

PROJECT TEAM

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PROJECT SUMMARY

This project is an accessory structure that is out of sight of all right-of-ways and consists of an approximately 635sf storage shed for the ACMA School. Design and build a storage structure on the northwest quadrant of the existing ACMA school site.

- Storage occupancy type is non-hazardous. Clad in cementitious panels and siding in colors to match the existing school.
- Provide heating for freeze protection only.
- Provide convenience power outlets and simple lighting. Adhere to Beaverton Development Code for an accessory structure and 2021 Oregon Energy Code for a semi-heated space.

BUILDING CODE SUMMARY

BUILDING CODE STUDY 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC)

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION:

CLASSIFICATION GROUP:

Group S-1: Moderate-Hazard Storage

CHAPTER 4: SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY:

OCCUPACY LOAD FACTORS Accessory Storage and Mechanical Equipment Rooms: 300 gross

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS:

ALLOWABLE HEIGHT Allowable Height: 40'

Designed Height: 14' - 10"

ALLOWABLE BUILDING AREA 9.000 SF

Designed Area: 672 SF

FIRE RATED SEPARATION REQUIREMENTS (508)

 Required Occupancy Separations: None Group S: Accessory occupancy, no required separation per 508.2.

INCIDENTAL USES (509)

 Required, per Table 509: Furnace rooms, boiler rooms, refrigerant machinery room, laundry rooms over 100sf Provided: No incidental uses are included in this project

CHAPTER 6: TYPES OF CONSTRUCTION

CONSTRUCTION CLASSIFICATION • VB

FIRE-RESISTANCE RATING REQUIREMENTS OF BUILDING ELEMENTS (Table 601 & 602) Primary Structural Frame

• 0 HOUR

- Bearing Walls, Exterior (Per Table 602):
- 1 HOUR, if less than 10 feet fire separation distance 0 HOUR, if greater than or equal to 10 feet fire separation distance Bearing Walls, Interior
- 0 HOUR
- Non-bearing walls and partitions, Exterior (Per Table 602) • 1 HOUR, if less than 10 feet fire separation distance
- 0 HOUR, if greater than or equal to 10 feet fire separation distance Non-bearing walls and partitions, Interior
- 0 HOUR, but not less than the fire-resistance rating required by other sections of this code. See shafts, etc. Floor construction and associated secondary members 0 HOUR
- Roof construction and associated secondary members 0 HOUR

SHEET INDEX

GENERAL G0.0S - SHED COVER SHEET

C1.0 - EXISTING CONDITIONS & DEMO PLAN

C2.0 - SITE PLAN C3.0 - NOTES AND DETAILS

<u>ARCHITECTURE</u>

A1.1S - SHED ASSEMBLY TYPES AND GENERAL INFO

- A1.2S SHED PLANS A1.3S - SHED ELEVATIONS AND SECTIONS
- A1.4S SHED WALL SECTIONS AND DETAILS A1.5S - SHED DETAILS

<u>STRUCTURAL</u>

- S1.1S STRUCTURAL NOTES
- S1.2S FOUNDATION AND FRAMING PLAN
- S3.1S SECTIONS AND ELEVATIONS
- S3.3S TYPICAL WOOD DETAILS
- S3.4S TYPICAL WOOD DETAILS

MECHANICAL

- M1.1 SHED MECHANICAL PLANS

ENERGY CODE STUDY - BUILDING ENVELOPE 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC) BASED ON ASHRAE STANDARD 90.1 - 2019

SEMIHEATED SPACE 5.5.2 - SEMIEXTERIOR BUILDING ENVELOPE

Table 5.5-4 (Climate Zone 4C) Opaque Elements

Roofs, insulation entirely above deck = R-10ci min

- Walls, above grade, steel framed = R-13 min Slab-on-Grade Floors, unheated = NR
- Opaque Doors, swinging = U-0.370 max
- Opaque Doors, nonswinging = U-0.360 max Exception 5.5.3.6: horizontally hinged sectional doors with a single row

Not applicable, no fenestration proposed

BEAVERTON ZONING DEVELOPMENT CODE

Note: This building will be used as a shed for accessory storage by the primary users on this site.

be grouped in the following classes in accordance with their flame spread and <u>ACCESSORY STRUCTURE</u> Beaverton Development Code 60.50.05

- No more than 700 square feet of floor area (on tax lot greater than 10,000 sf)
- Shall not exceed one story and shall not exceed 15 feet in height
- Shall not be located in a required front yard
- Shall not be located within 6 feet of main building or other accessory building Shall be built in accordance with building codes
- Must be approved through Conditional Use and Design Review processes
- ALLOWABLE HEIGHT FOR ACCESSORY STRUCTURES IN RESIDENTIAL ZONES

Allowable Height: 15' Designed Height: 14' - 10"

ALLOWABLE BUILDING AREA FOR ACCESSORY STRUCTURES IN RESIDENTIAL ZONES

 Allowable Building Area for Accesssory structure in Residentail Zone: 700 SF if lot size is greater than 10,000 SF

Designed Area: 635 SF

Not provided. Sprinklers for S-1 occupancies not required for fire areas less than 12,000 square feet and note greater than three stories above grade plane.

Portable Fire Extinguishers

Required: Portable fire extinguishes are required in the following

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

SMOKE BARRIERS (709) AND SMOKE PARTITIONS (710)

smoke-developed indexes into Class A, B, or C.

A. Gypsum Board: Class B

B. Plywood: Class C

CHAPTER 9: FIRE PROTECTION SYSTEMS

A. Plywood: Class C

Sections 705.5 and 705.8.

• 15% = 10' to <15'

25% = 15' to <20'

45% = 20' to <25'

compartments.

CHAPTER 8: INTERIOR FINISHES

Required: Class C minimum

Wall and Ceiling Finishes:

1. Walls:

2. Ceiling:

Sprinklers

Buildings on the same lot shall be assumed to have an imaginary line

between them. Where a new building is to be erected on the same lot

as an existing building, the location of the assumed imaginary line with

relation to the existing building shall be such that the exteiror wall and

• Openings per Table 705.8: Max area of exterior wall openings based on

fire separation distance; unprotected, nonsprinklered (UP, NS)

N/A: Project does not require smoke barriers or partitions as it does not

• Per 803.1.1: Interior wall and ceiling finish materials shall be classified in

accordance with ASTM E 84 or UL 723. Such interior finish materials shall

include Group I-2 or I-3 occupancies, have areas of refuge, include

underground buildings, have an elevator lobby or have multiple elevator

opening protection of the existing building met the criteria as set forth in

EXTERIOR WALLS (705)

- locations, per Fire Code Section 906: · In areas where flammable or combustible liquids are stored, used
- or dispensed. • Where required by the AHJ.
- Provided: Within both rooms
- Required:
- Per Table 906.3 (1): Minimum rated single extinguisher shall be 2-A, Maximum floor area for each extinguisher shall be 11,250sf, Minimum distance of travel to an extinguisher shall be 75'
- 906.5: Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless directed otherwise by the AHJ.
- 906.8: Cabinets used to house portable fire extinguishers shall not be locked.
- 906.9: Extinguishers weighing 40+ pounds shall be installed so that their tops are not more than 3.5 feet above the floor. Extinguishers weighing less than 40# may be installed so that their
- tops are not more than 5' above the floor. The clearance between the floor and the bottom of extinguishers shall not be less than 4"
- Provided: Provided per distances, areas, and mounting heights as noted above.

CHAPTER 10: MEANS OF EGRESS

• Ceiling height shall not be less than 7'-6".

- of fenestration shall be U-0.440 max, if fenestration area is 14-25% of the total door area

Fenestration

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: CU2018-001 DR2018-0114 F NUMBER: S



SHED ACMA



- M0.0 MECHANICAL SYMBOLS & ABBREVIATIONS
- E0.1S ELECTRICAL SITE PLAN SHED
- S3.2S TYPICAL CONCRETE DETAILS

- E4.1S SHED ENLARGED PLANS



POWER POLE ပြ GUY WIRE BOLLARD CATCH BASIN = CURB INLET DITCH INLET CLEANOUT J STREET LIGHT Δ MAILBOX \cap \bigcirc SIGN WATER VALVE \bowtie RAIN DRAIN SIGN Q Û (T)HEAT PUMP ΠHΡ D _4⊖0 GAS VALVE \bowtie JUNCTION BOX Ţ _____ EDGE OF PAVEMENT — X — X — FENCELINE _____ 5 FOOT INTERVAL CONTOUR — — — — — — 1 FOOT INTERVAL CONTOUR EDGE OF WATER OVERHEAD POWER ______ SD ______ STORM SEWER ------ SS ------- SS ------- SANITARY SEWER ——— W——— W——— WATER LINE _____ G _____ G _____ G AS LINE E ELECTRICAL LINE

THE DATUM FOR THIS SURVEY IS BASED UPON NGS OPUS SOLUTION REPORT TO EMERIO CONTROL POINT NO. 1. ELEVATION=219.273 NGVD 29 (COMPUTED USING GEOID12B) A TRIMBLE 5600 SERIES ROBOTIC INSTRUMENT WAS USED TO COMPLETE THIS SURVEY.

BOUNDARIES WERE DRAWN PER PLAT AND MONUMENTS FOUND. THIS IS NOT A BOUNDARY SURVEY. NO PROPERTY CORNERS WERE SET IN THIS SURVEY. NO WARRANTIES ARE MADE AS TO MATTERS OF UNWRITTEN TITLE, SUCH AS ADVERSE POSSESSION, ESTOPPEL, ACQUIESCENCE, ETC.

THE UNDERGROUND UTILITIES AS SHOWN ON THIS MAP HAVE BEEN LOCATED FROM FIELD SURVEY OF ABOVE GROUND STRUCTURES AND AS MARKED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPROMISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SURVEYOR.

NO TITLE REPORT WAS SUPPLIED OR USED IN THE PREPARATION OF THIS MAP. THERE MAY EXIST EASMENTS, CONDITIONS, OR RESTRICTIONS THAT COULD AFFECT THE TITLE OF THIS PROPERTY. NO ATTEMPT HAS BEEN MADE IN THIS SURVEY TO SHOW SUCH MATTERS THAT MAY AFFECT TITLE.

- JUNCTION BOX STORM MANHOLE
- SANITARY MANHOLE
- ELECTRICAL VAULT ELECTRICAL PEDESTAL ELECTRICAL METER TRANSFORMER
- DECIDUOUS TREE
- EVERGREEN TREE ELECTRICAL METER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL TELEPHONE VAULT
- WATER MANHOLE
- WATER VAULT
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- WATER BLOWOFF
- OVERHANG POST SUPPORT
- PAINT STRIPING

Harper **HHPR** Houf Peterson Righellis Inc.

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EXPIRES: 12/31/2022

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STORMWATER CLEANOUT

- PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR

GENERAL NOTES

- 1. WORK SHALL CONFORM TO INTERNATIONAL BUILDING CODE (IBC), UNIFORM PLUMBING CODE (UPC), CITY OF BEAVERTON STANDARDS, CLEAN WATER SERVICES DESIGN AND CONSTRUCTION STANDARDS (R&O 19-22), TVWD, AND TVF&R.
- AS-BUILT INFORMATION SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF O.R.S. 757.541 AND 757.571, INCLUDING NOTIFICATION OF ALL OWNERS OF UNDERGROUND FACILITIES AT LEAST 48 BUSINESS DAY HOURS PRIOR TO EXCAVATION. FIELD VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION
- EXISTING MONUMENTS, PROPERTY CORNERS, AND SURVEY MARKERS SHALL BE PROTECTED. REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.

CITY OF BEAVERTON

- 1. ALL WORK SHALL BE CONSTRUCTED PER THE APPLICABLE SECTIONS OF THE CITY OF BEAVERTON ENGINEERING DESIGN MANUAL (ORDINANCE 4417) AND CLEAN WATER SERVICES DESIGN AND CONSTRUCTION STANDARDS (RESOLUTION AND ORDER 19-22).
- EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. IN ORDER TO PROTECT EXISTING UNDERGROUND UTILITIES, CONTRACTORS PERFORMING WORK SHOWN ON THESE PLANS MUST NOTIFY UTILITIES AND PUBLIC AGENCIES AT LEAST 48 BUSINESS HOURS IN ADVANCE OF, AND NO MORE THAN 10 BUSINESS DAYS BEFORE, BEGINNING EXCAVATION, IN ACCORDANCE WITH THE PROVISIONS OF OAR 952-001-0090. LIMITS OF WORK SHALL BE PRE-MARKED FOR THE UTILITY LOCATORS. POTHOLE ALL CROSSINGS AS NECESSARY TO PREVENT GRADE AND ALIGNMENT CONFLICTS. REPORT ALL CONFLICTS TO THE ENGINEER IMMEDIATELY. PROTECT EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION. CALL THE ONE CALL UTILITY NOTIFICATION CENTER AT 503-246-6699 FOR UTILITY LOCATES. ANY DAMAGE TO EXISTING UTILITIES. WHETHER THEY'RE SHOWN ON THESE DRAWINGS OR NOT, WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

ATTENTION: OREGON LAW REQUIRES ALL EXCAVATORS TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER OF THE ADMINISTRATION OFFICE FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1987).

- THE CONTRACTOR SHALL EXERCISE ALL DUE CARE IN PROTECTING PROPERTY ALONG THE ROUTE OF THE IMPROVEMENTS. THIS PROTECTION SHALL INCLUDE, BUT NOT BE LIMITED TO, TREES, YARDS, FENCES, DRAINAGE LINES, MAIL BOXES, DRIVEWAYS, SHRUBS, LAWNS, IRRIGATION SYSTEMS, WITHIN ANY RIGHTS-OF-WAYS AND EASEMENTS. IF ANY OF THE ABOVE HAVE BEEN DISTURBED, THEY SHALL BE RESTORED AS NECESSARY TO AS NEAR THEIR ORIGINAL CONDITION AS POSSIBLE OR REPLACED IN KIND
- THE CONTRACTOR SHALL PERFORM ALL THE WORK SHOWN ON THE DRAWINGS AND ALL INCIDENTAL WORK CONSIDERED NECESSARY TO COMPLETE THE PROJECT IN AN ACCEPTABLE MANNER.
- 5. THE CONTRACTOR AND/OR EACH SUB-CONTRACTOR SHALL HAVE A MINIMUM OF ONE SET OF CITY-APPROVED CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES DURING EACH CONSTRUCTION PHASE WHILE WORK IS BEING DONE.
- 6. ALL MATERIAL SUPPLIERS SHALL SUBMIT TO THE ENGINEER PROOF OF MATERIAL(S) TESTED IN ACCORDANCE WITH SPECIFICATIONS. BY ACCEPTANCE OF THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR CERTIFIES THAT ALL MATERIALS DELIVERED TO THE JOB SITE WILL MEET OR EXCEED THOSE SPECIFICATIONS. ANY MATERIAL NOT CONFORMING SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST TO THE OWNER.
- FOLLOWING SUBSTANTIAL COMPLETION, THE DEVELOPER'S ENGINEER SHALL PROVIDE THREE PAPER-COPY, AS-BUILT AND RECORD DRAWING SETS OF ALL SHEETS IN THIS PLAN SET PLUS ANY APPROVED REVISIONS. AFTER WALK THROUGH AND PUNCH-LIST PREPARATION BY CITY CREWS, THE CITY INSPECTOR WILL REQUEST REVISIONS TO THE AS-BUILTS AND RECORD DRAWINGS. THE DEVELOPER'S ENGINEER SHALL THEN PROVIDE ONE SET OF MYLAR AS-BUILTS AND RECORD DRAWINGS AND AN ELECTRONIC COPY IN AUTOCAD FORMAT (DXF OR DWG FILES) ON DISK TO THE CITY INSPECTOR, PER CITY STANDARDS.
- THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AT LEAST 48 HOURS (TWO FULL WORKING DAYS) PRIOR TO BEGINNING THE PROJECT. CONNECTIONS BETWEEN EXISTING INFRASTRUCTURE AND NEW WORK SHALL NOT BE MADE UNTIL NECESSAR INSPECTIONS AND TESTS HAVE BEEN COMPLETED ON THE NEW WORK AND IT IS FOUND TO CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

PRIVATE UTILITIES NOTES

STORM DRAINAGE

PRIVATE STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2014 OREGON STRUCTURAL SPECIALTY CODE AND THE 2017 OREGON PLUMBING SPECIALTY CODE.

STORM DRAIN PIPE SHALL BE AS SHOWN ON PLAN. PVC ASTM 3034 SDR 35. STORM DRAIN PIPE WITH LESS THAN 3 FEET OF COVER IN VEHICULAR AREAS SHALL BE DUCTILE IRON.

THE CONTRACTOR SHALL TEST ALL PVC AND HDPE STORM PIPE FOR DEFLECTION AS PER CITY OF BEAVERTON AND CWS. A COPY OF THE TEST RESULTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL

THE CONTRACTOR SHALL FLUSH THE ENTIRE STORM SYSTEM AND VIDEO INSPECT ALL STORM SEWER CONVEYANCE PIPES. A COPY OF THE REPORT AND VIDEO TAPE SHALL BE SUBMITTED FOR REVIEW AND APPROVAL

CATCH BASINS SHALL BE INSTALLED TO FINISH GRADE.

CLEANOUTS SHALL HAVE GAS-TIGHT AND WATERTIGHT THREADED PLUG IN CONFORMANCE WITH PLUMBING CODE.

ALL RAIN DRAIN PIPING INSTALLED 2 FEET OR MORE FROM ANY BUILDING OR PROPERTY LINE SHALL BE SCHEDULE 40 PIPING OR APPROVED MATERIAL. COORDINATE LOCATION OF RAIN DRAINS WITH PLUMBING PLANS.

FOUNDATION DRAIN PIPE SHALL BE COORDINATED WITH STRUCTURAL AND ARCHITECTURAL PLANS AND DETAILS. AT FOUNDATION DRAIN CONNECTION INSTALL CLEANOUT AND ACCESSIBLE FLAPPER TYPE BACKWATER VALVE. SET RIM TO FINISH GRADE. COORDINATE FOUNDATION DRAIN CONNECTION POINTS WITH ARCHITECTURAL AND STRUCTURAL PLANS.

TRACER WIRE - 12-GAUGE STRANDED OR SOLID COPPER INSULATED HIGH MOLECULAR WEIGHT POLYETHYLENE (HMW-PE) TRACER WIRE. THE HMW-PE INSULATED COVER SHALL BE GREEN AND A MINIMUM 45 MIL THICK. THE WIRE SHALL BE RATED FOR 140 DEGREES FAHRENHEIT. INSTALL TRACER WIRE IN ALL TRENCHES FOR STORM SEWERS. PLACE THE TRACER WIRE DIRECTLY OVER THE PIPE CENTERLINE AND ON TOP OF THE PIPE ZONE MATERIAL, PARALLEL TO, AND ALONG THE ENTIRE LENGTH OF ALL NONMETALLIC PIPE

THE EXISTING STORMWATER MANAGEMENT PONDS SHALL REMAIN FUNCTIONAL DURING CONSTRUCTION. THESE PONDS SHALL BE MONITORED DURING CONSTRUCTION FOR ADEQUATE DRAINAGE, PLANT SURVIVAL, AND SEDIMENT. DO NOT ALLOW SEDIMENT LADEN WATER, DEBRIS, TRASH, OR CONSTRUCTION WASTE TO ENTER THE POND. THE CONTRACTOR WILL BE RESPONSIBLE FOR RETURNING THE PONDS TO PRE-CONSTRUCTION CONDITIONS AT THE COMPLETION OF THE PROJECT

MISCELLANEOUS UTILITIES

ELECTRICAL, TELEPHONE, GAS, AND TV INSTALLATION SHALL BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY INCLUDING REQUIREMENTS FOR UTILITY CROSSING SLEEVES.

ALL PROPOSED POWER, TELEPHONE, GAS, AND TV SERVICES ON SITE SHALL BE PLACED UNDERGROUND.

PLACE DETECTABLE MARKING TAPE AND TRACER WIRE IN THE TRENCH DIRECTLY ABOVE PARALLEL TO, AND ALONG THE ENTIRE LENGTH OF ALL NONMETALLIC PIPE AND CONDUIT



ADJUST MANHOLES, CLEAN OUT AND AREA DRAIN RIMS TO FINISH GRADE

EROSION CONTROL NOTES

- CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION / SEDIMENTATION CONTROL DURING CONSTRUCTION (ANY TIME OF THE YEAR), PER THE "EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL" DATED JUNE 2020 AND CLEAN WATER SERVICES DESIGN AND CONSTRUCTION STANDARDS, R&O 19-22, CHAPTER 6
- APPROVAL OF THIS EROSION / SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
- THE IMPLEMENTATION OF THESE ESC PLANS AND CONSTRUCTION, MAINTENANCE. REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE CITY OF BEAVERTON AND VEGETATION / LANDSCAPING IS ESTABLISHED. THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTENANCE OF ESC AFTER THE PROJECT IS APPROVED AND UNTIL THE LOTS ARE SOLD.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT / CONTRACTOR FOR THE DURATION OF THE CONSTRUCTION.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT / CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A
- MINIMUM OF ONCE EVERY TWO WEEKS OR WITHIN 24 HOURS FOLLOWING A STORM FVFNT. REMOVAL OF TRAPPED SEDIMENT IN A SEDIMENT BASIN OR SEDIMENT TRAP MUST
- OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY (50) PERCENT AND AT COMPLETION OF PROJECT.
- 10. STABILIZED GRAVEL ENTRANCES SHALL BE INSTALLED (AS NECESSARY) AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. 11. STORM DRAIN INLETS, BASINS AND AREA DRAINS SHALL BE PROTECTED UNTIL
- PAVEMENT SURFACES ARE COMPLETED AND / OR VEGETATION IS RE-ESTABLISHED.
- PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE SEEDING SHALL BE PERFORMED NO LATER THAN SEPTEMBER 1ST FOR EACH PHASE OF 13. CONSTRUCTION
- IF THERE ARE EXPOSED SOILS, OR SOILS ARE NOT FULLY ESTABLISHED FROM OCTOBER 14 1ST THROUGH MAY 31ST, THE WET WEATHER EROSION CONTROL MEASURES WILL BE IN EFFECT. SEE CHAPTER 6 OF THE EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL FOR REQUIREMENTS.
- ESC MEASURES SHALL BE REMOVED BY THE DEVELOPER / OWNER WHEN VEGETATION 15 IS FULLY ESTABLISHED. NOTIFY CITY OF BEAVERTON CONSTRUCTION INSPECTOR 24 HOURS PRIOR TO ANY 16.
- WORK ON THIS SITE



NOTES:

1. COLLECT AND RETAIN ALL THE CONCRETE WASHOUT WATER AND SOLIDS IN A LEAK PROOF BASIN.

- 2. INSPECT FREQUENTLY. DO NOT OVERFILL BASIN.
- **3. RECYCLE MATERIALS** A. WASHWATER RECYCLING: WASHWATER SHOULD BE PASSED THROUGH A FILTER AND TREATMENT SYSTEM TO REMOVE SOLIDS REDUCE PH. WASHWATER MAY BE REUSED FOR CONCRETE WASHOUT WATER. DISPOSAL OF WASHWATER SHALL BE AT AN APPROVED DISPOSAL FACILITY. DO NOT DRAIN TO STORM OR SANITARY SYSTEM
 - B. SOLIDS RECYCLING: COURSE AGGREGATE MATERIALS THAT ARE SEPARATED FROM WASHWATER MAY BE RETURN TO READY MIX PLANT. COORDINATE WITH READY MIX
 - PLANT PRIOR TO CONSTRUCTION. C. HARDENED CONCRETE RECYCLING: ALLOW CONCRETE WASHOUT TO HARDEN IN BASIN THE HARDEN CONCRETE MAY BE DELIVERED TO RECYCLING PLANTS

CONCRETE TRUCK WASHOUT BASIN













GENERAL SYMBOLS



PROJECT SYMBOLS



CONCRETE SLAB-ON-GRADE WITH REINFORCEMENT EACH WAY. SEE STRUCTURAL.

- COMPACTED GRANULAR FILL

SHED FLOOR TYPE - TYPICAL

FLOOR ASSEMBLY TYPE

SHED ROOF TYPE - TYPICAL



	DOOR AND FRAME SCHEDULE SHED								
	PANEL			FRAME					
DOOR	NO. OF			THICKN					
NO.	PANELS	WIDTH	HEIGHT	ESS	MATERIAL	TYPE	MATERIAL	FIRE RAT'G	COMMENTS
SD-1	2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	FLUSH PANEL	HM	NON-RATED	SEE SPECS FOR DOOR HARDWARE
SD-2	1	3' - 0"	7' - 0"	0' - 1 3/4"	HM	FLUSH PANEL	HM	NON-RATED	SEE SPECS FOR DOOR HARDWARE
SD-3		8' - 0"	8' - 0"	0' - 1 1/2"	ALUM	OVERHEAD SECTIONAL		NON-RATED	SEE SPECS FOR DOOR HARDWARE



SHED WALL TYPE - INTERIOR



SHED WALL TYPE - EXTERIOR @ METAL PANEL

WALL ASSEMBLY TYPES





Group

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<u>s</u>		SHED PLANS ACMA BEAVERTON SCHOOL DISTRICT
 PAINT UNDERSIDE OF EXPOSED RAFTERS DUCTWORK PER MECHANICAL OPEN TO STRUCTURE, TYPICAL 		A1.2S 74-18109-00 10/29/21 REVISIONS
Image: state		DLR Group Architecture & Engineering Inc., an Oregon corporation, ALL RIGH



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4 SHED - EAST ELEVATION A1.38 SCALE: 1/8" = 1'-0"



6 SHED - SOUTH ELEVATION A1.35 SCALE: 1/8" = 1'-0"





PANEL CLOSURE, SEALANT, & FASTENERS PER ROOFING MFR - PREFINISHED METAL FLASHING W/ CONTINUOUS CLEAT, COLOR TO MATCH METAL ROOF STRIP IN SELF ADHERED FLASHING VAPOR BARRIER, TERMINATE AT EDGE 2X8 TRIM BOARD PREFINISHED SHEET METAL TRIM, MATCH METAL ROOF COLOR 2X12 TRIM BOARD, PAINT FINISH

BACKER ROD & SELANT, EA SIDE PREFINISHED ALUMINUM LOUVER









PREFINISHED SHEET METAL FLASHING W/ DRIP EDGE & END DAMS

2X10 PRESSURE TREATED WD

VINYL WEATHERSTRIPPING



FIBER CEMENT PANEL SIDING, SEE LAP AIR BARRIER OVER SELF ADHERED SELF ADHERED MEMBRANE, WRAP INSIDE

CONTINUOUS BEAD OF SEALANT

2X10 PRESSURE TREATED WD TRIM,

VINYL WEATHERSTRIPPING

OVERHEAD SECTIONAL DOOR

AB ACI ADDL ADH ADJ ADJT AFF AGG AHU AISC ALT ALUM ANC ANSI APPD APPROX	ANCHOR BOLT AMERICAN CONCRETE INSTITUTE ADDITIONAL ADHESIVE ADJACENT, ADJUNCT ADJUSTABLE ABOVE FINISHED FLOOR AGGREGATE AIR HANDLING UNIT AMERICAN INSTITUTE OF STEEL CONSTRUCTION ALTERNATE ALUMINUM ANCHOR AMERICAN NATIONAL STANDARDS INSTITUTE APPROVED APPROXIMATE	FFE FFL FIG FIN FLG FLR FND FO FOC FOF FOM FOS FS FT FTG FV GA
ARCH AVG AWS B/B/CONC B/STL BD BEL BF BITUM BL BLDG BLK(G) BM BPL BRCG BRDG	ARCHITECT(URAL) AVERAGE AMERICAN WELDING SOCIETY BOTTOM OF BOTTOM OF CONCRETE BOTTOM OF STEEL BOARD BELOW BRACED FRAME BITUMINOUS BUILDING LINE BUILDING BLOCK(ING) BEAM BEARING PLATE BRACING BRIDGING	GAL GALV GC GEN GF GLB GND GOV GR GRTG GVL GYP H.D. HC HD HDR
BRG BRK BS BT BTM BTWN BW	BEARING BRICK BOTH SIDES BENT BOTTOM BETWEEN BOTH WAYS STEEL CHANNEL	HDW HGT HJT HK HORIZ HP HS HT HWD
CALC CDF CEM CFT CIP CJ CL CLR CMU COL COL	CALCULATION CONTROLLED DENSITY FILL CEMENT CUBIC FOOT CAST IN PLACE CONCRETE CONTROL JOINT CENTER LINE CLEAR(ANCE) / CLEAR CENTIMETER(S) CONCRETE MASONRY UNIT COLUMN COMMON	ICF ID IFC IN INCL INFO INT INTM INV
CONC COND CONST CONST JT CONT CONTR CSK CTC CTLVR CTR	CONCRETE CONDITION CONNECTION CONSTRUCTION CONSTRUCTION JOINT CONTINUE(OUS) CONTRACT(OR) COUNTERSINK, COUNTERSUNK CENTER TO CENTER CANTILEVER CENTER	JT K KD KLF KO KSF KSI L LAM LAND
CY CYL d DBA DBL DC DD DEG DEM DEP DEPR DET DIA DIM DL DN DO DTA DTS DWC	CUBIC YARDS CYLINDER PENNY (AS IN NAIL, Id) DEFORMED BAR ANCHOR DOUBLE DRAG CONNECTION DESIGN DEVELOPMENT DEGREE DEMOLISH DEPRESSED DEPRESSED DEPRESSION DETAIL DIAMETER DIMENSION DEAD LOAD DOWN DITTO DOVETAIL ANCHOR DOVETAIL ANCHOR SLOT	LB LBR LG LG LIN LL LLH LLH LUV LNTL LONG LS LSL LT GA LTWT LVL LWC
DWLS (E) E EA EB EF EIFS EJ ELEC	DOWELS EXISTING EAST EACH EXPANSION BOLT EACH FACE EXTERIOR INSULATION FINISH SYSTEM EXPANSION JOINT ELECTRIC(AL)	MAS MATL MAX MB MBR MC MCJ MECH MED MEP
ELEV EO EOC EOM EOP EOS EPY EQ EQUIV EST EXP EYT	ELEVATION EDGE OF EDGE OF CONCRETE EDGE OF MASONRY EDGE OF PAVEMENT EDGE OF SLAB EPOXY COATING EQUAL EQUIVALENT ESTIMATE(D) EXPANSION EXTERIOR	MFR MIN MISC MM MOD MOD MOV MTD MTL N
F FAS FB FBO FDN	FAHRENHEIT FASTEN(ER) FLAT BAR FURNISHED BY OTHERS FOUNDATION	NIC NO NOM NREQE NS NTS

FINISHED FLOOR ELEVATION FINISH FLOOR LINE FIGURE FINISH(ED) FLANGE FLOOR FOUNDATION FACE OF FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FACE OF STUDS FAR SIDE FEET FOOTING FIELD VERIFY GAUGE OR GAGE GALLON(S) GALVANIZED GENERAL CONTRACT(OR) GENERAL GROUND FACE GLUE LAMINATED BEAM GROUND GOVERNEMENT GRADE(ING) GRATING GROUT GRAVEL GYPSUM HEAVY DUTY HOLLOW CORE HEAD HEADER HARDWARE HEIGHT HEAD JOINT HOOK(S) HORIZONTAL STEEL HP SHAPE HIGH STRENGTH HEIGHT HARDWOOD INSULATED CORE FORM, INSULATING CONCRETE FORM INSIDE DIAMETER ISSUE FOR CONSTRUCTION INCH INCLUDE(D)(ING) INFORMATION INTERIOR INTERMEDIATE INVERT(ED) JOIST JOINT KIP (1000 POUNDS) KILN-DRIED **KIPS PER LINEAR FOOT** KNOCKOUT KIPS PER SQUARE FOOT KIPS PER SQUARE INCH STEEL ANGLE LAMINATE(D) LANDSCAPE LAG BOLT LUMBER POUNDS LINEAL FOOT LONG LINEAR LIVE LOAD DOUBLE STEEL ANGLE LONG LEGS HORIZONTAL LONG LEGS VERTICAL LINTEL LONGITUDINAL LEFT SIDE LAMINATED STRAND LUMBER LIGHT GAGE LIGHT WEIGHT LAMINATED VENEER LUMBER LIGHT WEIGHT CONCRETE METER(S) MASONRY MATERIAL(S) MAXIMUM MACHINE BOLTS MEMBER MISC STEEL CHANNEL MASONRY CONTROL JOINT MECH MECHANICAL MEDIUM MECHANICAL, ELECTRIAL, PLUMBING MANUFACTURER MINIMUM MISCELLANEOUS MILLIMETER(S) MASONRY OPENING MODIFIED MONO MONOLITHIC MOVABLE MOUNT(ED)(ING) METAL NORTH NOT IN CONTRACT NUMBER NOMINAL NREQD NOT REQUIRED NEAR SIDE NTS NOT TO SCALE

HORIZ

INTM

LONG

LT GA

OC ON CENTER OCEW ON CENTER EACH WAY OUTSIDE DIAMETER OD OVERHEAD OH OJ OPEN-WEB JOIST OPH OPPOSITE HAND OPNG OPENING OPP OPPOSITE OSB ORIENTED STRAND BOARD OPEN TO STRUCTURE OTS P-T POST-TENSIOND PAR PARALLEL PCC PRECAST CONCRETE POUNDS PER CUBIC FOOT PCF PED PEDESTAL PERF PERFORATE(D) PERI PERIMETER PRE-FINISHED PF POINT OF INTERSECTION ΡI PL PLATE PLBG PLUMBING PLF POUNDS PER LINEAR FOOT PLG PILING PLYWD PLYWOOD PNL PANEL PNT PENETRANT TESTING PREFAB PREFABRICATE(D) PREFIN PREFINISHED PRF PREFORMED PROJ PROJECT PRESTRESSED CONCRETE PSC PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER PSL PT PRESSURE TREATED POST-TENSIONED CONCRETE PTC PVC POLYVINYLCHLORIDE QTY QUANTITY R# REVISION, REVISED RAD RADIUS RCP REFLECTED CEILING PLAN REF REFERENCE REINF REINFORCE(D) REQD REQUIRED REQT REQUIREMENT(S) REV REVISION(S), REVISED RFG ROOFING RGH ROUGH RND ROUND RO ROUGH OPENING ROW RIGHT OF WAY RS RIGHT SIDE SOUTH S SCHED SCHEDULE SD SCHEMATIC DESIGN STEEL DECK INSTITUTE SDI SDS SELF DRILLED SCREW STRUCTURAL GENERAL NOTES SGN SHT SHEET SHTG SHEATHING SIM SIMILAR STEEL JOIST INSTITUTE SJI SLAB ON GRADE SOG SIMILAR, OPPOSITE HAND SOH SPEC SPECIFICATION(S) SQ SQUARE SSTL STAINLESS STEEL STD STANDARD STL STEEL STRUCT STRUCTURE(AL) SW SHEAR WALL T&G **TONGUE & GROOVE** TOP OF T/ TEMP TEMPORARY THK THICK(NESS) TO TOP OF TOC TOP OF CONCRETE TOL TOLERANCE TOM TOP OF MASONRY TOP TOP OF PLATE TOPO TOPOGRAPHY TOS TOP OF STEEL TOSL TOP OF SLAB TOT TOP OF TRUSS TOW TOP OF WALL TRANS TRANSVERSE TYP TYPICAL UNO UNLESS NOTED OTHERWISE UT ULTRASONIC TESTING VERT VERTICAL VNR VENEER VOL VOLUME WEST W STEEL WIDE FLANGE BEAM W W/ WITH W/O WITHOUT WD WOOD WD BLK WOOD BLOCKING WID WIDTH WIRE MESH WM WP WORK POINT WS WATER STOP WEIGHT WT WELDED THREADED STUD WTS WTW WALL-TO-WALL WELDED WIRE FABRIC WWF WELDED WIRE MESH WWM XS EXTRA STRONG XXS DOUBLE EXTRA STRONG



(42) ABBREVIATIONS

S0.15 NO SCALE





USE OF DRAWINGS

- ALL TYPICAL DETAILS AND NOTES SHOWN IN THE DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 2. NOTES ON THE STRUCTURAL GENERAL NOTES SHEET ARE APPLICABLE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- 3. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND OTHER DRAWINGS FOR BIDDING AND CONSTRUCTION. SEE ARCHITECTURAL. MECHANICAL. ELECTRICAL. AND PLUMBING DRAWINGS FOR EMBEDS, OPENINGS, SLEEVES, ETC NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE WORK AND VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BETWEEN TRADES AND EQUIPMENT PURCHASED. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 4. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS DO NOT SCALE DRAWINGS.
- 5. DIMENSIONS NOTED PLUS OR MINUS (+/-) OR AS 'FIELD VERIFY' INDICATE UN-VERIFIED DIMENSIONS THAT REQUIRE CONFIRMATION OR DETERMINATION BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM INDICATED DIMENSIONS.
- 6. IF ANY STRUCTURAL NOTES ARE IN CONFLICT WITH EACH OTHER ARCHITECTURAL, OTHER DRAWINGS, OR THE SPECIFICATIONS, USE THE MOST STRINGENT REQUIREMENT FOR BIDDING AND CONSTRUCTING THE WORK
- 7. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK. IMMEDIATELY REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE ENGINEER OF RECORD. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.
- 8. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT AND BE ACCOMPANIED BY SUBSTANTIATING CALCULATIONS.

MEANS AND METHODS

- 1. DLR GROUP, OR ANY OF ITS EMPLOYEES, SHALL NOT HAVE CONTROL, OR BE RESPONSIBLE FOR, THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCES, ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF INDIVIDUAL, OR COMPANY, TO SAFELY CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
- 2. THE CONTRACTOR SHALL PROVIDE NECESSARY BRACING AND SHORING AS REQUIRED UNTIL THE BUILDING'S STRUCTURAL SYSTEMS HAVE BEEN COMPLETED. THE STRUCTURE SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN A QUALIFIED LICENSED STRUCTURAL ENGINEER WHO SHALL DETERMINE WHERE TEMPORARY SHORING/BRACING IS REQUIRED AND PROVIDE ITS DESIGN. PROVIDE THE TEMPORARY BRACING AS REQUIRED TO STABILIZE THE STRUCTURE AND ITS COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED ACCORDING TO THE CONTRACT DOCUMENTS.
- 3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND FOR MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK IN A MANNER THAT PROVIDES FOR THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST INJURY AND DAMAGE DUE TO FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH CONSTRUCTING THE WORK.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE STRUCTURE DURING CONSTRUCTION. WHERE CONSTRUCTION SEQUENCING AND STAGING ARE LIKELY TO CREATE OVERLOADING, THE CONTRACTOR SHALL RETAIN A QUALIFIED STRUCTURAL ENGINEER TO DETERMINE HOW TO TEMPORARILY SHORE AND SUPPORT THE OVERLOADED ELEMENTS IN A MANNER THAT DOES NOT EXCEED THE STRESS LIMITS OF THE ELEMENTS AND THE SUPPORTING FOUNDATION AS DEFINED BY THE APPLICABLE BUILDING CODES

<u>GEOTECHNICAL</u>

- THE FOUNDATIONS WERE DESIGNED TO THE REQUIREMENTS PROVIDED IN THE PROJECT GEOTECHNICAL REPORT NUMBER "6111 GEOTECHNICAL RPT" PREPARED BY GRI, DATED JUNE 25, 2018. THE CONTRACTOR SHALL UTILIZE THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT TO ACHIEVE THE DESIGN PARAMETERS LISTED IN THESE DRAWINGS.
- ALLOWABLE BEARING PRESSURE: 2,500 PSF MINIMUM BEARING DEPTH: 18 INCHES BELOW GRADE AT REST PRESSURE: 55 PSE/FT ACTIVE PRESSURE: 35 PSF/FT PASSIVE PRESSURE: 250 PSF/FT COEFFICIENT OF FRICTION: 0.3
- 2. THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND APPROVE PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL AND CASTING OF FOOTING. THE GEOTECHNICAL ENGINEER OR AN APPROVED TESTING LAB SHALL OBSERVE SOIL COMPACTION WORK.
- 3. SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY TO THE CONTRACT DOCUMENTS. THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT, AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 4. DETERMINE THE LOCATION OF ALL NEW/EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO COMMENCING EXCAVATION. COORDINATE UTILITY LOCATIONS WITH FOUNDATIONS AS REQUIRED.
- 5. CONTRACTOR SHALL CONFIRM THE ASBUILT LOCATION OF ANY POTENTIAL NEW OR EXISTING STRUCTURES OR OBJECTS WITHIN THE ZONE OF EXCAVATION INCLUDING WORK PERFORMED AS A PORTION OF THIS PROJECT BEFORE EXCAVATING OR INSTALLING FOUNDATION ELEMENTS. NOTIFY THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY EXCAVATIONS OR OTHER SITE WORK, IF THE EXCAVATION WILL CUT BELOW AN ADJACENT STRUCTURE'S BOTTOM OF FOOTING ELEVATION OR IF AN ADJACENT STRUCTURE IS UPSLOPE FROM THE PLANNED SITE WORK.
- 6. AGGREGATE BASE (GRANULAR FILL) BELOW CONCRETE SLAB-ON-GRADE SHALL CONSIST OF MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND BASED ON LOCAL AVAILABILITY.
- 7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.

STRUCTURAL OBSERVATION

- STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH BUILDING CODE SECTION 1704.6. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEMS AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED PER IBC SECTION 110 OR SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1705.
- THE OWNER SHALL EMPLOY AN ENGINEER OR ARCHITECT LICENSED TO PERFORM STRUCTURAL OBSERVATION IN THE PROJECT JURISDICTION.
- 3. THE STRUCTURAL OBSERVER SHALL PROVIDE A LETTER TO BE SUBMITTED TO THE BUILDING OFFICIAL BEFORE THE FIRST SITE VISIT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS.
- 4. THE STRUCTURAL OBSERVER SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL AT THE CONCLUSION OF ALL STRUCTURAL WORK THAT SITE VISITS HAVE OCCURRED AND THE OBSERVER SHALL REPORT ANY DEFICIENCIES THAT HAVE NOT BEEN RESOLVED.
- 5. THE CONTRACTOR SHALL SCHEDULE EACH OBSERVATION AT LEAST TWO WEEKS PRIOR TO DATE OF THE PROPOSED OBSERVATION.
- 6. THE STRUCTURAL OBSERVER SHALL PERFORM OBSERVATIONS AT THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES:
- CONSTRUCTION STAGES ELEMENTS/CONNECTIONS TO BE OBSERVED a) PRIOR TO CONCRETE PLACEMENT, OBSERVE FOUNDATION & WALL REINFORCEMENT, AND ANCHOR BOLTS. b) AT SUBSTANTIAL COMPLETION OF THE PRIMARY STRUCTURE PRIOR TO COVERING WALL OR ROOF SHEATHING.

1. ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 OREGON STRUCTURAL SPECIALTY CODE. 2. THE PROJECT IS TO BE CONSTRUCTED IN THE STATE OF OREGON. 3. DESIGN LOADS: BUILDING DESIGN LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE BUILDING CODE AND ASCE 7 AS FOLLOWS: 4. ROOF DEAD LOADS: M,E,& P ALLOWANCE 5 PSF EQUIPMENT ACTUAL WEIGHT 20 PSF (INCLUDES STRUCTURE WEIGHT & MEP ALLOWANCE) TOTAL DESIGN DL = 5. LIVE LOADS: 20 PSF ROOF 6. SNOW LOAD: Pg - 11 PSF GROUND SNOW LOAD:: FLAT-ROOF SNOW LOAD: Pf - 12 PSF SNOW EXPOSURE FACTOR Ce - 1.0 SNOW IMPORTANCE FACTOR: I - 1.1 THERMAL FACTOR: Ct - 1.2 25 PSF (20 PSF + 5 PSF RAIN-ON-SNOW) DESIGN: WIND LOADS: ANALYSIS PROCEDURE METHOD 2 – ANALYTICAL PROCEDURE DESIGN WIND SPEED: Vult - 103 MPH Vasd - 80 MPH EXPOSURE CATEGORY: B, ALL FACES DIRECTIONALITY FACTOR, Kd: 0.85 TOPOGRAPHIC FACTOR, Kzt: 1 00 INTERNAL PRESSURE COEFFICIENT: ± 0.18 COMPONENTS & CLADDING WIND PRESSURES: ROOF: -50 PSF, 16 PSF WALL: -26 PSF, 20 PSF 8. SEISMIC LOAD: EQUIVALENT LATERAL FORCE PROCEDURE ANALYSIS PROCEDURE MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss – 0.902 S1 – 0.412 SITE CLASS: RISK CATEGORY SEISMIC LOAD RESISTING SYSTEM: LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RESPONSE MODIFICATION FACTOR: R = 6.5 DEFLECTION AMPLIFICATION FACTOR: Cd = 4 SEISMIC IMPORTANCE FACTOR: le = 1.25 DESIGN SPECTRAL RESPONSE ACCELERATIONS: Sds = 0.685 Sd1 = 0.519 SEISMIC DESIGN CATEGORY SEISMIC RESPONSE COEFFICIENT: Cs = 0.132 DESIGN BASE SHEAR: 8.4 KIPS **SUBMITTALS** 1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE OWNER'S REPRESENTATIVE AND ENGINEER-OF-RECORD PRIOR TO ANY FABRICATION OR CONSTRUCTION. DIMENSION AND QUANTITY VERIFICATION ARE THE CONTRACTOR'S RESPONSIBILITIES AND ARE NOT REVIEWED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY THE ENGINEER OF RECORD. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED, EITHER PRIOR TO OR AFTER THE ENGINEER PROCESSES THE SHOP DRAWING SUBMITTALS, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED. CHANGES TO THE CONTRACT DOCUMENTS SHALL BE CLOUDED ON SHOP DRAWINGS OR REQUESTED IN WRITING. THE CONTRACTOR IS LIABLE FOR ANY DEVIATIONS UNLESS REVIEWED AND ACKNOWLEDGED BY THE ENGINEER OF RECORD IN WRITING. 3. COPIES OF STRUCTURAL DRAWINGS (PLANS AND/OR DETAILS) WILL NOT BE ACCEPTED AS SHOP DRAWINGS. ALL SHOP DRAWINGS MUST BE REPRODUCED BY THE RESPECTIVE SUPPLIERS AND DETAILED AS NECESSARY 4. THE CONTRACTOR SHALL PROVIDE 10 WORKING DAYS IN HIS SCHEDULE FOR THE ENGINEER'S REVIEW OF EACH SUBMITTAL. THE 10 WORKING DAYS COMMENCE UPON THE ENGINEER'S RECEIPT OF A PROPERLY COMPLETED SUBMITTAL IN HIS OFFICE. 5. REQUIRED SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: ROOF AND WALL SHEATHING CONCRETE MIX DESIGNS CONCRETE REINFORCEMENT COLD FORMED (LIGHT-GAUGE) METAL FRAMING 6. FOLLOWING ACCEPTANCE BY THE ARCHITECT AND ENGINEER AND PRIOR TO FABRICATION, ADDITIONAL TIME FOR REVIEW AND ACCEPTANCE OF SUBMITTAL BY THE BUILDING OFFICIAL IS REQUIRED AND SHALL BE IDENTIFIED AND ALLOWED FOR IN THE CONTRACTOR'S SCHEDULE. SUBMIT SUBSTITUTION REQUESTS PER THE PROCEDURES IN THE SPECIFICATIONS WITH APPLICABLE ICC REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DETAILING, FABRICATION AND ERECTION. ADDITIONAL ENGINEERING CALCULATIONS AND DETAILS, PROVIDED BY A STRUCTURAL ENGINEER LICENSED IN THE PROJECT STATE, MAY BE REQUIRED OF THE CONTRACTOR FOR SUBSTITUTIONS THAT ARE NOT SIMILAR TO THE SPECIFIED PRODUCTS AND CONFIGURATION. BIDDER-DESIGNED SUBMITTALS: CALCULATIONS AND SHOP DRAWINGS FOR ELEMENTS DESIGNED BY THE CONTRACTOR OR VENDORS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER. RETAINED BY THE CONTRACTOR AND REGISTERED IN THE PROJECT STATE. SUBMIT THESE DOCUMENTS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER AND OWNER'S REPRESENTATIVE PRIOR TO FABRICATION. INCLUDE ALL DESIGN LOAD AND REACTIONS ON OTHER STRUCTURES ON THE DRAWINGS. CALCULATIONS SHALL BE SUBMITTED FOR INFORMATION ONLY AND WILL NOT BE REVIEWED OR RETURNED. REVIEW BY THE STRUCTURAL ENGINEER OF RECORD SHALL NOT IMPLY ANY RESPONSIBILITY FOR THE ACTUAL DESIGN OF BIDDER-DESIGNED SYSTEMS OR COMPONENTS. BIDDER-DESIGNED SUBMITTALS INCLUDE THE FOLLOWING CONTRACTOR/VENDOR DESIGNED ELEMENTS. DEFERRED SUBMITTALS ARE INDICATED WITH AN ASTERISK: * CEILING/MEP ANCHORAGE AND SEISMIC BRACING * OVERHEAD DOOR ANCHORAGE AND SEISMIC BRACING MECHANICAL AND CHEMICAL ANCHORS 1. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. 2. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS AND IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS. 3. HOLES FOR INSTALLING REINFORCING BARS, BOLTS, THREADED RODS AND INSERTS SHALL BE DRILLED USING 4. CONCRETE: PER SECTION 1705.3 AND TABLE 1705.3, THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: THE ICC APPROVED DRILLING METHOD FOR THE ANCHOR TO BE INSTALLED. NON-DESTRUCTIVELY LOCATE EXISTING REINFORCING PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCING. 4. ADHESIVE ANCHORS SHALL USE ASTM A36 THREAD RODS, UNO PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR AS REQUESTED.

DESIGN CRITERIA

6. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.

8. THE FOLLOWING TABLE OF ANCHORS REPRESENT THE DEFAULT PRODUCTS USED IN DESIGN. WHERE SPECIFIC PRODUCTS ARE NOT OTHERWISE CALLED OUT IN THE STRUCTURAL DRAWINGS. THIS TABLE SHALL CONTROL

ADHESIVE ANCHORAGES, WHERE SPECIFIED ON THE DRAWINGS, SHALL CONFORM TO THE FOLLOWING: A. CONCRETE HILTI HIT-RE 500-V3 ESR-3814

CONCRETE

1. THE CONCRETE MIX TABLE SHOWN BELOW SHALL APPLY TO ALL CONCRETE I PROJECT. MIX DESIGN SUBMITTALS SHALL BE IDENTIFIED FOR INTENDED STR TO THE OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER FOR REVIE PLACING ANY CONCRETE.

CONCRETE MIX DESIGNS						
CONCRETE USAGE	fc (PSI) 28 DAY, MIN	ENTRAINED AIR (MAX)	W/C RATIO (MAX)	MAXIMUM AGGREGATE SIZE	FLY ASH CONTENT	
FOOTINGS	4,500	5% (+/- 1.5%)	0.45	3/4"	15-25%	
FOUNDATION WALLS	4,500	5% (+/- 1.5%)	0.45	3/4"	15-25%	
INTERIOR SLAB ON GRADE	4,000	NONE	0.50	3/4"	15-20%	
EXTERIOR SLAB ON GRADE	4,500	5% (+/- 1.5%)	0.45	3/4"	15-20%	

2. SCHEDULED CEMENT CONTENT IS THE MINIMUM TOTAL CEMENTITIOUS MATERIALS CONTENT INCLUDING PORTLAND CEMENT AND FLY ASH.

- 3. FLY ASH SHALL CONFORM TO ASTM C618, TYPE F. PERCENTAGE SCHEDULED IS BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL INCLUDING ASTM C150, C595, C845, AND C1157 CEMENT. DO NOT USE FLY ASH IF CONTENT WITHIN THE PERCENTAGES SHOWN CANNOT BE ACHIEVED.
- 4. WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE INCORPORATED IN THE CONCRETE MIX DESIGNS AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.
- 5. AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK THAT IS EXPOSED TO WEATHER. WHERE ENTRAINED AIR IS NOT SCHEDULED, DO NOT ALLOW THE AIR CONTENT OF SLABS TO EXCEED 3% NATURALLY. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE END OF THE PLACING HOSE.
- 6. SLEEVES FOR PIPING OR DUCTS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN JOISTS, BEAMS, GIRDERS, OR IN SLABS ADJACENT TO A COLUMN (WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS) UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE STRUCTURAL ENGINEER'S APPROVAL BEFORE THE SLAB IS PLACED. ALL PIPE PENETRATIONS THROUGH SLABS SHALL BE SLEEVED IN CONFORMANCE WITH ACI 318, SECTION 6.3.
- 7. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS.
- 8. WHEN RUN IN SLABS, ELECTRICAL CONDUIT SHALL BE RUN AT MID-DEPTH OF THE SLAB AND CONDUIT SIZE SHALL NOT EXCEED 33 PERCENT OF THE SLAB DEPTH. NO CONDUIT SHALL BE PLACED IN SLABS WITH ACTUAL CONCRETE THICKNESS LESS THAN 3 INCHES. NOT INCLUDING METAL DECK DEPTH. THERE SHALL BE A MINIMUM OF 3 INCHES OF CLEAR SPACE BETWEEN CONDUITS. ALUMINUM CONDUIT IS PROHIBITED. ADDITIONAL REINFORCEMENT, #3 AT 12" OC, SHALL BE PLACED PERPENDICULAR TO THE CONDUIT ABOVE AND BELOW THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1' - 0" BEYOND THE CONDUITS ON BOTH SIDES
- 9. REINFORCING STEEL MATERIALS

DEFORMED BARS	ASTM A615, GI
SPECIAL DUCTILE QUALITY WELDABLE DEFORMED BARS	ASTM A706, GI
SMOOTH WELDED WIRE FABRIC (WWF)	ASTM A185 (Fy

- 10. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
- 11. ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING CONCRETE PLACEMENT. REINFORCING PLACEMENT SHALL BE APPROVED BY THE ARCHITECT OR THEIR AUTHORIZED REPRESENTATIVE BEFORE CONCRETE IS PLACED.
- 12. LAP REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE 'Ls' SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE SUBJECT TO STRUCTURAL ENGINEER'S APPROVAL, MECHANICAL SPLICES, WHERE ALLOWED ON THE PLANS. SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION. LAP SPLICES OF BOTTOM BARS SHALL OCCUR AT A SUPPORT. LAP SPLICES OF TOP STEEL SHALL OCCUR AT MID SPAN.
- 13. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED AS SUCH OR APPROVED BY THE STRUCTURAL ENGINEER.
- 14. REINFORCING BARS SHALL NOT BE WELDED OR TACK WELDED TO OTHER BARS OR TO PLATES, ANGLES, ETC. UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS DI.4, WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS QUALIFIED FOR WELDS USING APPROVED ELECTRODES.
- 15. CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE: CAST AGAINST AND PERMANENTLY

EXPOSED TO EARTH.....

EXPOSED TO EARTH OR WEATHER #5 OR SMALLER 1 1/2"

		1/4
#6 OR LARGER	2"	1

NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND

SLABS, WALLS, JOISTS	
#11 OR SMALLER	
ALL OTHER	1 1/2"
BEAMS COLUMNS	

EAIVIS, COLUIVINS	
PRIMARY REINFORCEMENT,	
TIES, STIRRUPS, SPIRALS,	1

16. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC UNLESS NOTED OTHERWISE.

17. ALL CONCRETE SHALL BE VIBRATED.

SPECIAL STRUCTURAL INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE BUILDING CODE, SECTION 1704, AS NOTED BELOW. TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE 17. TOENAIL JOISTS TO TOP PLATES OF BEARING WALLS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- 2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
- 3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 110 OF THE BUILDING CODE
- ALL CONCRETE EXCEPT: SIDE WALKS, AND DRIVEWAYS.
- 5. SPECIAL INSPECTION FOR SEISMIC RESISTANCE IS REQUIRED AND SHALL COMPLY WITH SECTION 1705.11 INCLUDING ARCHITECTURAL, ELECTRICAL, AND MECHANICAL COMPONENTS.
- 6. THE SPECIAL INSPECTOR SHALL PERFORM AN INSPECTION OF THE COLD FORMED STEEL FRAMING AND WALL/ROOF SHEATHING ATTACHMENT TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS, AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- 7. SOILS: PER SECTION 1705.6 AND TABLE 1705.6. SEE CIVIL DRAWINGS AND SPECIFICATION DIVISION 2.
- 8. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR: INSPECTOR TO VERIFY INSTALLATION IN ACCORDANCE WITH ESR REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.
- 9. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- 10. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.
- 11. THE TESTING/INSPECTION FIRM'S ENGINEER SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

7. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT.

WOOD

WALL STUDS

WALL PLATES

JOISTS (2x MEMBERS)

0.131

0.148

0.148

0.162

0.192

12d

16d

20d

GENERAL FRAMING

AIX DESIGNS USED ON THIS	
RUCTURAL USE AND SUBMITTI	E
W TWO WEEKS PRIOR TO	

- RADE 60 RADE 60 LOW ALLOY / = 65,000 PSI)

- . SAWN LUMBER SHALL BE KILN-DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU - STANDARD GRADING RULES FOR WEST COAST LUMBER NO 17, SOUTHERN PINE INSPECTION BUREAU - STANDARD GRADING RULES FOR SOUTHERN PINE LUMBER, OR SIMILAR APPROVED GRADING AGENCY'S LATEST EDITION STANDARD. ALL DIMENSIONAL WOOD FRAMING USED AS STRUCTURAL ELEMENTS SHALL CONFORM TO DOC PS20-10. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:
- \square DF-LARCH NO 2 DF-LARCH NO 2 뀌 DF-LARCH NO 2 ഗ 4 LIGHT GAUGE STEEL CONNECTOR CALLOUTS REFER TO PRODUCTS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. INSTALL CONNECTORS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND THE DRAWINGS. CONNECTORS SHALL BE INSTALLED TO OBTAIN THE MAXIMUM LOAD VALUE LISTED IN THE \mathbf{O} MANUFACTURER'S CATALOG UNO. LIGHT GAUGE STEEL CONNECTORS SHALL HAVE A G90 GALVANIZED FINISH LIGHT GAUGE STEEL CONNECTORS AND THEIR NAILS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL 4 HAVE A G185 GALVANIZED FINISH OR SHALL BE STAINLESS STEEL. FASTENERS LESS THAN ONE HALF INCH DIAMETER FOR THESE CONNECTORS SHALL BE HOT-DIP OR MECHANICALLY GALVANIZED. CONNECTORS SHALL HAVE FASTENERS OF THE SAME MATERIAL TYPE AND FINISH. NAILING SHALL CONFORM TO THESE DRAWINGS AND THE MINIMUM NAILING REQUIREMENTS AS SET FORTH IN THE BUILDING CODE. IN THE EVENT OF A DISCREPANCY BETWEEN THESE DRAWINGS AND THE BUILDING CODE, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. 94665 . NAILS, SCREWS, ANCHOR BOLTS, WASHERS, THRU BOLTS, EXPANSION ANCHORS, EPOXY ANCHOR RODS, AND Teliliam S. Raglan CONCRETE OR MASONRY HEAVY DUTY SCREW ANCHORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP (ASTM A153 CLASS C) OR MECHANICALLY GALVANIZED (ASTM B695 CLASS 55). OREGON 5. WOOD STRUCTURAL PANELS SHALL BE APA RATED AND SHALL CONFORM TO PS 1/PS 2 PRODUCT STANDARD DOCUMENTS. PANELS PERMANENTLY EXPOSED TO WEATHER SHALL BE EXTERIOR GRADE. PANELS APPLIED TO STEVENK WALLS, FLOORS, AND ROOFS SHALL BE EXPOSURE 1 GRADE. PROTECT SHEATHING FROM WATER DAMAGE WHILE STORED AT JOB SITE. SHEATHING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE: EXPIRES: 12/31/2022 ROOF SHEATHING SHALL BE MIN 19/32" WITH A MIN PANEL SPAN RATING 40/20. WALL SHEATHING SHALL BE MIN 7/16" WITH A MIN PANEL SPAN RATING 24/16. WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO FASTENING SCHEDULE, OSSC TABLE 2304.10.1. ALL NAILS SHALL BE COMMON UNLESS NOTED OTHERWISE. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. NAILS USED ON THE EXTERIOR OR SUBJECT TO MOISTURE SHALL BE GALVANIZED OR STAINLESS STEEL. COMMON NAIL SIZE TABLE DIAMETE LENGTH 2-1/2" 3-1/4" 3-1/2" THE TABLE LISTS THE NAILS USED TO ENGINEER THE WOOD FRAMING FOR THE PROJECT. ALL NAILS USED SHALL COMPLY WITH THE DIAMETERS AND LENGTHS NOTED. SPECIAL NAILS WILL BE NOTED IN THE CONSTRUCTION DOCUMENTS. 7. WOOD CONNECTION BOLTS SHALL CONFORM TO ASTM A307. BOLTS SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS. BOLT HOLES SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE. 8. PROTECT WOOD FROM WEATHER SUCH THAT MOISTURE CONTENT AT THE TIME GYPSUM WALLBOARD IS APPLIED DOES NOT EXCEED 19%. 9. WOOD MEMBERS DIRECTLY EXPOSED TO MOISTURE OR THAT ARE IN CONTACT WITH CONCRETE OR OTHER CEMENTITIOUS MATERIALS SHALL BE PRESSURE TREATED. PRESSURE TREAT LUMBER IN ACCORDANCE WITH THE MANUAL OF RECOMMENDED PRACTICE OF THE AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA). 10. DETERMINE THE SIZE AND LOCATION OF OPENINGS, INCLUDING THOSE NOT SHOWN ON THE CONTRACT Ζ DRAWINGS, REQUIRED BY ALL TRADES. CONFIRM THAT THE TYPICAL AND SPECIAL FRAMING DETAILS SHOWN IN THE CONTRACT DRAWINGS COVER ALL OF THE CONDITIONS DETERMINED. REPORT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. 11. PROVIDE SIMPSON LUS FACE HANGERS OR B TOP FLANGE HANGERS BETWEEN JOISTS AND BEAMS UNLESS OTHERWISE NOTED. PROVIDE SIMPSON HUSC CONCEALED FLANGE HANGERS BETWEEN BEAMS AND COLUMNS OR BUILT-UP POSES. PROVIDE SIMPSON AB# SERIES AT BASE AND PC# SERIES AT CAPS UNLESS OTHERWISE NOTED. PROVIDE WEB BLOCKING AT WOOD I JOISTS. 12. PROVIDE 2X6 STUDS AT 16" OC AT EXTERIOR WALLS AND INTERIOR WALLS. STUDS SHALL HAVE FULL BEARING ON A 2" NOMINAL OR LARGER PLATE OR SILL WITH A WIDTH TO EQUAL OR EXCEEDING THE STUD WIDTH. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS. PROVIDE ONE KING STUD AND ONE JACK STUD EACH SIDE OF EA. OPENING, MIN. SEE TYPICAL DETAILS FOR ADDITIONAL OPENING REQUIREMENTS. STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" OC, STAGGERED, OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0" OC, MINIMUM TWO \sim ANCHORS PER WALL SEGMENT, MAXIMUM 8" FROM EACH WALL END UNLESS INDICATED OTHERWISE. MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TOGETHER PER THE TYPICAL DETAILS. 13. HEADERS SHALL BE THREE 2X10's FOR 2X6 WALLS, MINIMUM UNLESS NOTED OTHERWISE. 14. ALL WALLS SHALL BE CONSTRUCTED AS SHEAR WALL TYPE SW6 UNLESS OTHERWISE NOTED. PROVIDE CONTINOUS BLOCKING AT ALL JOINTS AND NAIL SHEATHING TO BLOCKING AT 6" ON CENTER AT ALL EDGES PER THE SHEAR WALL SCHEDULE. 15. CARE SHALL BE TAKEN TO AVOID OVERDRIVING NAILS THROUGH ROOF, FLOOR, AND WALL SHEATHING. NAILS SHALL BE CONSIDERED OVERDRIVEN IF THE HEAD HAS BEEN DRIVEN MORE THAN 1/8" BELOW THE FACE OF THE SHEATHING. IF MORE THAN 25% OF THE NAILS IN A SINGLE SHEET ARE OVERDRIVEN, ADD ONE ADDITIONAL NAIL FOR EVERY TWO OVERDRIVEN NAILS WHERE 6" OR 4" NAIL SPACINGS ARE REQUIRED OR REMOVE AND REPLACE THE FULL SHEET WHERE NAIL SPACINGS LESS THAN 4" ARE REQUIRED.. 16. WOOD FRAMING SHALL BE A MINIMUM OF 2", BUT SHALL NOT BE LESS THAN THE DISTANCE SPECIFIED IN CHAPTER 21 OF THE BUILDING CODE AND THE INTERNATIONAL MECHANICAL CODE, FROM FLUES, CHIMNEYS, AND FIREPLACES, AND 6" AWAY FROM FLUE OPENINGS. HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS PER SCHEDULE. ATTACH BEAMS COMPRISED OF MULTIPLE JOISTS AS SHOWN IN TYPICAL DETAIL. 18. PROVIDE ONE ROW OF BRIDGING EVERY 8 FEET ALONG SPAN OF JOISTS 19. JOISTS AS USED IN THIS SECTION REFERS TO 2X FRAMING MEMBERS USED AS ROOF RAFTERS OR FLOOR JOISTS. NOTCHES AT JOIST ENDS SHALL NOT EXCEED ONE FOURTH THE DEPTH OF THE JOIST. HOLES BORED FOR PIPE OR CABLE SHALL BE WITHIN THE MIDDLE THIRD OF THE JOIST DEPTH AND THE DIAMETER OF SUCH HOLES SHALL NOT EXCEED ONE THIRD THE DEPTH OF THE JOIST OR 1", WHICHEVER IS GREATER. ALL OTHER REQUIRED HOLES OR NOTCHES MUST BE APPROVED BY STRUCTURAL ENGINEER. THIS SECTION DOES NOT APPLY TO ENGINEERED WOOD MEMBERS: LS, LVL OR PSL. CONTACT ENGINEER PRIOR TO NOTCHING OR DRILLING IN ENGINEERED WOOD MEMBERS. 20. LAY ROOF SHEATHING WITH GRAIN PERPENDICULAR TO SUPPORTS. NAIL ROOF SHEATHING PER TYPICAL DETAIL AND PROVIDE APPROVED EDGE CLIPS CENTERED BETWEEN FRAMING MEMBERS AT UNBLOCKED ROOF 21. PROVIDE SIMPSON H2.5A HURRICANE CLIPS FROM ROOF RAFTERS AND CANTILEVERED RAFTERS TO THE WALL TOP PLATES OR SUPPORTING BEAMS UNLESS ANOTHER HURRICANE CLIP IS NOTED. PROVIDE WEB BLOCKING AT WOOD I JOISTS RECEIVING HURRICANE CLIPS. 22. THE STRUCTURAL DRAWINGS DO NOT SHOW VENTING DETAILS AT ROOFS AND OTHER ENCLOSED SPACES. SEE ARCH FOR VENTING REQUIREMENTS, IF ANY. 23. ALL ELECTRICAL, MECHANICAL, PLUMBING AND ARCHITECTURAL SYSTEMS (INCLUDING VERTICAL TRANSPORTATION SYSTEMS, EXTERIOR FINISHES AND CLADDING SYSTEMS) SHALL BE DESIGNED FOR SHRINKAGE OF 1/2" PER FLOOR ABOVE THE UPPERMOST CONCRETE FLOOR LEVEL. THE TOTAL ESTIMATED SHRINKAGE FOR VARIOUS HEIGHT BUILDINGS ARE AS FOLLOWS:
 - NO. OF TOTAL ESTIMATED STORIES

SHEATHING EDGES.

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	2x BOTTOM PLATE AT	VALID FOR I	DIMENSIONAL LUMBER PR	ROJECT	SOU	THERN PINE STUD SHEAR V	VALL SCHEDULE	
	ELEVATED FLOORS		FRAMING	REQUIREMENTS	NAILING RE	EQUIREMENTS	WALL BOTTOM P	LATE CONNE
	- CONNECTION TYPE 1 - BLOCKING OR RIM JOIST	SHEAR WALL TYPE	SHEATHING (NOTES 1,2)	FDN SILL PLATE, WALL STUDS OCCURRING AT ABUTTING PANEL EDGES, & BLOCKING (NOTES 4,5,6)	PANEL EDGES (NOTES 7,8)	INTERMEDIATE FRAMING MEMBERS	SILL TO WOOD FRAMING BELOW (CONNECTION TYPE 1)	SILL TO CONNE (CONNE (No
	CONNECTION TYPE 3	SW6	7/16" SHEATHING 1 SIDE	2x	8d @ 6" OC	8d @ 12" OC	16d @ 8" OC	5/8" Ø AE
	- DOUBLE TOP PLATE	SW4	7/16" SHEATHING 1 SIDE	3х	8d @ 4" OC	8d @ 12" OC	16d @ 6" OC	5/8" Ø AE
	SPLICED PER TYPICAL DETAIL	SW3	7/16" SHEATHING 1 SIDE	3x	8d @ 3" OC	8d @ 12" OC	16d @ 4" OC	5/8" Ø AE
· ` `		SW2	7/16" SHEATHING 1 SIDE	Зх	8d @ 2" OC	8d @ 12" OC	16d @ 3" OC	5/8" Ø AE
	EDGE NAILING AT ALL JAMB, CORNER, WALL	SW66	7/16" SHEATHING 2 SIDES (NOTE 3)	2x	8d @ 6" OC	8d @ 12" OC	(2) ROWS 16d @ 8" OC	5/8" Ø AE
	WITH HOLD DOWNS	SW44	7/16" SHEATHING 2 SIDES (NOTE 3)	Зх	8d @ 4" OC	8d @ 12" OC	(2) ROWS 16d @ 6" OC	5/8" Ø AE
	- INTERMEDIATE FRAMING MEMBERS	SW33	7/16" SHEATHING 2 SIDES (NOTE 3)	3x	8d @ 3" OC	8d @ 12" OC	(2) ROWS 16d @ 4" OC	5/8" Ø AE
	- ANCHOR ROD PER SCHED CONNECTION TYPE 2	SW22	7/16" SHEATHING 2 SIDES (NOTE 3)	3x	8d @ 2" OC	8d @ 12" OC	(2) ROWS 16d @ 4" OC	5/8" & Al

USED WHEN NAILED TOGETHER PER 'WALL BOTTOM PLATE

5. WALL STUDS NOT OCCURING AT ABUTTING PANEL EDGES

6. WALL BOTTOM PLATES OCCURING ABOVE WOOD FRAMING

8. INSTALL BLOCKING AT PANEL EDGES NOT OCCURRING AT

9. PROVIDE SIMPSON BPS TYPE BEARING PLATES OR

10. ANCHOR BOLTS SHALL BE ADHESIVE OR CIP AND

EQUIVALENT ON ALL ANCHOR BOLTS TO CONCRETE.

PROVIDE BPS5/8-3 AT 2x4 WALLS AND BPS5/8-6 AT 2x6

WALLS. PROVIDE STANDARD CUT WASHER BETWEEN NUT

EMBEDMENT SHALL BE MEASURED TO THE TOP SIDE OF

THE EMBEDDED NUT. LOCATE ANCHOR BOLTS WITHIN 8"

11. FRAMING CLIPS SHALL BE SIMPSON A35, SIMPSON LTP5,

12. DO NOT OVER DRIVE NAILS. REFER TO GENERAL NOTES.

7. STAGGER NAILS AT ABUTTING PANEL EDGES.

TO WOOD FRAMING BELOW'.

MAY BE 2x.

MAY BE 2x.

AND BPS.

STUDS OR PLATES.

OF ENDS OF WALLS.

OR APPROVED EQUAL.

(NOTE 11)

CLIPS @ 24" OC

CLIPS @ 16" OC

CLIPS @ 12" OC

CLIPS @ 8" OC

CLIPS @ 24" OC

(2) ROWS

CLIPS @ 16" OC

(2) ROWS

CLIPS @ 12" OC

(2) ROWS

CLIPS @ 8" OC

(2) ROWS

260

380

490

640

520

760

980

1280

dnojr

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LUMBER (LSL, LVL, PSL, OR I-JOIST)

	MECHANICAL	. SYMB	DLS	
	HVA	AC		T DEFERRED SUBMITTALS
	DIFFUSER (SUPPLY)	24"x12"	TYPICAL DUCT - SIZE AS INDICATED (WIDTH / DEPTH) SIZE INDICATES FREE AREA	1. HANGERS AND SUPPORTS, AND THEIR STRUCTURAL ATTACHMENTS FOR ALL EQUIPMENT, PIPING & DUCTWORK >6 SQ.FT. CROSS SECTIONAL AREA.
\bigcirc	DIFFUSER (SUPPLY)		MITERED ELBOW WITH VANES	ALL DEFERRED SUBMITTALS SHALL BE SUBMITTED AS DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF OREGON.
	GRILLE (RETURN)		MITERED ELBOW WITHOUT VANES	
_				
			RADIUS ELBOW	
~ // -	RETURN ARROW			
<i>⊷</i> ∕~	EXHAUST ARROW		TEE WITH VANES	2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE
<u>12"x12" D-1</u> 200 CFM	RECTANGULAR DIFFUSER INDICATION SHOWING CFM	\bigtriangledown	TEE WITH RADIUS	 2019 OREGON MECHANICAL SPECIAL IY CODE 2021 OREGON PLUMBING SPECIAL TY CODE 2019 OREGON FIRE CODE 2019 OREGON FIRE CODE
	ROUND DIFFUSER INDICATION SHOWING CFM	\bigcirc	ROUND DUCT UP	2019 NATIONAL FIRE PROTECTION ASSOCIATION 13
→ <u>12"x12" G-1</u> 200 CFM	RECTANGULAR GRILLE INDICATION SHOWING CFM	\square	SUPPLY DUCT UP	
<u>12"x12" R-1</u> 200 CFM	RECTANGULAR REGISTER INDICATION SHOWING CFM		RETURN DUCT UP	
F V	FIRE DAMPER			
S 🔻 ———	SMOKE DAMPER		EXHAUST DUCT UP	 REFER TO ARCHITECTURAL AND CODE PLANS FOR RATED WALLS AND PARTITIONS. VERIFY LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
FS 🖝	FIRE/SMOKE DAMPER	(\mathbb{S})	ROUND DUCT DOWN	3. COORDINATE PIPING/DUCT PENETRATIONS THROUGH WALLS, ROOFS, OR CEILINGS WITH OTHER TRADES.
BD	BACKDRAFT DAMPER			 INSTALL EXPANSION COMPENSATORS, GUIDES, AND ANCHORS PER MANUFACTURERS RECOMMENDATIONS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT TO A CONTRACTOR IS A CO
GD	GRAVITY DAMPER		SUPPLY DUCT DOWN	BUILDING INTO MECHANICAL ROOMS OR OTHER INTERIOR SPACE IF REQUIRED. COORDINATE WITH CONSTRUCTIO
RD L	BARAMETRIC RELIEF DAMPER			SCHEDULE. 6. REFERENCE STRUCTURAL DETAILS FOR PIPING/EQUIPMENT PLACEMENT. INSTALLATION.
PR L	PRESSURE REDUCING DAMPER DAMPER		RETURN DUCT DOWN	7. PLANS DO NOT INCLUDE ALL OFFSETS FOR COORDINATION WITH DUCT, PIPING, LIGHTING, AND STRUCTURAL SYST
М [MOTORIZED DAMPER		EXHAUST DUCT DOWN	PROVIDE ALLOWANCES FOR REQUIRED OFFSETS. 8. VARIABLE FREQUENCY DRIVES (VFD'S) TO BE FURNISHED BY DIVISION 23. 9. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL REMOVING, CUTTING, REINSTALLING, RATCHING AND PLACE
VD	VOLUME DAMPER		FLEXIBLE CONNECTION	ALL EXISTING BUILDING STRUCTURE, SURFACES, AND FINISHES (THAT ARE TO REMAIN) REQUIRED TO COMPLETE
	VOLUME DAMPER			WORK STATED IN THE CONTRACT DOCUMENTS.
- <u>\/</u> -	OPPOSED DAMPER	<u> </u>		11. WHEN MOUNTING OR LOCATING EQUIPMENT, COORDINATE WITH ALL TRADES TO ALLOW REQUIRED SPACE NEEDE
-+++-	PARALLEL DAMPER	SA		COIL PULL, FILTER PULL, EQUIPMENT REMOVAL WITHOUT PIPE MAIN REMOVAL, ETC. TO FACILITATE REMOVAL OF
•	SECURITY BAR	—— RA ——	RETURN AIR - SINGLE LINE	12. PIPING SHALL NOT BE SUPPORTED FROM OTHER PIPING, CONDUIT, EQUIPMENT, OR DUCTWORK.
\vdash (T)	THERMOSTAT - WALL MOUNTED	—— EA ——	EXHAUST AIR - SINGLE LINE	13. RUN ALL WASTE, VENT, STORM/OVERFLOW STORM AND BUILDING DRAIN PIPING AT 1/4" PER FOOT SLOPE UNLESS
		OA	OUTSIDE AIR - SINGLE LINE	14. ELEVATIONS SHOWN ARE TO THE INVERT OF ALL PIPING BASED ON ARCHITECTURAL ELEVATION OF FINISHED FLO
FCG	CARBON MONOXIDE SENSOR - WALL MOUNTED	—— TA ——	TRANSFER AIR - SINGLE LINE	INDICATED ON THE ARCHITECTURAL PLANS UNLESS OTHERWISE NOTED.
	CARBON MONOXIDE SENSOR - CEILING MOUNTED	— LTD —	TRANSFER AIR - SINGLE LINE	15. ALL MITERED ELBOWS SHALL BE PROVIDED WITH ACOUSTICAL TURNING VANES.
	CARBON DIOXIDE SENSOR - WALL MOUNTED	\longrightarrow	SINGLE LINE REDUCER	
(C) 02	CARBON DIOXIDE SENSOR - CEILING MOUNTED		SINGLE LINE FLEX DUCT	
ΗÐ	HUMIDISTAT - WALL MOUNTED	———	NEW TO EXISTING CONNECTION POINT	
(H) ⊢N	HUMIDISTAT - WALL MOUNTED	AFMS	AIRFLOW MEASUREMENT STATION	
$ \mathbb{N}_{02} $	NITROGEN DIOXIDE SENSOR - WALL MOUNTED	DP	DIFFERENTIAL PRESSURE SENSOR (DUCT MOUNTED)	
⊢S	TEMPURATURE SENSOR - WALL OR DUCT MOUNTED	SP [STATIC PRESSURE SENSOR (DUCT MOUNTED)	
S	TEMPURATURE SENSOR - CEILING MOUNTED	B	EMERGENCY BOILER SHUT OFF SWITCH	
HP	PRESSURE SENSOR - WALL OR DUCT MOUNTED	SP	STATIC PRESSURE SENSOR	
(P)	PRESSURE SENSOR - CEILING MOUNTED	Ĩ	DUCT SMOKE DETECTOR OR SWITCH	
		⊢©ຼ	RED LIGHT GREEN LIGHT INDICATOR	
UV	OF LIVADLE OF EINING SEINSUK	к		

RED SUBMITTALS

CABLE CODE

NICAL NOTES

CHITECTURAL AND CODE PLANS FOR RATED WALLS AND PARTITIONS. FIONS OF THERMOSTATS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION. PIPING/DUCT PENETRATIONS THROUGH WALLS, ROOFS, OR CEILINGS WITH OTHER TRADES. NSION COMPENSATORS, GUIDES, AND ANCHORS PER MANUFACTURERS RECOMMENDATIONS. IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN NEW MECHANICAL EQUIPMENT THROUGH D MECHANICAL ROOMS OR OTHER INTERIOR SPACE IF REQUIRED. COORDINATE WITH CONSTRUCTION

- STRUCTURAL DETAILS FOR PIPING/EQUIPMENT PLACEMENT, INSTALLATION. IT INCLUDE ALL OFFSETS FOR COORDINATION WITH DUCT, PIPING, LIGHTING, AND STRUCTURAL SYSTEMS.
- WANCES FOR REQUIRED OFFSETS.
- EQUENCY DRIVES (VFD'S) TO BE FURNISHED BY DIVISION 23. CONTRACTOR IS RESPONSIBLE FOR ALL REMOVING, CUTTING, REINSTALLING, PATCHING AND PLACEMENT OF BUILDING STRUCTURE, SURFACES, AND FINISHES (THAT ARE TO REMAIN) REQUIRED TO COMPLETE ALL
- D IN THE CONTRACT DOCUMENTS. ETMETAL BOX OVER EXHAUST AND RETURN GRILLES WHERE DUCTS OF SMALLER SIZE CONNECT TO GRILLE. ING OR LOCATING EQUIPMENT, COORDINATE WITH ALL TRADES TO ALLOW REQUIRED SPACE NEEDED FOR TER PULL, EQUIPMENT REMOVAL WITHOUT PIPE MAIN REMOVAL, ETC. TO FACILITATE REMOVAL OF THE
- NOT BE SUPPORTED FROM OTHER PIPING, CONDUIT, EQUIPMENT, OR DUCTWORK.
- E, VENT, STORM/OVERFLOW STORM AND BUILDING DRAIN PIPING AT 1/4" PER FOOT SLOPE UNLESS OTED. HORIZONTAL VENT PIPING SHALL BE GRADED TO DRAIN BACK TO THE WASTE PIPE BY GRAVITY. SHOWN ARE TO THE INVERT OF ALL PIPING BASED ON ARCHITECTURAL ELEVATION OF FINISHED FLOORS AS I THE ARCHITECTURAL PLANS UNLESS OTHERWISE NOTED.
- ELBOWS SHALL BE PROVIDED WITH ACOUSTICAL TURNING VANES.

ABBREVIATIONS EXISTING (E)

#	NUMBER	(E)	EXISTING
&	AND	E	EAST
°C	AT	EA	EACH
	DEGREES CELCIUS	EA	EXHAUST AIR
°F	DEGREES FAHRENHEIT	EAT EC	ENTERING AIR TEMPERATURE ELECTRICAL CONTRACTOR
A	COMPRESSED AIR	EDH	ELECTRIC DUCT HEATER
A AMP	AMPERE	EER	ENERGY EFFICIENCY RATIO
A/C	AIR CONDITIONING(ER)	EEWS	EMERGENCY EYE WASH
AABC	ASSOCIATED AIR BALANCE COUNCIL		EMERGENCY EYE WASH SHOWE
AAP AAV		EFF	EFFICIENCY ELECTRICAL HEATER
ACCU	AIR COOLED CONDENSER AIR COOLED CONDENSING UNIT ALIXILIARY CONDENSATE DRAIN	EL FL FC	ELECTRICAL NEATER ELEVATION ELECTRIC(AL)
AD	ACCESS DOOR	ELEV	ELEVATOR
AD	AREA DRAIN	EMER	EMERGENCY
ADA	AMERICANS WITH DISABILITY ACT	EMCS	ENERGY MANAGEMENT CONTRO
ADDN	ADDITION OR ADDITIONAL	ENCL	ENCLOSURE
ADJ	ADJUSTABLE	ENG	ENGINEER
AFF	ABOVE FINISH FLOOR	EQ	EQUAL
AFG AGF	ABOVE FINISHED GRADE AIR GAP FITTING	EQUIP	
AHJ AHRI	AUTHORITY HAVING JURISDICTION AIR-CONDITIONING HEATING AND	ES	ENERGENCY SHOWER
AHU		EST ET	ESTIMATE EXPANSION TANK
ALT AMB	AREA INLET ALTERNATE AMRIENT	EWC EWH	ELECTRIC WATER COOLER ELECTRIC WATER HEATER
AMBA	AMERICAN BOILER MANUFACTURERS	EWT EXH	ENTERING WATER TEMPERATUR EXHAUST
ANCH	ANCHOR	EXIST	EXISTING
ANSI	AMERICAN NATIONAL STANDARDS	EXP	EXPOSED
AP	INSTITUTE ACCESS PANEL	EXT	EXTERIOR
APPROX	APPROXIMATE	F	FAHRENHEIT
APD	AIR PRESSURE DROP		FIRELINE
AR ARCH	ACID RESISTING ARCHITECTURAL	F F.V. FA	FURNACE FIELD VERIFY FIRE ALARM
AS ASCE	AIR SEPERATOR AMERICAN SOCIETY OF CIVIL ENGINEERS	FA FA FA	FIRE ALARIVI FACE FIRE ALARM ANNUNCIATOR
ASHP		FAB	FABRICATE(D) FIRE ALARM CONTROL PANEL
ASME	ENGINEERS	FCO FCU	FLOOR CLEAN OUT FAN COIL UNIT
	ENGINEERS	FD FD	FIRE DAMPER FLOOR DRAIN
AV	AUDIO-VIDEO	FDC	FIRE DEPARTMENT CONNECTION
AV	ACID VENT	FE	FIRE EXTINGUISHER
AV	AIR VENT	FEC	FIRE EXTINGUISHER CABINET
AVTR	ACID VENT THRU ROOF	FF	FINISH FLOOR
AW	ACID WASTE	FH	FIRE HYDRANT
AWG	AMERICAN WIRE GUAGE	FHC	FIRE HOSE CABINET
AWT		FIN FIX	FINISHED FIXTURE
BAS	BUILDING AUTOMATION SYSTEM	FLEX FLR	FLEXIBLE FLOOR FIDE MAIN
BC	BALANCING COCK BACK DRAFT DAMPER	FM FM EME	FIRE MAIN FORCE MAIN FLOW MEALISURING FOLIIPMENT
BEL BF	BELOW BOILER FEED	FO	FLAT OVAL (DUCTWORK)
BFF	BELOW FINISH FLOOR	FOR	FUEL OIL RETURN
BFP	BACKFLOW PREVENTER	FOS	FUEL OIL SUPPLY
BFV	BUTTERFLY VALVE	FOV	FUEL OIL VENT
BHP	BREAK HOURSEPOWER	FPD	FIRE PUMP DISCHARGE
BLDG	BUILDING	FPM	FEET PER MINUTE
BLKG	BLOCKING	FS	FLOOR SINK
BLKHD	BULKHEAD	FS	FLOW SWITCH
BMS	BUILDING MANAGEMENT SYSTEM	FSD	FIRE/SMOKE DAMPER
BOC	BOTTOM OF CASING	FT	FEET (FOOT)
BOD	BOTTOM OF DUCT	FT	FLOW TRANSMITTER
BOP	BOTTOM OF PIPE	FTR	FIN TUBE RADIATOR
BOT	BOTTOM	FTU	FAN TERMINAL UNIT
BSMI BTU BTUH	BRITISH THERMAL UNIT	FU FUT	
BV	BALL VALVE	FVC	
C C	CONDUIT CONDENSER WATER	G	GRILLE NATURAL GAS GALIGE
CAP	CAPACITY	GAL	GALLON
	CONDENSATE DRAIN	GALV	GALVANIZED
CENT	CENTRIFUGAL	GC	GENERAL CONTRACTOR
CF	CUBIC FEET	GCO	GRADE CLEAN OUT
CFH	CUBIC FEET PER HOUR	GD	GARBAGE DISPOSAL
CFM	CUBIC FEET PER MINUTE	GEN	GENERAL
CH	CHILLER	GFCI	GROUND FAULT CIRCUIT INTERR
CI	CAST IRON	GHR	GLYCOL-WATER HEATING RETUR
CI	CURB INLET	GHS	GLYCOL-WATER HEATING SUPPL
CIP	CAST IRON PIPE	GOVT	GOVERNMENT
CIRC	CIRCULATING	GPD	GOLLONS PER DAY
CKT	CIRCUIT	GPH	GALLONS PER HOUR
CL	CENTER LINE	GPM	GALLONS PER MINUTE
CLG	CEILING	GR	GRILLE
CLR CO		GS IIP GV GV TP	GATE VALVE
CO2 COMB	CARBON MONOADE CARBON DIOXIDE COMBINATION	GW	GREASE WASTE
COMM	COMMUNICATIONS	H	HEIGHT
	COMPRESSOR UNIT	HB	HOSE BIB
CONC	CONCRETE	HC	HEATING COIL
CONN(S)	CONNECTION(S)	HCR	HOT / CHILLED WATER RETURN
CONST Ó	CONSTRUCTION	HCS	HOT / CHILLED WATER SUPPLY
CONT	CONTINUOUS	HGR	HANGER
CONTR	CONTRACT(OR)	HID	HIGH INTENSITY DISCHARGE
CONV	CONVECTOR	HORIZ	HORIZONTAL
CP CPS	CONDENSATE PUMP CYCLES PER SECOND	HP HP HD	HEAT POMP HORSEPOWER HIGH DRESSURE
CR	CONDENSER WATER RETURN	HPR	HIGH PRESSURE STEAM RETURN
CR	CORRISION RESISTANT	HPS	HIGH PRESSURE STEAM SUPPLY
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT	HR	HOUR
CS	COUNTERSINK	HS	HAND SINK
CS	COMBINATION SEWER	HTG	HEATING
CS	CONDENSER WATER SUPPLY	HTR	HEATER
CTR	CONTER	HTWR	HIGH TEMPERATURE HOT WATE
	CONTENSING UNIT	HTWS	HIGH TEMPERATURE HOT WATE
CUH	CABINET UNIT HEATER	HUM HVAC	HUMIDIFIER HEATING VENTILATING AND AIR
CWR	CHILLED WATER RETURN	HW	DOMESTIC HOT WATER
CWS	CHILLED WATER SUPPLY	HWC	DOMESTIC HOT WATER RECIRCU
CYL	CYLINDER	HWR HWS	HOT WATER RETURN HOT WATER SUPPLY
D	DIFFUSER	HX HZ	HEAT EXCHANGER HERTZ (FREQUENCY)
D DB DB		i.e.	
DBL	DOUBLE DIRECT CURRENT	IAQ IAW	INDOOR AIR QUALITY IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE
DC	DUST COLLECTOR	ID	
DDC	DIRECT DIGITAL CONTROL	IF	
DDCVA	DOUBLE DETECTOR CHECK VALVE ASSEMBLY	IES	ILLUMINATING ENGINEERING SO
DE	DEIONIZED WATER	IH	INTAKE HOOD
DEG	DEGREE	IJS	IN JOIST SPACE
DEMO	DEMOLISH OR DEMOLITION	IN	
DEPT	DEPARTMENT	INSUL	INSULATION
DET	DETAIL	INT	INTERIOR
DF	DRINKING FOUNTAIN	IP	IRON PIPE
DFR	DIESEL FUEL RETURN	IW	INDIRECT WASTE
DFS DFU	DIESEL FUEL SUPPLY DRAINAGE FIXTURE UNITS	JAN	
DFV	DIESEL FUEL VENT	JB	JUNCTION BOX
DG	DOOR GRILLE	JS	JANITORS SINK
DH	DUCT HEATER	KW	KILOWATT
DI	DISTILLED WATER	KWH	KILOWATT HOUR
DIA DIAG	DIAMETER DIAGONAL	L	LAVATORY
		LAT LAV	LEAVING AIR TEMPERATURE
DISTR	SPECIFICATION DIVISION	LB(S) LF	POUND(S) LINEAR FOOT
		LG LIN	LENGTH (LONG) LINEAR
DOAS	DIFFERENTIAL SMOKE DETECTOR	LUX	LIQUID OXYGEN
DSD		LPG	LIQUID PETROLIUM GAS
DSP	DRY STANDPIPE	LPK	LOW PRESSURE STEAM SUPPLY
DTI	DETAIL	LPS	
DTR DW	DUCT THRU ROOF DISHWASHER	LS LTD I V	LINED TRANSFER DUCT
DWG(S)	DRAWING(S)	LWT	LEAVING WATER TEMPERATURE

	m Ma Maint	THOUSAND MIXED AIR MAINTENANCE	SS SST
ERATURE	MAN MATL	MANUAL MATERIAL	STD STL
ICTOR TER	MAU MAV MAX	MAKEUP AIR UNIT MANUAL AIR VENT MAXIMUM	STO STR
KATIO ISH ISH SHOWER	MBH	THOUSAND BTU PER HOUR	SUS SV
	MD MECH	MOTORIZED DAMPER MECHANICAL	SWE
1	MEZZ	MEZZANINE MANUFACTURER	SYM
	MFRG MH	MANUFACTURING MANHOLE	T T
NT CONTROL SYSTEM	MIN MISC	MINIMUM MISCELLANEOUS	T&B TA
	ML MPG	MOTORIZED LOUVER MEDIUM PRESSURE GAS	TB TC
	MS MTD	MOP SINK MOUNTED	TC TD
-	MTG MTWR	MOUNTING MEDIUM TEMPERATURE HOT WATER RETURN	TD TEM
R RESSURE	MTWS MV	MEDIUM TEMPERATURE HOT WATER SUPPLY MEDICAL VACUUM	TEM THK
	(N)	NEW	TMV TOIL
ATER	N N	NITROGEN NORTH	TPV TS
MPERATURE	N2O N.C.	NITROUS OXIDE NORMALLY CLOSED	TSP TT
	N.O. N/A	NORMALLY OPEN NOT APPLICABLE	
	NC NC	NOISE CRITERIA NORMALLY CLOSED	UG
	NEC NEMA	NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURERS ASSN.	UL
	NIC NO	NOT IN CONTRACT NUMBER	UNF
IATOR	NO2 NOM	NITROGEN DIOXIDE NOMINAL	UR UTIL
DL PANEL	NPCW	NON POTABLE COLD WATER	UV
	NPHW	NON POTABLE HOT WATER NON POTABLE HOT WATER CIRC	V V
	NIS		V VA
ONNECTION	O&M OA	OPERATION AND MAINTENANCE OUTSIDE AIR	VA VAC
CABINET	OD OD		VAV VBF
	OFOI	OWNER FURNISHED OWNER INSTALLED	VCP VD
	ORD	OVERFLOW ROOF DRAIN	VEL VEN
	OSD OS&Y	OVERFLOW STORM DRAIN	VER VES
	OTCS	OPEN TO CEILING SPACE OVEREI OW	VFD VOL
EQUIPMENT RK)	OVHD OX	OVERHEAD OXYGEN	VP VSM
	(P)	PRIMED	VTR
25	Р/Т Р	PRESSURE/TEMPERATURE TEST PORT PUMP	W
JE	PAR PB	PARALLEL PULL BOX	W
0	PB PC	PUSH BUTTON PUMPED CONDENSATE	W W
Υ.	PCF PD	POUNDS PER CUBIC FOOT PRESSURE DIFFERENCE	W/O
	PD PDI	PUMP DISCHARGE PLUMBING & DRAINAGE INSTITUTE	WB
URE UNITS	PE PENT	POLYETHYLENE PENTHOUSE	WC
	PERF PERP	PERFORATED PERPENDICULAR	WCC
	PG Pl	PRESSURE GAUGE POINT OF INTERSECTION	WCC
	PI PIV	PRESSURE INDICATOR POST INDICATOR VALVE	WFN WG
OR		PLATE PLUMBING	WH WH
		PLTWOOD PNEUMATIC DANIEL	WHA WLR
UIT INTERRUPTER	POC	POINT OF CONNECTION PAIR	WLS WP
TING RETURN TING SUPPLY	PSI	POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH PRESSURE DROP	WP WPE
	PT PVC	PLASTER TRAP POLYVINYI CHI ORIDE	WSF WSE
E	PW PWR	PUMPED WASTE POWER	WT
AT PUMP	QTY	QUANTITY	тн ZCB
JGH ROOF	R R∆		ZCV
	RAD	RADIUS RADIATOR	
	RCP	REFLECTED CEILING PLAN REINFORCED CONCRETE PIPE	
R RETURN R SUPPLY	RCU	RECIPROCATING CHILLER UNIT ROOF DRAIN	
HARGE	RD REF	REFRIGERANT DISCHARGE REFERENCE	
	REFR REG	REFRIGERANT REGISTER	
	REM REQ(D)	REMOVABLE REQUIRE(D)	
AM RETURN AM SUPPLY	REV RF	REVISION(Ś) RETURN FAN	
	RH RH	RELATIVE HUMIDITY RELIEF HOOD	
	RHC RHG	REHEAT COIL REFRIGERANT GOT GAS	
HOT WATER SUPPLY	RIJS RL	RISE IN JOIST SPACE RAIN LEADER (OR STORM WATER)	
IG AND AIR CONDITIONING	RL RM	REFRIGERANT LIQUID ROOM	
ER RECIRCULATING	RND RPBP	ROUND REDUCED PRESSURE BACKFLOW PREVENTER	
	RPM RS	REVOLUTIONS PER MINUTE REFRIGERANT SUCTION	
1	RTU RWS	ROOF TOP UNIT RAIN WATER SYSTEM	
	S S	SMOKE DAMPER SOUTH	
H DING CODE	S S	SANITARY SEWER SPRINKLER LINE	
	SA SA	SOUND ATTENUATOR SUPPLY AIR	
EERING SOCIETY	SAN SC	SANITARY WASTE SCIENCE CENTER	
	SC SCHED	SECURITY SCHEDULE	
	SCO SCW	SURFACE CLEAN OUT SOFT COLD WATER	
	SD SD	SMOKE DAMPER STORM DRAIN	
	SD SE	SMOKE DETECTOR STEAM EXHAUST VENT	
	SECT SF	SECTION SQUARE FOOT	
	SF SGL	SUPPLY FAN SINGLE	
	SHT	SHEET SAET HAT WATER	
	SIM	SIMILAR	
	SM	SPRINKLER MAIN SHEET METAL	
	S.O.V.	SHUT OFF VALVE STATIC PRESSURE	
AS AM RETURN	SP SPD	STAND PIPE SURGE PROTECTION DEVICE	
AM SUPPLY	SPEC SPK	SPECIFICATION(S) SPRINKLER	
СТ	SPPA SQ	STRUCTURAL POLYCARBONATE PANEL ASSEMBLY SQUARE	
IPERATURE	SS	STAINLESS STEEL	

T TEMPERED T THERMOSTAT TA TRANSFER AIR TA TRANSFER AIR TA TRANSFER AIR TE TERMINAL BOX TC TECHNOLOGY CENTER TO TRANSFER DUCT TD TEMPERATURE CONTROL TC TECHNOLOGY CENTER TO TRANSFER DUCT TD TEMPORARY TEMP TEMPERATURE THK THECKNESS) TWV THERMOSTATIC MIXING VALVE TOL TOLET TFV TRAP PRIMER VALVE TS TEMPERATURE SENSOR TSP TOTAL STATIC PRESSURE TT TEMPERATURE SENSOR TSP TOTAL STATIC PRESSURE TT TEMPERATURE TRANSMITTER TYP TYPICAL UC UNIT COLLER UG UNDERGROUND UH UNIT HEATER UL UNDERGROUND UH UNESCAVATED UNEN UNESCAVATED V VOLIME VE VENT VENTLATOR V VENT VENTLATOR V VOLIME UNEN VENT VENTLATOR V VOLIME UNEN VENT VENTALATORTION) VERT VENTTHEDCLAP PIPE W WARE SERVICE W WIGE W WARES WEGS SANITARY WASTE ABOVE GRADE WEGS SANITARY WASTE ABOVE GRADE WEGS SANITARY WASTE ABOVE GRADE WC WATER COLOR W WATER COLONE W WATER C	SS SST STD STD STL STOR STRUCT SUSP SV SWBD SWP SYM	SERVICE SINK SECONDARY STORM DRAINAGE STORM DRAINAGE STANDARD STEEL STORAGE STRUCTURAL SUSPENDED SOLENOID VALVE SWITCHBOARD STEAM WORKING PRESSURE SYMETRICAL	
TEMP TEMPORARY TEMP TEMPERATURE THK THICKINESS) TMV THERMOSTATIC MIXING VALVE TOIL TOILET TPV TRAP PRIMER VALVE TS TEMPERATURE SENSOR TSP TOTAL STATIC PRESSURE TT TEMPERATURE TRANSMITTER TYP TYPICAL UG UNIT COOLER UG UNDERGROUND UH UNITHERT RANSMITTER TYP TYPICAL UL UNDERGROUND UH UNITHERS LABORATORIES UNEX UNEXCAVATED UNEX UNESS NOTED OTHERWISE UR UNIT VESTILATOR V VENT V VOLT V VOLT VENT V VOLT VENT V VOLT V VOLT VENT V VOLT VENT V VOLT V VOLT VENT V VOLT VENT V VOLT VENT V VOLT VENT V VOLT VENT V VOLT VENT V VOLT VENT VENT V VOLT VENT	T T&B TA TB TC TC TD TD	TEMPERED THERMOSTAT TOP AND BOTTOM TRANSFER AIR TERMINAL BOX TEMPERATURE CONTROL TECHNOLOGY CENTER TRANSFER DUCT TRENCH DRAIN	
UC UNIT COOLER UG UNDERGROUND UH UNT HEATER UL UNDERWRITERS LABORATORIES UNEX UNDEXCAVATED UNEX CAVATED UNEX UNEXCAVATED UNEX UNITESS NOTED OTHERWISE UR URINAL UTIL UTILITY UV UNIT VENTILATOR V VENT V VOLT V VOLT V VOLT V VACUUM VA VOLT-AMPERE VA VALVE VAC VACUUM VA VOLT-AMPERE VA VALVE VAC VACUUM VAY VARABLE AIR VOLUME VBF VENT BELOW FLOOR VCP UTITRIFIED CLAY PIPE VD VOLUME DAMPER- MANUAL VEL VELOCITY VENT VENTILATOR(TION) VERT VESTIBULE VFD VARIABLE SPEED MOTOR CONTROLLER VFD WARTER COMMENSION SPEE W WASTE W WASTE W WASTE W WASTE W WASTE W WASTE W WASTE ADOVE GRADE WC WATER CLOSET WC WATER CLOSET WC WATER CLOSET WC WATER CLOSET WC WATER CLOSET WFM WASTER HAMMER ARRESTOR WHR WATER HAMMER ARRESTOR WHR WATER HAMMER ARRESTOR WR WATER LOOP SUPPLY WP WEATHERPROOF (NEMA 3R) WP WEATHERPROOF (NEMA 3R) WP WEATHERPROOF (NEMA 3R) WP WEATHERPROOF SUPPLY WF WEIGHT YH YARD HYDRANT YH YARD HYDRANT YH	TEMP TEMP THK TMV TOIL TPV TS TSP TT TYP	TEMPORARY TEMPERATURE THICK(NESS) THERMOSTATIC MIXING VALVE TOILET TRAP PRIMER VALVE TEMPERATURE SENSOR TOTAL STATIC PRESSURE TEMPERATURE TRANSMITTER TYPICAL	
V VENT V VOLT V VACUUM VA VOLT-AMPERE VA VALVE VAC VACUUM VAV VARIABLE AIR VOLUME VBF VENT BELOW FLOOR VCP VITRIFED CLAY PIPE VD VOLUME DAMPER - MANUAL VEL VELOCITY VENT VENTALATOR(TION) VERT VESTIBULE VFD VARIABLE FREQUENCY DRIVE VOL VOLUME VFD VARIABLE FREQUENCY DRIVE VOL VOLUME VFD VARIABLE SPEED MOTOR CONTROLLER VTR VENT THROUGH ROOF W WRET W WATER W WATER W WATER W WATER SERVICE W WATER W WATER W WATER W WATER W WATER W WATER W WATER W WATER W WATER W WATER VTR VENT HOUT WATER CLOSET WC WATER CLOSET WC WATER CLOSET WC WATER CLOSET WCC WAT	UC UG UH UNEX UNFIN UNO UR UTIL UV	UNIT COOLER UNDERGROUND UNIT HEATER UNDERWRITERS LABORATORIES UNEXCAVATED UNFINISHED UNLESS NOTED OTHERWISE URINAL UTILITY UNIT VENTILATOR	
WWIREWWATER SERVICEWWIDEWWASTEWWASTEWWATTW/WITHWOWITHOUTWAGS SANITARY WASTE ABOVE GRADEWBWET BULBWBEGSANITARY WASTE BELOW GRADEWCWATER COLUMNWCWATER COLED CONDENSERWCLWATER CLOSETWCCWATER COLSET/LAVATORY COMBINATIONWCOWALL CLEAN OUTWFWASH FOUNTAINWFMDWATER FLOW MEASURING DEVICEWGWIRE GUARDWHWALL HYDRANTWHAWATER HEATERWHAWATER LOOP RETURNWLSWATER LOOP SUPPLYWPWEATHER-PROOF (NEMA 3R)WPWEATHERPROOF (NEMA 3R)WPWEATHERPROOF SUPPLYWPWEATHERPROOF SUPPLY	V V VA VAC VAC VAV VBF VCP VD VEL VENT VENT VEST VFD VOL VP VSMP VTR	VENT VOLT VACUUM VOLT-AMPERE VALVE VACUUM VARIABLE AIR VOLUME VENT BELOW FLOOR VITRIFIED CLAY PIPE VOLUME DAMPER - MANUAL VELOCITY VENTALATOR(TION) VERTICAL VESTIBULE VARIABLE FREQUENCY DRIVE VOLUME VACUUM PUMP VACUUM PUMP VARIABLE SPEED MOTOR CONTROLLER VENT THROUGH ROOF	
YHYARD HYDRANTZCBZONE CONTROL BOXZCVZONE CONTROL VALVE	VTR W W W W W W W W W W W W W W W W W C W	VENT THROUGH ROOF WIRE WEST WATER SERVICE WIDE WASTE WATT WITH WITHOUT SANITARY WASTE ABOVE GRADE WET BULB SANITARY WASTE BELOW GRADE WATER COLUMN WATER COLUMN WATER CLOSET WATER COOLED CONDENSER WATER CLOSET/LAVATORY COMBINATION WALL CLEAN OUT WASH FOUNTAIN WATER FLOW MEASURING DEVICE WIRE GUARD WALL HYDRANT WATER HEATER WATER HAMMER ARRESTOR WATER LOOP RETURN WATER LOOP SUPPLY WEATHER-PROOF (NEMA 3R) WEATHER-PROOF WHIRLPOOL BATH WET STAND PIPE WASHINGTON STATE ENERGY CODE WEIGHT	
•	YH ZCB ZCV	YARD HYDRANT ZONE CONTROL BOX ZONE CONTROL VALVE	

M1.1 / NO SCALE

				.FA	AN SCHE	DULE	E. SHEI	כ							
SERVES	LOCATION	FAN TYPE	WHEEL TYPE	AIR FLOW (CFM)	EXTERNAL S.P. (IN WG)	FAN RPM	SOUND (SONES)	MOTORIZED DAMPER	CONTROL	WEIGHT (LBS)	DRIVE TYPE	FAN HP	v	PH	BASIS OF DESIGN (LOREN COOK)
STORAGE SHED	FACILITIES STORAGE 111	INLINE	FORWARD	435	0.37	1300	6.3	No	SCHEDULE	44	DIRECT	.25	115	1	95-SQ-VG
PLY TO ALL):															

.DIFFUSER, F	REGIST	ER & GF	RILLE SCHEDULE	. SHED
AX STATIC PD (IN WG)	MAX NC	MATERIAL	MOUNTING TYPE	BASIS OF DESIGN
0.10	20	STEEL	WALL/DUCT	TITUS 350 RL
0.10	20	STEEL	WALL/DUCT	GREENHECK FAN INLET GUARD

		.LOU	VER SC	HEDULE.	
ντιον	MAX STATIC PD (IN WG)	FREE AREA (SF)	DAMPER (Y/N)	ТҮРЕ	BASIS OF DESIGN
35 CFM	0.20	0.62	Yes	DRAINABLE COMBO BACKDRAFT DAMPER LOUVER	RUSKIN ELC445D
5 CFM	0.10	0.45	Yes	DRAINABLE COMBO BACKDRAFT DAMPER LOUVER	RUSKIN ELC445D

.EL	ECTRIC U	INIT HEATER	R SCHE	DULE	E SHEI)
		SENSIBLE CAP	TOTAL	ELE(CTRICAL DATA	
R FLOW	LOCATION	(MBH)	WATTS	V	PH	BASIS OF DESIGN
600 CFM	ACMA STORAGE	26.0	7500	208	1	REZNOR EGEB
310 CFM	FACILITIES STORAGE	17.0	5000	208	1	REZNOR EGEB

LEGEND NOTES LEGEND NOTES ARE COMMON TO ALL SOME NOTES MAY NOT APPLY TO THIS SHEET ACMA SHED EDPROF 478,20 SEAN AVERY EXPIRES 12/31/2021 DISTRICT SHED PLAN SCHOOL Ш S ACMA BEAVERTON ELECTRICAL **E0.1S** 74-18109-00 06/04/2021 **Jroup** gineering Planning br

				LIGH	IT FIXTURE SCHEDULE	- SHED	
TYPE	MANUFACTURER	MODEL	LAMP	Electrical Data	Ballast(s) Type	Comments Mounting	DESCRIPTION
ESL3-120V	PHILIPS	111L-16L-350-NW-G2-3-UNV-DD-F1-BZ	4000K LED	120 V/1-18 VA	0-10V DIMMING DRIVER EXTERIOR WALL PA	CK WALL 11'-0" AFF	SHED - EXTERIOR 12" X 6" X 7" WALL SCONCE. +10'6" AFF UNLESS OTHERWISE NOTED. 1908 NOMINAL LUMENS. UL LISTED FOR WET LOCATIONS. BRONZE FINISH.
SL1B-120	PHILIPS	FSS-4-55L-835-UNV-DIM	3500K LED	120 V/1-45 VA	0-10V DIMMING DRIVER 4' STRIP	SUSPENDED	SHED - CHAIN HUNG 4' STRIP LIGHT FIXTURE. 5500 NOMINAL LUMENS. 100% FROSTED REFLECTOR. CHAIN HANGING KIT WITH V HOOK.

	PANEL: A: Location: Sp BUS Rating: 22 Main Breaker:	2 (E) nace 7 5 A				VOLTS: Phases: Wires: Sccr:	208Y / 120 3 4			LU	MC FE INTEG G ACCE	ounti Ed Fr Ral S Ssor	ING: FLUSH ROM: SPD: Type 1 RIES: SEE ONE-LINE			
T CIRCUIT I	DESCRIPTION	BKR TRIP	Р.	BKR LOAD TYPE TYPE	PHASE A (VA) PHASE	B (VA) PH	ASE C (VA)	LOAD TYPE	BKR TYPE	P B	kr Rip	CIRCUIT DESCRIPTION	скт	SHE	
EXISTING LOAD		20	1		0	0	0				2 2	20	EXISTING LOAD	2	4	
EXISTING LOAD		20	1		0	0	C	0			2 2	20	EXISTING LOAD	6	Σ	
EXISTING LOAD		20	1			0	0				2 2	20	EXISTING LOAD	10	Q	
EXISTING LOAD EXISTING LOAD		20	1		0	0		0			1 2	 20	 EXISTING LOAD	12		
EXISTING LOAD EXISTING LOAD		20	1			0	0	0			1 2 1 2	20 20	EXISTING LOAD EXISTING LOAD	16 18		
EXISTING LOAD EXISTING LOAD		20	1		0	0 0	0				1 2	20 20	EXISTING LOAD EXISTING LOAD	20		REDPRO
EXISTING LOAD		20	1		0	0	С	0			1 2	20	EXISTING LOAD	24	SIST.	NGINE
EXISTING LOAD		20	1			0	0	0.050			$\frac{1}{2}$	20	EXISTING LOAD	28	RE	86692PE
EXISTING LOAD		20	1		0 4	1,887		6,250	L; R; M 		3 1		A2-SHED 	30	be	en l
							4,194							34 36		OREGON
														38 40		SEAN AVE
					4887 \//	110/	1 \/A	6250 \/A						42	E	PIRES 12/31/
				TOTAL LOAL	S 42 A	35	A	53 A								
D LOAD E DESCRIPTION	CONNECTED LOAD (VA)	DEMAN D	ESTI DEMA	MATED ND (VA)		DEMAND FACTO	OR NOTES		E	BKR TYPE			PANEL TOTALS			
LIGHTING	441 VA	125.00%		551 VA CC	NTINUOUS LO	AD @ 125%			G = GFCI	(5mA)						
RECEPTACLES KITCHEN	1800 VA 0 VA	100.00%	18	BOO VA FIF	ST 10KVA @ 1	00%, REMAINDE	R @ 50% NEC ART 220		GP = GFC	CI (30mA)			CONNECTED LOAD: 15 kVA ESTIMATED DEMAND: 15 kVA			
1 LARGEST MOTOR	R 0 VA	0.00%		0 VA LA	RGEST MOTOR	R, NEC ART. 430			LO = LOC	K OUT			CONNECTED CURRENT: 42 A			
	13196 VA	100.00%	13	196 VA									EMD CURRENT: 43 A			
000EII10	0 1/1	0.00%		0 VA												
HEATING	0 VA	0.0076														
HEATING OTHER are SPARE ES:	0 VA 0 VA 0 VA	0.00%		0 VA 0 VA												
I HEATING O OTHER are SPARE ES:	0 VA 0 VA 0 VA	0.00% 0.00% 0.00% 2-SHED		0 VA 0 VA											NS	
HEATING OTHER are SPARE ES:	OVA OVA OVA	0.00% 0.00% 0.00% 2-SHED 2-SHED 2MA STORA 5 A _0	AGE 117	0 VA 0 VA		VOLTS: PHASES: WIRES: SCCR:	208Y / 120 3 4 22,000			LU	MC FE INTEG G ACCES	OUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE		D PLANS	
HEATING OTHER re SPARE SS: CIRCUIT I	OVA OVA OVA OVA	2-SHED CMA STORA 5 A _O BKR TRIP	AGE 117		PHASE A (VOLTS: PHASES: WIRES: SCCR: (VA) PHASE	208Y / 120 3 4 22,000 B (VA) PH	ASE C (VA)	LOAD	LU BKR TYPE	MC FE INTEG G ACCES P BI TF	OUNTI ED FR RAL S SSOR KR RIP	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE CIRCUIT DESCRIPTION	СКТ	GED PLANS	
HEATING OTHER re SPARE SS: CIRCUIT I	OVA OVA OVA OVA	2-SHED CMA STORA 5 A _O BKR TRIP 50	AGE 117	0 VA 0 VA BKR IYPE M	PHASE A (3,750	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE	208Y / 120 3 4 22,000 B (VA) PH	ASE C (VA)	LOAD TYPE	LU BKR TYPE 		DUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE CIRCUIT DESCRIPTION	СКТ	SUCCED PLANS	
HEATING OTHER re SPARE ES: CIRCUIT 1 UH-S1 UH-S2	OVA OVA OVA OVA DVA DVA	2-SHED CMA STORA 5 A O BKR TRIP 50 	AGE 117 P - 2 2	0 VA 0 VA BKR IYPE IYPE 	PHASE A (VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 3,750	208Y / 120 3 4 22,000 B (VA) PH 441 2,5	ASE C (VA)	LOAD TYPE L R	LU BKR TYPE 	MC FE INTEGI G ACCE: P BI TH 1 2 1 2	OUNTI ED FR RAL S SSOR KR RIP 20 20	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS	СКТ 2 4 6	ARGED PLANS	
HEATING OTHER re SPARE SS: CIRCUIT 1 UH-S1 UH-S2 EF-S1	OVA OVA OVA OVA	2-SHED 2-SHED CMA STORA 5 A _O BKR TRIP 50 	AGE 117 AGE 117 P - 2 2 1	0 VA 0 VA BKR IYPE IYPE M M M	PHASE A (3,750 2,500	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 0 3,750 0 0 696	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0	ASE C (VA)	LOAD TYPE L R R	LU BKR TYPE 	MC FE INTEG G ACCE P B TF 1 2 1 2 1 2 	DUNTI ED FR RAL S SSOR KR RIP 20 20 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY	СКТ 2 4 6 8 10	LARGED PLANS	
HEATING OTHER re SPARE SS: UH-S1 UH-S2 EF-S1 GEN RECEPTS	O VA O VA O VA O VA	0.00% 0.00% 0.00% 2-SHED CMA STORA 5 A _O BKR TRIP 50 	AGE 117 AGE 117 2 2 1 1 1	0 VA 0 VA 0 VA 0 VA 0 VA	PHASE A (3,750 2,500 2,500 3 53 A	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 0 3,750 0 0 696 4 4887 42	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA A	ASE C (VA) 0 900 0 0 4194 VA 35 A	LOAD TYPE L R 	LU BKR TYPE 	MC FE INTEGI G ACCES P BI TH 	DUNTI ED FR RAL S SSOR KR RIP 20 20 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RIES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY	CKT 2 4 6 8 10 12	ENLARGED PLANS	
HEATING OTHER re SPARE is:	O VA O VA	0.00% 0.00% 0.00% 2-SHED 2-SHED CMA STORA 5 A 5 A 5 A 5 A 5 A 5 A 5 0 5 0 5 0 5 15 15 20	AGE 117 AGE 117 P . 2 1 1 1 1	0 VA 0 VA	PHASE A (3,750 2,500 2,500 3 5 5 3 A	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 0 3,750 0 0 696 4 4887 42 DEMAND FACTO	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA A DR NOTES	ASE C (VA)	LOAD TYPE L R 	LU BKR TYPE BKR TYPE	MC FE INTEG G ACCES P B TT G ACCES 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	DUNTI ED FR RAL S SSOR KR RIP 20 20 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY	CKT 2 4 6 8 10 12	D ENLARGED PLANS	MA
HEATING OTHER re SPARE SS: SS: CIRCUIT UH-S1 UH-S2 EF-S1 GEN RECEPTS AD LIGHTING	O VA 0 VA	0.00% 0.00% 0.00% 2-SHED 2-SHED 2-SHED 2-SHED 2- 2- 3- 35 15 20 20 20 20 20 20 20 20 20 20 20 20 20	AGE 117 AGE 117 P . 2 1 1 1 1 1 ESTI DEMA	0 VA 0 VA	PHASE A (3,750 2,500 2,500 3,750 2,500 3,750 5 5 5 5 5 5 5 5 5 5 5 5 5	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 3,750 0 696 A 4887 42 DEMAND FACTO AD @ 125%	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 2 0 90 7 VA 3 0 90 7 VA 4 A	ASE C (VA) 0 900 0 0 4194 VA 35 A	LOAD TYPE L R G = GFCI	LU BKR TYPE BKR TYPE (5mA)	MC FE INTEG G ACCES P B TF 1 22 1 22 	DUNTI ED FR RAL S SSOR KR RIP 20 20 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY SPACE ONLY	CKT 2 4 6 8 10 12	IED ENLARGED PLANS	CMA
MEATING OTHER re SPARE S	O VA 0 VA	0.00% 0.00% 0.00% 2-SHED CMA STORA 5 A O BKR TRIP 5 0 35 15 20 DEMAN D 125.00% 100.00%	AGE 117 AGE 117 P 2 1 1 1 1 1 1 1	0 VA 0 VA 0 VA 0 VA 0 VA	PHASE A (3,750 2,500 2,500 5 53 A NTINUOUS LOA ST 10KVA @ 1	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 0 3,750 0 0 696 A 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA A DR NOTES R @ 50%	ASE C (VA) 0 900 0 0 4194 VA 35 A	LOAD TYPE L R G = GFCI GP = GFC	LU BKR TYPE BKR TYPE (5mA) Cl (30mA)	MC FE INTEG G ACCES P B TF 1 2 1 2 	DUNTI ED FR RAL S SSOR KR RIP 20 20 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY	CKT 2 4 6 8 10 12	HED ENLARGED PLANS	ACMA
HEATING OTHER re SPARE SS: CIRCUIT UH-S1 UH-S2 EF-S1 GEN RECEPTS AD LOAD DESCRIPTION LIGHTING RECEPTACLES KITCHEN LARGEST MOTOR	0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA 0 VA	0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 2 2 1 1 1 1 1 1 1	0 VA	PHASE A (3,750 2,500 2,500 2,500 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: (VA) PHASE 0 0 3,750 0 696 4 42 0 0 42 0 0 0 0 0 0 0 0 0 0 0 0 0 0	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 00 900 0 0 4194 VA 35 A	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = 1 OC	LU BKR TYPE BKR TYPE -	MC FE INTEG G ACCES P B TF 1 2 1 2 	DUNTI ED FR RAL S SSOR KR RIP 	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
HEATING OTHER re SPARE SS: CIRCUIT UH-S1 UH-S1 UH-S2 EF-S1 GEN RECEPTS SD RECEPTACLES KITCHEN LIGHTING RECEPTACLES KITCHEN LARGEST MOTOR	0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: ML DESCRIPTION CONNECTED LOAD (VA) 441 VA 1800 VA 0 VA 0 VA 0 VA 13196 VA	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5A 0 5A 0 50 35 15 0 20 0 125.00% 100.00% 100.00% 0.00% 100.00% 100.00%	AGE 117 AGE 117 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 VA 0 BKR LOAD TYPE M M M M M M M M M M M M 551 VA CC 300 VA FIF 0 VA NC 0 VA LA 196 VA	PHASE A (3,750 2,500 2,500 2,500 2,500 2,53 A S 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: 0 0 3,750 0 0 696 4 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, R, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 2 0 90 VA 3 PH 2,5 0 90 VA 3 PH 2,5 0 90 PH 2,5 0 90 PH 2,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1	ASE C (VA) 00 900 0 0 4194 VA 35 A	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC	LU BKR TYPE BKR TYPE (5mA) Cl (30mA) NT TRIP K OUT	MC FE INTEGI G ACCE: P BI TI 1 2 1 2 	DUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
HEATING OTHER Pe SPARE SPARE SPARE CIRCUIT UH-S1 UH-S1 UH-S2 EF-S1 GEN RECEPTS D LOAD DESCRIPTION LIGHTING RECEPTACLES KITCHEN LIGHTING RECEPTACLES KITCHEN LARGEST MOTOF MOTOR COOLING HEATING	0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER:	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 P - 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 VA 0 BKR LOAD TYPE M M M M M M M M M M M 551 VA CC 300 VA FIF 0 VA NC 0 VA LA 196 VA 0 0 VA VA	PHASE A (3,750 2,500 2,500 2,500 2,500 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: VA) PHASES: VIRES: SCCR: O 3,750 O 696 A 4887 DEMAND FACTO AD @ 125% O0%, REMAINDER O1CHEN LOADS, R, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA A PR NOTES R @ 50% NEC ART. 220	ASE C (VA)	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC	LU BKR TYPE 	MC FE INTEG G ACCES P BI TF 1 2 1 2 1 2 	DUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
INPARE OTHER re SPARE SS: SPARE UH-S1 SPARE UH-S1 SPARE SS: SPARE UH-S2 SPARE SS:	0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: ML DESCRIPTION 0 0 441 VA 1800 VA 0 VA	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 2-SHED Store SMA STORA 5.0 5.4 -0 BKR TRIP 50 35 15 20 DEMAN D 125.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 P - 2 2 1 1 1 1 2 1 1 1 1 1 1 1 1	0 VA 0 BKR LOAD TYPE M CC 300 VA NC 0 VA N 0 VA N 0 VA N <td>PHASE A (3,750 2,500 2,500 2,500 5 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR</td> <td>VOLTS: PHASES: WIRES: SCCR: 0 0 3,750 0 0 696 4 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430</td> <td>208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220</td> <td>ASE C (VA) 0 900 0 0 4194 VA 35 A </td> <td>LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC</td> <td>LU BKR TYPE </td> <td>MC FE INTEGI G ACCES P BI TI </td> <td>CUNTI ED FR RAL S SSOR</td> <td>ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SP</td> <td>CKT 2 4 6 8 10 12</td> <td>SHED ENLARGED PLANS</td> <td>ACMA</td>	PHASE A (3,750 2,500 2,500 2,500 5 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: 0 0 3,750 0 0 696 4 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 0 900 0 0 4194 VA 35 A 	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC	LU BKR TYPE 	MC FE INTEGI G ACCES P BI TI 	CUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SP	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
HEATING OTHER OTHER re SPARE S: CIRCUIT UH-S1 UH-S1 UH-S2 EF-S1 GEN RECEPTS D LIGHTING LIARGEST MOTOP MOTOR LARGEST MOTOP MOTOR COOLING HEATING OTHER re SPARE	0 VA VA 0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: MAIN BREAKER: MAIN BREAKER: 0 441 VA 1800 VA 0 VA	0.00% 0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5 A -0 BKR TRIP 50 35 15 20 DEMAN D 125.00% 100.00% 0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 2 2 1 1 1 1 1 1 2 1 1 1 1 1 1	0 VA 0 0 VA 0 0 VA 0 0 VA 0 BKR LOAD TYPE M M M M M M 551 VA CC 300 VA FIF 0 VA A 196 VA A 0 VA A	PHASE A (3,750 2,500 2,500 2,500 3 5 53 A NTINUOUS LOA ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: 0 0 3,750 0 0 696 A 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 0 900 0 0 4194 VA 35 A 	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC	LU BKR TYPE 	MC FE INTEG G ACCES P B TF 	CUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
HEATING OTHER re SPARE IS: SPARE IUH-S1 SPARE IUH-S1 SPARE IUH-S2 SPARE IIIGHTING RECEPTS IIIGHTING RECEPTACLES KITCHEN MOTOR ILARGEST MOTOR OTHER IOTHER SPARE IS: SPARE	0 VA VA 0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: MAIN BREAKER: MAIN BREAKER: OVA 441 VA 1800 VA 0 VA	0.00% 0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5 A -0 BKR TRIP 50 35 15 20 DEMAN D 125.00% 100.00% 0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 P - 2 2 1 - 1 - 1 - 1 - 1 - 1 - 1 -	0 VA 0 0 VA 0 0 VA 0 0 VA 0 BKR LOAD TYPE M M M M M M 551 VA CC 300 VA FIF 0 VA A 0 VA LA 196 VA 0 0 VA A	PHASE A (3,750 2,500 2,500 2,500 5 53 A NTINUOUS LO, ST 10KVA @ 1 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: 0 3,750 0 696 0 696 0 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 0 900 0 0 4194 VA 35 A 	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC	LU BKR TYPE 	MC FE INTEG G ACCES P B TF 	CUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SP	CKT 2 4 6 8 10 12	SHED ENLARGED PLANS	ACMA
HEATING OTHER re SPARE SS: SPARE UH-S1 SPARE SP LOAD UH-S2 SPARE SE SPARE EF-S1 GEN RECEPTS GEN RECEPTS SPARE KITCHEN MOTOR COOLING HEATING OTHER SPARE SS: SPARE	0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: MAIN BREAKER: DESCRIPTION CONNECTED LOAD (VA) 441 VA 1800 VA 0 VA	0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5 A	AGE 117 AGE 117 2 2 1 1 1 DEMA 13 13 	0 VA 0 0 VA 0 0 VA 0 0 VA 0 BKR LOAD TYPE M M M M M M 551 VA CC 300 VA FIF 0 VA A 0 VA LA 0 VA O 0 VA A 0 VA C	PHASE A (3,750 2,500 2,500 2,500 2,500 5 53 A NTINUOUS LO, ST 10KVA @ 11 N-DWELLING K RGEST MOTOR	VOLTS: PHASES: WIRES: SCCR: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 0 900 0 0 4194 VA 35 A 	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC C	LU BKR TYPE 	MC FE INTEG G ACCES P B TF 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	CUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	1S SHED ENLARGED PLANS	ACMA
HEATING OTHER re SPARE IS: SPARE IS: IS	0 VA LOCATION: AC BUS RATING: 12 MAIN BREAKER: MAIN BREAKER: <td>0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5 A -0 BKR TRIP 50 35 35 15 20 DEMAN D 125.00% 100.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%</td> <td>AGE 117 AGE 117 2 2 1 1 1 DEMA 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>0 VA 0 0 VA 0 0 VA 0 0 VA 0 BKR LOAD TYPE M M M M M M 551 VA CC 300 VA FIF 0 VA A 0 VA A</td> <td>PHASE A (3,750 2,500 2,500 2,500 2,500 2,500 2,500 2,500 2,500 3,750 2,500 2,500 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 3,7</td> <td>VOLTS: PHASES: WIRES: SCCR: 0 3,750 0 696 0 696 0 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430</td> <td>208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220</td> <td>ASE C (VA) 0 900 0 0 4194 VA 35 A </td> <td>LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC I </td> <td>LU BKR TYPE </td> <td>MC FE INTEG G ACCES P B TF </td> <td>CUNTI ED FR RAL S SSOR</td> <td>ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA</td> <td>CKT 2 4 6 8 10 12</td> <td>1.1S SHED ENLARGED PLANS</td> <td>109-00 12021 NS</td>	0.00% 0.00% 0.00% 0.00% 2-SHED MA STORA 5 A -0 BKR TRIP 50 35 35 15 20 DEMAN D 125.00% 100.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	AGE 117 AGE 117 2 2 1 1 1 DEMA 1 1 1 1 1 1 1 1 1 1 1 1 1	0 VA 0 0 VA 0 0 VA 0 0 VA 0 BKR LOAD TYPE M M M M M M 551 VA CC 300 VA FIF 0 VA A	PHASE A (3,750 2,500 2,500 2,500 2,500 2,500 2,500 2,500 2,500 3,750 2,500 2,500 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 2,500 3,750 3,7	VOLTS: PHASES: WIRES: SCCR: 0 3,750 0 696 0 696 0 4887 42 DEMAND FACTO AD @ 125% 00%, REMAINDEF (ITCHEN LOADS, 8, NEC ART. 430	208Y / 120 3 4 22,000 B (VA) PH 441 2,5 0 90 7 VA 2 A DR NOTES R @ 50% NEC ART. 220	ASE C (VA) 0 900 0 0 4194 VA 35 A 	LOAD TYPE L R G = GFCI GP = GFC ST = SHU LO = LOC I 	LU BKR TYPE 	MC FE INTEG G ACCES P B TF 	CUNTI ED FR RAL S SSOR	ING: SURFACE ROM: A2 (E) SPD: Type 1 RES: SEE ONE-LINE CIRCUIT DESCRIPTION SPACE ONLY LIGHTING GEN RECEPTS SPACE ONLY SPACE ONLY SPA	CKT 2 4 6 8 10 12	1.1S SHED ENLARGED PLANS	109-00 12021 NS

2 SHED POWER ENLARGED PLAN E4.1S SCALE: 1/4" = 1'-0"

Group Engineering Planning

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