INTERNATIONAL BLVD SEATAC - PARKING

20841 INTERNATIONAL BLVD
SEATAC, WA 98198
PERMIT SUBMITTAL - 1.31.2025

VICINITY MAP

SHEET INDEX

SHEET	DRAWING DESCRIPTION
GENERAL	
G-101	COVER
ARCHITECTURAL	
A-111	SITE PLAN
A-112	RAMP DETAILS
PORTABLE MANUFACTURER DRAWINGS	
1	GENERAL BUILDING DESCRIPTION AND MATERIALS SPECIFICATIONS
2	FLOOR PLAN
3	BUILDING SECTION AND FRAMING DETAILS
3A	BUILDING SECTIONS
4	EXTERIOR ELEVATIONS
5	ELECTRICAL PLAN
6	HVAC AND CEILING PLAN
F1	FOUNDATION PLAN

GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH THE 2021 INTERNATIONAL BUILDING CODE, WASHINGTON STATE BUILDING CODE WAC 51-50, AND ALL GOVERNING JURISDICTIONS' RULES, ORDINANCES, AND REGULATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNDERSTANDING AND IMPLEMENTING ALL SAFETY REQUIREMENTS AND PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES REQUIRED BY THE GOVERNING JURISDICTION.
3. PRIOR TO BEGINNING ANY WORK, VERIFY THE LOCATIONS OF ALL UTILITIES AND PROTECT THEM FROM DAMAGE.
4. ALL DEMOLISHED OR REMOVED MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
5. ANY ITEM/WORK NOT REFERRED TO AS EXISTING SHALL BE CONSIDERED A NEW ITEM/WORK REQUIRED FOR THIS PROJECT.
6. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS.
7. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
8. DO NOT MODIFY THE WORK SHOWN EXCEPT WITH WRITTEN INSTRUCTIONS FROM THE ARCHITECT.
9. REPORT ANY CONFLICTS BETWEEN THE SPECIFICATIONS AND THE DRAWINGS BEFORE PROCEEDING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF CONFLICTING INFORMATION SHALL BE DONE AT THE CONTRACTOR'S RISK.
10. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT.

CODE INFORMATION

IBC TABLE 602, CONSTRUCTION TYPE: V-B, OCCUPANCY GROUP: B
FOR SEPARATION OF 5<X<10 A 1-HOUR EXTERIOR WALL RATING IS REQUIRED
FOR SEPARATION OF 10<X<30 NO EXTERIOR WALL RATING IS REQUIRED

ARCHITECTURAL SYMBOLS

TRUE NORTH — NORTH ARROW

0 4 8 16 — GRAPHIC SCALE

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

PROJECT INFORMATION

SITE ADDRESS	20841 INTERNATIONAL BLVD., SEATAC, WA 98198
PARCEL NUMBERS	0922049352
JURISDICTION	CITY OF SEATAC
ZONING	COMMUNITY BUSINESS (CB-C)
PROJECT SITE AREA	1.802 ACRES / 78,518 SQUARE FEET
SCOPE OF WORK	CONSTRUCT/INSTALL A MODULAR BUILDING FOR OFFICE SPACE TO SUPPORT THE EXTENDED STAY PARKING LOT BEING DEVELOPED.
UTILITY PURVEYORS	SEWER — MIDWAY SEWER DISTRICT WATER — HIGHLINE WATER DISTRICT ELECTRIC — PUGET SOUND ENERGY
PROJECT SITE ACCESS	EAST: EXISTING PAVED ENTRY FROM INTERNATIONAL BLVD, SOUTH BOUND
BUILDING: SQAURE FEET	672 SF
OCCUPANCY	B
OCCUPANT LOAD	150 SF GROSS = 5 OCCUPANTS

PROJECT TEAM

OWNER
SHAMSELDIN CORPORATION

OWNER'S REP/DEVELOPER
LLEWELLEYN REAL ESTATE
618 SOUTH 223RD STREET, SUITE 2
DES MOINES, WA 98198
CONTACT: MORGAN LLEWELLYN
PHONE: 253.852.1898
EMAIL: MORGAN@LLEWELLYNRE.COM

ARCHITECT
BCRA, INC
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: HEIDI KIHLMAN
EMAIL:HKIHLMAN@BCRADESIGN.COM
PHONE: 253.627.4367

CIVIL
BCRA, INC
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: JIMMY COOK
CONTACT: HEIDI KIHLMAN
PHONE: 253.627.4367

bcra
T 253.627.4367 F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

PROJECT
PROJECT DESCRIPTION
INTERNATIONAL BLVD SEATAC
20841 INTERNAITONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01/31/2025
BCRA NO.
21054.00.01
DRAWN BY:
REVIEWED BY:
SHEET TITLE
COVER

bcra
© COPYRIGHT 2023 - BCRA, INC. ALL RIGHTS RESERVED.

SHEET
G-101
PROJECT STATUS

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

24x36 2/3/2025 5:37:39 PM

SITE PLAN GENERAL NOTES

1. REFER TO SHEETS 1-6 AND F1 FOR MODULAR UNIT DESIGN SPECIFICATIONS AND DETAILS
2. REFER TO CIVIL DRAWINGS FOR FULL EXTENT OF THE SITE FEATURES.
3. REFER TO CIVIL DRAWINGS FOR ASPHALT PAVING AND CONCRETE SIDEWALK SECTIONS.
4. REFER TO CIVIL DRAWINGS FOR ALL SURFACING FEATURES, UTILITIES, GRADING, STORMWATER AND ELEVATIONS. ELEMENTS SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY.
5. REFER TO LANDSCAPE DRAWINGS FOR PLANTING AND IRRIGATION DESIGN.
6. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING.

SITE PLAN LEGEND

- PARCEL BOUNDARY
- PATH OF TRAVEL
- BUILDING PERIMETER
- FH — FIRE HYDRANT (EXISTING)

ASPHALT
2" GALVANIZED POLE
PROPERTY LINE
MODULAR UNIT
ADA PATH OF TRAVEL
15'
10'
FIRE HYDRANT DISTANCE
40'-3"
15' UTILITY EASEMENT
RC. NO. 20050721001422
SCHEDULE B #7
FIRE HYDRANT
ASPHALT
PACIFIC HWY SOUTH
PROPERTY LINE
50'
10' SEWER LINE EASEMENT
RC. NO. 7209220472
SCHEDULE B #4
ASPHALT
10'
10' SEWER LINE EASEMENT
RC. NO. 7209220468
SCHEDULE B #2
15'
15' UTILITY EASEMENT
RC. NO. 20050721001423
SCHEDULE B #8
T POLE
PROPERTY LINE
TEMPORARY
POWER CABINETS

COMPACT
18
21
15
12
10
42
2
P

0 8 16 32
SCALE: 1/16" = 1'-0"

TRUE NORTH

1 SITE PLAN
1/16" = 1'-0"

2/7/2025 1:01:44 PM
24-08

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

bcra
T 253.627.4367 F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

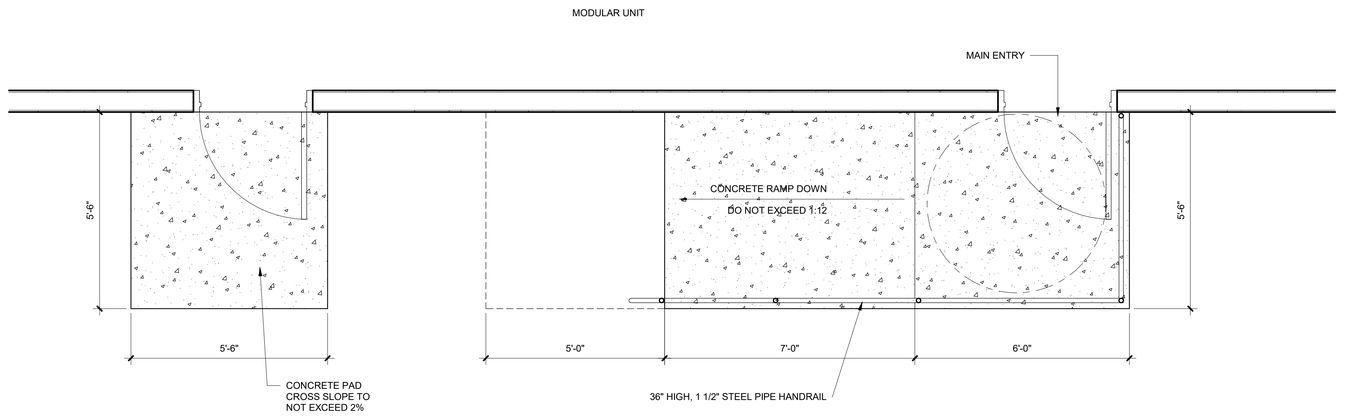
PROJECT
PROJECT DESCRIPTION
INTERNATIONAL BLVD SEATAC
20841 INTERNAITONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01/31/2025
BCRA NO.
21054.00.01
DRAWN BY: H. KIHLMAN
REVIEWED BY: H. KIHLMAN
SHEET TITLE
SITE PLAN

bcra
© COPYRIGHT 2023 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
A-111
PROJECT STATUS



1 RAMP DETAIL
1/2" = 1'-0"

bcra
T 253.627.4367 F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

PROJECT
PROJECT DESCRIPTION
INTERNATIONAL BLVD SEATAC
20841 INTERNAITONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01/31/2025

BCRA NO.
21054.00.01

DRAWN BY: Author

REVIEWED BY:

SHEET TITLE
RAMP DETAILS

bcra
© COPYRIGHT 2023 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
A-112

PROJECT STATUS

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

24x36 2/3/2025 5:37:30 PM

GENERAL BUILDING DESCRIPTION AND MATERIAL SPECIFICATIONS

SHEET 1

CITY -- COUNTY -- STATE ID., WA., OR.,
INSPECTED BY: IDAHO
BUILDING CLASSIFICATION:
OCCUPANCY GROUP B TYPE OF CONST. V-B
OCCUPANCY LOAD: 150 SQ. FT. PER PERSON= 5
ROOF LIVE LOAD: 40 WIND 120 MPH/EXP. C
FLOOR LOAD 50 PSF /SEISMIC CAT D
NOTES:
(1) BUILDING: DESIGNED TO 2018 IBC (2019 OSSC OREGON)

FOUNDATION: ☒ BY OTHERS ☐ CONCRETE ☒ PAD/PIER

TRANSPORTING CHASSIS

TYPE ☒CROSSMEMBER/OUTRIGGER ☐ PERIMETER ☐ SKID
MAIN LONGITUDINAL MEMBER 12" I-BEAM
CROSSMEMBERS-- ☒14 ☐ GAGE EACH @☒ 96" O.C.
OUTRIGGERS-- ☒13 ☐ GAGE EACH @☒ 48" O.C.
RUNNING GEAR--TYPE ☒OVERSLUNG
TIRES ☒14 PLY
BRAKE SYSTEM 12 VOLT ELECTRIC
NUM. OF AXLES, BRAKE 4 IDLERS 0
HITCH MEMBERS--TYPE ☒STD. BALL
☒ DETACHABLE
PAINTING-- ALL MEMBERS TO BE COMPLETELY COATED WITH ANTI-RUST PAINT
NOTES:
(1) CHASSIS: 11'-9 1/2"x55'-11 1/2"
(2) PROVIDE OUTRIGGERS @ 48" O/C PERIMETER OF BLDG.
(3) PROVIDE NEW AXLES & TIRES
(4) PROVIDE FULL I-BEAM @ REAR

FLOOR CONSTRUCTION

WOOD JOISTS W/ NOM. 2x8 EACH @ ☒16" O.C.
RIM SPLICE AND BRIDGING W/ NOM. SGL. 2x8
LUMBER GRADE #2 HF
SUBFLOORING MATERIAL 3/4" T&G OSB DECKING
UNDER SHEATHING MOBILE FLEX-K
NOTES:

FINISHED FLOORING

NO.	LOCATION	TYPE	MFG.	STYLE	COLOR
1	THRU-OUT	1/8" TILE	ARMSTRONG	EXCELON	(NOTE 1)
2					
3					

NOTES:
(1) 1/8" TILE COLOR: #51858 SANDRIFT WHITE

MOULDINGS

WALLS BATTEN TO MATCH VINYL
CEILING SUSPENDED T-GRID
STD. BASE 4" CONT. VINYL BASE W/TOE (NOTE 1)
RESTRM BASE 4" CONT. VINYL BASE W/TOE (NOTE 1)
DOORS METAL WINDOWS VINYL GYPSUM (NOTE 2)
NOTES:
(1) 4" VINYL BASE COLOR: ROPPE #174 SMOKE
(2) ALL WINDOW WRAP: 5/8" VINYL GYPSUM W/ZIP STRIP. WITH 1-PIECE VINYL OUTSIDE WINDOW CORNERS. MATCH WALL COVERING (HAMPTON GREY)

INTERIOR WALL FINISH

NO.	LOCATION	MATERIAL	COLOR
1	THROUGHOUT	5/8" VINYL GYPSUM	(NOTE 1)
2	RESTROOM	(48" H)F.R.P. PER CODE	WHITE

NOTES:
(1) VINYL GYPSUM COLOR: HAMPTON GREY

EXTERIOR WALL CONSTRUCTION

WOOD STUDS W/ NOM. 2X6 @ ☒16" O.C.
TOP & BTM PLATES, SPLICES & BLKG W/ NOM. 2X6
LUMBER GRADE SPF STUD/SPF STD & BTR PL
EXTERIOR SUBSHEATHING 7/16" OSB @ ENDWALLS ONLY (NOTE 1)
EXTERIOR SIDING L.P. SMART PANEL(8"GROOVES) (NOTE 1)
OVER BUILDING WRAP
EXTERIOR TRIM 1x4/6 PRIMED TRIM
COLORS-SIDING KELLY MOORE #03-041 WHISPER GREY
TRIM KELLY MOORE #03-040 IROGON
MATCHING SKIRTING-SIZE - AMT. - COLOR-
INTERIOR SUBSHEATHING 1/2" INSUL. BD. @ SIDEWALLS ONLY
CEILING HEIGHT ☒ 7'-10"
NOTES:
(1) ENDWALLS ONLY: BLOCK ALL EDGES - FASTEN 7/16" OSB W/RINGSHANK NAILS @ 4" &12" O/C - FASTEN SIDING W/RINGSHANK NAILS @ 6" & 12" O/C
SIDEWALLS: BLOCK ALL EDGES - FASTEN SIDING W/RINGSHANK NAILS @ 6" & 12" O/C
(2) HEADERS: SEE DOOR & WINDOW DETAIL SHT. #3
(3) CHORD SPLICES: USE (24) 12d NAILS EA SIDE OF SPLICE
(4) DBL. TOP PLATE
(5) ENDWALLS ONLY: INSTALL (3 EA) SIMPSON #LSTA15 @ HVAC OPENING & CORNERS OF ENDWALLS

INTERIOR WALL CONSTRUCTION

FRAMING-LUMBER GRADE SPF STUD/SPF STD & BTR PL
PARTITION WALLS W/ NOM. 2x4 @ ☒ 16" O.C.
SHEAR WALLS W/ NOM. -- @ ☐ 16" O.C.
PLUMBING WALLS W/ NOM. 2x6 @ ☐ 24" O.C.
SUBSHEATHING --
NOTES:
(1) INTERIOR FRONT WALL TO BE 7'-10" TALL (SEE SHT. #2)

ROOF CONSTRUCTION (40# ROOF LOAD)(TRANSVERSE)

FRAMING W/ NOM. MFG. TRUSSES @ ☒24" O.C.(#F435403)
LONGITUDINAL BEAMS 2x6 & 2x8 RIMRAILS
SUBSHEATHING 5/8" OSB (NOTE 1)
ROOFING MAT. (45 MIL) EPDM BLACK MEMBRANE
OVER FR ADHESIVE (CLASS C)
CEILING MATERIAL (2x4 LAY-IN) SUSPENDED T-GRID(WHITE) (2)
EAVES-- ENDS --
SIDES --
GUTTERS --- MINI GUTTER @ EXT. DOORS
VENTING -- (SEE DETAIL/SHT. #3)
NOTES:
(1) BLOCK EDGES 10'-0" @ EACH END, FASTEN 5/8" OSB W/ RINGSHANK NAILS @ 6" O/C - BUILDING PERIMETER @ 6" O/C - PANEL EDGES @ 12" O/C - PANEL FIELD
(2) CEILING TILE: ARMSTRONG #769A

INSULATION

LOCATION	R-VALUE	THICKNESS	MATERIAL
FLOOR	R-30	7.0"	UNFACED
CEILING	R-51	12.5"	UNFACED W/CLASS A V/R
PLENUM	R-11	3.5"	UNFACED
RESTROOM	R-11	3.5"	UNFACED
EXT. WALLS: (ENDWALLS)	R-21 ONLY	5.5"	UNFACED (NOTE 1)
(SIDEWALLS)	R-21+R-3.2C1	5.5" & 1/2"	UNFACED (NOTE 1)

NOTES:
(1) WALL VINYL IS VAPOR BARRIER (NOTE: PROVIDE 1/2" CONT. INSUL. BD. (R-3.2) @ INT. SIDE OF SIDEWALLS ONLY (R MAX THERMASHEATH-3)
(2) ROOF INSULATION: (2)LAYERS R-15 & (1)LAYER R-21
(3) FLOOR INSULATION: (2)LAYERS R-15

DOOR SCHEDULE

LOC	TYPE	SIZE	FRAME	LOCKSET	OTHER
1	H.M.	36x80	STEEL	DEADBOLT	(NOTE #1)
2	HCWD	36x80	METAL	PASSAGE	(NOTE #2)
3	HCWD	36x80	METAL	PRIVACY	(NOTE #3)

NOTES:
(1) EXT. DOOR #1: 1.75"(20GA)INSUL. W/(18GA)ADJ STEEL FRAME (PROVIDE TOP CAP FOR EXTERIOR DOORS)
HINGES: MFG. STANDARD (4.5"x 4.5) (1.5 PR) (S/S)
CLOSURE: MFG. STANDARD GRADE 1 (H/C)
LATCHSET:PARKER #SL8160 H/D GRADE 2 PASSAGE LEVER
DEADBOLT: FALCON D231 DBL CYL. (KEYED BOTHSIDES)
WED1689 DEADBOLT INDICATOR (OPEN/LOCKED)
(PROVIDE SIGN: "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED".)
STD. WEATHERSTRIPPING, THRESHOLD, DOOR BOTTOM
(2) INT. DOOR #2: HOLLOW CORE PREFINISHED ALPINE OAK W/METAL FRAME/COLOR : DARK BROWN
HINGES: MFG. STANDARD 3.5"x3.5" (1.5 PR)
LATCHSET: MFG. STANDARD GRADE 2 LEVER PASSAGE
STD. WALL STOP.
(3) INT. DOOR #3: HOLLOW CORE PREFINISHED ALPINE OAK W/METAL FRAME/COLOR : DARK BROWN
HINGES: MFG. STANDARD 3.5"x3.5" (1.5 PR)
LOCKSET: MFG. STANDARD GRADE 2 LEVER PRIVACY
(4) EXT. DOORS & FRAMES COLOR TO MATCH TRIM

WINDOW SCHEDULE (U=.29/NFRC/WESTERN WINDOW)

LOC.	TYPE	SIZE	FRAME	GLASS	OTHER
1	H.S.	48x36	VINYL	INSUL.	LOW E ARGON W/SCREEN

NOTES:
(1) WINDOWS MOUNTED @ STD. DOOR HGT.(6'-8" TO TOP)
(2) ALL WINDOW WRAP: 5/8" VINYL GYPSUM W/ZIP STRIP. WITH 1-PIECE VINYL OUTSIDE WINDOW CORNERS. MATCH WALL COVERING (HAMPTON GREY)

ELECTRICAL (SIEMENS #SNW2424B1125)

TOTAL LOAD 120/240V 125 AMP 1 PHASE-M.B. 125 AMP
PANEL: EXTERIOR MT. BREAKERS: SNAP ON TYPE
SERVICE ☒ UNDERGROUND ☐ OVERHEAD
WIRING ☒ COPPER NONMETALLIC SHEATHED CABLE(ROMEX)
☐ COPPER THHN WIRE IN ☐ FLEX ☐ EMT COND.
☒ MC CABLE(ABOVE SUSPENDED T-GRID)

LIGHTING	TYPE
EXT. DOORS	EXT. WALL MT. LED (15W) W/PHOTOCELL (MORRIS #71519)
CEILING	2X4/RECESSED LED FLAT PANEL (49W) (LEDONE #LOC-24BLPL-49W-40K) DIMMING
RESTROOM	2X2/RECESSED LED FLAT PANEL (29W) (LEDONE #LOC-22BLPL-MAMCCT-HL) DIMMING

FANS	LOCATION	TYPE	CFM
--	RESTROOM	(ERV) SEE SHT. #6	-

SMOKE DETECTORS--TYPE --
NOTES:
(1) WIRING TO BE IN ROMEX (M.C. CABLE ABOVE T-GRID)
(2) PROVIDE ROUGH-IN ONLY FOR PHONE/DATA
(3) SERVICE TO BE UNDERGROUND
(4) SEE SHT. #5 FOR ADDITIONAL INFORMATION

HEATING AND A/C

TYPE ENDWALL MT. HEAT PUMP (BARD #W30HB-A10)
RATING-HEATING 26,083 BTUH 10 KW 1000 CFM EACH
COOLING 29,100 BTUH 2.5 TON @ .20 CESP
THERMOSTAT-TYPE PROGRAMMABLE T-STAT (HONEYWELL T6 PRO #TH6320U2008)

DUCTING	LOCATION	SIZE	MATERIAL	REG. SIZE
SUPPLY	@ CEILING	SHT 6	1" FIBERGLASS	24x24
RETURN	@ CEILING	SHT 6	1" FIBERGLASS	24x24

NOTES:
(1) PROVIDE 100% ECONOMIZER FOR HEAT PUMP
(2) PROVIDE ERV SYSTEM (SEE SHT. #6)
(3) SEE SHT. #6 FOR ADDITIONAL INFORMATION

APPLIANCES

APPLIANCE	TYPE	SIZE
WATER HEATER	EEMAX EMT 2.5 (120V)	2.5 GAL

NOTES:
(1) MOUNT W/H UP HIGH ON SHELF W/PAN

PLUMBING

HANDICAPPED DESIGN - ☒ REQUIRED ☐ NOT REQUIRED
DRAIN LINE MTR. ABS SUPPLY LINE MTR. PEX

FIXTURE	TYPE	VALVE
WTR. CLOS.	MFG. STANDARD (18")H/C-ELONG.	TANK
LAVY. SINK	MFG. STANDARD (20x18)WALL MT.	NOTE #1

NOTES:
(1) LAVY FAUCET: PROFLOW #PFWSC30065 SGL. LEVER
(2) PROVIDE SHUTOFF VALVES @ ALL FIXTURES
(3) SEE SHT. #2 FOR ADDITIONAL INFORMATION

FURNISHINGS

TYPE	DESCRIPTION	COLOR
DESK TOP	-	-
FILE CAB.	-	-
PLAN TABLE	-	-

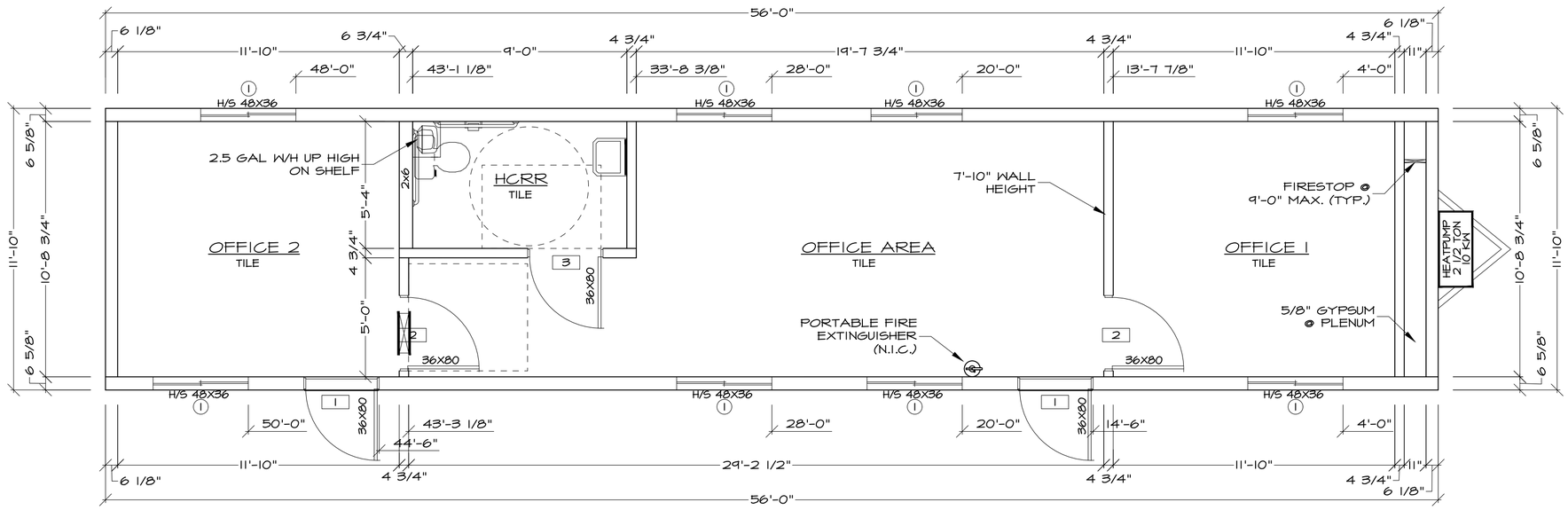
R/R ACCESS	TYPE	SIZE
GRAB BARS	(1 SET)18", 36" & 42" (S/S)	1.25"
MIRRORS	STD. @ 40" AFF W/CLIPS	18"x36"
T.P. HOLDER	MFG. STD. SINGLE ROLL	

NOTES:

MISCELLANEOUS

(1) IDAHO, WASHINGTON, OREGON INSIGNIAS
(2) PORTABLE FIRE EXTINGUISHERS PER IBC906.1 (N.I.C.)

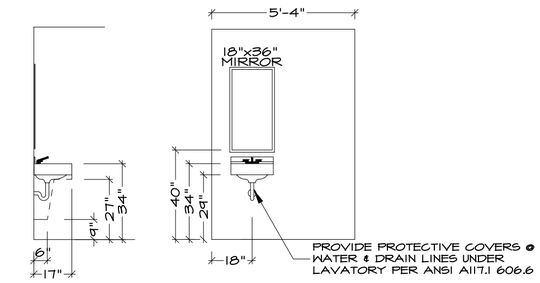
SUBMITTALS BEING USED ☐YES ☒NO

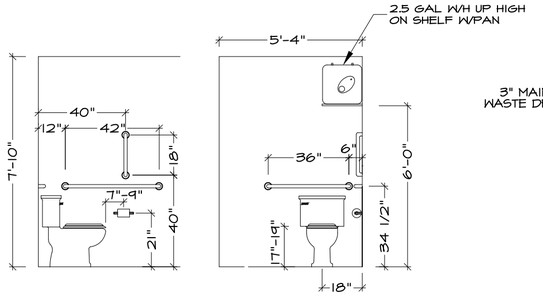


FLOOR PLAN
SCALE 1/4" = 1'-0"

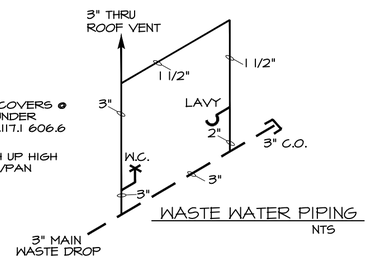
NOTES:
(1) MOUNT WINDOWS @ STANDARD DOOR HEIGHT.(6'-8" TO TOP)

(2) PROVIDE R-11 INSULATION @ RESTROOM WALLS & PLENUM WALL.

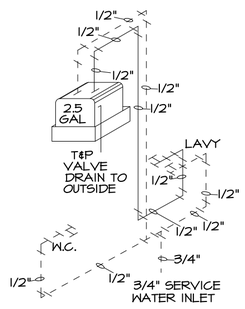




H/C RESTROOM DIMENSIONS
SCALE 1/4" = 1'-0"



WASTE WATER PIPING
NTS



SERVICE WATER PIPING
NTS

NOTES:

WASTE MANIFOLD — — —
(ALL HORIZONTAL WASTE PROVIDED BY NABS)

COLD WATER LINES - - - - - - - -
HOT WATER LINES ———

TOTAL SERVICE FIXTURE UNITS:3.5 UNITS
(46 to 60 PSI \ 100' Developed length)

TOTAL DRAIN FIXTURE UNITS: 5 UNITS
(Sizing per Plumbing Code)

2021 IBC BUILDING CLASSIFICATION

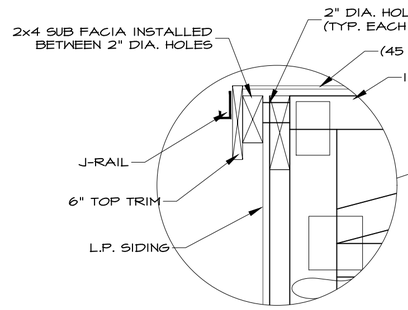
TOTAL BLDG. FLOOR AREA.....672 SQ. FT.
FLOOR LIVE LOAD.....50 PSF
ROOF LIVE LOAD.....40 PSF
WIND LOAD.....120 MPH/EXP. C
SEISMIC CAT.....D
OCCUPANCY GROUP.....B
TYPE OF CONST.....TYPE V-B (NON-RATED)

OCCUPANCY LOAD PER 2018 IBC(2019 OSSC)/TABLE 1004.5

BUSINESS AREA: 150 SQ. FT. GROSS = 5 OCCUPANTS

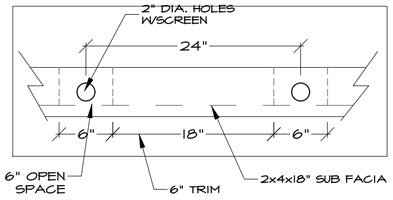
TOTAL OCCUPANT LOAD = 5 OCCUPANTS

SHEET: 2

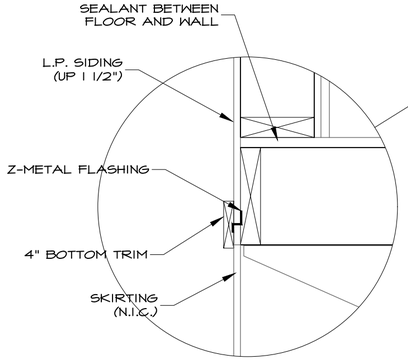


ROOF VENTING DETAIL

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

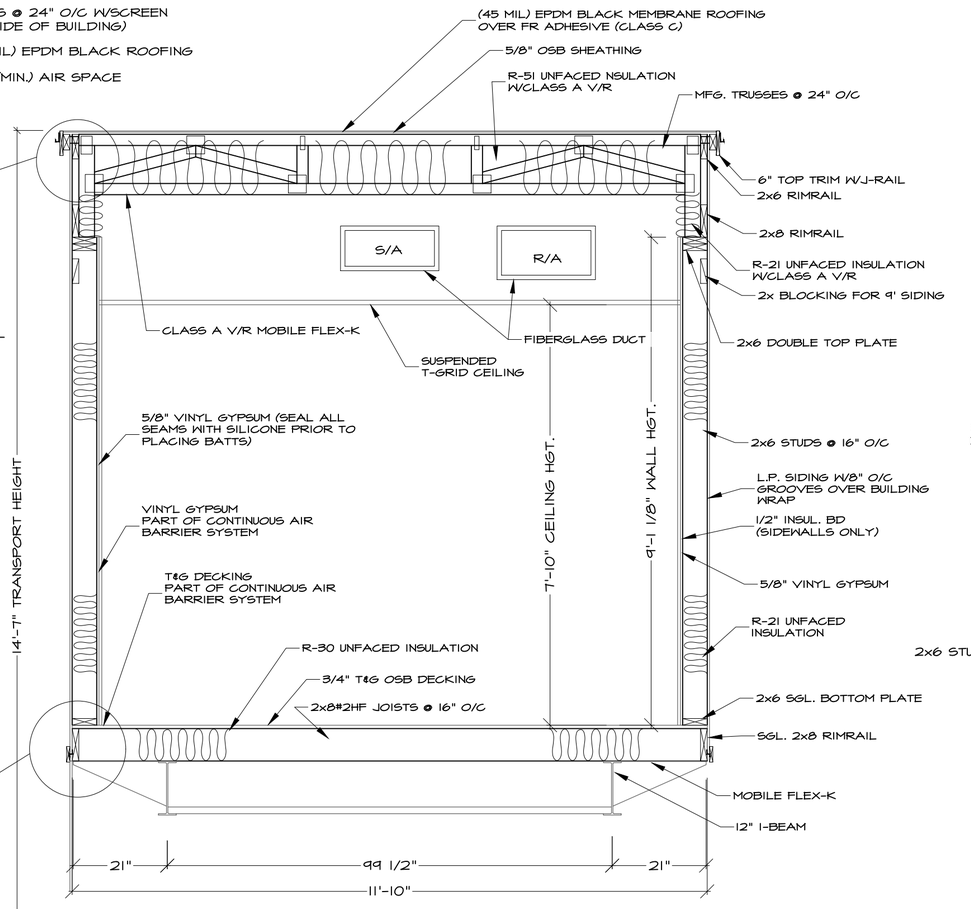


ROOF VENTING DETAIL



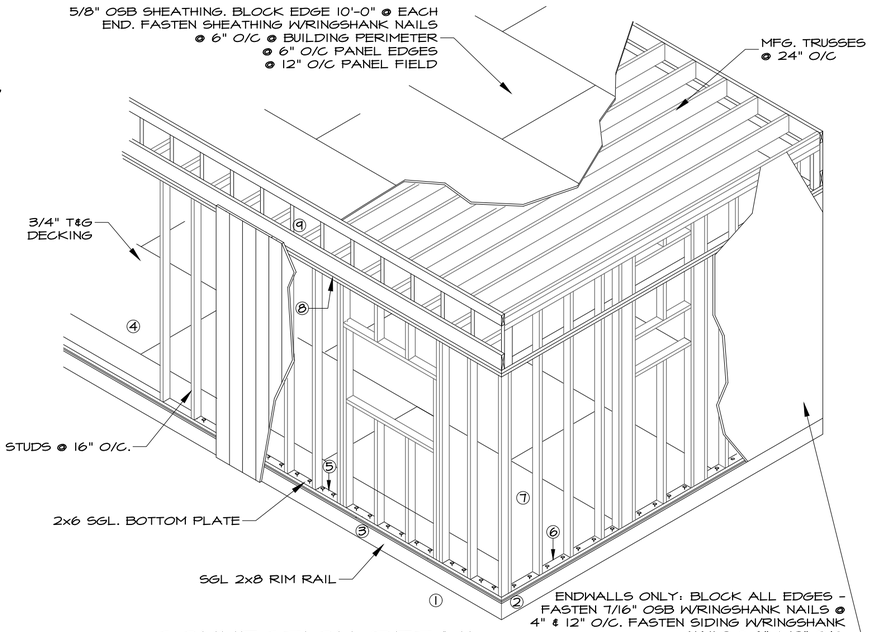
PERIMETER DETAIL

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



BUILDING SECTION (@ PEAK)

SCALE 1/2"=1'-0"



CONNECTION DETAIL

NTS

AIR BARRIER

AIR BARRIER MATERIAL:
1. FLOORS: 3/4" T&G DECKING
2. WALLS: BUILDING WRAP
3. ROOFS: MOBILE FLEX-K

PROVIDE LUS26 JOIST HANGERS ATTACHED TO 2x8 RIMRAIL ON TRUSSES LOCATED ABOVE OPENINGS ALL SIDEWALL OPENINGS)

FASTENER SCHEDULE

1) CHASSIS TO FLOOR: (2 EA) 5/16"x3" LAG SCREWS @ EACH OUTRIGGER(48" O/C PERIMETER OF BLDG./96" O/C REMAINDER). PROVIDE 5/16"x3" LAG SCREWS W/CLIPS STAGGERED @ EACH MAIN I-BEAM @ 4'-0" O/C..

2) DOUBLE FLOOR JOISTS AT ENDS: FASTEN W/(4) 7d(2 1/4") @ 24" O/C BOTH SIDES W/ADHESIVE

3) FLOOR RAIL TO FLOOR JOIST: FASTEN W/(4)12d

4) DECKING TO JOIST-PERIMETER: FASTEN BLDG. PERIMETER & PANEL EDGES W/(6d) RINGSHANK NAILS @ 6" O/C - FASTEN PANEL FIELD W/(6d) RINGSHANK NAILS @ 12" O/C

5) SIDEWALL TO FLOOR: FASTEN W/(12d) @ 8" O/C

6) ENDWALL TO FLOOR: FASTEN W/(12d) @ 8" O/C

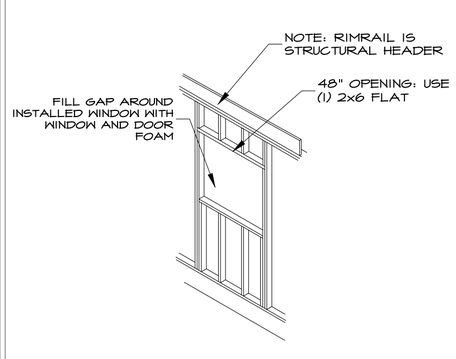
7) ENDWALL TO SIDEWALL: FASTEN W/(12d) @ 6" O/C & (5ea) 12d @ TOP PLATE OVERLAP W/STRAP

8) SIDEWALL PLATE TO STUDS: FASTEN W/(3ea) 12d NAILS

9) 2x8 RIMRAIL TO SIDEWALL: TOENAIL RAIL W/(12d) NAILS @ 4" O/C

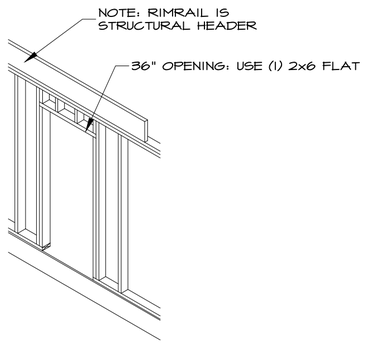
FASTENER SCHEDULE (PER TABLE 2304.10.1)

1) FRAMING NAILS(FLOORS/WALLS/ROOFS): DIA: .131, LENGTH: 3 1/4", COATING: BRTITE BASIC/SMOOTH.
2) FLOOR DECKING NAILS: DIA: .113, LENGTH: 2 3/8", COATING: BRITE VINYL COATED/RINGSHANK.
3) ROOF SHEATHING & SIDING: DIA: .113, LENGTH: 2 3/8", COATING: GALV/RINGSHANK.



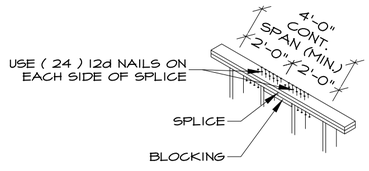
WINDOW HEADER DETAIL

NTS



DOOR HEADER DETAIL

NTS

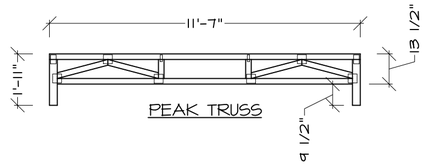


NAILS MUST BE PLACED WITHIN 2' OF SPLICE AND MAY BE INSTALLED FROM TOP ALONG ENTIRE LENGTH AND\OR FROM BOTTOM OUT OF BLOCK\SPLICE AREA

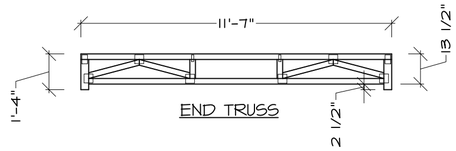
DBL TOP PLATE CHORD SPLICE

NTS

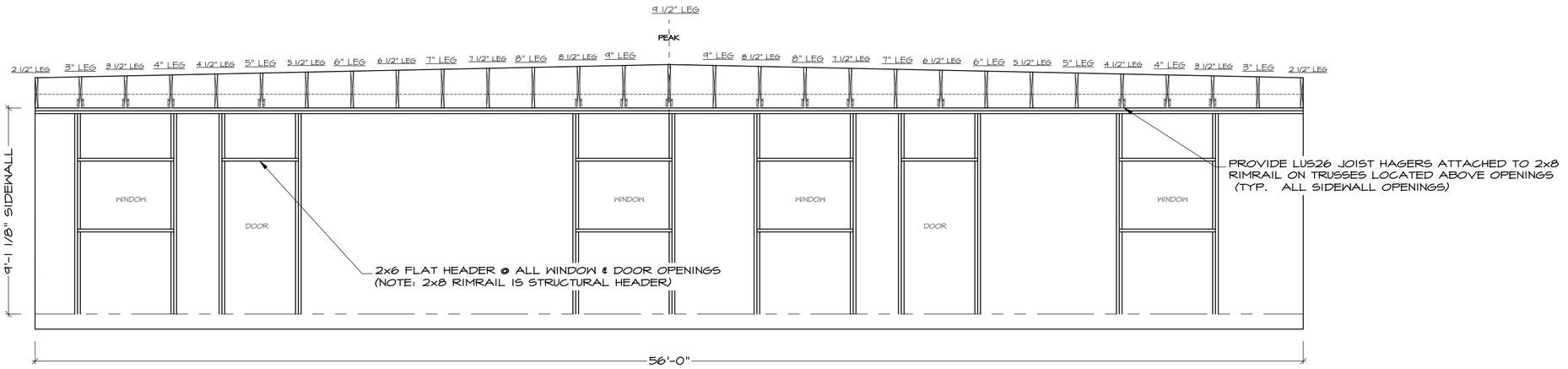
SHEET: 3



PEAK TRUSS

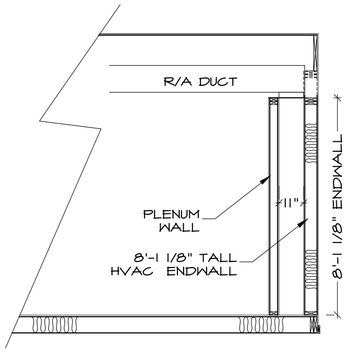


END TRUSS



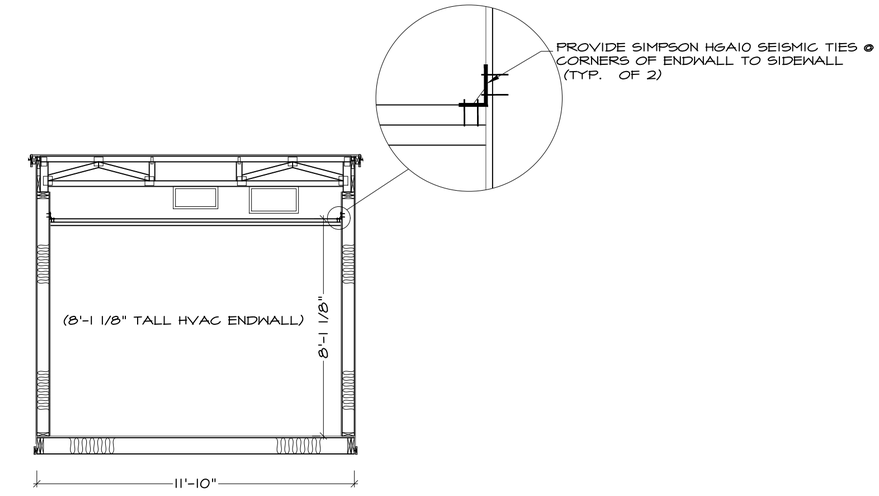
SOUTH SIDEWALL VIEW

SCALE 1/4"=1'-0"



HVAC ENDWALL(SIDEVIEW)

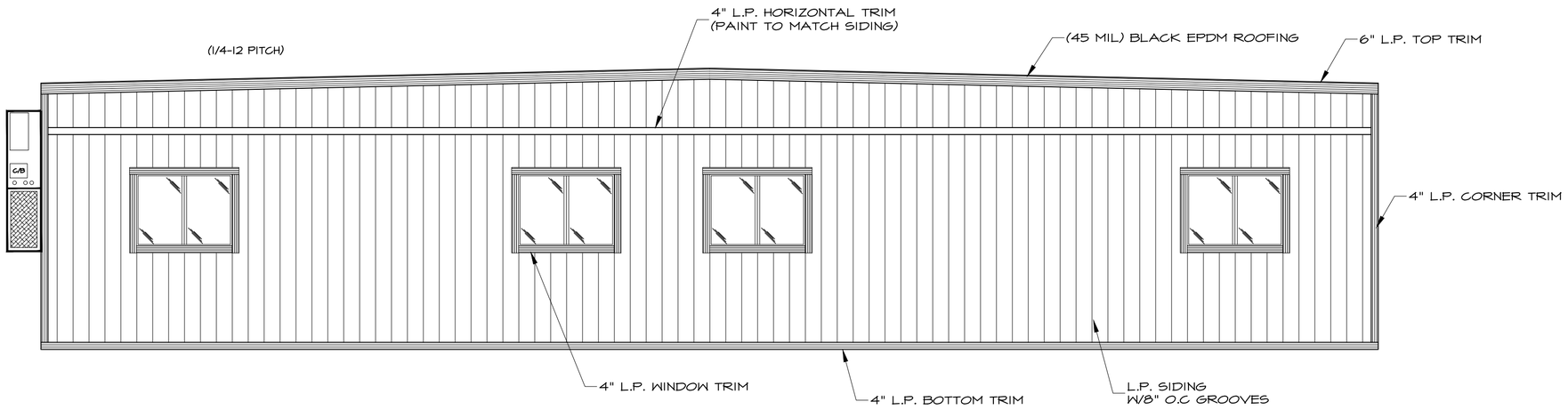
SCALE 1/4"=1'-0"



HVAC ENDWALL(FRONTVIEW)

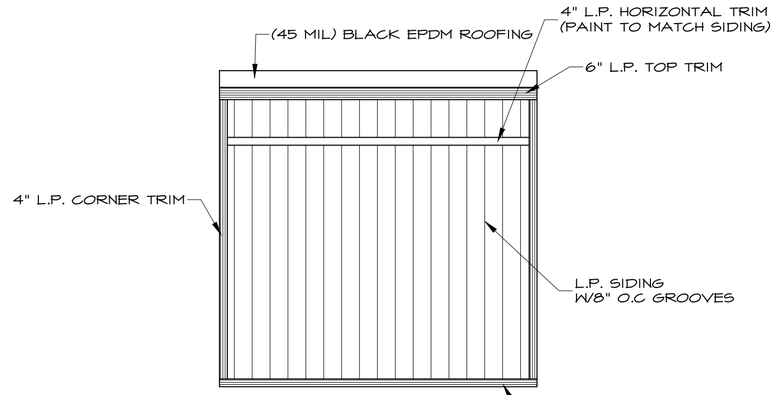
SCALE 1/4"=1'-0"

SHEET:
3A



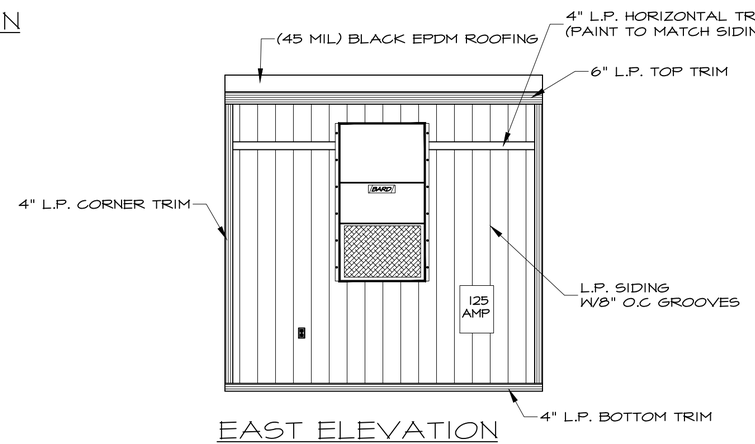
NORTH ELEVATION

SCALE 1/4"=1'-0"



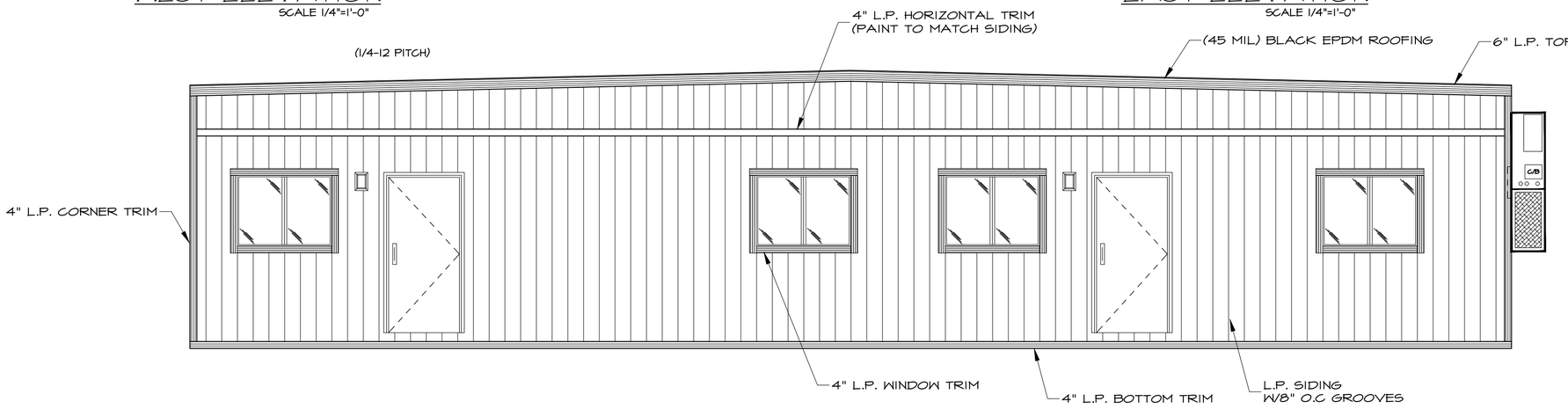
WEST ELEVATION

SCALE 1/4"=1'-0"



EAST ELEVATION

SCALE 1/4"=1'-0"



SOUTH ELEVATION

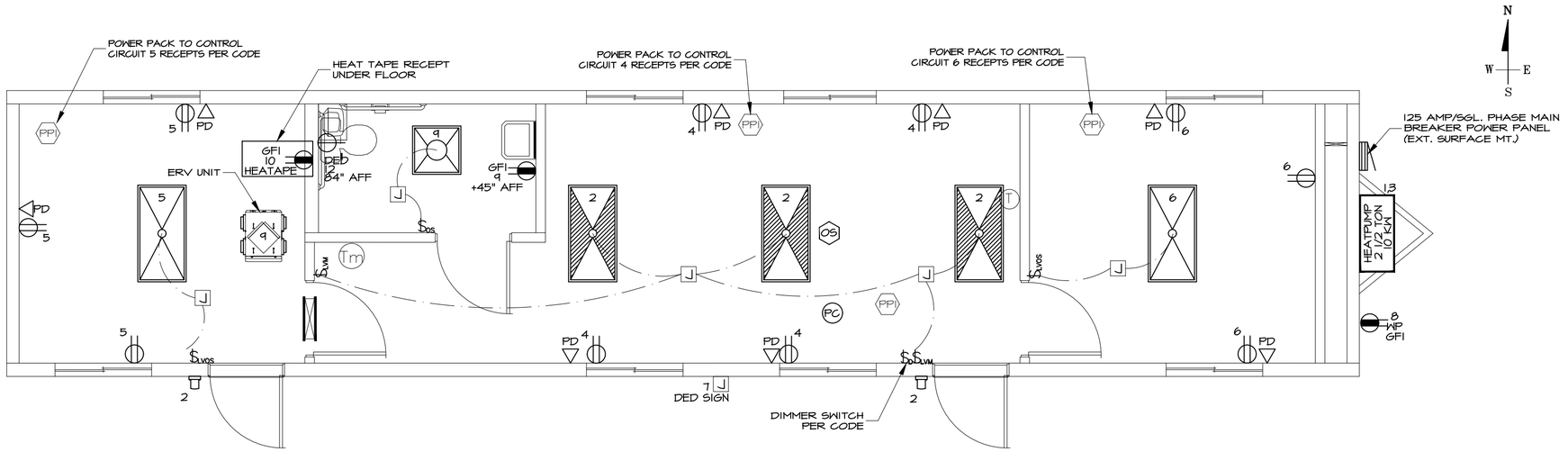
SCALE 1/4"=1'-0"

SHEET:

4

LEGEND & NOTES

	2X4/RECESSED LED FLAT PANEL (49W) (LEDONE #LOC-24BLPL-49W-40K) DIMMING
	2X4/RECESSED LED FLAT PANEL (49W) (LEDONE #LOC-24BLPL-49W-40K) DIMMING (DAYLIGHT ZONE)
	2X2/RECESSED LED FLAT PANEL (29W) (LEDONE #LOC-22BLPL-MWMCCT-HL) DIMMING
	EXTERIOR SURFACE MT. LED LIGHT W/ PHOTOCELL MORRIS #71519 (15W / 4000K)
$LVM	LOW VOLTAGE MOMENTARY SWITCH @ 45" AFF TO CENTER (WHITE) (WATTSTOPPER LVSW-101-W)
$LVOS	LOW VOLTAGE OCCUPANCY SENSOR @ 45" AFF TO CENTER (WHITE) (WATTSTOPPER PW-100-24)
$OS	SINGLE POLE OCCUPANCY SENSOR (WHITE) @ 45" AFF TO CENTER (WATTSTOPPER- PW301W)
$D	SINGLE POLE, THREE-WAY 0-10 V DIMMING CONTROL @ 45" AFF TO CENTER (WHITE) (LUTRON #NFTVWH)
	SPEC GRADE 20 AMP DUPLEX RECEPT. (WHITE) @ 18" AFF TO CENTER.(BR20C1-W) (50% CONTROLLED/50% CONSTANT HOT)
GFI	SPEC GRADE 20 AMP GFI DUPLEX RECEPT (WHITE) (GFTR2-W)
WP GFI	WEATHER RESISTANT (CORROSION & UV-RAY RESISTANT) GFI DUPLEX RECEPT(GFWT2-W) WWEATHERPROOF (IN-USE)COVER(MM420C)
HEAT TAPE	SPEC GRADE 20 AMP WEATHER PROOF HEATAPE SGL RECEPT (WHITE) WGFEP BREAKER (#5801-W W/#MM420C COVER) LOCATE NEAR WATER SUPPLY INLET.
P/D	PHONE/DATA ROUGH-IN ONLY: 4SQ BOX W/G MUDRING W/BLANK COVER W/3/4" CONDUIT STUB TO ABOVE CEILING ONLY @ 18" AFF TO CENTER
T	HONEYWELL T6 PRO WALL MT. PROGRAMMABLE T-STAT @ (48" AFF TO CENTER) (#TH6320U2008)
Tm	#FT247 WALL MT. 7-DAY PROGRAMABLE ERV TIMER @ 48" AFF TO CENTER
PP OS	CEILING MOUNT OCCUPANCY SENSOR (WHITE) (WATTSTOPPER #CI-305) WWATTSTOPPER #BZ-250 POWER PACK
PC	WATTSTOPPER #LS-301 DIMMING PHOTO SENSOR FOR DAYLIGHT ZONES
	(1) 125A/240V 1-PHASE MAIN BREAKER EXT. SURFACE MT. POWER PANEL (SIEMENS #SNW2424B1125)



ELECTRICAL PLAN

SCALE 1/4" = 1'-0"

NOTE

1) PER 2021 WSEC , SECTION C403.4.1.6 DOOR SWITCHES FOR HVAC SYSTEM THERMOSTATIC CONTROL WILL BE PROVIDED.

NOTES

ALL GENERAL USE (NON-DEDICATED/GFI) RECEPTACLES TO BE 50/50 OCCUPANCY CONTROLLED. THE TOP PLUG WILL BE OCCUPANT CONTROLLED, THE BOTTOM PLUG WILL HAVE CONSTANT 120V POWER. ALL RECEPTACLES SHALL BE CLEARLY LABELED & MARKED ACCORDINGLY PER 2019 ASHRAE 90.1 SECTION 8.4.2 & WSEC C405.10.. & NEC FIGURE 406.3E

NOTES

2021 WSEC EFFICIENCY PACKAGE CREDITS PER C406 (6 CREDITS MIN. REQUIRED).

1) REDUCED LIGHTING POWER OPTION 2 PER C406.3.2
.64W (TABLE C405.4.2(1)X672=430W
430WX(.80)=344W ALLOWED/ 274 INSTALLED COMPLIES (4 CREDITS).

2) DEDICATED OUTDOOR AIR SYSTEM (DOAS) PER C406.6 (4 CREDITS)

NOTE

WSEC C411 SOLAR READINESS: SOLAR ZONE BOUNDARIES, ACCESS PATHWAYS, AND ROUTE FOR WIRING TO BE DETERMINED BY END USER WITH APPROVAL FROM LOCAL ELECTRICAL AHJ.

NOTES

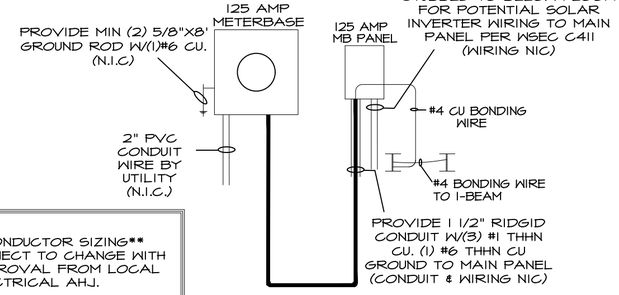
(1)NEC 427.22 GROUND FAULT PROTECTION OF EQUIPMENT (GFEP) SHALL BE PROVIDED FOR ELECTRIC HEAT TRACE. THE DEVICE PROVIDING THIS PROTECTION SHALL BE SENSITIVE TO LEAKAGE CURRENTS FROM 6mA TO 50mA. THIS IS UNLIKE GFCI PROTECTION FOR PERSONAL THAT TRIPS AT 5mA (+ OR - 1mA)

(2) WAC 296-46B, IDENTIFICATION PLATES ON DISCONNECTING MEANS ARE TO SHOW DESIGNATION CIRCUIT SOURCE PANEL THAT SUPPLIES DISCONNECT AND IDENTIFICATION ON WHAT IS BEING DISCONNECTED. MUST BE AN IDENTIFICATION PLATE (HVAC DISCS.)

NOTE

THIS STRUCTURE IS DESIGNED FOR COMPLIANCE WITH THE REQUIREMENTS OF THE 2018 WASHINGTON STATE ENERGY CODE (WSEC) SECTION C411 FOR SOLAR READINESS USING A GROUND MOUNTED ARRAY AS NOTED ON PLAN SHEETS 1&5. THE MINIMUM REQUIRED AREA IS BASED ON SECTION C411.2 ITEM 2

40% OF THE ROOF AREA @ 672 SqFt = 269 SqFt



CONDUCTOR SIZING SUBJECT TO CHANGE WITH APPROVAL FROM LOCAL ELECTRICAL AHJ.

ONE LINE DIAGRAM

NTS

NOTES:

1. 30" WIDTH WORKING SPACE IS REQUIRED FOR BUILDING DISCONNECT & HVAC DISCONNECT PER NEC 110.26.
2. THE OUTSIDE BUILDING DISCONNECTING MEANS SHALL HAVE AN IDENTIFICATION PLATE WITH AT LEAST ONE-HALF-INCH HIGH LETTERS IDENTIFYING: THE BUILDING SERVED AND ITS FUNCTION AS THE BUILDING MAIN DISCONNECT PER WAC 296-46B-225.032.
3. WHERE THE PREMISES WIRING SYSTEM HAS FEEDERS SUPPLIED FROM MORE THAN ONE NOMINAL VOLTAGE SYSTEM, EACH UNGROUNDED CONDUCTOR OF A FEEDER SHALL BE IDENTIFIED BY PHASE OR LINE AND SYSTEM AT ALL TERMINATION, CONNECTION, AND SPLICE POINTS PER NEC 215.12.
4. POSTING OF IDENTIFICATION MEANS: THE METHOD UTILIZED FOR CONDUCTORS ORIGINATING WITHIN EACH FEEDER PANELBOARD OR SIMILAR FEEDER DISTRIBUTION EQUIPMENT SHALL BE PERMANENTLY POSTED AT EACH FEEDER PANELBOARD OR SIMILAR FEEDER DISTRIBUTION EQUIPMENT PER NEC 215.12(C)(1)(B).
5. IDENTIFICATION PLATES ON DISCONNECTING MEANS ARE TO SHOW DESIGNATION OF CIRCUIT SOURCE PANELBOARD THAT SUPPLIES DISCONNECT AND IDENTIFY WHAT IT IS DISCONNECTING. MUST BE AN IDENTIFICATION PLATE. (ITEMS SUCH AS HVAC DISCONNECTS). PER WAC 296-46B-110.022.
6. WHERE PREMISES WIRE SYSTEM HAS BRANCH CIRCUITS SUPPLIED FROM MORE THAN ONE NOMINAL VOLTAGE SYSTEM, EACH UNDERGROUND CONDUTOR OF A BRANCH CIRCUIT SHALL BE IDENTIFIED BY PHASE AND SYSTEM AT ALL TERMINATIONS, CONNECTIONS, AND SPLICE POINTS BY COLOR CODING OR TAGGING PER NEC 210.5(C).
7. ALL GROUNDING ELECTRODES AT EACH BUILDING SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. (PER NEC 250.50)
8. CONCRETE ENCASED GROUNDING ELECTRODE MUST BE INSTALLED AT EACH NEW BUILDING OR STRUCTURE ON PERMANENT FOUNDATION. (PER WAC 296.46B-250 052)

VOLTAGE: 120/240 — LOCATION: EXTERIOR

PHASE: 1 WIRE 4 — 125 AMP M.B. POWER PANEL

BUSS AMPS: 125 AMP — 125 AMP MAIN BREAKER — MOUNTING: SURFACE

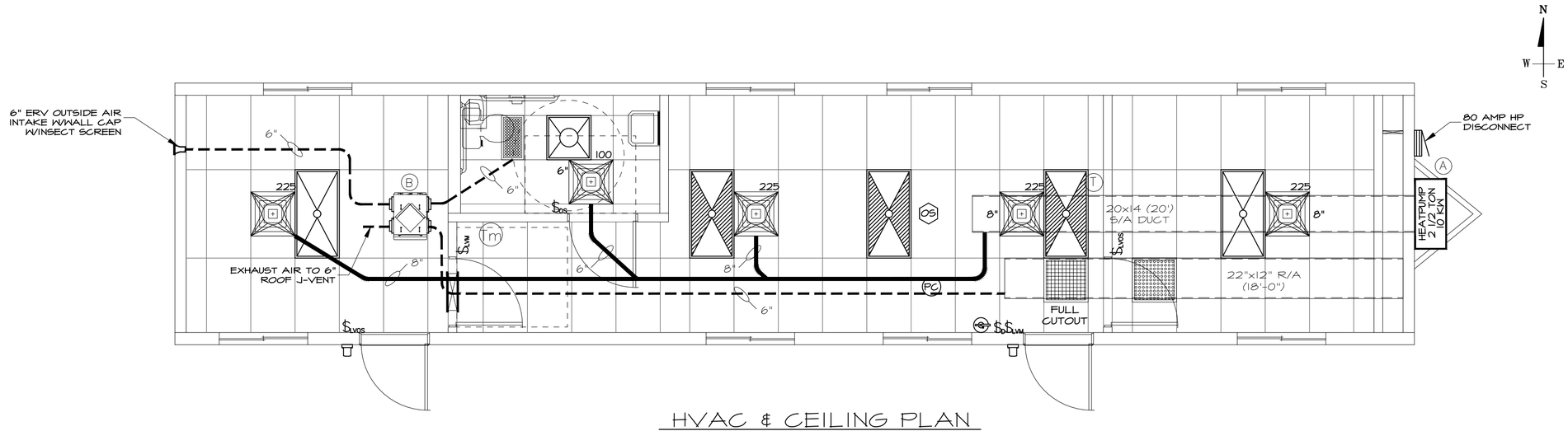
DESCRIPTION	# OF	WATTS A	WATTS B	WIRE SIZE	BREAKER AMP	BREAKER POLE	CIR #	BUS CONNECTION	CIR #	BREAKER POLE	BREAKER AMP	WIRE SIZE	WATTS A	WATTS B	# OF	DESCRIPTION
HEATPUMP	1	8740	8740	4-4-8	80	2	1		2	1	20	12-2	177		6	LIGHTING
							3		4	1	20	12-2		720	4	RECEPTS
OFFICE 1	4	589		12-2	20	1	5		6	1	20	12-2	589		4	OFFICE 2
DED SIGN	1		1500	12-2	20	1	7		8	1	20	12-2		500	1	WP GFI
HCRR/ERV	3	255		12-2	20	1	9		10	1	20	12-2	1500		1	**HEATAPE
							11		12	1	20	12-2		1500	1	*WATER HEATER
							13		14							
							15		16							
							17		18							
							19		20							
							21		22							
							23		24							
TOTALS		9,584	10,240										2,266	2,720		TOTALS

WATTS: BUS A = 11,850 — LCLx25% = 77

BUS B = 12,960

TOTAL = 24,810 WATTS — 24,887 WATTS + 240 VOLTS = 104 AMPS

*GFCI LOCKOUT BREAKER
**GFEP BREAKER



HVAC & CEILING PLAN

SCALE 1/4" = 1'-0"

NOTE:

CEILING TILE TO BE ARMSTRONG #769A

MECHANICAL LEGEND

SYM.	DESCRIPTION
	HEAT PUMP ELECTRIC 2-1/2 TON/10KW W/100%ECONOMIZER
	24"x24" SUPPLY AIR REGISTER W/ ADJ. MANUAL DAMPER
	24"x24" FULL CUTOUT (EGGCRATE) RETURN AIR REGISTER
	24"x24" RETURN AIR REGISTER
	24"x12" PERFORATED ERV RETURN/ EXHAUST AIR REGISTER
(T)	WALL MT. PROGRAMABLE T-STAT @ 48" AFF TO CENTER (HONEYWELL T6 PRO #TH6320U2008)
(Tm)	#FT247 WALL MT. 7-DAY PROGRAMABLE ERV TIMER @ 48" AFF TO CENTER

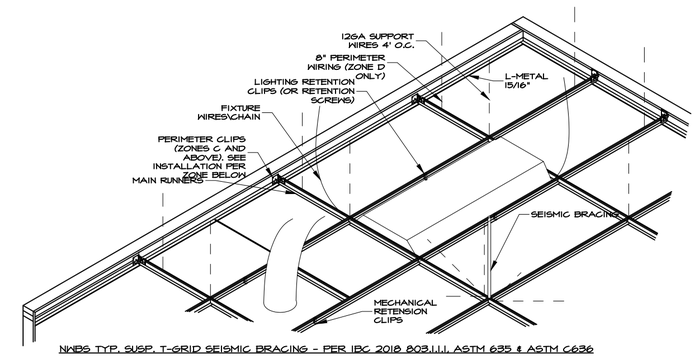
ERV SCHEDULE

SYM.	TYPE	C.F.M.	ESP	VOLTS	AMPS	H/P	WATTS	MANUFACTURER
(B)	ERV	90	0.30	120V	0.03	0.1	46 @90 CFM	*RENEWAIRE #EV90 W/S&P FT247 7-DAY PROG. TIMER

*ERV IS DESIGNED FOR COMMERCIAL USE & MEETS ANSI & ETL & COMPLY'S WITH WSEC C403.5.1

HEATING & A/C SCHEDULE

SYM.	TYPE	K.W.	STAGES	C.F.M.	S.P.E.	VOLTS - PHASE	EER	B.T.U. HEATING	B.T.U. COOLING	MANUFACTURER
(A)	HEATPUMP	10	1	1000	.20	230/208 – 1	11.0	26,083	29,100	BARD W30HB-A10 W/100% ECONOMIZER



NWBS TYP. SUSP. T-GRID SEISMIC BRACING - PER IBC 2018 803.1.1.1, ASTM 635 & ASTM C636

- ALL GRID AREAS
  - HANGER WIRES SHALL BE SPACED ON 4' O.C. ALONG MAIN CARRYING BEAMS. ALL WIRES TO BE ATTACHED SUCH THAT THE ANGLE NOT EXCEED 1:6 UNLESS COUNTER SLOPING WIRE METHOD IS USED (2 OPPOSING WIRES AT THE SAME ANGLES TO THE SAME POINT ON THE GRID)
  - ALL WIRE TIES TO BE AT LEAST THREE TIGHT TURNS LESS THAN 3" IN HEIGHT (CALIFORNIA OSHPD AND DSA-SS PROJECTS REQUIRE 3 TIGHT TURNS IN 1-1/2")
- ALL GRID - MECHANICAL AND ELECTRICAL FIXTURES
  - MECHANICAL FIXTURES TO BE AFFIXED DIRECTLY TO GRID WITH MINIMUM TWO RETENTION CLIPS (OR SCREWS IF APPLICABLE) IN OPPOSING LOCATIONS.
  - ELECTRICAL FIXTURES
    - TO BE AFFIXED DIRECTLY TO GRID WITH MINIMUM TWO RETENTION CLIPS (OR SCREWS IF APPLICABLE) IN OPPOSING LOCATIONS.
    - FIXTURES WEIGHING LESS THAN 56LBS SHALL HAVE (2) 12GA WIRES\CHAIN ATTACHED AT OPPOSING ENDS (CORNERS) OF THE FIXTURE TO THE STRUCTURE ABOVE, MAY BE SLACK.
    - FIXTURES OR ITEMS HEAVIER THAN 56LBS SHALL BE INDEPENDENTLY SUPPORTED TO THE STRUCTURE.
- FOR SEISMIC ZONE C
  - ALL PERIMETER WALLS SHALL HAVE SEISMIC CLIPS INSTALLED WITH 3/8" GAP BETWEEN WALL AND GRID SUPPORTS. GRID MUST BE ABLE TO FLOAT 3/8" IN ALL DIRECTIONS.
- FOR SEISMIC ZONE D OR ABOVE (HEAVY DUTY GRID REQUIRED) (ZONE C REQUIREMENTS NOT REQUIRED, FOLLOW INSTALLATION BELOW ONLY)
  - TWO ADJACENT WALLS SHALL HAVE SEISMIC PERIMETER CLIPS INSTALLED WITH 3/4" GAP BETWEEN WALL AND GRID SUPPORTS. COMPONENTS AT TWO OPPOSITE ADJACENT WALLS MUST BE POSITIVELY ATTACHED TO THE PERIMETER WALL.
  - PERIMETER 12GA WIRES MUST BE INSTALLED WITHIN 8" OF THE WALL ON ALL GRID SUPPORTS
  - SEISMIC BRACING EVERY 144 SQUARE FEET FOR CONTINUOUS GRID AREAS 1000SF OR LARGER. BRACING WIRES TO BE ATTACHED AT A MAXIMUM OF 45 DEGREES TO THE PLANE OF THE CEILING AND PARALLEL TO COMPONENTS INTERSECTING AT THE BRACE LOCATION. BRACE WIRES TO BE TAUT AND TIED BOTH ENDS WITH A MINIMUM THREE TIGHT WRAPS IN 3 INCHES.
    - VERTICAL STRUT SHALL BE EMT CONDUIT SIZED PER BELOW AND CONNECTED AT BOTH ENDS.
      - 1/2" EMT CONDUIT UP TO 6 FEET, 0 INCHES
      - 3/4" EMT CONDUIT UP TO 8 FEET, 6 INCHES
      - 1" EMT CONDUIT UP TO 10 FEET, 0 INCHES

****NOTE****

1) PER 2021 WSEC , SECTION C403.4.1.6 DOOR SWITCHES FOR HVAC SYSTEM THERMOSTATIC CONTROL WILL BE PROVIDED.

****NOTES****

C403.6 DOAS

EXCEPTION 1 - USING NATURAL VENTILATION PER IMC SECTION 402 (4% OF FLOOR AREA)

672 SQ FT X .04 = 26.9 SQ FT REQUIRED

NET WINDOW OPENING (23"x33 3/8") = 5.3 SQ FT
5.3 SQ FT X (8 WINDOWS) = 42.4 SQ FT WINDOWS

DOOR = 20 SQ FT EACH
20 SQ FT X (2 DOORS) = 40 SQ FT DOORS

82.4 SQ FT OF WINDOW & DOOR OPENINGS

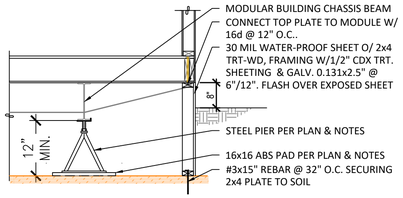
****NOTES****

2021 WSEC EFFICIENCY PACKAGE CREDITS PER C406 (6 CREDITS MIN. REQUIRED).

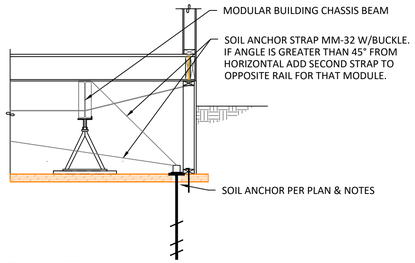
1) REDUCED LIGHTING POWER OPTION 2 PER C406.3.2
.64W (TABLE C405.4.2(1)X672=444W
444WX(.80)=355W ALLOWED/ 274 INSTALLED COMPLIES (4 CREDITS).

2) DEDICATED OUTDOOR AIR SYSTEM (DOAS) PER C406.6 (4 CREDITS)

SHEET: 6

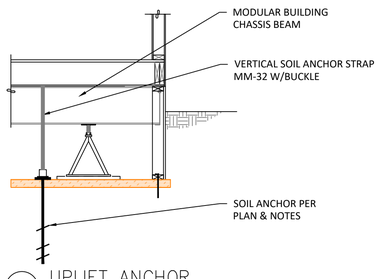


1 PIER/PAD SUPPORT
Scale: 1/2" = 1'-0"

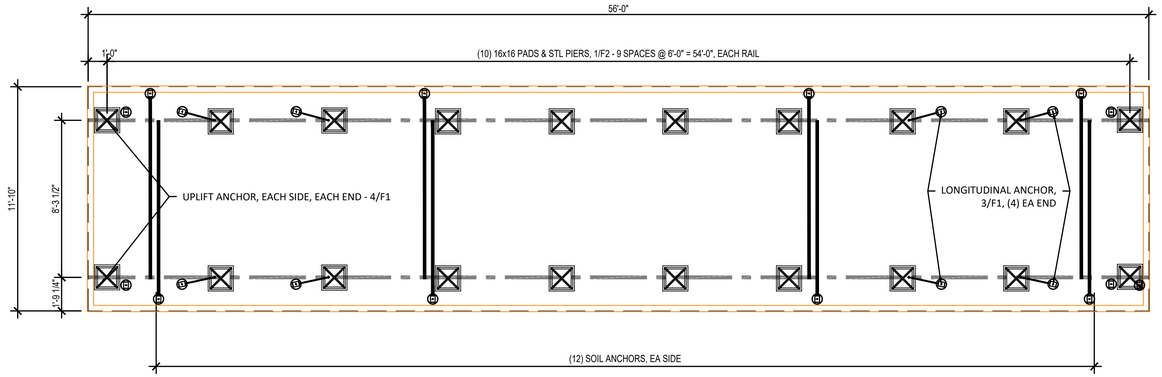


2 LATERAL ANCHOR
Scale: 1/2" = 1'-0"

3 LONGITUDINAL ANCHOR
Scale: 1/2" = 1'-0"



4 UPLIFT ANCHOR
Scale: 1/2" = 1'-0"



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

STRUCTURAL NOTES:

1. GENERAL:
   - 1.1. DESIGN BASED ON NORTHWEST BUILDING SYSTEMS JOB #20208.
   - 1.2. BUILDING DIMENSIONS FROM THE MODULAR BUILDING MANUFACTURER'S PLANS MAY VARY AND INSIGNIFICANT ADJUSTMENTS MAY BE MADE IN THE FIELD.
   - 1.3. ANY VARIATION IN INSTALLATION OR MATERIALS OF THE FOUNDATION REQUIRES ENGINEER CONCURRENCE PRIOR TO PURCHASE AND INSTALLATION OF THE FOUNDATION MATERIALS.
   - 1.4. NO GEOTECHNICAL REPORT WAS FURNISHED FOR THIS FOUNDATION DESIGN. THE OWNER IS RESPONSIBLE FOR PROVIDING A STABLE, FIRM AND SMOOTH FOUNDATION SUBGRADE.
   - 1.5. FOUNDATION IS DESIGNED FOR A FINISHED FLOOR AT 36-INCHES ABOVE GRADE. SHOULD THE FINISHED FLOOR EXCEED THIS HEIGHT, CONTACT ENGINEER TO VERIFY THE DESIGN.
2. DESIGN INFORMATION & LOADING:
   - 2.1. BUILDING CODE
     - 2.1.1. IBC, 2021 EDITION, WBC-22
     - 2.1.2. BUILDING RISK CATEGORY II
   - 2.2. ROOF LIVE LOADS:
     - 2.2.1. 22 PSF-GROUND SNOW LOAD
     - 2.2.2. 25PSF-ROOF DESIGN SNOW LOAD
     - 2.2.3. 20 PSF-ROOF DESIGN LIVE LOAD
   - 2.3. FLOOR LIVE LOAD:
     - 2.3.1. 50 PSF UNIFORM
     - 2.3.2. 2,000# CONCENTRATED
   - 2.4. WIND CRITERION:
     - 2.4.1. 100 MPH, EXP B, Kzt=1.0
   - 2.5. SEISMIC CRITERION: Sds=1.139, Ie=1.0, CATEGORY, D
   - 2.6. ASSUMED SOIL BEARING: 1,500 PSI, SITE SOIL CLASS D
3. CONCRETE:
   - 3.1. DESIGN COMP.STRENGTH 2,500 PSI
   - 3.2. REINF. YIELD 60 KSI
4. MASONRY:
   - 4.1. 8x16 UNITS ASTM C-90, GRADE N
   - 4.2. UNITS MAY BE 8" &/OR 4" NOMINAL HEIGHT UNITS.
   - 4.4. SET SINGLE DRY-STACKED UNITS W/CORES VERTICAL, UNGROUTED & NO MORE THAN 24-INCHES HIGH, PER PLAN.
   - 4.5. SET DOUBLE ALTERNATING DRY-STACKED UNITS W/CORES VERTICAL, UNGROUTED & NO MORE THAN 48-INCHES HIGH, PER PLAN..
   - 4.6. SET DOUBLE ALTERNATING DRY-STACKED UNITS W/CORES VERTICAL, GROUTED & NO MORE THAN 72-INCHES HIGH, PER PLAN.
   - 4.7. CMU PIER TALLER THAN 72-INCHES SHALL BE ENGINEERED FOR SITE SPECIFIC CONDITIONS.
5. SPECIALTY ITEMS:
   - 5.1. METAL PIERS TO BE CAPABLE OF SUPPORTING 6,000#
   - 5.2. ABS PADS TO BE "BLACK PAD" OR EQUIVALENT.
   - 5.3. LATERAL STABILITY SHALL BE MINUTE MAN ANCHORS MMA-92, GW2 , OR EQUIVALENT AUGER SOIL ANCHOR W/ A MIN. *ALLOWABLE* DESIGN LOAD OF 3,150#.
   - 5.4. UPLIFT STABILITY SHALL BE MINUTEMAN ANCHORS MMA-92, GW2 , OR EQUIVALENT AUGER SOIL ANCHOR W/ A MIN. *ALLOWABLE* DESIGN LOAD OF 3,150#.
   - 5.5. CONNECT BRACE TIES TO BUILDING ONLY AFTER BUILDING IS FULLY BLOCKED AND LEVELED.
   - 5.6. INSTALL ALL SPECIALTY ITEMS PER THE MANUFACTURER'S RECOMMENDATIONS.
6. VENTING:
   - 6.1. PROVIDE UNDER FLOOR VENTILATION AT 1 NET SF OF VENTILATION PER 150 SF OF FLOOR AREA.
   - 6.2. IF A CLASS 1 VAPOR RETARDER IS INSTALLED THE RATIO MAY BE INCREASED TO $\frac{1}{1500}$.ACCESS:
   - 6.1. PROVIDE ACCESS TO THE UNDER FLOOR AREA PER THE CODE.
   - 6.2. PROVIDE 18" MIN. CLEARANCE FROM SOIL TO UNDERSIDE OF ANY UNTREATED WOOD MEMBER.
   - 6.3. PROVIDE 12" MIN. CLEARANCE UNDER FROM SOIL TO UNDERSIDE OF ALL BUILDING MEMBERS.
7. SITE CONDITIONS:
   - 7.1. FOUNDATION SUBGRADE TO BE 6-INCH THICK COMPACTED ROAD-MIX GRAVEL PAD OVER UNDISTURBED NATIVE SUITABLE STABLE SOILS OR STRUCTURAL FILL.
   - 7.2. SLOPE FINISHED GRADE AWAY FROM THE BUILDING FOUNDATION AT A MIN. GRADE OF 2%.

SPECIALTY MODULAR

Dean W Briggs, PE
Modular@Bdgs-Engineering.com
2025.01.12 10:44:07 -08'00'

DEAN W. BRIGGS, PE
BRIGGS
SERVING TEH WESTERN UNITES STATES
PO BOX 1405137, GARDEN CITY, ID 83714 - (208) 871-0200

THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT FROM DEAN W BRIGGS, PE

SEA-TAC
20841 INTERNATIONAL BLVD, SEATAC, WA 98198

12x56 OFFICE BUILDING - FOUNDATION PLAN/NOTES/DETAILS

DWG DATE: JANUARY 2025
DWG NO. 20250100.01.1-1
SCALE: AS SHOWN

REVISION DATE: 1/11/2025

F1

SHEET : 1 OF 1

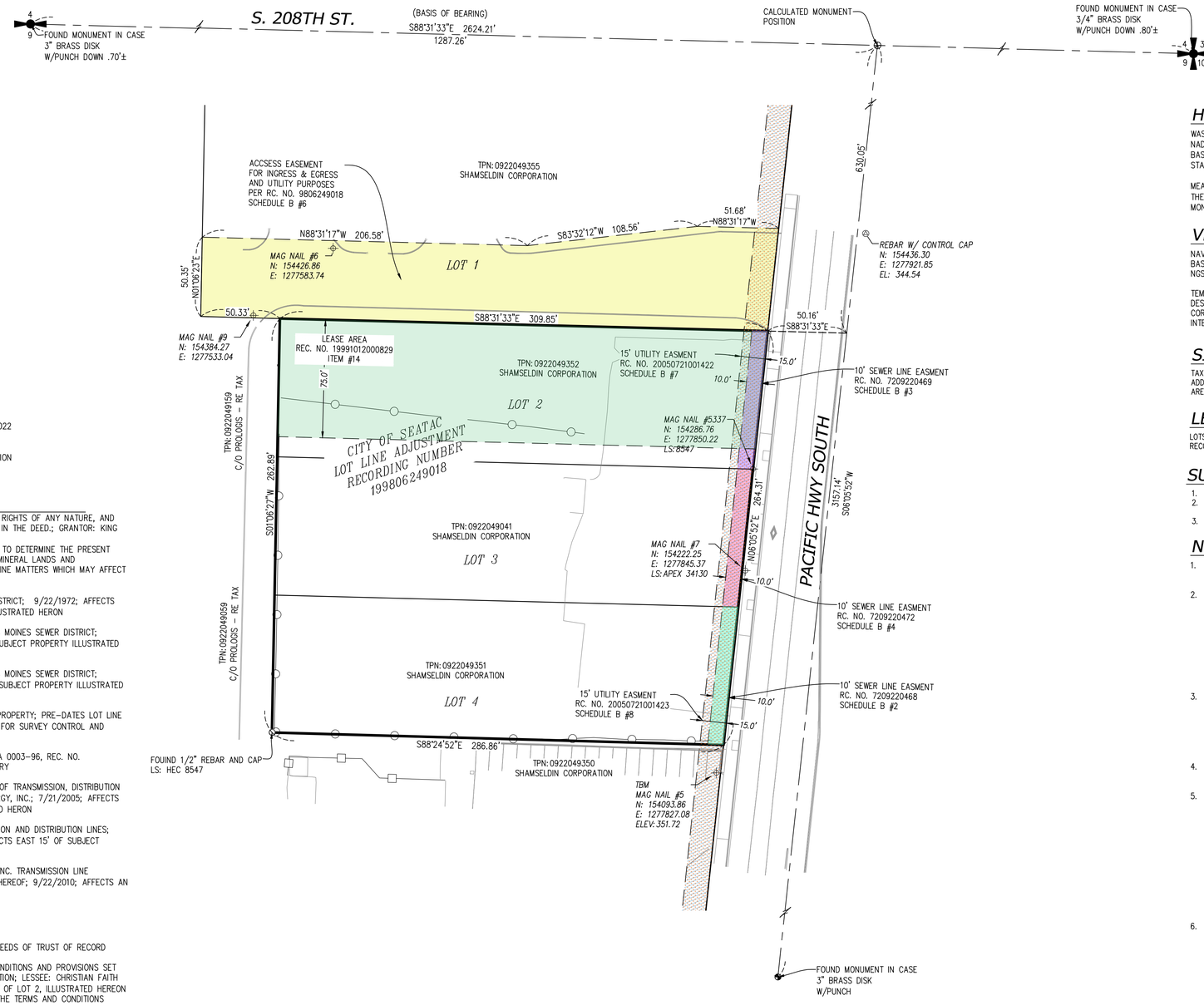
ROBIN RAY

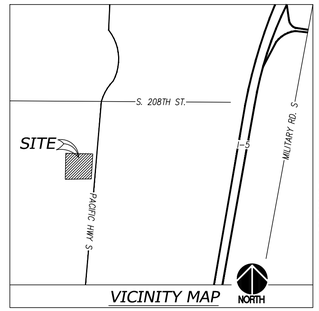
BOUNDARY AND TOPOGRAPHIC SURVEY

A PORTION OF THE N.W. 1/4 OF THE N.E. 1/4 OF SECTION 9, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M., CITY OF SEATAC, KING COUNTY, WASHINGTON

NORTH

HORIZONTAL SCALE: 1"=40'
40 0 40 80





LEGEND

- FOUND MONUMENT AS NOTED, MARCH 2022
- FOUND REBAR / IRON PIPE AS NOTED
- SURVEY CONTROL POINT, AS NOTED
- TPN TAX PARCEL NUMBER
- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- ROAD CENTERLINE
- CHAIN LINK FENCE
- HAND RAIL

SCHEDULE B EXCEPTIONS

PER CHICAGO TITLE COMPANY GUARANTEE NUMBER 221294–TC, DATED MARCH 23, 2022

* NOT A SURVEY MATTER, DESCRIPTION PROVIDED AS A COURTESY
** CONTENT/DATA WITHIN INSTRUMENT IS INSUFFICIENT TO DETERMINE EXACT LOCATION
*** INSTRUMENT IS BLANKET IN NATURE OR AFFECTS ENTIRE PROPERTY
DNA DOES NOT APPLY

EXCEPTION NUMBER	AFN	DESCRIPTION
1	***1315102	RESERVATION OF OIL, COAL, GAS AND MINERAL RIGHTS OF ANY NATURE, AND RIGHT OF ENTRY TO EXPLORE SAME,CONTAINED IN THE DEED.; GRANTOR: KING COUNTY; 6/10/1919; TITLE NOTE: NO EXAMINATION HAS BEEN MADE TO DETERMINE THE PRESENT RECORD OWNER OF THE ABOVE MINERALS, OR MINERAL LANDS AND APPURTENANT RIGHTS THERETO, OR TO DETERMINE MATTERS WHICH MAY AFFECT THE LANDS OR RIGHTS SO RESERVED.
2	7209220468	SEWER MAIN EASEMENT; DES MOINES SEWER DISTRICT; 9/22/1972; AFFECTS EAST 10' OF LOT 4 OF SUBJECT PROPERTY ILLUSTRATED HERON
3	7209220469	RIGHT OF WAY OR SEWER MAIN EASEMENT; DES MOINES SEWER DISTRICT; 9/22/1972; AFFECTS EAST 10' OF LOT 2 OF SUBJECT PROPERTY ILLUSTRATED HEREON
4	7209220472	RIGHT OF WAY OR SEWER MAIN EASEMENT; DES MOINES SEWER DISTRICT; 9/22/1972; AFFECTS EAST 10' OF LOT 3 OF SUBJECT PROPERTY ILLUSTRATED HEREON
5	9010249004	BOUNDARY SURVEY WHICH INCLUDES SUBJECT PROPERTY; PRE–DATES LOT LINE ADJUSTMENT (ITEM 6); USED AS A REFERENCE FOR SURVEY CONTROL AND BOUNDARY
6	9806249018	CITY OF SEATAC LOT LINE ADJUSTMENT NO. LLA 0003–96, REC. NO. 199806249018; SERVES AS BASIS FOR BOUNDARY
7	20050721001422	ONE OR MORE UTILITY SYSTEMS FOR PURPOSE OF TRANSMISSION, DISTRIBUTION AND SALE OF ELECTRICITY; PUGET SOUND ENERGY, INC.; 7/21/2005; AFFECTS EAST 15' OF SUBJECT PARCELS AS ILLUSTRATED HERON
8	20050721001423	OVERHEAD FACILITIES FOR ELECTRIC TRANSMISSION AND DISTRIBUTION LINES; PUGET SOUND ENERGY, INC.; 7/21/2005; AFFECTS EAST 15' OF SUBJECT PARCELS AS ILLUSTRATED HEREON
9	20100922000020	CONSENT FOR USE OF PUGET SOUND ENERGY, INC. TRANSMISSION LINE RIGHT–OF–WAY AND TERMS AND CONDITIONS THEREOF; 9/22/2010; AFFECTS AN OFFSITE LOCATION
10	N/A	TAXES
11	N/A	TAXES
12	N/A	TAXES
13	N/A	TITLE NOTE REGARDING OPEN MORTGAGES OR DEEDS OF TRUST OF RECORD
14	19991012000829	A LEASE WITH CERTAIN TERMS, COVENANTS, CONDITIONS AND PROVISIONS SET FORTH THEREIN; LESSOR: SHAMSELDIN CORPORATION; LESSEE: CHRISTIAN FAITH CENTER; 10/12/1999; AFFECTS THE NORTH 75' OF LOT 2, ILLUSTRATED HEREON
	9603261232	MEMORANDUM OR AMENDMENT OF LEASE AND THE TERMS AND CONDITIONS THEREOF; 3/26/1996
	9808071861	SECOND AMENDMENT TO GROUND LEASE, ASSIGNMENT AND ASSUMPTION OR GROUND LEASE AND CONSENT TO ASSIGNMENT OF GROUND LEASE AND THE TERMS AND CONDITIONS THEREOF; LESSOR: SHAMSELDIN CORPORATION; ASSIGNOR: CHRISTIAN FAITH CENTER; ASSIGNEE: ALASKA AIRLINES, INC.; 8/7/1998
15	N/A	TITLE NOTE; NOT A SURVEY MATTER

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2011 EPOCH 2010.00
BASED ON GPS OBSERVATION UTILIZING THE WASHINGTON STATE REFERENCE NETWORK (WSRN)

MEASURED NORTH S88°31'33"E EAST FOR THE NORTH LINE OF THE N.E. 1/4 OF SECTION 9 BETWEEN TWO FOUND MONUMENTS ALONG S. 208TH ST.

VERTICAL DATUM

NAVD 88
BASED ON GPS OBSERVATION UTILIZING THE WSRN WITH NGS GEOID18 LOADED

TEMPORARY BENCHMARK ELEVATION = 351.72
DESCRIPTION: MAGNAIL #5 LOCATED IN THE NORTHEASTERLY CORNER OF THE SOUTHERLY PARKING LOT, WEST OF INTERNATIONAL BLVD.

SITE DATA

TAX PARCEL NO. 0922049352, 0922049041, 0922049351
ADDRESS: 21011 INTERNATIONAL BLVD SEATAC, WA 98198
AREA: 78543± SQ. FT. = 1.8 ACRES±

LEGAL DESCRIPTION

LOTS 2, 3 AND 4 OF CITY OF SEATAC LOT LINE ADJUSTMENT NO. LLA 0003–96, RECORDED UNDER RECORDING NO. 9806249018, IN KING COUNTY, WASHINGTON.

SURVEY REFRENCES

1. CHICAGO TITLE COMPANY GUARANTEE NO. 221294–TC
2. LOT LINE ADJUSTMENT CITY OF SEATAC LLA 0003–96 KING COUNTY, WASHINGTON
3. RECORD OF SURVEY, BOOK 239 PAGE 178

NOTES

1. EQUIPMENT USED: TOPCON QS AND/OR CARLSON CR2+ ROBOTIC TOTAL STATION; TOPCON, HIPER VR FOR GPS READINGS
2. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE WITH THE FINAL RESULTS MEETING OR EXCEEDING THE CURRENT TRAVERSE AND RELATIVE POSITIONAL ACCURACY STANDARDS CONTAINED IN W.A.C. 332–130–085 AND W.A.C. 332–130–090. THE RELATIVE POSITIONAL ACCURACY OF THE POSITIONS LOCATED HEREON MEETS OR EXCEEDS 2 CM (0.07 FT.) PLUS 50 PARTS PER MILLION BETWEEN ANY TWO TESTED POSITIONS. ALL MEASUREMENTS WERE MADE WITH A CARLSON CR2+ ROBOTIC TOTAL STATION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON (R.C.W.) 58.09 AND THE WASHINGTON ADMINISTRATIVE CODE (W.A.C.) 332–130, THIS SURVEY MAY DEPICT OCCUPATIONAL INDICATORS THAT DIFFER FROM THE DEEDED LOT LINES. THESE INDICATORS, IF AT ALL PRESENT, MAY REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT PURPORT TO RESOLVE SUCH ITEMS.
4. FIELD WORK PERFORMED IN MARCH 2022, UNDER SITTS & HILL JOB NUMBER 19656.
5. UTILITIES AS SHOWN HEREON ARE BASED ON FIELD SURVEY OBSERVATION OF UTILITY LOCATE SERVICES PERFORMED BY C–N–I IN MARCH 2022 FOR THIS SURVEY. THIS HAS BEEN SUPPLEMENTED BY RECORD INFORMATION PROVIDED BY (AGENCY). RECORD UTILITY LINES SHOWN HEREON ARE DEPICTED WITH A DASHED LINETYPE AS SHOWN IN THE LEGEND. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY AND PAINTED UTILITY LOCATE LINES. COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA IS CONSISTENT WITH QUALITY LEVEL (A,B,C,D) OF THE ASCE STANDARD GUIDELINES 38–02.
6. SITTS & HILL ENGINEERS, INC. HAS RELIED UPON TITLE INFORMATION NOTED IN COMMITMENT FOR TITLE INSURANCE PREPARED BY CHICAGO TITLE INSURANCE COMPANY OF WASHINGTON, COMMITMENT NUMBER 2212994–TC, DATED 03–29–2022. IN PREPARATION OF THIS SURVEY, SITTS AND HILL ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS SITTS AND HILL ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND/OR DISCLOSED BY SAID TITLE COMPANY'S ORDER. SITTS & HILL ENGINEERS, INC. HAS RELIED WHOLLY ON SAID TITLE COMPANY'S REPORT AND THEREFORE QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. THIS SURVEY COMPLIES WITH W.A.C. 332–130–145. THE CONTOURS DEPICTED HEREON ARE BASED ON DATA FROM DIRECT FIELD MEASUREMENTS. SPOT ELEVATIONS ARE BASED ON DIRECT FIELD MEASUREMENTS AND ARE DEPICTED FOR REFERENCE. THE PURPOSE OF THIS TOPOGRAPHIC MAP IS TO SERVE AS A BASE MAP FOR CONTEMPLATED SITE IMPROVEMENTS AND DESIGN.

REVISIONS

APPROVALS
DESIGNED --
DRAWN G.M.C.
CHECKED D.M.S.
DATE 04–26–2022
SCALE AS NOTED

SEAL
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF WASHINGTON
SCHILLING
20013
PRELIMINARY

PREPARED BY
sitts & hill
CIVIL | STRUCTURAL | SURVEY
4815 CENTER STREET | TACOMA, WA 98409
PHONE: (253) 474-9449 | FAX: (253) 474-0153
http://www.sittshill.com/

PREPARED FOR
LLEWELLEYN REAL ESTATE
618 SOUTH 223RD ST. SUITE 2
DES MOINES, WA 98198
253–852–1898

PROJECT
SHAMSELDIN SEATAC COMMERCIAL SITE
21011 INTERNATIONAL BLVD SEATAC, WA 98198

SHEET TITLE
BOANDARY AND TOPOGRAPHIC SURVEY

SHEET NO.
1 OF 2

PROJECT NO.
19656

O:\19600\19656\Drawings\19656 - Topo Sheet 1.dwg last edited: 04/26/22 4:06pm by: sdhillingd

LEGEND

- FOUND MONUMENT AS NOTED
- FOUND REBAR / IRON PIPE AS NOTED
- SURVEY CONTROL POINT, AS NOTED
- SANITARY SEWER MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- UTILITY POLE
- GUY ANCHOR
- JUNCTION BOX
- POWER CABINET
- LIGHT POLE
- ELECTRIC METER
- BOLLARD
- GATE POST
- COMMUNICATIONS VAULT
- COMMUNICATIONS MANHOLE
- SIGN
- DECIDUOUS TREE
- TPN TAX PARCEL NUMBER
- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- ROAD CENTERLINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- BURIED WATER LINE
- BURIED GAS LINE
- BURIED POWER LINE
- BURIED TELECOMMUNICATIONS LINE
- OVERHEAD POWER LINE
- CHAIN LINK FENCE
- HAND RAIL
- RECORD STORM LINE
- RECORD SANITARY LINE
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- RIVER ROCKS

REVISIONS --

APPROVALS

DESIGNED	---
DRAWN	G.M.C.
CHECKED	D.M.S.
DATE	04-26-2022
SCALE	AS NOTED

SEAL

SCHILLING / 36013 / REGISTERED PROFESSIONAL LAND SURVEYOR / STATE OF WASHINGTON

PRELIMINARY

PREPARED BY

sitts & hill
CIVIL I STRUCTURAL I SURVEY
4815 CENTER STREET I I TACOMA, WA 98409
PHONE: (253) 474-9449 I I FAX: (253) 474-0153
http://www.sittshill.com/

PREPARED FOR

LLEWELLEYN REAL ESTATE
618 SOUTH 223RD ST. SUITE 2
DES MOINES, WA 98198
253-852-1898

PROJECT
SHAMSELDIN SEATAC
COMMERCIAL SITE
21011 INTERNATIONAL BLVD SEATAC, WA 98198

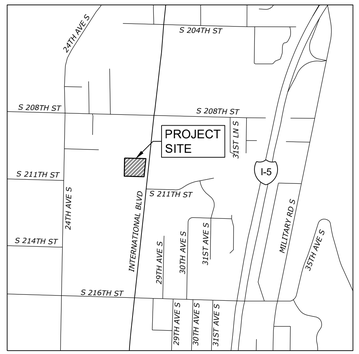
SHEET TITLE
BOUNDARY AND TOPOGRAPHIC
SURVEY

SHEET NO.
2 OF 2

PROJECT NO.
19656

D:\19656\19656\Drawings\19656 - Topo Sheet 2.dwg last edited: 04/26/22 4:09pm by: sschilling

LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198
STE - GRADING & DRAINAGE PERMIT - 02.03.2025



VICINITY MAP
NTS

SURVEY INFORMATION
SURVEY PREPARED BY SITTS & HILL ENGINEERS, INC. DATED 02.13.2023

LEGAL DESCRIPTION
LOTS 2, 3 AND 4 OF CITY OF SEATAC LOT LINE ADJUSTMENT NO. LLA 0003-96, RECORDED UNDER RECORDING NO. 9806249018, IN KING COUNTY, WASHINGTON.

BASIS OF BEARINGS
WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83/2011 EPOCH 2010.00 BASED ON GPS OBSERVATION UTILIZING THE WASHINGTON STATE REFERENCE NETWORK (WSRN)

MEASURED NORTH S88°31'33"E EAST FOR THE NORTH LINE OF THE N.E. 1/4 OF SECTION 9 BETWEEN TWO FOUND MONUMENTS ALONG S. 20TH ST.

VERTICAL DATUM
NAVD 88
BASED ON GPS OBSERVATION UTILIZING THE WSRN WITH NGS GEOID18 LOADED

TEMPORARY BENCHMARK ELEVATION = 351.72
DESCRIPTION: MAGNAIL #5 LOCATED IN THE NORTHEASTERLY CORNER OF THE SOUTHERLY PARKING LOT, WEST OF INTERNATIONAL BLVD.

ABBREVIATIONS

AC	ACRE	NC	NO CURB
APPROX	APPROXIMATELY	NO.	NUMBER
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	NTS	NOT TO SCALE
ARCH	ARCHITECTURAL	OC	ON CENTER
ASPH	ASPHALT	OD	OUTSIDE DIAMETER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	OFF	OFFSET
AVE	AVENUE	PC	POINT OF CURVATURE
		PCC	POINT OF COMPOUND CURVE
BLDG	BUILDING	PI	POINT OF INTERSECTION
BMP	BEST MANAGEMENT PRACTICE	PL	PROPERTY LINE
BTM	BOTTOM OF PIPE	PP	POWER POLE
BW	BOTTOM OF WALL	PRC	POINT OF REVERSE CURVE
		PROP	PROPOSED
℄	CENTERLINE	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVC	POLYVINYL CHLORIDE
CF	CUBIC FEET	PVMT	PAVEMENT
CI	CAST IRON		
CL	CLASS	R	RADIUS
CMP	CORRUGATED METAL PIPE	RCW	REVISED CODE OF WASHINGTON
CO	CLEAN OUT	ROW	RIGHT-OF-WAY
CONC	CONCRETE	RT	RIGHT
CPEP	CORRUGATED POLYETHYLENE PIPE	S	SOUTH
CR	CROWN OF PIPE	SC	STORM CEPTOR
CSTC	CRUSHED SURFACING TOP COURSE	SCH	SCHEDULE
		SD	STORM DRAIN
DEPT	DEPARTMENT	SDMH	STORM DRAIN MANHOLE
DI	DUCTILE IRON	SDR	STANDARD DIMENSION RATIO
E	EAST	SF	SQUARE FEET
EA	EACH	SPECS	SPECIFICATIONS
EC	EXTRUDED CURB	SQ YD	SQUARE YARD
EG	EXISTING GRADE	SS	SANITARY SEWER
ELEV	ELEVATION	SSCO	SANITARY SEWER CLEANOUT
EP	EDGE OF PAVEMENT	ST	STREET
ESC	EROSION & SEDIMENT CONTROL	STA	STATION
EXIST	EXISTING	STD	STANDARD
FFE	FINISH FLOOR ELEVATION	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
FG	FINISHED GRADE		
FH	FIRE HYDRANT		
FL	FLANGED	T	TELEPHONE
		TC	TOP OF CURB
G	GAS	TEMP	TEMPORARY
GRVL	GRAVEL	TESC	TEMPORARY EROSION & SEDIMENT CONTROL
GV	GAS VALVE		
		TP	TOP OF PAVEMENT
H	HEIGHT	TW	TOP OF WALL
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL
HMA	HOT MIX ASPHALT		
HORIZ	HORIZONTAL	UG	UNDER GROUND
		UIC	UNDER GROUND INJECTION CONTROL
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION	U.O.N.	UNLESS OTHERWISE NOTED
IN	INCH	UP	UTILITY POLE
L	LENGTH	V	VERTICAL
LAT	LATITUDE		
LF	LINEAR FEET	W	WEST
LON	LONGITUDE	W/	WITH
LT	LEFT	WAC	WASHINGTON ADMINISTRATIVE CODE
MAX	MAXIMUM	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
MH	MANHOLE		
MIN	MINIMUM	WV	WATER VALVE
MISC	MISCELLANEOUS		
MJ	MECHANICAL JOINT	YD	YARD DRAIN
MON	MONUMENT		
N	NORTH		

30 15 0 30
SCALE: 1"= 30'

SHEET INDEX

SHEET NO.	DESCRIPTION
C-001	COVER SHEET
C-100	DEMOLITION PLAN
C-101	TESC PLAN
C-102	TESC DETAILS
C-300	GRADING PLAN
C-301	GRADING DETAILS
C-401	STORM DRAINAGE & UTILITY PLAN
C-402	STORM DRAINAGE PROFILE AND DETENTION SYSTEM PLAN
C-410	UTILITY DETAILS
L-301	LANDSCAPE PLAN
L-401	IRRIGATION PLAN
L-501	PLANTING DETAILS
L510	IRRIGATION DETAILS

SITE DATA
PARCEL NUMBER: 0922049352

PARKING STALLS:	ADA	2
	COMPACT	69
	STANDARD	170
	TOTAL	241

PROJECT TEAM

DEVELOPER
LLEWELLYN REAL ESTATE
618 SOUTH 223RD STREET, SUITE 2
DES MOINES, WA 98198
CONTACT: MORGAN LLEWELLYN
PHONE: 253.852.1898
EMAIL: MORGAN@LLEWELLYNRE.COM

ARCHITECT
BCRA
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: HEIDI KIHLMAN
PHONE: 253.627.4367
EMAIL: HKIHLMAN@BCRADESIGN.COM

CIVIL ENGINEER
BCRA
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: JIM COOK
PHONE: 253.627.4367
EMAIL: JCOOK@BCRADESIGN.COM

LANDSCAPE ARCHITECT
BCRA
2106 PACIFIC AVENUE, SUITE 300
TACOMA, WA 98402
CONTACT: MAYA TUIASOSOPO
PHONE: 253.627.4367
EMAIL: MTUIASOSOPO@BCRADESIGN.COM

SURVEYOR
SITTS & HILL
4815 CENTER STREET
TACOMA, WA 98409
CONTACT: DESIRAE SCHILLING
PHONE: 253.474.9449
EMAIL: SITTSHILL.COM

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

bcra
T 253.627.1367, F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

JAIMES D. COOK — 43645 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025
BCRA NO.
21054
DRAWN BY: SJC DESIGNED BY: LPL
REVIEWED BY: JDC
SHEET TITLE
COVER SHEET

bcra
© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
C-001
STE - GRADING & DRAINAGE PERMIT

DATE PLOTTED: 2/3/2025 8:16:41 AM FILENAME: 21054 COVER.DWG BY: —

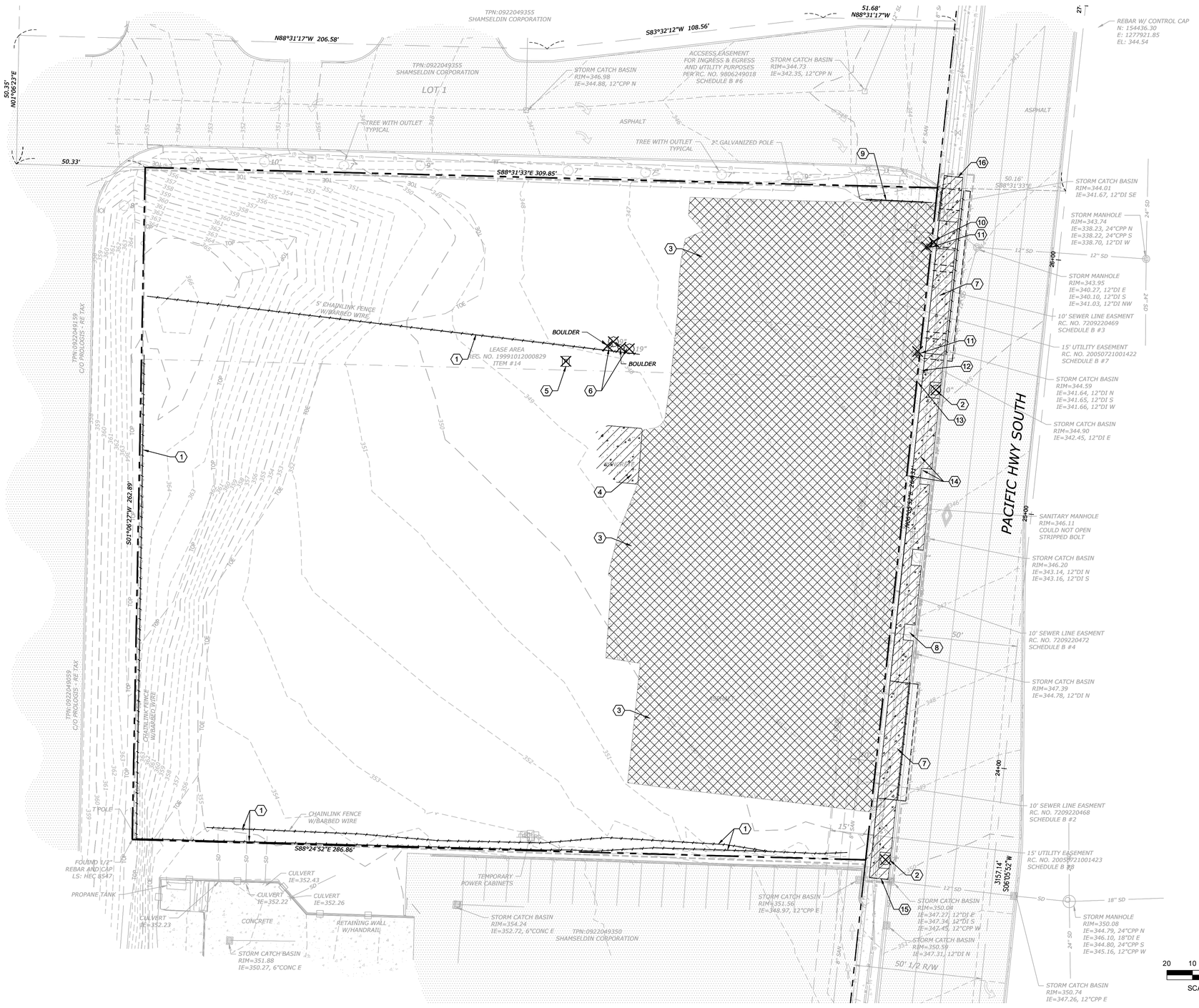
IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

LEGEND

- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- EX PROPERTY BOUNDARY
- EX CENTERLINE
- EX RIGHT-OF-WAY
- EX ASPHALT
- EX CONCRETE
- REMOVE ASPHALT
- REMOVE CONCRETE
- LIMITS OF DISTURBANCE
- DEMOLISH FEATURE
- REMOVE FEATURE

DEMOLITION KEYNOTES

1. EX FENCE TO BE REMOVED
2. EX STREET TREE TO BE REMOVED
3. EX ASPHALT TO BE REMOVED AS NOTED
4. EX CONCRETE TO BE REMOVED
5. EX POWER EQUIPMENT TO BE REMOVED
6. EX TREES & BOULDERS TO BE REMOVED
7. EX DRIVEWAY APPROACH, CURB AND GUTTER TO BE REMOVED
8. UNLESS NOTED OTHERWISE EX STREET TREES SHALL BE PROTECTED TO THE MAXIMUM EXTENT FEASIBLE
9. EX WOOD LANDSCAPE BORDER TO BE REMOVED
10. EX LIGHT POLE TO BE REMOVED
11. EX BOLLARD TO BE REMOVED
12. PROTECT EX FIRE HYDRANT TO REMAIN
13. PROTECT EX POWER POLE TO REMAIN
14. PROTECT ALL EX UTILITIES TO REMAIN
15. BEGIN REMOVAL OF EX SIDEWALK TO NEAREST JOINT
16. END REMOVAL OF EX SIDEWALK TO NEAREST JOINT



Know what's below. Call before you dig.

DATE PLOTTED: 2/3/2025 8:16:51 AM FILENAME: 21054 DEMO.DWG BY: ---

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

bcra
T.253.627.4367, F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

SEAL

JAIMIE D. CORNELIUS — 43645 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025

BCRA NO.
21054

DRAWN BY: SJC DESIGNED BY: LPL

REVIEWED BY: JDC

SHEET TITLE
DEMOLITION PLAN

bcra

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
C-100

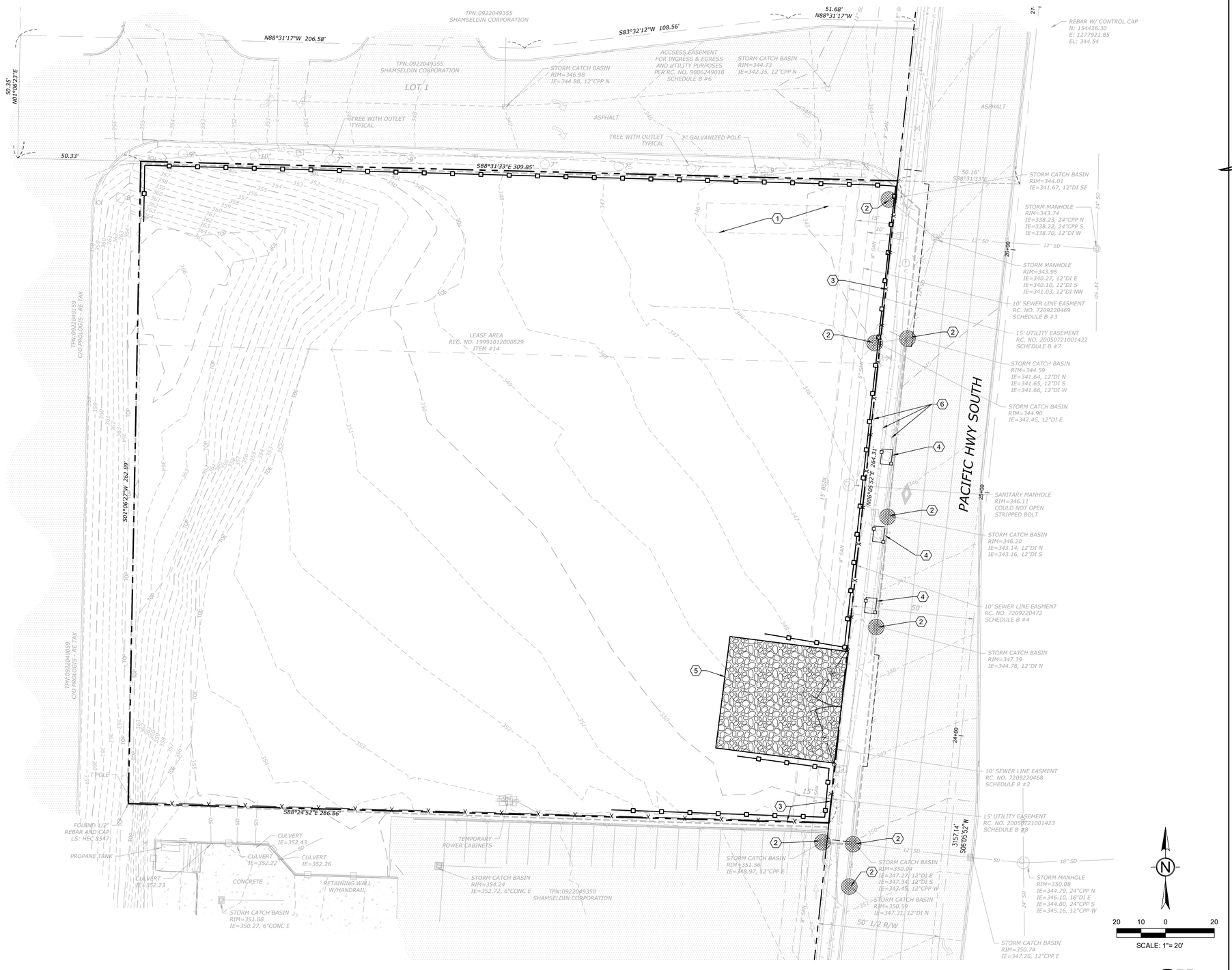
STE - GRADING & DRAINAGE PERMIT

LEGEND

- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- EX PROPERTY BOUNDARY
- EX CENTERLINE
- EX RIGHT-OF-WAY
- EX ASPHALT
- EX CONCRETE
- LIMITS OF DISTURBANCE
- SILT / FILTER FABRIC FENCE
- TREE PROTECTION FENCING
- STRAW WATTLES
- TEMP CONSTRUCTION FENCE
- CONSTRUCTION ENTRANCE
- INLET PROTECTION

T.E.S.C. KEYNOTES

1. PROPOSED BUILDING FOOTPRINT
2. PROVIDE INLET PROTECTION (TYP) SEE DETAIL 3/C-102
3. PROVIDE TEMPORARY CONSTRUCTION FENCING AND GATE SEE DETAIL 6/C-102
4. PROVIDE TREE PROTECTION EX TREES TO REMAIN SEE DETAIL 5/C-102
5. PROVIDE CONSTRUCTION ENTRANCE SEE DETAIL 2/C-102 COORDINATE WITH SITE INSPECTOR FOR EXACT SIZE AND LOCATION
6. PROTECT ALL EX UTILITIES TO REMAIN



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

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

DATE PLOTTED: 2/3/2025 8:16:59 AM FILENAME: 21054 TESC.DWG BY:---

bcra
T.253.627.4367, F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

SEAL

JAIMIE D. CORNELIUS — 43645 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025

BCRA NO.
21054

DRAWN BY: SJC DESIGNED BY: LPL

REVIEWED BY: JDC

SHEET TITLE
TESC PLAN

bcra

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

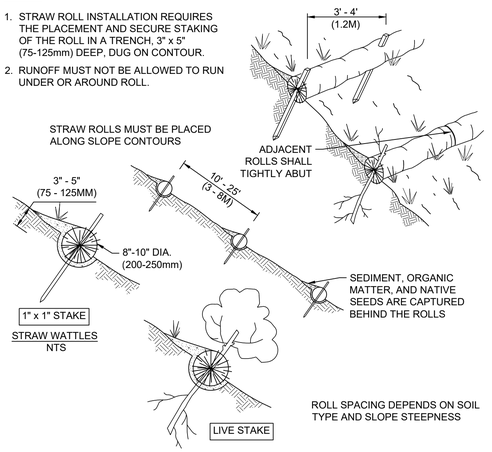
SHEET

C-101

STE - GRADING & DRAINAGE PERMIT

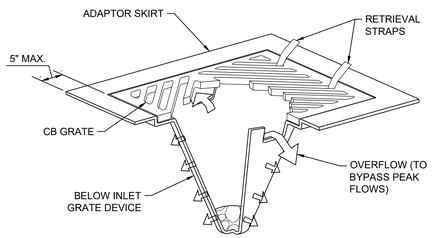
NOTES:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" x 5" (75-125mm) DEEP, DUG ON CONTOUR.
2. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.



STRAW WATTLES

NTS 4

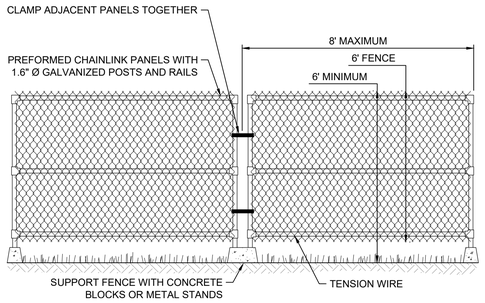


NOTES:

1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
2. THE "BIGD" SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE "BIGD" WITHOUT SPILLING THE COLLECTED MATERIAL.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STD. SPEC. 8-01.3(15).

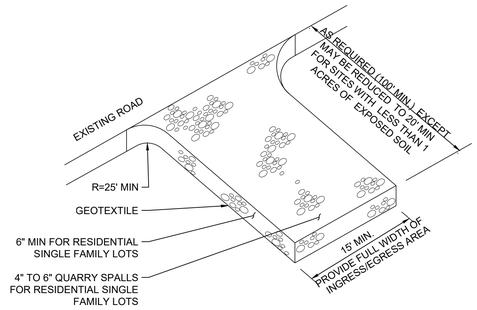
CATCH BASIN INLET PROTECTION

NTS 3



TEMPORARY CHAIN LINK CONSTRUCTION FENCE

NTS 6



CONSTRUCTION ENTRANCE NOTES

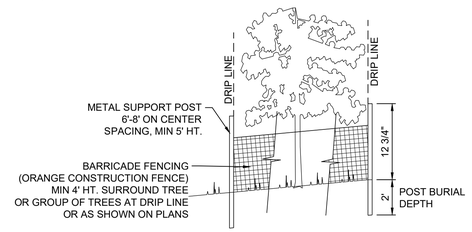
1. MATERIAL SHALL BE 4 INCH TO 8 INCH QUARRY SPALLS (4 TO 6 INCH FOR RESIDENTIAL SINGLE FAMILY LOTS) AND MAY BE TOP-DRESSED WITH 1 INCH TO 3 INCH ROCK. (STATE STANDARD SPECIFICATIONS, SECTION 8-15.)
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 50 FEET LONG (20 FEET FOR SITES WITH LESS THAN 1 ACRE OF DISTURBED SOIL). WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. SMALLER PADS MAY BE APPROVED FOR SINGLE-FAMILY RESIDENTIAL AND SMALL COMMERCIAL SITES.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF PAD.
4. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE IN AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.
5. GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:
   -GRAB TENSILE STRENGTH (ASTM D4751) - 200 PSI MIN.
   -GRAB TENSILE ELONGATION (ASTM D4632) - 30% MAX
   -MULLEN BURST STRENGTH (ASTM D3786-80a) - 400 PSI MIN.
   -AOS (ASTM D4751) - 20 TO 45
   (U.S. STANDARD SIEVE SIZE)

CONSTRUCTION ENTRANCE

NTS 2

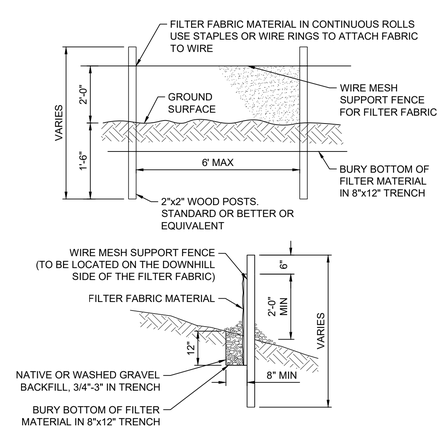
NOTES:

1. A 4 FOOT HIGH TEMPORARY FENCE MUST BE PLACED AT THE DRIP LINE OF TREES PRIOR TO THE COMMENCEMENT OF CLEARING OR EARTHWORK. NOTIFY THE CLEARING AND GRADING INSPECTOR TO GET BOTH THE INSPECTION AND WRITTEN APPROVAL OF FLAGGED TREES AND TEMPORARY PROTECTION FENCING AROUND TREES TO BE SAVED PER THE APPROVED CLEARING AND GRADING PLAN.
2. NO STOCKPILING OF MATERIAL AND NO VEHICULAR TRAFFIC ARE ALLOWED WITHIN THE LIMITS OF HAND THE TEMPORARY FENCING. FILLING, EXCAVATION, AND CLEARING MUST BE ACCOMPLISHED BY HAND METHODS ONLY.
3. ROOTS OF TREES TO BE SAVED WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE TREATED IN THE FOLLOWING WAY: FOR DAMAGED ROOTS AVER 1" IN DIAMETER, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION OF THE ROOT ALL EXPOSED ROOTS WILL BE TEMPORARILY COVERED WITH DAMP BURLAP OR WOOD SHAVINGS TO PREVENT DRYING AND COVERED WITH EARTH AS SOON AS POSSIBLE.
4. SEE LANDSCAPE PLANS FOR LOCATION OF EXISTING TREES TO RECEIVE TEMPORARY FENCING.
5. SEE SPECIFICATIONS FOR PRUNING, WATERING AND OTHER MAINTENANCE REQUIREMENTS



TREE PROTECTION

NTS 5



FILTER FABRIC FENCE NOTES:

1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT THE SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED AT BOTH ENDS TO POST.
2. POST SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POST AND UPSLOPE FROM THE BARRIER. THIS TRENCH SHALL BE BACKFILLED WITH WASHED GRAVEL.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POST USING A HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS.THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED TO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH CASE, THE FILTER FABRIC IS STAPLED OR WIRE DIRECTLY TO THE POST WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
7. FILTER FABRIC FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SILT FENCES WILL BE INSTALLED PARALLEL TO ANY SLOPE CONTOURS.
10. CONTRIBUTING LENGTH TO FENCE WILL NOT BE GREATER THAN 100 FEET.
11. DO NOT INSTALL BELOW AN OUTLET PIPE OR WEIR.
12. INSTALL DOWNSLOPE OF EXPOSED AREAS.
13. DO NOT DRIVE OVER OR FILL OVER SILT FENCES.

FILTER FABRIC - SILT FENCE

NTS 1

bcra
T.253.627.4367, F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

SEAL

JAMES D. CORRIGAN
STATE OF WASHINGTON
21645
REGISTERED
PROFESSIONAL ENGINEER

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025
BCRA NO.
21054
DRAWN BY: SJC DESIGNED BY: LPL
REVIEWED BY: JDC
SHEET TITLE
TESC DETAILS

bcra
© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
C-102

STE - GRADING & DRAINAGE PERMIT

DATE PLOTTED: 2/3/2025 8:17:04 AM FILENAME: 21054 TESC DETAILS.DWG BY: —

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

LEGEND

- EX PROPERTY BOUNDARY
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- EX STORM DRAINAGE PIPE
- EX YD/CO/CB/CB 2/MH
- EX WATER LINE
- EX METER
- EX FIRE HYDRANT
- EX GATE VALVE
- EX SEWER PIPE
- EX SANITARY MH/CO
- ASPHALT PAVEMENT
- CEMENT CONCRETE SIDEWALK
- CEMENT CONCRETE PAVEMENT
- CURB AND GUTTER
- BUILDING
- CAST-IN-PLACE RETAINING WALL
- 100 MAJOR CONTOURS
- 102 MINOR CONTOURS
- (R) (V) (BREAK) RIDGE / VALLEY / GRADE BREAK
- STORM DRAINAGE PIPE
- AD CB AREA DRAIN / CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2 / MANHOLE
- SDCO STORM CLEANOUT
- WATER SERVICE LINE
- SSS SSS SANITARY SEWER SERVICE

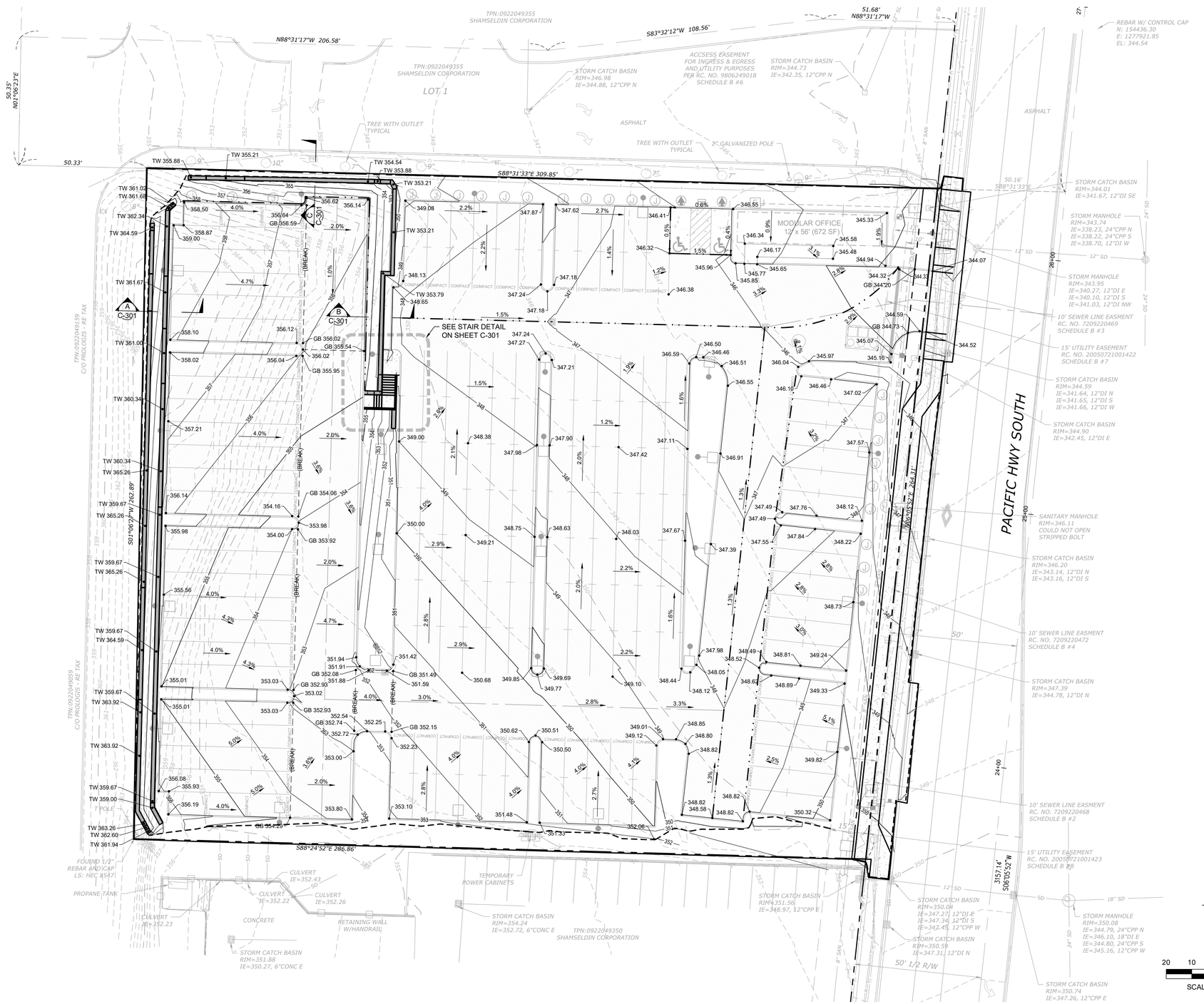
EARTHWORK

CUT	2972 CY
FILL	998 CY
NET	1974 CY (CUT)

VOLUMES ARE APPROXIMATE, A SHRINK/SWELL FACTOR HAS NOT BEEN APPLIED. CONTRACTOR SHALL DETERMINE EXACT EARTHWORK VOLUMES.

SPOT ELEVATION LEGEND

- XX.XX TOP OF PAVEMENT
- TW XX.XX TOP OF WALL @ GRADE (TW)
- BW XX.XX RETAINING WALL
- BOTTOM OF WALL @ GRADE (BW)
- GB XX.XX GRADE BREAK (GB)
- XX.XX (ME) MATCH EXISTING GROUND (ME)



ALL ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED

20 10 0 20

SCALE: 1"= 20'

Know what's below. Call before you dig.

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

DATE PLOTTED: 2/3/2025 8:17:19 AM FILENAME: 21054 GRAD.DWG BY: ---

bcra
T 253.627.1367, F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

SEAL

JAMES D. CORRIGAN STATE OF WASHINGTON 43645 REGISTERED PROFESSIONAL ENGINEER

2/3/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025

BCRA NO.
21054

DRAWN BY: SJC DESIGNED BY: LPL

REVIEWED BY: JDC

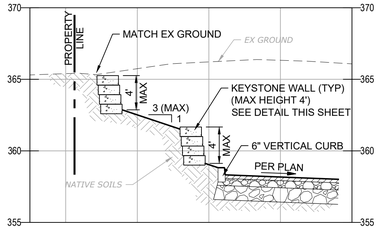
SHEET TITLE
GRADING PLAN

bcra

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

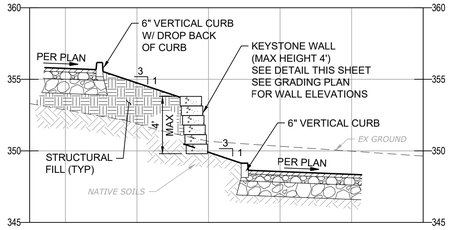
SHEET
C-300

STE - GRADING & DRAINAGE PERMIT



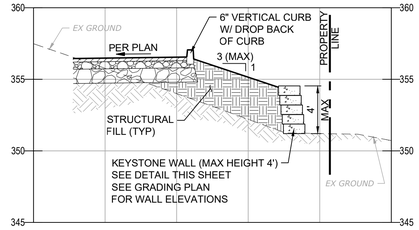
SITE SECTION 'A'

1"=5'



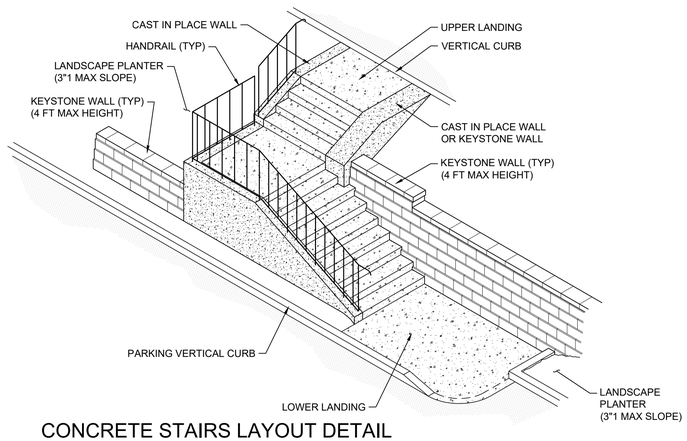
SITE SECTION 'B'

1"=5'



SITE SECTION 'C'

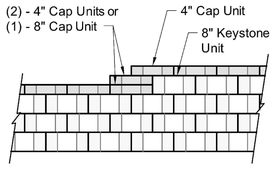
1"=5'



CONCRETE STAIRS LAYOUT DETAIL

1"=5'

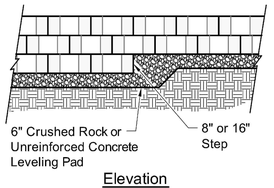
KEYSTONE RETAINING WALL SYSTEMS
A CONTECH COMPANY



Note:

1. Secure all cap units with Keystone Kapseal or equal.

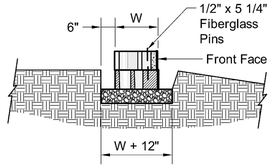
Top of Wall Steps



Elevation

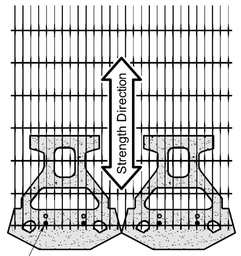
Note:

1. The leveling pad is to be constructed of crushed stone or 2000 psi ± unreinforced concrete.



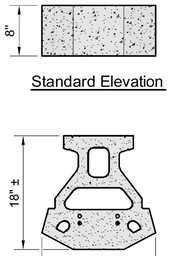
Section

Leveling Pad Detail



Geogrid is to be Placed on Level Backfill and Extended Over the Fiberglass Pins. Place Next Unit. Pull Grid Taught and Backfill. Stake as required.

Grid & Pin Connection

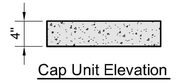


Standard Elevation

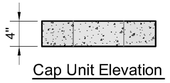
Standard Plan

Standard Unit

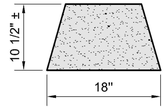
* Dimensions May Vary by Region



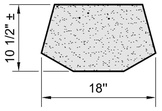
Cap Unit Elevation



Cap Unit Elevation



Cap Unit Plan



Cap Unit Plan

Universal Cap Unit Option

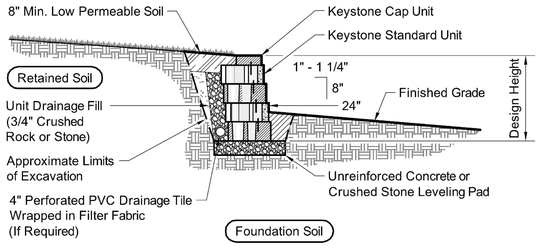
* Dimensions & Availability Will Vary by Region

3-Plane Split Cap Unit Option

* Dimensions & Availability Will Vary by Region

KEYSTONE GRAVITY WALL DETAILS

NTS



Typical Gravity Wall Section

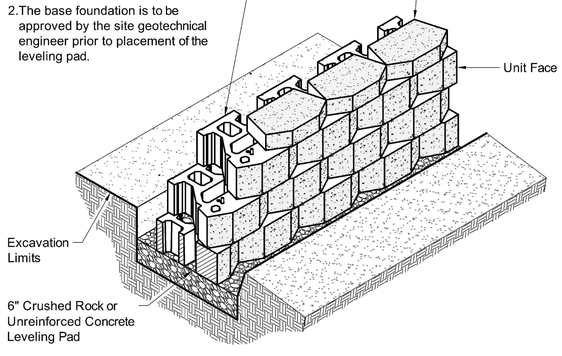
Standard Unit - 1" Setback

Base Leveling Pad Notes:

1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

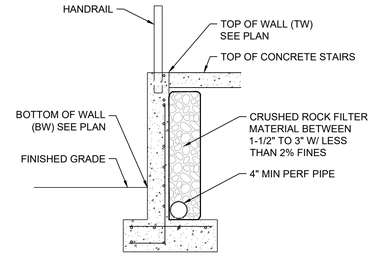
Standard Unit	
Width:	18"
*Depth:	18"
Height:	8"
*Weight:	102 lbs

Cap Unit	
Width:	18"
*Depth:	10 1/2"
Height:	4"
*Weight:	45 lbs



Standard Unit/Base Pad Isometric Section View

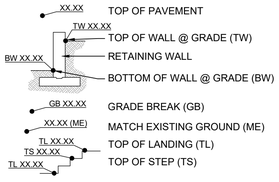
* Dimensions & Weight May Vary by Region

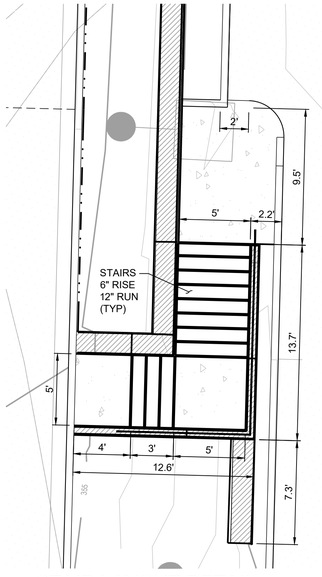


CONCRETE CAST IN PLACE WALL

NTS

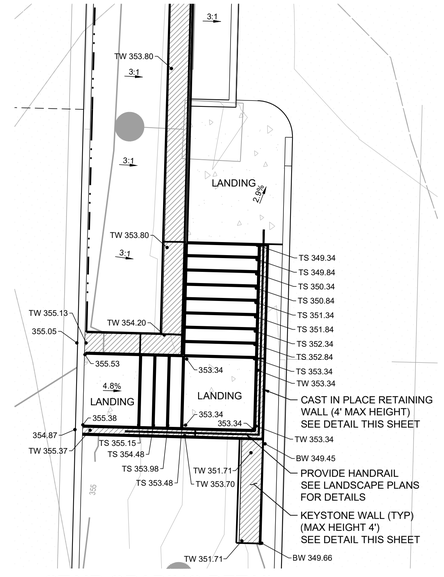
SPOT ELEVATION LEGEND





STAIR LAYOUT DETAIL

1"=5'



STAIR GRADING DETAIL

1"=5'

N

5 2.5 0 5

SCALE: 1"= 5'

ALL ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED

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

bcra
T.253.627.4367 F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

JAMES D. CARPENTER — 43645 — REGISTERED PROFESSIONAL ENGINEER

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025

BCRA NO.
21054

DRAWN BY: SJC DESIGNED BY: LPL

REVIEWED BY: JDC

SHEET TITLE
GRADING DETAILS

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET

C-301

STE - GRADING & DRAINAGE PERMIT

DATE PLOTTED: 2/3/2025 8:17:45 AM FILENAME: 21054 GRAD DETS.DWG BY: —

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

LEGEND

- EX PROPERTY BOUNDARY
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- EX STORM DRAINAGE PIPE
- EX YD/CO/CB/CB 2/MH
- EX WATER LINE
- EX METER
- EX FIRE HYDRANT
- EX GATE VALVE
- EX SEWER PIPE
- EX SANITARY MH/CO
- ASPHALT PAVEMENT
- CEMENT CONCRETE SIDEWALK
- CEMENT CONCRETE PAVEMENT
- CURB AND GUTTER
- BUILDING
- CAST-IN-PLACE RETAINING WALL

SEWER KEYNOTES

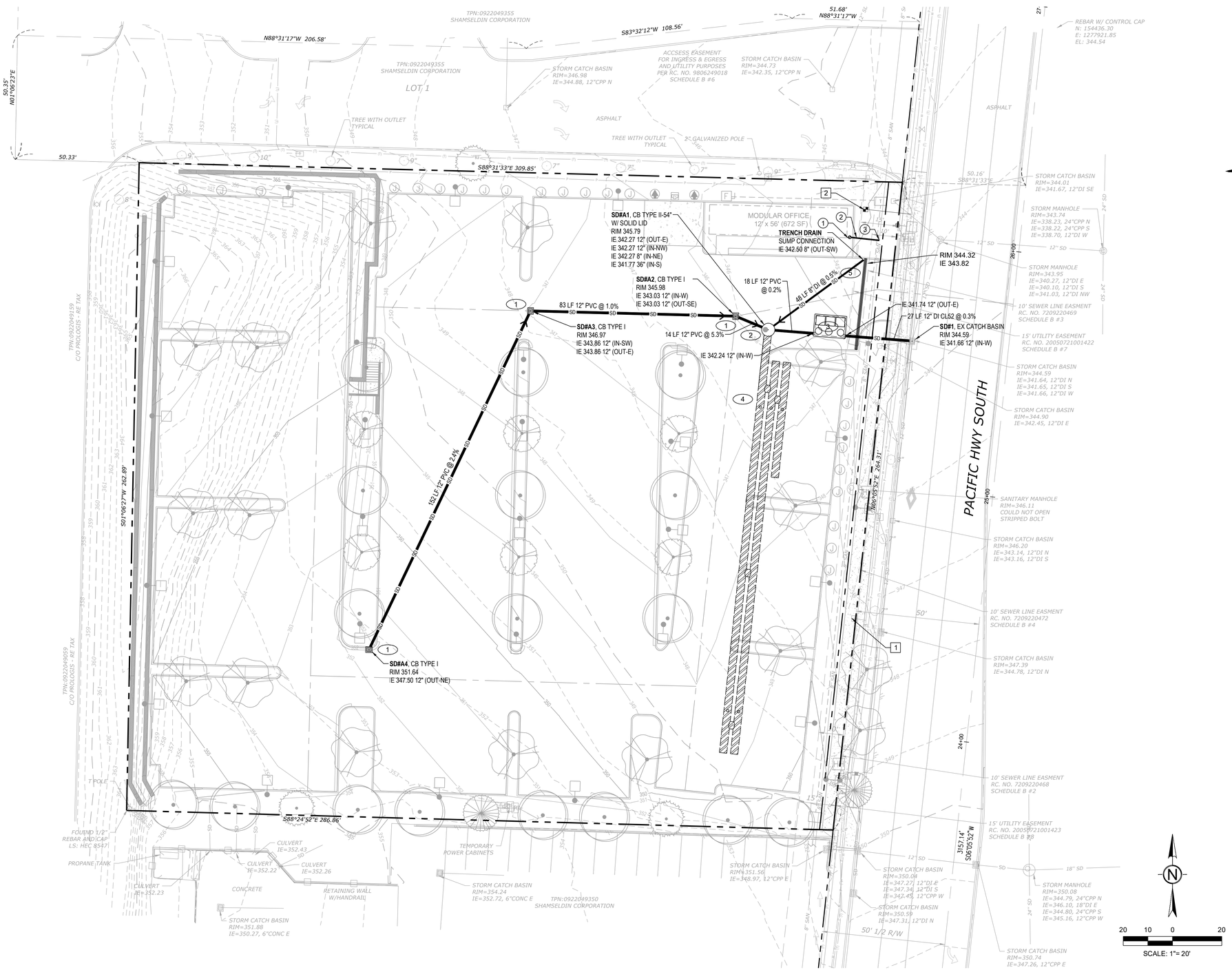
1. 6" SSCO PER DETAIL 7/C-410
2. 12 LF 6" PVC-35 SIDE SEWER @ 2.0% MIN
3. CONNECT TO EXISTING SEWER MAIN

WATER KEYNOTES

1. IRRIGATION TO UTILIZE EXISTING WATER METER
2. PROVIDE 5/8" WATER SERVICE LINE AND METER PER CITY STDS

STORM DRAINAGE KEYNOTES

1. CATCH BASIN TYPE I PER DETAIL 6/C-410
2. CATCH BASIN TYPE II-48" CONTROL STRUCTURE PER DETAILS 3/C-410
3. CONTECH MODULAR WETLAND VAULT PER DETAIL 2/C-302
4. STORM DRAINAGE DETENTION PIPING PER DETAILS
5. TRENCH DRAIN PER DETAIL 4/C-410
   TOP OF TRENCH TO
   FOLLOW FINISHED GRADE



bcra
T.253.627.1367, F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

SEAL

JIMMIE D. COMBS
STATE OF WASHINGTON
43645
REGISTERED
PROFESSIONAL ENGINEER

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025

BCRA NO.
21054

DRAWN BY: SJC DESIGNED BY: LPL

REVIEWED BY: JDC

SHEET TITLE
STORM DRAINAGE & UTILITY PLAN

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

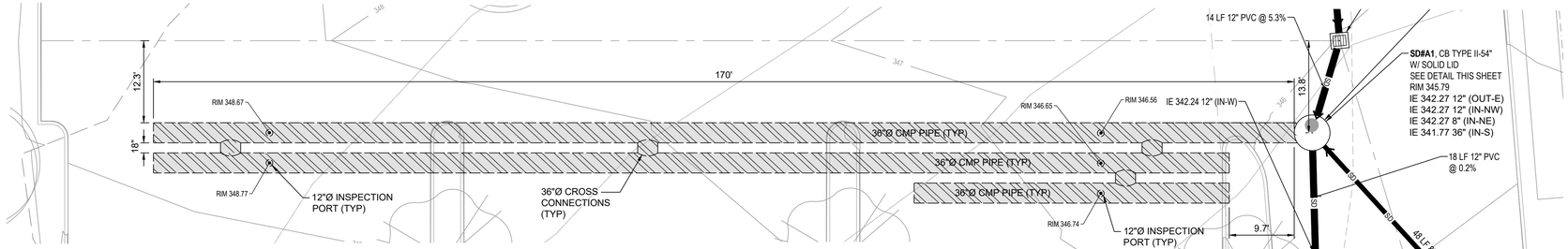
SHEET
C-401

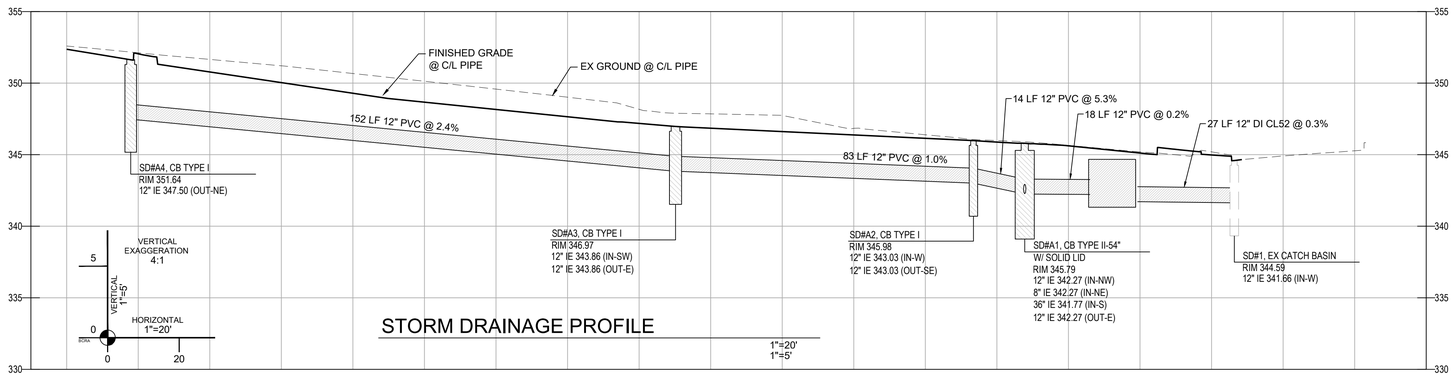
STE - GRADING & DRAINAGE PERMIT

Know what's below. Call before you dig.

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

DATE PLOTTED: 2/3/2025 8:17:59 AM FILENAME: 21054 GRAD UTIL.DWG BY: ---



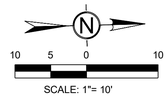


STORM DRAINAGE PROFILE

1"=20'
1"=5'

DETENTION STORM SYSTEM PLAN

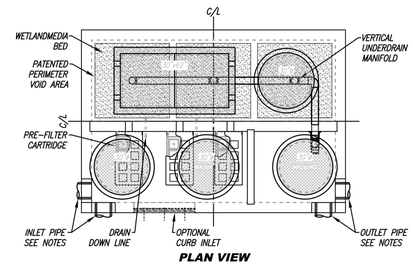
1"=10'



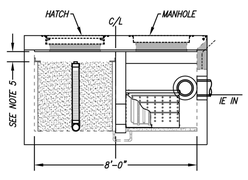
SCALE: 1"= 10'

SITE SPECIFIC DATA			
PROJECT NUMBER	21054.00.01		
PROJECT NAME	Intl Blvd. Parking		
PROJECT LOCATION	SeaTac, WA		
STRUCTURE ID	Modular Wetlands 1		
TREATMENT REQUIRED			
TREATMENT FLOW (CFS)	0.261		
PRETREATMENT LOADING RATE (GPM/SF)	2.1 GPM/S		
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0		
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE	DV		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	342.24	PVC	12"
INLET PIPE 2			
OUTLET PIPE	341.74	DI	12"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION		345.37	
SURFACE LOAD	HS-20		
NOTES:			

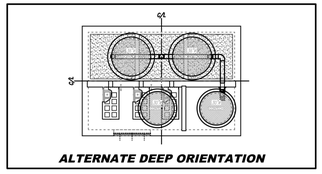
* PRELIMINARY ONLY - NOT FOR CONSTRUCTION



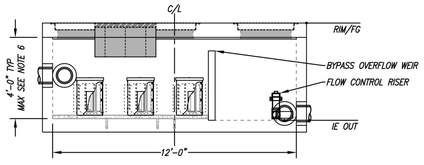
PLAN VIEW



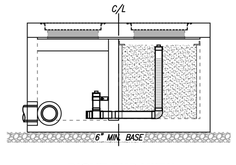
LEFT END VIEW



ALTERNATE DEEP ORIENTATION



ELEVATION VIEW



RIGHT END VIEW

INSTALLATION NOTES

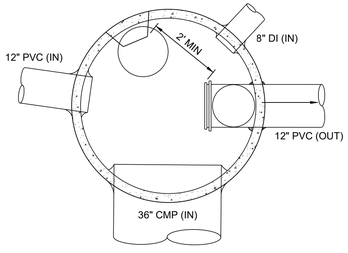
1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.
5. ALTERNATE DEEP FRAME & COVER ORIENTATION USED WHEN CEILING TO MEDIA DISTANCE IS 2.5' OR GREATER.
6. VERTICAL HEIGHT VARIES BASED ON SITE SPECIFIC REQUIREMENTS.

MODULAR WETLANDS — FOR PATENT INFORMATION, GO TO www.ContechES.com/IP

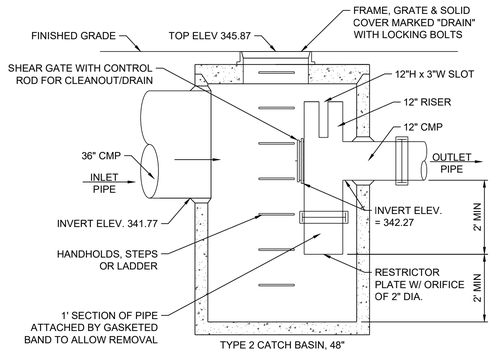
PROPRIETARY AND CONFIDENTIAL:
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF CONTECH AND ITS COMPANIES. THIS DOCUMENT, NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITH OUT THE WRITTEN CONSENT OF CONTECH.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

MWS-L-8-12-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL



PLAN VIEW



ELEVATION VIEW

NOTES:

1. PIPE SIZES & SLOPES, PER PLANS
2. OUTLET CAPACITY NOT LESS THAN COMBINED INLETS
3. METAL PARTS:
   A. CORROSION RESISTANT OR GALVANIZED OR ALUMINUM TYPE 2
   B. IF GALVANIZED STEEL PIPE, HAVE ASPHALT TREATMENT 1
4. FRAME & LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP
   B. CLIMBDOWN SPACE IS CLEAR OF RISER & CLEANOUT GATE.

CONTROL STRUCTURE #A1

1"=2'

1

Know what's below. Call before you dig.

bcra
T 253.627.4367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

JAMES D. CONTECH — 43645 — REGISTERED PROFESSIONAL ENGINEER

2/3/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE 02.03.2025
BCRA NO. 21054
DRAWN BY: SJC DESIGNED BY: LPL
REVIEWED BY: JDC

SHEET TITLE
STORM DRAINAGE PROFILE AND DETENTION SYSTEM PLAN

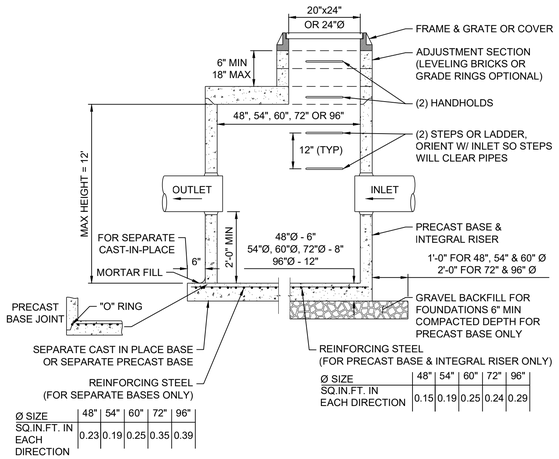
© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
C-402

STE - GRADING & DRAINAGE PERMIT

DATE PLOTTED: 2/3/2025 8:18:14 AM FILENAME: 21054 STRM DWG BY: —

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY



Ø SIZE	48"	54"	60"	72"	96"
SQ.IN.FT. IN EACH DIRECTION	0.23	0.19	0.25	0.35	0.39

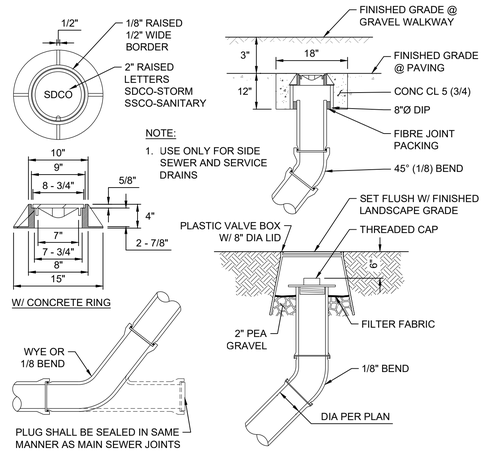
Ø SIZE	48"	54"	60"	72"	96"
SQ.IN.FT. IN EACH DIRECTION	0.15	0.19	0.25	0.24	0.29

NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M199) AND ASTM C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN CLEARANCE. SEE DWG NO 2-006, CATCH BASIN DETAILS. HANDHOLDS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN OF ONE HANDHOLD BETWEEN THE LAST STEP AND TOP OF THE MANHOLE.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2" MIN UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAX HOLE SIZE SHALL BE 36" FOR 48" CATCH BASIN, 42" FOR 54" CB, 48" FOR 60" CB, 60" FOR 72" CB, 84" FOR 96" CB MIN DISTANCE BETWEEN HOLES SHALL BE 8" FOR 48", 54", AND 60" CB; 12" FOR 72" AND 96" CB.
6. CATCH BASIN FRAMES AND GRATES OR COVERS SHALL BE IN ACCORDANCE WITH SEC. 7.05 AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MIN YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MIN CLEARANCE.
8. MIN SOIL BEARING VALUE SHALL EQUAL 3,300 POUNDS PER SQUARE FOOT.
9. FOR DETAILS SHOWING LADDER, STEPS, HANDRAILS AND TOP SLABS, SEE DWG NO 2-006.
10. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SEC. 7-05.3 FOR JOINT REQUIREMENTS.

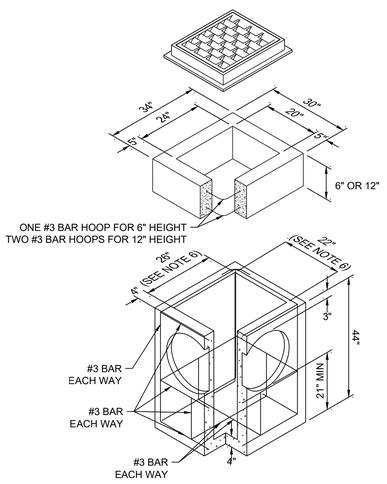
TYPICAL CATCH BASIN - TYPE 2 (48", 54", 60", 72", 84", 96")

NTS 3



SANITARY SEWER CLEANOUT

NTS 7



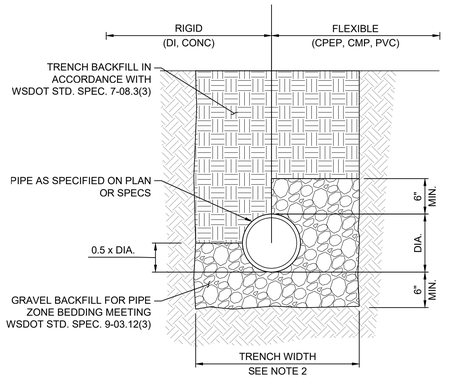
PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE Ø
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1)	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2)	12"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

1. AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
2. THE KNOCKOUT DIAMETER SHALL NOT BE GREATER THAN 20". KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
3. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5'.
4. THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN. THE FRAME MAY BE CAST INTO THE ADJUSTMENT SECTION.
5. THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
6. THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
7. ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.

TYPICAL CATCH BASIN - TYPE 1

NTS 6

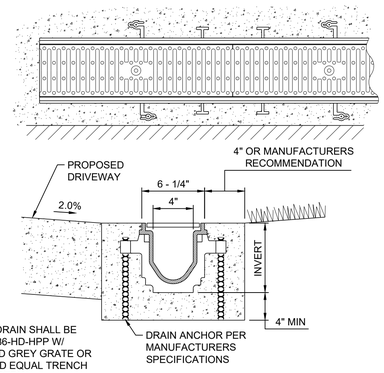


NOTES:

1. TRENCH EXCAVATION AND PIPE LAYING SHALL BE PER WSDOT STD. SPEC. 7-08.
2. TRENCH WIDTHS PER WSDOT 2-09.4:
   -DRAIN AND UNDERDRAIN PIPES, TRENCH WIDTH = ID + 12 INCHES.
   -PIPES 15 INCHES AND UNDER, TRENCH WIDTH = ID + 30 INCHES.
   -PIPES 18 INCHES AND OVER, TRENCH WIDTH = (1.5 X ID) + 18 INCHES.

TYPICAL TRENCH SECTION

NTS 5

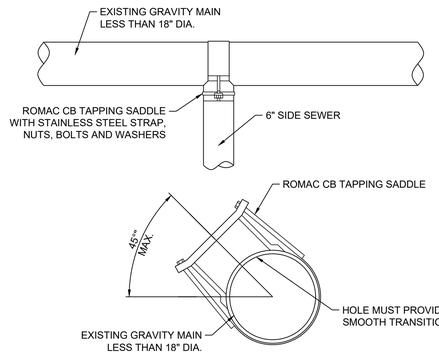


NOTES:

1. TRENCH DRAIN SHALL BE ZURN Z-886-HD-HPP W/ STANDARD GREY GRATE OR APPROVED EQUAL TRENCH DRAIN SYSTEM

CHANNEL DRAIN

NTS 4

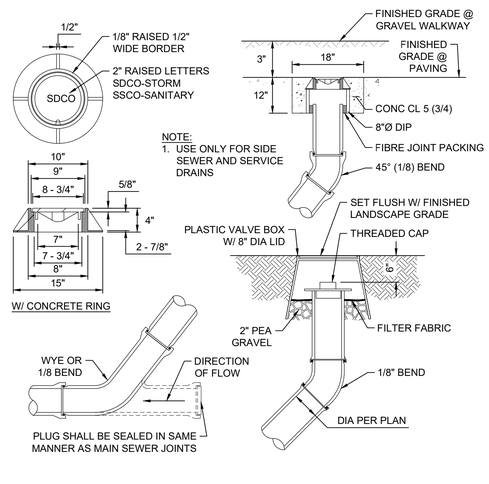


NOTES:

1. FOR EXISTING MAINS ONLY
2. INSERT-A-TEE SHALL NOT BE ALLOWED

GRAVITY SEWER TAP CONNECTION

NTS 2



STORM DRAIN CLEANOUT

NTS 1

bcra
T 253.627.4367, F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

SEAL

JAMES D. CORRIGAN
43645
REGISTERED
PROFESSIONAL ENGINEER

2/5/2025

PROJECT
LLEWELLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
02.03.2025
BCRA NO.
21054
DRAWN BY: SJC DESIGNED BY: LPL
REVIEWED BY: JDC
SHEET TITLE
UTILITY DETAILS

bcra
© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
C-410
STE - GRADING & DRAINAGE PERMIT

DATE PLOTTED: 2/3/2025 8:18:20 AM FILENAME: 21054 UTIL DETAILS.DWG BY: ---

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

PLANTING NOTES

1. LANDSCAPE CONTRACTOR SHALL LOCATE ALL TREES, SHRUBS AND PLANTING BEDS ACCORDING TO LOCATIONS SHOWN ON DRAWINGS. ALL PLANTING LOCATIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE START OF PLANTING OPERATIONS. LANDSCAPE CONTRACTOR SHALL MAKE MODIFICATIONS IN LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
2. THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND REPORTING IN WRITING TO THE LANDSCAPE ARCHITECT ANY CONFLICTS RELATIVE TO IMPLEMENTATION OF THE LANDSCAPE CONSTRUCTION DOCUMENTS. BCRA SHALL NOT ASSUME ANY ERRORS OR OMISSIONS IN THE PLANT SCHEDULE LISTED HEREIN. THE PLANT SYMBOLS SHOWN ON THE LANDSCAPE PLAN SHALL PREVAIL SHOULD THERE BE ANY DISCREPANCIES IN QUANTITIES BETWEEN THE PLAN AND PLANT SCHEDULE.
3. LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT PROTECTION AND MAINTENANCE THROUGHOUT INSTALLATION AND UNTIL FINAL ACCEPTANCE OF LANDSCAPE INSTALLATION AS FOLLOWS:
   A) ALL PLANT MATERIAL SHALL BE PROTECTED, FROM TIME OF DIGGING TO TIME OF FINAL ACCEPTANCE, FROM INJURY, EXCESSIVE DRYING FROM WINDS, IMPROPER VENTILATION, OVER-WATERING, FREEZING, HIGH TEMPERATURES, OR ANY OTHER CONDITION DAMAGING TO PLANTS.
   B) PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF POSSIBLE. ALL PLANTS NOT PLANTED ON THE DAY OF DELIVERY SHALL BE PLACED IN A TEMPORARY NURSERY AND KEPT MOIST, SHADED, AND PROTECTED FROM THE SUN AND WIND. EACH ROOTBALL SHALL BE COVERED ENTIRELY WITH MULCH. ALL PLANT MATERIALS SHALL BE INSTALLED PER THE PLAN DRAWINGS AND SPECIFICATIONS.
4. LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIALS THAT COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ANSI Z 60.1 "STANDARDS FOR NURSERY STOCK"' UNLESS OTHERWISE SPECIFIED. CALIPER OF B&B TREES SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES.
   A) PLANTING MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, RESETTING PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION.
   B) PLANT MAINTENANCE SHALL INCLUDE THOSE OPERATIONS NECESSARY TO PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR SHALL PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.
5. CONTRACTOR SHALL VERIFY AND MAINTAIN ALL SETBACKS, CLEAR ZONES AND SIGHT TRIANGLES REQUIRED BY ALL LOCAL AND MUNICIPAL CODES WHERE APPLICABLE.
6. LANDSCAPE CONTRACTOR SHALL ENSURE THAT THE LANDSCAPE INSTALLATION IS COORDINATED WITH THE PLANS PREPARED BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE OR OTHER PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS AS DESIGNATED ON THIS PLAN.
7. ALL PLANTING AREAS ARE TO RECEIVE 2" DEPTH OF MULCH CONSISTING OF A 50% FINE BARK / 50% ORGANIC MULCH MIXTURE.

LANDSCAPE CALCULATIONS

PARKING LOT/PERIMETER BUFFER LANDSCAPING PROVIDED:

10'-0" TYPE III LANDSCAPE BUFFER ALONG NORTH EDGE OF PARKING
10'-6" TYPE III LANDSCAPE BUFFER ALONG EAST EDGE OF PARKING
10'-0" TYPE III LANDSCAPE BUFFER ALONG SOUTH EDGE OF PARKING
10'-0"TYPE III LANDSCAPE BUFFER ALONG WEST EDGE OF PARKING

FRONTAGE IMPROVEMENT LANDSCAPING PROVIDED:

6' LANDSCAPE STRIP WITH STREET TREES (COMBINATION OF EXISTING AND NEW) BEHIND CURB ALONG PACIFIC HWY S.

SURFACE PARKING LANDSCAPING (15.445.250)

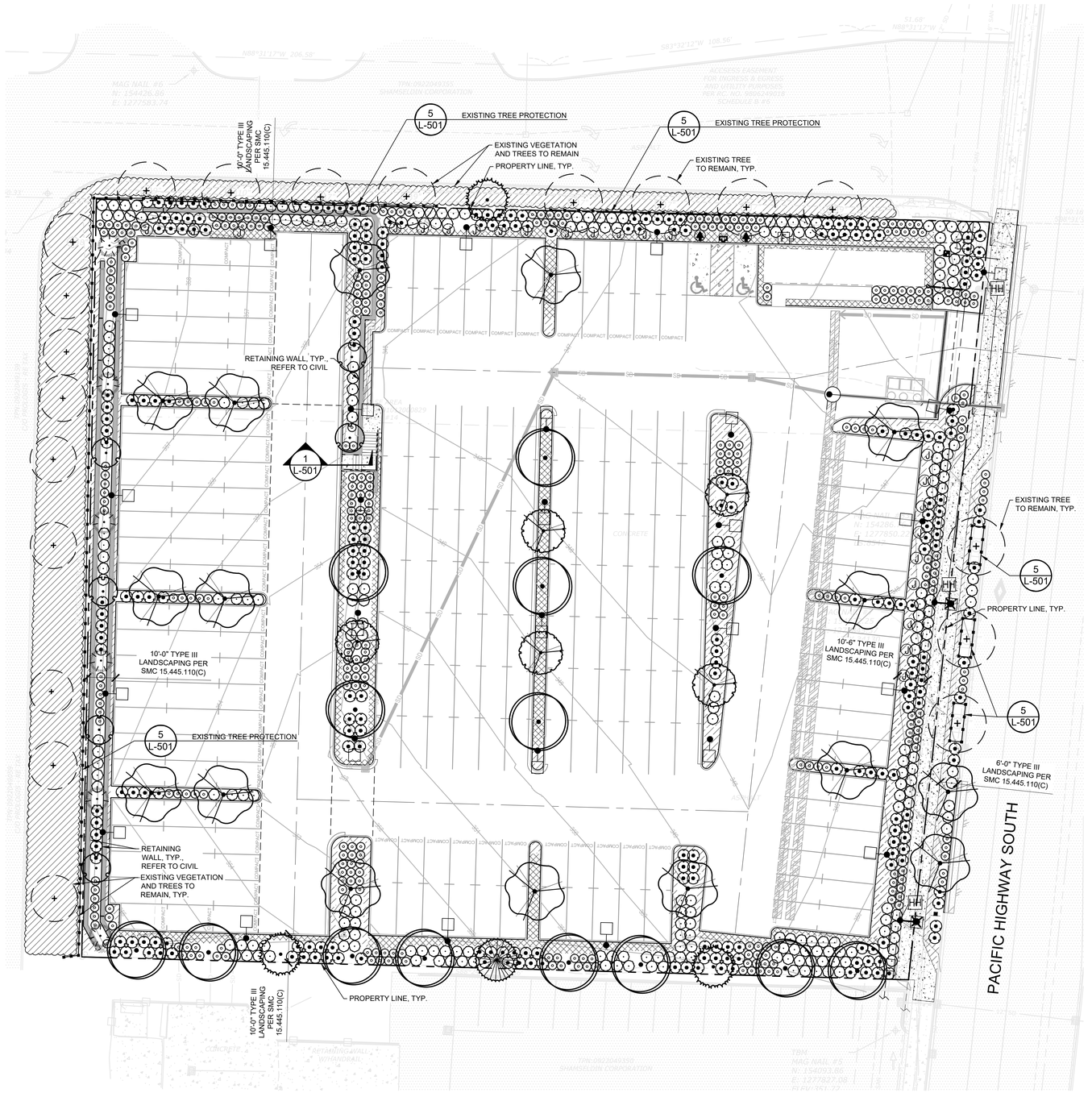
SURFACE PARKING LANDSCAPING PROVIDED: 6,495 SF
INTERIOR PARKING LOT AREA = 64,669 SF
6,495 SF / 64,669 = 10% (MEETS REQUIREMENT PER 15.445.250

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	CONT	CAL	SIZE	QTY	DETAIL
TREES						
	CERCIS OCCIDENTALIS / WESTERN REDBUD	B & B	2" CAL MIN.	4' HT. MIN.	5	3/L-501
	CORNUS NUTTALLII / PACIFIC DOGWOOD	B & B	2" CAL MIN.	4' HT. MIN.	14	3/L-501
+	EXISTING TREE TO REMAIN	EXISTING			20	5/L-501
	JUNIPERUS SCOPULORUM 'SKYROCKET' / SKYROCKET JUNIPER	B & B		8' HT. MIN.	6	4/L-501
	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	8` HT. MIN.			3	4/L-501
	QUERCUS ROBUR REGAR PRINCE / ENGLISH OAK	B & B	2" CAL MIN.	4' HT. MIN.	6	3/L-501
	RHAMNUS PURSHIANA / CASCARA	B & B	2" CAL MIN.	4' HT. MIN.	16	3/L-501
	THUJA PLICATA / WESTERN RED CEDAR	8` HT. MIN.		8' HT. MIN.	1	4/L-501

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY	DETAIL
SHRUBS				
	MAHONIA NERVOSA / OREGON GRAPE	2 GAL	250	1/L-501
	NANDINA DOMESTICA 'MOON BAY' / MOON BAY HEAVENLY BAMBOO	2 GAL	329	1/L-501
	VIBURNUM DAVIDII / DAVID VIBURNUM	2 GAL	244	1/L-501

SYMBOL	BOTANICAL / COMMON NAME	CONT	SPACING	QTY	DETAIL
GROUND COVERS					
	ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK	1 GAL	24" o.c.	672	7/L-510
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	1 GAL	24" o.c.	807	7/L-510



1 L-301 LANDSCAPE PLAN

0 20 40 60 feet
SCALE: 1" = 20'

NORTH

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

DATE PLOTTED: 1/31/2025 11:14:09 AM FILENAME: L-300 LANDSCAPE.DWG BY: ---

bcra
T 253.627.4367, F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

LYON LANDSCAPE ARCHITECTS

SEAL

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
ERIC JOHN STREEBY
LICENSE NO. 1436
EXPIRES ON 01/24/2026

PROJECT
LLEWWLLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01.31.2025
BCRA NO.
21054
DRAWN BY: MT DESIGNED BY: MT
REVIEWED BY: ES
SHEET TITLE
LANDSCAPE PLAN

bcra
© COPYRIGHT 2024 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
L-301
PERMIT SET

IRRIGATION NOTES

1. THE CONTRACTOR IS TO INSTALL AN AUTOMATIC IRRIGATION SYSTEM THAT WILL PROVIDE 100% COVERAGE FOR ALL LANDSCAPED AREAS.
2. REFER TO SPECIFICATIONS AND DETAILS FOR INSTALLATION INSTRUCTIONS.
3. MEET ALL APPLICABLE LOCAL AND MUNICIPAL CODES FOR WORK NECESSARY IN IRRIGATION SYSTEM INSTALLATION.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, AND USE/SALES TAXES APPLICABLE TO THIS PROJECT.
6. VERIFY ALL SITE INFORMATION PRIOR TO CONSTRUCTION. NOTIFY OWNER/LANDSCAPE ARCHITECT OF ANY DISCREPANCIES FROM PREPARED IRRIGATION PLANS.
7. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UNDERGROUND UTILITIES CAUSED BY INSTALLATION OF IRRIGATION SYSTEM.
8. CONTRACTOR IS TO REFER TO AND COORDINATE IRRIGATION SYSTEM INSTALLATION WITH LANDSCAPE PLANS. AVOID CONFLICTING LOCATIONS BETWEEN PIPING AND LANDSCAPE MATERIAL, EDGING, ETC.
9. TAP LOCATION ON PLAN IS SCHEMATIC, CONTRACTOR IS TO VERIFY LOCATION AND COORDINATE WITH OWNER AND ALL OTHER DISCIPLINES.
10. CONTRACTOR IS TO PROVIDE ALL NECESSARY PIPE, VALVES, ETC. DOWNSTREAM FROM POINT OF CONNECTION NOT INSTALLED BY OTHER DISCIPLINES.
11. CONTRACTOR IS TO VERIFY AVAILABLE PRESSURE AND FLOW AT POINT OF CONNECTION PRIOR TO INSTALLATION OF IRRIGATION SYSTEM EQUIPMENT AND NOTIFY LANDSCAPE ARCHITECT WITH VERIFICATION FIGURES. FAILURE TO NOTIFY LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR TAKING RESPONSIBILITY FOR ANY ALTERATIONS TO THE PLAN DUE TO VARIATIONS OF PRESSURE OR FLOW AT HIS/HER OWN RISK.
12. INSTALL MANUAL DRAIN VALVES AT ALL LOW POINTS TO ALLOW FOR SYSTEM WINTERIZATION.
13. CONTRACTOR TO COORDINATE INSTALLATION OF SLEEVING WITH BUILDING CONSTRUCTION AND INSTALLATION OF PAVING AND SIDEWALKS. ALL SLEEVING UNDER PAVED SURFACES SHOWN ON PLANS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. ALL MAINLINES, LATERAL LINES, DRIP LINES AND CONTROL WIRES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. INSTALL SLEEVING AS PER DETAIL AND SPECIFICATIONS. ALL SLEEVING TO BE TWICE THE SIZE OF PIPING ROUTED THROUGH SLEEVE.
14. ALL PIPING, PVC ELECTRICAL SLEEVES, ETC. UNDER PAVING SHALL BE INSTALLED PRIOR TO PAVING WORK. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER PAVING EXCEPT WHERE SHOWN ON DRAWING. CAP ALL ENDS HAND TIGHT PRIOR TO BACKFILL USE PVC SCHEDULE 40 PIPE FOR ALL NON-PRESSURE LATERAL LINE PIPING INSTALLED UNDER PAVED AREAS.
15. CONTRACTOR IS TO PROVIDE ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER. COORDINATE LOCATION WITH OWNER/LANDSCAPE ARCHITECT.
16. CONTRACTOR SHALL EXTEND SPARE CONTROL WIRES FROM EACH CONTROLLER TO THE END OF THE MAINLINE SERVING THAT CONTROLLER. SEE DETAILS AND SPECIFICATIONS FOR NUMBER OF SPARE WIRES AND INSTALLATION REQ.
17. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL MALE PIPE THREADS ON ALL IRRIGATION SWING JOINT AND VALVE ASSEMBLIES.
18. ALL TRENCHES TO BE COMPACTED TO THE SAME DENSITY AS THE UNDISTURBED ADJACENT SOIL.
19. CONTRACTOR TO PERFORM IRRIGATION AUDIT FOR IRRIGATION ZONES AS PART OF FINAL IRRIGATION ACCEPTANCE.
20. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED IN LANDSCAPED AREAS AND WITHIN THE PROPERTY LIMITS. ANY EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 2'-0" FROM EDGE OF ANY PAVED SURFACES. AND A MINIMUM OF 3'-0" FROM THE CENTERLINE OF ANY DRAINAGE SWALES.
21. IF PROPOSED IRRIGATION SYSTEM IS CONNECTING TO AN EXISTING SYSTEM, CONTRACTOR IS RESPONSIBLE FOR TESTING AND VERIFYING BOTH EXISTING AND NEW IRRIGATION SYSTEMS PROVIDE 100% COVERAGE.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	DETAIL
EST LCS RCS CST SST	RAIN BIRD 1812-SAM-PRS-U 15 STRIP SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510
Q T H F	RAIN BIRD 1812-SAM-PRS-U U8 SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510
Q T H F	RAIN BIRD 1812-SAM-PRS-U U10 SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510
Q T H F	RAIN BIRD 1812-SAM-PRS-U U12 SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510
Q T H F	RAIN BIRD 1812-SAM-PRS-U U15 SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510
08HE-VAN 12HE-VAN 10HE-VAN 15HE-VAN	RAIN BIRD 1812-SAM-PRS-U HE-VAN SERIES SHRUB SPRAY, 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE.	30	1/L-510

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
	RAIN BIRD PEB-PRS-D 1IN., 1-1/2IN., 2IN., 3IN. PLASTIC INDUSTRIAL REMOTE CONTROL VALVE. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE.	4/L-510
	RAIN BIRD 44-RC 1IN. BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	7/L-510
M	RAIN BIRD EFB-CP-PRS-D 2" 1IN., 1-1/4", 1-1/2IN., 2IN. BRASS MASTER VALVE, THAT IS CONTAMINATION PROOF W/SELF-FLUSHING FILTER SCREEN. GLOBE CONFIGURATION, RECLAIMED WATER COMPATIBLE, AND PURPLE HANDLE COVER DESIGNATES NON-POTABLE WATER USE. WITH PRESSURE REGULATOR.	5/L-510
BF	FEBCO 850 1-1/2" DOUBLE CHECK BACKFLOW PREVENTION, 1/2IN. TO 2IN.	5/L-510
C	RAIN BIRD ESP-2WIRE (120VAC) 50 STATION 2-WIRE, INDOOR/ OUTDOOR CONTROLLER W/ DECODER AUTO-ADDRESS. FOR RESIDENTIAL OR LIGHT COMMERCIAL USE. LNK WIFI MODULE AND FLOW SENSOR READY. USE WITH 2W-1 SINGLE STATION DECODERS AND STANDARD DIRECT BURIAL WIRE.	6/L-510
M	WATER METER 1-1/2"	
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	3/L-510
	IRRIGATION MAINLINE: PVC SCHEDULE 40	3/L-510
	PIPE SLEEVE: PVC CLASS 200 SDR 21	2/L-510

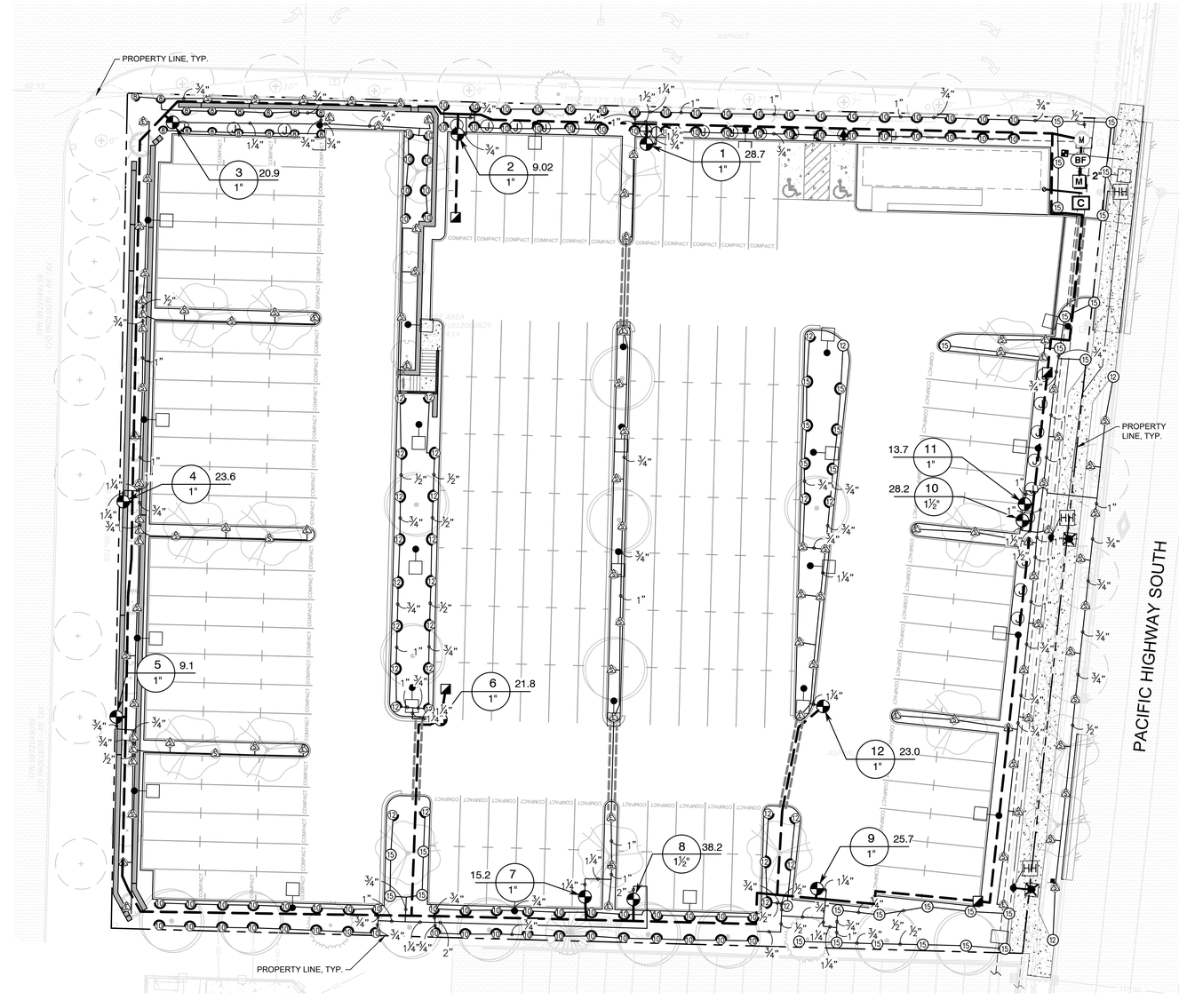
Valve Callout
Valve Number
Valve Flow
Valve Size

CRITICAL ANALYSIS

Generated:	2025-01-31 08:31
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1-1/2"
Flow Available	75 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	60 PSI
Elevation Change:	5.00 ft
Service Line Size:	3"
Length of Service Line:	20 ft
Pressure Available:	58 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	38.18 GPM
Flow Available at POC:	75 GPM
Residual Flow Available:	36.82 GPM
Critical Station:	8
Design Pressure:	30 PSI
Friction Loss:	3.75 PSI
Fittings Loss:	0.38 PSI
Elevation Loss:	0 PSI
Loss through Valve:	3.52 PSI
Pressure Req. at Critical Station:	37.6 PSI
Loss for Fittings:	0.21 PSI
Loss for Main Line:	2.13 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	6.5 PSI
Loss for Master Valve:	0.76 PSI
Loss for Water Meter:	3.05 PSI
Critical Station Pressure at POC:	50.3 PSI
Pressure Available:	58 PSI
Residual Pressure Available:	7.7 PSI

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	WIRE	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	28.75	165.3	40.6	50.3	1.38 in/h
2	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	9.02	225.0	32.9	39.1	1.4 in/h
3	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	20.94	317.4	38.1	46.7	1.37 in/h
4	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	23.64	441.7	36.4	45.5	1.38 in/h
5	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	9.1	509.7	33.4	39.7	1.45 in/h
6	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	21.84	537.3	38.2	47.3	1.3 in/h
7	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	15.15	422.0	38.2	45.6	1.54 in/h
8	RAIN BIRD PEB-PRS-D	1-1/2"	SHRUB SPRAY	38.18	406.7	37.6	50.3	1.43 in/h
9	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	25.68	336.1	36.5	46.0	1.53 in/h
10	RAIN BIRD PEB-PRS-D	1-1/2"	SHRUB SPRAY	28.23	156.6	36.5	46.0	1.36 in/h
11	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	13.7	151.0	36.8	43.8	1.29 in/h
12	RAIN BIRD PEB-PRS-D	1"	SHRUB SPRAY	23.01	408.7	36.5	45.8	1.76 in/h
	Common Wire				1,296			



1 L-401 IRRIGATION PLAN

0 20 40 60 feet
SCALE: 1" = 20'
NORTH

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

DATE PLOTTED: 1/31/2025 11:14:08 AM FILENAME: L-400 IRRIGATION.DWG BY: ---

bcra
T 253.627.4367, F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

LYON LANDSCAPE ARCHITECTS

SEAL
STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
ERIC JOHN STREEBY
LICENSE NO. 1436
EXPIRES ON 01/24/2026

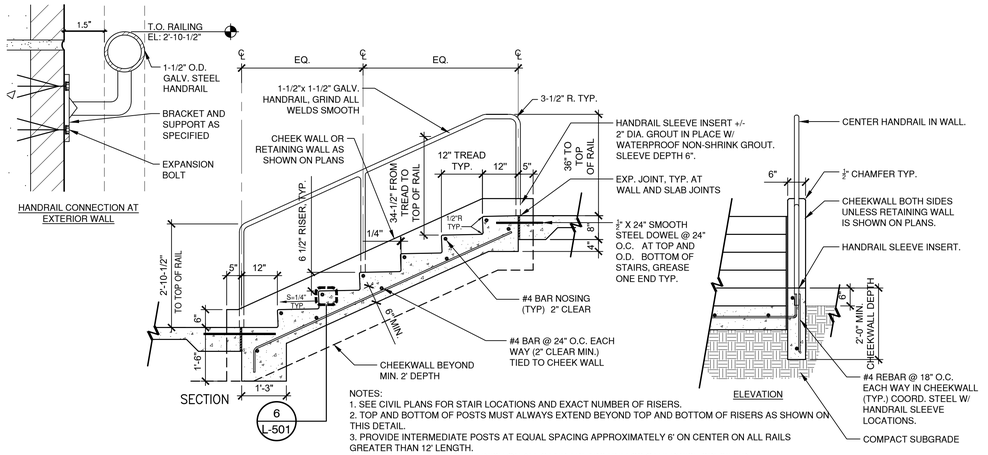
PROJECT
LLEWWLLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE 01.31.2025
BCRA NO. 21054
DRAWN BY: MT DESIGNED BY: MT
REVIEWED BY: ES
SHEET TITLE
IRRIGATION PLAN

bcra
© COPYRIGHT 2024 - BCRA, INC. ALL RIGHTS RESERVED

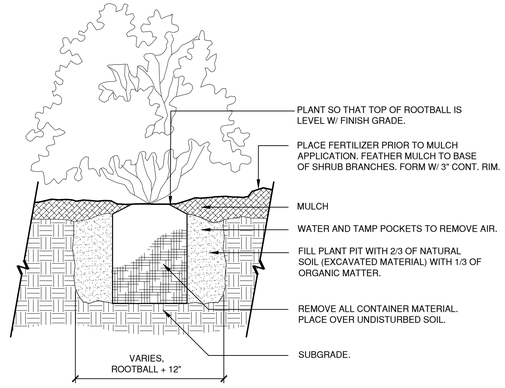
SHEET
L-401
PERMIT SET



NOTES:
1. SEE CIVIL PLANS FOR STAIR LOCATIONS AND EXACT NUMBER OF RISERS.
2. TOP AND BOTTOM OF POSTS MUST ALWAYS EXTEND BEYOND TOP AND BOTTOM OF RISERS AS SHOWN ON THIS DETAIL.
3. PROVIDE INTERMEDIATE POSTS AT EQUAL SPACING APPROXIMATELY 6' ON CENTER ON ALL RAILS GREATER THAN 12' LENGTH.
4. PROVIDE MEDIUM BROOM FINISH ON ALL STAIR TREADS UNLESS OTHERWISE SPECIFIED.
5. FOR HANDRAILS ATTACHED TO WALL PROVIDE BRACKET SIM. TO CONNECTION ENLARGEMENT.

1 CONCRETE STAIRS WITH HANDRAIL

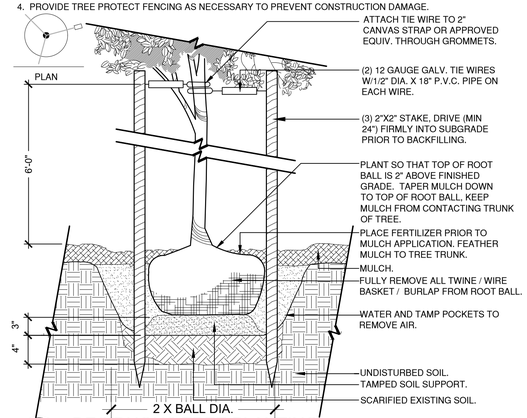
1/2" = 1'-0" P-CO-INT-02



2 SHRUB PLANTING - CONTAINER

1" = 1'-0" 32 9333.13-01

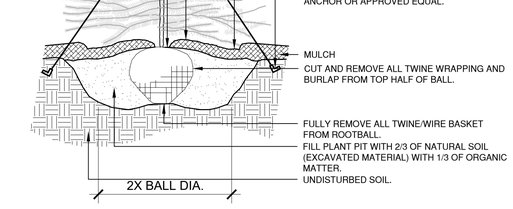
NOTE:
1. DO NOT CUT LEADER. PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING.
2. KEEP CROWN SHAPE TYPICAL OF SPECIES.
3. REMOVE ALL PLANTING LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT.
4. PROVIDE TREE PROTECT FENCING AS NECESSARY TO PREVENT CONSTRUCTION DAMAGE.



3 DECIDUOUS TREE PLANTING

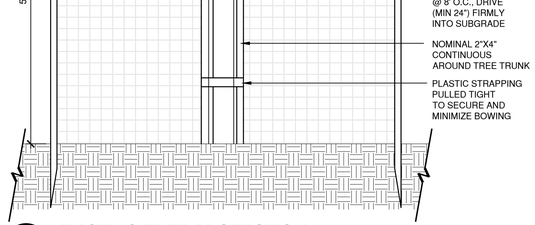
1" = 1'-0" P-CO-INT-28

NOTE:
1. DO NOT CUT LEADER. PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING.
2. KEEP CROWN SHAPE TYPICAL OF SPECIES.
3. REMOVE ALL PLANTING LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT.



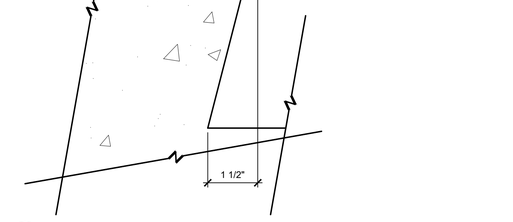
4 EVERGREEN TREE PLANTING

1" = 1'-0" P-CO-INT-27



5 EXISTING TREE PROTECTION

NTS P-CO-INT-99



6 STAIR TREAD ENLARGEMENT

6" = 1'-0" 322913-03

bcra
T.253.627.4367, F.253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 380, TACOMA, WA 98402

LYON LANDSCAPE ARCHITECTS

SEAL

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
ERIC JOHN STREEBY
LICENSE NO. 1436
EXPIRES ON 01/24/2026

PROJECT
LLEWWLLYN REAL ESTATE
INTERNATIONAL BLVD
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

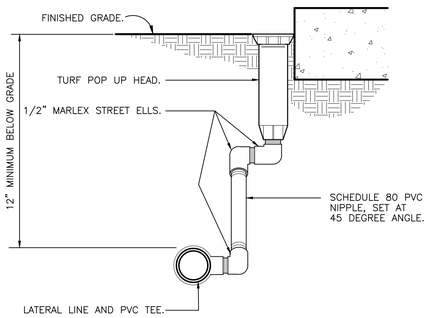
DATE 01.31.2025
BCRA NO. 21054
DRAWN BY: MT DESIGNED BY: MT
REVIEWED BY: ES
SHEET TITLE
PLANTING DETAILS

bcra
© COPYRIGHT 2024 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
L-501
PERMIT SET

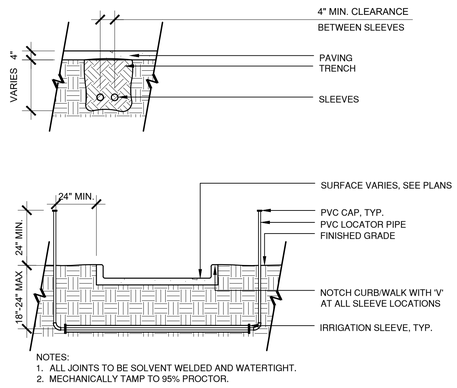
DATE PLOTTED: 13/1/2025 11:14:12 AM FILENAME: L-500 DETAILS.DWG BY:---

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY



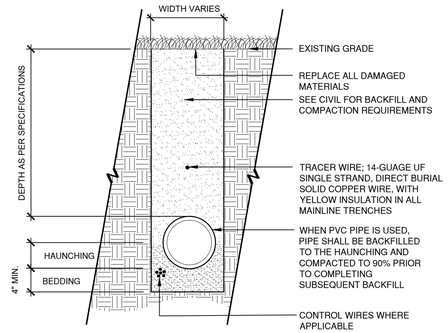
1 TURF / SHRUB SPRAY MARLEX ASSEMBLY

3" = 1'-0" P-CO-INT-04



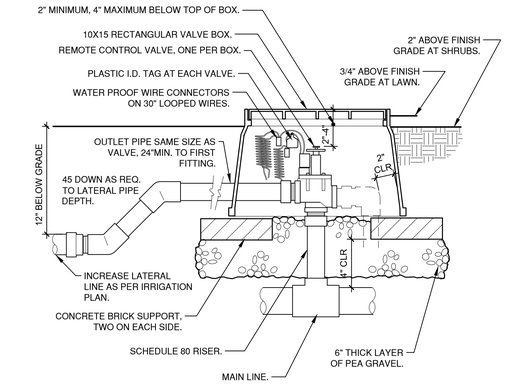
2 IRRIGATION: SLEEVING

3/8" = 1'-0" P-CO-INT-08



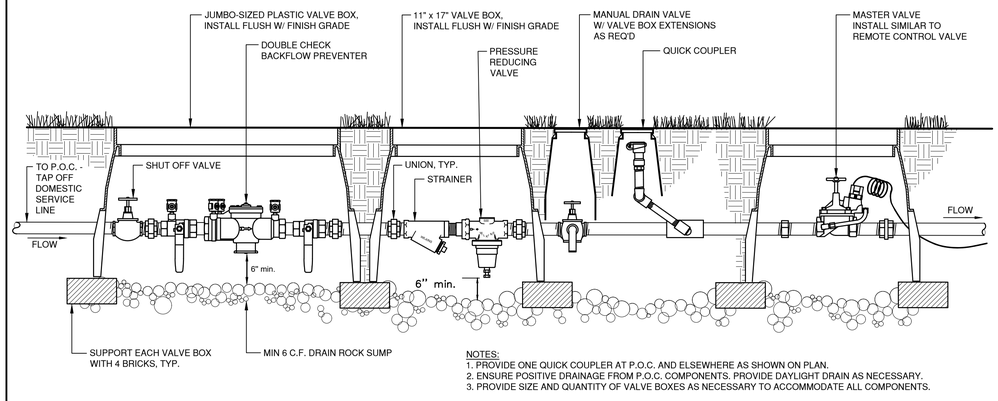
3 TRENCH DETAIL WITH TRACER WIRE

1" = 1'-0" P-CO-INT-12



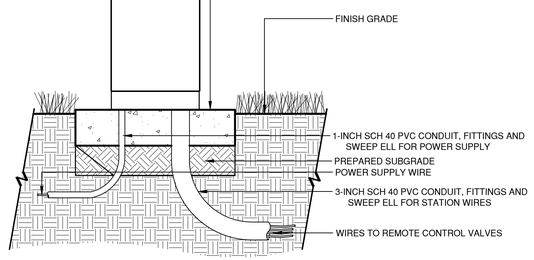
4 ELECTRIC REMOTE CONTROL VALVE

1 1/2" = 1'-0" FX-IR-FX-RCV-04



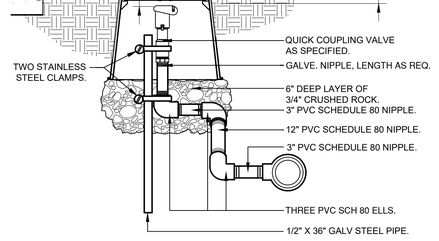
5 DOUBLE CHECK VALVE BACKFLOW ASSEMBLY

1" = 1'-0" 328409.46-04



6 IRRIGATION CONTROLLER WITH METAL CABINET/PEDESTAL

1" = 1'-0" 328409.16-02



7 QUICK COUPLING VALVE IN BOX

1 1/2" = 1'-0" P-CO-INT-03

DATE PLOTTED: 1/31/2025 11:14:10 AM FILENAME: L-500 DETAILS.DWG BY: ---

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

bcra
T 253.627.4367 F 253.627.4385 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE, SUITE 300, TACOMA, WA 98402

LYON LANDSCAPE ARCHITECTS

SEAL

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
ERIC JOHN STREEBY
LICENSE NO. 1436
EXPIRES ON 01/24/2026

PROJECT
LLEWWLLYN REAL ESTATE
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01.31.2025

BCRA NO.
21054

DRAWN BY: MT DESIGNED BY: MT

REVIEWED BY: ES

SHEET TITLE
IRRIGATION DETAILS

bcra
© COPYRIGHT 2024 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
L-510
PERMIT SET

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER		LAMP	INPUT WATTS	REMARKS	ACCEPTABLE MANUFACTURERS
		NAME	CATALOG NO.				
SL-1	POLE MOUNTED LARGE ROADWAY SCALE	RAGNI LIGHTING	R-LIGHT-32L-500mA-3000K-T3	LED	51		
-	27' STREET LIGHT POLE	AEC ILLUMINATION	PGBS-27-T4-TNT4H4-GF12A0-3BAS-C.11	-	-		
-	6' ARM FOR ROADWAY POLE	AEC ILLUMINATION	MUL-96-A-TNT4H4-C.11	-	-		
F-1	POLE MOUNTED SITE LIGHTING FIXTURE (TYPE 5 DISTRIBUTION PATTERN)	COOPER LIGHTING	GLEON-SA2B-830-U-5WQ	LED	85		
F-2	POLE MOUNTED SITE LIGHTING FIXTURE (TYPE 4 DISTRIBUTION PATTERN)	COOPER LIGHTING	GLEON-SA2B-830-U-SL4	LED	85		

LIGHTING COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2025 NEEA, All rights reserved

Project & Applicant Information	**Project Title**	International BLVD Parking Lot - 2021 WSEC	For Building Department Use: **Date: Jan 31, 2025**
	Project Address	20841 International BLVD 1 Seatac, WA 98198	
	Applicant Name	Scott Gore	
	Applicant Phone	425-301-6208	
	Applicant Email	Scott@CaseEng.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	All Commercial	**General Building Use Type**		Parking, Vehicle Garage	**Building Cond. Floor Area**	672	
General Project Types	New Building	**New Building or Addition**	Exterior Lighting	**Alteration Lighting Scope**		**Project Cond. Floor Area**	672
		Lighting Scope				**Floors Above Grade**	1
						Compliance Method	General Prescriptive
Lighting Project Description	Long term / Short term parking lot						

Lighting Compliance Scope and Method	**Project Type**	**Interior / Exterior (Interior includes both interior & parking)**	**Luminaire Replacement Scope**	**Compliance Method**	**LPA Calculation Adjustment**	**Compliance Verification**
	New Building	Exterior Lighting			Not applicable to exterior	**COMPLIES**
Additional Energy Efficiency (AEC) Measures Included	No lighting or electrical additional energy efficiency measures included in project		**Load Management (LDM) Measures Included**		No lighting or electrical load management measures included in project	

Project Title	**International BLVD Parking Lot - 2021 WSEC**	**Date**	**Jan 31, 2025**
Lighting Power Calculation	**NEW BUILDING - EXTERIOR LIGHTING**	**Compliance Verification**	**COMPLIES**
Exterior Lighting Zone	**ZONE 3**	**Base Site Allowance**	**400**

Exterior Lighting Power Allowance

Exterior Surface	Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	Linear Feet (LF)	LPA (Watts/LF)	Total Watts Allowed (LPA x SF) or (LPA x LF)	Total Proposed Watts	Compliance Status
Uncovered parking areas and drives		77,200	0.037			2,856		
					Base Site Allowance	400		
					Totals	3,256	2,040	COMPLIES

Proposed Exterior Lighting Power Density

Fixture Type	Fixture ID	Exterior Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures							
Pole top-mounted	F-2	Uncovered parking areas and drives -	12	85			1,020
Pole-mounted	F-1	Uncovered parking areas and drives -	12	85			1,020
						Proposed Total LPD	**2,040**

ELECTRICAL LEGEND

POWER RECEPTACLES & OUTLETS

- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- DUPLEX GFCI RECEPTACLE
- DOUBLE DUPLEX GFCI RECEPTACLE
- DUPLEX RECEPTACLE MOUNTED IN CEILING
- DOUBLE DUPLEX RECEPTACLE MOUNTED IN CEILING
- DUPLEX RECEPTACLE MOUNTED +4"O.C. ABOVE COUNTER OR BACKSPLASH, WHEN PRESENT (U.O.N.)
- DOUBLE DUPLEX RECEPTACLE MOUNTED +4"O.C. ABOVE COUNTER OR BACKSPLASH, WHEN PRESENT (U.O.N.)
- DUPLEX GFCI RECEPTACLE MOUNTED +4"O.C. ABOVE COUNTER OR BACKSPLASH, WHEN PRESENT (U.O.N.)
- DOUBLE DUPLEX GFCI RECEPTACLE MOUNTED +4"O.C. ABOVE COUNTER OR BACKSPLASH, WHEN PRESENT (U.O.N.)
- GFCI RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE COVER
- FLOOR POKE-THRU WITH DEVICES SHOWN
- DUPLEX RECEPTACLE WITH 1/2 SWITCHED
- DOUBLE DUPLEX RECEPTACLE WITH 1/2 SWITCHED
- TAMPER RESISTANT RECEPTACLE
- SINGLE SPECIAL PURPOSE RECEPTACLE
- JUNCTION BOX WITH BLANK COVER
- FURNITURE SYSTEM POWER FEED. CONNECT CONDUCTORS TO FURNITURE SYSTEM FLEX CONDUIT PROVIDED BY OTHERS. VERIFY REQUIREMENTS.

TELE/COMMUNICATIONS SYSTEM DEVICES

- TELEPHONE
- WALL MOUNTED TELEPHONE (VERIFY MOUNTING HEIGHT)
- SINGLE GANG TELEPHONE/DATA OPENING
- WAP WIRELESS ACCESS POINT
- JUNCTION BOX & CONDUIT FOR FURNITURE SYSTEM TELE/DATA CONNECTIONS
- DATA/COMM OUTLET (NUMBER INDICATES NUMBER OF JACKS. 'B' INDICATES BLANK PLATE)
- TTB TELEPHONE TERMINAL BOARD – 3/4" FIRE RESISTANT PLYWOOD, 8' HIGH x LENGTH SHOWN ON PLAN

SERVICE GEAR - AS SHOWN ON PLANS

- CIRCUIT BREAKER PANELBOARD
- EXISTING PANELBOARD TO REMAIN
- TERMINAL CABINET
- SWITCHBOARD OR MOTOR CONTROL CENTER, SIZE AS SHOWN ON PLANS
- T DRY TYPE TRANSFORMER (SEE NOTES & RISER DIAGRAM FOR SIZE)
- TRANSFER SWITCH
- GROUND BAR

EQUIPMENT CONNECTIONS & CONTROLS

- EQUIPMENT CONNECTION
- MOTOR CONNECTION
- FAN CONNECTION
- ELECTRIC WALL HEATER CONTROLLED BY WALL MOUNTED THERMOSTAT
- ELECTRIC WALL HEATER WITH INTEGRAL THERMOSTAT
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION STARTER AND DISCONNECT
- ENCLOSED CIRCUIT BREAKER
- PUSHBUTTON SWITCH
- S^M MOTOR RATED SWITCH
- WALL MOUNTED THERMOSTAT

NOTES AND MISCELLANEOUS SYMBOLS

- 3 FLAGNOTE – IDENTIFIES A SPECIFIC ITEM ON A DRAWING. COORESPONDS TO A SCHEDULE IN THE ELECTRICAL SET THAT EXPLAINS DETAILS OR FEATURES OF THAT ITEM.
- FF-3 MECHANICAL FLAG – DEFINES MECHANICAL EQUIPMENT AND COORESPONDS TO DESIGNATIONS IN MECHANICAL PLANS AND SCHEDULES. COORESPONDS MECHANICAL CONNECTION SCHEDULE IN THE ELECTRICAL SET.
- 1 REVISION CLOUD AND FLAG – CLOUD SURROUNDS INFORMATION THAT HAS BEEN REVISED. FLAG IDENTIFIES THE REVISION IN WHICH THE CHANGES WERE MADE.
- 3 DETAIL NUMBER – APPEARS IN FRONT OF A TITLE ON DRAWINGS WITH MORE THAN ONE ILLUSTRATION.
- 3 / E1.1 IDENTIFICATION SYMBOL – CROSS REFERENCES INFORMATION IN ONE AREA WITH A DETAIL (TOP #) AND SHEET (BOTTOM #) IN ANOTHER IN THE ELECTRICAL SET.

CONDUITS AND CIRCUITING

- WIRING CONCEALED IN CEILING OR WALL
- WIRING CONCEALED UNDER FLOOR OR UNDERGROUND
- CONDUIT HOME-RUN
- CONDUCTORS IN CONDUIT
  - PHASE CONDUCTOR(S)
  - NEUTRAL CONDUCTOR
  - GROUND CONDUCTOR
- GROUND WIRE
- CONDUIT BENDS TO CHANGE ELEVATION AT THIS POINT
- CONDUIT STUB-UP
- CONDUIT BREAK
- CONDUIT CONTINUES ELSEWHERE (NOTED ON PLAN)
- CONDUIT TO BE REMOVED
- MULTI-OUTLET ASSEMBLY (SEE NOTES ON PLAN)

LIGHT FIXTURES & CONTROLS

NOTE: LIGHTING FIXTURE SYMBOLS SHOW LENGTH, MOUNTING & EMERGENCY EGRESS INFORMATION ONLY. REFER TO FIXTURE DESIGNATIONS & LIGHTING FIXTURE SCHEDULE FOR LAMP TYPE & OTHER FIXTURE SPECIFICS.

- RECESSED DOWNLIGHT
- PENDANT MOUNTED FIXTURE OR CHANDELIER
- SINGLE POINT SOURCE WALL MOUNTED FIXTURE
- SURFACE MOUNTED LINEAR FIXTURE (NARROW BODY)
- RECESSED LINEAR FIXTURE
- PENDANT MOUNTED LINEAR FIXTURE
- WALL MOUNTED LINEAR FIXTURE
- LINEAR STRIP FIXTURE
- WALL MOUNTED STRIP FIXTURE
- LINEAR UNDERCOUNTER FIXTURE
- LED COVE OR UNDER COUNTER LIGHT (LENGTH AS SHOWN ON PLAN)
- TRACK LIGHT (LENGTH AS SHOWN ON PLAN)
- RECESSED LINEAR 2'X4' FIXTURE
- RECESSED LINEAR 2'X2' FIXTURE

EMERGENCY EGRESS FIXTURES: SHADED FIXTURES REPRESENT A CONNECTION TO EMERGENCY EGRESS LIGHTING CIRCUIT VIA UL924 RELAY. DUAL CIRCUITS – NORMAL & EMERGENCY SHOWN ON PLAN AS NORMAL#/EM# OR NORMAL#/EM#

- SURFACE LINEAR FIXTURE ON EMERGENCY EGRESS CIRCUIT
- RECESSED LINEAR FIXTURE ON EMERGENCY EGRESS CIRCUIT
- SINGLE POINT FIXTURE ON EMERGENCY EGRESS CIRCUIT
- UNIVERSAL/CEILING MOUNTED EXIT SIGN
- DIRECTIONAL EXIT SIGN (ARROWS INDICATE ONE OR TWO SIDES AND DIRECTION INDICATED)
- EMERGENCY EXIT SIGN WITH DUAL PATHWAY HEADS
- DUAL HEAD EMERGENCY EGRESS FIXTURE

- S SINGLE POLE LIGHT SWITCH
- S^3 THREE POLE LIGHT SWITCH (NUMBER INDICATES NUMBER OF POLES USED)
- S_D DIMMER SWITCH
- S_{OS} OCCUPANCY SENSOR LIGHT SWITCH
- S_{VS} VACANCY SENSOR LIGHT SWITCH
- S_{LV} LOW VOLTAGE SWITCH CONTROLLED BY ROOM SENSOR
- $S_{LVD\ b\,R1}$ LIGHT SWITCH SUBSCRIPTS ARE AS FOLLOWS:
  - LV = LOW VOLTAGE, D = DIMMING
  - b = LOWER CASE LETTER CORRESPONDS TO LETTER AT FIXTURES TO BE CONTROLLED
  - R# = RELAY # IN LIGHTING CONTROL PANEL
  - S# = SENSOR ZONE
- OS OCCUPANCY SENSOR
- VS VACANCY SENSOR
- PC PHOTOCELL LIGHT SENSOR
- PHOTOCELL AIMED NORTH, MOUNTED ON BUILDING EXTERIOR
- S^P LIGHT SWITCH WITH PILOT LIGHT
- S^K KEYED SWITCH
- T LED TRANSFORMER – SHOWN AS NEEDED

NOTE: THESE STANDARDS APPLY ON ALL ELECTRICAL DRAWINGS UNLESS NOTED OTHERWISE.

- SYMBOLS SHOWN ON PLANS IN STANDARD (HEAVY) LINE WEIGHT ARE NEW OR RELOCATED WORK.
- SYMBOLS SHOWN IN LIGHT LINE WEIGHT OR DESIGNATED WITH (E) INDICATE EXISTING TO REMAIN.
- SYMBOLS SHOWN AS DASHED INDICATE ITEMS TO BE REMOVED OR DEMOLISHED.

ABBREVIATIONS

A (200A)	(AFTER A NUMBER) = AMPS
AF(200AF)	(AFTER A NUMBER) = FUSE SIZE IN AMPS
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
C	CONDUIT
CKT	CIRCUIT
CL	CENTERLINE
CLG	CEILING
CU	COPPER
DIA	DIAMETER
DISC	DISCONNECT
DISP	DISPOSER
DW	DISHWASHER
E.C.	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
(E)	EXISTING (USED AS SYMBOL DESIGNATION)
EMT	ELECTRICAL METALLIC TUBING
EXTG	EXISTING (USED AS ABBREVIATION IN TEXT)
EV	ELECTRIC VEHICLE (CHARGER)
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FLR	FLOOR
F.O.I.C.	FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR
FSD	FIRE SMOKE DAMPER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HWT	HOT WATER TANK
kCMIL	THOUSANDS OF CIRCULAR MILS
KVA	1000 VOLT AMPERES
KW	1000 WATTS
LCP	LIGHTING CONTROL PANEL
LT	LIGHT
LTS(LTG)	LIGHTS (LIGHTING)
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MLO	MAIN LUGS ONLY
MSC	MULTI-SCENE CONTROLLER
N3R	NEMA 3R
NIC	NOT IN CONTRACT
NREC	NON-RESIDENTIAL ENERGY CODE
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
PNL	PANELBOARD
REC	RECEPTACLE(S)
REF RQMTS	REFRIGERATOR REQUIREMENTS
SCL	SEATTLE CITY LIGHT
SQ	SQUARE
SW	SWITCH
TBD	TO BE DETERMINED
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UC	UNDER COUNTER
U.O.N.	UNLESS OTHERWISE NOTED
UTIL	UTILITY
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VS	VACANCY SENSOR
W	WATTS
WAP	WIRELESS ACCESS POINT
WC	WATER COOLER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

DRAWING INDEX

E0.1	ELECTRICAL LEGEND & LIGHTING FORMS
E1.1	ELECTRICAL SITE PLAN
EL1.1	SITE LIGHTING CALCULATIONS
E9.1	RISER DIAGRAM, PANEL SCHEDULES & ARC FLASH CALCULATIONS
E10.1	ELECTRICAL DETAILS (NOT INCLUDED)

bcra
T 253.627.1367 F 253.627.4396 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE SUITE 300, TACOMA, WA 98402

CASE ENGINEERING
ELECTRICAL | LIGHTING | TELECOM | SECURITY
19515 North Creek Parkway, Suite 302
Bothell, WA 98011
425-402-9400 office@caseeng.com

MICHAEL S. CASE — STATE OF WASHINGTON — 22007 — REGISTERED PROFESSIONAL ENGINEER

PROJECT
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE 01/31/20225
BCRA NO. 25015
DRAWN BY: BY
REVIEWED BY: SG
SHEET TITLE
ELECTRICAL LEGEND AND LIGHTING FORMS

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
E0.1

24x36

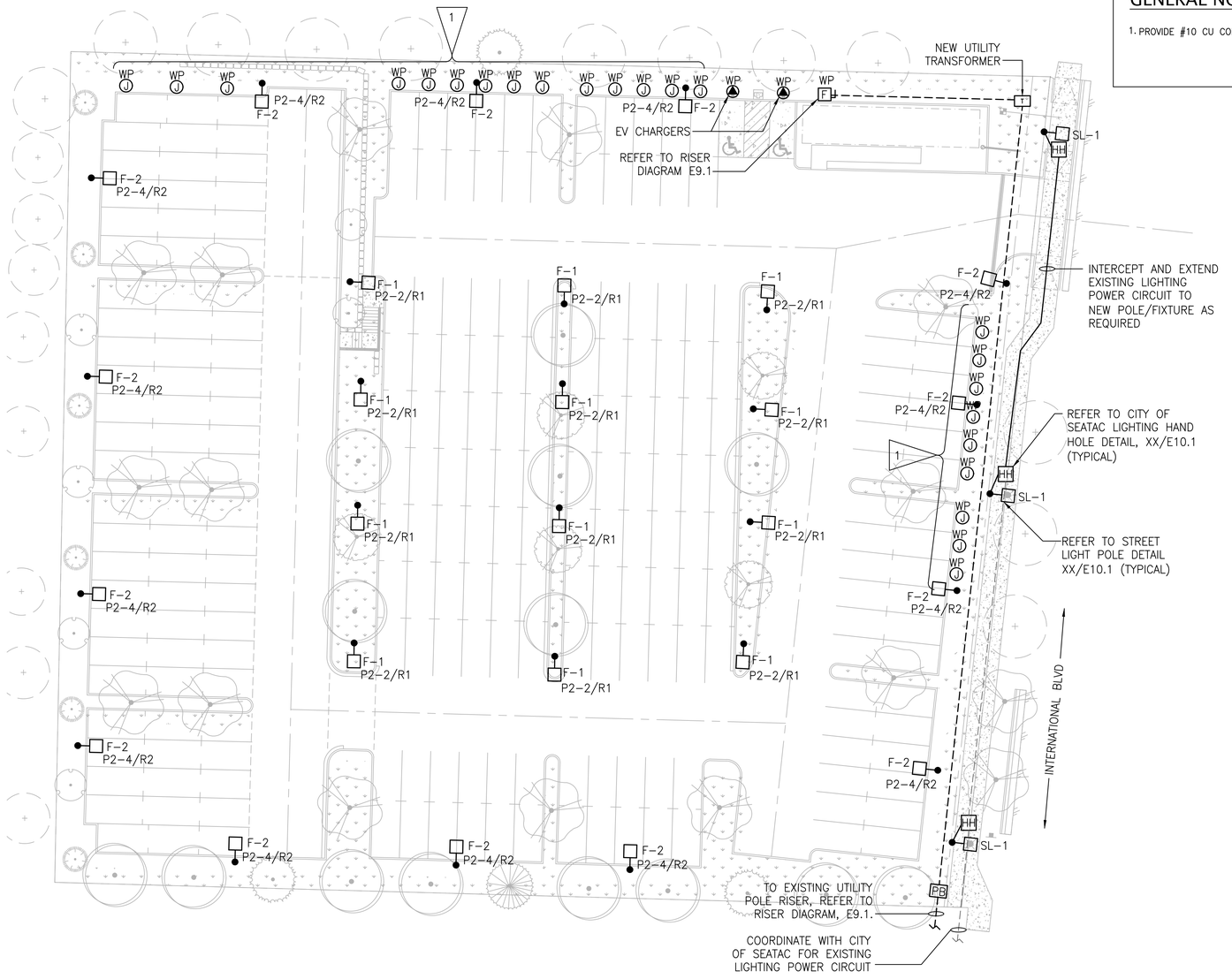
IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

FLAG NOTES

1 FUTURE EV CHARGERS – PROVIDE CAST WEATHERPROOF J–BOX, 1"C.O. AND PULL CORD FOR FUTURE CONDUCTORS

GENERAL NOTES

1. PROVIDE #10 CU CONDUCTORS FOR ALL SITE LIGHTING FEEDERS



ELECTRICAL SITE PLAN

SCALE: 1" = 20'–0"

NORTH

bcra
T 253.627.1367 F 253.627.4295 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE SUITE 300, TACOMA, WA 98402

CASE ENGINEERING
ELECTRICAL | LIGHTING | TELECOM | SECURITY
19515 North Creek Parkway, Suite 302
Bothell, WA 98011
425-402-9400 office@caseeng.com

PROJECT
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE 01/31/20225
BCRA NO. 25015
DRAWN BY: BY
REVIEWED BY: SG
SHEET TITLE
ELECTRICAL SITE PLAN

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

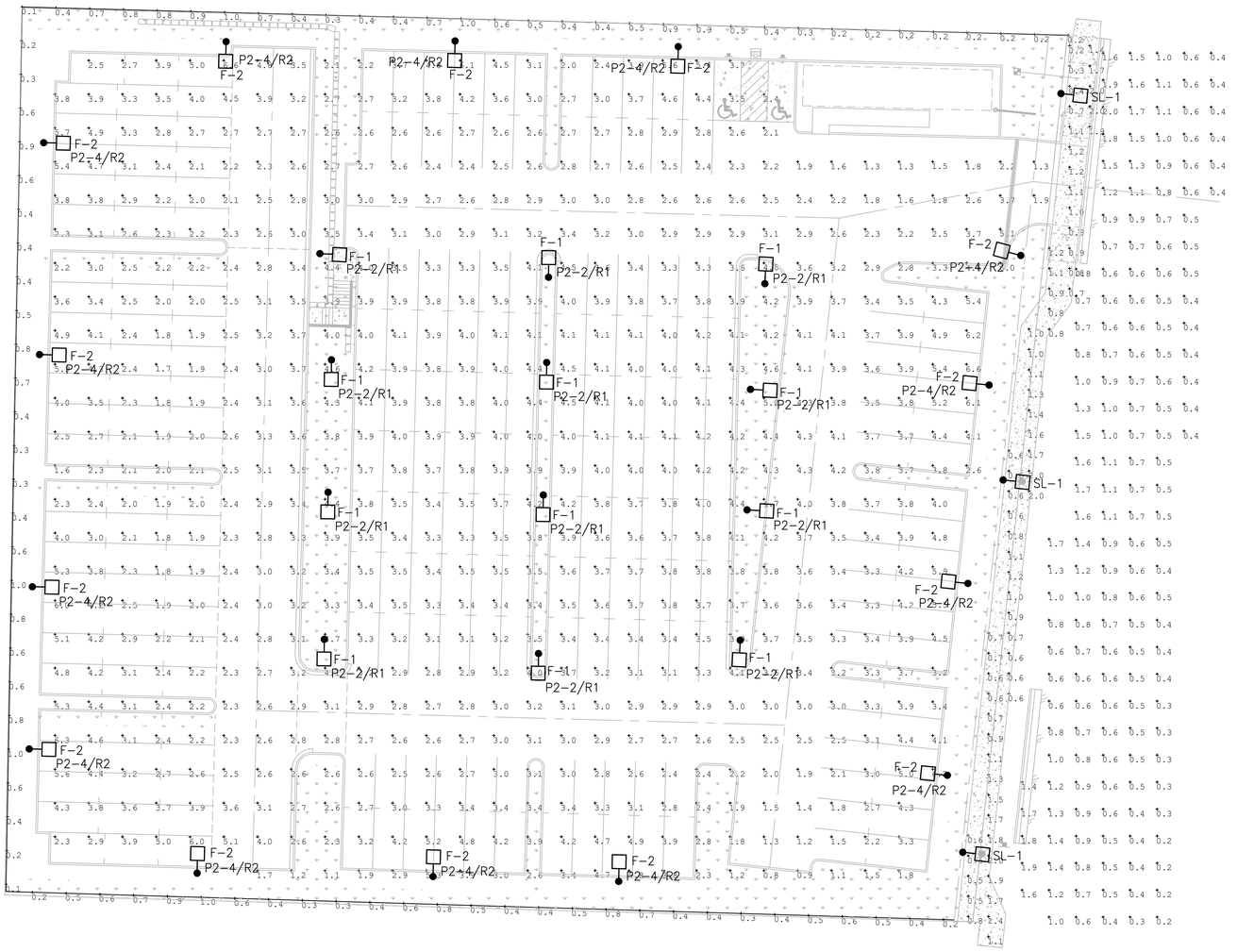
SHEET

E1.1

24x36

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
International Blvd Planar	Illuminance	Fc	0.79	2.0	0.2	3.95	10.00
Parking Lot Boundary	Illuminance	Fc	0.51	1.0	0.1	5.10	10.00
Parking Lot Planar	Illuminance	Fc	3.32	6.6	0.8	4.15	8.25
Sidewalk Planar	Illuminance	Fc	1.06	2.0	0.2	5.30	10.00



SITE LIGHTING CALCULATIONS

SCALE: 1" = 20'-0"

NORTH

bcra
T 253.627.1367 F 253.627.4395 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE SUITE 300, TACOMA, WA 98402

CASE ENGINEERING
ELECTRICAL | LIGHTING | TELECOM | SECURITY
19515 North Creek Parkway, Suite 302
Bothell, WA 98011
425-402-9400 office@caseeng.com

MICHAEL S. CASE — STATE OF WASHINGTON — 22004 — REGISTERED PROFESSIONAL ENGINEER

PROJECT
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01/31/20225

BCRA NO.
25015

DRAWN BY: BY

REVIEWED BY: SG

SHEET TITLE
SITE LIGHTING CALCULATIONS

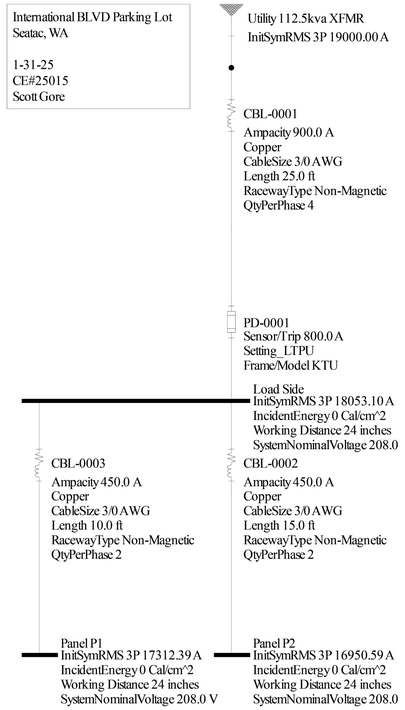
© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET

EL1.1

24X36

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY



ARC FLASH CALCULATION RISER DIAGRAM

NOT TO SCALE

WARNING

Arc Flash and Shock Risks Appropriate PPE Required
Failure to Comply Can Result in Death or Injury!

1.81 cal/cm^2 @18 in

23 in	Arc Flash Boundary	Glove Class	
208 VAC	Shock Risk	00	
42 in	Limited Approach	*Available Fault Current*	
12 in	Restricted Approach	18.05 kA	
4 cal/cm^2	Minimum Arc Rating		
PPE:	**Level 1**		

Arc-rated shirt & pants or arc-rated coverall or arc-rated arc flash suit — Case Engineering

January 31, 2025

Bus: Load Side Prot: PD-0001

WARNING

Arc Flash and Shock Risks Appropriate PPE Required
Failure to Comply Can Result in Death or Injury!

1.86 cal/cm^2 @18 in

24 in	Arc Flash Boundary	Glove Class	
208 VAC	Shock Risk	00	
42 in	Limited Approach	*Available Fault Current*	
12 in	Restricted Approach	17.31 kA	
4 cal/cm^2	Minimum Arc Rating		
PPE:	**Level 1**		

Arc-rated shirt & pants or arc-rated coverall or arc-rated arc flash suit — Case Engineering

January 31, 2025

Bus: Panel P1 Prot: PD-0001

WARNING

Arc Flash and Shock Risks Appropriate PPE Required
Failure to Comply Can Result in Death or Injury!

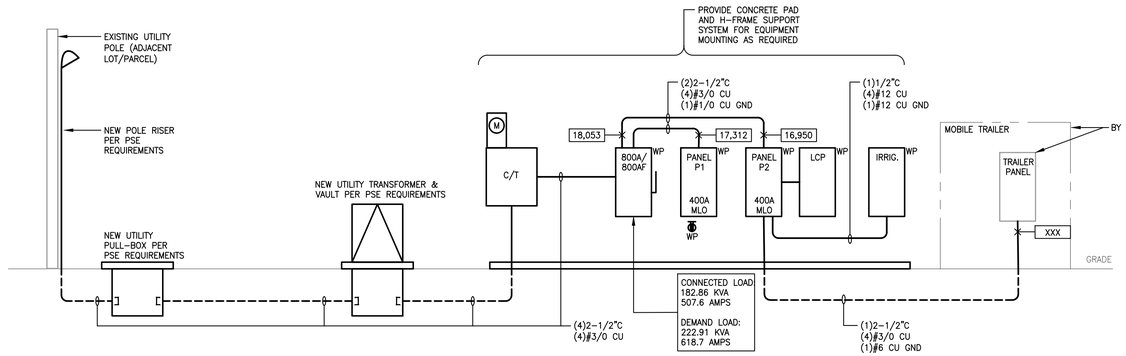
1.88 cal/cm^2 @18 in

24 in	Arc Flash Boundary	Glove Class	
208 VAC	Shock Risk	00	
42 in	Limited Approach	*Available Fault Current*	
12 in	Restricted Approach	16.95 kA	
4 cal/cm^2	Minimum Arc Rating		
PPE:	**Level 1**		

Arc-rated shirt & pants or arc-rated coverall or arc-rated arc flash suit — Case Engineering

January 31, 2025

Bus: Panel P2 Prot: PD-0001



RISER DIAGRAM

NOT TO SCALE

NEW PANEL: P1

PROJECT NAME: INTERNATIONAL BLVD PARKING LOT — PROJECT #: 25015
LOCATION: — FED FROM: PANEL MDP

NOTE	CKT NO.	CIRCUIT NAME		Θ	AMP	P	R	H	M	L	EV	O	TOTAL
	1	EV CHARGER	#1	A	40	2					3.33		3.33
	3	- - -	THIS PROJECT	B	- -	-					3.33		3.33
	5	EV CHARGER	#2	C	40	2					3.33		3.33
	7	- - -	THIS PROJECT	A	- -	-					3.33		3.33
	9	EV CHARGER	#3	B	40	2					3.33		3.33
	11	- - -	FUTURE	C	- -	-					3.33		3.33
	13	EV CHARGER	#4	A	40	2					3.33		3.33
	15	- - -	FUTURE	B	- -	-					3.33		3.33
	17	EV CHARGER	#5	C	40	2					3.33		3.33
	19	- - -	FUTURE	A	- -	-					3.33		3.33
	21	EV CHARGER	#6	B	40	2					3.33		3.33
	23	- - -	FUTURE	C	- -	-					3.33		3.33
	25	EV CHARGER	#7	A	40	2					3.33		3.33
	27	- - -	FUTURE	B	- -	-					3.33		3.33
	29	EV CHARGER	#8	C	40	2					3.33		3.33
	31	- - -	FUTURE	A	- -	-					3.33		3.33
	33	EV CHARGER	#9	B	40	2					3.33		3.33
	35	- - -	FUTURE	C	- -	-					3.33		3.33
	37	REC - SERVICE RECEPT (BELOW PANEL)		A	20	1	0.18						0.18
	39	SPARE		B	20	1							
	41	SPARE		C	20	1							
	2	EV CHARGER	#10	A	40	2					3.33		3.33
	4	- - -	FUTURE	B	- -	-					3.33		3.33
	6	EV CHARGER	#11	C	40	2					3.33		3.33
	8	- - -	FUTURE	A	- -	-					3.33		3.33
	10	EV CHARGER	#12	B	40	2					3.33		3.33
	12	- - -	FUTURE	C	- -	-					3.33		3.33
	14	EV CHARGER	#13	A	40	2					3.33		3.33
	16	- - -	FUTURE	B	- -	-					3.33		3.33
	18	EV CHARGER	#14	C	40	2					3.33		3.33
	20	- - -	FUTURE	A	- -	-					3.33		3.33
	22	SPACE ONLY		B									
	24	SPACE ONLY		C									
	26	SPACE ONLY		A									
	28	SPACE ONLY		B									
	30	SPACE ONLY		C									
	32	SPACE ONLY		A									
	34	SPACE ONLY		B									
	36	SPACE ONLY		C									
	38	SPACE ONLY		A									
	40	SPACE ONLY		B									
	42	SPACE ONLY		C									

PANEL DESCRIPTION
PANEL AMPS : 400
FEEDER AMPS : 400
L - L VOLTS : 208
L - N VOLTS : 120
PHASE : 3
WIRE : 4
M.L.O. [X]
MAIN CB [ ]
FLUSH [ ]
SURFACE [X]
ISO GND [ ]
FEED-THRU [ ]

LOAD SUMMARY
(TOTAL, ALL SECTIONS)
REC KVA : 0.18
HEAT KVA :
MOTOR KVA :
LIGHTING KVA :
KITCHEN KVA : 93.24
OTHER KVA :
PHASE A KVA : 33.48
AMPS : 278.0
PHASE B KVA : 29.97
AMPS : 249.8
PHASE C KVA : 29.97
AMPS : 249.8
CONNECTED LOAD
KVA : 93.42
AMPS : 259.3
DEMAND LOAD
KVA : 116.73
AMPS : 324.0

NOTES/REMARKS :
1.
2.
3.

DEMAND / DIVERSITY FACTORS

LOAD	DESCRIPTION	DEMAND		
R	RECEPTACLES - TO 10KVA	100%	=	0.18
	REMAINING OVER 10KVA	50%	=	
H	HEATING	100%	=	
M	MOTORS	100%	=	
LM	LARGEST MOTOR	125%	=	
L	LIGHTING	125%	=	
EV	EV CHARGERS	125%	=	116.55
O	OTHER	100%	=	

NEW PANEL: P2

PROJECT NAME: INTERNATIONAL BLVD PARKING LOT — PROJECT #: 25015
LOCATION: — FED FROM: PANEL MDP

NOTE	CKT NO.	CIRCUIT NAME		Θ	AMP	P	R	H	M	L	EV	O	TOTAL
	1	EV CHARGER	#15	A	40	2					3.33		3.33
	3	- - -	FUTURE	B	- -	-					3.33		3.33
	5	EV CHARGER	#16	C	40	2					3.33		3.33
	7	- - -	FUTURE	A	- -	-					3.33		3.33
	9	EV CHARGER	#17	B	40	2					3.33		3.33
	11	- - -	FUTURE	C	- -	-					3.33		3.33
	13	EV CHARGER	#18	A	40	2					3.33		3.33
	15	- - -	FUTURE	B	- -	-					3.33		3.33
	17	EV CHARGER	#19	C	40	2					3.33		3.33
	19	- - -	FUTURE	A	- -	-					3.33		3.33
	21	EV CHARGER	#20	B	40	2					3.33		3.33
	23	- - -	FUTURE	C	- -	-					3.33		3.33
	25	EV CHARGER	#21	A	40	2					3.33		3.33
	27	- - -	FUTURE	B	- -	-					3.33		3.33
	29	EV CHARGER	#22	A	40	2					3.33		3.33
	31	- - -	FUTURE	B	- -	-					3.33		3.33
	33	EV CHARGER	#23	A	40	2					3.33		3.33
	35	- - -	FUTURE	B	- -	-					3.33		3.33
	37	LIGHTING CONTROL PANEL (LCP)		A	20	1						0.50	0.50
	39	SPARE		B	20	1							
	41	SPARE		C	20	1							
1	2	LTG - SITE		A	20	1				0.51			0.51
1	4	LTG - SITE		B	20	1				0.51			0.51
	6	SPARE		C	20	1							
	8	MODULAR TRAILER		A	200	2	3.00	4.00	3.00	0.50		2.00	12.50
	10	- - -		B	- -	-	3.00	4.00	3.00	0.50		2.00	12.50
	12	IRRIGATION PANEL		C	20	1						1.00	1.00
	14	SPACE ONLY		A									
	16	SPACE ONLY		B									
	18	SPACE ONLY		C									
	20	SPACE ONLY		A									
	22	SPACE ONLY		B									
	24	SPACE ONLY		C									
	26	SPACE ONLY		A									
	28	SPACE ONLY		B									
	30	SPACE ONLY		C									
	32	SPACE ONLY		A									
	34	SPACE ONLY		B									
	36	SPACE ONLY		C									
	38	SPACE ONLY		A									
	40	SPACE ONLY		B									
	42	SPACE ONLY		C									

PANEL DESCRIPTION
PANEL AMPS : 400
FEEDER AMPS : 400
L - L VOLTS : 208
L - N VOLTS : 120
PHASE : 3
WIRE : 4
M.L.O. [X]
MAIN CB [ ]
FLUSH [ ]
SURFACE [X]
ISO GND [ ]
FEED-THRU [ ]

LOAD SUMMARY
(TOTAL, ALL SECTIONS)
REC KVA : 6.00
HEAT KVA : 8.00
MOTOR KVA : 6.00
LIGHTING KVA : 2.02
KITCHEN KVA : 59.94
OTHER KVA : 5.50
PHASE A KVA : 33.49
AMPS : 279.1
PHASE B KVA : 32.99
AMPS : 274.9
PHASE C KVA : 20.98
AMPS : 174.8
CONNECTED LOAD
KVA : 87.46
AMPS : 242.8
DEMAND LOAD
KVA : 104.45
AMPS : 289.9

NOTES/REMARKS :
1. VIA LIGHTING CONTROL PANEL (LCP)
2.
3.

DEMAND / DIVERSITY FACTORS

LOAD	DESCRIPTION	DEMAND		
R	RECEPTACLES - TO 10KVA	100%	=	6.00
	REMAINING OVER 10KVA	50%	=	
H	HEATING	100%	=	8.00
M	MOTORS	100%	=	
LM	LARGEST MOTOR	125%	=	7.50
L	LIGHTING	125%	=	2.53
EV	EV CHARGERS	125%	=	74.93
O	OTHER	100%	=	5.50

LCP RELAY SCHEDULE

LOCATION: AT MDP
MOUNTING: SURFACE

RELAY	CIRCUIT	SWITCH	LOCATION	ON/OFF TIME	DAYS	NOTES
R1	P2-2	LV1	SITE LIGHTING	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	1
R2	P2-4	LV1	SITE LIGHTING	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	1
R3			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	1
R4			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	
R5			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	
R6			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	
R7			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	
R8			SPARE RELAY	8:00/19:00 12:00/14:00	M,TU,W,TH,F SA	

NOTES:
1. COORDINATE LIGHTING SCHEDULE W OWER PRIOR TO ROUGH-IN
2.
3.
4.
5.

bcra
T 253.627.1367 F 253.627.4295 WWW.BCRADESIGN.COM
2106 PACIFIC AVENUE SUITE 300, TACOMA, WA 98402

CASE ENGINEERING
ELECTRICAL | LIGHTING | TELECOM | SECURITY
19515 North Creek Parkway, Suite 302
Bothell, WA 98011
425-402-9400 office@caseeng.com

MICHAEL S. CASE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

PROJECT
INTERNATIONAL BLVD SEATAC
20841 INTERNATIONAL BLVD
SEATAC, WA 98198

REVISIONS

DATE
01/31/20225

BCRA NO.
25015

DRAWN BY: BY

REVIEWED BY: SG

SHEET TITLE
RISER DIAGRAM, PANEL SCHEDULES & ARC FLASH CALCULATIONS

© COPYRIGHT 2019 - BCRA, INC. ALL RIGHTS RESERVED

SHEET
E9.1

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

24x36