

Wenatchee TFREC Plant Growth Facility Pre-Design

3/4/22
 A NEW FACILITY FOR
 WSU TFREC
 NEW TREE GROWTH FACILITY
 1100 N. WESTERN AVE
 WENATCHEE, WA 98807
 CONTACT:
 .
 .

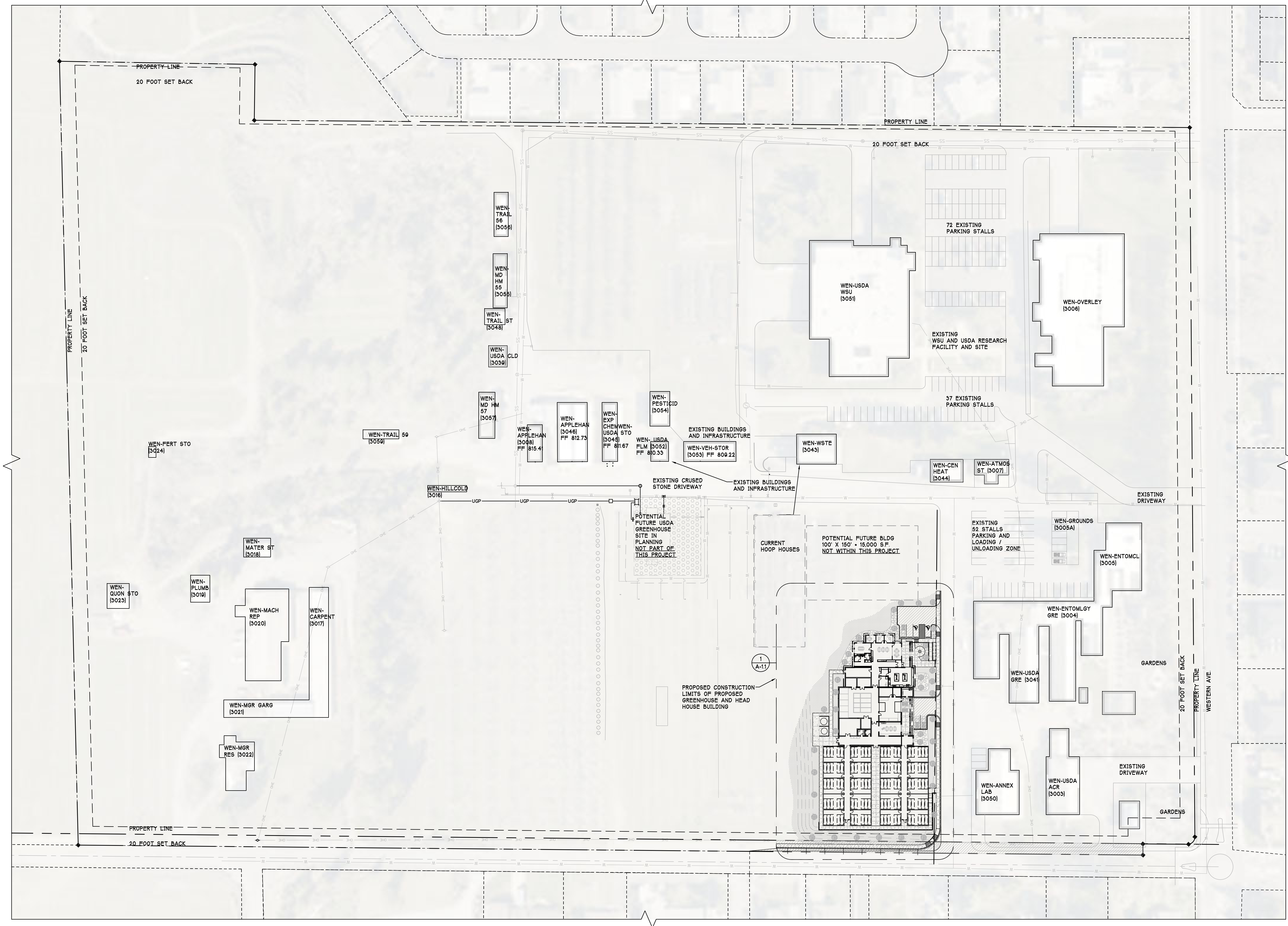


21-511
 PROJECT NUMBER:

 REVISIONS:
 3/4/22 PRELIM. SET

 SHEET TITLE:
 OVERALL
 SITE PLAN

PETER J. CARLETTI
 PROJECT ARCHITECT
 DAVID WILSON
 DRAWN BY
 TIM GOODMAN
 CHECKED BY
 SEPTEMBER 9, 2021
 DATE
 S:\ARCH\21\DRAWINGS\21-511
 COMPUTER FILE NAME



HEAD HOUSE / GREENHOUSE OVERALL SITE PLAN

SCALE 1" = 50'-0"

SITE PLAN NOTES:

1. CONNECT ALL DOWNSPOUTS TO PVC TIGHTLINES AND CONNECT TO STORM DRAINAGE SYSTEM PER CIVIL DRAWINGS.
2. SEE CIVIL DWGS FOR GRADING, DRAINAGE, AND UTILITY PLANS
3. VERIFY LOCATIONS OF EXISTING POWER, COMM. SEWER, WATER GAS, AND STORM DRAINAGE LINES PRIOR TO CONSTRUCTION
4. CONTRACTOR TO VERIFY ALL EXISTING GRADES AND PROPERTY LINES
5. PROVIDE AND INSTALL CONDUIT AND POWER FROM POWER VAULT AND TELEPHONE/ DATA SERVICE TO BUILDING TYP.
6. STRIPE ALL NEW STALLS AS SHOWN. DO NOT NUMBER STALLS
7. REFER TO CIVIL DRAWINGS FOR ALL SITE DIMENSIONS AND BUILDING LOCATIONS TYPICAL
8. REFER TO LANDSCAPE DRAWINGS FOR ALL LANDSCAPE REQUIREMENTS, LOCATIONS, AND QUANTITIES.

ADDRESS: 1100 N. WESTERN AVE. WENATCHEE WA

PARCEL: 25905

LOT SIZE - 34.56 ACRES

OWNER: WASHINGTON STATE UNIVERSITY

P.O. BOX 641045 PULLMAN 99164

LEGAL DESCRIPTION:

T 23N R 20EWM S 32 LOT B BLA 2003-046 SESE 34.5600 ACRES

ZONING CODE PER WENATCHEE

OMU- OFFICE MIXED USE DISTRICT

EXISTING TREE RESEARCH NO CHANGE IN USE

BUSINESS OFFICE	-PERMITTED USE
INSTITUTION OF HIGHER ED	-CONDITIONAL USE
ACCESSORY BLDG - AGRICULTURE	-PERMITTED USE
AGRICULTURE	-PERMITTED USE
AGRICULTURE RELATED INDUSTRY	-CONDITIONAL USE

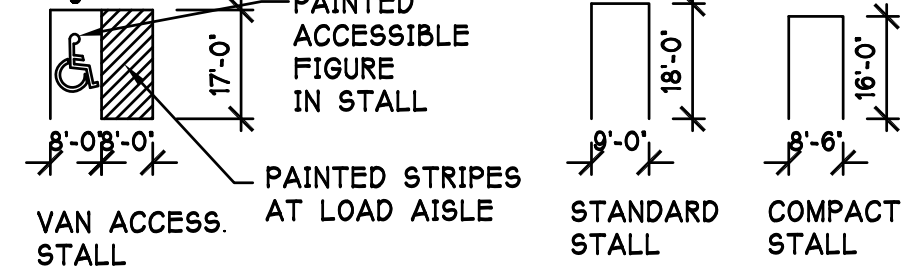
SETBACKS

STREET SETBACK	10 FEET
REAR SETBACK - ADJ TO RL ZONE	20 FEET
SIDE	5 FEET
BLDG HEIGHT LIMIT	60 FEET
MAX DENSITY	50X

PER 1046080 SETBACK MEASUREMENTS
NORTH SOUTH AND WEST ADJUT RL ZONE
EAST (FRONT) N. WESTER AVE AND MRC - MIXED RESIDENTIAL CORRIDOR
(f) IN THE OMU, RMU, CN, NWBD AND SWBD ZONES WHERE THE REAR SETBACK ADJUTS A RESIDENTIAL ZONE, THE MINIMUM REAR SETBACK SHALL BE THE SAME AS THE MINIMUM REAR SETBACK OF THE ADJUTING ZONE.

PARKING WENATCHEE MC 10.60

RESERVED PARKING
SIGN WITH R7-501 PLAQUE
PER WSDOT STD PLAN H-5E



PARKING CALCULATIONS
STANDARD SIZE MIN TO BE 8'-0" X 18'-0"
40X ALLOWED TO BE 8'-6" X 16'-0" LABELED "COMPACT"
DRIVE AISLE MIN 24'-0" (STANDARD STALL)

10.60.080 OFF-STREET PARKING REQUIREMENTS:

RETAIL- FOOD AND MERCHANDISE, PERSONAL AND PROFESSIONAL SERVICES, OFFICES, BANKS, RADIO AND TELEVISION STUDIOS, LIQUOR STORES, ADULT ENTERTAINMENT FACILITIES, LAUNDROMATS, SERVICE AND REPAIR SHOPS (NONMOTORIZED), FARMERS MARKET

4 SPACES PER 1000 SQUARE FEET UP TO 2,000 GFA
3.5 SPACES PER 1000 SQUARE FEET FOR 2,001 -7,500 GFA
2.85 SPACES PER 1000 SQUARE FEET FOR 7,501 -40,000 GFA
2.5 SPACES PER 1000 SQUARE FEET FOR 40,001+ GFA INDUSTRIAL

INDUSTRIAL

CONTROLLED ATMOSPHERE STORAGE, WAREHOUSE, REFRIGERATION, STORAGE WAREHOUSE

1 SPACE PER 5,000 SQUARE FEET OF GFA

MANUFACTURING WAREHOUSE/PACKAGING

(2) STALLS PER 1000 S.F.

EXISTING BUILDING SQUARE FOOTAGE	
OFFICE SPACE LAB SPACE	• 44626 S.F.
02.5/1000 • 112 PARKING STALLS REQUIRED	
GREENHOUSE/CONTROLLED ENVIRONMENT	• 9631 S.F.
01/5000 • 2 STALLS REQUIRED	
STORAGE WAREHOUSE	• 2500 S.F.
02/1000 • 5 STALLS REQUIRED	
TOTAL STALLS REQUIRED	• 119 STALLS
TOTAL STALLS (EXISTING)	• 159 STRIPPED

EXISTING SMALL OUT BUILDINGS AND RESIDENCES HAVE ACCOMPANYING PARKING NEXT TO OR WITHIN THESE BUILDINGS.

BUILDING PROPOSED:

TOTAL BUILDING W/ GREENHOUSE 26,023 S.F. FOOTPRINT

OFFICE AREA @ 3.5 PER 1000 3099 S.F.

14 STALLS REQ'D

CONTROLLED ENVIRONMENT #1 PER 5000 8128 S.F.

2 STALLS REQ'D

GREEN HOUSES PROPOSE @ 1 PER 5000 13,896 S.F.

3 STALLS REQ'D

19 NEW STALLS REQUIRED FOR PROPOSED NEW BUILDING

NEW STALLS PROPOSED: (8) TOTAL

TOTAL CAMPUS CALCULATED STALLS REQ'D •138 STALLS

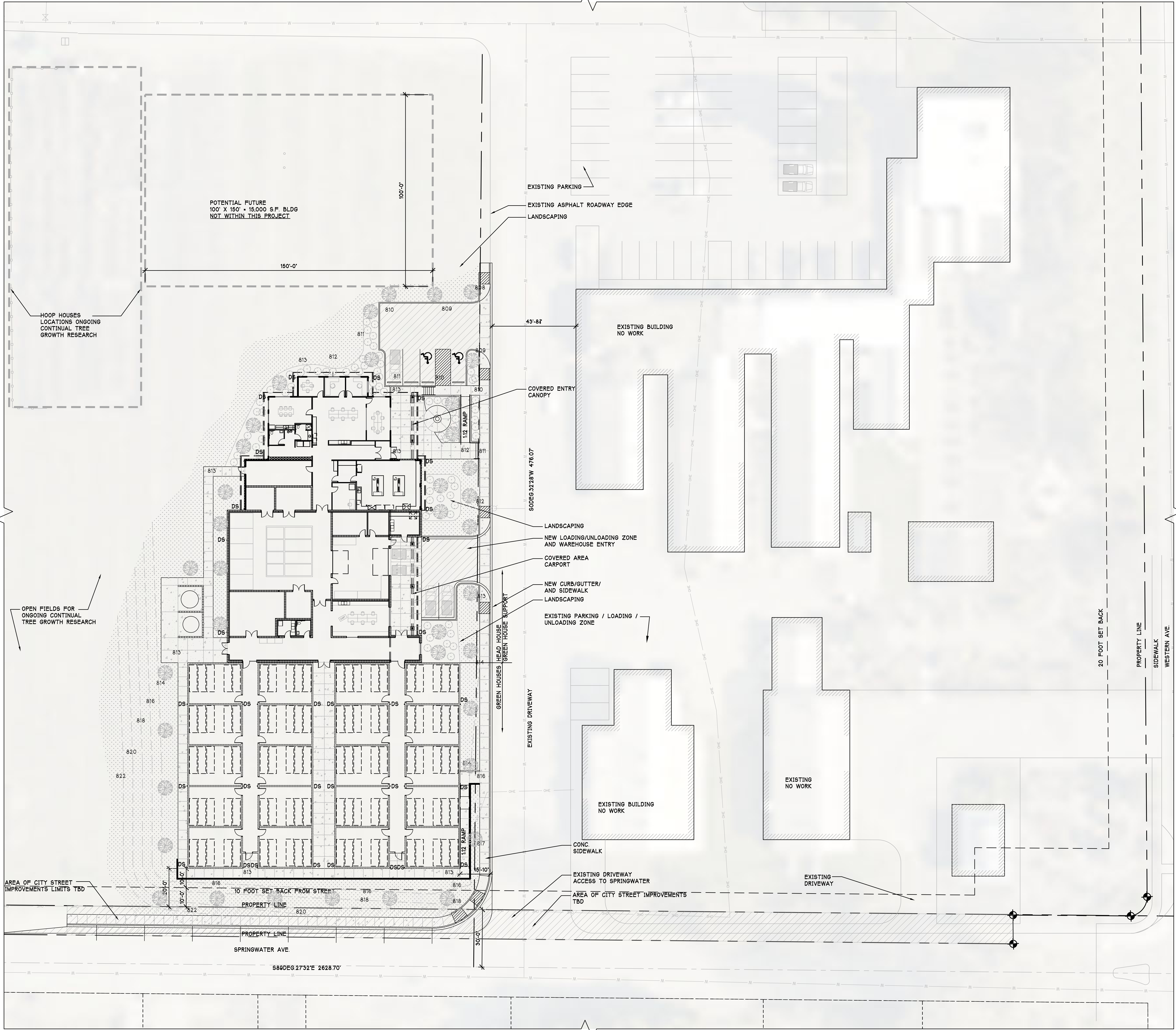
TOTAL CAMPUS PARKING STALLS •167 STALLS (OK)

LANDSCAPING FOR GRAPHIC REPRESENTATION ONLY. REFER TO LANDSCAPE PLANS TYPICAL

NOTE: REFER TO CIVIL CONSTRUCTION PLANS FOR SITE DEVELOPMENT REQUIREMENTS. SITE UTILITY LINES ARE SHOWN FOR GRAPHIC REPRESENTATION ONLY AND ALL SITE DEVELOPMENT DETAILS SHOULD BE CONSTRUCTED PER THE CIVIL CONSTRUCTION PLANS TYP.

LEGEND:

- NEW CONCRETE XXX S.F.
- NEW ASPHALT XXX S.F.
- PERVIOUS PAVEMENT XXX S.F.
- LANDSCAPE AREAS XXX S.F.
- BUILDING FOOTPRINT XXX S.F.
- NEW EASEMENTS - POTENTIAL
- AREA OF RETAINING WALL/ CURB PER CIVIL
- AREA OF BARRIER CURB PER CIVIL
- CATCH BASIN PER CIVIL
- SITE LIGHT PER ELECTRICAL



1 HEAD HOUSE / GREENHOUSE ENLARGED SITE PLAN

SCALE 1"=20'-0"



CARLETTI ARCHITECTS P.S.

architecture & planning

116 EAST FIR STREET
Suite A
Mount Vernon, WA 98273

Phone: (360) 424-0394
Fax: (360) 424-5726

A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA
98807

CONTACT:

.

.



21-511
PROJECT NUMBER:

REVISIONS:
3/4/22 PRELIM SET

SHEET TITLE:

ENLARGED

SITE PLAN

PETER J. CARLETTI

PROJECT ARCHITECT:

DAVID WILSON

DRAWN BY:

TIM GOODMAN

CHECKED BY:

SEPTEMBER 9, 2021

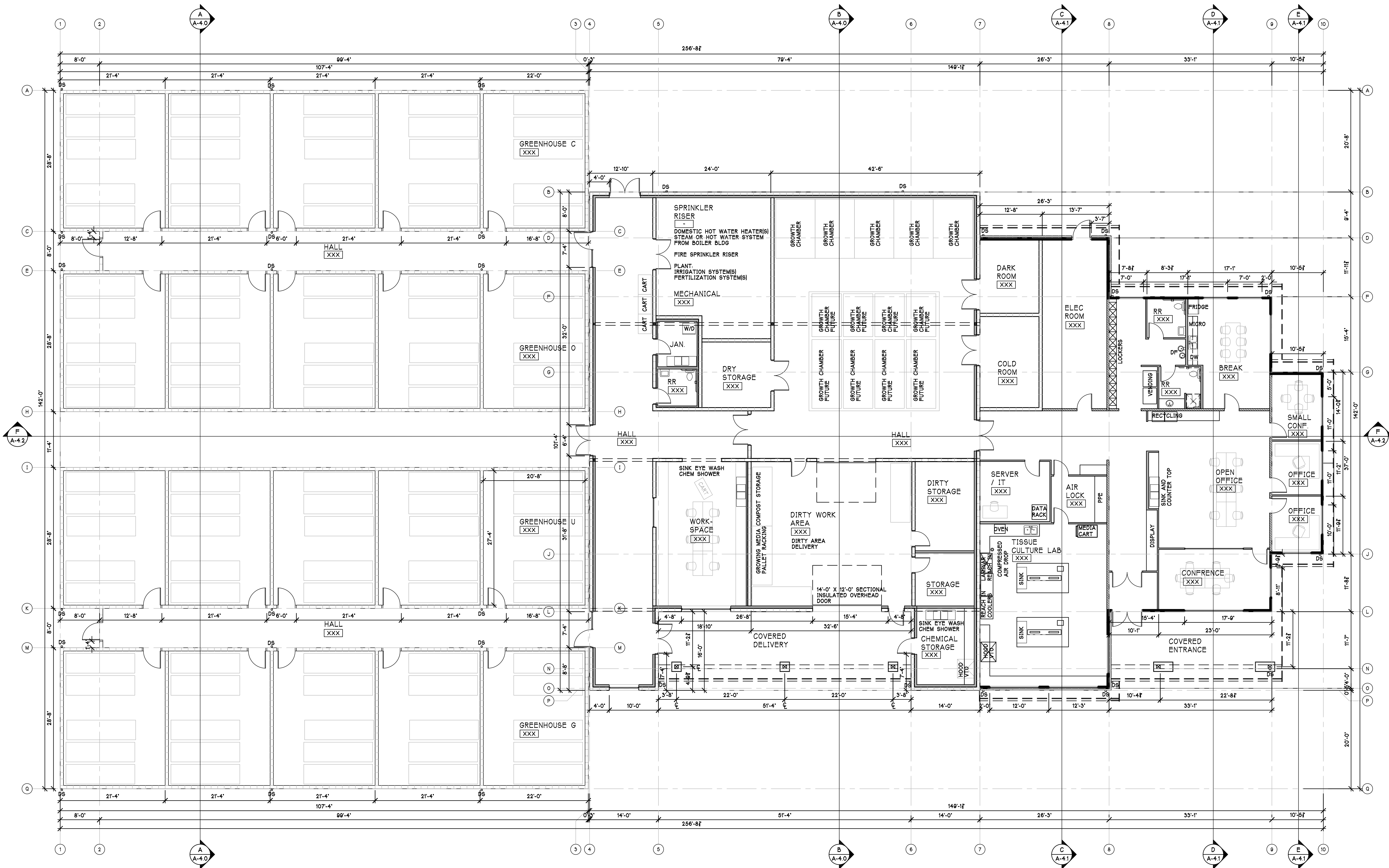
DATE

S:\ARCH\21\DRAWINGS\21-511

COMPUTER FILE NAME

A-1.1

COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.



HEAD HOUSE / GREENHOUSE FLOOR PLAN

SCALE 1/8"=1'-0"

BUILDING SQUARE FOOTAGE	
GREENHOUSES (NON HEATED)	- 13,019 SF
GROWTH AREA (HEATED)	- 8,128 SF
OFFICE SPACE (HEATED)	- 3,000 SF
COVERED DELIVERY ENTRANCE	- 704 SF
COVERED ENTRANCE CANOPY	- 483 SF
TOTAL SF	- 27,234 SF

3/4/22

A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA 98807
CONTACT:



21-511
PROJECT NUMBER:

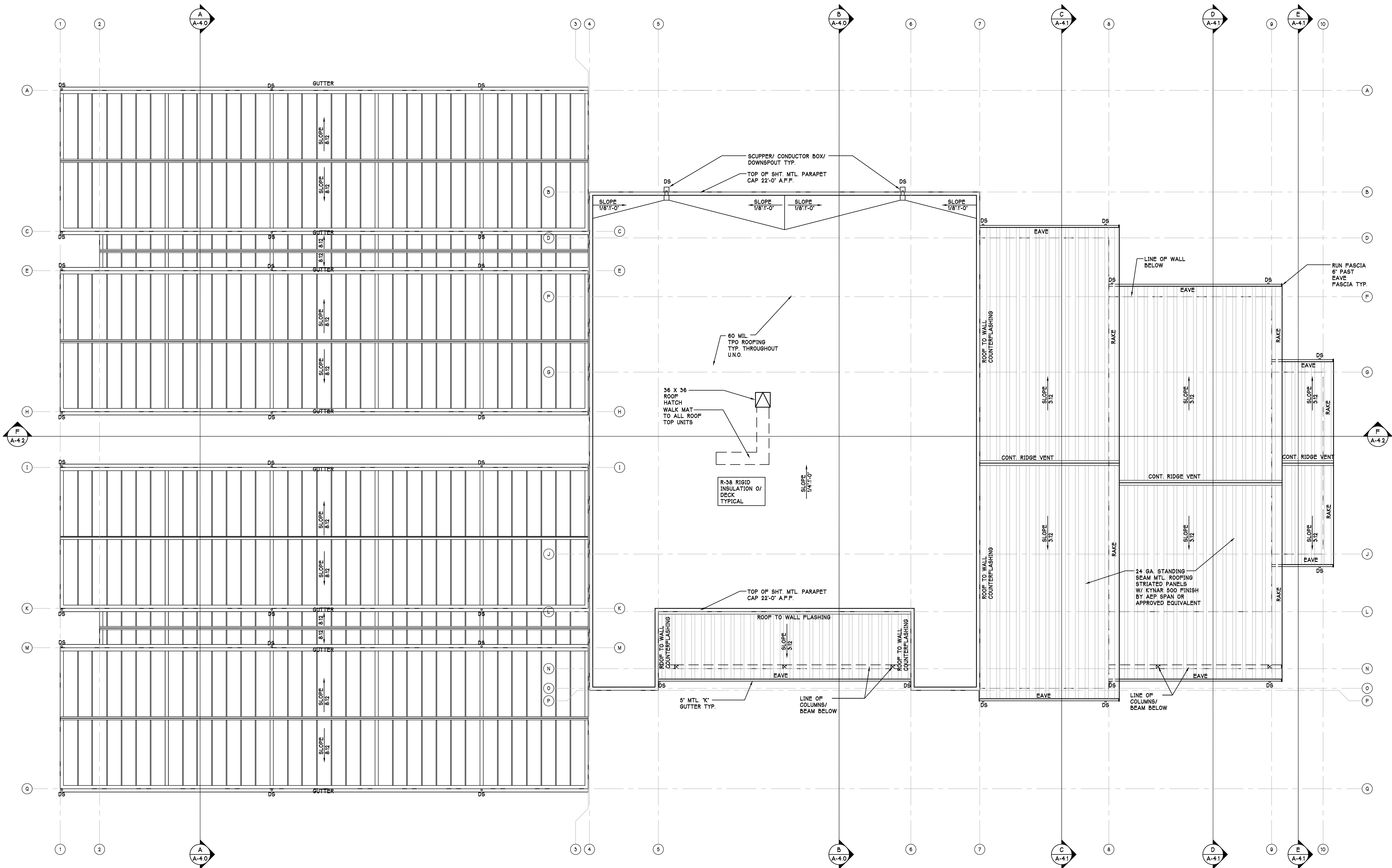
REVISIONS:
3/4/22 PRELIM. SET

SHEET TITLE:
ROOF PLAN

PETER J. CARLETTI
PROJECT ARCHITECT
DAVID WILSON
DRAWN BY
TIM GOODMAN
CHECKED BY
SEPTEMBER 9, 2021
DATE
S:\ARCH\21\DRAWINGS\21-511
COMPUTER FILE NAME

A-2.2

COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.



HEAD HOUSE / GREENHOUSE ROOF PLAN

SCALE 1/8"=1'-0"



CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
Suite A
Mount Vernon, WA 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA
98807
CONTACT:



21-511
PROJECT NUMBER:

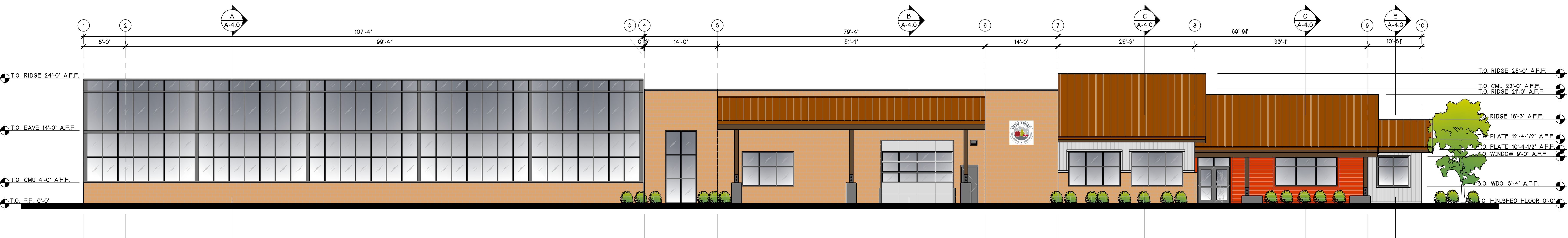
REVISIONS:
3/4/22 PRELIM. SET

SHEET TITLE:
ELEVATIONS

PETER J. CARLETTI
PROJECT ARCHITECT
DAVID WILSON
DRAWN BY
TIM GOODMAN
CHECKED BY

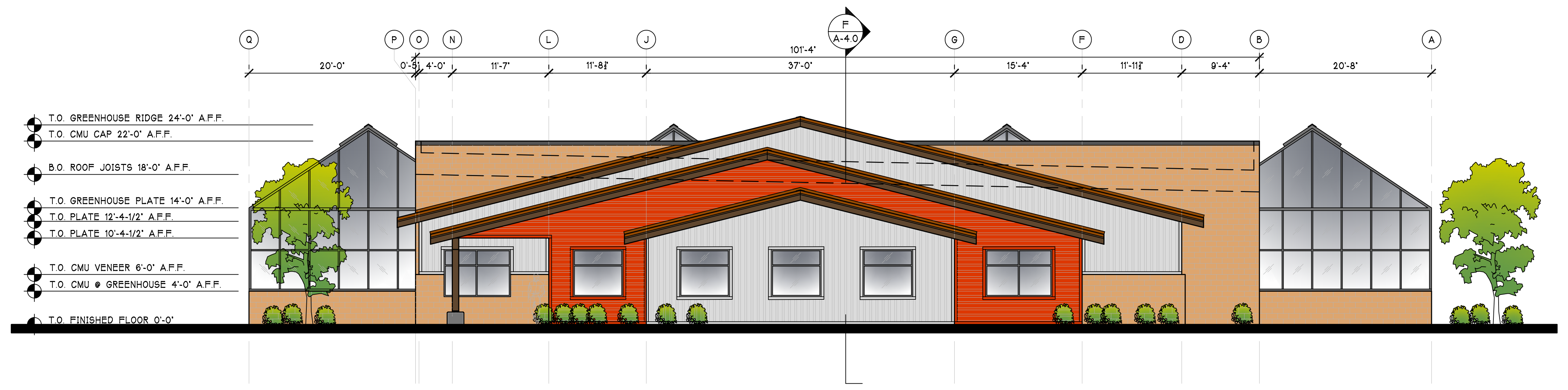
SEPTEMBER 9, 2021
DATE
S:\ARCH\21\DRAWINGS\21-511
COMPUTER FILE NAME

A-3.0
COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.



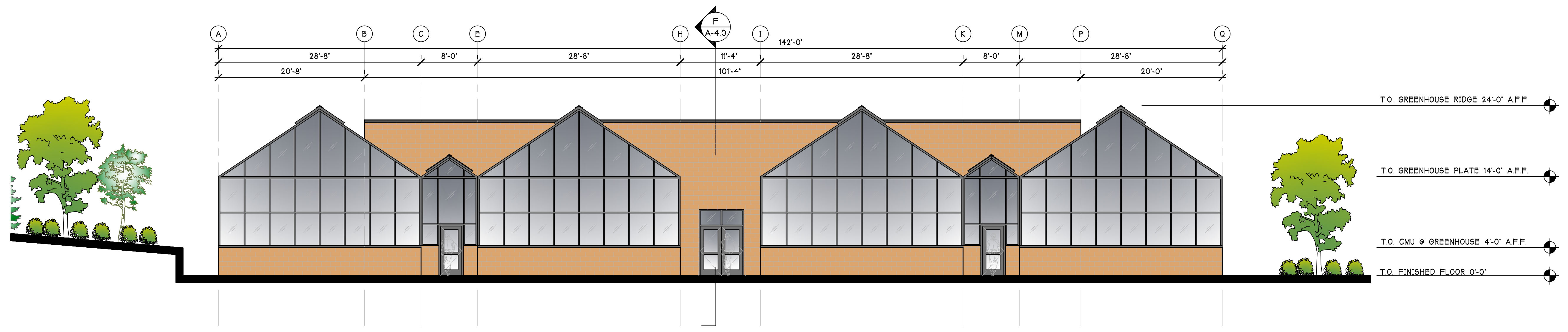
EAST ELEVATION

SCALE 1/8"=1'-0"



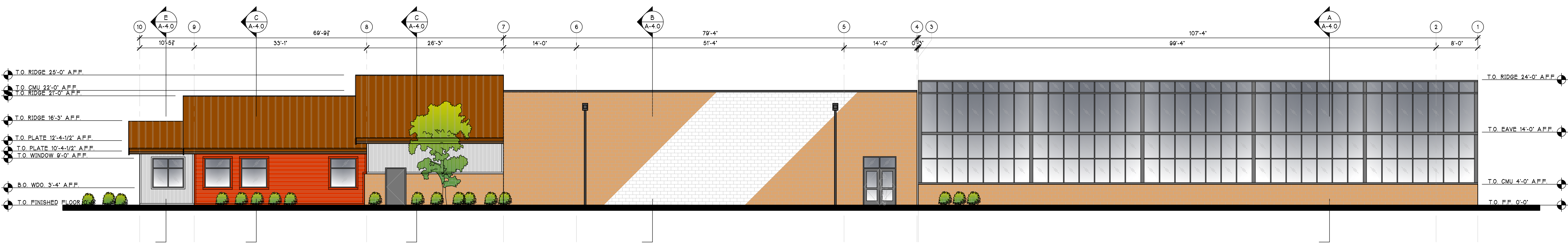
NORTH ELEVATION

SCALE 1/8"=1'-0"



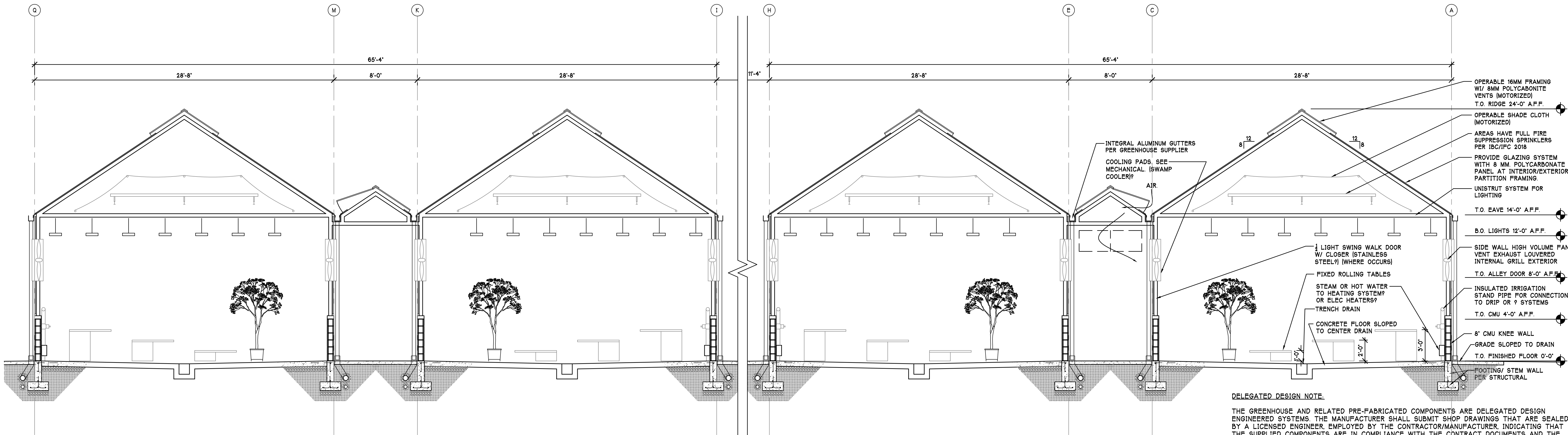
SOUTH ELEVATION

SCALE 1/8"=1'-0"



WEST ELEVATION

SCALE 1/8"=1'-0"



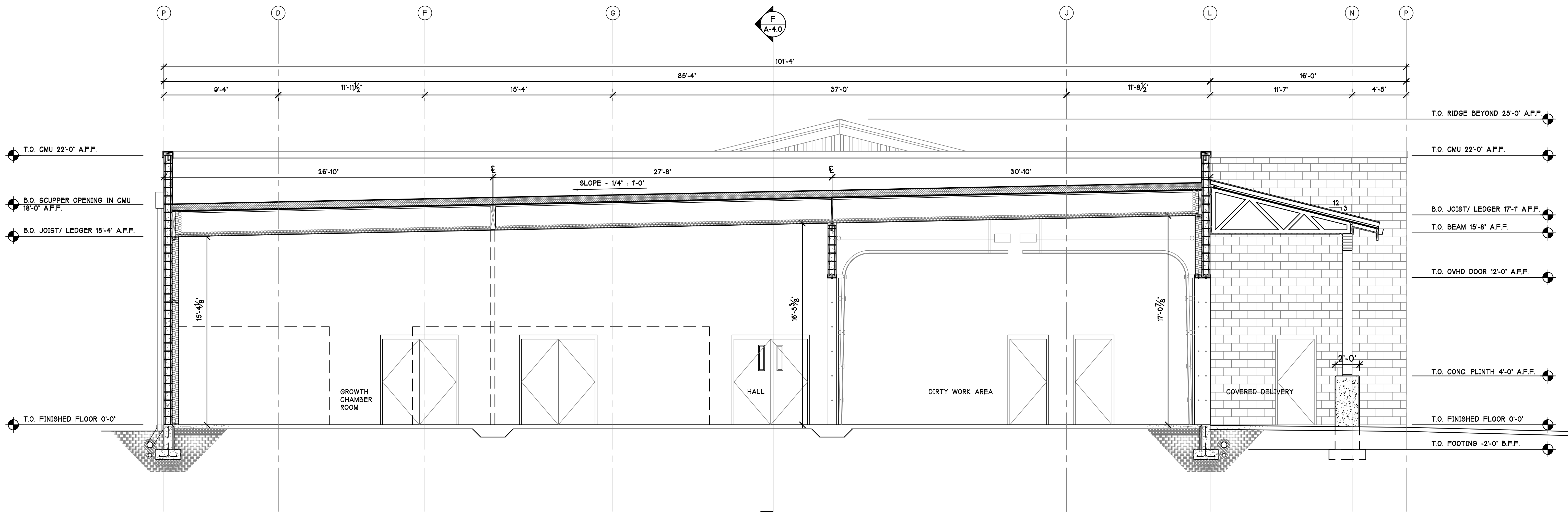
DELEGATED DESIGN NOTE.

THE GREENHOUSE AND RELATED PRE-FABRICATED COMPONENTS ARE DELEGATED DESIGN ENGINEERED SYSTEMS. THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS THAT ARE SEALED BY A LICENSED ENGINEER, EMPLOYED BY THE CONTRACTOR/MANUFACTURER, INDICATING THAT THE SUPPLIED COMPONENTS ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND THE SPECIFIED CRITERIA. PROVIDE A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR THE FRAMES, TRUSSES, GIRTS, BRACES, PURLINS, MODIFIED FOUNDATION REQUIREMENTS. LAYOUT OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS. DELEGATED DESIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE. ALL SUBMITTALS MUST BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO ANY FABRICATION OR RELATED FIELD CONSTRUCTION.

DETAILS SHOWN ON THESE CONSTRUCTION DRAWINGS ARE THE DESIGNER OF RECORD'S ESTIMATE OF REQUIREMENTS BASED ON ANTICIPATED SYSTEMS AND CONFIGURATION. ITEMS SPECIFIED IN THESE CONTRACT DOCUMENTS, SUCH AS THICKNESS AND GAUGES, SHALL BE INCORPORATED AS THE MINIMUM ALLOWED.

BUILDING SECTION A

SCALE 1/4"=1'-0"



BUILDING SECTION B

SCALE 1/4"=1'-0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
Suite A
Mount Vernon, WA 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA
98807

CONTACT: 98807



21-511
PROJECT NUMBER:

REVISIONS:
3/4/22 PRELIM. SET

SHEET TITLE:

SECTIONS

PETER J. CARLETTI
PROJECT ARCHITECT
DAVID WILSON
DRAWN BY
TIM GOODMAN
CHECKED BY

SEPTEMBER 9, 2021
DATE
S:\ARCH\21\DRAWINGS\21-511
COMPUTER FILE NAME

A-4.0
COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.



CARLETTI ARCHITECTS P.S.

architecture & planning

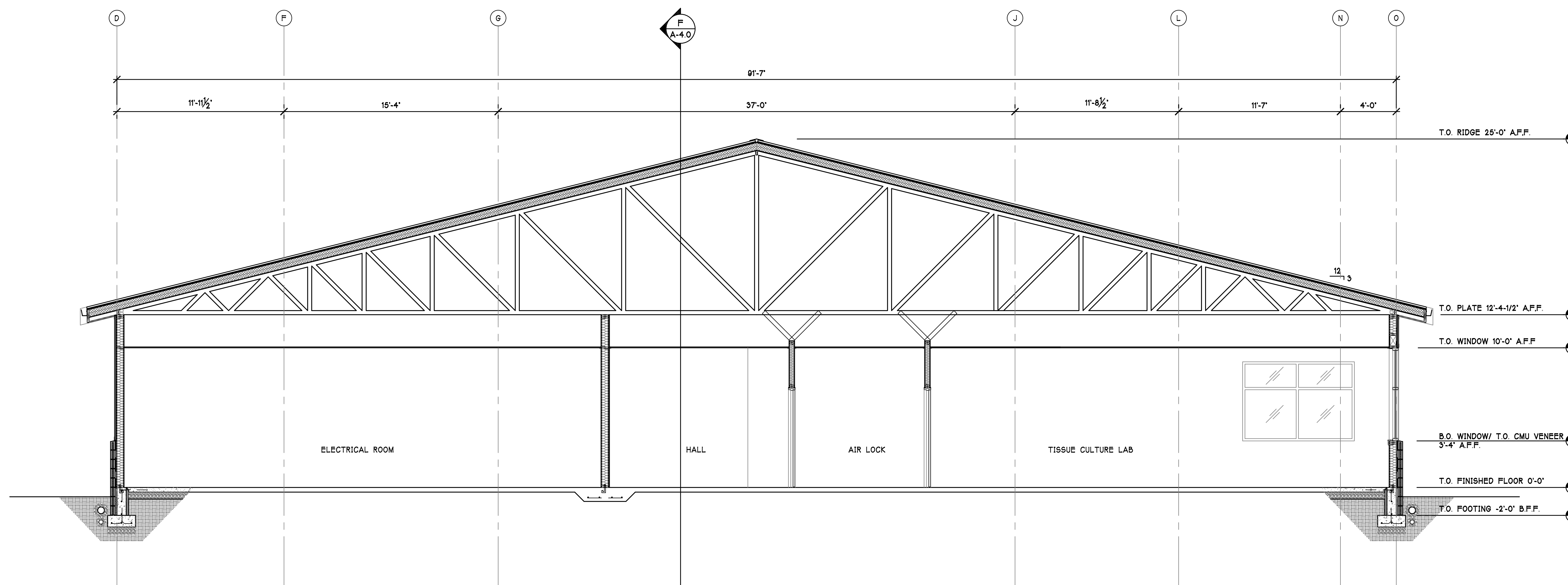
116 EAST FIR STREET
Suite A
Mount Vernon, WA 98273

Phone: (360) 424-0394
Fax: (360) 424-5726

3/4/22

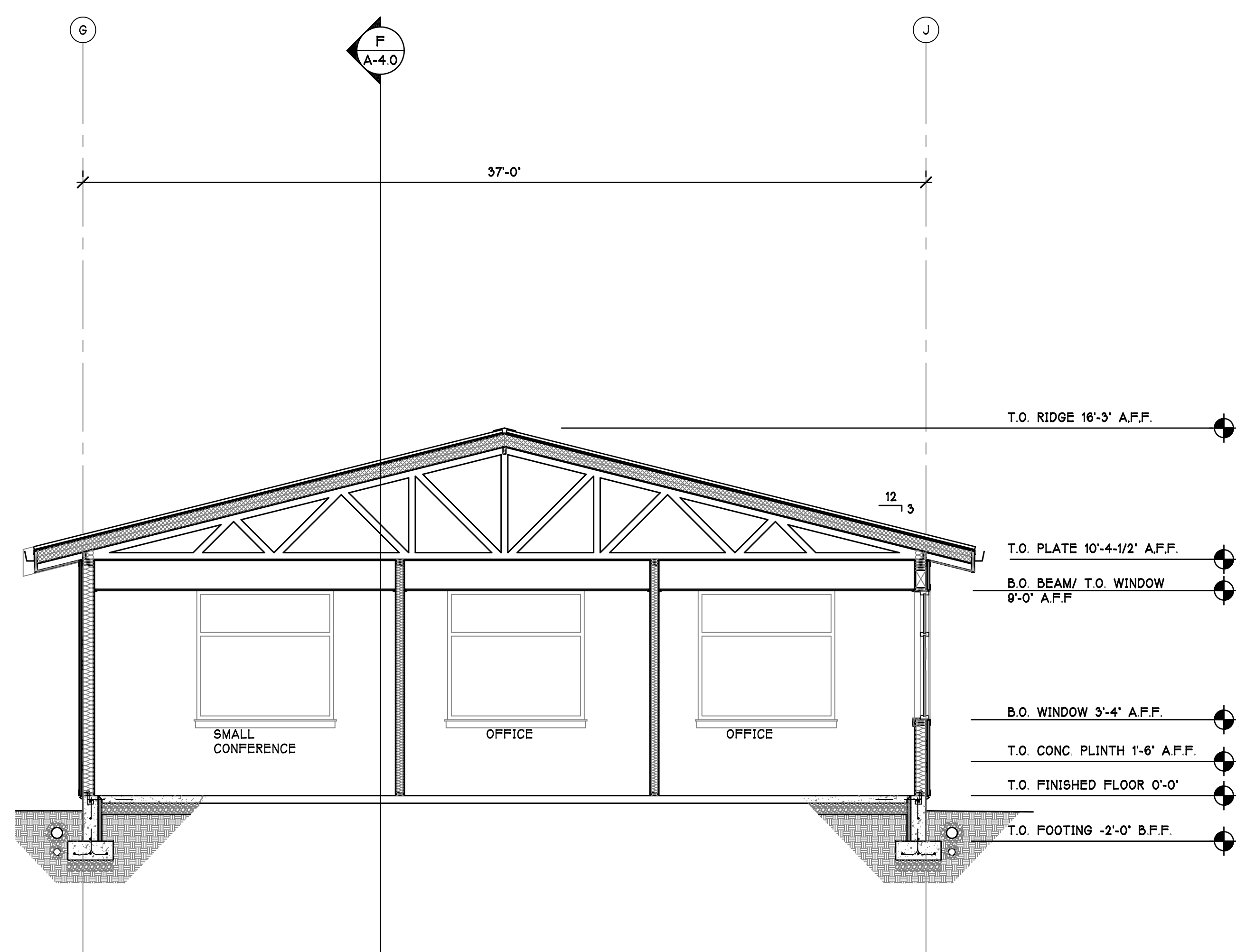
A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA
98807

CONTACT:



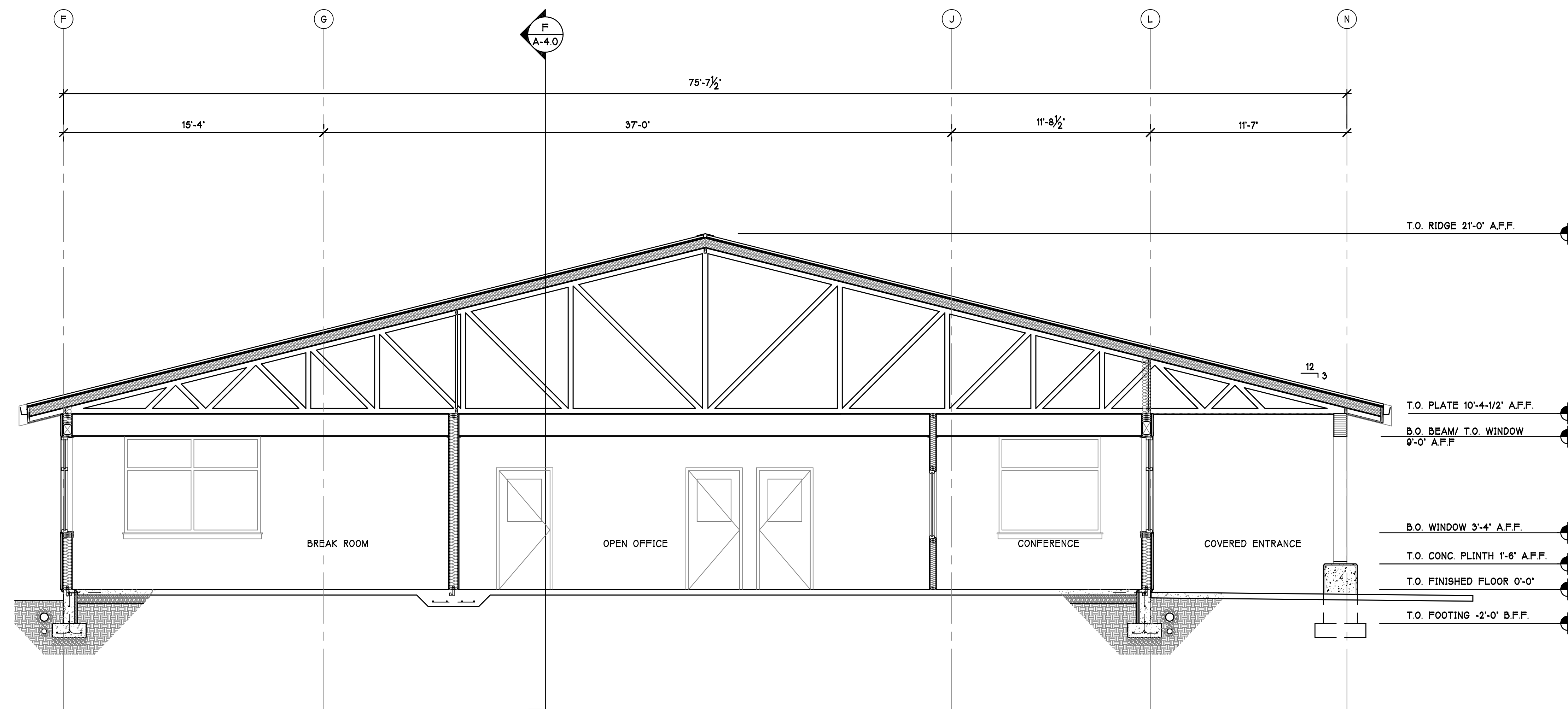
BUILDING SECTION C

SCALE 1/4"=1'-0"



BUILDING SECTION E

SCALE 1/4"=1'-0"



BUILDING SECTION D

SCALE 1/4"=1'-0"

21-511
PROJECT NUMBER:

REVISIONS:
3/4/22 PRELIM. SET

SHEET TITLE:

SECTIONS

PETER J. CARLETTI
PROJECT ARCHITECT

DAVID WILSON
DRAWN BY

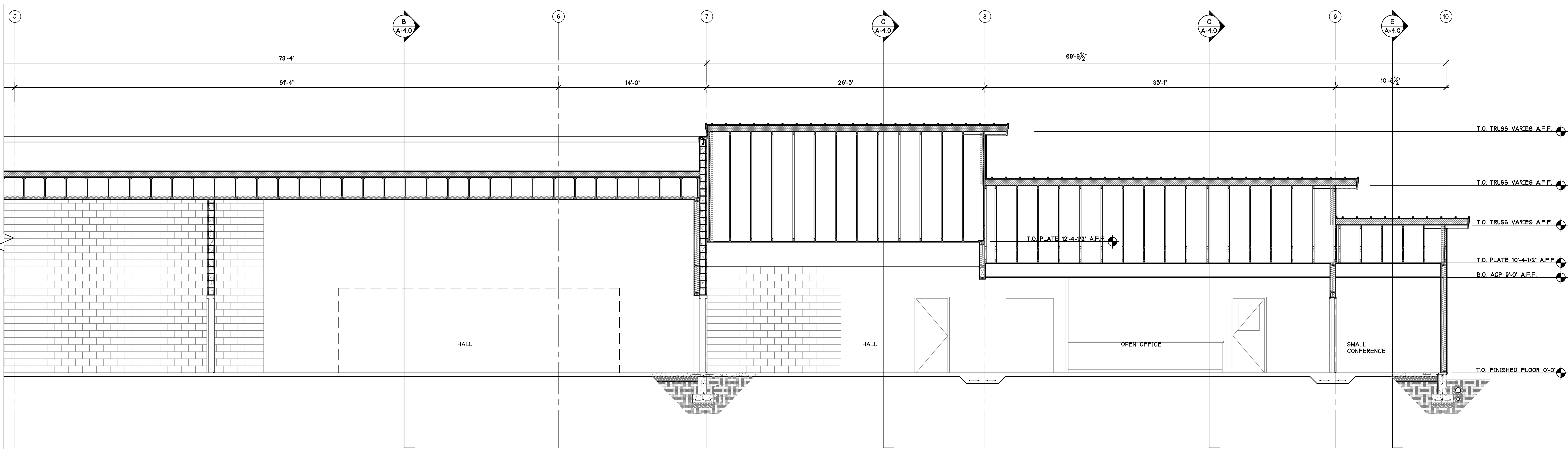
TIM GOODMAN
CHECKED BY

SEPTEMBER 9, 2021
DATE

S:\ARCH\21\DRAWINGS\21-511
COMPUTER FILE NAME

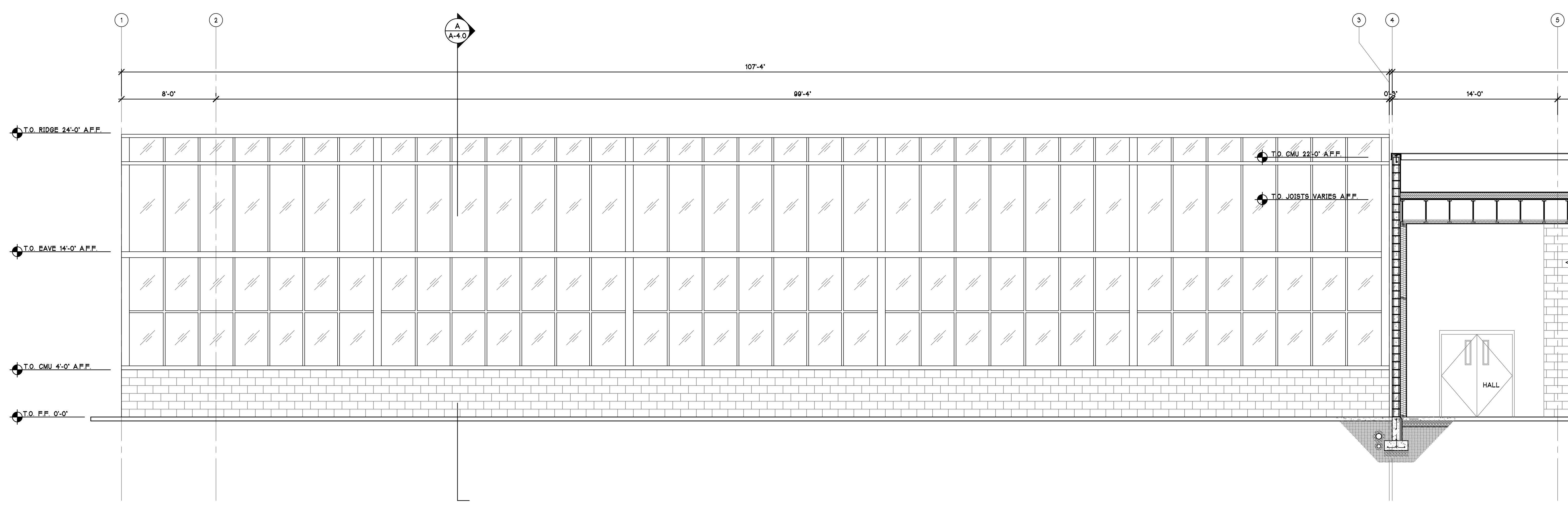
A-4.1

COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.



BUILDING SECTION F

SCALE 1/4"=1'-0"



BUILDING SECTION F - CONTINUED

SCALE 1/4"=1'-0"

CARLETTI ARCHITECTS P.S.
architecture & planning
116 EAST FIR STREET
Suite A
Mount Vernon, WA 98273
Phone: (360) 424-0394
Fax: (360) 424-5726

A NEW FACILITY FOR
WSU TFREC
NEW TREE GROWTH FACILITY
1100 N. WESTERN AVE
WENATCHEE, WA
98807

CONTACT:



21-511
PROJECT NUMBER:

REVISIONS:
3/4/22 PRELIM. SET

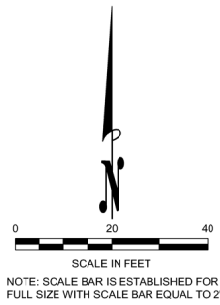
SHEET TITLE:

SECTIONS

PETER J. CARLETTI
PROJECT ARCHITECT
DAVID WILSON
DRAWN BY
TIM GOODMAN
CHECKED BY
SEPTEMBER 9, 2021
DATE
S:\ARCH\21\DRAWINGS\21-511
COMPUTER FILE NAME

A-4.2
COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.

JeffS, 3/17/22 12:36pm
M:\1jobs2021\20210318.0000\Dwg\Final\20210318E1.dwg, Layout: COVER

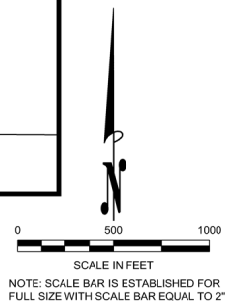


NOTE: SCALE BAR IS ESTABLISHED FOR FULL SIZE WITH SCALE BAR EQUAL TO 2

 **Erlandsen**
SURVEYING | PLANNING | ENGINEERING

DRAWN BY: KC
DATE: 3/17/2022
SCALE: AS NOTED

LAYOUT: COVER
FILE NO.: 2021031
JOB NO.: 2021031



NOTE: SCALE BAR IS ESTABLISHED FOR FULL SIZE WITH SCALE BAR EQUAL TO 2"

	TRAFFIC SIGN
	GUARDRAIL FACE
	ROCK EXPOSED
	EDGE OF WATER
	EASEMENT LINE
	EASEMENT CENTERLINE
	LOT BOUNDARY
	R/W LINE

	WATER METER
	WATER MAIN VALVE
	FIRE HYDRANT
	WATER MAIN FITTING
	BLOWOFF
	AIR/VAC
	COUPLER
	CONCRETE BLOCK N
	REDUCER
	ADAPTER
	TRAFFIC SIGN

EXISTING	
	TELEPHONE MANHOLE
	TELEPHONE PEDESTAL
	GAS MANHOLE
	GAS VALVE
	GAS METER
	GAS RISER
	ELECTRICAL MANHOLE
	ELECTRICAL VAULT CENTER
	ELECTRICAL TRANSFORMER
	ELECTRICAL OUTLET
	ELECTRICAL HANDHOLE
	ELECTRICAL METER
	TV MANHOLE
	TV PEDESTAL
	TV POLE
	WATER MANHOLE
	WATER VALVE
	WATER BLOWOFF
	WATER METER
	FIRE HYDRANT
	WELL
	IRRIGATION MANHOLE
	IRRIGATION AIR RELEASE
	IRRIGATION RISER
	IRRIGATION VALVE
	FIBER OPTIC MANHOLE
	FIBER OPTIC PEDESTAL
	ELECTRICAL POLE
	ELECTRICAL POLE WITH TRANSFORMER
	GUY POLE
	GUY ANCHOR
	RAILROAD CONTROL BOX
	DECIDUOUS TREE
	CONIFEROUS TREE
	DECIDUOUS BUSH
	CONIFER BUSH
	MAILBOX
	SURVEY MONUMENT

The diagram illustrates the correct use of Section and Detail Indicators in technical drawing. It is divided into two main parts: SECTION INDICATOR and DETAIL INDICATOR.

SECTION INDICATOR:

- Top Example (Incorrect):** A circle containing 'X' over 'C1' is shown. An arrow points from the text 'SECTION NUMBER' to the circle. Another arrow points from the text 'DRAWING ON WHICH SECTION IS SHOWN' to the circle. A line extends from the right side of the circle.
- Bottom Example (Correct):** A circle containing 'X' over 'C1' is shown. An arrow points from the text 'SECTION NUMBER' to the circle. Another arrow points from the text 'DRAWING ON WHICH SECTION IS REFERENCED' to the circle. To the right of the circle, the word **SECTION** is written in large, bold, capital letters. Below **SECTION**, the text 'NOT TO SCALE' is written. A horizontal line extends from the right side of the circle.

DETAIL INDICATOR:

- Top Example (Incorrect):** A circle containing 'X' over 'C1' is shown. An arrow points from the text 'DETAIL NUMBER' to the circle. Another arrow points from the text 'DRAWING ON WHICH DETAIL IS SHOWN' to the circle. A line extends from the right side of the circle.
- Bottom Example (Correct):** A circle containing 'X' over 'C1' is shown. An arrow points from the text 'DETAIL NUMBER' to the circle. Another arrow points from the text 'DRAWING ON WHICH DETAIL IS REFERENCED' to the circle. To the right of the circle, the word **DETAIL** is written in large, bold, capital letters. Below **DETAIL**, the text 'NOT TO SCALE' is written. A horizontal line extends from the right side of the circle.

AAF	AVERAGE ANNUAL FLOW	E	EAST	L	LENGTH	S	SOUTH
AB	ANCHOR BOLT	EA	EACH	LB	POUND	SC	SCUM
AC	ASPHALT CONCRETE	ECC	ECCENTRIC	LB/HR	POUNDS PER HOUR	SDH	SCHEDULE
ACP	ACOUSTIC PANEL	EFF	EFFLUENT	LF	LINEAR FEET	SDG	SMALL DIAMETER GRAVITY
ADJ	ADJUSTABLE	EG	EXHAUST GRILLE			SF	SQUARE FEET
AFF	ABOVE FINISHED FLOOR	EL	ELEVATION	MAG	MAGNETIC	SHT	SHEET
AFN	AUDITOR FILE NUMBER	ELL	ELBOW OR BEND	MATL	MATERIAL	SL	SLOPE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	ELEC	ELECTRICAL	MAH	METAL ACCESS HATCH	SOC	SOCKET
ALTR	ALTERNATE	EMBD	EMBEDMENT	MAX	MAXIMUM	SP	STATIC PRESSURE
ALUM	ALUMINUM	EMERG	EMERGENCY	MECH	MECHANICAL	SPECS	SPECIFICATIONS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	EX	EXISTING	MRF	MANUFACTURER	SQ	SQUARE
AP	ACCESS PANEL	EXP	EXPANSION	MGD	MILLION GALLONS PER DAY	SS	STAINLESS STEEL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	EW	EACH WAY	MG/L	MILLIGRAM PER LITER	STA	STATION
ASPH	ASPHALT	EVCS	END VERTICAL CURVE STATION	MH	MANHOLE	STD	STANDARD
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS			MIN	MINIMUM	STL	STEEL
ASSY	ASSEMBLY	FAB	FABRICATED	MMF	MAXIMUM MONTH FLOW	STRG	STRONG
AVE	AVENUE	FCA	FLANGED COUPLING ADAPTER	MD	MID ORDINATE	SUC	SUSPENDED CEILING
		FCO	FLOOR CLEANOUT	MDV	MOTOR OPERATED VALVE	SWD	SIDE WATER DEPTH
BI	BLACK IRON	FD	FLOOR DRAIN				
BLD FLG	BLIND FLANGE	FF	FACTORY FINISH, FINISHED FLOOR	N	NORTH	TAPD	TAPERED
BLDG	BUILDING	FG	FINISHED GRADE	NO.	NUMBER	TB	TOP AND BOTTOM
BLK	BLOCK	FIG	FIGURE	NPW	NON-POTABLE WATER	TC	TOP OF CURB
BLKING	BLOCKING	FIN	FINISHED	NTS	NOT TO SCALE	TDH	TOTAL DYNAMIC HEAD
BOD	BOTTOM OF DUCT, BIOCHEMICAL OXYGEN DEMAND	FIPT	FEMALE INTERNATIONAL PIPE THREAD			TEL	TELEPHONE
BOT	BOTTOM	FL	FLANGE	OSD	OPPOSED BLADE DAMPER	THK	THICK
BOW	BOTTOM OF WALL	FLN	FLOW LINE	OC	ON CENTER	THRD	THREADED
BRG	BRIDGE	FLEX	FLEXIBLE	OD	OUTSIDE DIAMETER	THRU	THROUGH
BTWN	BETWEEN	FLR	FLOOR	OF	OUTSIDE FACE	TK	TANK
BVC	BEGIN VERTICAL CURVE	FPM	FEET PER MINUTE	OPENG	OPENING	TO	TOP
		FT	FEET	OPP	OPPOSITE	TOC	TOP OF CONCRETE
C	CONDUIT	FT2	SQUARE FEET	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	TOF	TOP OF FOOTING
CAP	CORRUGATED ALUMINUM PIPE	FTG	FOOTING			TOG	TOP OF GROUT
CB	CATCH BASIN			OP	OVERHEAD POWER	TOS	TOP OF SLAB
CCP	CONCRETE CYLINDER PIPE	GA	GAUGE	OZ	OUNCE	TOW	TOP OF WALL
CD	CEILING DIFFUSER	GALV	GALVANIZED			TS	TOTAL SOLIDS
CDF	CONTROLLED DENSITY FILL	GEN	GENERAL	PE	PLAIN END	TSS	TOTAL SUSPENDED SOLIDS
CFM	CUBIC FEET PER MINUTE	GI	GALVANIZED IRON	PERF	PERFORATED	TYP	TYPICAL
CI	CAST IRON	GOVT	GOVERNMENT	PG	PERFORMANCE GRADE		
CL	CLASS	GPD	GALLONS PER DAY	PHF	PEAK HOUR FLOW	UHMW	ULTRA HIGH MOLECULAR WEIGHT, POLYETHYLENE
CLAR	CLARIFIER	GPM	GALLONS PER MINUTE	PL	PLATE		
CL	CENTER LINE	GRD	GRADE	PLYWD	PLYWOOD	UV	ULTRAVIOLET
CLR	CLEARANCE	GRT	GROUT	PRV	PRESSURE REDUCING VALVE		
CMP	CORRUGATED METAL PIPE	GRV	GROOVED PIPE OR COUPLING	PS	PUMP STATION, PRIMARY SLUDGE OR PIPE SUPPORT	VC	VERTICAL CURVE
CMU	CONCRETE MASONRY UNIT	GSM	GALVANIZED SHEET METAL			VERT	VERTICAL
CO	CLEANOUT	GV	GATE VALVE	PSF	POUNDS PER SQUARE FOOT	VFD	VARIABLE FREQUENCY DRIVE
CONC	CONCRETE	GWB	GYPSSUM WALL BOARD	PSI	POUNDS PER SQUARE INCH	VIS	VINYL SHEET
CONN	CONNECTION			PSIG	POUNDS PER SQUARE INCH GAUGE	VS	VOLATILE SOLIDS
CONT	CONTRACTOR, CONTINUOUS	H	HEIGHT, HOLLOW	PVC	POLYVINYL CHLORIDE	VTR	VENT THROUGH ROOF
CONV	CONVEYOR	HB	HOSE BIB	PVI	POINT OF VERTICAL INTERSECTION		
CPLG	COUPLING	HEX	HEXAGONAL	PVMT	PAVEMENT	W	WIDTH, WEST
CONTIN	CONTINUED	HORIZ	HORIZONTAL			W/	WITH
CP	CORNER POST	HP	HORSEPOWER	QT	QUARTER	WAS	WASTE ACTIVATED SLUDGE
CPEP	CORRUGATED POLYETHYLENE PIPE	HMA	HOT MIX ASPHALT	QJAD	QUADRANT	WCO	WALL CLEANOUT
CSBS	CRUSHED SURFACING BASE COURSE	HDG	HOT DIPPED GALVANIZED			WD	WIDE
CSH	CONCRETE SURFACE HARDENER	HR	HOUR	RAG	RETURN AIR GRILLE	W/O	WITHOUT
CSTC	CRUSHED SURFACING TOP COURSE	HDPE	HIGH DENSITY POLYETHYLENE	RAS	RETURN ACTIVATED SLUDGE	WRF	WATER RECLAMATION FACILITY
CTR	CENTER			RD	ROOF DRAIN	WSL	WATER SURFACE LEVEL
CJ	COPPER	ID	IDENTIFICATION, INSIDE DIAMETER	RED	REDUCER	WWF	WELDED WIRE FABRIC
CX	CONNECT TO EXISTING	IE	INVERT ELEVATION	REINF	REINFORCE	WWM	WELDED WIRE MESH
		IN	INCH	REQD	REQUIRED	WWTF	WASTEWATER TREATMENT FACILITY
D	DRAIN	INF	INFLUENT	RESTL	REINFORCING STEEL		
DI	DUCTILE IRON	INV	INVERT	RGF	RECIRCULATING GRAVEL FILTER	YH	YARD HYDRANT
DA	DIAMETER			RLX	RELOCATE EXISTING		
DR	DIRECTION	J BOX	JUNCTION BOX	RM	ROOM		
DSCH	DISCHARGE			RO	ROUGH OPENING		
DV	DIVISION			RS	RAW SEWAGE		</



- CURB, GUTTER AND SIDEWALK
PER CITY OF WENATCHEE STANDARDS

STORM POND

• •

1. UTILITIES SHOWN ARE BASE ON PUBIC SOURCES AND ARE APPROXIMATE ONLY.
2. SITE TOPOGRAPHY IS BASED ON PUBLIC LIDAR DATA AND SHOULD NOT BE CONSIDER DESIGN GRADE QUALITY.
3. SITE PLAN INFORMATION FOR USDA GREENHOUSE IS BASED ON DRAFT PLANS DATED 03/30/21.
4. MAP WAS DEVELOPED FOR PLANNING PURPOSES ONLY AND WHILE EFFORTS HAVE BEEN MADE TO IDENTIFY FEATURE ACCURATELY, ERLANDSEN ASSUMES NO LIABILITY TO ACCURACY OF THIS DATA NC ANY DESIGN BASED ON THIS DATA.



Erlandsen
SURVEYING | PLANNING | ENGINEERING

<http://www.erlandson.com>

TOLL FREE (800) 732-7442

DESCRIPTION:

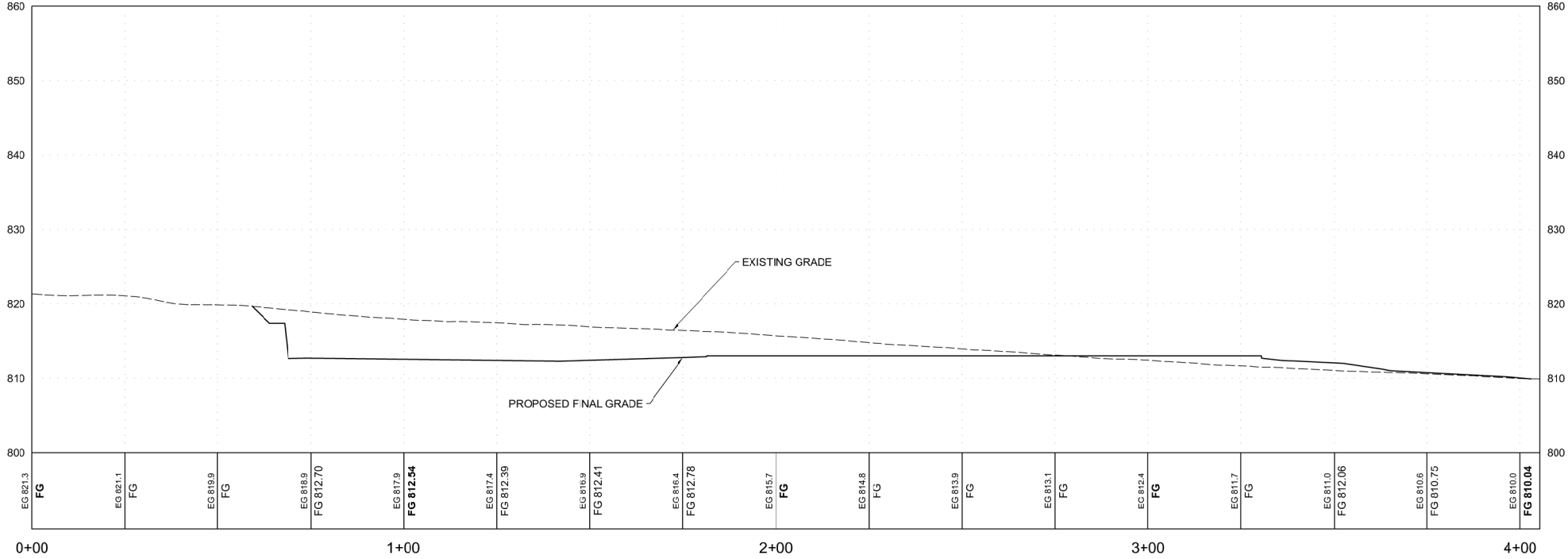
NO:

SHEET OF



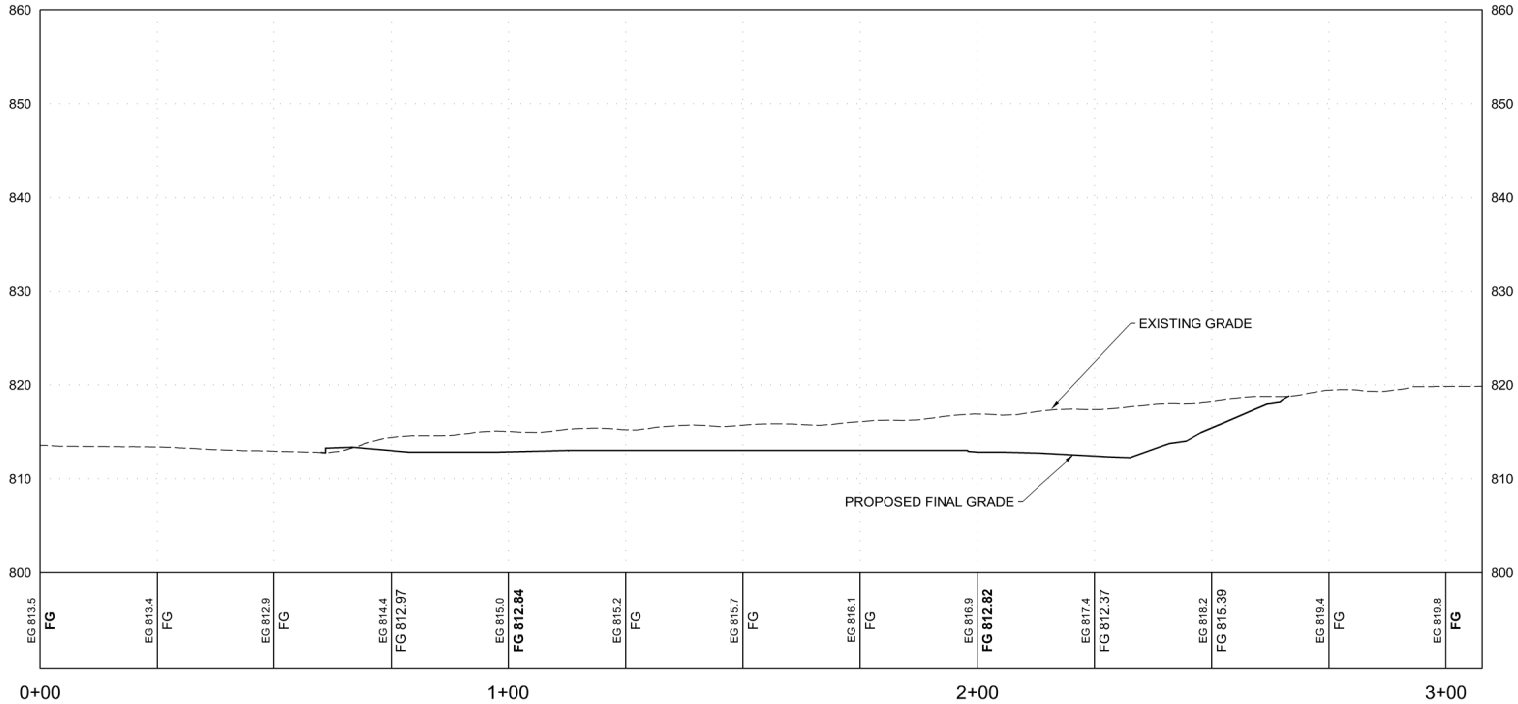
FRUIT TREE GROWTH FACILITATION
CIVIL SITE PLAN

J:\16 3/17/22 12:29pm
M:\16-2022\10310318.000\Draws\Final\20210318E1.dwg, Layout: PROFILES



SECTION A-A

H: 1:20 V: 1:10



SECTION B-B

H: 1:20 V: 1:10



DRAWN BY: KC
DATE: 3/17/2022
SCALE: AS NOTED

LAYOUT: PROFILE
FILE NO: 20210318E1.DWG
JOB NO: 20210318

SHEET C-350

<http://www.erlandsen.com>

ERLANDSEN
250 SIMON ST SE
EAST WENATCHEE, WA 98802
PH: 509-864-2562
TOLL FREE: (800) 732-7442



WSU TREE FRUIT
PLANT GROWTH FACILITY
PROFILES

4/20/2022



WSU Wenatchee - TFREC

Preliminary Construction Estimate

DIV. #	DIVISION TITLE	TOTAL		
1	General Conditions	\$	675,000.00	
2	Sitework & Existing Conditions	\$	1,071,760.00	
3	Concrete	\$	312,170.00	
4	Masonry	\$	860,720.00	
5	Steel and Metals	\$	42,600.00	
6	Wood	\$	220,635.00	
7	Thermal and Moisture	\$	222,485.00	
8	Doors and Windows	\$	284,734.00	
9	Finishes	\$	436,513.00	
10	Specialties	\$	13,270.00	
11	Equipment	\$	10,000.00	
12	Furnishings and Casework	\$	120,000.00	
13	Special Construction	\$	1,936,264.00	
21	Fire Protection	\$	121,550.00	
22	Plumbing	\$	243,100.00	
23	HVAC	\$	652,460.00	
26	Electrical	\$	765,747.00	
27	Communications Systems	\$	44,500.00	
28	Electronic Fire & Safety	\$	17,500.00	
PROJECT TOTAL BARE COSTS		\$	8,051,008.00	
GC Overhead and Profit		\$	966,120.96	12%
PROJECT SUBTOTAL		\$	9,017,128.96	
CONTINGENCY		\$	1,803,425.79	20%
PROJECT SUBTOTAL		\$	10,820,554.75	
WSST		\$	908,926.60	8.40%
PROJECT CONSTRUCTION TOTAL		\$	11,729,481.35	
A&E FEES		\$	1,084,977.02	9.25%
PROJECT GRAND TOTAL		\$	12,814,458.38	
EXCLUDES:				
1	FFE (Fixtures Furniture & Equipment) by Owner	\$	-	
2	Alternate #1 - Future Growth Chambers	\$	195,631.99	



WSU Wenatchee - TFREC

Preliminary Construction Estimate

CODE	DESCRIPTION	Cost
	General Conditions	Cost
010020	General Conditions	\$ 675,000.00
010090	Misc. Construction Supplies	\$ -
010100	Project Meetings	\$ -
010160	Project Layout	\$ -
010165	Set Batterboards / Line Control	\$ -
013110	Project Manager	\$ -
013130	Superintendent	\$ -
013140	Foreman	\$ -
013520	Safety & First Aid	\$ -
015113	Temporary Electricity	\$ -
015123	Temporary Heating	\$ -
015126	Temporary Lighting	\$ -
015213	Temporary Office	\$ -
015218	Sanikan	\$ -
015813	Project Signage	\$ -
017413	Project Daily Cleanup	\$ -
017419	Dumpster & Disposal Fees	\$ -
017423	Final Cleanup	\$ -
017825	As Built Drawings	\$ -
019990	Misc. Equipment	\$ -
	DIV 1 TOTALS	\$ 675,000.00

	Sitework & Existing Conditions	Cost
SITE	SITEWORK	
021000	Site preparation	\$ 441,000.00
022030	Site Grade	\$ 42,000.00
022080	Foundation Excavation	\$ 73,000.00
024202	Storm	\$ 81,000.00
024290	Sanitary Sewer	\$ 70,000.00
025150	Asphalt Paving	\$ 14,580.00
025200	Extruded Curbs	\$ 1,880.00
025210	Pour in Place Curbs	\$ 13,875.00
025220	Wheel Stops	\$ 750.00
025300	City Sidewalks & Approaches	\$ 14,675.00
025400	On Site Sidewalks & Aprons	\$ 21,000.00
025500	Pavement Striping	\$ 1,000.00
027110	Road Improvements	\$ 67,000.00
027130	Domestic Water Service	\$ 10,000.00
027135	Fire Line (Underground)	\$ 105,000.00
028000	Landscaping	\$ 75,000.00
028010	Irrigation	\$ 40,000.00
Div 2 Totals	DIV 2 TOTALS	\$ 1,071,760.00
	Concrete	Cost
031000	Greenhouse Foundation	\$ 142,000.00
031010	Building Foundation	\$ 35,170.00
031610	Slab on Grade Pour	\$ 35,000.00
032100	Rebar Material	\$ 65,000.00
032110	Rebar Install Foundation	\$ 35,000.00
Div 3 Totals	DIV 3 TOTALS	\$ 312,170.00
	Masonry	Cost
040000	Masonry Exterior	\$ 447,680.00
040005	Masonry Buckouts	\$ 6,800.00
042100	Masonry Interior	\$ 200,640.00
042200	Masonry GH	\$ 205,600.00
Div 4 Totals	DIV 4 TOTALS	\$ 860,720.00

	Steel & Metals	Cost
050000	Total Steel Package	\$ 42,600.00
	DIV 5 TOTALS	\$ 42,600.00
	Wood	Cost
060500	Framing Accessories	\$ 6,500.00
060700	Framing Lumber Matl.	\$ 90,000.00
061140	Wall Headers	\$ 3,000.00
061150	Wall Sheathing	\$ 3,945.00
061180	Base Misc. Framing	\$ 11,400.00
061320	Glu-Lam Beams	\$ 1,275.00
061710	Roof Bolted Ledger	\$ 1,900.00
061720	Roof Joists	\$ 14,100.00
061730	Pre-Fabricated Roof Trusses	\$ 16,900.00
061740	Blocking	\$ 8,550.00
061741	Roof Joist Blocking	\$ 12,800.00
061760	Roof Overframing	\$ 6,840.00
061770	Roof Sheathing	\$ 26,700.00
061820	Fascia	\$ 3,600.00
061950	Covered Canopy	\$ 13,125.00
	DIV 6 TOTALS	\$ 220,635.00
	Thermal and Moisture	Cost
072100	Bldg. Envelope Insulation	\$ 32,000.00
074300	Metal Siding Vertical	\$ 30,300.00
075200	Metal Roofing 3:12	\$ 50,115.00
075300	Membrane Roofing	\$ 108,750.00
078200	Roof Hatches	\$ 1,320.00
	DIV 7 TOTALS	\$ 222,485.00
	Doors & Windows	Cost
081100	Ext. H.M. Doors & Frames	\$ 2,774.00
082200	Int. H.M Doors & Frames	\$ 34,560.00
082350	Double Doors & Frames	\$ 17,100.00
081400	Bump Doors	\$ 6,900.00
083600	Overhead Doors	\$ 26,000.00
084800	Storefront Doors	\$ 45,000.00
084900	Storefront Glass System	\$ 142,000.00
085000	Int Windows	\$ 10,400.00
	DIV 8 TOTALS	\$ 284,734.00

	Finishes	Cost
091100	Wall 2 sided GWB	\$ 80,080.00
091110	1 Sided Wall / Exterior	\$ 128,492.00
092500	Gypsum Drywall Ceilings	\$ 11,900.00
095000	Suspended Ceiling	\$ 9,120.00
096100	Tile (RR and Jan)	\$ 9,520.00
096300	Carpet	\$ 1,125.00
096500	Base	\$ 3,500.00
096600	Sealed Concrete	\$ 28,400.00
096700	Polished Concrete	\$ 77,280.00
099000	Painting	\$ 75,000.00
099850	Wainscot 8' AFF	\$ 12,096.00
	DIV 9 TOTALS	\$ 436,513.00
	Specialties	Cost
105400	Interior Signs	\$ 2,450.00
105500	Ext. Signage / Bldg.	\$ 340.00
105000	Lockers	\$ 5,050.00
105250	Knox Box	\$ 845.00
108010	ADA Bars	\$ 1,770.00
108020	Soap Dispenser	\$ 300.00
108030	Toilet Paper Dispenser	\$ 370.00
108040	Paper Towel Dispenser	\$ 875.00
108050	Seat Cover Dispenser	\$ 370.00
108060	Mirror	\$ 600.00
108070	Trash Can	\$ 300.00
	DIV 10 TOTALS	\$ 13,270.00
	Equipment	Cost
114100	Kitchen/Breakroom Appliances	\$ 10,000.00
	DIV 11 TOTALS	\$ 10,000.00
	Furnishing and Casework	Cost
123000	Cabinets & Casework	\$ 30,000.00
123100	Countertops	\$ 10,000.00
124000	Lab Casework	\$ 55,000.00
126000	Lab Countertop	\$ 25,000.00
	DIV 12 TOTALS	\$ 120,000.00

	Special Construction	Cost
131200	Greenhouses (W/ louvers, evaporative coolers, shade system)	\$ 1,818,264.00
131200	Greenhouses Argus system	\$ 118,000.00
	DIV 13 TOTALS	\$ 1,936,264.00
	Fire Protection	Cost
210000	Fire Sprinkler Rough-in	\$ 85,000.00
211000	Fire Sprinkler Trim Out	\$ 36,550.00
	DIV 21 TOTALS	\$ 121,550.00
	Plumbing	Cost
220000	Plumbing Rough-in	\$ 130,000.00
221000	Plumbing Trim Out	\$ 113,100.00
	DIV 22 TOTALS	\$ 243,100.00
	HVAC	Cost
231000	HVAC Rough-in (office and lab areas)	\$ 431,450.00
232000	GH Mechanical (hook up of greenhouse mech. Gas lines ect)	\$ 30,000.00
236500	Growth Chambers Rough-in	\$ 135,900.00
236000	HVAC Trimout (office and lab areas)	\$ 42,150.00
237000	Growth Chambers Trim Out	\$ 12,960.00
	DIV 23 TOTALS	\$ 652,460.00
	Div 23 Blank	
	Electrical	Cost
260000	Electrical Rough-in (office and lab areas)	\$ 496,247.00
261000	Electrical rough-in GH	\$ 238,000.00
261500	Electrical Trimout	\$ 31,500.00
	DIV 26 TOTALS	\$ 765,747.00
	Communications Systems	Cost
272000	Data Systems	\$ 44,500.00
	DIV 27 TOTALS	\$ 44,500.00
	Electronic Fire & Safety	Cost
284000	Fire Detection Systems	\$ 17,500.00
	DIV 28 TOTALS	\$ 17,500.00

Project Cost	\$ 8,051,008.00
Fee 12%	\$ 966,120.96
Project Cost With Fee	\$ 9,017,128.96
Contingency 20%	\$ 1,803,425.79
Total Cost with Contingency	\$ 10,820,554.75
Tax 8.4%	\$ 908,926.60
Total Project Cost with Tax	\$ 11,729,481.35

Div Code	Alternate #1 - Future Growth Chambers	Cost
237000	Growth Chambers Trim Out	\$ 106,280.00
260000	Electrical Rough-in	\$ 28,000.00
ALTERNATE #1 TOTALS		\$ 134,280.00

Project Cost	\$ 134,280.00
Fee 12%	\$ 16,113.60
Project Cost with Fee	\$ 150,393.60
Contingency 20%	\$ 30,078.72
Total Cost with Contingency	\$ 180,472.32
Tax 8.4%	\$ 15,159.67
Total Project Cost with Tax	\$ 195,631.99