Tualatin Industrial Park
Tualatin, Oregon

22 October 2019

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LEGEND

PROPERTY LINE

LINE OF SOFFIT OR ELEMENT ABOVE

CENTER LINE

COLUMN GRID LINE

APPLICABLE CODES

ALL CONSTRUCTION SHALL CONFORM WITH ALL APPLICABLE LOCAL STATE AND FEDERAL CODES REGULATION AND LAWS, INCLUDING, BUT NOT LIMITED TO:

BUILDING	2014 OREGON STRUCTURAL SPECIALTY CODE
MECHANICAL	2014 OREGON MECHANICAL SPECIALTY CODE
PLUMBING	2014 OREGON PLUMBING SPECIALTY CODE
ELECTRICAL	2014 OREGON ELECTRICAL SPECIALTY CODE
FIRE	2014 OREGON FIRE CODE
ACCESSIBILITY	2009 ICC / ANSI A117.1 ACCESSIBILITY CODE
ENERGY	2014 OREGON ENERGY EFFICIENCY SPECIALTY CODE

PROJECT SUMMARY

CURRENT ZONING USE: MG - GENERAL MANUFACTURING
PROPOSED ZONING USE: MG - GENERAL MANUFACTURING

OCCUPANCY GROUP: S-1 / B

CONSTRUCTION TYPE: V-B

LEGAL DESCRIPTION:

TAX LOT 500 FROM TAX MAP 2S 1 27AA, TAX LOT 600 AND 700 FROM TAX MAP 2S 1 22DD.

LOT AREA:	717,165 sf ±
	16.46 acres ±
LOT A:	297,108 sf ±
LOT B:	420,057 sf ±
TOTAL BUILDING AREA:	317,125 sf
BUILDING A:	129,975 sf
MANUFACTURING:	45,491.25 sf (35%)
WAREHOUSE:	84,484.75 sf (65%)
BUILDING B:	187,150 sf
MANUFACTURING:	84,217.5 sf (45%)
WAREHOUSE:	102,932.5 sf (55%)
SITE COVERAGE:	44.22 %
LOT A:	43.75%
LOT B:	44.55%
DOCK DOOR RATIO:	1 / 5,975 sf
BUILDING A:	1 / 4,475 sf
BUILDING B:	1 / 7,800 sf
PARKING REQUIRED	264 spaces
BUILDING A:	98 spaces
MANUFACTURING (1.6 / 1,000 sf)	73 spaces
WAREHOUSE (0.3 / 1,000 sf)	25 spaces
BUILDING B:	166 spaces
MANUFACTURING (1.6 / 1,000 sf)	135 spaces
WAREHOUSE (0.3 / 1,000 sf)	31 spaces
PARKING PROVIDED:	274 spaces
BUILDING A:	102 spaces
STANDARD:	96 spaces
HANDICAP ACCESSIBLE:	6 spaces
BUILDING B:	172 spaces
STANDARD:	166 spaces
HANDICAP ACCESSIBLE:	6 spaces
LANDSCAPE REQUIRED:	71,717 sf (10%)
LOT A:	29,711 sf
LOT B:	42,006 sf
LANDSCAPE PROVIDED:	110,526 sf (15.41%)
	29,808 sf (10.03%)
	80,718 sf (19.22%)

PROJECT TEAM

OWNER / DEVELOPER

PHELAN DEVELOPMENT COMPANY
450 NEWPORT CENTER DRIVE, SUITE 405
NEWPORT BEACH, CA 92660
(949) 720-8050

APPLICANT

MICHAEL DEARMEY
PHELAN DEVELOPMENT COMPANY
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NEWPORT BEACH, CA 92660
(949) 720-8050

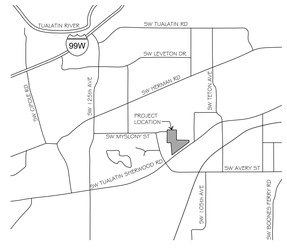
ARCHITECT

CALVIN J. COATSWORTH ARCHITECTS, PC
1574 GULF ROAD
PMB 212
POINT ROBERST, WA 98281
PHONE: (949) 833-1930

CIVIL ENGINEER

CRAIG HARRIS
AAI ENGINEERING
4875 SW GRIFFITH DRIVE, SUITE 300
BEAVERTON, OR 97005
PHONE: (503) 352-3030

VICINITY MAP



NORTH

SCALE: NOT TO SCALE

A-0

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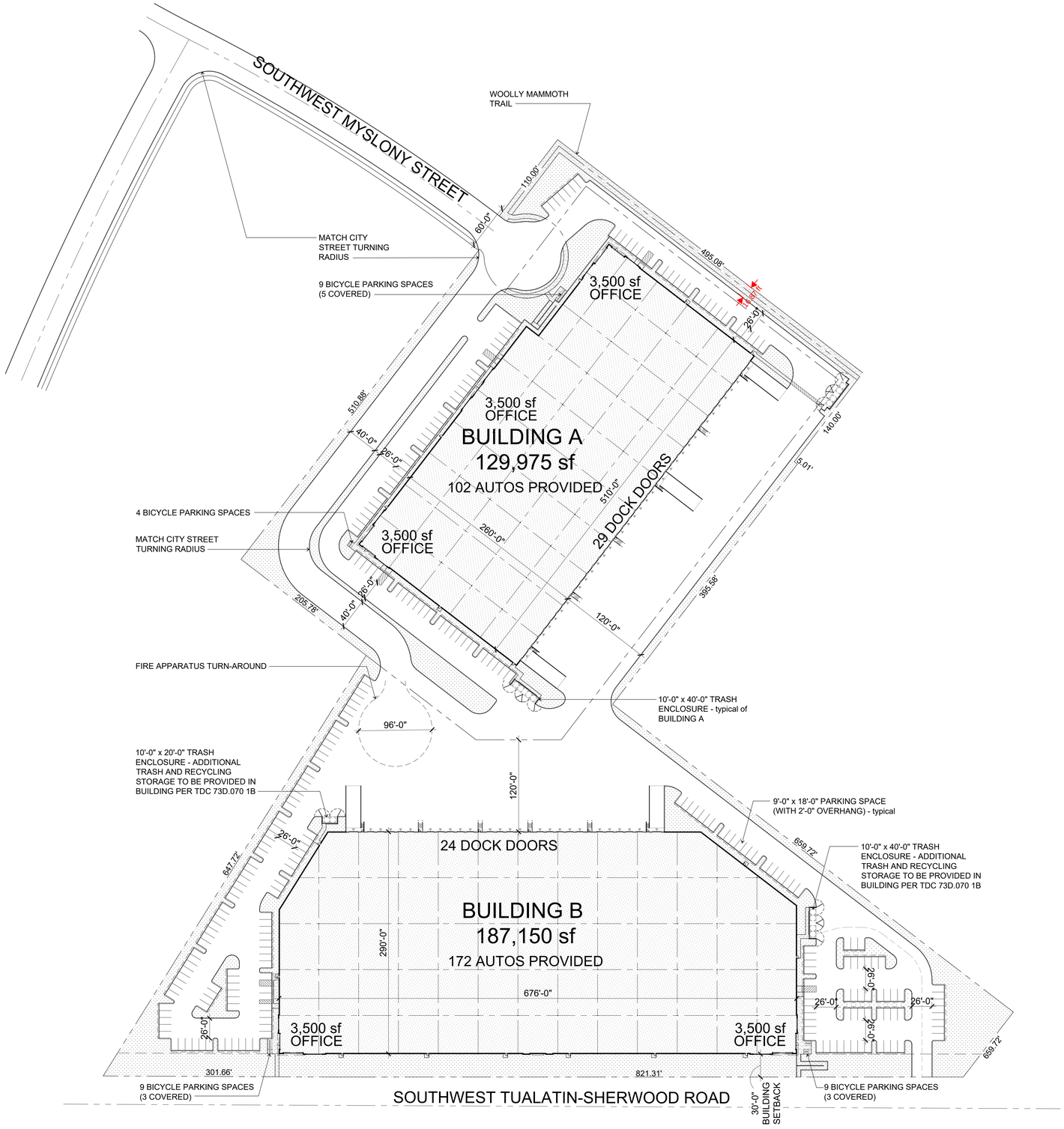
22 October 2019

p:\2019\19500 phelan development\19500.21-tualatin industrial park (pascuzzi property), tualatin, or\19500.21 site plan scheme 13r2.dwg



PRELIMINARY SITE PLAN
SCHEME 13 R2

23 October 2019

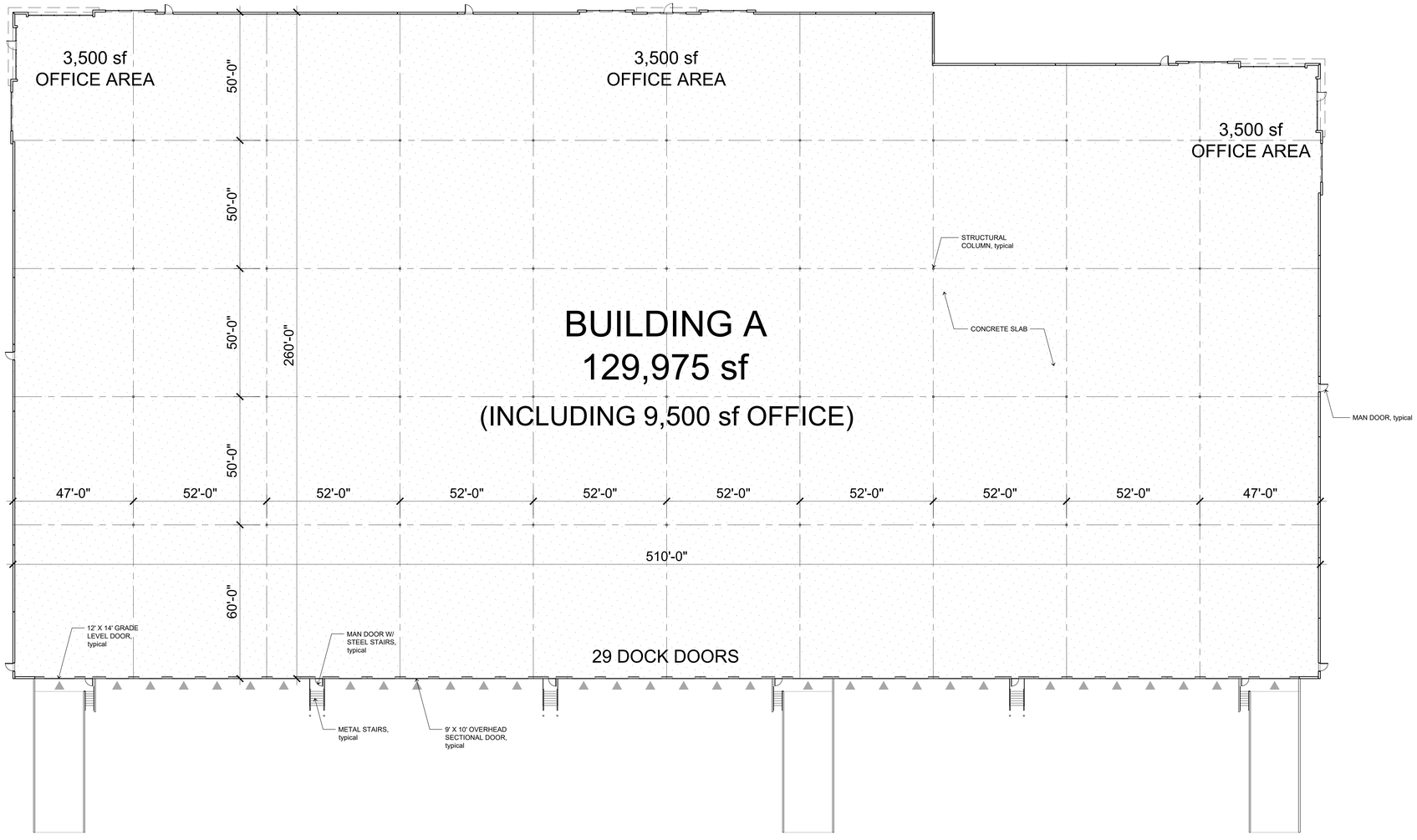
Tualatin Industrial Park
Tualatin, Oregon

0' 20' 60' 120'
SCALE: 1" = 60'

A-1

Carlile Coatsworth Architects, Inc
18600 MacArthur Boulevard - Suite 300 - Irvine, CA 92612 - Phone: (949) 833-1930

PHELAN DEVELOPMENT
450 Newport Center Drive, Suite 405
Newport Beach, CA 92660



BUILDING A - FLOOR PLAN

Tualatin Industrial Park
Tualatin, Oregon

0' 5' 10' 20' 40'
SCALE: 1" = 20'

A-2

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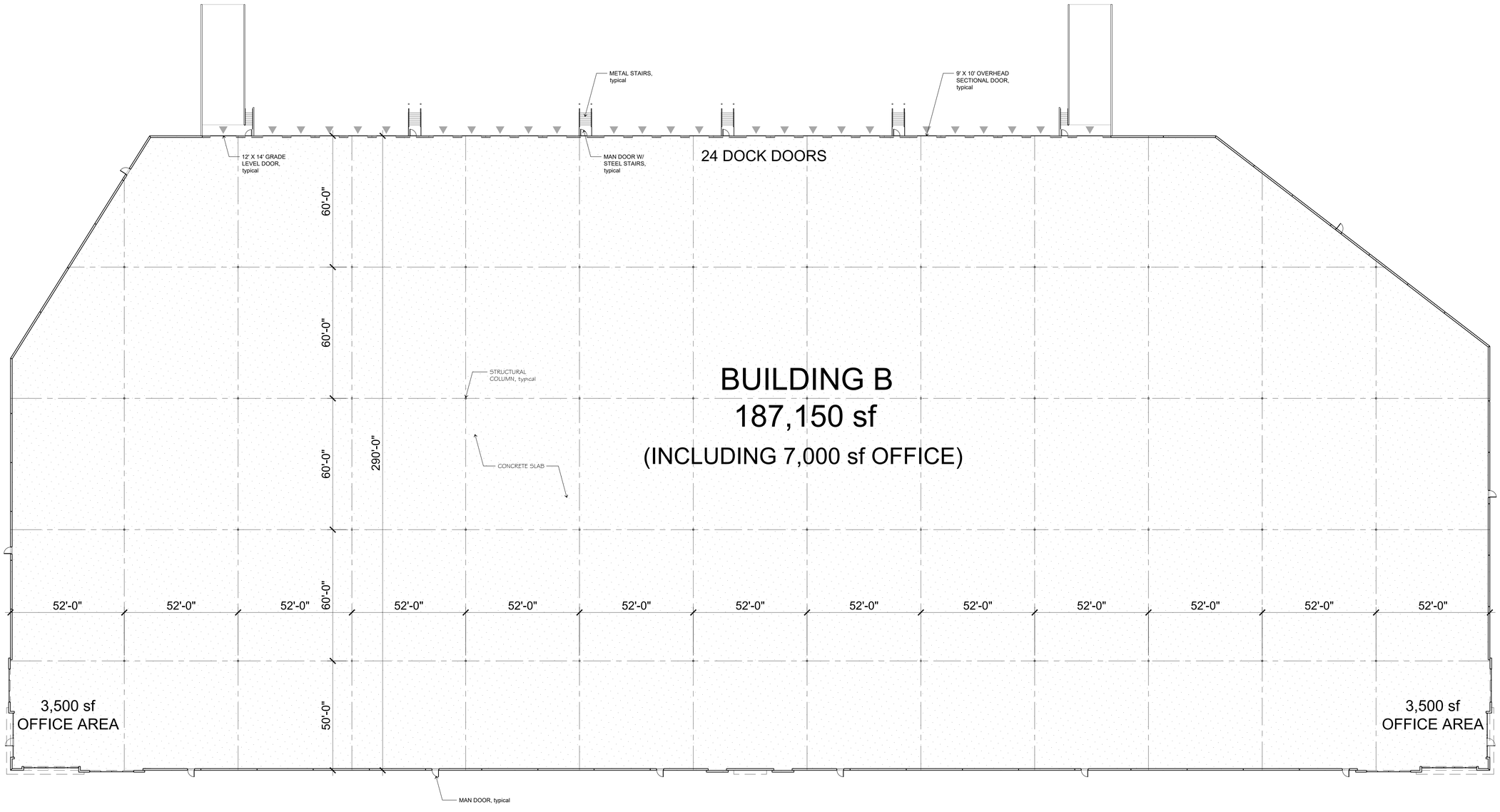

BUILDING B - FLOOR PLAN

Tualatin Industrial Park
Tualatin, Oregon

SCALE: 1" = 20'

A-3

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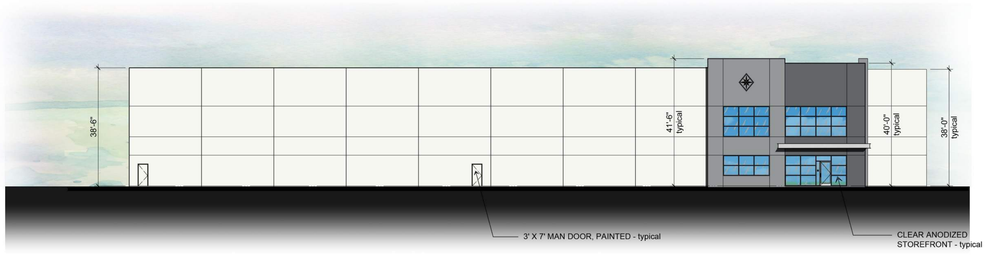
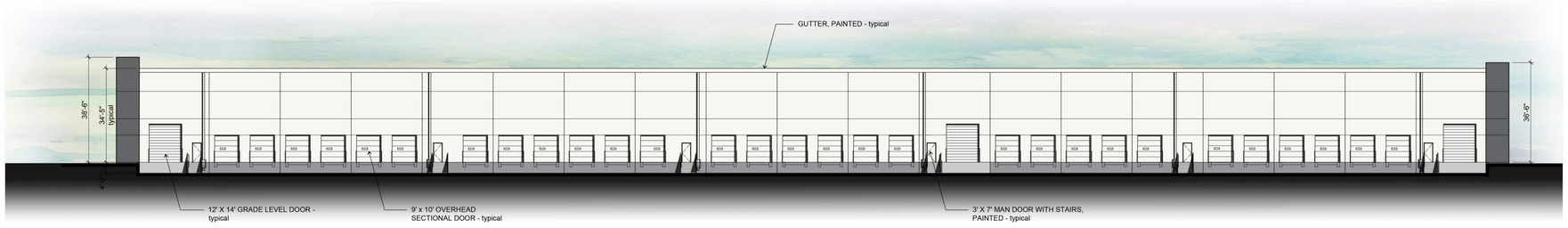
SOUTH ELEVATION

WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION

	P-1	TILT-UP CONCRETE WALL PANEL WALL PANEL FIELD COLOR SHERWIN WILLIAMS - #7757 - HIGH REFLECTIVE WHITE
	P-2	TILT-UP CONCRETE WALL PANEL WALL PANEL FIELD COLOR SHERWIN WILLIAMS - #7071 - GRAY SCREEN
	P-3	TILT-UP CONCRETE WALL PANEL WALL PANEL ACCENT COLOR SHERWIN WILLIAMS - #9162 - AFRICAN GRAY
	P-4	TILT-UP CONCRETE WALL PANEL WALL PANEL ACCENT COLOR SHERWIN WILLIAMS - #7075 - WEB GRAY
	G-1	1" INSULATED DUAL PANE MEDIUM PERFORMANCE PPG VISTACOOL PACIFICA GLAZING CLEAR ANODIZED ALUMINUM MULLIONS

BUILDING A - EXTERIOR ELEVATIONS

Tualatin Industrial Park
Tualatin, Oregon

A-4

0' 5' 10' 20' 40'
SCALE: 1" = 20'

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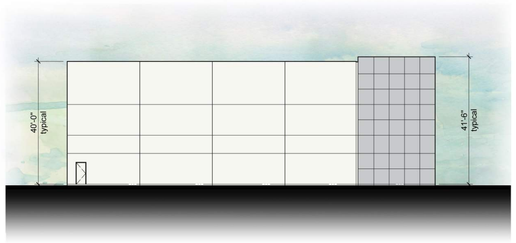
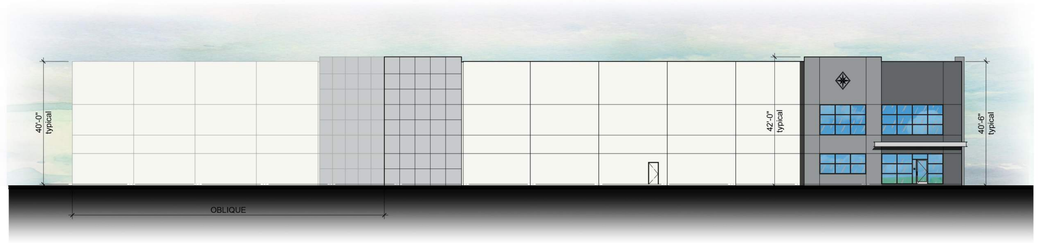
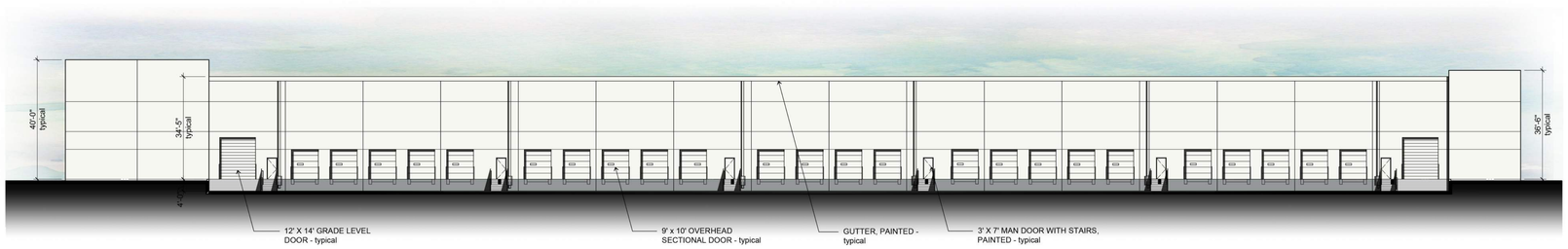
SOUTHEAST ELEVATION



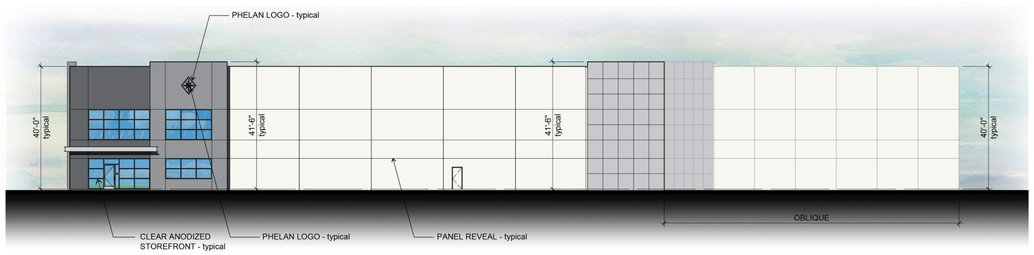
WEST ELEVATION



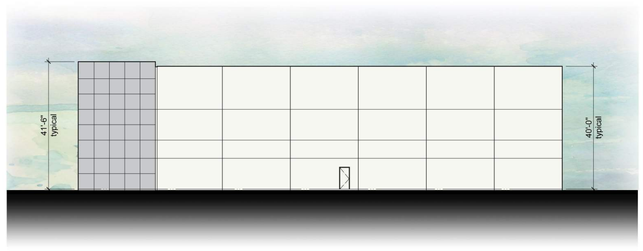
SOUTHWEST ELEVATION



NORTHWEST ELEVATION



NORTHEAST ELEVATION



NORTH ELEVATION

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BUILDING B - EXTERIOR ELEVATIONS

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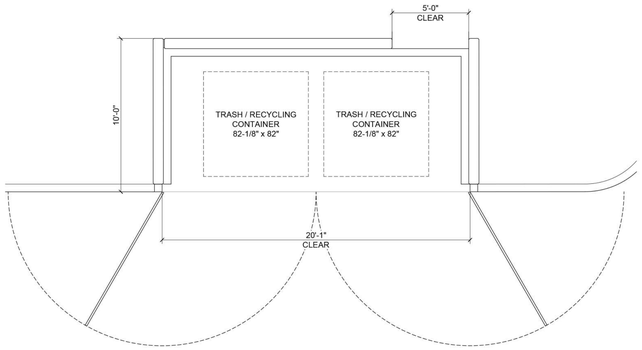
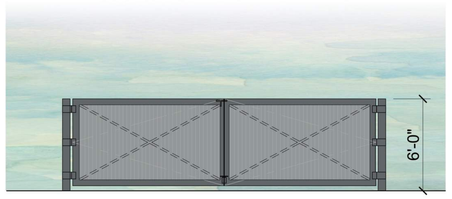
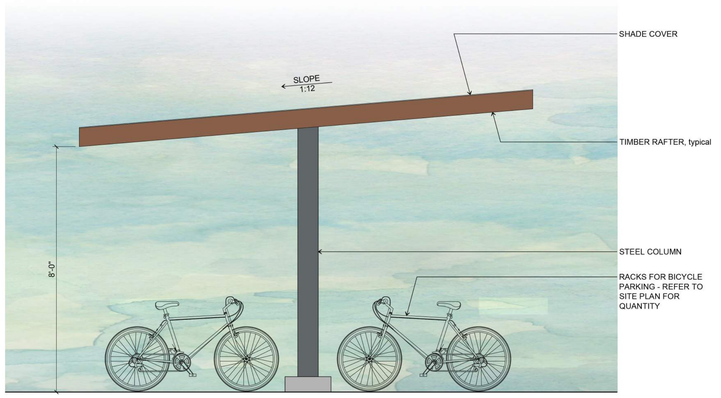
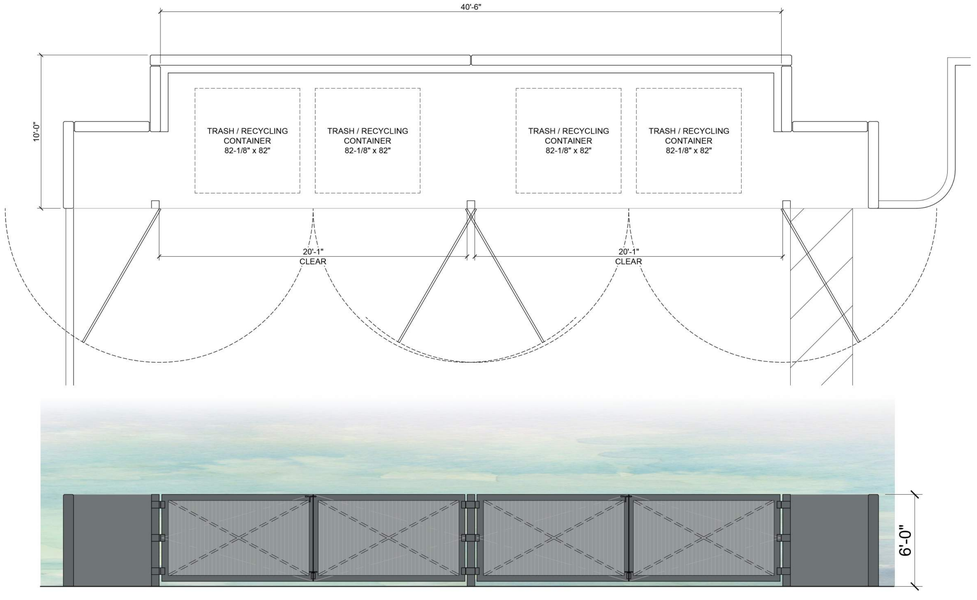


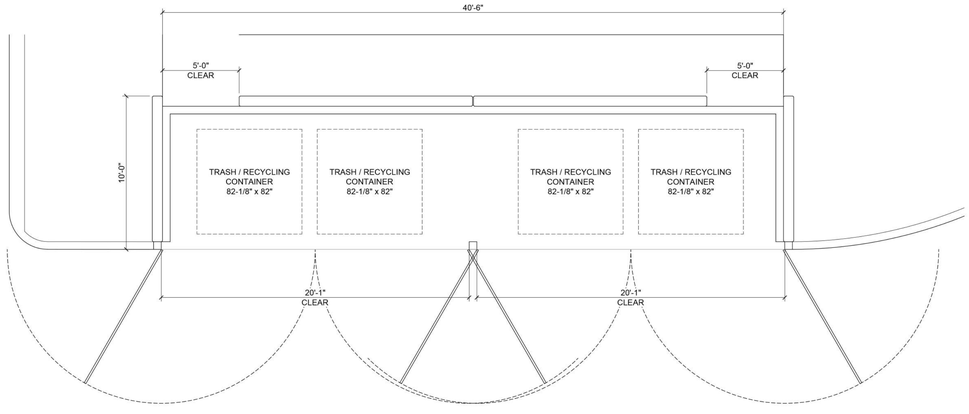


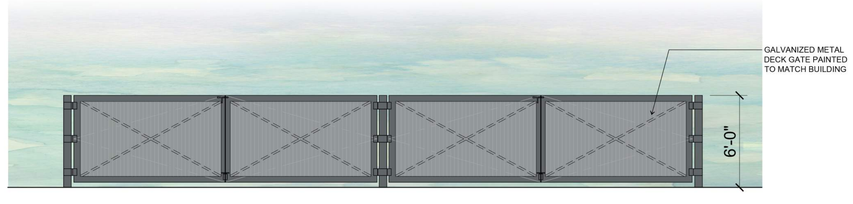


COVERED BICYCLE PARKING ELEVATION

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







TRASH / RECYCLING ENCLOSURE PLANS AND ELEVATIONS & COVERED BIKE PARKING ELEVATIONS

Tualatin Industrial Park
Tualatin, Oregon

A-6

0' 1' 2' 4' 8'
SCALE: 1/4" = 1'-0"

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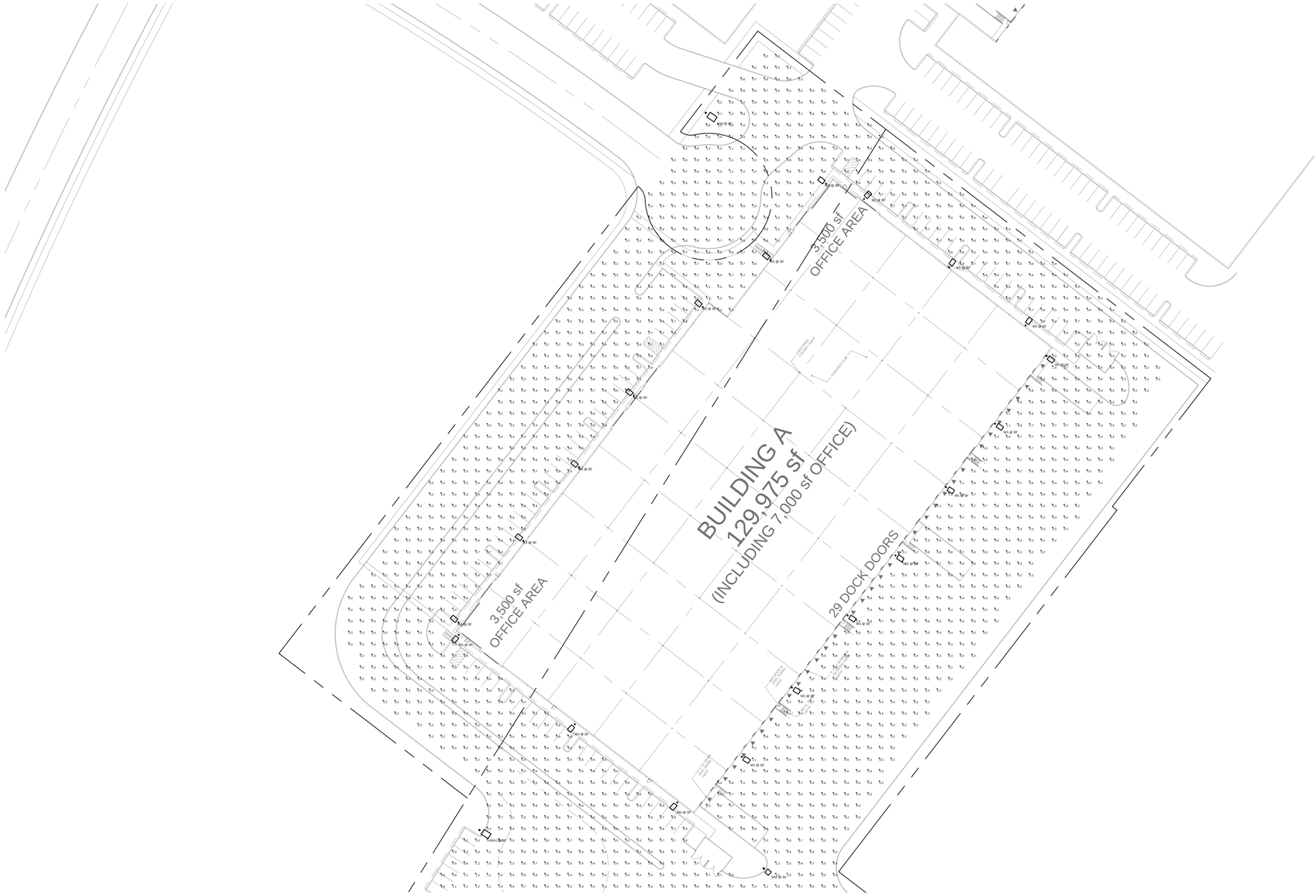

SITE PHOTOMETRIC STUDY - BLDG A 1

SCALE: 1"=40'-0"

SITE PHOTOMETRIC

FC-1

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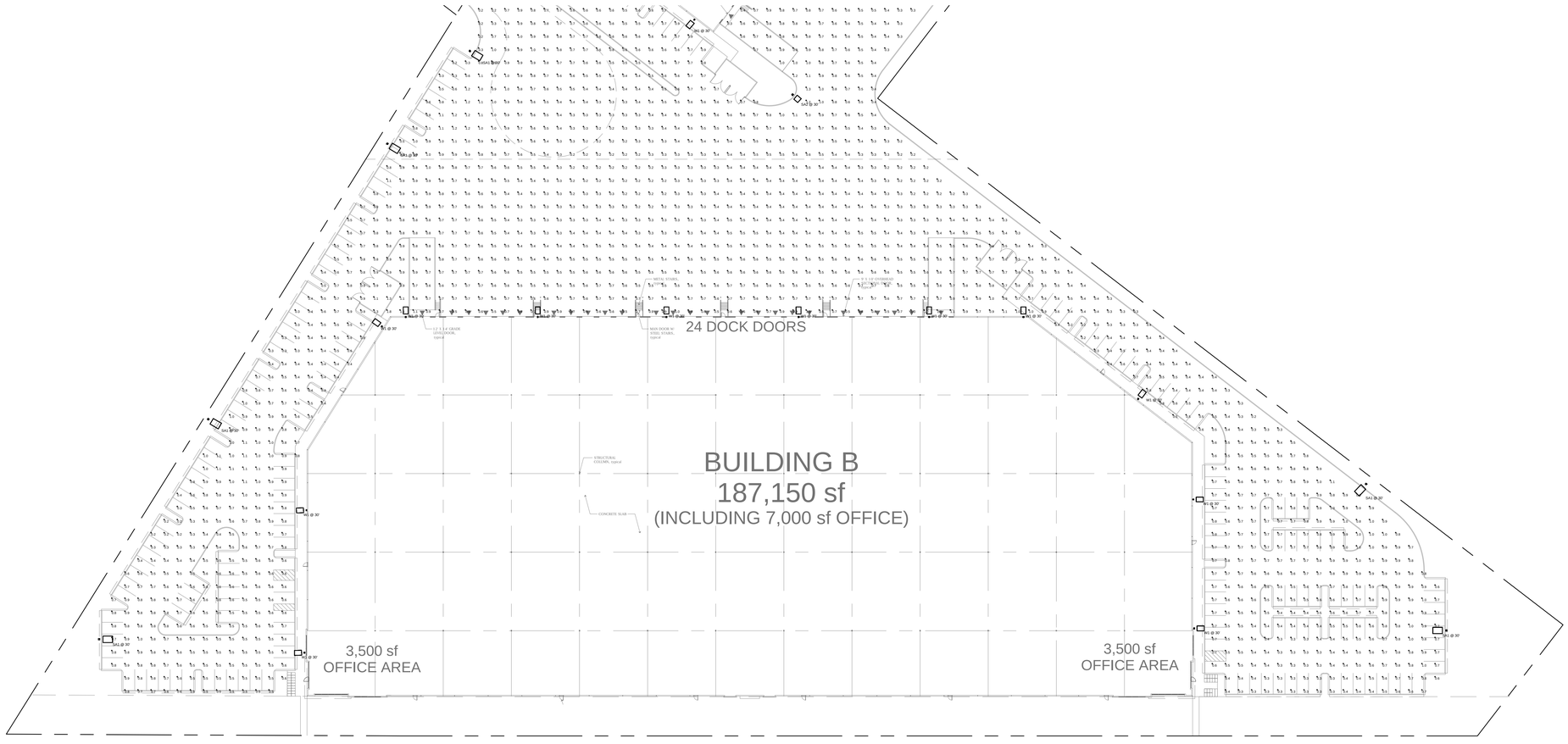

SITE PHOTOMETRIC STUDY - BLDG B (1)

SCALE: 1"=40'-0"

SITE PHOTOMETRIC

FC-2

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Schedule											
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens per Lamp	LLF	Wattage
	W1	32	U.S. ARCHITECTURAL LIGHTING	RZR-WM PLED 4 8 LED NW MM51151 WALL MT AT 30 FT AFG	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 2 CIRCUIT BOARDS EACH WITH 20 LEDS, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.	40	RZR-WM2-4FT-40PLED--NW-525.ies	162	0.85	65.6
	SA1	6	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-IV-FT-48LED-700mA-NW-HS -MM51151 WALL MT AT 30 FT AFG	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 4 CIRCUIT BOARDS EACH WITH 12 LEDS, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 MOLDED BLACK PLASTIC HOUSE SIDE SHIELD BELOW EACH OPTIC, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY-EIGHT WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON RZRG-120LED ITL & WORSE CASE RZRM-48PLED ITL. PR - LUMEN OUTPUT PRORATED FROM UPDATED TESTING (06/17).	48	RZRM-PLED-IV-FT-48LED-700mA-NW-HS.IES	192	0.85	105.1
	SA3	1	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-IV-FT-48LED-700mA-NW-HS -MM511 POLE MT AT 30 FT AFG	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 4 CIRCUIT BOARDS EACH WITH 12 LEDS, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 MOLDED BLACK PLASTIC HOUSE SIDE SHIELD BELOW EACH OPTIC, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY-EIGHT WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON RZRG-120LED ITL & WORSE CASE RZRM-48PLED ITL. PR - LUMEN OUTPUT PRORATED FROM UPDATED TESTING (06/17).	48	RZRM-PLED-IV-FT-48LED-700mA-NW-HS.IES	192	0.85	105.1
	SA2	1	U.S. ARCHITECTURAL LIGHTING	RZR MPLED-VSQW 48 LED 1050MA NW -MM511 POLE MT AT 30 FT AFG	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 4 CIRCUIT BOARDS EACH WITH 12 LEDS, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY-EIGHT WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON RZRG-120LED ITL & WORSE CASE RZRM-48PLED ITL. (120VAC, 60Hz) TO THE DRIVERS.	48	RZRM-PLED-VSQ-W-48LED-1050mA-NW.IES	373	0.85	159.6

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.6 fc	1.8 fc	0.2 fc	9.0:1	3.0:1

RAZAR SERIES-LED

LED/ELECTRICAL GUIDE

LED COUNT	SOURCE TYPE	SOURCE	INITIAL LUMENS - 4000K CCT	INITIAL LUMENS - 3000K CCT	INITIAL LUMENS - 5000K CCT	L70 GREATER THAN (HR)	STARTING TEMP.	SYSTEM WATTS	VOLTS	MAX INPUT AMPS
24	LED	24 PLED® Optical Module - 350mA	3,298 - 3,784	3,133 - 3,595	3,463 - 3,973	60,000+	-20°F	29	120 277	0.24 0.10
24	LED	24 PLED® Optical Module - 525mA	4,711 - 5,405	4,475 - 5,135	4,947 - 5,675	60,000+	-20°F	42	120 277	0.34 0.15
24	LED	24 PLED® Optical Module - 700mA	6,023 - 6,911	5,722 - 6,565	6,324 - 7,256	60,000+	-20°F	56	120 277	0.45 0.20
24	LED	24 PLED® Optical Module - 1050mA	8,171 - 9,375	7,762 - 8,906	8,580 - 9,844	60,000+	-20°F	82	120 277	0.68 0.30
40	LED	40 PLED Optical Module - 350mA	5,585 - 6,408	5,306 - 6,088	5,864 - 6,729	60,000+	-20°F	43	120 277	0.38 0.17
40	LED	40 PLED® Optical Module - 525mA	8,059 - 9,246	7,656 - 8,784	8,462 - 9,709	60,000+	-20°F	65	120 277	0.55 0.24
40	LED	40 PLED® Optical Module - 700mA	10,240 - 11,749	9,728 - 11,162	10,752 - 12,337	60,000+	-20°F	87	120 277	0.73 0.32
40	LED	40 PLED® Optical Module - 1050mA	13,642 - 15,652	12,960 - 14,870	14,324 - 16,435	60,000+	-20°F	128	120 277	1.12 0.49
48	LED	48 PLED® Optical Module - 350mA	6,562 - 7,529	6,234 - 7,153	6,890 - 7,909	60,000+	-20°F	53	120 277	0.46 0.20
48	LED	48 PLED® Optical Module - 525mA	9,330 - 10,705	8,864 - 10,170	9,797 - 11,240	60,000+	-20°F	79	120 277	0.68 0.29
48	LED	48 PLED® Optical Module - 700mA	11,735 - 13,464	11,148 - 12,791	12,322 - 14,137	60,000+	-20°F	106	120 277	0.88 0.38
48	LED	48 PLED® Optical Module - 1050mA	16,360 - 18,771	15,542 - 17,832	17,178 - 19,709	60,000+	-20°F	160	120 277	1.33 0.58
RZR										
80	LED	80 PLED® Optical Module - 350mA	10,824 - 12,419	10,283 - 11,798	11,365 - 13,040	60,000+	-20°F	86	120 277	0.75 0.33
80	LED	80 PLED® Optical Module - 525mA	15,587 - 17,884	14,808 - 16,990	16,366 - 18,778	60,000+	-20°F	130	120 277	1.10 0.48
80	LED	80 PLED® Optical Module - 700mA	19,767 - 22,680	18,779 - 21,546	20,755 - 23,814	60,000+	-20°F	174	120 277	1.45 0.63
80	LED	80 PLED® Optical Module - 1050mA	26,255 - 30,124	24,942 - 28,618	27,568 - 31,630	60,000+	-20°F	257	120 277	2.22 0.96
RZR-G										
80	LED	80 PLED® Optical Module - 350mA	10,950 - 12,564	10,403 - 11,936	11,498 - 13,192	60,000+	-20°F	87	120 277	0.75 0.33
80	LED	80 PLED® Optical Module - 525mA	15,735 - 18,054	14,948 - 17,151	16,522 - 18,957	60,000+	-20°F	129	120 277	1.10 0.48
80	LED	80 PLED® Optical Module - 700mA	20,074 - 23,032	19,071 - 21,881	21,078 - 24,184	60,000+	-20°F	174	120 277	1.45 0.63
80	LED	80 PLED® Optical Module - 1050mA	27,651 - 31,725	26,268 - 30,139	29,033 - 33,311	60,000+	-20°F	266	120 277	2.22 0.96
120	LED	120 PLED® Optical Module - 350mA	16,211 - 18,599	15,400 - 17,669	17,021 - 19,529	60,000+	-20°F	130	120 277	1.06 0.46
120	LED	120 PLED® Optical Module - 525mA	23,154 - 26,566	21996 - 25,238	24,312 - 27,894	60,000+	-20°F	192	120 277	1.63 0.70
120	LED	120 PLED® Optical Module - 700mA	29,424 - 33,760	27,953 - 32,072	30,895 - 35,448	60,000+	-20°F	260	120 277	2.17 0.94
120	LED	120 PLED® Optical Module - 1050mA	40,350 - 46,296	38,333 - 43,981	42,368 - 48,611	60,000+	-20°F	398	120 277	3.33 1.43

NOTES:
1. Max Input Amps is the highest of starting, operating, or open circuit currents.
2. Lumen values for LED Modules vary according to the distribution type. 80LED array appears in both the RZR and RZR-G models.
3. System Watts includes the source watts and all driver components.
4. Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use surge suppressor supplied with luminaire. **Note: Surge suppressors are considered a perishable device.**
5. L70(10K) – TM-21 6x rule applied.

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

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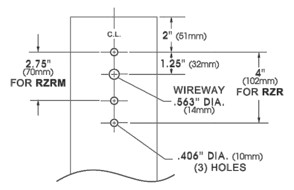
U.S. ARCHITECTURAL LIGHTING

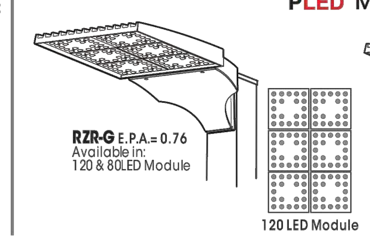
RAZAR SERIES-LED

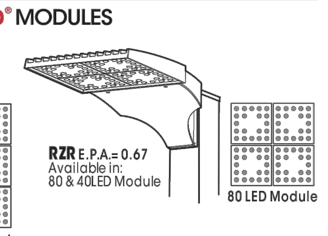
SPECIFICATIONS

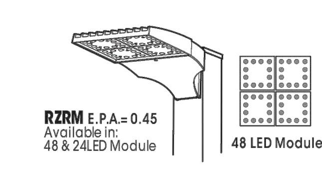
POLE DRILLING TEMPLATE



PLED® MODULES







Approximate Average Lumens – 4000K
(Lumens median of all distributions)

	350mA			525mA			700mA			1050mA		
	Watts	Lumens	HID Eq.	Watts	Lumens	HID Eq.	Watts	Lumens	HID Eq.	Watts	Lumens	HID Eq.
24	28	3541	50	41	5058	70-100	53	6567	100	81	8773	150-175
40	45	5997	70-100	66	8653	100-150	87	10995	175	134	14647	200-250
48	55	7046	100	81	10018	150-175	105	12600	200	160	17566	250
80	87	11622	175-200	131	16736	200-250	174	21235	400	266	28190	450-575
120	127	17405	250	195	24860	450	260	31592	575-750	396	43323	750-1000

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/277/RAL-8019-S

SPEC/ORDERING INFORMATION

MODEL	OPTICS	LED MODE	VOLTAGE	FINISH	OPTIONS

MODEL
- ☐ RZR-G
- ☐ RZR
- ☐ RZR-MAF[1]
- ☐ RZRM

NOTES: 1 - DLC PENDING AS OF 7/19

OPTICS
- ☐ TYPE II PLED-II
- ☐ TYPE II FRONT ROW PLED-II-FR
- ☐ TYPE II MEDIAN ILLUMINATOR PLED-II-ML
- ☐ TYPE III MED. PLED-III-M
- ☐ TYPE III WIDE PLED-III-W
- ☐ TYPE IV PLED-IV
- ☐ TYPE IV PLED-IV-FT
- ☐ TYPE V NARROW PLED-VSQ-N
- ☐ TYPE V MED. PLED-V-SQ-M
- ☐ TYPE V WIDE PLED-V-SQ-W

LED MODE

NO. LEDs
- RZR-G: ☐ 120LED, ☐ 80LED
- RZR: ☐ 80LED, ☐ 40LED
- RZRM: ☐ 48LED, ☐ 24LED

DRIVE CURRENT
- ☐ 350mA
- ☐ 525mA
- ☐ 700mA[2]
- ☐ 1050mA[2]

COLOR TEMP - CCT
- ☐ NW (4000K)* *STANDARD
- ☐ CW (5000K)
- ☐ WW (3000K)

CONSULT FACTORY FOR OTHER LED COLORS

AMBER[3]
- ☐ PHOSPHOR CONVERTED AMBER PCA
- ☐ TRUE AMBER[4] TRA

NOTES:
2 - 700mA and 1050mA NOT FOR USE WITH TRA LED'S
3 - NARROW BAND AMBERS HAVE NO DEFINABLE CCT EQUIVALENT
4 - AVAILABLE IN 350mA & 525mA DRIVE CURRENTS ONLY

VOLTAGE
- ☐ 120
- ☐ 208
- ☐ 240
- ☐ 277
- ☐ 347
- ☐ 480

FINISH

STANDARD TEXTURED FINISH
- ☐ BLACK RAL-9005-T
- ☐ WHITE RAL-9003-T
- ☐ GREY RAL-7004-T
- ☐ DARK BRONZE RAL-8019-T
- ☐ GREEN RAL-6005-T

FOR SMOOTH FINISH REPLACE SUFFIX "T" WITH SUFFIX "S" (EXAMPLE: RAL-9005-S)

CONSULT FACTORY FOR CUSTOM COLORS

OPTIONS
- ☐ HIGH-LOW DIMMING FOR HARDWIRED SWITCHING OR NONINTEGRATED MOTION SENSOR .... HLSW
- ☐ INTERNAL HOUSE SIDE SHIELD ... HS-PLED
- ☐ PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) .. PC+V
- ☐ TWIST LOCK RECEPTACLE ONLY ... TPR
- ☐ 7-PIN TWIST LOCK RECEPTACLE ONLY ... TPR7
- ☐ SINGLE FUSE (120V, 277V, 347V) .. SF
- ☐ DOUBLE FUSE (208V, 240V, 480V) .. DF
- ☐ STEP DIM MOTION SENSOR (PROGRAMMED 50/100) MS-F211
- ☐ REMOTE MOTION SENSOR CONFIGURATOR MS-FC10

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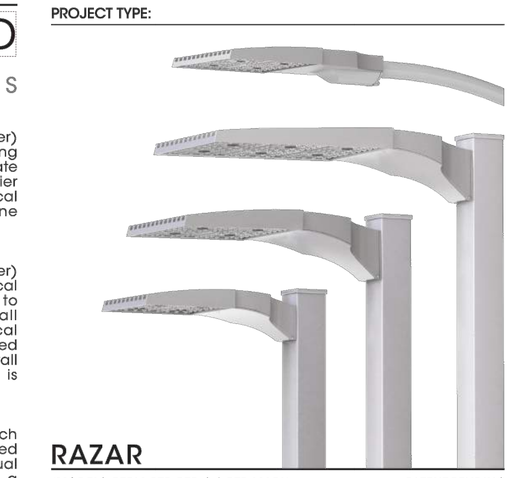
SOLID STATE AREA LIGHTING

RAZAR SERIES-LED

SPECIFICATIONS

PROJECT NAME:

PROJECT TYPE:



RAZAR
(MODELS: RZRM, RZR, RZR-G & RZR-MAF*) PATENT PENDING

OPTICAL HOUSING
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance <± .002") to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188".

ELECTRICAL HOUSING w/ INTEGRATED ARM
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

PLED™ OPTICS
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

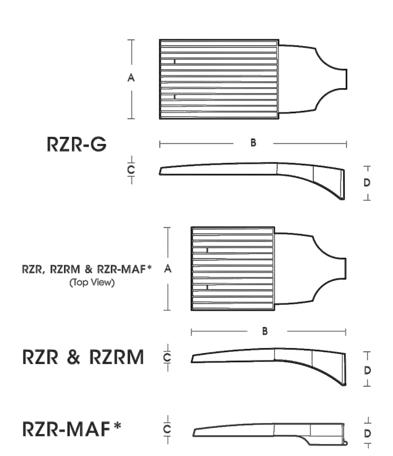
LED DRIVER(S)
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer, held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field accessible installation.)

LED EMITTERS
High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

AMBER LED's
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. **TRA** (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

MAST ARM FITTER/ELECTRICAL HOUSING
Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.



FIXTURE	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm
RZR-MAF	15" 381mm	28.25" 724mm	2.5" 64mm	4" 102mm

*DLC PENDING AS OF 7/19

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2019253

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PHOTOMETRIC STATS &
FIXTURE SPECIFICATION

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Tualatin Industrial Park
Tualatin, Oregon

FC-3

PHELAN DEVELOPMENT
450 Newport Center Drive, Suite 405
Newport Beach, CA 92660

Attachment 2

TREE NO.	COMMON NAME	SCIENTIFIC NAME	DBH[1]	CONDITION[2]	STRUCTURE[2]	COMMENTS	TREATMENT
10056	bigleaf maple	*Acer macrophyllum*	18,18, 18	fair	fair	multiple leaders at 3' with decay, history of branch failure	remove
10057	sweet cherry	*Prunus avium*	8	fair	fair	one sided, overtopped by adjacent tree, large wound with decay at lower trunk	remove
10058	sweet cherry	*Prunus avium*	11,9	fair	fair	codominant at ground level with included bark, one sided	remove
10059	sweet cherry	*Prunus avium*	11,9	very poor	very poor	dead	remove
10060	sweet cherry	*Prunus avium*	16,15, 10	poor	poor	multiple leaders at ground level with decay, significant branch dieback	remove
10061	sweet cherry	*Prunus avium*	16	good	fair	one sided	remove
10062	sweet cherry	*Prunus avium*	16,16, 16,15, 13	fair	fair	multiple leaders at 2' with included bark	remove
10063	sweet cherry	*Prunus avium*	20	good	fair	codominant at 8', one sided	remove
10111	English walnut	*Juglans regia*	8,8,8,8 ,7	good	fair	multiple leaders at 2' with included bark	remove
10112	English hawthorn	*Crataegus monogyna*	8,8,5	good	fair	multiple leaders at ground level	remove
10149	English holly	*Ilex aquifolium*	7,6,5,5 ,5	fair	fair	multiple leaders at ground level, moderately thin crown	remove
10162	incense cedar	*Calocedrus decurrens*	30	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10163	incense cedar	*Calocedrus decurrens*	20	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10164	incense cedar	*Calocedrus decurrens*	22	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10165	incense cedar	*Calocedrus decurrens*	18	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10166	incense cedar	*Calocedrus decurrens*	18	fair	fair	excessive competition with adjacent trees due to close spacing	retain

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Attachment 2

TREE NO.	COMMON NAME	SCIENTIFIC NAME	DBH[1]	CONDITION[2]	STRUCTURE[2]	COMMENTS	TREATMENT
10167	incense cedar	*Calocedrus decurrens*	26	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10168	incense cedar	*Calocedrus decurrens*	18	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10169	incense cedar	*Calocedrus decurrens*	12	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10170	incense cedar	*Calocedrus decurrens*	24	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10171	incense cedar	*Calocedrus decurrens*	15	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10172	incense cedar	*Calocedrus decurrens*	12	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10173	incense cedar	*Calocedrus decurrens*	11	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10174	incense cedar	*Calocedrus decurrens*	12	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10175	incense cedar	*Calocedrus decurrens*	23	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10176	incense cedar	*Calocedrus decurrens*	16	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10177	incense cedar	*Calocedrus decurrens*	14	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10178	incense cedar	*Calocedrus decurrens*	20,18	fair	fair	excessive competition with adjacent trees due to close spacing	retain

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TREE NO.	COMMON NAME	SCIENTIFIC NAME	DBH[1]	CONDITION[2]	STRUCTURE[2]	COMMENTS	TREATMENT
10179	incense cedar	*Calocedrus decurrens*	24,16	fair	fair	excessive competition with adjacent trees due to close spacing	retain
10586	American chestnut	*Castanea dentata*	48,10, 8	very poor	very poor	extensive top dieback, topped for overhead power clearance	remove
10783	sweet cherry	*Prunus avium*	14	good	fair	multiple leaders	remove
10784	sweet cherry	*Prunus avium*	12,10, 8	good	fair	multiple leaders at 2'	remove
10785	sweet cherry	*Prunus avium*	10,10	good	fair	codominant at 1'	remove
10797	Douglas-fir	*Pseudotsuga menziesii*	36	good	fair	one sided, retaining wall cut at 12 feet from NW side of tree	retain
10805	orchard apple	*Malus domestica*	10,10, 10,10, 7,7,3	fair	fair	not maintained for fruit production	remove
10819	western redcedar	*Thuja plicata*	12	good	good		retain
10820	western redcedar	*Thuja plicata*	12	good	good		retain
10821	incense cedar	*Calocedrus decurrens*	12	good	good		retain
10822	western redcedar	*Thuja plicata*	8,6	good	fair	codominant at 1'	retain
10823	western redcedar	*Thuja plicata*	12,4	good	fair	codominant at 1'	retain
10824	western redcedar	*Thuja plicata*	12	good	good		retain
10825	western redcedar	*Thuja plicata*	12	good	good		retain
10826	western redcedar	*Thuja plicata*	12	good	good		retain
10827	orchard pear	*Pyrus sp.*	18,16, 10	fair	fair	not maintained for fruit production	remove
10828	black cottonwood	*Populus trichocarpa*	32	good	good		remove
20011	sweet cherry	*Prunus avium*	12	good	fair	one sided, multiple leaders	remove
20023	n/a	n/a	n/a	n/a	n/a	not located	n/a
20032	Douglas-fir	*Pseudotsuga menziesii*	18	good	fair	one sided	retain
20042	western hemlock	*Tsuga heterophylla*	38	good	fair	lost top, upright competing leader at 15'	remove

[1] **DBH** is the trunk diameter in inches measured per International Society of Arboriculture (ISA) standards.
[2] **Condition** and **Structure** ratings range from very poor, poor, fair, to good.

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Attachment 3
Tree Protection Recommendations

The following recommendations will help to ensure that the trees to be retained are adequately protected:

Before Construction Begins

1. Notify all contractors of tree protection procedures. For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection.
   a. Hold a tree protection meeting with all contractors to explain the goals of tree protection.
   b. Have all contractors sign memoranda of understanding regarding the goals of tree protection. The memoranda should include a penalty for violating the tree protection plan. The penalty should equal the resulting fines issued by the local jurisdiction plus the appraised value of the tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined in the current edition of the ***Guide for Plant Appraisal*** by the Council of Tree & Landscape Appraisers. The penalty should be paid to the owner of the property.
2. Fencing
   a. Trees to remain on site will be protected by installation of tree protection fencing as shown in Detail 1 this sheet
   b. The fencing should be put in place before the ground is cleared in order to protect the trees and the soil around the trees from disturbances.
   c. Fencing should be established by the project arborist based on the needs of the trees to be protected and to facilitate construction.
   d. Fencing should consist of 6-foot high steel fencing on concrete blocks or 6-foot metal fencing secured to the ground with 8-foot metal posts to prevent it from being moved by contractors, sagging, or falling down.
   e. Fencing should remain in the position that is established by the project arborist and not be moved without approval from the project arborist until final project approval.
3. Signage
   a. All tree protection fencing should have signage as follows so that all contractors understand the purpose of the fencing:

> **TREE PROTECTION ZONE**
>
> **DO NOT REMOVE OR ADJUST THE LOCATION OF THIS TREE PROTECTION FENCING**
> **UNAUTHORIZED ENCROACHMENT MAY RESULT IN FINES**
>
> Please contact the project arborist if alterations to the location of the tree protection fencing are necessary.
>
> Todd Prager, Project Arborist, Teragan & Associates, 971-295-4835

   b. Signage should be placed every 75-feet or less.

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During Construction

1. Protection Guidelines Within the Tree Protection Zones:
   a. No new buildings; grade change or cut and fill, during or after construction; new impervious surfaces; or utility or drainage field placement should be allowed within the tree protection zones.
   b. No traffic should be allowed within the tree protection zones. This includes but is not limited to vehicle, heavy equipment, or even repeated foot traffic.
   c. No storage of materials including but not limiting to soil, construction material, or waste from the site should be permitted within the tree protection zones. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
   d. Construction trailers should not to be parked/placed within the tree protection zones.
   e. No vehicles should be allowed to park within the tree protection zones.
   f. No other activities should be allowed that will cause soil compaction within the tree protection zones.
2. The trees should be protected from any cutting, skinning or breaking of branches, trunks or woody roots.
3. The project arborist should be notified prior to the cutting of woody roots from trees that are to be retained to evaluate and oversee the proper cutting of roots with sharp cutting tools. Cut roots should be immediately covered with soil or mulch to prevent them from drying out.
4. Trees that have woody roots cut should be provided supplemental water during the summer months.
5. Any necessary passage of utilities through the tree protection zones should be by means of tunneling under woody roots by hand digging or boring with oversight by the project arborist.
6. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

After Construction

1. Carefully landscape the areas within the tree protection zones. Do not allow trenching for irrigation or other utilities within the tree protection zones.
2. Carefully plant new plants within the tree protection zones. Avoid cutting the woody roots of trees that are retained.
3. Do not install permanent irrigation within the tree protection zones unless it is drip irrigation to support a specific planting or the irrigation is approved by the project arborist.
4. Provide adequate drainage within the tree protection zones and do not alter soil hydrology significantly from existing conditions for the trees to be retained.
5. Provide for the ongoing inspection and treatment of insect and disease populations that are capable of damaging the retained trees and plants.
6. The retained trees may need to be fertilized if recommended by the project arborist.
7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

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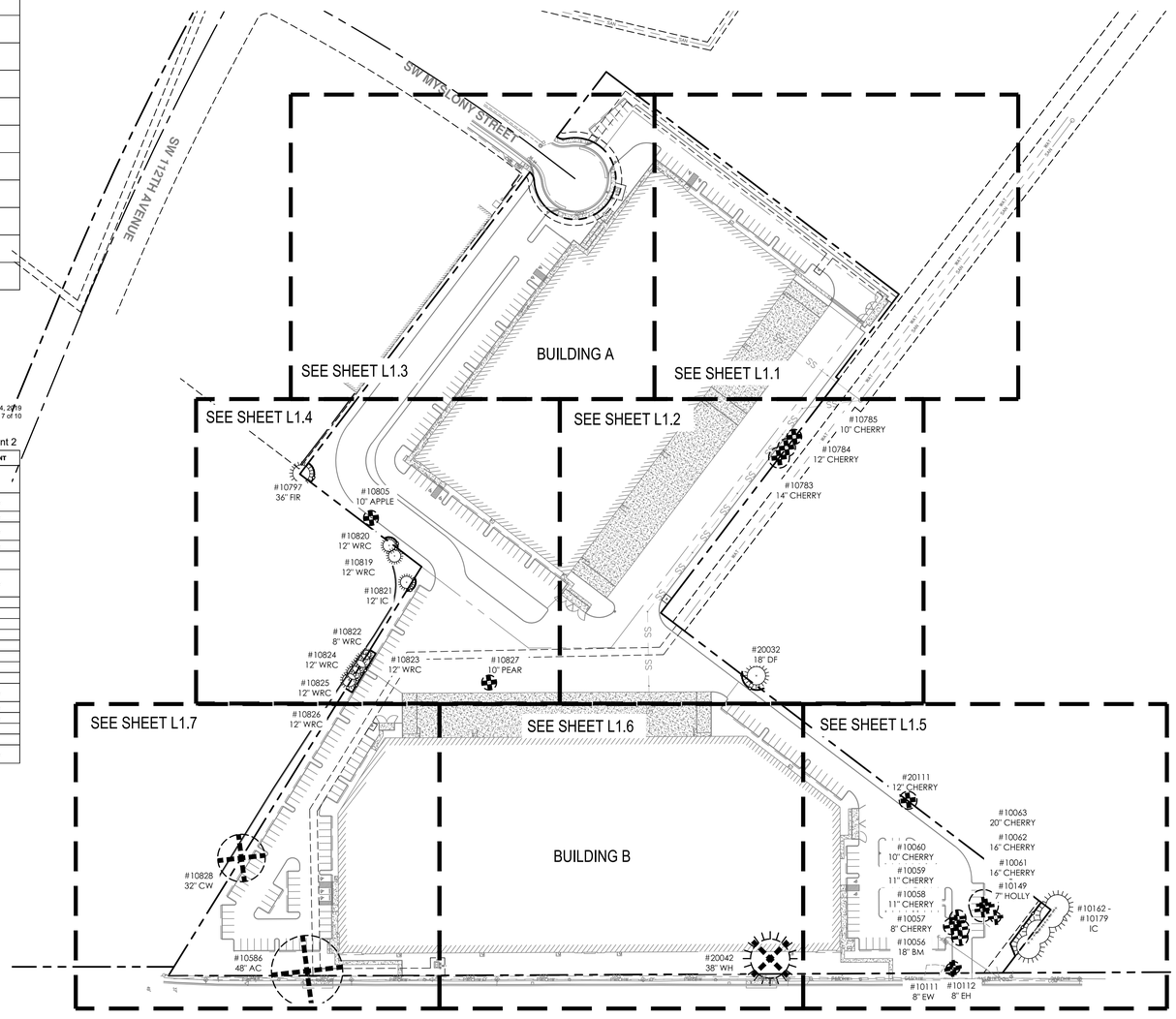


TREE SUMMARY

TREES EXISTING = 48

TREES TO BE REMOVED = 20

TREES TO REMAIN = 28

TREES PROPOSED = 78

LEGEND

EXISTING TREES TO BE REMOVED

EXISTING TREES TO REMAIN

#16 FIR — EXISTING TREE NUMBER & SPECIES, SEE ARBORIST REPORT

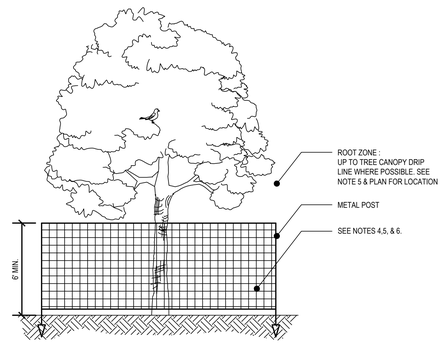
TREE PROTECTION FENCE

1 / L1.0

TREE PROTECTION FENCE

TREE PROTECTION NOTES:

1. BEFORE WORK IS STARTED, INSTALL TREE PROTECTION FENCING. CONTACT THE PROJECT ARBORIST FOR ASSISTANCE.
2. REFER TO SECTION 34.200 TREE REMOVAL, 34.270 TREE PROTECTION DURING CONSTRUCTION & 73.250 TREE PRESERVATION OF THE TUALATIN CITY CODE.
3. NO ENCROACHMENT OF ANY KIND IS ALLOWED WITHIN THE TREE PROTECTION FENCE ZONE DURING CONSTRUCTION.
4. INSTALL FENCE ON TREE SIDE OF EXISTING CURB FOR ALL TREES TO BE PRESERVED. ROOT PROTECTION ZONE IS AN AREA AROUND A TREE THAT IS BASED ON THE DIAMETER OF THE TREE CANOPY AND BETWEEN EXISTING CURB AND PROPOSED SIDEWALK .
5. FENCING SHALL BE 6-FOOT HIGH METAL FENCING WITH METAL POSTS AND BE SECURED TO THE GROUND WITH 8-FOOT METAL POSTS. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
6. FENCE SHALL BE INSTALLED PRIOR TO LAND CLEARING, FILLING OR ANY LAND ALTERATION AND SHALL REMAIN IN PLACE UNTIL AFTER CONSTRUCTION IS COMPLETE.
7. NO EXCAVATION OR COMPACTION OF EARTH OR OTHER POTENTIALLY DAMAGING ACTIVITIES ALLOWED WITHIN THE PROTECTION FENCING.
8. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMITS OF THE FENCING.
9. WITHIN CLEARING/GRADING LIMITS OR AT THE EDGE OF THE CLEARING/GRADING LIMITS, TREE PROTECTION MAY BE INSTALLED AROUND GROUPS OF TREES.
10. DURING WORK, ANY ROOTS GREATER THAN TWO INCHES FOUND DURING EXCAVATION SHALL BE CLEANLY CUT. MULTIPLE ROOT PRUNING EVENTS FOR SINGLE TREES SHALL BE MANAGED & MONITORED BY THE PROJECT ARCHITECT.
11. AFTER CONSTRUCTION IS COMPLETE, PROJECT ARCHITECT SHALL VERIFY TREE PROTECTION FENCING CAN BE REMOVED.



TREE PROTECTION FENCING DETAIL

N.T.S.

NORTH

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
552
Teresa Catherine Long
OREGON
5-14-04

PHELAN
DEVELOPMENT
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503.620.3030 tel | 503.620.5539 fax | www.aaieng.com

TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
LANDSCAPE PLAN

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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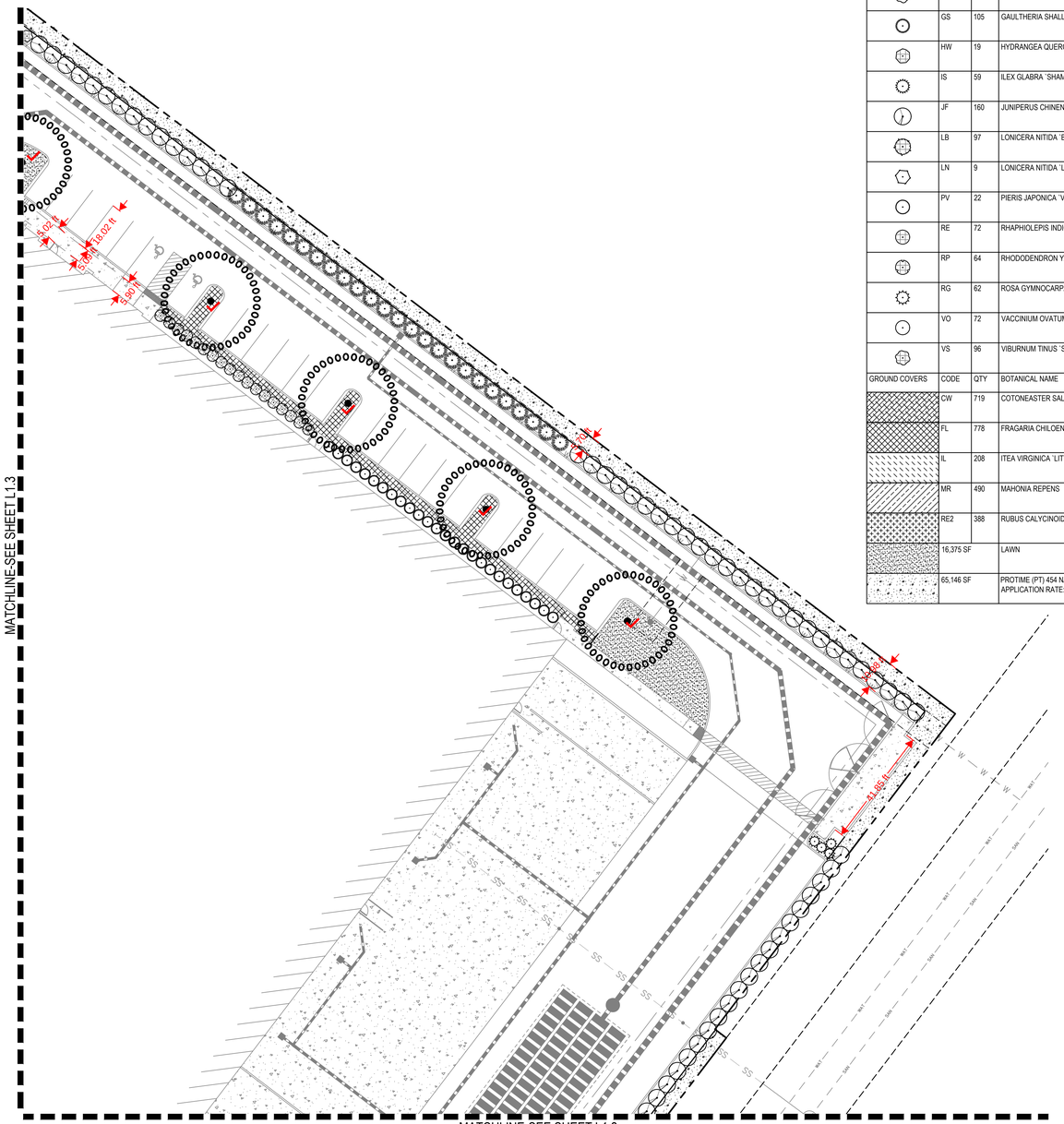
SHEET NUMBER
L1.0

JOB NUMBER: A19173.10



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.	
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.	
	UC	32	ULMUS X `FRONTIER`	AMERICAN ELM	1.5" CAL.	
	ZV	11	ZELKOVA SERRATA `VILLAGE GREEN`	SAWLEAF ZELKOVA	1.5" CAL.	
STREET TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	CB	10	CARPINUS BETULUS `FASTIGIATA`	PYRAMIDAL EUROPEAN HORNBEAN	1.5" CAL.	
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AE	56	ABELIA X GRANDIFLORA `EDWARD GOUCHER`	GLOSSY ABELIA	1 GAL.	
	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
	AA	18	AZALEA X `AUTUMN ANGEL`	AUTUMN ANGEL AZALEA	1 GAL.	
	CF	21	CEANOTHUS THYRSIFLORUS `VICTORIA`	VICTORIA CEANOTHUS	1 GAL.	
	CT	33	CHOISYA TERNATA	MEXICAN ORANGE	1 GAL.	
	ES	81	EUONYMUS JAPONICUS `SILVER KING`	SILVER KING EUONYMUS	1 GAL.	
	GS	105	GAULTHERIA SHALLON	SALAL	1 GAL.	
	HW	19	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	1 GAL.	
	IS	59	ILEX GLABRA `SHAMROCK`	INKBERRY	3 GAL.	
	JF	160	JUNIPERUS CHINENSIS `SEA GREEN`	SEA GREEN JUNIPER	1 GAL.	
	LB	97	LONICERA NITIDA `BAGGESEN`S GOLD`	BOXLEAF HONEYSUCKLE	1 GAL.	
	LN	9	LONICERA NITIDA `LEMON BEAUTY`	BOXLEAF HONEYSUCKLE	1 GAL.	
	PV	22	PIERIS JAPONICA `VALLEY ROSE`	VALLEY ROSE JAPANESE PIERIS	1 GAL.	
	RE	72	RHAPHIOLEPIS INDICA `CONOR`	ELEANOR TABOR INDIAN HAWTHORN	1 GAL.	
	RP	64	RHODODENDRON YAKUSIMANUM `PERCY WISEMAN`	PERCY WISEMAN RHODODENDRON	1 GAL.	
	RG	62	ROSA GYMNOCARPA	DWARF ROSE	1 GAL.	
	VO	72	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	1 GAL.	
	VS	96	VIBURNUM TINUS `SPRING BOUQUET`	SPRING BOUQUET LAURESTINUS	1 GAL.	
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	CW	719	COTONEASTER SALICIFOLIUS REPENS	WILLOWLEAF COTONEASTER	1 GAL.	24" o.c.
	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
	IL	208	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SWEETSPIRE	1 GAL.	24" o.c.
	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
	RE2	388	RUBUS CALYCINOIDES `EMERALD CARPET`	EMERALD CARPET CREEPING RASPBERRY	1 GAL.	24" o.c.
	16,375 SF		LAWN			
	65,146 SF		PROTIME (PT) 454 NATIVE URBAN MEADOW MIX 1 APPLICATION RATE: 3 OZ PER 1,000 SF			

LANDSCAPE REQUIREMENTS BLDG A

TOTAL SITE AREA	= 297,108 SF
LANDSCAPE AREA REQUIRED 10% OF SITE	= 29,711 SF
LANDSCAPE ARE PROPOSED 10% OF SITE	= 29,808 SF
INTERIOR PKG. LOT LANDSCAPING REQ. TOTAL PKG SPACES	= 25 SF PER PKG. SPACE = 102
PARKING LOT TREES TOTAL PKG LOT TREES	= 1 PER 4 SPACES = 26

LANDSCAPE REQUIREMENTS BLDG B

TOTAL SITE AREA	= 420,057 SF
LANDSCAPE AREA REQUIRED 10% OF SITE	= 42,006 SF
LANDSCAPE ARE PROPOSED 19.2% OF SITE	= 80,718 SF
INTERIOR PKG. LOT LANDSCAPING REQ. TOTAL PKG SPACES	= 25 SF PER PKG. SPACE = 172
PARKING LOT TREES TOTAL PKG LOT TREES	= 1 PER 4 SPACES = 43

TREE SUMMARY

TREES EXISTING = 48

TREES TO BE REMOVED = 20

TREES TO REMAIN = 28

TREES PROPOSED = 78

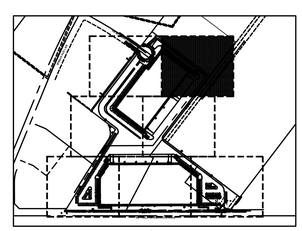
LEGEND

EXISTING TREES TO REMAIN

TREE PROTECTION FENCE

1 / L1.0

TREE PROTECTION FENCE



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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Teresa Marlene Long
OREGON
5-14-04
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

HARDSCAPE

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER

L1.1

JOB NUMBER: A19173.10

LANDSCAPE REQUIREMENTS BLDG A

TOTAL SITE AREA	= 297,108 SF
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LEGEND

EXISTING TREES TO REMAIN

TREE PROTECTION FENCE

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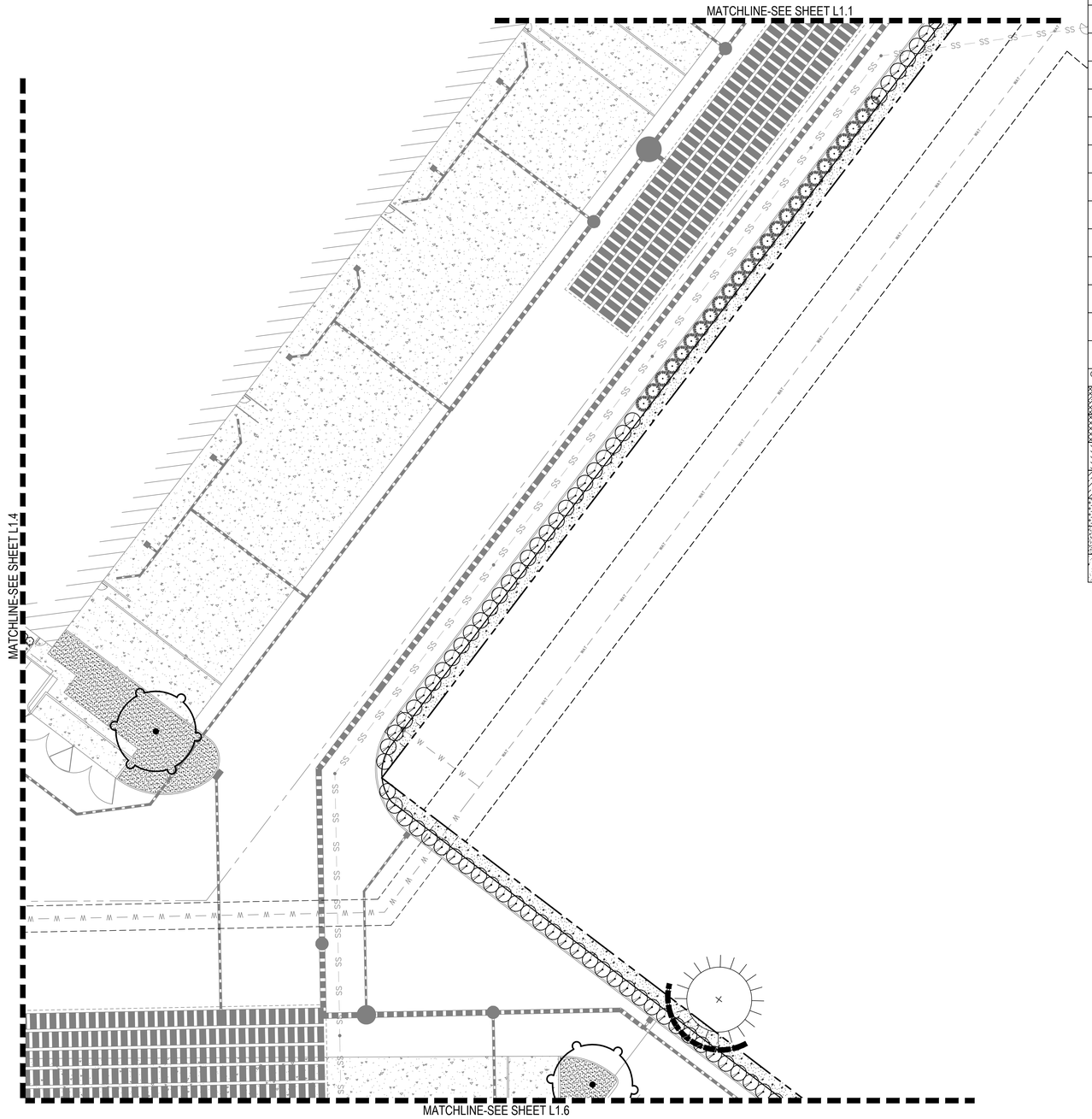
TREE PROTECTION FENCE



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.	
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.	
	UC	32	ULMUS X `FRONTIER`	AMERICAN ELM	1.5" CAL.	
	ZV	11	ZELKOVA SERRATA `VILLAGE GREEN`	SAWLEAF ZELKOVA	1.5" CAL.	
STREET TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	CB	10	CARPINUS BETULUS `FASTIGIATA`	PYRAMIDAL EUROPEAN HORNBEAN	1.5" CAL.	
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AE	56	ABELIA X GRANDIFLORA `EDWARD GOUCHER`	GLOSSY ABELIA	1 GAL.	
	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
	AA	18	AZALEA X `AUTUMN ANGEL`	AUTUMN ANGEL AZALEA	1 GAL.	
	CF	21	CEANOTHUS THYRSIFLORUS `VICTORIA`	VICTORIA CEANOTHUS	1 GAL.	
	CT	33	CHOISYA TERNATA	MEXICAN ORANGE	1 GAL.	
	ES	81	EUONYMUS JAPONICUS `SILVER KING`	SILVER KING EUONYMUS	1 GAL.	
	GS	105	GAULTHERIA SHALLON	SALAL	1 GAL.	
HH	HW	19	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	1 GAL.	
	IS	59	ILEX GLABRA `SHAMROCK`	INKBERRY	3 GAL.	
	JF	160	JUNIPERUS CHINENSIS `SEA GREEN`	SEA GREEN JUNIPER	1 GAL.	
LB	LB	97	LONICERA NITIDA `BAGGESEN`S GOLD`	BOXLEAF HONEYSUCKLE	1 GAL.	
	LN	9	LONICERA NITIDA `LEMON BEAUTY`	BOXLEAF HONEYSUCKLE	1 GAL.	
	PV	22	PIERIS JAPONICA `VALLEY ROSE`	VALLEY ROSE JAPANESE PIERIS	1 GAL.	
RE	RE	72	RHAPHIOLEPIS INDICA `CONOR`	ELEANOR TABOR INDIAN HAWTHORN	1 GAL.	
RP	RP	64	RHODODENDRON YAKUSIMANUM `PERCY WISEMAN`	PERCY WISEMAN RHODODENDRON	1 GAL.	
	RG	62	ROSA GYMNOCARPA	DWARF ROSE	1 GAL.	
	VO	72	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	1 GAL.	
VS	VS	96	VIBURNUM TINUS `SPRING BOUQUET`	SPRING BOUQUET LAURESTINUS	1 GAL.	
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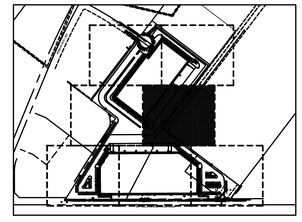
	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
	IL	208	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SWEETSPIRE	1 GAL.	24" o.c.
	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
	RE2	388	RUBUS CALYCINOIDES `EMERALD CARPET`	EMERALD CARPET CREEPING RASPBERRY	1 GAL.	24" o.c.
	16,375 SF		LAWN			
	65,146 SF		PROTIME (PT) 454 NATIVE URBAN MEADOW MIX 1 APPLICATION RATE: 3 OZ PER 1,000 SF			



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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Teresa Marlene Long
OREGON
5-14-04
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PRELIMINARY

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER

L1.2

JOB NUMBER: A19173.10

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.	
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.	
	UC	32	ULMUS X `FRONTIER`	AMERICAN ELM	1.5" CAL.	
	ZV	11	ZELKOVA SERRATA `VILLAGE GREEN`	SAWLEAF ZELKOVA	1.5" CAL.	
STREET TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	CB	10	CARPINUS BETULUS `FASTIGIATA`	PYRAMIDAL EUROPEAN HORNBEAN	1.5" CAL.	
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AE	56	ABELIA X GRANDIFLORA `EDWARD GOUCHER`	GLOSSY ABELIA	1 GAL.	
	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
	AA	18	AZALEA X `AUTUMN ANGEL`	AUTUMN ANGEL AZALEA	1 GAL.	
	CF	21	CEANOTHUS THYRSIFLORUS `VICTORIA`	VICTORIA CEANOTHUS	1 GAL.	
	CT	33	CHOISYA TERNATA	MEXICAN ORANGE	1 GAL.	
	ES	81	EUONYMUS JAPONICUS `SILVER KING`	SILVER KING EUONYMUS	1 GAL.	
	GS	105	GAULTHERIA SHALLON	SALAL	1 GAL.	
	HW	19	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	1 GAL.	
	IS	59	ILEX GLABRA `SHAMROCK`	INKBERRY	3 GAL.	
	JF	160	JUNIPERUS CHINENSIS `SEA GREEN`	SEA GREEN JUNIPER	1 GAL.	
	LB	97	LONICERA NITIDA `BAGGESEN`S GOLD`	BOXLEAF HONEYSUCKLE	1 GAL.	
	LN	9	LONICERA NITIDA `LEMON BEAUTY`	BOXLEAF HONEYSUCKLE	1 GAL.	
	PV	22	PIERIS JAPONICA `VALLEY ROSE`	VALLEY ROSE JAPANESE PIERIS	1 GAL.	
	RE	72	RHAPHIOLEPIS INDICA `CONOR`	ELEANOR TABOR INDIAN HAWTHORN	1 GAL.	
	RP	64	RHODODENDRON YAKUSIMANUM `PERCY WISEMAN`	PERCY WISEMAN RHODODENDRON	1 GAL.	
	RG	62	ROSA GYMNOCARPA	DWARF ROSE	1 GAL.	
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	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
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	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
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	16,375 SF		LAWN			
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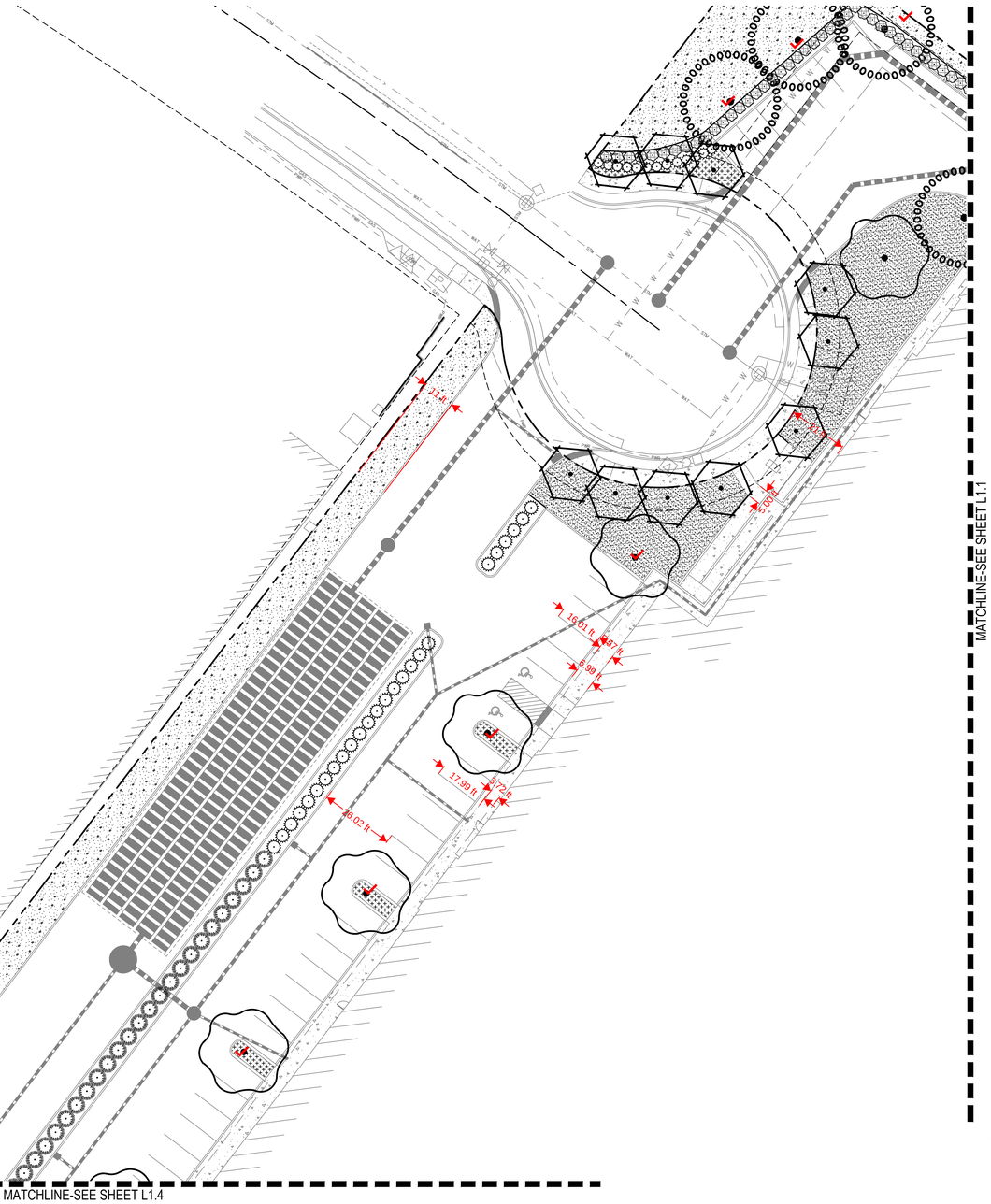

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LANDSCAPE REQUIREMENTS BLDG B

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TREE SUMMARY

TREES EXISTING = 48

TREES TO BE REMOVED = 20

TREES TO REMAIN = 28

TREES PROPOSED = 78

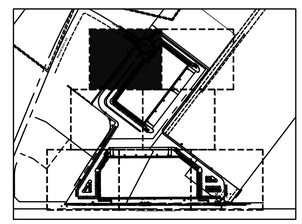
LEGEND

EXISTING TREES TO REMAIN

TREE PROTECTION FENCE

1 / L1.0

TREE PROTECTION FENCE



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER

L1.3

JOB NUMBER: A19173.10

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.
	UC	32	ULMUS X `FRONTIER`	AMERICAN ELM	1.5" CAL.
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STREET TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**
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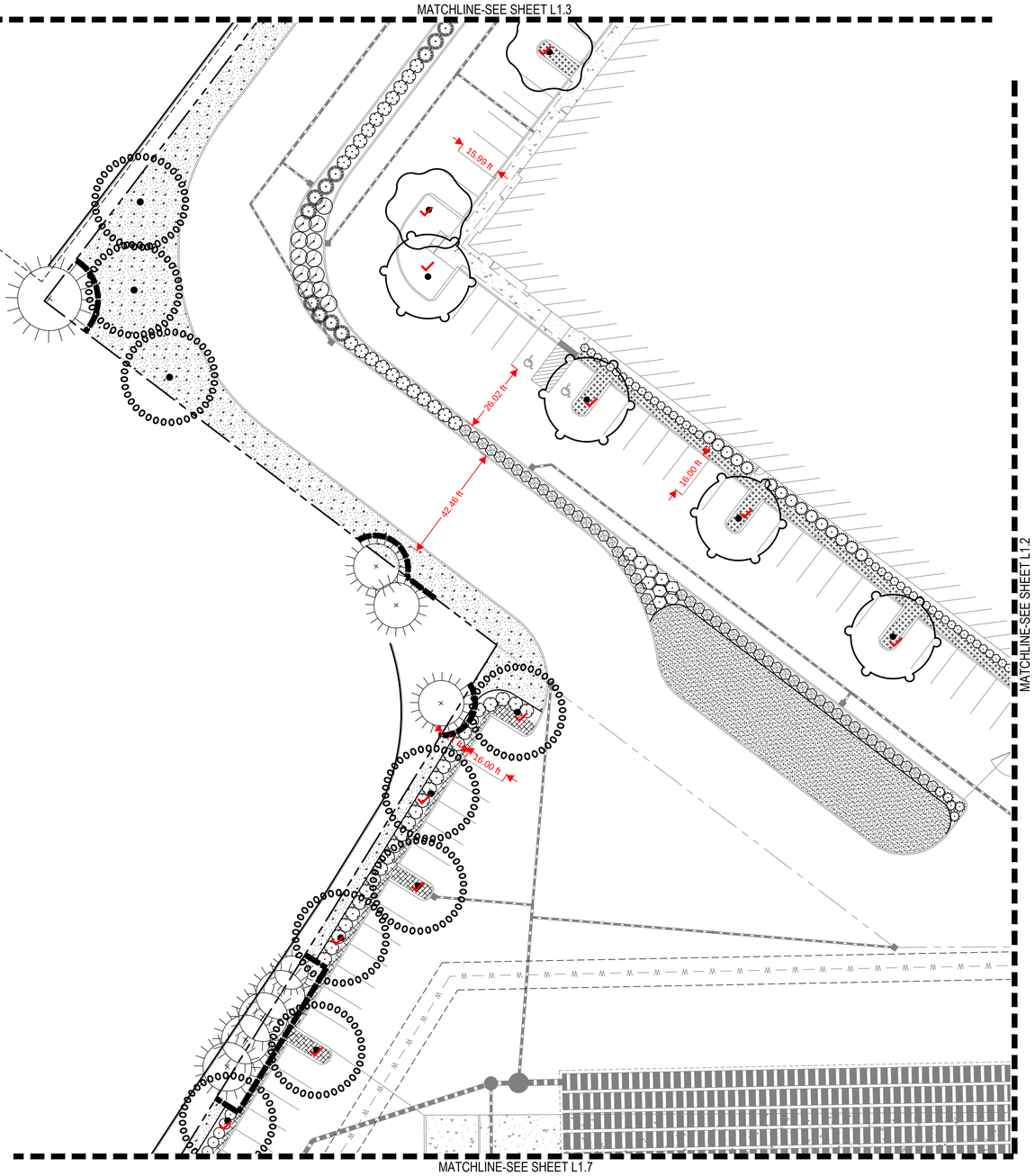
	HW	19	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	1 GAL.
	IS	59	ILEX GLABRA `SHAMROCK`	INKBERRY	3 GAL.
	JF	160	JUNIPERUS CHINENSIS `SEA GREEN`	SEA GREEN JUNIPER	1 GAL.
	LB	97	LONICERA NITIDA `BAGGESEN`S GOLD`	BOXLEAF HONEYSUCKLE	1 GAL.
	LN	9	LONICERA NITIDA `LEMON BEAUTY`	BOXLEAF HONEYSUCKLE	1 GAL.
	PV	22	PIERIS JAPONICA `VALLEY ROSE`	VALLEY ROSE JAPANESE PIERIS	1 GAL.
	RE	72	RHAPHIOLEPIS INDICA `CONOR`	ELEANOR TABOR INDIAN HAWTHORN	1 GAL.
	RP	64	RHODODENDRON YAKUSIMANUM `PERCY WISEMAN`	PERCY WISEMAN RHODODENDRON	1 GAL.
	RG	62	ROSA GYMNOCARPA	DWARF ROSE	1 GAL.
	VO	72	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	1 GAL.
	VS	96	VIBURNUM TINUS `SPRING BOUQUET`	SPRING BOUQUET LAURESTINUS	1 GAL.
GROUND COVERS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**SPACING**
	CW	719	COTONEASTER SALICIFOLIUS REPENS	WILLOWLEAF COTONEASTER	1 GAL.	24" o.c.
	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
	IL	208	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SWEETSPIRE	1 GAL.	24" o.c.
	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
	RE2	388	RUBUS CALYCINOIDES `EMERALD CARPET`	EMERALD CARPET CREEPING RASPBERRY	1 GAL.	24" o.c.
	16,375 SF		LAWN			
	65,146 SF		PROTIME (PT) 454 NATIVE URBAN MEADOW MIX 1 APPLICATION RATE: 3 OZ PER 1,000 SF			



LANDSCAPE REQUIREMENTS BLDG A

TOTAL SITE AREA	= 297,108 SF
LANDSCAPE AREA REQUIRED 10% OF SITE	= 29,711 SF
LANDSCAPE ARE PROPOSED 10% OF SITE	= 29,808 SF
INTERIOR PKG. LOT LANDSCAPING REQ.	= 25 SF PER PKG. SPACE
TOTAL PKG SPACES	= 102
PARKING LOT TREES	= 1 PER 4 SPACES
TOTAL PKG LOT TREES	= 26

LANDSCAPE REQUIREMENTS BLDG B

TOTAL SITE AREA	= 420,057 SF
LANDSCAPE AREA REQUIRED 10% OF SITE	= 42,006 SF
LANDSCAPE ARE PROPOSED 19.2% OF SITE	= 80,718 SF
INTERIOR PKG. LOT LANDSCAPING REQ.	= 25 SF PER PKG. SPACE
TOTAL PKG SPACES	= 172
PARKING LOT TREES	= 1 PER 4 SPACES
TOTAL PKG LOT TREES	= 43

TREE SUMMARY

TREES EXISTING = 48

TREES TO BE REMOVED = 20

TREES TO REMAIN = 28

TREES PROPOSED = 78

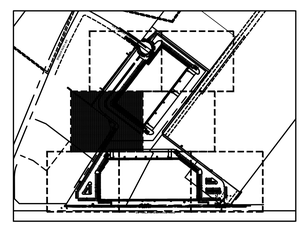
LEGEND

EXISTING TREES TO REMAIN

TREE PROTECTION FENCE

1 / L1.0

TREE PROTECTION FENCE



NORTH

GRAPHIC SCALE

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(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED
552
Teresa Katherine Long
OREGON
5-14-04
LANDSCAPE ARCHITECT
PRELIMINARY

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503.620.3030 tel | 503.620.5539 fax | www.aaiengineering.com

TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

HARDSCAPE

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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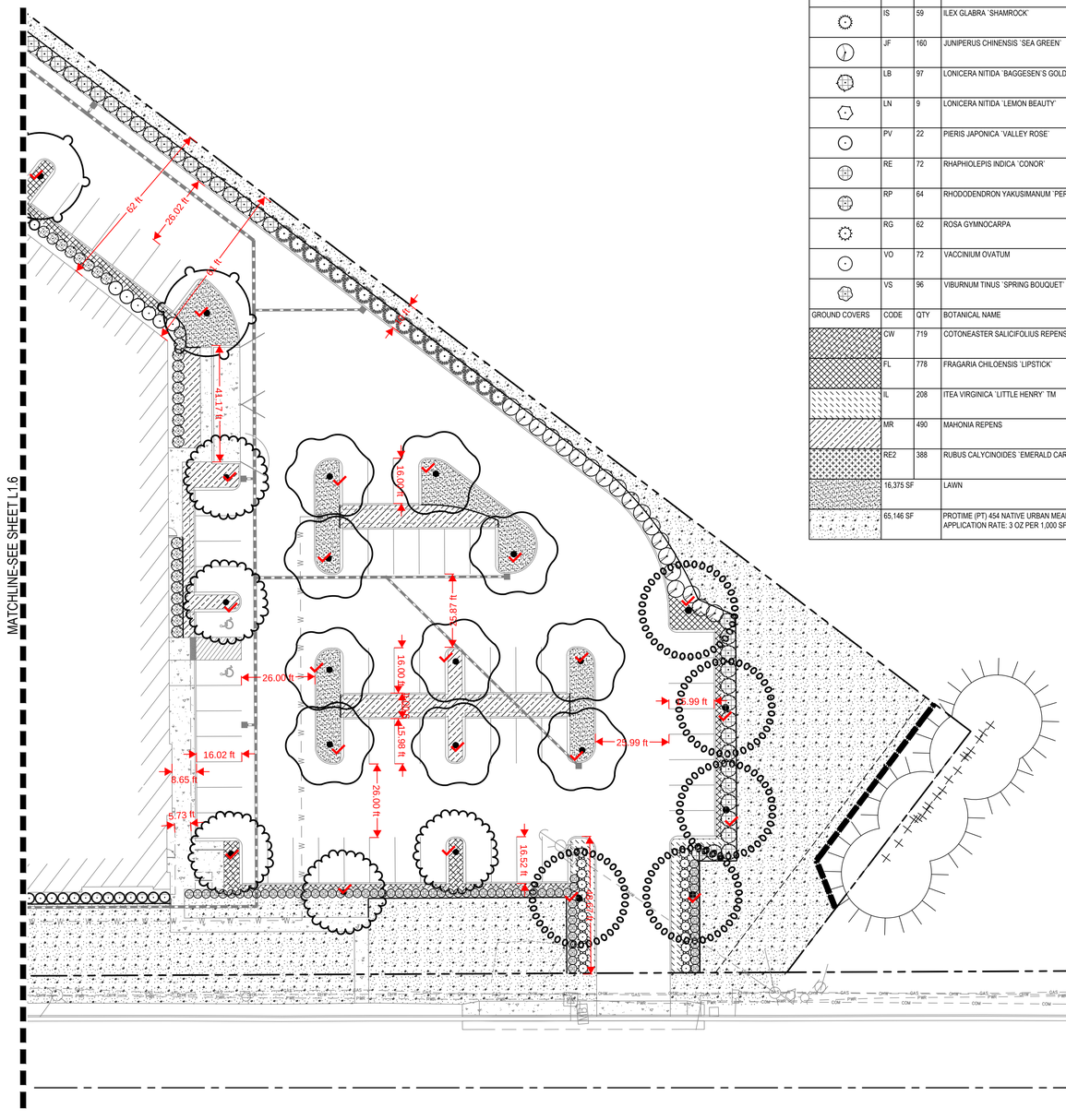
SHEET NUMBER

L1.4

JOB NUMBER: A19173.10



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.	
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.	
	UC	32	ULMUS X `FRONTIER`	AMERICAN ELM	1.5" CAL.	
	ZV	11	ZELKOVA SERRATA `VILLAGE GREEN`	SAWLEAF ZELKOVA	1.5" CAL.	
STREET TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	
	CB	10	CARPINUS BETULUS `FASTIGIATA`	PYRAMIDAL EUROPEAN HORNBEAN	1.5" CAL.	
SHRUBS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	
	AE	56	ABELIA X GRANDIFLORA `EDWARD GOUCHER`	GLOSSY ABELIA	1 GAL.	
	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
	AA	18	AZALEA X `AUTUMN ANGEL`	AUTUMN ANGEL AZALEA	1 GAL.	
	CF	21	CEANOTHUS THYRSIFLORUS `VICTORIA`	VICTORIA CEANOTHUS	1 GAL.	
	CT	33	CHOISYA TERNATA	MEXICAN ORANGE	1 GAL.	
	ES	81	EUONYMUS JAPONICUS `SILVER KING`	SILVER KING EUONYMUS	1 GAL.	
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	HW	19	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	1 GAL.	
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GROUND COVERS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**SPACING**
	CW	719	COTONEASTER SALICIFOLIUS REPENS	WILLOWLEAF COTONEASTER	1 GAL.	24" o.c.
	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
	IL	208	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SWEETSPIRE	1 GAL.	24" o.c.
	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
	RE2	388	RUBUS CALYCINOIDES `EMERALD CARPET`	EMERALD CARPET CREEPING RASPBERRY	1 GAL.	24" o.c.
	16,375 SF		LAWN			
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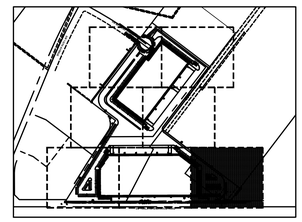
TREE PROTECTION FENCE



NORTH

GRAPHIC SCALE

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(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED 552 PROFESSIONAL LANDSCAPE ARCHITECT Teresa Marlene Long OREGON 5-14-04 PRELIMINARY

PHELAN DEVELOPMENT
450 Newport Center Drive, Suite 405
Newport Beach, CA 92660

AAI afshan associates, inc. ENGINEERING
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

HARDSCAPE

DATE: 10/28/19
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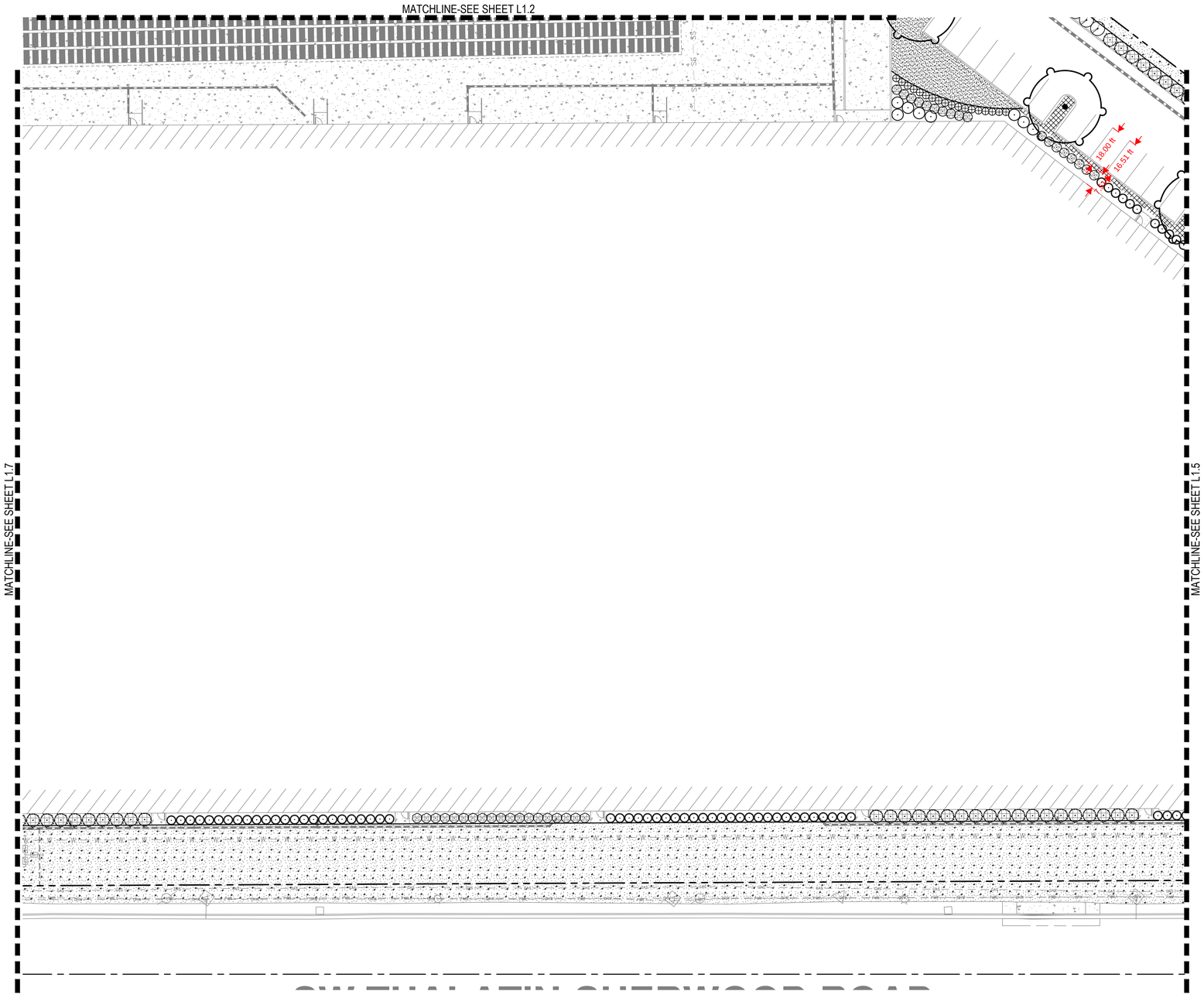
SHEET NUMBER

L1.5

JOB NUMBER: A19173.10



PLANT SCHEDULE

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STREET TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
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	AE	56	ABELIA X GRANDIFLORA `EDWARD GOUCHER`	GLOSSY ABELIA	1 GAL.	
	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
	AA	18	AZALEA X `AUTUMN ANGEL`	AUTUMN ANGEL AZALEA	1 GAL.	
	CF	21	CEANOTHUS THYRSIFLORUS `VICTORIA`	VICTORIA CEANOTHUS	1 GAL.	
	CT	33	CHOISYA TERNATA	MEXICAN ORANGE	1 GAL.	
	ES	81	EUONYMUS JAPONICUS `SILVER KING`	SILVER KING EUONYMUS	1 GAL.	
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	LN	9	LONICERA NITIDA `LEMON BEAUTY`	BOXLEAF HONEYSUCKLE	1 GAL.	
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	RG	62	ROSA GYMNOCARPA	DWARF ROSE	1 GAL.	
	VO	72	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	1 GAL.	
	VS	96	VIBURNUM TINUS `SPRING BOUQUET`	SPRING BOUQUET LAURESTINUS	1 GAL.	
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	CW	719	COTONEASTER SALICIFOLIUS REPENS	WILLOWLEAF COTONEASTER	1 GAL.	24" o.c.
	FL	778	FRAGARIA CHILOENSIS `LIPSTICK`	BEACH STRAWBERRY	1 GAL.	18" o.c.
	IL	208	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SWEETSPIRE	1 GAL.	24" o.c.
	MR	490	MAHONIA REPENS	CREEPING MAHONIA	1 GAL.	24" o.c.
	RE2	388	RUBUS CALYCINOIDES `EMERALD CARPET`	EMERALD CARPET CREEPING RASPBERRY	1 GAL.	24" o.c.
	16,375 SF		LAWN			
	65,146 SF		PROTIME (PT) 454 NATIVE URBAN MEADOW MIX 1 APPLICATION RATE: 3 OZ PER 1,000 SF			

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LANDSCAPE REQUIREMENTS BLDG B

TOTAL SITE AREA	= 420,057 SF
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EXISTING TREES TO REMAIN

TREE PROTECTION FENCE

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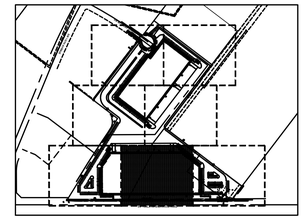
TREE PROTECTION FENCE



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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Teresa Catherine Long
OREGON
5-14-04
LANDSCAPE ARCHITECT
PRELIMINARY

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DEVELOPMENT
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

HARDSCAPE

DATE: 10/28/19
DRAWN: NJD
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SHEET NUMBER

L1.6

JOB NUMBER: A19173.10

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
	AF	22	ACER RUBRUM `FRANKSRED` TM MEDIUM	RED SUNSET MAPLE	1.5" CAL.	
	PC	13	PISTACIA CHINENSIS MEDIUM	CHINESE PISTACHE	1.5" CAL.	
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	AC2	102	ARBUTUS UNEDO `COMPACTA`	DWARF STRAWBERRY TREE	1 GAL.	
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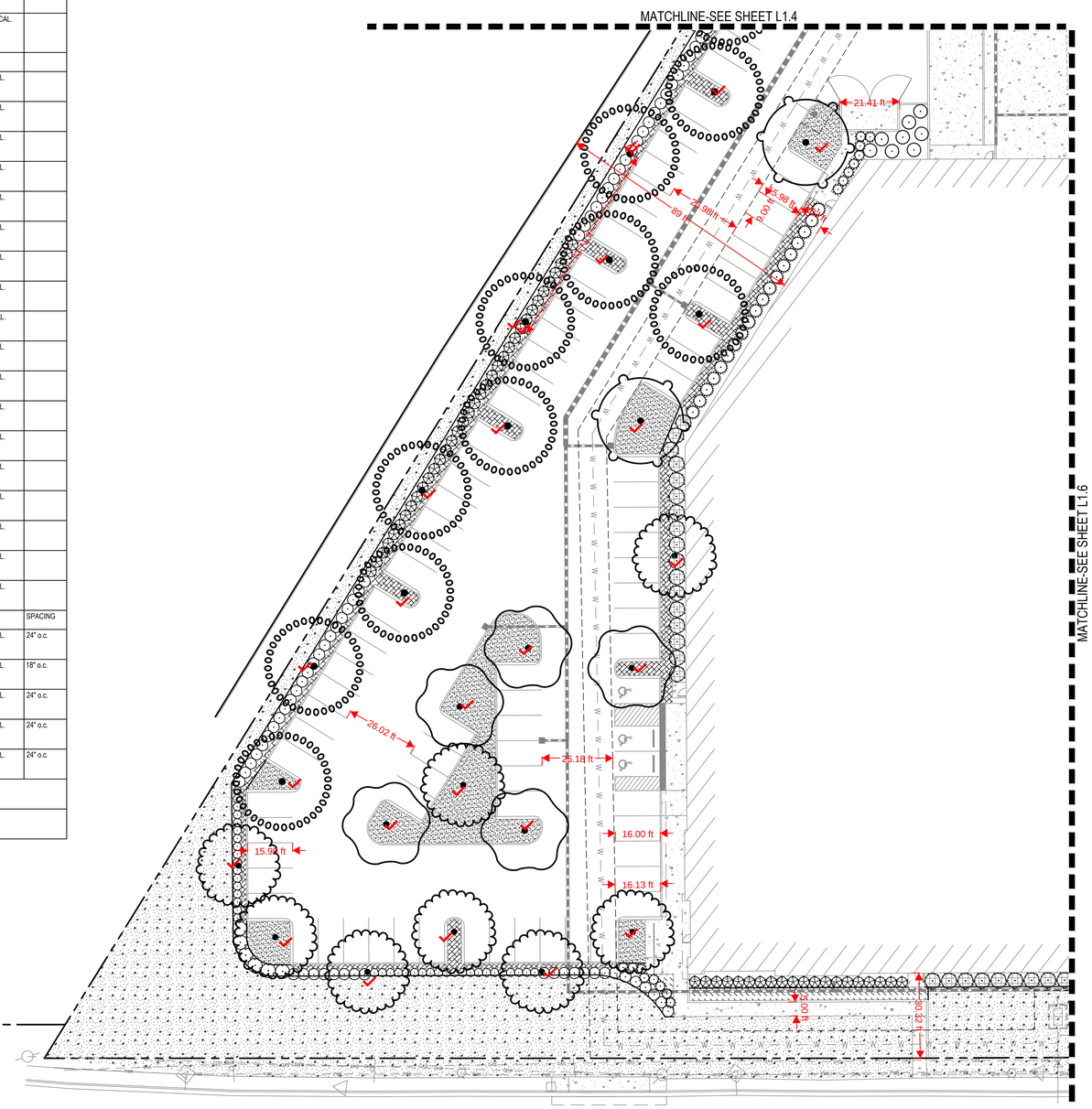

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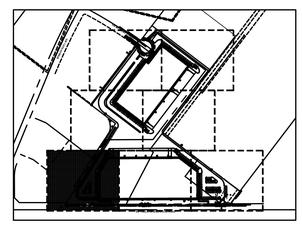

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OREGON
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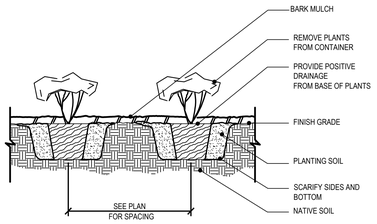
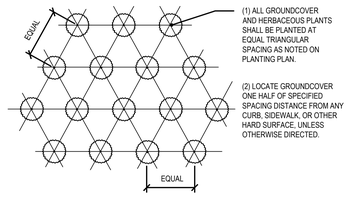
SHEET NUMBER

L1.7

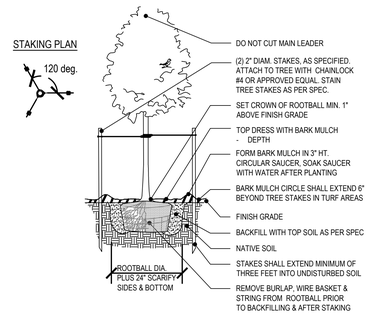
JOB NUMBER: A19173.10



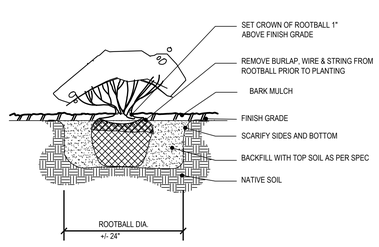
1 GROUNDCOVER & HERBACEOUS PLANT PLANTING DETAIL
L2.0 SCALE: NTS



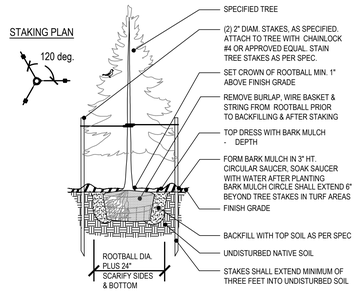
2 GROUNDCOVER & HERBACEOUS PLANT PLANTING PLAN
L2.0 SCALE: NTS



3 DECIDUOUS TREE PLANTING DETAIL
L2.0 SCALE: NTS



4 SHRUB PLANTING
L2.0 SCALE: NTS



5 CONIFER TREE PLANTING DETAIL
L2.0 SCALE: NTS

REGISTERED LANDSCAPE ARCHITECT
552
Teresa Katherine Long
OREGON
5-14-04
PRELIMINARY

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
LANDSCAPE DETAILS

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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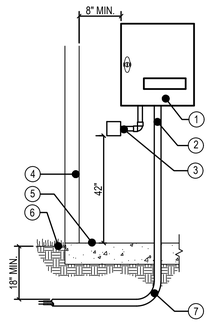
SHEET NUMBER
L2.0

JOB NUMBER: A19173.10

10/28/2019 – LAND USE SUBMITTAL



LEGEND

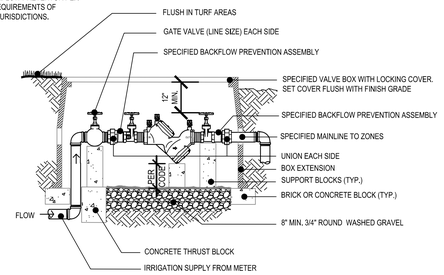
1. AUTOMATIC CONTROLLER WITH LOCKING ACCESS DOOR.
2. 2" DIA. P.V.C. CONDUIT FOR COMMON AND CONTROL WIRES TO 5' BEYOND EDGE OF BUILDING.
3. CONDUIT FOR 120 VOLT ELECTRICAL SERVICE WITH JUNCTION BOX.
4. BUILDING WALL.
5. BUILDING FLOOR.
6. FINISH GRADE.
7. SWEEP EL ON ALL ELECTRICAL CONDUIT.

NOTES

1. ALL WIRES TO BE INSTALLED AS PER LOCAL CODE.
2. VERIFY LOCATION PRIOR TO INSTALLATION.
3. INSTALL CONTROLLER PER MANUFATURER'S INSTRUCTIONS.

1 / ## WALL MOUNTED CONTROLLER
SCALE: NTS

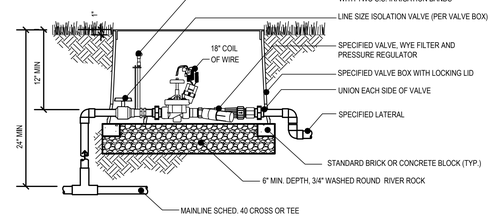
NOTE:
INSTALL BACKFLOW PREVENTOR PER CODE AND REQUIREMENTS OF PREVAILING JURISDICTIONS.



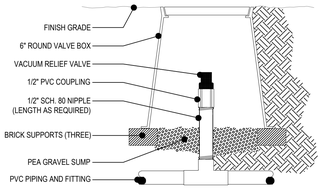
2 / ## BACKFLOW PREVENTION DEVICE ASSEMBLY
SCALE: NTS

NOTES

1. LOCATION OF QUICK COUPLER WITHIN VALVE BOX IS SHOWN FOR CLARIFICATION ONLY. INSTALL OFF-SET FROM MAINLINE.
2. EXACT FITTING REQUIREMENTS, COMPONENT SHAPES AND SEQUENCE MAY DIFFER FROM THAT SHOWN.



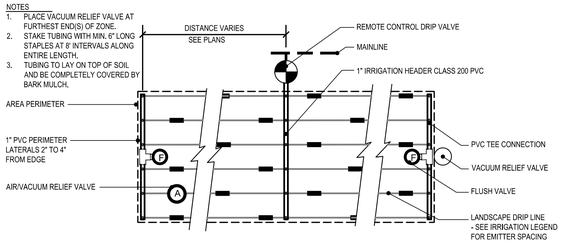
3 / ## DRIP IR CONTROL VALVE ASSEMBLY
SCALE: NTS



4 / ## VACUUM RELIEF VALVE
SCALE: NTS

NOTES

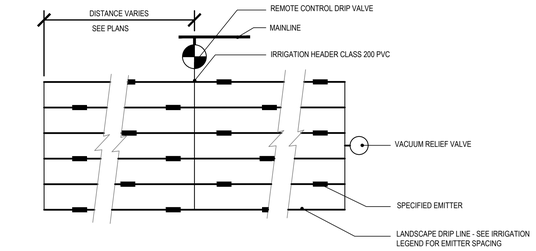
1. PLACE VACUUM RELIEF VALVE AT FURTHEST END(S) OF ZONE.
2. STAKE TUBING WITH MIN. 6" LONG STAPLES AT 8' INTERVALS ALONG ENTIRE LENGTH.
3. TUBING TO LAY ON TOP OF SOIL AND BE COMPLETELY COVERED BY BARK MULCH.



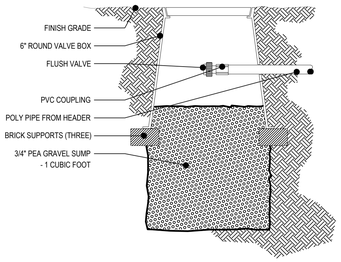
5 / ## DRIPLINE LAYOUT DIAGRAM
SCALE: NTS

NOTES

1. PLACE VACUUM RELIEF VALVE AT FURTHEST END(S) OF ZONE.
2. STAKE TUBING WITH MIN. 6" LONG STAPLES AT 8' INTERVALS ALONG ENTIRE LENGTH.



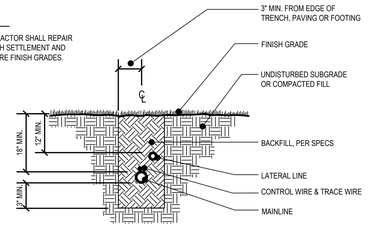
6 / ## INLINE EMITTER TUBING INSTALLATION
SCALE: NTS



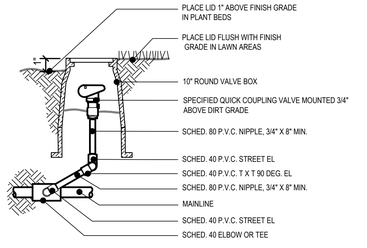
7 / ## FLUSH VALVE
SCALE: NTS

NOTES

1. CONTRACTOR SHALL REPAIR TRENCH SETTLEMENT AND RESTORE FINISH GRADES.



8 / ## IR TRENCHING DETAIL
SCALE: NTS



9 / ## QUICK COUPLER VALVE DETAIL
SCALE: NTS

10/28/2019 – LAND USE SUBMITTAL

REGISTERED
552
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OREGON
5-14-04
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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
IRRIGATION DETAILS

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
L2.1

JOB NUMBER: A19173.10

Landscape Construction Specifications

General

1. Municipal, County, State and Federal laws, regarding uses and regulations governing or relating to any portion of the work depicted on these plans are hereby incorporated into and made part of these specifications, and their provisions shall be carried out by the contractor.

2. The Contractor shall verify the locations of all existing utilities, structures, and services before commencing work. The location of utilities, structures, services shown on these plans are approximate only. Any discrepancies between these plans and the actual field conditions shall be reported to the Owner's representative.

3. The Contractor shall locate and protect all existing utilities, features and plants on and adjacent to the project site during construction. Contractor shall repair, at his own expense, all damage resulting from his operations or negligence.

4. The Contractor shall obtain all necessary valid licenses, permits, and insurance required to perform the work indicated herein before commencing work, and shall be responsible for coordinating work with all parties involved, including jurisdictional agencies.

5. The Contractor shall use all means necessary to protect the public at all times during the construction process.

6. In the event of conflict between pertinent codes, regulations, structural notes, and/or requirements, or the referenced standards of these Specifications, the provisions of the more stringent shall govern.

7. Weather Limitations: Soil work shall be performed only when the weather conditions do not detrimentally affect the quality of work.

Mandatory Site Inspection Schedule

1. Schedule for Mandatory site inspection procedures. The mandatory site inspections include but are not limited to the following:

   Pre-Construction Site Meeting
   Contractor shall be notified a minimum of 48 hours prior to meeting to review site conditions, proposed construction and construction schedule, and review construction specifications prior to commencement of construction operations.

   Rough Grading Inspection
   Contractor shall notify Owner's Representative a minimum 48 hours prior to request for inspection of rough soil grades. All rough grading operations shall be completed per specifications and prepared for inspection. No topsoil placement or backfilling in areas to be landscaped should occur until written approval by Owner's Representative has been issued.

   Open Trench Irrigation Inspection
   Contractor shall notify Owner's Representative 24 hours prior to inspection for written approval of irrigation trench depths, piping conditions, and pressure testing. (Refer to Irrigation Specification for inspection procedures)

   Plant Material Inspection
   Plant material quality and layout inspection and written approval shall occur with 24 hours notice to Owner's Representative prior to installation of any plant material. (Refer to Planting Specification for inspection procedures)

   Final Landscape Areas and Irrigation Performance Inspection
   Contractor shall notify Owner's Representative 48 hours prior to inspection for approval of landscape and irrigation work. Irrigation operations and coverage shall be inspected. Plant quality and layout shall be inspected. Written approval shall be issued upon inspection approval of specified construction. (Refer to relative specification sections)

Erosion Control

1. Provide and maintain positive drainage patterns throughout the construction process, and as directed by the Owner's Representative if weather or construction activity creates drainage conflicts detrimental to construction process or environmental conditions. Comply with jurisdictional requirements.

2. Maintain erosion measures throughout the landscaping process. Restore erosion control measures disturbed by landscaping operations. Remove only upon approval of Owner's Representative.

Invasive Weed Control Prior to Construction

1. Verify and identify conditions requiring eradication of invasive weeds and grasses prior to existing soil surface disturbance as directed by Owner's Representative. Stockpiled topsoil shall be treated to eradicate weeds prior to soil ripping and stockpiling. Weed eradication shall include herbicide and non-herbicide methods only administered by a currently licensed applicator. Eradication shall include and is not limited to elimination of the following invasive species from areas to be landscaped:

   Cirsium arvense (Canadian Thistle) Lotus corniculatus (Bird's foot Trefoil
   Convolvulus spp. (Morning Glory) Lythrium salicaria (Purple Loosestrife)
   Cytisus scoparus (Scotch Broom) Melilotus spp. (Sweet Clover)
   Dipsacus sylvestris (Common Teasel) Myriophyllum spicatum (Eurasian Milfoil)
   Equisetum spp. (Horsetail) Phalaris arundinaceae (Reed Canary Grass)
   Festuca arundinaceae (Tall Fescue) Rubus discolor (Himalayan Blackberry)
   Hedera helix (English Ivy) Solanum spp. (Nightshade)
   Holcus canatus (Velvet Grass) Trifolium spp. (Clovers)
   Lolium spp. (Rye Grasses)

Rough Grade Inspection

1. Conditions and quality of rough grade shall be inspected and approved by Owner's Representative prior to the commencement of specified work in areas to be landscaped. The contractor shall then be responsible for completion of activities specified herein, and defined on the plan.

2. In all plant bed areas the sub-grade shall be free of unsuitable material such as stumps, roots, rocks, concrete, asphalt, or metals, for a minimum depth of 24 inches, and in all lawn or seeded areas the sub-grade shall be free of unsuitable material for a minimum depth of 12 inches

3. The Owner's Representative, at their discretion, shall direct further rough grading or soil preparation if specified activities have not created a surface satisfactory for further work to commence. Compensation for additional surface work created by conditions unknown at the outset and as directed in writing by the Owner's Representative shall be negotiated at the time of the directive, and prior to the commencement of particular construction activities.

Finish Grading

1. Verify that rough grade in landscape areas is sufficiently below proposed final grade for planting beds and lawn areas to allow for placement of topsoil mix. Refer to grading plans for finish grade references. Verify that grades provide positive drainage at all landscape areas, and slope away from structures at a minimum of 2% slope. Final grades in all landscape areas shall be crowned at center to facilitate proposed drainage.

Installation Of Irrigation Sleeving

1. Sleeving conduit shall be installed at existing and proposed paved areas as per specifications, as directed by the Owner's Representative, or as irrigation installation requirements, prior to preparation for paving construction. Set piping to provide minimum covers of:

   18-inch for sleeving beneath walkways;
   24-inch for sleeving beneath vehicular traffic or structures.

   Mark each end of sleeving with a 2 x 4 stake with 24" exposed, clearly marked 'SLEEVE LOCATION'. Contractor shall maintain staking identification and location throughout construction process. Protect all existing paving when installing sleeving. Restore all paving damaged by sleeve installation.

2. Size of sleeving conduit pipe shall be a minimum of two times the diameter of the bell end of the pipe that is to be fed into the sleeve.

3. Set sleeving in a compacted bed of material that will not damage the pipe during compaction of surface backfill material.

Design / Build Irrigation Specification

1.1 DESIGN BUILD SUBMITTALS AND REQUIREMENTS

A. Design Criteria: Submitted plan shall meet the following criteria and shall be approved for construction only upon verification that all required criteria have been met.
   1. Drawings submitted for design approval:
      a. Must clearly illustrate irrigation heads, dripline, valve, controller and point of connection locations. Individual valves and controllers shall be numbered sequentially. The size and maximum flow through each valve and capacity of each controller shall be clearly noted.
      b. Must clearly illustrate pipe sizes from all laterals and mainline pipe.
      c. Drawings must be to a standard measurable engineering scale that is at a minimum of 1"=30'-0".
      d. Drawings must be CAD generated.
      e. Drawings must include a legend that describes all symbols and materials represented on the plan.
      f. Drawings must clearly illustrate that the proposed irrigation system meets all performance criteria described by these specifications.
      g. Must utilize graphics that clearly distinguish between lateral and mainline pipe and sleeves under pavement; dripline; manual or automatic control valves, isolation valves and drain valves; irrigation controllers and all other equipment located on the plan.

B. Irrigation system as designed and installed shall perform within the tolerances and specification of the specified manufacturers.

C. The system shall be fully adjustable to fine-tune the system performance for specific zones. Indicate water pressure and gallonage parameters at available water source on the required submittal.

D. Irrigation system shall be designed so that planting beds, sloped banks and lawn zones are on separate control valves to facilitate the different water requirements of each area.

E. System shall be designed to supply manufacturer's specified minimum operating pressure to furthest emitter from water meter. Water flow through piping shall not exceed a velocity of 5 feet per second.

F. System shall furnish components to allow operation within manufacturer's specified tolerances for optimum performance. Undersized components shall not be approved for installation.

5. Upon completion of the irrigation system installation and as a condition of it's acceptance, deliver to the Owner's representative the following 'As- built' drawings; Three prints and one reproducible sepia of all changes to the irrigation system including a Controller Zone Reference chart. Instruct owner of system components operation, system winterization, and controller adjustment processes. Instruct owner of precipitation requirements and schedule of anticipated controller adjustments as landscape matures.

6. Protect existing buildings, walls, pavements, reference points, monuments, and markers on this site. Verify location of and protect all utilities. Protect adjacent property. Protect work and materials of other trades. Protect irrigation system materials before, during, and after installation. In the event of damage, repair or replace items as necessary to the approval of the Owner's representative and at no additional cost to the Owner. Use all means necessary to protect the public from injury at all times.

7. Provide warranty for all installed materials and work for one year beyond the date of final acceptance of the irrigation system installation.

8. Verify gallonage, pressure, size, and location of service water line. The Contractor shall guarantee an irrigation system that functions to manufacturer's specifications with the source volume and pressure afforded to site. Make arrangements for water shut-off during construction if necessary, notify owner 24 hours prior to suspension of water service.

9. Irrigation trenches shall be a depth to provide a minimum cover of 18 inches for sleeving beneath walkways; 18 inches for all pressurized main lines; 36 inches for sleeving beneath asphalt paving, and 12 inches for all lateral lines. Backfill with clean fill void of material injurious to system components. All sleeving under vehicular traffic to be Class 200 PVC, all other sleeving shall be class 200 PVC Locate top of zone valves a minimum of 6" below finish grade.

10. Combine wire and piping where possible.

11. Contractor shall follow manufacturer's instructions for solvent welding of PVC pipe and fittings to achieve tight and inseparable joints. Utilize single wrap Teflon tape at all threaded joints.

12. Install all valves with fittings that facilitate maintenance removal and place valve boxes at location that are easily serviced but not in conspicuous locations. Locate in planting beds wherever possible, away from mower, edger, or de-thatcher operations.

13. Contractor shall install one manual drain valve at discharge side of each remote control valve and at all low points in mainline pipe so as to allow for complete drainage of all main lines. Mark with a painted sleeve cover and indicate locations on As-Built drawings.

14. Contractor shall provide backflow prevention as required per local and state codes, installed as per manufacturer's specifications.

15. Contractor shall install irrigation controller in accordance with manufacturer's specifications. Verify a 120 V.A.C. electrical source and a min. 1 1/2" conduit from controller location open to all electrical zone valves in field. Weatherproof any exterior wall penetrations.

16. Automatic Controller: Rainbird or Hunter capable of meeting Water Sense EPA Criteria or approved equal. Controller shall have ability for all zones to fully operate and meet both normal and specified low volume system requirements as specified herein, and as required by site conditions. Coordinate location in field with owner's representative.

17. Install all wire in accordance with manufacturer's specifications with a minimum of 18 inch looped inside valve box at each remote control valve and at the controller. All splices shall occur within valve boxes with water-proof connectors.

18. Contractor shall install all sprinkler heads with flexible risers, using flexible polyethylene pipe not to exceed 18 inches in length or PVC swing joints. Tee fittings shall extend horizontally from pipe .

19. Contractor shall thoroughly flush irrigation system after piping, risers, and valves are installed but prior to installing sprinkler heads. Thoroughly clean, adjust and balance the installed irrigation system. Adjust spray pattern of nozzles to minimize throw of water onto buildings, walls, roads and parking lots. Adjust controller for optimum performance and precipitation rates utilizing proper water conservation measures.

Topsoil Placement and Soil Preparation

1. Contractor shall submit certified topsoil analysis report for owner's approval prior to plant installation.

2. Contractor is responsible for any amendments to soil PH , fertility and/or drainage conditions necessary to ensure proper growing conditions for proposed planting.

3. Topsoil shall be friable soil from existing stockpiled material or imported, with added soil amendments as specified. It shall not be delivered while in a frozen or muddy condition. Protect from erosion at all times. Utilize existing stockpiled topsoil only under the direction of the Owner's Representative. Do not place topsoil in areas that have not been cleared of weeds listed herein. Topsoil shall meet the following requirements:

   a. Free of roots and rocks larger than 1/2 inch,
   b. Free of subsoil, debris, large weeds, foreign matter and any other material deleterious to plant material health.
   c. Acidity range (pH) of 5.5 to 7.5.
   d. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter with decaying matter of 25 percent content by volume or less.
   e. Textural gradations shall be sand: 45-75%, silt: 15-35%, clay: 05-20%.

4. Commercial fertilizer shall be an organic base, complete fertilizer containing in available form by within a minimum of 10N 10P 5K - with 50 percent of the available nitrogen in slow-release formula, Webfoot Organic Delux, or approved equal.a

5. Compost shall be yard debris compost meeting industry and jurisdictional standards.

6. Contractor shall remove all debris, rocks one inch in diameter or larger, sticks, mortar, concrete, asphalt, paper, contaminated soil and any material harmful to plant life, in all planting areas.

7. Contractor shall rototill subgrade six (6) inches deep before placing topsoil. Specified imported topsoil shall be placed at a minimum depth of **12"** in all planting areas. Do not place material during wet conditions. Do not work saturated soils in any manner. floated to a level, sloped or mounded grade between any existing or constructed point on the site, such as curbs, walls, walks, paving and the like. Final soil grades in planting beds shall be 2" below adjacent paving and curbs for mulch application.

8. Distribute following soil amendments to all landscape areas in even layers and power rotobill or spade to a minimum depth of six (6) inches into topsoil, as follows;

   Planting Beds:
   a. Compost: Apply nine cubic yards per 1000 sq. ft.
   b. Commercial Fertilizer: Apply 50 pounds per 1000 sq. ft.

9. Preparation of backfill planting soil mix shall be as follows:

   Thoroughly blend and mix the following proportion of materials while in a moist condition:
   - Three cubic yards topsoil
   - 1 1/2 cubic yards compost
   - 1 1/2 cubic yards medium bark,
   - 10 pounds commercial fertilizer
   - Five pounds bonemeal

10. Keep project free from accumulation of debris, topsoil and other material. At completion of each area of work, remove debris, equipment and surplus materials. Any paved area or surfaces stained or soiled from landscaping materials shall be cleaned with a power sweeper using water under pressure. Building surfaces shall be washed with proper equipment and materials as approved by the Owner's representative.

Seed Installation

1. Seeding operations shall occur only between March 15 and October 15.

2. Seeding is not permitted during cold weather (less than 32 degrees F), hot weather (greater than 80 degrees F), when soil temperature is less than 55 degrees F, when ground is saturated, or when wind velocity is greater than 10 mph.

3. Contractor shall float rough graded seedbed. Do not disturb natural drainage patterns. Remove rocks, clumps, or debris at surface. Lightly scarify surface.

4. Contractor shall apply 10 pounds commercial fertilizer per 1,000 square feet of surface area before spreading seed.

5. Lawn Seed: Contractor shall manually broadcast or hydro-seed eight pounds of Sunmark "Northwest Supreme Lawn Mix" grass seed per 1,000 square feet.

6. Fieldgrass Seed: Contractor shall manually broadcast or hydro-seed eight pounds of Sunmark "Diamond Green" grass seed per 1,000 square feet.

7. The Contractor shall protect and maintain the seeded area by fencing, watering, feeding, reseeding, mowing and repairing as necessary to establish a thick, uniform stand of grass acceptable to the Owner's representative. Contractor to maintain lawn for a minimum of 3 mowings.

Trees, Shrubs, & Groundcover Installation

1. Contractor shall guarantee materials and workmanship in general landscape areas for one year from date of conditional acceptance. Plant material shall be in accordance with American Standard for Nursery Stock (ANSI Z60.1) , shall comply with State and Federal laws with respect to inspection for insect infestation and plant diseases and shall be free of insect pests and plant diseases.

2. Plant materials shall have a minimum of 6 inches of prepared soil under the root ball, and a minimum of 6 inches on each side of the root ball. Tree roots or root ball shall have a minimum of 12 inches of plant soil under the root ball and a minimum of 12 inches on each side of the root ball, or roots. Final grade should maintain root ball slightly above surrounding grade (not to exceed one inch) for bark mulch installation.

3. Root control barrier shall be installed in trenches, alongside hardscape structures and utility lines such as sidewalks, curbs, pavement, walls, and concrete located within 5 feet of new trees measured from the trunk. Root barrier is to be 40 - 60 mil HDPE, minimum 18" deep and extend 10' in either direction measured from the center of the trunk.

4. Mulch all planting beds after planting, final raking, grading and leveling of the planting beds with a layer of Hem/Fir medium screened bark mulch as specified on the plans.

5. Balled and burlapped trees, boxed trees or bare root trees shall be either guyed or staked as detailed on the plans.

6. Remove all dead or dying branches and criss-crossing branches from trees. Do not cut leader.

7. Keep project free from accumulation of debris, topsoil and other material. At completion of each area of work, remove debris, equipment and surplus material. All paved areas or surfaces stained or soiled from landscape material shall be cleaned with a water-pressure power sweeper. Building surfaces shall be washed with proper equipment and materials as approved by the Owner.

8. River Rock Mulch:
   River rock mulch shall be minimum 3/4" to maximum 1-1/2" diameter washed round river rock, uniform in size. All fines shall be screened from the aggregate within a one-quarter inch (1/4") tolerance. Color shall be white to light brown. Contractor shall provide the owner with samples of river rocks for approval prior to installation.

Maintenance

1. Contractor shall maintain general landscape areas for one year after accepted completion of project.

2. Maintenance shall include; all grade resettlement, weeding, policing and removal of plant material debris during maintenance period. Remove and replace dead plant material as needed at no cost to owner for maintenance period. Seasonal leaf fall removal is outside the scope of this maintenance specification.

3. Any unsatisfactory condition arising during this maintenance period shall be brought to the attention of the Owner's Representative immediately.

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Newport Beach, CA 92660

AAI dyhan associates, inc.
ENGINEERING
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503.620.3030 tel | 503.620.5539 fax | www.aaieng.com

TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
LANDSCAPE & IR SPECS

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
L3.0

JOB NUMBER: A19173.10

GENERAL NOTES

1. CONSTRUCTION LAYOUT (ALL ACTUAL LINES AND GRADES) SHALL BE STAKED BY A PROFESSIONAL SURVEYOR, REGISTERED IN THE STATE OF OREGON, BASED ON COORDINATES, DIMENSIONS, BEARINGS, AND ELEVATIONS, AS SHOWN, ON THE PLANS.
2. PROJECT CONTROL SHALL BE FIELD VERIFIED AND CHECKED FOR RELATIVE HORIZONTAL POSITION PRIOR TO BEGINNING CONSTRUCTION LAYOUT.
3. PROJECT CONTROL SHALL BE FIELD VERIFIED AND CHECKED FOR RELATIVE VERTICAL POSITION BASED ON THE BENCHMARK STATED HEREON, PRIOR TO BEGINNING CONSTRUCTION LAYOUT.
4. WHEN DIMENSIONS AND COORDINATE LOCATIONS ARE REPRESENTED – DIMENSIONS SHALL HOLD OVER COORDINATE LOCATION. NOTIFY THE CIVIL ENGINEER OF RECORD IMMEDIATELY UPON DISCOVERY.
5. BUILDING SETBACK DIMENSIONS FROM PROPERTY LINES SHALL HOLD OVER ALL OTHER CALLOUTS. PROPERTY LINES AND ASSOCIATED BUILDING SETBACKS SHALL BE VERIFIED PRIOR TO CONSTRUCTION LAYOUT.
6. CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING MONUMENTATION DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT OF ANY MONUMENTS DAMAGED OR REMOVED DURING CONSTRUCTION. NEW MONUMENTS SHALL BE REESTABLISHED BY A LICENSED SURVEYOR.
7. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS, THE PROJECT SPECIFICATIONS AND THE APPLICABLE REQUIREMENTS OF THE 2018 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2017 OREGON PLUMBING SPECIALTY CODE AND REQUIREMENTS OF THE CITY OF TUALATIN.
8. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS. ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES FOR THE EXECUTION AND COMPLETION OF WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
9. ATTENTION: OREGON LAW REQUIRES YOU 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 FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503) 232-1987). EXCAVATORS MUST NOTIFY ALL PERTINENT COMPANIES OR AGENCIES WITH UNDERGROUND UTILITIES IN THE PROJECT AREA AT LEAST 48 BUSINESS-DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS PRIOR TO COMMENCING AN EXCAVATION, SO UTILITIES MAY BE ACCURATELY LOCATED.
10. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR SHALL VERIFY ELEVATIONS, PIPE SIZE, AND MATERIAL TYPES OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WITH CONSTRUCTION AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF AAI ENGINEERING, 72 HOURS PRIOR TO START OF CONSTRUCTION TO PREVENT GRADE AND ALIGNMENT CONFLICTS.
11. THE ENGINEER OR OWNER IS NOT RESPONSIBLE FOR THE SAFETY OF THE CONTRACTOR OR HIS CREW. ALL O.S.H.A. REGULATIONS SHALL BE STRICTLY ADHERED TO IN THE PERFORMANCE OF THE WORK.
12. TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. THE CONTRACTOR SHALL ADHERE TO CITY OF TUALATIN FOR MINIMUM EROSION CONTROL MEASURES. THE ESC FACILITIES SHOWN IN THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL ROADWAYS, KEEPING THEM CLEAN AND FREE OF CONSTRUCTION MATERIALS AND DEBRIS, AND PROVIDING DUST CONTROL AS REQUIRED.
14. TRAFFIC CONTROL SHALL BE PROVIDED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO CITY OF TUALATIN FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL WORK WITH THE OWNER.
16. NOTIFY CITY INSPECTOR 72 HOURS BEFORE STARTING WORK. A PRECONSTRUCTION MEETING WITH THE OWNER, THE OWNER'S ENGINEER, CONTRACTOR AND THE CITY REPRESENTATIVE SHALL BE REQUIRED.
17. THE CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS INCLUDING ADDENDA ON THE PROJECT SITE AT ALL TIMES.
18. THE CONTRACTOR SHALL KEEP THE ENGINEER AND JURISDICTION INFORMED OF CONSTRUCTION PROGRESS TO FACILITATE SITE OBSERVATIONS AT REQUIRED INTERVALS. 24-HOUR NOTICE IS REQUIRED.
19. EXISTING SURVEY MONUMENTS ARE TO BE PROTECTED DURING CONSTRUCTION OR REPLACED IN ACCORDANCE WITH OREGON REVISED STATUTES 209.140 – 209.155.

CONSTRUCTION NOTES

DEMOLITION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND DISPOSAL OF EXISTING AC, CURBS, SIDEWALKS AND OTHER SITE ELEMENTS WITHIN THE SITE AREA IDENTIFIED IN THE PLANS.
2. EXCEPT FOR MATERIALS INDICATED TO BE STOCKPILED OR TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY, REMOVED FROM THE SITE, AND DISPOSED OF PROPERLY.
3. ITEMS INDICATED TO BE SALVAGED SHALL BE CAREFULLY REMOVED AND DELIVERED STORED AT THE PROJECT SITE AS DIRECTED BY THE OWNER.
4. ALL LANDSCAPING, PAVEMENT, CURBS AND SIDEWALKS, BEYOND THE IDENTIFIED SITE AREA, DAMAGED DURING THE CONSTRUCTION SHALL BE REPLACED TO THEIR ORIGINAL CONDITION OR BETTER.
5. CONCRETE SIDEWALKS SHOWN FOR DEMOLITION SHALL BE REMOVED TO THE NEAREST EXISTING CONSTRUCTION JOINT.
6. SAWCUT STRAIGHT MATCHLINES TO CREATE A BUTT JOINT BETWEEN THE EXISTING AND NEW PAVEMENT.

UTILITIES

1. ADJUST ALL INCIDENTAL STRUCTURES, MANHOLES, VALVE BOXES, CATCH BASINS, FRAMES AND COVERS, ETC. TO FINISHED GRADE.
2. CONTRACTOR SHALL ADJUST ALL EXISTING AND/OR NEW FLEXIBLE UTILITIES (WATER, TV, TELEPHONE, ELEC., ETC.) TO CLEAR ANY EXISTING OR NEW GRAVITY DRAIN UTILITIES (STORM DRAIN, SANITARY SEWER, ETC.) IF CONFLICT OCCURS.
3. CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE INSTALLATION OF OR ADJUSTMENT TO GAS, ELECTRICAL, POWER AND TELEPHONE SERVICE.
4. BEFORE BACKFILLING ANY SUBGRADE UTILITY IMPROVEMENTS CONTRACTOR SHALL SURVEY AND RECORD MEASUREMENTS OF EXACT LOCATION AND DEPTH AND SUBMIT TO ENGINEER AND OWNER.

STORM AND SANITARY

1. CONNECTIONS TO EXISTING STORM AND SANITARY SEWERS SHALL CONFORM TO THE 2018 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 00490, "WORK ON EXISTING SEWERS AND STRUCTURES".
2. BEGIN LAYING STORM DRAIN AND SANITARY SEWER PIPE AT THE LOW POINT OF THE SYSTEM, TRUE TO GRADE AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. THE CONTRACTOR SHALL ESTABLISH LINE AND GRADE FOR THE STORM AND SANITARY SEWER PIPE USING A LASER.
3. ALL ROOF DRAIN AND CATCH BASIN LEADERS SHALL HAVE A MINIMUM SLOPE OF 2 PERCENT UNLESS NOTED OTHERWISE IN THE PLANS.

WATER

1. ALL WATER AND FIRE PROTECTION PIPE SHALL HAVE A MINIMUM 36-INCH COVER TO THE FINISH GRADE.
2. ALL WATER AND FIRE PRESSURE FITTINGS SHALL BE PROPERLY RESTRAINED WITH THRUST BLOCKS PER DETAIL.
3. ALL WATER MAIN / SANITARY SEWER CROSSINGS SHALL CONFORM TO THE OREGON STATE HEALTH DEPARTMENT REGULATIONS, CHAPTER 333.

EARTHWORKS

1. CONTRACTOR SHALL PREVENT SEDIMENTS AND SEDIMENT LADEN WATER FROM ENTERING THE STORM DRAINAGE SYSTEM.
2. TRENCH BEDDING AND BACKFILL SHALL BE AS SHOWN ON THE PIPE BEDDING AND BACKFILL DETAIL, THE PROJECT SPECIFICATIONS AND AS REQUIRED IN THE SOILS REPORT. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER WILL NOT BE PERMITTED.
3. SUBGRADE AND TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER IS NOT PERMITTED.

PAVING

1. SEE ARCHITECTURAL PLANS FOR SIDEWALK FINISHING AND SCORING PATTERNS.

MATERIAL NOTES

1. GENERAL: MATERIALS SHALL BE NEW. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, AND USEFULNESS. PROPOSED SUBSTITUTIONS WILL REQUIRE WRITTEN APPROVAL FROM ENGINEER PRIOR TO INSTALLATION.
2. STORM AND SANITARY SEWER PIPING SHALL BE PVC PIPE AS INDICATED IN THE PLANS. PIPES WITH LESS THAN 2' OF COVER SHALL BE C900/C905 PVC, HDPE OR DUCTILE IRON PIPE.
3. PRIVATE WATER MAINS 4-INCH DIAMETER AND LARGER SHALL BE DUCTILE IRON PIPE SCH 80; AS INDICATED IN THE PLANS.
4. PRIVATE WATER LINES 3-INCH DIAMETER AND SMALLER SHALL BE TYPE K COPPER OR PVC; AS INDICATED IN THE PLANS.
5. CONCRETE FOR CURBS, SIDEWALK AND DRIVEWAYS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

SEPARATION STATEMENT

ALL WATER MAIN CROSSINGS SHALL CONFORM TO THE OREGON STATE HEALTH DEPARTMENT, CHAPTER 333. WATER MAINS SHALL CROSS OVER SANITARY SEWERS WITH A 18" MINIMUM CLEARANCE BETWEEN OUTSIDE DIAMETERS OF PIPE WITH ALL PIPE JOINTS EQUIDISTANT FROM CROSSING. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWERS IN PARALLEL INSTALLATIONS SHALL BE 10'. MAINTAIN 12" MINIMUM VERTICAL DISTANCE FOR ALL OTHER UTILITY CROSSINGS AND 12" HORIZONTAL PARALLEL DISTANCE. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN THE MINIMUM 10' HORIZONTAL SEPARATION, THE WATER MAIN SHALL BE LAID ON A SEPARATE SHELF IN THE TRENCH 18" INCHES ABOVE THE SEWER.

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
GENERAL NOTES

DATE: 10/28/19
DRAWN: NJD
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REVISIONS:

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SHEET NUMBER
C0.2

JOB NUMBER: A19173.10

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SHEET NOTES

1. SURVEY COMPLETED BY AKS ENGINEERING AND FORESTRY, LLC.

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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

EXISTING CONDITIONS

DATE:	10/28/19
DRAWN:	NJD
CHECKED:	DSE
REVISIONS:	

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SHEET NUMBER

C0.3

JOB NUMBER: A19173.10

10/28/2019 – LAND USE SUBMITTAL

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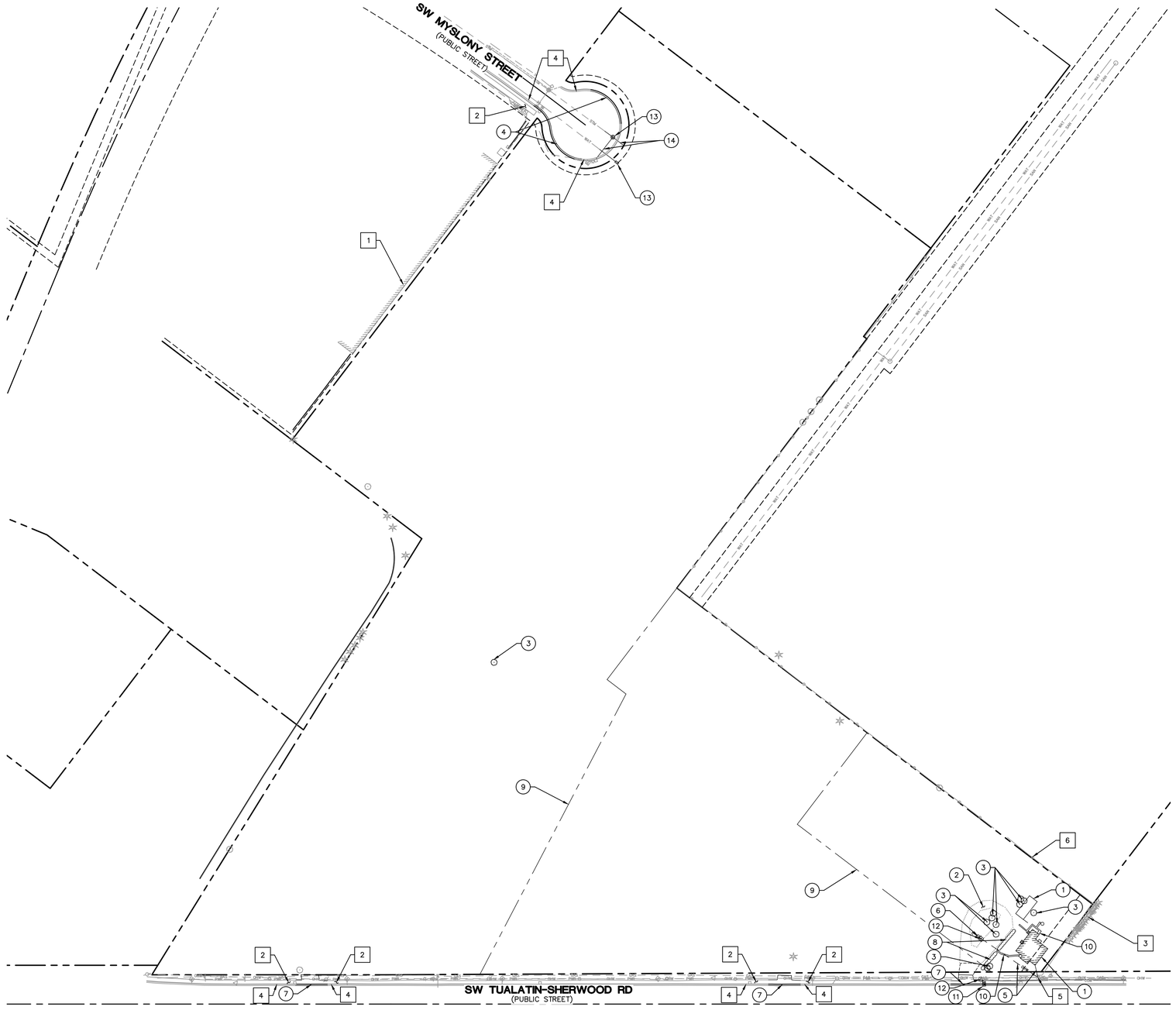

SHEET NOTES

1. SEE SHEET C0.2 FOR GENERAL SHEET NOTES.
2. CONTRACTOR MAY STAGE WITHIN LIMITS OF DEMOLITION.
3. REMOVE ALL SITE COMPONENTS AND RECYCLE COMPONENTS AS REQUIRED IN THE SPECIFICATIONS.
4. ALL TRADE LICENSES AND PERMITS NECESSARY FOR THE PROCUREMENT AND COMPLETION OF THE WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING DEMOLITION.
5. THE CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING RIGHT-OF-WAY SURVEY MONUMENTATION DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT BY A LICENSED SURVEYOR OF ANY DAMAGED OR REMOVED MONUMENTS.
6. PROTECT ALL ITEMS ON ADJACENT PROPERTIES AND IN THE RIGHT OF WAY INCLUDING BUT NOT LIMITED TO SIGNAL EQUIPMENT, PARKING METERS, SIDEWALKS, STREET TREES, STREET LIGHTS, CURBS, PAVEMENT AND SIGNS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DAMAGED ITEMS TO ORIGINAL CONDITION.
7. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, AND OTHER FACILITIES IMMEDIATELY ADJACENT TO EXCAVATIONS FROM DAMAGES CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS.
8. SAWCUT STRAIGHT LINES IN SIDEWALK, AS NECESSARY.
9. CONTRACTOR IS RESPONSIBLE TO CONTROL DUST AND MUD DURING THE DEMOLITION PERIOD, AND DURING TRANSPORTATION OF DEMOLITION DEBRIS. ALL STREET SURFACES OUTSIDE THE CONSTRUCTION ZONE MUST BE KEPT CLEAN.
10. PROTECT ALL EXISTING UTILITY STRUCTURES AND UNDERGROUND MAINS TO REMAIN.
11. PROTECT ALL EXISTING VEGETATION TO REMAIN.

(X) PROTECTION NOTES

1 PROTECT EXISTING BUILDING
2 PROTECT EXISTING SIDEWALK
3 PROTECT EXISTING TREE
4 PROTECT EXISTING CURB
5 PROTECT EXISTING POWER POLE
6 PROTECT EXISTING FENCE

(X) DEMOLITION NOTES

1 REMOVE EXISTING BUILDING
2 REMOVE EXISTING GRAVEL ROAD
3 REMOVE EXISTING TREE
4 REMOVE EXISTING CURB
5 REMOVE EXISTING POWER LINE
6 REMOVE EXISTING POWER POLE
7 REMOVE EXISTING DRIVEWAY
8 REMOVE EXISTING BRUSH
9 ABANDON EXISTING TAX LOT
10 REMOVE EXISTING CONCRETE WALKWAY
11 REMOVE EXISTING MAILBOX
12 REMOVE EXISTING JUNCTION BOX
13 REMOVE EXISTING MANHOLE
14 REMOVE EXISTING STORM PIPE
15 REMOVE EXISTING WATER METER

NORTH

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

DEMOLTION PLAN

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER

C0.4

JOB NUMBER: A19173.10

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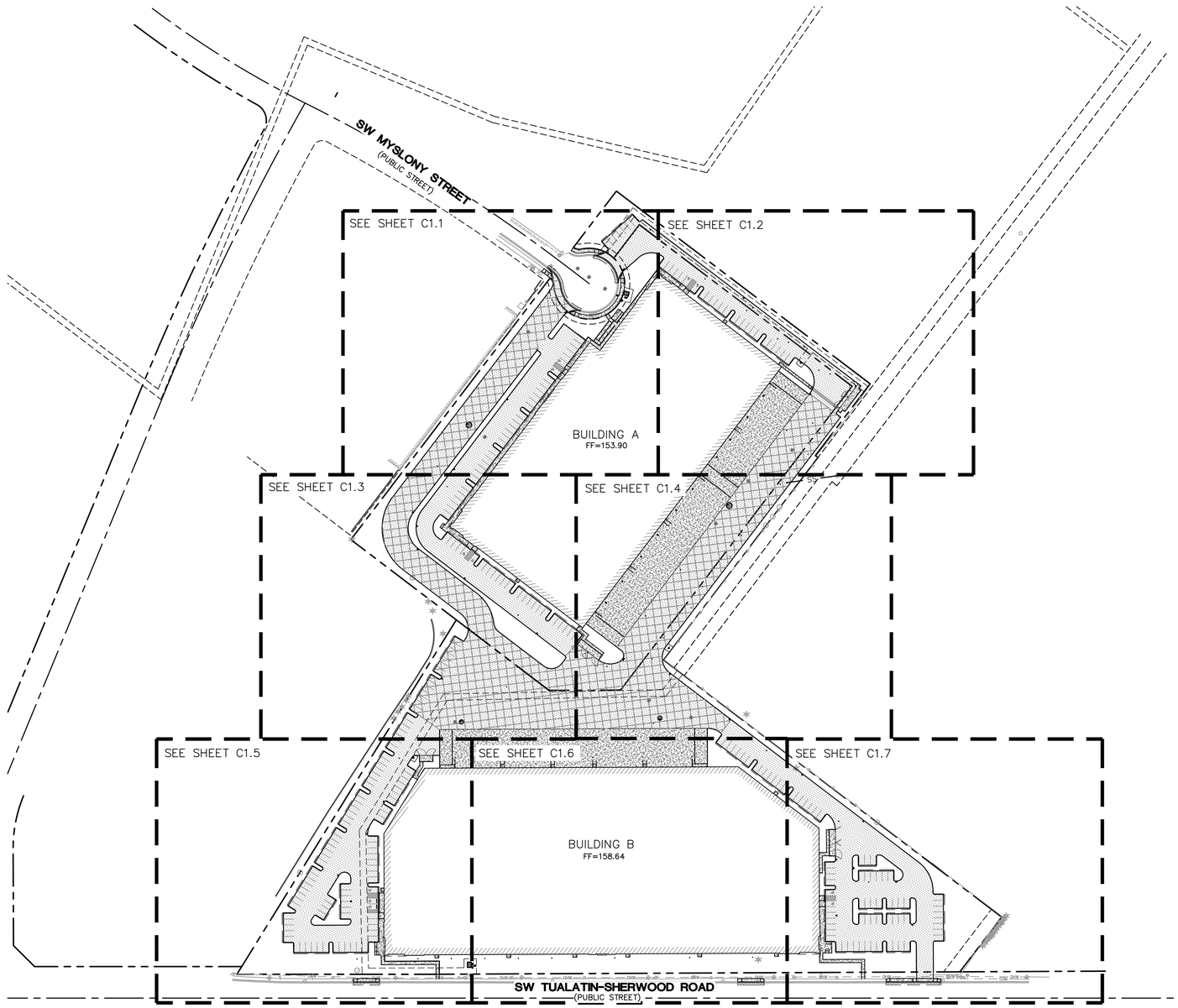

SHEET NOTES

1. SEE SHEET C0.2 FOR GENERAL SHEET NOTES.
2. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SITE INFORMATION.
3. THE CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS INCLUDING ADDENDA ON THE PROJECT SITE AT ALL TIMES.
4. THE CONTRACTOR SHALL KEEP THE ENGINEER AND JURISDICTION INFORMED OF CONSTRUCTION PROGRESS TO FACILITATE SITE OBSERVATIONS AT REQUIRED INTERVALS. 24—HOUR NOTICE IS REQUIRED.

LEGEND

PROPERTY LINE

CONCRETE SURFACING

PRIVATE ASPHALT SURFACING

COMMERCIAL ASPHALT SURFACE

NORTH

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 feet

10/28/2019 — LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN

DATE: 10/28/19
DRAWN: NJD
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REVISIONS:

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SHEET NUMBER
C1.0

JOB NUMBER: A19173.10

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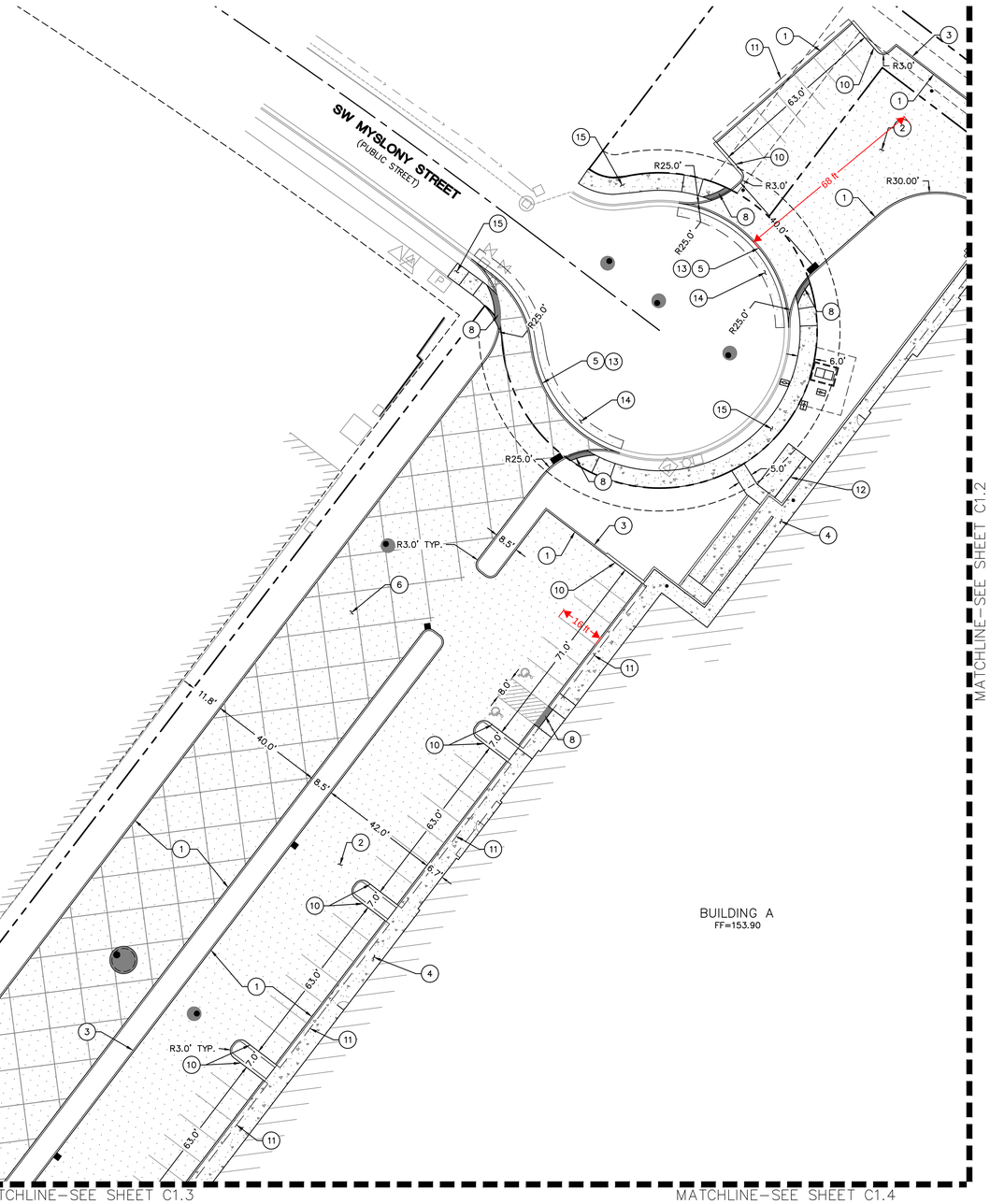


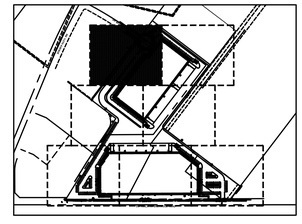
SHEET NOTES

1. SEE SHEET C1.0 FOR GENERAL SITE PLAN NOTES AND LEGEND.
2. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SITE INFORMATION

(X) CONSTRUCTION NOTES

1 INSTALL PRIVATE 6" WIDE CONCRETE CURB
2 INSTALL ASPHALT SURFACE
3 INSTALL WALL, DESIGN BUILD BY CONTRACTOR
4 INSTALL PRIVATE SIDEWALK
5 INSTALL 40' WIDE COMMERCIAL DRIVEWAY
6 INSTALL HEAVY ASPHALT SURFACE
7 INSTALL 6' WIDE PUBLIC SIDEWALK
8 INSTALL ADA RAMP
9 INSTALL TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
10 INSTALL PRIVATE 9" WIDE CONCRETE CURB
11 3' WIDE VEHICLE OVERHANG
12 INSTALL BICYCLE RACK, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
13 INSTALL PUBLIC CURB AND GUTTER
14 INSTALL PUBLIC ASPHALT
15 INSTALL PUBLIC SIDEWALK
16 INSTALL PRIVATE CONCRETE SURFACE
17 INSTALL WHEELSTOPS
18 INSTALL 26' WIDE DRIVEWAY

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG NL HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C1.1

JOB NUMBER: A19173.10

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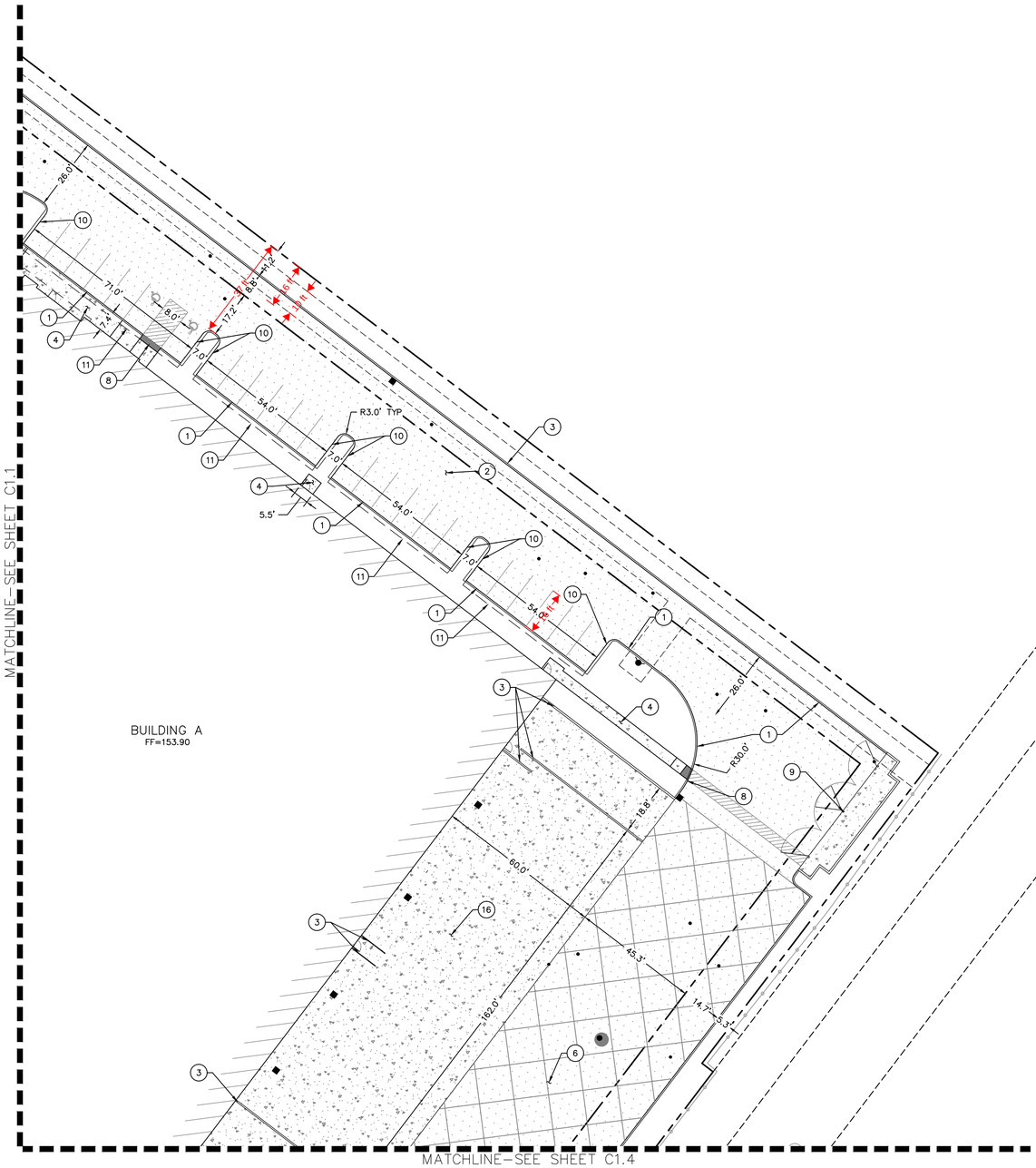


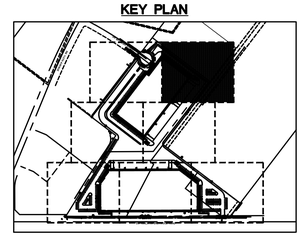
SHEET NOTES

1. SEE SHEET C1.0 FOR GENERAL SITE PLAN NOTES AND LEGEND.
2. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SITE INFORMATION

(X) CONSTRUCTION NOTES

1 INSTALL PRIVATE 6" WIDE CONCRETE CURB
2 INSTALL ASPHALT SURFACE
3 INSTALL WALL, DESIGN BUILD BY CONTRACTOR
4 INSTALL PRIVATE SIDEWALK
5 INSTALL 40' WIDE COMMERCIAL DRIVEWAY
6 INSTALL HEAVY ASPHALT SURFACE
7 INSTALL 6' WIDE PUBLIC SIDEWALK
8 INSTALL ADA RAMP
9 INSTALL TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
10 INSTALL PRIVATE 9" WIDE CONCRETE CURB
11 3' WIDE VEHICLE OVERHANG
12 INSTALL BICYCLE RACK, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
13 INSTALL PUBLIC CURB AND GUTTER
14 INSTALL PUBLIC ASPHALT
15 INSTALL PUBLIC SIDEWALK
16 INSTALL PRIVATE CONCRETE SURFACE
17 INSTALL WHEELSTOPS
18 INSTALL 26' WIDE DRIVEWAY

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
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SHEET NUMBER
C1.2

JOB NUMBER: A19173.10

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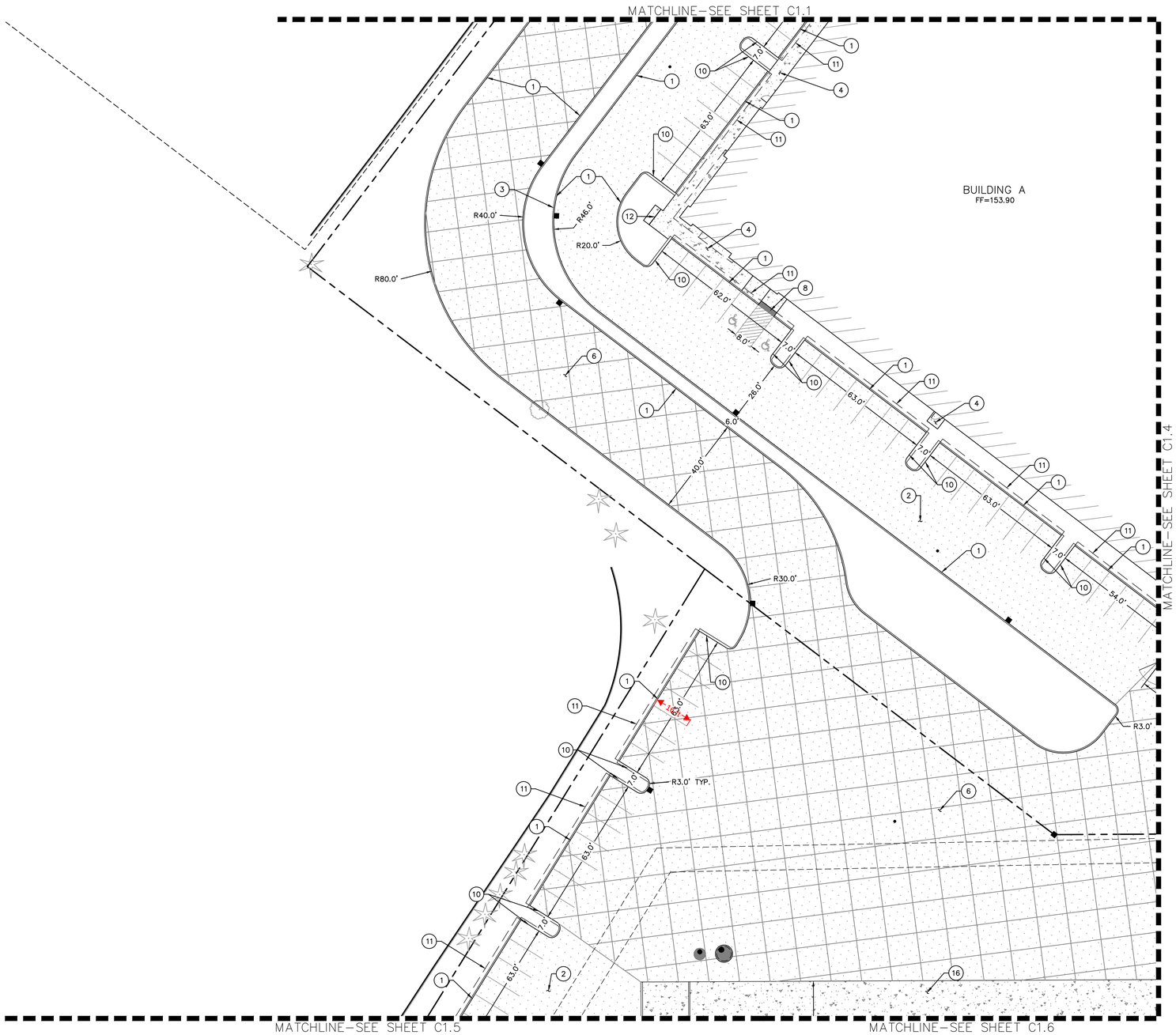

SHEET NOTES

1. SEE SHEET C1.0 FOR GENERAL SITE PLAN NOTES AND LEGEND.
2. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SITE INFORMATION

(X) CONSTRUCTION NOTES

1 INSTALL PRIVATE 6" WIDE CONCRETE CURB
2 INSTALL ASPHALT SURFACE
3 INSTALL WALL, DESIGN BUILD BY CONTRACTOR
4 INSTALL PRIVATE SIDEWALK
5 INSTALL 40' WIDE COMMERCIAL DRIVEWAY
6 INSTALL HEAVY ASPHALT SURFACE
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8 INSTALL ADA RAMP
9 INSTALL TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
10 INSTALL PRIVATE 9" WIDE CONCRETE CURB
11 3' WIDE VEHICLE OVERHANG
12 INSTALL BICYCLE RACK, SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
13 INSTALL PUBLIC CURB AND GUTTER
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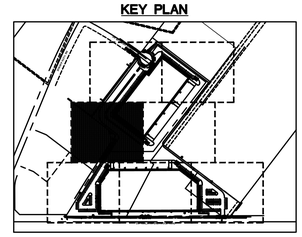
15 INSTALL PUBLIC SIDEWALK
16 INSTALL PRIVATE CONCRETE SURFACE
17 INSTALL WHEELSTOPS
18 INSTALL 26' WIDE DRIVEWAY

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C1.3

JOB NUMBER: A19173.10

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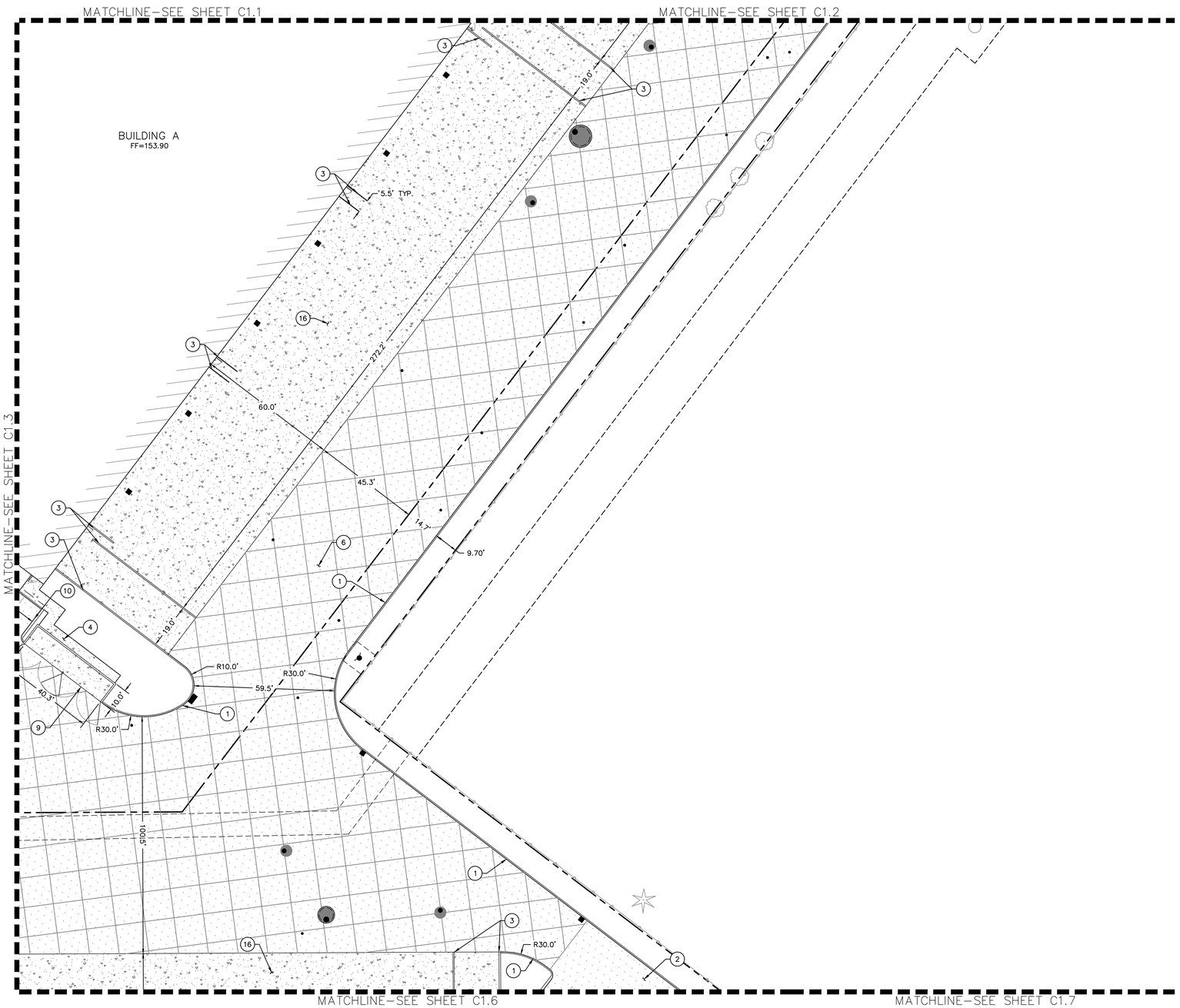

SHEET NOTES

1. SEE SHEET C1.0 FOR GENERAL SITE PLAN NOTES AND LEGEND.
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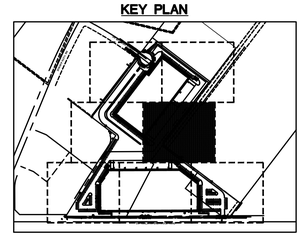
KEY PLAN



NORTH

GRAPHIC SCALE

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(IN FEET)
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10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
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CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C1.4

JOB NUMBER: A19173.10

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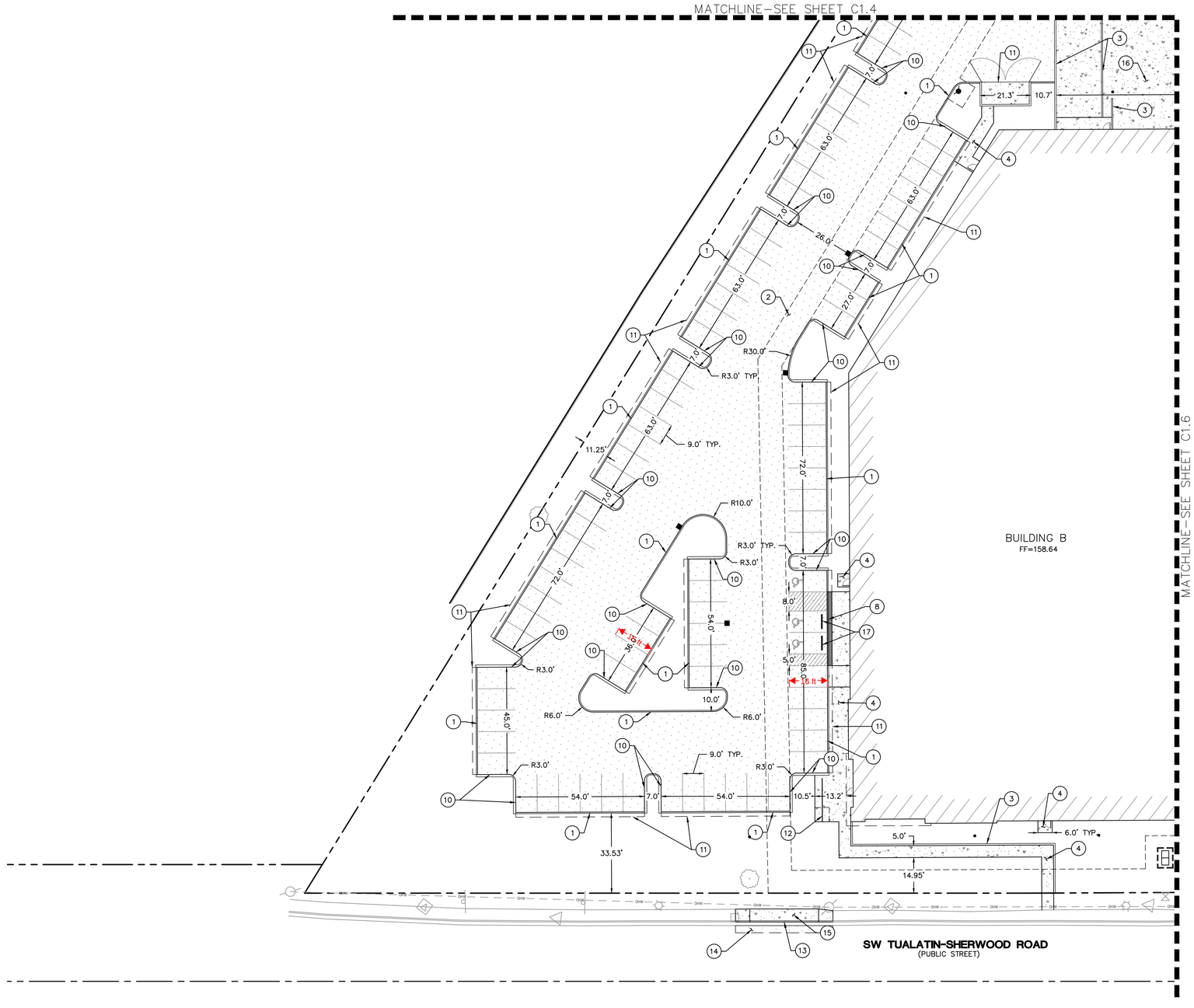

SHEET NOTES

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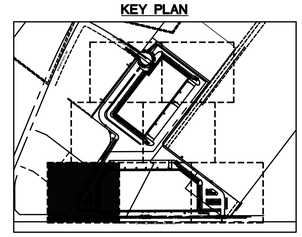
KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
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10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
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EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
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SHEET NUMBER
C1.5

JOB NUMBER: A19173.10

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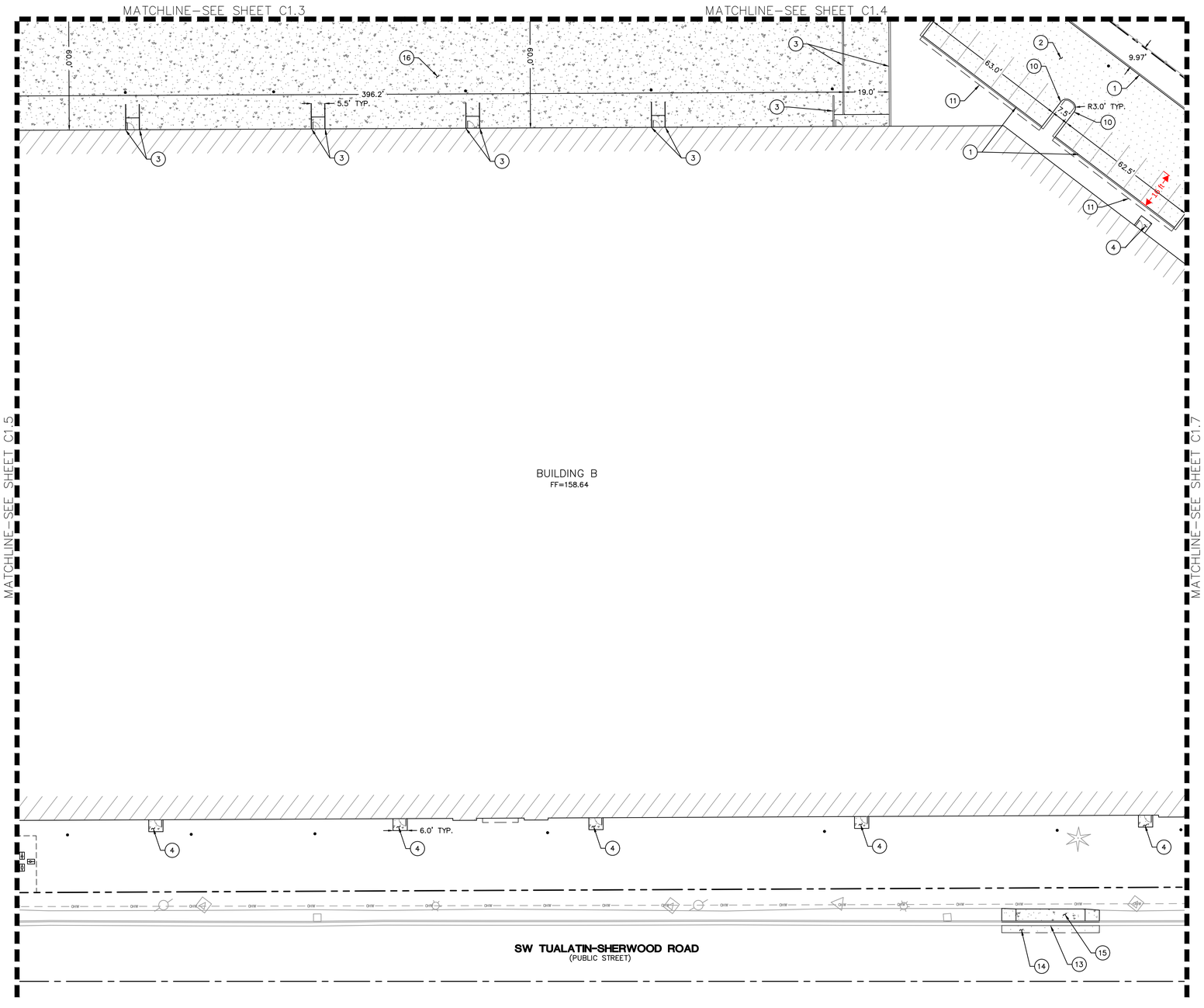

SHEET NOTES

1. SEE SHEET C1.0 FOR GENERAL SITE PLAN NOTES AND LEGEND.
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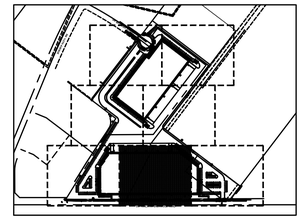
KEY PLAN



NORTH

GRAPHIC SCALE
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10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
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SHEET NUMBER
C1.6

JOB NUMBER: A19173.10

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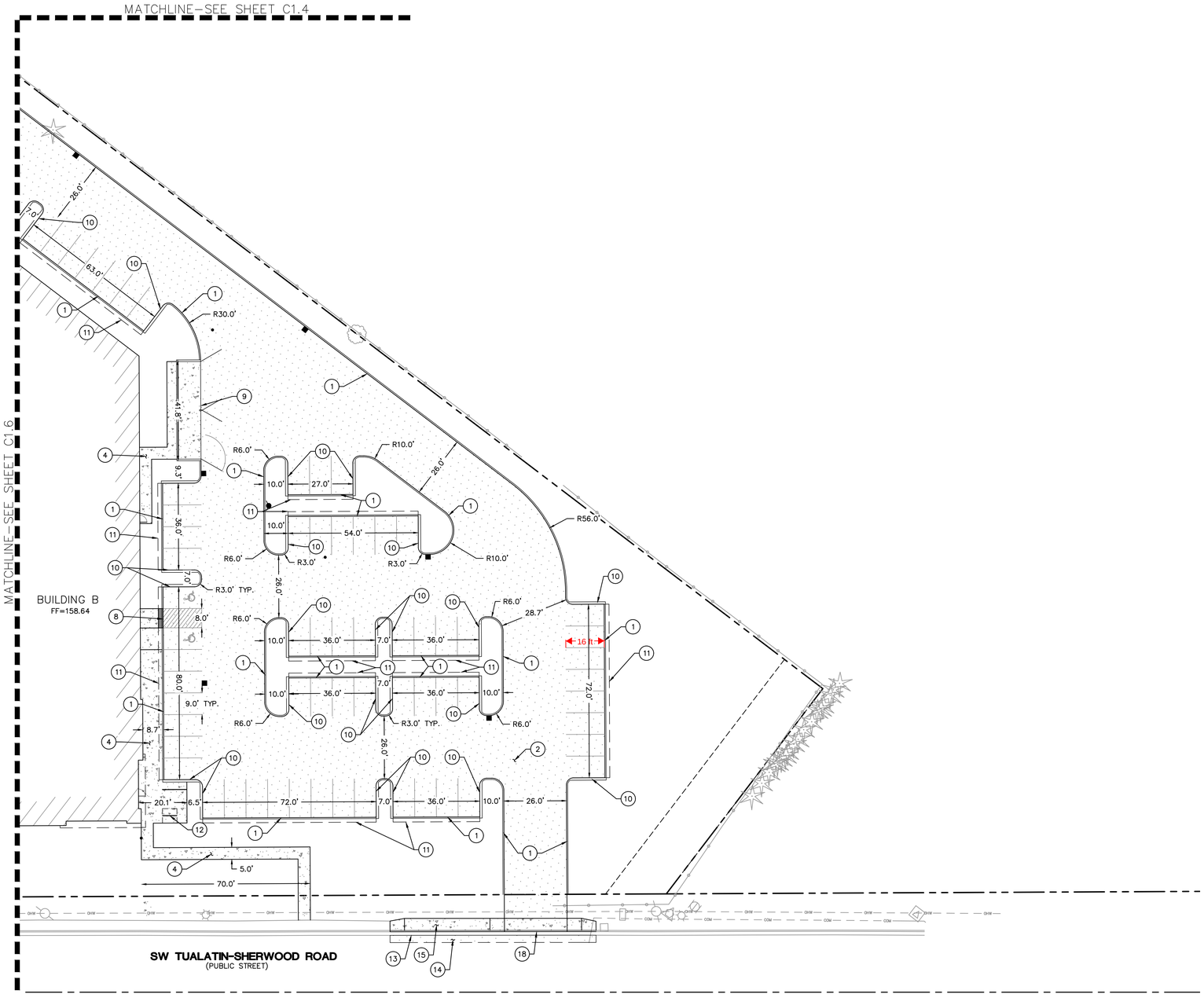

SHEET NOTES

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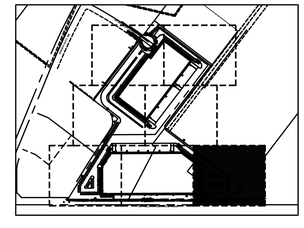
KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
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EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
HARDSCAPE PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
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SHEET NUMBER
C1.7

JOB NUMBER: A19173.10

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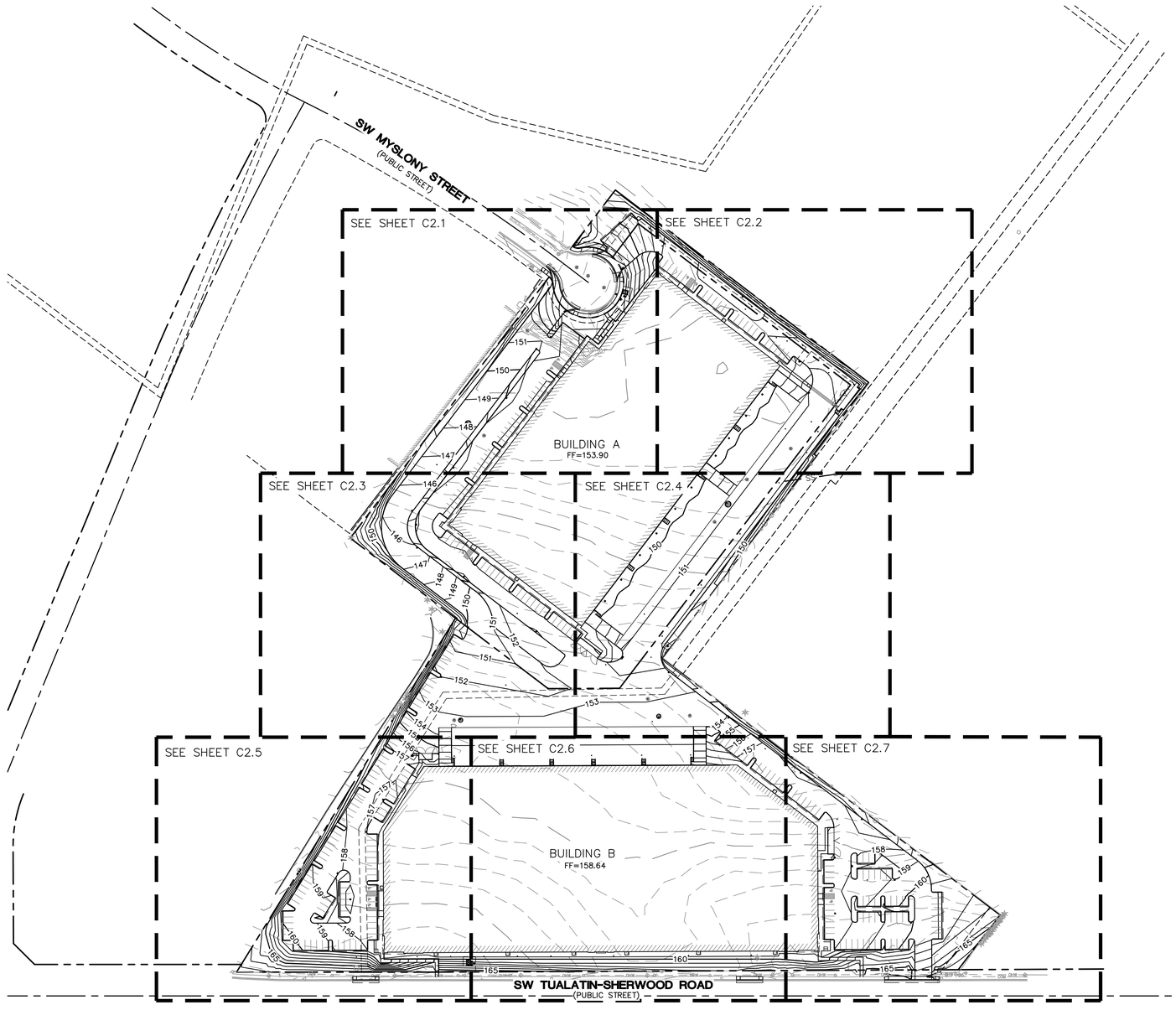

SHEET NOTES

1. SEE SHEET C0.2 FOR GENERAL SHEET NOTES.
2. CURB HEIGHTS ARE 6" UNLESS NOTED OTHERWISE.
3. LANDINGS ON ACCESSIBLE ROUTES SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. ALL ACCESSIBLE ROUTES SHALL COMPLY WITH CURRENT ADA ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (ADAAG).
5. ALL WALKWAYS FROM ACCESSIBLE UNITS ARE DESIGNED TO NOT REQUIRE HANDRAILS. THEREFORE, RAMPS WITH SLOPES STEEPER THAN 5.0% AND LESS THAN 8.33% SHALL NOT EXCEED 0.5' RISE OR 6.0' LENGTH.
6. FINISH GRADES ARE TO BE BROUGHT TO WITHIN 0.08 FT IN 10 FT OF THE GRADES SHOWN AT SUBGRADE AND TO WITHIN 0.03 FT IN 10 FT AT FINISH GRADE. CONTRACTOR TO ALLOW FOR PLACEMENT OF REQUIRED TOPSOIL IN ROUGH GRADING.
7. GRADING ELEVATIONS AS SHOWN ON SITE AND LANDSCAPE PLANS ARE FINISHED GRADE WHICH INCLUDES SUBGRADE SOIL, TOPSOIL, SOIL AMENDMENTS, ROCKERY AND RUNOFF PROTECTION CONTRACTOR IS RESPONSIBLE TO COORDINATE GRADING WITH BOTH EXCAVATOR AND LANDSCAPE CONTRACTOR.

LEGEND

EXISTING CONTOUR MINOR — 102

EXISTING CONTOUR MAJOR — 100

PROPOSED CONTOUR MINOR — 102

PROPOSED CONTOUR MAJOR — 100

NORTH

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CRAIG NL HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE

GRADING PLAN

DATE:	10/28/19
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SHEET NUMBER

C2.0

JOB NUMBER: A19173.10

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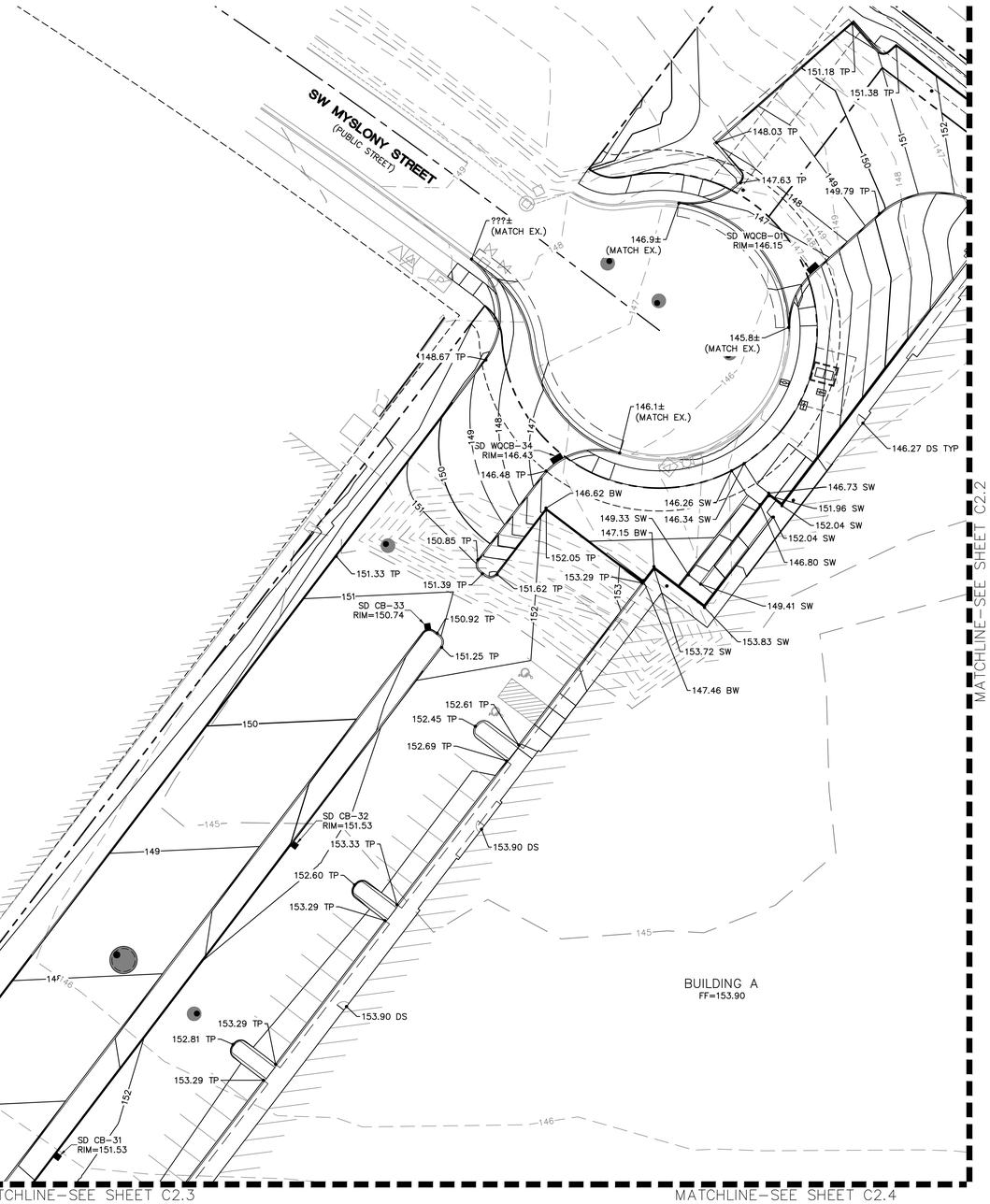


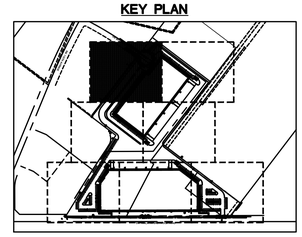
SHEET NOTES

1. SEE SHEET C2.0 FOR GENERAL GRADING NOTES AND LEGEND.

GRADING LABEL LEGEND

CALLOUT	DESCRIPTION
XX.XX	SPOT ELEVATION
XX	DESCRIPTION LISTED BELOW.
DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



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SHEET NUMBER
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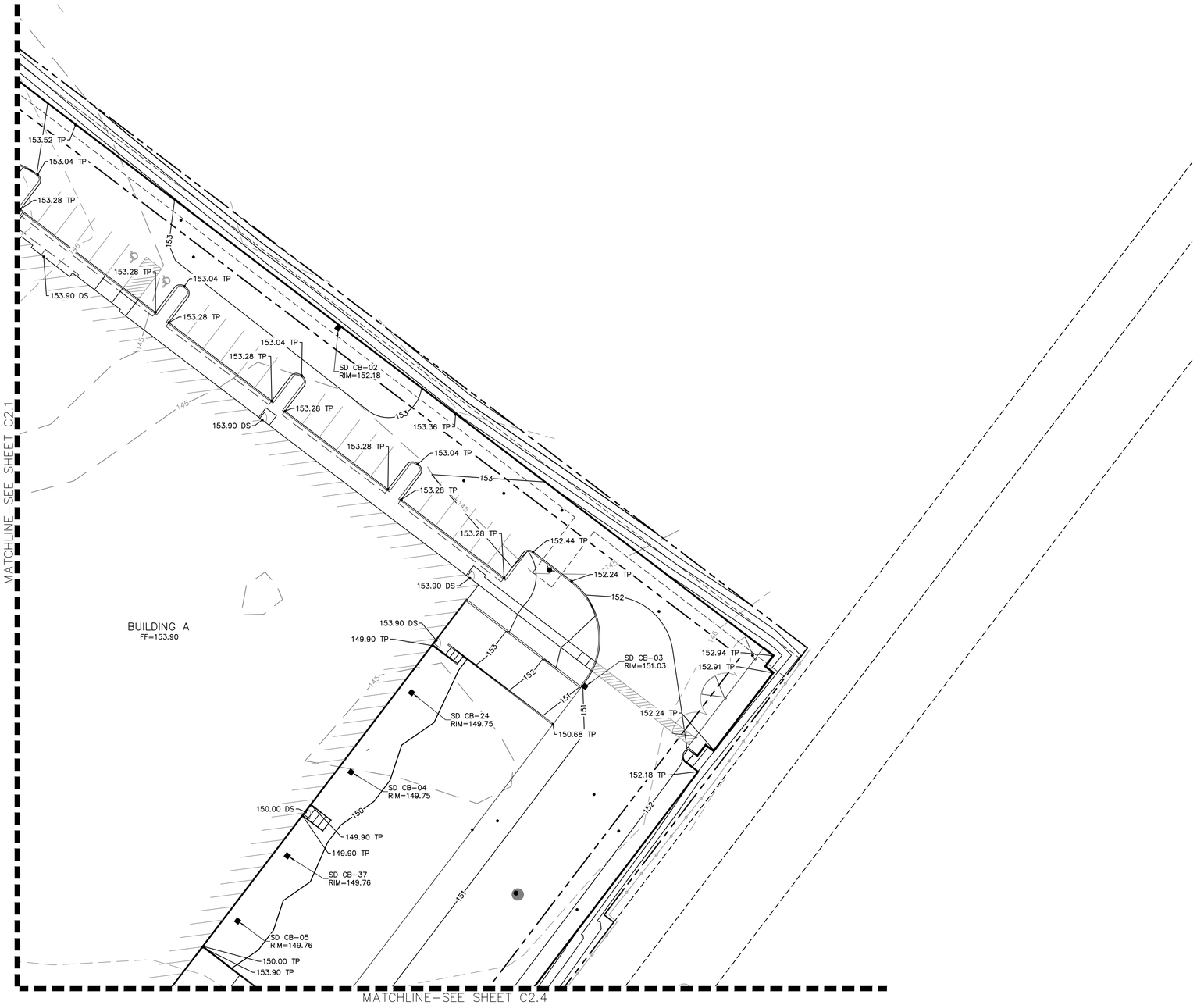

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GRADING LABEL LEGEND

CALLOUT — DESCRIPTION

XX.XX — SPOT ELEVATION

XX — DESCRIPTION LISTED BELOW.

DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
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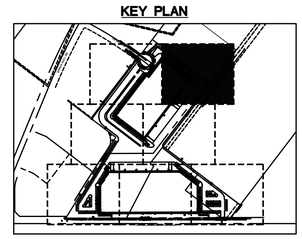
KEY PLAN



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SHEET NUMBER

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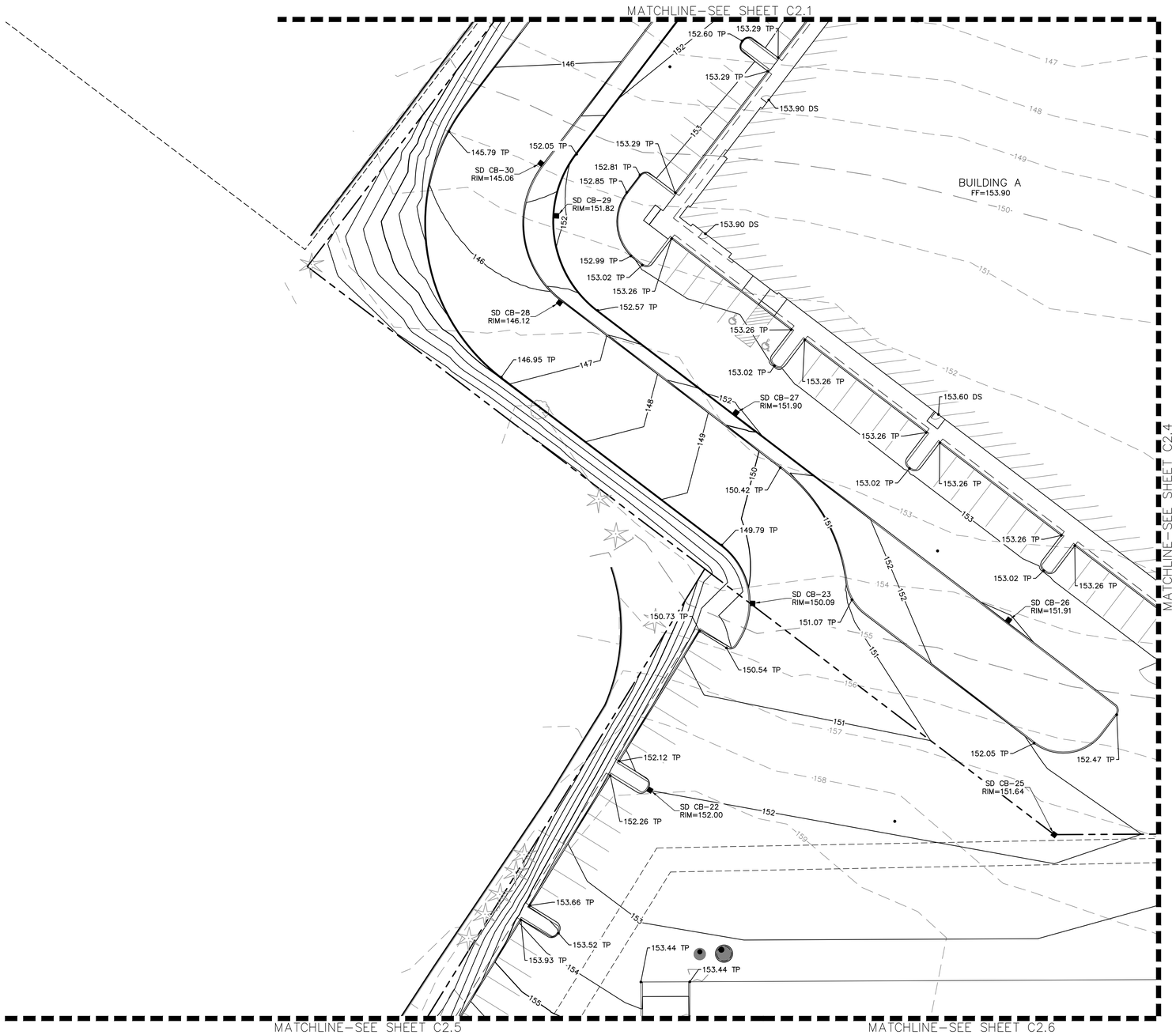

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	SPOT ELEVATION
	DESCRIPTION LISTED BELOW.
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EX	EXISTING GRADE
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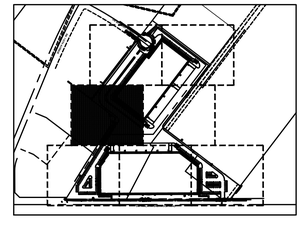
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CRAIG NL HARRIS
EXPIRES: 6/30/2021

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450 Newport Center Drive, Suite 405
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

GRADING PLAN – ENLARGEMENT

DATE:	10/28/19
DRAWN:	NJD
CHECKED:	DSE

REVISIONS:

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SHEET NUMBER

C2.3

JOB NUMBER: A19173.10

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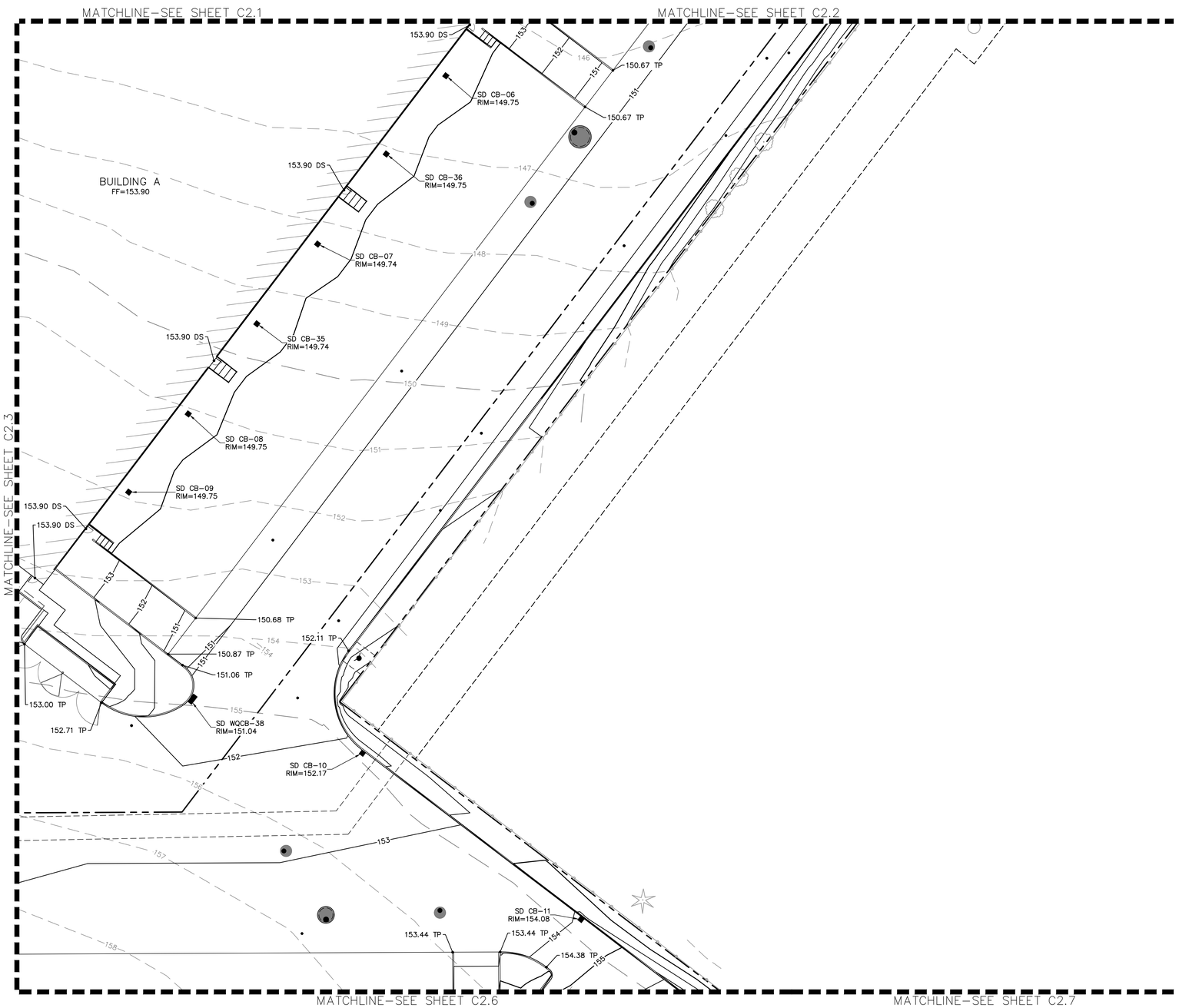


SHEET NOTES

1. SEE SHEET C2.0 FOR GENERAL GRADING NOTES AND LEGEND.

GRADING LABEL LEGEND

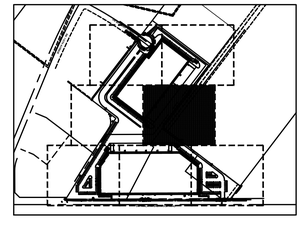
CALLOUT — DESCRIPTION

XX.XX — SPOT ELEVATION

XX — DESCRIPTION LISTED BELOW.

DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

GRADING PLAN – ENLARGEMENT

DATE:	10/28/19
DRAWN:	NJD
CHECKED:	DSE
REVISIONS:	

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SHEET NUMBER

C2.4

JOB NUMBER: A19173.10

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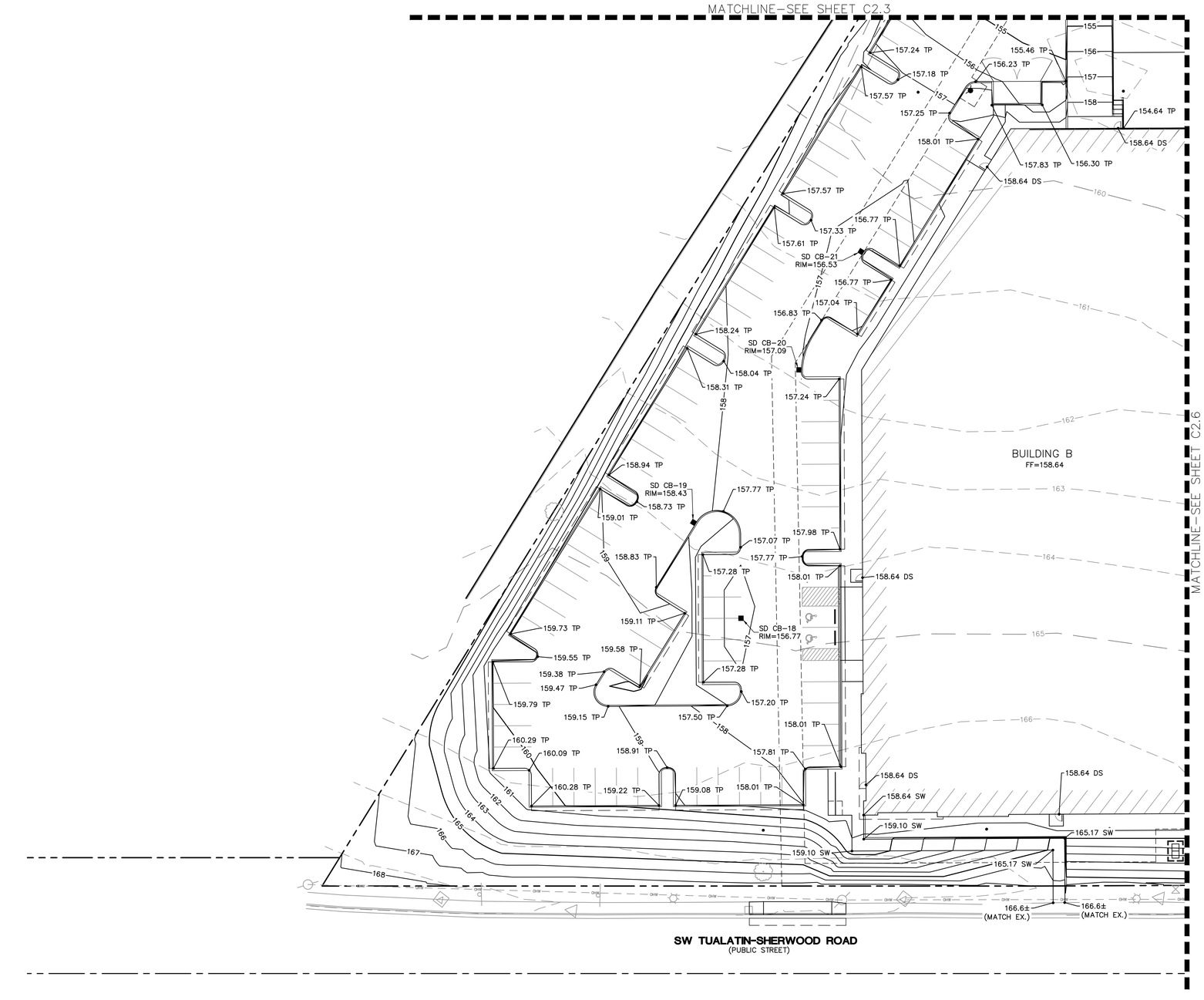


SHEET NOTES

1. SEE SHEET C2.0 FOR GENERAL GRADING NOTES AND LEGEND.

GRADING LABEL LEGEND

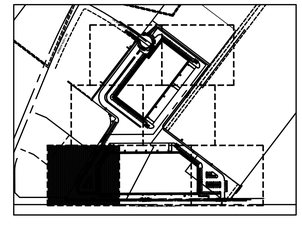
CALLOUT — DESCRIPTION

XX.XX — SPOT ELEVATION

XX — DESCRIPTION LISTED BELOW.

DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG NL HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

GRADING PLAN – ENLARGEMENT

DATE:	10/28/19
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SHEET NUMBER

C2.5

JOB NUMBER: A19173.10

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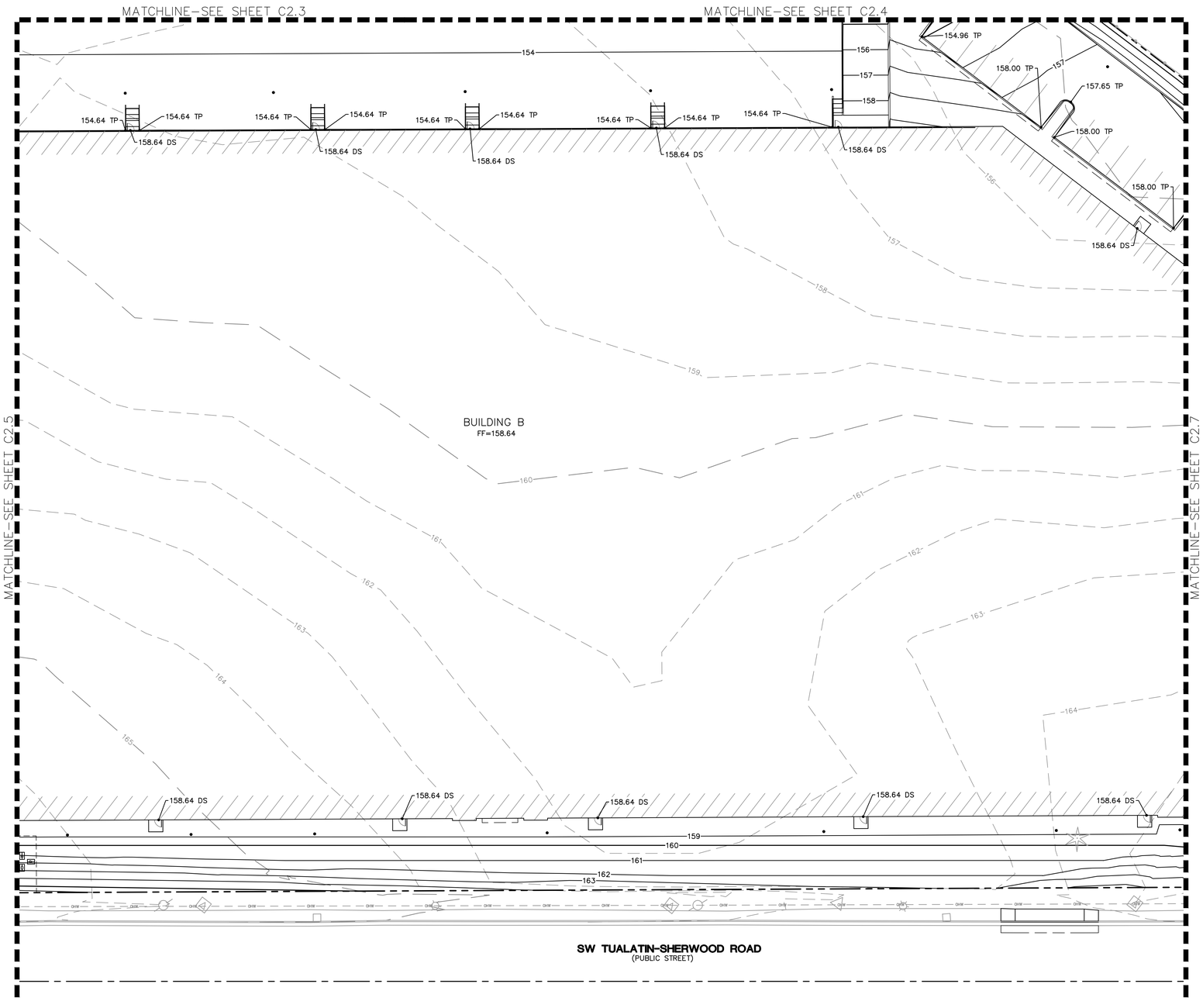


SHEET NOTES

1. SEE SHEET C2.0 FOR GENERAL GRADING NOTES AND LEGEND.

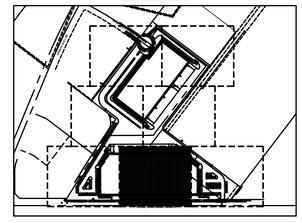
GRADING LABEL LEGEND

CALLOUT — DESCRIPTION
- SPOT ELEVATION
- DESCRIPTION LISTED BELOW.

XX.XX XX

DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER — CRAIG N. HARRIS — EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE

GRADING PLAN – ENLARGEMENT

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SHEET NUMBER

C2.6

JOB NUMBER: A19173.10

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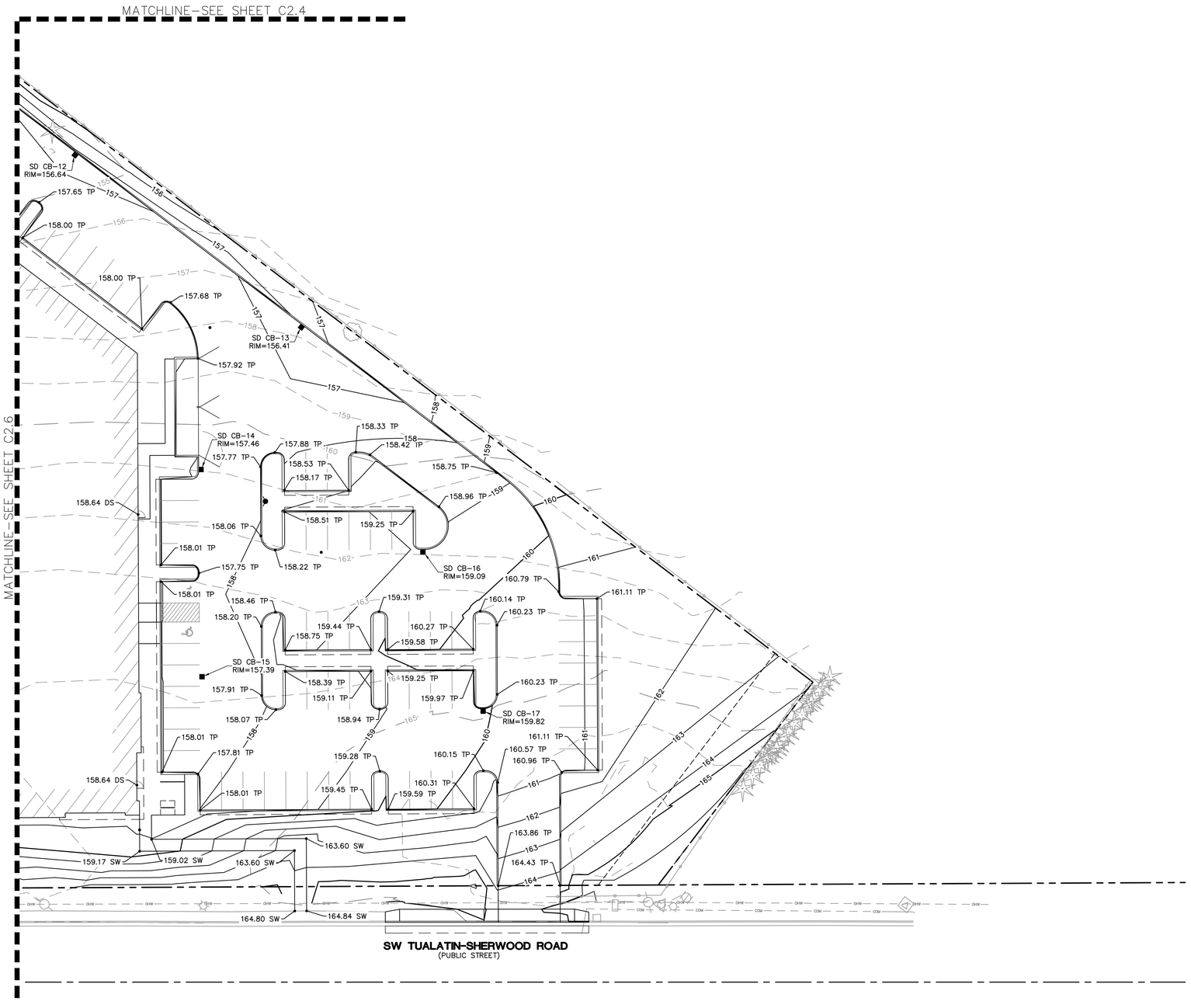


SHEET NOTES

1. SEE SHEET C2.0 FOR GENERAL GRADING NOTES AND LEGEND.

GRADING LABEL LEGEND

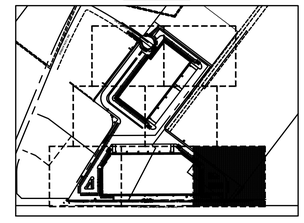
CALLOUT — DESCRIPTION

XX.XX — SPOT ELEVATION

XX — DESCRIPTION LISTED BELOW.

DS	DOOR SILL
EX	EXISTING GRADE
FFE	FINISHED FLOOR
SW	SIDEWALK
TC	FINISHED GRADE AT TOP OF CURB
TP	FINISHED GRADE AT TOP OF PAVEMENT

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2009
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE

GRADING PLAN – ENLARGEMENT

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REVISIONS:

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SHEET NUMBER

C2.7

JOB NUMBER: A19173.10

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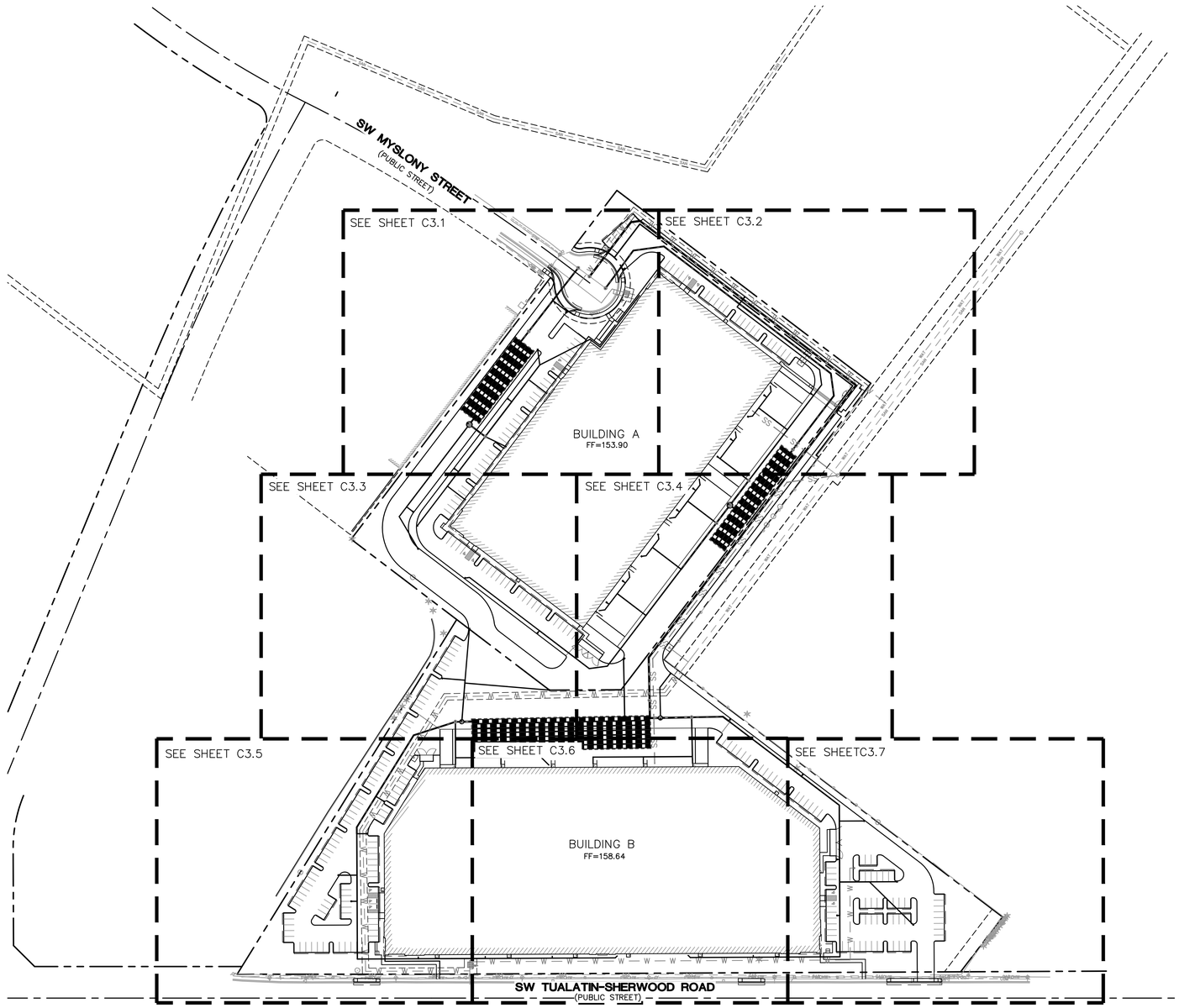

SHEET NOTES

1. SEE C0.2 FOR GENERAL SHEET NOTES.
2. ALL STORM PIPING SHALL BE PVC 3034 OR APPROVED EQUAL AT 1.0% MIN SLOPE, UNLESS NOTED OTHERWISE.
3. THIS PLAN IS GENERALLY DIAGRAMMATIC. IT DOES NOT SHOW EVERY JOINT, BEND, FITTING, OR ACCESSORY REQUIRED FOR CONSTRUCTION.
4. CLEAN OUTS SHALL BE INSTALLED IN CONFORMANCE WITH UPC CHAPTER SEVEN, SECTION 707 AND SECTION 719. NOT ALL REQUIRED CLEAN OUTS ARE SHOWN.
5. UTILITIES WITHIN FIVE FEET OF A BUILDING SHALL BE CONSTRUCTED OF MATERIALS APPROVED FOR INTERIOR USE AS DESCRIBED IN THE CURRENT EDITION OF THE UPC
6. CHANGES IN DIRECTION OF DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF APPROVED FITTINGS AND SHALL BE OF THE ANGLES PRESENTED BY ONE-SIXTEENTH BEND, ONE-EIGHTH BEND, ONE-SIXTH BEND OR OTHER APPROVED FITTINGS OF EQUIVALENT SWEEP.
7. INLETS AND OUTLETS TO ON-SITE MANHOLES SHALL HAVE FLEXIBLE CONNECTION NO CLOSER THAN 12" AND NO FARTHER THAN 36" FROM THE MANHOLE.

LEGEND

SANITARY SEWER LINE	SS SS
WATER LINE	W W W
FIRE LINE	FP FP FP FP
FDC LINE	FDC FDC FDC
STORM LINE	

NORTH

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 feet

10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C3.0

JOB NUMBER: A19173.10

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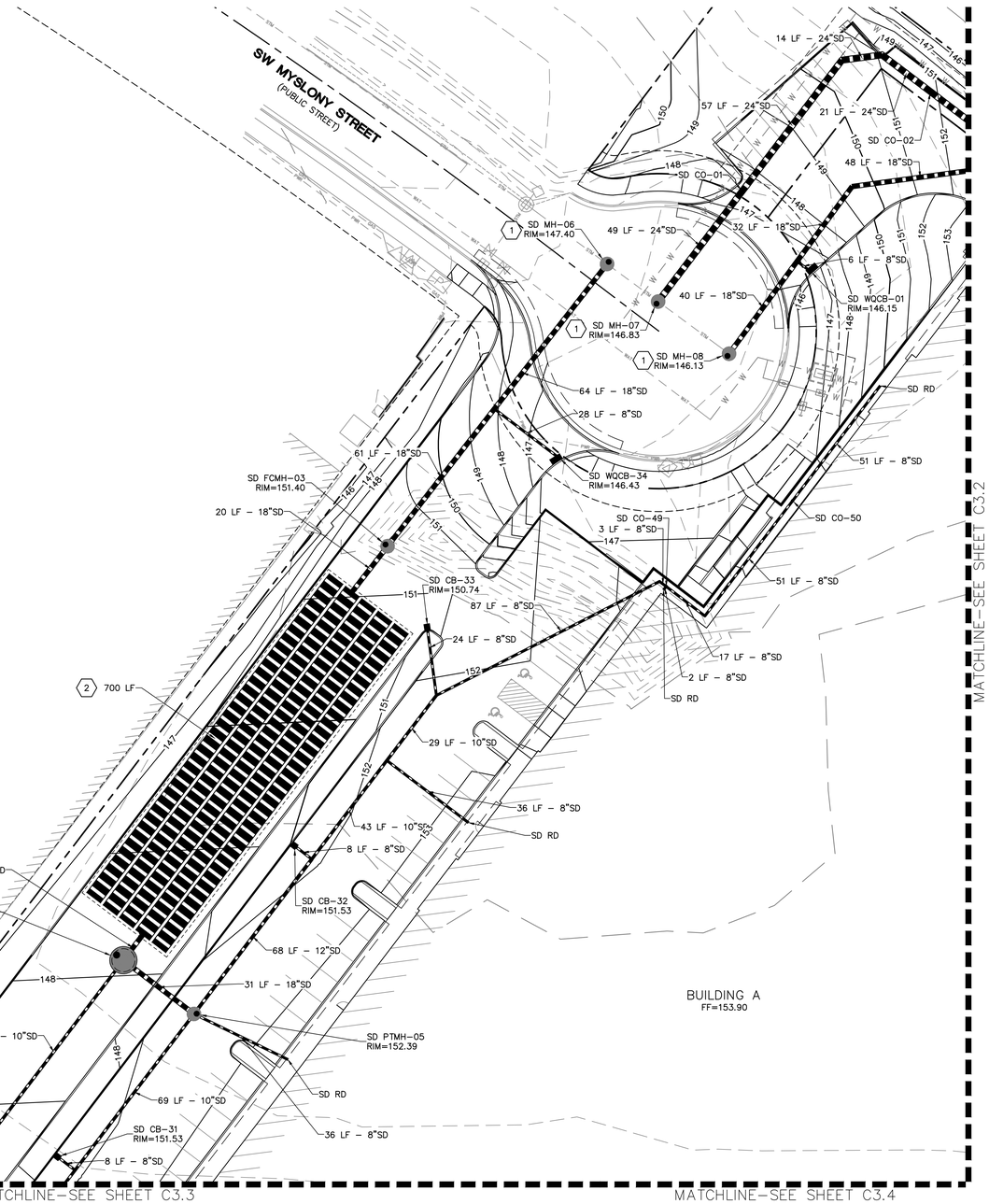


SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
← STRUCTURE INFO (WHERE APPLICABLE)

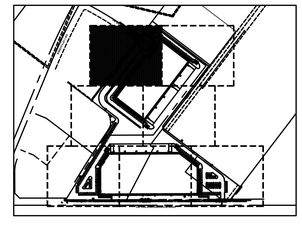
STRUCTURE TYPES

CALLOUT	DESCRIPTION
CB	CATCH BASIN
CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
WQMH	WATER QUALITY MANHOLE

(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN
2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C3.1

JOB NUMBER: A19173.10

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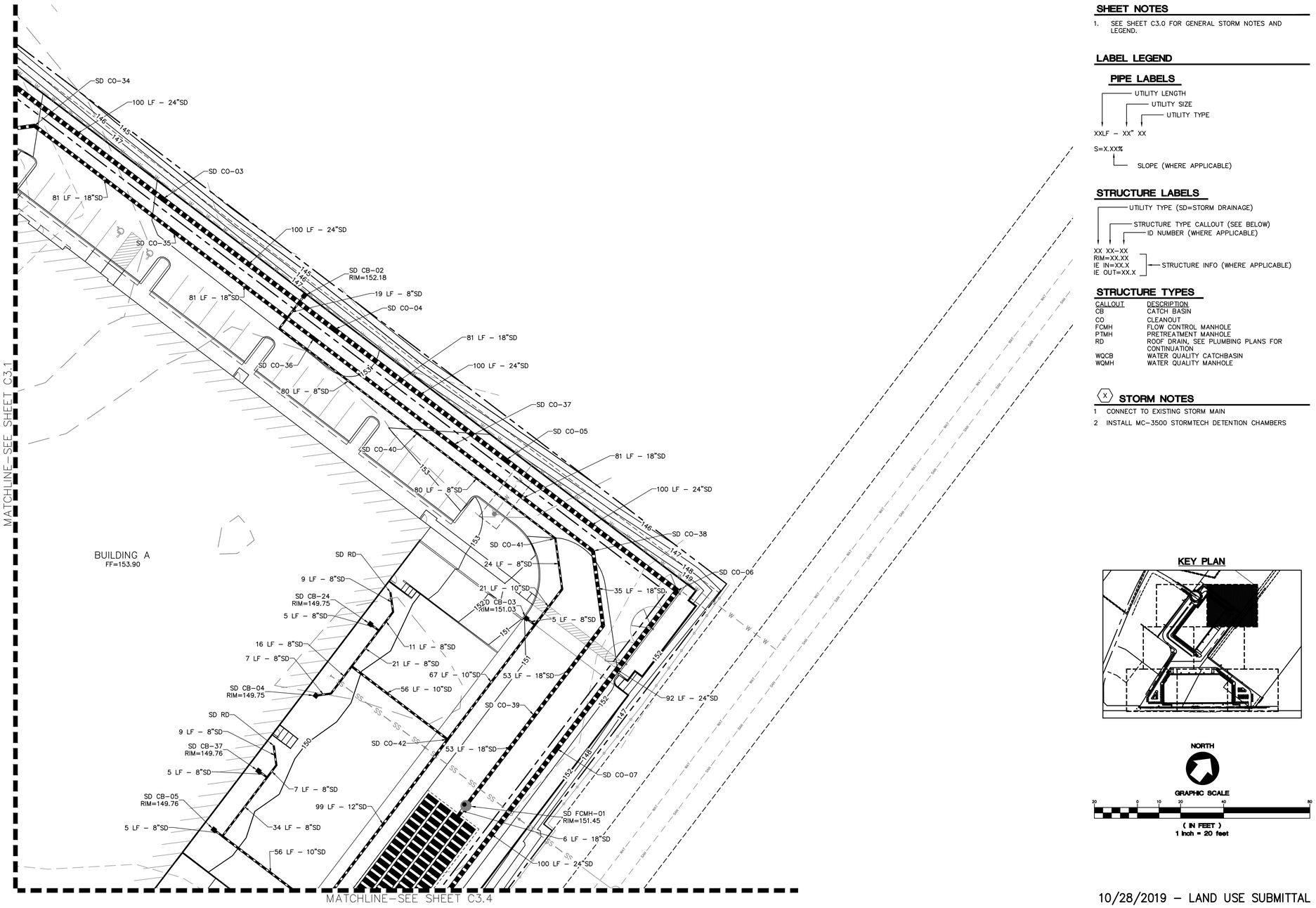

SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
← STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

CALLOUT	DESCRIPTION
CB	CATCH BASIN
CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
WQMH	WATER QUALITY MANHOLE

(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN

2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN

NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN – ENLARGEMENT

DATE:	10/28/19
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SHEET NUMBER
C3.2

JOB NUMBER: A19173.10

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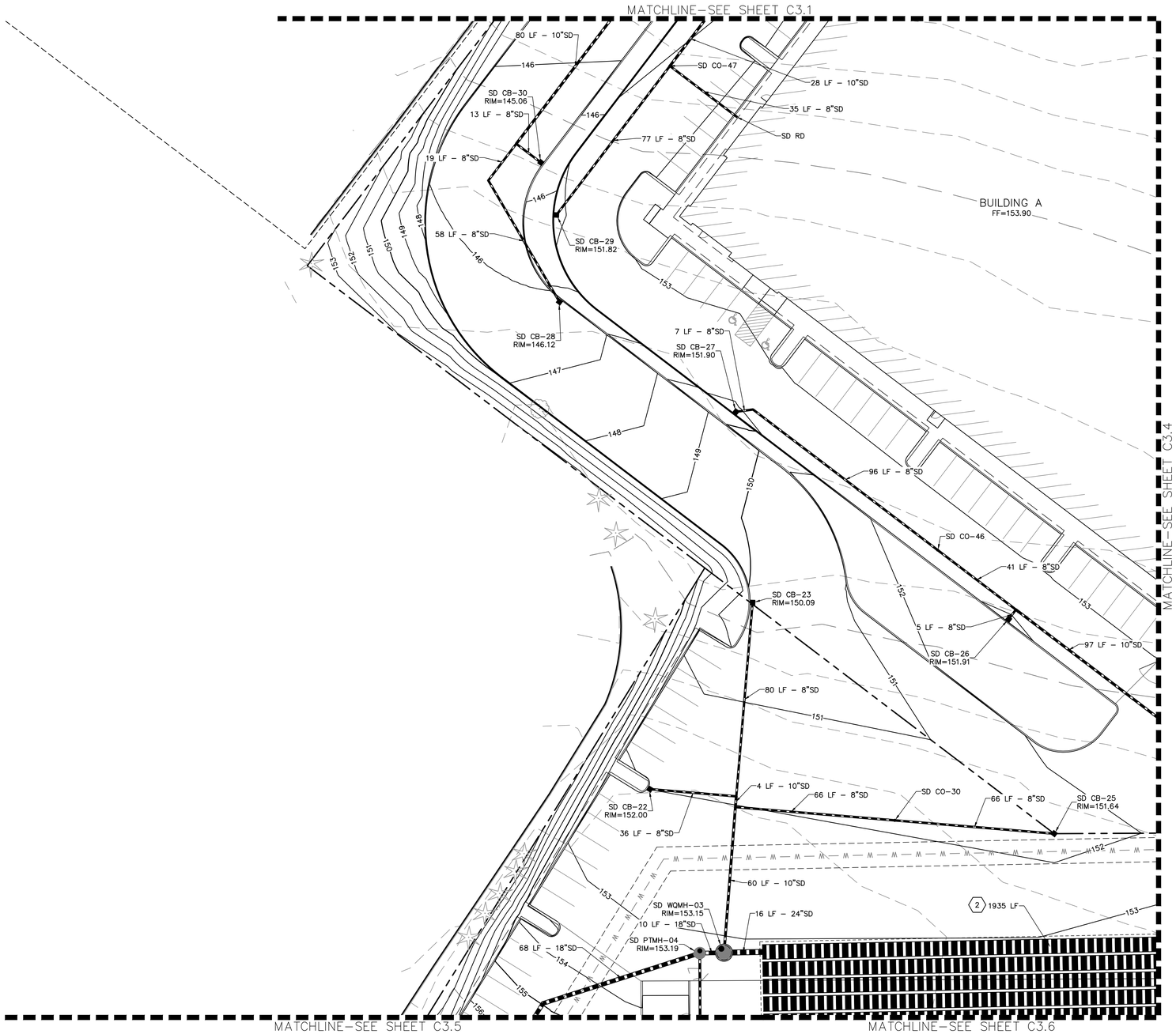

SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE
XXLF - XX" XX
S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)
XX XX-XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

CALLOUT	DESCRIPTION
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CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
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(X) STORM NOTES

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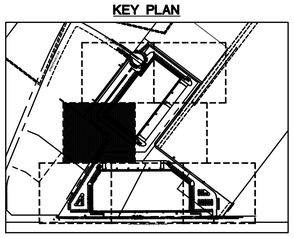
2 INSTALL MC-3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 feet

10/28/2019 - LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN - ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C3.3

JOB NUMBER: A19173.10

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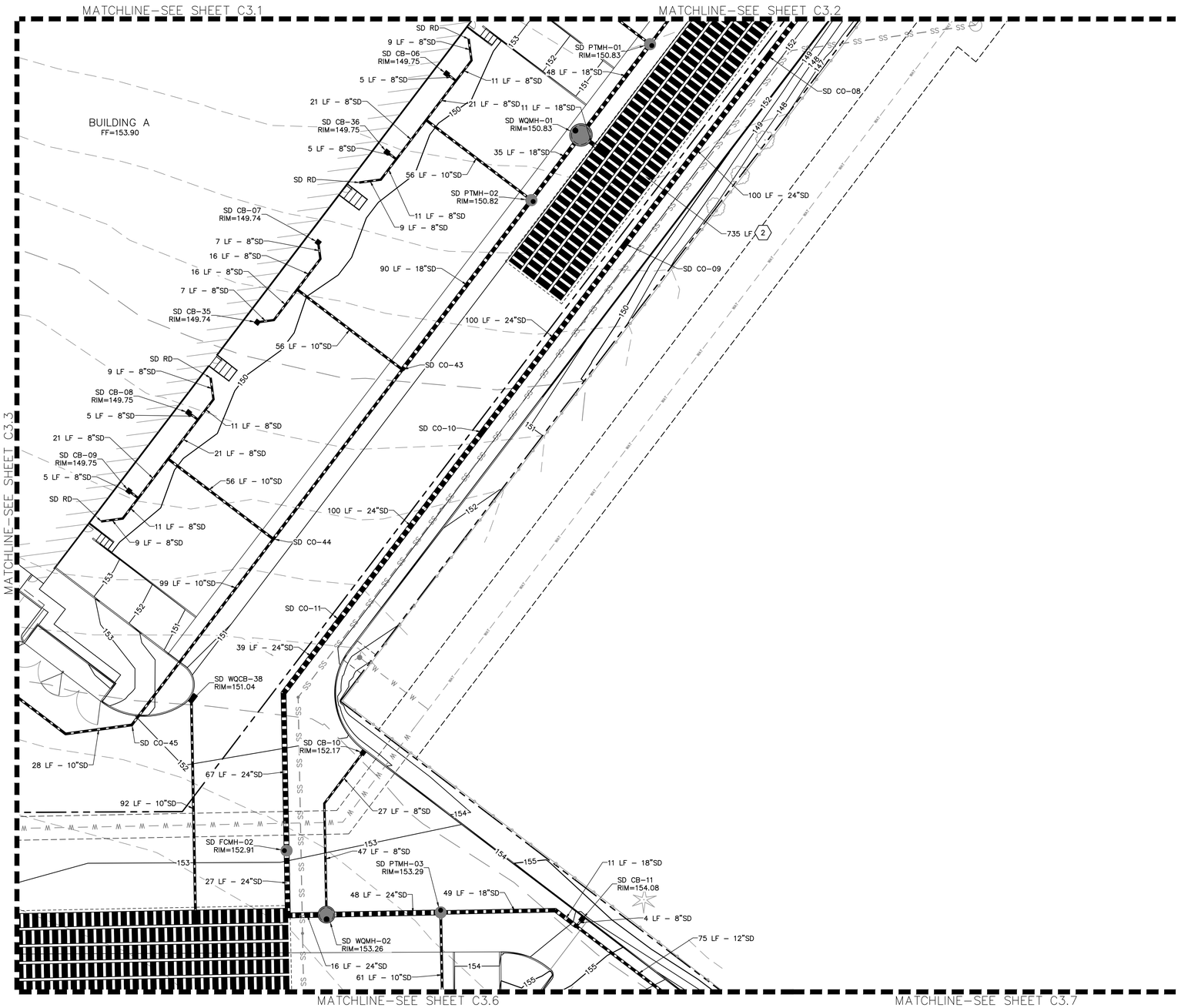

SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
← STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

CALLOUT	DESCRIPTION
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RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
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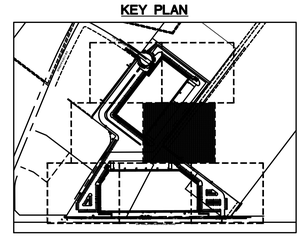
(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN

2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

PHELAN DEVELOPMENT
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Newport Beach, CA 92660

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503.620.3030 tel | 503.620.5539 fax | www.aaieng.com

TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN – ENLARGEMENT

DATE:	10/28/19
DRAWN:	NJD
CHECKED:	DSE

REVISIONS:

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SHEET NUMBER
C3.4

JOB NUMBER: A19173.10

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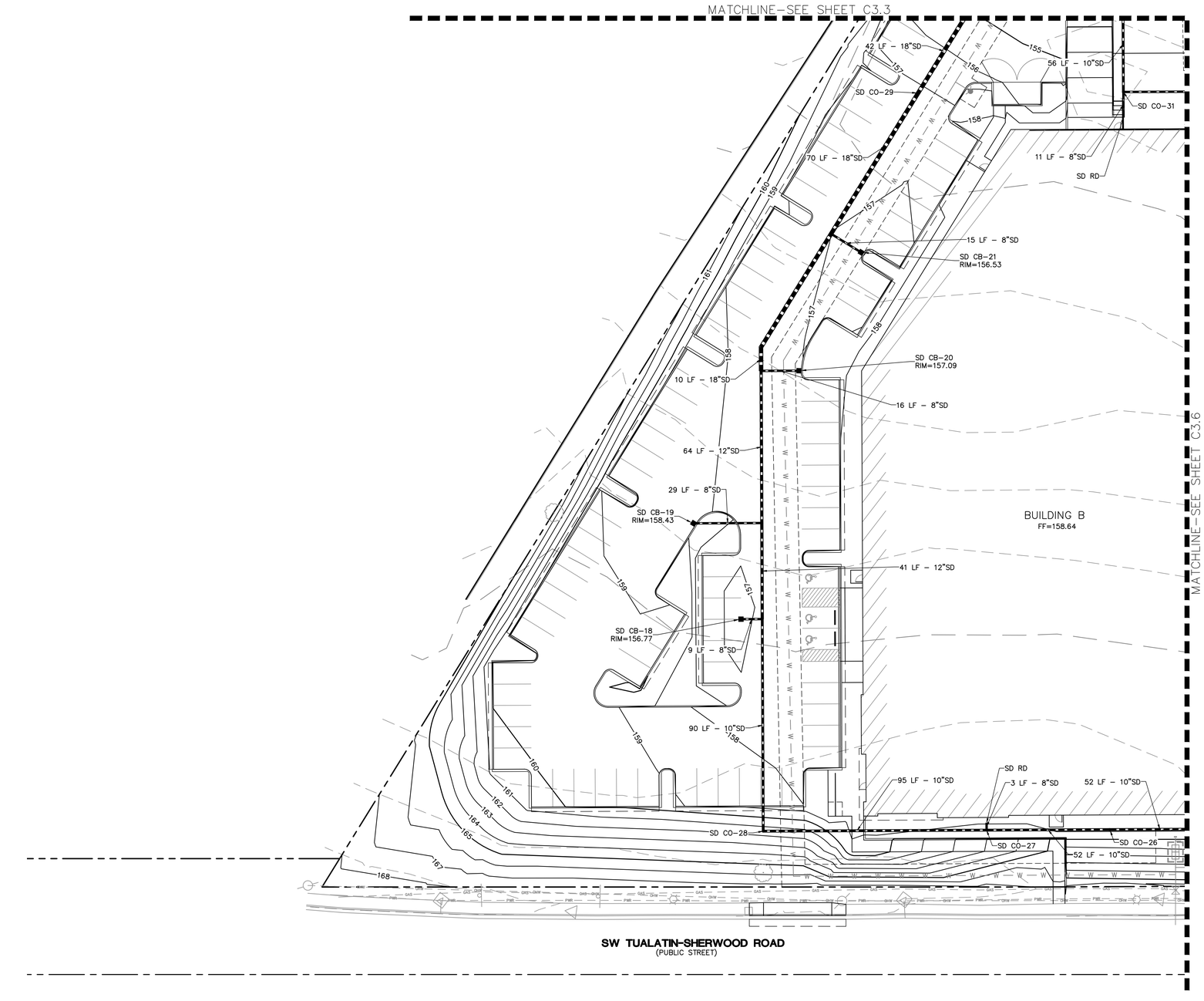


SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE
XXLF – XX" XX
S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)
XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
STRUCTURE INFO (WHERE APPLICABLE)

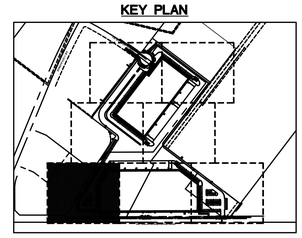
STRUCTURE TYPES

CALLOUT	DESCRIPTION
CB	CATCH BASIN
CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
WQMH	WATER QUALITY MANHOLE

(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN
2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
STORM PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C3.5

JOB NUMBER: A19173.10

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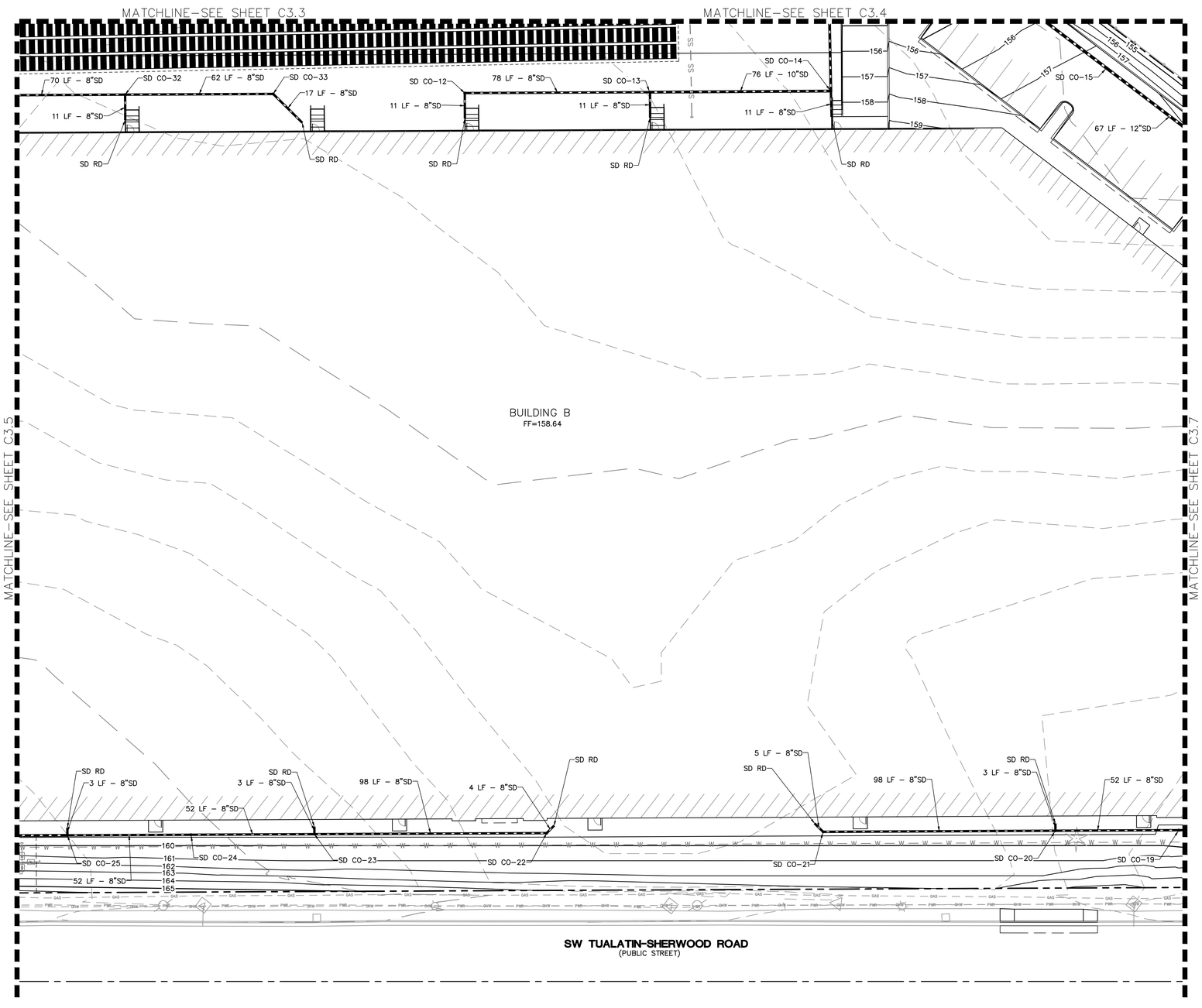


SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (SD=STORM DRAINAGE)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
← STRUCTURE INFO (WHERE APPLICABLE)

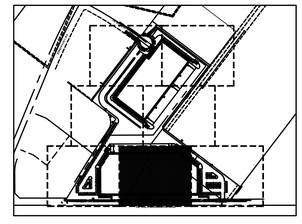
STRUCTURE TYPES

CALLOUT	DESCRIPTION
CB	CATCH BASIN
CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
WQMH	WATER QUALITY MANHOLE

(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN
2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

PHELAN DEVELOPMENT
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

STORM PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER

C3.6

JOB NUMBER: A19173.10

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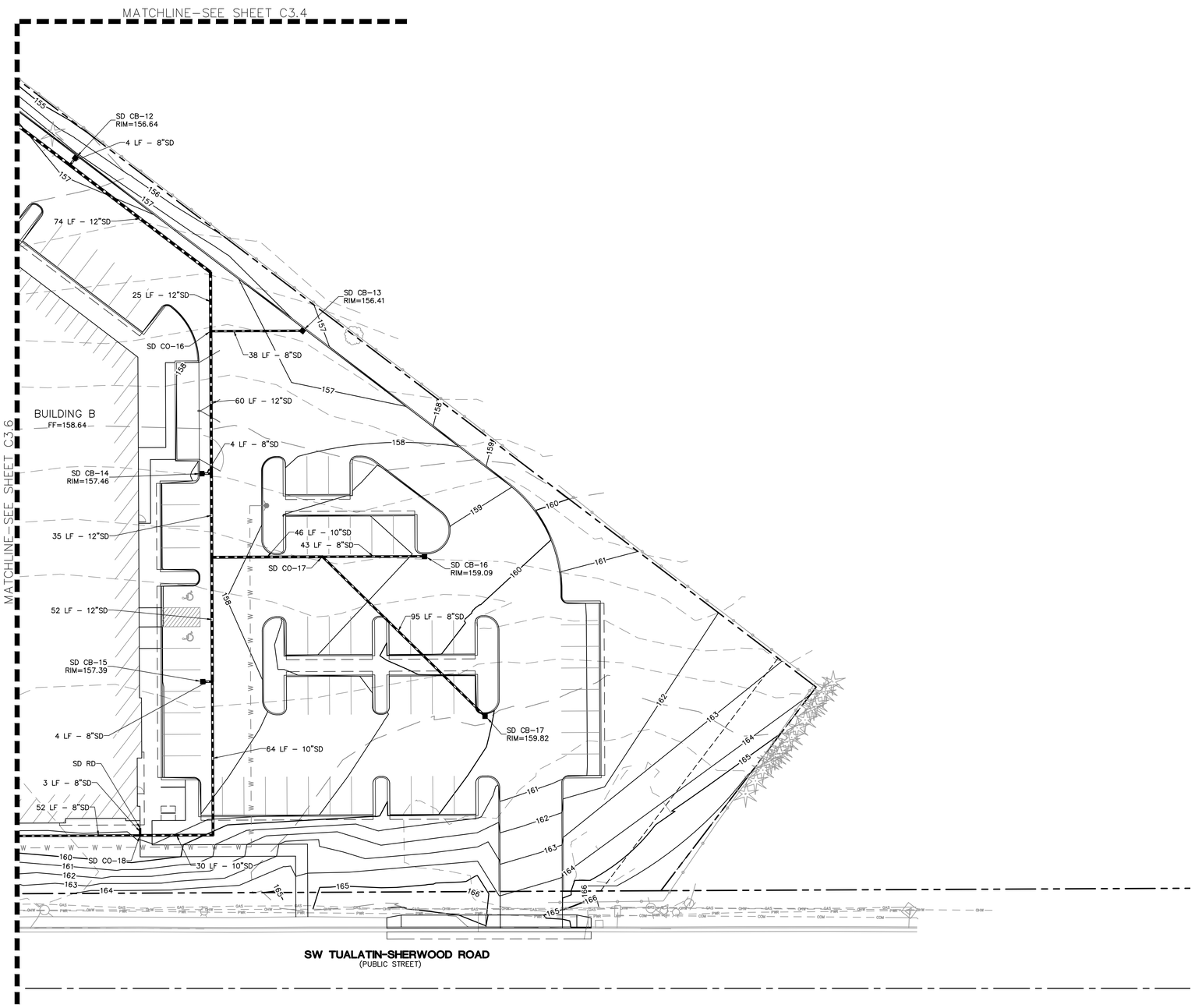


SHEET NOTES

1. SEE SHEET C3.0 FOR GENERAL STORM NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

XXLF – XX" XX
- UTILITY LENGTH
- UTILITY SIZE
- UTILITY TYPE

S=X.XX%
- SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

XX XX–XX
- UTILITY TYPE (SD=STORM DRAINAGE)
- STRUCTURE TYPE CALLOUT (SEE BELOW)
- ID NUMBER (WHERE APPLICABLE)

RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
- STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

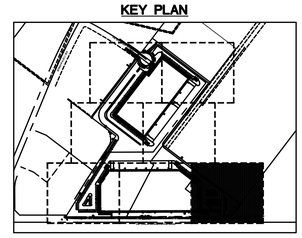
CALLOUT	DESCRIPTION
CB	CATCH BASIN
CO	CLEANOUT
FCMH	FLOW CONTROL MANHOLE
PTMH	PRETREATMENT MANHOLE
RD	ROOF DRAIN, SEE PLUMBING PLANS FOR CONTINUATION
WQCB	WATER QUALITY CATCHBASIN
WQMH	WATER QUALITY MANHOLE

(X) STORM NOTES

1 CONNECT TO EXISTING STORM MAIN

2 INSTALL MC–3500 STORMTECH DETENTION CHAMBERS

KEY PLAN



NORTH

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 feet

10/28/2019 – LAND USE SUBMITTAL

PHELAN DEVELOPMENT
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TUALATIN INDUSTRIAL

TUALATIN, OR

SHEET TITLE

STORM PLAN – ENLARGEMENT

DATE:	10/28/19
DRAWN:	NJD
CHECKED:	DSE
REVISIONS:	

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SHEET NUMBER

C3.7

JOB NUMBER: A19173.10

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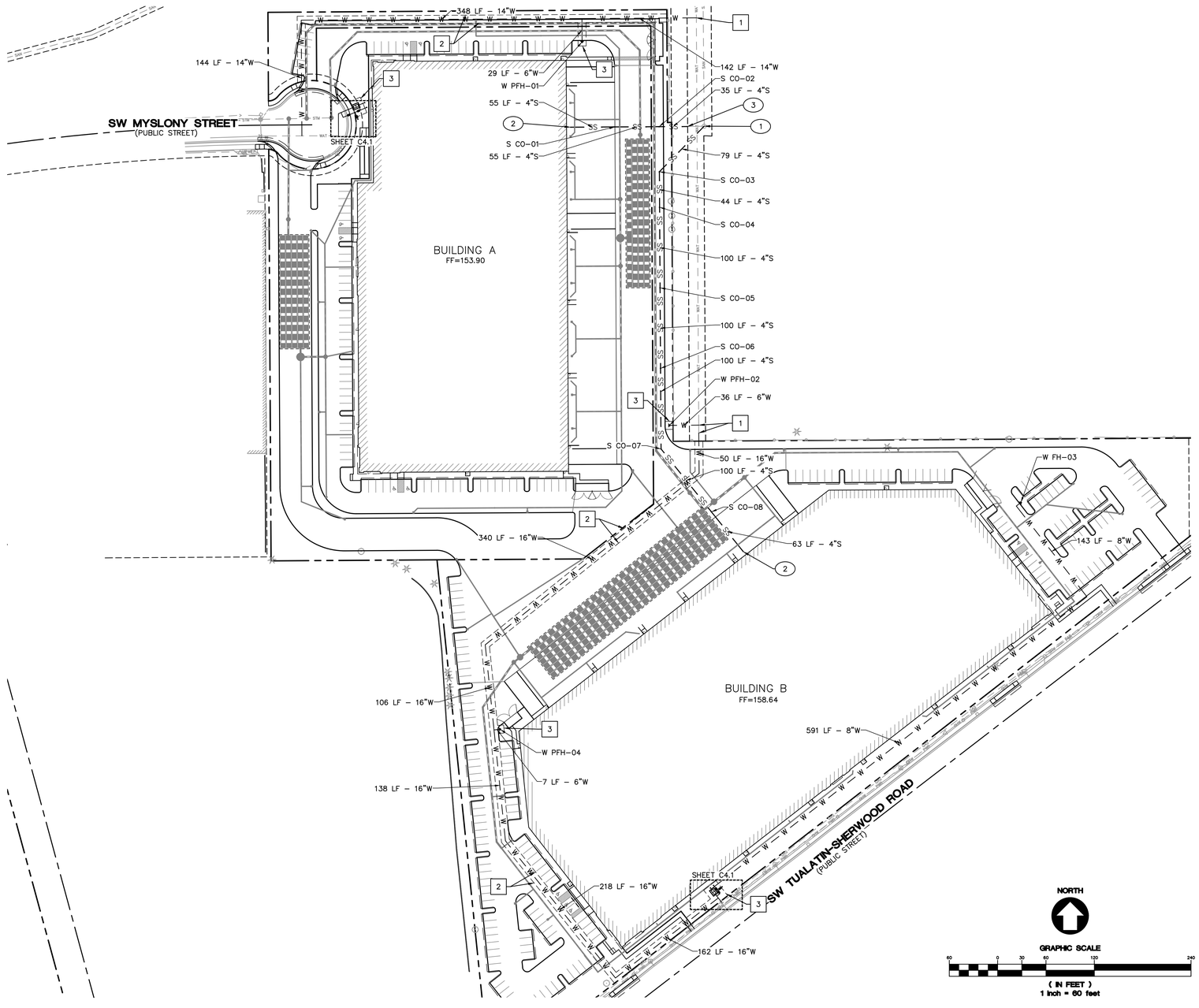

SHEET NOTES

1. SEE SHEET C0.2 FOR GENERAL SHEET NOTES.
2. INSTALL THRUST BLOCKS ON FIRE AND WATER LINES.
3. ALL SANITARY PIPING SHALL BE PVC 3034 OR APPROVED EQUAL UNLESS NOTED OTHERWISE.
4. THIS PLAN IS GENERALLY DIAGRAMMATIC. IT DOES NOT SHOW EVERY JOINT, BEND, FITTING, OR ACCESSORY REQUIRED FOR CONSTRUCTION.
5. CLEAN OUTS SHALL BE INSTALLED IN CONFORMANCE WITH UPC CHAPTER SEVEN, SECTION 707 AND SECTION 719. THIS PLAN MAY NOT SHOW ALL REQUIRED CLEAN OUTS.
6. DOMESTIC WATER AND FIRE LINES AND ACCESSORIES BETWEEN THE WATER METER AND THE BUILDING SHALL BE INSTALLED BY A LICENSED PLUMBER EMPLOYED BY A LICENSED PLUMBING CONTRACTOR.
7. UTILITIES WITHIN FIVE FEET OF A BUILDING SHALL BE CONSTRUCTED OF MATERIALS APPROVED FOR INTERIOR USE AS DESCRIBED IN THE CURRENT EDITION OF THE UPC.
8. INLETS AND OUTLETS TO ON–SITE MANHOLES SHALL HAVE FLEXIBLE CONNECTION NO CLOSER THAN 12" AND NO FARTHER THAN 36" FROM THE MANHOLE.
9. CONTRACTOR TO VERIFY SANITARY AND WATER SIZING WITH APPROVED PLUMBING PLANS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION OF SAID UTILITIES.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (FP=FIRE PROTECTION, S=SANITARY, W=WATER)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

CALLOUT	DESCRIPTION
CO	CLEANOUT TO GRADE
FH	PRIVATE FIRE HYDRANT
PFH	PUBLIC FIRE HYDRANT

LEGEND

SANITARY SEWER LINE — SS — SS —
WATER LINE — W — W — W —
FIRE LINE — FP — FP — FP — FP —
FDC LINE — FDC — FDC — FDC —
STORM LINE

(X) SANITARY NOTES

1 CONNECT TO EXISTING SANITARY SEWER MAIN
2 SANITARY SEWER POINT OF CONNECTION TO BUILDING
3 CONNECT TO EXISTING SANITARY SEWER LATERAL

[X] WATER NOTES

1 CONNECT TO EXISTING WATER MAIN
2 PROPOSED 10' WIDE PUBLIC WATER UTILITY AND ACCESS EASEMENT TO THE BENEFIT OF THE CITY OF TUALATIN
3 PROPOSED PUBLIC WATER UTILITY AND ACCESS EASEMENT TO THE BENEFIT OF THE CITY OF TUALATIN, LOCATED 5 ' OFF THE PROPOSED PUBLIC STRUCTURES

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
UTILITY PLAN

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C4.0

JOB NUMBER: A19173.10

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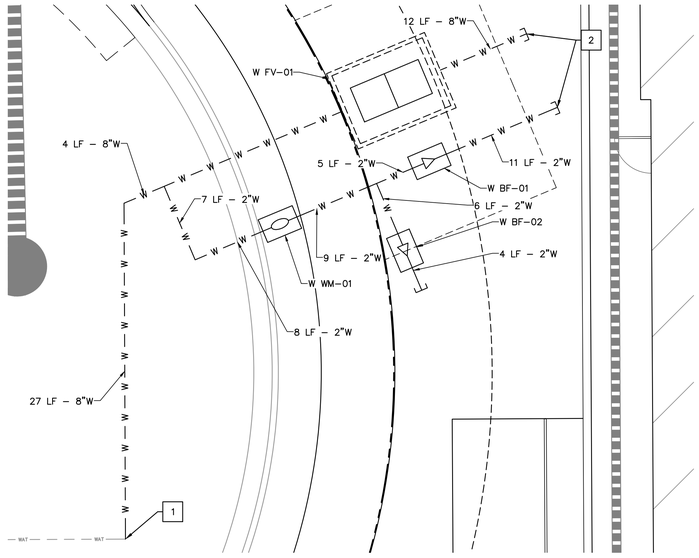
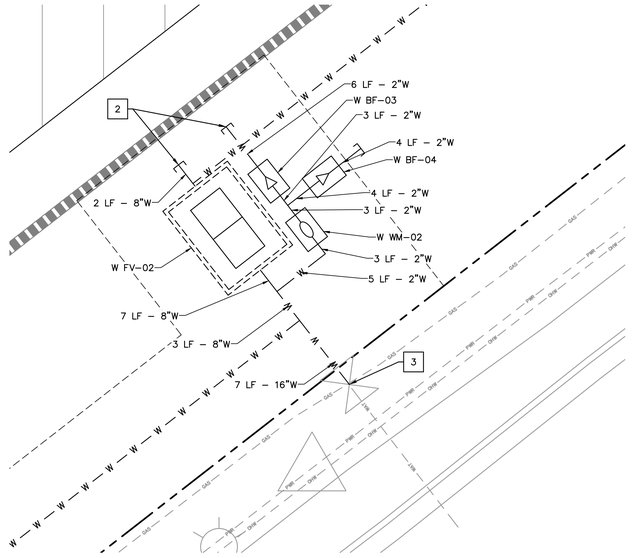


SW MYSLONY WATER CONNECTION ENLARGEMENT
SCALE: NTS



SW TUALATIN–SHERWOOD WATER CONNECTION ENLARGEMENT
SCALE: NTS

SHEET NOTES

1. SEE SHEET C4.0 FOR GENERAL UTILITY NOTES AND LEGEND.

LABEL LEGEND

PIPE LABELS

UTILITY LENGTH
UTILITY SIZE
UTILITY TYPE

XXLF – XX" XX

S=X.XX%
SLOPE (WHERE APPLICABLE)

STRUCTURE LABELS

UTILITY TYPE (FP=FIRE PROTECTION, S=SANITARY, W=WATER)
STRUCTURE TYPE CALLOUT (SEE BELOW)
ID NUMBER (WHERE APPLICABLE)

XX XX–XX
RIM=XX.XX
IE IN=XX.X
IE OUT=XX.X
← STRUCTURE INFO (WHERE APPLICABLE)

STRUCTURE TYPES

CALLOUT	DESCRIPTION
BF	BACKFLOW ASSEMBLY
FV	FIRE VAULT
WM	WATER METER

X WATER NOTES

1 CONNECT TO EXISTING WATER MAIN
2 WATER POINT OF CONNECTION TO BUILDING
3 CONNECT TO EXISTING WATER LATERAL

NORTH

GRAPHIC SCALE
5 0 2.5 5 10 20
(IN FEET)
1 inch = 5 feet

10/28/2019 – LAND USE SUBMITTAL

REGISTERED PROFESSIONAL ENGINEER
CRAIG N. HARRIS
EXPIRES: 6/30/2021

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TUALATIN INDUSTRIAL
TUALATIN, OR

SHEET TITLE
UTILITY PLAN – ENLARGEMENT

DATE: 10/28/19
DRAWN: NJD
CHECKED: DSE
REVISIONS:

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SHEET NUMBER
C4.1

JOB NUMBER: A19173.10

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