTRIC ONE-LINE DIAGRAM 3 N.T.S.



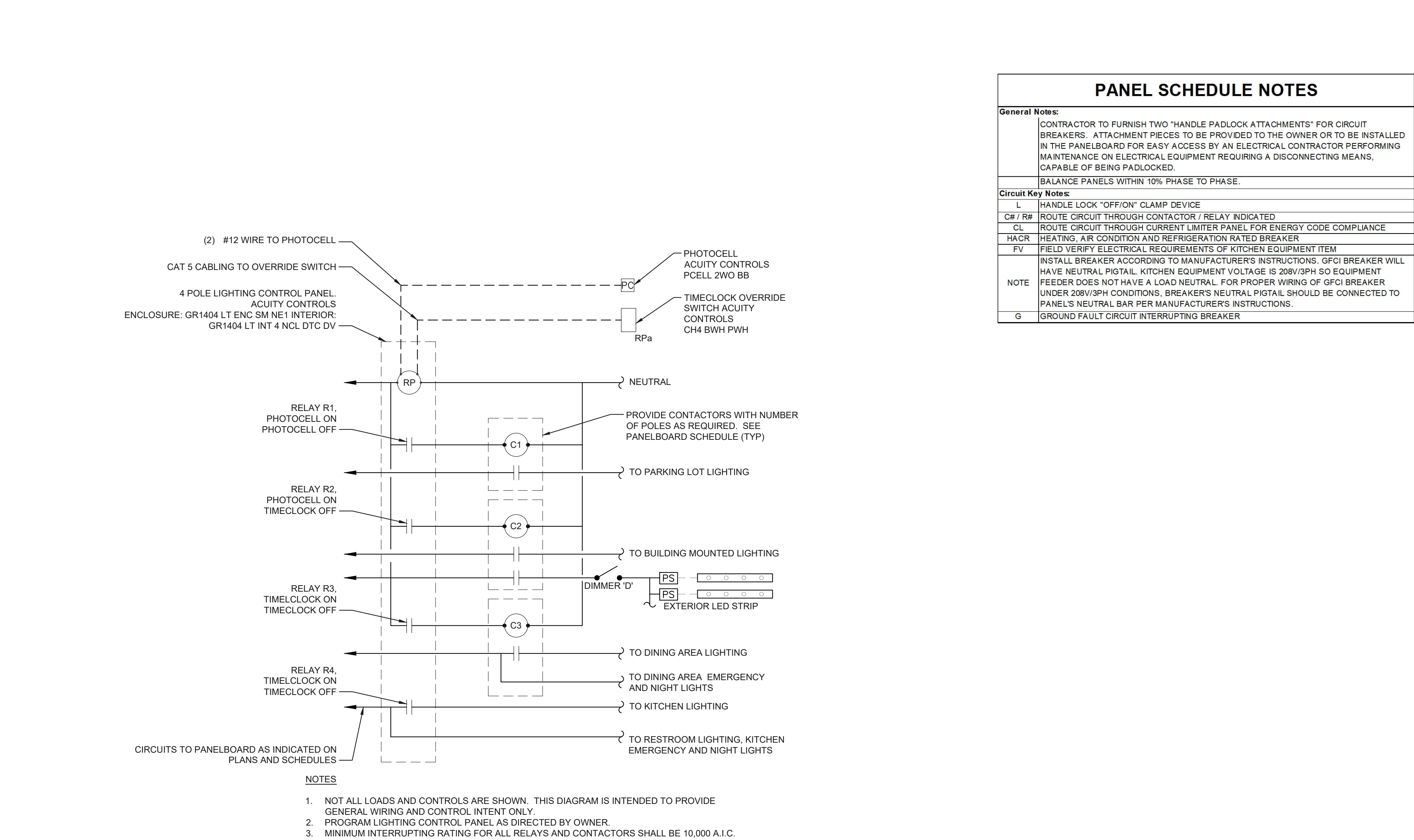
SERVICE ENTRANCE GROUNDING 4 N.T.S.

PANEL A table listing branch circuit descriptions, kVA, wire size, ground size, and breaker type. Includes electrical load summary table.

PANEL A ELECTRICAL LOAD SUMMARY

PANEL B table listing branch circuit descriptions, kVA, wire size, ground size, and breaker type. Includes electrical load summary table.

PANEL B ELECTRICAL LOAD SUMMARY



LIGHTING CONTROL DIAGRAM 2 N.T.S.

Approval and Issue information including checked by (KFF), issue date (07/12/2022), and issue description (PERMIT SET).

Revisions table with columns for #, date, and description.

NOTICE text regarding architectural and engineering drawing confidentiality and agreement.



PROJECT information: 19353 VERNIER ROAD, HARPER WOODS, MI 48225. STORE # 919728.



PROJECT NO.: 40509-11. SHEET TITLE: PANEL SCHEDULES AND RISER DIAGRAM. SHEET: E3.1.

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\IE3.1\_PANEL SCHEDULES AND RISER DIAGRAM.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:37 PM

KITCHEN EQUIPMENT WIRING SCHEDULE											
SYM #	ITEM	VOLTAGE PHASE	HP	KW	FLA	FEEDERS		TYPE OF CONNECTION	BRANCH BREAKER	MOUNTING HEIGHT	REMARKS
						WIRE	COND.				
3.4	HAND DRYER	120V, 1Ø	---	1.0	---	2 #10 & 1 #10 GRD	*	DIRECT	20A/1P	42"	COORDINATE JUNCTION BOX MOUNTING HEIGHTS WITH UNIT REQUIREMENTS.
27.4	10" MONITOR	120V, 1Ø	---	0.25	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	40"	◇
27.6	CRASH POINT MONITOR	120V, 1Ø	---	0.36	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	CLG	◇ COORDINATE RECEPTACLE LOCATION WITH MONITOR COLUMN MOUNT
27.7	23" MONITOR	120V, 1Ø	---	0.25	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	72"	◇
31.1	WIRELESS BASE STATION	120V, 1Ø	---	0.18	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	72"	◇ 6
32	BATTERY CHARGER	120V, 1Ø	---	0.18	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	48"	◇ 6
37.14 37.15	CASH REGISTER	120V, 1Ø	---	0.5	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	◇ AT DRIVE-THRU
38.19L	SANDWICH UNIT	120V, 1Ø	---	0.48	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	◇ DO NOT MOUNT ANY RECEPTACLES BEHIND THIS UNIT.
46.7	BAGEL TOASTER	208V, 1Ø	---	4.992	---	2 #10 & 1 #10 GRD	*	PLUG-CORD	30A/2P	48"	◇ NEMA 6-30R
57.2	FONDANT WARMER	120V, 1Ø	---	0.80	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	◇
62.18	ICE MACHINE	120V, 1Ø	---	1.656	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	◇ 9
66.11	INTELLISHOT DAIRY DISPENSER	120V, 1Ø	---	0.27	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	40"	◇
67.8	HOT POWDERED DRINK MACHINE	120V, 1Ø	---	1.8	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	40"	◇
68.21	COFFEE BREWER	120V/208V 1Ø, 3W	---	4.0	---	3 #10 & 1 #10 GRD	*	PLUG-CORD	30A/2P	48"	◇ 4 PRONG PLUG, 3' CORD, L14-30R RECEPTACLE #10 COND AT DRIVETHRU
69.6	SUGAR DISPENSER	120V, 1Ø	---	0.072	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	40"	◇
70	WALK-IN FREEZER	208V, 1PH	---	10.8	---	2#12 & 1 #12 GRD	*	DIRECT	20A/2P	-	◇ FIELD VERIFY ELECTRICAL REQUIREMENTS OF ITEM PRIOR TO COMMENCING WORK.
72.14 72.3	EXHAUST HOOD FANS	120V, 1Ø	---	0.75	---	2 #12 & 1 #12 GRD	*	DIRECT	20A/1P	-	EF-1
74	WALK-IN COOLER	120V, 1PH	---	1.7	---	2#12 & 1 #12 GRD	*	DIRECT	20A/1P	-	◇ FIELD VERIFY ELECTRICAL REQUIREMENTS OF ITEM PRIOR TO COMMENCING WORK.
81.3R 81.3L	UNDERCOUNTER REFRIGERATOR	120V, 1Ø	---	0.48	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	◇ 9
87.5	ICE CAPP MACHINE	208V, 1Ø	---	2.6	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/2P	40"	◇ NEMA 6-20R LOCATED IN VENTILATION AREA ABOVE COUNTER
92.5	LANE TIMER MONITOR	120V, 1Ø	---	---	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	CLG	◇ COORDINATE RECEPTACLE LOCATION WITH MONITOR COLUMN MOUNT
118.1	PORTAL COMPUTER - OFFICE	120V, 1Ø	---	0.6	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	---	◇
123.1	MEDIA ENGINE CABINET	120V, 1Ø	---	---	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	---	◇
130.6R	NITRO DISPENSER	120V, 1Ø	---	0.84	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	26"	◇ 6 9
130.8	ICE COFFEE BREWER	120/208V 1Ø, 3W	---	4.050	---	3 #10 & 1 #10 GRD	*	PLUG-CORD	30A/2P	48"	◇ 4 PRONG PLUG, 6' CORD, L14-30R RECEPTACLE
135.3	HOT HOLDING UNIT - ZX2	120V, 1Ø	---	0.84	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	61"	◇
136.9	ESPRESSO MACHINE	208V, 1Ø	---	4.6	---	2 #10 & 1 #10 GRD	*	PLUG-CORD	30A/2P	40"	NEMA L6-30R
156.7S	ICB INFUSION STAND - SINGLE	120V, 1Ø	---	---	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	48"	◇
203.1R	RATIONAL XS OVEN RIGHT HINGE	208V, 3Ø, 4W	---	5.7	---	3 #10 & 1 #10 GRD	*	PLUG-CORD	30A/3P	18"48"	◇ NEMA 15-30R RECEPTACLE
218.1	RECEIPT PRINTER - STICKY PAPER	120V, 1Ø	---	0.18	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/1P	20"	
223	EGG COOKER	208V, 1Ø	---	3.0	---	2 #12 & 1 #12 GRD	*	PLUG-CORD	20A/2P	20"	NEMA L6-20R

◇ KITCHEN SCHEDULE CODED NOTES:

1. RECEPTACLE NEMA CONFIGURATION FOR EQUIPMENT SHALL MATCH PLUG TYPE PROVIDED WITH POWER CORD. COORDINATE WITH EQUIPMENT SUPPLIER FOR REQUIREMENTS.
2. PROVIDE PLUG AND CORD.
3. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF ELECTRICAL CONNECTIONS. VERIFY MOUNTING HEIGHTS IN FIELD WITH PROJECT MANAGER, MILLWORK AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
4. MOUNT AT 48" A.F.F. EXCEPT FOR BACK COUNTER EQUIPMENT WHICH SHALL BE MOUNTED AT +14" A.F.F.
5. SEE DETAIL 5 ON SHEET E4.2.
6. PROVIDE DUPLEX RECEPTACLE ONLY WITH MOUNTING ROOM FOR TRANSFORMER.
7. INSTALLATION OF FREEZER/COOLER SHALL BE BY OWNER. ALL WIRING BY EC.
8. MOUNT RECEPTACLE FOR TOWER AND REFRIGERATOR TO UPPER CORNER WALL OF MILLWORK. SEE 7/A9 FOR ADDITIONAL DETAILS. PROVIDE ADDITIONAL ELECTRICAL CONNECTION FOR NITRO COMPRESSOR. COORDINATE LOCATION AND ELECTRICAL REQUIREMENTS IN FIELD.
9. ELECTRICAL RECEPTACLE FOR EQUIPMENT MOUNTED BELOW COUNTER BEHIND FULL COUNTER-DEPTH KITCHEN EQUIPMENT (I.E. UNDERCOUNTER REFRIGERATORS, SANDWICH UNITS, ICE MACHINES, ETC) SHALL BE COUNTERSUNK INTO WALL TO ALLOW FRONT OF EQUIPMENT TO BE FLUSH WITH MILLWORK AND NOT STICK OUT BEYOND FRONT OF COUNTER.

\* ALL CONDUITS SHALL BE MINIMUM 3/4", OR 1" WHERE UNDER SLAB OR AS OTHERWISE NOTED.

DRAWN BY NWO

CHECKED BY APPROVED BY KFF

ISSUE DATE 07/12/2022

ISSUE

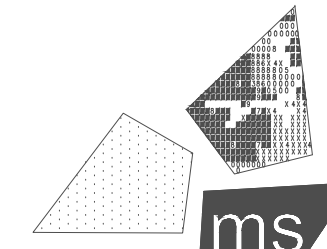
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phone 614.898.7100  
fax 614.898.7570



PROJECT:

19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**KITCHEN EQUIPMENT SCHEDULE**

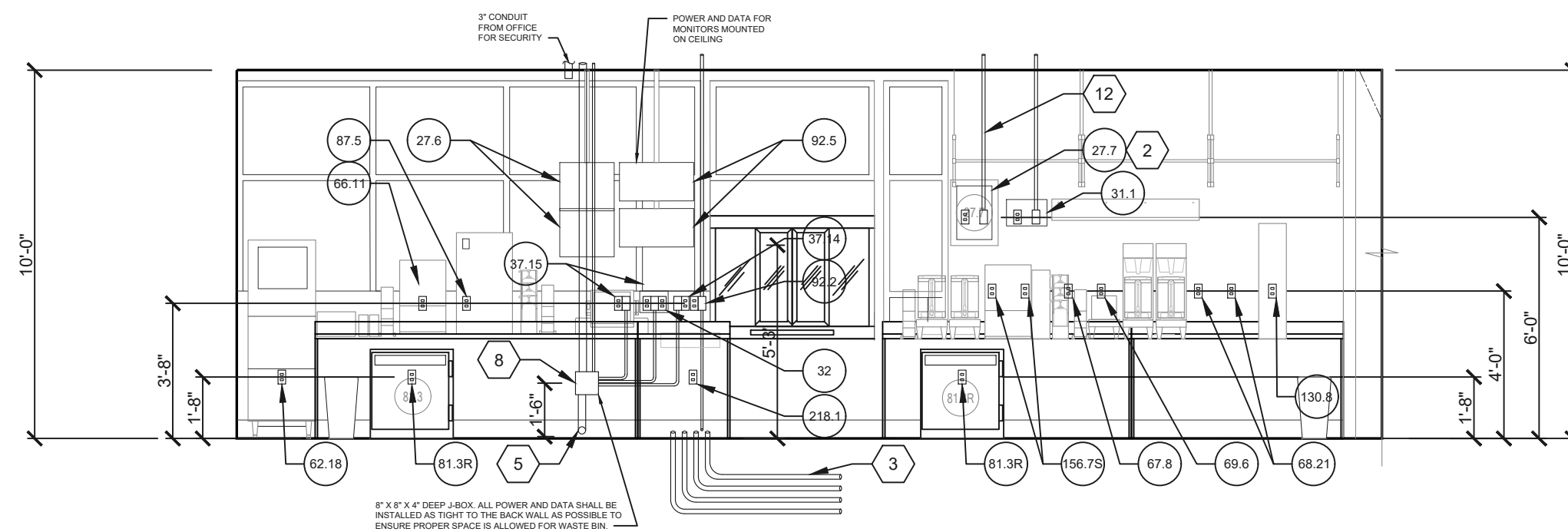
SHEET:  
**E3.2**

**GENERAL NOTES**

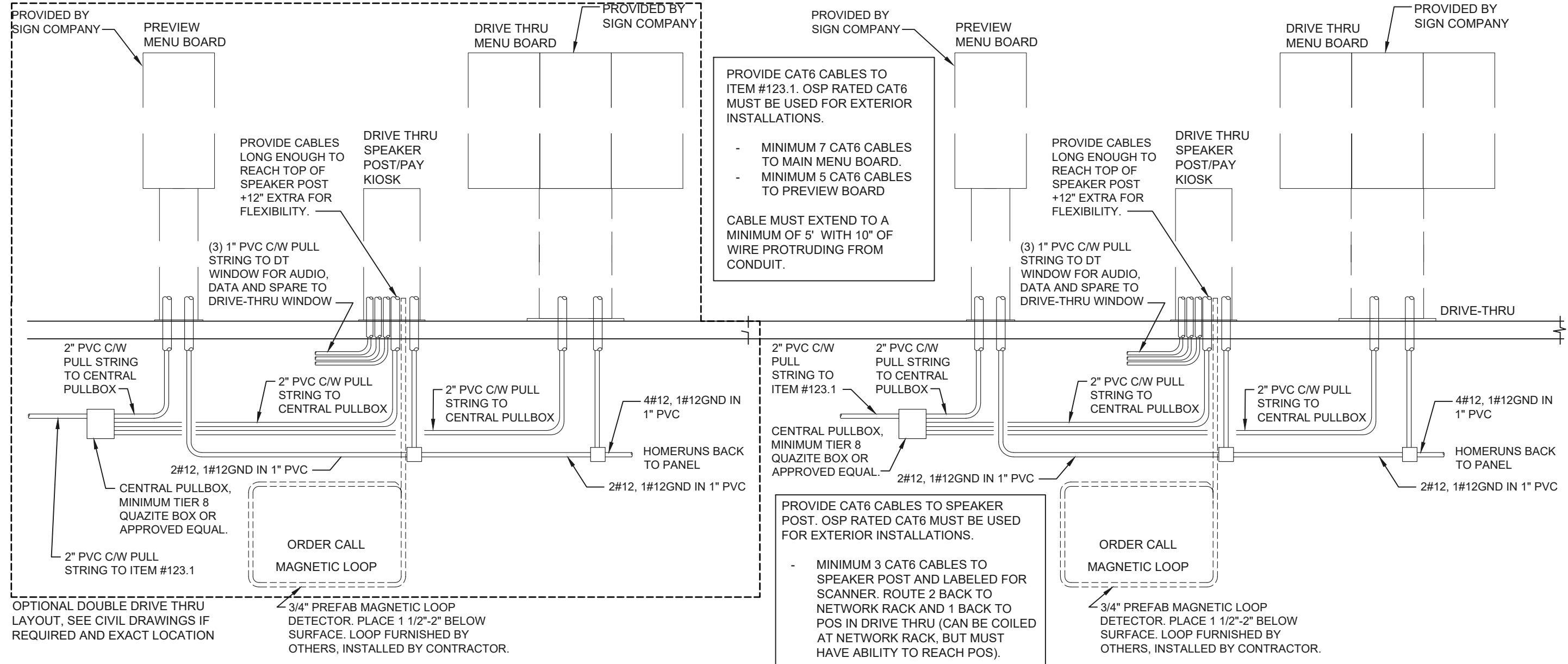
- A. ALL DETAILS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO REVIEW SITE SPECIFIC MILLWORK SHOP DRAWINGS PRIOR TO ROUGH IN AND COORDINATE ROUGH IN LOCATIONS WITH MILLWORK ACCESS.
- B. MILLWORK AND DEVICES SHOWN FOR REFERENCE ONLY. MOUNT DEVICES IN EXTERIOR WALL ONLY WHERE ACCESSIBLE THROUGH MILLWORK. FIELD VERIFY WITH MILLWORK SUPPLIER FOR EXACT SIZES, LOCATIONS AND REQUIREMENTS.

**# DETAILS CODED NOTES:**

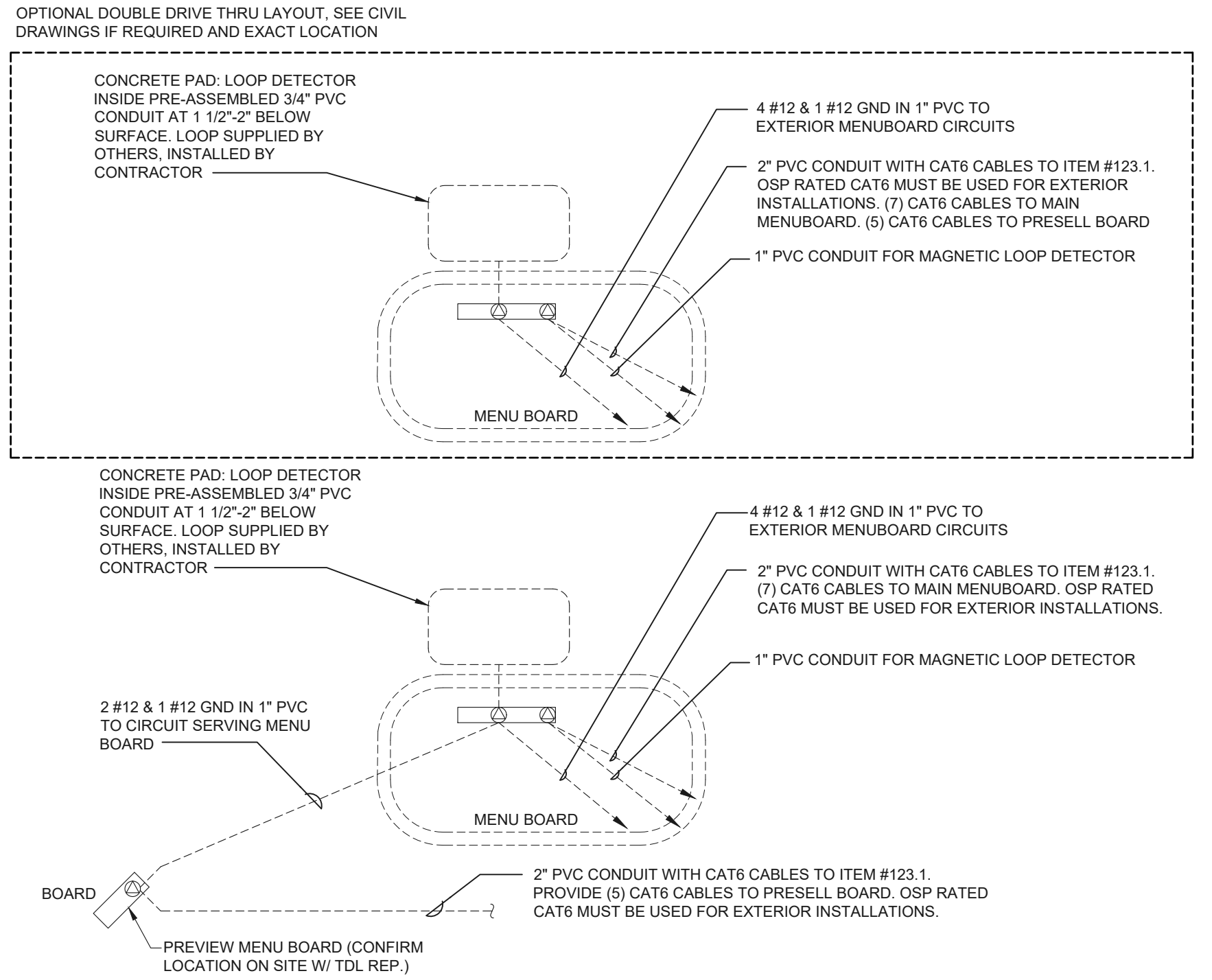
1. NOTE NOT USED.
2. WALL MOUNT MONITOR BRACKET PROVIDED BY TDL. ENSURE ADEQUATE PLYWOOD BACKING IN WALL FOR SUPPORT.
3. (1) 1" CONDUIT TO TIMER LOOP AND (3) 1" TO EXTERIOR D/T SPEAKER POST/MENU BOARD (PER DRIVE THRU LANE) STUBBED OUT OF FLOOR IN KICK SPACE OF CABINET.
4. NOTE NOT USED.
5. 3" CONDUIT FROM 8" X 8" JUNCTION BOX TO KICK SPACE IN CABINET.
6. NOTE NOT USED.
7. NOTE NOT USED.
8. 8" X 8" JUNCTION BOX MUST BE MOUNTED IN 1ST COMPARTMENT, SINCE 2ND IS NOT ACCESSIBLE.
9. NOT NOT USED.
10. DETAIL IS DIAGRAMMATIC ONLY. REFER TO ARCHITECTURAL DRAWINGS AND SITE SPECIFIC MILLWORK SHOP DRAWINGS PRIOR TO ROUGH IN AND ADJUST TO SUIT.
11. ALL CONDUIT ABOVE GROUND SHALL BE EMT.
12. 1" CONDUIT FROM CEILING TERMINATING IN SINGLE GANG JUNCTION BOX WITH COVER PLATE.



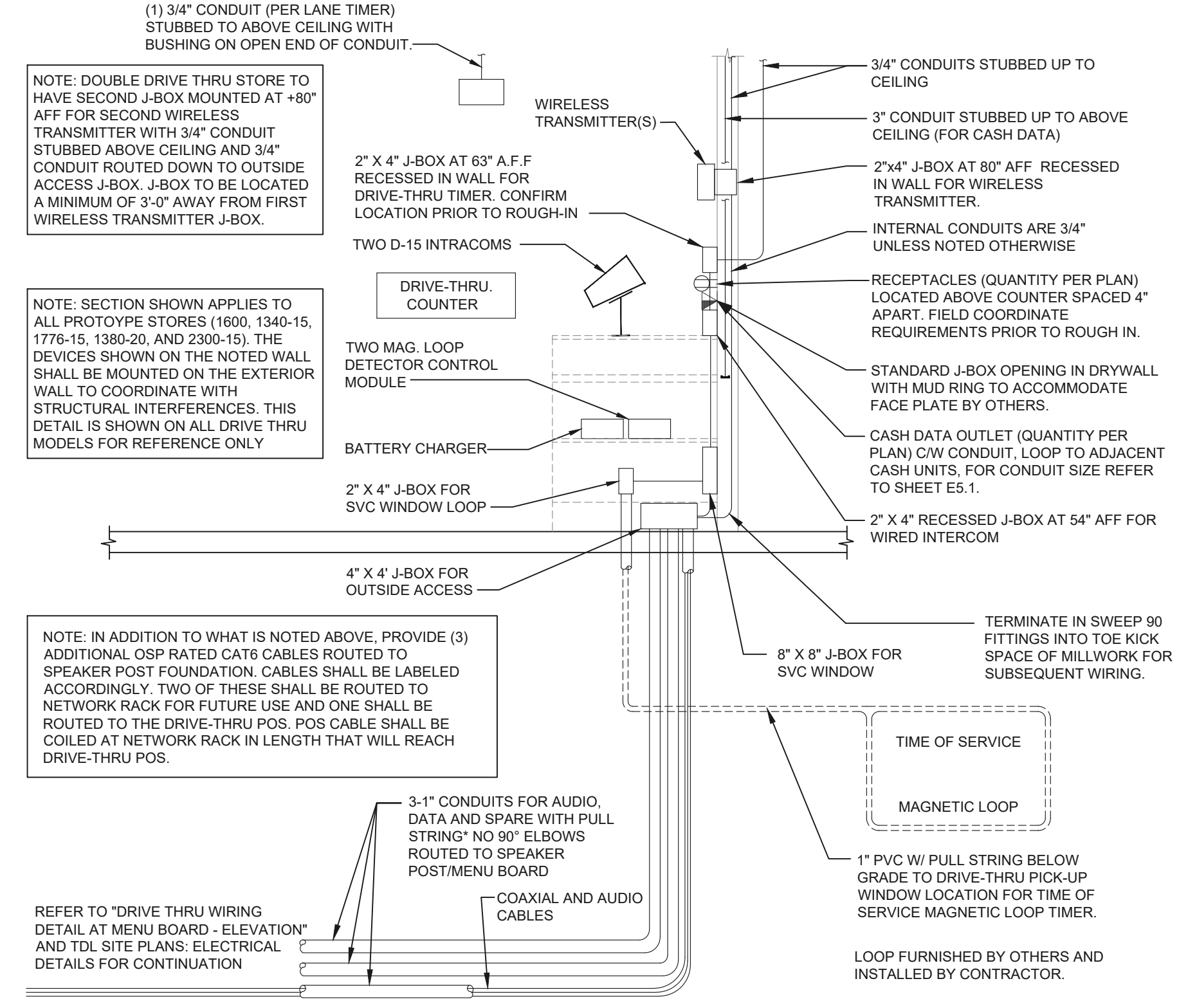
**DRIVE-THRU WINDOW DETAIL 1**  
N.T.S.



**DRIVE-THRU WIRING DETAIL AT MENU BOARD - ELEVATION 4**  
N.T.S.



**DRIVE-THRU WIRING DETAIL AT MENU BOARD - PLAN 5**  
N.T.S.



**DRIVE-THRU WIRING DETAIL AT D.T. COUNTER 3**  
N.T.S.

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CHECKED BY: KFF  
APPROVED BY:

ISSUE DATE: 07/12/2022

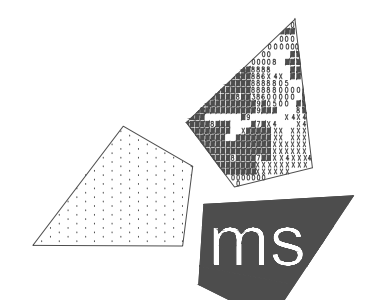
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**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
**STORE # 919728**

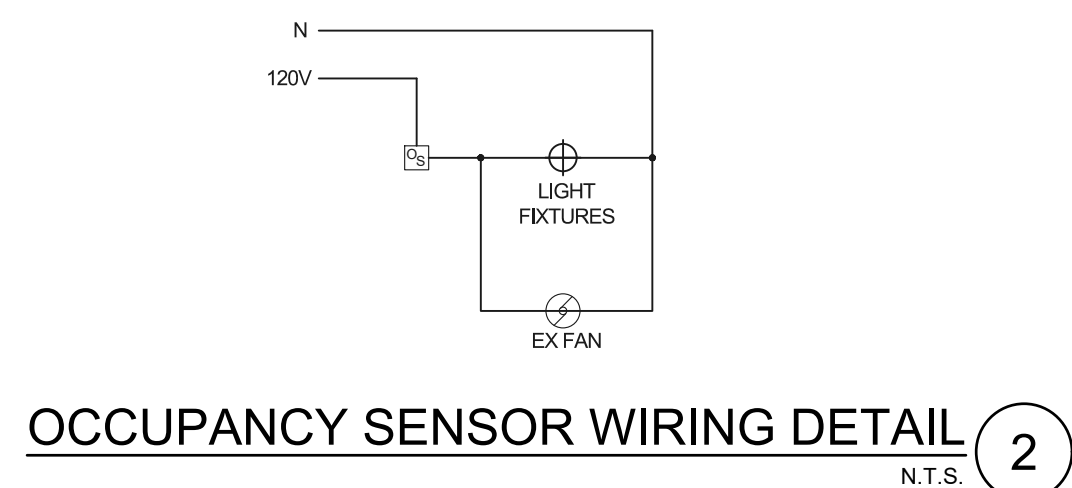
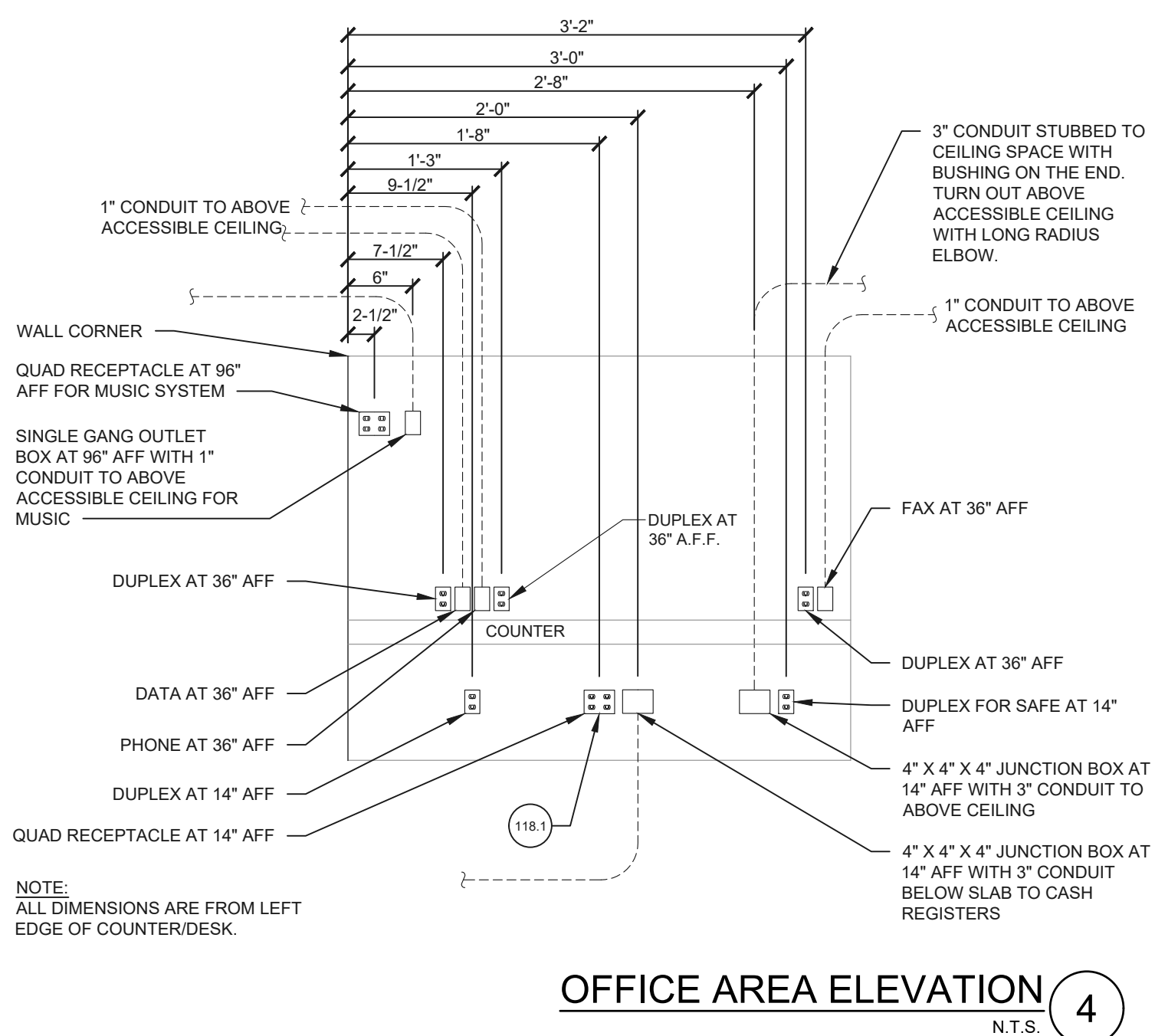
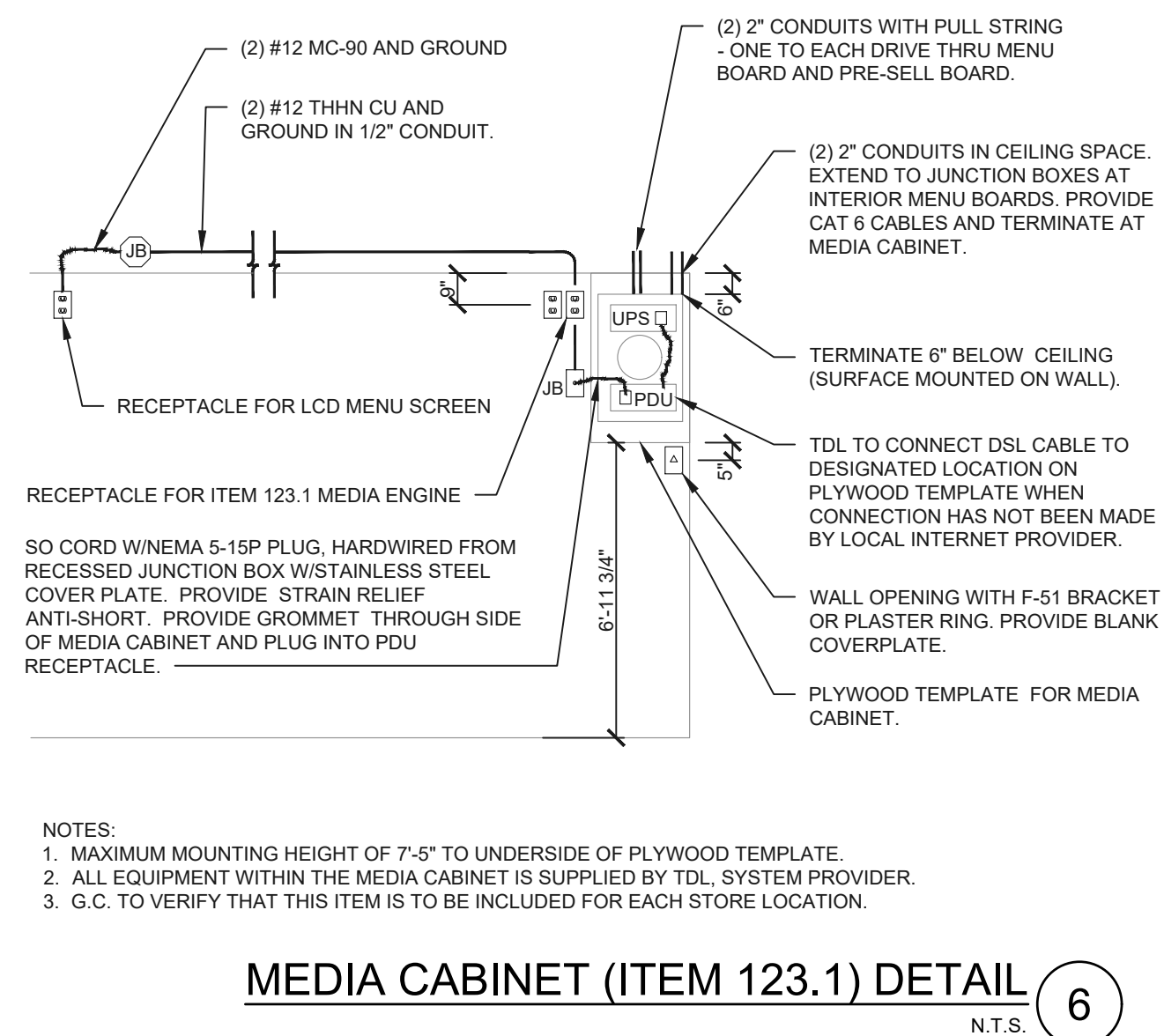
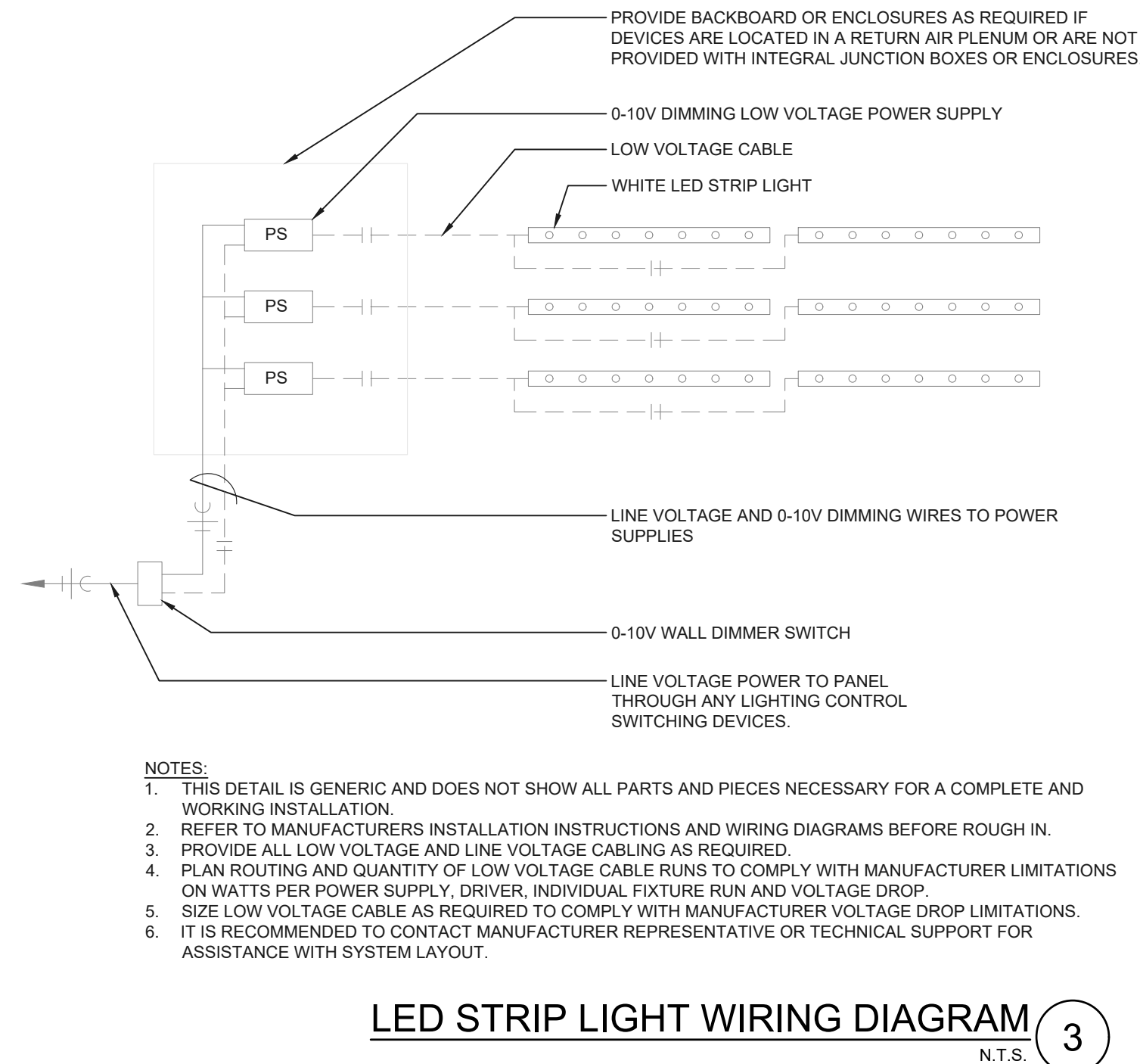
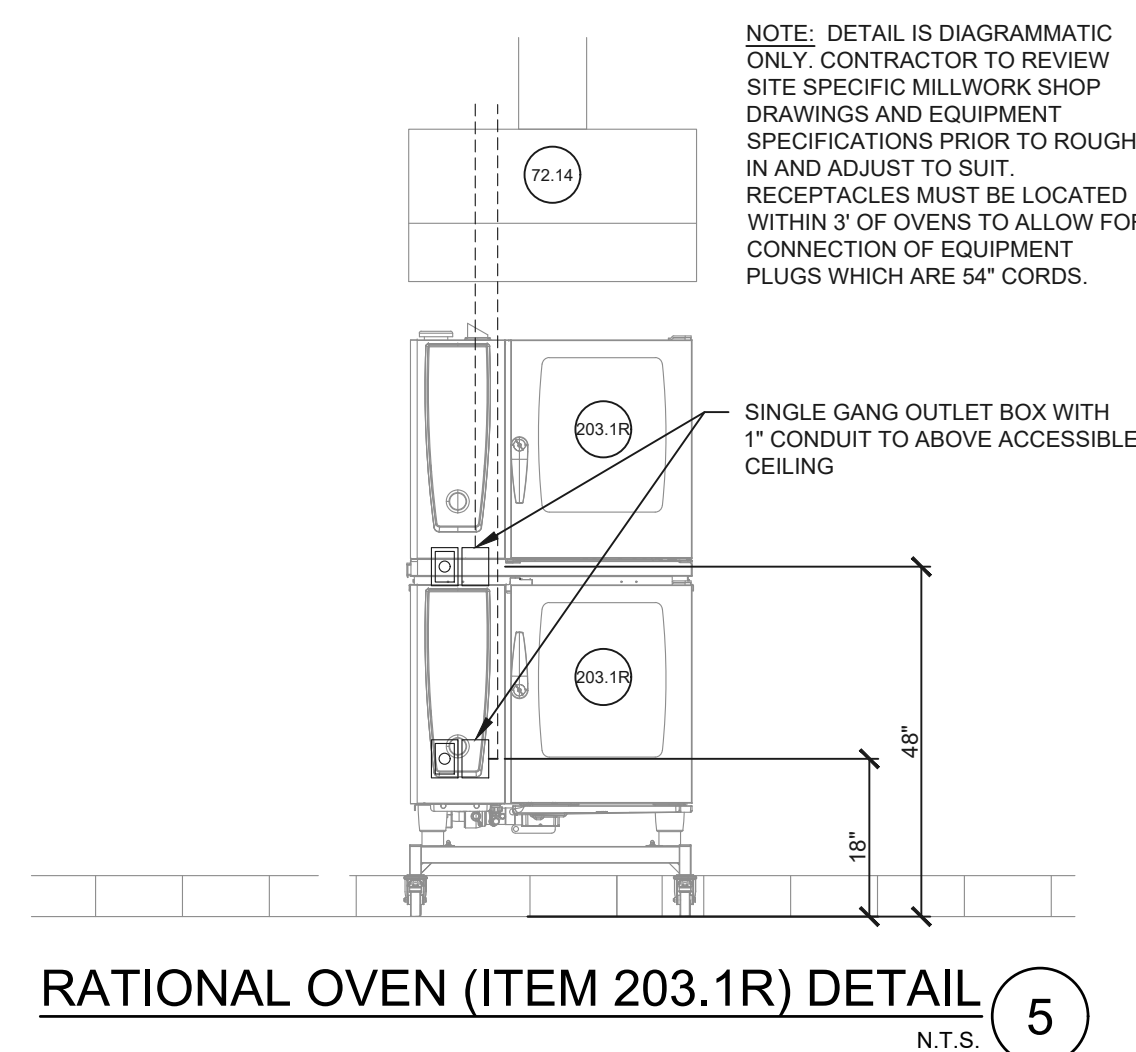


PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**ELECTRICAL DETAILS AND SCHEDULES**

SHEET: **E4.1**



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NWO

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07/12/2022

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**PROJECT:**  
 19353 VERNIER ROAD  
 HARPER WOODS, MI 48225  
 STORE # 919728



PROFESSIONAL OF RECORD:  
 JASON E. CHRISTOFF No. 6201061051  
 EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
**ELECTRICAL DETAILS**

SHEET:  
**E4.2**

File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IE5.1\_TELEPHONE PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:38 PM

# CODED NOTES:

1. DEVICE MOUNTED ON INSIDE OF MILLWORK. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATIONS AND MILLWORK SHOP DRAWINGS. WIRING TO DEVICE TO BE ROUTED CONCEALED WITHIN CASEWORK THROUGH JUNCTION BOX (SEE NOTE 6).
2. 1" CONDUIT WITH SINGLE GANG MINIMUM SIZE JUNCTION BOX FOR HEADSET AT 60" A.F.F. TO ABOVE CEILING.
3. 1" CONDUIT WITH SINGLE GANG MINIMUM SIZE JUNCTION BOX AT 2" A.F.F. UNDER COUNTER TO DRIVE-THRU WINDOW.
4. NOTE NOT USED.
5. EXTEND (1) 1" EMPTY CONDUIT WITH PULL STRING FROM MONITOR JUNCTION BOX UP THROUGH CEILING FOR DATA CABLES TO KITCHEN ORDER PROCESSOR. REFER TO KITCHEN EQUIPMENT SCHEDULE ON E3.1 FOR DATA OUTLET MOUNTING HEIGHT. COORDINATE EXACT LOCATION OF PROCESSOR WITH OWNER PRIOR TO ROUGH-IN.
6. NOTE NOT USED.
7. ROUTE 3" CONDUIT WITH PULL STRING OVERHEAD FOR SECURITY WITH 4" X 4" X 4" MINIMUM SIZE JUNCTION BOX AT 14" A.F.F. TO DRIVE-THRU COUNTER. REFER TO DETAIL 4 ON SHEET E4.2.
8. 3" CONDUIT WITH 4" X 4" X 4" MINIMUM SIZE JUNCTION BOX AT 14" A.F.F. TO ABOVE ACCESSIBLE LAY-IN CEILING. INSTALL BUSHING ON CONDUIT END. REFER TO DETAIL 4 ON SHEET E4.2.
9. ROUTE IN-HOUSE PHONE LINES FROM TELEPHONE SYSTEM TO TELEPHONE OUTLETS. LINES SHALL BE CATEGORY 6.
10. INSTALL TELEPHONE EQUIPMENT IN THIS 4' X 4' SPACE, KEEPING EQUIPMENT AS HIGH AND AS COMPACT AS POSSIBLE. 4' HEIGHT IS TO BE MEASURED STARTING AT THE CEILING AND THEN DOWN 4'.
11. PHONE JACK FOR CREDIT CARD MACHINE INSTALLED AT 1'-0" A.F.F.. ELECTRICAL CONTRACTOR SHALL RUN IN HOUSE PHONE LINES FROM TELEPHONE SYSTEM TO PHONE JACK. PHONE LINES SHALL BE CATEGORY 6.
12. NOTE NOT USED.
13. 2" CONDUIT FROM MEDIA CABINET TO MENU BOARD, SPEAKER POST AND PRE-SELL BOARD. USE LONG RADIUS ELLS FOR ALL BENDS. SEE DETAIL 4/E4.2 FOR FURTHER INFORMATION.
14. PROVIDE (3) 1" CONDUITS FROM DRIVE-THRU WINDOW TO MENU BOARD/SPEAKER POST - ONE FOR COAX/AUDIO, ONE FOR DATA AND ONE FOR SPARE. CONDUITS TO TERMINATE AT KICK PLATE OF MILLWORK IN ORDER TO NOT INTERFERE WITH MILLWORK COUNTER. MILLWORK COMPANY TO PROVIDE ACCESS PANEL. REFER TO SHEETS E4.1 AND AS2.1 FOR DETAILS. CONTRACTOR TO COORDINATE ROUTING OF CONDUITS TO OUTDOOR MENUBOARDS IN FIELD BASED ON ACTUAL SITE CONDITIONS.
15. 3/4" CONDUIT FROM ABOVE CEILING TO JUNCTION BOX AT 72" A.F.F. FOR TIMER, THEN DOWN TO BELOW COUNTER AT NOTE 3.
16. READER, 3/4" CONDUIT TO ABOVE CEILING.
17. ONE 1" CONDUIT TO MENU BOARDS FOR POWER. EXTEND POWER CONDUIT TO PANEL. REFER TO SHEET AS2.1 AND E4.1 FOR DETAILS.
18. TWO 3" CONDUITS FOR TELEPHONE SERVICE. SEE SITE PLAN FOR CONTINUATION.
19. 2" CONDUIT TO MENU BOARD, SPEAKER POST AND PRE-SELL BOARD. VERIFY LOCATION WITH CIVIL PLANS BEFORE ROUGH-IN.
20. NOTE NOT USED.
21. INSTALL DATA OUTLET WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING RATIONAL OVEN. REFER TO DETAIL 5 ON SHEET E4.2.

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KFF

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07/12/2022

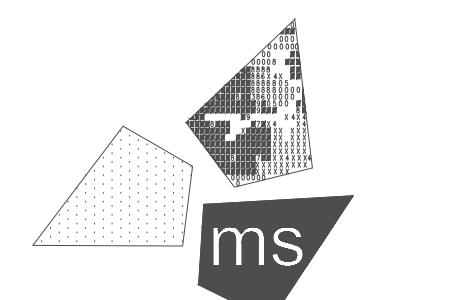
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#	DATE	DESCRIPTION

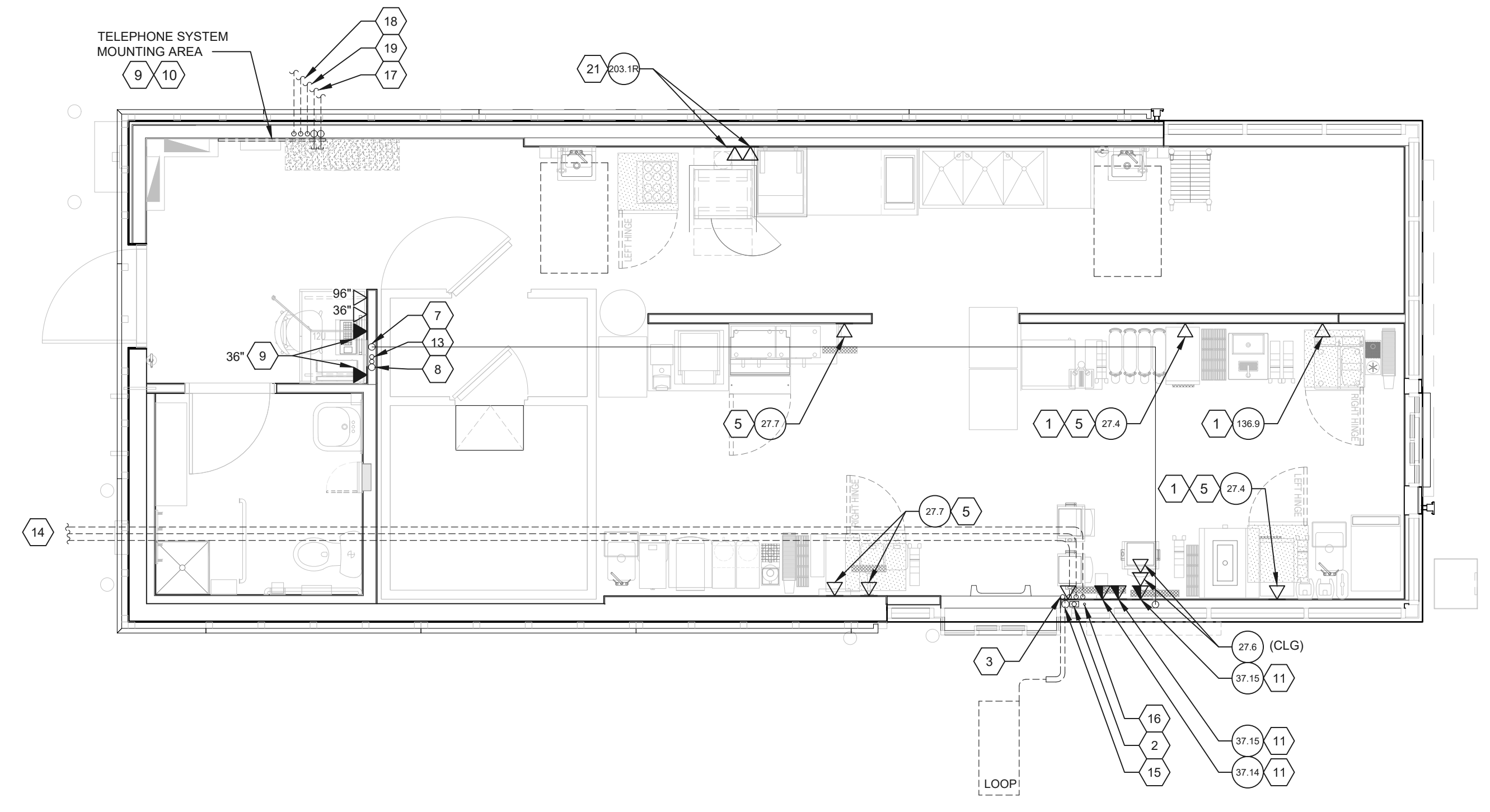
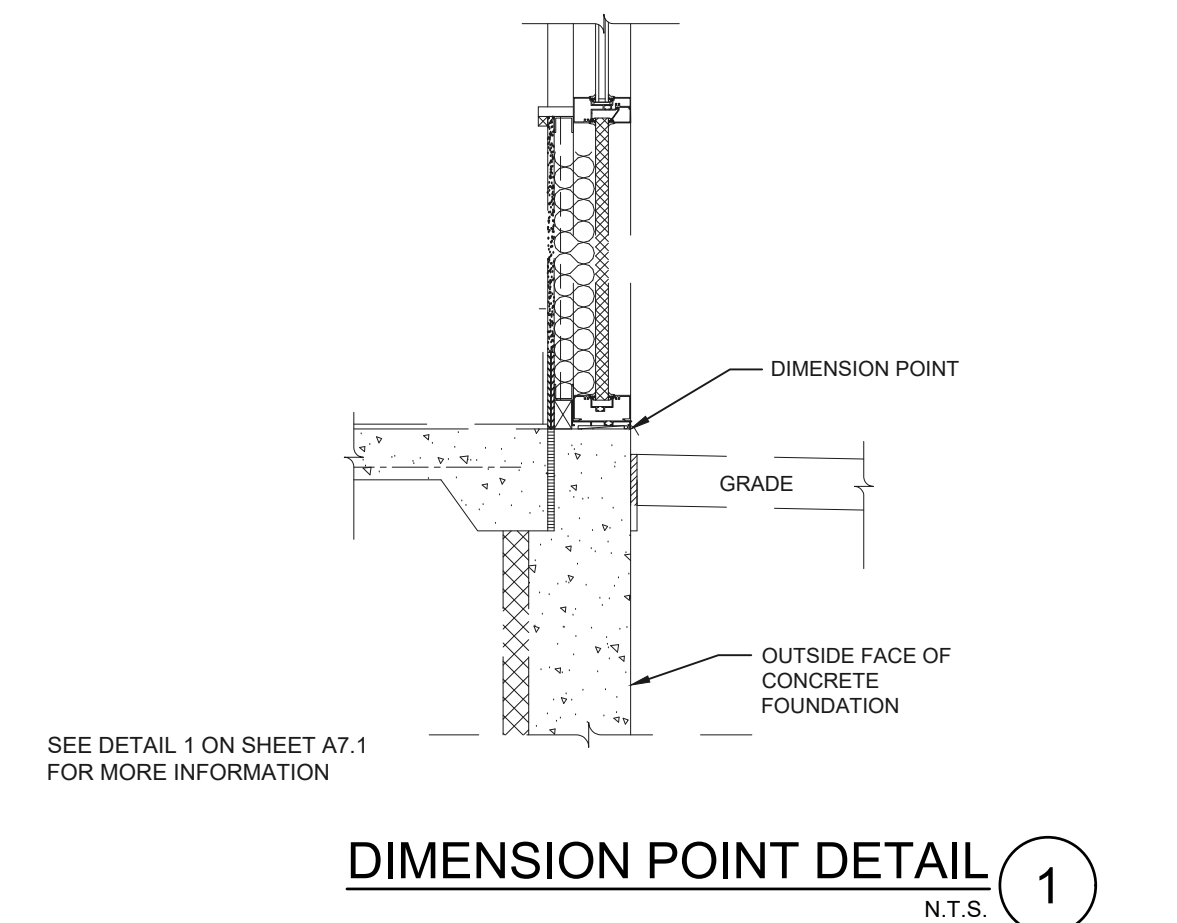
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phone 614.898.7100  
fax 614.898.7570

*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



TELEPHONE AND REGISTER SYSTEMS PLAN **2**  
1/4" = 1'-0"



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
TELEPHONE PLAN

SHEET:  
E5.1

COMcheck Software Version COMcheckWeb  
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC  
Project Title: 40509-11 THUS Harper Woods, MI  
Project Type: New Construction

Construction Site: 19353 Vernier Road, Harper Woods, Michigan 48225  
Owner/Agent: ms consultants, inc, 2221 Schrock Road, Columbus, Ohio 43229, 614-878-7100  
Designer/Contractor: Tim Hortons

Additional Efficiency Package(s)  
Credits: 1.0 Required 1.0 Proposed  
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Common Space Types:Food Preparation	733	1.09	799
2-Common Space Types:Restrooms	58	0.88	51
Total Allowed Watts =			850

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture Watt.	D Fixture (C X D)	E
1-Common Space Types:Food Preparation				
LED: B: Other:	1	14	40	560
LED: Z: Other:	1	2	30	60
2-Common Space Types:Restrooms				
LED: B: Other:	1	1	40	40
Total Proposed Watts =			660	

Interior Lighting PASSES: Design 22% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jason E. Christoff - PE  
Name - Title Signature Date 06/30/22

Project Title: 40509-11 THUS Harper Woods, MI Report date: 06/30/22  
Data filename: Page 1 of 12

Jason E. Christoff - PE  
Name - Title Signature Date 06/30/22

Project Title: 40509-11 THUS Harper Woods, MI Report date: 06/30/22  
Data filename: Page 3 of 12

COMcheck Software Version COMcheckWeb  
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC  
Project Title: 40509-11 THUS Harper Woods, MI  
Project Type: New Construction  
Exterior Lighting Zone: 2 (Residential mixed use area (L22))

Construction Site: 19353 Vernier Road, Harper Woods, Michigan 48225  
Owner/Agent: ms consultants, inc, 2221 Schrock Road, Columbus, Ohio 43229, 614-878-7100  
Designer/Contractor: Tim Hortons

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	33287 ft2	0.06	Yes	1997
Drive-up windows/doors	1 windows	400	No	400
Main entry	3 ft of door	20	Yes	60
Total Tradable Watts (a) =				2057
Total Allowed Watts =				2457
Total Allowed Supplemental Watts (b) =				600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.  
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture Watt.	D Fixture (C X D)	E
Parking area (33287 ft2): Tradable Wattage				
LED: PL-1: Other:	1	4	193	731
LED: CL-LED: Other:	1	1	379	379
LED: CL1W-LED: Other:	1	1	316	316
Drive-up windows/doors (1 windows or doors): Non-tradable Wattage				
LED: WL6: Other:	1	1	20	20
LED: Y: Other:	1	3	12	36
Main entry (3 ft of door width): Tradable Wattage				
LED: LP7: Other:	1	1	10	10
Total Tradable Proposed Watts =				1436

Exterior Lighting PASSES: Design 46% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: 40509-11 THUS Harper Woods, MI Report date: 06/30/22  
Data filename: Page 2 of 12

COMcheck Software Version COMcheckWeb  
Mechanical Compliance Certificate

Project Information

Energy Code: 2015 IECC  
Project Title: 40509-11 THUS Harper Woods, MI  
Location: Harper Woods, Michigan  
Climate Zone: 5a  
Project Type: New Construction

Construction Site: 19353 Vernier Road, Harper Woods, Michigan 48225  
Owner/Agent: ms consultants, inc, 2221 Schrock Road, Columbus, Ohio 43229, 614-878-7100  
Designer/Contractor: Tim Hortons

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed  
Reduced Lighting Power, 1.0 credit

Mechanical Systems List

Quantity System Type & Description

- RTU-1 (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 110 kBtu/h  
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE  
Cooling: 1 each - Single Package DX Unit, Capacity = 61 kBtu/h, Air-Cooled Condenser, Air Economizer  
Proposed Efficiency = 16.10 SEER, Required Efficiency = 14.00 SEER  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00  
Fan System: FAN SYSTEM 1 - Compliance (Motor nameplate HP and fan efficiency method) : Passes  
Fans:  
FAN 1 Supply, Constant Volume, 1750 CFM, 1.4 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency, fan exception: Single fan <= SHP
- RTU-2 (Single Zone):  
Heating: 1 each - Central Furnace, Gas, Capacity = 110 kBtu/h  
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE  
Cooling: 1 each - Single Package DX Unit, Capacity = 47 kBtu/h, Air-Cooled Condenser, Unknown Economizer  
Proposed Efficiency = 16.10 SEER, Required Efficiency = 14.00 SEER  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00  
Fan System: FAN SYSTEM 2 - Compliance (Motor nameplate HP and fan efficiency method) : Passes  
Fans:  
FAN 2 Supply, Constant Volume, 1600 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency, fan exception: Single fan <= SHP

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jason E. Christoff - PE  
Name - Title Signature Date 06/30/22

Project Title: 40509-11 THUS Harper Woods, MI Report date: 06/30/22  
Data filename: Page 4 of 12

COMcheck Software Version COMcheckWeb  
Envelope Compliance Certificate

Project Information

Energy Code: 2015 IECC  
Project Title: 40509-11 THUS Harper Woods, MI  
Location: Harper Woods, Michigan  
Climate Zone: 5a  
Project Type: New Construction  
Vertical Glazing / Wall Area: 15%

Construction Site: 19353 Vernier Road, Harper Woods, Michigan 48225  
Owner/Agent: ms consultants, inc, 2221 Schrock Road, Columbus, Ohio 43229, 614-878-7100  
Designer/Contractor: Tim Hortons

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed  
Reduced Lighting Power, 1.0 credit

Building Area

Building Area	Floor Area
1-A2 - Restaurant (Retail) : Nonresidential	888

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>(e)</sub>
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - A2 - Restaurant]	800	---	27.7	0.035	0.032
Floor: Unheated Slab-On-Grade, Vertical 3 ft., [Bldg. Use 1 - A2 - Restaurant] (c)	134	---	15.0	0.480	0.540
<b>NORTH</b>					
Ext. Wall - Rear: Wood-Framed, 16in. o.c., [Bldg. Use 1 - A2 - Restaurant]	275	20.0	5.0	0.047	0.064
Door 102: Insulated Metal, Swinging, [Bldg. Use 1 - A2 - Restaurant]	27	---	---	0.167	0.370
<b>EAST</b>					
Ext. Wall - Front: Wood-Framed, 16in. o.c., [Bldg. Use 1 - A2 - Restaurant]	712	20.0	5.0	0.047	0.064
Window Type W4: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer Trifab Versaglazze 451T, SHGC 0.40, [Bldg. Use 1 - A2 - Restaurant] (b)	63	---	---	0.380	0.380
<b>SOUTH</b>					
Ext. Wall - Walk-Up: Wood-Framed, 16in. o.c., [Bldg. Use 1 - A2 - Restaurant]	266	20.0	5.0	0.047	0.064
Window Type W2 & W3: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer Trifab Versaglazze 451T, SHGC 0.40, PF 0.34, [Bldg. Use 1 - A2 - Restaurant] (b)	87	---	---	0.380	0.380
Window - Walk-Up: Metal Frame with Thermal Break: Operable, Perf. Specs.: Product ID Solarban 60, SHGC 0.30, [Bldg. Use 1 - A2 - Restaurant] (b)	10	---	---	0.270	0.450
<b>WEST</b>					
Ext. Wall - Drive-Thru: Wood-Framed, 16in. o.c., [Bldg. Use 1 -	587	20.0	5.0	0.047	0.064

Project Title: 40509-11 THUS Harper Woods, MI Report date: 07/08/22  
Data filename: Page 1 of 8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sub>(e)</sub>
A2 - Restaurant]					
Window Type W1: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer Trifab Versaglazze 451T, SHGC 0.40, PF 0.34, [Bldg. Use 1 - A2 - Restaurant] (b)	96	---	---	0.380	0.380
Window Drive-Thru: Metal Frame with Thermal Break: Operable, Perf. Specs.: Product ID Solarban 60, SHGC 0.30, PF 0.34, [Bldg. Use 1 - A2 - Restaurant] (b)	15	---	---	0.270	0.450

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.  
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.  
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 13% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Charles M. Busch - RA  
Name - Title Signature Date 07/08/22

Project Title: 40509-11 THUS Harper Woods, MI Report date: 07/08/22  
Data filename: Page 2 of 8

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ISSUE

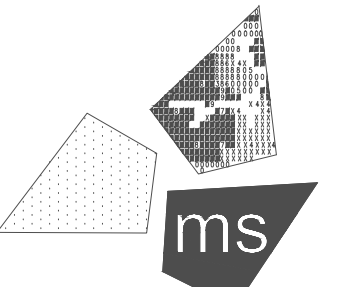
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	07/12/22	PERMIT SET

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#	DATE	DESCRIPTION
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PROJECT:

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HARPER WOODS, MI 48225

STORE # 919728



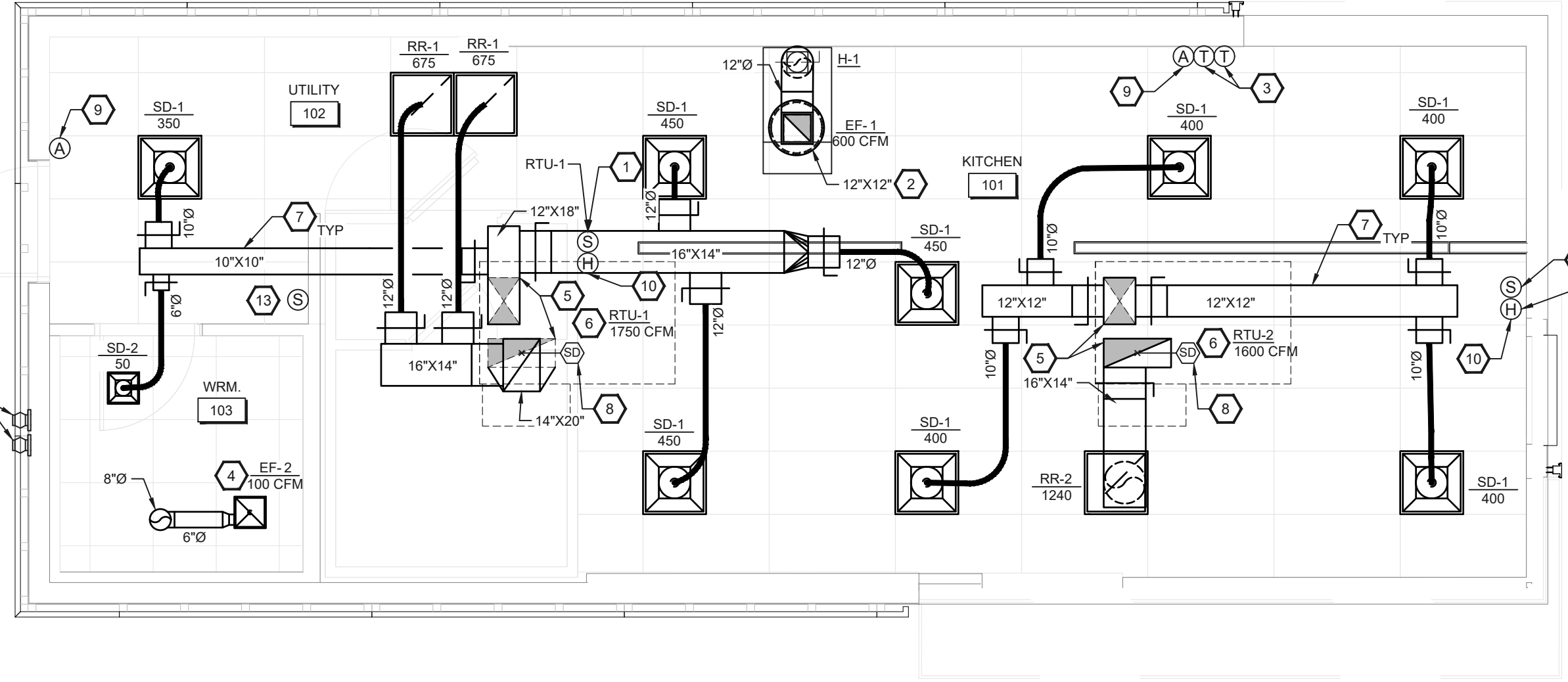
PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
ENERGY  
CALCULATIONS

SHEET:  
E6.1

File Name: N:\03162\40509-THUS11\_1\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IDTO M1\_1\_HVAC PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:38 PM



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

**GENERAL NOTES**

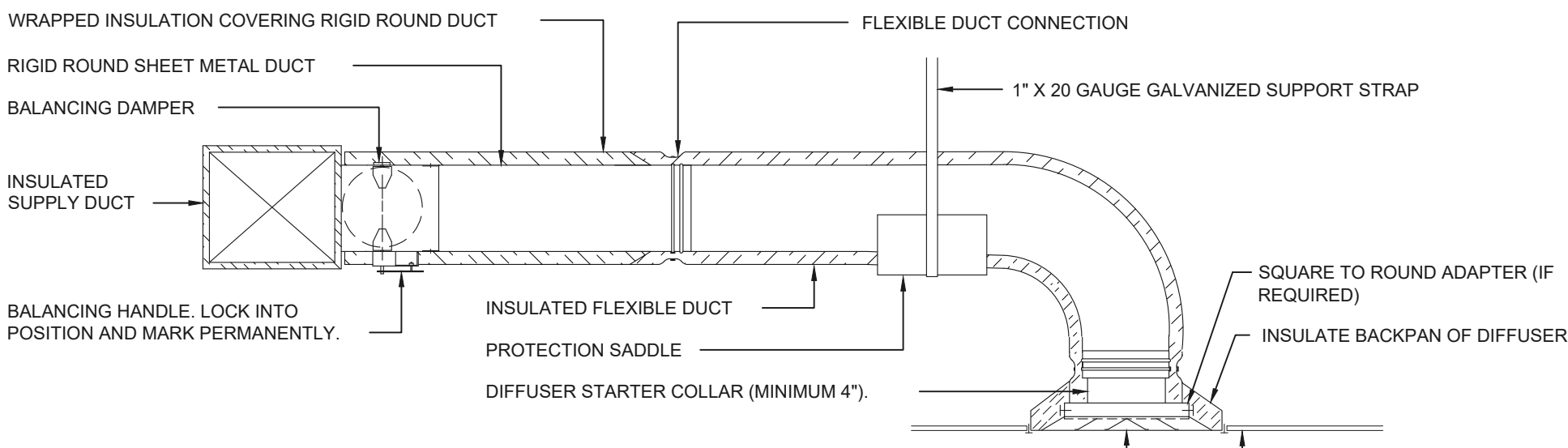
- THIS CONTRACTOR SHALL GUARANTEE ALL WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, (USUAL WEAR IS EXPECTED), AND SHOULD SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF BUILDING BY OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE, DEFECTIVE ITEMS AND ALL DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO OWNER.
- DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLAN IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
- SPIN-IN FITTING WITH DAMPER SHALL BE FLEXAIRE RF OR METALARE MBSD, TYPICAL OF ALL BRANCH DUCT RUNS. MANUAL BALANCING DAMPERS SHALL BE IN ACCESSIBLE LOCATION, COORDINATE LOCATION AND ACCESS WITH GENERAL CONTRACTOR.
- DUCTWORK DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS. DUCTWORK SHOWN SHALL BE INSULATED WITH 2" DUCT WRAP, INCLUDING TOP OF THE DIFFUSERS. INSULATION SHALL HAVE MINIMUM INSTALLED R-VALUE OF 6.
- COMPLETED INSTALLATIONS SHALL CONFORM TO APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES INCLUDING, BUT NOT LIMITED TO THE LATEST EDITIONS OF THE FOLLOWING: STATE BUILDING CODE, NFPA-90A, NFPA-96 AND NFPA-101.
- PROVIDE COMPLETE BALANCE OF THE HVAC SYSTEM BY AN INDEPENDENT CONTRACTOR WHILE IN THE PRESENCE OF OWNER'S REPRESENTATIVE. PROVIDE COMPLETE BALANCE REPORT. REPORT SHALL INCLUDE AIR BALANCE OF ALL ROOFTOP UNITS, EXHAUST FANS, REGISTERS AND DIFFUSERS TO SPECIFIED AIR FLOWS. CONTRACTOR SHALL TEST THE COMPLETE OPERATION AND SEQUENCES OF OPERATION FOR ALL HVAC EQUIPMENT.
- ALL DUCTWORK SHALL BE INSTALLED PER SMACNA SPECIFICATIONS.
- ALL 90 DEGREE BENDS IN SHEET METAL SUPPLY AIR DUCTS SHALL HAVE TURNING VANES.
- DUCTWORK SHALL BE ROUTED ABOVE SUSPENDED CEILING, WHENEVER POSSIBLE. DUCTWORK RUNNING PARALLEL TO ROOF JOIST SHALL BE RAISED UP AND RUN BETWEEN JOISTS.
- RECEIVE AND SET ROOF MOUNTED CONDENSING UNITS FOR FREEZERS AND COOLERS AND PROVIDE MOUNTING RAILS. SEE ARCHITECTURAL SHEETS FOR LOCATIONS OF ROOF MOUNTED EQUIPMENT CURBS AND RAIL DETAILS.
- RETURN DROPS FROM ROOFTOP UNITS SHALL HAVE INTERNALLY LINED INSULATION, PINNED AND GLUED PER SMACNA, WITH MINIMUM INSTALLED R-VALUE OF 6.
- SUPPLY AND RETURN AIR DUCT DROPS FROM ROOFTOP UNITS SHALL BE ISOLATED FROM UNIT VIBRATION WITH FLEXIBLE DUCT CONNECTORS.
- PROVIDE ALL LOW VOLTAGE CONTROL WIRING. SEE TEMPERATURE AND LIGHTING CONTROL SCHEMATIC FOR ADDITIONAL REQUIREMENTS.
- SEE ARCHITECTURAL REFLECTED CEILING PLAN IN ARCHITECTURAL SET FOR MORE INFORMATION.
- PROVIDE ROOFTOP UNITS. REFER TO ARCHITECTURAL ROOF PLAN FOR APPROXIMATE LOCATION OF ROOFTOP UNITS. PURCHASE HVAC EQUIPMENT THROUGH OWNER'S NATIONAL ACCOUNTS.
- SLOPE EXHAUST FAN DUCTWORK BACK TOWARD HOOD TO PREVENT MOISTURE FROM BUILDING UP IN THE DUCTWORK.
- ALL AIR DEVICES, EXPOSED DUCTWORK, AND EXPOSED EXHAUST VENTING SHALL MATCH COLOR OF TILE OR DRYWALL CEILING.
- PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE HEATING AND VENTILATING WORK INDICATED ON THE DRAWINGS AND AS REQUIRED BY LOCAL CODES AND ORDINANCES.
- DIFFUSERS, REGISTERS, LOUVERS SHALL BE AS PER MODEL AND SIZE INDICATED ON DRAWINGS. NO SUBSTITUTES SHALL BE ACCEPTED UNLESS APPROVED BY OWNER OR ARCHITECT IN WRITING. DIFFUSERS AND LOUVERS NOT MEETING SPECIFICATION AS SHOWN ON DRAWINGS SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.
- UNLINED SUPPLY AND RETURN AIR DUCTWORK SHALL BE WRAPPED WITH EXTERNAL INSULATION WITH A FLAME SPREAD RATING NOT EXCEEDING TWENTY-FIVE (25) AND A SMOKE DEVELOPED RATING NOT EXCEEDING FIFTY (50). INSULATION SHALL BE FLEXIBLE FIBERGLASS DUCT WRAP LAMINATED TO FOIL REINFORCED KRAFT VAPOR BARRIER FACING WITH 2" STAPLING FLANGE, AND HAVE MINIMUM INSTALLED R-VALUE OF 6.0. INSULATION SHALL NOT BE APPLIED UNTIL GENERAL CONSTRUCTION HAS PROCEEDED SUFFICIENTLY TO ENSURE AGAINST PHYSICAL OR MOISTURE DAMAGE TO INSULATION. INSULATION DAMAGED THROUGH FAILURE TO OBSERVE THIS DIRECTIVE SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE. INSTALL INSULATION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- BEFORE FINAL ACCEPTANCE BY OWNER, AN OWNER'S REPRESENTATIVE SHALL INSPECT THE ENTIRE HVAC SYSTEM AND SUBMIT A WRITTEN REPORT TO THE OWNER. FINAL BALANCE OF HVAC SYSTEM SHALL BE PERFORMED BY AN INDEPENDENT CONTRACTOR WITH COSTS INCLUDED IN GENERAL CONTRACTOR'S BID. NO FINAL PAYMENT WILL BE MADE UNTIL THE ABOVE REPORT HAS BEEN RECEIVED AND THE HVAC SYSTEMS ARE IN BALANCE.
- INSTALL SENSORS COMPLETE WITH ALL NECESSARY WIRING AND CONTROLS, LOCATION AS INDICATED ON THE DRAWINGS. THERMOSTAT SHALL PROVIDE FOR AUTOMATIC AND MANUAL FAN OPERATION.
- ADJUST ALL CONTROLS AND EQUIPMENT FOR PROPER OPERATION. LUBRICATE AND CLEAN ALL EQUIPMENT PRIOR TO ACCEPTANCE BY OWNER.
- COORDINATE ALL WORK WITH OTHER CONTRACTORS.
- FURNISH THE OWNER WITH ALL OPERATING MANUALS AND MAINTENANCE INSTRUCTIONS FOR EQUIPMENT INSTALLED.
- NOTIFY OTHER CONTRACTORS OF REQUIRED CHANGES IN ROOF OPENINGS FOR ROOFTOP UNITS DUE TO CHANGE IN EQUIPMENT SIZE.
- NOTIFY OTHER CONTRACTORS OF CHANGES IN ELECTRICAL AND GAS REQUIREMENTS FOR THE ROOF TOP UNITS, FANS, AND DUCTWORK DUE TO CHANGES IN EQUIPMENT CAPACITIES OR SITE CONDITIONS.
- INSTALL ALL HVAC UNITS WITH CLEARANCES TO ADJACENT WALLS AS REQUIRED TO CONFORM TO LOCAL CODES AND INSPECTION REQUIREMENTS. NOTE: ALL WALLS SHOWN ON DRAWINGS ARE ASSUMED TO BE OF COMBUSTIBLE CONSTRUCTION.

**SYMBOLS & ABBREVIATIONS LEGEND**

(H)	HUMIDITY SENSOR	(S)	SENSOR	(A)	ANNUNCIATOR	(SD)	DUCT SMOKE DETECTOR	(DO)	DUCT OFFSET	(SU)	SUPPLY DUCT - UP	(RA)	RA OR EXH. DUCT UP	(RA)	RA OR EXH. DUCT DN	(EV)	ELBOW TURNING VANES	(FD)	FIRE DAMPER (F.D.)	(MB)	MANUAL BALANCE DAMPER	(TR)	TRANSITION	(FLEX)	FLEXIBLE DUCTWORK	(SD)	SUPPLY DIFFUSER	(RG)	RETURN GRILLE	(EG)	EXHAUST GRILLE	(SIF)	SPIN-IN FITTING	(SIF)	SPIN-IN FITTING W/ MAN. BAL. DPR.	(X)	ROUND DUCT	(AB)	ABOVE	(ACU)	AIR CURTAIN UNIT	(A/C)	AIR CONDITIONING	(AD)	ACCESS DOOR	(AFF)	ABOVE FINISHED FLOOR	(AHU)	AIR HANDLING UNIT	(ARCH)	ARCHITECT	(BDD)	BACKDRAFT DPR.	(BEL)	BELOW	(BLDGS)	BUILDING	(CFM)	CUBIC FEET PER MINUTE	(CLG)	CEILING	(CONT)	CONTINUATION	(CONTR)	CONTRACTOR	(COORD)	COORDINATE	(CUB)	CABINET UNIT	(HEAT)	HEATER	(DIFF)	DIFFUSER	(DISC)	DISCONNECT	(DN)	DOWN	(DPR)	DAMPER	(EA)	EACH	(EC)	ELECTRICAL	(CONTR)	CONTRACTOR	(EX)	EXISTING	(EXH)	EXHAUST	(F. DPR)	FIRE DAMPER	(FLEX)	FLEXIBLE	(FLOOR)	FLOOR	(FIT)	FITTING	(GEN)	GENERAL CONTRACTOR	(HC)	HEATING CONTRACTOR	(HP)	HORSEPOWER	(MAX)	MAXIMUM	(MCA)	MAX CIRCUIT AMPACITY	(MECH)	MECHANICAL	(MFR)	MANUFACTURER	(MIN)	MINIMUM	(MOCP)	MAX OVERCURRENT PROTECTION	(MTD)	MOUNTED	(NTS)	NOT TO SCALE	(OA)	OUTSIDE AIR	(PC)	PLUMBING CONTRACTOR	(RA)	RETURN AIR	(RTU)	ROOFTOP UNIT	(SA)	SUPPLY AIR	(TV)	TURNING VANES	(TYP)	TYPICAL	(WH)	WATER HEATER	(W)	WITH
-----	-----------------	-----	--------	-----	-------------	------	---------------------	------	-------------	------	------------------	------	--------------------	------	--------------------	------	---------------------	------	--------------------	------	-----------------------	------	------------	--------	-------------------	------	-----------------	------	---------------	------	----------------	-------	-----------------	-------	-----------------------------------	-----	------------	------	-------	-------	------------------	-------	------------------	------	-------------	-------	----------------------	-------	-------------------	--------	-----------	-------	----------------	-------	-------	---------	----------	-------	-----------------------	-------	---------	--------	--------------	---------	------------	---------	------------	-------	--------------	--------	--------	--------	----------	--------	------------	------	------	-------	--------	------	------	------	------------	---------	------------	------	----------	-------	---------	----------	-------------	--------	----------	---------	-------	-------	---------	-------	--------------------	------	--------------------	------	------------	-------	---------	-------	----------------------	--------	------------	-------	--------------	-------	---------	--------	----------------------------	-------	---------	-------	--------------	------	-------------	------	---------------------	------	------------	-------	--------------	------	------------	------	---------------	-------	---------	------	--------------	-----	------

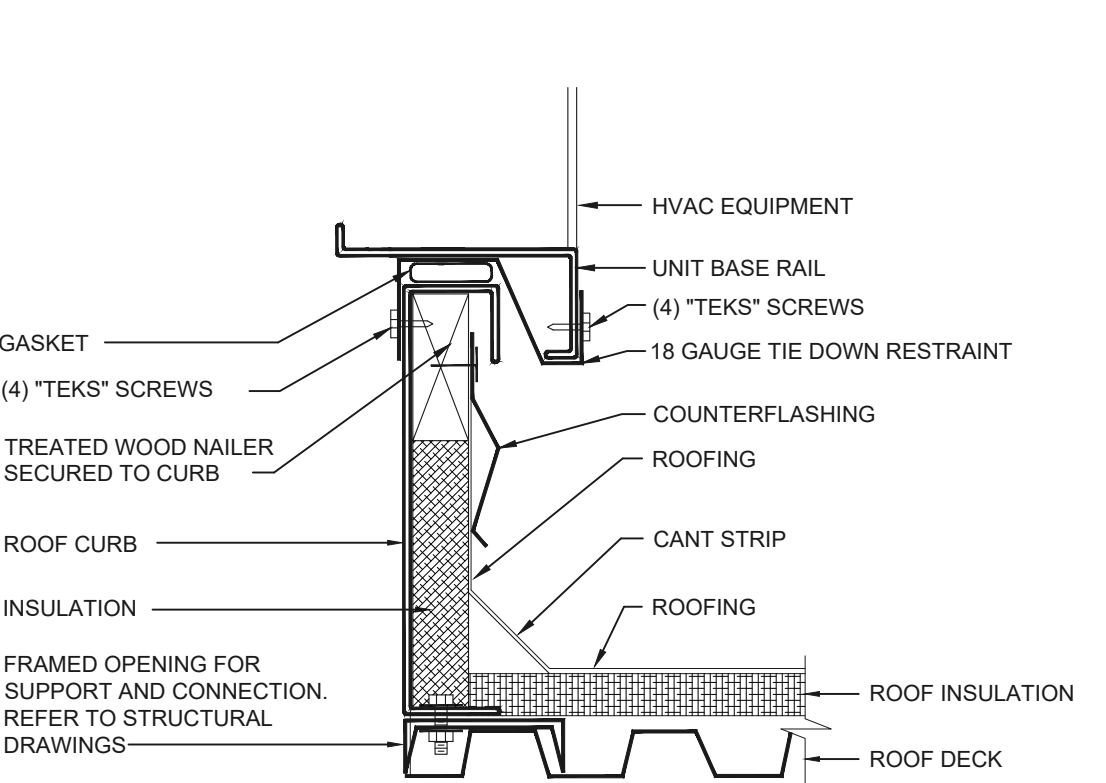
**CODED NOTES:**

- REMOVE TEMPERATURE SENSOR FOR RTU MOUNTED AT 5'-0" AFF. COORDINATE WITH OWNER AND EQUIPMENT PLAN PRIOR TO ROUGH-IN. EXTEND CONTROL WIRING TO THERMOSTAT.
- PROVIDE EXHAUST DUCT UP TO EXHAUST FAN. TRANSITION AT HOODS AND FAN. PROVIDE FLEXIBLE CONNECTION AT FAN. ALL DUCT ASSOCIATED WITH EF-1 SHALL BE 22 GAUGE TYPE 304 STAINLESS STEEL WITH SEAMS CONTINUOUSLY WELDED LIQUID TIGHT.
- JOHNSON CONTROLS THERMOSTAT MODEL #T9100 WITH INTEGRAL WI-FI AND REMOTE SENSORS (SEE NOTE 1 FOR SENSOR LOCATIONS) FOR RTUs.
- EXHAUST FAN MOUNTED IN CEILING. EXTEND 6" DUCT FROM EXHAUST FAN TO 8" EXHAUST DUCT AND RISE UP THRU ROOF. PROVIDE WITH ROOF JACK, STORM COLLAR, AND ALL-WEATHER CAP. SEAL ROOF WATER TIGHT.
- FULL SIZE SUPPLY AND RETURN DUCTS UP TO ROOFTOP UNIT WITH FLEXIBLE DUCT CONNECTIONS. SEE PLAN FOR SIZING. TRANSITION AS REQUIRED.
- PROVIDE ROOFTOP UNIT AND CURB. SHIM UNIT AND CURB LEVEL FOR PROPER CONDENSATE DRAINAGE. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN. SEE ARCHITECTURAL SET FOR ADDITIONAL INFORMATION. COORDINATE LOCATION WITH OTHER TRADES. EXHAUST DISCHARGES SHALL BE LOCATED MINIMUM TEN FEET FROM OUTSIDE AIR INTAKES.
- ROUTE DUCTWORK AS HIGH AS POSSIBLE. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE WITH OTHERS.
- PROVIDE DUCT SMOKE DETECTOR IN ROOFTOP UNIT RETURN AIR DUCT. UPON ACTIVATION THE SMOKE DETECTOR SHALL SHUT DOWN RTU AND ACTIVATE VISIBLE OR AUDIBLE SIGNAL IN AN APPROVED LOCATION AND SHALL BE IDENTIFIED AS AN AIR DUCT DETECTOR.
- PROVIDE REMOTE ANNUNCIATOR (VISIBLE AND AUDIBLE) FOR RTU DUCT SMOKE DETECTORS.
- REMOVE HUMIDITY SENSOR FOR RTU MOUNTED AT 5'-0" AFF. COORDINATE WITH OWNER PRIOR TO ROUGH-IN. EXTEND CONTROL WIRING TO CONTROLS IN RTU..
- NOTE NOT USED.
- WATER HEATER CONCENTRIC VENT THROUGH WALL.
- PROVIDE UL 2075 LISTED CARBON MONOXIDE DETECTOR/ALARM ON WALL. MOUNT AT 5'-0" ABOVE FINISHED FLOOR. UPON ACTIVATION THE CARBON MONOXIDE SHALL EMIT A VISIBLE AND AUDIBLE SIGNAL IN AN APPROVED LOCATION AND SHALL BE IDENTIFIED AS A WALL MOUNTED CARBON MONOXIDE DETECTOR.

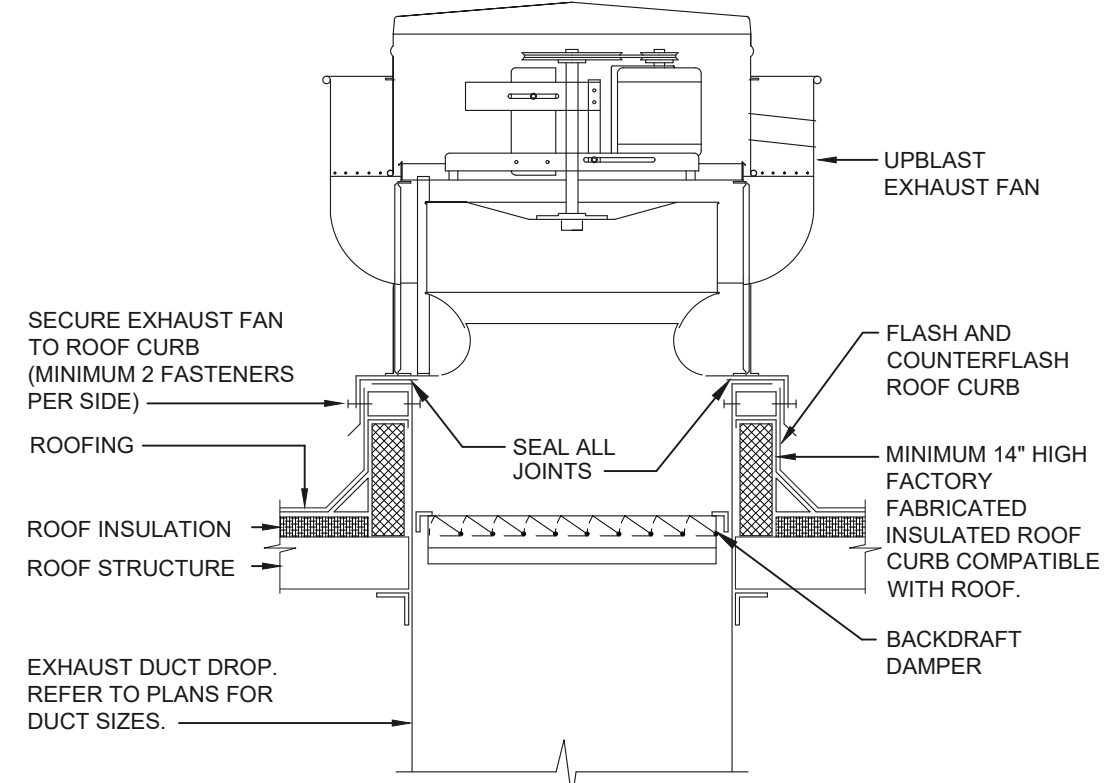


- NOTES:
- PROVIDE METAL OR "PANDUIT" DRAW BAND AT FLEXIBLE DUCT CONNECTION ON INTERIOR FLEXIBLE DUCT HELIX. SECURE INSULATION OVER DRAW BAND WITH ADDITIONAL DRAW BAND.
  - PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
  - PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF FLEXIBLE DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
  - BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

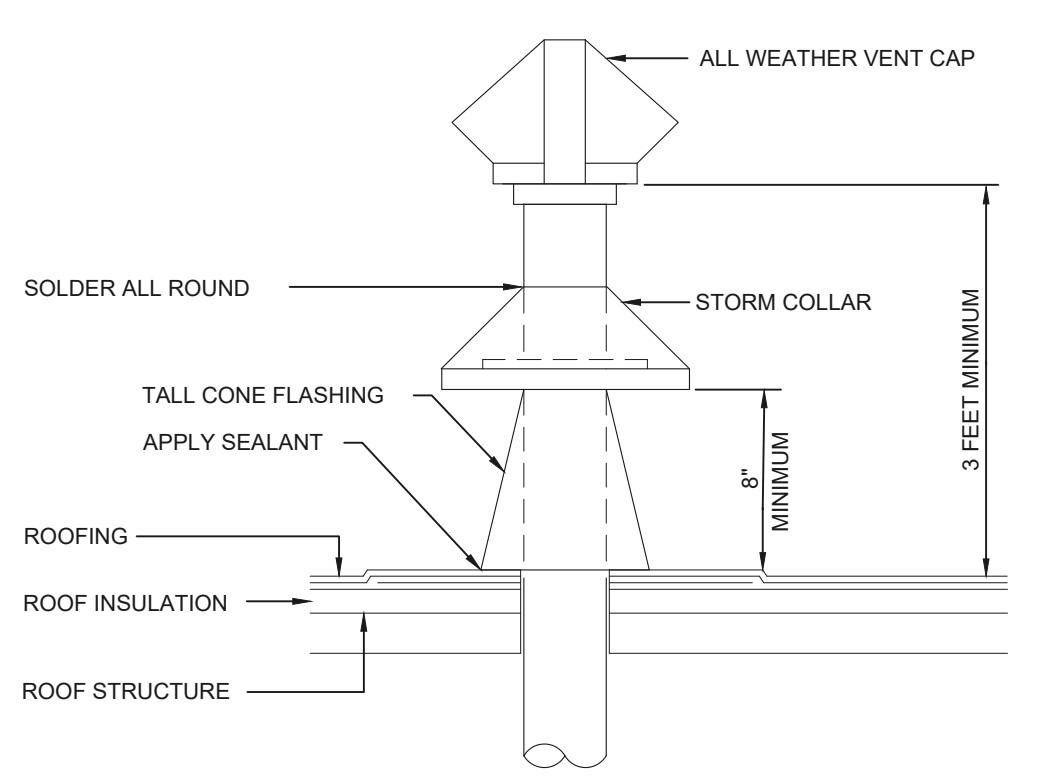
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**ROOFTOP UNIT CURB 04**  
NOT TO SCALE



**UPBLAST EXHAUST FAN 02**  
NOT TO SCALE



**DUCT THROUGH ROOF 03**  
NOT TO SCALE

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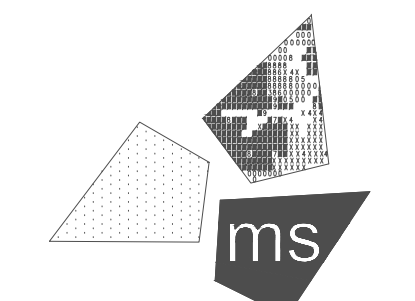
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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
HVAC PLAN & DETAILS

SHEET:  
M1.1

File Name: N:\03162\40509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IDTO M2.1\_HVAC SCHEDULE.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:38 PM

### OUTSIDE AIR REQUIREMENT SCHEDULE

OCCUPANCY CATEGORY	2015 INTERNATIONAL MECHANICAL CODE OUTSIDE AIR REQUIREMENTS								SYSTEM MARK	ACT OA CFM/UNIT
	OCCUPANT CLASS	SQ. FT.	OCCUPANT DENSITY (P/1000 SQ.FT.)	OCCUPANT LOAD	CFM PER OCCUPANT	CFM PER SQUARE FOOT	AIR DISTRIBUTION EFFECTIVENESS	OA CFM REQD.		
RETAIL	STORAGE ROOM	80	---	---	---	0.12	0.8	12	RTU-1	80
KITCHEN	KITCHEN (COOKING)	540	---	---	---	---	0.8	0	RTU-1&2	680
TOTALS:										760

### AIR BALANCE SCHEDULE

MARK	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	RESULTING PRESSURE
RTU-1	1750	1350	400	---	+400
RTU-2	1600	1240	360	---	+360
EF-1	---	---	---	-600	-600
EF-2	---	---	---	-100	-100
TOTALS	3350	2590	+760	-700	+60

### HVAC EQUIPMENT & MATERIAL PACKAGE

FOR QUOTATION ON THE FOLLOWING EQUIPMENT SEE ARCHITECTURAL SHEET FOR CONTACT INFORMATION.

**EQUIPMENT PACKAGE:**  
RTU-1 AND RTU-2, AS PER SCHEDULE THIS SHEET. IF DESIGN CONDITIONS DIFFER FROM THOSE LISTED, CONTACT OWNER

**ROOF CURB PACKAGE:**  
INCLUDES CURBS (KNOCK-DOWN FOR RTU'S ONLY) FOR RTU-1, RTU-2, AND EF-1. ALL CURBS ARE INSULATED AND COMPLY WITH NFPA 96 REQUIREMENTS FOR HEIGHT.

**AIR DEVICE PACKAGE:**  
ALL AIR DEVICES SHALL BE PROVIDED BY GENERAL CONTRACTOR.

GENERAL CONTRACTOR FURNISHES RTUS, HUMIDITY SENSOR, THERMOSTATS, CURBS, EXHAUST FANS, AND HOODS. THIS CONTRACTOR TO SCHEDULE DELIVERY, RECEIVE, SET, INSTALL AND MAKE OPERATIONAL ALL EQUIPMENT AND DEVICES FURNISHED BY OWNER. CONTRACTOR TO PROVIDE ALL OTHER MATERIAL AND EQUIPMENT.

EQUIPMENT AND MATERIAL PACKAGES ARE IN STOCK AND SHOULD BE ORDERED IMMEDIATELY UPON RECEIPT OF CONTRACT TO AVOID CONSTRUCTION DELAY.

### ROOFTOP HVAC UNIT SCHEDULE

CARRIER MANUFACTURER IS BASIS OF DESIGN. EQUALS BY TRANE, LENNOX, AAOON AND YORK MAY BE USED PROVIDED ALTERNATE UNITS MEET ALL DESIGN CRITERIA SET FORTH IN DRAWINGS.

UNIT NO.	MFR., MODEL NO.	CFM	O.A. CFM	EXT. S.P.	COOLING DATA				MOTOR			HEATING DATA		TONNAGE	WEIGHT	FILTERS	MCA	MOCP	REMARKS			
					AMBIENT OAT (°F)	EAT (°FDBWB)	TOTAL COOLING MBH	SENSIBLE COOLING MBH	EER (SEER)	WATTS	HP	R.P.M.	VOLTS							PHASE	STAGES	HEAT OUTPUT MBH
RTU-1	CARRIER 48GCEA06	1,750	400	0.75"	95	80/67	61.6	44.9	(16.1)	--	1.4	208	3	2	66 / 93	82 / 110	5	800 lbs	2"	29	40	1 2 3 4 5 6 7 8 9 10
RTU-2	CARRIER 48GCEA05	1,600	360	0.75"	95	80/67	47.6	34.2	(16.1)	--	1.0	208	3	2	66 / 93	82 / 110	4	750 lbs	2"	24	30	1 2 3 4 5 6 7 8 9 10

- 1 FURNISH UNIT WITH FACTORY INSTALLED LOW-LEAK ECONOMIZER WITH DUAL ENTHALPY CONTROLLER, FAULT DETECTION AND DIAGNOSTICS, AND WEATHER HOOD WITH BIRD SCREEN AT UNIT INLET.
- 2 PROVIDE UNITS WITH 18" HIGH KNOCK-DOWN CURB, FACTORY MOUNTED DISCONNECT SWITCH, AND FACTORY INSTALLED NON-POWERED GFI DUPLEX RECEPTACLE.
- 3 PROVIDE UNITS WITH FACTORY INSTALLED FRESH AIR TEMPERING KITS.
- 4 SET MINIMUM OUTSIDE AIR AS SPECIFIED ABOVE. FIELD SET 2 MINIMUM POSITIONS TO MAINTAIN SCHEDULED OUTSIDE AIR FLOW RATE AT SUPPLY FAN MINIMUM AND MAXIMUM SPEEDS. OUTSIDE AIR DAMPER SHALL FULLY CLOSE ON UNIT SHUTDOWN.
- 5 PROVIDE WITH FACTORY INSTALLED HOT GAS REHEAT DEHUMIDIFICATION & REMOTE WALL MOUNTED HUMIDITY SENSOR.
- 6 PROVIDE UNIT WITH FACTORY MOUNTED AND WIRED VARIABLE FREQUENCY DRIVE FOR 2-SPEED FAN OPERATION.
- 7 PROVIDE UNIT WITH CONDENSER COIL HAIL GUARDS.
- 8 PROVIDE UNIT WITH FACTORY MOUNTED AND WIRED CONDENSATE OVERFLOW SWITCH.
- 9 PROVIDE UNIT WITH BAROMETRIC RELIEF DAMPERS.
- 10 ROOFTOP UNITS SHALL HAVE A 5 YEAR COMPRESSOR AND A 10 YEAR HEAT EXCHANGER WARRANTY.

### EXHAUST HOOD SCHEDULE

MARK	MODEL NUMBER	SIZE	EXHAUST OPENING	ROOF OPENING	DUCT AT CURB	REMARK
H-1	HALTON HOOD FOR OVEN	48"x26"x18"	8"x8"	11.25x11.25	10"x10"	1 2 3 4 5 6

- 1 ALL DUCTWORK SHALL BE FABRICATED ACCORDING TO NFPA 96 & LOCAL CODES.
- 2 FINAL BALANCING OF THE SYSTEM SHALL BE PERFORMED AS OUTLINED IN INSTRUCTION SHEET FURNISHED BY HOOD SUPPLIER.
- 3 EXHAUST AIR OPENINGS SHALL BE CUT IN FACTORY AND BALANCING DAMPERS SHALL BE INSTALLED. ALL HOODS SHALL BE UL CERTIFIED AND LABELED. TRANSITION TO DUCTWORK IN FIELD AS REQUIRED.
- 4 TDL EXHAUST HOOD PACKAGE. COORDINATE DELIVERY OF THIS PACKAGE WITH OWNER REPRESENTATIVE. INSTALLATION BY THIS CONTRACTOR.
- 5 VERIFY DIMENSIONS WITH THE SUPPLIER.
- 6 TYPE 2 HOOD.

### EXHAUST FAN SCHEDULE

UNIT NO.	MFR., MODEL NO.	TYPE	C.F.M.	S.P. IN. W.G.	WHEEL R.P.M.	MOTOR			SERVING	LOCATION	REMARKS		
						H.P.	WATTS	RPM				VOLTS	PHASE
EF-1	JENCO FAN TXD1250SC	ROOF DIRECT DRIVE	600	0.875	1320	1/2	--	1750	120	1	KITCHEN EXHAUST HOOD H-1	ROOF	1 2 3 4 5 6
EF-2	BROAN L100MG	CEILING DIRECT DRIVE	100	0.25	760	--	87	1750	120	1	RESTROOM EXHAUST	RESTROOM	1 2 3 4 5 6

- 1 FANS AND CURBS WILL BE SUPPLIED BY GENERAL CONTRACTOR.
- 2 UNIT SHALL BE FURNISHED FROM FACTORY WITH DISCONNECT SWITCH AND BIRDSCREEN.
- 3 UNIT SHALL BE FURNISHED FROM FACTORY WITH SPEED CONTROL.
- 4 MAINTAIN 10'-0" MINIMUM CLEARANCE FROM ROOFTOP UNIT.
- 5 FAN SHALL BE CONTROLLED THROUGH LIGHTING CIRCUIT.
- 6 UNIT SHALL BE FURNISHED FROM FACTORY WITH BACKDRAFT DAMPER.

### AIR DEVICE SCHEDULE

TAG	TYPE		BORDER	THROW				MATERIAL			ACCESSORY			SYMBOL KEY - FIRST LETTER: S-SUPPLY R-RETURN E-EXHAUST SECOND LETTER: D-DIFFUSER R-REGISTER G-GRILLE				
	DIFFUSER	REGISTER		1-WAY	2-WAY	3-WAY	4-WAY	STEEL	ALUMINUM	PLASTIC	DAMPER	EQUAL GRID	REF. DAMPER					
SD-1	●		●												EA3	24"x24"	PER PLAN	1 2 3 4 5 6
SD-2	●		●												EA3	12"x12"	PER PLAN	1 2 3 4 5 6 7
RR-1		●													EFAREC	24"x24"	12"Ø	1 2 3 4 5 6
RR-2		●													EFAREC	24"x24"	18"Ø	1 2 3 4 5 6

- 1 BASED ON EGER.
- 2 PROVIDE DIFFUSER WITH NECK SIZE INDICATED ON PLAN. NECK SIZE SHALL MATCH BRANCH DUCT SIZE.
- 3 VERIFY ARRANGEMENT WITH CEILING TYPE (LAY-IN, SURFACE MOUNT, ETC.).
- 4 FURNISH SQUARE TO ROUND NECK TRANSITION PIECE WHERE REQUIRED.
- 5 DAMPERS TO BE OPPOSED BLADE.
- 6 AIR DEVICE TO MATCH COLOR OF CEILING.
- 7 PROVIDE WITH DRYWALL/PLASTER FRAME.

DRAWN BY  
NWO

CHECKED BY  
APPROVED BY  
KFF

ISSUE DATE  
07/12/2022

#### ISSUE

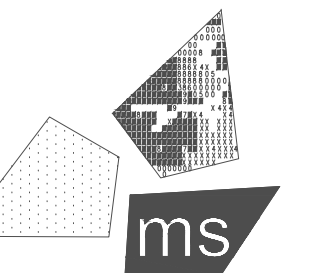
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1	07/12/22	PERMIT SET

#### REVISIONS

#	DATE	DESCRIPTION
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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:  
40509-11

SHEET TITLE:  
HVAC SCHEDULE

SHEET:  
M2.1



File Name: N:\03162\40509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IDTO M3.1\_EXHAUST HOOD SHOP DRAWINGS.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:38 PM

TAG: H-1  
RATIONAL  
OVEN  
HOOD

*Tim Hortons*

MODEL NO. VG-C+

MATERIAL  
Interior 18 GA. STAINLESS STEEL  
Exterior 18 GA. STAINLESS STEEL

FINISH #3 POLISH

LIGHTS - U.L. LISTED  
N/A

FILTERS - U.L. CLASSIFIED  
N/A

CFM Exhaust 600

CONTROLS

OTHER

PROJECT  
TIM HORTONS 1600-22 US

LOCATION

ARCHITECT

ENGINEER

CONTRACTOR

SUBMITTED BY

DATE \_\_\_\_\_ JOB# \_\_\_\_\_

Halton  
CARE FOR INDOOR AIR

PROVIDE WITH 24"x46"x50" HIGH CEILING CLOSURE PANELS.

FRONT  LEFT  
 RIGHT  BACK  
 LOOSE  ATTACHED

TAG: H-2  
BAGEL  
TOASTER

*Tim Hortons*

MODEL NO.

MATERIAL  
Interior 18 GA. STAINLESS STEEL  
Exterior 18 GA. STAINLESS STEEL

FINISH #3 POLISH

LIGHTS - U.L. LISTED  
N/A

FILTERS - U.L. ALUMINUM BAFFLE  
NONE

CFM Exhaust 300

CONTROLS

OTHER

PROJECT  
TIM HORTONS 1600-22 US

LOCATION

ARCHITECT

ENGINEER

CONTRACTOR

SUBMITTED BY

DATE \_\_\_\_\_ JOB# \_\_\_\_\_

Halton  
CARE FOR INDOOR AIR

OPTIONS	MOTOR TYPE		
1. DISCONNECT	TOLP-THERMAL PROTECTED		
2. SPEED CONTROLLER		<input checked="" type="checkbox"/> UL 705	
3. BACKDRAFT DAMPER		<input type="checkbox"/> UL 762	
4. ROOF CURB			
5. HINGED BASE			

NOTES:  
1.) O.D. FOR THE CURB FOR THIS MODEL IS 15"x15".

MODEL	A	B	R-sq.	T-sq.	Lbs.
TXD102SSC	22"	27.25"	12"	16.5"	105
TXD1250SC	23"	31.5"	19.25"	24"	115

NOTE: R-sq. DESIGNATES MAXIMUM ROOF OPENING SIZE.

**EXHAUST FAN**

TXD DIRECT DRIVE

GENERAL SPECIFICATIONS

- Heavy gauge aluminum construction.
- All aluminum centrifugal blower type wheel with backward inclined blades.
- Motor and drives enclosed in weatherproof compartment out of exhaust airstream.
- Heavy duty, open drip proof motor.
- Entire drive assembly and motor force air cooled by air brought in through a breather tube isolated from exhaust airstream.
- Fan assembly floated on vibration isolators.
- Aluminum Birdscreen (UL705 only)
- OPTIONAL Curb - 18 gauge galvanized steel all welded construction.

PROJECT  
TIM HORTONS 1600-22 US

LOCATION

ARCHITECT

ENGINEER

CONTRACTOR

SUBMITTED BY

DATE 5-11-2000 JOB # SUBMIT

JEN COFAN

6393 POWERS AVENUE  
JACKSONVILLE, FL 32217

PHONE: (904) 731-4711  
FAX: (904) 737-8322

**HOOD & FAN PACKAGE NOTES**

- PROVIDE ALL WORK TO INSTALL KITCHEN HOODS AND EXHAUST FANS AS SHOWN ON THE DRAWINGS.
- HEATING AND COOLING UNITS AS INDICATED ON THE DRAWINGS TO BE INSTALLED BY THIS CONTRACTOR AND PURCHASED BY THIS CONTRACTOR FROM OWNER VENDOR. HEATING AND COOLING UNITS INDICATED ON THE DRAWINGS AND HEREINAFTER SPECIFIED ARE DESIGNED TO MEET ASHRAE 90.1 BASED ON COLUMBUS, OHIO DESIGN CONDITIONS OF 90°F SUMMER AND 0°F WINTER.
- ALL EXHAUST FANS MUST BE INSTALLED LEVEL AND PLUMB.
- EXHAUST AIR VOLUMES ARE RECOMMENDED FOR THE PROPER FUNCTION OF THE COOKING EQUIPMENT SPECIFIED.
- VERIFY ALL DIMENSIONS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE HOOD WITH BALANCING DAMPER AT DUCT COLLAR. DAMPER SHALL BE LISTED FOR USE AS PART OF TYPE II EXHAUST SYSTEM.

DRAWN BY: NWO

CHECKED BY: KFF

APPROVED BY:

ISSUE DATE: 07/12/2022

ISSUE		
#	DATE	DESCRIPTION
07/12/22		PERMIT SET

REVISIONS

#	DATE	DESCRIPTION

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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
**EXHAUST HOOD SHOP DRAWINGS**

SHEET: **M3.1**

**PLUMBING SYMBOLS LEGEND**

ABBREVIATIONS:

AFF/AFG	ABOVE FINISHED FLOOR/GRADE
AHJ	AUTHORITY HAVING JURISDICTION
BFP	BACKFLOW PREVENTER
BV	BALL VALVE
WCO/CO	WALL CLEANOUT/ CLEANOUT
FCO/ECO	FLOOR/EXTERIOR CLEANOUT
RI	ROUGH-IN
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF
IW	INDIRECT WASTE

LINETYPES:

---	COLD WATER (CW)
- - - - -	COLD WATER (CW) - BELOW SLAB/GRADE
—FW—	FILTERED WATER SUPPLY (FW)
—	HOT WATER (HW) 140°, 120°
- - - - -	HOT WATER RETURN (HWR) 140°, 120°
—G—	GAS LINE (G)
—D—	CONDENSATE LINE (D)
---	PLUMBING VENT (V)
- - - - -	PLUMBING VENT (V) - BELOW SLAB/GRADE
—	SANITARY WASTE (SAN) - BELOW SLAB/GRADE
—GW—	GREASE WASTE (GW) - BELOW SLAB/GRADE

PIPE SYMBOLS:

↳○↳	PIPE TURNING UP/DOWN
↳○↳	TEE TURNING UP/DOWN
↳○↳	SHUTOFF VALVE (BALL TYPE)
↳↳	CHECK VALVE
↳↳	BALANCING VALVE
↳ ]	END CAP
⊥	WALL HYDRANT

**GENERAL NOTES**

- PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO EXECUTE THE PLUMBING WORK INDICATED ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES AND ORDINANCES.
- PAY ALL FEES AND ARRANGE FOR EXECUTION OF ALL TAPS, METERS WITH REQUIRED ENCLOSURES (IF ANY), ETC. INHERENT TO THE INSTALLATION OF NEW PLUMBING SERVICE.
- PLUMBING WORK INCLUDES ALL PIPING FOR DOMESTIC HOT AND COLD WATER LINES, VENT AND SANITARY LINES, HOOK-UP OF ALL FIXTURES SCHEDULED ON THE DRAWINGS, AND INSULATION OF DESIGNATED PIPING RUNS. WORK SHALL ALSO INCLUDE ALL GAS PIPING AND EQUIPMENT CONNECTIONS WHERE REQUIRED.
- ALL ITEMS SUCH AS FITTINGS, ETC. NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED.
- SOIL, WASTE, AND VENT PIPING SHALL BE OF MATERIAL APPROVED BY LOCAL CODES. PVC, DWV PIPING AND FITTINGS SHALL BE SCHEDULE 40 AS A MINIMUM.
- PROVIDE CLEANOUTS FOR SOIL AND WASTE LINES AS SHOWN ON DRAWINGS, AND OF TYPE APPROVED BY LOCAL CODES.
- ALL WATER SUPPLY PIPING BELOW GROUND SHALL BE PEX PIPING UNLESS PROHIBITED BY LOCAL CODES IN WHICH CASE COPPER TUBING SHALL BE USED, (AVOID FITTINGS BELOW SLAB WHENEVER POSSIBLE). ALL WATER SUPPLY PIPING ABOVE GROUND SHALL BE TYPE L HARD COPPER TUBING UNLESS NOTED OTHERWISE. PEX PIPING PASSING THROUGH CONCRETE SLABS SHALL BE SLEEVED WITH PVC BEND SUPPORT BY MANUFACTURER. PROVIDE UPONOR/WIRBSO SERIES: A5500500 FOR 1/2", PEX A5500750 FOR 3/4" PEX, A5501000 FOR 1" PEX. PROVIDE CORRUGATED PVC TUBING (1) PIPE DIAMETER LARGER THAN THE PEX TUBING FOR SIZES LARGER THAN 1" PEX.
- PROVIDE FOR DRAINING WATER SYSTEM, AND CAP ALL STUBS UNTIL FINISH WORK IS INSTALLED. INSTALL DRAIN VALVE AT WATER METER WITH 3/4" HOSE THREAD AND VACUUM BREAKER.
- PROVIDE STOPS ON WATER SUPPLIES TO EACH FIXTURE & EQUIPMENT.
- GAS PIPING FOR HEATING SYSTEMS WITH GAS-FIRED EQUIPMENT SHALL BE INCLUDED IN THIS CONTRACT. GAS PIPING SHALL BE STANDARD WEIGHT, BLACK STEEL PIPE, SCHEDULE 40. PIPING EXPOSED TO ATMOSPHERE OR RUN BELOW GRADE SHALL HAVE POLYETHYLENE PLASTIC COATING. ALL GAS PIPING, FITTINGS AND INSTALLATION SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANY AND ALL GOVERNING BODIES.
- INSULATE ALL COLD AND HOT WATER PIPING PER SPECIFICATIONS. WATER LINES SHOULD NOT BE INSTALLED IN EXTERIOR WALLS TO PREVENT FREEZING. INSULATION SHALL MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS REQUIRED BY LOCAL CODES.
- PLUMBING FIXTURES SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS. ALL FIXTURE FITTINGS AND EXPOSED FIXTURE PIPING SHALL BE BRASS CHROMIUM PLATED, ALL TRAPS SHALL BE CAST BRASS. ALL FIXTURES SHALL BE EQUAL IN ALL RESPECTS TO FIXTURES SPECIFIED.
- PROVIDE WATER METER TYPE AS REQUIRED BY LOCAL UTILITY COMPANY.
- ROUGH-IN AND FINAL CONNECTIONS OF REQUIRED WASTE, VENT, AND WATER SUPPLY PIPING BY THIS CONTRACTOR. ALL SUPPLY PIPING SHALL BE VALVED.
- HOSE BIBBS SHALL BE FREEZELESS AUTOMATIC DRAINING TYPE. REFER TO SCHEDULE.
- COORDINATE ALL WORK WITH OTHER CONTRACTORS.
- THIS CONTRACTOR SHALL GUARANTEE ALL WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS. (USUAL WEAR IS EXPECTED), AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE BUILDING BY THE OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND ALL DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
- PROVIDE BACKFLOW PREVENTER WHEN REQUIRED BY LOCAL CODE.
- SEE PLUMBING SHEETS FOR KITCHEN EQUIPMENT SCHEDULE, FIXTURE SCHEDULE, DETAILS AND SANITARY ISOMETRIC.
- THE DIRECTION OF THE SANITARY MAIN AND THE LOCATION OF THE GREASE INTERCEPTOR SHALL BE COORDINATED WITH CIVIL DRAWINGS PRIOR TO ROUGH-IN.
- ALL COLD, HOT, AND FILTERED WATER LINES SHALL BE INSTALLED UNDER SLAB UNLESS NOTED OTHERWISE. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN OF PIPING TO PREVENT CONFLICT.
- COORDINATE LOCATION AND ROUGH-IN HEIGHT OF KITCHEN EQUIPMENT WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.
- MAKE ALL CONNECTIONS TO KITCHEN AND MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED. USE MILL HARDWOOD 30B35 BRAIDED FLEXIBLE HOSES FOR ALL COUNTERTOP EQUIPMENT.
- PROVIDE WATER HAMMER ARRESTORS AT THE END RUN OF ALL WATER PIPING. SIZE AS RECOMMENDED BY PLUMBING AND DRAINAGE INSTITUTE, AND AS RECOMMENDED BY THE MANUFACTURER.
- ALL PIPING (GAS AND WATER) SHALL BE CONCEALED IN WALL SPACE WHEN POSSIBLE.
- ALL SHUT-OFF VALVES SHALL BE 1/4 TURN VALVES.
- THIS CONTRACTOR TO INSTALL PEX MANIFOLDS UNDER COUNTER SPACE AND SHALL BE MOUNTED AT 12" A.F.F. UNLESS NOTED OTHERWISE. COORDINATE LOCATION WITH OWNER.
- DAMAGE TO EXISTING WALLS, FLOORS, FINISHES ETC. BY THIS CONTRACTOR SHALL BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.
- PROVIDE CUT TO LENGTH PEX PIPING SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND FILTERED WATER PEX FROM SHUTOFF VALVE ABOVE CEILING TO EQUIPMENT'S CONNECTION. INSTALL CONNECTION ENDS ON PEX SIZE AND TYPE TO COORDINATE WITH EQUIPMENT CONNECTION. SEE PEX RISERS AND KITCHEN CONNECTION SCHEDULE FOR MORE INFORMATION FOR INSTALLATION DETAILS. COORDINATE WITH OWNER'S REPRESENTATIVE & MILLWORK. SUPPORT PEX AT PROPER INTERVALS TO PREVENT SAGGING.
- ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED AT 1/4" PER FOOT FOR PIPE SIZES 3" AND SMALLER, 1/8" PER FOOT FOR PIPE SIZES 4"-6", AND 1/16" PER FOOT FOR PIPE SIZES 8" OR LARGER UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON DRAWINGS. GREASE LADEN WASTE LINES AND SAND/OIL WASTE LINES SHALL BE INSTALLED AT NO LESS THAN AT 1/4" PER FOOT FALL.

**GAS FIRED WATER HEATER SCHEDULE**

SYMBOL	MANUF.	MODEL	BTU	GAS PRESSURE	TEMP RISE (°F)	SET POINT (°F)	NOTES (#)
WH-1	RINNAI	CU199	199,000	3.5-10.5" W.C.	100	140	(1), (2)
WH-2	RINNAI	CU199	199,000	3.5-10.5" W.C.	100	140	(1), (2)

NOTES:

- INSTANTANEOUS TYPE WATER HEATER WITH CONCENTRIC FLUE/AIR INTAKE SYSTEM (WALL-TYPE), DIRECT ELECTRONIC IGNITION SYSTEM, REMOTE ELECTRONIC CONTROLS AND INTEGRAL DIAGNOSTICS, MEETS CURRENT EDITION OF ASHRAE 90.1B AND IECC TABLE C404.2. UNIT HAS A RATED ENERGY FACTOR (EF) OF 0.96. PROVIDE WITH MANUFACTURER'S RACKING SYSTEM.
- FURNISH WITH EXPANSION TANK AS SPECIFIED ON PLANS.

**EXPANSION TANK SCHEDULE**

SYMBOL	MANUF.	MODEL	GAL.	ACCEPT. GAL.	CONN. LOC.	CONN. SIZE	MOUNTING	NOTES (#)
ET-1	AMTROL	ST-8	4.4	3.2	TOP	3/4"	ABOVE WH-1	(1), (2)

NOTES:

- EXPANSION TANK: STEEL SHELL, HEAVY DUTY BUTYL NSF/ANSI 61, FACTORY PRECHARGED TO 50 PSIG, MAX OPERATING TEMPERATURE 200°, MAX OPERATING PRESSURE 150 PSI, 1 YEAR MANUFACTURER'S WARRANTY. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- FIELD CHARGE EXPANSION TANK TO SYSTEM PRESSURE BEFORE CONNECTION TO DOMESTIC WATER SYSTEM. FIELD VERIFY PRESSURE REQUIREMENTS.

**PUMP SCHEDULE**

SYMBOL	MANUF.	MODEL	GPM	HEAD (FT)	V	PH	A	W	NOTES (#)
RCP	GRUNDFOS	ALPHA2	5	12	115	1	0.65	5-65	(1)

NOTES:

- RECIRCULATING PUMP: BRONZE BODY RECIRCULATING PUMP WITH "AUTOADAPT" VARIABLE SPEED MOTOR. INSTALL NEAR WATER HEATER PER MANUFACTURER'S INSTRUCTIONS. PROVIDE WITH ALPHA 3-PRONG PLUG AND COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR. PROVIDE WITH HONEYWELL L5009C SURFACE MOUNT AQUASTAT SET TO 5°F BELOW WATER HEATER OPERATING TEMPERATURE.

**GREASE INTERCEPTOR SCHEDULE**

SYMBOL	MANUF.	MODEL	FLOW RATE (GPM)	GREASE CAPACITY (LBS.)	LIQUID CAPACITY (GAL.)	NOTES (#)
GI	SCHIER	GB-250	100	1.895	277	(1), (2), (3)

- NOTES:
- CONTRACTOR SHALL SUBMIT PROPOSED GREASE INTERCEPTOR INSTALLATION PLANS AND SPECIFICATIONS TO LOCAL AUTHORITIES FOR THEIR APPROVAL BEFORE ACQUISITION. SEE MANUFACTURER INSTALLATION MANUAL FOR ADDITIONAL INSTRUCTIONS.
  - PROVIDE WITH C24HP H2O LOAD RATED PICKABLE CAST IRON LIDS WITH "SAFE MANWAY" FALL PROTECTION COVER.
  - PROVIDE WITH AK1 ANCHOR KIT.

**BACKFLOW PREVENTER SCHEDULE**

LOCATION	TAG	MODEL	ASSE
MAIN WATER SUPPLY	RPZ	WATTS LF009-QT-S	1013
ESPRESSO MACHINE	DCV-1	WATTS SD-3	1022
COFFEE BREWERS	DCV-2	WATTS SD-2	1022
OTHER EQUIPMENT	DCV-3	WATTS SERIES 7	1024

NOTE:  
VERIFY BACKFLOW VALVE REQUIREMENTS AND APPROVAL FOR ALL EQUIPMENT WITH AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION.

**PLUMBING FIXTURE SCHEDULE**

SYMBOL	FIXTURE TYPE	MANUFACTURER	MODEL	DESCRIPTION	ACCESSORIES/OPTIONS
WC	WATER CLOSET (ACCESSIBLE)	AMERICAN STANDARD	4142.601/901	FLOOR MOUNT, WHITE VITREOUS CHINA, 1.1 GPF PRESSURE ASSIST TANK, ADA WATER CLOSET WITH TANK LOCKING DEVICE. PROVIDE LEVER ON ACCESSIBLE SIDE IN ACCORDANCE TO ADA ACCESSIBILITY REQUIREMENTS. MOUNT WATER AT 12" +/- AFF.	PROVIDE WITH QUARTER TURN BRASS ANGLE COMPRESSION STOP WITH LOOSE KEY HANDLE, STAINLESS BRAIDED SUPPLY AND CHROME SUPPLY ESCUTCHEON.
LAV	LAVATORY (ACCESSIBLE)	AMERICAN STANDARD	#0368.421.020 LUCERNE	WALL HUNG, 20 1/2" X 18 1/2", WHITE VITREOUS CHINA. TOTO #TEL105-D1/E POLISHED CHROME, SINGLE HOLE, ECOPOWER DECK MOUNTED FAUCET WITH 0.9GPC DISCHARGE (10 SECOND CYCLE). MOUNT WASTE INLET AT 18" AFF.	PROVIDE WITH QUARTER TURN BRASS ANGLE COMPRESSION STOPS WITH LOOSE KEY HANDLES, STAINLESS BRAIDED SUPPLIES, CHROME SUPPLY AND DRAIN ESCUTCHEONS, CHROME GRID STRAINER DRAIN WITH TAILPIECE, CHROME PLATED CAST BODY P-TRAP WITH CLEANOUT, AND ZURN #Z-1231-81 LAVATORY CARRIER. INSULATE WASTE AND WATER PIPING WITH TRUEBRO "LAV-GUARD2" #101-EZ.
FPWH	FROST PROOF WALL HYDRANT	WOODFORD	MODEL 65	ANTI-SIPHON, AUTOMATIC DRAINING, WALL HYDRANT, NON-FREEZE INTEGRAL VACUUM BREAKER, ALL BRONZE INTERIOR PARTS, KEY OPERATED, 3/4" SOLDER INLET.	MOUNT 18" ABOVE FINISHED GRADE. PROVIDE APPROPRIATE MODEL FOR WALL THICKNESS AND SITE SPECIFIC TEMPERATURE REQUIREMENTS.
MS	MOP SINK	FIAT	MSB2424	FLOOR MOUNTED, MOLDED STONE BASIN, 24" X 24" X 10" DEEP. DRAIN AND STOPPER SHALL BE INCLUDED WITH SINK. MOUNT WATER LINES AT 30" AFF.	PROVIDE WITH FIAT #830-AA FAUCET, HOSE AND BRACKET #832-AA, AND CHROME PLATED WALL NIPPLES AND ESCUTCHEONS.
MV	MIXING VALVE	ZURN	ZW3870XL / ZW1070XL	THERMOSTATIC CONTROLLER WITH INTEGRAL CHECKS, ALL BRASS BODY WITH DUAL STAINLESS STEEL STRAINER, VANDAL RESISTANT TEMPERATURE ADJUSTMENT HANDLE.	SET TO 105°F. MOUNT IN ACCESSIBLE LOCATION.
FD-1	FLOOR DRAIN	ZURN	#ZN415-3NH-5M-P-V P	CAST IRON BODY, 7" DIAMETER BRONZE SERIES C STRAINER, COMBINATION MEMBRANE CLAMP, AND ADJUSTABLE COLLAR.	PROVIDE WITH ASSE 1072 APPROVED TRAP SEAL DEVICE. TRAP SEAL DEVICE SHALL BE TRAP PROSET TRAPGUARD OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE DRAINS IN CUSTOMER AREAS WITH VANDAL RESISTANT SCREWS.
FS-1	FLOOR SINK	ZURN	#FD2370-PV3	12" SQUARE TOP FLOOR SINK W/8" DEEP PVC/CAST IRON BODY & 3" BOTTOM OUTLET (CAST IRON OPTIONAL)	
FS-2	FLOOR SINK	ZURN	#FD2375-NH4 W/ZN1900-2	12" SQUARE TOP FLOOR SINK WITH 6" DEEP ACID RESISTANT ENAMEL CAST IRON BODY AND 3" OUTLET WITH 1/2" NICKEL BRONZE GRATE.	SET FLOOR SINK LEVEL WITH FINISH FLOOR.
FCO	FLOOR CLEAN OUT	ZURN	#CO2455-PV4	ADJUSTABLE PVC BODY WITH INTEGRAL THREADED PLUG AND SCREW DOWN COVER.	
ECO	EXTERIOR CLEAN OUT	ZURN	#Z1400-K	PVC BODY WITH PVC PLUG AND THREADED BRASS INSERT FOR CO2530 ROUND ACCESS COVER.	
WCO	WALL CLEAN OUT	ZURN	#CO2412-PVC	PVC BODY WITH PVC PLUG AND THREADED BRASS INSERT FOR CO2530 ROUND ACCESS COVER.	
KS-1	KITCHEN SINK	POLAR WARE	#173-4.2	DROP IN SINK, 17"x13", STAINLESS STEEL. ZURN #Z812A1-XL POLISHED CHROME, 4" CENTERSET, GOOSENECK FAUCET WITH 2.2 GPM DISCHARGE. MOUNT WASTE INLET AT 18" AFF.	PROVIDE WITH QUARTER TURN BRASS ANGLE COMPRESSION STOPS WITH LOOSE KEY HANDLES, STAINLESS BRAIDED SUPPLIES, CHROME SUPPLY AND DRAIN ESCUTCHEONS, CHROME TAILPIECE, AND CHROME PLATED CAST IRON P-TRAP WITH CLEANOUT.
KS-2	KITCHEN SINK	POLAR WARE	#141-OC	WALL MOUNT SINK 15"x17", STAINLESS STEEL ZURN #Z8112A1-XL-TWM POLISHED CHROME, 4" CENTERSET, GOOSENECK FAUCET WITH 2.2 GPM DISCHARGE. MOUNT WASTE INLET AT 18" AFF.	PROVIDE WITH QUARTER TURN BRASS ANGLE COMPRESSION STOPS WITH LOOSE KEY HANDLES, STAINLESS BRAIDED SUPPLIES, CHROME SUPPLY AND DRAIN ESCUTCHEONS, CHROME TAILPIECE, AND CHROME PLATED CAST IRON P-TRAP WITH CLEANOUT.

**KITCHEN EQUIPMENT CONNECTION SCHEDULE**

ITEM	DESCRIPTION	FW	CW	HW (110°)	HW (140°)	WASTE	VENT	REMARKS
20.4	3-COMP. SINK	--	1/2"	--	1/2"	INDIRECT	1 1/2"	(2), (4)
62.18	ICE MACHINE	1/2"	--	--	--	INDIRECT	--	(2), (4), (5)
69.9	HOT POWDERED DRINK MACHINE	1/2"	--	--	--	--	--	(2), (5)
68.21	COFFEE BREWER	1/2"	--	--	--	--	--	(2), (5)
70	WALK-IN FREEZER	--	--	--	--	INDIRECT	--	
74	WALK-IN COOLER	--	--	--	--	INDIRECT	--	(2)
130.8	ICED COFFEE BREWER	1/2"	--	--	--	--	--	(2), (5),
136.9	ESPRESSO	1/2"	--	--	--	INDIRECT	--	(2), (4), (5)
203.1R	STACKED OVENS	--	1/2"	--	--	INDIRECT	--	(1), (3), (4), (5), (7), (8)
208.3	RINSER - IN COUNTER WITH DRAIN PAN	--	1/2"	--	--	INDIRECT	--	(4), (5)
208.5	RINSER - W/ ICE BIN	--	1/2"	--	--	INDIRECT	--	(4), (5)

- REMARKS:
- INSTALL ASSE BACKFLOW PREVENTER PER LOCAL CODES AND SPECIFICATIONS.
  - PROVIDE CUT TO LENGTH PEX PIPING FROM MANIFOLD SHUTOFF TO EQUIPMENT CONNECTION. INSTALL ENDS ON PEX SIZED PER EQUIPMENT CONNECTION.
  - STACKED OVENS COME WITH STAINLESS STEEL DRAIN KIT. KIT IS TO BE INSTALLED WITH AN INDIRECT DRAIN WITH TRAP FROM SINGLE POINT CONNECTION AND EXTEND TO DRAIN.
  - INDIRECT WASTE TO DRAIN W/AIR GAP PER CODE.
  - PROVIDE BACKFLOW PROTECTION PER BACKFLOW PREVENTOR SCHEDULE. COORDINATE BACKFLOW INSTALLATION WITH KITCHEN EQUIPMENT PROVIDER.
  - MOUNT WASTE INLET AT 18" AFF.
  - CHEMICAL FEED UNITS AND INSTALLATION KITS FURNISHED BY OWNER'S REPRESENTATIVE AND INSTALLED BY CONTRACTOR. FEED STATIONS ARE LOCATED BELOW OVEN RACK. CONNECT ONE CHEMICAL UNIT TO EACH OVEN AND LABEL WHICH CHEMICAL UNIT SERVES WHICH OVEN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE SHUT-OFF VALVE WITH 1/2" HOSE TO EACH OVEN, AND LABEL VALVE "TREATED WATER". EXTEND AN ADDITIONAL 3/4" COLD WATER LINE FROM PEX MAIN TO 36" AFF AND PROVIDE SHUT-OFF VALVE WITH 1/2" FLEXIBLE HOSE TO EACH OVEN PER MANUFACTURER'S RECOMMENDATIONS, AND LABEL VALVE "UNTREATED WATER". INSTALL PER MANUFACTURER'S RECOMMENDATIONS. MAKE ALL FINAL CONNECTIONS. INSTALL TUBING KITS AND WATER FILTRATION SYSTEM AS FURNISHED BY OWNER'S REPRESENTATIVE. COORDINATE EXACT LOCATION WITH OWNER'S REPRESENTATIVE & MILLWORK PRIOR TO ROUGH-IN. PROVIDE PEX FOR COLD WATER AND FILTERED WATER LINES AS REQUIRED.

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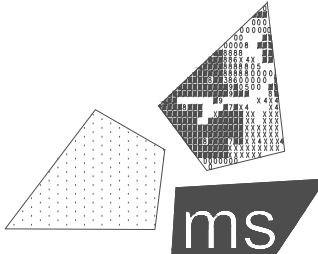
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	07/12/22	PERMIT SET

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PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 0201061051  
EXP. DATE: 03/17/2023

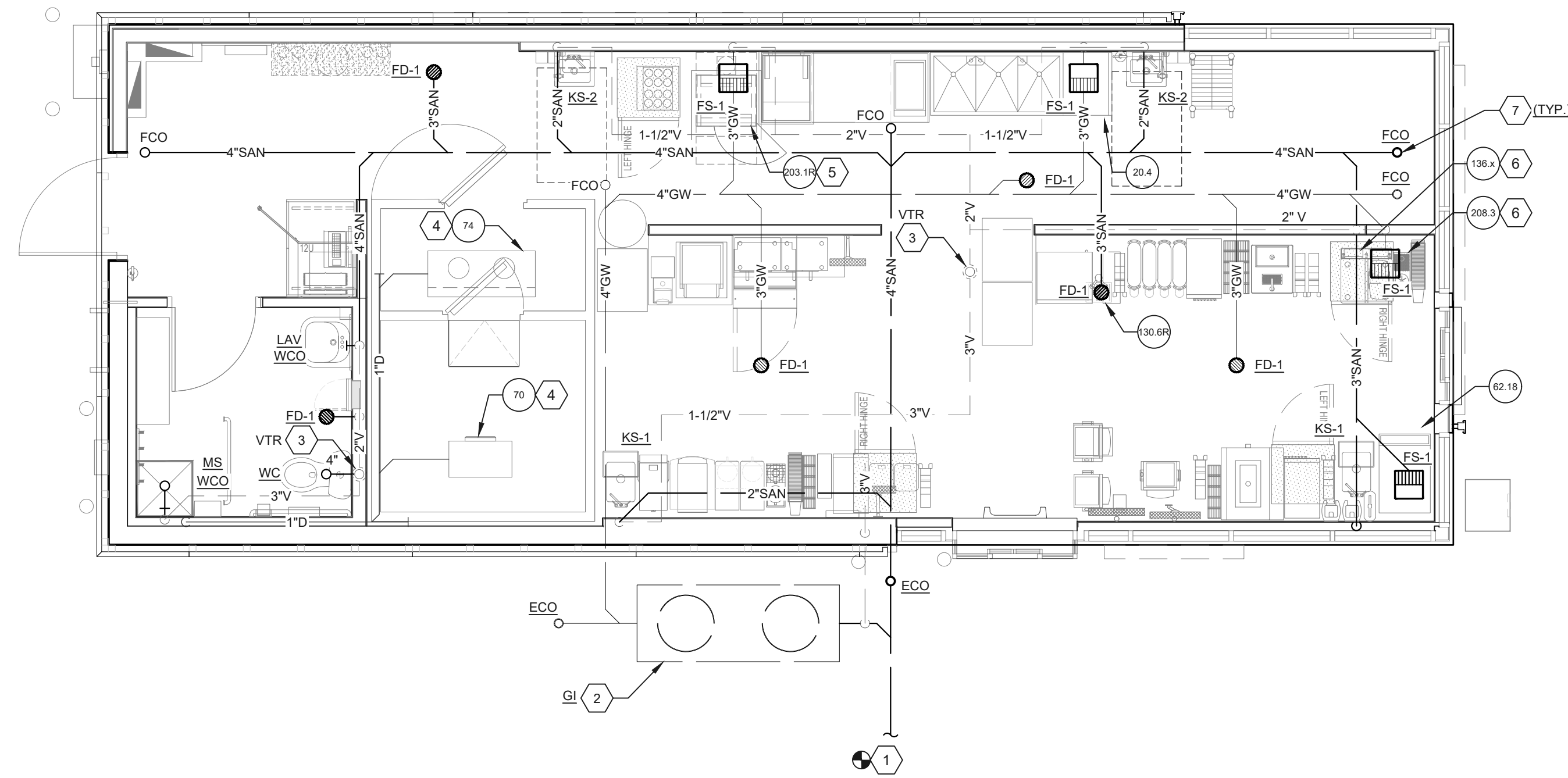
PROJECT NO.:  
40509-11

SHEET TITLE:  
**PLUMBING SCHEDULES AND NOTES**

SHEET:  
**P1.0**

File Name: N:\03\62\40509-THUS11\_HARPER WOODS, MI\DT0 (RBI)\DOCS\CAD\P-1.0\_PLUMBING SCHEDULES & NOTES.DWG Plotted By: ORLANDINI, NATHAN Plt Date: 7/12/2022 3:39 PM

File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IP1.1\_PLUMBING SANITARY WASTE & VENT PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:38 PM



PLUMBING PLAN - SANITARY WASTE & VENT 1  
1/4" = 1'-0"

- CODED NOTES:**
- EXTEND SANITARY LINE AS SHOWN PER PLANS. REFER TO CIVIL DRAWINGS FOR CONTINUATION. FIELD VERIFY EXACT LOCATION PRIOR TO STARTING WORK.
  - PROVIDE EXTERIOR GREASE INTERCEPTOR. LOCATE CLEAR OF DRIVE-THRU LANE. REFER TO CIVIL DRAWINGS FOR FINAL LOCATION. REFER TO "GREASE INTERCEPTOR" DETAIL.
  - PROVIDE SANITARY VENT THROUGH ROOF PER "VENT THRU ROOF (VTR)" DETAIL. LOCATE VENT MINIMUM OF 10'-0" AWAY FROM AIR INTAKES ON ROOF, UNLESS APPROVED BY ENGINEER PRIOR TO INSTALLATION. VTR SHALL BE EXTENDED HIGHER THAN AIR INTAKES. LOCATE PER ROOF PLAN.
  - EVAPORATOR INSIDE WALK-IN COOLER/FREEZER SHALL BE DRAINED TO NEAREST INDIRECT DRAIN RECEPTOR. USE 1" DIAMETER COPPER LINE AND 45° ELBOWS WHEN CHANGING DIRECTION. HEAT TRACING INSIDE FREEZER SHALL BE PROVIDED, CONNECTED AND INSTALLED BY GENERAL CONTRACTOR. ENTIRE LENGTH OF PIPE SHALL BE INSULATED, PROTECTED BY GUARD AND TAGGED FOR CAUTION FOR HEAT TAPE UNDER INSULATION. THE GENERAL CONTRACTOR SHALL PROVIDE POWER, DRAINAGE AND HEAT TRACING INSTALLATION AS PER MANUFACTURER'S RECOMMENDATIONS. RUN TIGHT TO FREEZER/COOLER WALLS.
  - STACKED OVENS SHALL BE DRAINED TO FLOOR SINK WITH 2" LINE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE INDIRECT CONNECTION. SANITARY DRAIN PIPING WITHIN 6'-0" SHALL BE OF CAST IRON CONSTRUCTION. LOCATE CENTER OF DRAIN 12" FROM BACK WALL.
  - INDIRECT WASTE FROM RINSER AND ESPRESSO MACHINE INSIDE CABINET. ROUTE WITHIN CABINET TO BACK OF COUNTER AND ACROSS TO FLOOR SINK WITH AIR GAP. MOUNT PVC TO BE OUT OF SIGHT AND ALLOW ACCESS TO ALL EQUIPMENT UNDER COUNTER. VERIFY ROUTING WITH CONSTRUCTION MANAGER.
  - FLOOR CLEANOUTS SHALL BE LEVEL AND FLUSH WITH SURROUNDING FLOOR. DO NOT SLOPE FLOOR TO CLEAN OUT.

**DFU CALCULATIONS**

FIXTURE	QTY.	DFU	TOTAL
WATER CLOSET (FLUSH)	1	4	4
LAVATORY	1	1	1
MOP BASIN	1	2	2
HAND SINK	4	1	4
3-COMP SINK	1	3	3
3" HUB DRAIN	1	5	5
3" FLOOR SINK	4	5	20
3" FLOOR DRAIN (EMERGENCY)	6	-	-
*DFU VALUES GIVEN PER IPC*		DFU TOTAL	39.0

DRAWN BY: NWO

CHECKED BY: KFF

APPROVED BY:

ISSUE DATE: 07/12/2022

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*Tim Hortons*

PROJECT:  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

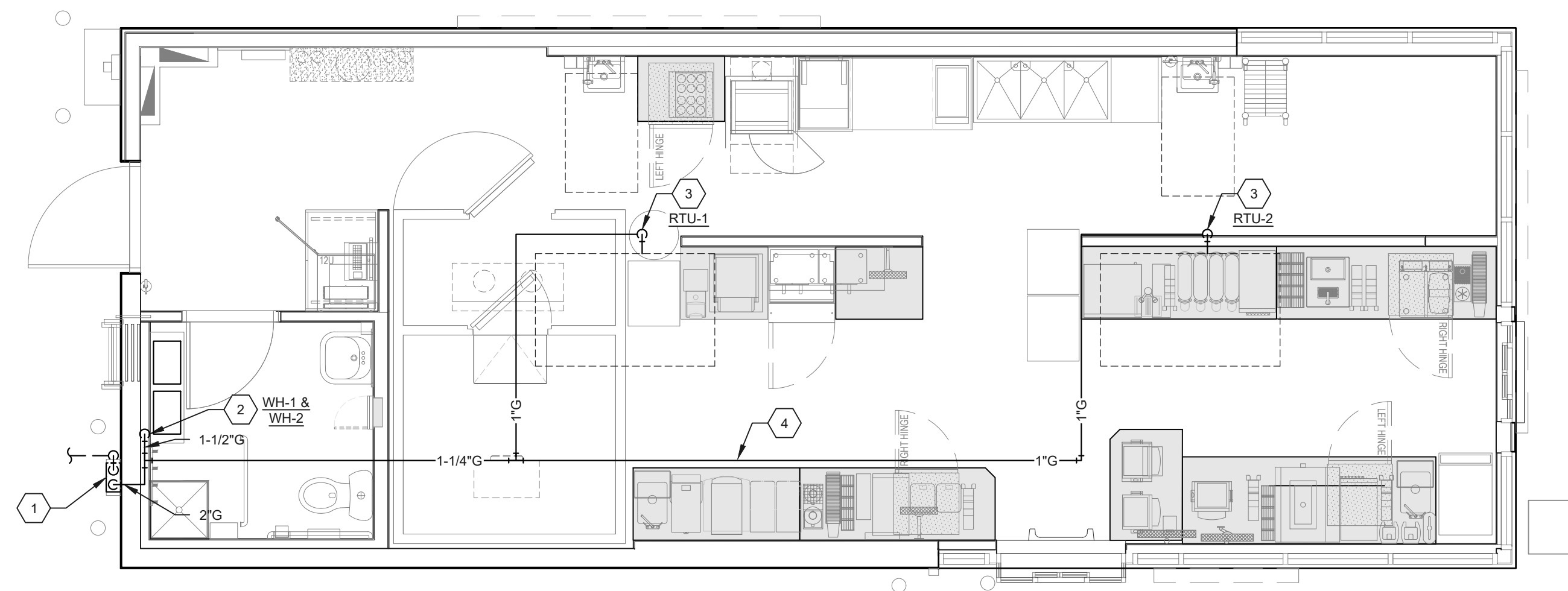
SHEET TITLE:  
**SANITARY WASTE AND VENT PLAN**

SHEET:  
**P1.1**



File Name: N:\03\24\0509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IP1.3\_PLUMBING NATURAL GAS PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:39 PM

**PLUMBING PLAN - NATURAL GAS** 1  
1/4" = 1'-0"



#	CODED NOTES:
1.	GAS SERVICE AND METER SETTING SIZED PER GAS COMPANY REQUIREMENTS FOR MAX CONNECTED LOADS AS SHOWN IN "NATURAL GAS CALCULATIONS" TABLE WITH TOTAL DEVELOPED LENGTH INCLUDING FITTINGS, VALVES, ETC. OF 70 LINEAR FEET AND TOTAL SYSTEM PRESSURE DROP OF 0.3" W.C. WITH 14" W.C. DELIVERED AT THE METER. HOLD GAS METER AND NATURAL GAS LINES TIGHT TO BUILDING. ROUTE GAS PIPING UP WALL AND ENTER BUILDING. SEAL PENETRATION WATER TIGHT. REFER TO GAS SERVICE DETAIL 09P4.
2.	ROUTE 1-1/2" NATURAL GAS LINE DOWN TO WATER HEATERS. PROVIDE 6" DIRT LEG, GAS COCK, AND UNION AT EACH WATER HEATER. PROVIDE CONCENTRIC VENT AIR INTAKE ROOF TERMINATION KIT. ROUTE VENTINTAKE PIPING AS SHOWN. INSTALL TO MEET CODE AND MANUFACTURER'S REQUIREMENTS. MAKE ALL FINAL INTAKE/EXHAUST CONNECTIONS. COORDINATE LOCATION OF ROOF OPENING WITH ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
3.	ROUTE NATURAL GAS UP THROUGH ROOF TO ROOFTOP EQUIPMENT AS SHOWN PER PLAN. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. REFER TO "ROOFTOP UNIT GAS CONNECTION" DETAIL. PAINT GAS LINES ON ROOF SAFETY YELLOW. ROUTE GAS LINES TO ALLOW FULL ACCESS TO RTU EQUIPMENT.
4.	ROUTE GAS PIPING TIGHT TO STRUCTURE ABOVE.

NATURAL GAS CALCULATIONS	
EQUIPMENT	MBH
RTU-1	110
RTU-2	110
WH-1	199
WH-2	199
<b>TOTAL GAS LOAD (MBH)</b>	<b>618</b>

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CHECKED BY	KFF	
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**PROJECT:**  
19353 VERNIER ROAD  
HARPER WOODS, MI 48225  
**STORE # 919728**



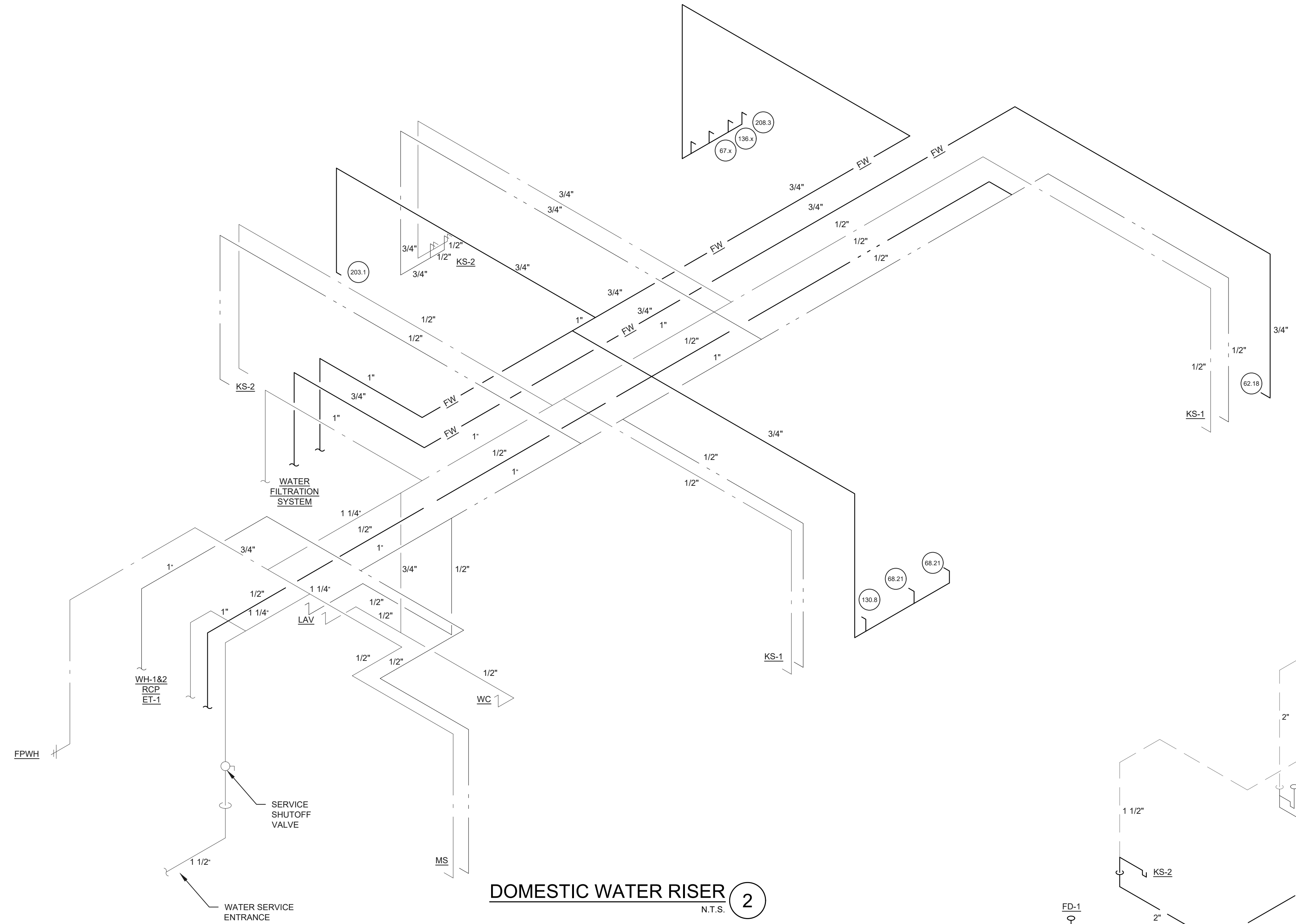
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JASON E. CHRISTOFF No. 6201061051  
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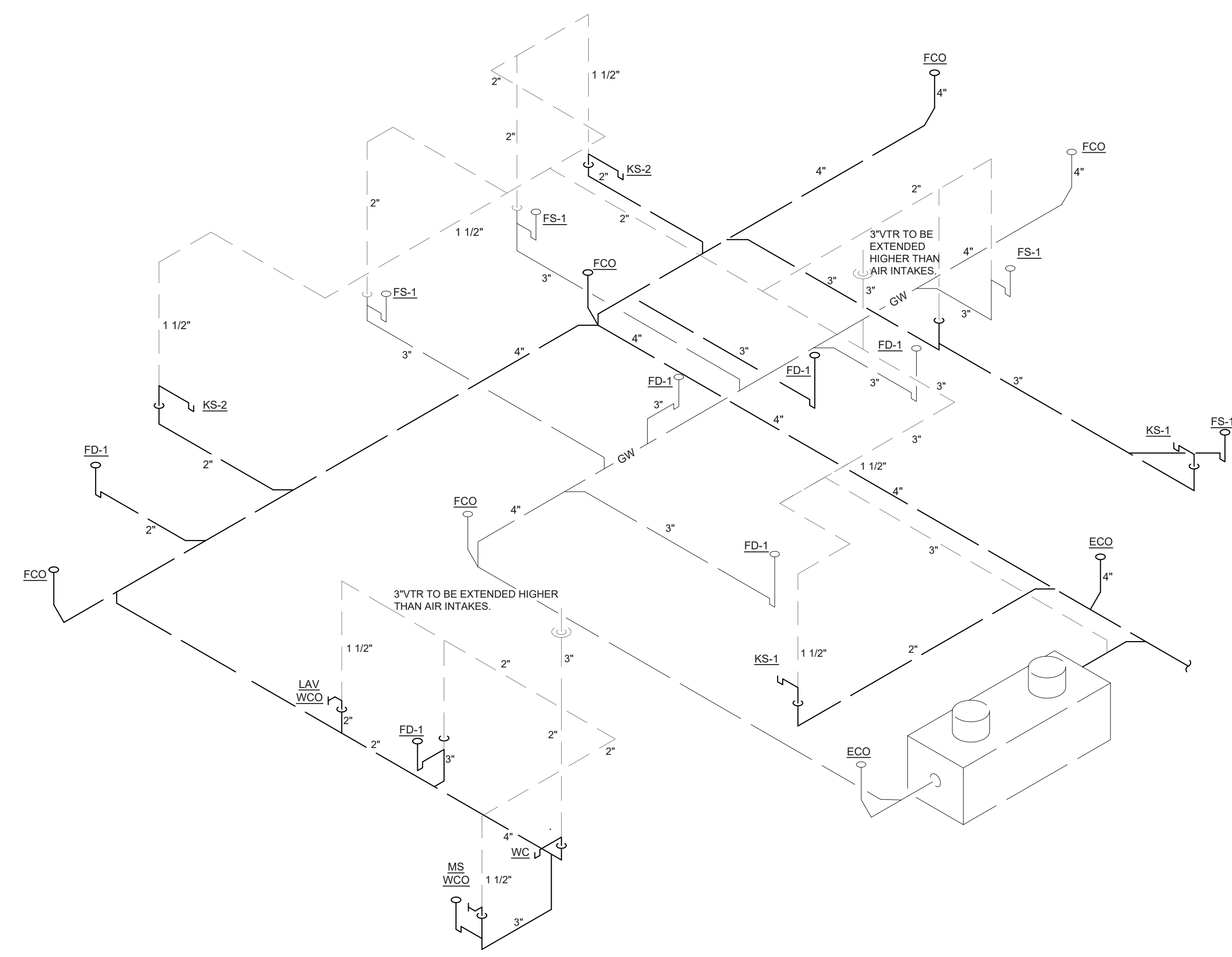
SHEET TITLE:  
**PLUMBING NATURAL GAS PLAN**

SHEET:  
**P1.3**

File Name: N:\036240509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IP2.1\_PLUMBING RISERS.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:39 PM



**DOMESTIC WATER RISER**  
N.T.S. **2**



**SANITARY WASTE & VENT RISER**  
N.T.S. **1**

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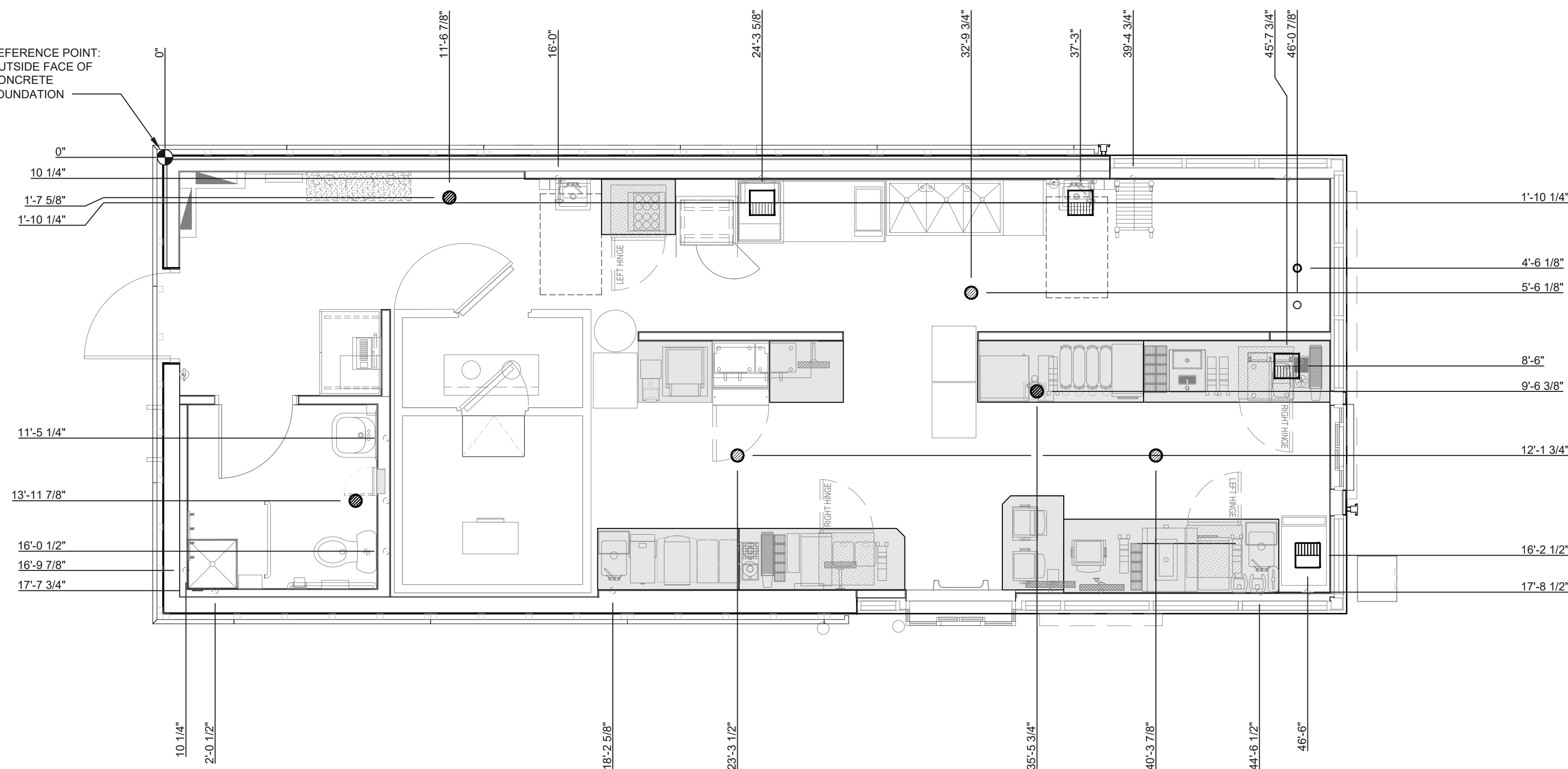
PROFESSIONAL OF RECORD:  
 JASON E. CHRISTOFF No. 6201061051  
 EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11  
 SHEET TITLE:  
**PLUMBING RISERS**  
 SHEET:  
**P2.1**

File Name: N:\030240509-THUS11\_HARPER WOODS, MI DTO (RB)\DOCS\CAD\IP3\_1\_PLUMBING ROUGH-IN PLAN.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:39 PM

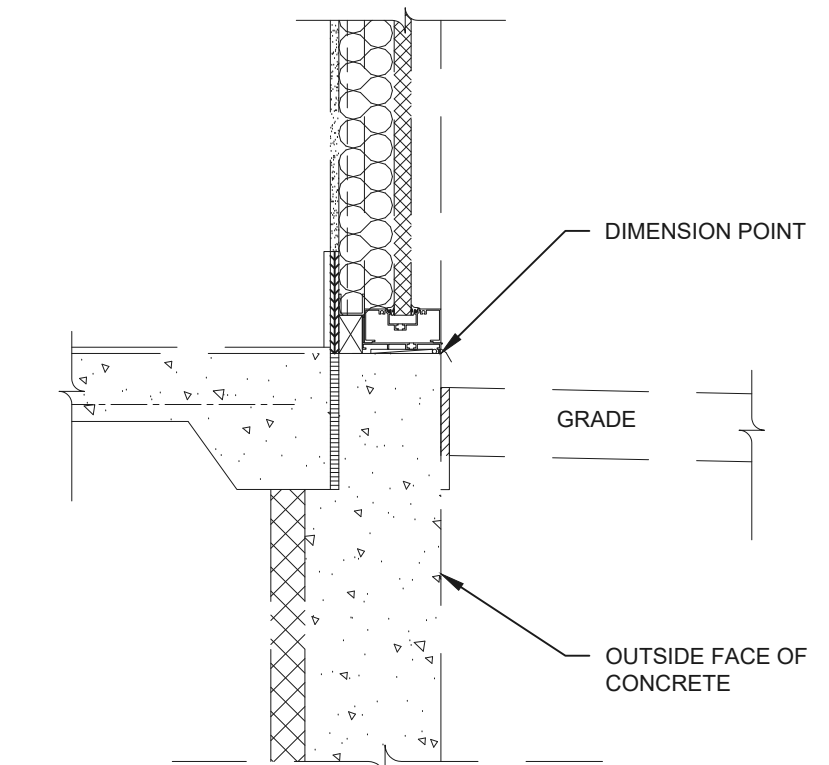
NOTE: ALL DIMENSIONS ARE FROM OUTSIDE FACE OF CONCRETE FOUNDATION. SEE DETAIL 02 ON THIS SHEET.

REFERENCE POINT:  
OUTSIDE FACE OF CONCRETE FOUNDATION



DIMENSIONS ARE FOR REFERENCE ONLY.  
GENERAL CONTRACTOR TO COORDINATE FINAL LOCATIONS WITH TIM HORTONS REPRESENTATIVE, KITCHEN EQUIPMENT VENDOR, MILLWORK VENDOR, AND ALL OTHER TRADES PRIOR TO STARTING WORK.

PLUMBING PLAN - ROUGH-IN **1**  
1/4\" = 1'-0"



SEE DETAIL ON SHEET A7 FOR MORE DETAILS

DIMENSION POINT DETAIL **02**  
NOT TO SCALE

DRAWN BY: NWO

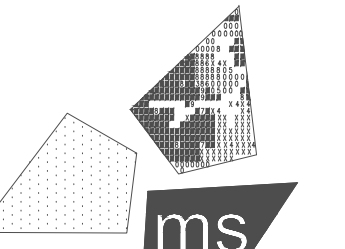
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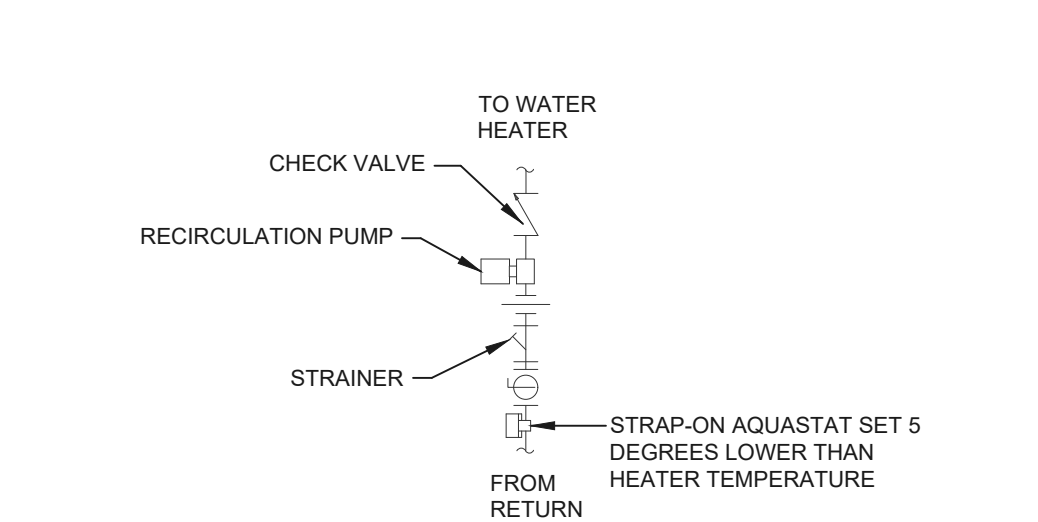
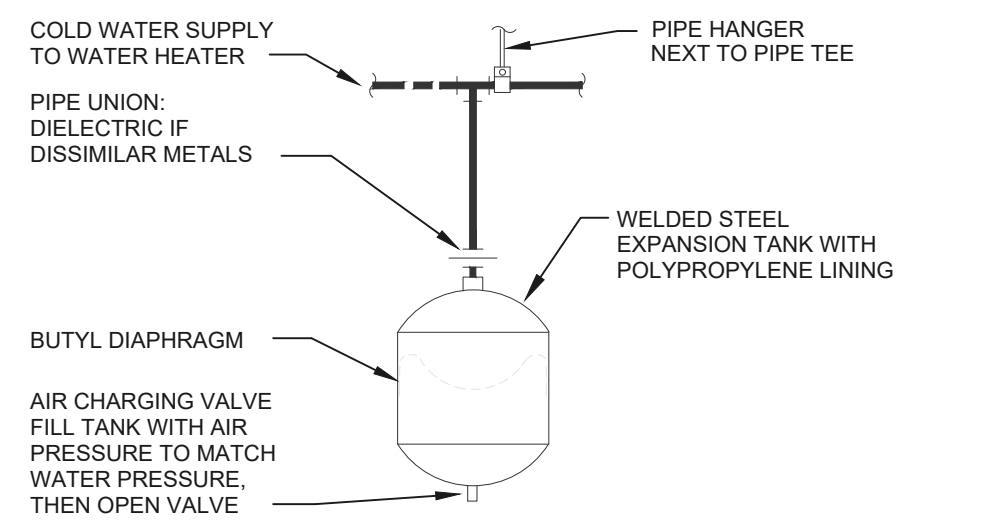
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JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE:  
PLUMBING ROUGH-IN PLAN

SHEET: P3.1

File Name: N:\03\240509-THUS11\_HARPER WOODS, MI DTD (RB)\DOCS\CAD\11\_PLUMBING DETAILS.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:39 PM



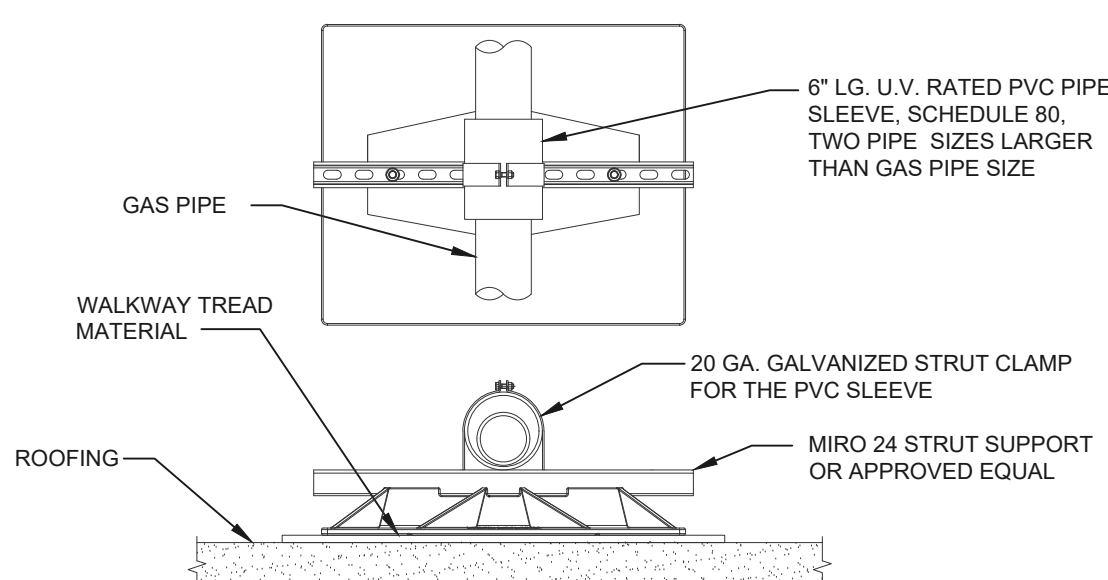
**SMALL EXPANSION TANK**  
NOT TO SCALE **16**

**RECIRCULATING PUMP**  
NOT TO SCALE **12**

PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. MAKE PIPE SAME SIZE AS TANK FITTING. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION PROCEDURE. VERIFY PROPER OPERATION WHEN INSTALLED.

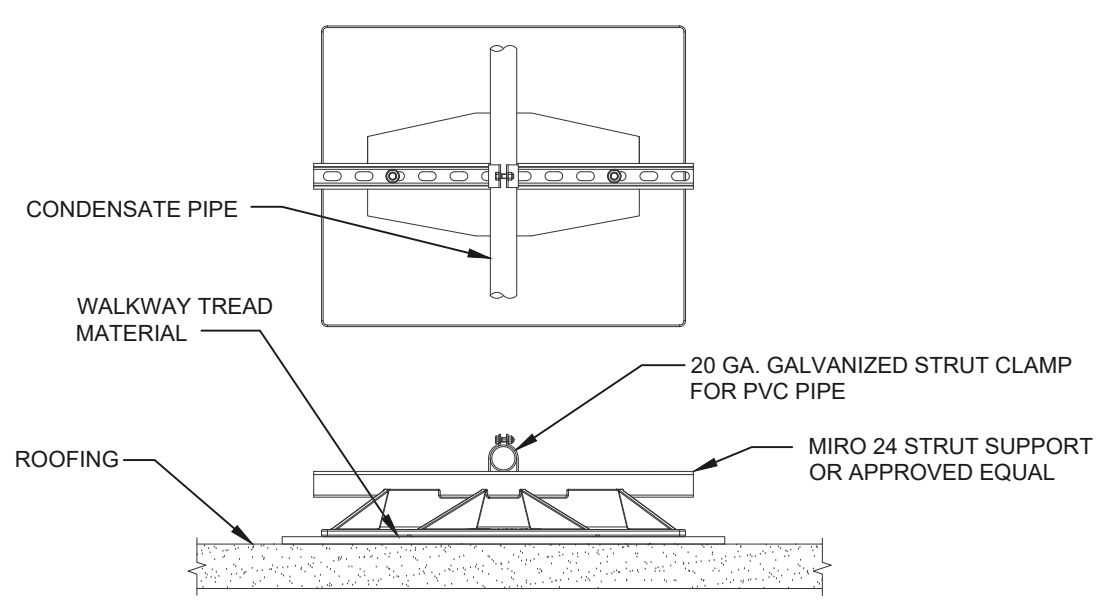
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS.

EXPANSION TANK INSTALLATION SHALL OCCUR ONLY WHEN THERE IS A BACKFLOW PREVENTION DEVICE INSTALLED WITHIN THE BUILDING WATER SYSTEM.



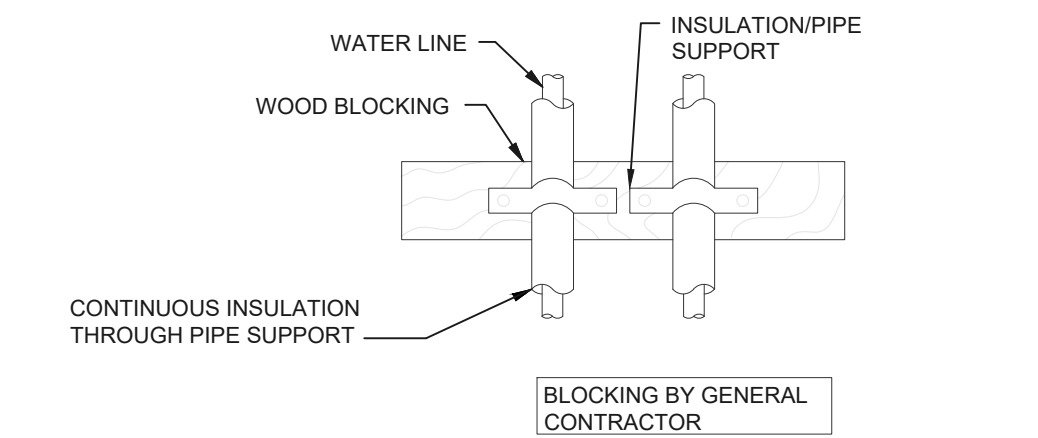
- NOTES:**
- SUPPORT REQUIRED 10'-0" O.C. AND AT ALL CHANGES IN DIRECTION.
  - INCREASE IN HEIGHT AS REQUIRED FOR ROUTING ABOVE ROOF MOUNTED ACCESSORIES SUCH AS EXPANSION JOINTS AND TO ACCOMMODATE SLOPE.

**ROOF GAS PIPE SUPPORT**  
NOT TO SCALE **17**

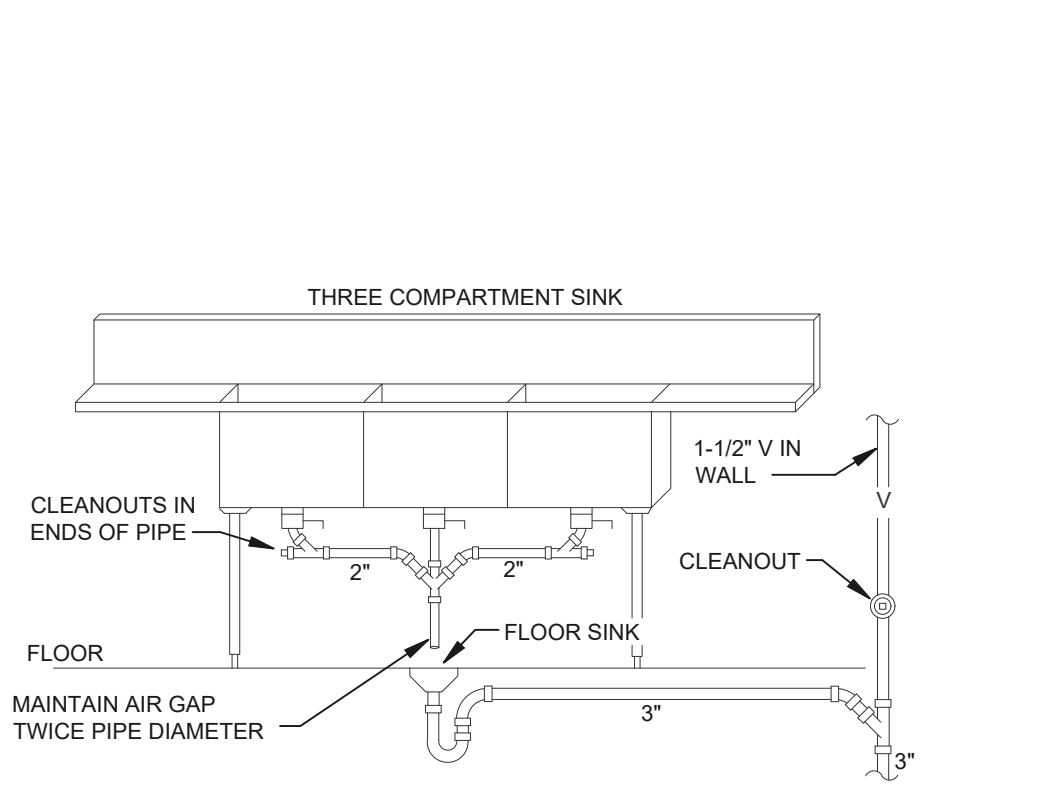


- NOTES:**
- SUPPORT REQUIRED 10'-0" O.C. AND AT ALL CHANGES IN DIRECTION.
  - INCREASE IN HEIGHT AS REQUIRED FOR ROUTING ABOVE ROOF MOUNTED ACCESSORIES SUCH AS EXPANSION JOINTS AND TO ACCOMMODATE SLOPE.

**ROOF CONDENSATE PIPE SUPPORT**  
NOT TO SCALE **18**

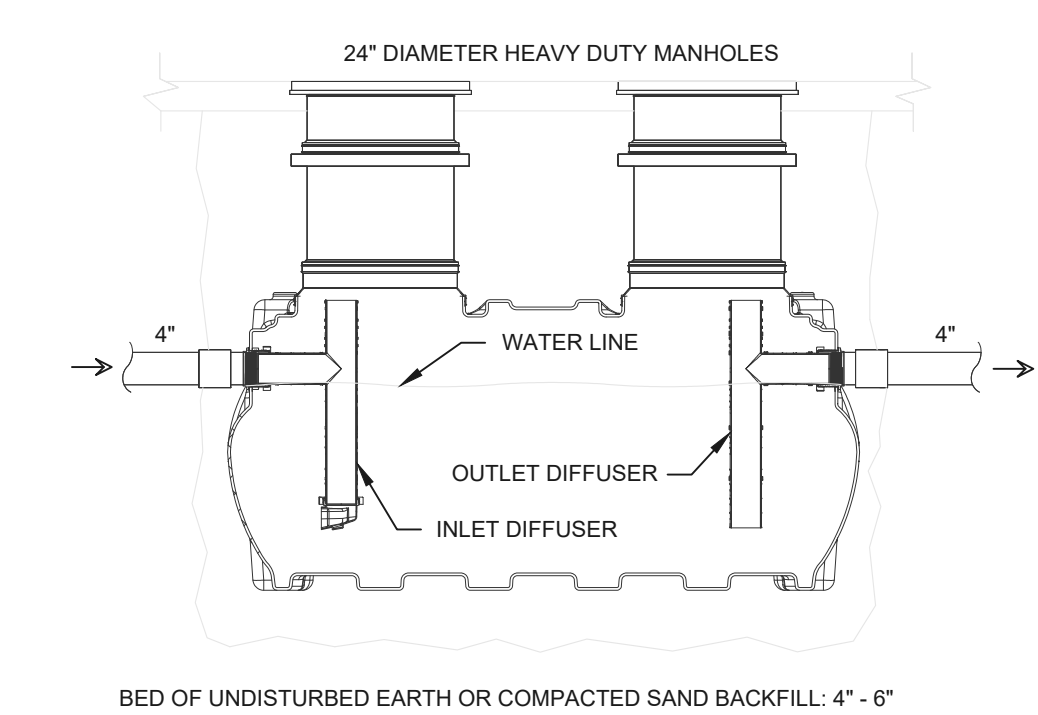


**PIPE SUPPORT (IN-WALL)**  
NOT TO SCALE **13**



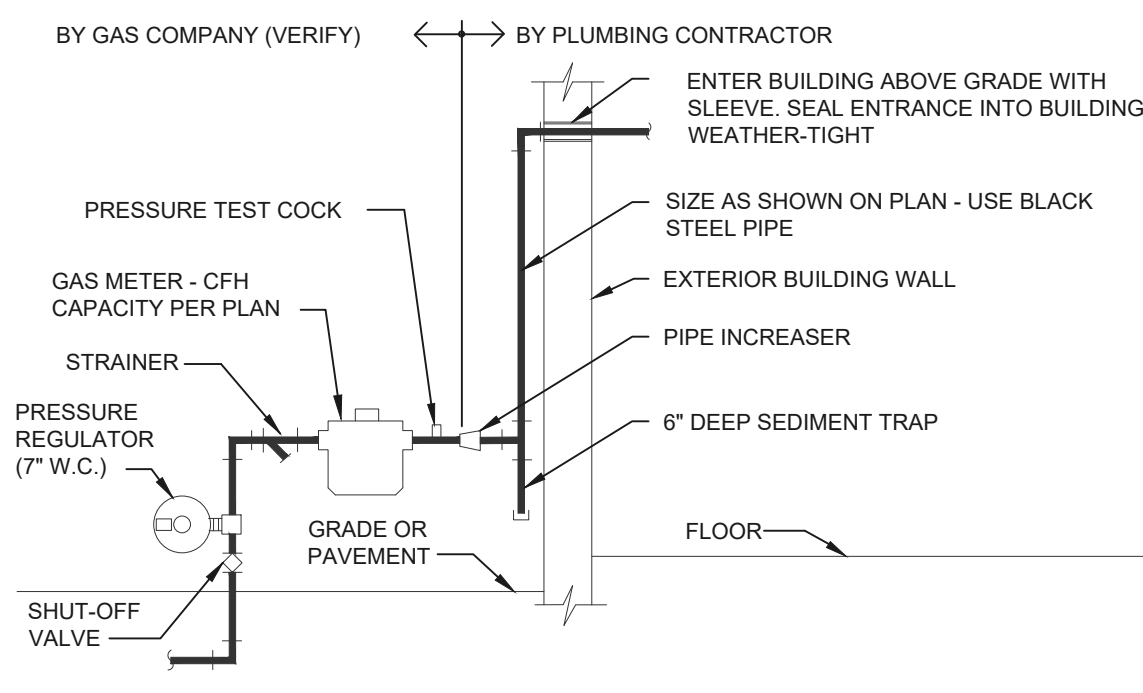
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS AND TO MEET APPLICABLE CODE REQUIREMENTS. UTILIZE HUBLESS CAST IRON PIPE, FITTINGS AND CONNECTORS FOR SINK CONNECTIONS.

**3 COMP SINK**  
NOT TO SCALE **14**



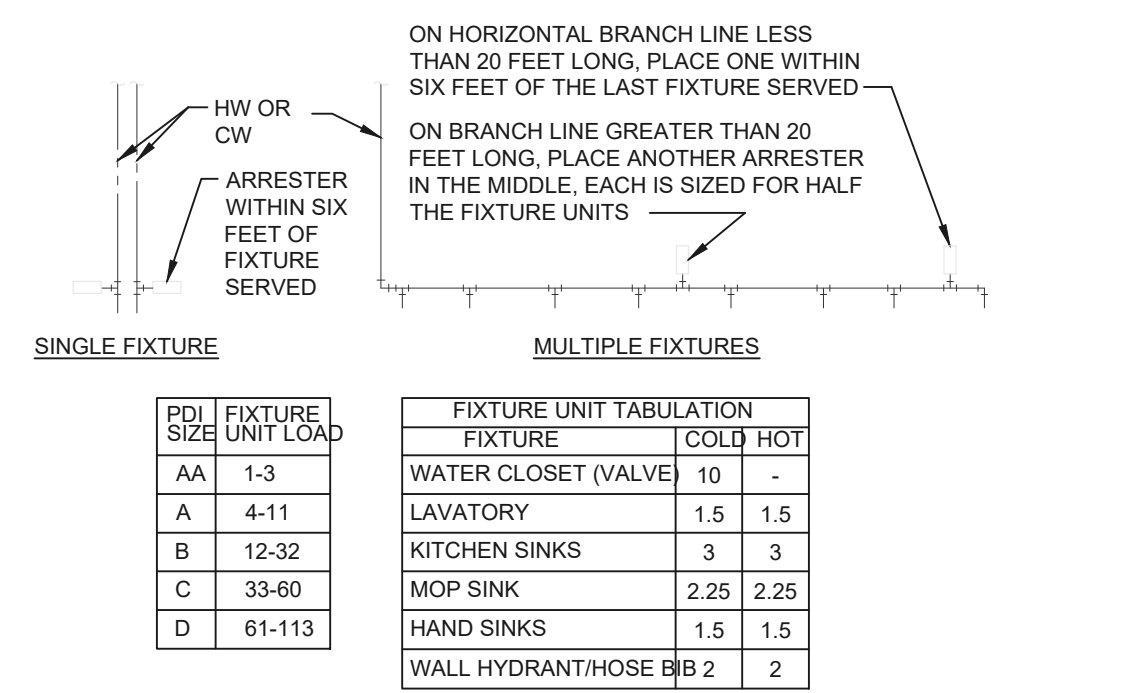
GB-250 - 100 GPM - 277 GALLON CAPACITY. DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. CONTRACTOR SHALL SUBMIT PROPOSED GREASE INTERCEPTOR INSTALLATION PLANS AND SPECIFICATIONS TO LOCAL AUTHORITIES FOR THEIR APPROVAL BEFORE ACQUISITION. SEE MANUFACTURER INSTALLATION MANUAL FOR ADDITIONAL INSTRUCTIONS.

**GREASE INTERCEPTOR**  
NOT TO SCALE **15**



VERIFY REQUIREMENTS FOR METERING AND PIPING WITH GAS COMPANY. GAS COMPANY SHALL EXCAVATE, BACKFILL, AND REPAIR PAVING AND SOI FOR GAS SERVICE LINE INSTALLATION FROM MAIN TO BUILDING. PLUMBING CONTRACTOR TO PAY ALL GAS COMPANY FEES FOR THIS INSTALLATION. USE WELDED OR SCREWED PIPE AND FITTINGS PER SPECIFICATIONS. PAINT EXPOSED METAL GAS PIPE, FITTINGS AND ITEMS TO MATCH BUILDING.

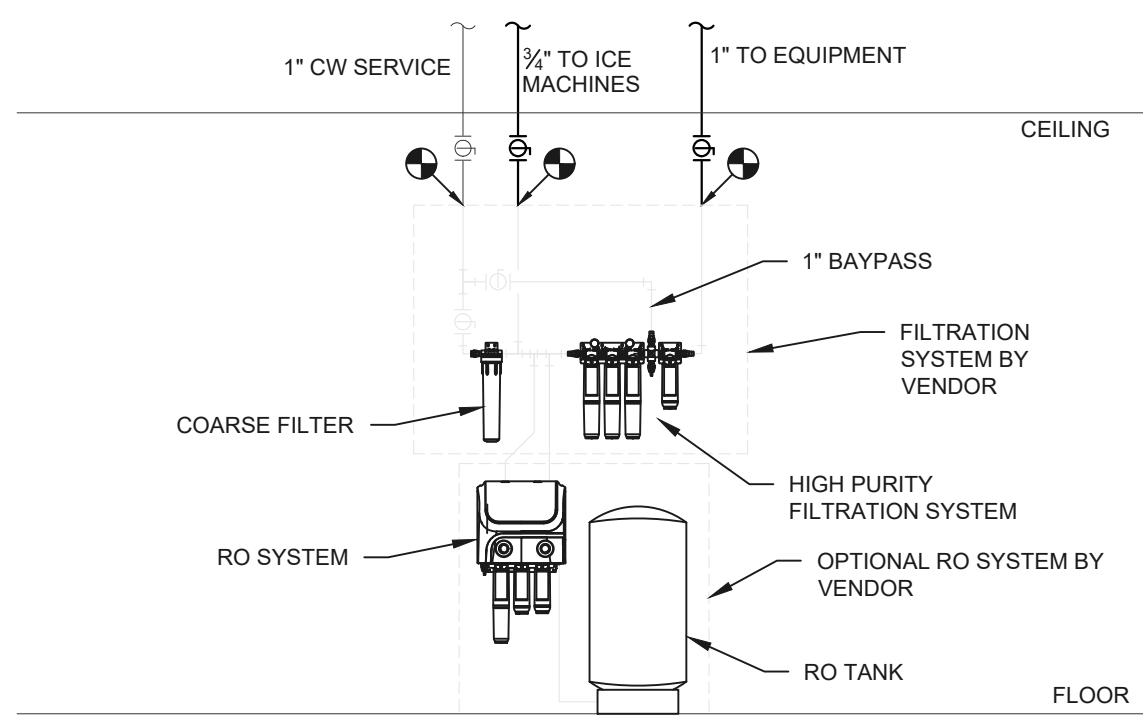
**GAS SERVICE**  
NOT TO SCALE **09**



SINGLE FIXTURE		MULTIPLE FIXTURES	
PDI	FIXTURE SIZE UNIT LOAD	FIXTURE UNIT TABULATION	
		FIXTURE	COLD HOT
AA	1-3	WATER CLOSET (VALVE)	10 -
A	4-11	LAVATORY	1.5 1.5
B	12-32	KITCHEN SINKS	3 3
C	33-60	MOP SINK	2.25 2.25
D	61-113	HAND SINKS	1.5 1.5
		WALL HYDRANT/HOSE	2 2

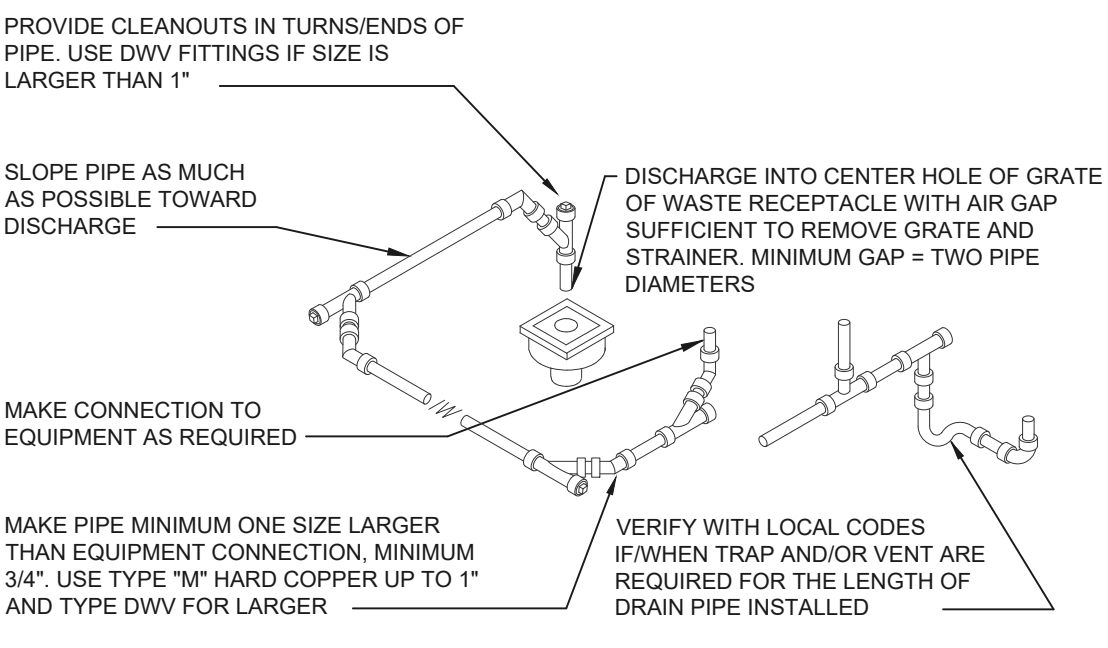
PC TO PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 OR ANSI #112.26.1M CERTIFICATION. SIZE AND INSTALL PER PDI #WH-201 STANDARD OR MANUFACTURER'S INSTRUCTION. THE TABLES ABOVE ARE BASED ON THE SIOUX CHIEF PRODUCT LINE. IF PRESSURE IS IN EXCESS OF 65 PSIG THEN UPSIZE THE ARRESTER BY ONE (EXAMPLE: AN 'A' ARRESTER WOULD BECOME A 'B' ARRESTER.)

**WATER HAMMER ARRESTOR**  
NOT TO SCALE **10**



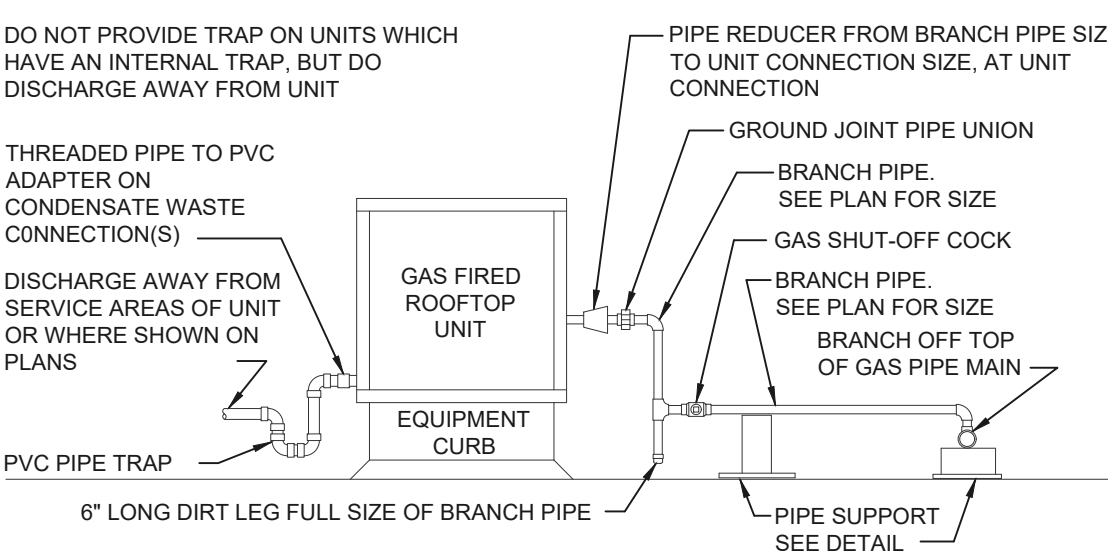
PROVIDE COLD AND FILTERED WATER STUBS TO FUTURE FILTRATIONS SYSTEM LOCATION AS SHOWN PER PLANS FOR CONNECTION BY OTHERS. FILTRATION, OPTIONAL RO SYSTEM, ASSOCIATED PIPING, CW BYPASS TO BE PROVIDED BY VENDOR. FIELD VERIFY FILTRATION PACKAGE SYSTEM SELECTED PRIOR TO STARTING WORK. SYSTEM SHOWN IS FOR REFERENCE ONLY.

**FILTRATION SYSTEM**  
NOT TO SCALE **11**



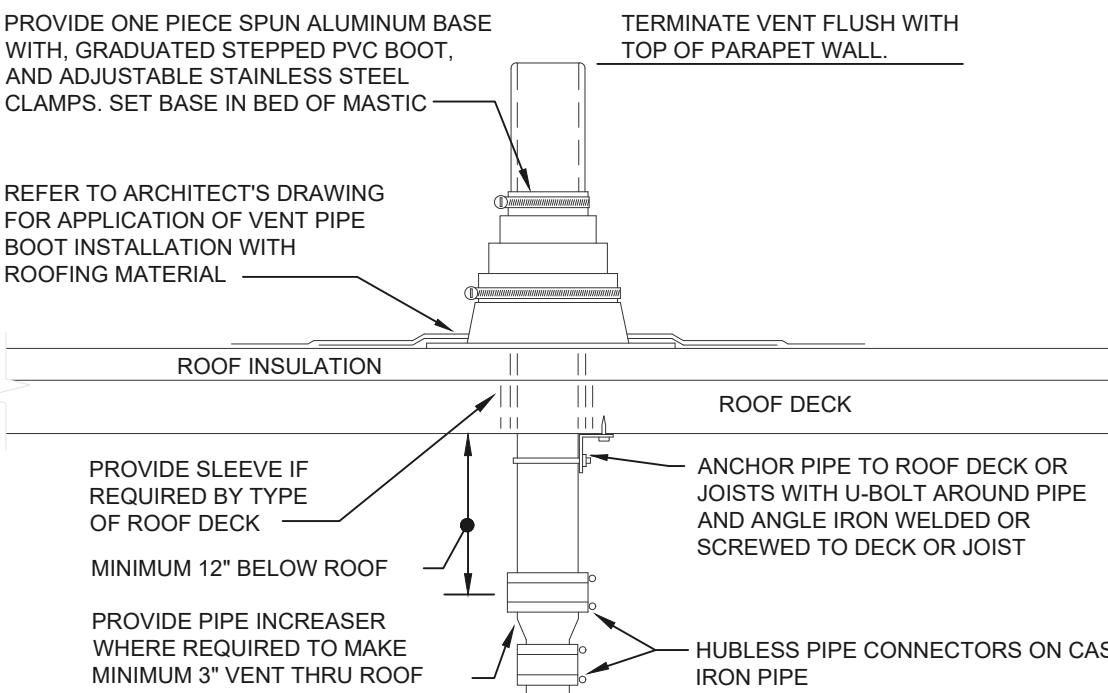
ROUTE PIPE INCONSPICUOUSLY AND UNOBTRUSIVELY. HANG PIPE AS REQUIRED. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

**INDIRECT DRAIN**  
NOT TO SCALE **04**



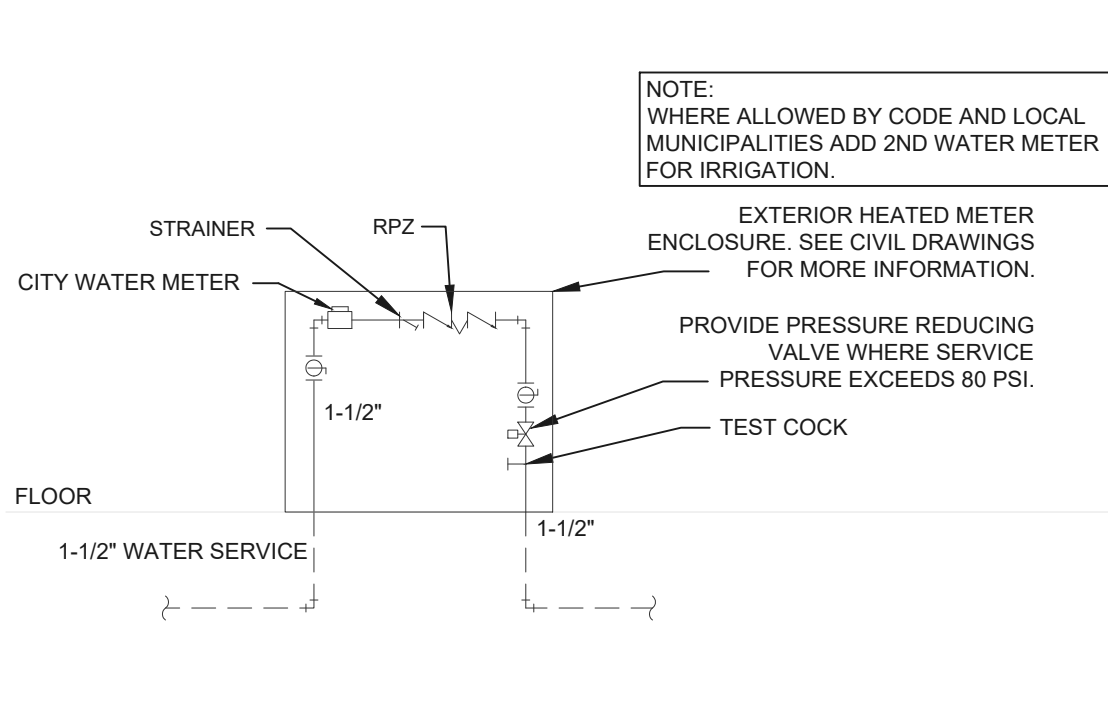
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED.

**ROOFTOP UNIT CONNECTIONS**  
NOT TO SCALE **05**



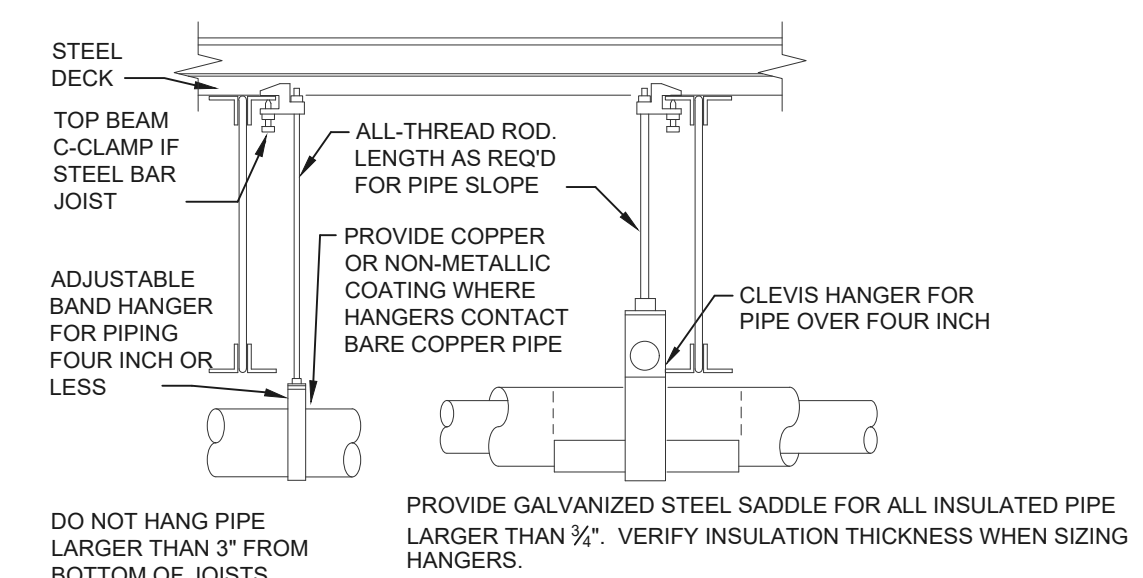
REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR A MINIMUM OF 10 FEET HORIZONTAL (UNLESS APPROVED BY ENGINEER PRIOR TO INSTALLATION) OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. PROVIDE 1\"/>

**VENT THROUGH ROOF DETAIL**  
NOT TO SCALE **06**



DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. PROVIDE BACKFLOW PREVENTER OF TYPE AND MANUFACTURER APPROVED BY LOCAL AUTHORITIES. PROVIDE PRESSURE REDUCING VALVE ONLY IF PRESSURE EXCEEDS 80 PSI - VERIFY. STRAINER AND REDUCING VALVE MAY BE INSTALLED IN VERTICAL PIPE IF SPACE LIMITATIONS REQUIRE IT. CLEAN STRAINER BEFORE TURNING BUILDING OVER TO OWNER. PROVIDE ANY REQUIRED CERTIFICATION OF TEST OF BACKFLOW PREVENTER TO LOCAL AUTHORITIES.

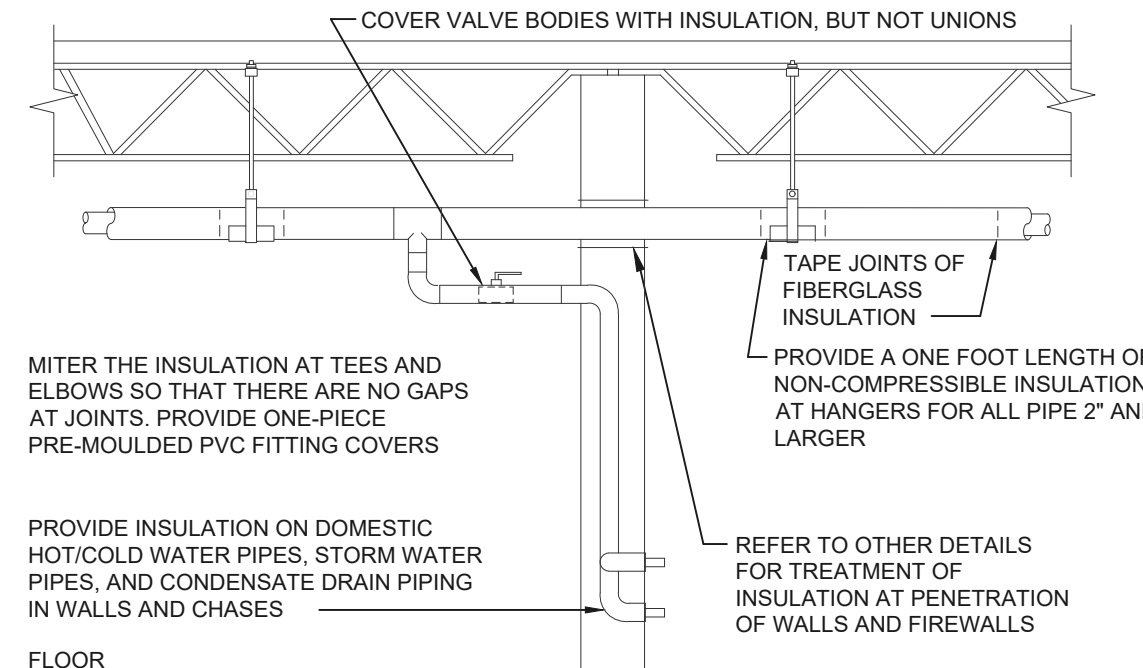
**WATER SERVICE ENTRANCE**  
NOT TO SCALE **07**



PROVIDE GALVANIZED STEEL SADDLE FOR ALL INSULATED PIPE LARGER THAN 1/2\"/>

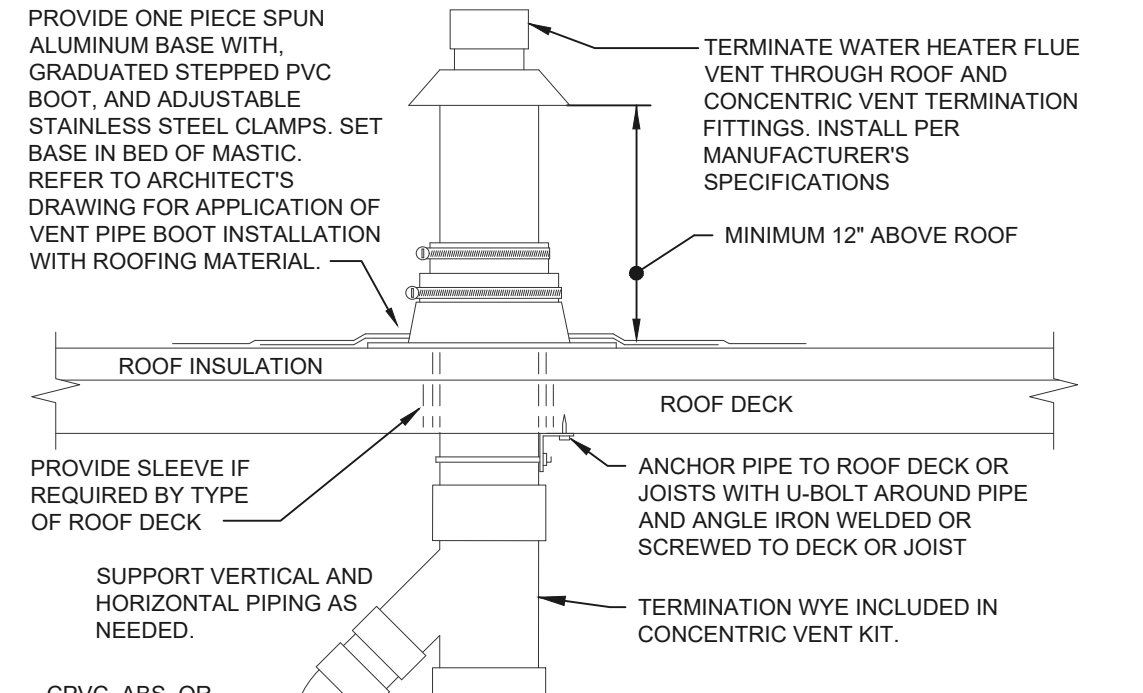
PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER EXCEPT IN CHASES. TRAPEZE HANGERS MAY BE USED FOR MULTIPLE PARALLEL PIPES. HANGER SPACING FOR PIPE SIZE: COPPER: 4\"/>

**PIPE HANGERS**  
NOT TO SCALE **01**



PROVIDE FIBERGLASS INSULATION WITH ALL-SERVICE JACKET WITH VAPOR BARRIER ON ALL COLD/HOT WATER PIPING AND CONDENSATE DRAIN PIPE. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING INSULATION. INSTALL ALL ITEMS PER SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS. MAINTAIN VAPOR BARRIER ON COLD PIPING BY MEANS OF SEALANT AND TAPE. FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES SHALL NOT EXCEED 25/50. SEAL EXPOSED ENDS OF FIBERGLASS INSULATION WITH ADHESIVE MASTIC.

**PIPE INSULATION**  
NOT TO SCALE **02**



REFER TO PLANS FOR WATER HEATER FLUE VENT PIPE SIZES AND LOCATIONS. LOCATE CONCENTRIC VENT A MINIMUM OF 10 FEET HORIZONTAL (UNLESS APPROVED BY ENGINEER PRIOR TO INSTALLATION) AND ONE FOOT FROM ANY VERTICAL SURFACE. VERIFY FLASHING AND COUNTERFLASHING WITH ROOFING CONTRACTOR.

**CONCENTRIC VENT**  
NOT TO SCALE **03**

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PROJECT:  
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HARPER WOODS, MI 48225  
STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

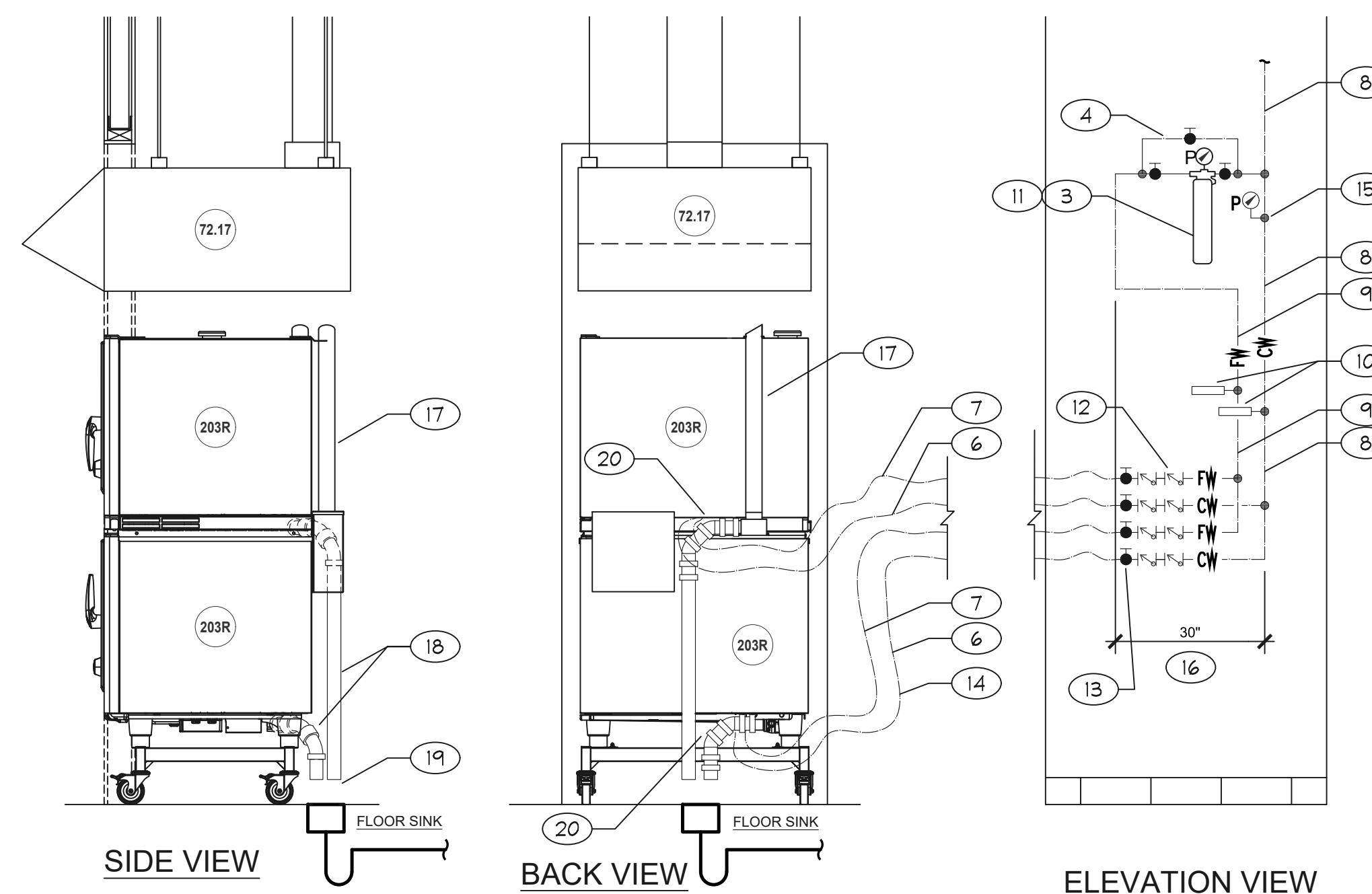
SHEET TITLE:  
**PLUMBING DETAILS**

SHEET:  
**P4.1**



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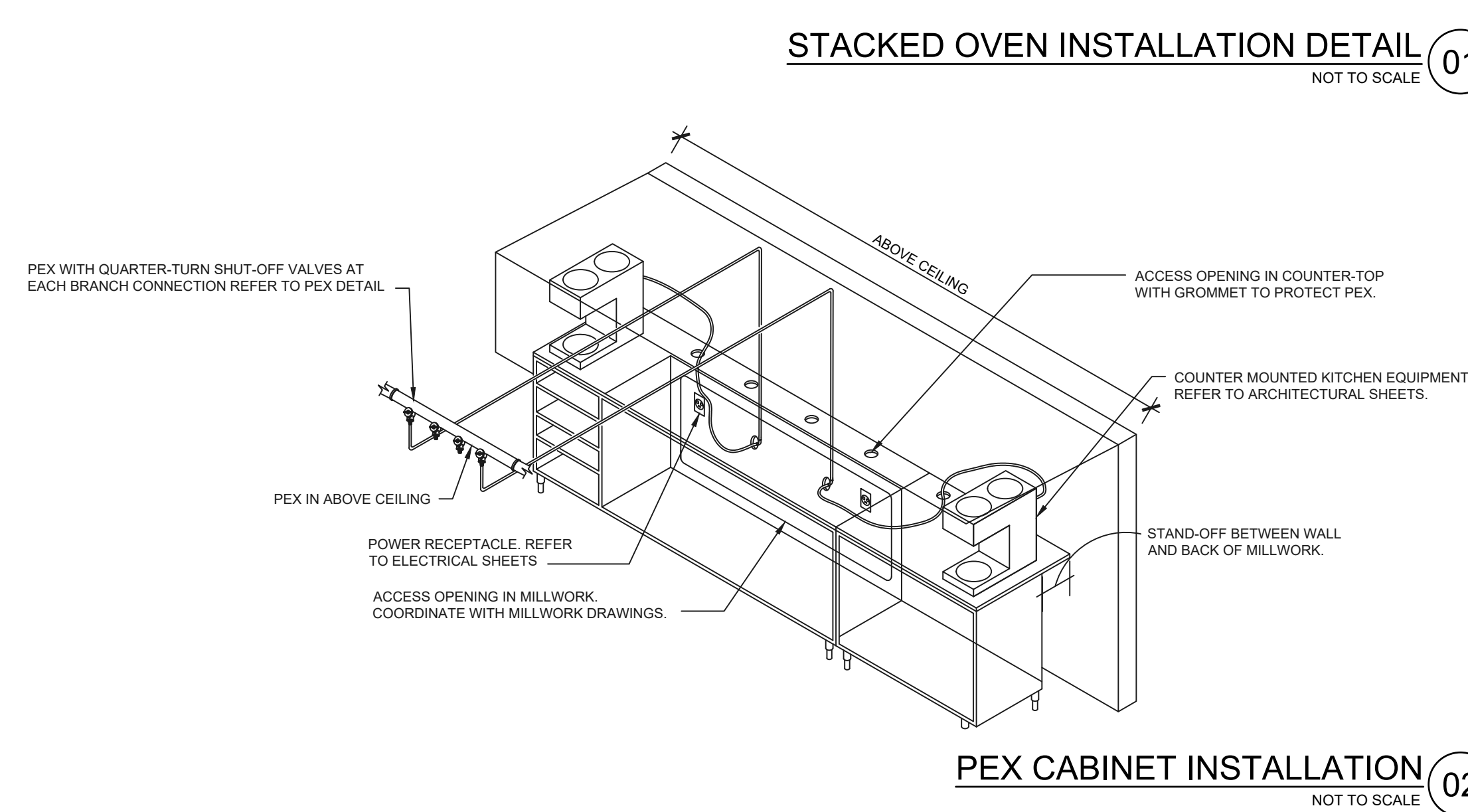
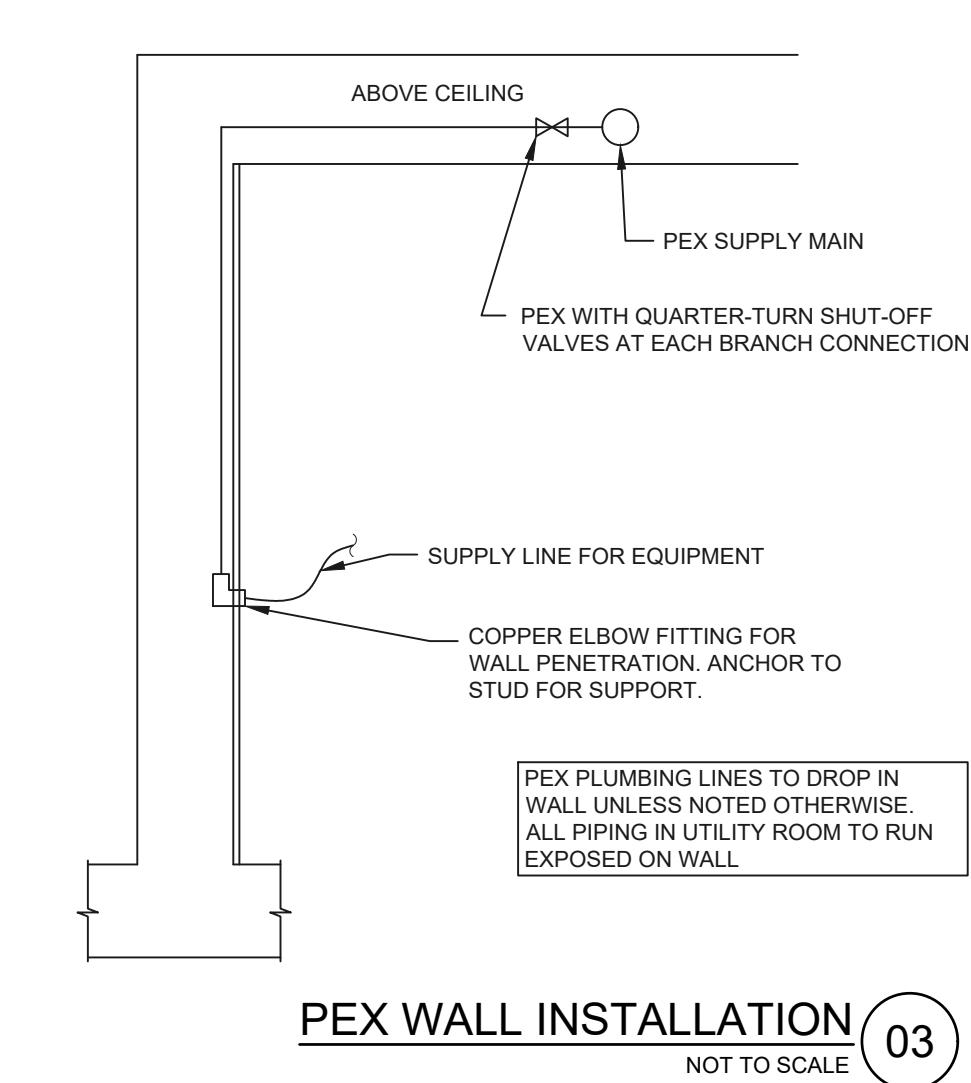
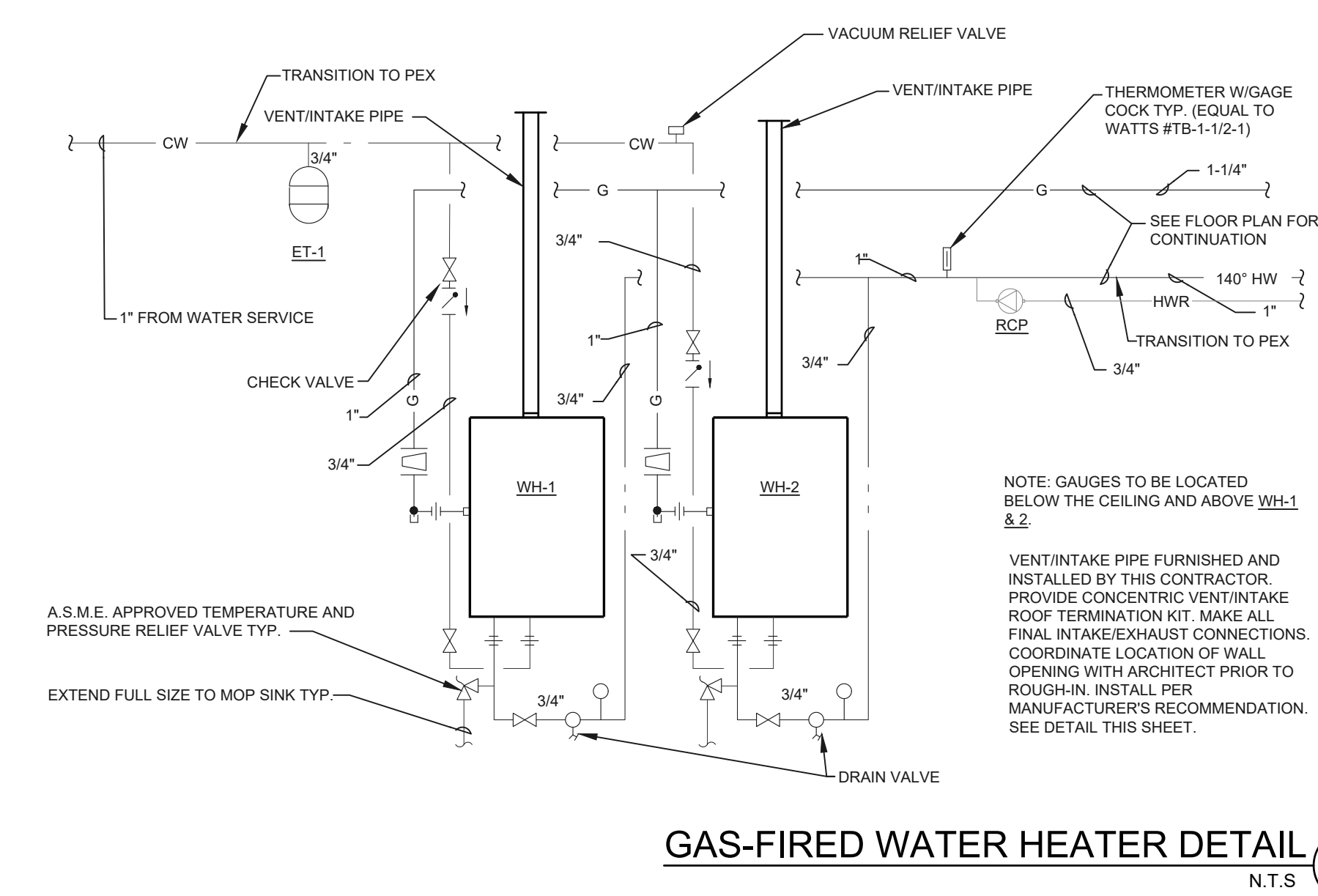
- NOTES:
- DETAIL IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL REVIEW SITE SPECIFIC DRAWINGS PRIOR TO ROUGHING IN AND ADJUST TO SUIT.
  - GENERAL CONTRACTOR SHALL PERFORM A PRESSURE TEST ON INCOMING WATER LINE AND DOWNSTREAM OF WATER TREATMENT SYSTEM FOR OVEN(S) AND SUBMIT THE RESULTS BACK TO THE ENGINEER AND TIM HORTON'S PROJECT MANAGER FOR REVIEW.
  - WATER TREATMENT SYSTEM (3M) FURNISHED WITH OVEN AND INSTALLED BY GENERAL CONTRACTOR.
  - 3/4" BY-PASS LINE CW BY-PASS VALVES ON WATER TREATMENT SYSTEM PROVIDED BY GENERAL CONTRACTOR.
  - ALL PIPING SHOWN SHALL BE 1/2" UNLESS OTHERWISE NOTED.
  - CW: COLD WATER LINE.
  - FW: FILTERED WATER LINE.
  - 3/4" COLD WATER LINE PROVIDED BY GENERAL CONTRACTOR.
  - 3/4" FILTERED WATER LINE PROVIDED BY GENERAL CONTRACTOR.
  - WATER HAMMER ARRESTOR WATTS MODEL LF15M2 SIZE: 3/4". PROVIDED BY GENERAL CONTRACTOR
  - MAINTAIN MINIMUM 3" CLEARANCE BELOW FILTER CARTRIDGES UPON COMPLETION OF ALL WORK FOR REMOVAL/INSTALLATION OF FILTERS.
  - DUAL CHECK VALVE "APOLLO 4N-300 SERIES" OR "WATTS 7 SERIES". (TYP. FOR 4)
  - TERMINATE CW & FW PIPING DOWNSTREAM OF D.U.C. CW SHUT-OFF VALVE AND 3/4" M.P.T. CONNECTION. THIS CONTRACTOR SHALL PROVIDE FINAL CONNECTION OF PRE-INSTALLED WATER PIPING FURNISHED WITH RATIONAL OVENS DOWNSTREAM OF SHUT-OFF VALVES. GENERAL CONTRACTOR SHALL FIELD VERIFY DISTANCE FROM OVEN TO LOCATION OF WATER TREATMENT SYSTEM AND PROVIDE ADDITIONAL LENGTH OF 1/2" PEX CW 3/4" N.P.T. FITTINGS WHERE REQUIRED TO SUIT. (TYP. FOR 4)
  - 1/2" WATER LINE PROVIDED WITH OVEN, TERMINATED WITH 3/4" F.P.T. CONNECTION. PIPING PRE-INSTALLED ON OVEN. (TYP. FOR 4)
  - PRESSURE GAUGE BOSHART INDUSTRIES MODEL PGS-100-G (MAXIMUM 100 P.S.I.) PROVIDED BY GENERAL CONTRACTOR.
  - ENSURE ALL PLUMBING FITTINGS, GAUGES, BACK FLOW PREVENTERS AND PIPING TO BE INSTALLED WITHIN THE WALL SPACE AS NOTED ON THE DETAIL.
  - PRE-INSTALLED STAINLESS STEEL VENT PIPE FOR THE BOTTOM OVEN. GENERAL CONTRACTOR TO PROVIDE PRE-MOULDDED GLASS-FIBER INSULATION WITH ZESTON 2000 PVC JACKETING.
  - 2" COPPER DWV CW PRE-MOULDDED GLASS-FIBER INSULATION WITH ZESTON 2000 PVC JACKETING. INSTALL HORIZONTAL SECTIONS OF DRAIN LINE WITH MINIMUM 5% / 3' SLOPE. SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR
  - MAINTAIN MINIMUM 1" AIR GAP AT FD-3.
  - THREE (3) 45° ELBOWS ARE REQUIRED. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR DETAILS.



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STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11  
SHEET TITLE: **PLUMBING DETAILS**  
SHEET: **P4.2**











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WALL PROTECTION SECTION 10 26 00

- 11 SUMMARY
12 ACTION SUBMITTALS
13 INFORMATIONAL SUBMITTALS
14 CLOSEOUT SUBMITTALS
15 QUALITY ASSURANCE
16 WARRANTY

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- 21 MATERIALS
A. PVC PLASTIC
B. POLYCARBONATE PLASTIC SHEET
D. ADHESIVE
22 CORNER GUARDS
A. SURFACE-MOUNTED, RESILIENT, CORNER GUARDS

PART 3 - EXECUTION

- 31 INSTALLATION
A. GENERAL
B. PROVIDE SPLICES, MOUNTING HARDWARE, ANCHORS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
C. REMOVE EXCESS ADHESIVE USING METHODS AND MATERIALS RECOMMENDED IN WRITING BY MANUFACTURER.

TOILET ACCESSORIES SECTION 10 28 00

- 11 RELATED DOCUMENTS
12 QUALITY ASSURANCE
13 PROJECT CONDITIONS
A. COORDINATION
PART 2 - PRODUCTS
21 MANUFACTURERS
22 MATERIALS - GENERAL

PART 2 - PRODUCTS

- 23 RECESSED SANITARY NAPKIN DISPOSAL
A. SATIN-FINISH STAINLESS STEEL
24 SEMI-RECESSED GARBAGE
A. TYPE 304 STAINLESS STEEL ALLOY
25 GRAB BARS
A. STAINLESS STEEL TYPE
26 HAND DRYER
A. WARM AIR, RAPID DRYING, ENERGY EFFICIENT ELECTRIC HAND DRYER, SURFACE MOUNTED
27 MIRROR UNIT
A. STAINLESS STEEL, FRAMED MIRROR UNITS

28 MISCELLANEOUS ACCESSORIES

- A. MOP AND BROOM HOLDER
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FABRICATION PART 3 - EXECUTION

- A. GENERAL
B. SURFACE-MOUNTED TOILET ACCESSORIES
C. KEYS
31 INSTALLATION
A. INSTALL TOILET ACCESSORY UNITS
B. IN LOCATIONS MARKED FOR HANDICAPPED ACCESSIBILITY

FIRE PROTECTION SPECIALTIES SECTION 10 44 00

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A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT APPLY TO THIS SECTION
12 QUALITY ASSURANCE
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B. COORDINATION

PART 2 - PRODUCTS

- 21 MANUFACTURERS
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22 MATERIALS
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PART 3 - EXECUTION

- 31 INSTALLATION
A. GENERAL
B. MULTIPURPOSE DRY-CHEMICAL TYPE
C. FIRE-PROTECTION CABINETS
D. FIRE-RATED CABINETS
E. CABINET CONSTRUCTION
F. DOOR MATERIAL
G. DOOR STYLE
H. DOOR CONSTRUCTION
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ACCESSORIES

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B. IDENTIFICATION
C. IDENTIFY FIRE EXTINGUISHER IN CABINET
D. CABINET AND DOOR FINISHES

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- A. SURFACE PREPARATION
B. FACTORY PRIMING FOR FIELD PAINTED FINISH
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- 3.1 EXAMINATION
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3.2 INSTALLATION
A. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS
B. INSTALL IN LOCATIONS AND AT MOUNTING HEIGHTS
3.3 ADJUSTING, CLEANING AND PROTECTION
A. ADJUST CABINET DOORS
B. REFRESH OR REPLACE CABINETS AND DOORS
3.4 FIRE-PROTECTION CABINET SCHEDULE
A. FIRE-PROTECTION CABINET PROVIDE

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ISSUE DATE 07/12/2022

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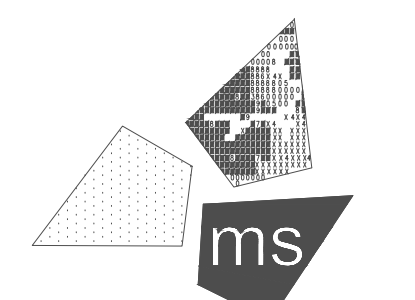
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CHARLES M. BUSCH No. 1301068763
EXP. DATE: 10/31/2023

PROJECT NO.: 40509-11

ARCHITECTURAL SPECIFICATIONS

SHEET: SP6









File Name: N:\030240509-THUS11\_HARPER WOODS, MI DTO (RBI)\DOCS\CAD\ES\_X\_ELECTRICAL SPECIFICATIONS.DWG Plotted By: ORLANDINI, NATHAN Plot Date: 7/12/2022 3:33 PM

DIVISION 26 - ELECTRICAL SPECIFICATIONS

VOICE AND DATA COMMUNICATION CABLING SECTION 27 51 23

PART 1 - GENERAL

1.1 SUMMARY

- A. THIS SECTION INCLUDES WIRE, CABLE, CONNECTING DEVICES, INSTALLATION, AND TESTING FOR WIRING SYSTEMS TO BE USED AS SIGNAL PATHWAYS FOR VOICE AND HIGH-SPEED DATA TRANSMISSION.
1.2 DEFINITIONS
A. EMI: ELECTROMAGNETIC INTERFERENCE.
B. IDC: INSULATION DISPLACEMENT CONNECTOR.
C. LAN: LOCAL AREA NETWORK.
D. PVC: POLYVINYL CHLORIDE.
E. STP: SHIELDED TWISTED PAIR.
F. UTP: UNSHIELDED TWISTED PAIR.

- 1.3 SUBMITTALS
A. PRODUCT DATA: INCLUDE DATA ON FEATURES, RATINGS, AND PERFORMANCE FOR EACH COMPONENT SPECIFIED.
B. SHOP DRAWINGS: INCLUDE DIMENSIONED PLAN AND ELEVATION VIEWS OF EACH INDIVIDUAL COMPONENT. SHOW EQUIPMENT ASSEMBLIES, METHOD OF FIELD ASSEMBLY, WORKSPACE REQUIREMENTS, AND ACCESS FOR CABLE CONNECTIONS.

- 1.4 QUALITY ASSURANCE
A. INSTALLER QUALIFICATIONS: SYSTEM INSTALLER MUST HAVE ON STAFF A REGISTERED COMMUNICATION DISTRIBUTION DESIGNER CERTIFIED BY BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL.
B. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
C. COMPLY WITH NFPA 70.

1.5 COORDINATION

- A. COORDINATE LAYOUT AND INSTALLATION OF VOICE AND DATA COMMUNICATION CABLING WITH OWNER'S TELECOMMUNICATIONS AND LAN EQUIPMENT SUPPLIERS.
1. MEET JOINTLY WITH TELECOMMUNICATIONS AND LAN EQUIPMENT SUPPLIERS, AND OWNER TO EXCHANGE INFORMATION AND AGREE ON DETAILS OF EQUIPMENT ARRANGEMENTS AND INSTALLATION INTERFACES.
2. RECORD AGREEMENTS REACHED IN MEETINGS AND DISTRIBUTE TO OTHER PARTICIPANTS.
3. ADJUST ARRANGEMENTS AND LOCATIONS OF DISTRIBUTION FRAMES AND CROSS-CONNECT AND PATCH PANELS IN EQUIPMENT ROOMS AND WIRING CLOSETS TO ACCOMMODATE AND OPTIMIZE ARRANGEMENT AND SPACE REQUIREMENTS OF TELEPHONE SWITCH AND LAN EQUIPMENT.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
1. CABLE
a. BELDEN INC.; ELECTRONICS DIVISION.
b. BERK-TEK; AN ALCATEL COMPANY.
c. BRAND-REX CO.; UNIT OF BICC CABLES CORP.
d. GENERAL CABLE CORPORATION.
e. LUCENT TECHNOLOGIES; GLOBAL SERVICE PROVIDER.
f. MOHAWK/CDT; A DIVISION OF CABLE DESIGN TECHNOLOGIES.
g. MONTROSE/CDT; A DIVISION OF CABLE DESIGN TECHNOLOGIES.
h. OPTICAL CABLE CORPORATION.
i. PANDUIT CORP.
j. PRESTOLITE WIRE CORP.
k. REMEE PRODUCTS CORP.
l. SIECOR.
m. SUPERIOR ESSEX; SUPERIOR TELECOMMUNICATIONS INC.
2. TERMINAL AND CONNECTOR COMPONENTS AND DISTRIBUTION RACKS:
a. AMP INCORPORATED; A TYCO INTERNATIONAL LTD. COMPANY.
b. HUBBELL PREMISE WIRING.
c. LEVITON TELECOM.
d. LUCENT TECHNOLOGIES; GLOBAL SERVICE PROVIDER.
e. PANDUIT CORP.
f. THOMAS & BETTS CORPORATION.
g. CHATSWORTH PRODUCTS.

2.2 SYSTEM REQUIREMENTS

- A. GENERAL: COORDINATE THE FEATURES OF MATERIALS AND EQUIPMENT SO THEY FORM AN INTEGRATED SYSTEM. MATCH COMPONENTS AND INTERCONNECTIONS FOR OPTIMUM FUTURE PERFORMANCE.
B. EXPANSION CAPABILITY: UNLESS OTHERWISE INDICATED, PROVIDE SPARE CONDUCTOR PAIRS IN CABLES, POSITIONS IN CROSS-CONNECT AND PATCH PANELS, AND TERMINAL STRIPS TO ACCOMMODATE 20 PERCENT FUTURE INCREASE IN ACTIVE WORKSTATIONS.

2.3 MOUNTING ELEMENTS

- A. RACEWAYS AND BOXES: COMPLY WITH DIVISION 26 SECTION "RACEWAYS AND BOXES."
B. BACKBOARDS: 3/4-INCH, INTERIOR-GRADE, FIRE-RETARDANT-TREATED PLYWOOD.
C. DISTRIBUTION RACKS: WALL-MOUNTED, MODULAR-STEEL UNITS DESIGNED FOR TELECOMMUNICATIONS TERMINAL SUPPORT AND COORDINATED WITH DIMENSIONS OF UNITS TO BE SUPPORTED.
1. APPROXIMATE MODULE DIMENSIONS: 36 INCHES HIGH BY 22 INCHES WIDE.
2. FINISH: BAKED-POLYESTER POWDER COAT.

2.4 TWISTED-PAIR CABLES, CONNECTORS, AND TERMINAL EQUIPMENT

- A. CABLES: LISTED AS COMPLYING WITH CATEGORY 6 (CAT6) OF TIA/EIA-568-A, CATEGORY 6 (CAT6) FOR VOICE (RJ-11 JACKS) AND FOR DATA.
B. CONDUCTORS: SOLID COPPER.
C. UTP CABLE: COMPLY WITH TIA/EIA-568-A, FOUR, THERMOPLASTIC-INSULATED, INDIVIDUALLY TWISTED PAIRS OF CONDUCTORS; NO. 24 AWG, COLOR-CODED; ENCLOSED IN PVC JACKET.
D. UTP PLENUM CABLE: LISTED FOR USE IN AIR-HANDLING SPACES. FEATURES ARE AS SPECIFIED FOR CABLES, CONDUCTORS, AND UTP CABLE, EXCEPT MATERIALS ARE MODIFIED AS REQUIRED FOR LISTING.
E. UTP CABLE CONNECTING HARDWARE: COMPLY WITH TIA/EIA-568-A, IDC TYPE, USING MODULES DESIGNED FOR PUNCH-DOWN CAPS OR TOOLS.
1. IDC TERMINAL BLOCK MODULES: INTEGRAL WITH CONNECTOR BODIES, INCLUDING PLUGS AND JACKS WHERE INDICATED.
2. IDC CONNECTING HARDWARE: CONSISTENT THROUGHOUT PROJECT.
F. PATCH PANEL: MODULAR PANELS HOUSING MULTIPLE-NUMBERED JACK UNITS WITH IDC-TYPE CONNECTORS AT EACH JACK FOR PERMANENT TERMINATION OF PAIR GROUPS OF INSTALLED CABLES.
1. NUMBER OF JACKS PER FIELD: ONE FOR EACH FOUR-PAIR UTP CABLE INDICATED.
2. MOUNTING: RACK.
G. JACKS AND JACK ASSEMBLIES FOR UTP CABLE: MODULAR, COLOR-CODED, RJ-45 RECEPTACLE UNITS WITH INTEGRAL IDC-TYPE TERMINALS. USE KEYPED JACKS FOR DATA SERVICE.
H. UTP PATCH CORDS: FOUR-PAIR CABLES IN 48-INCH LENGTHS, TERMINATED WITH RJ-45 PLUG AT EACH END. USE KEYPED PLUGS FOR DATA SERVICE.
I. WORKSTATION OUTLETS: DUAL JACK-CONNECTOR ASSEMBLIES, AS INDICATED IN SCHEDULE, MOUNTED IN SINGLE-GANG FACEPLATE.
1. FACEPLATE: BRUSHED STAINLESS STEEL 302.
2. MOUNTING: FLUSH, UNLESS OTHERWISE INDICATED.
3. LEGEND: FIELD-LABELED, PER SCHEDULE ON DRAWINGS.

2.5 IDENTIFICATION PRODUCTS

- A. COMPLY WITH DIVISION 26 SECTION "BASIC ELECTRICAL MATERIALS AND METHODS" AND THE FOLLOWING:
1. CABLE LABELS: SELF-ADHESIVE VINYL OR VINYL-CLOTH WRAPAROUND TAPE MARKERS, MACHINE PRINTED WITH ALPHANUMERIC CABLE DESIGNATIONS.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. EXAMINE PATHWAY ELEMENTS INTENDED FOR CABLES, CHECK RACEWAYS, AND OTHER ELEMENTS FOR COMPLIANCE WITH SPACE ALLOCATIONS, INSTALLATION TOLERANCES, HAZARDS TO CABLE INSTALLATION, AND OTHER CONDITIONS AFFECTING INSTALLATION. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 APPLICATION OF MEDIA

- A. HORIZONTAL CABLE FOR DATA SERVICE: USE UTP CATEGORY 6 (CAT6) CABLE FOR RUNS BETWEEN COMMUNICATION SERVICE ENTRANCE AND WORKSTATION OUTLETS.
B. HORIZONTAL CABLE FOR VOICE SERVICE: USE UTP CATEGORY 6 (CAT6) CABLE FOR RUNS BETWEEN COMMUNICATION SERVICE ENTRANCE AND WORKSTATION OUTLETS, EXCEPT DEDICATED VOICE OUTLETS (RJ-11 JACKS) MAY BE CATEGORY

3.3 INSTALLATION

- A. WIRING METHOD: INSTALL WIRING IN RACEWAY EXCEPT WITHIN CONSOLES, CABINETS, DESKS, AND COUNTERS AND EXCEPT IN ACCESSIBLE CEILING SPACES WHERE UNENCLOSED WIRING, SUPPORTED ON J-HOOKS MAY BE USED. USE UL-LISTED PLENUM CABLE FOR ALL RUNS. CONCEAL RACEWAY AND CABLES EXCEPT IN UNFINISHED SPACES.
B. INSTALL CABLES USING TECHNIQUES, PRACTICES, AND METHODS THAT ARE CONSISTENT WITH CATEGORY RATING OF COMPONENTS AND THAT ENSURE APPROPRIATE CATEGORY 6 (CAT6) PERFORMANCE OF COMPLETED AND LINKED SIGNAL PATHS, END TO END.
C. INSTALL CABLES WITHOUT DAMAGING CONDUCTORS, SHIELD, OR JACKET.
D. DO NOT BEND CABLES, IN HANDLING OR IN INSTALLING, TO SMALLER RADII THAN MINIMUMS RECOMMENDED BY MANUFACTURER.
E. PULL CABLES WITHOUT EXCEEDING CABLE MANUFACTURER'S RECOMMENDED PULLING TENSIONS.
1. PULL CABLES SIMULTANEOUSLY IF MORE THAN ONE IS BEING INSTALLED IN SAME RACEWAY.
2. USE PULLING COMPOUND OR LUBRICANT IF NECESSARY. USE COMPOUNDS THAT WILL NOT DAMAGE CONDUCTOR OR INSULATION.
3. USE PULLING MEANS, INCLUDING FISH TAPE, CABLE, ROPE, AND BASKET-WEAVE WIRE OR CABLE GRIPS, THAT WILL NOT DAMAGE MEDIA OR RACEWAY.
F. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OR EXPOSED STRUCTURAL MEMBERS AND FOLLOW SURFACE CONTOURS WHERE POSSIBLE.
G. SECURE AND SUPPORT CABLES AT INTERVALS NOT EXCEEDING 30 INCHES AND NOT MORE THAN 6 INCHES FROM CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES, AND TERMINALS.
H. WIRING WITHIN WIRING CLOSETS AND ENCLOSURES: PROVIDE CONDUCTORS OF ADEQUATE LENGTH, TRAIN CONDUCTORS TO TERMINAL POINTS WITH NO EXCESS. USE LACING BARS TO RESTRAIN CABLES, TO PREVENT STRAINING CONNECTIONS, AND TO PREVENT BENDING CABLES TO SMALLER RADII THAN MINIMUMS RECOMMENDED BY MANUFACTURER.

- I. SEPARATION OF WIRES: COMPLY WITH TIA/EIA-569-A RULES FOR SEPARATING UNSHIELDED COPPER VOICE AND DATA COMMUNICATION CABLING FROM POTENTIAL EMI SOURCES, INCLUDING ELECTRICAL POWER LINES AND EQUIPMENT.
J. MAKE SPLICES, TAPS, AND TERMINATIONS ONLY AT INDICATED OUTLETS, TERMINALS, AND CROSS-CONNECT AND PATCH PANELS.
K. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH MEDIA TYPES.

3.4 GROUNDING

- A. COMPLY WITH DIVISION 26 SECTION "GROUNDING AND BONDING".
B. GROUND CABLE SHIELDS, DRAIN CONDUCTORS, AND EQUIPMENT TO ELIMINATE SHOCK HAZARD AND TO MINIMIZE GROUND LOOPS. COMMON-MODE RETURNS: NOISE PICKUP, CROSS TALK, AND OTHER IMPAIRMENTS.
C. BOND SHIELDS AND DRAIN CONDUCTORS TO GROUND AT ONLY ONE POINT IN EACH CIRCUIT.
D. SIGNAL GROUND TERMINAL: LOCATE IN EACH EQUIPMENT ROOM AND WIRING CLOSET; ISOLATE FROM POWER SYSTEM AND EQUIPMENT GROUNDING.
E. SIGNAL GROUND BUS: MOUNT ON WALL OF MAIN EQUIPMENT ROOM WITH STANDOFF INSULATORS.

3.5 INSTALLATION IN EQUIPMENT ROOMS AND WIRING CLOSETS

- A. INSTALL PLYWOOD BACKBOARDS ON WALLS OF EQUIPMENT ROOMS AND WIRING CLOSETS FROM FLOOR TO CEILING.
B. MOUNT PATCH PANELS, ETC. IN RACKS.
C. GROUP CONNECTING HARDWARE FOR CABLES INTO SEPARATE LOGICAL FIELDS.
D. USE PATCH PANELS TO TERMINATE CABLES ENTERING THE SPACE, UNLESS OTHERWISE INDICATED.

3.6 INSTALLATION STANDARDS

- A. COMPLY WITH REQUIREMENTS IN TIA/EIA-568-A AND TIA/EIA-569-A.

3.7 IDENTIFICATION

- A. IN ADDITION TO REQUIREMENTS IN THIS ARTICLE, COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 26 SECTION "BASIC ELECTRICAL MATERIALS AND METHODS" AND TIA/EIA-606.
B. SYSTEM: USE A UNIQUE, THREE-GROUP, ALPHANUMERIC DESIGNATION FOR EACH CABLE, AND LABEL CABLE AND JACKS, CONNECTORS, AND TERMINALS TO WHICH IT CONNECTS WITH SAME DESIGNATION. USE LOGICAL AND SYSTEMATIC DESIGNATIONS FOR FACILITY'S ARCHITECTURAL ARRANGEMENT.
C. WORKSTATION: LABEL CABLES WITHIN OUTLET BOXES.
D. DISTRIBUTION RACKS AND FRAMES: LABEL EACH UNIT AND FIELD WITHIN THAT UNIT.
E. WITHIN CONNECTOR FIELDS IN EQUIPMENT ROOMS AND WIRING CLOSETS: LABEL EACH CONNECTOR AND EACH DISCRETE UNIT OF CABLE-TERMINATING AND CONNECTING HARDWARE.
F. CABLES, GENERAL: LABEL EACH CABLE WITHIN 4 INCHES OF EACH TERMINATION AND TAP, WHERE IT IS ACCESSIBLE IN A CABINET OR JUNCTION OR OUTLET BOX, AND ELSEWHERE AS INDICATED.
G. EXPOSED CABLES AND CABLES IN WIRE TROUGHS: LABEL EACH CABLE AT INTERVALS NOT EXCEEDING 15 FEET.
H. CABLE SCHEDULE: POST IN PROMINENT LOCATION IN EACH EQUIPMENT ROOM AND WIRING CLOSET. LIST INCOMING AND OUTGOING CABLES AND THEIR DESIGNATIONS, ORIGINS, AND DESTINATIONS. PROTECT WITH RIGID FRAME AND CLEAR PLASTIC COVER. FURNISH AN ELECTRONIC COPY OF FINAL COMPREHENSIVE SCHEDULES FOR PROJECT, IN SOFTWARE AND FORMAT SELECTED BY OWNER.
I. SEPARATION OF WIRES: COMPLY WITH TIA/EIA-569-A RULES FOR SEPARATING UNSHIELDED COPPER VOICE AND DATA COMMUNICATION CABLING FROM POTENTIAL EMI SOURCES, INCLUDING ELECTRICAL POWER LINES AND EQUIPMENT.
J. MAKE SPLICES, TAPS, AND TERMINATIONS ONLY AT INDICATED OUTLETS, TERMINALS, AND CROSS-CONNECT AND PATCH PANELS.
K. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH MEDIA TYPES.

END OF SECTION 27 51 23

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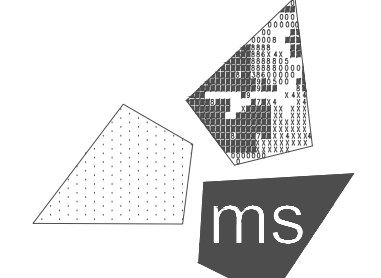
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PROJECT: 19353 VERNIER ROAD HARPER WOODS, MI 48225 STORE # 919728



PROFESSIONAL OF RECORD: JASON E. CHRISTOFF No. 6201061051 EXP. DATE: 03/17/2023

PROJECT NO.: 40509-11

SHEET TITLE: ELECTRICAL SPECIFICATIONS

SHEET: ES1.4





DIVISION 23 - MECHANICAL SPECIFICATIONS

PACKAGED AIR CONDITIONING UNITS SECTION 23.74.23

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. PACKAGED AIR CONDITIONING UNITS.
- B. MAINTENANCE SERVICE.

1.2 REGULATORY REQUIREMENTS

- A. PRODUCTS REQUIRING ELECTRICAL CONNECTION LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

1.3 DELIVERY, STORAGE, AND PROTECTION

- A. PROTECT UNITS FROM PHYSICAL DAMAGE BY STORING OFF SITE UNTIL ROOF MOUNTING CURBS ARE IN PLACE AND READY FOR IMMEDIATE INSTALLATION OF UNITS.

1.4 WARRANTY

- A. PROVIDE FIVE-YEAR MANUFACTURER WARRANTY FOR ENTIRE UNIT.

1.5 MAINTENANCE SERVICE

- A. FURNISH SERVICE AND MAINTENANCE OF PACKAGED AIR CONDITIONING UNITS FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 - PRODUCTS

END OF SECTION

2.1 MANUFACTURERS / MODELS

- A. REFER TO SCHEDULE ON DRAWINGS.

2.2 AIR CONDITIONING UNITS

- A. GENERAL: ROOF MOUNTED UNITS HAVING GAS BURNER AND ELECTRIC REFRIGERATION.
- B. DESCRIPTION: SELF-CONTAINED PACKAGE, FACTORY ASSEMBLED AND PRE-WIRED, CONSISTING OF CABINET AND FRAME, SUPPLY FAN, HEAT EXCHANGER AND BURNER, CONTROLS, AIR FILTERS, REFRIGERANT COOLING COIL AND COMPRESSOR, CONDENSER COIL AND CONDENSER FAN.
- C. ELECTRICAL CHARACTERISTICS AND ACCESSORIES: REFER TO DRAWINGS.

2.3 FABRICATION

- A. CABINET: STEEL WITH BAKED ENAMEL FINISH, ACCESS DOORS OR REMOVABLE ACCESS PANELS WITH QUICK FASTENERS - SCREWDRIVER OPERATED FLUSH CAM TYPE. STRUCTURAL MEMBERS SHALL BE 18 GAGE WITH ACCESS DOORS OR REMOVABLE PANELS OF MINIMUM 20 GAGE.
- B. INSULATION: THICK NEOPRENE COATED GLASS FIBER WITH EDGES PROTECTED FROM EROSION.
- C. HEAT EXCHANGERS: STAINLESS STEEL, WELDED CONSTRUCTION.
- D. SUPPLY FAN: FORWARD CURVED CENTRIFUGAL TYPE, RESILIENTLY MOUNTED WITH V-BELT DRIVE, ADJUSTABLE VARIABLE PITCH MOTOR PULLEY, AND RUBBER ISOLATED HINGE MOUNTED HIGH EFFICIENCY MOTOR, DIRECT DRIVE AS INDICATED.
- E. AIR FILTERS: REFER TO DRAWINGS.

2.4 BURNER

- A. GAS BURNER: INDUCED DRAFT TYPE BURNER WITH ADJUSTABLE COMBUSTION AIR SUPPLY, PRESSURE REGULATOR, GAS VALVES, MANUAL SHUT-OFF, INTERMITTENT SPARK OR GLOW COIL IGNITION, FLAME SENSING DEVICE, AND AUTOMATIC 100 PERCENT SHUT-OFF PILOT.
- B. GAS BURNER SAFETY CONTROLS: ENERGIZE IGNITION, LIMIT TIME FOR ESTABLISHMENT OF FLAME, PREVENT OPENING OF GAS VALVE UNTIL PILOT FLAME IS PROVEN, STOP GAS FLOW ON IGNITION FAILURE, ENERGIZE BLOWER MOTOR, AND AFTER AIR FLOW PROVEN AND SLIGHT DELAY, ALLOW GAS VALVE TO OPEN.
- C. HIGH LIMIT CONTROL: TEMPERATURE SENSOR WITH FIXED STOP AT MAXIMUM PERMISSIBLE SETTING, DE-ENERGIZE BURNER ON EXCESSIVE BONNET TEMPERATURE AND ENERGIZE BURNER WHEN TEMPERATURE DROPS TO LOWER SAFE VALUE.
- D. SUPPLY FAN CONTROL: TEMPERATURE SENSOR SENSING BONNET TEMPERATURES AND INDEPENDENT OF BURNER CONTROLS, WITH PROVISIONS FOR CONTINUOUS FAN OPERATION.

2.5 EVAPORATOR COIL

- A. PROVIDE COPPER TUBE ALUMINUM FIN COIL ASSEMBLY WITH GALVANIZED STEEL DRAIN PAN AND CONNECTION.
- B. PROVIDE CAPILLARY TUBES OR THERMOSTATIC EXPANSION VALVES FOR UNITS 6 TONS COOLING CAPACITY OR LESS, AND THERMOSTATIC EXPANSION VALVES AND ALTERNATE ROW CIRCUITING FOR UNITS 7.5 TONS COOLING CAPACITY AND GREATER.

2.6 COMPRESSOR

- A. PROVIDE HERMETIC COMPRESSORS, 3600 RPM MAXIMUM, RESILIENTLY MOUNTED WITH POSITIVE LUBRICATION, CRANKCASE HEATER, HIGH AND LOW PRESSURE SAFETY CONTROLS, MOTOR OVERLOAD PROTECTION, SUCTION AND DISCHARGE SERVICE VALVES AND GAGE PORTS, AND FILTER DRIER.
- B. FIVE MINUTE TIMED OFF CIRCUIT TO DELAY COMPRESSOR START.

2.7 CONDENSER

- A. PROVIDE COPPER TUBE ALUMINUM FIN COIL ASSEMBLY WITH SUB COOLING ROWS AND COIL GUARD.
- B. PROVIDE DIRECT DRIVE CONDENSER FANS, RESILIENTLY MOUNTED WITH FAN GUARD, MOTOR OVERLOAD PROTECTION, AND WIRED TO OPERATE WITH COMPRESSOR.

- C. PROVIDE REFRIGERANT PRESSURE SWITCHES TO CYCLE CONDENSER FANS.

2.8 MIXED AIR CASING

- A. DAMPERS: REFER TO DRAWINGS.

- B. GASKETS: PROVIDE TIGHT FITTING DAMPERS WITH EDGE GASKETS (MAXIMUM LEAKAGE RATE 5 PERCENT AT 2 INCHES W.G. (500 PA) PRESSURE DIFFERENTIAL).

2.9 PERFORMANCE

- A. REFER TO DRAWINGS.

- B. SCHEDULED PERFORMANCE:

1. COOLING CAPACITY: ARI 210 TEST CONDITIONS.
2. SOUND RATING NUMBERS: ARI 270.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. VERIFY THAT ROOF IS READY TO RECEIVE WORK AND OPENING DIMENSIONS ARE AS ILLUSTRATED BY THE MANUFACTURER.
- B. VERIFY THAT PROPER POWER SUPPLY IS AVAILABLE.

3.2 INSTALLATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, NFPA 90A, AND NFPA 90B.

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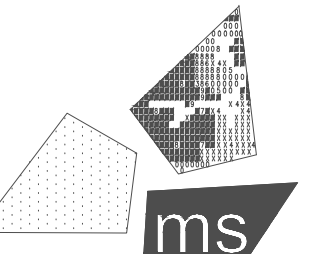
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PROJECT:

19353 VERNIER ROAD  
HARPER WOODS, MI 48225

STORE # 919728



PROFESSIONAL OF RECORD:  
JASON E. CHRISTOFF No. 6201061051  
EXP. DATE: 03/17/2023

PROJECT NO.:

40509-11

SHEET TITLE:

**MECHANICAL  
SPECIFICATIONS**

SHEET:

MS1.3

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DIVISION 22 - PLUMBING SPECIFICATIONS SECTION "ACCESS DOORS AND FRAMES."

BASIC MECHANICAL MATERIALS AND METHODS SECTION 22.00.00 PART 2 - PRODUCTS

- 1.1 RELATED DOCUMENTS
A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT...
1.2 SUMMARY
A. THIS SECTION INCLUDES THE FOLLOWING:
1. PIPING MATERIALS AND INSTALLATION INSTRUCTIONS...
1.3 DEFINITIONS
A. FINISHED SPACES: SPACES OTHER THAN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS...
1.4 SUBMITTALS
A. PRODUCT DATA: FOR THE FOLLOWING:
1. TRANSITION FITTINGS.
2. DIELECTRIC FITTINGS.
3. MECHANICAL SLEEVE SEALS.
4. ESCUTCHEONS.
B. WELDING CERTIFICATES.
1.5 QUALITY ASSURANCE
A. STEEL SUPPORT WELDING: QUALIFY PROCESSES AND OPERATORS...
B. STEEL PIPE WELDING: QUALIFY PROCESSES AND OPERATORS...
C. COMPLY WITH PROVISIONS IN ASME B31 SERIES...
D. CERTIFY THAT EACH WELDER HAS PASSED AWS QUALIFICATION TESTS...
E. ELECTRICAL CHARACTERISTICS FOR PLUMBING EQUIPMENT...
1.6 DELIVERY, STORAGE, AND HANDLING
A. DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS...
B. STORE PLASTIC PIPES PROTECTED FROM DIRECT SUNLIGHT...
1.7 COORDINATION
A. ARRANGE FOR PIPE SPACES, CHASES, SLOTS, AND OPENINGS...
B. COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES...
C. COORDINATE REQUIREMENTS FOR ACCESS PANELS AND DOORS...
D. DELIVERY, STORAGE, AND HANDLING
E. COORDINATION

- 2.1 MANUFACTURERS
A. IN OTHER PART 2 ARTICLES WHERE SUBPARAGRAPH TITLES BELOW INTRODUCE LISTS...
1. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS...
2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS...
B. PIPE, TUBE, AND FITTINGS
A. PIPE THREADS: ASME B1.20.1 FOR FACTORY-THREADED PIPE AND PIPE FITTINGS.
C. JOINTING MATERIALS
A. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND THERMAL CONDITIONS...
1. ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE...
2. AWWA C110, RUBBER, FLAT FACE...
B. FLANGE BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL...
C. PLASTIC, PIPE-FLANGE GASKET, BOLTS, AND NUTS...
D. SOLDER FILLER METALS: ASTM B 32, LEAD-FREE ALLOYS...
E. BRAZING FILLER METALS: AWS A5.8, BCUP SERIES...
F. WELDING FILLER METALS: COMPLY WITH AWS D10.12...
G. SOLVENT CEMENTS FOR JOINING PLASTIC PIPING:
1. ABS PIPING: ASTM D 2235.
2. CPVC PIPING: ASTM F 493.
3. PVC PIPING: ASTM D 2564...
4. PVC TO ABS PIPING TRANSITION: ASTM D 3138.
H. FIBERGLASS PIPE ADHESIVE: AS FURNISHED OR RECOMMENDED BY PIPE MANUFACTURER.
2.2 TRANSITION FITTINGS
A. AWWA TRANSITION COUPLINGS: SAME SIZE AS, AND WITH PRESSURE RATING AT LEAST EQUAL TO AND WITH ENDS COMPATIBLE WITH...
2.3 SLEEVES
A. GALVANIZED-STEEL SHEET: 0.0239-INCH MINIMUM THICKNESS...
B. STEEL PIPE: ASTM A 53, TYPE E, GRADE B, SCHEDULE 40...
C. CAST IRON: CAST OR FABRICATED "WALL PIPE" EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE...
D. STACK SLEEVE FITTINGS: MANUFACTURED, CAST-IRON SLEEVE WITH INTEGRAL CLAMPING FLANGE...
E. MOLDED PVC: PERMANENT, WITH NAILING FLANGE FOR ATTACHING TO WOODEN FORMS.
F. PVC PIPE: ASTM D 1785, SCHEDULE 40.
G. MOLDED PE: REUSABLE, PE, TAPERED-CUP SHAPED, AND SMOOTH-OUTER SURFACE WITH NAILING FLANGE...
H. ESCUTCHEONS
A. DESCRIPTION: MANUFACTURED WALL AND CEILING ESCUTCHEONS AND FLOOR PLATES...
B. ONE-PIECE, DEEP-PATTERN TYPE: DEEP-DRAWN, BOX-SHAPED BRASS WITH POLISHED CHROME-PLATED FINISH.
C. ONE-PIECE, CAST-BRASS TYPE: WITH SET SCREW.
1. FINISH: POLISHED CHROME-PLATED.
D. SPLIT-CASTING, CAST-BRASS TYPE: WITH CONCEALED HINGE AND SET SCREW.
1. FINISH: POLISHED CHROME-PLATED.
E. ONE-PIECE, STAMPED-STEEL TYPE: WITH SET SCREW OR SPRING CLIPS AND CHROME-PLATED FINISH.

- F. SPLIT-PLATE, STAMPED-STEEL TYPE: WITH CONCEALED HINGE, SET SCREW OR SPRING CLIPS, AND CHROME-PLATED FINISH.
G. ONE-PIECE, FLOOR-PLATE TYPE: CAST-IRON FLOOR PLATE.
H. SPLIT-CASTING, FLOOR-PLATE TYPE: CAST BRASS WITH CONCEALED HINGE AND SET SCREW.
2.9 GROUT
A. DESCRIPTION: ASTM C 1107, GRADE B, NON SHRINK AND NONMETALLIC, DRY HYDRAULIC-CEMENT GROUT.
1. CHARACTERISTICS: POST-HARDENING, VOLUME-ADJUSTING, NON STAINING, NON CORROSIVE, NONGASEOUS, AND RECOMMENDED FOR INTERIOR AND EXTERIOR APPLICATIONS.
2. DESIGN MIX: 5000-PSI, 28-DAY COMPRESSIVE STRENGTH.
3. PACKAGING: PREMIXED AND FACTORY PACKAGED.
PART 3 - EXECUTION
3.1 PLUMBING DEMOLITION
A. REFER TO DIVISION 01 SECTION "CUTTING AND PATCHING" AND DIVISION 02 SECTION "SELECTIVE STRUCTURE DEMOLITION" FOR GENERAL DEMOLITION REQUIREMENTS AND PROCEDURES.
B. DISCONNECT, DEMOLISH, AND REMOVE PLUMBING SYSTEMS, EQUIPMENT, AND COMPONENTS INDICATED TO BE REMOVED.
1. PIPING TO BE REMOVED: REMOVE PORTION OF PIPING INDICATED TO BE REMOVED AND CAP OR PLUG REMAINING PIPING WITH SAME OR COMPATIBLE PIPING MATERIAL.
2. PIPING TO BE ABANDONED IN PLACE: DRAIN PIPING AND CAP OR PLUG PIPING WITH SAME OR COMPATIBLE PIPING MATERIAL.
3. EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT.
4. EQUIPMENT TO BE REMOVED AND REINSTALLED: DISCONNECT AND CAP SERVICES AND REMOVE, CLEAN, AND STORE EQUIPMENT; WHEN APPROPRIATE, REINSTALL, RECONNECT, AND MAKE EQUIPMENT OPERATIONAL.
5. EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT AND DELIVER TO OWNER.
C. IF PIPE, INSULATION, OR EQUIPMENT TO REMAIN IS DAMAGED IN APPEARANCE OR IS UNSERVICEABLE: REMOVE DAMAGED OR UNSERVICEABLE PORTIONS AND REPLACE WITH NEW PRODUCTS OF EQUAL CAPACITY AND QUALITY.
3.2 PIPING SYSTEMS - COMMON REQUIREMENTS
A. INSTALL PIPING ACCORDING TO THE FOLLOWING REQUIREMENTS AND DIVISION 22 SECTIONS SPECIFYING PIPING SYSTEMS.
B. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS...
C. INSTALL PIPING IN CONCEALED LOCATIONS, UNLESS OTHERWISE INDICATED...
D. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS...
E. INSTALL PIPING ABOVE ACCESSIBLE CEILING TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL.
F. INSTALL PIPING TO PERMIT VALVE SERVICING.
G. INSTALL PIPING AT INDICATED SLOPES.
H. INSTALL PIPING FREE OF SAGS AND BENDS.
I. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.
J. INSTALL PIPING TO ALLOW APPLICATION OF INSULATION.
K. SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE.
L. INSTALL ESCUTCHEONS FOR PENETRATIONS OF WALLS, CEILING, AND FLOORS...
1. NEW PIPING:
a. PIPING WITH FITTING OR SLEEVE PROTRUDING FROM WALL: ONE-PIECE, DEEP-PATTERN TYPE.
b. CHROME-PLATED PIPING: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
c. INSULATED PIPING: ONE-PIECE, STAMPED-STEEL TYPE WITH SPRING CLIPS.
d. BARE PIPING AT WALL AND FLOOR PENETRATIONS IN FINISHED SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
e. BARE PIPING AT WALL AND FLOOR PENETRATIONS IN FINISHED SPACES: ONE-PIECE, STAMPED-STEEL TYPE WITH CONCEALED HINGE AND SET SCREW.
f. BARE PIPING AT CEILING PENETRATIONS IN FINISHED SPACES: ONE-PIECE, STAMPED-STEEL TYPE OR SPLIT-PLATE, STAMPED-STEEL TYPE WITH CONCEALED HINGE AND SET SCREW.
g. BARE PIPING AT CEILING PENETRATIONS IN FINISHED SPACES: ONE-PIECE, STAMPED-STEEL TYPE WITH CONCEALED OR EXPOSED-RIVET HINGE AND SET SCREW.
h. BARE PIPING IN UNFINISHED SERVICE SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
i. BARE PIPING IN UNFINISHED SERVICE SPACES: ONE-PIECE, STAMPED-STEEL TYPE WITH CONCEALED OR EXPOSED-RIVET HINGE AND SET SCREW OR SPRING CLIPS.
j. BARE PIPING IN EQUIPMENT ROOMS: ONE-PIECE, CAST-BRASS TYPE.
M. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.
N. PERMANENT SLEEVES ARE NOT REQUIRED FOR HOLES FORMED BY REMOVABLE SLEEVES.
O. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FLOOR AND ROOF SLABS.
1. CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH SURFACES.
a. EXCEPTION: EXTEND SLEEVES INSTALLED IN FLOORS OF MECHANICAL EQUIPMENT AREAS OR OTHER WET AREAS...
2. INSTALL SLEEVES IN NEW WALLS AND SLABS ARE CONSTRUCTED.
3. INSTALL SLEEVES THAT ARE LARGE ENOUGH TO PROVIDE 1/4-INCH ANNUAL CLEAR SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION...
a. STEEL PIPE SLEEVES: FOR PIPES SMALLER THAN NPS 8.
b. STEEL SHEET SLEEVES: FOR PIPES NPS 8 AND LARGER...
c. STACK SLEEVE FITTINGS: FOR PIPES PENETRATING FLOORS WITH MEMBRANE WATERPROOFING...
d. SEAL SPACE OUTSIDE OF SLEEVE FITTINGS WITH GROUT.
4. EXCEPT FOR UNDERGROUND WALL PENETRATIONS, SEAL ANNUAL SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION...
5. PVC NON PRESSURE PIPING: JOIN ACCORDING TO ASTM D 2855.
6. PVC TO ABS NON PRESSURE TRANSITION FITTINGS: JOIN ACCORDING TO ASTM D 3138 APPENDIX.
J. PLASTIC PRESSURE PIPING GASKETED JOINTS: JOIN ACCORDING TO ASTM D 3139.
K. PLASTIC NON PRESSURE PIPING GASKETED JOINTS: JOIN ACCORDING TO ASTM D 3212.
L. PE PIPING HEAT-FUSION JOINTS: CLEAN AND DRY JOINING SURFACES...
1. PLAIN-END PIPE AND FITTINGS: USE BUTT FUSION.
2. PLAIN-END PIPE AND SOCKET FITTINGS: USE SOCKET FUSION.
M. FIBERGLASS BONDED JOINTS: PREPARE PIPE ENDS AND FITTINGS...
3.4 PIPING CONNECTIONS
A. MAKE CONNECTIONS ACCORDING TO THE FOLLOWING, UNLESS OTHERWISE INDICATED.
1. INSTALL UNIONS, IN PIPING NPS 2 AND SMALLER...
2. INSTALL FLANGES, IN PIPING NPS 2-1/2 AND LARGER...
3. DRY PIPING SYSTEMS: INSTALL DIELECTRIC UNIONS AND FLANGES...
4. WET PIPING SYSTEMS: INSTALL DIELECTRIC COUPLING AND NIPPLE FITTINGS...
3.5 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS
A. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM...
B. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS...
C. INSTALL PLUMBING EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR...
3.6 PAINTING
A. PAINTING OF PLUMBING SYSTEMS, EQUIPMENT,

- AND COMPONENTS IS SPECIFIED IN ARCHITECTURAL SPECIFICATION SECTIONS "INTERIOR PAINTING" AND "EXTERIOR PAINTING."
B. DAMAGE AND TOUCHUP: REPAIR MARRED AND DAMAGED FACTORY-PAINTED FINISHES WITH MATERIALS AND PROCEDURES TO MATCH ORIGINAL FACTORY FINISH.
3.7 CONCRETE BASES
A. CONCRETE BASES: ANCHOR EQUIPMENT TO CONCRETE BASE ACCORDING TO EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS...
1. CONSTRUCT CONCRETE BASES OF DIMENSIONS INDICATED...
2. INSTALL DOWEL RODS TO CONNECT CONCRETE BASE TO CONCRETE FLOOR...
3. INSTALL EPOXY-COATED ANCHOR BOLTS...
4. PLACE AND SECURE ANCHORAGE DEVICES...
5. INSTALL ANCHOR BOLTS TO ELEVATIONS...
6. INSTALL ANCHOR BOLTS ACCORDING TO ANCHOR-BOLT MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. USE 3000-PSI, 28-DAY COMPRESSIVE-STRENGTH CONCRETE...
3.8 ERECTION OF METAL SUPPORTS AND ANCHORAGES
A. REFER TO DIVISION 05 SECTION "METAL FABRICATIONS" FOR STRUCTURAL STEEL.
B. CUT, FIT, AND PLACE MISCELLANEOUS METAL SUPPORTS ACCURATELY IN LOCATION...
C. FIELD WELDING: COMPLY WITH AWS D11.1.
3.9 ERECTION OF WOOD SUPPORTS AND ANCHORAGES
A. CUT, FIT, AND PLACE WOOD GROUNDS, NAILERS, BLOCKING, AND ANCHORAGES TO SUPPORT...
B. SELECT FASTENER SIZES THAT WILL NOT PENETRATE MEMBERS...
C. ATTACH TO SUBSTRATES AS REQUIRED TO SUPPORT APPLIED LOADS.
3.10 GROUTING
A. MIX AND INSTALL GROUT FOR PLUMBING EQUIPMENT BASE BEARING SURFACES...
B. CLEAN SURFACES THAT WILL COME INTO CONTACT WITH GROUT.
C. PROVIDE FORMS AS REQUIRED FOR PLACEMENT OF GROUT.
D. AVOID AIR ENTRAPMENT DURING PLACEMENT OF GROUT.
E. PLACE GROUT, COMPLETELY FILLING EQUIPMENT BASES.
F. PLACE GROUT ON CONCRETE BASES AND PROVIDE SMOOTH BEARING SURFACE...
G. PLACE GROUT AROUND ANCHORS.
H. CURE PLACED GROUT.
END OF SECTION
A. MAKE CONNECTIONS ACCORDING TO THE FOLLOWING, UNLESS OTHERWISE INDICATED.
1. INSTALL UNIONS, IN PIPING NPS 2 AND SMALLER...
2. INSTALL FLANGES, IN PIPING NPS 2-1/2 AND LARGER...
3. DRY PIPING SYSTEMS: INSTALL DIELECTRIC UNIONS AND FLANGES...
4. WET PIPING SYSTEMS: INSTALL DIELECTRIC COUPLING AND NIPPLE FITTINGS...
3.5 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS
A. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM...
B. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS...
C. INSTALL PLUMBING EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR...
3.6 PAINTING
A. PAINTING OF PLUMBING SYSTEMS, EQUIPMENT,

DRAWN BY: NWO
CHECKED BY: KFF
ISSUE DATE: 07/12/2022
ISSUE # DATE DESCRIPTION
07/12/22 PERMIT SET
REVISIONS # DATE DESCRIPTION
NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE...
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PROJECT NO.: 40509-11
SHEET TITLE: PLUMBING SPECIFICATIONS
SHEET: PS1.1

<u>HANGERS AND SUPPORTS</u>	<u>SECTION 22 05 29</u>	COLLARS ABOVE ROOF JACKS, SCREW VERTICAL FLANGE SECTION TO FACE OF CURB.	1/2"	2. JOINTS: ASTM D2235, SOLVENT WELD.	<u>PART 3 - EXECUTION</u>	A. ASSE 1018; BRONZE BODY WITH INTEGRAL VACUUM BREAKER, NON-LIMING INTERNAL OPERATING ASSEMBLY, GASKETED BRONZE COVER.	D. SINKS.	B. REFER TO DRAWINGS FOR ELECTRICAL CHARACTERISTICS, CAPACITY, HEATING ELEMENT SIZE, AND ACCESSORIES.
PART 1 - GENERAL		O. SET SLEEVES IN POSITION IN FORM WORK. PROVIDE REINFORCING AROUND SLEEVES.	b. CONDENSATE DRAINS 1/2"	C. PVC PIPE: ASTM D2665.	3.1 PREPARATION	2.4 CLEANOUTS	E. SERVICE SINKS.	C. HEATER SHALL BE SUITABLE FOR A MAXIMUM WORKING PRESSURE OF 150 PSIG. HEATER SHALL BE UL LISTED AND LABELED. MEET THE EFFICIENCY REQUIREMENTS OF ASHRAE 90.1, AND BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.
1.1 SECTION INCLUDES		P. SIZE SLEEVES LARGE ENOUGH TO ALLOW FOR MOVEMENT DUE TO EXPANSION AND CONTRACTION. PROVIDE FOR CONTINUOUS INSULATION WRAPPING.	2. PRE-FORMED GLASS FIBER a. DOMESTIC HOT WATER, COLD WATER, AND HOT WATER RECIRCULATION	1. FITTINGS: ASTM D2665, PVC. 2. JOINTS: ASTM D2855, SOLVENT WELD WITH ASTM D2564 SOLVENT CEMENT.	A. REAM PIPE AND TUBE ENDS. REMOVE BURRS.	A. MANUFACTURER/MODEL: REFER TO SCHEDULE ON DRAWINGS.	F. ELECTRIC WATER COOLERS.	
A. PIPE, EQUIPMENT HANGERS, AND SUPPORTS.		Q. WHERE PIPING OR DUCTWORK PENETRATES FLOOR, CEILING, OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND ADJACENT WORK WITH FIRE STOPPING INSULATION AND CALK. PROVIDE CLOSE FITTING METAL COLLAR OR ESCUTCHEON COVERS AT BOTH SIDES OF PENETRATION.	1* b. CONDENSATE DRAINS 1*  END OF SECTION	2.6 WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING A. PIPE 1-1/2 INCHES AND SMALLER: ASTM F878, CROSSLINKED POLYETHYLENE TUBING (PEX). JOINTS SHALL NOT BE MADE BELOW SLAB. B. PIPE 2 INCHES AND LARGER: COPPER PIPE, ASTM B88, TYPE K, HARD DRAWN.	B. REMOVE SCALE AND DIRT ON INSIDE AND OUTSIDE BEFORE ASSEMBLY.	A. INTERIOR: 1. BRONZE OR BRASS, WALL MOUNTED, REPLACEABLE HEXAGONAL DISC, HOSE THREAD SPOUT, CHROME PLATED WHERE EXPOSED, LOCK SHIELD, REMOVABLE KEY, AND INTEGRAL VACUUM BREAKER IN CONFORMANCE WITH ASSE 1011.	1.2 REGULATORY REQUIREMENTS	D. RELIEF VALVE: ASME AND/OR AGA RATED PRESSURE AND TEMPERATURE SAFETY RELIEF VALVE, PIPED FULL SIZE TO APPROVED RECEPTOR.
B. SLEEVES AND SEALS.		R. INSTALL CHROME PLATED STEEL ESCUTCHEONS AT FINISHED SURFACES.	PLUMBING PIPING SECTION 22 11 16	PART 1 - GENERAL 1.1 SECTION INCLUDES A. PIPE, PIPE FITTINGS, VALVES, AND CONNECTIONS FOR PIPING SYSTEMS 1. SANITARY WASTE AND VENT 2. DOMESTIC WATER 3. STORM WATER 4. NATURAL GAS 5. CONDENSATE DRAINS	C. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.	B. PRODUCTS REQUIRING ELECTRICAL CONNECTIONS: LISTED AND CLASSIFIED BY UNDERWRITER LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.	PART 3 - EXECUTION 3.1 INSTALLATION	
C. FLASHING AND SEALING EQUIPMENT AND PIPE STACKS.		3.2 SCHEDULES A. HANGER SPACING AND HANGER ROD SIZES:  PIPE SIZE (IN)      MAX. HANGER SPACING (FT)      HANGER ROD DIAMETER (IN) 1/2 TO 1-1/2      6-1/2      3/8 1-1/2 TO 2      8      3/8 2-1/3 TO 3      10      1/2 4 TO 6      10      5/8 PVC      6      3/8 CI NO-HUB      5      1/2	PART 1 - GENERAL 1.1 SECTION INCLUDES A. PIPE, PIPE FITTINGS, VALVES, AND CONNECTIONS FOR PIPING SYSTEMS 1. SANITARY WASTE AND VENT 2. DOMESTIC WATER 3. STORM WATER 4. NATURAL GAS 5. CONDENSATE DRAINS	2.8 NATURAL GAS PIPING, BURIED WITHIN 5 FEET OF BUILDING A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK.	D. INSTALL PIPING AS HIGH AS POSSIBLE TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE.	PART 2 - PRODUCTS - REFER TO DRAWINGS	PART 3 - EXECUTION 3.1 INSTALLATION	A. INSTALL WATER HEATERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND TO UL REQUIREMENTS.
D. EQUIPMENT CURBS.		END OF SECTION	PART 2 - PRODUCTS 2.1 SANITARY WASTE PIPING, BURIED WITHIN 5 FEET OF BUILDING BELOW FLOOR A. CAST IRON PIPE: ASTM A74 SERVICE WEIGHT. 1. FITTINGS: CAST IRON. 2. JOINTS: HUB-AND-SPIGOT, CISPI HSN COMPRESSION TYPE WITH ASTM C564 NEOPRENE GASKETS OR LEAD AND OAKUM.	2.8 NATURAL GAS PIPING, BURIED WITHIN 5 FEET OF BUILDING A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM A234/A234M, FORGED STEEL WELDING TYPE. 2. JOINTS: ANSI B31.1, WELDED. 3. JACKET: AWWA C105 FACTORY APPLIED POLYETHYLENE JACKET AND DOUBLE LAYER, HALF-LAPPED 10 MIL POLYETHYLENE TAPE ON FITTINGS ONLY, OR IN ACCORDANCE WITH AUTHORITY HAVING JURISDICTION.	E. GROUP PIPING WHEREVER PRACTICAL AT COMMON ELEVATIONS.	PART 2 - PRODUCTS - REFER TO DRAWINGS	PART 3 - EXECUTION 3.1 EXAMINATION	A. INSTALL WATER HEATERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND TO UL REQUIREMENTS.
PART 2 - PRODUCTS		PART 1 - GENERAL	PART 1 - GENERAL	2.8 NATURAL GAS PIPING, BURIED WITHIN 5 FEET OF BUILDING A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	F. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.	PART 2 - PRODUCTS - REFER TO DRAWINGS	PART 3 - EXECUTION 3.1 EXAMINATION	B. PROVIDE ALL REQUIRED PIPING AND VALVES.
2.1 PIPE HANGERS AND SUPPORTS		PART 1 - GENERAL	PART 1 - GENERAL	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	G. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE OR EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	C. DOMESTIC HOT WATER DISCHARGE TEMPERATURE SHALL BE SET AT 110° F.
A. MANUFACTURERS:		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	H. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED.	PART 2 - PRODUCTS - REFER TO DRAWINGS	PART 3 - EXECUTION 3.1 EXAMINATION	END OF SECTION 22 33 00
1. B-LINE.		PART 1 - GENERAL	PART 1 - GENERAL	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	I. INSTALL VENT PIPING PENETRATING ROOFED AREAS TO MAINTAIN INTEGRITY OF ROOF ASSEMBLY.	PART 2 - PRODUCTS - REFER TO DRAWINGS	PART 3 - EXECUTION 3.1 EXAMINATION	
2. GRINNELL.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	J. PROVIDE SUPPORT FOR UTILITY METERS IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANIES.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
B. PLUMBING PIPING:		PART 1 - GENERAL	PART 1 - GENERAL	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	K. GAS PIPING SYSTEMS WITHIN A BUILDING SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO A GROUNDED ELECTRODE AS DEFINED BY NFPA 70.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
1. CONFORM TO ASME B31.9.		PART 1 - GENERAL	PART 1 - GENERAL	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	L. PREPARE EXPOSED, UNFINISHED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
2. HANGERS FOR PIPE SIZES 1/2" TO 1-1/2": MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	M. INSTALL BELL AND SPIGOT PIPE WITH BELL END UPSTREAM.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
3. HANGERS FOR PIPE SIZES 2" AND LARGER: CARBON STEEL, ADJUSTABLE, CLEVIS.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	N. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
4. CARBON STEEL, ADJUSTABLE, CLEVIS.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	O. SLEEVE PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS, WHERE EXPOSED PIPING PASSES THROUGH FINISHED WORK, PROVIDE CHROME PLATED ESCUTCHEONS OR OTHER FINISH ACCEPTABLE TO ARCHITECT, WHERE FINISH IS NOT CRITICAL. SUITABLE PLATES SHALL BE PROVIDED TO ASSURE EFFECTIVENESS OF CONSTRUCTION AS A FIRE STOP.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
5. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	P. ALL PIPING SHALL BE FREE OF RUST INSIDE AND OUT.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
6. WALL SUPPORT FOR PIPE SIZES 3" AND SMALLER: CAST IRON HOOK.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	Q. ALL CORRUGATED STAINLESS STEEL TUBING SHALL BE INSTALLED BY TRAINED PERSONNEL WITH STRIKE PROTECTION AS REQUIRED.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
7. WALL SUPPORT FOR PIPE SIZES 4" AND LARGER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.	R. THE TOTAL SYSTEM SHALL MEET OWNER'S APPROVAL.	PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
8. VERTICAL SUPPORT: STEEL RISER CLAMP, ANGLE RING.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
9. FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
PART 2 - ACCESSORIES		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
A. HANGER RODS: MILD STEEL THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
2.3 FLASHING		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
A. METAL FLASHING: 26 GAUGE GALVANIZED STEEL.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
B. METAL COUNTER FLASHING: 22 GAUGE GALVANIZED STEEL.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
C. LEAD FLASHING:		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
1. WATERPROOFING: 5 LB./FT.2 SHEET LEAD.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
2. SOUNDPROOFING: 1 LB./FT.2 SHEET LEAD.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE A. STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK. 1. FITTINGS: ASTM D2683 OR ASTM D2513 SOCKET TYPE. 2. JOINTS: FUSION WELDED.		PART 3 - EXECUTION 3.1 EXAMINATION	PART 3 - EXECUTION 3.1 EXAMINATION	
D. FLEXIBLE FLASHING: 47 MIL THICK SHEET BUTYL, COMPATIBLE WITH ROOFING.		PART 2 - PRODUCTS	PART 2 - PRODUCTS	2.9 NATURAL GAS PIPING, ABOVE GRADE 				