General Notes

THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE GENERAL CONTRACTOR SHALL PROVIDE FOR THE SAFETY, CARE OF UTILITIES AND ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL COMPLY WITH THE STATE AND FEDERAL SAFETY REGULATIONS.

THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR SATISFYING ALL APPLICABLE BUILDING CODES REGARDING BUILDING, BUILDING STRUCTURE, ZONING, ELECTRICAL, MECHANICAL, PLUMBING AND FIRE AND OBTAINING ALL PERMITS AND REQUIRED APPROVALS. THE DRAWINGS AND SPECIFICATIONS SHALL NOT PERMIT WORK THAT DOES NOT CONFORM TO THESE CODES. ANY DISCREPANCIES BETWEEN CODE REQUIREMENTS AND THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

LIMITED ARCHITECTURAL AND ENGINEERING SERVICE HAS BEEN PROVIDED FOR THIS HOUSE DESIGN. ADDITIONAL CONSTRUCTION DETAILS, INFORMATION AND SPECIFICATIONS ARE NEEDED BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ALL SPECIFIED HOUSE STRUCTURE THAT THE SPECIFIED STRUCTURE IS AS REQUIRED TO CONSTRUCT THE HOUSE FOR THE LOCATION OF WHERE THIS HOUSE IS BUILT. THE GENERAL CONTRACTOR MUST GET AN APPROVAL OF HOUSE REQUIRED STRUCTURE FROM WITH LOCAL STRUCTURAL ENGINEER.

ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND THE LOCAL BUILDING AUTHORITY.

MECHANICAL WORK SHALL BE EXECUTED AND INSPECTED IN ACCORDANCE WITH PUBLIC UTILITY REGULATIONS AND LOCAL APPLICABLE CODES.

DO NOT PROCEED IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED WITH WRITTEN DIRECTION FROM THE ARCHITECT. THE ARCHITECT IS NOT RESPONSIBLE FOR CONSTRUCTION PROCEDURES, TECHNIQUES OR THE FAILURE OF THE SUB-CONTRACTORS TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, INDUSTRY STANDARDS, OR REQUIRED CODES.

WRITTEN DIMENSIONS ALWAYS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS SHOWN PRIOR TO BEGINNING ANY WORK AND NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES FOR INTERPRETATION OR CLARIFICATION PRIOR TO BEGINNING ANY ASSOCIATED WORK. PLAN DIMENSIONS ARE TAKEN FROM THE CENTER AND FACE OF FRAMING MEMBERS UNLESS OTHERWISE NOTED. SECTION OR ELEVATION DIMENSIONS ARE TO TOP OF CONCRETE, TOP OF PLYWOOD, OR BEAMS UNLESS OTHERWISE NOTED.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR OWNER TO VERIFY THE ACCURACY AND COMPLETENESS OF THE DOCUMENTS AS PRESENTED AND TO VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE SUFFICIENTLY IN ADVANCE OF THE WORK TO BE PERFORMED TO ASSURE THE ORDERLY PROGRESS OF THE WORK. ANY DISCREPANCIES BETWEEN THESE CONSTRUCTION DOCUMENTS AND ACTUAL JOB SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BEGINNING ANY CONSTRUCTION.

THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL GRADES INCLUDING PAVED AREA SLOPES PRIOR TO PLACING ANY FOUNDATIONS. SURVEY WORK SHOULD BE VERIFIED IN DETAIL. VERIFY ALL DIMENSIONS, CONDITIONS, AND UTILITY LOCATIONS ON THE JOB PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIALS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES IN THE DRAWINGS IMMEDIATELY. STAKE ALL BUILDING CORNERS AND DRIVEWAY LOCATIONS FOR OWNER, BUILDER, AND DESIGN FIRM.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT THE EXISTING TREES TO REMAIN AND ADJACENT PROPERTIES FROM DAMAGE DURING CONSTRUCTION. PROVIDE PROTECTIVE FENCING THROUGHOUT CONSTRUCTION.

IT IS THE INTENT AND MEANING OF THESE DRAWINGS THAT THE CONTRACTOR AND EACH SUBCONTRACTOR PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, SUPPLIES, EQUIPMENT, ETC., TO OBTAIN A COMPLETE JOB WITHIN THE RECOGNIZED STANDARDS OF THE INDUSTRY.

THE CONTRACTOR & HIS SUBCONTRACTORS SHALL MAINTAIN THE PREMISES CLEAN AND FREE OF ALL TRASH, DEBRIS AND SHALL PROTECT ALL ADJACENT WORK FROM DAMAGE, SOILING, PAINT OVERSPRAY, ETC. ALL FIXTURES, EQUIPMENT, GLAZING, FLOORS, ETC. SHALL BE LEFT CLEAN AND READY FOR OCCUPANCY UPON COMPLETION OF THE PROJECT.

FIELD MEASUREMENTS TO BE VERIFIED FOR PROPER FIT AND ATTACHMENT FOR ALL DOORS, WINDOWS, CABINETRY, APPLIANCES, HARDWARE, FIXTURES, AND SPECIALIZED EQUIPMENT. ITEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL WINDOWS AND DOORS DIMENSIONS ARE SHOWN OF AN ACTUAL UNIT SIZE. THE CONTRACTOR MUST LEAVE EXTRA SPACE FOR WINDOWS AND DOORS INSTALLATION.

FLOOR JOIST SUPPLIER TO VERIFY DIMENSIONS AND COORDINATE JOIST LAYOUT PLAN AND APPROPRIATE DETAILS.

ROOF RAFTER AND BEAM SUPPLIER TO VERIFY DIMENSIONS AND COORDINATE RAFTER AND BEAM LAYOUT PLAN AND APPROPRIATE DETAILS.

PROVIDE FIRE & SMOKE DETECTORS AS REQUIRED BY LOCAL JURISDICTION.

PROVIDE INSULATION AROUND ALL PLUMBING AND HEATING LINES EXPOSED TO TEMPERATURE DIFFERENTIALS.

SUBSTITUTION OF "EQUAL" PRODUCTS WILL BE ACCEPTABLE.

IN THE LOCATIONS OF HARSH WINTER CONDITIONS, ROOF AND DECK SURFACES MUST BE MAINTAINED REASONABLY FREE OF ICE AND SNOW TO ENSURE MINIMAL PROBLEMS WITH THESE SURFACES.

CODES HAVING JURISDICTION SHALL BE OBSERVED STRICTLY IN THE CONSTRUCTION OF THE PROJECT. ALL APPLICABLE STATE, COUNTY AND CITY REQUIREMENTS REGARDING BUILDING, BUILDING STRUCTURE, ZONING, ELECTRICAL, MECHANICAL, PLUMBING AND FIRE CODES SHALL BE VERIFIED BY THE GENERAL CONTRACTOR & SUBCONTRACTORS BEFORE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES BETWEEN CODE REQUIREMENTS AND THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

MINOR DETAILS NOT SHOWN OR SPECIFIED BUT NECESSARY FOR PROPER INSTALLATION OR FOR BUILDING CODE COMPLIANCE OR STANDARDS LISTED HEREIN SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR'S CLARIFICATION.

IF GENERAL CONTRACTOR IS NOT HIRED FOR THE CONSTRUCTION WORK THE OWNER OF THE HOUSE IS RESPONSIBLE FOR ABOVE MENTIONED GENERAL CONTRACTOR'S DUTIES.



TRUOBA Designing Contemporary Houses

www.truoba.com
info@truoba.com

TRUOBA MINI 619

House Area: 44 m²

INDEX SHEET

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- 2 SLAB FOUNDATION PLAN
- 3 CRAWL FOUNDATION PLAN
- 4 PLUMBING PLAN
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Project Title

<u>Truoba Mini 619</u>

Drawing Name

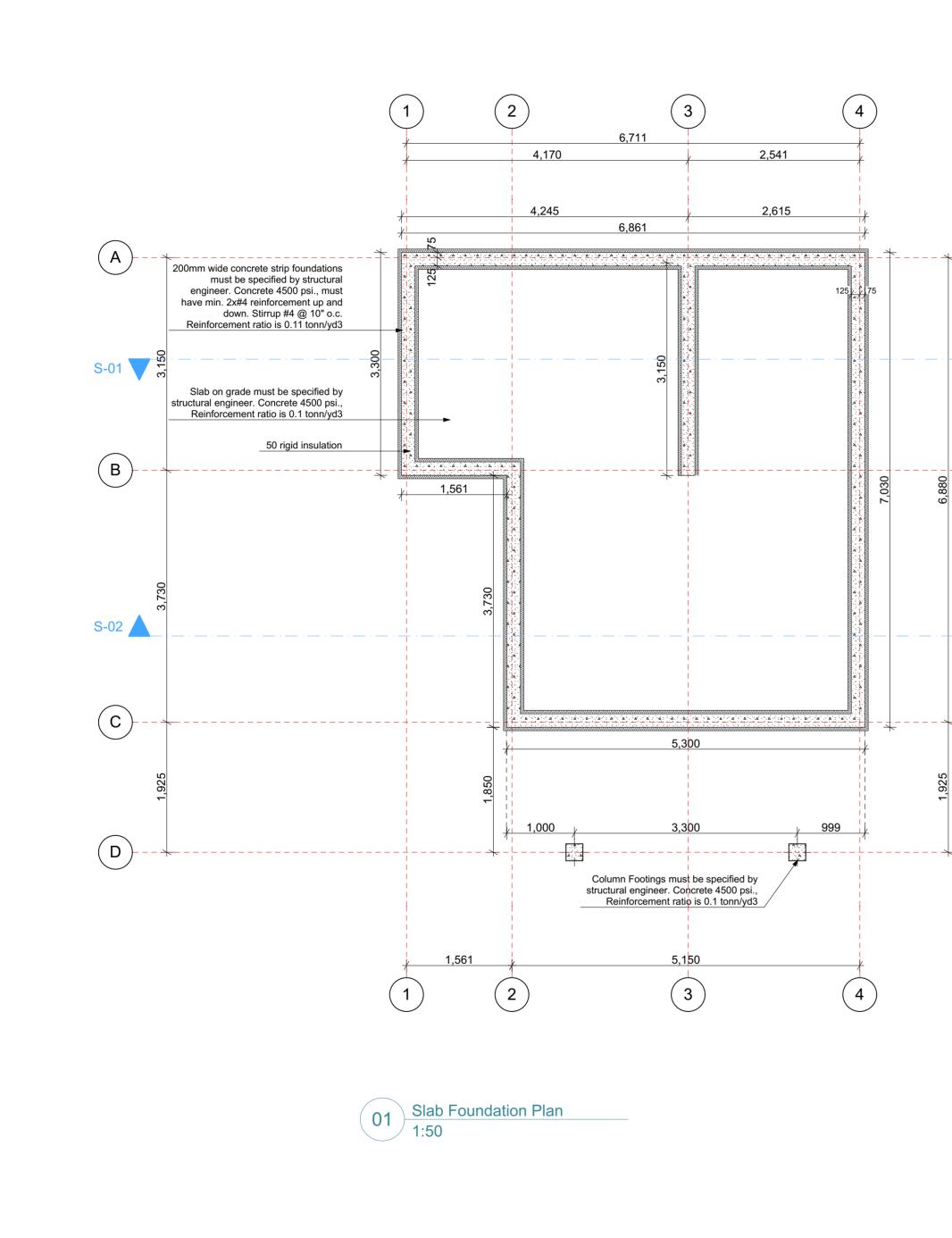
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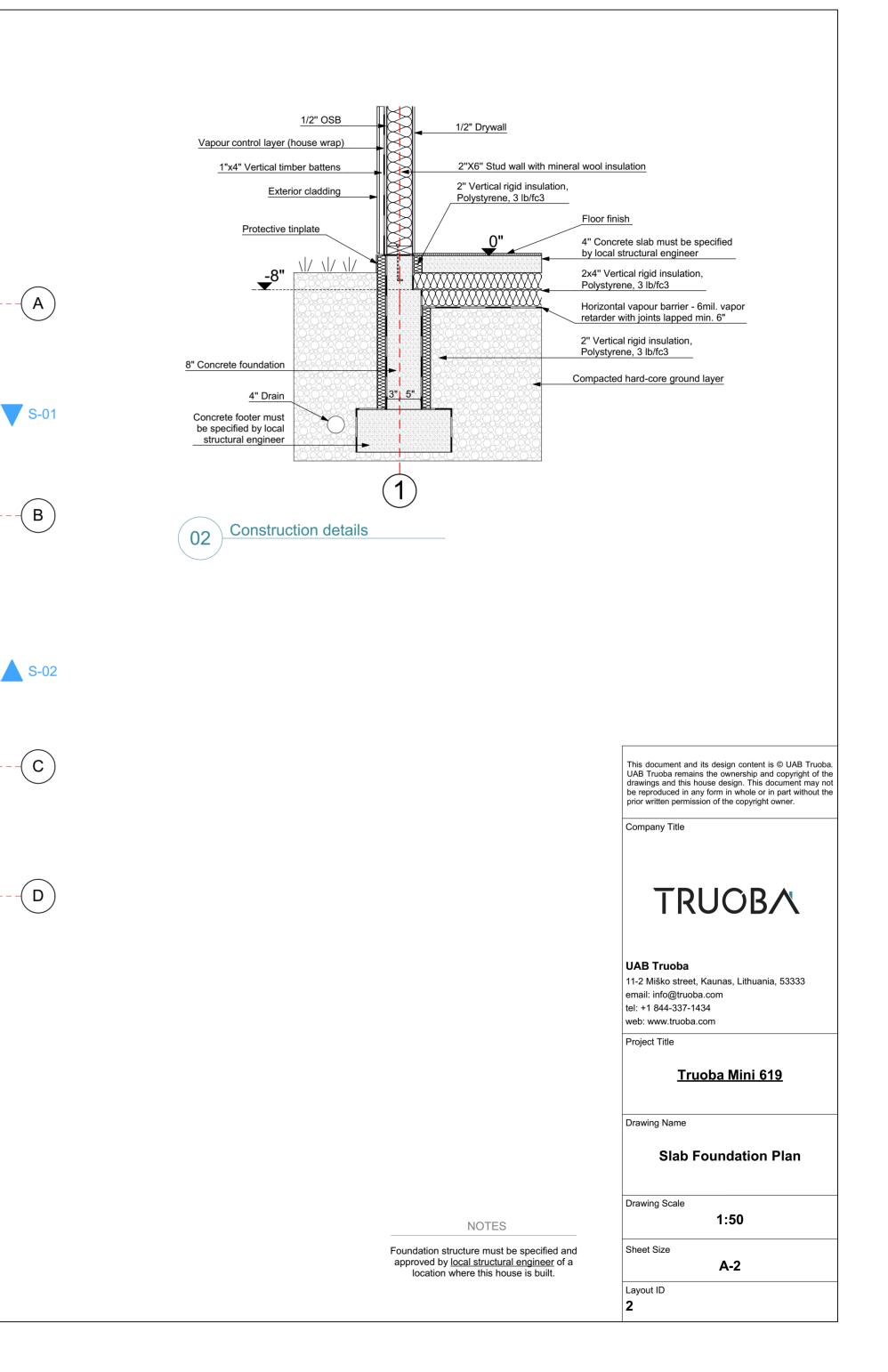
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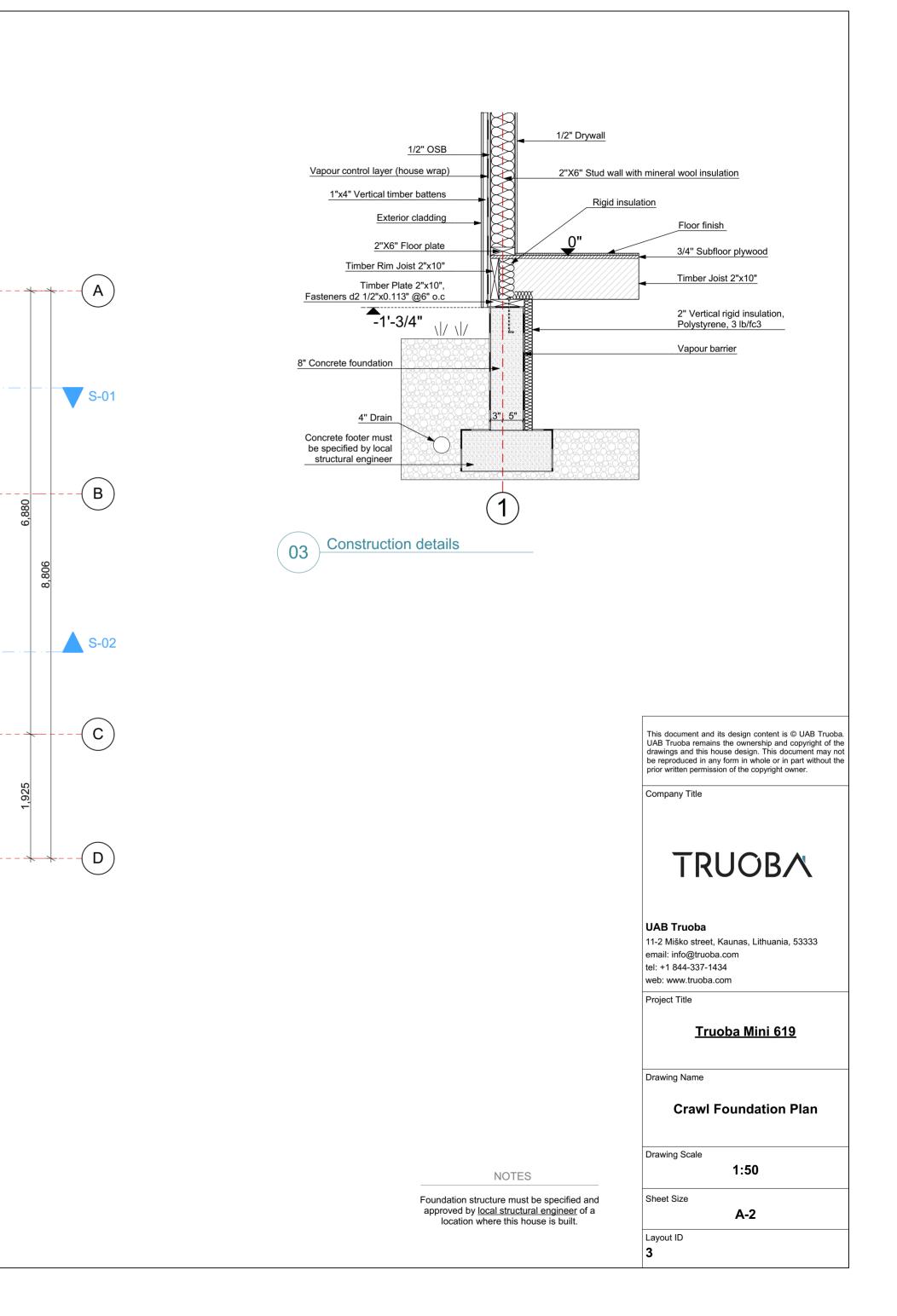
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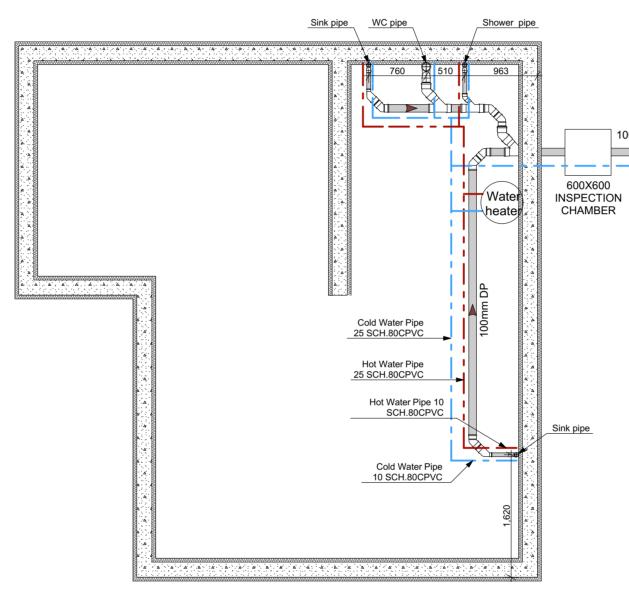






2 4 1 6,711 4,170 2,541 6,861 75 A _____ 200mm wide concrete strip foundations must be specified by structural engineer. Concrete 4500 psi., must 125 have min. 2x#4 reinforcement up and down. Stirrup #4 @ 10" o.c. Reinforcement ratio is 0.11 tonn/yd3 1,635 2,610 _2,615__ **^** S-01 V 300 • ۸. Rim joist 50 rigid insulation B 7,030 1,561 Column Footings must be specified by structural engineer. Concrete 4500 psi., Reinforcement ratio is 0.1 tonn/yd3 3,73 S-02 50x250 joists at 400 o.c.. To be approved by local structural engineer. Fasteners d2 1/2"x0.113" @6" o.c C) 5,300 350 1,000 999 3,300 D <u>د</u> ک ------Column Footings must be specified by structural engineer. Concrete 4500 psi., Reinforcement ratio is 0.1 tonn/yd3 1,561 5,150 $\overline{}$ (1)(2) (3) (4) **Crawl Foundation Plan** 01 1:50







100mm DP TO CITY SEWER

)

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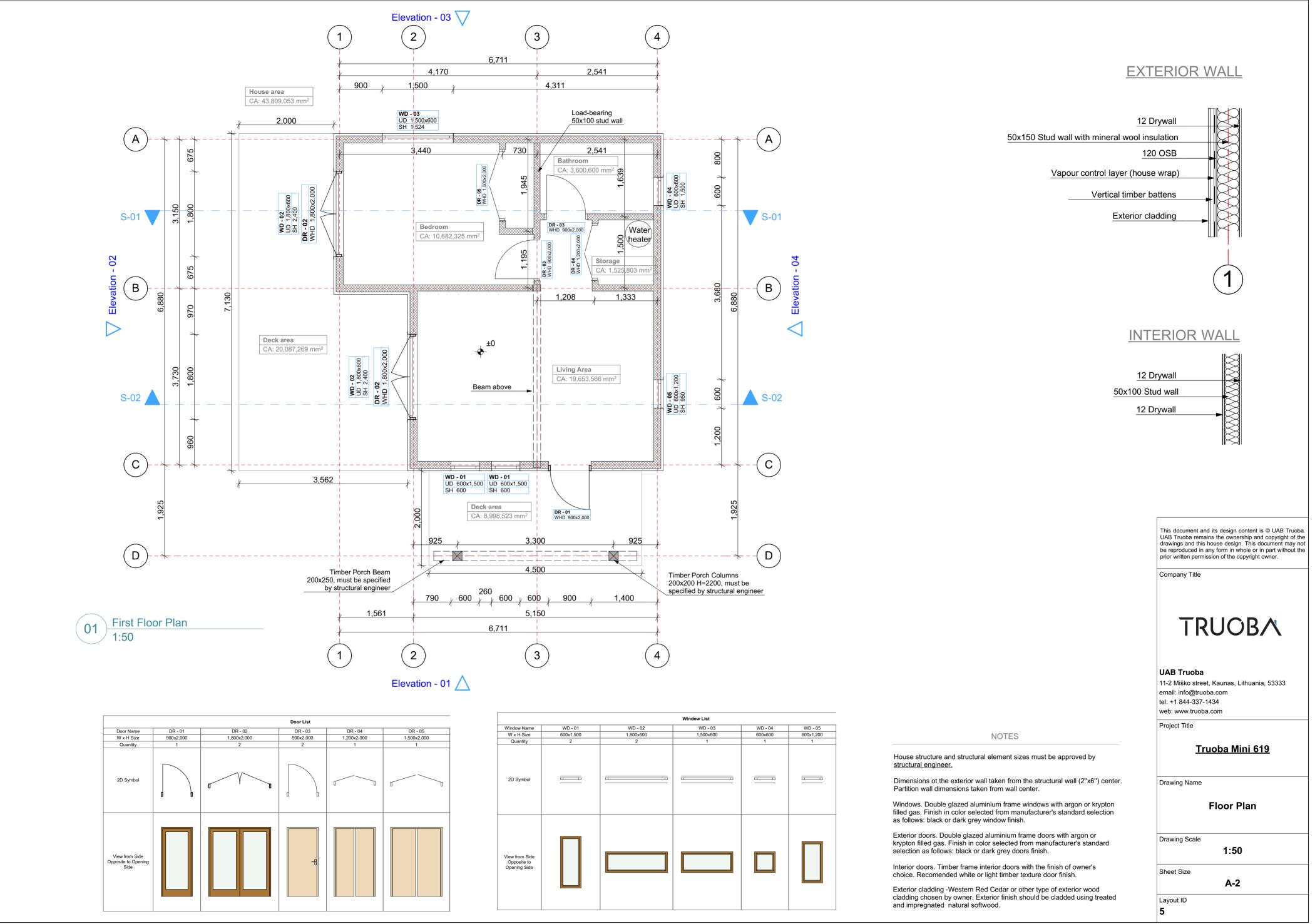
Plumbing Plan

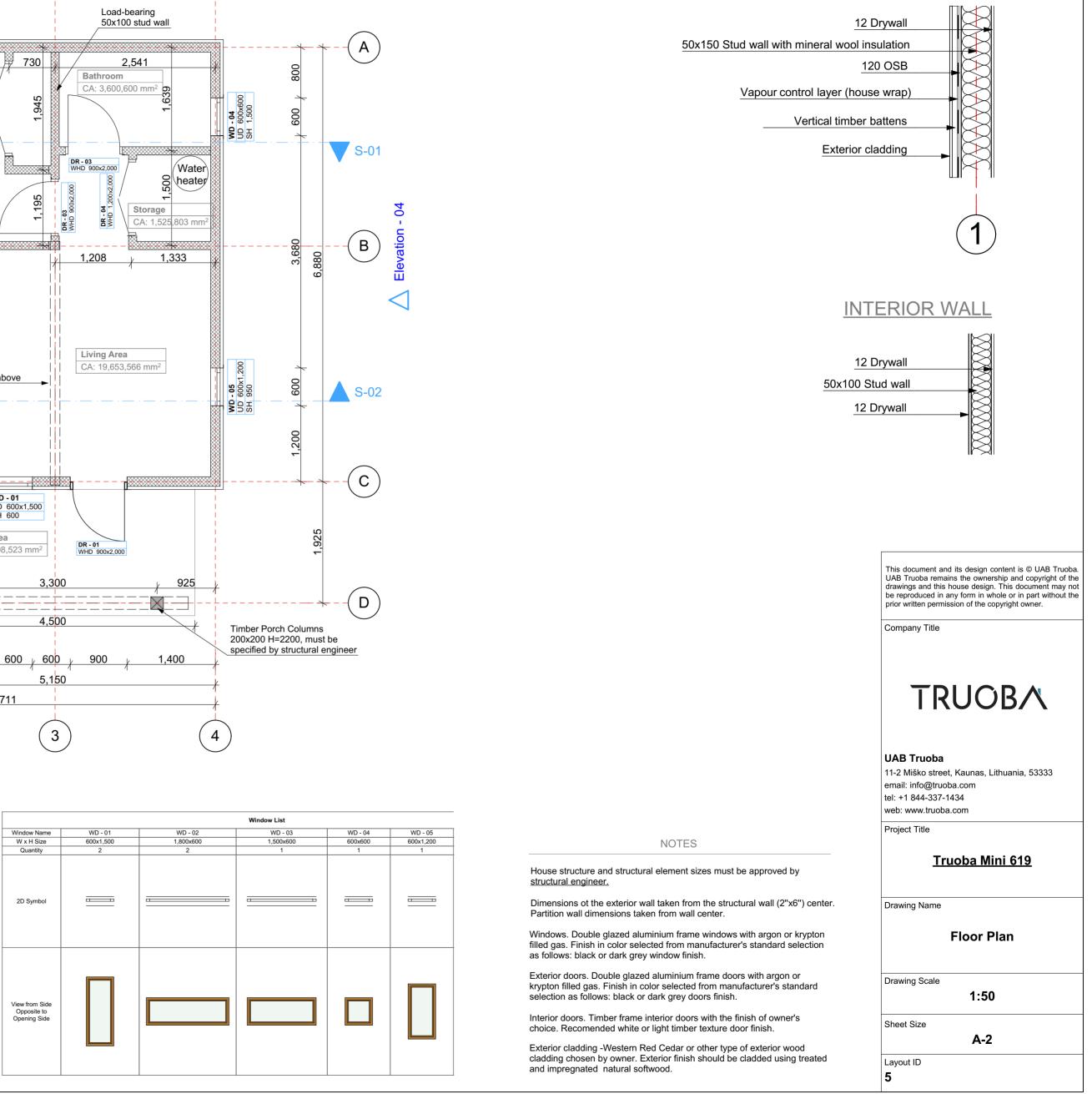
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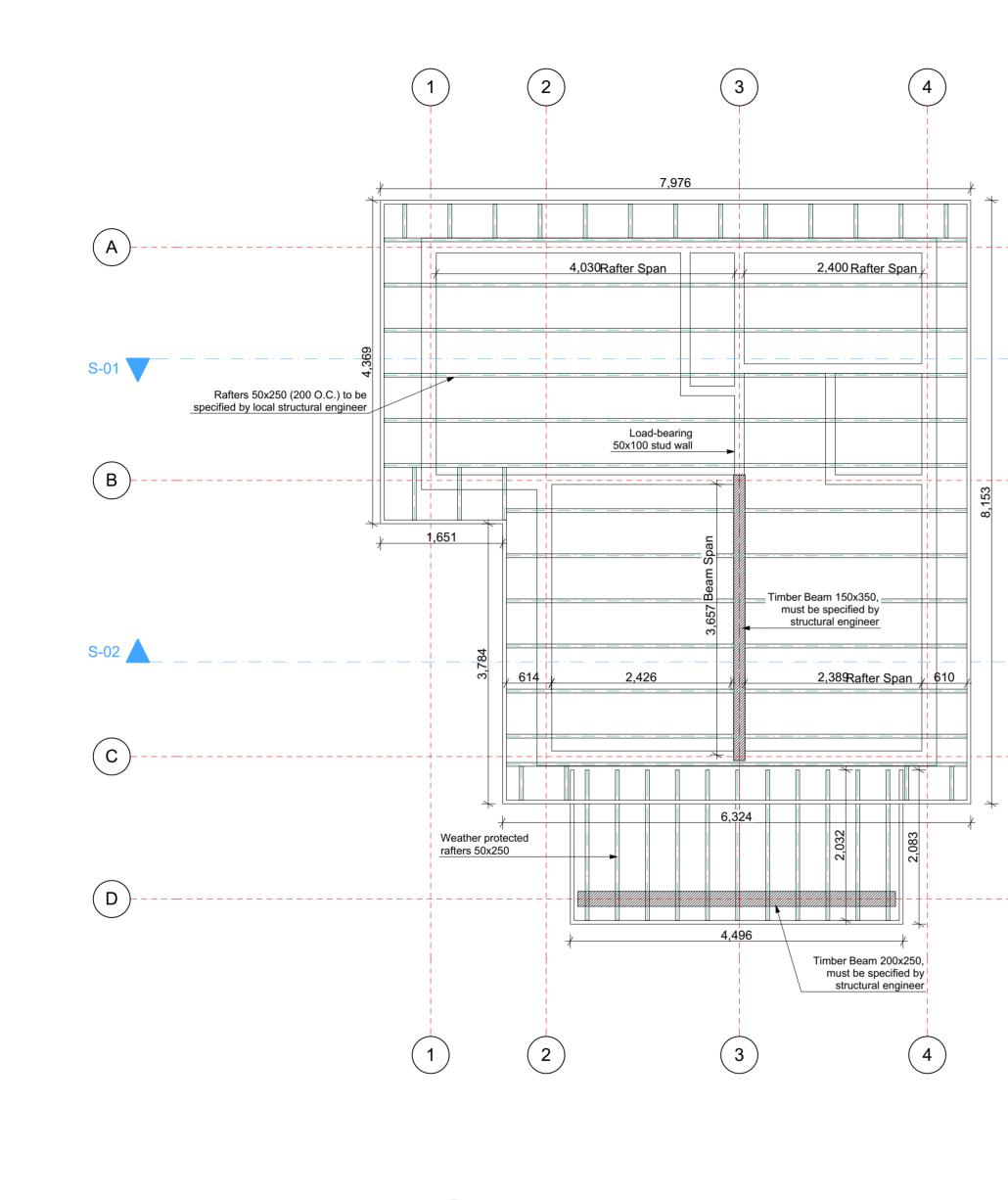
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A-2

Layout ID **4**







01 Roof Construction Plan 1:50

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Drawing Name

Roof Construction Plan

Drawing Scale

1:50

Sheet Size

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Layout ID 6

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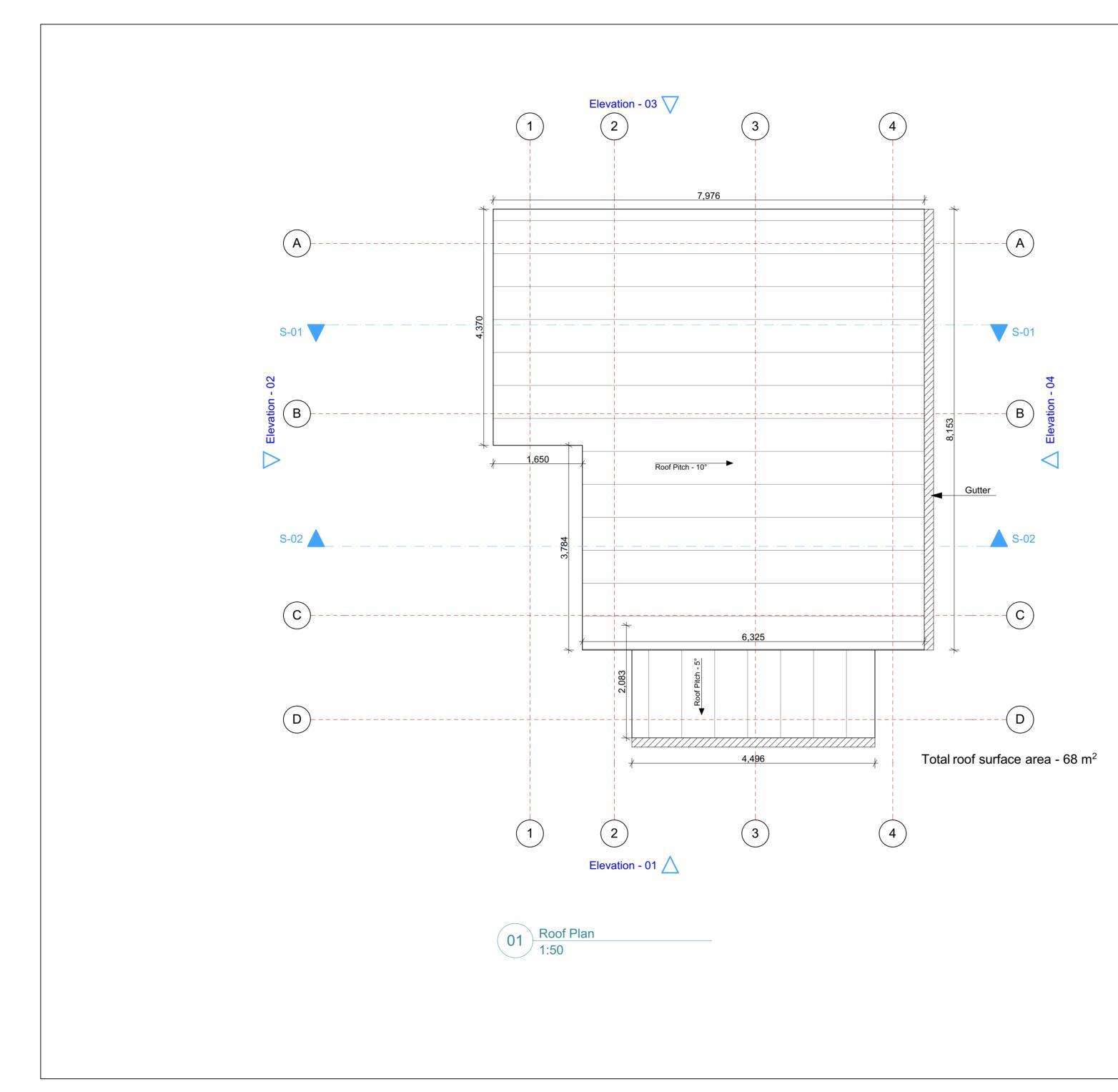
(в

S-02

(C)

(D)

Roof structural element sizes will vary by the location and requirements of local building codes. Entire roof structure must be specified and approved by <u>local structural</u> engineer of a location where this house is built.



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Drawing Name

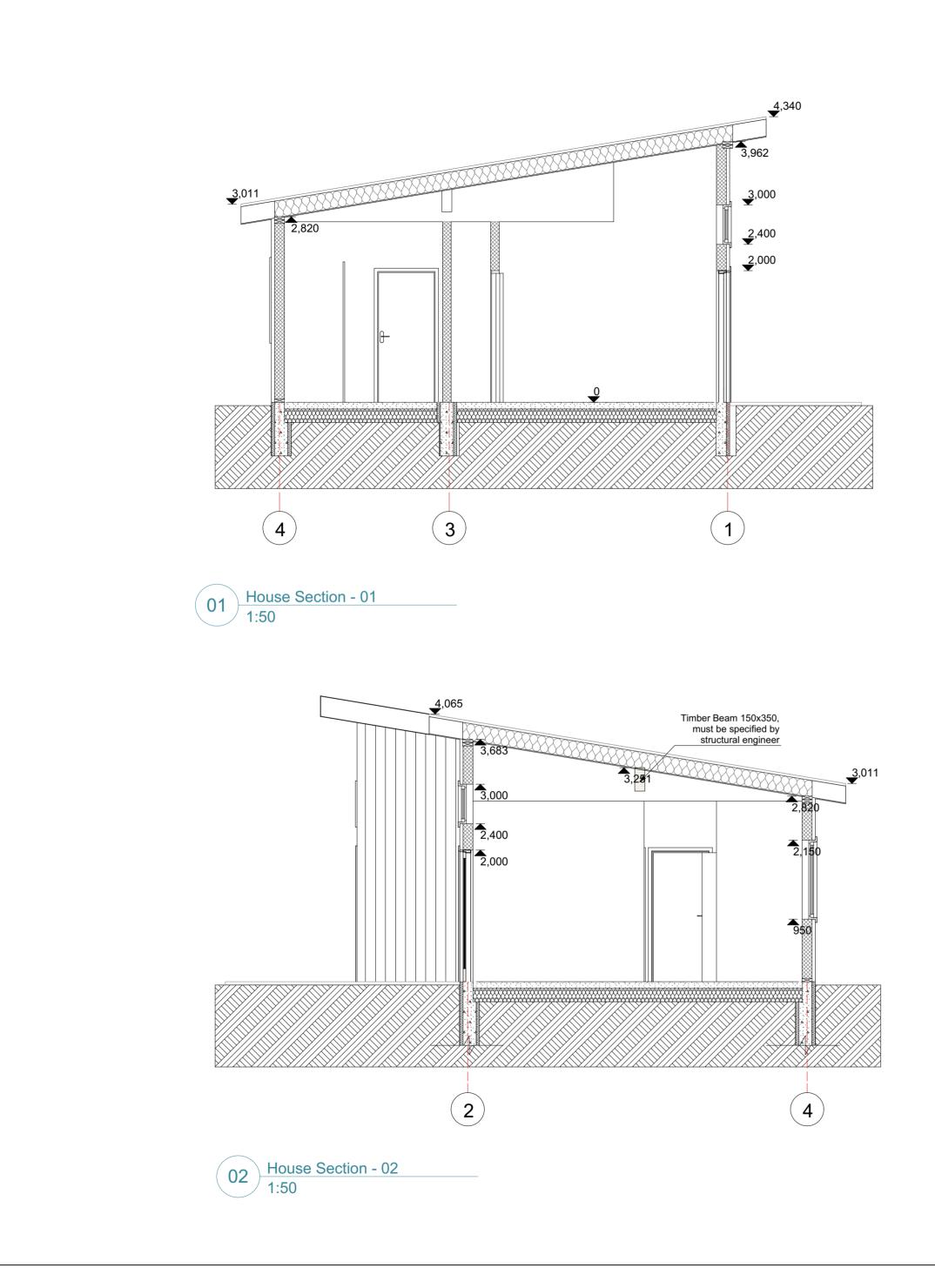
Roof Plan

Drawing Scale

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A-2

Layout ID **7**



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Drawing Name

	Sections
NOTES All house structure must be specified ar	Drawing Scale 1:50
approved by <u>local structural engineer</u> of location where this house is built.	
	Layout ID 8



Exterior doors. Double glazed aluminium frame doors with argon or krypton filled gas. Finish in color selected from manufacturer's standard selection as follows: black or dark grey doors finish.

Exterior cladding -Western Red Cedar or other type of exterior wood cladding chosen by owner. Exterior finish should be cladded using treted and impregnated natural wood.

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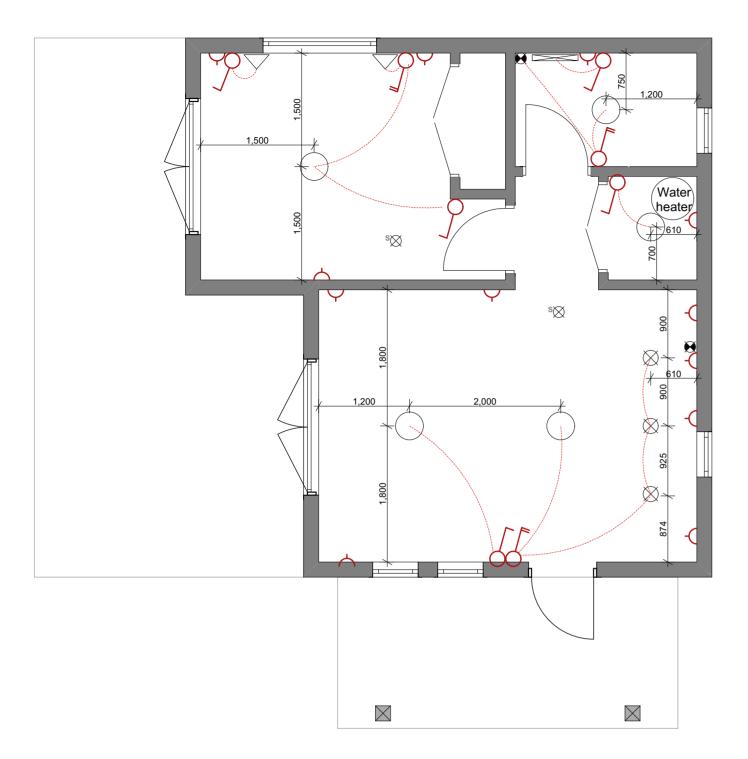
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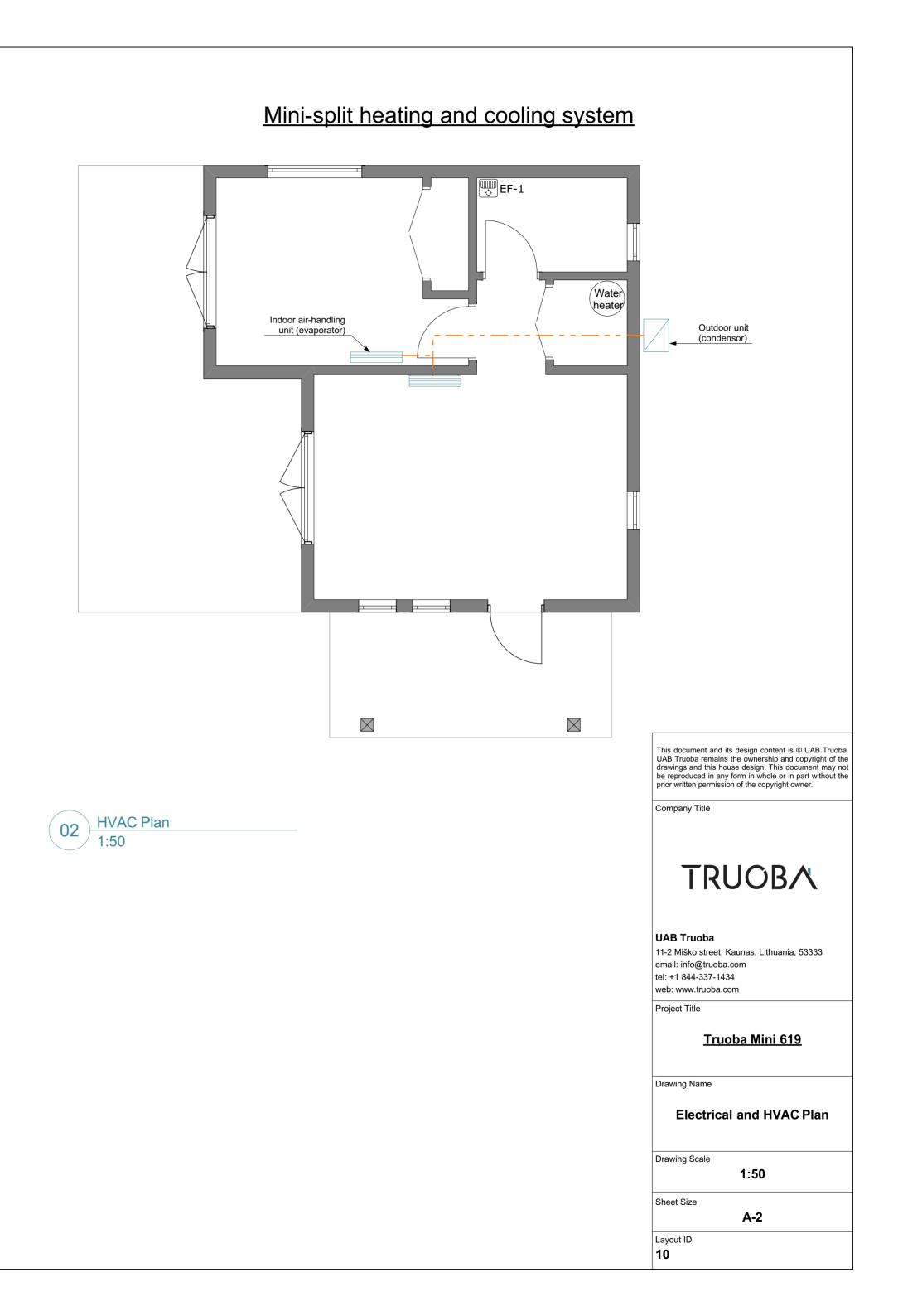
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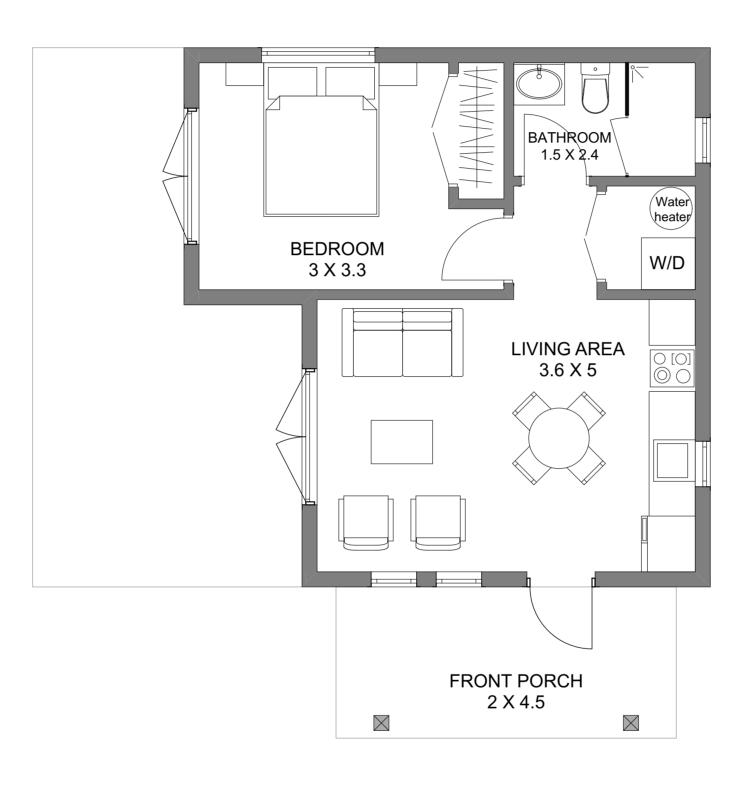




ELECTRICAL SYMBOLS

۶X	Smoke detector
Ð	Exhaust fan
-	Outdoor wall light
Ø	Downlight
\bigtriangleup	Internal wall spotlight
	Wall light
\bigcirc	Ceiling light
	Single outlet for two plugs
2	Double outlet for four plugs
6	Single switch
6	Double switch
6	Triple switch
F	Ceiling fan + light
8	Ceiling fan
TEL	Telephone outlet
TV	Television outlet
INT	Internet outlet







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<u>Truoba Mini 619</u>

Drawing Name

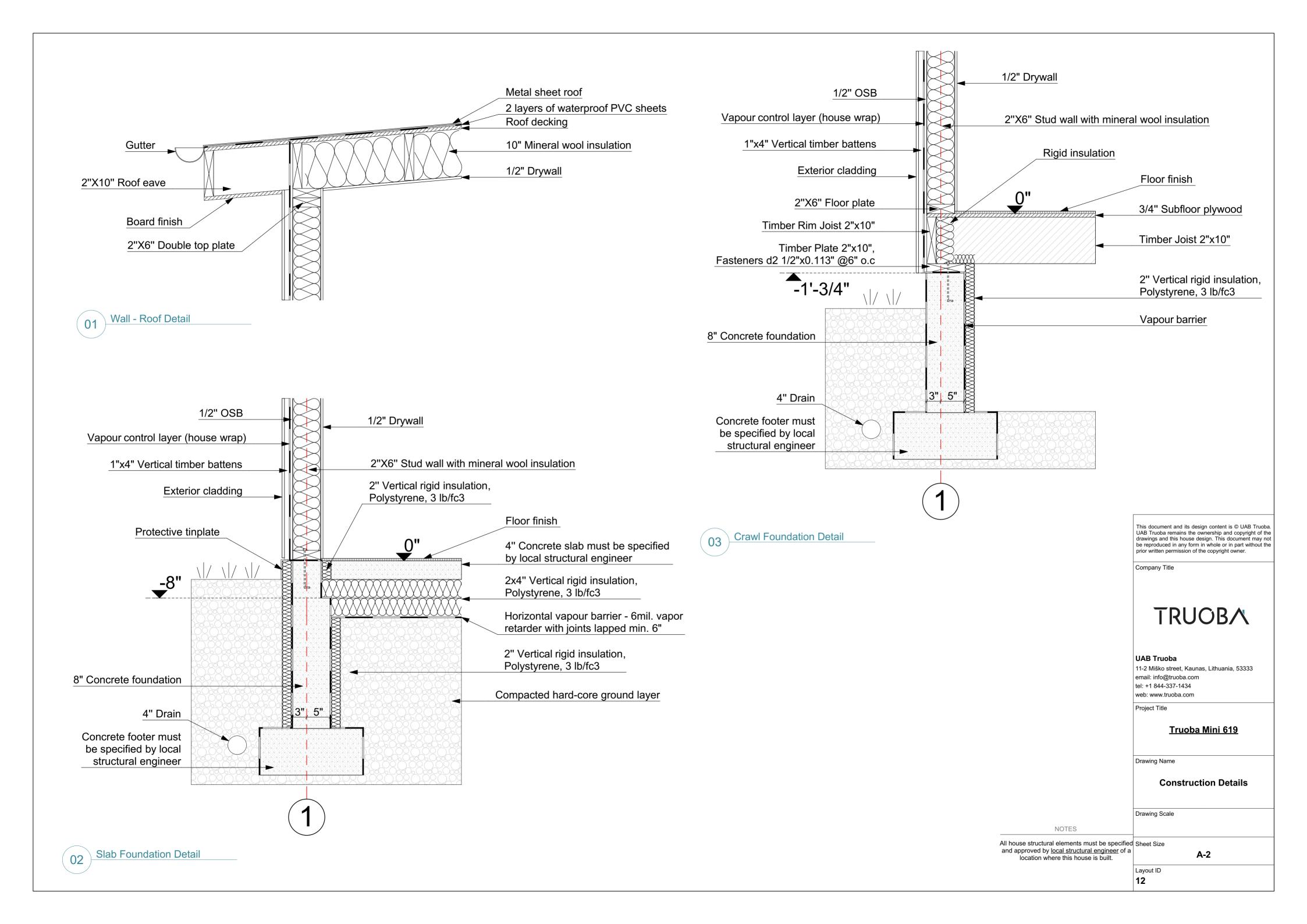
Furniture Plan

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A-2

Layout ID **11**



Plumbing Specifications

PLUMBING SPECIFICATIONS

THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND THE WORK INCOLORS WOOLS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BEVERAGE DISPENSING EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO

INSPECTION. HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION. WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL

COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE. AT THE OWNER'S OPTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

PIPING SYSTEMS - GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLAR TROURED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLAR TO OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONFIDENCE AND ADDITIONATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION

PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

FIXTURES/EQUIPMENT FURNISHED BY OTHERS: PLUMBING CONTRACTOR SHALL PROVIDE UTILITY CONNECTIONS REQUIRED SUCH AS WATER, GAS, AIR, SUPPLIES, WASTE OUTLET, TRAPS, ETC. AT ALL PLUMBING TYPE FIXTURES OR EQUIPMENT WAS TEODIET, TRAFS, ETC. AT ALL PLONDING THE FIATORES ON EQUIPMENT FURNISHED BY OWNER, GENERAL CONTRACTOR, FOOD SERVICE CONTRACTOR, EQUIPMENT SUPPLIER, ETC. INCLUDED ARE STOP VALVES, ESCUTCHEONS, AND CHROME PLATED BRASS TUBING WITH COMPRESSION FITTINGS.

SEWER AND WASTE PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON SHITLE SHALL AND DRAINAGE PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS, SANITARY DRAINAGE PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS MAY BE USED (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES). ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED. 1/4" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.

VENTS: PROVIDE A COMPLETE SYSTEM OF STANDARD WEIGHT CAST IRON NO-HUB VENT RISERS WHERE THE CEILING SPACE IS USED AS A RETURN AIR PLENUM OR USE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES) WHERE THERE IS A DUCTED RETURN AIR SYSTEM. DO NOT USE PVC PIPE IN RETURN AIR PLENUM SPACES. THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.

CONDENSATE AND INDIRECT DRAIN PIPING-PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV(SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS.

CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND ALT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2° MIN. CPVC PIPE WITH SOLVENT FITTING. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS).

PIPE INSULATION: INSULATE (AS ALLOWED BY CODE) ALL LISTED SERVICE PIPING AS FOLLOWS. DOMESTIC COLD/HOT WATER, HOT WATER RETURN, STORM WATER PIPING. PROVIDE 1" PREFORMED FIBERGLASS, ASJ/SS-11, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. FOR CONDENSATE PIPING PROVIDE 1/2" THICK INSULATION OF SAME CHARACTERISTICS AS LISTED FOR 1" ABOVE. WHERE PERMITTED BY LOCAL CODES, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PRE-FORMED PVC FITTING COVERS - EQUAL TO SELF-ADHESIVE ARMSTRONG 2000 WITH K FACTOR OF 0.27 AT 75 DEGREES MEAN TEMPERATURE. INSULATE ANY EXPOSED CONDENSATE PIPING WITH WASTE

TEMPERATURE BELOW 60 DEGREES F. SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT, VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING 400 LB W.O.G. SOLDER END

ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

PIPING SYSTEM- PVC SCHEDULE 40, SCHEDULE 80 AND CPVC PIPE WITH SOLVENT FITTINGS SHALL BE USED WHERE PEMITTED BY CODE/LOCAL AUTHORITIES.

INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT, AND OMIT ESCUTCHEONS.

REPARE RISISTING PLUMBING SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITIONS. TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE, FOR FOUR (HOURS MINIMUM, WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOFING WARRAN

GENERAL NOTES

THE INTENT OF THESE PLANS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND SERVICES NECESSARY TO FURNISH, INSTALL, TEST, AND ADJUST A COMPLETE WORKABLE PLUMBING INSTALLATION AS SHOWN, PRESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS, BUT NECESSARY FOR THE PROPER

- 2. THE ENTIRE INSTALLATION SHALL CONFORM TO THE APPLICABLE CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION. IN THE EVENT OF CONFLICT BETWEEN SPECIFICATIONS, CODES, AND REGULATIONS, THE MORE RESTRICTIVE SHALL APPLY.
- 3. COORDINATE ENTIRE INSTALLATION OF THE PLUMBING SYSTEM WITH THE WORK OF OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. REPORT ANY DISCREPANCIES, IN WRITING, TO THE ENGINEER PRIOR TO COMMENCEMENT
- 4. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT IN ACCORDANCE WITH THE SPECIFICATIONS.
- 5 PROVIDE ONE YEAR WARRANTY ON ALL PARTS AND LABOR 6. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW SCOPE.

OF WORK.

EXECUTION AND COMPLETION OF THE INTENT THEREOF.

- CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF ALL DUCT, PIPE, CONDUIT, ETC.
- 7. ALL CUTTING AND PATCHING OF THE EXISTING STRUCTURE SHALL BE PROVIDED UNDER OTHER SECTIONS OF THE WORK. PROVIDE NECESSARY REQUIREMENTS TO THE PROJECT SUPERINTENDEN
- 8. ALL HOT WATER PIPING AND RECIRCULATION PIPING (EXCEPT RUNOUTS 12 FT OR SHORTER TO INDIVIDUAL FIXTURES) SHALL BE INSULATED TO MEET THE REQUIREMENTS OF THE APPLICABLE CODE.
- 9. CONDENSATE DRAINS SHALL BE PROVIDED FOR EACH AIR CONDITIONING UNIT. HORIZONTAL CONDENSATE DRAINS ABOVE ANY CEILING SHALL BE INSULATED WITH MIN. 3/8" THICK CLOSED CELL INSULATION.
- A. WASTE, VENT, AND STORM DRAIN PIPING SHALL BE CO-EXTRUDED PVC SCHEDULE 40) PIP
- B. WATER PIPE SHALL BE CPVC PIPE C. CONDENSATE PIPING SHALL BE CO-EXTRUDED PVC (SCHEDULE 40) PIPE D. INSIDE GAS PIPING SHALL BE BLACK IRON SCHEDULE 40 WITH MALLEABLE IRON FITTINGS. OUTSIDE SHALL BE GALVANIZED IRON SCHEDULE 40 WITH
- GALVANIZED FITTINGS. GAS LINE TO BE PAINTED GRAY IN COLOR. A 24 HOUR METERED GAS TEST SHALL BE REQUIRED. E. ALL PIPING NOT ENCLOSED IN CONDITION SPACE OR AT EXTERIOR WALLS SHALL BE INSULATED.
- F. PIPING: PVC SCHEDULE 40. SCHEDULE 80 AND CPVC PIPING WITH SOLVENT
- WELD FITTINGS SHALL BE USED WHERE PERMITTED BY CODE/LOCAL AUTHORITIES
- 11. ALL VENTS OR EXHAUSTS SHALL BE AT LEAST 10 FT. AWAY OR 3 FT. ABOVE ANY WINDOW, DOOR, OPENING, OR AIR INTAKE
- 12. CLEANOUTS SHALL BE INSTALLED PER THE APPLICABLE CODE.
- 13. PROVIDE WATER TIGHT FLASHINGS WHEREVER PIPES PASS THROUGH EXTERIOR WALLS, ROOFS, OR FLOORS,
- 14. PROVIDE ISOLATION FOR ALL PIPES THAT COME IN CONTACT WITH THE STRUCTURE
- 15. LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION ARE LOCATION OF EXISTING UTILITIES AND POINTS OF COMPECTION ARE APPROXIMATEL. CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTHS OF EXISTING UTILITIES AND SERVICES PRIOR TO STARTING WORK OF THIS SECTION. IF INDICATED POINTS OF CONNECTION CANNOT BE MADE TO EXISTING UTILITIES AS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED
- 16. VALVES SHALL BE NIBCO, JENKINS, HAMMOND, RED & WHITE OR APPROVED EQUAL. SERVICE PRESSURE SHALL BE SUITABLE FOR SERVICE INTENDED. THE MAIN WATER SHUT OF VALVE SHALL BE A FULL PORT BALL TYPE AND APPROVED FOR SERVICE INTENDED.
- 17. CONTRACTOR SHALL PROVIDE ALL SHUT OFF VALVESAS NECESSARY TO ISOLATE ANY EQUIPMENT, PLUMBING ITEMS, OR FIXTURES, THAT MAY NEED SERVICING OR ARE SUBJECT TO FAILURE WHETHER OR NOT SUCH VALVES ARE SHOWN ON THE DRAWINGS.
- 18. PROVIDE HANGERS AND SUPPORTS AS REQUIRED. PLUMBERS TAPE AND WIRE ARE NOT ACCEPTABLE.
- 19. CONTRACTOR IS RESPONSIBLE FOR HIS OWN TRENCHING, BACKFILL, AND COMPACTION OF TRENCHES NECESSARY TO COMPLETE HIS SCOPE OF WORK. BACKFILLED TRENCHES SHALL BE RETURNED TO THEIR ORIGINAL GRADE UNLESS NOTED OTHERWISE.
- 20. CONTRACTOR SHALL AFFIX A MAINTENANCE LABEL TO ALL EQUIPMENT REQUIRING ROUTINE MAINTENANCE AND SHALL PROVIDE MAINTENAN OPERATIONAL MANUALS IN ACCORDANCE WITH THE SPECIFICATIONS. NANCE AND
- 21. ALL EQUIPMENT THAT REQUIRES KEYS OR SPECIAL TOOLS TO OPERATE SHALL SUPPLY THE OWNER WITH TWO OF ANY SUCH KEYS OR TOOLS FOR EACH PIECE OF EQUIPMENT THAT REQUIRE THE SAME.
- 25. ANY CHANGE OR DEVIATION FROM THESE PLANS OR SPECIFICATIONS SHALL REQUIRE THE APPROVAL, IN WRITING, OF THE ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK.
- 26 ALL PLUMBING, ELECTRICAL, AND GAS LINES SHALL BE CONCEALED WITHIN THE THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE. ALL LIVES NOT CONCEALED SHALL BE SECURED 6" OFF THE FLOOR AND 3/4" FROM THE WALLS USING STANDOFF BRACKETS
- 27. AN APPROVED BACKFLOW PREVENTOR SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND SOURCE OF COMTAMINATION.
- 28. WATER SUPPLY CARBONATORS SHALL BE PROTECTED BY AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR. THE F IN-DIRECTLY TO A FLOOR SINK WITH A 1" MIN. AIR GAP. RELIEF VALVE SHALL DRA

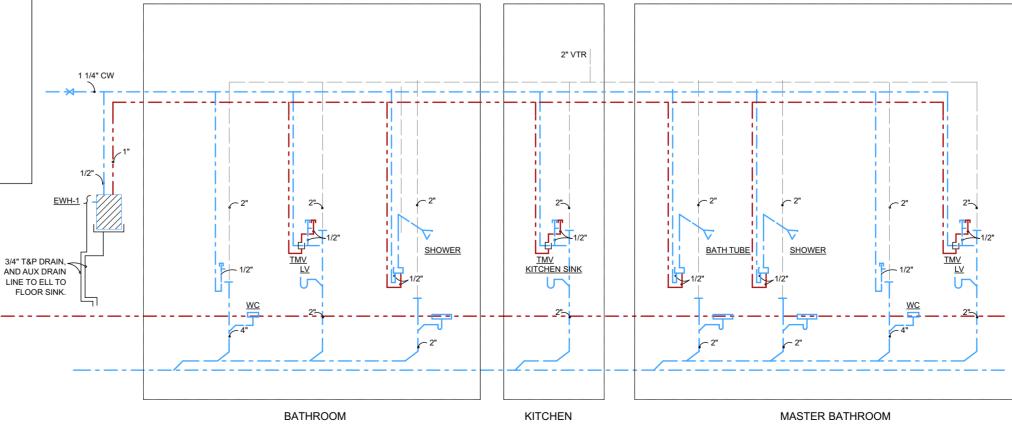
SERVICE		COPPER	COPPER	COPPER	CAST	BLACK	GALV.	VTRI.	ABS	SCH.40 PVC	SCH.80 CPVC
SERVICE		TYPE "M"	TYPE "L"	TYPE "K"	IRON	STEEL	STEEL	CLAY			
WATER PIPING	INSIDE										х
	OUTSIDE										x
SANITARY DRAIN	INSIDE									х	
	OUTSIDE									х	
SANITARY VENT	INSIDE									х	
	OUTSIDE									x	
GAS PIPING	INSIDE					Х					
	OUTSIDE						Х				
STORM DRAIN	INSIDE									х	
	OUTSIDE									x	
INDIRECT	INSIDE									х	
DRAINAGE	OUTSIDE									x	
CONDESATE	INSIDE									Х	
	OUTSIDE									X	
COMPRESSED	INSIDE					x					
AIR	OUTSIDE						x				

WATER HEATER SCHEDULE

MARK	MANUFACTURER/MODEL	QUANTITY	AREA SERVED	ELECTRICAL	GALLONS	RECOVERY RATE
EWH-1&2	RHEEM: 82SV50-2	2	KITCHEN/RESTROOM	40AMP 208V,1P	55 GAL	21 GPH

CODES AND STANDARDS

INTERNATIONAL BUILDING CODE INTERNATIONAL ENERGY CONSERVATION CODE INTERNATIONAL EXISTING BUILDING CODE INTERNATIONAL FIRE CODE INTERNATIONAL FUEL AND GAS CODE INTERNATIONAL MECHANICAL CODE INTERNATIONAL PLUMBING CODE INTERNATIONAL PROPERTY MAINTENANCE CODE INTERNATIONAL RESIDENTIAL CODE INTERNATIONAL SWIMMING POOL & SPA CODE NFPA 101 LIFE SAFETY CODE NATIONAL ELECTRICAL CODE



SPECIAL NOTICE TO CONTRACTORS

- 1. ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE LISTED BELOW MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
- 2. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF ALL POINTS OF CONNECTION, LOCATION AND CONDITION OF ALL BUILDING (ROOF/FLOOR/CEILING) PENETRATIONS, LOCATION AND CONDITION OF ALL UTILITIES AND BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, ELECTRICAL, BUILDING MECHANICAL SYSTEMS, DUCT CONNECTIONS, EXHAUST/OUTSIDE AIR CONNECTIONS, SECURITY, FIRE ALARM, DATA, AND PHONE PRIOR TO SUBMISSION OF THEIR BID.
- ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITL CONSTRUCTION

PLUMBING LEGEND

40000

RESPONSIBILITY NOTES

- ROOF OPENINGS FOR PLUMBING AND RELATED WORK SHALL BE THE RESPONSIBILITY OF THE PLUMBING SUBCONTRACTOR. HE SHALL EMPLOY THE OWNER'S ROOFER FOR THIS WORK TO AINTAIN THE ROOF BOND.
- EXISTING SANITARY SEWER AND EXISTING DOMESTIC WATER CONNECTIONS REFER TO SHEET P3.0 FOR LOCATIONS. CONTRACTOR TO FIELD VERIFY LOCATIONS AND TIE-ENDS
- UNDER FLOOR PLUMBING ROUGH-IN FOR REST ROOMS SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR AND SLAB DEPRESSIONS.
- THE SPRINKLER CONTRACTOR SHALL SURVEY THE EXISTING SPRINKER SYSTEM, ANY REQUIRED MODIFICATIONS SHALL BE BROUGHT UP TO CODE.
- IF DRAWINGS CALL FOR THE REUSE OF EXISTING EQUIPMENT, THE OWNER'S GENERAL CONTRACTOR SHALL VERIFY THAT ALL SUCH EQUIPMENT IS IN PROPER WORKING ORDER, OR TAKE THE ECESSARY STEPS TO ACCOMPLISH SUCH. IF REPLACEMENT IS REQUIRED, USE THE EQUIPMENT AND HARDWARE AS SPECIFIED ON THESE SCHEDULES OR AS CALLED OUT IN THE SPECIFICATIONS ON THIS SHEET. ALL SUCH ITEMS MUST MEET ALL GOVERNING CODES AND STANDARDS OF PRACTICE.

2015 EDITION
2015 EDITION
2017 EDITION

	SYMBOL	ABBREV	DESCRIPTION
		SS or W	NEW SEWER OR WASTE
		W (E)	EXIST. SEWER OR WASTE
		V	NEW VENT
		V (E)	EXIST. VENT
		CW	NEW COLD WATER
		CW (E)	EXISTING COLD WATER
		нw	NEW HOT WATER
		HW (E)	EXIST. HOT WATER
		G	NEW GAS
		G (E)	EXISTING GAS
		CD	NEW CONDENSATE DRAIN
		CD (E)	EXIST. CONDENSATE DRAIN
	CA	CA	COMPRESSED AIR
_	φ	FCO	FLOOR CLEANOUT
	Ю	wco	WALL CLEANOUT
	O	FD	FLOOR DRAIN
	— ——	FS	FLOOR SINK
	<u> </u>	TP	TRAP PRIMER & TRAP PRIMER PIPING
	·	SOV	SHUT-OFF VALVE
	N	CV	CHECK VALVE
		PRV	BACKFLOW PREVENTER W SOV'S
		T&P	
	0	DN	PIPE DOWN
	0	UP	PIPE UP
	•	POC	POINT OF CONNECTION
	7	-	PLUMBING NOTE CALL-OUT
		ABV	ABOVE
		AFF	ABOVE FINISH FLOOR
		AP	ACCESS PANEL
		BEL	BELOW
		BLDG	BUILDING
		CLG	CEILING
		CONT	CONTINUATION
		EL	ELEVATION
		FIN	FINISH
		FL	FLOOR
		GR	GRADE
		NTS	NOT TO SCALE
		OC	ON CENTER
		S= %	SLOPE AT A PERCENTAGE
		SHT	SHEET
		TYP	TYPICAL

VTR

VENT THRU ROOF



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Company Title



UAB Truoba

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Project Title

<u>Truoba Mini 619</u>

Drawing Name

Plumbing Specifications

Drawing Scale

Sheet Size

A-2

Layout ID 13

Electrical Specifications

GENERAL NOTES: ELECTRICAL (CONTINUED)

AND/OR DATA SERVICE ENTRANCE.

DIAGRAM FOR ADDITIONAL DETAILS

FIXTURE RECOMMENDATIONS, LAMPS, ETC.

VERIEVALL RECEPTACI E MOUNTING HEIGHTS WITH OWNER

PROTECTION NOT INDICATED ON PLANS. (NEC 210.8)

TOP OF

CONTROL DEVICE

FLOOR

REGULAR MOUNTING HEIGHT

<u>NOTE</u>

INTERNATIONAL BUILDING CODE

INTERNATIONAL FIRE CODE

NFPA 101 LIFE SAFETY CODE

NATIONAL ELECTRICAL CODE

CODES AND STANDARDS

INTERNATIONAL EXISTING BUILDING CODI

INTERNATIONAL FUEL AND GAS CODE

INTERNATIONAL MECHANICAL CODE

INTERNATIONAL RESIDENTIAL CODE

PRIOR TO CONSTRUCTION.

NO SCALE

15" MIN

(FRONT

9" MIN

(SIDE

APPROACH)

APPROACH

ENTIRE INSTALLATION TO COMPLY WITH THE NEC 2017 (NFPA 70), THE CITY BUILDING CODES 2012, NFPA STANDARDS AS APPLICABLE, IN ADDITION TO SPECIFICATIONS AS OUTLINED BELOW

GENERAL

SCOPE:

2.

CODES:

PERMITS:

DRAWINGS:

MATERIAL:

FIXTURES:

PANELS:

DEVICES:

SPECIFICATIONS. (SEE MECHANICAL

BE WHITE (UNLESS

BRANCH CIRCUIT WIRING:

TYPICAL NOTES

RE-INSPECTIONS.

ALL ELECTRICAL WORK FOR THE ENTIRE PROJECT SHALL BE PERFORMED IN A NEATAND CRAFTSMANLIKE MANNER BY PERSONS SWILLED IN THE TRADE, AND SHALL BE DONE UNDER THE SUPERVISION OF A MASTER ELECTRICIAN LICENSED TO DO WORK IN THE AREA WHERE THE PROJECT IS TO BE CONSTRUCTED. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST COPY OF THE VANTOWAL ELECTRIC CODE PRESENTLY ENFORCED.

THE PROJECT INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE A COMPLETE ELECTRICAL INSTALLATION INCLUDING, BUT NOT LIMITED TO, POWER SERVICES (TEMPORARY, NORMAL, AND STANDARY OR EMERGENCY), SWITCHORARDS, AUTOMATIC TRANSERS RWITC ENTRANCES, DISCOMMENTS, DISTRIBUTION PANELS, CONDUIT, WRING, JUNCTION AND OUTLET BOXES, WIRING DEVICES AND COVER PLATES, LICHTING FORTURES, CONNECTION CHORDS, SPECIAL COMPLETIONS AND OUTLETS, ALL AS ILLUSTRATED ON THE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES, UTLITY COMPANES, AND GOVERING AUTHORITIES.

THE ELECTRICAL CONTRACTOR TO FURNISH A MINIMUM 100 AMP SINGLE PHASE TEMPORARY SERVICE. POWER COMPANY FEES AND MONTHLY ELECTRIC BILL TO BE PAID BY THIS CONTRACTOR.

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAYING ALL FEES ASSOCIATED THEREWITH. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INSPECTIONS, INCLUDING ALL FEES ASSOCIATED WITH

THE DRAWINGS ARE DIAGRAMMATIC, AND DO NOT SHOW ALL CHANGES IN HEIGHT, STRUCTURAL MEMBERS, DUCTWORK, PIPING, BRACKETS AND ANY OTHER NUMBER OF ITEMS WHICH MIGHT CAUSE A CONFLICT. THIS CONTRACTOR IS RESPONSIBLE FOR COORDIMATING WITH OTHER TRADES AS TO THE LOCATION OF HIS DEVICES AND NECESSARY AREAS FOR PANELS AND CONDUITWING RUNS, VERYTY AND COORDINATE ALL ELECTRICAL WORK WITH ALL TRADES TO PROVIDE A TIMELY INSTALLATION ADDITIONAL CHARGES DUE TO LACK OF COORDINATION WILL NOT BE APPROVED.

ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE LISTED BY AND BEAR THE U.L. LABEL WHERE SUBJECT TO APPROVAL. MATERIALS SHALL BE OF THE SAME MANUFACTURER OR BRAND FOR EACH TYPE OF MATERIAL, UNLESS DESIGNATED OTHERWISE.

ALL PANELS TO BE FURNISHED AS PER PANEL SCHEDULE. SQUARE D, CUTLER HAMMER AND ITE ARE ACCEPTABLE MANUFACTURERS.

ALL SWITCHBOARD AND OVERCURRENT DEVICES SHALL BE SERIES-RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT; VERIFY WITH LOCAL UTILITY COMPANY. SEE PANEL SCHEDULE.

EXTERIOR DISCONNECT SWITCHES SHALL BE NEMA 3R ENCLOSURES AND ELECTRICALLY PROTECTED AS PER MANUFACTURER'S

INTERIOR DISCONNECT SWITCHES SHALL BE NEMA 1 ENCLOSURES AND ELECTRICALLY PROTECTED AS PER MANUFACTURER'S SPECIFICATAIONS. (SEE MECHANICAL).

OTHERWISE) WITH MATCHING COVERPLATE: MOUNTING HEIGHT SHALL BE +48* AFF TO BOTTON

3. SWITCHES SHALL BE 20 AMP, SPECIFICATION GRADE TOGGLE SWITCHES, SIDE WIRED WITH GROUNDING TERMINAL; COLOR SHALL

4. RECEPTACLES SHALL BE 15 AMP (MINIMUM), SPECIFICATION GRADE, SIDE WIRED WITH GROUNDING TERMINAL; COLOR SHALL BE

5. ALL RECEPTACLES INSTALLED IN KITCHENS, OR WITHIN 6 FEET (6') OF A WATER SUPPLY (i.e.: SINK), SHALL BE GROUND FAULT

6. ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN BATHROOMS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

1. EQUIPMENT FURNISHED AND PHYSICALLY INSTALLED BY "OTHERS". ALL ELECTRICAL CONNECTIONS EXTERNAL TO THE EQUIPMENT SHALL BE MADE BY THE ELECTRICAL CONTRACTOR. WIRE, CONDUIT, LUGS, RECEPTACLES, PIGTAILS, DISCONNECTS, ETC. AS MAY BE REQUIRED SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. NOTE: INCLUDE WORSE CONDITION IN PRICING. "VERIFY ROUGHIN LOCATIONS, TYPE OF CONNECTION AND AMPACITY REQUIRED FROM APPLICABLE EQUIPMENT DRAWINGS PRIOR TO INSTALLING ANY CONDUIT, CONDUCTORS OR BOXES.

WALL TELEPHONE/DATA OUTLET. INSTALL 2-GANG BOX WITH MODULAR TELEPHONE DEVICE IN COVER PLATE. INSTALL (2) 34* EMT CONDUITS TO ACCESSIBLE CEILING SPACE OR HOMERUN TO TELEPHONE/COMPUTER TERMINAL EQUIPMENT. HEIGHT,

RESIDENTIAL TYPE, 120 VOLT AC/DC, SINGLE STATION SMOKE DETECTOR, PHOTOCELL TYPE, LOCATE PER N.F.P.A. #74. MULTIPLE DETECTORS IN SAME UNIT TO HAVE SIGNAL DEVICES INTERCONNECTED.

PROVIDE LIGHT FIXTURE AND RECEPTACLE AT LOCATIONS INDICATED FOR HVAC MAINTENANCE LIGHTING. USE COMBINATION SWITCH AND RECEPTACLE FOR LIGHT CONTROL. FIELD DETERMINES EXACT LOCATION AND HEIGHT.

6. SWITCHED JUNCTION BOX IN CEILING FOR CEILING FAN OR LIGHT. NOTE: BOX MUST BE IDENTIFIED FOR FAN SUPPORT USE

7. IF THE CEILING SPACE OR HVAC CLOSETS IN THIS PROJECT WILL BE USED AS A RETURN AIR PLENUM THEN ALL MATERIALS

PLENUM SPACE SHALL COMPLY WITH THE CITY BUILDING CODE, 6TH EDITION (2017) THE CITY MECHANICAL CODE

ANCHOR TO STRUCTURE TO SUPPORT 75 LBS. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL FAN ANDIOR LIGHT, AND ALL WIRING, INCLUDING SWITCH AND POWER LEGS. VERIFY AND COORDINATE FAN TYPE WITH OWNER.

THE CELING SPACE OR HVAC CLOSETS IN THIS PROJECT WILL BE USED AS A RETURN AIR PLENUM THEN ALL MATERIALS. AND COMPONENTS LOCATED ADRIVE CELING SPACE OR CLOSET WITHIN RETURN AIR PLENUM SHALL BE APPROVED FOR PLENUM USE (OR) SHALL BE WRAPPED WITH A UL LISTED AND APPROVED PLENUM WRAP AND INSTALLED PER MANUFACTUR INSTRUCTIONS. MATERIALS AND WRAPS SHALL MEET THE FLAME SPREAD INDEX OF NOT MORE THEN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TSTED IN ACCORDANCE WITH ASTIN & AND (MISSING SHALL APPLY TO ALL ITEMS LOCATED WITHIN THE RETURN MIR PLENUM SPACE WHETHER THEY ARE NEW OR EXISTING. ENTIRE OF ENUM OPED CONTON MORE THAN 50 WHEN THE DIA OR OF OR THE THE THE ARD A WOR OR EXISTING. ENTIRE OF ENUM OPED CONTON MORE THAN 50 WHEN THE DIA OR OF OR THE THE THE ADA OR UNCLOSED.

(SECTION 602 IN ITS ENTIRETY), THE CITY PLUMBING CODE, AND THE NATIONAL ELECTRIC CODE 2014 IN ADDITION TO AN

APPLICABLE NFPA STANDARDS OR LOCALLY ADOPTED CODES, AMENDMENTS OR ORDINANCES. THIS NOTE SHALL SUPERCEDE ALL OTHER NOTES LOCATED ON THESE DRAWINGS OR OTHER DRAWINGS INCLUDED FOR THIS PERMIT.

CIRCUIT INTERRUPTER (G.F.C.I.) DEVICES WITH DOWNSTREAM DEVICES IDENTIFIED

ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE SPECIFIED ON PLANS.

MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG THWN COPPER

UNLESS NOTED, IS 18" ABOVE FINISH FLOOR.

WHITE (UNLESS NOTED OTHERWISE) WITH MATCHING COVERPLATE; MOUNTING HEIGHT NOTED IN SYMBOL LEGEND OR ON

1. ALL FIXTURES SHALL BE AS LISTED IN THE LIGHTING FIXTURE SCHEDULES/ RECOMMENDATIONS.

2. LIGHTING FIXTURES ARE TO BE FURNISHED, INSTALLED, AND LAMPED UNDER THIS CONTRACT.

ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH ANSI, NFPA70, CITY LAWS, AND ALL LOCAL RULES AND REGULATIONS, INCLUDING THE 2017 NATIONAL ELECTRIC CODE AND THE CITY ENERGY CODE 2015.

GENERAL:

- ROUGH IN LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, AS WELL AS EQUIPMENT SIZE TO AVOID COME JCT WITH OTHER TRADES

- 2. PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL RELOCATE. AS DIRECTED BY THE OWNER/ARCHITECT, ANY PIECE OF

INSTALLATION:

NOTE: MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL BE SIX FEET (6').

SPECIFICALLY PERMITTED.

EXCEPTION:

DOCUMENTS.

EQUIPMENT:

GROUNDING:

MINIMUM #6 AWG-CI

ELEVATOR ROOMS (AS APPLICABLE)

SITE VERIFICATION NOTES

GENERAL NOTES; ELECTRICAL

WARRANTY: NOTE

EXCEPTION NO. 1:

- QUIPMENT IN THE VERTICAL AND/OR HORIZONTAL DIRECTION UP TO 15:0" FROM THE LOCATION SHOWN ON THE DRAWINGS
- AT NO ADDITIONAL COSTS TO THE OWNER.

3. EXTERIOR EQUIPMENT: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA

NOTE: MAXIMUM LENGTH OF FLEXIBLE CONDUIT BETWEEN MEANS OF DISCONNECT (OR JUNCTION BOX) AND EQUIPMENT SHALL BE

4. INTERIOR: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN

IOTE: EMT SHALL NOT BE INSTALLED IN LOCATIONS (1) SUBJECT TO SEVERERE DAMAGE, (2) IN CONTACT WITH EARTH, (3) IN CONCRETE SLABS ON GRADE, (4) OTHER LOCATIONS AS LISTED IN N.E.C. 2014, ARTICLE 358.12.

EXCEPTION NO. 2: DWELLING UNITS SHALL NOT BE REQUIRED TO MEET #16320.5

7. THRU-FEEDS: MAINTAIN THRU-FEEDS ON ALL ELECTRICAL DEVICES AT C 0

- WIRING METHODS
- ALL PVC COMPONENTS (PIPING, FITTINGS, CEMENT, ETC.) SHALL BE FROM THE SAME MANUFACTURER.
- EXTERIOR ABOVE GRADE: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA

REQUIREMENTS, IN APPROVED METALLIC ON NONMETALLIC CONDUIT. ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER.

REQUIREMENTS, IN APPROVED LIQUIDTIGHT FLEXIBLE METALLIC OR NONMETALLIC CONDUIT (MINIMUM 34*). ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER.

APPROVED METALLIC (EMT) CONDUIT. ALL COMPONENTS (PIPING, FITTINGS, ETC.) SHALL BE FROM THE SAME MANUFACTURER. CONDUITS SHALL BE CONCEALED IN OR BEHIND CEILINGS, WALLS, OR FLOORS, EXCEPT WHERE EXPOSED RACEWAYS ARE

ELECTRICAL SYSTEM EXPANSION: ANY PANELBOARD MOUNTED SO THAT ITS FRONT FACE IS FLUSH WITH THE FINISHED WALL

6 ELECTRICAL BOXES: ALL OUTLET DEVICE AND JUNCTION BOXES SHALL BE STANDARD 4* SQUARE GALVANIZED STEEL OR

2. THIS CONTRACT TO INCLUDE CONNECTION OF LINE VOLTAGE ONLY. CONTROL WIRING TO BE BY THE HVAC CONTRACTOR.

SHALL HAVE ONE (1) 3/4" EMT CONDUIT INSTALLED FROM PANELBOARD TO ACCESSABLE CEILING SPACE FOR EVERY FOUR (4) OR MAJOR FRACTION THEREOF, POLES INDICATED AS "SPACE" OR "SPARE" IN THE PANELBOARD SCHEDULE PER THESE

EXECUTION REGISTER OF THE DUCET OF THE AND JUNCTION BUSIES OF ADDRESS OF ADDR

WIRE TO, AND MAKE CONNECTIONS TO, ALL PIECES OF EQUIPMENT FURNISHED BY OTHERS FOR COMPLETE AND SATISFACTORY OPERATION BY OTHERS.

THE ENTIRE ELECTRICAL GROUNDING SYSTEM SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF SECTION 250.86 AND 250.122 OF THE INATIONAL ELECTRIC CODE, INCLUDING BUT NOT LIMITED TO, THE ELECTRICAL SERVICE, ITS EQUIPMENT AND ENCLOSURE, CONDUITS AND OTHER CONDUCTIVE ENCLOSURES, NEUTRAL OR IDENTIFIED CONDUCTOR OF INTERIOR WIRING SYSTEM, MINN PAREIBORD, POWER AND LIGHTING PAREIBOARDS, NOCUCIRENT-CARRYING INTEL PARTS OF FIXED EQUIPMENT SUCH AS MOTORS, STARTER AND CONTROLLER CABINETS, INSTRUMENT CASES AND LIGHTING FIXTURES.

PROVIDE A SERVICE GROUND ACCORDING TO N.E.C. ARTICLE 250. THE MINIMUM INSTALLATION TO INLCLUDE: BUILDING FOOTERFOUNDATION RENFORCING STEEL TURNED UP OR OTHERWISE EXPOSED AT THE SERVICE LOCATION WITH APPROVED CONNECTOR TO BOND A GROUNDING CONDUCTOR SIZED PER TABLE 250 TO THE STEEL AND A DRIVEN ROD GROUND (MINIMUM SIVE BY & DEEDEN WITH & COPPER GROUNDING CONDUCTOR. IF AVAILABLE ON THE PREVISES, ALSO BOND METAL COLD WATER PIPING, METAL BUILDING FRAME AND GROUND RING WITH JUMPERS SIZED FROM 250-94.

3. ALL TELEPHONE, DATA, TELEVISION, AND OTHER TERMINAL EQUIPMENT SHALL BE BONDED TO THE GROUNDING ELECTRODE WITH

ELECTRICAL CONTRACTOR TO PROVIDE FULL WARRANTY (PARTS AND LABOR) ON ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THE SCOPE OF WORK FOR A PERIOD OF ONE YEAR FROM THE CERTIFICATE OF OCCUPANCY.

E.C. SHALL PROVIDE OWNER AND ENGINEER WITH REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING ALL REQUIRED MODIFICATIONS THAT HAVE OCCURRED IN THE FIELD.

ALL ELEVATOR MACHINE ROOMS SHALL BE PROVIDED WITH A FUSED DISCONNECT FOR ALL EQUIPMENT INCLUDING EQUIPMENT ROOM AIR CONDITIONING SYSTEMS, LIGHTING, RECEPTACLES, ETC. (REGARDLESS OF PLAN SYMBOL) IN ACCORDANCE WITH ASME

LEVEL OR AS DIRECTED BY ELEVATOR INSTALLER. PROVIDE A METAL END USE COVER. EXTEND CIRCUIT TO LUMINARIE IN PIT

ALL ITEMS ON THESE DRAWINGS MARKED AS "EXISTING" OR "EXIST" SHALL BE VERIFIES IN FIELD ANY DIFFERENCES BETWEEN ITEMS OR EQUIPMENT INDICATED AS EXISTING SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR ARCHITECT.

PRIOR TO CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL VERIFY THAT THE PHASE TO PHASE VOLTAGE AVAILABLE IS EQUAL TO EACH OTHER, AND EQUAL TO VOLTAGE SHOWN ON THESE DRAWINGS. A DIFFERENCE IN PHASE TO PHASE VOLTAGE MAY INDICATE THE PRESENCE OF A "HIGH LEG" DELTA SYSTEM. ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR REQUIRED DRAWING

SPLIT PHASE CIRCUIT BREAKERS ARE NOT PERMITTED TO BE INSTALLED ON HIGH LEG DELTA SYSTEMS. HIGH LEG DELTA SYSTEMS SHALL BE LABELED PER 408.3 AND THE HIGH LEG CONDUCTOR TO BE MARKED PER 110.15.

THE ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL ELECTRICAL SERVICE ROUGH-IN AND INSTALLATION DETAILS, FEES, WITH THE LOCAL POWER COMPANYIUTITY FIELD ENGINEER PRIOR TO AND INCLUDE IN BID!

THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE IN ORDER TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, FAILURE TO DO SO WILL NOT WARRANT ANY ADDITIONAL CHARGES TO THE OWNER.

THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID, ANY CUTTING OR PATCHING OF CONCRETE/ASPHALT PAVEMENTS, ETC. TO RUN ELECTRICAL.

ALL EQUIPMENT, FIXTURES, ETC. SHALL BE STARTED, TESTED, ADJUSTED AND PLACED IN SATISFACTORY OPERATING CONDITION. THIS

CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, MATERIALS AND EQUIPMENT TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY (C.O.), AND SHALL REPAIR ANY SUCH DEFECTS WITHOUT COST TO THE OWNER

I FOUIPMENT SHALL BE COVERED FOR THE DURATION OF THE MANUFACTURER'S GUARANTEE OR WARRANTY. THIS CONTRACTOR

HVAC AIR HANDLER AND CONDENSING UNIT CIRCUIT BREAKERS MUST BE U.L. LISTED AS "HACR" RATED IN ORDER TO USE NON-AUTO DISCONNECTS AT HVAC EQUIPMENT. IF NOT LISTED, THEN A FUSED DISCONNECT IN ACCORDANCE WITH THE EQUIPMENT

THE ELECTRICAL, GENERAL, HVAC, AND PLUMBING CONTRACTOR(S) SHALL STRICTLY ADHERE TO THE FOLLOWING ITEMS WHEN DEALING WITH ELECTRICAL EQUIPMENT CLEARANCES:

A.) NO PIPING OR DUCTWORK OF ANY KIND SHALL BE INSTALLED ABOVE ANY SWITCHBOARD OR PANELBOARD. THIS AREA TO REMAIN CLEAN FROM THE EQUIPMENT TO 25' ABOVE OR TO THE BOTTOM OF THE STRUCTURAL SLAB.

B.) A CLEARANCE OF 36" MINIMUM SHALL BE MAINTAINED IN FRONT OF ELECTRICAL EQUIPMENT FOR THE ENTIRE WIDTH OF THE EQUIPMENT, PLUS A MINIMUM OF 30" TOTAL LEFT/RIGHT CLEARANCE.

THE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH ALL STATE/LOCAL BUILDING CODES/ORDINANCES/REGULATIONS

PRESENTLY IN EFFECT. IN ADDITION, COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) 2014

SHALL FURNISH THE OWNER WITH ALL MANUFACTURER'S GUARANTEE AND WA

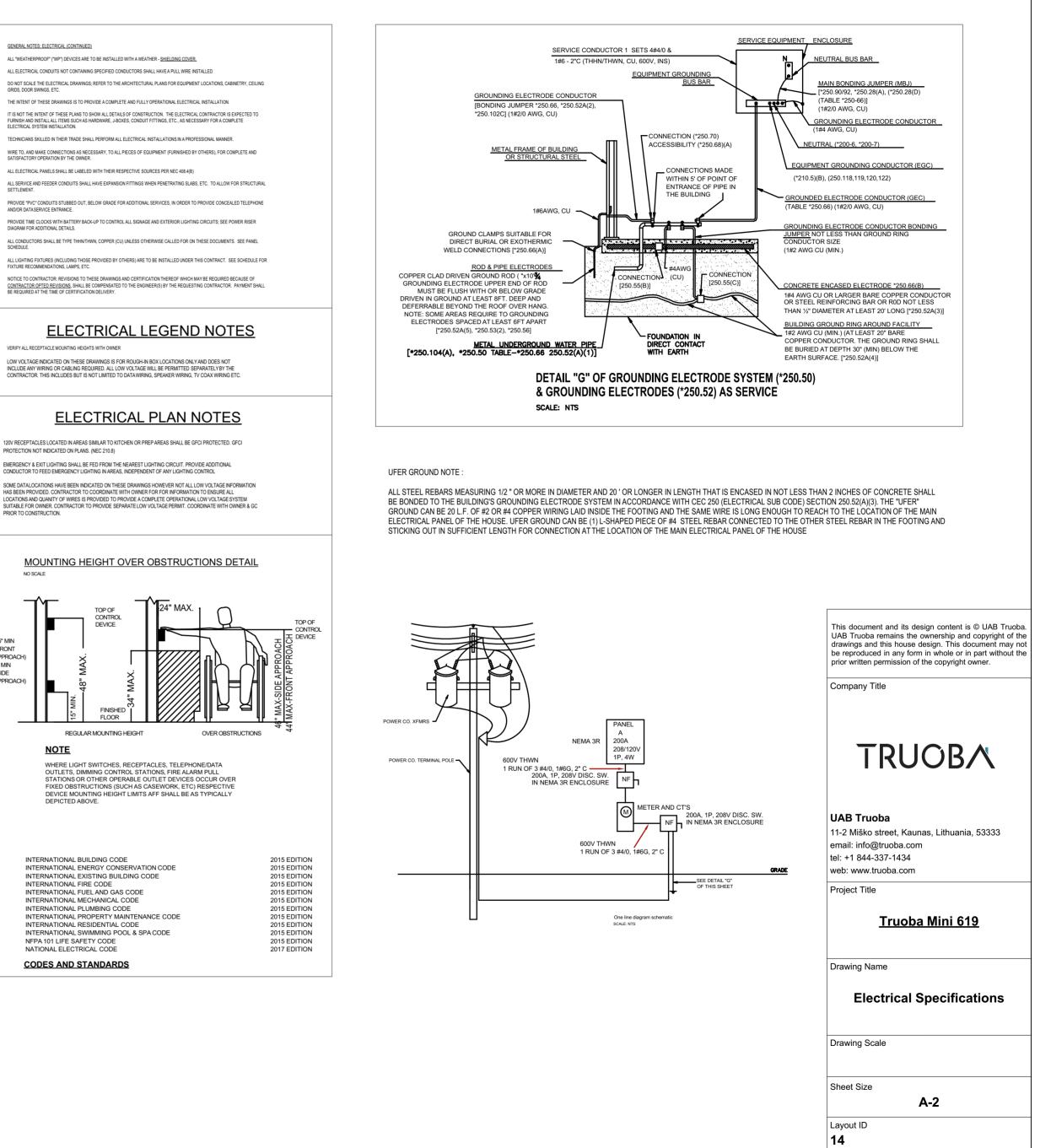
MANUFACTURER'S NAMEPLATE REQUIREMENTS MUST BE INSTALLED AT THE EQUIPMENT.

PROVIDE A GFCI RATED RECEPTACLE IN THE PIT OF THE ELEVATOR NEAR ENTRANCE TO PIT. MOUNT DEVICES 6 IN BELOW FIRST FLOOR

NON-METALLIC SHEATHED CABLE (NM, NMC, NMS) MAY BE USED WITHIN DWELLING UNITS, IN COMPLIANCE WITH N.E.C. 2014, ARTICLE 334.

PANELBOARDS INSTALLED ON A WALL SURFACE, WHERE AT LEAST THREE (3) SIDES, NOT INCLUDING THE FRONT, REMAIN ACCESSABLE AFTER CERTIFICATE OF OCCUPANCY SHALL NOT BE REQUIRED TO MEET #16320.5.

- BELOW GRADE: SINGLE- OR MULTI-CONDUCTOR COPPER WIRE WITH GROUND, MEETING N.E.C. AND NEMA REQUIREMENTS, IN APPROVED NONMETALLIC CONDUIT. CONDUIT MAY BE RUN IN OR BELOW CONCRETE, AND CONCEALED IN WALLS TO FIRST BOXES.



Mechanical Specifications

MECHANICAL SPECIFICATIONS

BASIC MECHANICAL REQUIREMENTS:

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING: A. LATEST EDITION AND AMENDMENTS OF THE APPLICABLE STATE AND LOCAL CODES.
- B. LATEST (OR APPLICABLE) EDITION OF INTERNATIONAL MECHANICAL CODE. C. LATEST (OR APPLICABLE) EDITION OF NFPA CODE 90A.
- 2. FURNISH AND INSTALL ALL LABOR, MATERIAL, AND EQUIPMENT AND SERVICES NECESSARY FOR COMPLETE AND SAFE INSTALLATION OF THE MECHANICAL SYSTEM INDICATED ON THE DRAWINGS AND NOTED IN THE SPECIFICATIONS HEREINAFTER. MECHANICAL DRAWINGS ARE CONSIDERED DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK AND SYSTEMS. REFER TO ARCHITECTURAL DRAWINGS TO VERIFY LOCATION OF DEVICES, EQUIPMENT, ETC. CHECK DRAWINGS OF OTHER TRADES TO VERIFY EXACT SPACE CONDITIONS OF DUCTWORK AND EQUIPMENT. MATERIALS SHALL BE NEW, FREE FROM DEFECTS AND LISTED BY ARI OR UL WHERE APPLICABLE. CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH EXISTING CONDITIONS. CONTRACTOR SHALL VISIT SITE AND EXAMINE EXISTING CONDITIONS PRIOR TO BID.
- SUBMIT SIX (6) COPIES OF SHOP DRAWINGS TO OWNER OR ARCHITECT FOR EACH PIECE OF EQUIPMENT TO INCLUDE RTU'S, ASSOCIATED PIPING, HEATERS, EQUIPMENT, DIFFUSERS, INSULATION, FANS, CONTROLS AND DUCTWORK. OBTAIN APPROVAL BEFORE EQUIPMENT IS ORDERED, BUILT, OR INSTALLED. INSULATION:

1. INSULATE ALL CONCEALED SUPPLY DUCTWORK WITH 2" THICK FIBREGLASS DUCT WRAP WITH VAPOR BARRIER FACING. ALL INSULATION, FASTENERS AND ADHESIVES SHALL MEET NFPA 90A REQUIREMENTS AND UL FLAME SPREAD AND SMOKE DEVELOPED CRITERIA AND SHALL BEAR UL STAMP.

GAS FIRED HEATING AND A/C UNIT:

- 1. INSTALL WHERE INDICATED AND AS SCHEDULED A PACKAGED AIR COOLED SELF CONTAINED ROOF TOP GAS FIRED HEATING AND DIRECT EXPANSION AIR CONDITIONING UNIT MANUFACTURED BY TRANE. UNIT SHALL BE PROVIDED AND INSTALLED BY LANDLORD.
- 2. UNIT CABINET: CONSTRUCT OF OF GALVANIZED STEEL, BONDERIZED AND COATED WITH A BAKED ENAMEL FINISH. CABINET INTERIOR SHALL BE INSULATED WITH ONE-INCH THICK NOEPRENE COATED FIBERGLASS. A CONDENSATE DRAIN FOR THE INDOOR COIL SHALL BE PROVIDED. PROVIDE 2" THICK FIBERGLASS THROW AWAY FILTERS WITH MAXIMUM FACE VELOCITY OF 300 FPM.
- 3. UNIT COMPRESSORS: SHALL BE SERVICEABLE, HERMETICALLY SEALED SUCTION PROVIDE MINIMUM ONE YEAR MANUFACTURERS WARRANTY ON COMPRESSOR(S). INDOOR AND OUTDOOR COILS SHALL BE CONSTRUCTED OF ALUMINUM PLATE FINS MECHANICALLY BONDED TO SEAMLESS COPPER TUBES WITH ALL JOINTS BRAZED. INDOOR FANS SHALL BE BELT DRIVEN AND PROVIDED WITH ADJUSTABLE PITCH MOTOR PULLY. OUTDOOR FANS SHALL BE DIRECT DRIVEN PROPELLOR TYPE WITH PERMANENTLY LUBRICATED MOTOR.
- 4. UNIT CONTROLS: PROVIDE PROGRAMMABLE THERMOSTAT WITH REMOTE SPACE SENSOR TO MAINTAIN HEATING AND COOLING SET POINTS. CONTROL UNIT FAN TO RUN CONTINUOUSLY OR ON AUTO-CYCLE. CYCLE BURNER AND COMPRESSORS IN SEQUENCE MAINTAIN SETPOINT. PROVIDE ECONOMIZER CONTROL TO INCLUDE RETURN AIR AND OUTSIDE AIR DAMPERS AND FULLY MODULATING ELECTRIC CONTROL SYSTEM WITH ENTHALPY CHANGE OVER CONTROL AND ADJUSTABLE MIXED AIR THERMOSTAT. ECONOMIZER CONTROL SHALL BE CAPABLE OF INTRODUCING UP TO 100% OUTSIDE AIR. HEATING CONTROLS SHALL CONSIST OF A REDUNDANT GAS VALVE, ELECTRONIC INTERMITTENT PILOT IGNITION, REMOTE PILOT FLAME SENSOR, TIME-DELAY RELAY, LIMIT SWITCHES AND CENTRIFUGAL SWITCH. LOCATE REMOTE SPACE SENSOR WHERE INDICATED ON DRAWING.
- 5. HEAT EXCHANGER: SHALL BE TUBULAR IN DESIGN AND CONSTRUCTED OF CORROSION RESISTANT ALUMINIZED STEEL. HEAT EXCHANGER SHALL CARRY A 5 YEAR WARRANTY, BURNERS SHALL BE CONSTRUCTED OF ALUMINUM PAINTED COLD ROLLED STEEL AND BE OF THE IN-SHOT TYPE
- 6. ELECTRICAL CONNECTION: PROVIDE A DISCONNECT SWITCH READY FOR A SINGLE POINT POWER CONNECTION.

EXHAUST FANS:

1. ROOF EXHAUST FANS SHALL BE CAPABLE OF HANDLING AIR QUANTITY ON DRAWINGS. FAN TO BE PROVIDED WITH BIRDSCREEN, SHOCK MOUNTS, NEMA 1 DISCONNECT TYPE ELECTRICAL CONNECTION, MANUFACTURER'S ROOF CURB AND SHALL BE CONTROLLED BY INTERLOCK TO HVAC UNIT. TOILET EF SHALL BE GREENHECK MODEL G-70-D OR APPROVED EQUAL. FANS TO BE PROVIDED BY LANDLORD.

DUCTWORK:

- 1. LOW PRESSURE DUCTWORK: ALL DUCTWORK UNLESS OTHERWISE NOTED SHALL BE FABRICATED OF GALVANIZED SHEET STEEL IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA DUCT CONSTRUCTION STANDARDS FOR 2" PRESSURE CLASS. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. FLEXIBLE DUCT CONNECTORS SHALL BE PREINSULATED WHERE INSULATION IS REQUIRED AND SHALL BE CLASSIFIED AS CLASS I OR CLASS O FLEXIBLE CONNECTORS IN ACCORDANCE WITH UL 181. FLEXIBLE CONNECTORS SHALL NOT EXTEND MORE THAN 10 FEET IN LENGTH
- 3. PROVIDE 1" THICK ACOUSTICAL DUCT LINING WITH AN AVERAGE DENSITY OF 1 1/2 LBS./CF. IN FIRST TEN FEET OF RETURN DUCT AND WHERE INDICATED. DUCT LINER SHALL HAVE FIRE RESISTANT INNER COATING TO PREVENT DELAMINATION OF FIBERS AND SHALL MEET NFPAAND UL REQUIREMENTS.

ACCESSORIES:

- 1. PROVIDE DUCTWORK ACCESSORIES IN ACCORDANCE WITH SMACNA STANDARDS. PROVIDE TURNING VANES IN ALL RECTANGULAR ELBOWS. WHERE SPACE PERMITS CONTRACTOR MAY PROVIDE RADIUS ELBOWS WITH A STANDARD CENTERLINE RADIUS EQUAL TO 1 1/2 TIMES THEIR WIDTH IN LIEU OF RECTANGULAR ELBOWS SHOWN ON PLANS. ALL RECTANGULAR DUCT TAPS SHALL BE MADE WITH 45 DEGREE ENTRY. ALL ROUND TAPS OVER 6" SHALL BE MADE WITH CONICAL TEES.
- 2. PROVIDE MANUAL VOLUME DAMPERS WHERE INDICATED AND AT ALL TAPS TO INDIVIDUAL DIFFUSERS.

AIR OUTLETS AND INLETS:

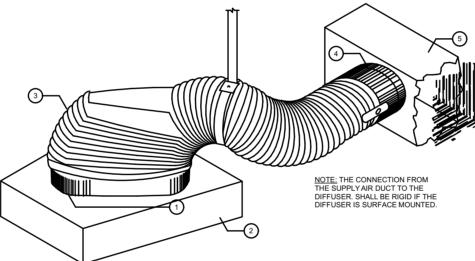
- 1. DIFFUSERS SHALL HAVE AN NC RATING OF NOT MORE THAN 35 OCCUPIED SPACE. THROW AND DROP SHALL MEET MANUFACT PUBLISHED RECOMMENDATIONS. PRIME DIFFUSERS FOR FIEL AS INDICATED ON ARCHITECTURAL DRAWINGS.
- 2. LOUVERED FACE SUPPLY DIFFUSERS SHALL BE TITUS MODEL OR APPROVED EQUAL. PROVIDE SQUARE OR ROUND NECK AS INDICATED AND FRAME TYPE TO MATCH CEILING CONSTRU
- 3. EXHAUST AND RETURN AIR GRILLES SHALL BE TITUS MODEL 35 GRILLES WITH 3/4 INCH SPACING.

CONTROLS

- 1. PROVIDE PROGRAMMABLE WALL MOUNTED SPACE THERMOST MOUNTED REMOTE SENSOR TO CONTROL ALL STAGES OF RO HEATING AND COOLING.
- 2. CONTROL ROOF MOUNTED TOILET EXHAUST FANS TO START A INTERLOCK TO RTU'S OCCUPIED CYCLE.
- 3. PROVIDE DUCT MOUNTED IONIZATION TYPE SMOKE DETECTOR DUCT OF EACH RTU 2000 CFM AND ABOVE. DETECTOR SHALL UPON DETECTION OF PRODUCTS OF COMBUSTION AND ACTIV AUDIBLE ALARM AND TROUBLE SIGNAL IN AN APPROVED LOCA

TESTING ADJUSTING AND BALANCING:

1. AFTER COMPLETION OF THE INSTALLATION OF THE AIR CONDI AND HEATING SYSTEMS AND PRIOR TO ACCEPTANCE BY THE C HANDLING SYSTEM AND APPURTENANCES APPLICABLE TO TH SYSTEM SHALL BE ADJUSTED AND BALANCED TO DELIVER TH QUANTITIES AS SPECIFIED. INDICATED ON THE DRAWINGS. OF DIRECTED. BALANCING WORK SHALL BE DONE IN ACCORDAN AABC OR NEBB PUBLISHED METHODS AND PRACTICES. THE C SHALL SUBMIT TO THE OWNER OR ENGINEER FOR THEIR EVAL AND APPROVAL, SIX (6) COPIES OF THE COMPLETE AIR BALAN



SUPPLY AIR DIFFUSER O

SYMBOLS LIST

- 1 ADAPTER FITTING AS REQUIRED ; SCREWED TO GRILLE
- 2 SUPPLY AIR DIFFUSER TYPE & SIZE AS SCHEDULED ; DIFFUSE HAVE OPPOSED BLADE DAMPER WHERE MOUNTED ON PLAST
- (3) PRE-INSULATED FLEX DUCT SECURED AT BOTH ENDS WITH

1 inch WIDE DRAW BANDS, SUPPORTED FROM STRUCTURE.

- MAXIMUM LENGTH 5FT
- (4) SPIN-IN FITTING W/DAMPER . VAPOR SEAL PRE-INSULATED FLE DUCT TO SUPPLY AIR DUCT . OMIT DAMPER WHERE DIFFUSER ON PLASTER CEILING
- 5 SUPPLY AIR DUCT-SIZE AS INDICATED ON PLANS .

FIELD DUCT SIZING CHART

Flexible	e Duct
Duct Size	Design Airflow
5"	50
6"	75
7"	110
8"	160
9"	225
10"	300
12"	480
14"	700
16"	1000
18"	1300
20"	1700

	MECHANICAL LEGEND	MECHANICAL CODES AND	STANDARD
SFOR ANY URERS D PAINTING TDC CTION. SORL STEEL LOUVERED TAT WITH SPACE OFTOP UNIT AND STOP FROM AND STOP FROM AND STOP FROM AND STOP FROM AND STOP FROM TONING DWNER, AIR E ABOVE E AIR CE WITH CONNECTOR DATE THE CONNECTION FROM TO AND CONNECTION FROM THE SUPPORT TO THE BIFUSER IS SURFACE MOUNTED.	NEW DUCTWORK EXISTING DUCTWORK SOUNDLINED DUCTWORK SOUNDLINED DUCTWORK DUCT BISING DUCT DROPPING DUCT SIZE, FIRST FIGURE IS VISIBLE SIDE CHANGE IN DUCT ELEVATION: RISE (R) OR DROP (D) DUCT WITH FLEXIBLE CONNECTION RECTANGULAR TO ROUND DUCT CONNECTION DUCT WITH CAPPED END DUCT SECTION, NEGATIVE PRESSURE DUCT OF CONNECTION - NEW TO EXISTING DESTIGNT OF CONNECTION - NEW TO EXISTING DESTINE SUPPLY DIFFUSER GO REMOTE SPACE SENSOR GO GAS METER AFF ABOVE FINISHED FLOOR CFM CUBIC FEET PER MINUTE CLG	<text></text>	2015 EDITION 2015 EDITION 2015 EDITION 2015 EDITION 2015 EDITION 2015 EDITION 2015 EDITION 2015 EDITION 2017 EDITION 2017 EDITION 2017 EDITION
R TO ER CEILING . EX IS MOUNTED SMOUNTED SMOUNTED COUND DUCT SIZE ESTIMATE Round Metal Pipe Duct Size Design Airflow 5" 50 6" 85 7" 125 8" 180 9" 240 10" 325 12" 525 14" 750 16" 1200 16" 1200 18" 1500 20" 2000	G NATURAL GAS WH WATER HEATER Image: Constraint of the state of the stat		be reproduced in any form in whole or in part withou prior written permission of the copyright owner. Company Title TRUOBA 11-2 Miško street, Kaunas, Lithuania, 53333 email: info@truoba.com tel: +1 844-337-1434 web: www.truoba.com Project Title Truoba Mini 619 Drawing Name Mechanical Specifications Drawing Scale Sheet Size A-2