CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

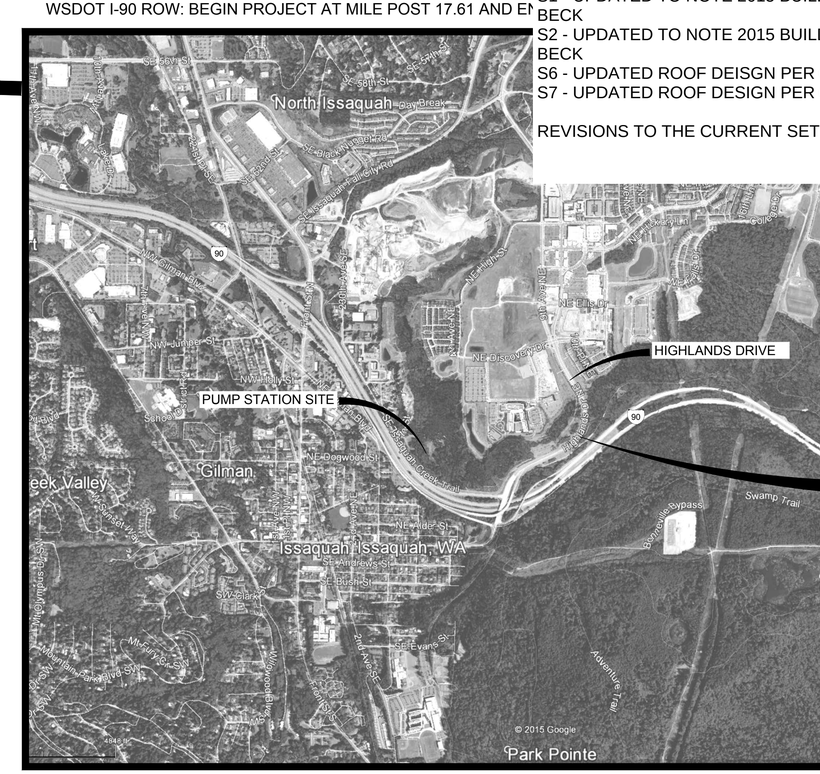
THIS SUBMITTAL ADDRESSES COMMENTS FROM THE CITY OF ISSAQUAH PLANNING DEPARTMENT ON THE PERMIT SUBMITTAL DRAWING SET DATED 11/30/2020. SELECTED DRAWINGS HAVE BEEN UPDATED AS REQUIRED TO ADDRESS THESE COMMENTS, DRAWINGS DIRECTLY ADDRESSING THE REVIEW COMMENTS INCLUDE:

G2 - UPDATED SHEET LIST TO INCLUDE ADDITIONAL DRAWINGS
G12 - ADDED NEW DRAWING "DRAINAGE PLAN" WHICH DEPICTS STORMWATER INFORMATION REQUESTED IN COMMENTS FROM CITY REVIEW.
G13 - ADDED NEW DRAWING "CRITICAL AREAS MAP" IN RESPONSE TO COMMENT 4 BY WOOD E&IS
S1 - UPDATED TO NOTE 2015 BUILDING CODE PER COMMENT FROM DOUGLAS BECK
S2 - UPDATED TO NOTE 2015 BUILDING CODE PER COMMENT FROM DOUGLAS BECK
S6 - UPDATED ROOF DEISGN PER COMMETNS FROM DOUGLAS BECK
S7 - UPDATED ROOF DESIGN PER COMMENTS FROM DOUGLAS BECK

REVISIONS TO THE CURRENT SET ARE CLOUDED IN RED

REGIONAL MAP

WSDOT I-90 ROW: BEGIN PROJECT AT MILE POST 17.61 AND EN



VICINITY MAP

REVISED SUBMITTAL 02/23/2021

Kennedy/Jenks Consultants
32001 32ND AVENUE SOUTH, SUITE 100
FEDERAL WAY, WASHINGTON 98001
253.835.6400
1397005*00

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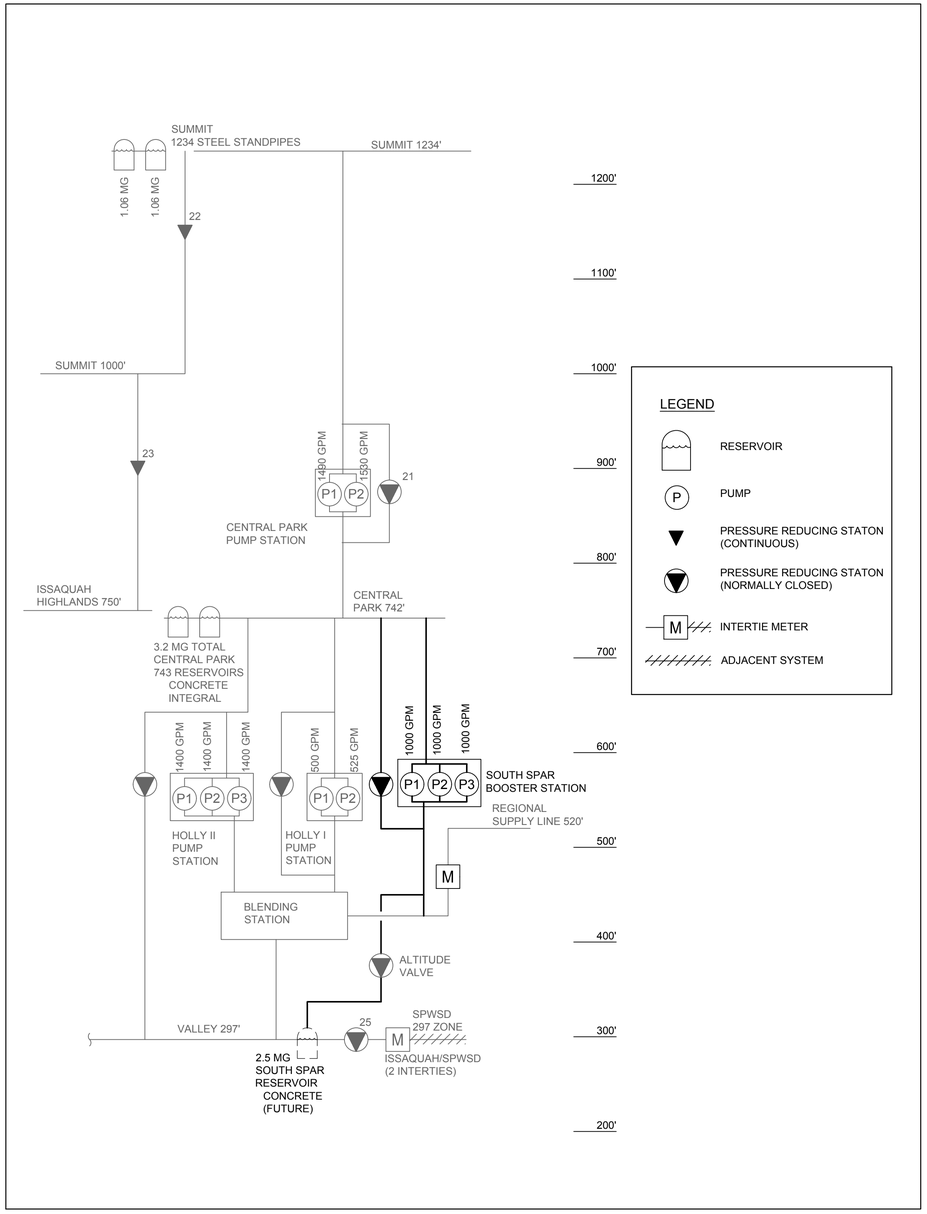

PARTIAL HYDRAULIC PROFILE

BASIS OF DESIGN

DESCRIPTION	UNIT	VALUE
BOOSTER PUMPS		
PUMP TYPE	VERTICAL TURBINE PUMP	
NUMBER OF PUMPS	EACH	3
FIRM CAPACITY (2 PUMPS)	GPM	2000
297 ZONE		
TDH	FT	550
MOTOR	HP	200
520 ZONE		
TDH	FT	330
MOTOR	HP	125

NOTE: CURRENT INSTALLATION PROVIDES ONE PUMP SIZED TO PUMP FROM 297 ZONE, AND TWO PUMPS SIZED TO PUMP FROM 520 ZONE. 520 ZONE PUMPS CAN BE UPGRADED IN THE FUTURE.

SITE INFORMATION:

ADDRESS	614 SE 74TH STREET, ISSAQUAH, WA 98027
DEVELOPABLE SITE AREA	2.7 AC
GROSS SITE AREA	7.3 AC
PARCEL NUMBER	272406-9126 AND 527910-0850
ZONING	CF-F AND CF-OS
EXISTING IMPERVIOUS AREA	0.01 AC
PROPOSED IMPERVIOUS AREA	0.47 AC

DRAWING COUNT	DRAWING NUMBER	DRAWING TITLE
1	G1	TITLE, REGIONAL MAP AND VICINITY MAP
2	G2	SHEET LIST, BASIS OF DESIGN, PARTIAL HYDRAULIC PROFILE, AND SURVEY INFORMATION
3	G3	ABBREVIATIONS
4	G4	CIVIL GENERAL SYMBOLS AND NOTES
5	G5	PIPING SYMBOLS, NOTES, AND SCHEDULE
6	G6	CITY STANDARD DETAILS
7	G7	CITY STANDARD DETAILS
8	G8	WSDOT STANDARD DETAILS
9	G9	WSDOT STANDARD DETAILS
10	G10	WSDOT STANDARD DETAILS
11	G11	OVERALL SITE PLAN
11A	G12	DRAINAGE PLAN
11B	G13	CRITICAL AREAS MAP
12	TP1	TRAFFIC CONTROL PLAN (LANE CLOSURE)
13	TP2	TRAFFIC CONTROL PLAN
14	TP3	TRAFFIC CONTROL PLAN
15	EC1	EROSION AND SEDIMENTATION CONTROL GENERAL NOTES
16	EC2	SITE EROSION CONTROL PLAN
17	EC3	SITE EROSION CONTROL PLAN
18	EC4	SITE EROSION CONTROL PLAN
19	EC5	SITE EROSION CONTROL PLAN
20	EC6	SITE EROSION CONTROL PLAN
21	EC7	SITE EROSION CONTROL PLAN
22	EC8	SITE EROSION CONTROL DETAILS
23	C1	SITE AND YARD PIPING PLAN
24	C2	SITE GRADING AND PAVING PLAN
25	C3	ACCESS ROAD PLAN AND PROFILE
26	C4	ACCESS ROAD PLAN AND PROFILE STA 14+25 TO STA 17+80
27	C5	SECTIONS AND DETAILS
28	C6	CIVIL DETAILS - 1
29	C7	CIVIL DETAILS - 2
30	C8	PUMP STATION GRADING PARTIAL PLAN
31	C9	ACCESS ROAD GATE AND FENCE PLAN
32	L1	BUFFER IMPACTS PLAN
33	L2	BUFFER MITIGATION PLAN
34	L3	BUFFER MITIGATION DETAILS
35	L4	TREE IMPACTS PLAN
36	L5	TREE MITIGATION PLAN
37	CP1	297/520 ZONE PIPELINES PLAN AND PROFILE STA. 1+00 TO STA. 11+00
38	CP2	297/520 ZONE PIPELINES PLAN AND PROFILE STA. 11+00 TO STA. 19+88.60
39	CP3	297/520 ZONE AND 742 ZONE PIPELINES PLAN AND PROFILE STA. 19+88.60 TO STA. 25+34.25
40	CP4	742 ZONE PIPELINE PLAN AND PROFILE STA. 50+00 TO STA.58+00
41	CP5	742 ZONE PIPELINE PLAN AND PROFILE STA. 58+00 TO STA. 67+00
42	CP6	742 ZONE PIPELINE PLAN AND PROFILE STA. 67+00 TO STA. 75+50
43	CP7	742 ZONE PIPELINE PLAN AND PROFILE STA. 75+50 TO STA. 84+50
44	CP8	742 ZONE PIPELINE PLAN AND PROFILE STA. 84+50 TO STA. 91+00
45	CP20	PIPELINE SECTIONS - 1
46	CP21	PIPELINE SECTIONS - 2
47	CP22	PIPELINE SECTIONS - 3
48	CP23	PIPELINE SECTIONS - 4
49	CP24	PIPELINE SECTIONS - 5
50	CP25	PIPELINE SECTIONS - 6
51	CP26	PIPELINE SECTIONS - 7
52	CP30	PIPELINE DETAILS - 1
53	CP31	PIPELINE DETAILS - 2
54	CP32	PIPELINE DETAILS - 3
55	CP33	PIPELINE DETAILS - 4
56	CP34	PIPELINE DETAILS - 5
57	A1	PUMP STATION FLOOR PLAN AND CODE SUMMARY
58	A2	PUMP STATION EXTERIOR ELEVATIONS, PUMP STATION SECTIONS, AND DETAILS
59	A3	PUMP STATION DOOR SCHEDULE, FINISH SCHEDULES, AND DETAILS
60	A4	PUMP STATION BUILDING SECTION AND DETAILS
61	S1	STRUCTURAL GENERAL NOTES AND ABBREVIATIONS
62	S2	STRUCTURAL STANDARD DETAILS - 1
63	S3	STRUCTURAL STANDARD DETAILS - 2
64	S4	STRUCTURAL CMU NOTES AND STANDARD DETAILS
65	S5	SPECIAL INSPECTION REQUIREMENTS
66	S6	PUMP STATION FOUNDATION PLAN AND ROOF PLAN
67	S7	PUMP STATION SECTIONS AND DETAILS
68	M1	PUMP STATION PLAN AND HVAC SCHEDULES
69	M2	PUMP STATION SECTIONS - 1
70	M3	PUMP STATION SECTIONS - 2
71	M4	STANDARD MECHANICAL DETAILS - 1
72	M5	STANDARD MECHANICAL DETAILS - 2
73	E1	ELECTRICAL ABBREVIATIONS AND SYMBOLS
74	E2	SINGLE LINE DIAGRAM
75	E3	SWITCHBOARD, MCC-1 AND VFD ELEVATION
76	E4	PUMP STATION POWER AND SIGNAL PLAN
77	E5	PUMP STATION LIGHTING, VIDEO AND GROUNDING PLAN
78	E6	CONDUIT AND WIRE, LUMINAIRE AND PANEL SCHEDULES
79	E7	STANDARD ELECTRICAL DETAILS AND WIRING DIAGRAMS
80	I 1	PROCESS & INSTRUMENTATION DIAGRAM LEGEND
81	I 2	PROCESS & INSTRUMENTATION DIAGRAM BOOSTER PUMP STATION
82	I 3	PROCESS & INSTRUMENTATION DIAGRAM AIR COMPRESSOR AND SURGE TANK

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SHEET LIST, BASIS OF DESIGN, PARTIAL HYDRAULIC PROFILE, AND SURVEY INFORMATION

FILE NAME 139700500-G002.DWG

JOB NO. 1397005*00

DATE FEBRUARY 2021

SHEET G2 OF

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ABBREVIATIONS

&	AND
∠	ANGLE
±	APPROXIMATELY
@	AT
℄	CENTERLINE
△	DEFLECTION
°	DEGREE
=	EQUALS
'	FOOT
>	GREATER THAN
"	INCH
Ø	PHASE
<	LESS THAN
#	NUMBER
%	PERCENT
A	AREA
AB	ANCHOR BOLT(-S)
ABAN	ABANDON (-ED)
ABS	ABSOLUTE
A.B.S.	ACRYLONITRILE-BUTADIENE-STYRENE
AC	ACRE, ASPHALTIC CONCRETE
A.C.	ASBESTOS CEMENT
A/C	ASPHALT CONCRETE
ACOUS	ACOUSTICAL
ACT.	ACTIVATE
ADDL, ADDIT	ADDITIONAL
ADJ	ADJUST(-ED,-MENT,-ABLE)
ADJT	ADJACENT
ADWF	AVERAGE DRY WEATHER FLOW
AF	ACRE-FEET
AFD	ADJUSTABLE FREQUENCY DRIVE
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
AIR-CON	AIR CONDITION (-ER,-ING)
AIRVAC	AIR AND VACUUM VALVE
AL, ALUM.	ALUMINUM
ALT	ALTERNAT(-E,-IVE)
ALTD	ALTITUDE
ANC, ANCH	ANCHOR
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APPROX	APPROXIMAT(-E,-LY)
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ARCH.	ARCHITECT (-URAL)
ARV	AIR RELEASE/RELIEF VALVE
ASB	ASBESTOS
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING & AIR CONDITIONING ENGINEERS
ASPH	ASPHALT
ASST	ASSISTANT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATM	ATMOSPHERE (14.7 LB/IN SQ)
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AVV	AIR AND VACUUM RELIEF VALVE
BARM	BARMINUTOR
BC	BEGINNING OF HORIZONTAL CURVE
BCV	BALL CHECK VALVE
BD	BOARD
BF, B.F.	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BIO	BIOFILTER
BIOL	BIOLOGICAL
BITUM	BITUMINOUS
BL	BUILDING LINE
BLDG	BUILDING
BLK	BLOCK(-S)
BLKG	BLOCKING
BM	BEAM, BENCHMARK
B.M.	BENCH MARK
BO	BLOWOFF
BOD 5	BIOCHEMICAL OXYGEN DEMAND (5 DAY)
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BS	BLACK STEEL
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BV	BALL VALVE
BVC	BEGINNING OF VERTICAL CURVE
B&S	BALL AND SOCKET
°C	DEGREES CELSIUS (CENTIGRADE)
C	CONDUIT
CAB.	CABINET
CAV	COMBINATION AIR VALVE
CB	CATCH BASIN
CC	CENTER TO CENTER
CCP	CONCRETE CYLINDER PIPE
CCWR	CLOSED-LOOP COOLING WATER RETURN
CCWS	CLOSED-LOOP COOLING WATER SUPPLY
CEM	CEMENT
CEN	CENTRAL
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHAMBER
CHAN	CHANNEL
CHEM	CHEMI (-CAL,-STRY)
CHK'D	CHECKED
CHKR	CHECKERED
CI	CAST IRON
CIP	CAST IRON PIPE
CIRC	CIRCULA(-R,-TION)
CIRCUM	CIRCUMFERENCE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	PIPE CLASS
CL ℄	CENTERLINE
CL2	CHLORINE
CLASS.	CLASSIFICATION
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR (-ANCE)
CM 3	CUBIC CENTIMETER
CM 2	SQUARE CENTIMETER
CM	CENTIMETER
CMC	CEMENT MORTAR COATED
CML	CEMENT MORTAR LINED
CML&C	CEMENT MORTAR LINED & COATED
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT(-S)
CNTR	COUNTER
CNTRSK	COUNTERSUNK
CO	CLEANOUT
CO2	CARBON DIOXIDE
C.O.D.	CHEMICAL OXYGEN DEMAND
COL	COLUMN
COMM	COMMUNICATION
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECT (-S,-ION)
CONST	CONSTRUCT (-ION)
CONST JT,CJ	CONSTRUCTION JOINT
CONT	CONTINU (-ED,-OUS,-ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
COR	CORNER
CORR	CORRUGATED
COUP.,CPLG	COUPLING
CP	CONTROL PANEL
CPP	CORRUGATED PLASTIC PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
C/S, CS	CONSTANT SPEED
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CT	COURT
CTR	CENTER
CTS	CATHODIC TEST STATION
CU	COPPER
CV	CHECK VALVE
CW	COLD WATER, CITY WATER
CWT	ONE HUNDRED POUNDS
CY	CUBIC YARD
D, DR	DRAIN
DBL	DOUBLE
DEG	DEGREE(-S)
DEMO, (D)	DEMOLISH
DET, DTL	DETAIL(-S)
DF	DOUGLAS FIR; DRINKING FOUNTAIN
DGRM	DIAGRAM
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL(-S)
DIAPH	DIAPHRAGM
DIM.	DIMENSION(-S)
D.I.P., DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DIST	DISTRIBUTION
DN	DOWN
D.O.	DISSOLVED OXYGEN
DR	DOOR
DRG	DOUBLE RUBBER GASKET JOINT
DS	DOWN SPOUT
DUP	DUPLEX
DWG(S)	DRAWING(-S)
E	ELECTRIC, EAST
EA	EACH
EC	END OF HORIZONTAL CURVE
ECC	ECCENTRIC
ECD	EPOXY COATED
EF	EACH FACE; EXHAUST FAN
EFFIC	EFFICIENCY
EFFL, EFF	EFFLUENT
e.g.	FOR EXAMPLE
EGL	ENERGY GRADE LINE
E.L.	EPOXY LINED
EL, ELEV.	ELEVATION
ELB, ELL	ELBOW
EL&C	EPOXY LINED & COATED
ELEC	ELECTRIC (-AL)
ELEM	ELEMENTARY
EMERG	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EP, EOP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EQ	EQUAL (-LY)
EQUAL., EQ.	EQUALIZATION
EQUIP	EQUIPMENT
EST	ESTIMATE (-D)
ETC	ET CETERA
EUC	EUCALYPTUS
EXC	EXCAVATE
EXH	EXHAUSTER (-S)
EXIST., (E)	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR, EXTENSION
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EW/EF	EACH WAY EACH FACE
E.W.S.	EYEWASH/SHOWER
F	FUTURE
°F	DEGREE FAHRENHEIT
FT	FEET, FOOT
FA	FIRE ALARM
FAB	FABRICATE(-D)
FAC	FACTORY
FACIL	FACILITY (-IES)
FAI	FRESH AIR INTAKE
FB	FLAT BAR
FC	FLEXIBLE COUPLING
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDR	FEEDER
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FF	FAR FACE, FINISH FLOOR
FG	FLAP GATE
FH	FIRE HYDRANT, FLAT HEAD
FIG.	FIGURE
FILT	FILTER
FIN.	FINISH(-ED)
FIN. GD	FINISH GRADE
FL	FLOW LINE
FLASH.	FLASHING
FLEX	FLEXIBLE
FLG, FL	FLANGE(-D)
FLR	FLOOR
FLUOR	FLUORESCENT
FM	FLOW METER, FORCE MAIN
FOB	FLAT ON BOTTOM
FOS	FACE OF STUD
FOT	FLAT ON TOP
FRC	FLEXIBLE RUBBER COUPLING
FREQ	FREQUENCY
FRP	FIBERGLASS REINFORCED PLASTIC
FSS	FIBERGLASS STRUCTURAL SHAPE
FT	FEET
FT 3	CUBIC FEET
FT 2	SQUARE FEET
FTG	FOOTING
FURN	FURNACE
FURR	FURRING
FUT, (F)	FUTURE
FWD	FORWARD
G	GAS
GA	GAUGE
GAL	GALLON (-S)
GALV	GALVANIZE(-D)
GASO	GASOLINE
GC	GROOVED COUPLING
GDL	GROUND LEVEL
GEN	GENERATOR
GENL	GENERAL
GL	GLASS
GLV	GLOBE VALVE
GLL	GLASS LINED
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE, GROUND, GRAM
GRL	GUARDRAIL
GS	GALVANIZED STEEL
GV	GATE VALVE
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSEBIBB
HC	HEAT CONSERVATION
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HGR	HANGER
HGT, HT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HPT, H.P.	HIGH POINT
HR	HOUR
HRL	HANDRAIL
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HVY	HEAVY
HW	HOT WATER
HWD, HDWD	HARDWOOD
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC
HZ	HERTZ
I & C	INSTRUMENTATION AND CONTROLS
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
I.F.	INSIDE FACE
IN 3	CUBIC INCHES
IN 2	SQUARE INCHES
IN	INCH (-ES)
INFL, INF	INFLUENT
INSTR	INSTRUMENT
INSUL	INSULAT(-E,-ION)
INT	INTERIOR
INV	INVERT
IPS	INTERNATIONAL PIPE STANDARD
IW	INDUSTRIAL WASTES
JAN	JANITOR
JB, J-BOX	JUNCTION BOX
JST	JOIST
JT	JOINT
KG	KILOGRAM; KNIFE GATE
KIP	ONE THOUSAND POUNDS
Km	KILOMETER
KV	KILOVOLTS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
L	LENGTH; LITER
LAB	LABORATORY
LAM	LAMINATE
LAT	LATERAL
LAV	LAVATORY
LB	POUND(-S)
L/D	LITERS PER DAY
LDG	LANDING
LE	LIFTING EYE
LEL	LOWER EXPLOSION LIMIT
LF	LINEAR FEET
LG	LONG
LGT	LIGHT
LH	LEFT HAND
LIQ	LIQUID
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LO	LIVE OAK
LOC	LOCATION
LONG.	LONGITUDINAL
LP	LOW POINT
LPC	LOW PRESSURE CONDENSATE
LPG	LIQUIFIED PETROLEUM GAS (PROPANE OR BUTANE AS NOTED)
LPS	LOW PRESSURE STEAM
LS	LIMIT SWITCH
LT	LEFT
LT.WT.	LIGHT WEIGHT
LTG	LIGHTING
LW	LOW WATER
LWL	LOW WATER LEVEL
(M)	MODIF (-Y, -IED)
M 3	CUBIC METERS
M 2	SQUARE METERS
M	METER
MACH., MACH	MACHINE
MATL, MAT'L	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MET.	METAL
MFR	MANUFACTURER
MG	MILLIGRAMS
M.G.	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MG/L	MILLIGRAMS PER LITER
MH	MANHOLE
MIL(S)	1/1000 INCH
MIN	MINIMUM; MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MILLILITER(-S)
MM	MILLIMETER(-S)
MODIF	MODIFICATION(-S)
MON	MONUMENT
MPH	MILES PER HOUR
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
MUL	MULLION
MV	MUD VALVE
MX	MIXER
N	NORTH
(N)	NEW
N/A	NOT APPLICABLE
NAT G, NG	NATURAL GAS
N.C., NC	NORMALLY CLOSED
NE	NORTHEAST
NEUT	NEUTRAL
NF	NEAR FACE
NG	NATURAL GAS
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC, N.I.C.	NOT IN CONTRACT
N.O., NO	NORMALLY OPEN
NO.	NUMBER
NOM	NOMINAL
NORM	NORMAL
NPW	NON-POTABLE WATER
NRS	NON-RISING STEM (VALVE)
NST	NATIONAL STANDARD THREAD
NT	NORMALLY THROTTLED
NTS	NOT TO SCALE
NV	NEEDLE VALVE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL
OA	OVERALL
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
O/C	OPEN/CLOSE SERVICE
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OF., OF	OVERFLOW
OFF.	OFFICE
OFS	OUTSIDE FACE OF STUD
O.H.	OVERHEAD
OL	OVERLOAD
OPNG	OPENING
OPER	OPERATOR
OPP	OPPOSITE
ORIG	ORIGINAL
OS&Y	OUTSIDE SCREW & YOKE (RISING STEM-VALVE)
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
OZ	OUNCE(-S)
P	PIPE
PC	PIECE
P.C.	POINT OF HORIZONTAL CURVE
PCC	POINT OF COMPOUND CURVE
PCF	POUNDS PER CUBIC FEET
PCO	PRESSURE CLEANOUT
PDV	PLUG DRAIN VALVE
P.E., PE	PLAIN END
PE, POLY	POLYETHYLENE
PERIM	PERIMETER
PEN.	PENETRATION
PERF	PERFORAT(-E, -ED, -ES, -ATION)
PF	PROFILE
PG	PRESSURE GAUGE
PH	PIPE HANGER
PHMS	PAN HEAD MACHINE SCREW
P.I.	POINT OF HORIZONTAL INTERSECTION
P & ID	PROCESS (OR PIPING) & INSTRUMENTATION DIAGRAM
PIV	POST INDICATOR VALVE
PIP	PLASTIC IRRIGATION PIPE
P.L., P/L	PROPERTY LINE
PL, P	PLATE
PLAS	PLASTER
PLCS	PLACES
PLY.	PLYWOOD
PNL	PANEL
P.O.C.	POINT OF CONNECTION
P.O.T	POINT OF TANGENCY
PP	PAGES, PERSONEL PROTECTION
P.P.	POWER POLE
PPB	PARTS PER BILLION
PPM	PARTS PER MILLION
PR	PAIR
P.R.	PULL RING
PRESS.	PRESSURE
PRFV	PRESSURE RELIEF VALVE
PRV	PRESSURE REDUCING VALVE
PRI	PRIMARY
PROJ	PROJECT(-ION)
PROP.	PROPERTY
PROT	PROTECTOR
PRS	PRESSURE SNUBBER
PRV	PRESSURE REDUCING VALVE
PS	PUMP STATION, PIPE SUPPORT
PSF	POUNDS PER SQUARE FEET
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE (PRESSURE ABOVE VACUUM)
PSIG	POUNDS PER SQUARE INCH-GAUGE (PRESSURE ABOVE ATMOSPHERE)
P.SL.	PIPE SLEEVE
P.STA.	PUMP STATION
P. SW.	PRESSURE SWITCH
PT	POINT
PV	PLUG VALVE
P.V.C.	POINT OF VERTICAL CURVE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PWWF	PEAK WET WEATHER FLOW
PVMT	PAVEMENT
PW	PLANT WATER, POTABLE WATER
PWR	POWER
Q.	FLOW OR DISCHARGE
R	RISER
R, RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REC	RECEIVING
RECIRC	RECIRCULAT(-E, -ION)
RED.	REDUCE(-R)
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGULAT(-E, -OR, -ION, -ING)
REINF	REINFORC(-E, -ED, -ING, -MENT)
REL	RELATIVE
REQD	REQUIRED
REQT	REQUIREMENT
RES, RSVR	RESERVOIR
RESIL	RESILIENT
REV	REVISION
RH	RIGHT HAND
RM	ROOM
RWD	REDWOOD
R/W	RIGHT-OF-WAY
RTN	RETURN
RTE	ROUTE
RT	RIGHT
RR	RAILROAD
RPS	REVOLUTIONS PER SECOND
RPM	REVOLUTIONS PER MINUTE
RND	ROUND
S	SEWER, SOUTH, SLOPE
SAN	SANITARY
SARV	SEWAGE AIR RELIEF VALVE
SAVV	SEWAGE AIR/VACUUM RELIEF VALVE
SCAV	SEWAGE COMBINATION AIR VALVE
SCFM	STANDARD CUBIC FEET PER MINUTE
SCHED, SCH	SCHEDULE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SE	SOUTHEAST
SEC	SECOND(-S, -ARTY)
SECT	SECTION(-S)
SED	SEDIMENTATION
SEW., SEW	SEWER
SG	SLUICE GATE
SHT, SH	SHEET
SI	SIDEWALK INLET
SIG	SIGNAL
SIM	SIMILAR
SL	SLUDGE
SMH	SANITARY SEWER MANHOLE
SO 2	SULFUR DIOXIDE
SP	STATIC PRESSURE
SP. GR.	SPECIFIC GRAVITY
SPCD	SPACED
SPCNG	SPACING
SPCS	SPACES
SPEC	SPECIFICATIONS
SQ	SQUARE
SQ FT, SF	SQUARE FEET
SQ IN	SQUARE INCHES
SRG	SINGLE RUBBER GASKET JOINT
SS	SANITARY SEWER
SS 304	STAINLESS STEEL TYPE 304
SS 316	STAINLESS STEEL TYPE 316
ST	STREET
STA	STATION
STD	STANDARD
STIFF	STIFFEN (-ER)
STL	STEEL
STORM, SD	STORM DRAIN
STM	STEAM
STN	STAINLESS
STOR	STORAGE
STRUCT	STRUCTUR(-E, -AL)
SUB	SUBNATANT
SUBM	SUBMISSION (SUBMIT)
SUP	SUPERNATANT
SUPP	SUPPORT(-S)
SURF.	SURFACE
SUSP	SUSPEND(-ED)
SV	SOLENOID VALVE
SW	SOUTHWEST; SWITCH
SWBD	SWITCHBOARD
S/W	SIDEWALK
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
T	TIMER, TIME, THERMOSTAT
T/	TOP OF
TAN.	TANGENT(-IAL)
TB	THRUST BLOCK
TBM	TEMPORARY BENCH MARK
T & B	TOP & BOTTOM
TC	TOP OF CURB
TBM	TEMPORARY BENCH MARK
TCE	TRICHLOROETHYLENE
TCV	TWIN ELEMENT CHECK VALVE
TDH	TOTAL DYNAMIC HEAD
TEL, TELE	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
TERM.	TERMINAL; TERMINATION
TEL	TELEPHONE
TGE	TOP OF GRATING ELEVATION
T & G	TONGUE & GROOVE
THK	THICK(-ENED, -ENER, -NESS)
TOC	TOP OF CONCRETE
TOD	TOTAL OXYGEN DEMAND
TOS	TOP OF STEEL
T.O.P.	TOP OF PAVEMENT
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL; TOP OF SLAB
T.O.W.	TOP OF WALL
T-__-S	TYPE ___ SUPPORT
T-__-P	TYPE ___ PIPE
TYP	TYPICAL
TURB	TURBIDITY
TS, T'STAT	THERMOSTAT
TRTMT	TREATMENT
TRANSV	TRANSVERSE
T-R	THROUGH ROOF
TR	TREAD(-S)
TP	TELEPHONE POLE
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPR	UPPER
V	VOLT
VAC	VACUUM
VAR	VARIABLE
V.A.T.	VINYL ASBESTOS TILE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VERT	VERTICAL
VERTS	VERTICAL BARS
VEST.	VESTIBULE
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
V/S, VS	VARIABLE SPEED
VT	VENT
VTR, V.T.R.	VENT TO ROOF
W	WIDTH; WIDE; WEST
W/	WITH
WC	WATER CLOSET
W CL	WATER COLUMN
WD	WOOD
WH	WATER HEATER
WM, W.M.	WATER METER
W/O	WITHOUT
WP	WEATHERPROOF
WS	WELDED STEEL, WATER SURFACE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WST	WATERSTOP
WSS	WASHINGTON STATE STANDARD WSDOT/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION
WT	WEIGHT
WTR	WATER
WTP	WATER TREATMENT PLANT
WW	WATER WASTE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WWTP	WASTEWATER TREATMENT PLANT
YD 3	CUBIC YARD
YD 2	SQUARE YARD
YD	YARD
YR	YEAR
XFMR	TRANSFORMER

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

ABBREVIATIONS

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-G003.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 3 OF 83

G3

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CIVIL/GENERAL SYMBOLS

FIBER OPTIC (EXISTING) — FO — FO
FIRE PROTECTION WATER (EXISTING) — FW — FW — FW
SEWER (EXISTING) — SS — SS — SS
STORM DRAIN (EXISTING) — SD — SD — SD
WATER LINE (EXISTING) — W
RECLAIMED WATER (EXISTING) — RW
GAS LINE (EXISTING) — G — G — G — G
TELEPHONE LINE (EXISTING) — T — T — T
ELECTRICAL LINE (EXISTING) — E — E — E
OVERHEAD POWER (EXISTING) — OH — OH — OH
PUBLIC UTILITY DISTRICT (EXISTING) — PUD
CABLE TV (EXISTING) — CTV
CROSSING UTILITIES (EXISTING)
FENCE — X — X
PROPERTY LINE
RIGHT-OF-WAY — ROW — ROW
CONTRACTORS WORK AREA LIMITS — WA
CENTERLINE
CULVERT WITH END SECTIONS
HANDRAIL OR GUARDRAIL
WATER SURFACE
GRADE CHANGE LINE
RIDGE LINE
FLOW LINE
GRADED SLOPE — TOP, TOE
DITCH OR SWALE
CONTOUR MAJOR (NEW) — 110
CONTOUR MINOR (NEW)
CONTOUR MAJOR (EXIST) — 110
CONTOUR MINOR (EXIST)

BENCH MARK — BM
SOIL BORING, IDENTIFICATION NUMBER — B-10
SOIL TEST PIT, IDENTIFICATION NUMBER — TP-10
SPOT ELEVATION — 10.35
ELECTROLYSIS TEST STATION — ETS
WATER METER — WM
FIRE DEPT. CONNECTION
FIRE HYDRANT
UTILITY BOX (AS LABELED)
POWER POLE
STREET LIGHT
STREET LIGHT AND TRAFFIC SIGNAL
YARD LIGHT
TRAFFIC SIGNAL
TELEPHONE RISER — T RISER
GUY ANCHOR
CATCH BASIN — CB
DROP INLET — DI
CLEAN OUT — CO
DRIVEWAY
HANDICAP ACCESS RAMP
CURVE NO. — 14
SURVEY PANEL
MONUMENT OR SURVEY POINT
SECTION CORNER
ELEVATION MARK (REFERENCE)
ELEVATION MARK (DESIGN)
FLAG NOTE — 1
WATER GATE VALVE

STRUCTURE OR PIPE (NEW)
STRUCTURE OR PIPE
DEMOLITION
CONCRETE IN SECTION
STEEL IN SECTION
WOOD IN SECTION
GRATING IN PLAN
CHECKERED PLATE IN PLAN
GRAVELED AREA IN PLAN OR SECTION
SAND
BRICK OR CONCRETE BLOCK IN SECTION
GRADE
FILL
ASPHALT CONCRETE (IN PLAN)
ASPHALT CONCRETE (IN SECTION)

NOTES:
1. THIS IS A GENERALIZED LEGEND SHEET. THIS CONTRACT MAY NOT USE ALL INFORMATION SHOWN.
2. INFORMATION SHOWN MAY NOT BE ALL INCLUSIVE. SEE ALSO ABBREVIATIONS, G-3.
3. STRUCTURAL FILL OR COMPACTED FILL, WHERE CALLED OUT ON THE DRAWINGS, SHALL REFER TO MATERIAL COMPACT TO AT LEAST 95% OF ASTM D 1557 TEST METHOD.

SECTION OR DETAIL REFERENCE

SECTION (LETTER)
DETAIL (NUMERAL)
A
M2
DISIPLINE DESIGNATION USED ONLY WHEN GOING OUTSIDE DISIPLINE REFERENCED ON
DRAWING NUMBER DRAWN ON

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CIVIL GENERAL SYMBOLS AND NOTES

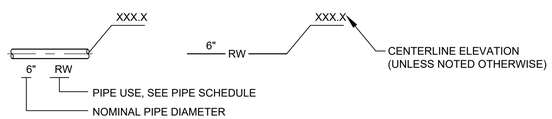
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-G004.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET G4 OF

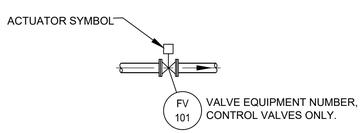
GENERAL PIPING NOTES

1. ALL PIPING, VALVES AND APPURTENANCES FOR ENTIRE PROJECT SHALL BE RESTRAINED USING APPROVED RESTRAINED-JOINT SYSTEM.
2. INFORMATION PROVIDED ON THIS SHEET ARE MINIMUM REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. MINIMUM COVER SHALL BE 3'-0" UNLESS OTHERWISE SHOWN.
4. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
5. NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE SPECIFIED.
6. APPROPRIATE STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
7. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
8. SYMBOLS, LEGENDS, AND PIPE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS. ALL OF THE ITEMS SHOWN ARE NOT NECESSARILY USED IN THE PROJECT.
9. ALL PIPING WITH UNRESTRAINED JOINTS, SHALL BE PROVIDED WITH THRUST PROTECTION AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST DETAILS AND NOTES ON DRAWINGS.
10. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS ARE ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
11. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PERFORMING THE CONNECTION OF THE PIPING AND ASSOCIATED APPURTENANCES INSTALLED UNDER THIS CONTRACT TO THE EXISTING PIPING AND FACILITIES, AND TO THE WORK OF OTHER CONTRACTORS.
12. PRIOR TO SUBMITTING PIPING DRAWINGS FOR ANY NEW PIPE THAT IS TO CONNECT TO AN EXISTING PIPE OR STRUCTURE, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE, PIPE CROSSINGS OR STRUCTURE TO VERIFY ITS EXACT LOCATION, SIZE, MATERIALS, AND INVERT ELEVATIONS.
13. ALL EXPOSED PIPING IS TO BE PAINTED AND LABELED UNLESS NOTED OTHERWISE. LABELING SHALL INCLUDE FLOW DIRECTION ARROW AND PIPE USE.
14. ALL PIPING UNDER STRUCTURES TO BE CONCRETE ENCASED UNLESS NOTED OTHERWISE.

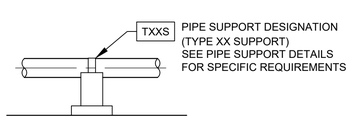
PIPING DESIGNATION



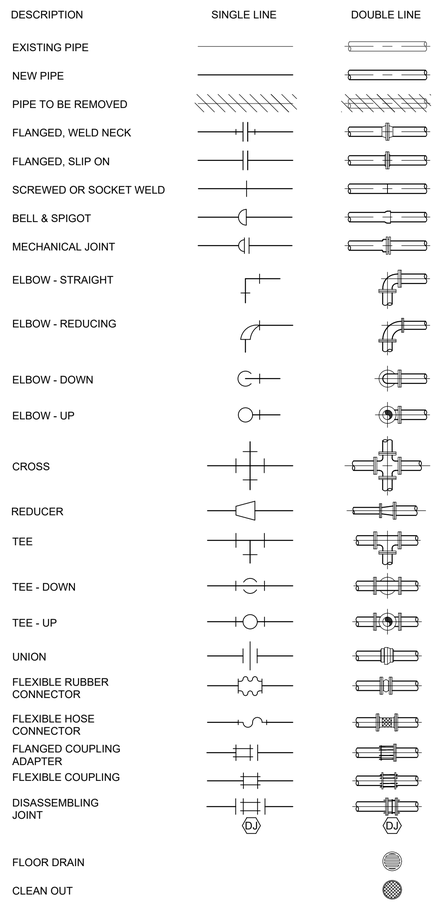
VALVE DESIGNATION



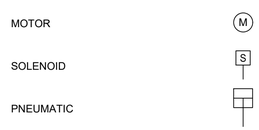
PIPE SUPPORT DESIGNATION



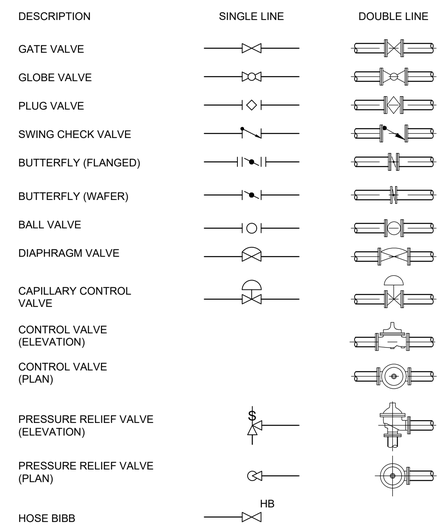
PIPE SYMBOLS



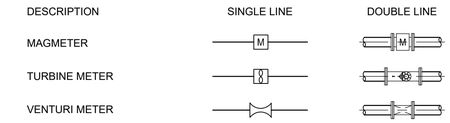
ACTUATOR SYMBOLS



VALVE SYMBOLS



FLOWMETER SYMBOLS



CONDUIT USAGE SCHEDULE

CIRCUIT TYPE	INSIDE BUILDINGS		OUTSIDE BUILDINGS		TRANSITION
	STANDARD	EMBEDDED IN CONCRETE	EXPOSED	BURIED IN SOIL	WITHIN 5 FEET OF BUILDING
LOW VOLTAGE POWER, 120 VAC CONTROL, SIGNAL, FIBER	GRS	PVC-80	PVC COATED GRS	HDPE-80	PVC COATED GRS
MEDIUM VOLTAGE POWER (PSE)	N/A	N/A	DB120	DB120	N/A

PIPE SCHEDULE

LINE	SYSTEM	SIZE	SERVICE	FLOW	PIPE TYPE	MAT'L	VALVE SYSTEM	TEST PRESSURE	TEST MEDIUM	ALLOWABLE LEAKAGE	TEST DURATION	NOTES
CA	COMPRESSED AIR	ALL	E	P	BS	BS	I	SEE NOTES	A	NONE	4 HRS	5
D	DRAIN (FLOOR)	≤ 4	B/C	G	CISP	CISP	-		W	NONE	1 HR	6
		≥ 4	B	G	HDPE	HDPE	-		W	NONE	1 HR	2, 6
OF	OVERFLOW	ALL	B	P	HDPE	HDPE	-		W	NONE	4 HRS	2
PW	POTABLE WATER	<4	B/E	P	CUP	CU	E	150	W	NONE	4 HRS	
		≥ 4	B	P	DIPB	DI	A	SEE NOTES	W	SEE NOTES	4 HRS	1, 3, 4
			B	P	HDPE	HDPE	A	SEE NOTES	W	NONE	4 HRS	1
		≥ 4	E	P	DIPF	DI	A		W	NONE	4 HRS	

STA	PIPELINE			
	297/520 ZONE		724 ZONE	
	WORKING PRESSURE	DR	WORKING PRESSURE	DR
PIPELINE A - 1ST AVE NE TO PUMP STATION				
6+40	100	21		
11+70	80	26		
19+80	63	26	275	7
24+99	63	26	275	7
PIPELINE B - ACCESS ROAD TO NE DISCOVERY DR				
1+00			275	7
16+08			250	9
60+00			200	11
67+00			160	13.5

PIPE TYPE LEGEND

SERVICE
B BURIED
C CONCRETE ENCASED
E EXPOSED
S SUBMERGED

FLOW
P PRESSURE
G GRAVITY
V VENT

SIZE
NOMINAL DIAMETER IN INCHES

PIPE TYPE, MATERIAL AND VALVE SYSTEM SEE SPECIFICATIONS UNLESS OTHERWISE NOTED

PIPE SCHEDULE NOTES
1) PROVIDE DUCTILE IRON UNLESS NOTED ON DRAWINGS. HDPE WATER MAIN TO BE PROVIDED WHERE INDICATED.
2) PROVIDE DR 32.5 FOR OVERFLOW AND DRAIN LINES.
3) ALLOWABLE LEAKAGE PER AWWA C600.
4) SEE TABLE FOR WORKING PRESSURE AND MINIMUM DR. TEST AT 1.5 TIMES WORKING PRESSURE.
5) COMPRESSED AIR SYSTEM IS 250 PSI WITH 150 PSI SERVICE TO SUCTION SIDE HYDROPNEUMATIC TANK. TEST AT 1.5 TIMES WORKING PRESSURE.
6) TEST PER PLUMBING CODE.

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JEFFREY M. FORAY, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED LMM

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPING SYMBOLS, NOTES, AND SCHEDULE

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-G005.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 5 OF 83
G5

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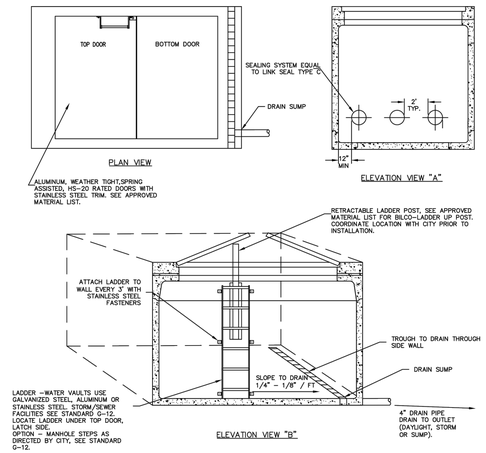
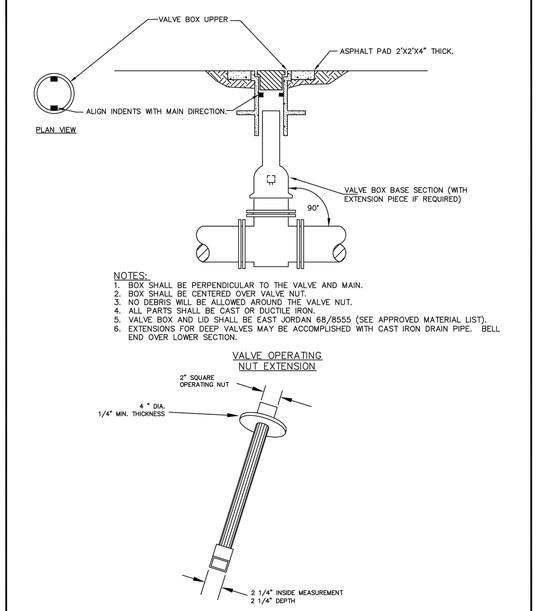


NOTES:

1. VAULT LIDS SHALL BE EQUAL TO LW PRODUCTS.
2. DOORS SHALL BE FULL OPENING, EXPOSING ENTIRE INTERIOR OF VAULT TO 6" MAX. OVERHANG OF INSIDE VAULT WALL TO ALL WALL SURFACES.
3. CITY SHALL SUPPLY LOCK TO CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR TO ORDER "BEST" BRAND PADLOCK FROM CITY.
4. ALL PENETRATIONS CORE DRILLED. PENETRATION MAY BE ALONG LENGTH OR WIDTH OF VAULT.
5. DIMENSION MAY VARY WITH APPLICATION, SEE RELATED DETAILS.

VAULTS- GENERAL FEATURES	DATE: **2/13/2020**	STANDARD DETAIL NO.	
	SCALE: **NTS**	**G-05**	



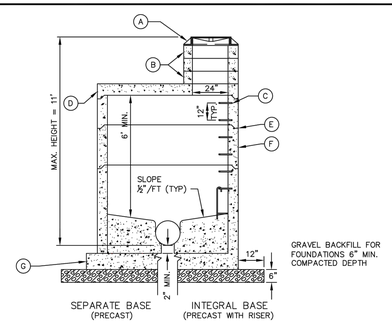
NOTES:

1. BOX SHALL BE PERPENDICULAR TO THE VALVE AND MAIN.
2. BOX SHALL BE CENTERED OVER VALVE NUT.
3. NO DEBRIS WILL BE ALLOWED AROUND THE VALVE NUT.
4. ALL PARTS SHALL BE CAST OR DUCTILE IRON.
5. VALVE BOX AND LID SHALL BE EAST JORDAN 68/8555 (SEE APPROVED MATERIAL LIST).
6. EXTENSIONS FOR DEEP VALVES MAY BE ACCOMPLISHED WITH CAST IRON DRAIN PIPE. BELL END OVER LOWER SECTION.

VALVE BOX AND VALVE EXTENSION INSTALLATION	DATE: **2/13/2020**	STANDARD DETAIL NO.	
	SCALE: **NTS**	**G-14**	

NOTES:

1. NOTE FOR DETAIL G-05: DO NOT PAINT VAULT FLOOR. PAINT WALLS AS FOLLOWS - CLEAN, SCUFF-SAND AND PREPARE PAINT PER PAINT MANUFACTURERS SPECIFICATION. PRIME WITH ONE COAT (6 MILS) OF SHERWIN WILLIAMS PRO-CRYL ACRYLIC PRIMER (B66 W 310 C43-22681) AND THEN TOP COAT WITH ONE COAT (6 MILS) OF SHERWIN WILLIAMS CRYL-HPA HIGH PERFORMANCE ACRYLIC GLOSS HIGH GLOSS BRIGHT WHITE (B66 W 377 6405-18908).



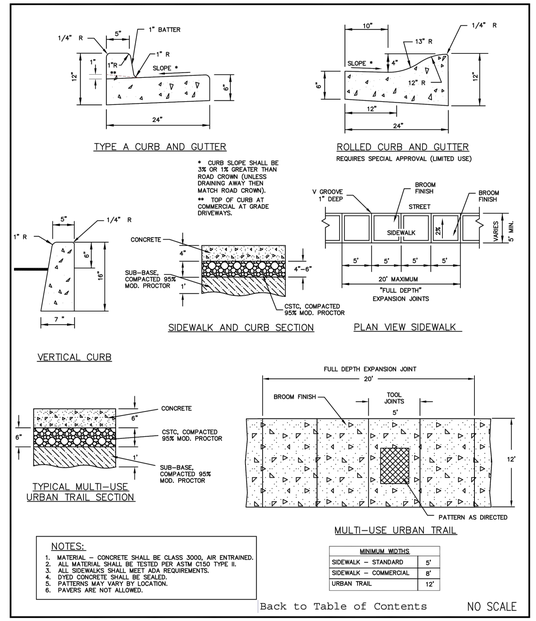
LEGEND

A. FRAME & COVER – SEE STANDARD DETAIL G-11 (CIRCULAR FRAME & COVER, BOLT-LOCKING).
B. ADJUSTMENT SECTION – SEE STANDARD DETAIL G-09 (MH OR CB RING ADJUSTMENT DETAIL).
C. STEPS & LADDER – SEE STANDARD DETAIL G-12 (MH LADDER & STEP)
D. PRECAST CONE (CONCENTRIC)
E. RUBBER GASKET BETWEEN ALL PRECAST SECTIONS. USE BITUTHENE 4000 FOR WATERPROOFING WHEN THE POTENTIAL FOR GROUNDWATER EXISTS.
F. PRECAST RISER SECTIONS (TYP)
G. PRECAST BASE: INTEGRAL BASE AND RISER, OR SEPARATE BASE

NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M198 AND M199, UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. PRECAST BASES SHALL BE FURNISHED WITH KOR-N-SEAL CONNECTOR, UNLESS OTHERWISE APPROVED BY CITY ENGINEER.
3. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT IN ANY POSITION.
4. SEE WSDOT STANDARD SPECIFICATIONS SEC. 7-05.3 AND 9-20.4(3).
5. ADJUSTMENT RISERS AND FRAME SHALL BE SET IN 3/4" NON-SHRINK GROUT. FILL LIFTING HOLES INSIDE AND OUT. PLASTER SMOOTH INSIDE AND OUT.
6. MINIMUM 2% SLOPE ON CHANNEL.
7. CONSTRUCT CHANNEL WITH CLASS 3000 CONCRETE TO PIPE DIAMETER, AND SHELF TO THE CROWN OF PIPE. PROVIDE SMOOTH FINISH.
8. ALL MANHOLES SHALL BE LOCATED OUTSIDE THE WHEEL PATH WHERE FEASIBLE AND NOT IN A BIKE LANE.

SEWER MANHOLE TYPE 3 72" & 96"	DATE:	STANDARD DETAIL NO.	
	SCALE: **NTS**	**S-03**	



NOTES:

1. MATERIAL – CONCRETE SHALL BE CLASS 3000, AIR ENTRAINED.
2. ALL MATERIAL SHALL BE TESTED PER ASTM C150 TYPE II.
3. ALL SIDEWALKS SHALL MEET ADA REQUIREMENTS.
4. DYED CONCRETE SHALL BE SEALED.
5. PATTERNS MAY VARY BY LOCATION.
6. PAVERS ARE NOT ALLOWED.

MINIMUM WIDTHS	
SIDEWALK – STANDARD	5'
SIDEWALK – COMMERCIAL	8'
URBAN TRAIL	12'

Back to Table of Contents NO SCALE

CITY OF ISSAQUAH PUBLIC WORKS DEPARTMENT AUGUST 2010	**SIDEWALKS/CURBS/URBAN TRAILS**	**STANDARD DETAIL NO.**	
	NOTE: THE ORIGINAL IS SIGNED BY THE ENGINEER, APPROVED FOR PUBLICATION AND FILED AT THE CITY OF ISSAQUAH PUBLIC WORKS ENGINEERING OFFICE.	**T-38**	REV:

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CITY STANDARD DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-G006.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

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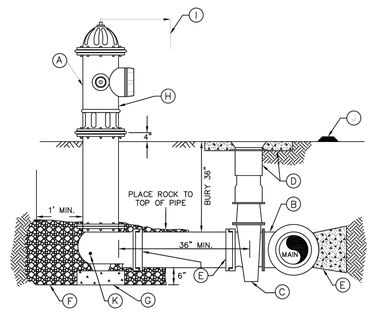


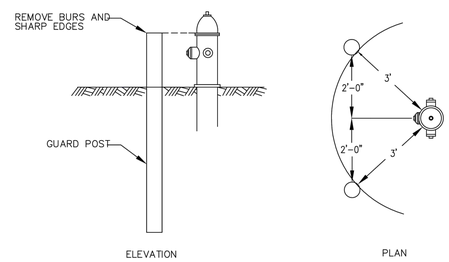
LEGEND:

A. AVK 275M-A2906-0AZJ2-GD, MUELLER 423-540627 OR EAST JORDAN 714360. NOTE: THE PART NUMBERS SPECIFIED ARE FOR A 4' BURY DEPTH. PART NUMBERS WILL CHANGE WITH DIFFERENT HYDRANT BURY DEPTHS. PUMPER PORT TO FACE STREET OR AS DIRECTED BY THE FIRE DEPARTMENT.
B. FLANGE OUTLET ON DUCTILE IRON TEE OR SEE STANDARD DETAIL W-08 (TAPPING TEES).
C. 1-AUXILLARY GATE VALVE-AVK SERIES 45 RESILIENT SEAT GATE VALVE WITH STAINLESS STEM AND DIRT SEAL, MUELLER A2362 RESILIENT SEAT GATE VALVE WITH STAINLESS STEM AND DIRT SEAL OR EAST JORDAN FLOWMASTER RESILIENT SEAT GATE VALVE WITH STAINLESS STEM AND DIRT SEAL, M.J.xFL. WITH LUGS. DO NOT MIX PARTS BETWEEN AVK, MUELLER OR EAST JORDAN. SEE APPROVED MATERIAL LIST.
D. 1-TWO PIECE CAST IRON VALVE BOX. SEE STANDARD DETAIL W-21 (VALVE BOX INSTALLATION).
E. 1-6" DUCTILE IRON CLASS 52 CEMENT-LINED PIPE, LENGTH UP TO 50'. OVER 50', 8" CLASS 52 DUCTILE IRON IS REQUIRED. RESTRAIN PIPE WITH APPROVED SYSTEM - SEE APPROVED MATERIAL LIST OR STANDARD DETAIL W-01 (TYPICAL HORIZONTAL CONCRETE BLOCKING).
F. ½ YARD WASHED DRAIN ROCK (¾"), PLACE TO TOP OF PIPE. PLACE GEO FABRIC AROUND TOP AND SIDES OF GRAVEL, DO NOT BLOCK DRAIN HOLES. DEEPER EXCAVATION WITH MORE DRAIN ROCK MAY BE REQUIRED IN POOR DRAINING SOILS.
G. 16"x8"x4" MINIMUM SIZE CONCRETE BLOCK UNDER HYDRANT.
H. FOOTAGE TO VALVE STENCILED ON HYDRANT IN 2" BLACK BLOCK ENAMEL NUMBERS TO THE NEAREST FOOT. LETTERS SHALL FACE HYDRANT VALVE.
I. MINIMUM 3' CLEAR, LEVEL AREA AROUND HYDRANT.
J. TWO WAY 4" SQUARE RAISED PAVEMENT MARKER BLUE. PLACE 4" OFF STREET CENTERLINE - HYDRANT SIDE.
K. DRAIN HOLE

NOTES:

1. HYDRANTS AND VALVES SHALL BE FROM THE SAME MANUFACTURER.
2. HYDRANT SHALL BE VERTICAL (PLUMB).
3. EXTENSION KITS ARE NOT ALLOWED.
4. HYDRANT WILL COME FACTORY WHITE FURNISHED WITH 5" STORZ CONNECTION. NO REPAINTS. ALLOW 6-8 WEEKS LEAD TIME FROM THE FACTORY.
5. TORQUE ALL BOLTS TO MANUFACTURE SPECIFICATIONS.

FIRE HYDRANT ASSEMBLY	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-02**

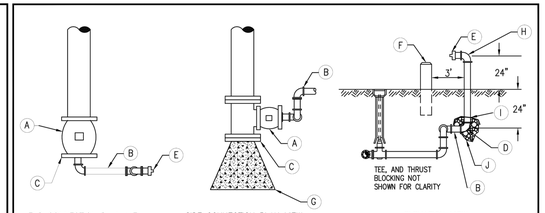


NOTES:

1. GUARD POST SHALL BE 6" CLASS 52 D.I. PIPE, 6' LONG, FILLED WITH CEMENT. PAINT ALL GUARD POST(S) WHITE PER SHERWIN WILLIAMS RECOMMENDATIONS. GUARD POST MUST BE CLEANED, SCUFFED SANDED AND PREPARED PER PAINT MANUFACTURE SPECIFICATION. PRIME WITH 1 COAT (6 MILLS) OF SHERWIN WILLIAMS PRO-CRYL ACRYLIC PRIMER (B66 W 310 643-22681) AND THEN TOP COAT WITH 1 COAT (6 MILLS) SHERWIN WILLIAMS CRYL-HPA HIGH PERFORMANCE ACRYLIC GLOSS (B66 W 377 6405-18908) HIGH GLOSS BRIGHT WHITE.

2. D.I. GUARD POSTS SHALL ONLY BE USED IN PARKING LOTS, OR AS DIRECTED.

GUARD POST	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-03**



MAIN SIZE	QUANTITY	BLOW-OFF SIZE
6	1	4"
8	1	4"
10	1	F.H.
12	1	F.H.
≥16	PIG	4"

LEGEND:

A. CAST IRON GATE VALVE, MAIN SIZE x BLOW-OFF SIZE TEE (SEE APPROVED MATERIAL LIST).
B. BRASS OR DUCTILE IRON PIPE.
C. BLIND FLANGE OR M.J. PLUG x SIZED BLOW-OFF PIPE.
D. 90° ELBOW WITH ⅜" DRAIN HOLE.
E. INSTALL BRASS, 4" FEMALE SEATTLE STANDARD THREAD X 2 ½" MALE NATIONAL STANDARD THREAD FITTING. INSTALL 2 ½" CAP NST.
F. GUARD POSTS WHEN REQUIRED.
G. PROVIDE RESTRAINED JOINTS.
H. PAINT ALL ABOVE-GROUND PIPE, FITTINGS AND GUARD POST(S) WHITE PER SHERWIN WILLIAMS RECOMMENDATIONS. BLOW-OFF ASSEMBLY MUST BE CLEANED, SCUFFED SANDED AND PREPARED PER PAINT MANUFACTURE SPECIFICATION. PRIME WITH 1 COAT (6 MILLS) OF SHERWIN WILLIAMS PRO-CRYL ACRYLIC PRIMER (B66 W 310 643-22681) AND THEN TOP COAT WITH 1 COAT (6 MILLS) SHERWIN WILLIAMS CRYL-HPA HIGH PERFORMANCE ACRYLIC GLOSS (B66 W 377 6405-18908) HIGH GLOSS BRIGHT WHITE.
I. PROVIDE GEO-FABRIC AROUND TOP AND SIDES OR ROCK. DO NOT BLOCK DRAIN HOLE.
J. PLACE ½ YARD OF ¾" WASHED ROCK AROUND DRAIN HOLE. DEEPER EXCAVATION WITH MORE DRAIN ROCK MAY BE REQUIRED IN POOR DRAINING SOILS.

NOTES:

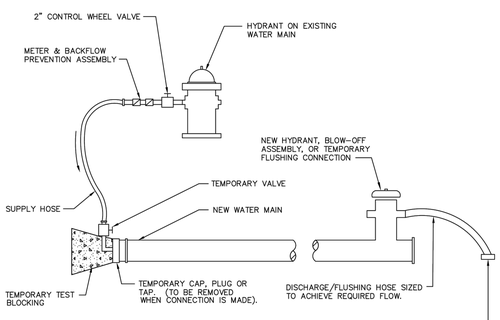
1. SEE STANDARD DETAIL W-21 (VALVE BOX INSTALLATION).
2. LOCATION OF BLOW-OFF TO BE DETERMINED BY CITY.
3. 2" BLOW-OFF SHALL BE INSTALLED ON ALL FUTURE STUBS.
4. TORQUE ALL BOLTS TO MANUFACTURE SPECIFICATIONS.
5. STENCIL FOOTAGE TO VALVE ON DISCHARGE PIPE. 2" BLACK BLOCK ENAMEL NUMBERS.
6. HYDRANT ASSEMBLIES MAY BE SUBSTITUTED FOR BLOW-OFF ASSEMBLIES. SEE STANDARD DETAIL W-02 (FIRE HYDRANT ASSEMBLY).
7. VALVE SHALL BE LOCATED AT LEAST 3' FROM GUARD POST OR STAND PIPE.
8. ALL JOINTS AND FITTINGS SHALL USE RESTRAINED JOINT SYSTEMS. SEE APPROVED MATERIAL LIST.

BLOW-OFF ASSEMBLY	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-04**

NOTES:

1. NOTE FOR DETAILS W-04: CLEAN, SCUFF-SAND AND PREPARE PAINT PER PAINT MANUFACTURERS SPECIFICATION. PRIME WITH ONE COAT (6 MILS) OF SHERWIN WILLIAMS PRO-CRYL ACRYLIC PRIMER (B66 W 310 C43-22681) AND THEN TOP COAT WITH ONE COAT (6 MILS) OF SHERWIN WILLIAMS CRYL-HPA HIGH PERFORMANCE ACRYLIC GLOSS HIGH GLOSS BRIGHT WHITE (B66 W 377 6405-18908)

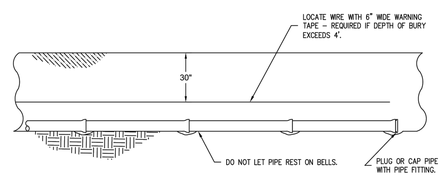
2. NOTE FOR DETAIL W-04, ITEM E: INSTALL BRASS, 4-INCH FEMALE SEATTLE STANDARD THREAD X 2 1/2-INCH MALE NATIONAL STANDARD THREAD FITTING, INSTALL 2 1/2-INCH CAP NST.



NOTES

1. AN APPROVED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED BETWEEN THE EXISTING AND NEW WATER MAIN DURING DISINFECTION AND FLUSHING OF NEW WATER MAIN. (OBTAINED FROM ISSAQUAH PUBLIC WORKS OPERATIONS).
2. THE BACKFLOW PREVENTION ASSEMBLY AND SUPPLY HOSE MUST BE DISCONNECTED DURING HYDROSTATIC PRESSURE TESTING OF THE NEW MAIN.
3. THE NEW WATER MAIN SHALL BE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER NEW MAIN IS PRESSURE TESTED, FLUSHED, DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED.
4. FOR DISINFECTION PROCEDURES SEE TECHNICAL SPECIFICATIONS.
5. AFTER CHLORINE IS FLUSHED AND MAIN CONNECTION IS MADE, THE NEW MAIN SHALL BE FLUSHED AT A VELOCITY OF 5 FPS. DISCHARGE SHALL BE SCREENED TO COLLECT ROCKS. FLUSHING DURATION SHALL ENSURE AT LEAST 3 CHANGES OF WATER IN THE NEW MAIN.
6. IF FLOW OR DISCHARGE LIMITATIONS PREVENT ACHIEVING 5 FPS, THEN THE PIPE SHALL BE PIGGED.
7. PROVIDE DECHLORINATION DURING FLUSHING WHERE NECESSARY.

FILLING AND FLUSHING NEW WATER MAINS	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-05**

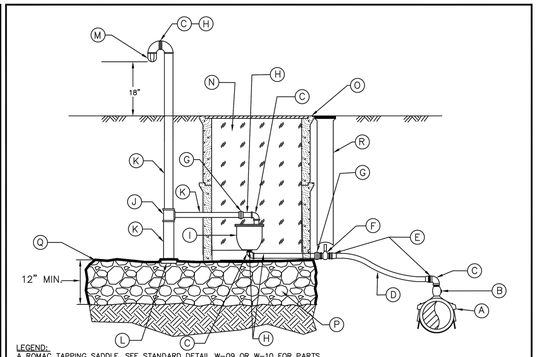


*** ALL JOINTS & CONNECTIONS SHALL BE MECHANICALLY RESTRAINED. SEE APPROVED MATERIAL LIST.**

NOTES

1. LAY PIPE WITH BELLS UPGRADE.
2. PREPARE TRENCH SO PIPE IS SUPPORTED FULL-LENGTH.
3. PLUG OR CAP PIPE WHENEVER NOT ACTIVELY WORKING ON PIPE SECTION. USE MJ OR TYTON JOINT PLUG OR CAP. BOARDS, BUCKETS, ETC. ARE NOT ALLOWED.
4. PIPE THAT IS ROLLED OFF A TRUCK OR TRAILER, OR IS DROPPED OR OTHERWISE MISHANDLED WILL BE REJECTED.
5. CUT ENDS SHALL BE BEVELED PER MANUFACTURER SPECIFICATIONS PRIOR TO ASSEMBLY.
6. GASKETS SHALL BE LUBRICATED WITH APPROVED AWWA C11/A21.11-07 SEC. 4.5.4 LUBRICANT.
7. THE NEW WATER MAIN SHALL BE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER NEW MAIN IS PRESSURE TESTED, DISINFECTED, FLUSHED AND SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED.
8. NEW MAINS SHALL BE FLUSHED AT A MINIMUM VELOCITY OF 5 FPS.
9. PIPES LESS THEN 20' OR LENGTHS APPROVED BY CITY ENGINEER MAY BE SWABBED WITH 500 PPM CHLORINE SOLUTION. CARE SHALL BE TAKEN NOT TO GET CHLORINE ON THE OUTSIDE OF THE PIPE OR FITTINGS.
10. EXTREME CARE SHALL BE TAKEN TO PREVENT WATER AND/OR DEBRIS FROM ENTERING PIPE.
11. A TORQUE WRENCH SHALL BE USED TO PROPERLY TIGHTEN BOLTS AND NUTS TO MANUFACTURER SPECIFICATIONS.
12. JOINT ASSEMBLY SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
13. PIPE LAYING OPERATIONS VIOLATING ANY SECTION OF THIS DETAIL SHALL BE IMMEDIATELY SUSPENDED UNTIL THE CITY HAS BEEN SATISFIED OF THE CONTRACTORS ABILITY TO MEET THESE REQUIREMENTS.
14. MAINTAIN 18" CLEAR ZONE AROUND WATER MAIN AND OTHER UTILITIES.

PIPE LAYING DETAIL	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-06**



LEGEND:
A. ROMAC TAPPING SADDLE. SEE STANDARD DETAIL W-09 OR W-10 FOR PARTS.
B. MUELLER OR FORD BALL CORPORATION STOP, MALE CC THREAD INLET BY MALE IRON PIPE OUTLET.
C. 90° BRASS ELBOW FEMALE IRON PIPE BY FEMALE IRON PIPE THREADS.
D. TYPE K SOFT COPPER WITH NO JOINTS. MAINTAIN POSITIVE SLOPE TO AIR VACUUM ASSEMBLY.
E. COUPLING COPPER TO MALE IRON PIPE THREADS: MUELLER 110 COMPRESSION OR FORD QUICK JOINTS, NO PACK JOINTS ALLOWED.
F. CURB STOP: FORD OR MUELLER (SEE STANDARD DETAIL W-09 OR W-10 FOR PARTS).
G. BRASS UNION, FEMALE IRON PIPE BY FEMALE IRON PIPE.
H. NIPPLES: BRASS, MALE IRON PIPE BY MALE IRON PIPE THREADS, LENGTHS VARY.
I. AIR & VACUUM VALVE ASSEMBLY. SEE APPROVED MATERIAL LIST.
J. BRASS TEE, IRON PIPE THREADS.
K. BRASS PIPE, MALE IRON PIPE THREADS.
L. BRASS CAP WITH ¼" DRILLED HOLE. PLACE BELOW PLASTIC SHEET.
M. BRASS BEEHIVE STRAINER
N. CEDAR SHAVINGS
O. METER BOX (2 SECTIONS REQUIRED) DFWB40CNP4-S25-4MA2 FOR 1" AND SMALLER VALVES. VAULT REQUIRED FOR 1-1/2" AND LARGER VALVES. SEE STANDARD DETAIL G-05 (VAULTS-GENERAL FEATURES).
P. ¾" WASHED ROCK
Q. GEO FABRIC- ENCLOSE WASHED ROCK ON TOP AND ALL SIDES.
R. STANDARD VALVE BOX SEE STANDARD DETAIL W-21 (VAVLE BOX INSTALLATION).

NOTES:
1. ALL PIPE AND FITTINGS TO BE BRASS, DUCTILE IRON OR COPPER.
2. PIPE ABOVE GRADE TO BE PAINTED. AIR VACUUM ASSEMBLY MUST BE CLEANED, SCUFFED SANDED AND PREPARED PER PAINT MANUFACTURE SPECIFICATION. PRIME WITH 1 COAT (6 MILLS) OF SHERWIN WILLIAMS PRO-CRYL ACRYLIC PRIMER (B66 W 310 643-22681) AND THEN TOP COAT WITH 1 COAT (6 MILLS) SHERWIN WILLIAMS CRYL-HPA HIGH PERFORMANCE ACRYLIC GLOSS (B66 W 377 6405-18908) HIGH GLOSS BRIGHT WHITE.
3. AIR & VACUUM RELEASE VALVE ASSEMBLY TAP MUST BE INSTALLED AT HIGHEST POINT OF WATER MAIN.
4. LOCATE AIR & VACUUM METER BOX OUTSIDE OF TRAFFIC AREAS, BEHIND CURB OR SIDEWALK.
5. REQUIRED SIZE SHALL BE DESIGNED BY THE ENGINEER.
6. GUARD POST(S) MAY BE REQUIRED PER CITY'S DIRECTION.

AIR VACUUM RELEASE VALVE ASSEMBLY	DATE: **2/13/2020**	SCALE: **NTS**	STANDARD DETAIL NO. **W-07**

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JEFFREY M. FORAY, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CITY STANDARD DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-G007.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
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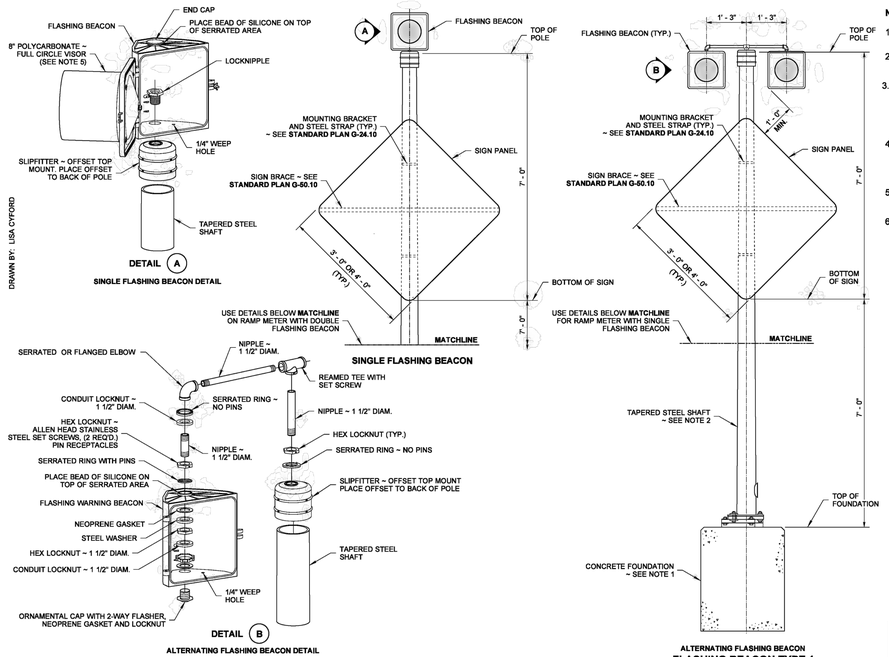


NOTES

1. See **Standard Plan J-21.10** for Signal Standard Foundation details.
2. All poles shall be hot dip galvanized per AASHTO M111.
3. Welding of structures shall be in accordance with the latest edition of the AWS D1.1 Structural Welding Code - Steel. All butt welds shall be ground flush with base metal.
4. Visor shall be 8" Polycarbonate, fully enclosed circle at bottom to reduce glare on sign. Display shall be of appropriate color needed.
5. See **Standard Plan J-21.17** for Electrical details.
6. Junction Box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.

FLASHING BEACON TYPE 1 SIGNAL STANDARD DETAILS

STANDARD PLAN J-21.16-01

SHEET 1 OF 1 SHEET

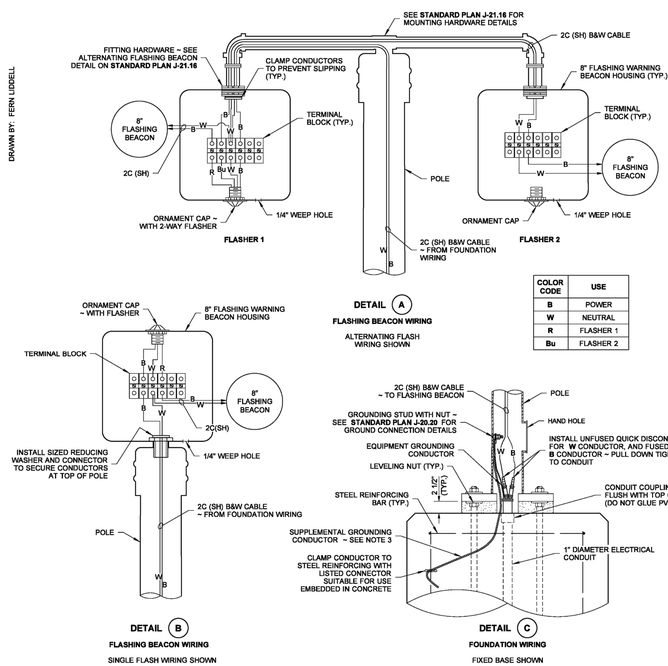
APPROVED FOR PUBLICATION

Pasco Bakotich III 6/10/13

STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

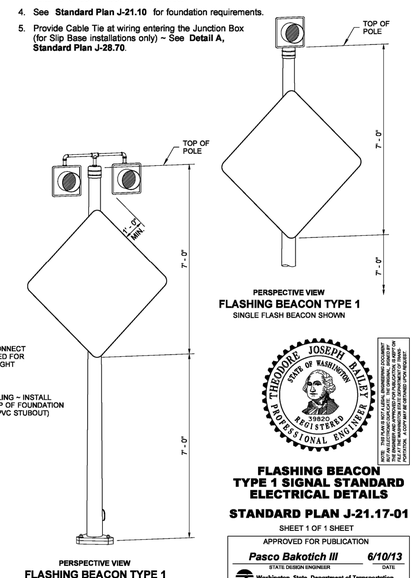
WSDOT STANDARD DETAIL J-21.16-01



COLOR CODE	USE
B	POWER
W	NEUTRAL
R	FLASHER 1
Bu	FLASHER 2

NOTES

1. See **Standard Specification 9-29.3** for Cable Conductor requirements.
2. See **Standard Plan J-21.16** for Flashing Beacon Type 1 Signal Standard details.
3. Supplemental Grounding Conductor shall be non-insulated #4 AWG stranded copper, provide 3' - 0" min. slack. Clamp to vertical steel reinforcing bar with listed connector suitable for use embedded in concrete.
4. See **Standard Plan J-21.10** for foundation requirements.
5. Provide Cable Tie at wiring entering the Junction Box (for Slip Base installations only) ~ See **Detail A, Standard Plan J-28.70**.



FLASHING BEACON TYPE 1 SIGNAL STANDARD ELECTRICAL DETAILS

STANDARD PLAN J-21.17-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III 6/10/13

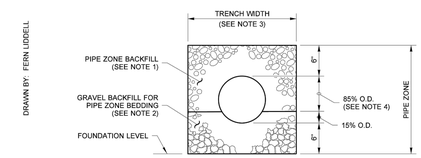
STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

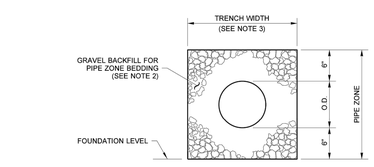
WSDOT STANDARD DETAIL J-21.17-01

NOTES:

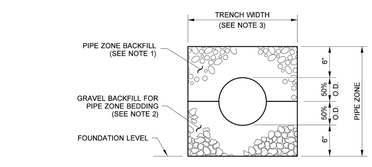
1. SEE STANDARD SPECIFICATIONS 9-03.9(3) (CSTC) FOR PIPE ZONE BACKFILL.
2. SEE STANDARD SPECIFICATIONS 9-03.9(3) (CSTC) FOR GRAVEL BACKFILL FOR PIPE ZONE BEDDING.
3. SEE STANDARD SPECIFICATIONS SECTION 2-09.4 FOR MEASUREMENT OF TRENCH WIDTH.
4. FOR SANITARY SEWER INSTALLATION, CONCRETE PIPE SHALL BE BEDDED TO SPRING LINE.
5. PIPE TRENCH MATERIALS SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D 1557 TEST METHOD.
6. SEE DRAWINGS C5 AND C6 FOR PAVING REQUIREMENTS.
7. MINIMUM BURY DEPTH SHALL BE AS SHOWN ON PIPELINE DRAWINGS.
8. TRENCH BACKFILL ABOVE PIPE ZONE BACKFILL SHALL BE CSTC (WSDOT STANDARD SPECIFICATION SECTION 9-03.9(3).
9. PROVIDE TRACER WIRE ABOVE ALL BURIED THERMOPLASTIC PIPE.



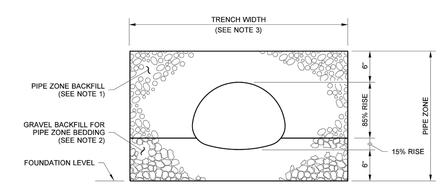
CONCRETE AND DUCTILE IRON PIPE



THERMOPLASTIC PIPE



METAL AND STEEL RIB REINFORCED POLYETHYLENE PIPE



PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS		
PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	UP TO 48"	24"
METAL PIPE ARCH (SPAN)	48" AND LARGER	DIAMETER/2 OR 36" WHICHEVER IS LESS

Heilman, Julie
Feb 20 2018 12:56 PM

PIPE ZONE BEDDING AND BACKFILL

STANDARD PLAN B-55.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Corporate, Staff
Feb 27 2018 8:01 AM

STATE DESIGN ENGINEER

Washington State Department of Transportation

WSDOT STANDARD DETAIL B-55.20-02

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WSDOT STANDARD DETAILS

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FILE NAME 139700500-G008.DWG

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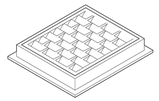
DATE NOVEMBER 2020

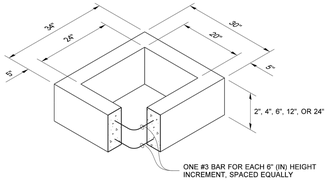
SHEET G8 OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-G008.dwg 12/10/2020 5:09 PM NICOLASLOZANOORDONEZ

DRAWN BY: LISA CYFORD



FRAME AND VANED GRATE



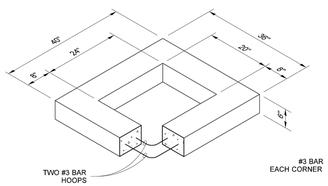
RECTANGULAR ADJUSTMENT SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. SECT. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	21"

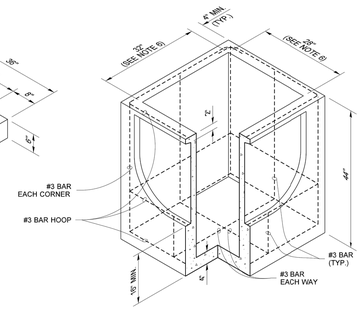
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

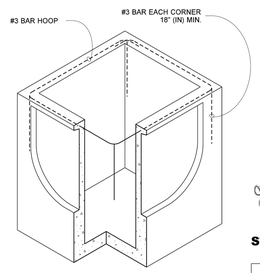
1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot, shall be used with the minimum required rebar shown in the ALTERNATIVE **PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout shall not be greater than 26" (in), in any direction. Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) 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 Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down or integrally cast into the adjustment section with flange up.
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.



REDUCING SECTION



PRECAST BASE SECTION



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

JULIE HEILMAN STATE OF WASHINGTON 51819 REGISTERED PROFESSIONAL ENGINEER

Heilman, Julie
Jan 25 2017 2:56 PM
cosign

CATCH BASIN TYPE 1L

STANDARD PLAN B-5.40-02

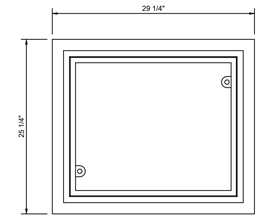
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jan 26 2017 6:49 AM
cosign
STATE DESIGN ENGINEER
Washington State Department of Transportation

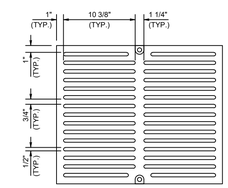
WSDOT STANDARD DETAIL B-5.40-02

NOTES

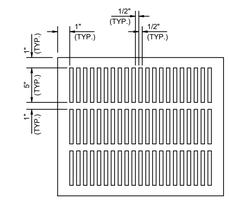
1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. All grates shall be 20" (in) x 24" (in).
3. Grate alternatives shown for informational purposes. Grate design varies by manufacturer and must meet ADA requirements.
4. Refer to Standard Specification Section 9-05.15 and 9-05.15 (2) for additional requirements.
5. Access lids shall be constructed of steel, aluminum, concrete, or polymer with an approved non-slip surface having a static coefficient of friction between 0.60 and 1.00 as determined by ASTM Designation C 1028-89. Access lids on inclines greater than 4 percent shall have a coefficient of friction between 0.80 and 1.00. Lids with openings greater than 0.5 inches (in the direction of travel) are not allowed in the pedestrian through zone.



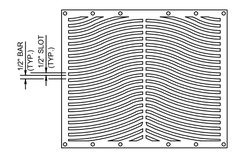
PLAN VIEW
GRATE FRAME
FOR DETAILS NOT SHOWN, **SEE STANDARD PLAN B-30.10**



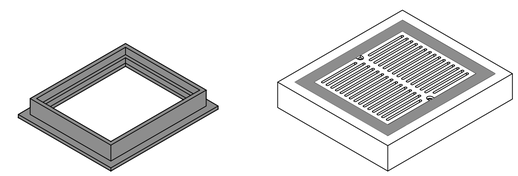
PLAN VIEW
GRATE ALTERNATIVE 1



PLAN VIEW
GRATE ALTERNATIVE 2



PLAN VIEW
GRATE ALTERNATIVE 3



ISOMETRIC VIEWS
(GRATE ALTERNATIVE 1 SHOWN)

ADA GRATES FOR RECTANGULAR FRAMES

SHEET 1 OF 1 SHEET

07/15/16

WSDOT STANDARD DETAIL B-30.15-00

MIKEMARX 7/1/2020 10:32 AM

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NO.	REVISION	DATE	BY

SCALES
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0 — 25mm
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JEFFREY M. FORAY STATE OF WASHINGTON 34536 REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

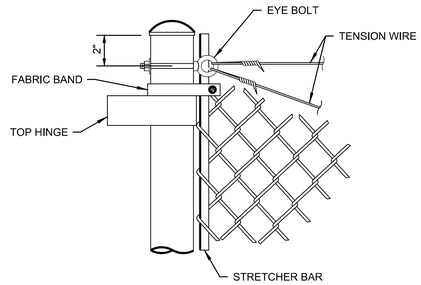
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

WSDOT STANDARD DETAILS

90% SUBMITTAL (REVISED 7/1/2020)

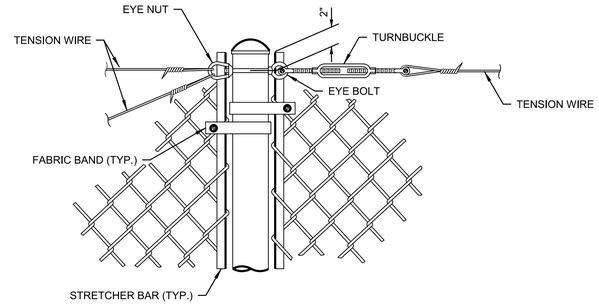
FILE NAME 139700500-G009.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 9 OF 83
G9

DRAWN BY: BILL BERENS



GATE POST

DETAIL (A)

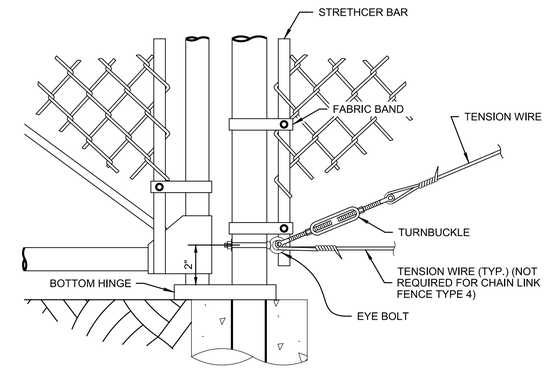


PULL POST

DETAIL (B)

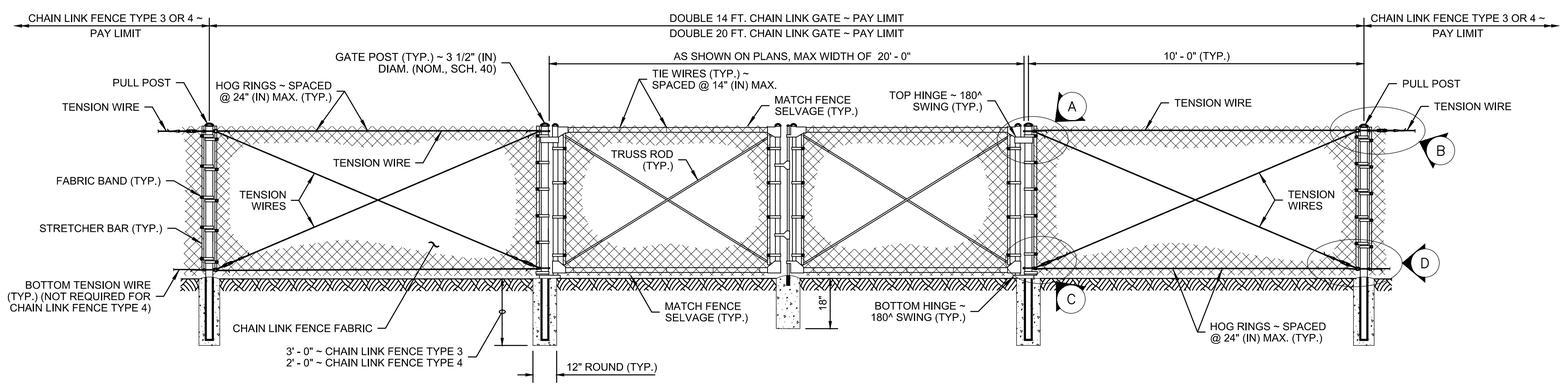
NOTES

1. Materials shall meet the requirements of **Standard Specification 9-16**.

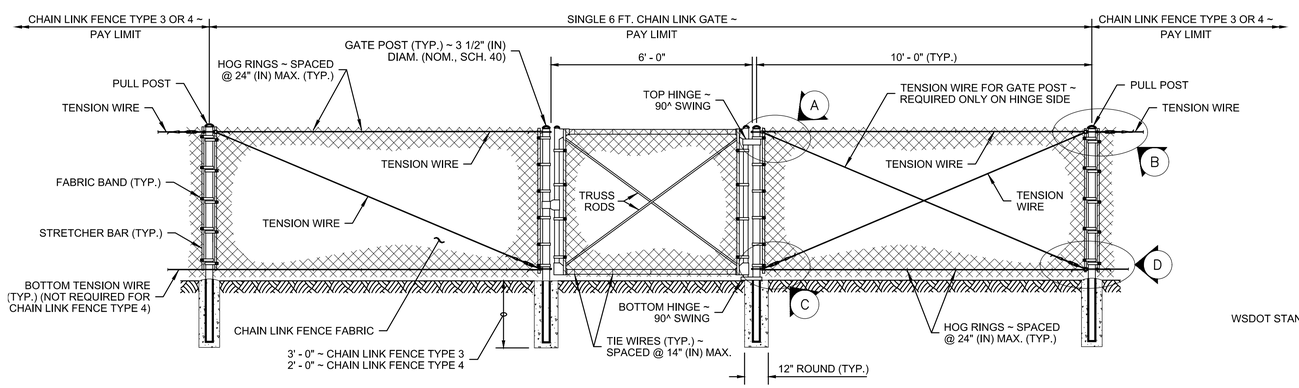


GATE POST

DETAIL (C)

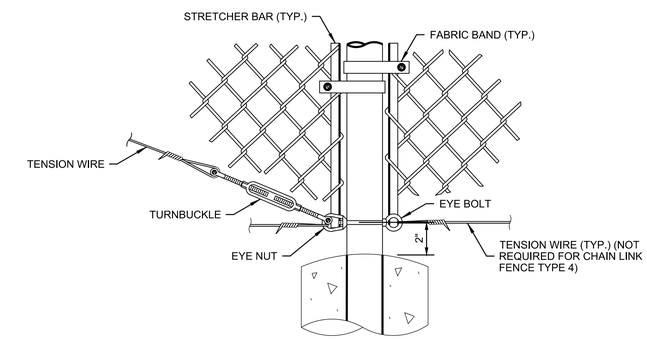


DOUBLE GATE



SINGLE GATE

WSDOT STANDARD PLAN L-30.10-02



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DETAIL (D)

WSDOT STANDARD DETAIL L-30.10-02

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN RJS

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

WSDOT STANDARD DETAILS

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-G010.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 10 OF 83

G10

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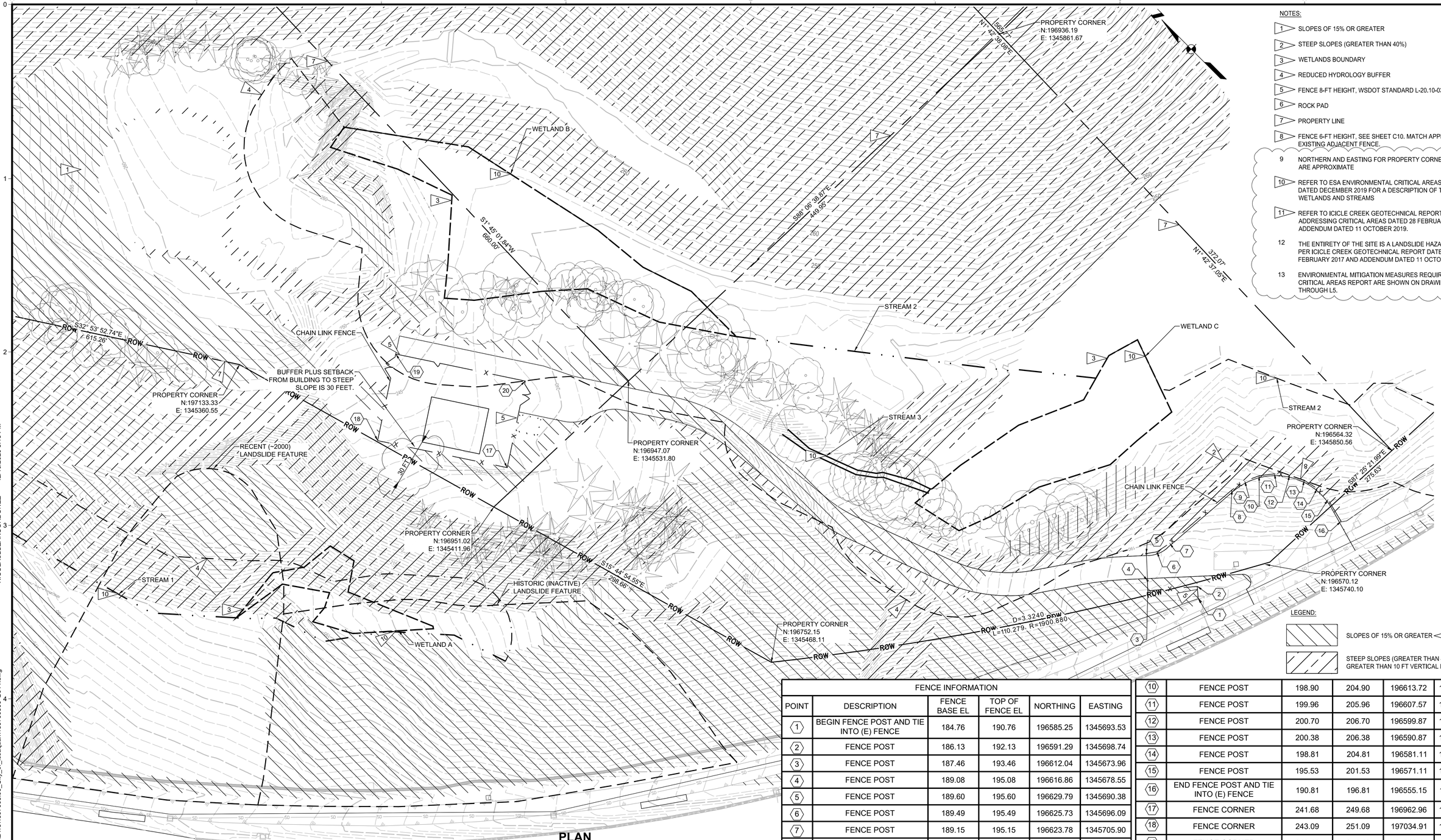

NOTES:

1. SLOPES OF 15% OR GREATER
2. STEEP SLOPES (GREATER THAN 40%)
3. WETLANDS BOUNDARY
4. REDUCED HYDROLOGY BUFFER
5. FENCE 8-FT HEIGHT, WSDOT STANDARD L-20.10-03.
6. ROCK PAD
7. PROPERTY LINE
8. FENCE 6-FT HEIGHT, SEE SHEET C10. MATCH APPEARANCE OF EXISTING ADJACENT FENCE.
9. NORTHERN AND EASTING FOR PROPERTY CORNER MARKERS ARE APPROXIMATE
10. REFER TO ESA ENVIRONMENTAL CRITICAL AREAS REPORT DATED DECEMBER 2019 FOR A DESCRIPTION OF THE WETLANDS AND STREAMS
11. REFER TO ICICLE CREEK GEOTECHNICAL REPORT ADDRESSING CRITICAL AREAS DATED 28 FEBRUARY 2017 AND ADDENDUM DATED 11 OCTOBER 2019.
12. THE ENTIRETY OF THE SITE IS A LANDSLIDE HAZARD AREAS PER ICICLE CREEK GEOTECHNICAL REPORT DATED 28 FEBRUARY 2017 AND ADDENDUM DATED 11 OCTOBER 2019.
13. ENVIRONMENTAL MITIGATION MEASURES REQUIRED PER THE CRITICAL AREAS REPORT ARE SHOWN ON DRAWINGS L1 THROUGH L5.

PLAN

0 15 30 45

1"=30'

FENCE INFORMATION

POINT	DESCRIPTION	FENCE BASE EL	TOP OF FENCE EL	NORTHING	EASTING
1	BEGIN FENCE POST AND TIE INTO (E) FENCE	184.76	190.76	196585.25	1345693.53
2	FENCE POST	186.13	192.13	196591.29	1345698.74
3	FENCE POST	187.46	193.46	196612.04	1345673.96
4	FENCE POST	189.08	195.08	196616.86	1345678.55
5	FENCE POST	189.60	195.60	196629.79	1345690.38
6	FENCE POST	189.49	195.49	196625.73	1345696.09
7	FENCE POST	189.15	195.15	196623.78	1345705.90
8	FENCE POST	196.73	202.73	196619.73	1345759.11
9	FENCE POST	197.91	203.91	196617.82	1345768.92
10	FENCE POST	198.90	204.90	196613.72	1345778.04
11	FENCE POST	199.96	205.96	196607.57	1345785.93
12	FENCE POST	200.70	206.70	196599.87	1345792.30
13	FENCE POST	200.38	206.38	196590.87	1345796.66
14	FENCE POST	198.81	204.81	196581.11	1345798.85
15	FENCE POST	195.53	201.53	196571.11	1345798.73
16	END FENCE POST AND TIE INTO (E) FENCE	190.81	196.81	196555.15	1345794.71
17	FENCE CORNER	241.68	249.68	196962.96	1345436.22
18	FENCE CORNER	243.09	251.09	197034.91	1345389.10
19	FENCE CORNER	246.46	254.46	197066.41	1345437.21
20	FENCE CORNER	241.15	249.15	196994.46	1345484.32

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JEFFREY M. FOKAI — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED DRP

DRAWN DRP

CHECKED JMF

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

OVERALL SITE PLAN

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-G011.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

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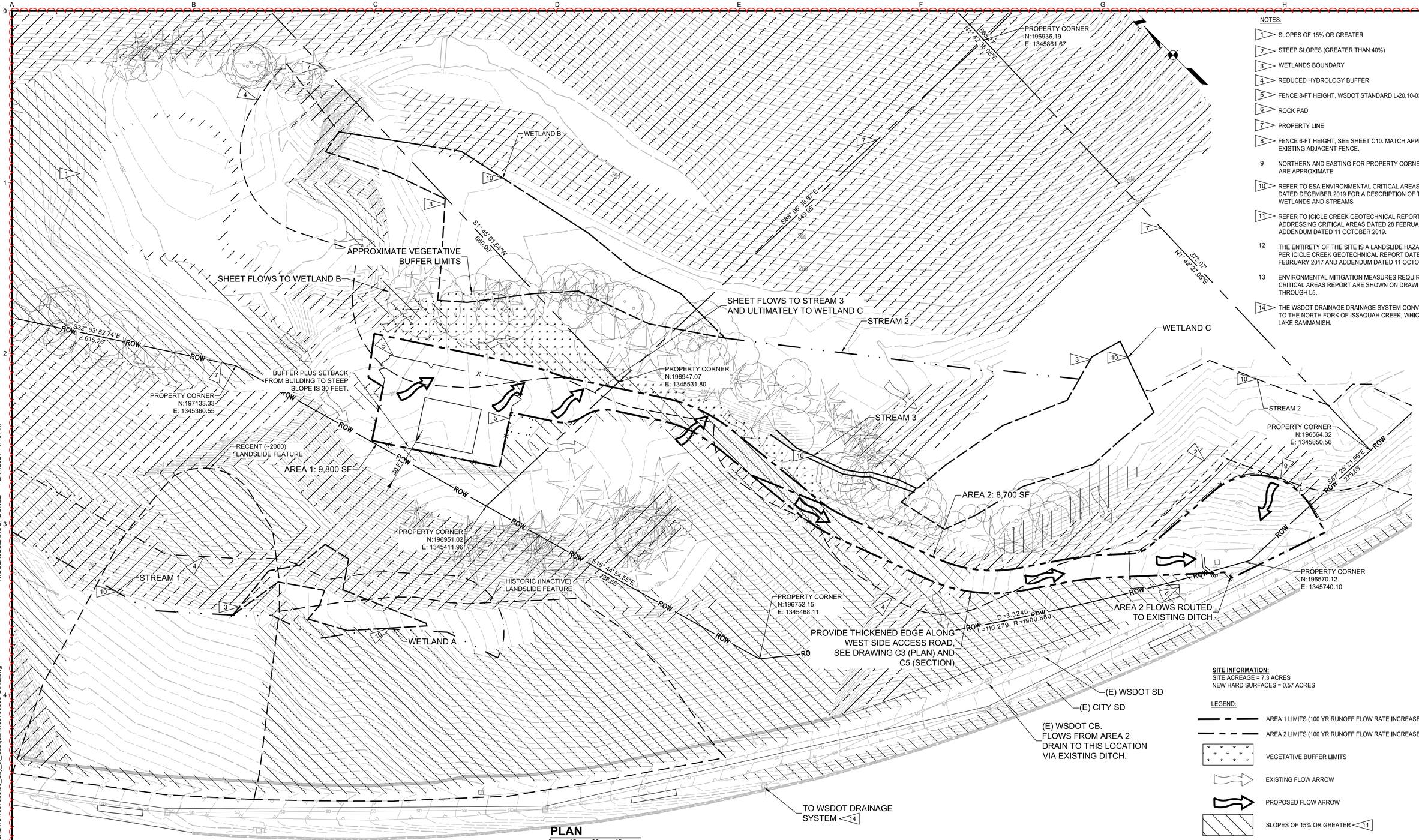

NOTES:

1. SLOPES OF 15% OR GREATER
2. STEEP SLOPES (GREATER THAN 40%)
3. WETLANDS BOUNDARY
4. REDUCED HYDROLOGY BUFFER
5. FENCE 8-FT HEIGHT, WSDOT STANDARD L-20.10-03.
6. ROCK PAD
7. PROPERTY LINE
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12. THE ENTIRETY OF THE SITE IS A LANDSLIDE HAZARD AREAS PER ICICLE CREEK GEOTECHNICAL REPORT DATED 28 FEBRUARY 2017 AND ADDENDUM DATED 11 OCTOBER 2019.
13. ENVIRONMENTAL MITIGATION MEASURES REQUIRED PER THE CRITICAL AREAS REPORT ARE SHOWN ON DRAWINGS L1 THROUGH L5.
14. THE WSDOT DRAINAGE DRAINAGE SYSTEM CONVEYS FLOWS TO THE NORTH FORK OF ISSAQUAH CREEK, WHICH DRAINS TO LAKE SAMMAMISH.

SITE INFORMATION:
SITE ACREAGE = 7.3 ACRES
NEW HARD SURFACES = 0.57 ACRES

LEGEND:

- AREA 1 LIMITS (100 YR RUNOFF FLOW RATE INCREASE = 0.14 CFS)
- AREA 2 LIMITS (100 YR RUNOFF FLOW RATE INCREASE = 0.10 CFS)
- VEGETATIVE BUFFER LIMITS
- EXISTING FLOW ARROW
- PROPOSED FLOW ARROW
- SLOPES OF 15% OR GREATER 11
- STEEP SLOPES (GREATER THAN 40% & GREATER THAN 10 FT VERTICAL RELIEF) 11

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JEFFREY M. FORAY, STATE OF WASHINGTON, 24536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED DRP
DRAWN DRP
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

DRAINAGE PLAN

FILE NAME 139700500-G012.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET G12 OF

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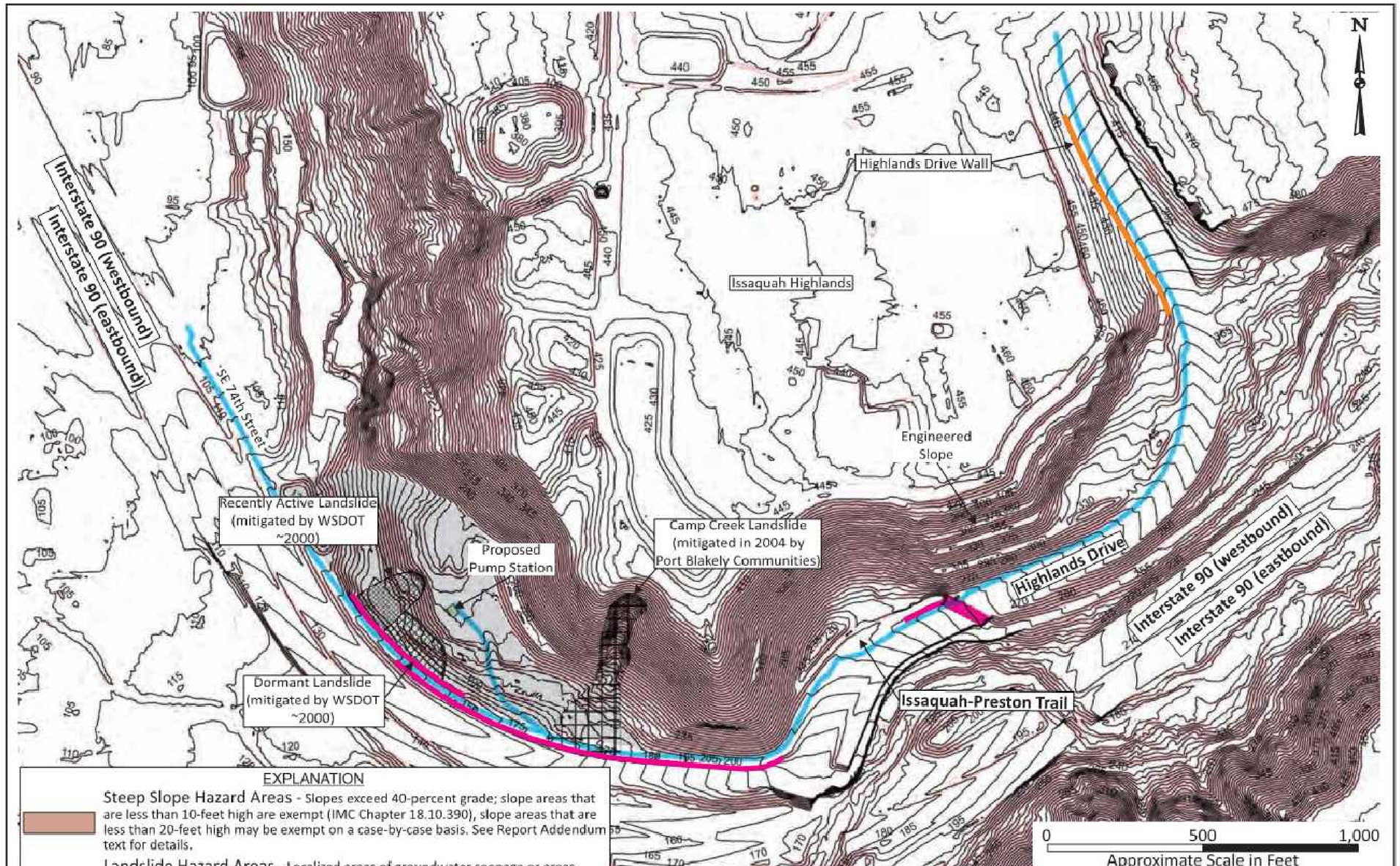

EXPLANATION

Steep Slope Hazard Areas - Slopes exceed 40-percent grade; slope areas that are less than 10-feet high are exempt (IMC Chapter 18.10.390), slope areas that are less than 20-feet high may be exempt on a case-by-case basis. See Report Addendum text for details.

Landslide Hazard Areas - Localized areas of groundwater seepage or areas that have experienced recent movement (identified landslide areas as shown). See Report Addendum text for details.

Erosion Hazard Areas - Large portions of the site are considered Erosion Hazard Areas (IMC Chapter 18.10.390). Implement appropriate Best Management Practices.

Known Landslides

WSDOT Retaining Walls and Structures (only shown adjacent to alignment)

Proposed Water Line

NOTES: 1) Base map prepared using Light Detection and Ranging (LiDAR) Digital Terrain Model (DTM) data (King County 2016 acquisition) obtained from the Washington State Department of Natural Resources (DNR) LiDAR Portal (http://lidarportal.dnr.wa.gov) and processed for 5-foot contours and 40-percent slopes using Esri ArcGIS 10.6.

2) Proposed Pump Station and Water Line locations based on Kennedy/Jenks Consultants, November 2020, South SPAR Booster Pump Station, sheets CP1 to CP8.

SITE PLAN AND CRITICAL AREAS MAP

SOUTH SPAR BOOSTER PUMP STATION AND 297/520 ZONE AND 742 ZONE WATER LINES

ICICLECREEK ENGINEERS
29335 NE 20th Street
Carnation, Washington 98014
(425) 333-0093

SCALE: As shown
DESIGNED: ---
DRAWN: JMS/BRB
CHECKED: KSK
DATE: 01/22/2021

ICE FILE NO.
0101-013
Attachment
A

NOTES:

1. SEE DRAWING G12 FOR ADDITIONAL INFORMATION REGARDING CRITICAL AREAS AROUND PUMP STATION SITE.

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JEFFREY M. FORAD, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CRITICAL AREA MAP

FILE NAME 139700500-G013.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET G13 OF

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GENERAL NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED T ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY KING COUNTY.
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE INSPECTOR.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC01.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET **EC01** 15 OF 83

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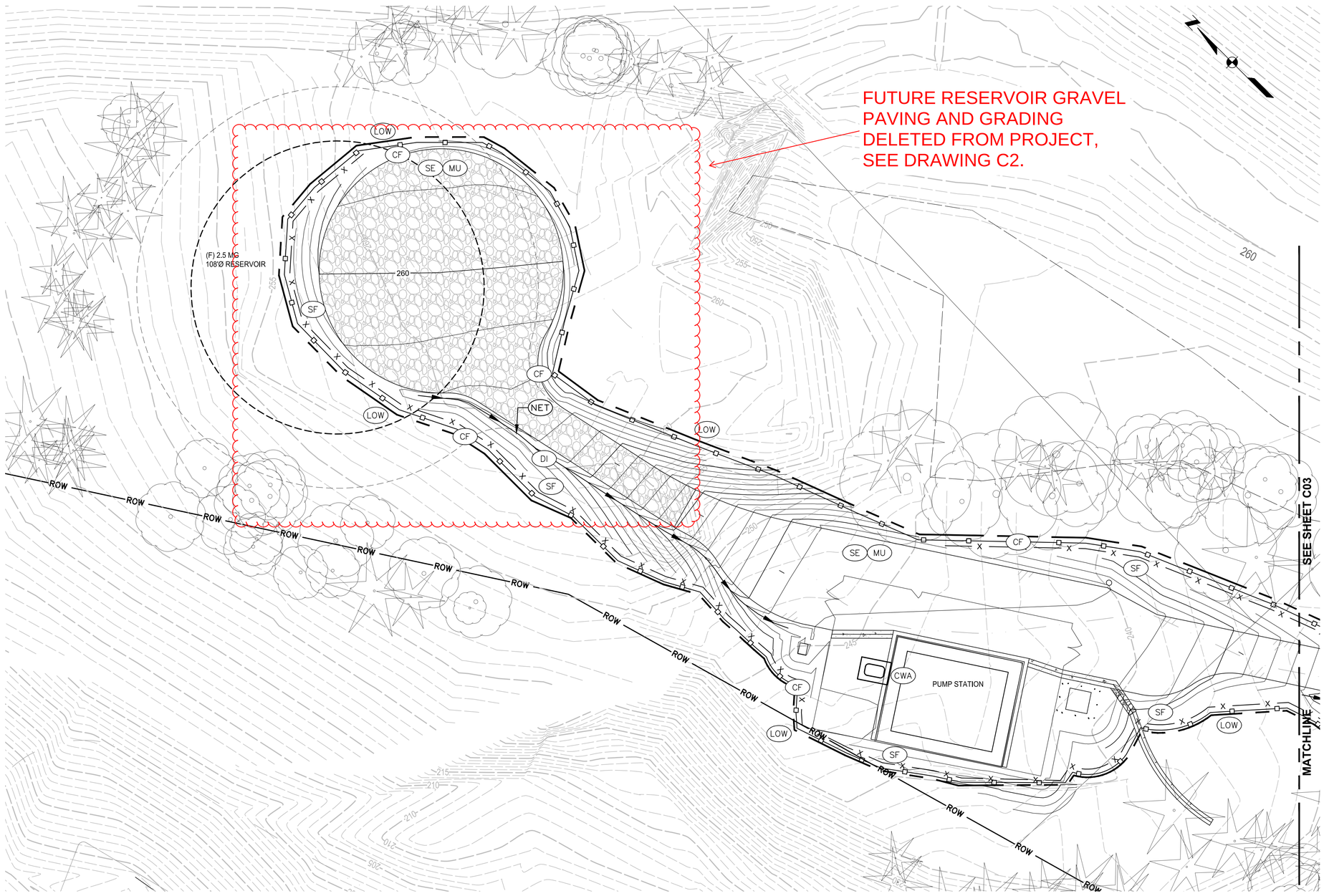

PLAN

0 10 20 30

1"=20'

NOTES:

1. ALL ESC MESAURES SHOWN ARE CONSIDERED INITIAL AND INTERIM, EXCEPT FOR SEEDING AND MULCHING, WHICH ARE FINAL.
2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.
4. PROVIDE TEMPORARY CONSTRUCTION FENCING AT ALL WORK LIMITS.

ESC LEGEND:

LOW	WORK LIMITS
SF	SILT FENCE
CF	CONSTRUCTION FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
DI	DITCH WITH CHECK DAMS
CWA	CONCRETE WASHOUT
SE	SEEDING
MU	MULCHING
NET	NETS AND BLANKETS

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

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JEFFREY M. FOKAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED DRP

DRAWN DRP

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC02.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 16 OF 83

EC02

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PLAN

0 20 40 60
1"=20'

NOTES:

1. ALL ESC MESAURES SHOWN ARE CONSIDERED INITIAL AND INTERIM, EXCEPT FOR SEEDING AND MULCHING, WHICH ARE FINAL.
2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.
4. PROVIDE TEMPORARY CONSTRUCTION FENCING AT ALL WORK LIMITS.

ESC LEGEND:

LOW	WORK LIMITS
SF	SILT FENCE
CF	CONSTRUCTION FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
DI	DITCH WITH CHECK DAMS
CWA	CONCRETE WASHOUT
SE	SEEDING
MU	MULCHING
NET	NETS AND BLANKETS

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

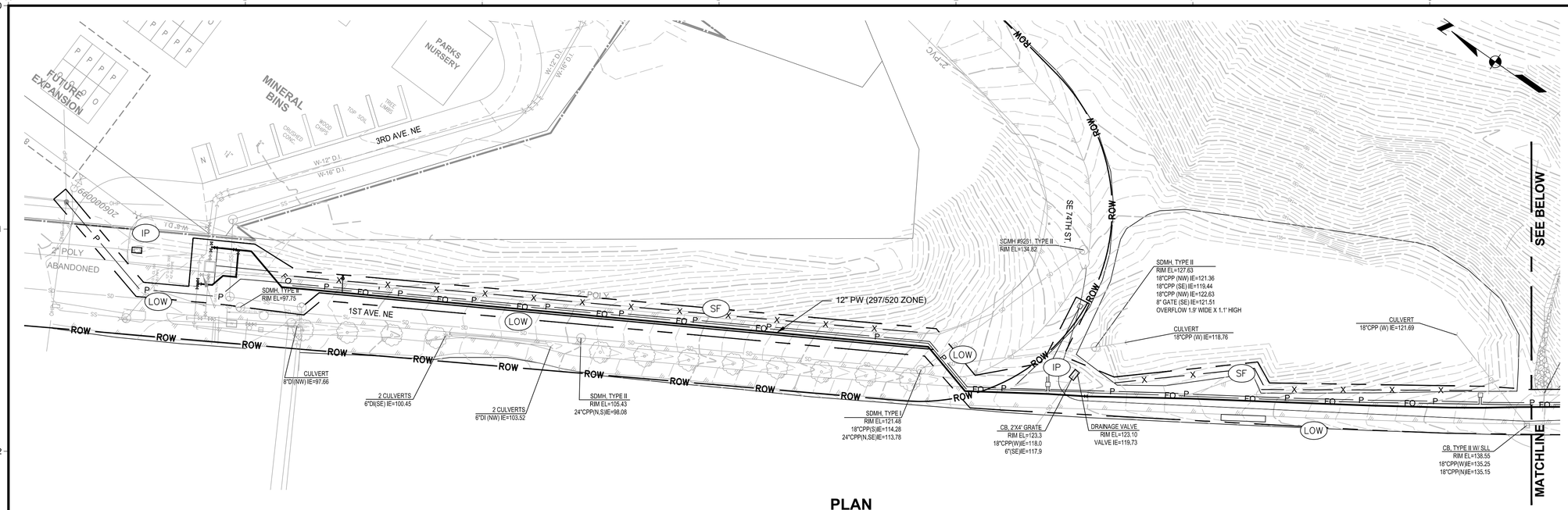
CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC03.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 17 OF 83
EC03



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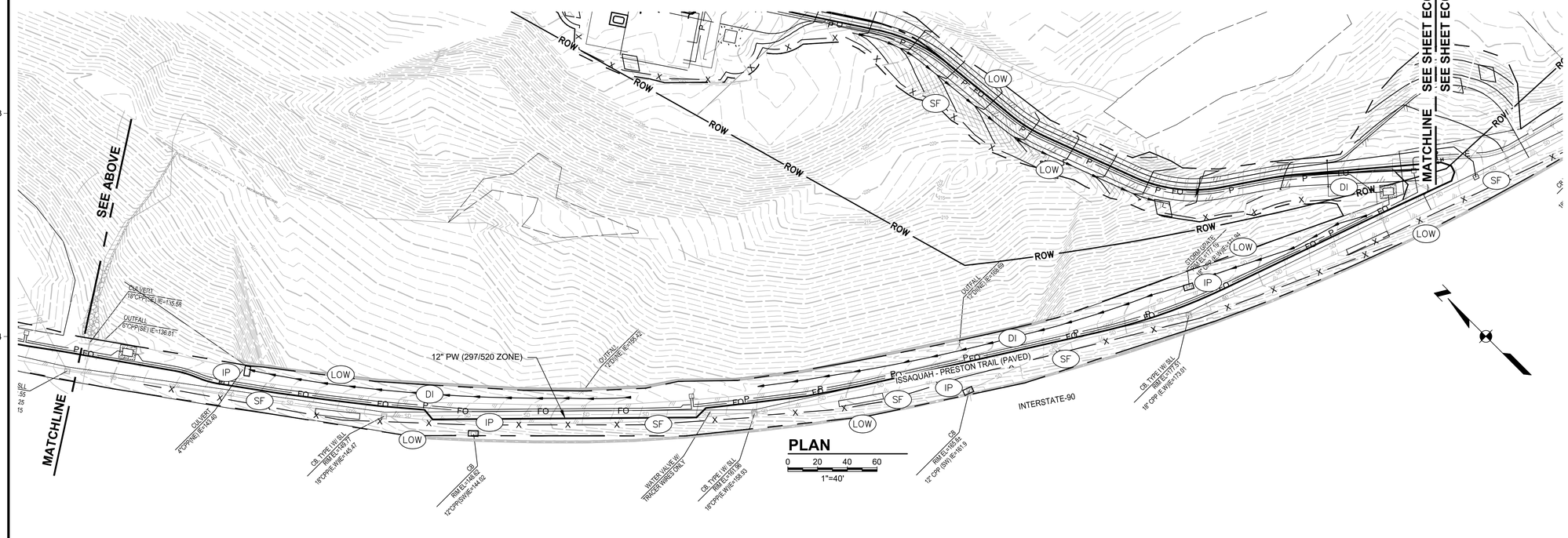
1"=40'



PLAN

0 20 40 60

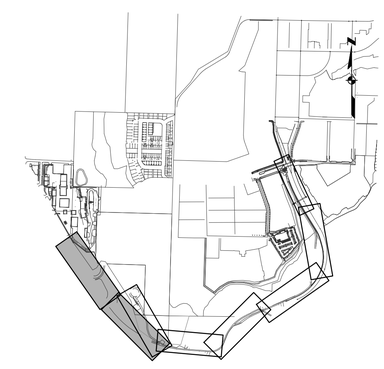
1"=40'

NOTES:

1. ALL ESC MESAURES SHOWN ARE CONSIDERED INITIAL AND INTERIM, EXCEPT FOR SEEDING AND MULCHING, WHICH ARE FINAL.
2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.

ESC LEGEND:

LOW	WORK LIMITS
SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
DI	DITCH WITH CHECK DAMS
CWA	CONCRETE WASHOUT
SE	SEEDING
MU	MULCHING
NET	NETS AND BLANKETS



KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC04.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 18 OF 83

EC04

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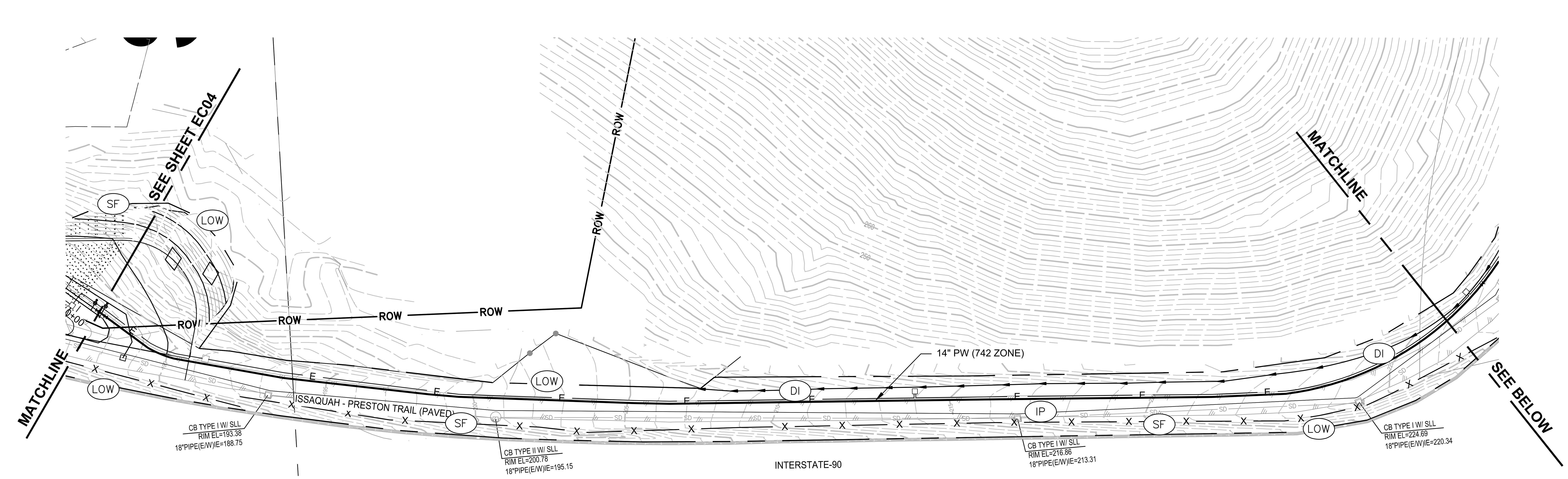
NOTES:

1. ALL ESC MESAURES SHOWN ARE CONSIDERED INITIAL AND INTERIM, EXCEPT FOR SEEDING AND MULCHING, WHICH ARE FINAL.
2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.

ESC LEGEND:

(line)	LOW	WORK LIMITS
— x —	SF	SILT FENCE
(box)	IP	INLET PROTECTION
(hatch)	CE	CONSTRUCTION ENTRANCE
(arrow line)	DI	DITCH WITH CHECK DAMS
	CWA	CONCRETE WASHOUT
	SE	SEEDING
	MU	MULCHING
	NET	NETS AND BLANKETS



PLAN

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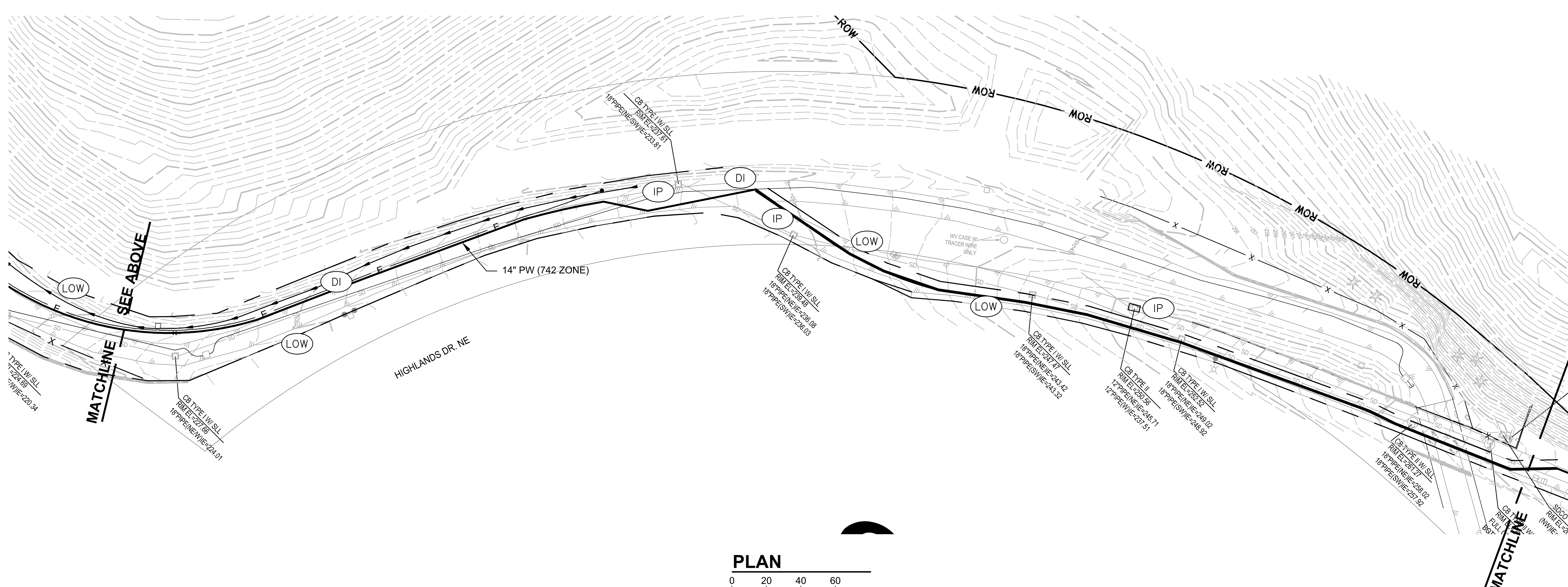

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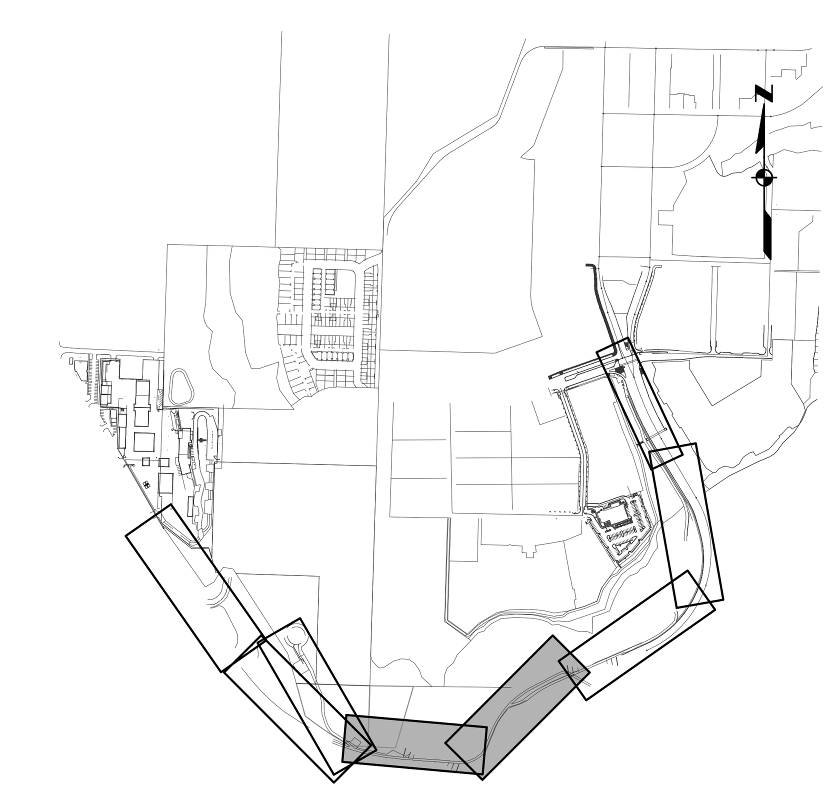
1"=40'



KEY PLAN
SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
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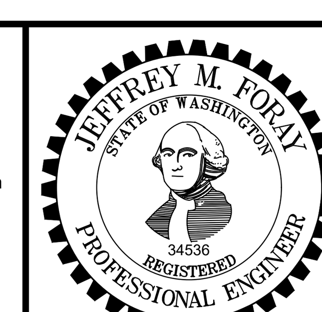
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC05.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 19 OF 83
EC05

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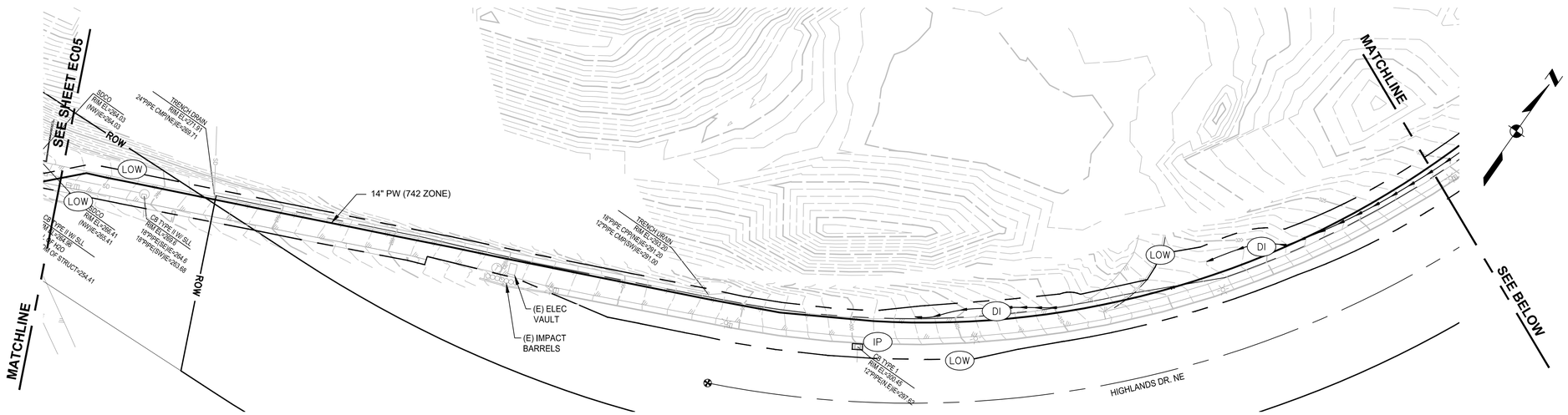

PLAN

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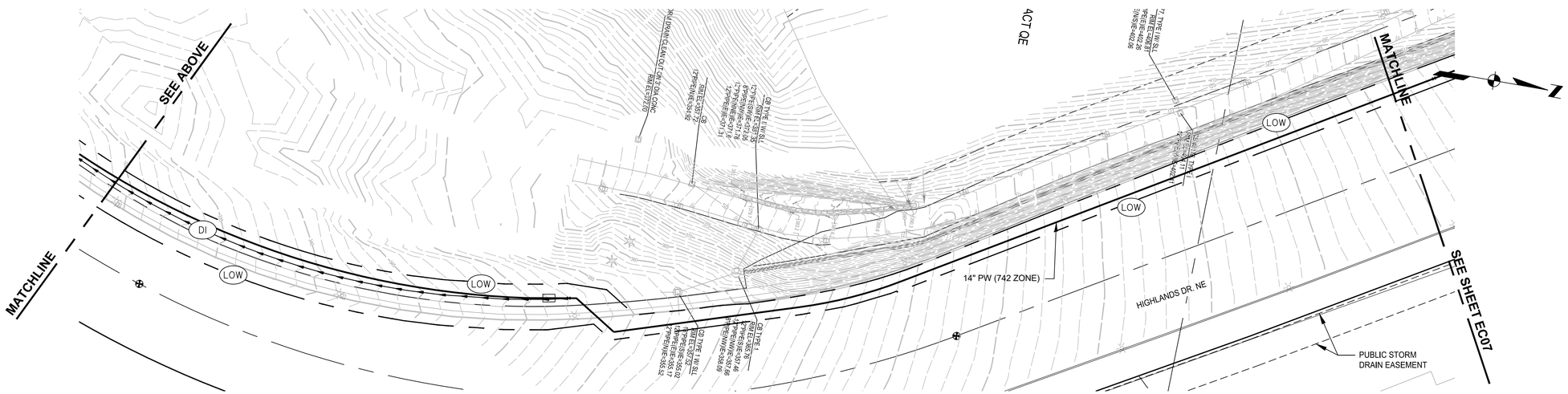
1"=40'



PLAN

0 20 40 60

1"=40'

NOTES:

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2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.

ESC LEGEND:

LOW	WORK LIMITS
SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
DI	DITCH WITH CHECK DAMS
CWA	CONCRETE WASHOUT
SE	SEEDING
MU	MULCHING
NET	NETS AND BLANKETS

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY STATE OF WASHINGTON 34536 REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC06.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 20 OF 83

EC06

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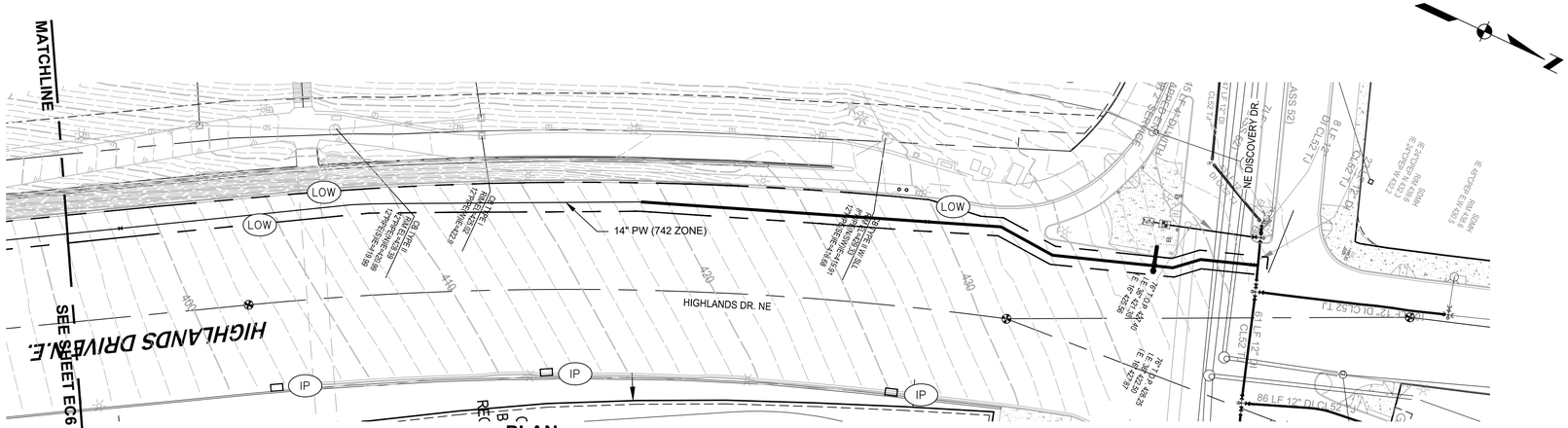


PLAN

0 20 40 60

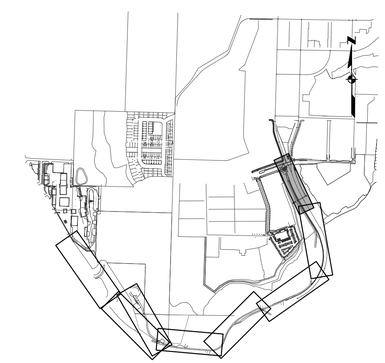
1"=40'

NOTES:

1. ALL ESC MESAURES SHOWN ARE CONSIDERED INITIAL AND INTERIM, EXCEPT FOR SEEDING AND MULCHING, WHICH ARE FINAL.
2. ALL ESC MEASURES SHALL BE REMOVED UPON COMPLETION OF SITE STABILIZATION.
3. INSTALL EROSION CONTROL BLANKET IN PROPOSED DITCH.

ESC LEGEND:

LOW	WORK LIMITS
SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
DI	DITCH WITH CHECK DAMS
CWA	CONCRETE WASHOUT
SE	SEEDING
MU	MULCHING
NET	NETS AND BLANKETS



KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORKAT — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-EC07.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 21 OF 83

EC07

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FIGURE D.3.2.B WATERWAY INSTALLATION

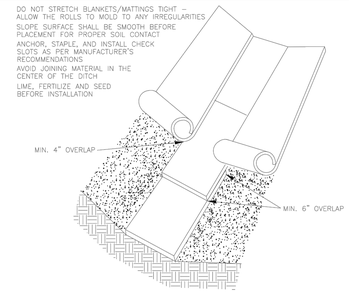
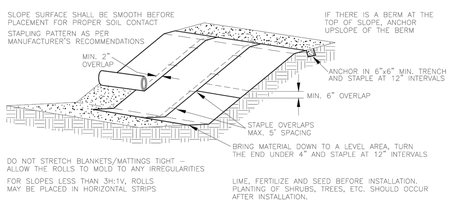


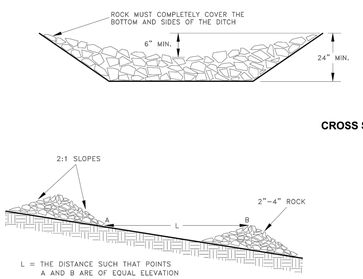
FIGURE D.3.2.C SLOPE INSTALLATION



NETTING DETAIL

NOT TO SCALE

FIGURE D.3.6.E CHECK DAMS



CHECK DAM DETAIL

NOT TO SCALE

FIGURE D.3.3.A SILT FENCE

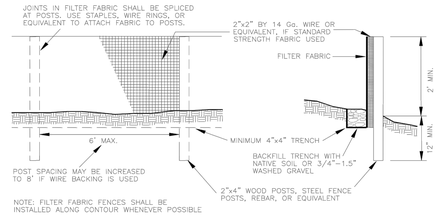
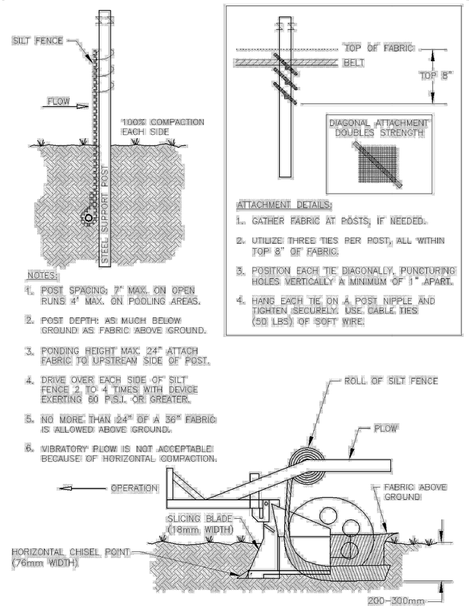


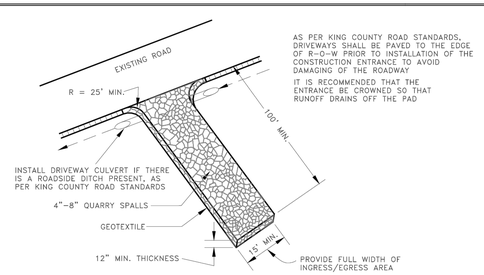
FIGURE D.3.3.B SILT FENCE INSTALLATION BY SLICING



SILT FENCE DETAIL

NOT TO SCALE

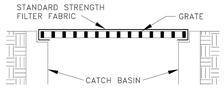
FIGURE D.3.4.A STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION ENTRANCE DETAIL

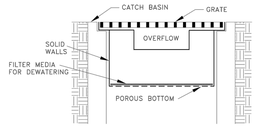
NOT TO SCALE

FIGURE D.3.5.E FILTER FABRIC PROTECTION



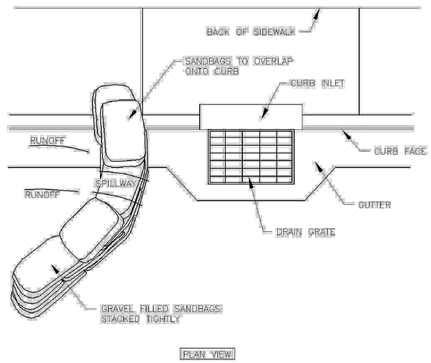
NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.

FIGURE D.3.5.F CATCH BASIN INSERT



NOTE: THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS A MIN. 0.5 C.F. OF STORAGE. THE MEANS TO DEWATER THE STORED SEDIMENT, AN OVERFLOW, AND CAN BE EASILY MAINTAINED.

FIGURE D.3.5.H CURB AND GUTTER BARRIER PROTECTION



NOTES:

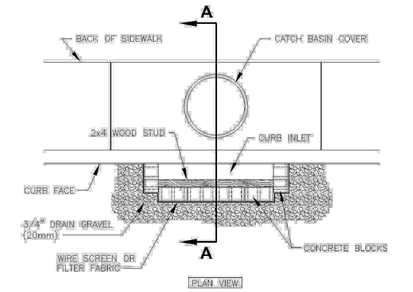
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE A ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

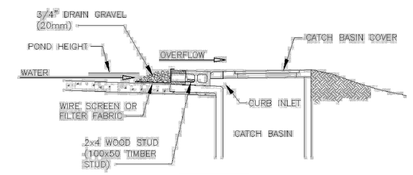
CURB AND GUTTER BARRIER

INLET PROTECTION DETAIL

NOT TO SCALE

FIGURE D.3.5.G BLOCK AND GRAVEL CURB INLET PROTECTION





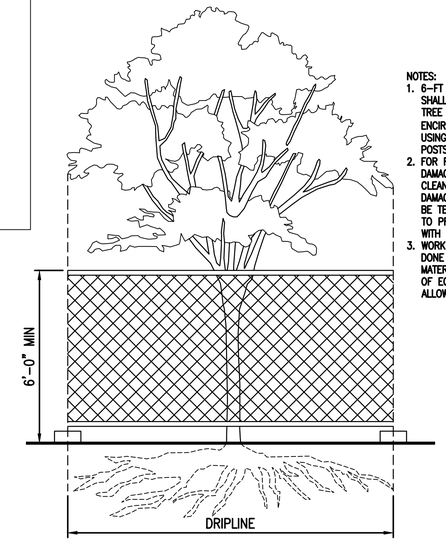
NOTES:

1. USE BLOCKS AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING SEGMENT, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

BLOCK AND GRAVEL CURB INLET PROTECTION

INLET PROTECTION DETAIL

NOT TO SCALE



NOTES:

1. 6-FT HIGH TEMPORARY CHAIN LINK FENCE SHALL BE PLACED AT THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE THE TREE(S). INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
2. FOR ROOTS OVER 1-INCH DIAMETER THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

TREE PROTECTION DETAIL

NOT TO SCALE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE EROSION CONTROL DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

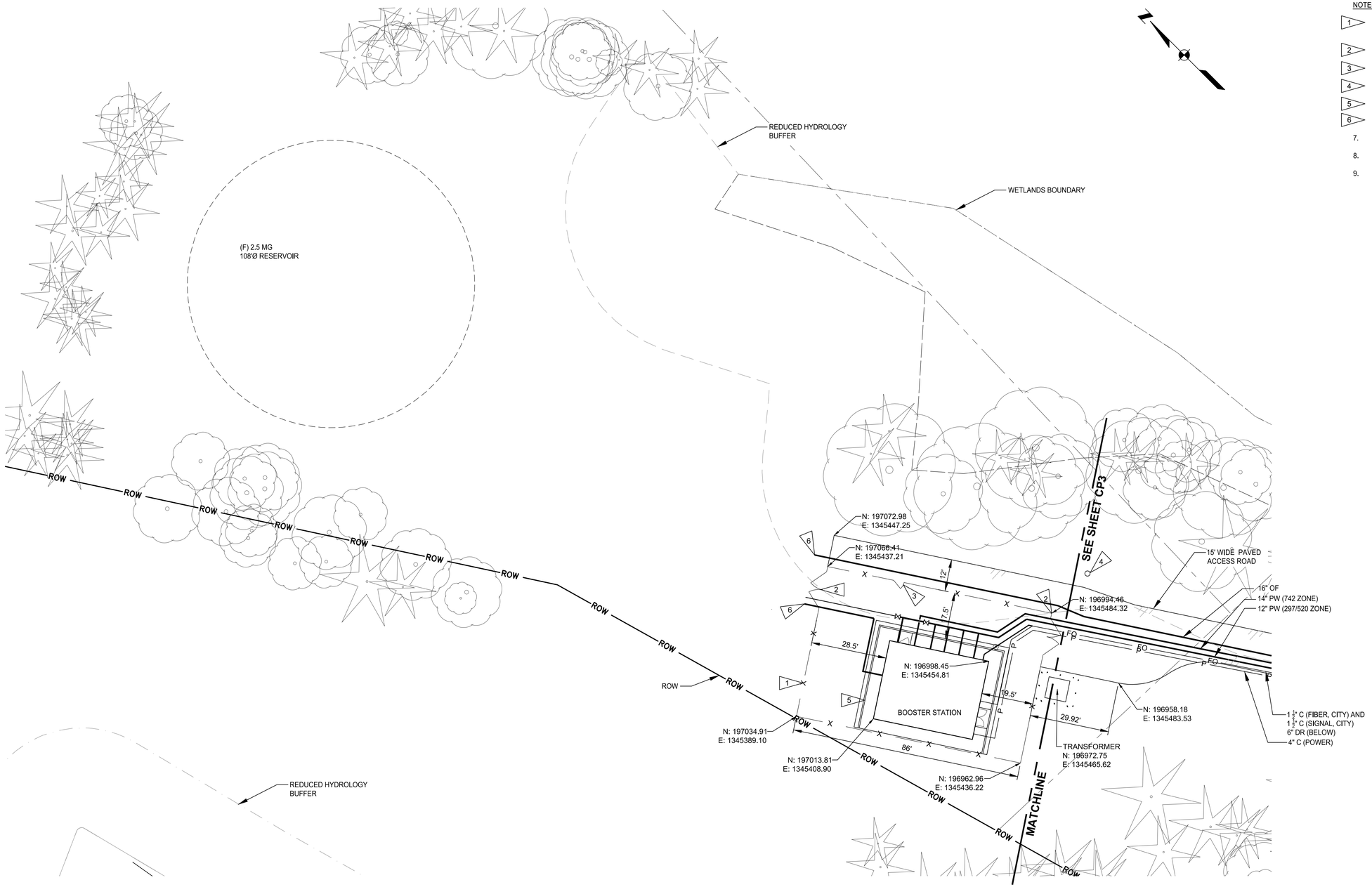
FILE NAME 139700500-EC08.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET **EC08** OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-EC08.dwg 11/23/2020 4:36 PM NICOLASLOZANOORDONEZ



PLAN

0 10 20 30

1"=20'

NOTES:

1. NEW FENCE. WSDOT STANDARD L-20.10-03 WITH 8 FOOT HEIGHT. INVERT FABRIC WHEN INSTALLING.
2. NEW DOUBLE GATE. WSDOT STANDARD L-30.10-02 WITH STRONG ARM GATE LATCH.
3. NEW SINGLE GATE. WSDOT STANDARD L-30.10-02.
4. CONCRETE POLE FOR SECURITY CAMERA. SEE SHEET S-4.
5. SIDEWALK. SEE DETAIL 3332 SHEET S4.
6. EXTEND PIPELINES FOR FUTURE RESERVOIR PAST END OF ASPHALT PAVING.
7. SEE MECHANICAL DRAWINGS FOR PIPING DETAILS.
8. SEE SHEETS C3 AND C4 FOR ACCESS ROAD PLAN AND PROFILE.
9. SEE SHEET C9 FOR DETAILED PUMP STATION GRADING PARTIAL PLAN.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

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JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED DRP

DRAWN DRP

CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

SITE AND YARD PIPING PLAN

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C001.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET 23 OF 83

C1

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PLAN

0 10 20 30

1"=20'

NOTES:

1. MAINTAIN 30' MINIMUM CLEARANCE BETWEEN STRUCTURES AND STEEP SLOPE.
2. SEE SHEETS C3 AND C4 FOR ACCESS ROAD PLAN AND PROFILE INCLUDING GRADING AND PAVING.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FOKAI — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

SITE GRADING AND PAVING PLAN

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C002.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET 24 OF 83

C2

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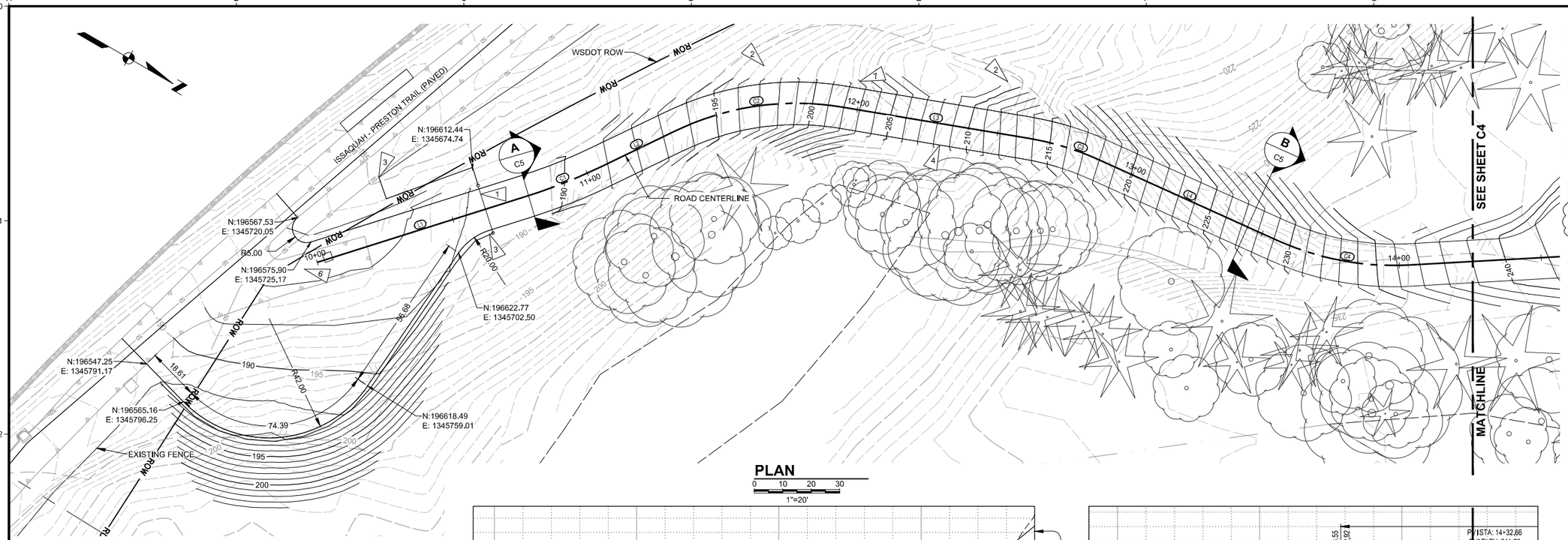
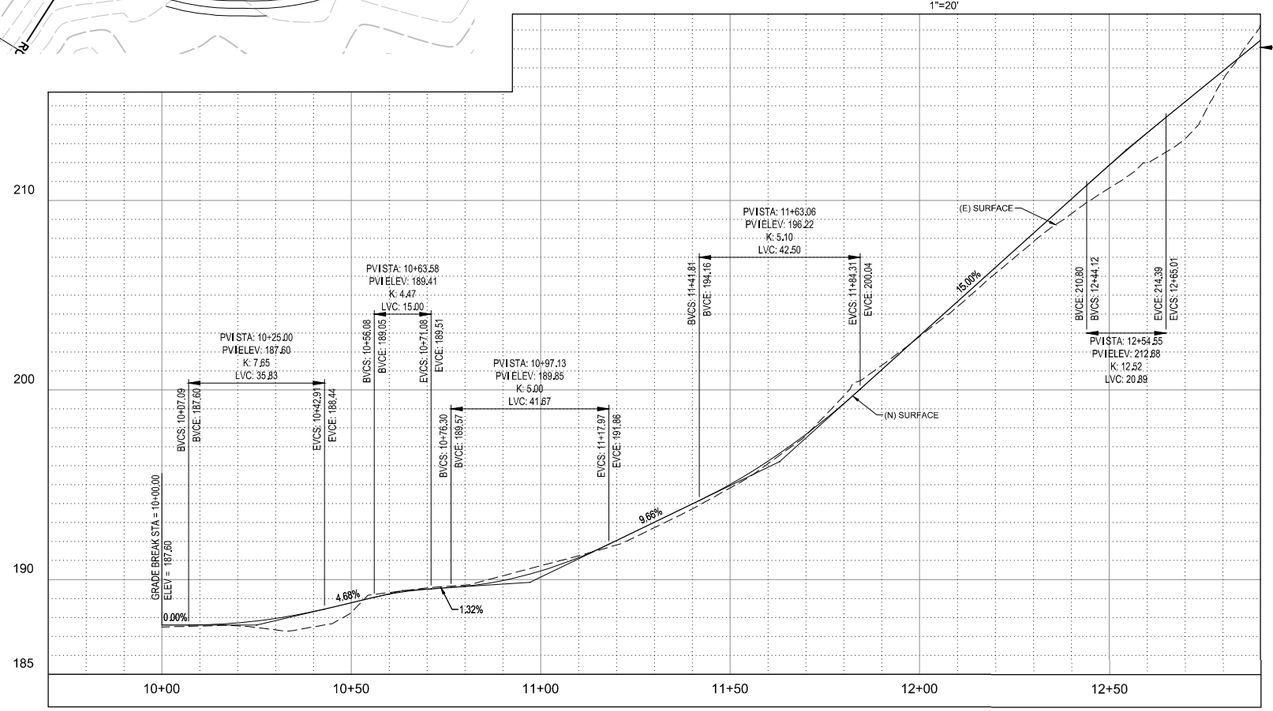
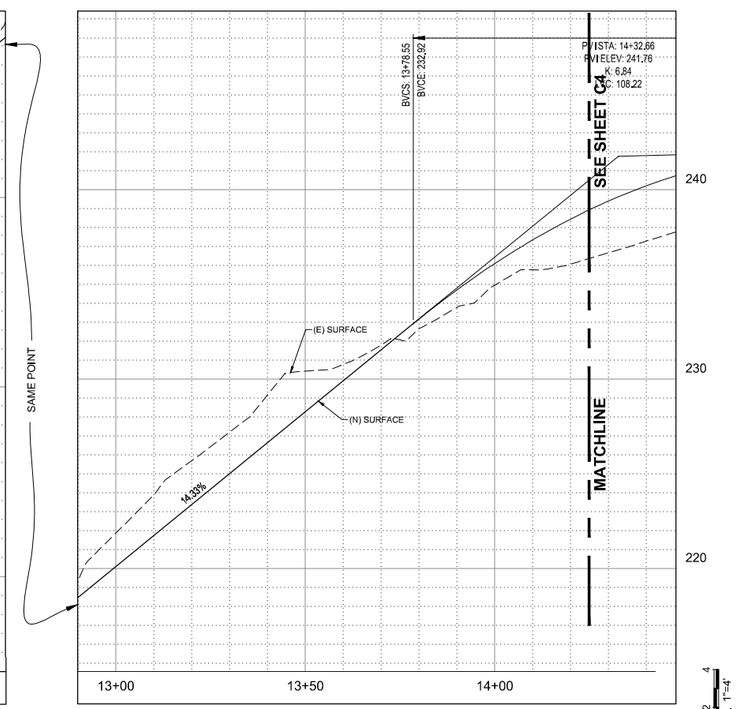


PLAN

0 10 20 30
1"=20'





PROFILE

0 10 20 30
HORIZ. 1"=20'
VERT. 1"=4'

NOTES:

1. NEW WSDOT GATE STANDARD L-30.10-02 SEE SHEET C9 FOR DETAILS.
2. ROCK PAD. SEE SHEET C7 FOR DETAILS.
3. CONTRACTOR TO DEMOLISH EXISTING 6 FT CHAIN LINK FENCE ACROSS ACCESS ROAD (APPROX. 127 LINEAR FEET). INSTALL NEW FENCH PER WSDOT STANDARD L-20.10-03 WITH 6 FOOT HEIGHT. SEE SHEET C10 FOR DETAILS.
4. (N) 15' WIDE ACCESS ROAD. 1 / C5
5. SEE SHEET C5 FOR ROAD SECTIONS, AND LINE AND CURVE TABLE.
6. LOWER ACCESS ROAD DRAINS TO DITCH ALONG TRAIL.
7. INSTALL THICKENED EDGE ALONG WEST SIDE OF ACCESS ROAD, STA 10+00 TO CHANGE IN CROSS SLOPE, APPROX. STA 12+00.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

ACCESS ROAD PLAN AND PROFILE

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C003.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET C3 OF

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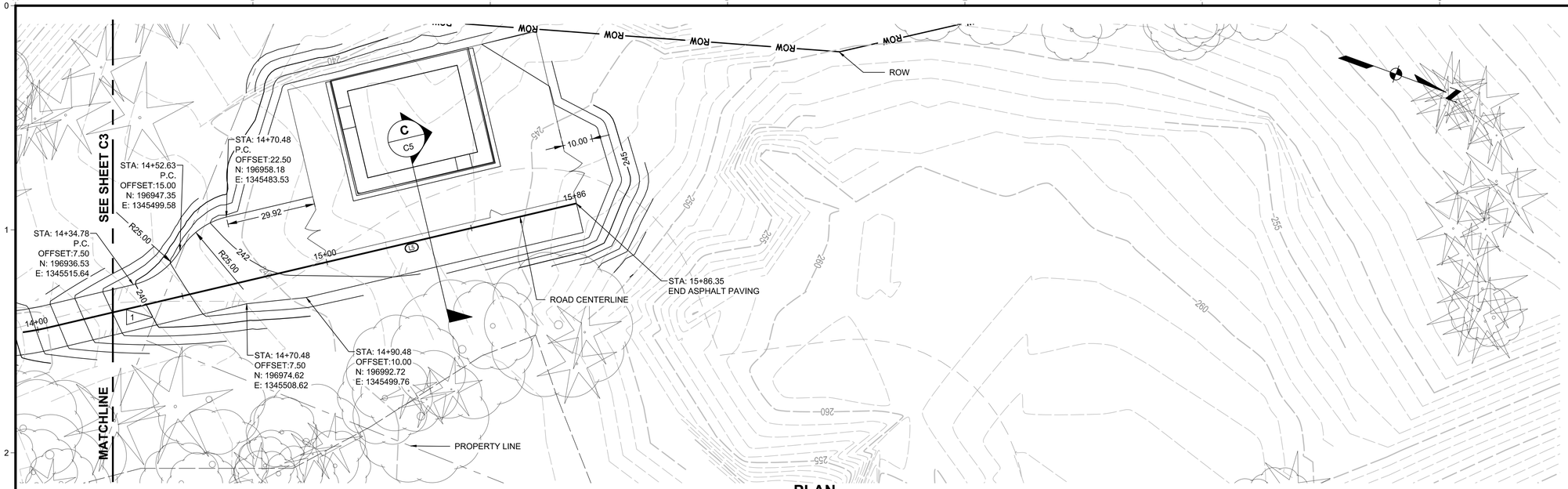
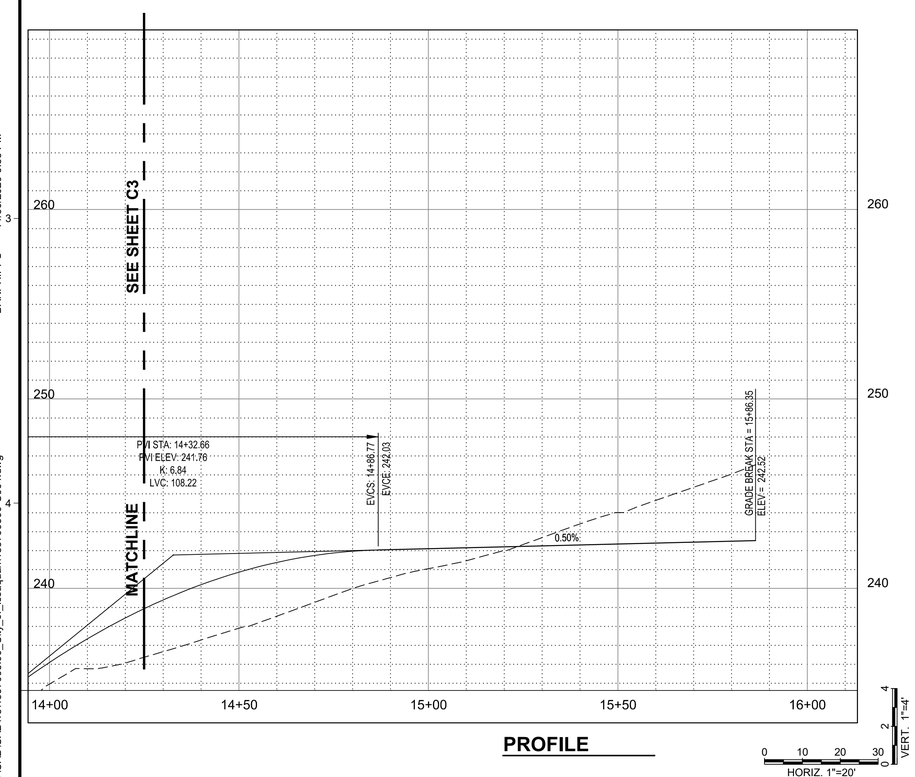
NOTES:

1. SEE SHEET C5 FOR ROAD SECTIONS, AND LINE AND CURVE TABLE.



PLAN

0 10 20 30
1"=20'



PROFILE

0 10 20 30
HORIZ. 1"=20'

0 2 4
VERT. 1"=4'

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NO.	REVISION	DATE	BY

SCALES

0 1"
0 25mm

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JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

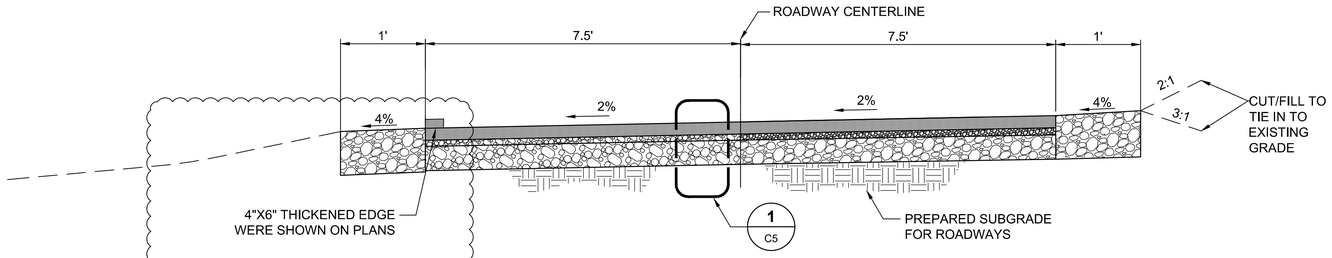
CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

ACCESS ROAD PLAN AND PROFILE
STA 14+25 TO STA 17+80

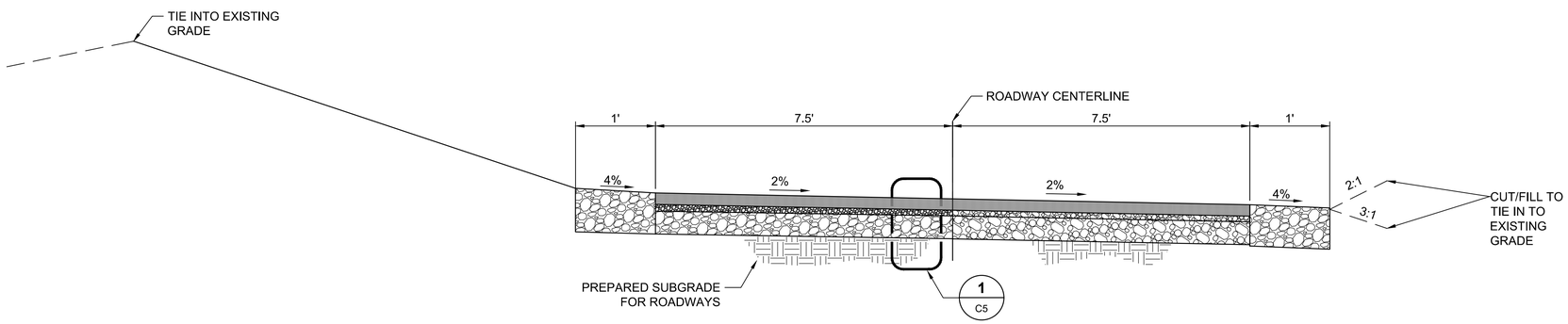
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C004.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET 26 OF 83
C4



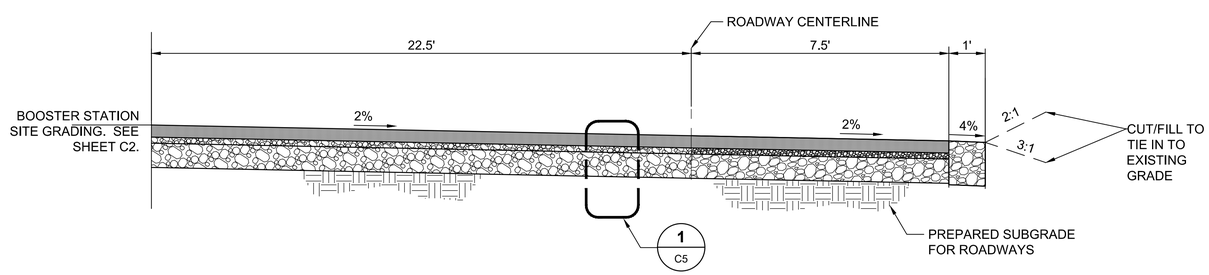
ROADWAY SECTION

STA: 10+60 TO 11+67, 14+07 TO 14+73 SCALE: NONE (A / C3)



ROADWAY SECTION

STA: 11+67 TO 14+07 SCALE: NONE (B / C3)



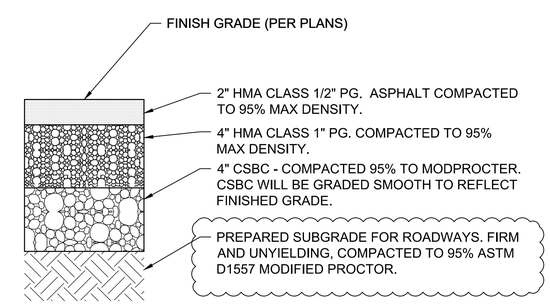
ROADWAY SECTION

STA:14+73 TO 15+86 SCALE: NONE (C / C4)

LINE/CURVE TABLE

SEGMENT	LENGTH	BEARING/DELTA	RADIUS	TANGENT	START STATION	END STATION	START N	START E	END N	END E
L1	76.95	N47°31'57"W			10+00.00	10+76.95	196,581.44	1,345,730.23	196,633.39	1,345,673.46
C1	28.70	8°13'17"	200.00	14.37'	10+76.95	11+05.65	196,633.39	1,345,673.46	196,651.19	1,345,650.98
L2	28.79	N55°45'14"W			11+05.65	11+34.44	196,651.19	1,345,650.98	196,667.39	1,345,627.18
C2	60.23	35°17'14"	97.80	31.11'	11+34.44	11+94.67	196,667.39	1,345,627.18	196,714.04	1,345,590.59
L3	66.29	N20°28'00"W			11+94.67	12+60.96	196,714.04	1,345,590.59	196,776.14	1,345,567.41
C3	25.76	14°45'25"	100.00	12.95'	12+60.96	12+86.72	196,776.14	1,345,567.41	196,801.16	1,345,561.60
L4	69.07	N05°42'35"W			12+86.72	13+55.79	196,801.16	1,345,561.60	196,869.88	1,345,554.73
C4	48.01	27°30'22"	100.00	24.48'	13+55.79	14+03.79	196,869.88	1,345,554.73	196,914.71	1,345,538.88
L5	182.61	N33°12'57"W			14+03.79	15+86.40	196,914.71	1,345,538.88	197,067.48	1,345,438.85

ACCESS ROAD SEGMENT TABLE



NOTES:
PAVING LIMITS ARE PROVIDED ON SHEETS CP20 TO CP26.

ACCESS ROAD PAVEMENT DETAIL

(1 / C5)

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"
0 — 25mm

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

SECTIONS AND DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C005.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET C5 OF

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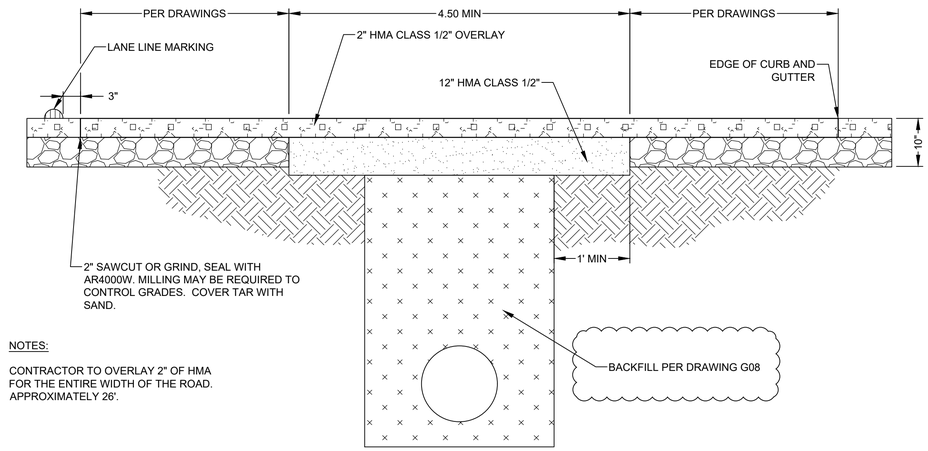


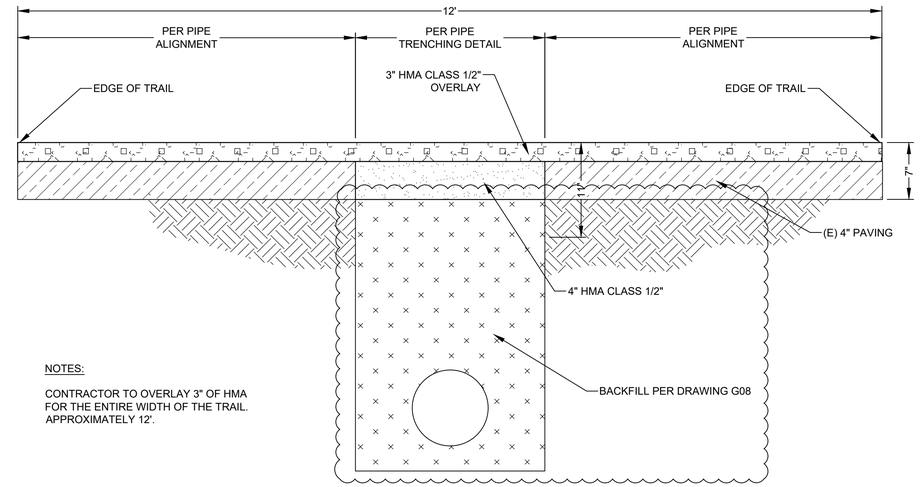
NOTES:

CONTRACTOR TO OVERLAY 2" OF HMA FOR THE ENTIRE WIDTH OF THE ROAD. APPROXIMATELY 26'.

ASPHALT PATCHBACK IN 1ST AVE NE (3)

STA 1+00 TO 6+30

CP20
CP21



NOTES:

CONTRACTOR TO OVERLAY 3" OF HMA FOR THE ENTIRE WIDTH OF THE TRAIL. APPROXIMATELY 12'.

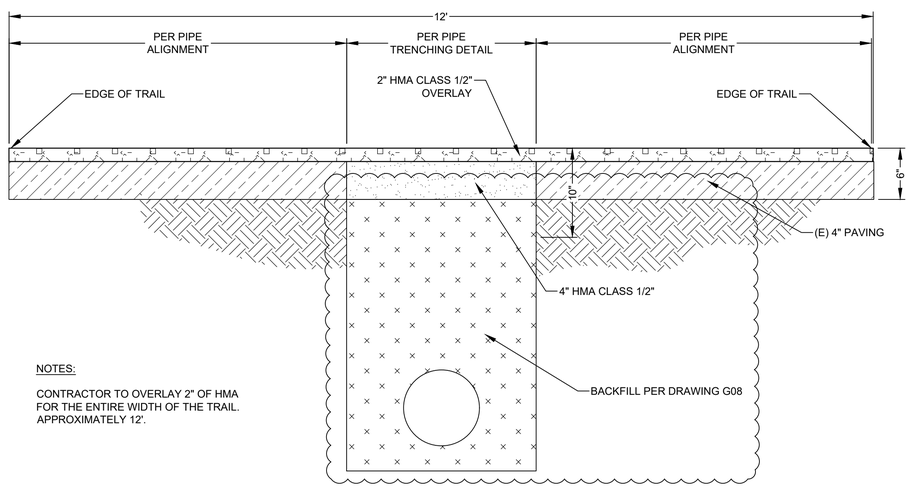
NOTES:

1. DETAILS ARE FOR PAVING REQUIREMENTS ONLY. SEE PIPELINE DRAWINGS (CP1-CP8) FOR ALIGNMENT. PAVING DETAILS ARE REFERENCED ON SECTION VIEWS, SEE DRAWINGS CP20 TO CP26.
2. FOR PAVING LIMITS SEE DRAWINGS CP20 TO CP26.

ASPHALT PATCHBACK IN ISSAQUAH PRESTON TRAIL (4A)

STA 6+30 TO 20+00 AND STA 50+50 TO STA 51+50

CP1
CP2
CP21
CP22
CP23
CP31



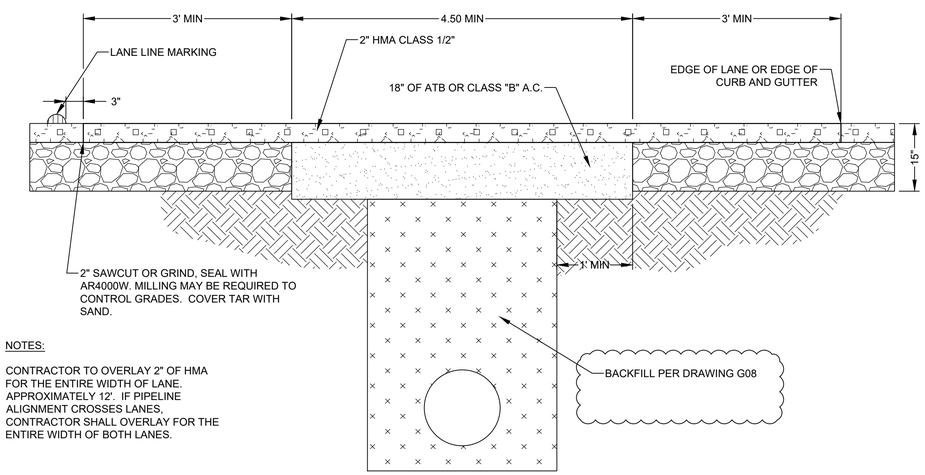
NOTES:

CONTRACTOR TO OVERLAY 2" OF HMA FOR THE ENTIRE WIDTH OF THE TRAIL. APPROXIMATELY 12'.

ASPHALT PATCHBACK IN ISSAQUAH PRESTON TRAIL (4B)

STA 51+50 TO 65+30 AND STA 66+70 TO 78+70

CP24
CP25
CP31



NOTES:

CONTRACTOR TO OVERLAY 2" OF HMA FOR THE ENTIRE WIDTH OF LANE. APPROXIMATELY 12'. IF PIPELINE ALIGNMENT CROSSES LANES, CONTRACTOR SHALL OVERLAY FOR THE ENTIRE WIDTH OF BOTH LANES.

ASPHALT PATCHBACK IN HIGHLANDS DRIVE (5)

STA 78+70 TO 90+92

CP26

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"
0 — 25mm

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CIVIL DETAILS - 1

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C006.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
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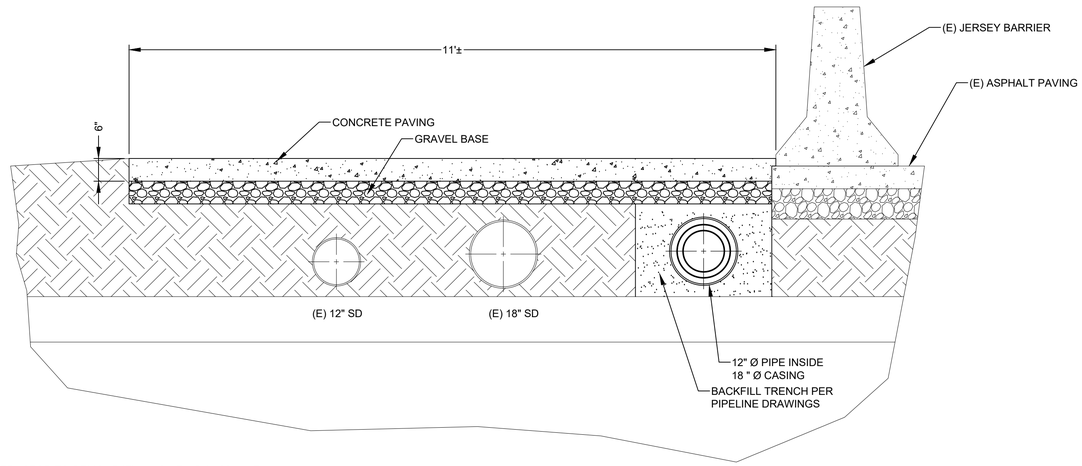
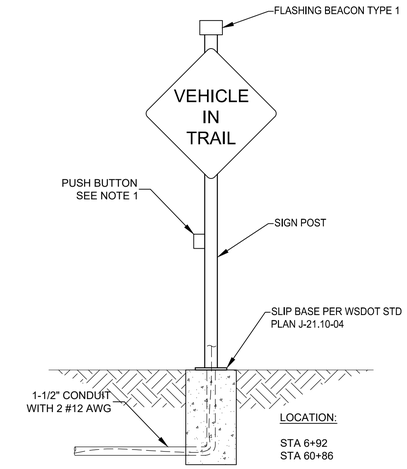


NOTES:

1. CONTRACTOR TO REMOVE (E) 4-INCH THICK ASPHALT AND RE-PAVE WITH 6-INCH THICK CONCRETE. MATCH GRADE WITH ASPHALT PAVING OVERLAY ON BOTH ENDS.
2. FOR PAVING LIMITS SEE SHEETS CP20 TO CP26.

CONCRETE PAVING AT PEDESTRIAN TUNNEL

6 / CP5

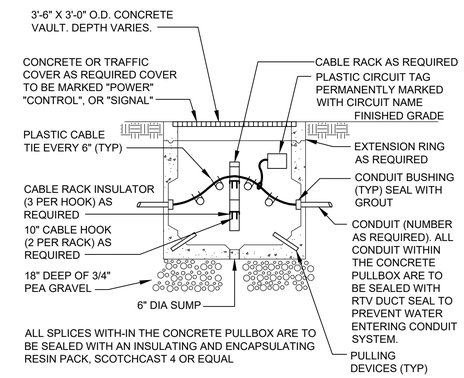


NOTES:

1. PROVIDE SIGN AND POST ASSEMBLY PER WSDOT STANDARD DETAIL J-21.16-01 EXCEPT AS MODIFIED ABOVE.
2. BEACON ACTIVATION TO BE FROM POSITION SWITCH UNDERNEATH REMOVABLE BOLLARD, ACTIVATION BUTTON ON SIGN POST, OR FROM CONTROL SYSTEM AT PUMP STATION. ACTIVATION BUTTON TO BE INSTALLED IN A LOCKING ENCLOSURE.
3. FOR FLASHING BEACON WARNING SEE WSDOT STD PLAN J-21.17-01.

VEHICLE IN TRAIL SIGN

7 / CP1 / CP5



LOCATION:

STA 5+38
STA 9+84
STA 14+37
STA 54+79
STA 58+17

(NOT USED)

8 / C1

TELEMETRY PULLBOX INSTALLATION

9 / CP1 / CP2 / CP4 / CP5

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NO.	REVISION	DATE	BY

SCALES

0 — 1"
0 — 25mm

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JEFFREY M. FOKAI — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CIVIL DETAILS - 2

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C007.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET 29 OF 83
C7

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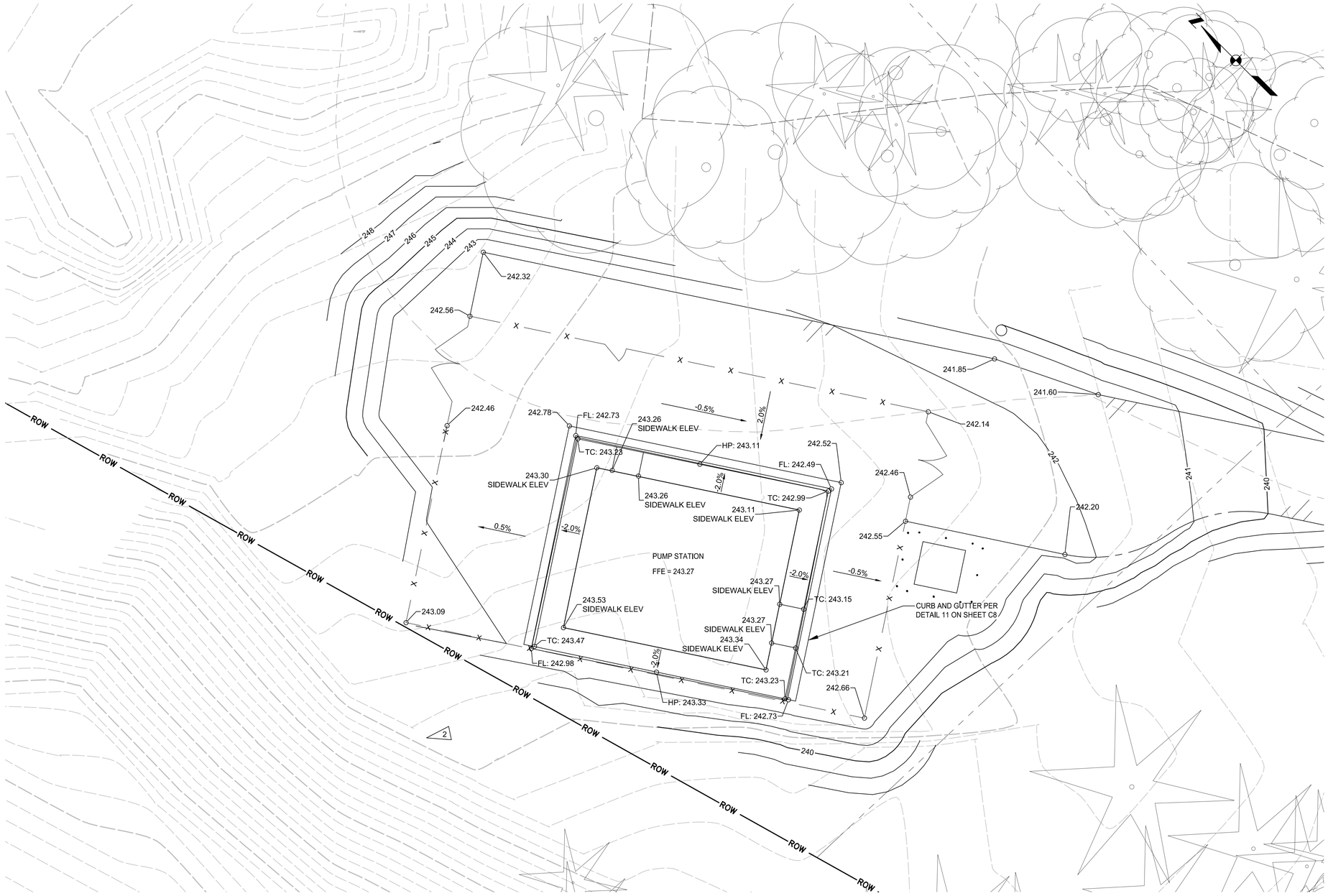
NOTES:

1. SEE SHEETS C3 AND C4 FOR ACCESS ROAD PLAN AND PROFILE.

2 MAINTAIN 30' MINIMUM CLEARANCE BETWEEN STRUCTURES AND STEEP SLOPE.



PARTIAL GRADING PLAN

0 10 20
1"=10'

USE OF DOCUMENTS	NO.	REVISION	DATE	BY
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SCALES
0 1"
0 25mm
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JEFFREY M. FORAY
STATE OF WASHINGTON
24536
REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION GRADING PARTIAL PLAN

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-C008.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET 30 OF 83
C8

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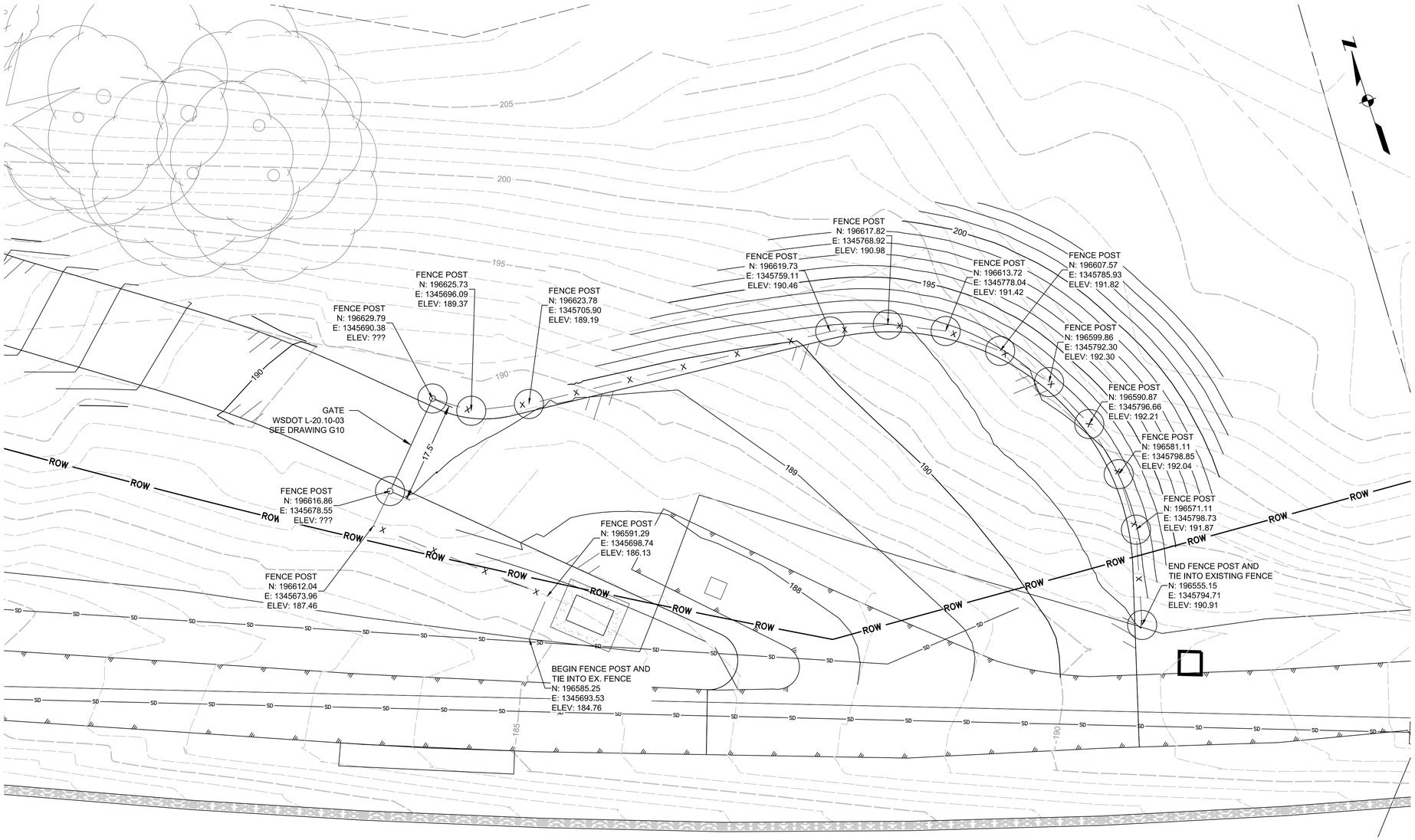
NOTES:

1. INSTALL 6'-0" HEIGHT CHAIN LINK FENCE TYPE 3 PER WSDOT STANDARD PLAN L-20.10-03. SEE DRAWING G10.
2. ELEVATIONS PROVIDED ARE FOR THE BASE OF THE 6'-0" FENCE



ACCESS ROAD GATE AND FENCE PLAN

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JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

ACCESS ROAD GATE AND FENCE PLAN

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FILE NAME 139700500-C009.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET 31 OF 83
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CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

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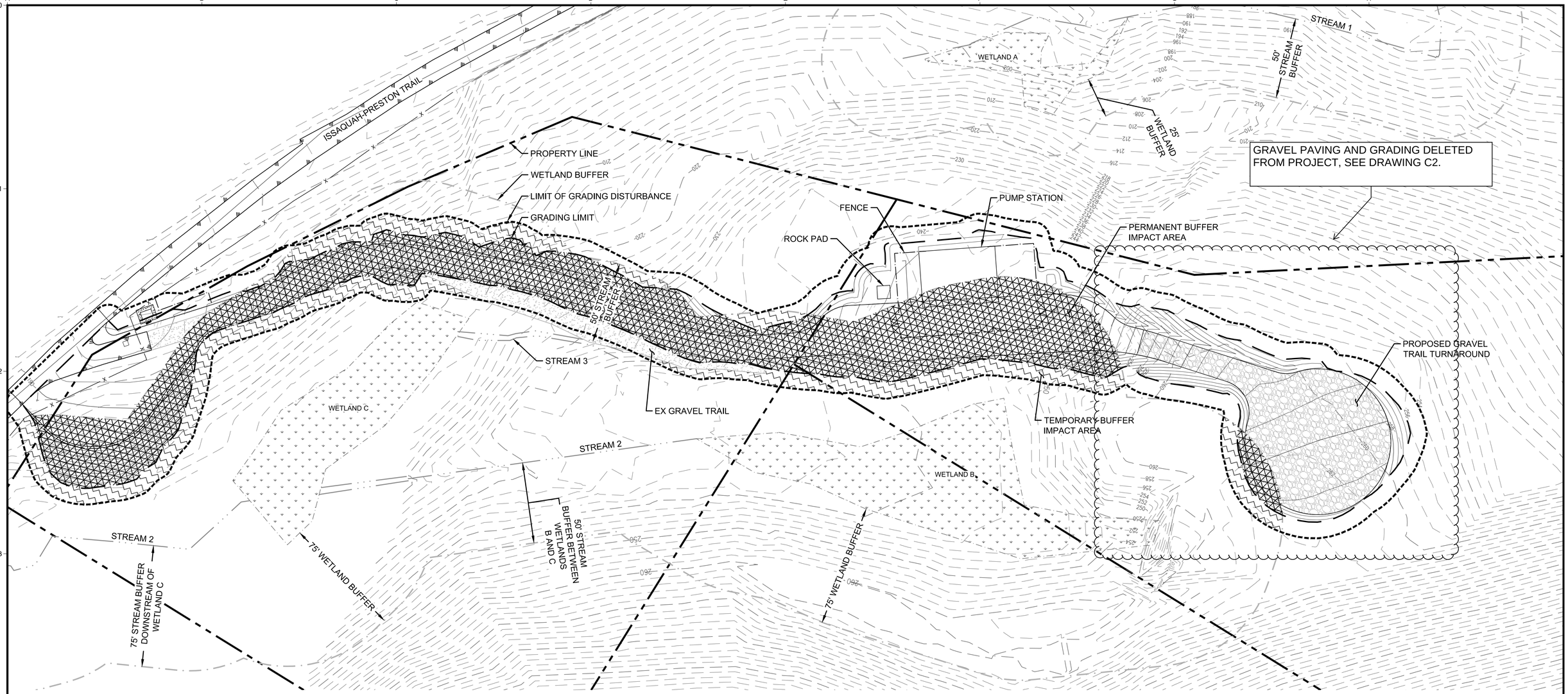
FILE NAME 139700500-C010.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 32 OF 83

C10



LEGEND

TEMPORARY BUFFER IMPACT AREA (9,593 SF)

PERMANENT BUFFER IMPACT AREA (23,659 SF)

NOTES

1. SEE SHEET L2 FOR THE BUFFER MITIGATION PLAN.
2. SEE SHEET L3 FOR BUFFER MITIGATION PLANTING DETAILS, NOTES, AND SCHEDULES.

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ISSAQUAH, WASHINGTON
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SEATTLE, WASHINGTON

BUFFER IMPACTS PLAN

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FILE NAME
JOB NO. 1397005*00
DATE JUNE 2020
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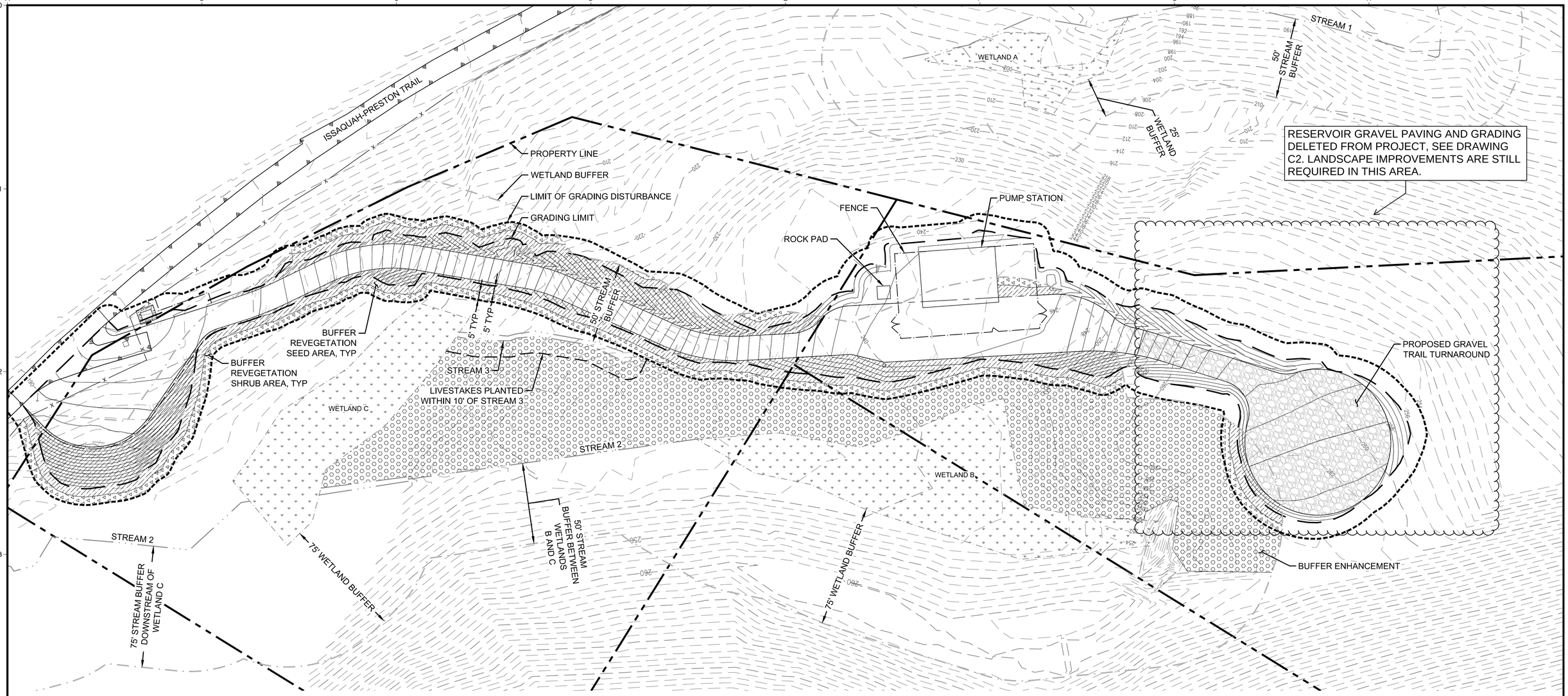

LEGEND

- BUFFER ENHANCEMENT AREA (23,982 SF)
- BUFFER REVEGETATION SHRUB AREA (5,569 SF)
- BUFFER REVEGETATION SEED AREA (15,348 SF)

NOTES

1. SEE SHEET L3 FOR BUFFER MITIGATION PLANTING DETAILS, NOTES, AND SCHEDULES.
2. SEE SHEET L5 FOR TREE MITIGATION PLANTING PLAN.

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BUFFER MITIGATION PLAN

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FILE NAME
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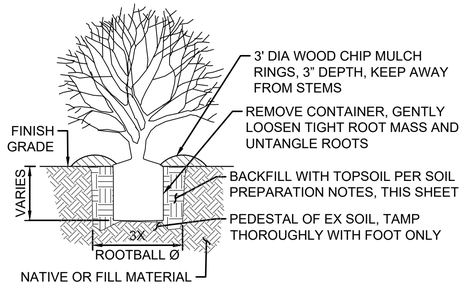
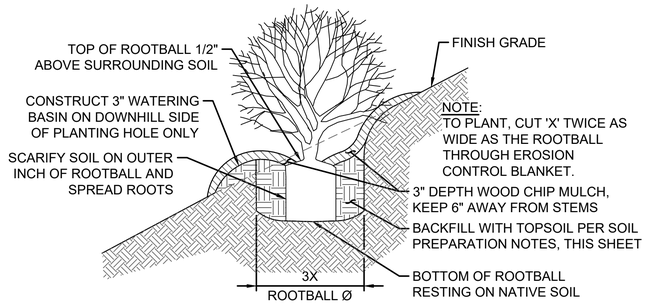
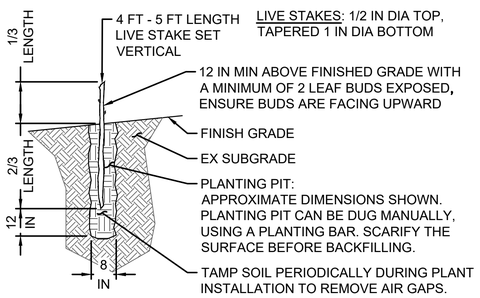


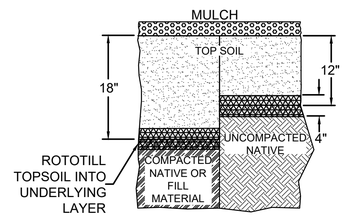
1 -- CONTAINER PLANTING
DETAIL SCALE: NTS



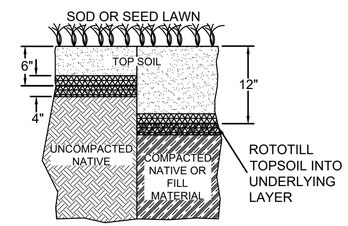
2 -- SLOPE PLANTING
DETAIL SCALE: NTS



3 -- LIVESTAKE PLANTING
DETAIL SCALE: NTS



TOP SOIL REQUIREMENTS FOR TREE AND SHRUB BEDS

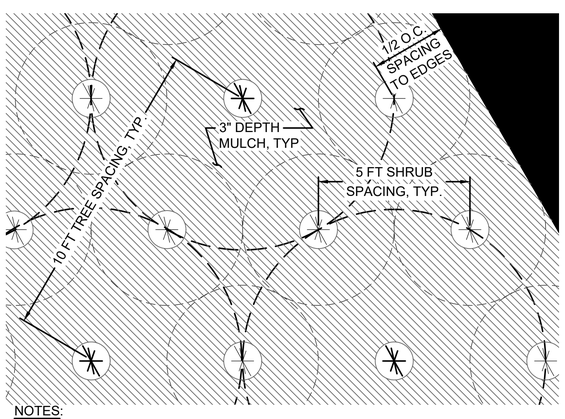


TOP SOIL REQUIREMENTS FOR LAWNS

5 -- SOIL PREPARATION
DETAIL SCALE: NTS

SOIL PREPARATION NOTES

1. CLEAR AND GRUB ALL PLANTING AREAS WITHIN THE LIMIT OF GRADING DISTURBANCE. PLANTING AREAS OUTSIDE THE LIMIT OF GRADING DISTURBANCE SHALL BE CLEARED OF INVASIVE VEGETATION ONLY AS NEEDED WHILE PROTECTING EXISTING TREES TO BE RETAINED.
2. WITHIN THE LIMIT OF GRADING DISTURBANCE ADD TOPSOIL TYPE A TO AREAS TO BE PLANTED OR SEEDED AS SHOWN IN SOIL PREPARATION DETAILS, THIS SHEET. OUTSIDE THE LIMIT OF GRADING DISTURBANCE USE TOPSOIL TYPE B FOR INFILL PLANTING PITS ONLY. IF THERE IS INSUFFICIENT TOPSOIL TYPE B THEN TOPSOIL TYPE C MAY BE USED UPON APPROVAL FROM OWNER'S REPRESENTATIVE.
3. SEEDING
4. EROSION CONTROL BLANKET
5. CONTAINER PLANTING
6. INSTALL 3-FOOT DIAMETER, 3-INCH DEPTH MULCH RINGS FOR ALL CONTAINER PLANTS.



NOTES:
1. PLANTING LAYOUT IS CONCEPTUAL AND INTENDED TO SHOW GROUPINGS OF SIMILAR SPECIES OF PLANTS.
3. GROUP EACH SPECIES IN ODD-NUMBERED CLUSTERS OF 3 TO 9 EXCEPT WHERE NOTED OTHERWISE.
4. PLANT LAYOUT AND TRIANGULAR SPACING MAY BE ADJUSTED TO MEET FIELD CONDITIONS WITH THE ACCEPTANCE OF THE ENGINEER.
5. SURROUND EACH TREE WITH SHRUBS, RETAINING THE 5 FT O.C. SPACING OF THE SHRUBS AS SHOWN IN THIS DETAIL.

4 -- TYPICAL PLANTING LAYOUT
DETAIL SCALE: NTS

BUFFER ENHANCEMENT PLANTING SCHEDULE (23,982 SF)

BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
TREES:				
PICEA SITCHENSIS	SITKA SPRUCE	1 GAL. CONTAINER	10' O.C.	53
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	1 GAL. CONTAINER	10' O.C.	53
RHAMNUS PURSHIANA	CASCARA	1 GAL. CONTAINER	10' O.C.	52
SALIX LUCIDA	PACIFIC WILLOW	1 GAL. CONTAINER	10' O.C.	52
THUJA PLICATA	WESTERN RED CEDAR	1 GAL. CONTAINER	10' O.C.	53
SHRUBS:				
ACER CIRCINATUM	VINE MAPLE	1 GAL. CONTAINER	5' O.C.	131
LONICERA INVOLUCRATA	TWINBERRY	1 GAL. CONTAINER	5' O.C.	132
MAHONIA AQUIFOLIUM	TALL ORGEON GRAPE	1 GAL. CONTAINER	5' O.C.	131
OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GAL. CONTAINER	5' O.C.	131
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL. CONTAINER	5' O.C.	131
RIBES LACUSTRE	PRICKLY CURRANT	1 GAL. CONTAINER	5' O.C.	131
LIVESTAKES:				
SALIX HOOKERIANA	HOOKER'S WILLOW	LIVESTAKE	3' O.C.	54
SALIX LASIANDRA	PACIFIC WILLOW	LIVESTAKE	3' O.C.	53
SALIX SITCHENSIS	SITKA WILLOW	LIVESTAKE	3' O.C.	54

BUFFER REVEGETATION SHRUB PLANTING SCHEDULE (5,569 SF)

BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
SHRUBS:				
ACER CIRCINATUM	VINE MAPLE	1 GAL. CONTAINER	5' O.C.	30
LONICERA INVOLUCRATA	TWINBERRY	1 GAL. CONTAINER	5' O.C.	30
MAHONIA AQUIFOLIUM	TALL ORGEON GRAPE	1 GAL. CONTAINER	5' O.C.	30
OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GAL. CONTAINER	5' O.C.	29
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL. CONTAINER	5' O.C.	30
POLYSTICHUM MUNITUM	SWORD FERN	1 GAL. CONTAINER	5' O.C.	30

BUFFER REVEGETATION SEED SCHEDULE (15,348 SF)

BOTANICAL NAME	COMMON NAME	DISTRIBUTION BY WEIGHT	RATE
AGROSTIS EXARATA	SPIKE BENTGRASS	10%	APPLY 20 LBS. PER ACRE
DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	15%	
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	20%	
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	55%	

BUFFER MITIGATION PLANTING NOTES

CLEARING AND TREE PROTECTION

1. REMOVE ALL INVASIVE SPECIES FROM THE MITIGATION AREAS PRIOR TO INSTALLATION USING METHODS APPROVED BY THE STATE OF WASHINGTON NOXIOUS WEED CONTROL BOARD AND AS INDICATED IN THE SPECIFICATIONS. SPECIFIC SPECIES TO BE REMOVED INCLUDE HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), ENGLISH IVY (HEDERA HELIX), ENGLISH HOLLY (ILEX AQUIFOLIUM), KNOTWEED (POLYGONUM SPP.), AND REED CANARYGRASS (PHALARIS ARUNDINACEA).
2. PRESERVE AND PROTECT ALL EXISTING VEGETATION NOT DESIGNATED FOR REMOVAL. PROVIDE, ERECT AND MAINTAIN TEMPORARY FENCING TO PREVENT ACCESS TO EXISTING WETLANDS OR WETLAND BUFFERS BY ANY VEHICLES. SEE SHEET EC8 FOR TREE PROTECTION DETAIL.
3. DO NOT DRIVE OR PARK ANY VEHICLES OR EQUIPMENT, STORE MATERIALS, STOCKPILE SOIL OR GRAVEL, OR DISPOSE OF ANY CONSTRUCTION OR WASTE MATERIAL WITHIN EXISTING WETLANDS OR WETLAND BUFFER OR NEAR NEWLY INSTALLED PLANTS. RESTRICT FOOT TRAFFIC WITHIN PROTECTED AREAS.

PLANTING

4. ASSUME TRIANGULAR SPACING FOR ALL PLANT SPACING ON PLANTING SCHEDULES.
5. PLANTING AREAS SHOULD BE STAKED IN THE FIELD FOR ACCEPTANCE BY THE ENGINEER PRIOR TO INSTALLATION.
6. PRIOR TO PLANTING, PLACE ALL PLANTS AS INDICATED ON THE PLANS, OR MARK EACH LOCATION WITH WOOD STAKES OR COLOR WIRE FLAGS MARKED WITH THE FIRST TWO LETTERS OF BOTH PLANT GENUS AND SPECIES (E.G. PHCA FOR PHYSOCARPUS CAPITATUS). NO PLANTING HOLES SHALL BE DUG OR BACKFILLED WITHOUT PRIOR APPROVAL OF ENGINEER. NOTIFY ENGINEER A MINIMUM OF 72 HOURS BEFORE PLANTING TO ALLOW AMPLE TIME TO ADJUST PLANT LOCATIONS. PROVIDE EXTRA STAKES OR FLAGS SUFFICIENT TO MARK LOCATIONS OF PLANTS NOT LOCATED ON PLAN.
7. APPLY BUFFER REVEGETATION SEED MIX ALONG ROADSIDE AREAS AS SHOWN ON PLANS AND IN BUFFER AREAS OUTSIDE OF SHOWN PLANTING REGIONS WHERE PLANTING WORK HAS IMPACTED EXISTING VEGETATION.
8. REMOVE PLANT TAGS AND CLEAN UP AREA PER SPECIFICATION 8-02.3(13).

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ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Environmental Science Associates
SEATTLE, WASHINGTON

BUFFER MITIGATION DETAILS

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME
JOB NO. 1397005*00
DATE JUNE 2020
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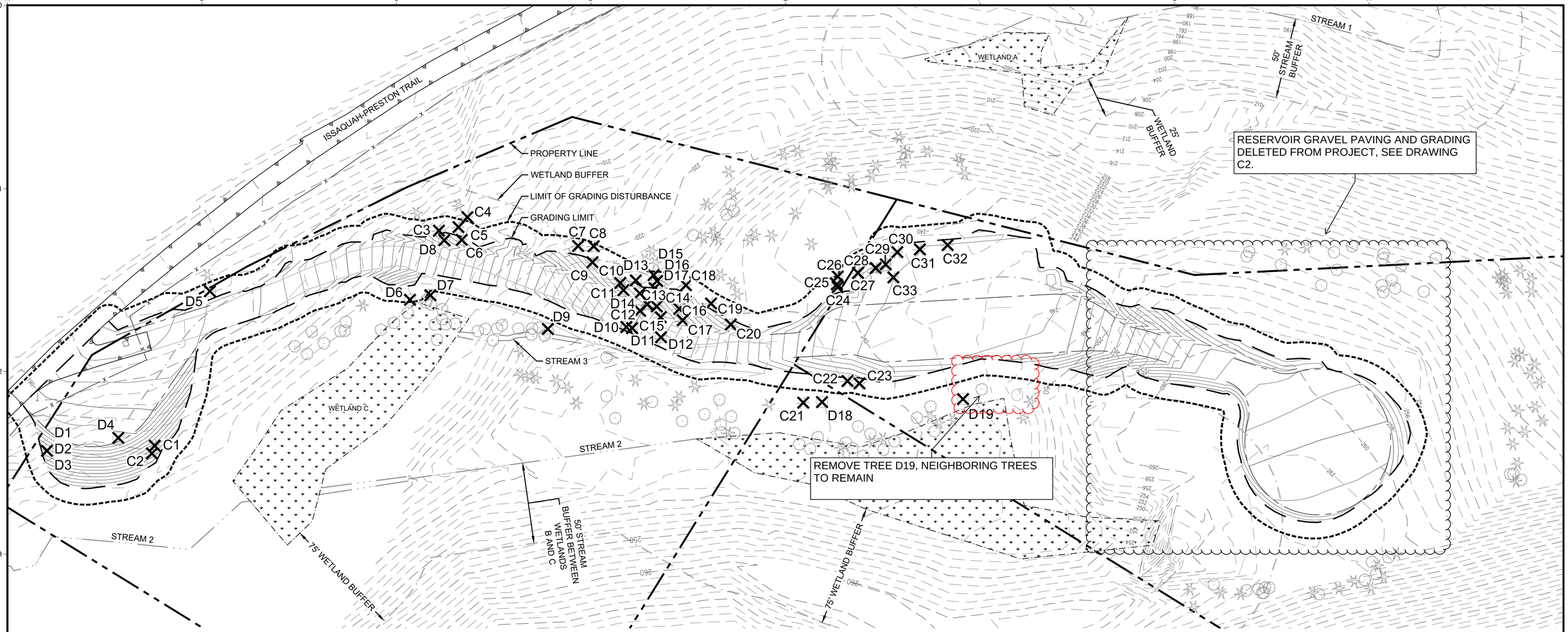

DECIDUOUS TREE REMOVAL TABLE

TREE #	SPECIES	SIZE (DBH)
D1	BIGLEAF MAPLE	7
D2	BIGLEAF MAPLE	5
D3	BIGLEAF MAPLE	4
D4	DECIDUOUS	22
D5	ALDER	6
D6	COTTONWOOD	14
D7	COTTONWOOD	18
D8	COTTONWOOD	20
D9	ALDER	7
D10	ALDER	7
D11	ALDER	6
D12	ALDER	6
D13	COTTONWOOD	7
D14	ALDER	7
D15	COTTONWOOD	23
D16	COTTONWOOD	13
D17	COTTONWOOD	19

DECIDUOUS TREE REMOVAL TABLE

TREE #	SPECIES	SIZE (DBH)
D18	COTTONWOOD	17
D19	ALDER	13
	COMBINED DBH TOTAL:	221

CONIFEROUS TREE REMOVAL TABLE

TREE #	SPECIES	SIZE (DBH)
C1	DOUGLAS FIR	13
C2	DOUGLAS FIR	9
C3	DOUGLAS FIR	9
C4	DOUGLAS FIR	13
C5	DOUGLAS FIR	7
C6	DOUGLAS FIR	10
C7	DOUGLAS FIR	17
C8	DOUGLAS FIR	16
C9	DOUGLAS FIR	15
C10	DOUGLAS FIR	6
C11	DOUGLAS FIR	14
C12	DOUGLAS FIR	9
C13	DOUGLAS FIR	13
C14	DOUGLAS FIR	6
C15	DOUGLAS FIR	8
C16	DOUGLAS FIR	17
C17	DOUGLAS FIR	8

CONIFEROUS TREE REMOVAL TABLE

TREE #	SPECIES	SIZE (DBH)
C18	DOUGLAS FIR	6
C19	DOUGLAS FIR	10
C20	DOUGLAS FIR	19
C21	DOUGLAS FIR	18
C22	DOUGLAS FIR	25
C23	DOUGLAS FIR	12
C24	DOUGLAS FIR	12
C25	DOUGLAS FIR	9
C26	DOUGLAS FIR	13
C27	DOUGLAS FIR	13
C28	DOUGLAS FIR	14
C29	DOUGLAS FIR	12
C30	DOUGLAS FIR	15
C31	DOUGLAS FIR	9
C32	DOUGLAS FIR	17
C33	DOUGLAS FIR	16
	COMBINED DBH TOTAL:	410

NOTES

1. SEE SHEET L5 FOR TREE MITIGATION PLAN, PLANTING SCHEDULE, AND PLANTING NOTES.
2. SEE SHEET L3 FOR PLANTING DETAILS AND SOIL PREPARATION NOTES.
3. PER THE ROADSIDE POLICY MANUAL (WSDOT, 2015), EACH REPLACEMENT 1 GALLON CONTAINER TREE OFFSETS 1 INCH DBH REMOVED. 2 GALLON CONTAINERS EACH OFFSET 2 INCH DBH REMOVED.

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ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Environmental Science Associates
SEATTLE, WASHINGTON

TREE IMPACTS PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME
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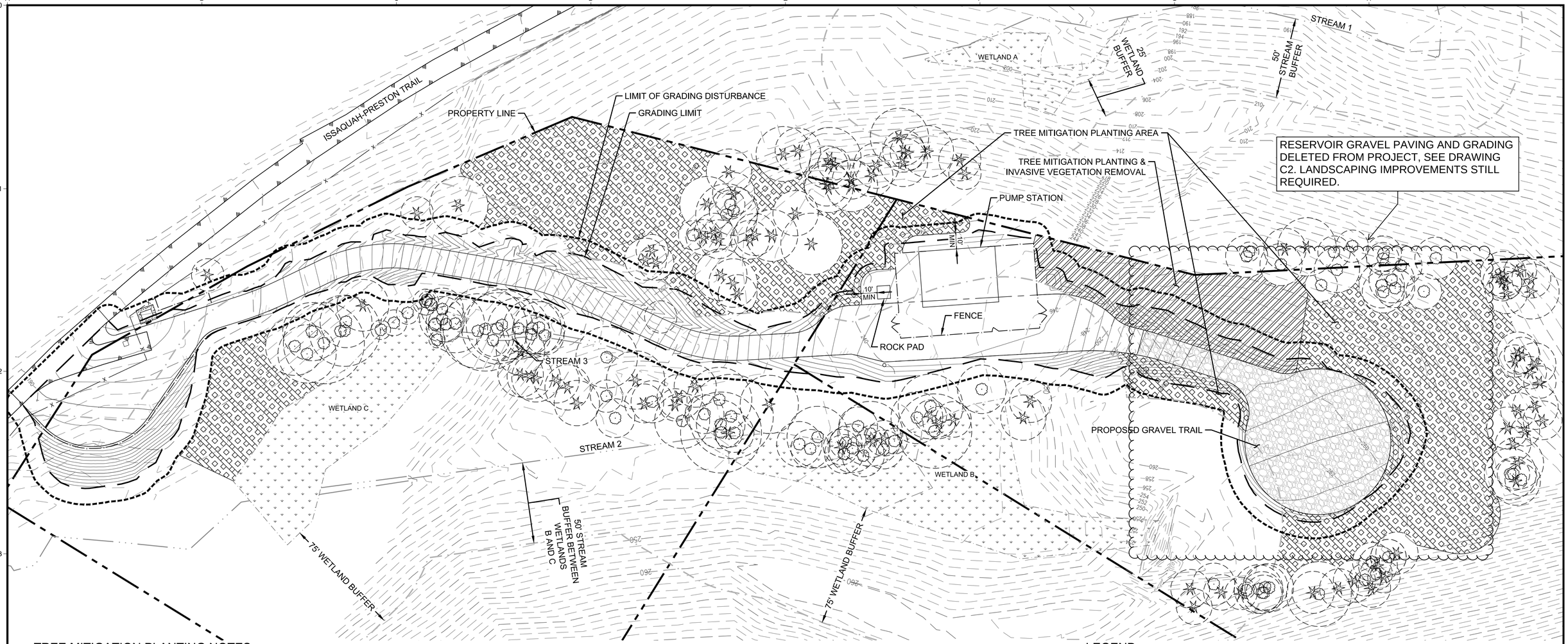

TREE MITIGATION PLANTING NOTES

1. SEE DETAILS ON SHEET L3 FOR PLANTING AND SOIL PREPARATION DETAILS.
2. REMOVE ALL INVASIVE SPECIES FROM THE TREE MITIGATION PLANTING AREAS PRIOR TO INSTALLATION USING METHODS APPROVED BY THE STATE OF WASHINGTON NOXIOUS WEED CONTROL BOARD AND AS INDICATED IN THE SPECIFICATIONS. SPECIFIC SPECIES TO BE REMOVED INCLUDE HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS) AND SCOTCH BROOM (CYTISUS SCOPARIUS).
3. PRESERVE AND PROTECT ALL EXISTING VEGETATION NOT DESIGNATED FOR REMOVAL. PROVIDE, ERECT AND MAINTAIN TEMPORARY FENCING TO PREVENT ACCESS TO EXISTING WETLANDS OR WETLAND BUFFERS BY ANY VEHICLES.
4. DO NOT DRIVE OR PARK ANY VEHICLES OR EQUIPMENT, STORE MATERIALS, STOCKPILE SOIL OR GRAVEL, OR DISPOSE OF ANY CONSTRUCTION OR WASTE MATERIAL WITHIN EXISTING WETLANDS OR WETLAND BUFFER OR NEAR NEWLY INSTALLED PLANTS. RESTRICT FOOT TRAFFIC WITHIN PROTECTED AREAS.
5. SEED SOURCE MUST BE AS LOCAL AS POSSIBLE, AND PLANTS MUST BE NURSERY PROPAGATED UNLESS TRANSPLANTED FROM ON-SITE AREAS APPROVED FOR DISTURBANCE.
6. PLANTING AREAS AND GENERAL PLANT LAYOUT SHOULD BE CONFIRMED BY CONTRACTOR WITH CITY BIOLOGIST PRIOR TO PLANT INSTALLATION.
7. SUBSEQUENT TO PLANT DELIVERY, BUT PRIOR TO PLANT INSTALLATION, THE CITY WILL INSPECT THE PLANTS TO ENSURE PLANT QUANTITIES, SIZES, AND HEALTH ARE ADEQUATE AND PER THE PLANTING PLAN. UNLESS THE CITY SPECIFICALLY AUTHORIZES ANY CHANGES OR SUBSTITUTIONS, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PLANT TYPES AND NUMBERS PER THE PLANTING PLAN.
8. PLANT SIMILAR SPECIES TOGETHER IN CLUSTERS OF 3, 5, 7, OR 9. DO NOT PLANT ALL OF ONE SPECIES IN ANY PLANTING AREAS.
9. IMMEDIATELY AFTER PLANT INSTALLATION, ALL INDIVIDUAL TREES WILL BE MARKED WITH BRIGHTLY COLORED FLAGGING, TO ALLOW FOR EASY IDENTIFICATION DURING AS-BUILT INSPECTION AND SUBSEQUENT MONITORING EFFORTS.
10. IMMEDIATELY FOLLOWING PLANT INSTALLATION THE CITY WILL CONDUCT AN AS BUILT SURVEY TO ENSURE ALL TREE PLANTING WAS INSTALLED ACCORDING TO THE PLANTING PLAN. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING PLANT TYPES AND NUMBERS PER THE PLANTING PLAN.

LEGEND

TREE MITIGATION PLANTING AREA (34,801 SF)

TREE MITIGATION PLANTING & INVASIVE VEGETATION REMOVAL (7,155 SF)

N

TREE MITIGATION PLANTING SCHEDULE

BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
ACER MACROPHYLLUM	BIG LEAF MAPLE	1 GAL. CONTAINER	10' O.C.	50
ACER MACROPHYLLUM	BIG LEAF MAPLE	2 GAL. CONTAINER	12' O.C.	50
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	1 GAL. CONTAINER	10' O.C.	200
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	2 GAL. CONTAINER	12' O.C.	110

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STATE OF WASHINGTON · ALLISONA B. GREENBERG · No. 1047 EXP. 2/28/2021 · LANDSCAPE ARCHITECT

DESIGNED ABG
DRAWN ABG
CHECKED SAR

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

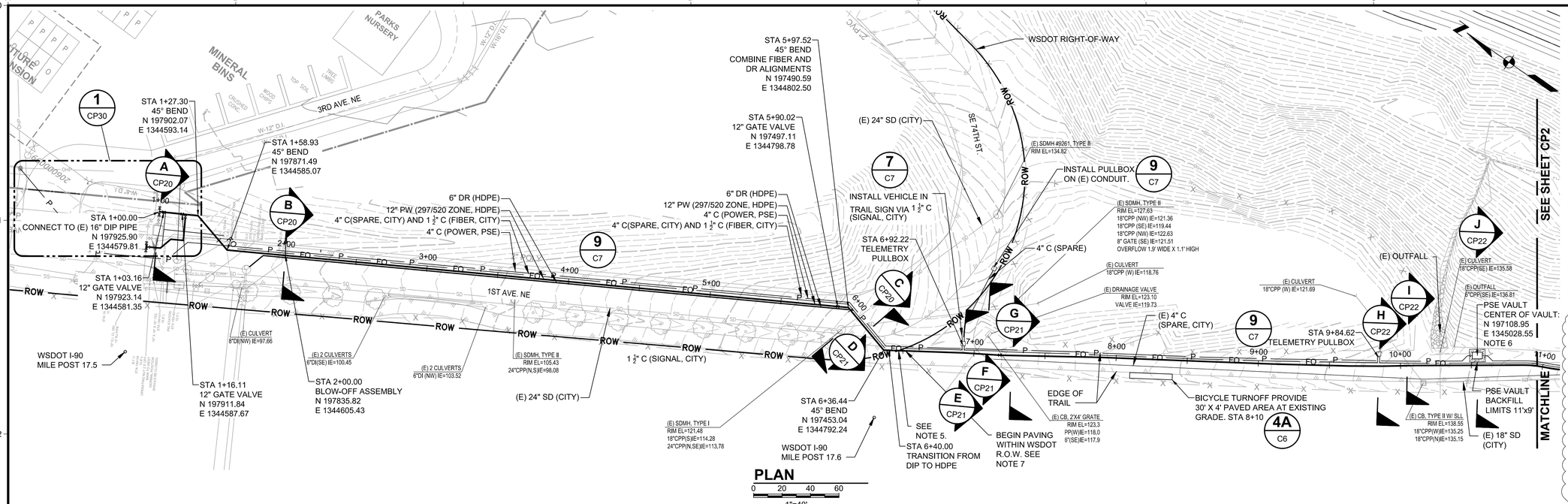
Environmental Science Associates
SEATTLE, WASHINGTON

TREE MITIGATION PLAN

90% SUBMITTAL (REVISED 7/1/2020)

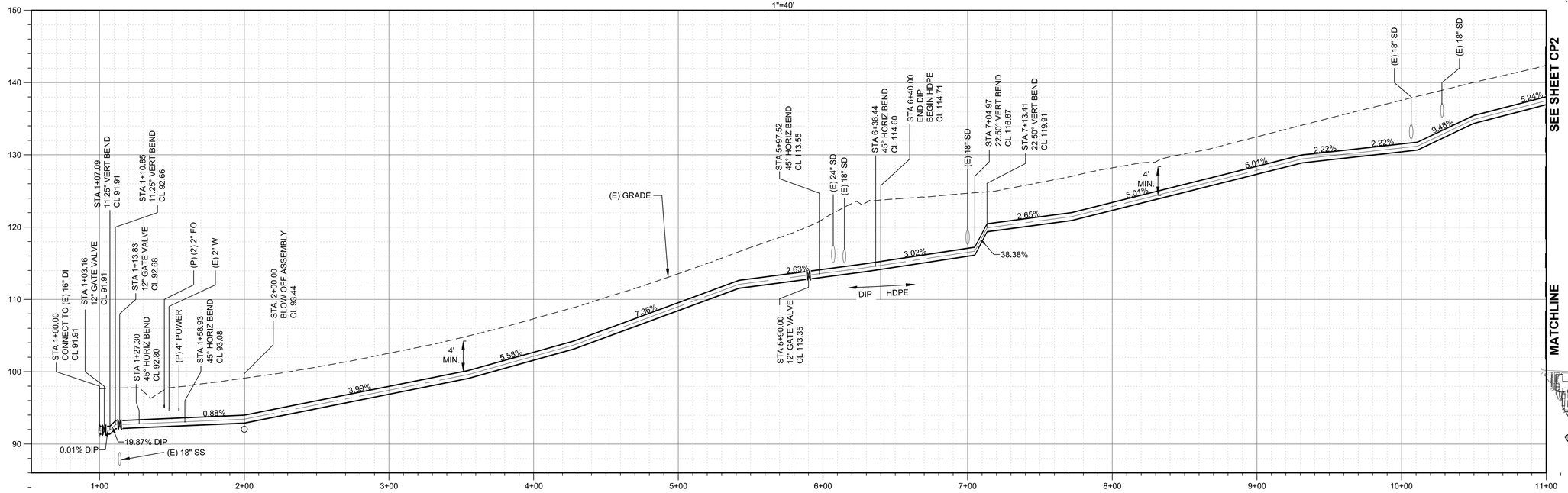
FILE NAME
JOB NO. 1397005*00
DATE JUNE 2020
SHEET L5 OF

AGREENBERG 7/1/2020 12:39 PM
U:\Projects\SEA\16xxxx\D160917.00 S.SPAR Booster Pump Station\08_CAD\Dwgs\90% REVISED\L5 TREE MITIGATION PLAN.dwg



PLAN

0 20 40 60
1"=40'

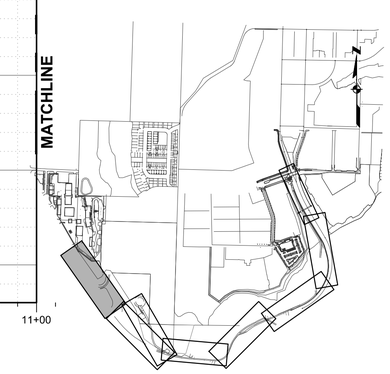


PROFILE

0 20 40 60
HORIZ. 1"=40'
VERT. 1"=8'

NOTES:

1. BLOW OFF ASSEMBLIES PER CITY STANDARD DETAIL W-04
2. COORDINATES SHOWN ON DRAWINGS ARE FOR THE 12" 297/520 ZONE WATERLINE.
3. CONTRACTOR TO COORDINATE WITH FIBER OPTIC CABLE SUPPLIER AND CONTROL SYSTEM INTEGRATOR FOR FIBER OPTIC CONDUIT DIAMETER, BEND RADIUS, AND PLACEMENT OF HANDHOLES TO ASSURE THAT INSTALLATION AND OPERATING SPECIFICATIONS OF THE CABLE ARE NOT EXCEEDED.
4. PROVIDE ELECTRICAL CONDUITS ALONG PIPELINE ROUTE. SEE PIPELINE DETAILS AND ELECTRICAL DRAWINGS.
5. PROJECT ENTERS WSDOT ROW AT I-90 MILE POST 17.61.
6. 7'x4'-8"x4' O.D. VAULT. SEE PSE DRAWINGS FOR VAULT INSTALLATION REQUIREMENTS AND DETAILS. PSE UTILITY FRANCHISE UF11217CAM09.
7. BEGIN WSDOT R.O.W. FINAL PAVING OVERLAY SHALL COVER ENTIRE LENGTH AND WIDTH OF TRAIL WITHIN WSDOT R.O.W. PAVE OUTSIDE THE WSDOT R.O.W. AS SHOWN. SEE PAVING DETAILS FOR ADDITIONAL INFORMATION.
8. PROVIDE 10AWG GREEN JACKETED TRACER WIRE FOLLOWING 6-INCH DR (HDPE) LINE. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED SEWER) PLACED AT THE START OF THE DRAIN LINE WITH NO MORE THAN 500 FEET IN BETWEEN THE BOXES. THE TRACER WIRE SHALL BE ACCESSIBLE IN THE MANHOLE CONNECTION.
9. PROVIDE 10AWG ORANGE JACKETED TRACER WIRE IN SAME CONDUIT AS THE FIBER OPTIC CABLE. PROVIDE PULL ROPE IN 4 INCH SPARE CITY CONDUIT.
10. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.



KEY PLAN

SCALE NONE

USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES

0 1"
0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

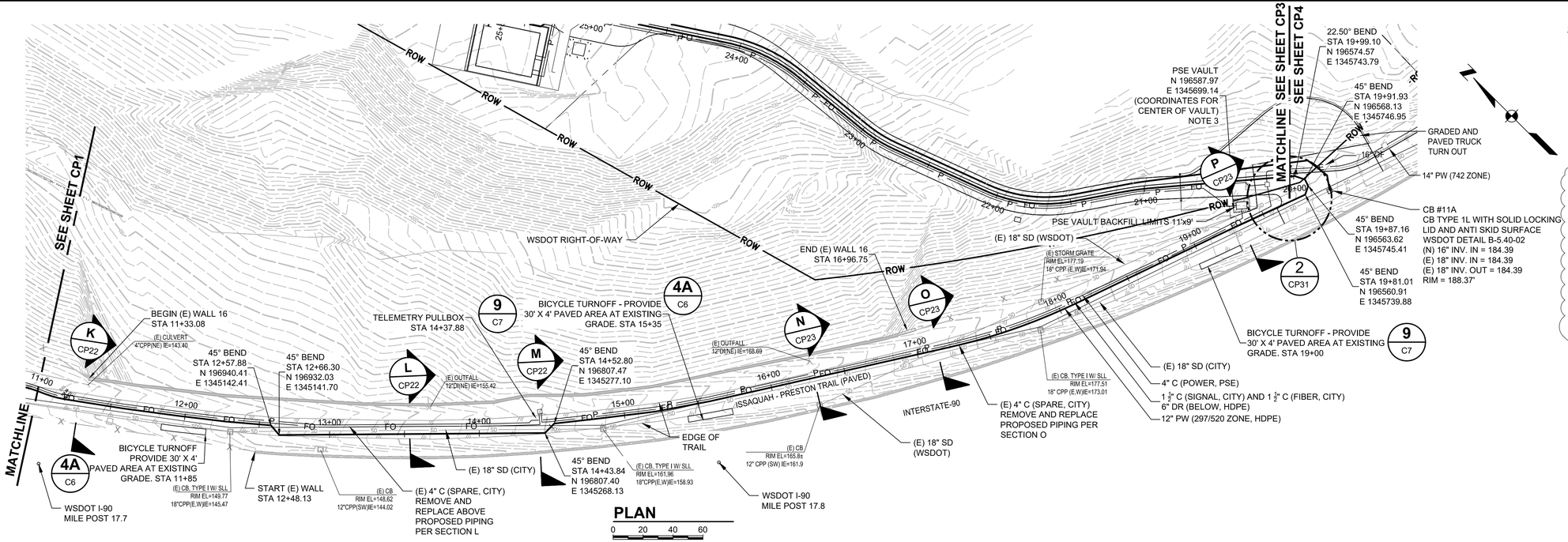
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

297/520 ZONE PIPELINE
PLAN AND PROFILE
STA. 1+00 TO STA. 11+00

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP001.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP1 OF

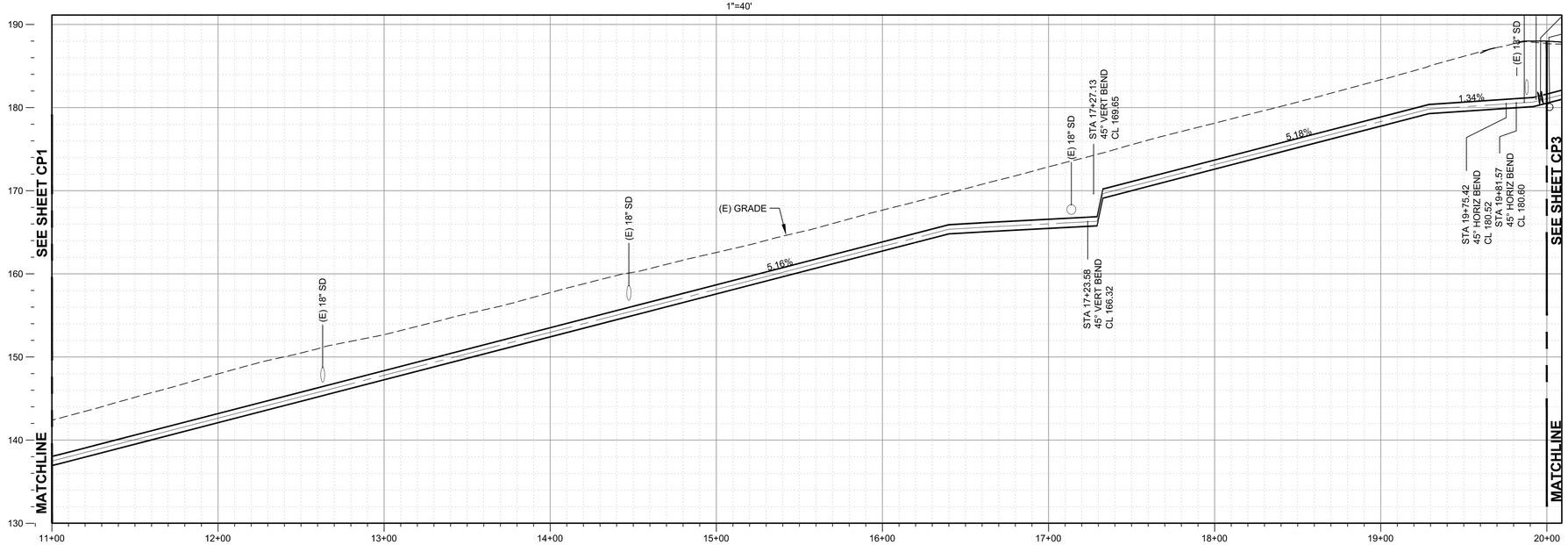
\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\131\1397005.00_City_of_Issaquah\139700500-CP001.dwg
NICOLASLOZANOORDONEZ 11/23/2020 4:37 PM



PLAN

0 20 40 60

1"=40'



PROFILE

0 20 40 60

HORIZ. 1"=40'

0 4 8

VERT. 1"=8'

NOTES:

1. STA 20+00.00 297/520 ZONE PIPELINES = STA 50+00.00 742 ZONE PIPELINE.
2. PROVIDE ELECTRICAL CONDUITS ALONG PIPELINE ROUTE. SEE PIPELINE DETAILS AND ELECTRICAL DRAWINGS.
3. 7'x4'-8"x4' O.D. VAULT. SEE PSE DRAWINGS FOR VAULT INSTALLATION REQUIREMENTS AND DETAILS. PSE UTILITY FRANCHISE UF11217CAM09.
4. PROVIDE 2'x6' SURCHARGE AT WALL WHILE TRENCH IS OPEN. SEE GEOTECHNICAL REPORT.
5. PROVIDE 10AWG GREEN JACKETED TRACER WIRE FOLLOWING 6-INCH DR (HDPE) LINE. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED SEWER) PLACED AT THE START OF THE DRAIN LINE WITH NO MORE THAN 500 FEET IN BETWEEN THE BOXES. THE TRACER WIRE SHALL BE ACCESSIBLE IN THE MANHOLE CONNECTION.
6. PROVIDE 10AWG ORANGE JACKETED TRACER WIRE IN SAME CONDUIT AS THE FIBER OPTIC CABLE. PROVIDE PULL ROPE IN 4 INCH SPARE CITY CONDUIT.
7. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

297/520 ZONE PIPELINE
PLAN AND PROFILE
STA. 11+00 TO STA. 19+88.60

90% SUBMITTAL (REVISED 11/30/2020)

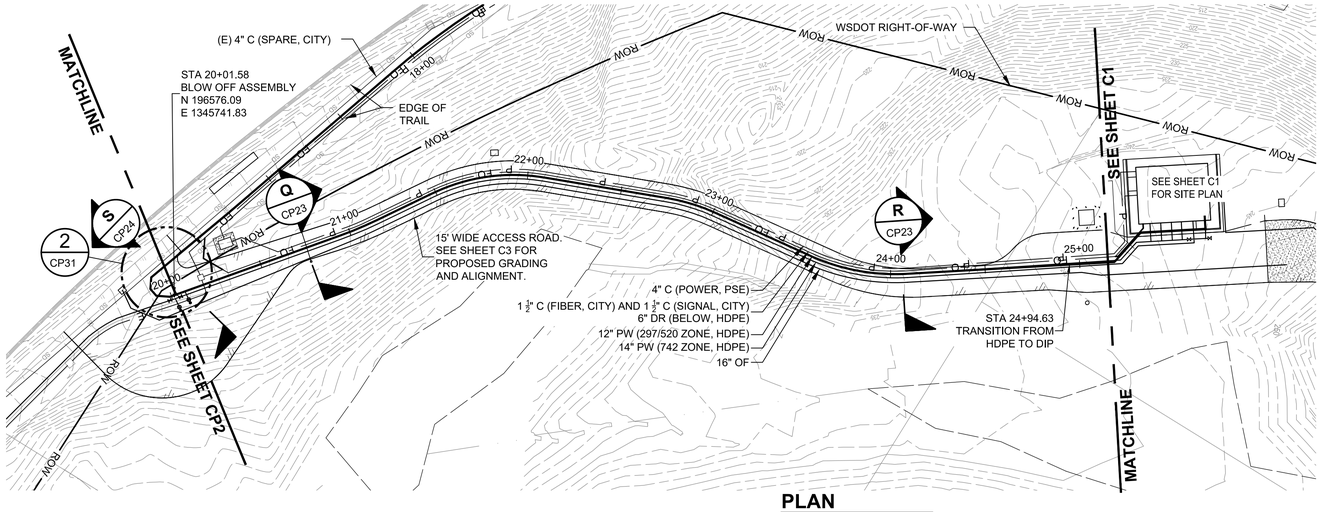
FILE NAME 139700500-CP002.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

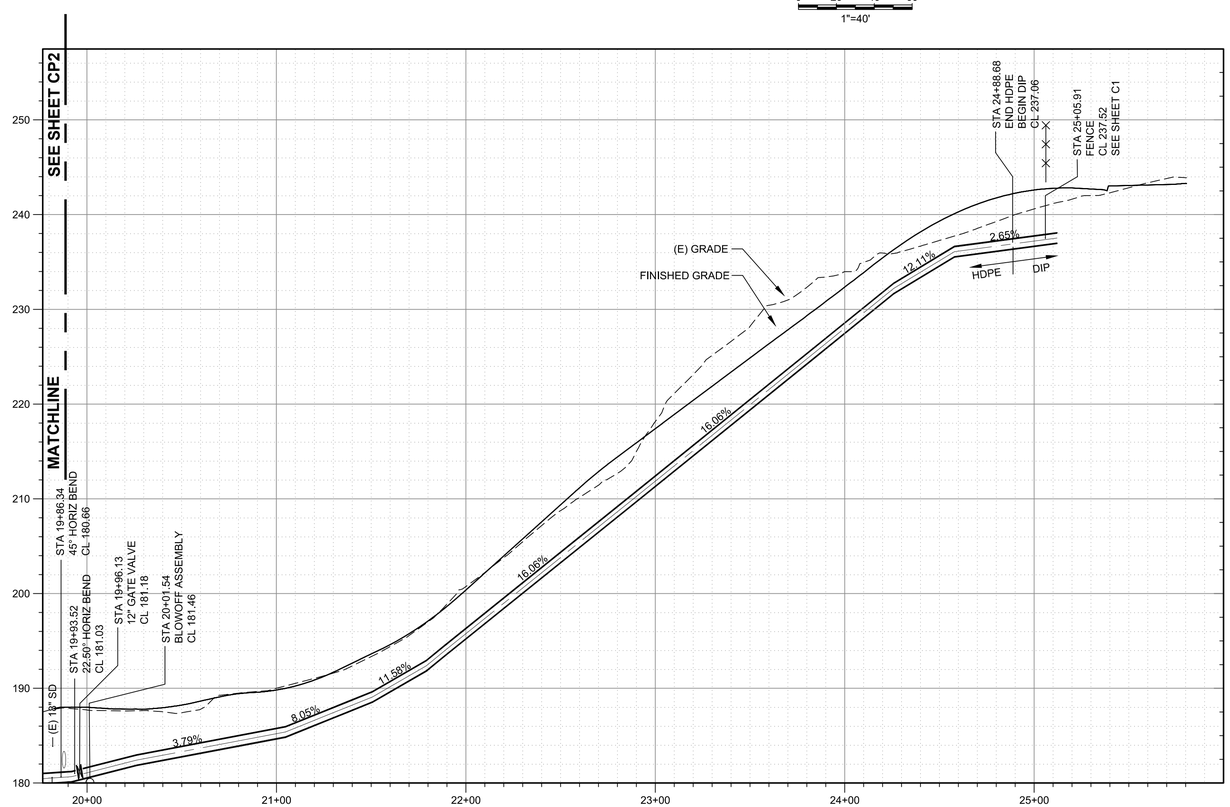
SHEET **CP2** OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP002.dwg 11/23/2020 4:37 PM NICOLASLOZANOORDONEZ



PLAN

0 20 40 60
1"=40'



PROFILE

0 20 40 60
HORIZ. 1"=40'

0 4 8
VERT. 1"=8'

NOTES:

1. BLOW OFF ASSEMBLIES PER CITY STANDARD DETAIL W-04.
2. COORDINATES SHOWN ON DRAWINGS ARE FOR THE 12" 297/520 ZONE WATERLINE.
3. PROVIDE ELECTRICAL CONDUITS ALONG PIPELINE ROUTE. SEE PIPELINE DETAILS AND ELECTRICAL DRAWINGS.
4. SEE SHEETS C4 AND C5 FOR ACCESS ROAD ALIGNMENT AND PROFILE INFORMATION.
5. PROVIDE 10AWG GREEN JACKETED TRACER WIRE FOLLOWING 6-INCH DR (HDPE) LINE. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED SEWER) PLACED AT THE START OF THE DRAIN LINE WITH NO MORE THAN 500 FEET IN BETWEEN THE BOXES. THE TRACER WIRE SHALL BE ACCESSIBLE IN THE MANHOLE CONNECTION.
6. PROVIDE 10AWG ORANGE JACKETED TRACER WIRE IN SAME CONDUIT AS THE FIBER OPTIC CABLE. PROVIDE PULL ROPE IN 4 INCH SPARE CITY CONDUIT.
7. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

297/520 ZONE AND 742 ZONE PIPELINES
PLAN AND PROFILE
STA. 19+88.60 TO STA. 25+34.25

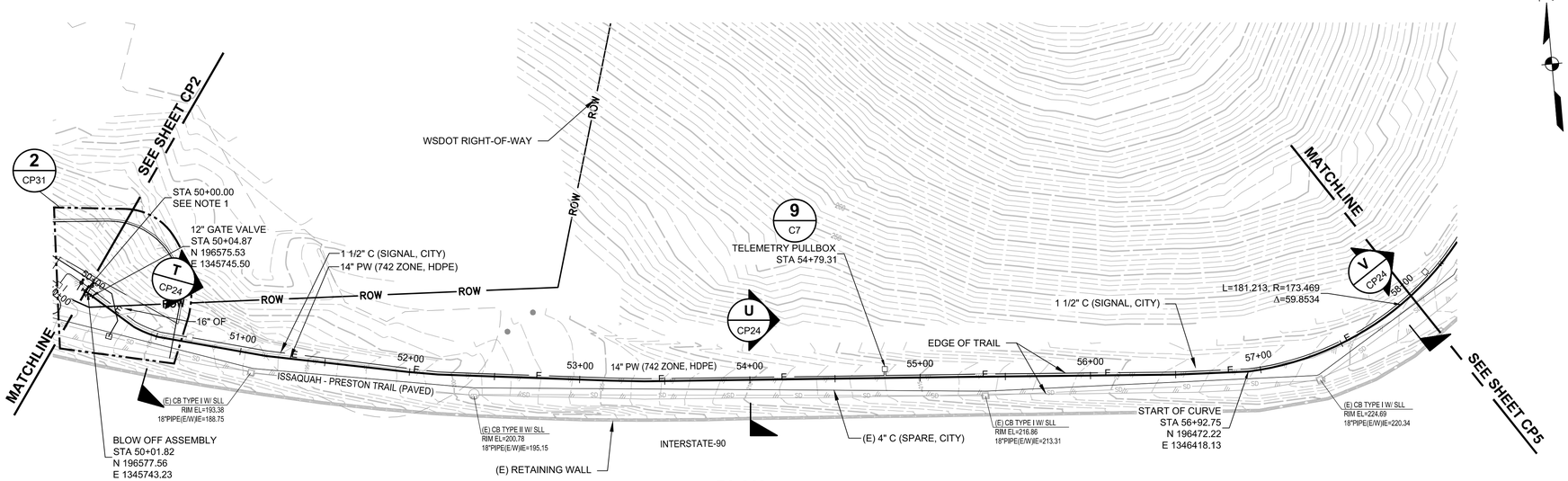
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP003.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET **CP3** OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP003.dwg 11/23/2020 4:38 PM NICOLAS.LOZANOORDONEZ

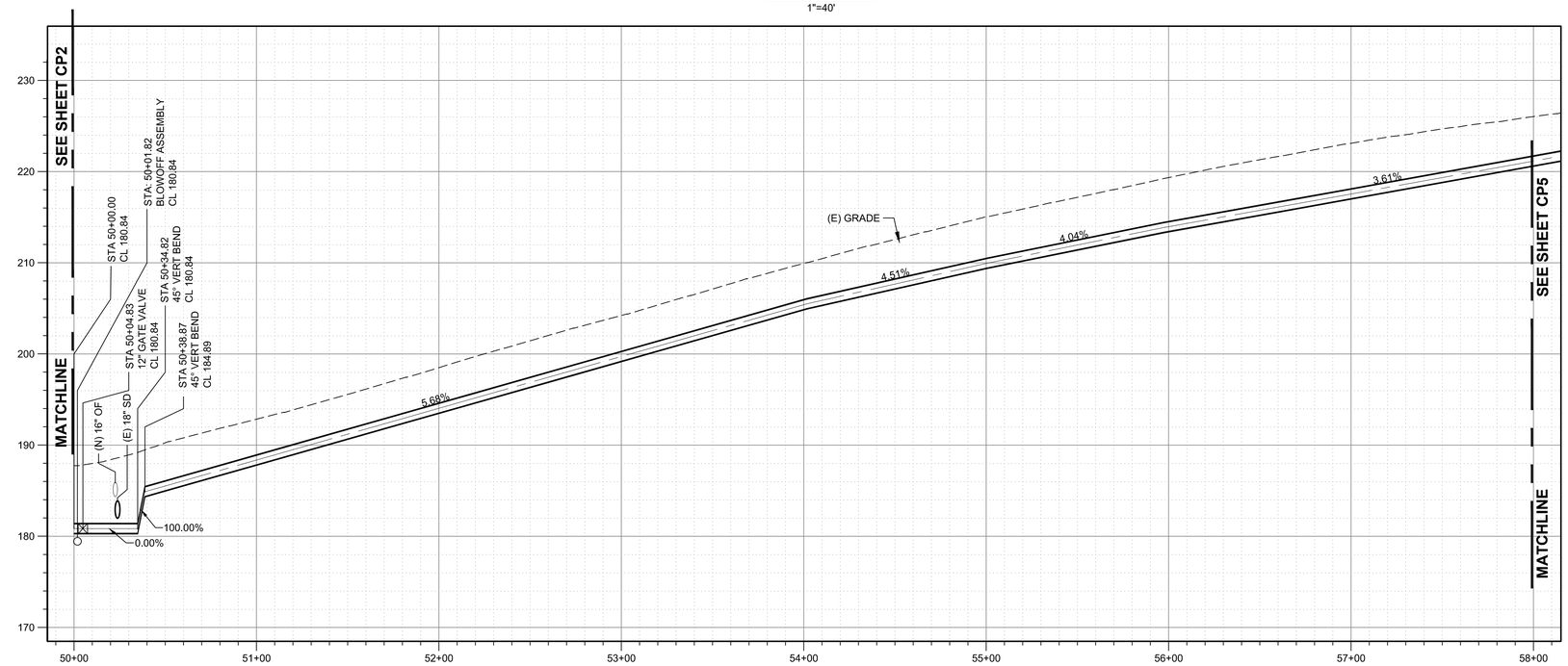
NOTES:

1. STA 50+00.00 742 ZONE PIPELINE = STA 20+00.00 297/520 ZONE PIPELINE.
2. BLOW OFF ASSEMBLIES PER CITY STANDARD DETAIL W-04.
3. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.



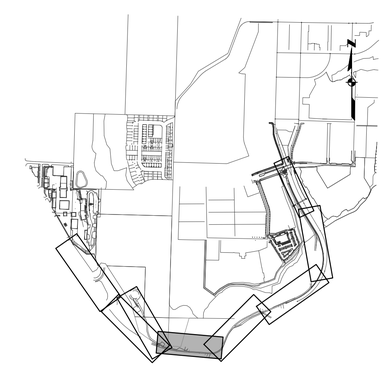
PLAN

0 20 40 60
1"=40'



PROFILE

0 20 40 60
HORIZ. 1"=40'
0 4 8
VERT. 1"=8'



KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

742 ZONE PIPELINE
PLAN AND PROFILE
STA. 50+00 TO STA. 58+00

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP004.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP4 OF

\\kjc-local\KJC-Root\KJ-Office\FWY\CAD\CAD\131\1397005.00_City_of_Issaquah\139700500-CP004.dwg
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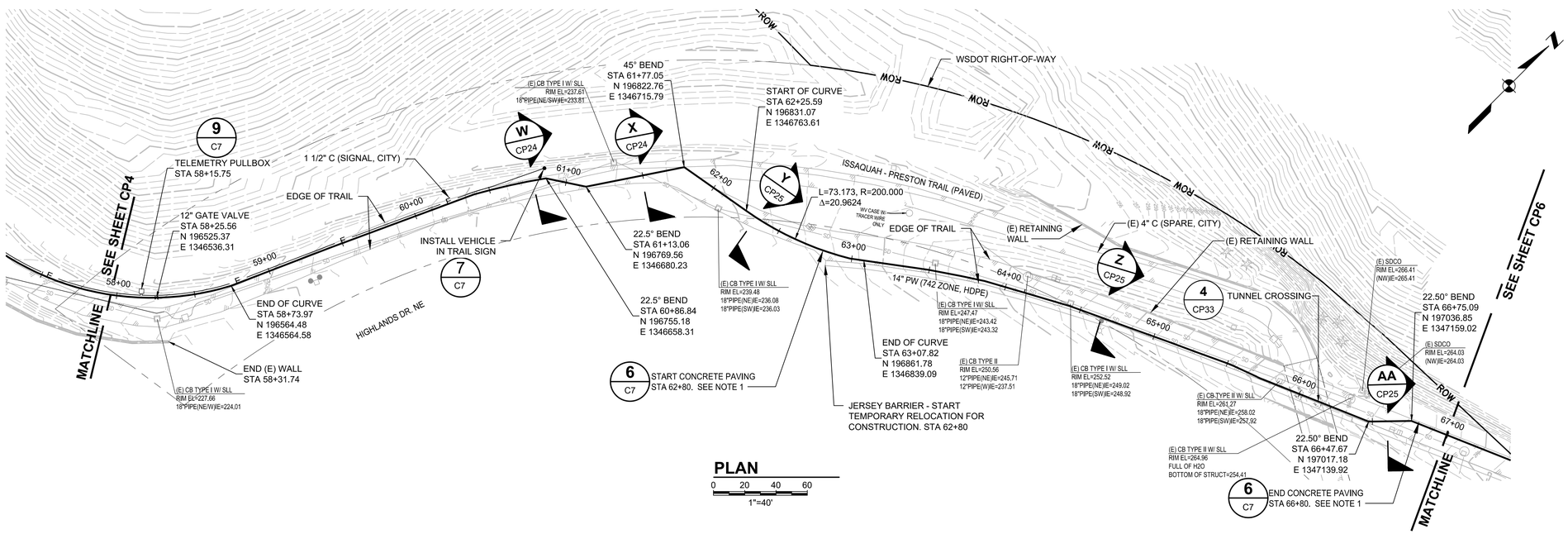


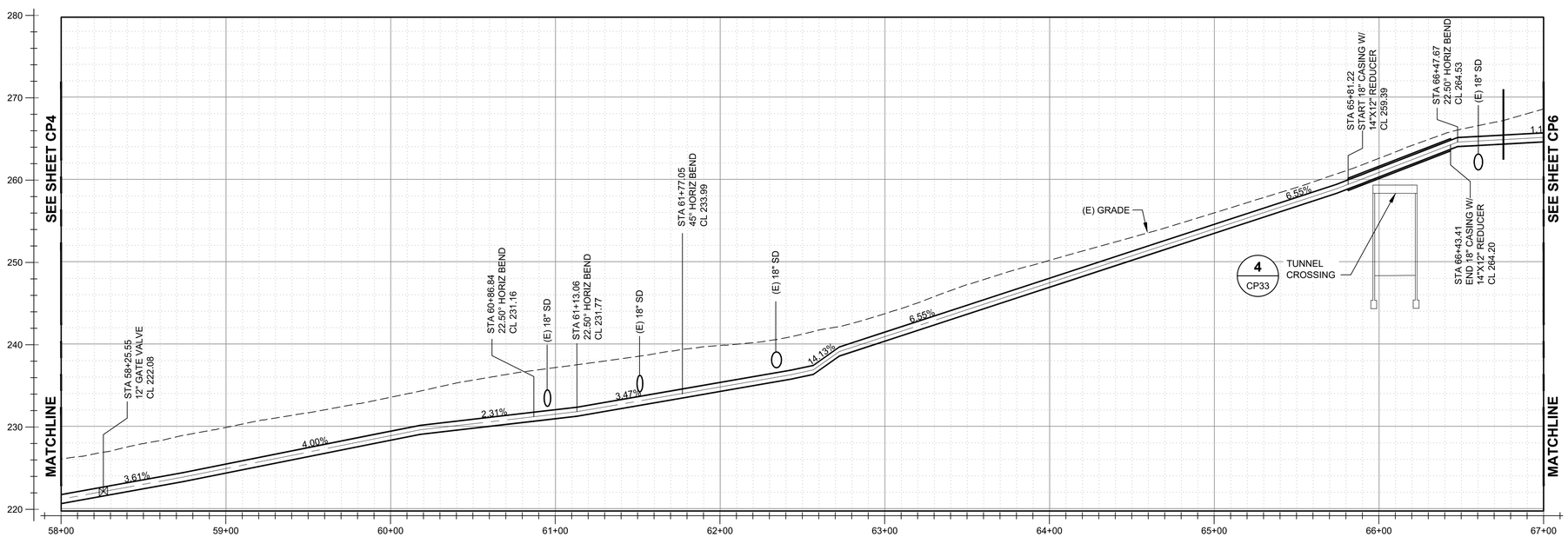
PLAN

0 20 40 60

1"=40'

NOTES:

1. CONCRETE PAVING TO BE PROVIDED WHERE PIPE HAS LESS THAN 3 FEET OF COVER.
2. FOR CONSTRUCTION AND INSTALLATION OF THE NEW 12" PIPE, TEMPORARILY REMOVE THE (E) FENCE AND REMOVE AND RESET THE (E) CONCRETE JERSEY BARRIER. SEE TRAFFIC CONTROL PLANS FOR WORK ASSOCIATED WITH REMOVE AND RESETTING (E) PERMANENT BARRIER. THE DURATION OF THE JERSEY BARRIER TEMPORARY RELOCATION SHALL NOT EXCEED TWO WEEKS. BOTH THE (E) FENCE AND (E) JERSEY BARRIER SHALL BE RESTORED TO THE ORIGINAL CONDITIONS ONCE THE NEW PIPE IS INSTALLED AND THE FINAL PAVEMENT LAYER IS SET ON THE TRAIL.
3. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.



PROFILE

0 20 40 60

HORIZ. 1"=40'

0 4 8

VERT. 1"=8'

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

742 ZONE PIPELINE
PLAN AND PROFILE
STA. 58+00 TO STA. 67+00

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP005.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET **CP5** OF

NICOLASLOZANOORDONEZ 11/23/2020 4:39 PM

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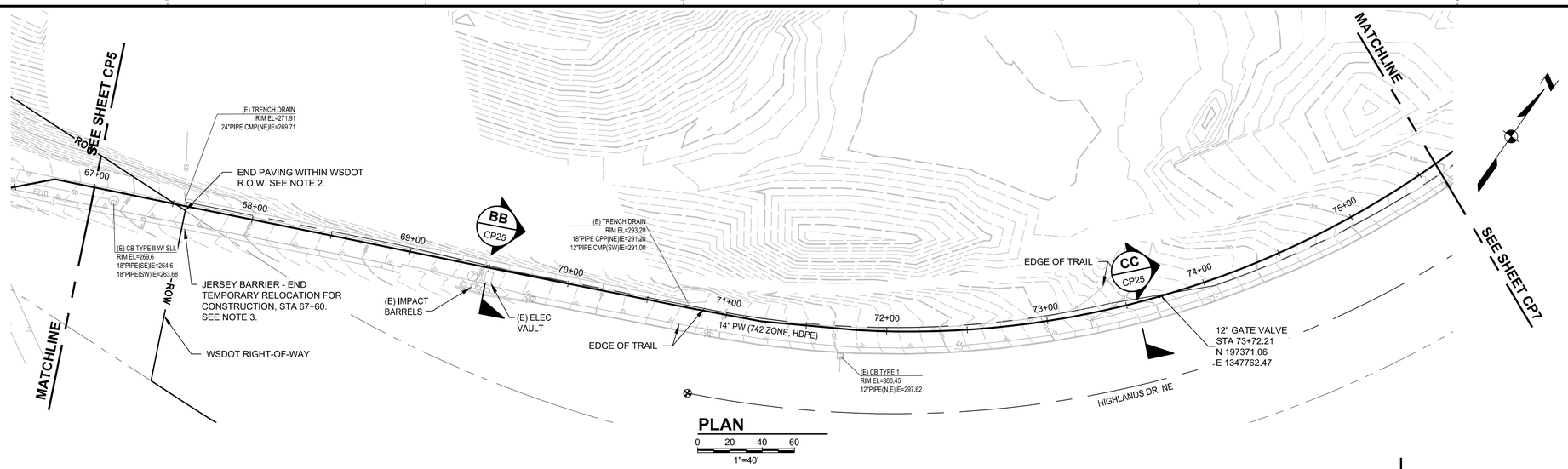


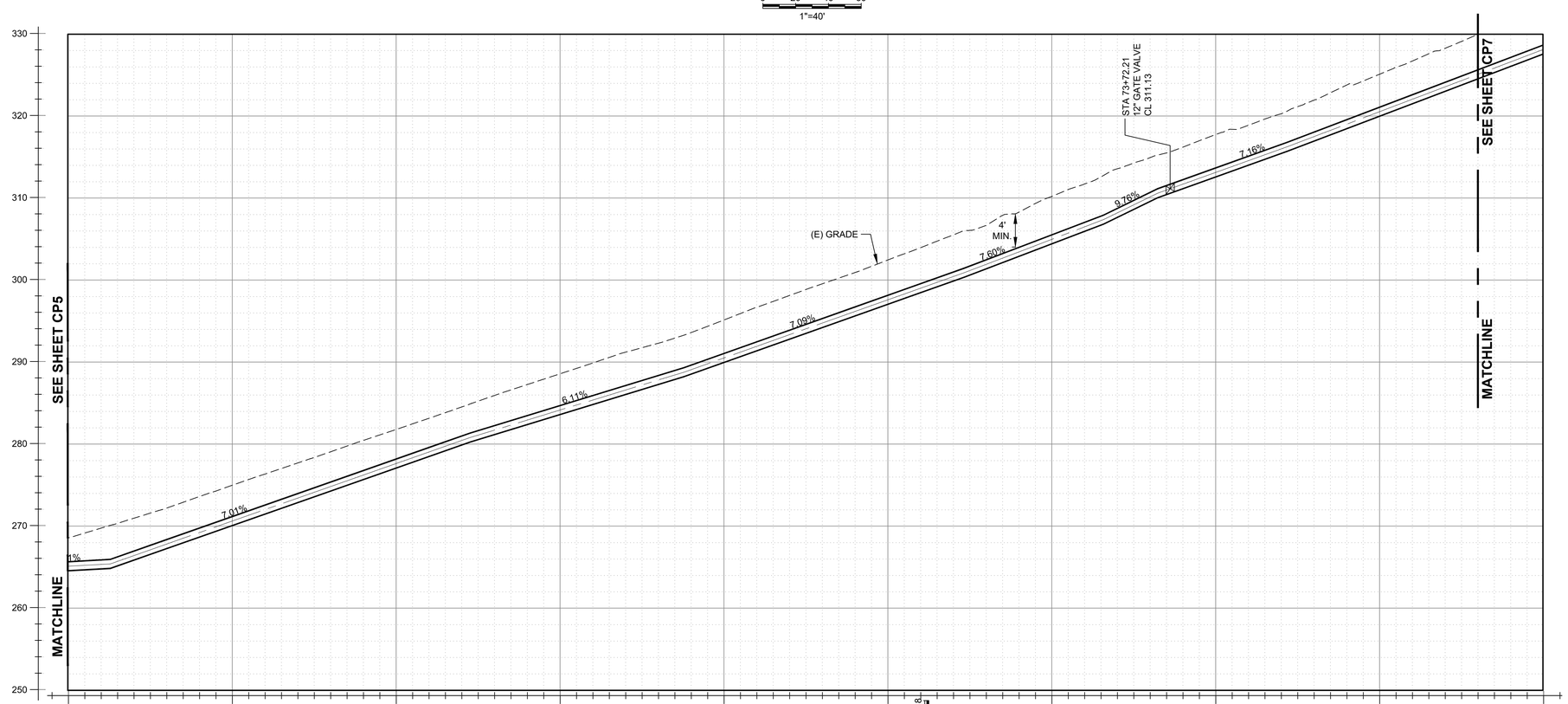
PLAN

0 20 40 60

1"=40'

NOTES:

1. PROJECT EXITS WSDOT ROW AT I-90 MILE POST 18.2.
2. END WSDOT R.O.W. FINAL PAVING OVERLAY SHALL COVER ENTIRE LENGTH AND WIDTH OF TRAIL WITHIN WSDOT R.O.W. PAVE OUTSIDE THE R.O.W. AS SHOWN. SEE PAVING DETAILS FOR ADDITIONAL INFORMATION.
3. MODIFY JERSEY BARRIER TEMPORARILY WITH FLARED APPROACH FOR TRAFFIC CONTROL PLAN.
4. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.



PROFILE

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
14536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

742 ZONE PIPELINE
PLAN AND PROFILE
STA. 67+00 TO STA. 76+00

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP006.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET **CP6** OF

NICOLASLOZANOORDONEZ 11/23/2020 4:40 PM

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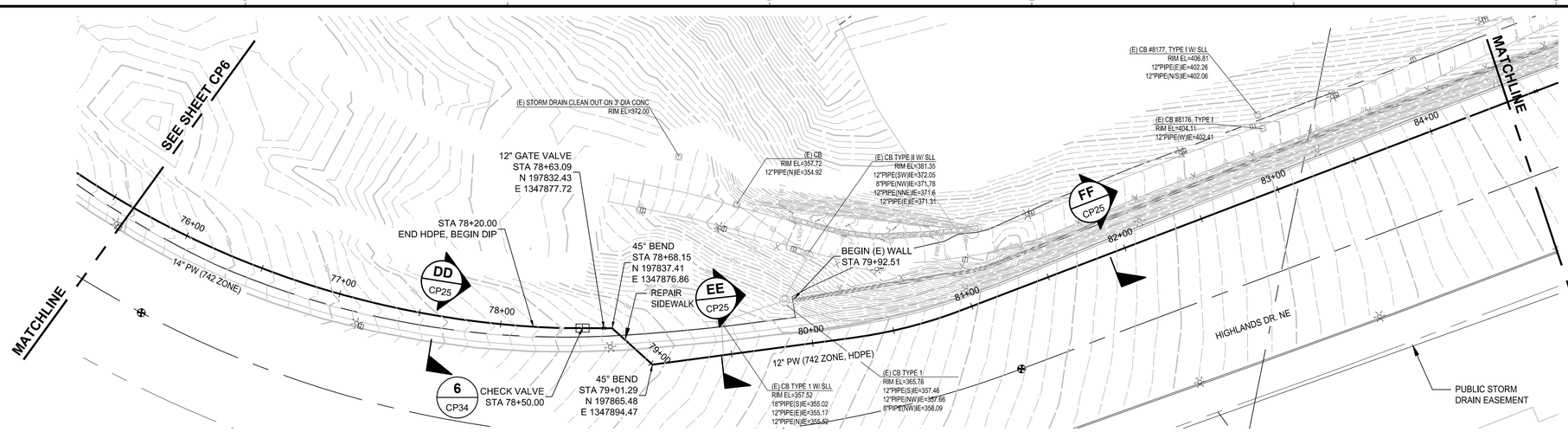
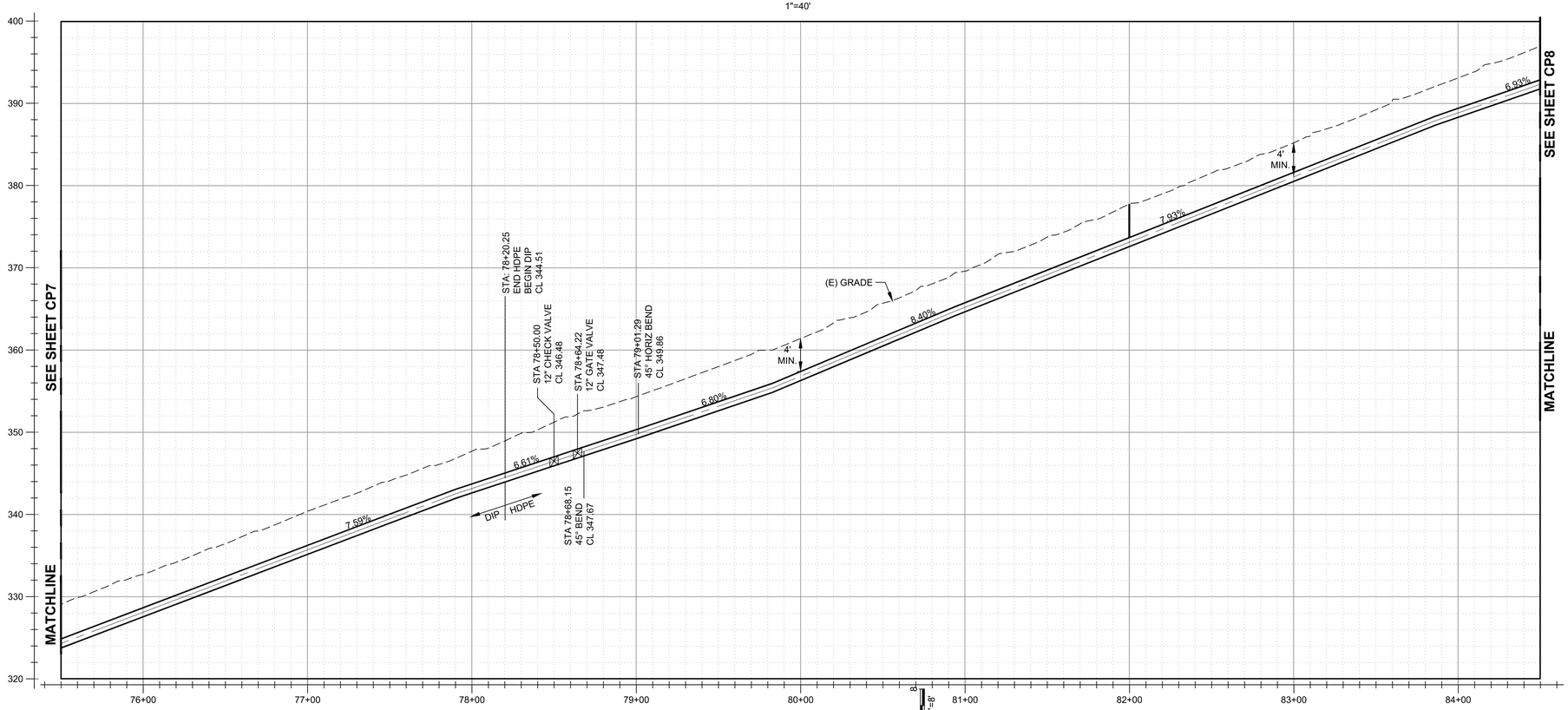


PLAN

0 20 40 60
1"=40'

NOTES:

1. PROVIDE 10AWG BLUE JACKETED TRACER WIRE FOLLOWING THE PATH OF THE HDPE WATER MAIN. TRACER WIRE SHALL BE ACCESSED BY VALVE BOXES (LABELED WATER) PLACED AT THE START AND END OF THE HDPE SECTION WITH NO MORE THAT 500 FEET IN BETWEEN THE BOXES.



PROFILE

0 20 40 60
HORIZ. 1"=40'
0 4 8
VERT. 1"=8'

KEY PLAN

SCALE NONE

USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES

0 1"
0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
24536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

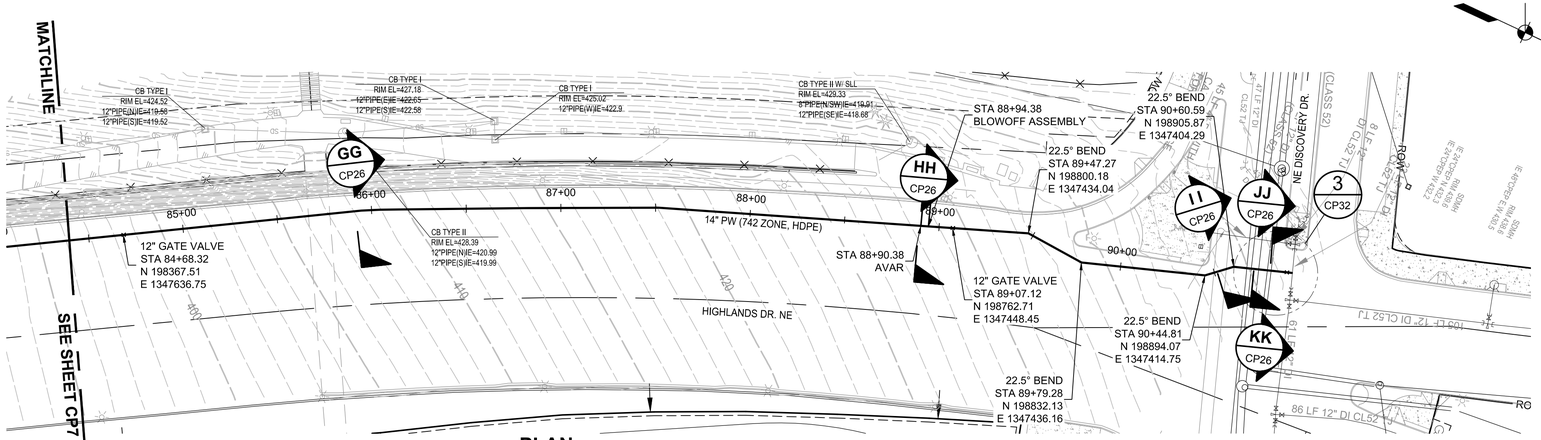
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

742 ZONE PIPELINE
PLAN AND PROFILE
STA. 75+50 TO STA. 84+50

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP007.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET **CP7** OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP007.dwg
NICOLASLOZANOORDONEZ 11/24/2020 7:04 PM

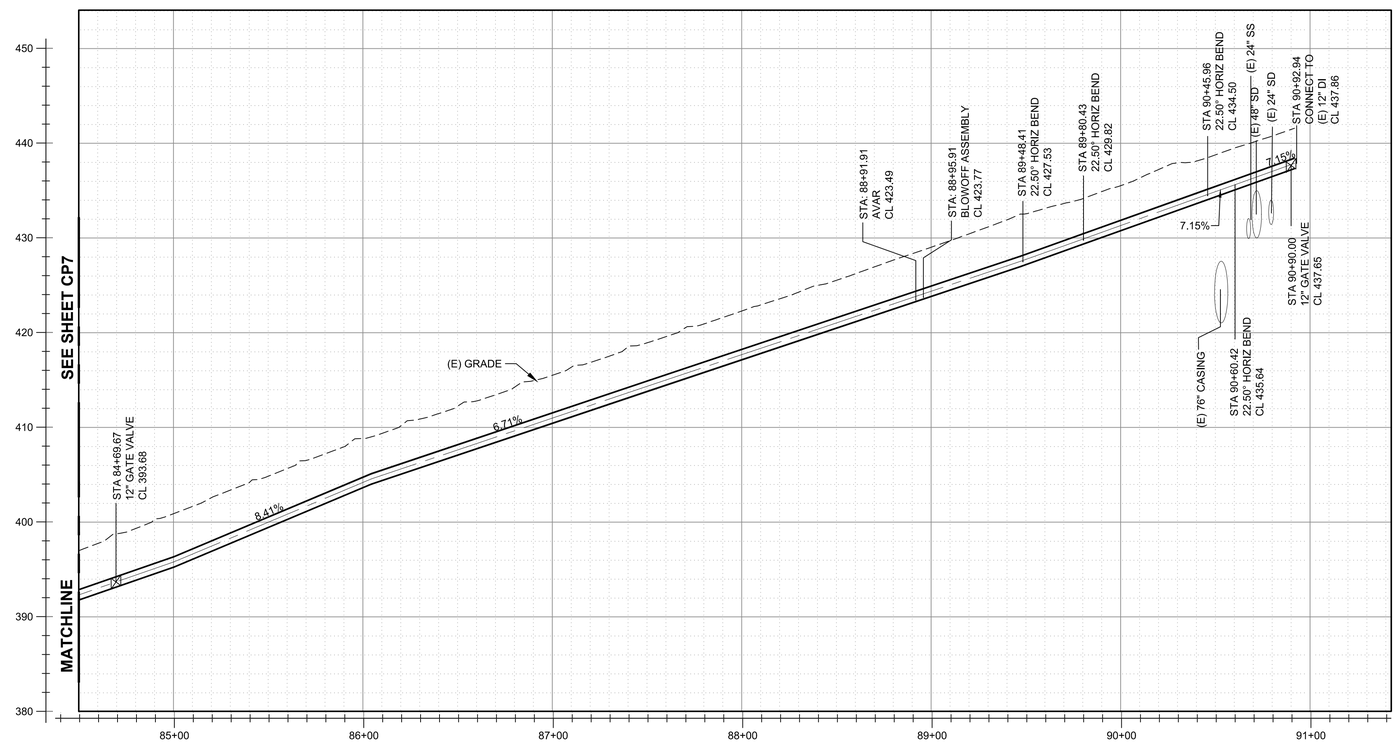


PLAN

0 20 40 60
1"=40'

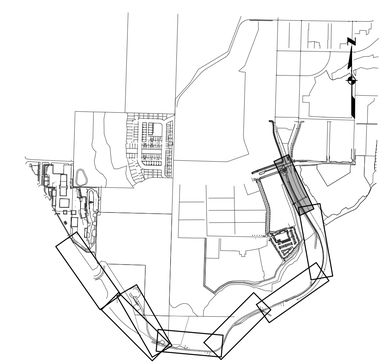
NOTES:

1. CONTRACTOR SHALL REPLACE TRAFFIC LOOPS AT INTERSECTION.
2. BLOWOFF ASSEMBLY PER CITY STANDARD DETAIL W-04. AVAR PER CITY STANDARD DETAIL W-07.



PROFILE

0 20 40 60
HORIZ. 1"=40'
0 4 8
VERT. 1"=8'



KEY PLAN

SCALE NONE

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

742 ZONE PIPELINE
PLAN AND PROFILE
STA. 85+00 TO STA. 91+00

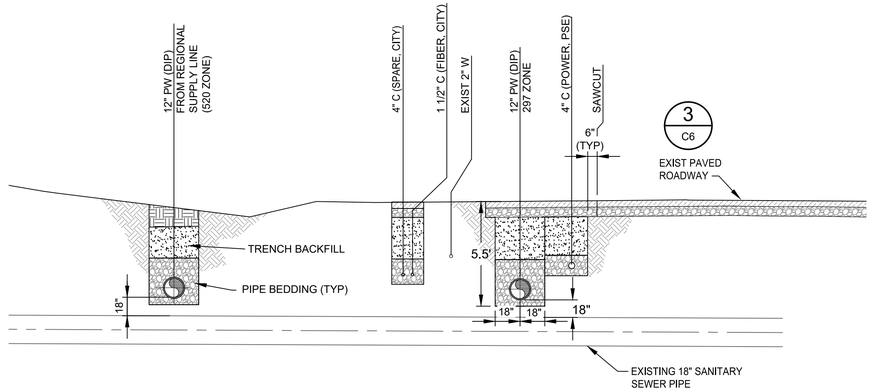
90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-CP008.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 45 OF 83
CP8

MIKEMARX 12/19/2019 1:13 PM
P:\CAD\13\1397005.00_City_of_Issaquah\139700500-CP008.dwg

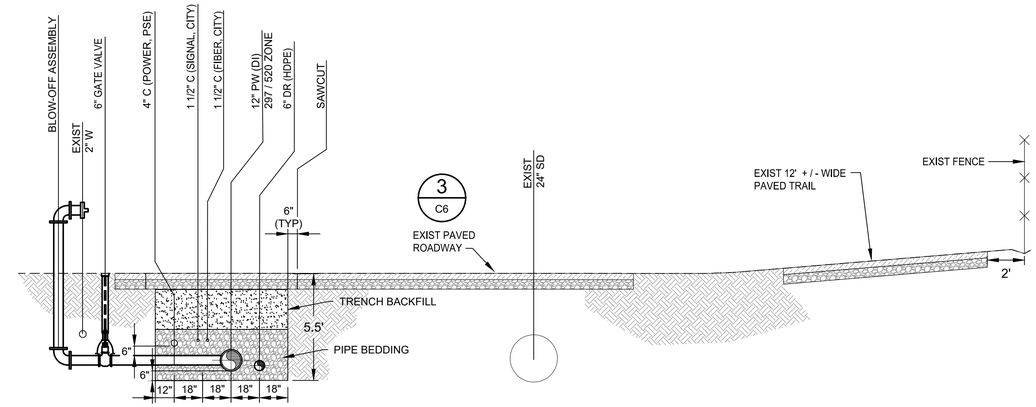
NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'.



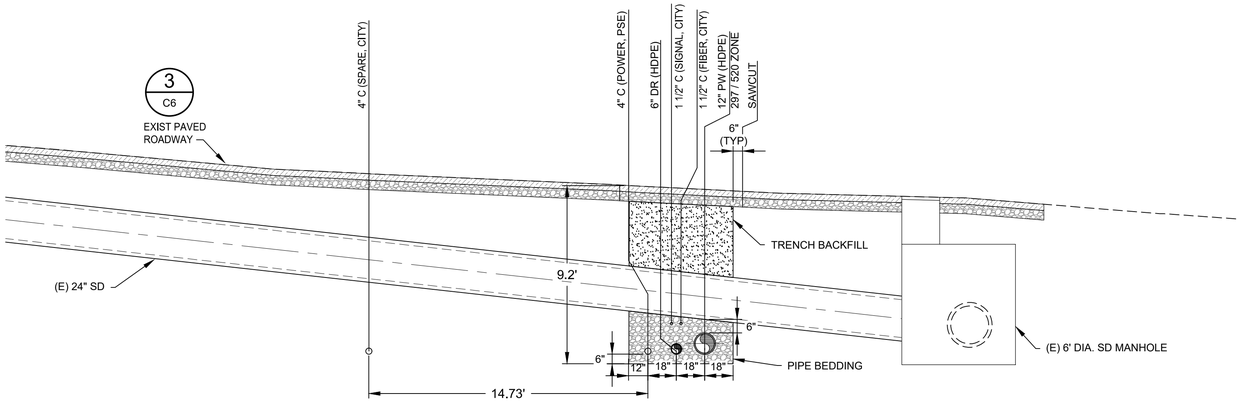
STA 1+00 TO 2+00 297/520 ZONE SECTION (A / CP1)

0 2 4 6
1"=4'



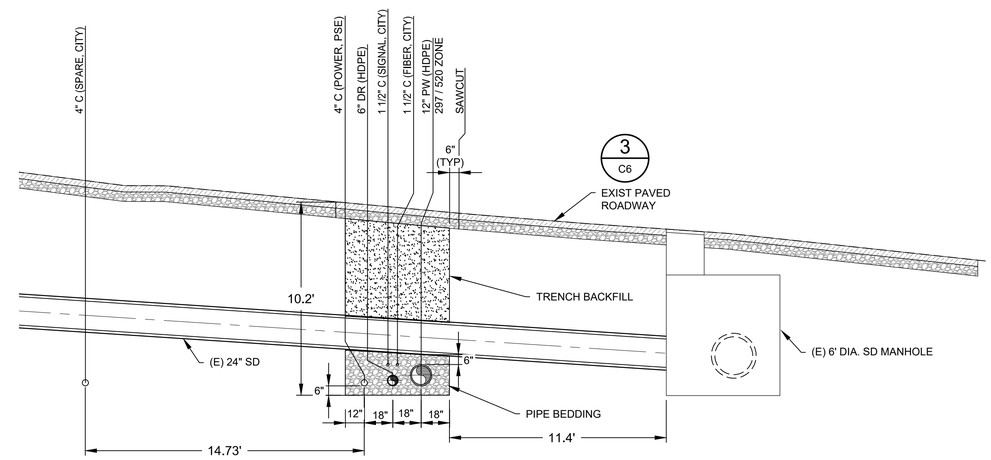
STA 2+00 TO 5+38 297/520 ZONE SECTION (B / CP1)

0 2 4 6
1"=4'



STA 6+05 TO 6+20 297/520 ZONE SECTION (C / CP1)

0 2 4 6
1"=4'



STA 6+20 TO 6+90 297/520 ZONE SECTION (D / CP1)

0 2 4 6
1"=4'

USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY, STATE OF WASHINGTON, 34536, REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 1

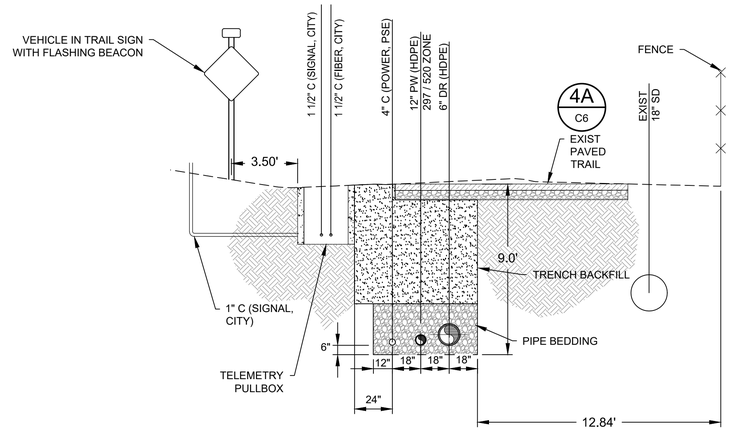
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP020.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP20 OF

NICOLASLOZANOORDONEZ 12/10/2020 7:31 AM
\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP020.dwg

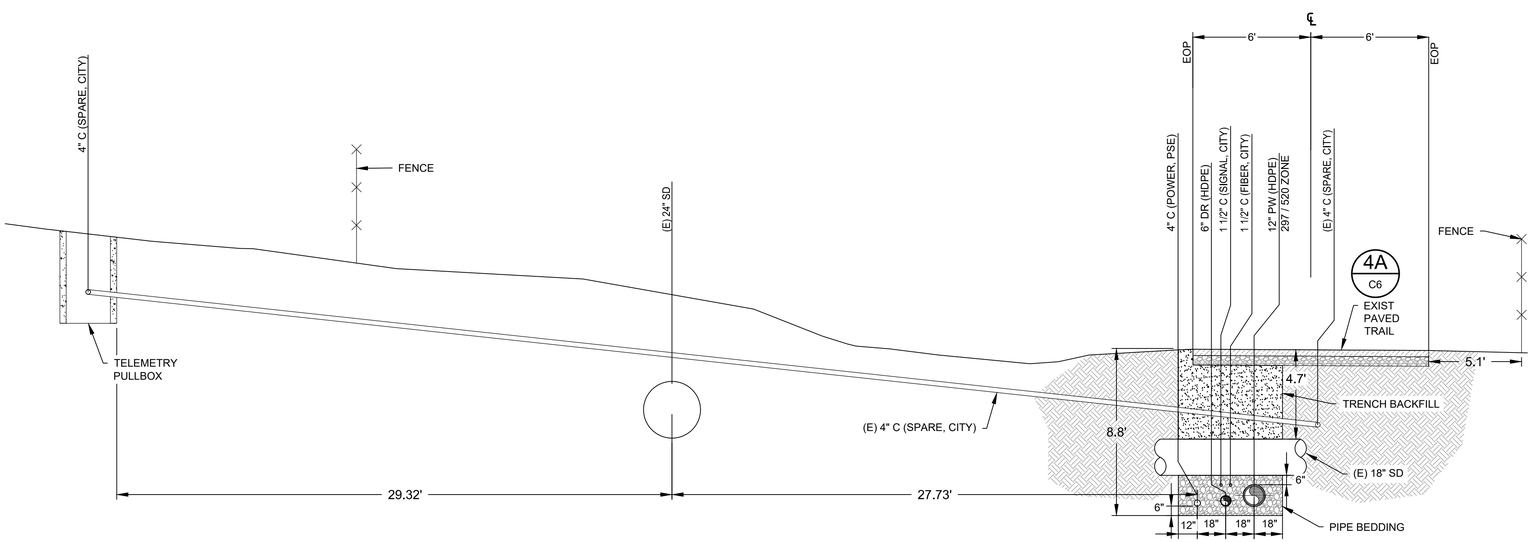
NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'
4. PRESERVE FEATURES OF EXISTING DITCH, RESTORE TO ORIGINAL CONDITION AFTER CONSTRUCTION.



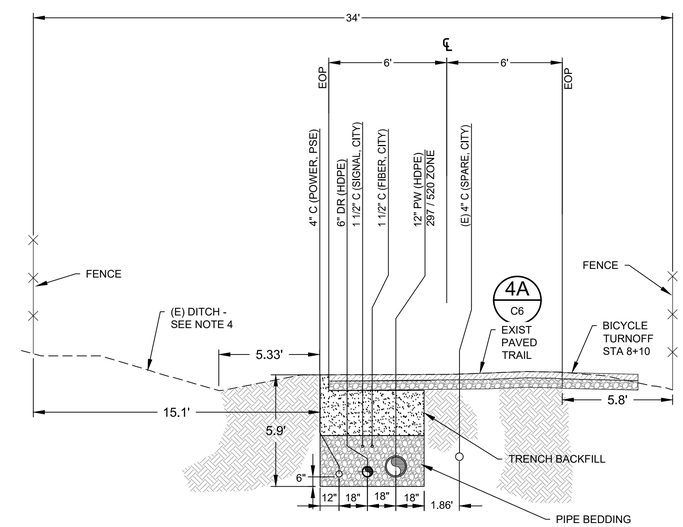
STA 6+95 TO 7+00 297/520 ZONE SECTION (E / CP1)

0 2 4 6
1"=4'



STA 7+00 TO 7+23 297/520 ZONE SECTION (F / CP1)

0 2 4 6
1"=4'



STA 7+23 TO 9+85 297/520 ZONE SECTION (G / CP1)

0 2 4 6
1"=4'

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

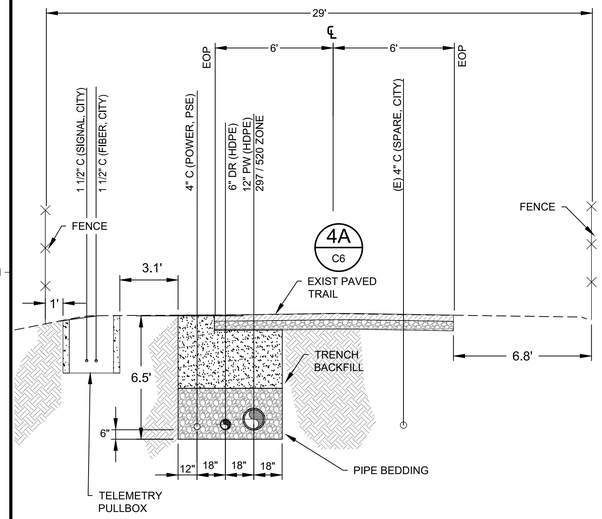
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 2

90% SUBMITTAL (REVISED 11/30/2020)

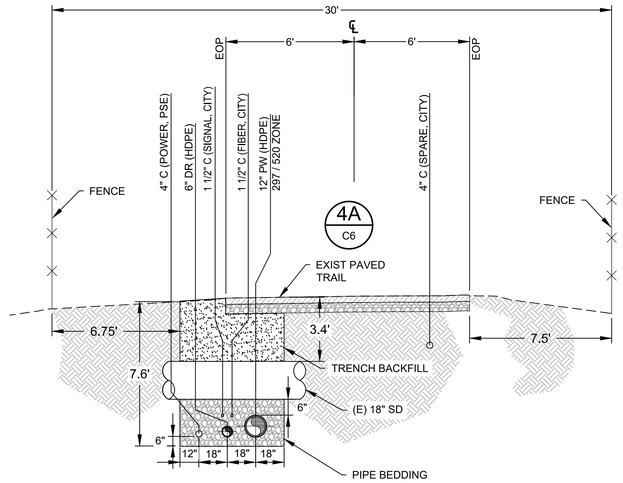
FILE NAME 139700500-CP021.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP21 OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP021.dwg
NICOLASLOZANOORDONEZ 12/10/2020 7:33 AM



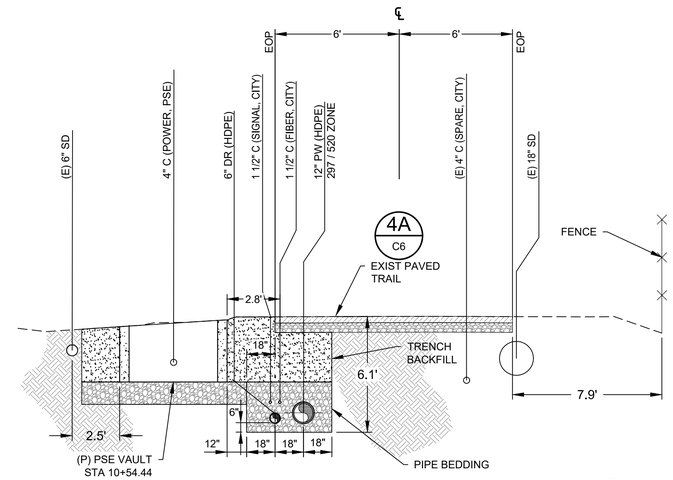
STA 9+85 TO 10+05 297/520 ZONE SECTION (H / CP1)

0 2 4 6
1"=4'



STA 10+08 TO 10+55 297/520 ZONE SECTION (I / CP1)

0 2 4 6
1"=4'

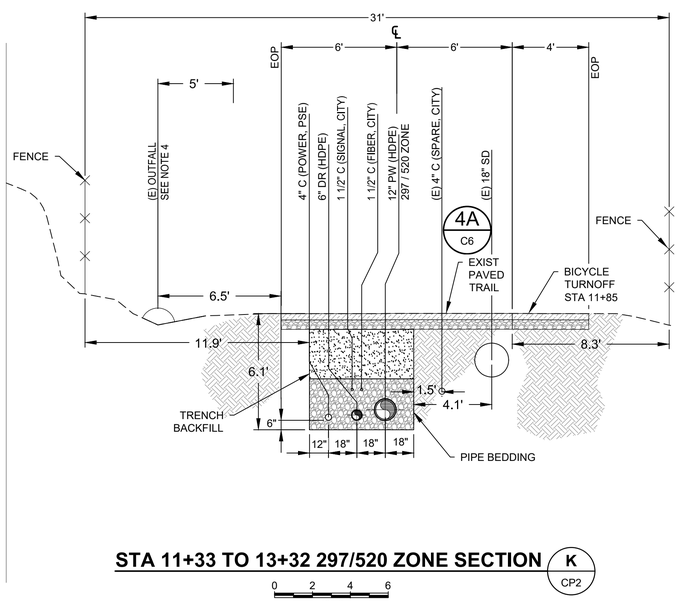


STA 10+55 TO11+33 297/520 ZONE SECTION (J / CP1)

0 2 4 6
1"=4'

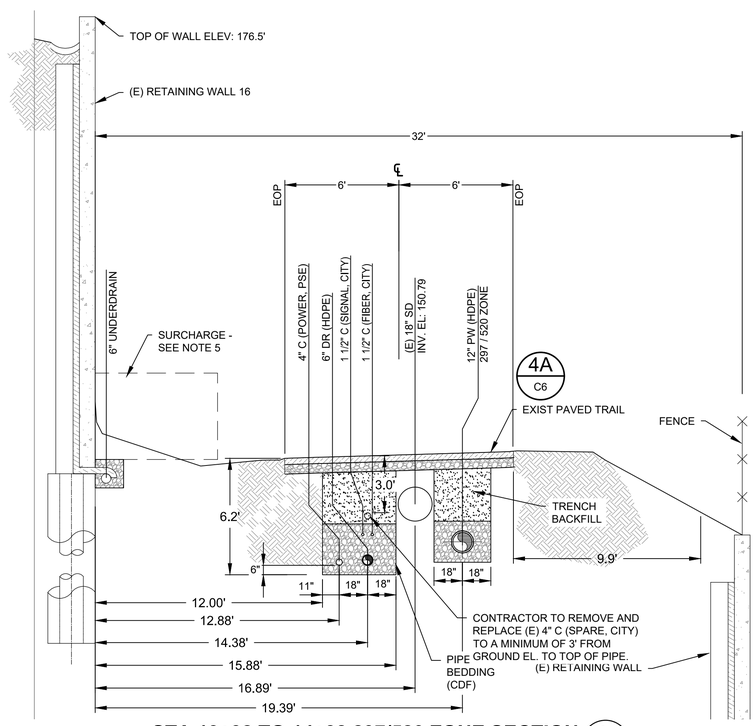
NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'
4. PRESERVE FEATURES OF OUTFALL, RESTORE TO ORIGINAL CONDITION AFTER CONSTRUCTION.
5. PROVIDE 4FT X 6FT SURCHARGE AT WALL WHILE TRENCH IS OPEN. SEE GEOTECHNICAL REPORT.



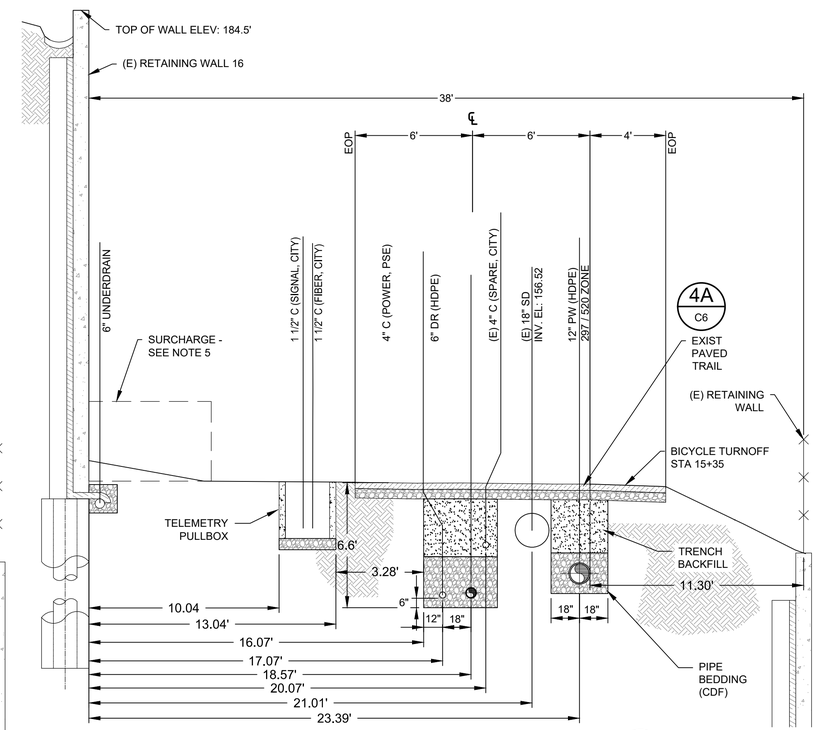
STA 11+33 TO 13+32 297/520 ZONE SECTION (K / CP2)

0 2 4 6
1"=4'



STA 13+32 TO 14+38 297/520 ZONE SECTION (L / CP2)

0 2 4 6
1"=4'



STA 14+38 TO 16+23 297/520 ZONE SECTION (M / CP2)

0 2 4 6
1"=4'

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

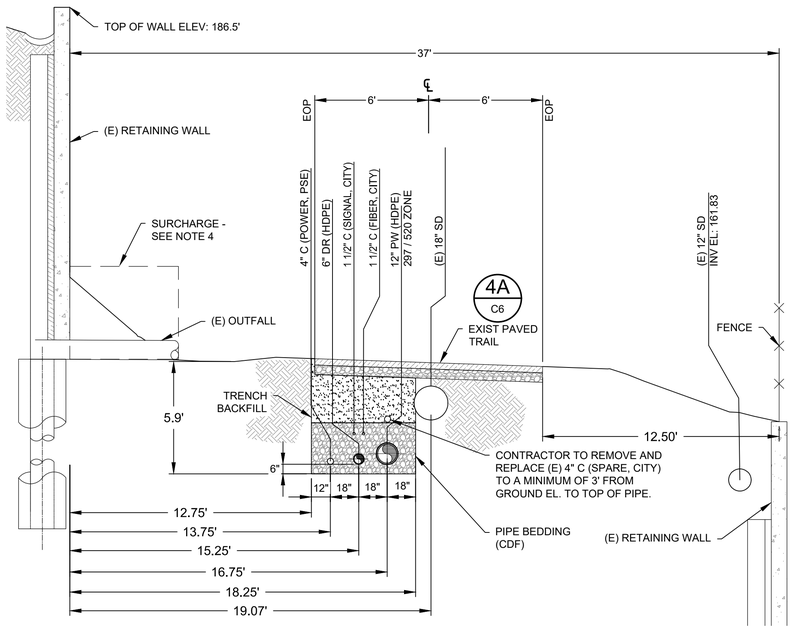
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 3

90% SUBMITTAL (REVISED 11/30/2020)

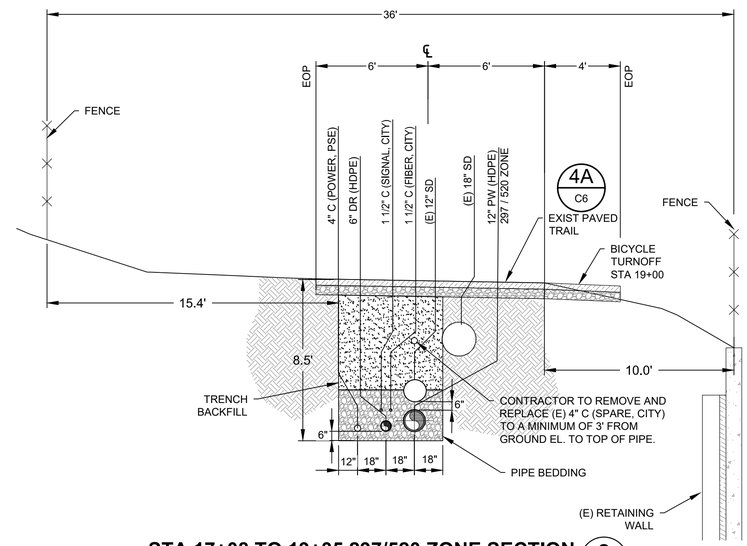
FILE NAME 139700500-CP022.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP22 OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP022.dwg
NICOLASLOZANOORDONEZ 12/10/2020 8:38 AM



STA 16+23 TO 17+08 297/520 ZONE SECTION (N / CP2)

0 2 4 6
1"=4'

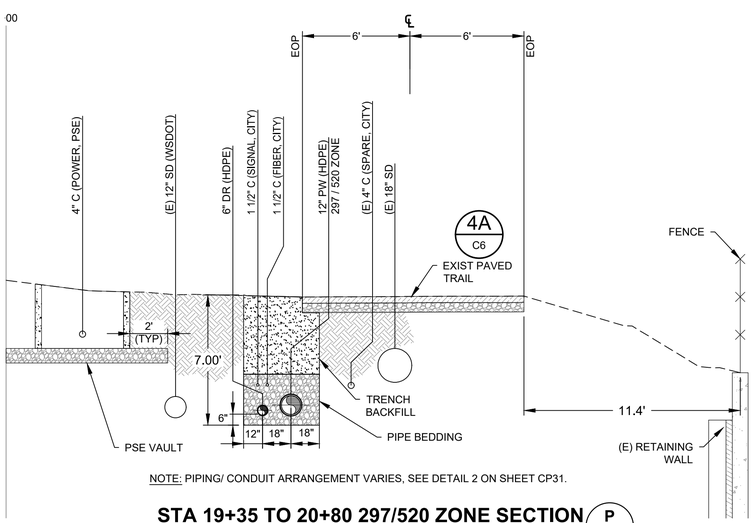


STA 17+08 TO 19+35 297/520 ZONE SECTION (O / CP2)

0 2 4 6
1"=4'

NOTES:

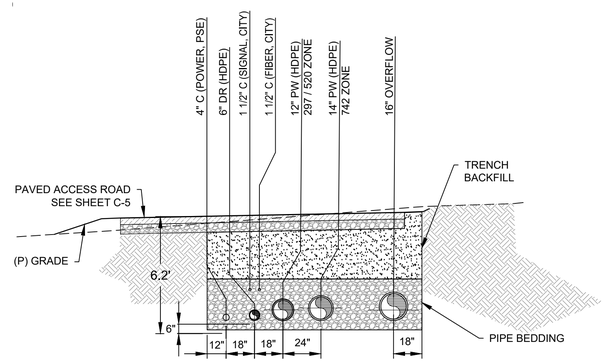
1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'
4. PROVIDE 4FT X 6FT SURCHARGE AT WALL WHILE TRENCH IS OPEN. SEE GEOTECHNICAL REPORT.



NOTE: PIPING/ CONDUIT ARRANGEMENT VARIES, SEE DETAIL 2 ON SHEET CP31.

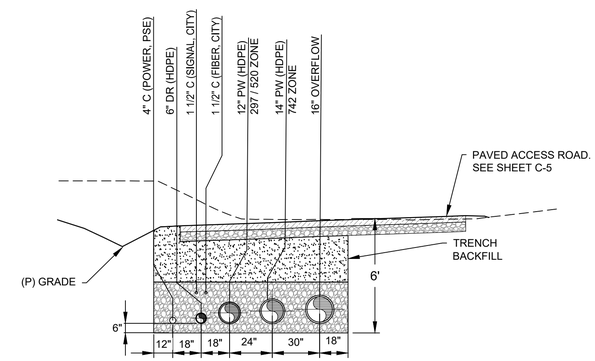
STA 19+35 TO 20+80 297/520 ZONE SECTION (P / CP2)

0 2 4 6
1"=4'



STA 20+80 TO STA 24+00 297/520/742 ZONE SECTION (Q / CP3)

0 2 4 6
1"=4'



STA 24+00 TO 25+05 297/520/742 ZONE SECTION (R / CP3)

0 2 4 6
1"=4'

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FOKAI — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 4

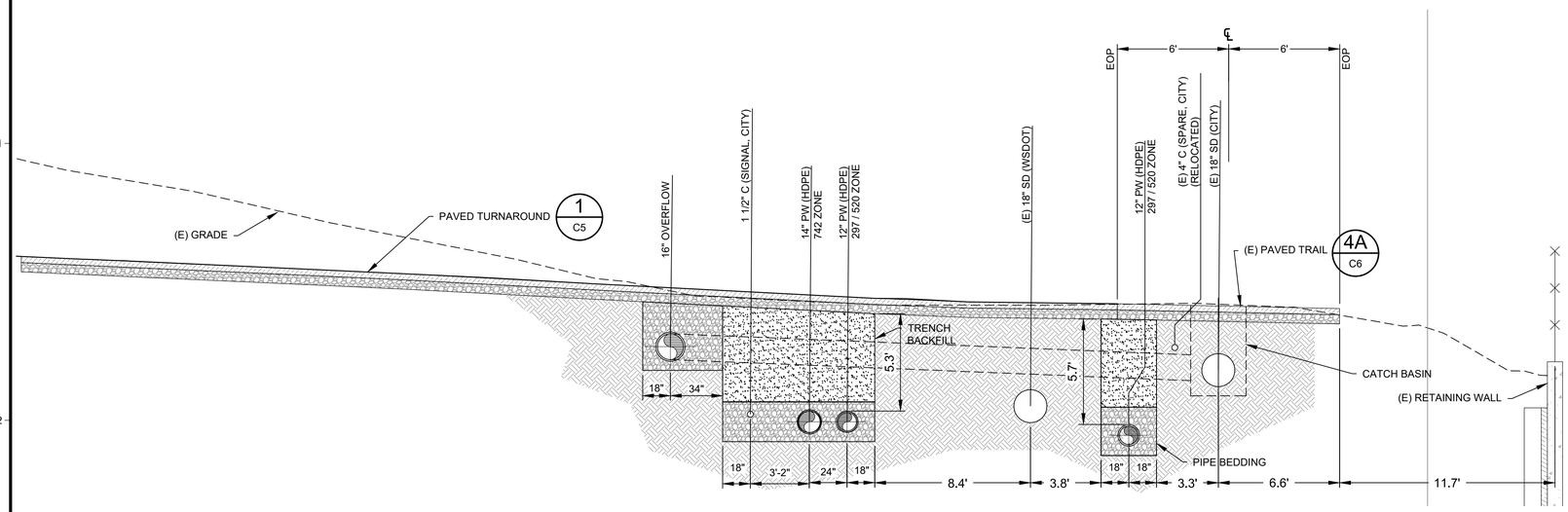
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP023.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP23 OF

NICOLASLOZANOORDONEZ 12/10/2020 8:39 AM
\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP023.dwg

NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'
4. PAVE PER DETAIL 4A ON SHEET C6 TO STA 51+50, DETAIL 4B ON SHEET C6 AFTER STA 51+50.

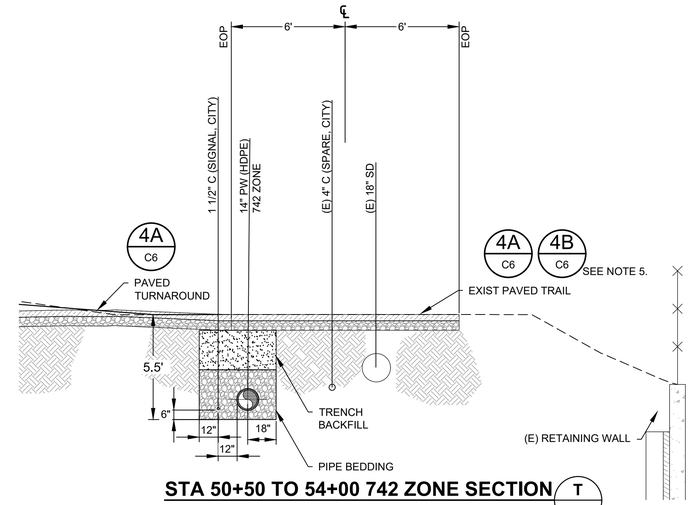


STA 50+00 TO 50+50 742 ZONE SECTION (S)

AND STA 19+75 TO 20+25 297/520 ZONE SECTION

CP3 / CP31

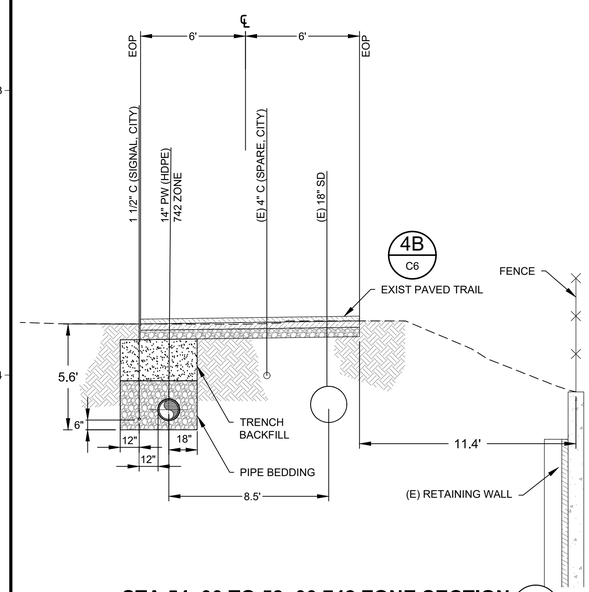
0 2 4 6 1"=4'



STA 50+50 TO 54+00 742 ZONE SECTION (T)

CP4

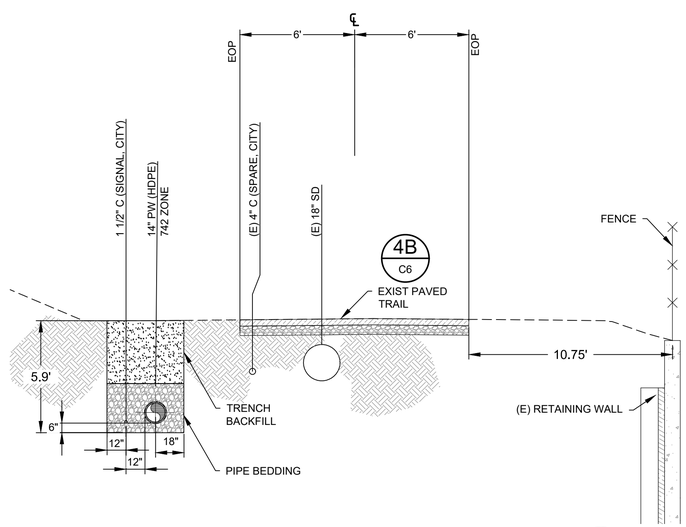
0 2 4 6 1"=4'



STA 54+00 TO 58+00 742 ZONE SECTION (U)

CP4

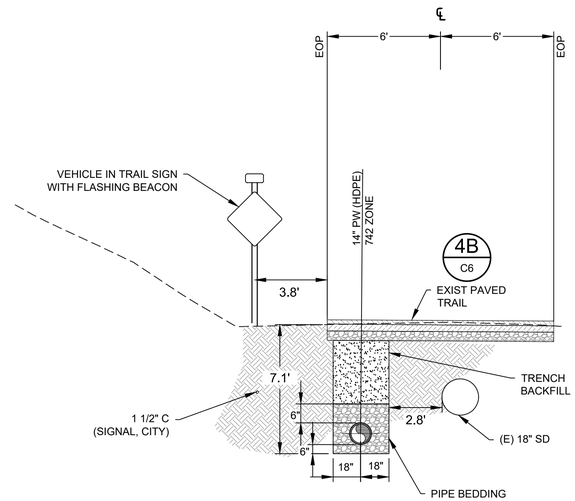
0 2 4 6 1"=4'



STA 58+00 TO 60+90 742 ZONE SECTION (V)

CP4

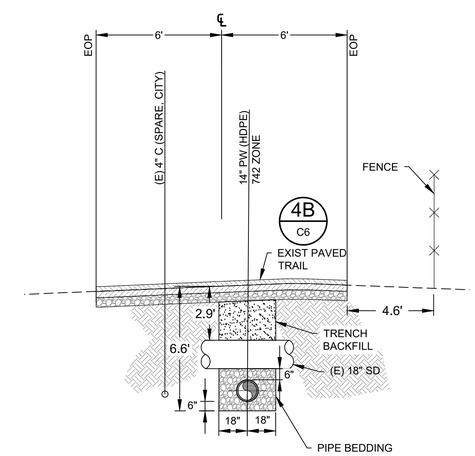
0 2 4 6 1"=4'



STA 60+86 TO 61+50 742 ZONE SECTION (W)

CP5

0 2 4 6 1"=4'



STA 61+50 TO 62+30 742 ZONE SECTION (X)

CP5

0 2 4 6 1"=4'

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN RJS

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 5

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP024.DWG

JOB NO. 1397005*00

DATE NOVEMBER 2020

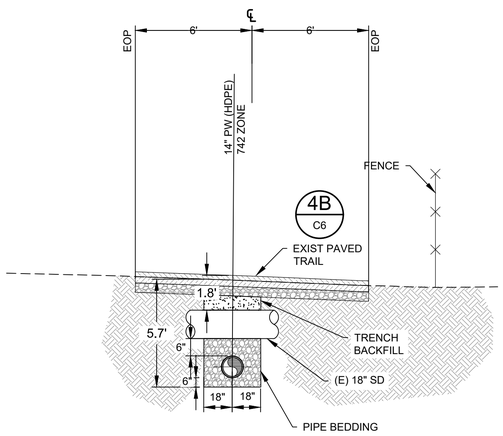
SHEET CP24 OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP024.dwg

NICOLASLOZANOORDONEZ 12/10/2020 8:41 AM

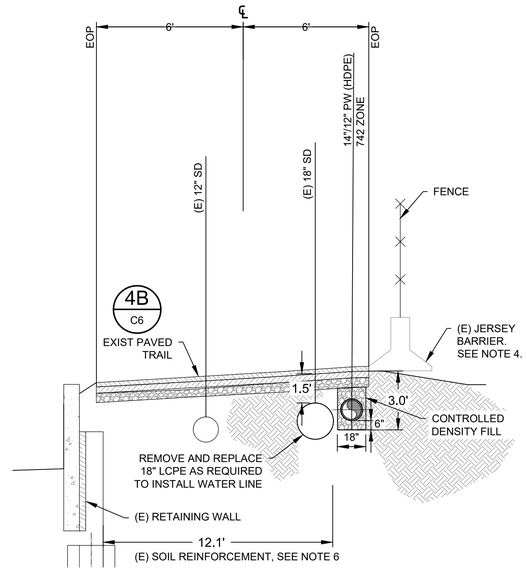
NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN. PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'.
4. RESET TRAFFIC BARRIERS FOR CONSTRUCTION PER TRAFFIC CONTROL PLAN, STA 62+80 TO 66+47.
5. SOIL REINFORCEMENT (GEOGRID)IS PRESENT IN THIS AREA. CUTTING OF GEOGRID IS PROHIBITED.



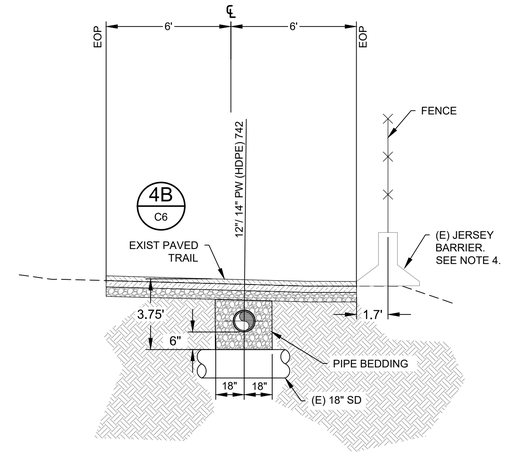
STA 62+30 TO 64+60 742 ZONE SECTION (Y / CP5)

0 2 4 6
1"=4'



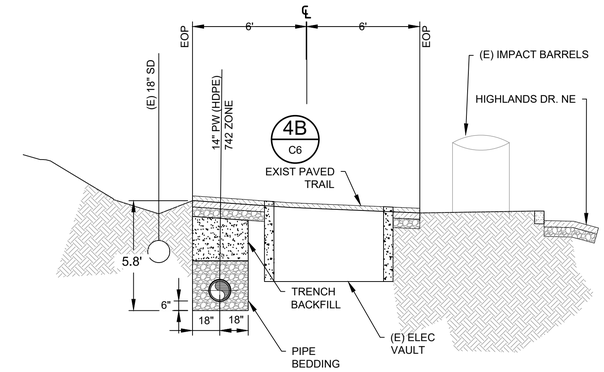
STA 64+60 TO 66+10 742 ZONE SECTION (Z / CP5)

0 2 4 6
1"=4'



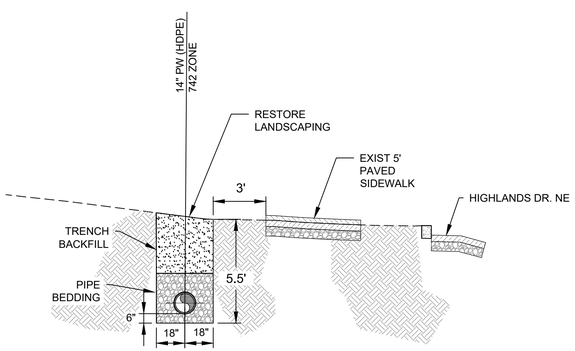
STA 66+60 TO 69+50 742 ZONE SECTION (AA / CP5)

0 2 4 6
1"=4'



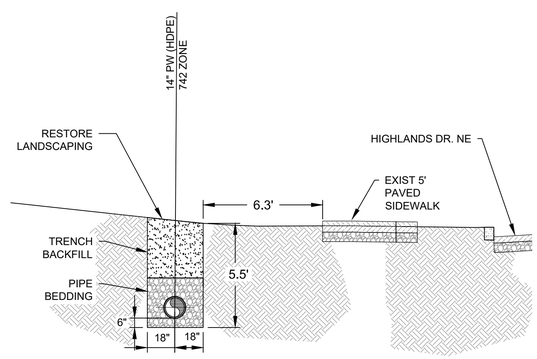
STA 69+50 TO 73+75 742 ZONE SECTION (BB / CP6)

0 2 4 6
1"=4'



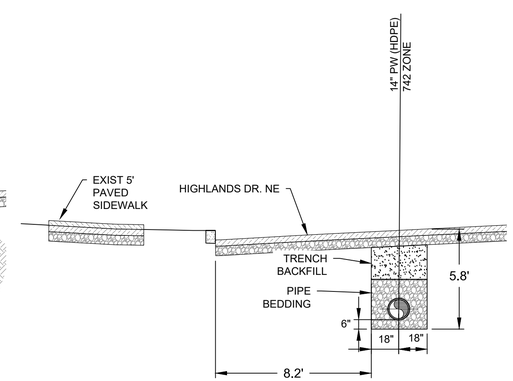
STA 73+75 TO 77+70 742 ZONE SECTION (CC / CP6)

0 2 4 6
1"=4'



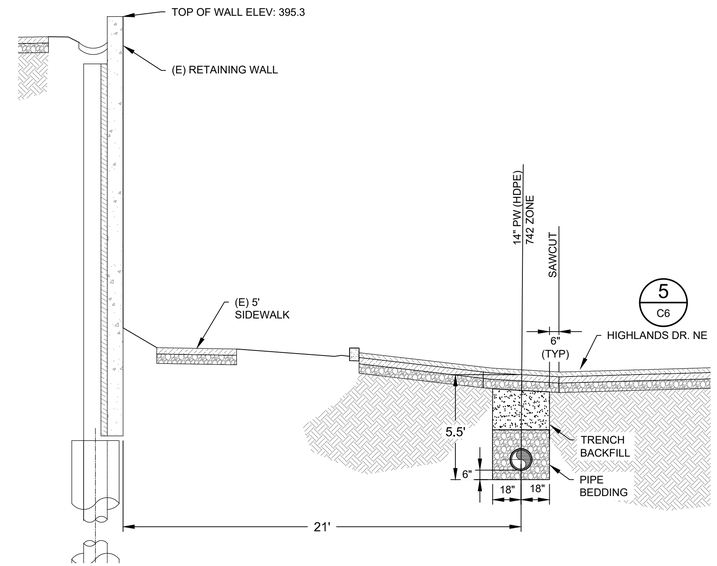
STA 77+70 TO 82+00 742 ZONE SECTION (DD / CP7)

0 2 4 6
1"=4'



STA 77+70 TO 82+00 742 ZONE SECTION (EE / CP7)

0 2 4 6
1"=4'



STA 82+00 TO 86+00 742 ZONE SECTION (FF / CP7)

0 2 4 6
1"=4'

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 6

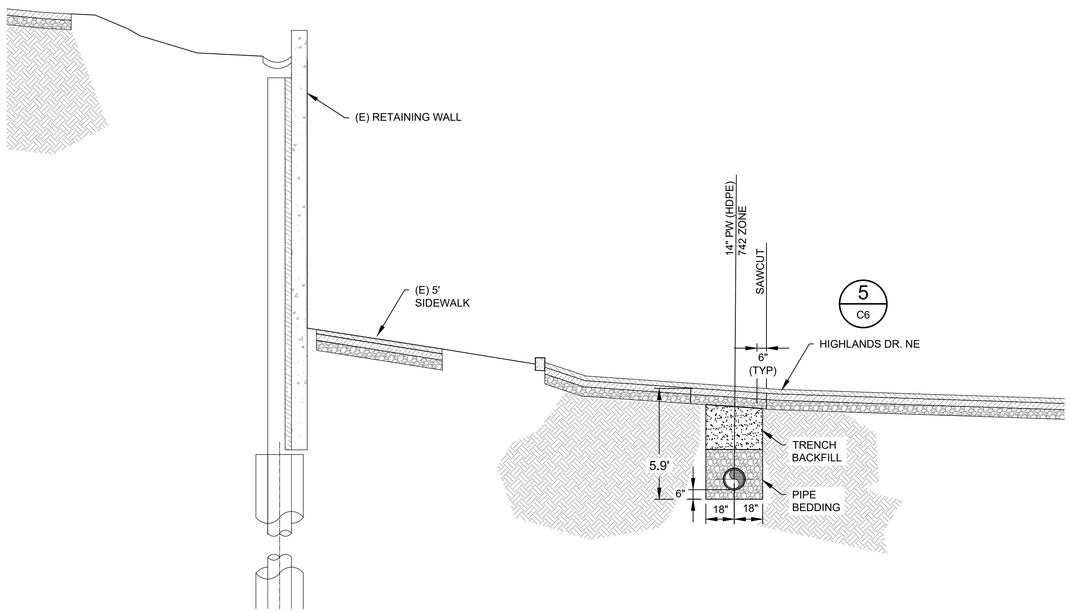
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP025.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP25 OF

\\jc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP025.dwg 12/10/2020 9:38 AM NICOLASLOZANOORDONEZ

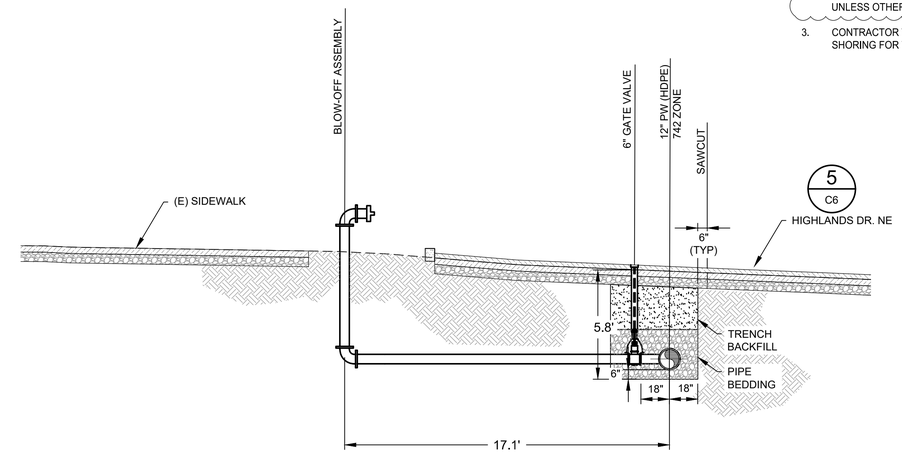
NOTES:

1. INSTALL LOCATE WIRE PER CITY STANDARD DETAIL W-06.
2. INSTALL PIPE BEDDING AND TRENCH BACKFILL PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO PREPARE SHORING PLAN, PROVIDE SHORING FOR TRENCH DEPTHS GREATER THAN 4'



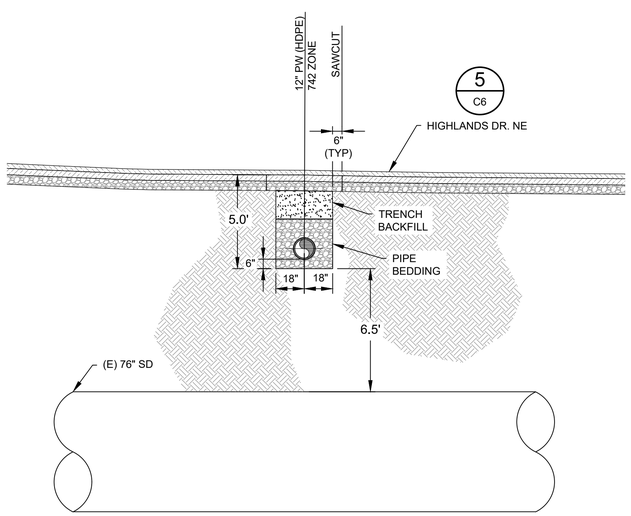
STA 86+00 TO 89+00 742 ZONE SECTION (GG / CP8)

0 2 4 6
1"=4'



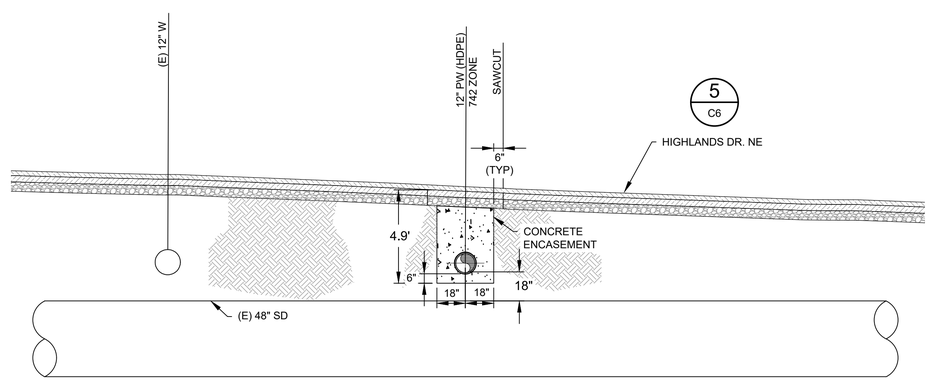
STA 89+00 TO 90+60 742 ZONE SECTION (HH / CP8)

0 2 4 6
1"=4'



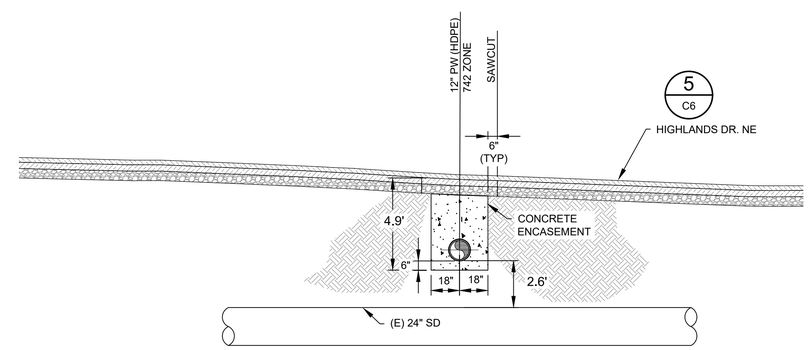
STA 90+60 TO 90+80 742 ZONE SECTION (II / CP8)

0 2 4 6
1"=4'



STA 90+80 TO 90+90 742 ZONE SECTION (JJ / CP8)

0 2 4 6
1"=4'



STA 90+90 TO 90+91 742 ZONE SECTION (KK / CP8)

0 2 4 6
1"=4'

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SCALES
0 1"
0 25mm
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JEFFREY M. FOKAI — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN RJS
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE SECTIONS - 7

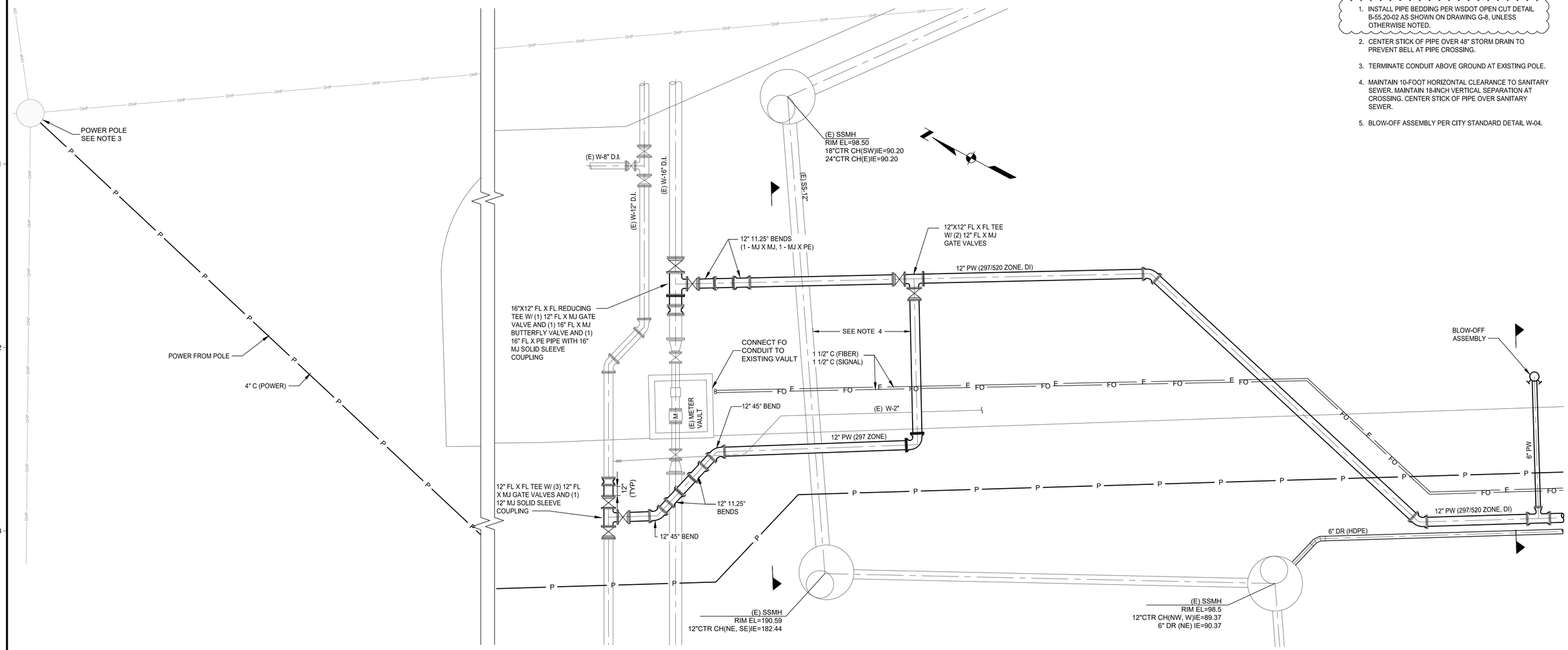
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP026.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET CP26 OF

NICOLASLOZANOORDONEZ 12/10/2020 8:42 AM
\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP026.dwg

NOTES:

1. INSTALL PIPE BEDDING PER WSDOT OPEN CUT DETAIL B-55.20-02 AS SHOWN ON DRAWING G-8, UNLESS OTHERWISE NOTED.
2. CENTER STICK OF PIPE OVER 48" STORM DRAIN TO PREVENT BELL AT PIPE CROSSING.
3. TERMINATE CONDUIT ABOVE GROUND AT EXISTING POLE.
4. MAINTAIN 10-FOOT HORIZONTAL CLEARANCE TO SANITARY SEWER. MAINTAIN 18-INCH VERTICAL SEPARATION AT CROSSING. CENTER STICK OF PIPE OVER SANITARY SEWER.
5. BLOW-OFF ASSEMBLY PER CITY STANDARD DETAIL W-04.



DETAIL 1 / CP1

0 4 8

3/16"=1'-0"

12/10/2020 8:48 AM

NICOLASLOZANOORDONEZ

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-CP030.dwg

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
24536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED DP/JMF

DRAWN LMM

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PIPELINE DETAILS - 1

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-CP030.DWG

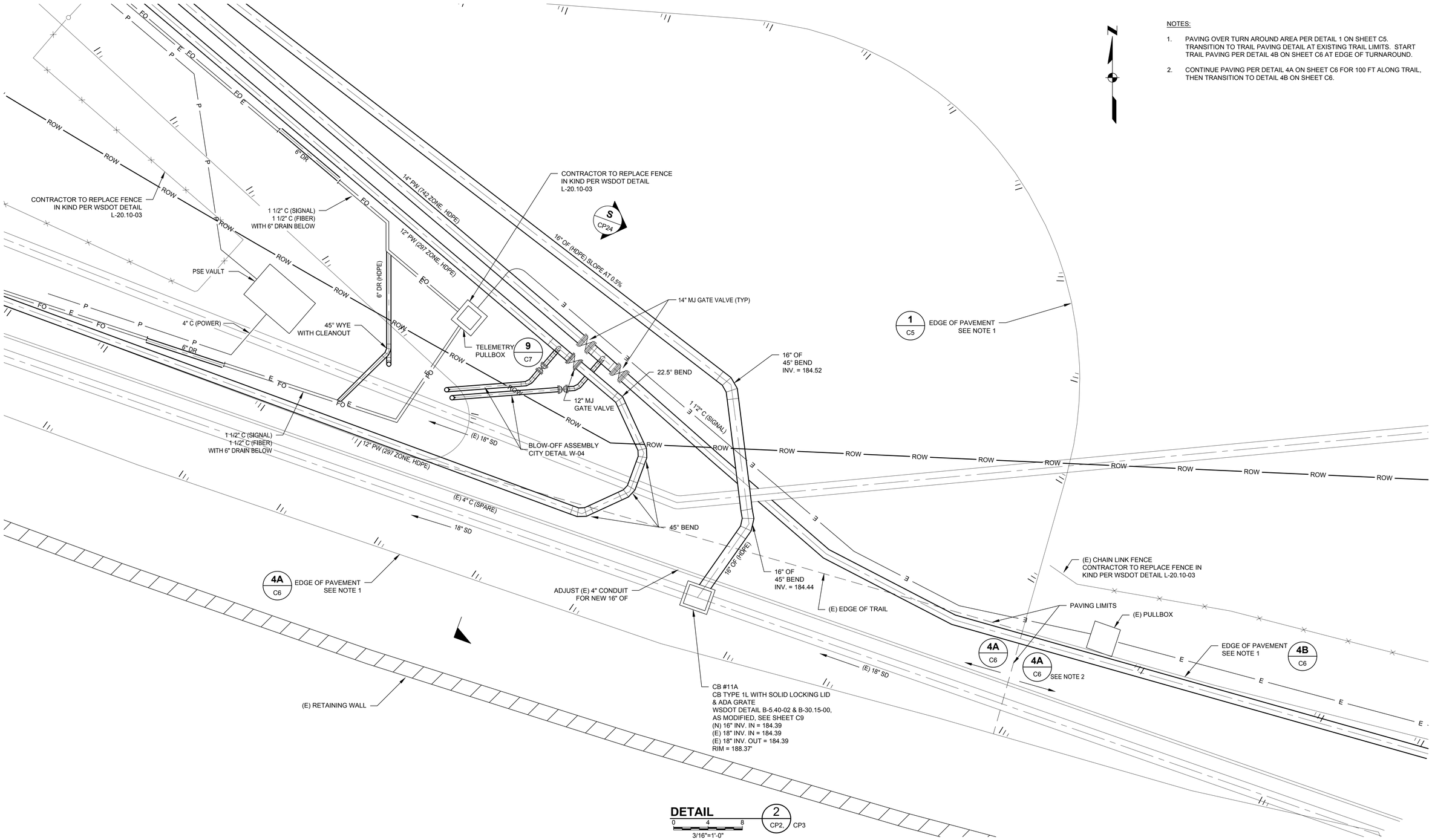
JOB NO. 1397005*00

DATE NOVEMBER 2020

SHEET **CP30** OF

NOTES:

1. PAVING OVER TURN AROUND AREA PER DETAIL 1 ON SHEET C5. TRANSITION TO TRAIL PAVING DETAIL AT EXISTING TRAIL LIMITS. START TRAIL PAVING PER DETAIL 4B ON SHEET C6 AT EDGE OF TURNAROUND.
2. CONTINUE PAVING PER DETAIL 4A ON SHEET C6 FOR 100 FT ALONG TRAIL, THEN TRANSITION TO DETAIL 4B ON SHEET C6.



DETAIL 2 CP2, CP3

0 4 8
3/16"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"
0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY
STATE OF WASHINGTON
34536
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED KSP
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE DETAILS - 2

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-CP031.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET **CP31** 54 OF 83

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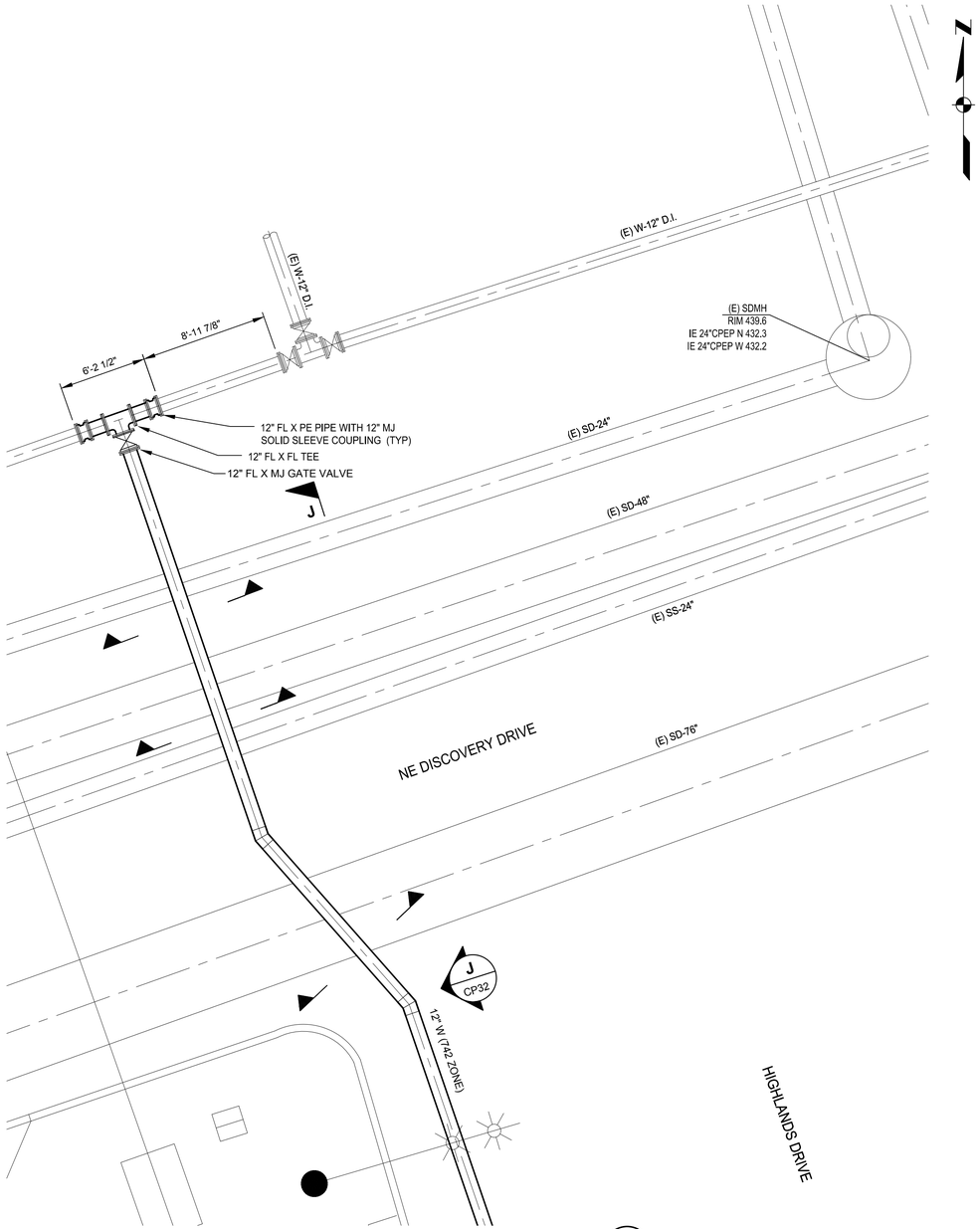
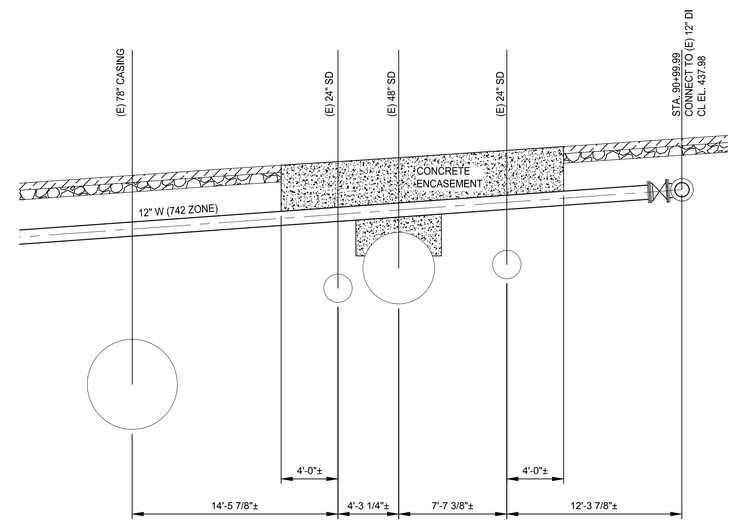


DETAIL 3 / CP8

0 4 8

3/16"=1'-0"



SECTION J / CP32

0 4 8

3/16"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 — 1"

0 — 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 24536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED KSP

DRAWN DRP

CHECKED MDL

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PIPELINE DETAILS - 3

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-CP032.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET **CP32** 55 OF 83

MIKEMARX 10/23/2019 8:43 AM

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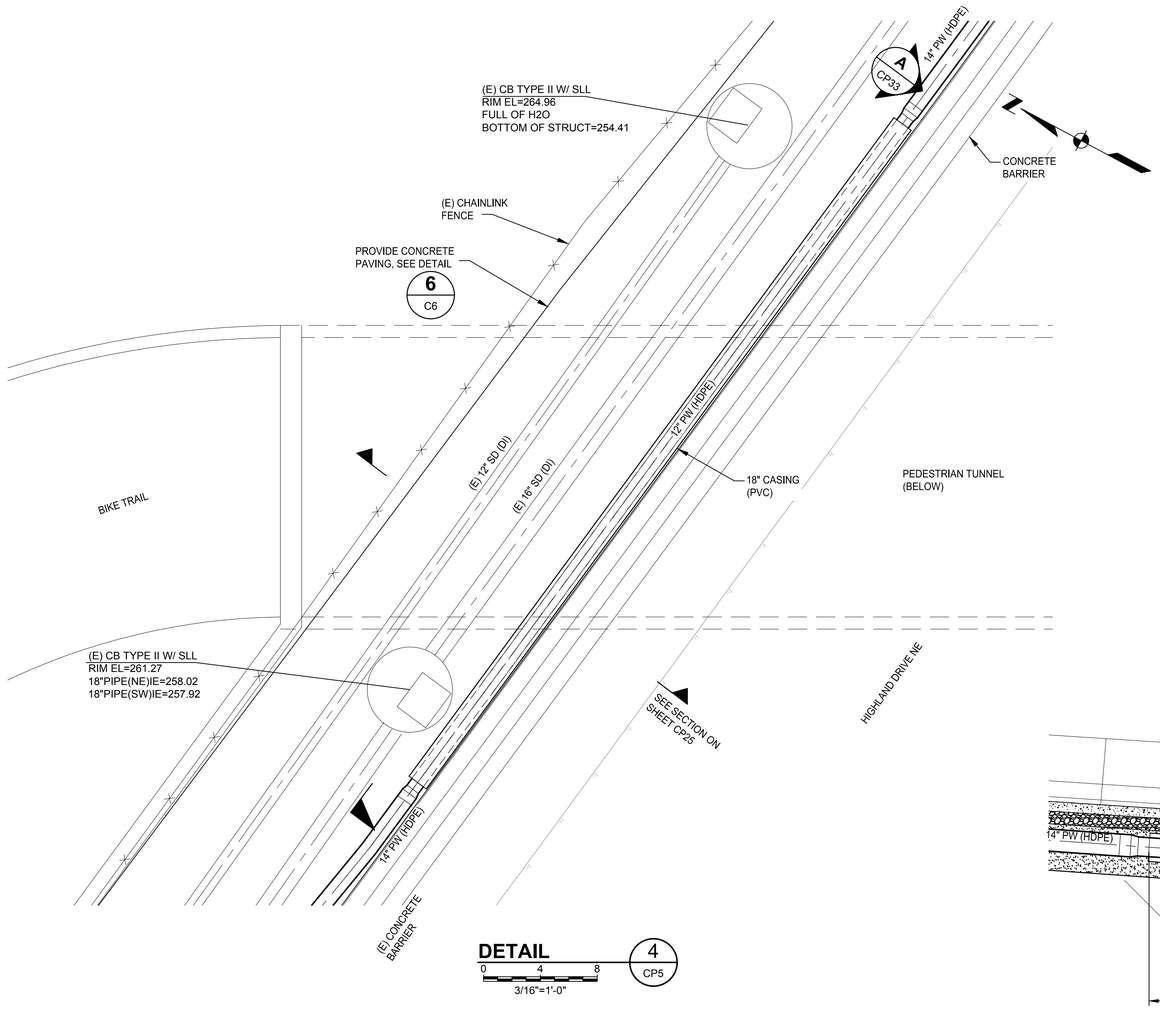
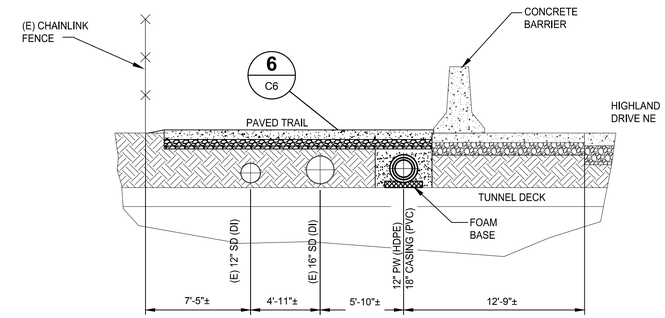
NOTES:

1. EXTEND CONCRETE PAVING OVER PIPE HAVING LESS THAN FOUR FEET OF COVER.
2. CASING TO EXTEND PAST TUNNEL LATERAL INFLUENCE ZONE AS SHOWN.



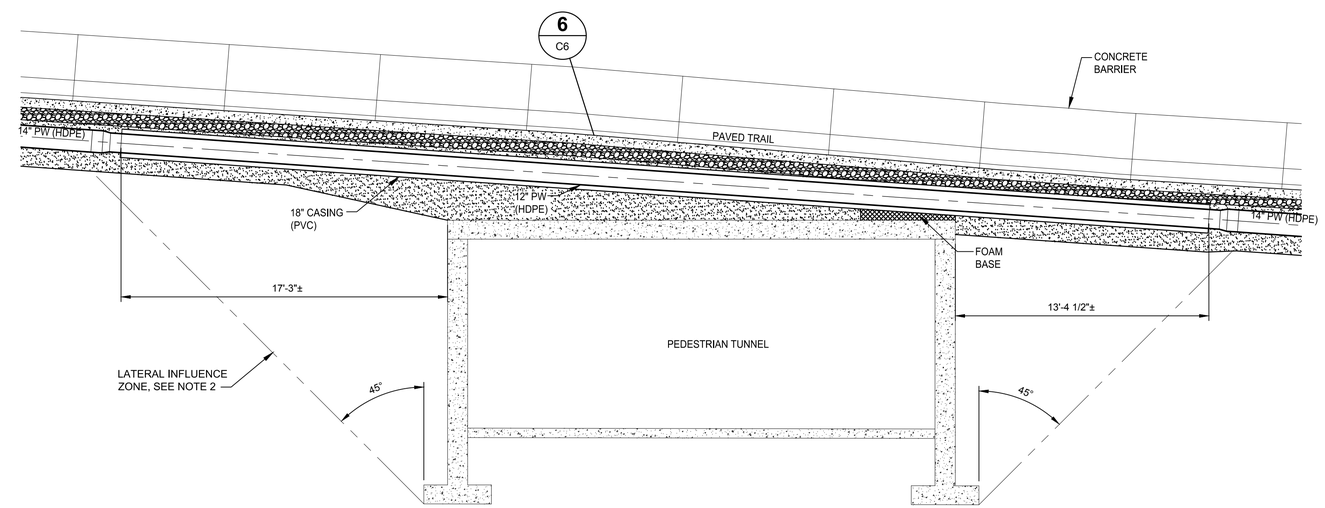
DETAIL 4/CP5

0 4 8
3/16"=1'-0"



STA 65+90 742 ZONE SECTION

0 3 6
1/4"=1'-0"



SECTION A/CP33

0 3 6
1/4"=1'-0"

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED DP/JMF
DRAWN LMM
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE DETAILS - 4

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-CP033.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 56 OF 83
CP33

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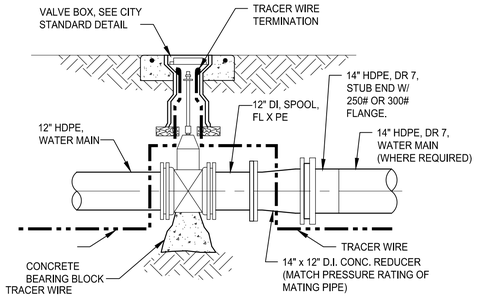
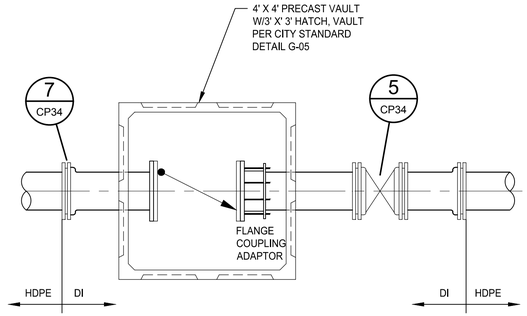
MIKEMARX 2/17/2020 8:04 AM



NOTES:
1. SEE HDPE TRANSITION DETAIL FOR STIFFENER REQUIREMENTS.
2. PROVIDE TWO LAYERS OF PE WRAP BETWEEN BLOCK AND VALVE.
3. FOR CONNECTIONS WHERE HDPE PIPE IS LARGER THAN VALVE, PROVIDE DI ECCENTRIC REDUCERS W/RESTRAINTS.

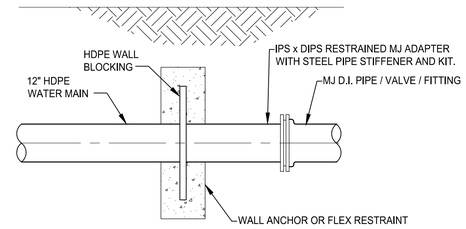
GATE VALVE IN HDPE MAIN (5 / CP34)

SCALE: NONE



CHECK VALVE IN HDPE MAIN (6 / CP34)

SCALE: NONE



NOTES:
1. INSTALL STAINLESS STEEL INTERNAL STIFFENER IN THE END OF THE HDPE PIPE WHEN THE HDPE PIPE IS INSERTED INTO THE BELL END OF NON-HDPE PIPE, VALVE, FITTING OR INTO THE HUB OF A MECHANICAL COUPLING.
2. INTERNAL STIFFENER CAN BE WEDGE TYPE IF SOLID BODY. STIFFENER WILL BE RATED FIR DR AND ID IF PIPE. FOR WATER, 304 OR 316 STAIN LESS STEEL IS ALLOWED. FOR WASTEWATER 316 IS REQUIRED.
3. MECHANICAL JOINT ADAPTERS SHELL BE PE4710 AND CAN BE MADE TO ASTM D 3261. IF MACHINED, ADAPTERS MUST MEET THE REQUIREMENTS OF ASTM F 2206. ADAPTERS SHALL HAVE A PRESSURE RATING EQUAL TO THE PIPE.
4. FIGURE ABOVE SHOWS TRANSITION TO BELL END OF DIP. FOR TRANSITION FO PLAIN END OF DIP, PROVIDE BELL MJ ADAPTER WITH RESTRAINT KIT.

HDPE TO DUCTILE IRON TRANSTITION ASSEMBLY (7 / CP34)

SCALE: NONE

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JMF
DRAWN DRP
CHECKED MDL

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PIPELINE DETAILS - 5

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-CP034.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 57 OF 82
CP34

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-CP034.dwg MIKEMARX 10/23/2019 8:56 AM

ISSAQUAH PUMP STATION CODE SUMMARY

CODES USED IN ANALYSIS:

BUILDING CODE - WASHINGTON STATE BUILDING CODE BASED ON 2015 INTERNATIONAL BUILDING CODE (IBC)

PLUMBING CODE - WASHINGTON STATE PLUMBING CODE BASED ON THE 2015 UNIFORM PLUMBING CODE (UPC)

MECHNICAL CODE - WASHINGTON STATE MECHANICAL CODE BASED ON THE 2015 INTERNATIONAL MECHANICAL CODE (IMC)

ELECTRICAL CODE - NEC 2014

FIRE/LIFE SAFETY CODE - WASHINGTON STATE FIRE CODE BASED ON THE 2015 INTERNATIONAL FIRE CODE (IFC)

ENERGY CODE - 2015 WASHINGTON STATE ENERGY CODE

KING COUNTY CODE - TITLES 16 and 17

WISHA (RCW 49.17) STANDARDS

CLIMATE ZONE:

4C

JURISDICTION:

CITY OF ISSAQUAH, WASHINGTON
CITY HALL NORTHWEST
1775 12th AVENUE NORTHWEST
ISSAQUAH, WASHINGTON 98027
PH (425) 837-3100

BUILDING DESCRIPTION/OCCUPANCY

THE BUILDING IS A PROCESS FACILITY, SINGLE OCCUPANCY, CLASSIFICATION F-1.

THIS IS A ONE-STORY CMU BUILDING WITH PRE-ENGINEERED WOOD TRUSS ROOF FRAMING AND METAL ROOF.

AREA

GROSS AREA IS 1,140 SQUARE FEET ON A SINGLE FLOOR. ALLOWABLE AREA IS 8,500 SQUARE FEET PER FLOOR PER TABLE 506.2.

HEIGHT

20'-0"± TO TOP OF ROOF. 40'-0" IS ALLOWED PER TABLE 504.3.

CONSTRUCTION

TYPE VB PER IBC SECTION 602.5 AND TABLE 503.

CHEMICAL STORAGE

NONE

ACCESSIBILITY

NOT REQUIRED FOR EQUIPMENT SPACES. SPACES FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE, REPAIR OR OCCASIONAL MONITORING OF EQUIPMENT ARE NOT REQUIRED TO BE ACCESSIBLE PER IBC 1103.2.9

EXITS REQUIRED

1 ALLOWED PER IBC 10006.2.1.

FIRE SPRINKLERS

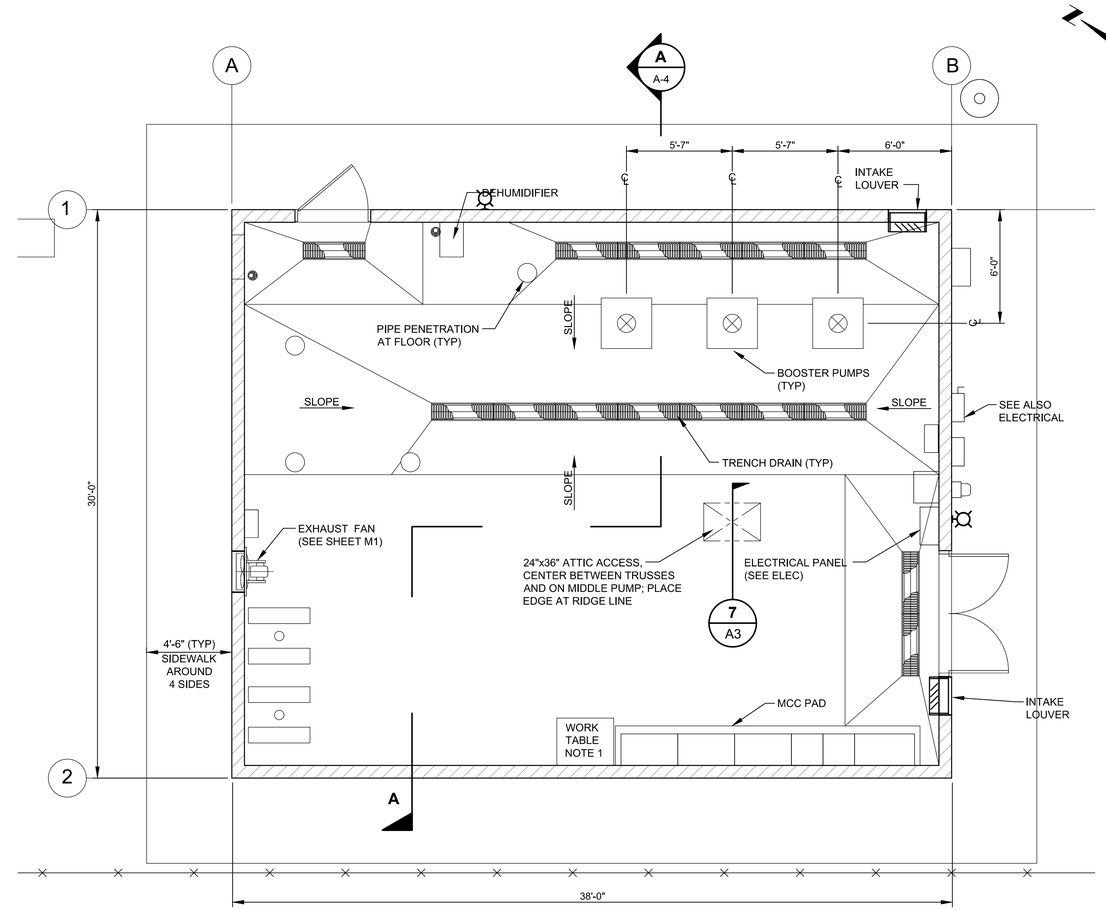
NOT REQUIRED PER IBC 903.2.4

FIRE RESISTANCE / DISTANCE TO PROPERTY LINE

MORE THAN 10'-0" TO PROPERTY LINE, NO FIRE RESISTANCE RATING REQUIRED PER TABLE 602.

NOTES

1. FOR SITE INFORMATION SEE CIVIL DRAWINGS
2. PROCESS EQUIPMENT IS NOT SHOWN FOR CLARITY. SEE MECHANICAL DRAWINGS.



FLOOR PLAN
0 3 6
1/4"=1'-0"

NOTES

1. WORK TABLE TO BE LOCKABLE SHOP DESK. GRAINGER MODEL NO. 4TX91 OR APPROVED EQUAL.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

4455 REGISTERED ARCHITECT MARK PRESTON STATE OF WASHINGTON

DESIGNED MP
DRAWN MP
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION FLOOR PLAN AND CODE SUMMARY

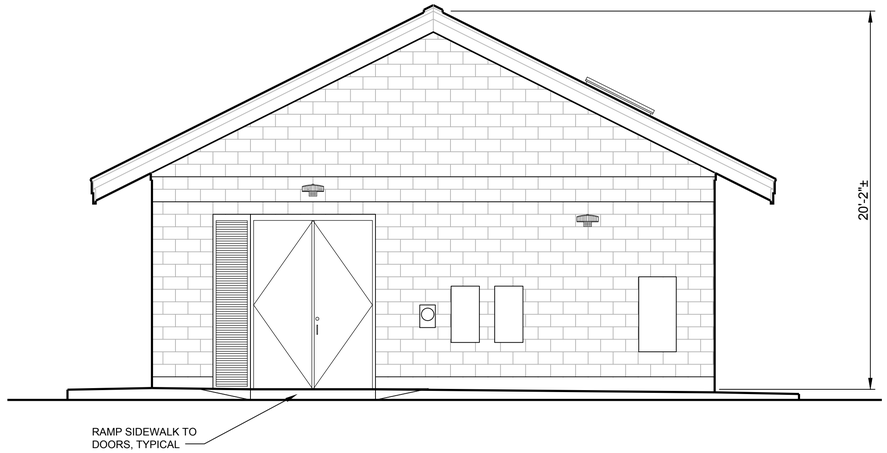
90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-A001.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET A1 OF

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-A001.dwg
MARKPRESTON 11/30/2020 9:47 AM

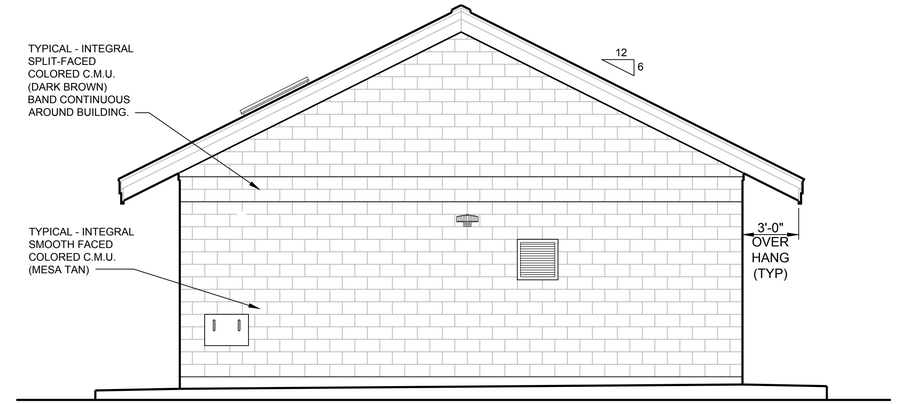
NOTES:

1. CMU COLOR TO BE MESA TAN WITH TAN GROUT. ROOF TO BE JADE GREEN.
2. DOORS, LOUVERS AND FRAMES TO BE SW 6748 "GREENS".



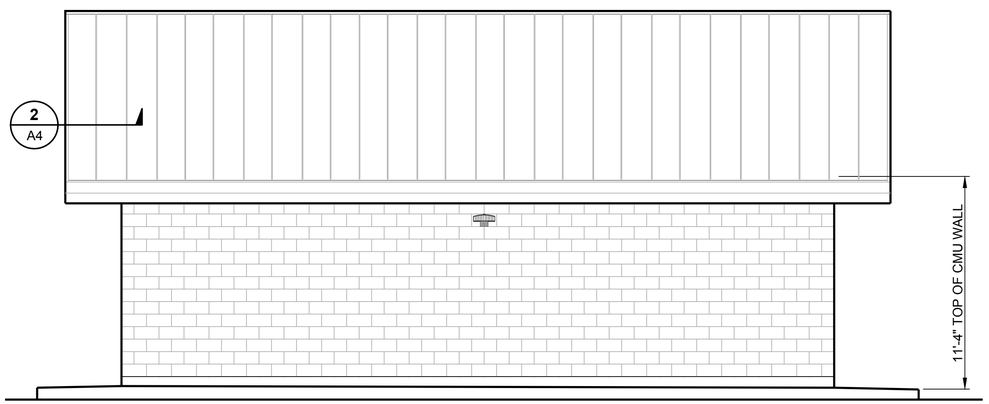
SOUTH ELEVATION

0 3 6
1/4"=1'-0"



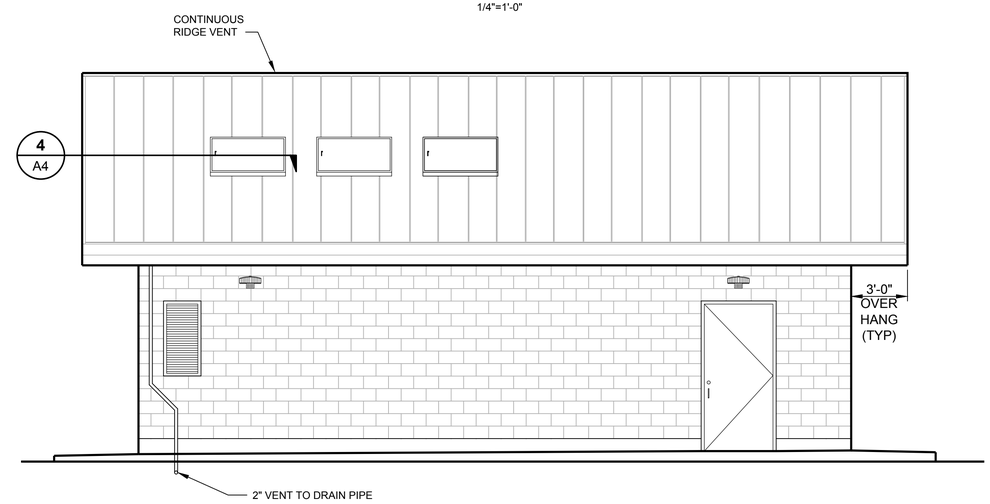
NORTH ELEVATION

0 3 6
1/4"=1'-0"



WEST ELEVATION

0 3 6
1/4"=1'-0"



EAST ELEVATION

0 3 6
1/4"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

4455 REGISTERED ARCHITECT MARK PRESTON STATE OF WASHINGTON

DESIGNED MP
DRAWN MP
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION
EXTERIOR ELEVATIONS

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-A002.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET A2 OF

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-A002.dwg
MARKPRESTON 11/30/2020 10:21 AM

FINISH SCHEDULE

ROOM		FLOOR		BASE		WALL								CEILING		
NO.	NAME	MATERIAL	FINISH	MATERIAL	FINISH	NORTH		WEST		SOUTH		EAST		MATERIAL	FINISH	HEIGHT
						MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH			
01	PUMP ROOM	CONC	FS	N/A	---	CMU	PTS	CMU	PTS	CMU	PTS	CMU	PTS	MGP	PTS	SLOPED

FINISH SCHEDULE NOTES

1. SEAL ALL EXPOSED EXTERIOR MASONRY WITH WATER RESISTANT SEALER/ANTI-GRAFFITI COATING.
2. PROVIDE BLOCK FILLER AND PAINT ALL EXPOSED INTERIOR CMU SURFACES.
3. COLOR OF DOORS AND FRAMES, SHALL BE SELECTED BY OWNER FROM MANUFACTURER'S FULL PALETTE.

FINISH SCHEDULE ABBREVIATIONS

CMU = CONCRETE MASONRY UNIT
CONC = CONCRETE
FS = FLOOR SEALER - SEE ALSO SPECIFICATION SECTION 6-20.2(1)D
PTS = PAINT TO SPECIFICATIONS
MGP = MARINE-GRADE PLYWOOD

DOOR SCHEDULE

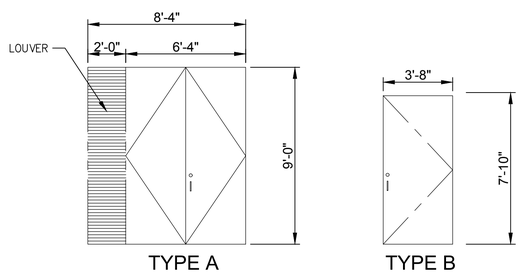
ROOM		DOOR		DOOR			FRAME				ASSEMBLY		REMARKS
NO.	NAME	NO.	WIDTH X HEIGHT	TYPE	MATERIAL	THERMAL VALUE	MATERIAL	HEAD	JAMB	SILL	HDWRE GROUP	FIRE RATING	
01	PUMP ROOM	01	6'-4" X 9'-0"	A	HM	-	HM	4/A3	5/A3	6/A3	1	-	INTEGRAL LOUVER SIDELITE
01	PUMP ROOM	02	3'-8" X 7'-10"	B	HM	-	HM	4/A3	5/A3	6/A3	2	-	

DOOR SCHEDULE NOTES

1. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE PER 2012 IBC 1008.1.8.
2. SEE SPECIFICATIONS FOR HARDWARE.

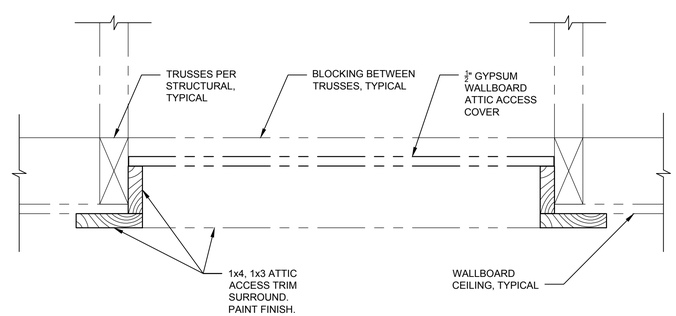
ABBREVIATIONS

HM = HOLLOW METAL

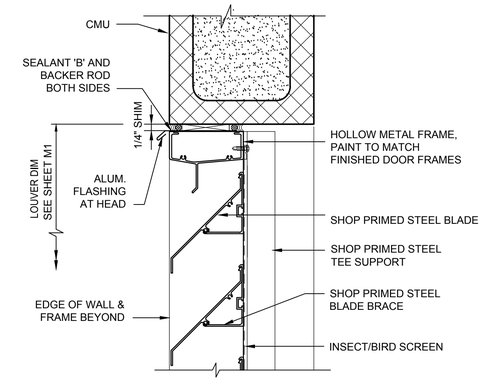


DOOR ELEVATIONS

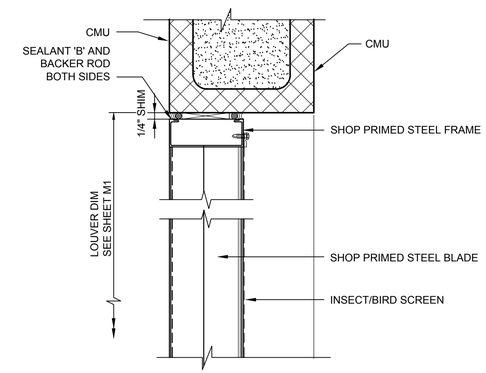
0 3 6
1/4"=1'-0"



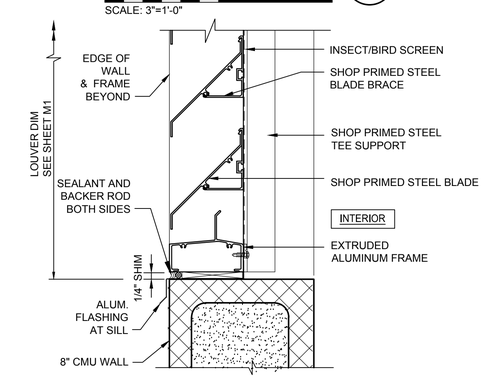
ATTIC ACCESS DETAIL 7 / A1
6 3 0 1'
SCALE: 3"=1'-0"



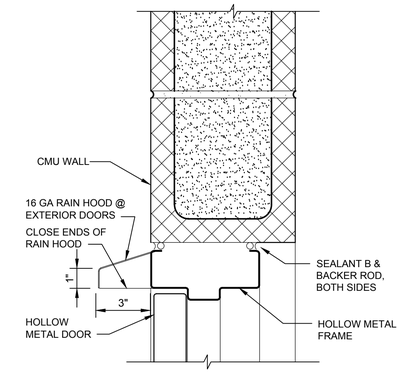
LOUVER HEAD DETAIL 1 / A3
6 3 0 1'
SCALE: 3"=1'-0"



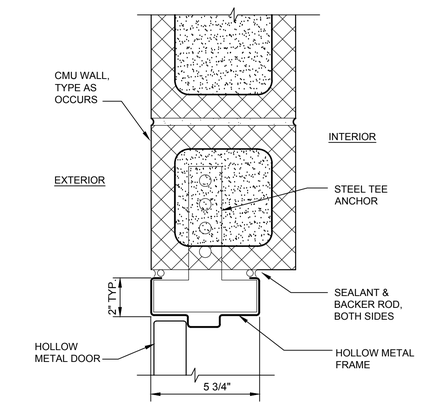
LOUVER JAMB DETAIL 2 / A3
6 3 0 1'
SCALE: 3"=1'-0"



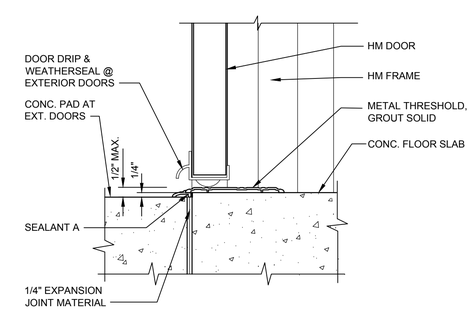
LOUVER SILL DETAIL 3 / A3
6 3 0 1'
SCALE: 3"=1'-0"



HM DOOR HEAD DETAIL 4 / A3
6 3 0 1'
SCALE: 3"=1'-0"



HM DOOR JAMB DETAIL 5 / A3
6 3 0 1'
SCALE: 3"=1'-0"



HM DOOR SILL DETAIL 6 / A3
6 3 0 1'
SCALE: 3"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

4455 REGISTERED ARCHITECT MARK PRESTON STATE OF WASHINGTON

DESIGNED MP
DRAWN MP
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

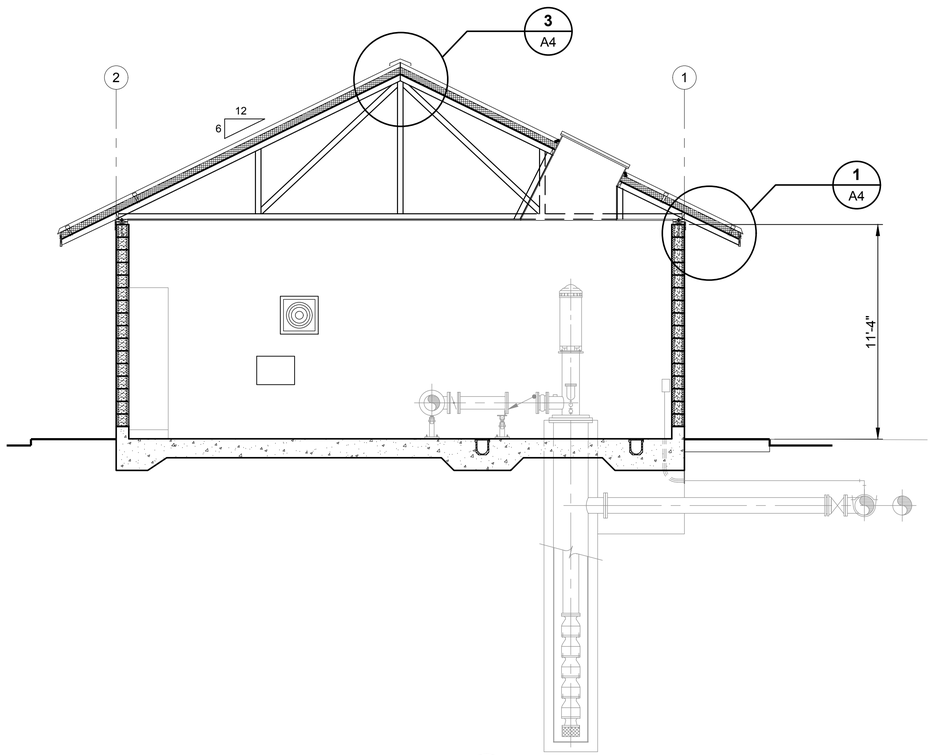
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION DOOR AND FINISH SCHEDULES AND DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

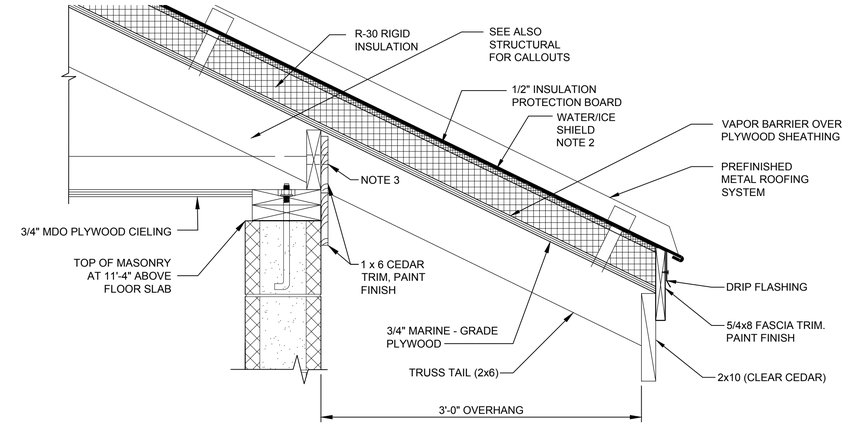
FILE NAME 139700500-A003.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET A3 OF

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-A003.dwg MARKPRESTON 11/30/2020 9:56 AM



BUILDING SECTION A / A1

0 3 6
1/4"=1'-0"

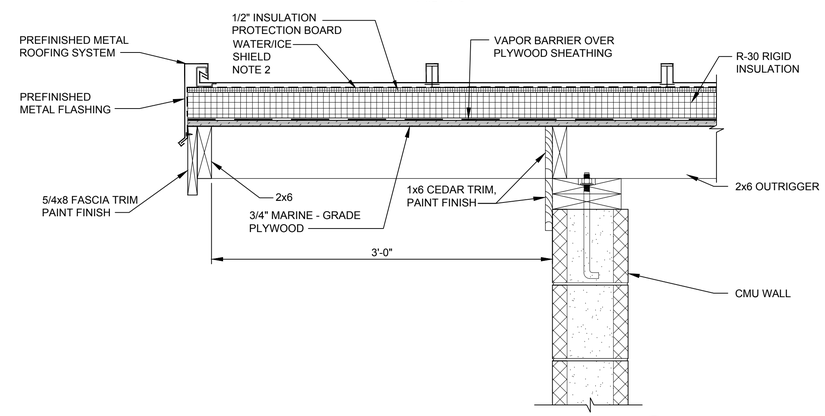


EAVE DETAIL 1 / A4

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

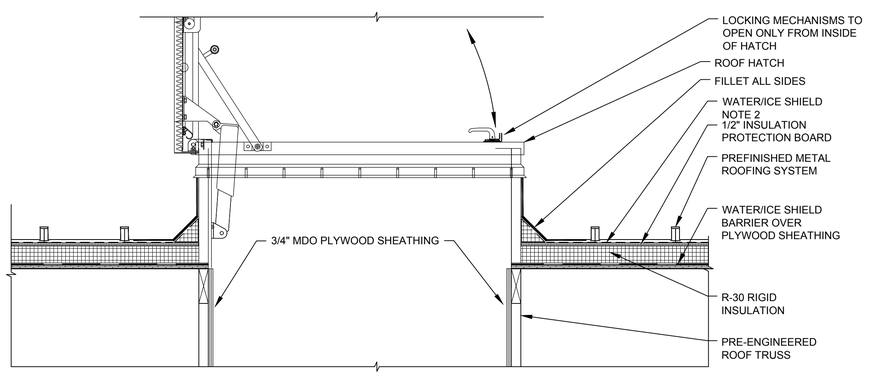
NOTES:

1. ALL EXPOSED PLYWOOD AND WOOD TRIM TO BE PAINTED.
2. WATER/ICE SHIELD TO BE CARLISLE WIP 300 HT.
3. VENT BLOCKING WITH INSECT SCREEN, CONTINUOUS BETWEEN TRUSSES AT BOTH EAVES. PROVIDE MATCHING ALIGNED VENTILATION HOLES AT CEDAR TRIM."



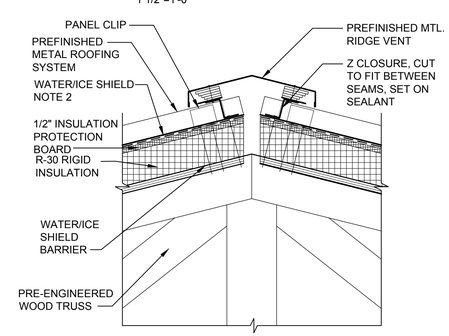
RAKE DETAIL 2 / A2

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



ROOF HATCH DETAIL 4 / A2

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



RIDGE DETAIL 3 / A4

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

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 1"
0 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

4455 REGISTERED ARCHITECT MARK PRESTON STATE OF WASHINGTON

DESIGNED MP
DRAWN MP
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION BUILDING SECTION AND DETAILS

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-A004.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
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GENERAL STRUCTURAL NOTES

GENERAL

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE WITH AMENDMENTS ADOPTED INTO THE WASHINGTON STATE BUILDING CODE AND THE REFERENCED BUILDING CODE STANDARDS.
2. THESE NOTES AS WELL AS THE TYPICAL DETAILS APPLY TO ALL PARTS OF THE PROJECT UNLESS NOTED OTHERWISE.
3. SHOP DRAWINGS FOR THIS CONTRACT SHALL BE COORDINATED WITH FAVORABLY REVIEWED EQUIPMENT MANUFACTURER'S DRAWINGS.
4. DIMENSIONS NOTED WITH AN ASTERISK, " * ", ARE TO BE COORDINATED WITH FAVORABLY REVIEWED SUBMITTAL BY THE EQUIPMENT MANUFACTURER.
5. DETAILS CALLED OUT WITH S-XXXX SHALL REFER TO THE STANDARD DETAIL FOR WHICH THEY ARE SO NAMED.

PERMITS AND INSPECTIONS

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED BY THE LOCAL BUILDING INSPECTOR.
2. THE CONTRACTOR SHALL SELECT, INSTALL AND MAINTAIN SHORING, SHEETING, BRACING AND SLOPING AS NECESSARY TO MAINTAIN SAFE EXCAVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING FULL COMPLIANCE WITH 29 CFR PART 1926 OSHA SUBPART P EXCAVATIONS AND TRENCHES REQUIREMENTS. ALL EARTHWORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH APPLICABLE LAW, INCLUDING LOCAL ORDINANCES, WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES TITLE 296, WASHINGTON ADMINISTRATIVE CODE REQUIREMENTS, AND APPLICABLE OSHA REQUIREMENTS.

SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATIONS

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48-HOURS BEFORE PLACEMENT OF REINFORCING STEEL AND CONCRETE SO THAT THE SUBGRADE OF EXCAVATIONS MAY BE INSPECTED BY THE GEOTECHNICAL ENGINEER.
2. THE GEOTECHNICAL ENGINEER SHALL VERIFY BACKFILL MATERIAL AND BACKFILLING PROCEDURES AND PROVIDE SOIL COMPACTION TESTS.
3. STRUCTURAL OBSERVATION SHALL BE PROVIDED BY THE DESIGN ENGINEER(S) OF RECORD OR THEIR AUTHORIZED REPRESENTATIVES IN ACCORDANCE WITH IBC 2018, SECTION 1710. STRUCTURAL OBSERVATION SHALL CONSIST OF SITE VISITS AT INTERVALS APPROPRIATE TO THE STAGE OF CONSTRUCTION TO OBSERVE CONSTRUCTION IN PROGRESS AND REVIEW OF TESTING AND INSPECTION REPORTS FOR GENERAL COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS RELATING TO THE STRUCTURAL WORK AND THE NONSTRUCTURAL COMPONENTS AND EQUIPMENT ANCHORAGE.
4. SPECIAL INSPECTION IN ACCORDANCE WITH IBC 2018, SECTION 1704, SHALL BE REQUIRED AS INDICATED IN THE SPECIAL INSPECTION AND TESTING SCHEDULE ON THIS SHEET.

SOIL AND FOUNDATIONS

1. GEOTECHNICAL INVESTIGATIONS FOR DESIGN PURPOSES FOR THIS PROJECT WERE MADE FOR CITY OF ISSAQUAH BY ICICLE CREEK ENGINEERS, INC IN A REPORT DATED 28 FEBRUARY 2017 AND REPORT ADDENDUMS DATED 11 OCTOBER 2019 AND 22 JANUARY 2021.
2. IN ACCORDANCE WITH THE IBC CHAPTER 18 THE SOILS IN ISSAQUAH, WA ARE GENERALLY CLASSIFIED SILTY SAND AND GRAVEL.
3. THE DESIGN BEARING CAPACITY OF THE SOILS IS 2,000 PSF FOR FOOTINGS. BEARING CAPACITY OF SOILS ARE FOR DEAD AND LIVE LOADS FOR FOUNDATIONS. BEARING VALUES MAY BE INCREASED BY ONE-THIRD WHEN TRANSIENT LOADS SUCH AS WIND OR SEISMIC LOADS ARE INCLUDED.
4. SOILS SHALL BE EXCAVATED TO THE ELEVATIONS INDICATED ON THE DRAWINGS FOR FOUNDATIONS. THE SUBGRADE SHALL BE PREPARED AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS AND APPROVED BY THE GEOTECHNICAL ENGINEER. EXCAVATED MATERIAL SHALL BE REPLACED WITH STRUCTURAL FILL AS SHOWN ON THE DRAWINGS. FOUNDATIONS SHALL BE CONSTRUCTED AGAINST UNDISTURBED NATIVE COMPETENT MATERIAL OR COMPACTED STRUCTURAL FILL.

LOADING CRITERIA

1. MINIMUM LOADING REQUIREMENTS PER CHAPTER 16 OF THE 2015 INTERNATIONAL BUILDING CODE INCLUDING LATEST REVISION.

2. DEAD LOAD:	AS CALCULATED
3. LIVE LOADS:	
FLOOR - HEAVY MANUFACTURING/STORAGE	250 PSF UNIFORM, 3,000 LBS POINT
ROOF (REDUCTION FOR UNIFORM LOAD)	20 PSF UNIFORM, 2,000 LBS POINT
GRATING, CHECKERED PLATE, ACCESS HATCHES	EQUAL TO FLOOR LIVE LOAD
SIDEWALKS & VEHICULAR DRIVEWAYS	250 PSF UNIFORM, 8,000 LBS POINT AASHTO
UNRESTRICTED VEHICULAR ACCESS	HS20-44
CONCRETE VAULTS AND COVERS	AASHTO HS20-44
4. WIND LOAD:	
BASIC WIND SPEED, Vult	115 MPH
EXPOSURE	C
5. SNOW LOAD:	
IMPORTANCE FACTOR, I	1.2
BASIC GROUND SNOW LOAD, Pg	25 PSF
SNOW EXPOSURE COEFFICIENT, Ce	0.9
THERMAL FACTOR, Ct	1.0
6. SEISMIC LOAD:	
OCCUPANCY CATEGORY	III
SEISMIC IMPORTANCE FACTOR, I	1.2
SEISMIC IMPORTANCE FACTOR, Ip	1.50
SITE CLASS	C
SITE COEFFICIENT S_S	1.304 g
SITE COEFFICIENT S_1	0.490 g
SEISMIC DESIGN RESPONSE PARAMATER S_{DS}	0.869 g
SEISMIC DESIGN RESPONSE PARAMATER S_{D1}	0.428 g
SEISMIC DESIGN CATEGORY	D
LONG PERIOD TRANSITION PERIOD, T_L	6

REINFORCING STEEL

1. REINFORCING BARS SHALL BE ASTM A615-GRADE 60.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
3. ARRANGEMENT AND DETAILING OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI 315 DETAILING MANUAL.
4. REINFORCING SHALL LAP IN ACCORDANCE WITH THE CONCRETE REINFORCEMENT SPLICE TABLE, UNLESS OTHERWISE SHOWN. WHEN BARS OF DIFFERENT SIZE LAP TO EACH OTHER, SPLICE LENGTH FOR THE SMALLER BAR CAN BE USED. DOWELS SHALL HAVE THE SAME SIZE AND SPACING AS THAT OF THE REINFORCING STEEL THEY ARE SPLICED AND SHALL HAVE A MINIMUM LAP AS NOTED ABOVE. BAR SPLICES SHALL BE STAGGERED.
5. HOOK REINFORCING BARS INTERUPTED BY OPENINGS.
6. NO WELDING OF REINFORCING BARS SHALL BE PERMITTED, UNLESS APPROVAL IN WRITING IS OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION.
7. DIMENSIONS TO REINFORCING ARE TO BAR CENTERLINES, UNLESS NOTED OTHERWISE BAR COVER IS CLEAR DISTANCE BETWEEN THE BAR AND THE CONCRETE SURFACE. UNLESS NOTED OR SHOWN OTHERWISE BAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND BASE SLABS:	
FORMED SURFACES AND BOTTOMS ON CONCRETE WORK MAT	2-INCH
TOP SURFACES EXPOSED TO EARTH, WATER, OR WEATHER	2-INCH
BOTTOMS AND SIDES IN CONTACT WITH EARTH	3-INCH
SUSPENDED SLABS:	
FORMED SURFACES EXPOSED TO EARTH, WATER, OR WEATHER	2-INCH
TOP AND BOTTOM BARS DRY CONDITION	1-INCH
BEAMS AND COLUMNS:	
DRY CONDITIONS:	
STIRRUPS, SPIRALS, AND TIES	1 1/2-INCH
PRINCIPAL REINFORCEMENT	2-INCH
EXPOSED TO EARTH, WATER, OR WEATHER:	
STIRRUPS, SPIRALS, AND TIES	2-INCH
PRINCIPAL REINFORCEMENT	2 1/2-INCH
WALLS:	
LESS THAN 12-INCHES THICK	1 1/2-INCH
12 INCHES OR OVER IN THICKNESS	2 1/2-INCH

CONCRETE:

1. CEMENT SHALL BE ASTM C150 TYPE II FOR ALL STRUCTURES. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
2. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-14 INCLUDING BAR BENDS AND HOOKS, UNLESS DETAILED OTHERWISE.
3. SUBMIT CONCRETE AND MASONRY LIFT DRAWINGS SHOWING THE LOCATION OF CONSTRUCTION JOINTS, WATERSTOPS AND OTHER TYPES OF JOINTS OTHER THAN SPECIFIED OR SHOWN ON THE DRAWINGS FOR FAVORABLE REVIEW BY THE ENGINEER BEFORE START OF WORK ON FORMS, REINFORCING STEEL OR PLACING CONCRETE. ANY ADDITIONAL VERTICAL OR HORIZONTAL CONSTRUCTION JOINTS SHALL HAVE A STANDARD KEYWAY AND SHALL BE FAVORABLY REVIEWED BY THE ENGINEER. REFER TO SPECIFICATIONS AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION. CONSTRUCTION JOINTS SHALL BE ROUGHENED TO 1/4-INCH AMPLITUDE.
4. OPENINGS, PIPE SLEEVES, CONDUITS, INSERTS AND OTHER EMBEDDED ITEMS SHALL BE IN PLACE BEFORE CONCRETE IS PLACED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, LANDSCAPING, HVAC, PLUMBING, INSTRUMENTATION AND OTHER PLANS FOR ITEMS REQUIRING SLEEVES AND EMBEDMENTS IN CONCRETE WHICH ARE NOT INDICATED OR SHOWN ON STRUCTURAL DRAWINGS. NO PIPES OR SLEEVES SHALL PASS THROUGH STRUCTURAL MEMBERS (UNLESS SHOWN ON STRUCTURAL DRAWINGS). COORDINATE WITH EQUIPMENT MANUFACTURERS DRAWINGS FOR ANCHORING DEVICES.
5. UNLESS OTHERWISE NOTED, ALL EXPOSED EDGES AND CORNERS SHALL BE CHAMFERED 3/4-INCH. INTERIOR FLOOR SLABS AND EXTERIOR SIDEWALKS SHALL HAVE TOOLED 3/8-INCH RADIUS CONSTRUCTION JOINT.
6. EACH FACE CONCRETE SHALL BE REINFORCED A MINIMUM OF NO. 5 BARS AT 12-INCHES EACH WAY.
7. CONCRETE ENCASE ALL PIPES AND CONDUITS UNDER CONCRETE SLABS AND FOOTINGS

MASONRY:

1. SEE SHEET S5.

WOOD FRAMING:

1. FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH AND BE GRADE MARKED PER WCLIB SPECIFICATIONS:
   - A) STUDS:
     2" TO 4" THICK, 2" TO 4" WIDE, INTERIOR, NON-BEARING PARTITIONS, STUD GRADE.
     2" TO 4" THICK, 2" AND WIDER, EXTERIOR, BEARING WALLS, NO. 1 AND BETTER GRADE.
   - B) JOISTS AND RAFTERS:
     2" TO 4" THICK, 2" TO 4" WIDE, SELECT STRUCTURAL GRADE.
     2" TO 4" THICK, 5" AND WIDER, NO. 1 AND BETTER GRADE.
   - C) BEAMS AND HEADERS:
     2" TO 4" THICK, 5" AND WIDER, NO. 1 AND BETTER GRADE.
     5" THICK AND GREATER, ALL WIDTHS, NO. 1 AND BETTER GRADE.
   - E) TOP PLATES:
     2" THICK X 4" WIDE, INTERIOR, NON-BEARING PARTITIONS, STUD GRADE.
     2" THICK X 4" WIDE, EXTERIOR, BEARING WALLS, NO. 1 AND BETTER GRADE.
   - F) BLOCKING:
     2" TO 4" THICK, 2" AND WIDER, STUD GRADE.
   - G) SILL PLATES:
     2" THICK X 4" WIDE, INTERIOR, NON-BEARING PARTITIONS, PRESSURE TREATED STUD GRADE.
     2" TO 4" THICK, 4" AND WIDER, EXTERIOR, PRESSURE TREATED NO. 1 AND BETTER GRADE.
2. STRUCTURAL PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO COMMERCIAL STANDARDS PS 1-09 AND GRADE STAMPED NFPA. ALL ROOFS AND WALLS SHALL BE SHEATHED AND ALL UNSUPPORTED EDGES SHALL BE BLOCKED ACCORDING TO THE TYPICAL NAILING SCHEDULE:
   - B) ROOF SHEATHING:
     4'x8'x3/4" SHEETS, MARINE GRADE.
3. ALL LUMBER HARDWARE (HANGERS, FRAMING ANCHORS, STRAPS, ETC) AS SHOWN ARE STRONG-TIE CONNECTORS AS MANUFACTURED BY SIMPSON COMPANY OF SAN LEANDRO, CALIFORNIA. APPROVED EQUAL HARDWARE MAY BE SUBSTITUTED IF FAVORABLY REVIEWED BY THE ENGINEER.
4. FASTENERS AND CONNECTORS EXPOSED TO WEATHER OR IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
5. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OR DRILLED UNLESS SPECIFICALLY SHOWN OR APPROVED BY THE ENGINEER.
6. MAXIMUM MOISTURE CONTENT OF LUMBER SHALL NOT EXCEED 19% FOR ALL FRAMING LUMBER.

STRUCTURAL ABBREVIATIONS

&	AND
@	AT
#	NUMBER
ø	DIAMETER
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIAL
AB	AGGREGATE BASE, ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDIT	ADDITIONAL
ADJ	ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ALUM	ALUMINUM
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
APROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
B/	BOTTOM OF
BB(S)	BEARING BAR(S)
BLKG	BLOCKING
BLDG	BUILDING
BM	BEAM
BM-1	BEAM MEMBER 1
BN	BOUNDARY NAILING
BOT	BOTTOM
BP	BASE PLATE
BS	BOTH SIDES
BTWN	BETWEEN
C	CHANNEL
CALC'S	CALCULATIONS
CC,C/C	CENTER-TO-CENTER
CBC	CALIFORNIA BUILDING CODE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
℄	CENTERLINE
CLR	CLEAR
CNJ	CONTROL JOINT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DWG(S)	DRAWINGS
(E)	EXISTING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBEDMENT
EN	EDGE NAILING
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
(F)	FUTURE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FN	FIELD NAILING
FNDN	FOUNDATION
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FAR SIDE
FT	FOOT/FEET
FTG	FOOTING
GA	GAGE/GAUGE
GALV	GALVANIZED
GLB	GLULAM BEAM
HDG	HOT DIP GALVANIZE(D)
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HWL	HIGH WATER LEVEL
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
IN	INCH
INT	INTERIOR
JT	JOINT
KIP	1,000 POUNDS
KSI	KIPS PER SQUARE INCH
L,∠	ANGLE
LB(S)	POUNDS
LB/SF	POUND(S) PER SQUARE FOOT
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LLBB	LONG LEG BACK-TO-BACK
LONGIT	LONGITUDINAL
LT	LIGHT
LW	LIGHT WEIGHT
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MOISTURE CONTENT
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
(N)	NEW
NDT	NON-DESTRUCTIVE TEST(ING)
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTACT
NO.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NSG	NON-SHRINK GROUT
NTS	NOT TO SCALE
OC	ON CENTERS
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND, OVERHEAD
OPNG(S)	OPENING(S)
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION
PAF	POWDER/POWER ACTUATED FASTENER
PER	PERIODIC
PL	PLATE
PLF	POUND PER LINEAL FOOT
PP	PARTIAL PENETRATION
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT(S)	POINT(S)
PT	PRESSURE TREATED
R, RAD	RADIUS
RECT	RECTANGLE, RECTANGULAR
REINF	REINFORCING, -MENT
REQ'D	REQUIRED
SCH	SCHEDULE
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SLBB	SHORT LEGS BACK-TO-BACK
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SMS	SHEET METAL SCREW
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
SS	STAINLESS STEEL
SSD	SATURATED SURFACE DRY
STAG	STAGGER
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUC	STRUCTURE
SUSP	SUSPENDED
SYM	SYMMETRICAL
T/	TOP OF
T&B	TOP AND BOTTOM
TS	STRUCTURAL TUBING
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UT	ULTRASONIC TESTING
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
W, WF	WIDE FLANGE
WCLIB	WEST COAST LUMBER INSPECTION BUREAU
WP	WORK POINT
WT	WEIGHT, STRUCTURAL TEE WALL THICKNESS
WWF	WELDED WIRE FABRIC
YD	YARD

USE OF DOCUMENTS

THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY
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SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

STEVE PRITCHETT — STATE OF WASHINGTON — 55904 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STRUCTURAL GENERAL NOTES AND ABBREVIATIONS

FILE NAME 139700500-S001.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET **S1** OF

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STEVEPRITCHETT 2/23/2021 3:22 PM

SPECIAL INSPECTIONS AND TESTS - GENERAL

1. THE OWNER OR THE OWNER'S AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS IN ACCORDANCE WITH CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE AND WASHINGTON ADMINISTRATIVE CODE DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL. STRUCTURAL SPECIAL INSPECTIONS AND TESTS SHALL GOVERN THE QUALITY, WORKMANSHIP AND REQUIREMENTS FOR MATERIALS COVERED. MATERIALS OF CONSTRUCTION AND TESTS SHALL CONFORM TO THE APPLICABLE STANDARDS LISTED IN THE REFERENCED BUILDING CODE.

2. APPROVED AGENCY: AN ESTABLISHED AND RECOGNIZED AGENCY THAT IS REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, WHERE SUCH AGENCY HAS BEEN APPROVED BY THE BUILDING OFFICIAL. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY.

3. ACCESS FOR SPECIAL INSPECTION: THE CONSTRUCTION OR WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED SHALL REMAIN ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION OR TESTING PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS OR TESTS.

4. REPORT REQUIREMENT: APPROVED AGENCIES SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS. THE APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.

5. SPECIAL INSPECTIONS OF FABRICATED ITEMS: WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION.

6. STATEMENT OF SPECIAL INSPECTIONS: THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL PREPARE A STATEMENT OF SPECIAL INSPECTIONS.

7. MATERIAL TESTS: IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN CHAPTERS 19 AND 20 OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN CHAPTERS 19 AND 20 OF ACI 318.

8. SEISMIC REQUIREMENTS IN THE STATEMENT OF SPECIAL INSPECTIONS: WHERE SPECIAL INSPECTIONS OR TESTS FOR SEISMIC RESISTANCE ARE REQUIRED, THE STATEMENT OF SPECIAL INSPECTIONS SHALL IDENTIFY THE DESIGNATED SEISMIC SYSTEMS AND SEISMIC FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO THE SPECIAL INSPECTIONS OR TESTS.

9. DESIGNATED SEISMIC SYSTEMS: SPECIAL INSPECTOR SHALL EXAMINE DESIGNATED SEISMIC SYSTEMS REQUIRING SEISMIC QUALIFICATION IN ACCORDANCE WITH SECTION 13.2.2 OF ASCE 7 AND VERIFY THAT THE LABEL, ANCHORAGE AND MOUNTING CONFORM TO THE CERTIFICATE OF COMPLIANCE.

10. WIND REQUIREMENTS IN THE STATEMENT OF SPECIAL INSPECTIONS. WHERE SPECIAL INSPECTION FOR WIND RESISTANCE ARE REQUIRED, THE STATEMENT OF SPECIAL INSPECTIONS SHALL IDENTIFY THE MAIN WINDFORCE-RESISTING SYSTEMS AND WIND-RESISTING COMPONENTS THAT ARE SUBJECT TO SPECIAL INSPECTIONS.

11. WIND-RESISTING COMPONENTS: PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FASTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:

    ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS.

    EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING.

12. CONTRACTOR RESPONSIBILITY: CORRECT DISCREPANCIES IDENTIFIED IN THE SPECIAL INSPECTIONS AND TESTS WHERE WORK WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS.

SOIL & FOUNDATIONS

1. SPECIAL INSPECTIONS AND TESTS OF EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING TABLES. THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE. DURING FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL VERIFY THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.

CONCRETE

1. SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING TABLES.
   1.1. WELDING OF REINFORCING BARS: SPECIAL INSPECTIONS OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.4 FOR SPECIAL INSPECTION AND OF AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION.

MASONRY

1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402/ACI 530/ASCE 5 AND TMS 602/ACI 530.1/ASCE 6.

NON-STRUCTURAL

1. PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS: PERIODIC SPECIAL INSPECTION OF PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE REQUIRED FOR THE FOLLOWING:

    ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY AND STANDBY POWER SYSTEMS IN STRUCTURES.

    ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT IN STRUCTURES.

    INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS DESIGNED TO CARRY HAZARDOUS MATERIALS AND THEIR ASSOCIATED MECHANICAL UNITS IN STRUCTURES.

    INSTALLATION AND ANCHORAGE OF DUCTWORK DESIGNED TO CARRY HAZARDOUS MATERIALS IN STRUCTURES.

    INSTALLATION AND ANCHORAGE OF VIBRATION ISOLATION SYSTEMS IN STRUCTURES WHERE THE APPROVED CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 1/4 INCH OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT.

2. ARCHITECTURAL COMPONENTS: PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NON-BEARING WALLS AND INTERIOR AND EXTERIOR VENEER IN STRUCTURES.

STRUCTURAL OBSERVATIONS

1. STRUCTURAL OBSERVATIONS: THE OWNER OR THE OWNER'S AUTHORIZED AGENT SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS FOR SEISMIC RESISTANCE AND WIND REQUIREMENTS.

2. STRUCTURAL OBSERVATIONS SHALL BE PROVIDED AT THE FOLLOWING EXTENT AND FREQUENCY:
   2.1. AFTER FOUNDATION REINFORCING HAS BEEN PLACED BUT BEFORE CONCRETE HAS BEEN PLACED.
   2.2. AFTER WALL REINFORCING HAS BEEN PLACED BUT BEFORE GROUT HAS BEEN PLACED.
   2.3. AFTER ROOF STRUCTURE HAS BEEN INSTALLED BUT PRIOR TO INSTALLATION OF ARCHITECTURAL COMPONENTS THAT INHIBIT THE OBSERVER'S ABILITY TO EASILY OBSERVE ROOF CONNECTIONS.

CONCRETE

REQUIRED SPECIAL INSPECTIONS AND TESTS

SPECIAL INSPECTION REQUIRED	TYPE	CONT	PERIODIC	REFERENCED STANDARD	IBC REF
YES	1. INSPECT REINFORCEMENT, INCLUDING PRE-STRESSING TENDONS, AND VERIFY PLACEMENT.	--	X	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1 - 26.6.3	1908.4
YES	2. REINFORCING BAR WELDING:				
YES	a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706.	--	X	AWS D1.4, ACI 318 26.6.4	--
YES	b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".	--	X		
YES	c. INSPECT ALL OTHER WELDS.	X	--		
YES	3. INSPECT ANCHORS CAST IN CONCRETE.	--	X	ACI 318 17.8.2	--
YES	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.				
YES	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	--	ACI 318 17.8.2.4	--
YES	b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	--	X	ACI 318 17.8.2	
YES	5. VERIFY USE OF REQUIRED DESIGN MIX.	--	X	ACI 318 Ch. 19, 26.4.3, 26.4.4	1904.1 1904.2 1908.2 1908.3
YES	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--	ASTM C172, ASTM C31, ACI 318 26.4, 26.12	1908.10
YES	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318 26.5	1908.6, 1908.7, 1908.8
YES	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X	ACI 318 26.5.3 - 26.5.5	1908.9
YES	9. INSPECT PRESTRESSED CONCRETE FOR:				
YES	a. APPLICATION OF PRE-STRESSING FORCES.	X	--	ACI 318 26.10	--
YES	b. GROUTING OF BONDED PRE-STRESSING TENDONS.	X	--		
YES	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	X	ACI 318 26.8	--
YES	11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318 26.11.2	--
YES	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED,	--	X	ACI 318 26.11.1.2(b)	--

GOVERNING CODES	
CONCRETE	ACI 318-14
GENERAL	IBC 2015
STEEL	ANSI/AISC 360-10
MASONRY	ACI 530-13
WELDING	AWS D1.1-10

MASONRY CONSTRUCTION

LEVEL B QUALITY ASSURANCE MINIMUM TESTS

YES	VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF-CONSOLIDATING GROUT
YES	VERIFICATION OF f'm AND f'AAC IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE

MINIMUM INSPECTIONS

SPECIAL INSPECTION REQUIRED	INSPECTION TASK	CONT	PERIODIC	TMS 402/ ACI 530/ ASCE 5	TMS 602/ ACI 530.1/ ASCE 6
YES	1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	--	X	--	Art. 1.5
	2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
YES	a. PROPORTIONS OF SITE-PREPARED MORTAR	--	X	--	Art. 2.1, 2.6 A
YES	b. CONSTRUCTION OF MORTAR JOINTS	--	X	--	Art. 3.3 B
YES	c. GRADE AND SIZE OF PRE-STRESSING TENDONS AND ANCHORAGES	--	X	--	Art. 2.4 B, 2.4 H
YES	d. LOCATION OF REINFORCEMENT, CONNECTORS, PRE-STRESSING TENDONS AND ANCHORAGES	--	X	--	Art. 3.4, 3.6 A
YES	e. PRE-STRESSING TECHNIQUE	--	X	--	Art. 3.6 B
YES	f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	X	--	Art. 2.1 C
	3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
YES	a. GROUT SPACE	--	X	--	Art. 3.2 D, 3.2 F
YES	b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRE-STRESSING TENDONS AND ANCHORAGES	--	X	Sec. 6.1	Art. 2.4, 3.4
YES	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRE-STRESSING TENDONS AND ANCHORAGES	--	X	Sec. 6.1, 6.2.1, 6.2.6, 6.2.7	Art. 3.2 E, 3.4, 3.6 A
YES	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRE-STRESSING GROUT FOR BONDED TENDONS	--	X	--	Art. 2.6 B, 2.4 G.1.b
YES	e. CONSTRUCTION OF MORTAR JOINTS.	--	X	--	Art. 3.3 B
	4. VERIFY DURING CONSTRUCTION:				
YES	a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	--	X	--	Art. 3.3 F
YES	b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	--	X	Sec. 1.2.1(e), 6.1.4.3, 6.2.1	--
YES	c. WELDING OF REINFORCEMENT	X	--	Sec. 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)	--
YES	d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	--	X	--	Art. 1.8 C, 1.8 D
YES	e. APPLICATION AND MEASUREMENT OF PRE-STRESSING FORCE	X	--	--	Art. 3.6 B
YES	f. PLACEMENT OF GROUT AND PRE-STRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	--	--	Art. 3.5, 3.6 C
YES	g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	X	--	Art. 3.3 B.9, 3.3 F.1.b
YES	5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS	--	X	--	Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

SOILS

REQUIRED SPECIAL INSPECTIONS AND TESTS

SPECIAL INSPECTION REQUIRED	TYPE	CONT	PERIODIC
YES	1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
YES	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
YES	3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	--	X
YES	4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	--
YES	5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

STEVE PRITCHETT — STATE OF WASHINGTON — 55904 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STRUCTURAL
SPECIAL INSPECTION AND TESTING

FILE NAME 139700500-S002.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET **S2** OF

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SPLICE LENGTH FOR REINFORCING BARS IN WALLS & SLABS (INCHES)[1,2,3,5]

BAR SIZE		CONC COVER=1.00 IN.		CONC COVER=1.50 IN.		CONC COVER=2.00 IN.	
SOFT METRIC	INCH POUND	TOP[4]	OTHER	TOP [4]	OTHER	TOP [4]	OTHER
#10	#3	17	16	17	16	17	16
#13	#4	23	17	23	17	23	17
#16	#5	33	26	28	22	28	22
#19	#6	46	35	34	26	34	26
#22	#7	74	57	55	43	49	38
#25	#8	93	72	70	54	56	43
#29	#9	113	87	86	66	69	53
#32	#10	137	106	105	81	85	66
#36	#11	162	125	125	97	102	79

NOTES:
1. LAP SPLICE LENGTHS ARE DEPENDENT ON THE FOLLOWING CRITERIA AND ARE IN CONFORMANCE WITH ACI 318-14. NOTIFY THE DESIGN ENGINEER IF THERE ARE ANY DIFFERENCES THAN THE FOLLOWING CRITERIA FOR APPLICABLE CHANGES IN LAP SPLICE LENGTH.
2. LAP SPLICE LENGTHS ARE IN INCHES FOR GRADE 60 REINFORCING IN NORMAL-WEIGHT CONCRETE WITH f'c GREATER THAN OR EQUAL TO 3,000 PSI.
3. CENTER-TO-CENTER SPACING OF REINFORCING SHALL BE GREATER THAN TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW BARS.
5. FOR EPOXY-COATED REINFORCING OR LIGHTWEIGHT AGGREGATE CONCRETE CONSULT THE DESIGN ENGINEER FOR LAP SPLICE LENGTHS.

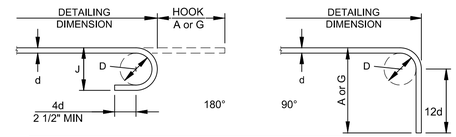
CONCRETE REBAR LAP SPLICE — S-3010

SCALE: 1'-0" = 1'-0"
REV 00

D = FINISHED INSIDE BEND DIAMETER (INCLUDES SPRINGBACK)

d = BAR DIAMETER

ACI 318-14 MIN BEND DIAMETER:
6d FOR #3 THROUGH #8
8d FOR #9, #10 & #11
10d FOR #14 AND #18

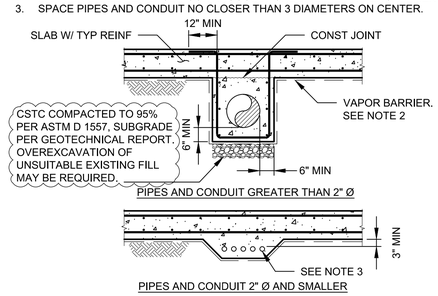


RECOMMENDED END HOOK DIMENSIONS				
BAR SIZE	D	180 ° HOOKS		90° HOOKS
		A or G	J	A or G
#3	0'-2 1/4"	0'-5"	0'-3"	0'-6"
#4	0'-3"	0'-6"	0'-4"	0'-8"
#5	0'-3 3/4"	0'-7"	0'-5"	0'-10"
#6	0'-4 1/2"	0'-8"	0'-6"	1'-0"
#7	0'-5 1/4"	0'-10"	0'-7"	1'-2"
#8	0'-6"	0'-11"	0'-8"	1'-4"
#9	0'-9 1/2"	1'-3"	0'-11 3/4"	1'-7"
#10	0'-10 3/4"	1'-5"	1'-1 1/4"	1'-10"
#11	1'-0"	1'-7"	1'-2 3/4"	2'-0"

REINFORCING HOOKS — S-3020

SCALE: NTS
REV 00

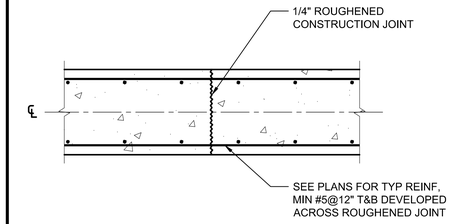
NOTES:
1. ENCASEMENT REINFORCING SHALL BE #4@12" UON. PROVIDE A MINIMUM 3 INCHES CLEAR COVER.
2. WHERE VAPOR BARRIER IS SHOWN IN PLANS OR SECTIONS THE VAPOR BARRIER SHALL BE PLACED CONTINUOUSLY UNDER SLAB AND ENCASEMENT.
3. SPACE PIPES AND CONDUIT NO CLOSER THAN 3 DIAMETERS ON CENTER.



PIPE AND CONDUIT ENCASEMENT — S-3030

SCALE: 3/8" = 1'-0"
REV 00

NOTES:
1. CLEAN AND ROUGHEN THE ENTIRE SURFACE OF THE JOINT EXPOSING CLEAN COARSE AGGREGATE SOLIDLY EMBEDDED IN THE CEMENT MATRIX.
2. PROVIDE TYPICALLY 1/4" ROUGHNESS OR AMPLITUDE TO THE SURFACE MEASURED FROM THE TOP OF THE EXPOSED AGGREGATE TO THE BOTTOM OF THE POCKETS BETWEEN AGGREGATE.
3. SEE SPECIFICATIONS FOR ADDITIONAL TREATMENT WITH EPOXY BONDING AGENT WHEN REQUIRED BY THE ENGINEER .

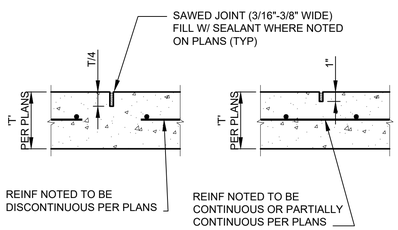


CONSTRUCTION JOINT — S-3111

ROUGHENED

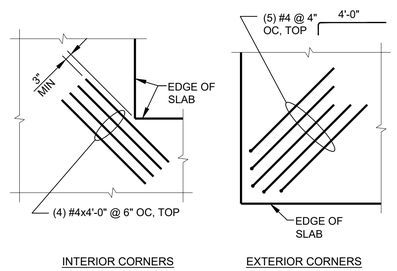
SCALE: 3/4" = 1'-0"
REV 00

NOTES:
1. JOINT FORMED WITH TOOL OR INSERT STRIP MAY BE SUBSTITUTED FOR SAWED TYPE WITH PRIOR ACCEPTANCE BY THE ENGINEER.
2. SAWED JOINT MUST BE CONSTRUCTED WITHIN 12 HOURS OF CONCRETE PLACEMENT.
3. THIS DETAIL DOES NOT APPLY TO SUSPENDED SLABS OR LIQUID CONTAINING BASINS UNLESS SPECIFICALLY NOTED.



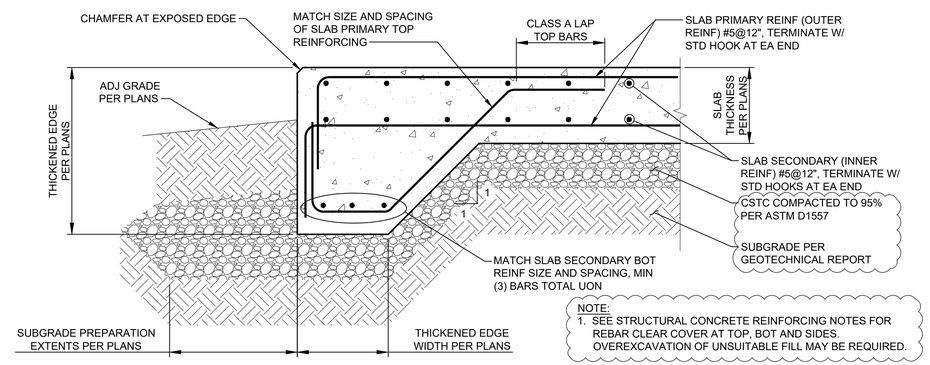
CONTROL JOINT — S-3170

SCALE: 1-1/2" = 1'-0"
REV 00



ADDITIONAL REINF AT SLAB CORNERS — S-3180

SCALE: 1" = 1'-0"
REV 00



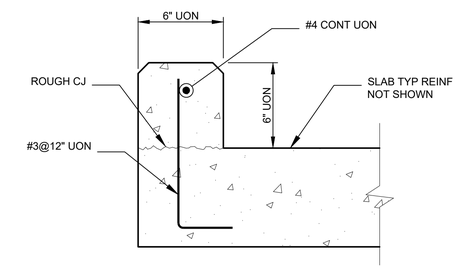
NOTE:
1. SEE STRUCTURAL CONCRETE REINFORCING NOTES FOR REBAR CLEAR COVER AT TOP, BOT AND SIDES. OVEREXCAVATION OF UNSUITABLE FILL MAY BE REQUIRED.

BUILDING FOUNDATION — S-3211

W/ THICKENED EDGE

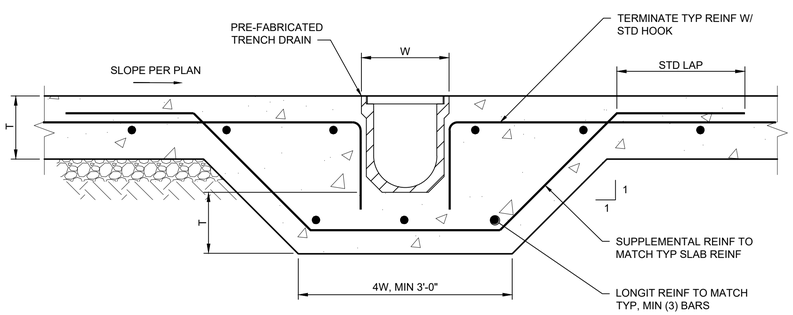
SCALE: 1" = 1'-0"
REV 00

NOTES:
1. SEE PLANS FOR CURB LOCATION AND DIMENSIONS.



CURB — S-3320

SCALE: 1-1/2" = 1'-0"
REV 00

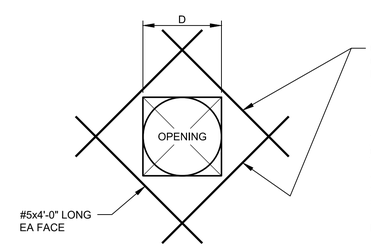


PREFAB TRENCH DRAIN — S-3351

SLAB W/ SINGLE MAT REINF

SCALE: 1" = 1'-0"
REV 00

NOTES:
1. THIS DETAIL IS REQUIRED UNLESS ADDITIONAL REINFORCEMENT SPECIFICALLY INDICATED AT OPENINGS ON DRAWINGS OR IF THE WALL/SLAB IS A PRESSURE WALL.



ONE EXTRA BAR EACH CORNER PER LAYER OF REGULAR REINFORCING (SEE TABLE BELOW). PLACE IN SAME TRANSVERSE POSITION AS REGULAR REINFORCING.

BAR LENGTH

THICKNESS OF CONCRETE	BAR SIZE	RECT OPNG	CIRCLE OPNG
<12"	4	3'-0"	D+12"
12" TO 18"	5	3'-0"	D+12"
>18"	6	3'-8"	D+12"

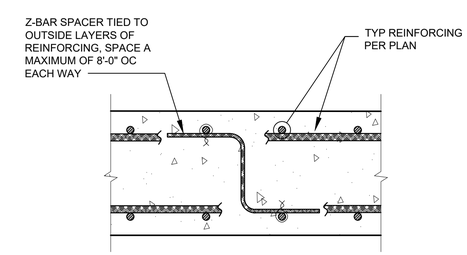
B = LAP SPLICE LENGTH FOR TOP BARS AS SHOWN IN CONC REINFORCEMENT SPLICE TABLE S-3010

ADDITIONAL REINFORCING AT OPENINGS - 12" < D ≤ 21" — S-3423

NON-PRESSURE WALLS AND SLABS

SCALE: 1" = 1'-0"
REV 00

NOTE:
1. FABRICATE SPACERS FROM #3 OR HEAVIER BARS.



SPACERS FOR REINF — S-3490

SCALE: 1-1/2" = 1'-0"
REV 00

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

STEVE PRITCHETT — STATE OF WASHINGTON — 55904 REGISTERED — PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

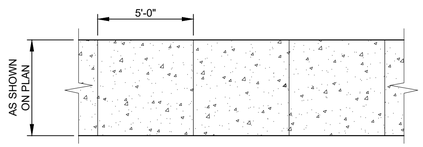
STRUCTURAL NOTES AND STANDARD DETAILS - 1

90% SUBMITTAL (REVISED 11/30/2020)

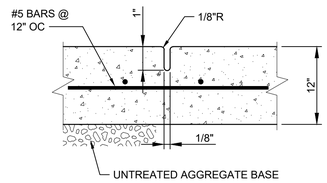
FILE NAME 139700500-S003.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET S3 OF

\\kjc.local\KJC-Root\KJ-Office\FWY\CAD\CAD\13\1397005.00_City_of_Issaquah\139700500-S003.dwg
STEVEPRITCHETT 12/10/2020 12:42 PM

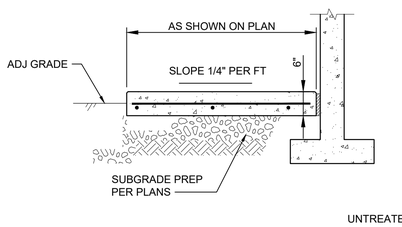
NOTES:
1. CONCRETE SIDEWALKS SHALL HAVE 1/2" EXPANSION JOINTS EVERY 30' AND SHALL HAVE WEAKENED PLANE JOINTS EVERY 5'.
2. ALL SIDEWALKS TO BE 12" THICKNESS WITH #5 REINFORCING BARS AT 12" OC BOTH WAYS UON ON PLAN.



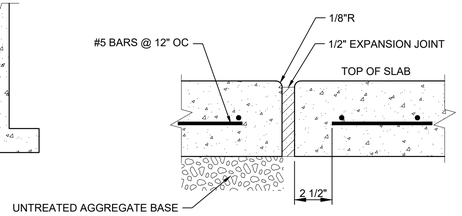
PLAN



WEAKENED PLANE JOINT



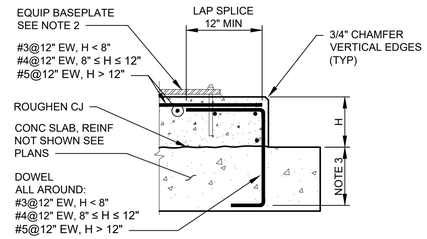
SECTION



EXPANSION JOINT

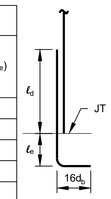
EXTERIOR WALKWAY — S-3332
THIN — SCALE: NTS — REV 00

NOTES:
1. PLACE ALL EQUIPMENT ON CONCRETE PADS (UON).
2. SEPARATE ALL STEEL SURFACES BEARING ON CONC BY 1/4" (MIN) THICK GROUT LAYER.
3. INSTALL THE MAX OF STANDARD HOOK DEVELOPMENT LENGTH OR 3" LESS THAN THE SLAB THICKNESS



EQUIP PAD — S-3831
ON NEW CONC — SCALE: 1" = 1'-0" — REV 00

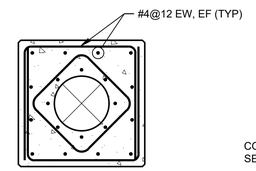
MASONRY REINFORCING DEVELOPMENT TABLE			
BAR SIZE	STRAIGHT (ℓ_d) REINF CENTERED IN WALL	STRAIGHT (ℓ_D) REINF NOT CENTERED	STD HOOK (ℓ_e)
#3	1'-0"	1'-2"	0'-5"
#4	1'-3"	2'-2"	0'-7"
#5	2'-0"	3'-3"	0'-9"
#6	3'-8"	4'-6"	0'-10"
#7	5'-0"	5'-3"	1'-0"
#8	6'-0"	6'-0"	1'-1"



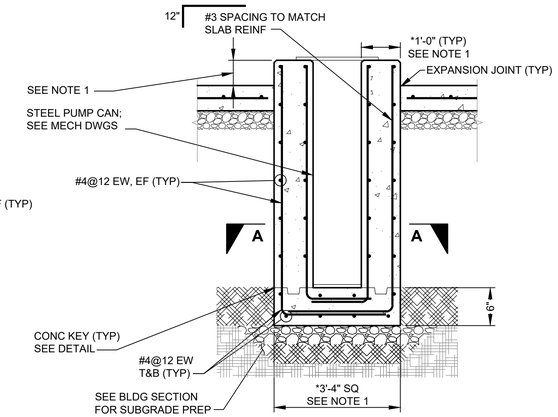
NOTES:
1. MIN DEVELOPMENT LENGTH AND LAP SPLICE FOR 8" (NOMINAL) CMU WALLS, f'_m ≥ 1500 PSI, 60 KSI REINF, TYP REINF SPACED > 2 IN CC AND A MIN 2 IN CLEAR TO CMU OUTER FACE.
2. FOR EPOXY COATED BARS INCREASE THE DEVELOPMENT LENGTHS BY 50%.
3. d_b = BAR DIAMETER, f'_m = CMU STRENGTH

MASONRY REINFORCEMENT — S-4010
DEVELOPMENT TABLE — SCALE: NTS — REV 00

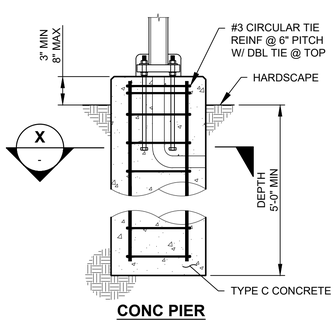
NOTES:
1. COORDINATE PUMP CAN DIMENSIONS WITH MECHANICAL DRAWINGS AND FAVORABLY REVIEWED PUMP ANCHORAGE AND EQUIPMENT SUBMITTALS.
2. COORDINATE ANCHOR TYPE, MATERIAL, FINISH, NUMBER, SIZE, SPACING, AND EDGE DISTANCE WITH REQUIREMENTS OF THE PUMP MANUFACTURER, AND REQUIREMENTS OF THE FAVORABLY REVIEWED PUMP ANCHORAGE DESIGN AND EQUIPMENT SUBMITTALS.
3. PUMP AND ANCHORS NOT SHOWN.



SECTION A-A

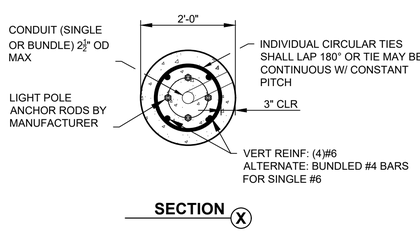


PUMP CAN — S-3999
SCALE: 1" = 1'-0" — REV 00



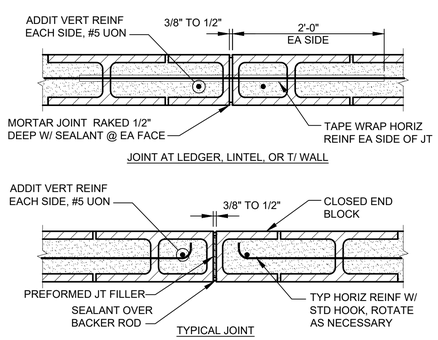
CONC PIER

NOTE:
1. SEE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION

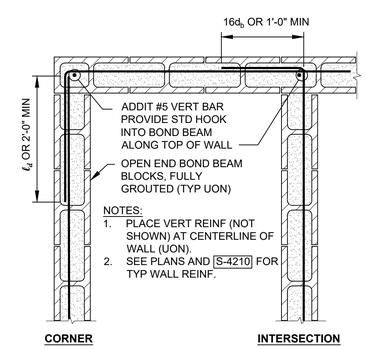


SECTION X

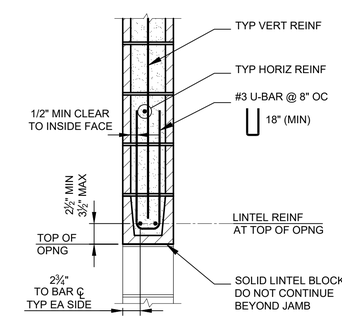
LIGHT POLE PIER — S-3771
SCALE: 3/4" = 1'-0" — REV 00



CMU CONTROL JOINT — S-4110
SCALE: 1" = 1'-0" — REV 00



TYPICAL REINF AT CMU CORNERS — S-4150
SINGLE MAT HORIZ REINF — SCALE: 3/4" = 1'-0" — REV 00



CMU LINTEL — S-4240
CENTERED VERT REINF — SCALE: 1" = 1'-0" — REV 00

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

STEVE PRITCHETT — STATE OF WASHINGTON — 35904 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STRUCTURAL NOTES AND STANDARD DETAILS - 2

90% SUBMITTAL (REVISED 11/30/2020)

FILE NAME 139700500-S004.DWG
JOB NO. 1397005*00
DATE NOVEMBER 2020
SHEET S4 OF

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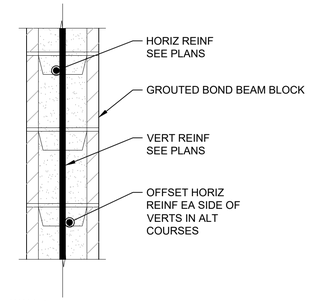
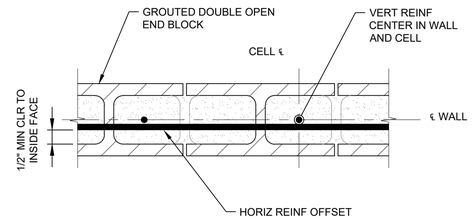
1. CONCRETE MASONRY UNITS: BLOCKS SHALL BE DOUBLE OPEN ENDED BOND BEAM (UON), HAVE A LIGHTWEIGHT CLASSIFICATION AND CONFORM TO ASTM C90. MINIMUM COMPRESSIVE STRENGTH OF UNITS OF 1,900 PSI WHEN AIR CURED FOR 28-DAYS. MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI OF MASONRY WALL ASSEMBLAGE AT 28-DAYS.
2. MORTAR: PROPORTION MORTAR TO CONFORM TO THE REQUIREMENTS OF ASTM C270 FOR TYPE S MORTAR. ANY MORTAR UNUSED WITHIN 2 HOURS OR GROUT THAT IS UNUSED WITHIN 1 1/2 HOURS AFTER INITIAL MIXING SHALL BE REMOVED FROM THE WORK.
3. GROUT: PROPORTION COARSE GROUT IN ACCORDANCE WITH ASTM C476. COMPRESSIVE STRENGTH SHALL BE TESTED IN ACCORDANCE WITH ASTM C1019. INCREASE CEMENT CONTENT OF THE GROUT, AS NECESSARY TO ACHIEVE THE SPECIFIED MASONRY ASSEMBLY STRENGTH (f'm) AND ADEQUATE WORKABILITY. GROUT SHALL HAVE A SLUMP BETWEEN 8 AND 10-INCHES AT THE TIME OF PLACEMENT. ALL CELLS SHALL BE FILLED SOLIDLY WITH GROUT. ALL GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION UNLESS SELF CONSOLIDATING GROUT HAS BEEN SPECIFICALLY APPROVED BY THE ENGINEER.
4. ADMIXTURES: ADMIXTURES ARE NOT PERMITTED IN MORTAR OR GROUT UNLESS FAVORABLY REVIEWED BY THE ENGINEER.
5. AGGREGATES: SAND FOR MORTAR SHALL CONFORM TO ASTM C144. AGGREGATE FOR GROUT SHALL CONFORM TO ASTM C404, EXCEPT WHEN OTHER GRADINGS ARE SPECIFICALLY APPROVED BY THE ENGINEER.
6. WATER USED FOR MORTAR AND GROUT SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, SALTS, ALKALI, AND ORGANIC MATERIALS.
7. REINFORCEMENT: REINFORCING SHALL BE ASTM A615-GRADE 60 UNLESS OTHERWISE NOTED. REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT. EMBEDDED ITEMS SHALL BE SECURED IN PLACE PRIOR TO GROUTING. PROVIDE A MINIMUM OF 1/2-INCH GROUT AROUND BOLTS IN MASONRY. VERTICAL REINFORCING SHALL BE HELD IN PLACE AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS. UTILIZE REBAR POSITIONERS TO ACHIEVE VERTICAL REINFORCING PLACEMENT. LINTEL UNITS SHALL BE USED OVER OPENINGS. MINIMUM SPLICE LENGTH SHALL EQUAL THE STRAIGHT BAR DEVELOPMENT LENGTH SHOWN IN THE TABLE BELOW.
8. BEFORE PLACING BLOCK ON CONCRETE, CLEAN AND ROUGHEN CONCRETE SO THAT AGGREGATE IS EXPOSED TO 1/4-INCH AMPLITUDE.
9. LAY ALL MASONRY WITH RUNNING BOND UNLESS OTHERWISE NOTED. CONSTRUCT ALL MASONRY TO MAINTAIN AN UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. THE VERTICAL ALIGNMENT SHALL BE SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED VERTICAL FLUE IN ACCORDANCE WITH THE GROUT SPACE REQUIREMENTS IN TABLE 7 OF THE SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1).
10. CONSTRUCTION JOINTS: WHEN GROUTING IS STOPPED FOR A PERIOD OF 1 HOUR OR LONGER, FORM HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT POUR 1 1/2 INCHES MINIMUM BELOW THE UPPER-MOST UNIT, EXCEPT AT THE TOP OF WALLS.
11. CONTROL JOINTS: LOCATE CONTROL JOINTS AS SHOWN ON PLANS. PLACE LEDGER, LINTEL, OR TOP OF WALL BEAM REINFORCING CONTINUOUS THROUGH EXPANSION AND CONTROL JOINTS. WRAPPING BARS WITH 1/8-INCH THICK BOND BREAKING TAPE 2'-0" BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT.
12. SPECIAL INSPECTION: WHERE THE BUILDING, STRUCTURE OR STRUCTURAL ELEMENT REQUIRES SPECIAL INSPECTION AS NOTED ON THE PLANS AND THE REINFORCING SCHEDULE BELOW, THE CONTRACTOR SHALL MAINTAIN ALL WORK ACCESSIBLE AND EXPOSED FOR INSPECTION IN ACCORDANCE WITH IBC CHAPTER 17.
13. REINFORCEMENT TOLERANCES: IN ACCORDANCE WITH THE SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1). UNLESS OTHERWISE NOTED VERTICAL WALL REINFORCEMENT SHALL BE PLACED AT CENTER CELL WITHIN A TOLERANCE OF ±1/2 INCH IN THE DIRECTION PERPENDICULAR TO THE WALL AND +/-1 INCH IN THE PLANE OF THE WALL.

MASONRY GENERAL NOTES — S-4020

SCALE: NTS
REV 00



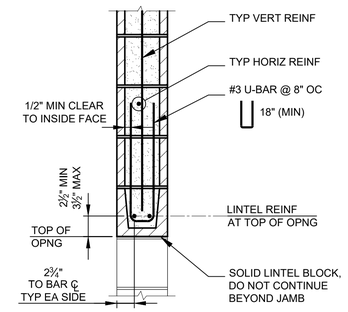
WALL SECTION



WALL PLAN

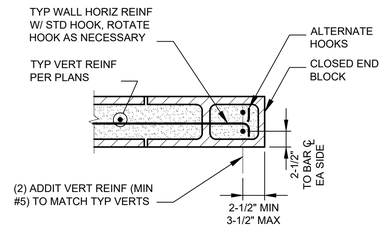
CMU WALL PLAN AND SECTION — S-4210

8" NOMINAL THICKNESS - VERT REINF CENTERED
SCALE: 1-1/2" = 1'-0"
REV 00



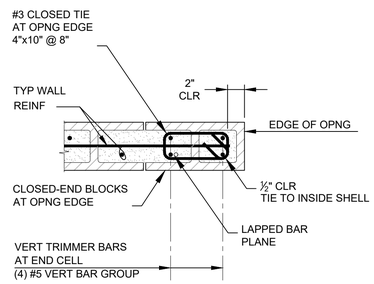
CMU LINTEL — S-4240

CENTERED VERT REINF
SCALE: 1" = 1'-0"
REV 00



CMU JAMB OR END OF WALL — S-4250

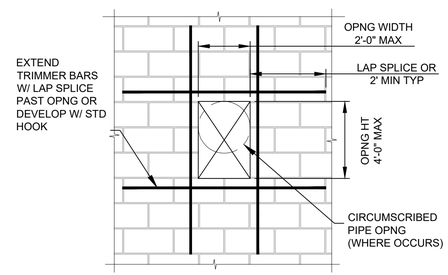
STD REINF
SCALE: 1" = 1'-0"
REV 00



CMU JAMB OR END OF WALL — S-4251

BOUNDARY ELEMENT
SCALE: 1" = 1'-0"
REV 00

NOTES:
1. ALL TRIMMER BARS ARE #5 UON ON PLANS. TRIMMER BARS ARE IN ADDITION TO TYPICAL WALL REINF.
2. TYPICAL WALL REINF NOT SHOWN.

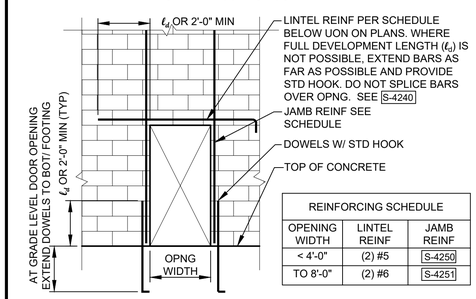


OPENING ELEVATION

CMU WALL OPENING — S-4330

MAX 24" WIDTH
SCALE: 1/2" = 1'-0"
REV 00

NOTES:
FOR WALL REINF, SEE PLANS AND S-4210
EXTENDED JAMB BARS ℓ_d OR 2'-0" MIN EXCEPT WHERE OPENING EXCEEDS 4'-0" IN WIDTH EXTEND FROM THE FLOOR TO ROOF

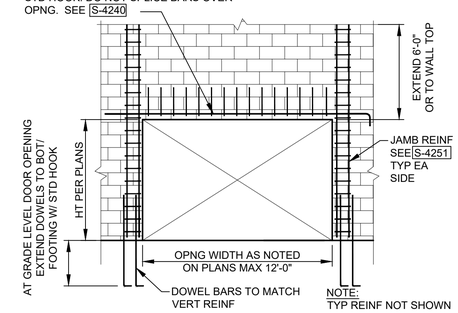


REINFORCING SCHEDULE		
OPENING WIDTH	LINTEL REINF	JAMB REINF
< 4'-0"	(2) #5	S-4250
TO 8'-0"	(2) #6	S-4251

CMU ELEVATION — S-4350

PERSONNEL DOOR
SCALE: 1/4" = 1'-0"
REV 00

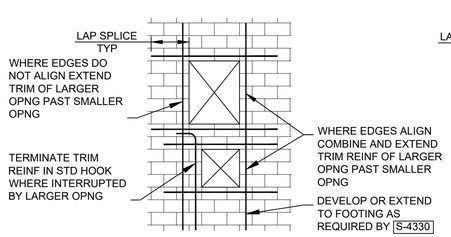
(2) #6 LINTEL REINF UON ON PLANS. WHERE FULL ℓ_d IS NOT POSSIBLE, EXTEND BARS AS FAR AS POSSIBLE AND PROVIDE STD HOOK. DO NOT SPLICE BARS OVER OPNG. SEE S-4240

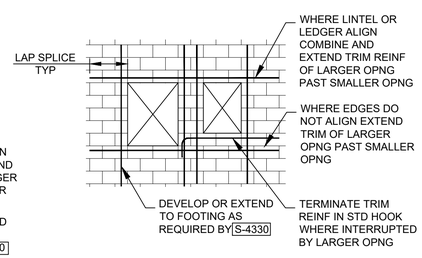


CMU ELEVATION — S-4360

ROLL-UP DOOR
SCALE: 1/4" = 1'-0"
REV 00

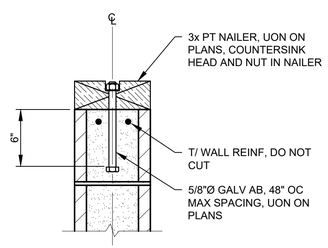
NOTES:
1. TYP REINF NOT SHOWN.
2. FOR REINF AT WALL OPENINGS SEE S-4330
3. FOR REINF AT PERSONNEL AND ROLL-UP DOORS SEE S-4350 & S-4360





CMU WALL REINF — S-4370

AT ADJACENT OPENINGS
SCALE: 1/4" = 1'-0"
REV 00



WOOD NAILER — S-4510

OVER CMU WALL
SCALE: 1-1/2" = 1'-0"
REV 00

USE OF DOCUMENTS

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SCALES
0 — 1"
0 — 25mm
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STEVE PRITCHETT — STATE OF WASHINGTON — 55904 REGISTERED — PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

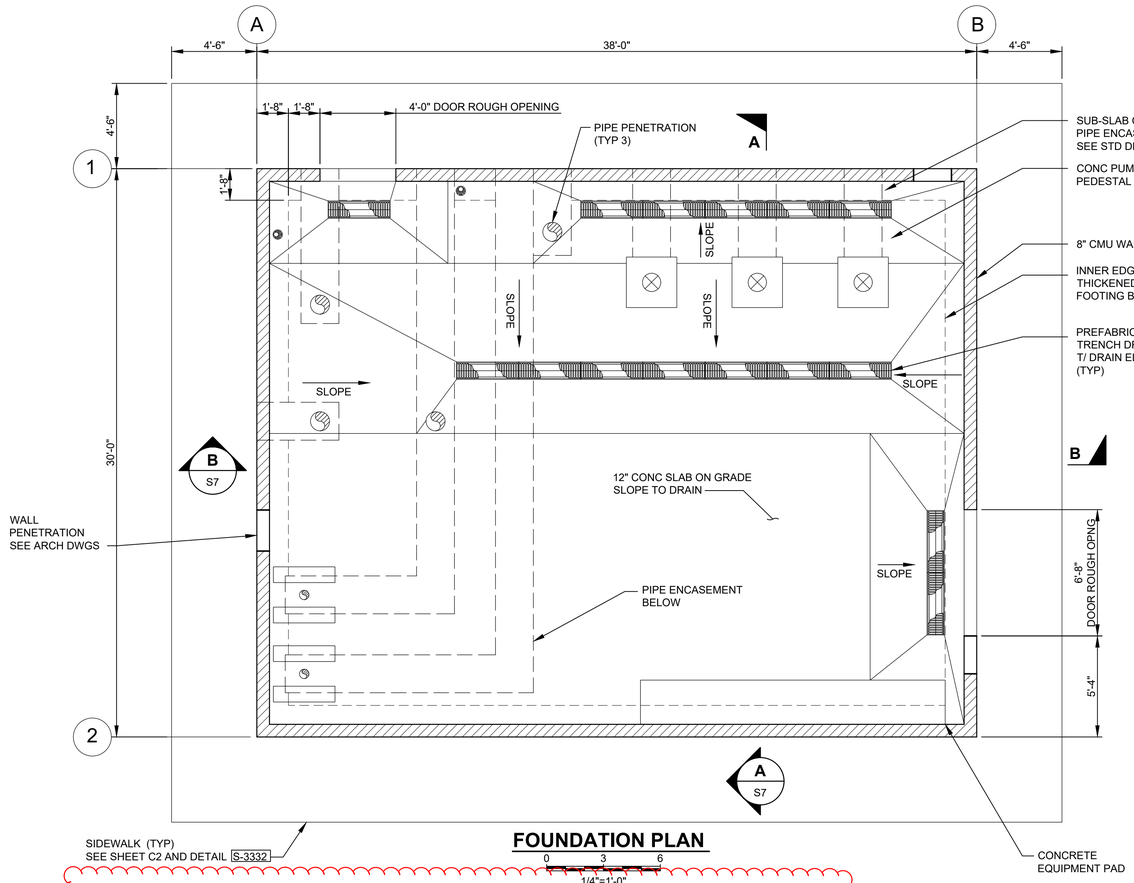
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STRUCTURAL NOTES AND STANDARD DETAILS - 3

90% SUBMITTAL (REVISED 7/1/2020)

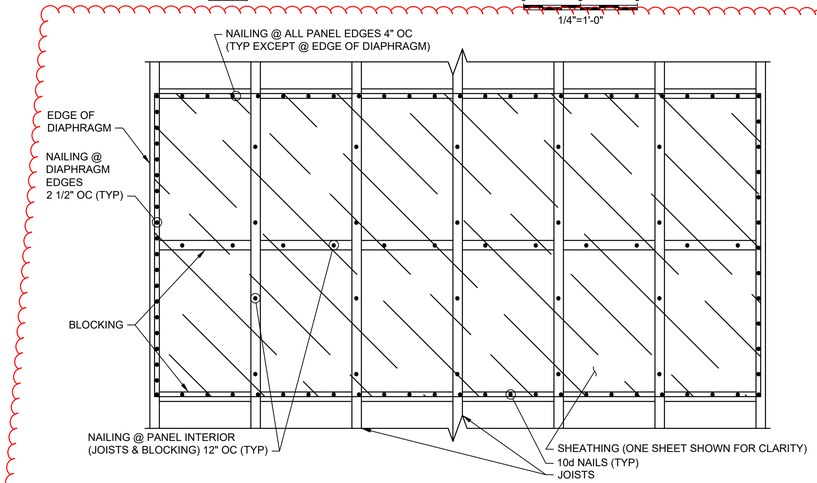
FILE NAME 139700500-S005.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 66 OF 83
S5

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-S005.dwg MIKEMARX 6/24/2020 11:59 AM



FOUNDATION PLAN

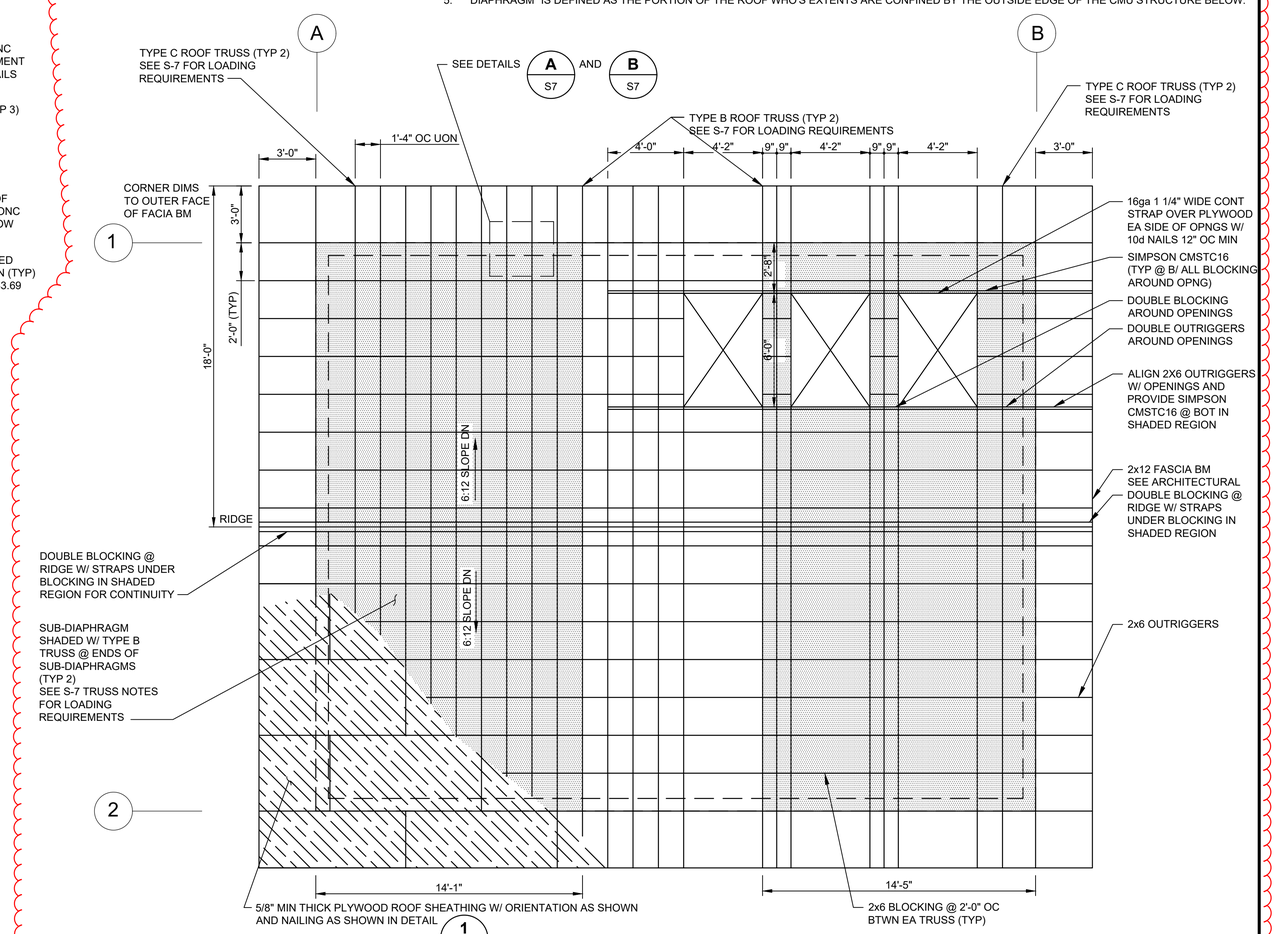
0 3 6
1/4"=1'-0"



DIAPHRAGM NAILING DETAIL 1

NOTES:

1. CONCRETE TO BE f'_c = 4,000psi.
2. CONCRETE FLOOR SLAB TO RECEIVE FLOAT FINISH. EXTERIOR LANDING TO RECEIVE LIGHT BROOM FINISH.
3. ALL ROOF TRUSSES SHALL BE TYPE A EXCEPT WHERE SPECIFICALLY NOTED ON THIS SHEET.
4. SIMPSON CMSTC16 SHALL BE INSTALLED ON THE UNDER-SIDE OF ALL BLOCKING IN SHADED AREA OF ROOF.
5. "DIAPHRAGM" IS DEFINED AS THE PORTION OF THE ROOF WHO'S EXTENTS ARE CONFINED BY THE OUTSIDE EDGE OF THE CMU STRUCTURE BELOW.



ROOF PLAN

0 3 6
1/4"=1'-0"

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SCALES
0 1"
0 25mm
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STEVE PRITCHETT STATE OF WASHINGTON 55904 REGISTERED PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

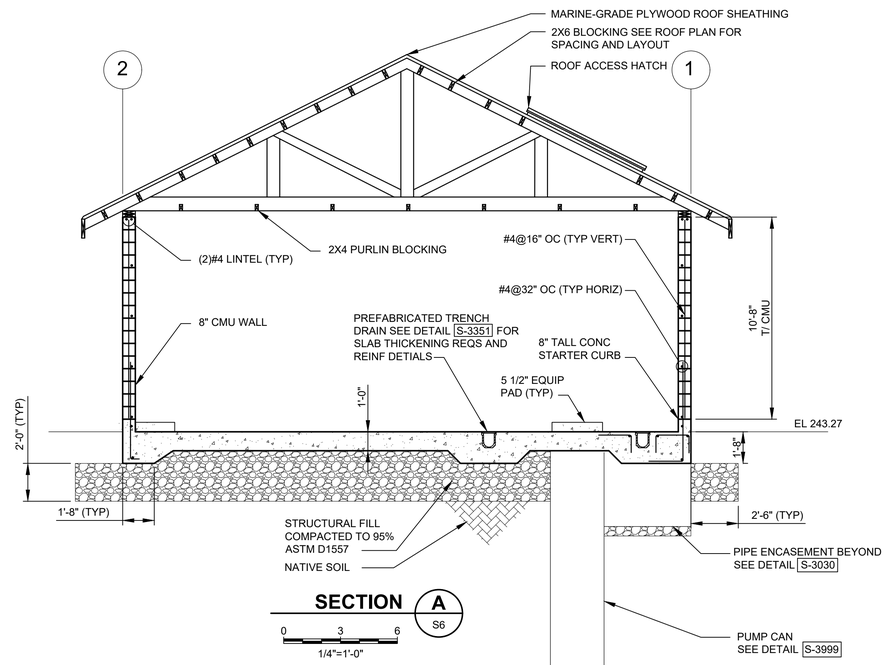
CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION FOUNDATION PLAN AND ROOF PLAN

FILE NAME 139700500-S006.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET S6 OF

\\kjc\kjc-root\KJ-Cad\FederalWay\CAD\13\1397005.00_City_of_Issaquah\139700500-S006.dwg 2/11/2021 1:48 PM STEVEPRITCHETT



SECTION A (S6)

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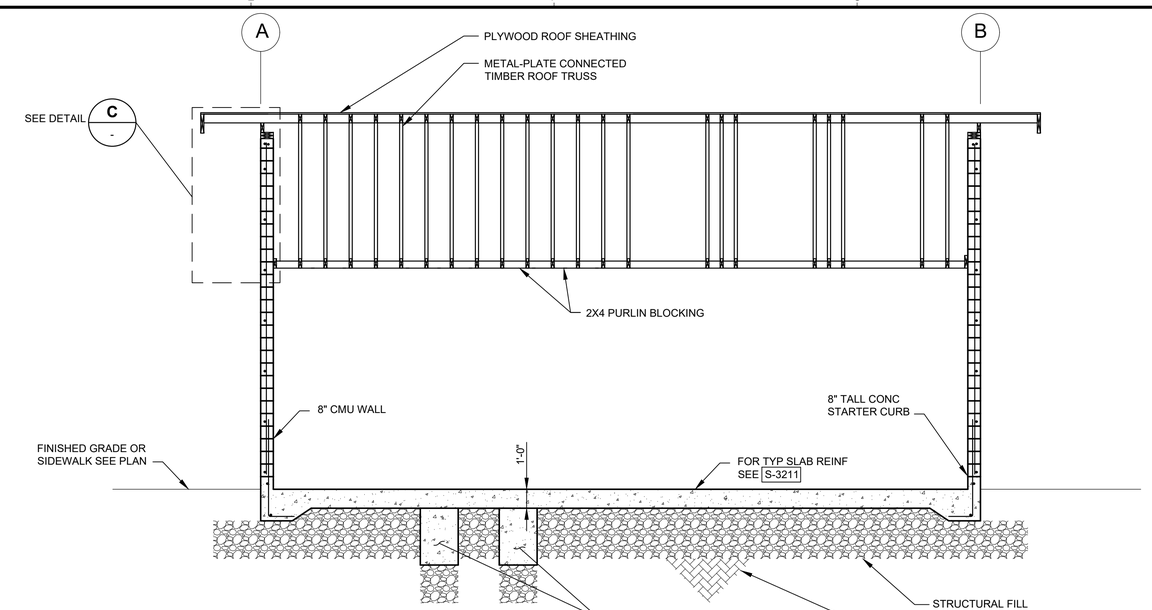
1/4"=1'-0"



SECTION B (S6)

0 3 6
1/4"=1'-0"

ROOF TRUSS NOTES:

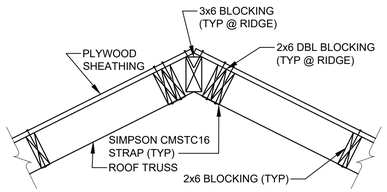
1. DESIGN ROOF TRUSSES FOR THE FOLLOWING MINIMUM UNFACTORED LOADS.

DEAD LOAD (NOT INCLUDING JOIST SELF WEIGHT)	
ON TOP CHORD	20 PSF
ON BOTTOM CHORD	5 PSF
HANGING POINT LOAD ANYWHERE ALONG BOTTOM CHORD	200 LB
LIVE LOAD	
HANGING POINT LOAD ANYWHERE ALONG BOT CHORD	500 LB
ON TOP CHORD	20 PSF
WIND LOAD: AT BASIC WIND SPEED OF 115 MPH, EXPOSURE CAT C	
NET UPLIFT/DOWNPRESSURE	-24 PSF/ 16 PSF
	TYPE C: 312 PLF ADDITIONAL DOWNWARD LOADING FROM OUTRIGGERS
SEISMIC LOAD:	TYPE A: 1,300 LBS AXIAL TENSION AND COMPRESSION @ FULL LENGTH
	TYPE B: 4,900 LBS AXIAL TENSION AND COMPRESSION @ FULL LENGTH
SNOW LOAD:	25 PSF UNIFORM
	30 PSF UNBALANCED

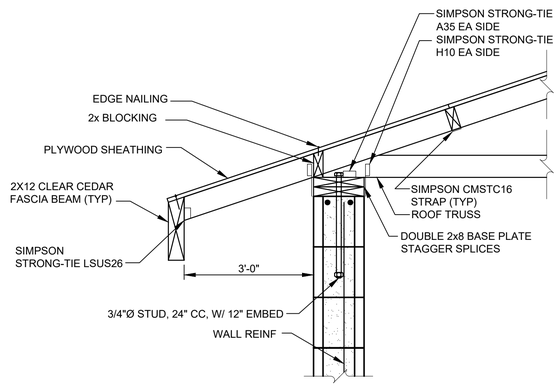
2. METAL PLATE CONNECTORS:
   a. PROVIDE METAL CONNECTOR PLATES DESIGNED AND TESTED IN ACCORDANCE WITH TRUSS PLATE INSTITUTE CRITERIA.
   b. CONNECTOR PLATES SHALL BE 20-GAUGE STEEL , ASTM A-446 GRADE C STRUCTURAL, HOT-DIP GALVANIZED, ASTM 525-G60.
   c. CODE APPROVED-ICC EVALUATION REPORT.
   d. APPLY CONNECTOR PLATES TO BOTH FACE OF TRUSS BY HYDRAULIC PRESS OR ROLLER SEAT PLATES FIRMLY AGAINST WOOD TRUSS MEMBERS.

3. FOR ALL TRUSS MEMBERS SEE WOOD FRAMING NOTES ON SHEET S1.

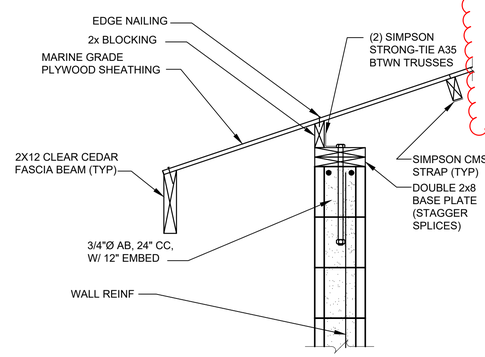
4. SUBMIT CALCULATIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON FOR THE DESIGN OF TRUSSES. SUBMIT DRAWINGS OF TRUSSES SHOWING ALL MEMBERS, LAYOUT, DIMENSIONS, AND CONNECTIONS.



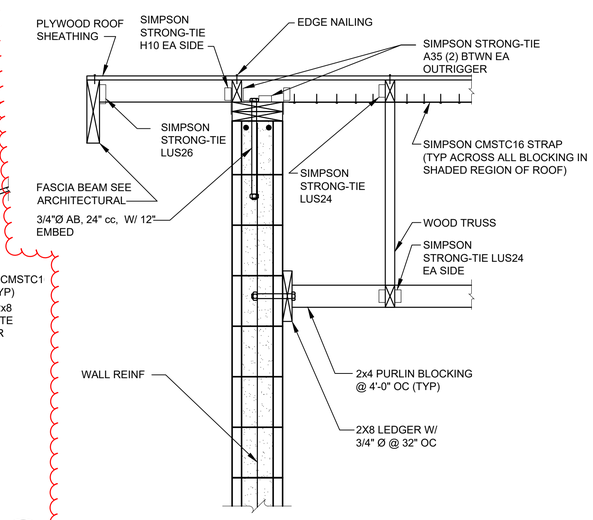
ROOF RIDGE DETAIL 1 (-)



EAVE DETAIL @ TRUSS A (S6)



EAVE DETAIL BETWEEN TRUSSES B (S6)



RAKE DETAIL C (-)

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
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STEVE PRITCHETT — STATE OF WASHINGTON — 55904 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED STP
DRAWN STP
CHECKED JDS

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION SECTIONS AND DETAILS

FILE NAME 139700500-S007.DWG
JOB NO. 1397005*00
DATE FEBRUARY 2021
SHEET S7 OF

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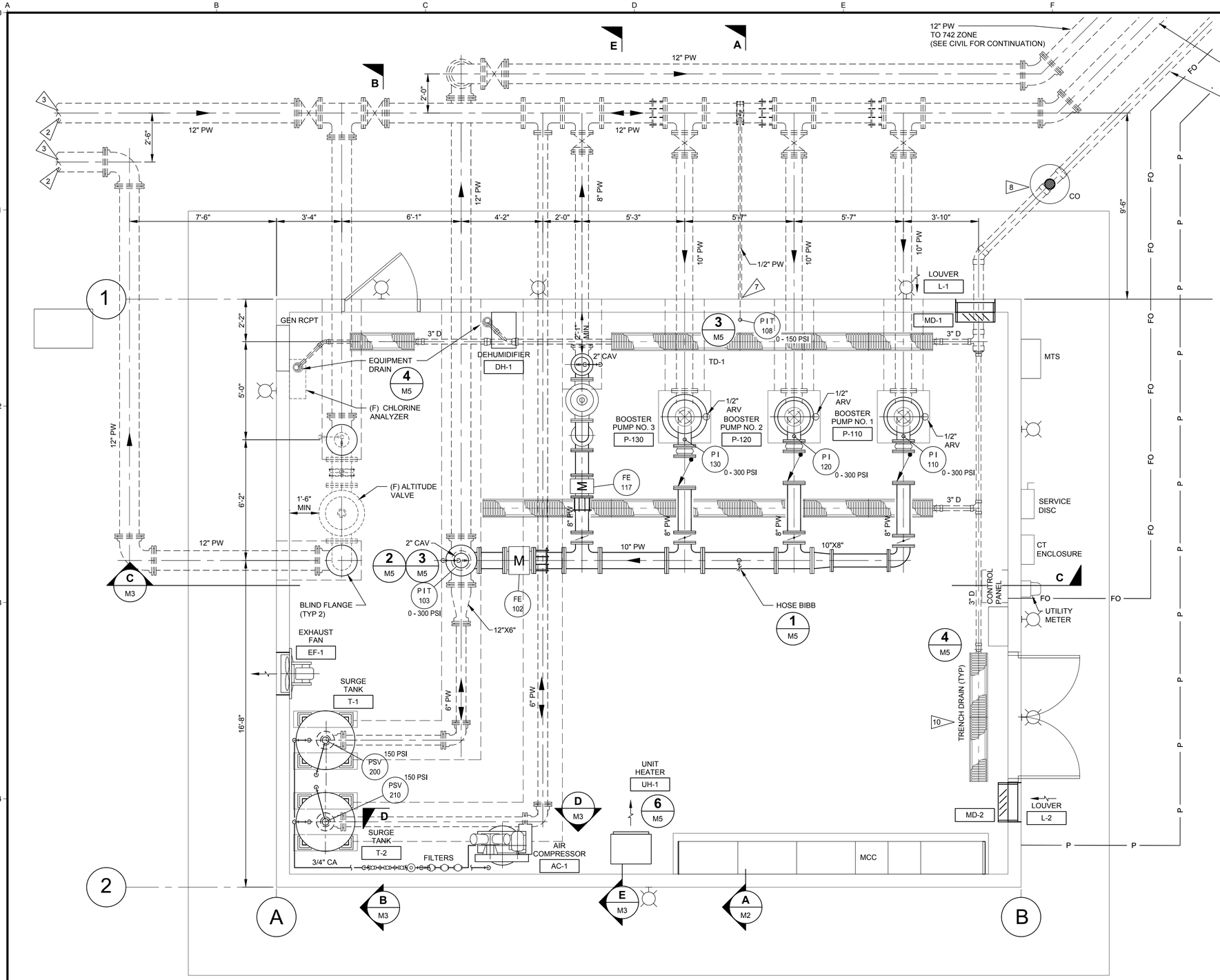
STEVEPRITCHETT



NOTES:

1. NOT ALL PIPING, VALVES AND ACCESSORIES ARE SHOWN ON THIS DRAWING. THIS DRAWING SHOWS GENERAL ARRANGEMENT AND LOCATION. PROVIDE ANY ADDITIONAL EQUIPMENT, PIPING, VALVES ACCESSORIES AS SHOWN ON ASSOCIATED PROCESS AND INSTRUMENTATION DIAGRAM.

2 CAP FOR FUTURE EXTENSION TO RESERVOIR.

3 INSTALL TEMPORARY BLOW-OFF ASSEMBLIES AT ENDS OF FUTURE CONNECTIONS TO RESERVOIR.

4. ALL DISCHARGE SIDE PIPING TO HAVE ANSI 250/300# FLANGES. MINIMUM WORKING PRESSURE IS 250 PSI.

5. SEE G-5 FOR PIPING SYMBOLS.

6. ENCASE ALL PIPING BELOW SLAB EXCEPT DRAIN LINE. SEE STRUCTURAL DRAWINGS.

7 PROVIDE 2-INCH PVC SLEEVE AROUND PIPE.

8 CLEANOUT PER CITY STANDARD DETAIL S-9.

9 PROVIDE CAV FOR 297 / 520 ZONE PIPELINE PER CITY STANDARD DETAIL W-07.

10 TRENCH DRAIN TO BE NDS PRO SERIES CHANNEL DESIGN WITH D.I. GRATE, 5-INCH WIDTH.

PLAN

0 2 4

3/8"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

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JEFFREY M. FORAY STATE OF WASHINGTON 34536 REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH

DRAWN LMM

CHECKED JMF

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PUMP STATION PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-M001.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 69 OF 83

M1

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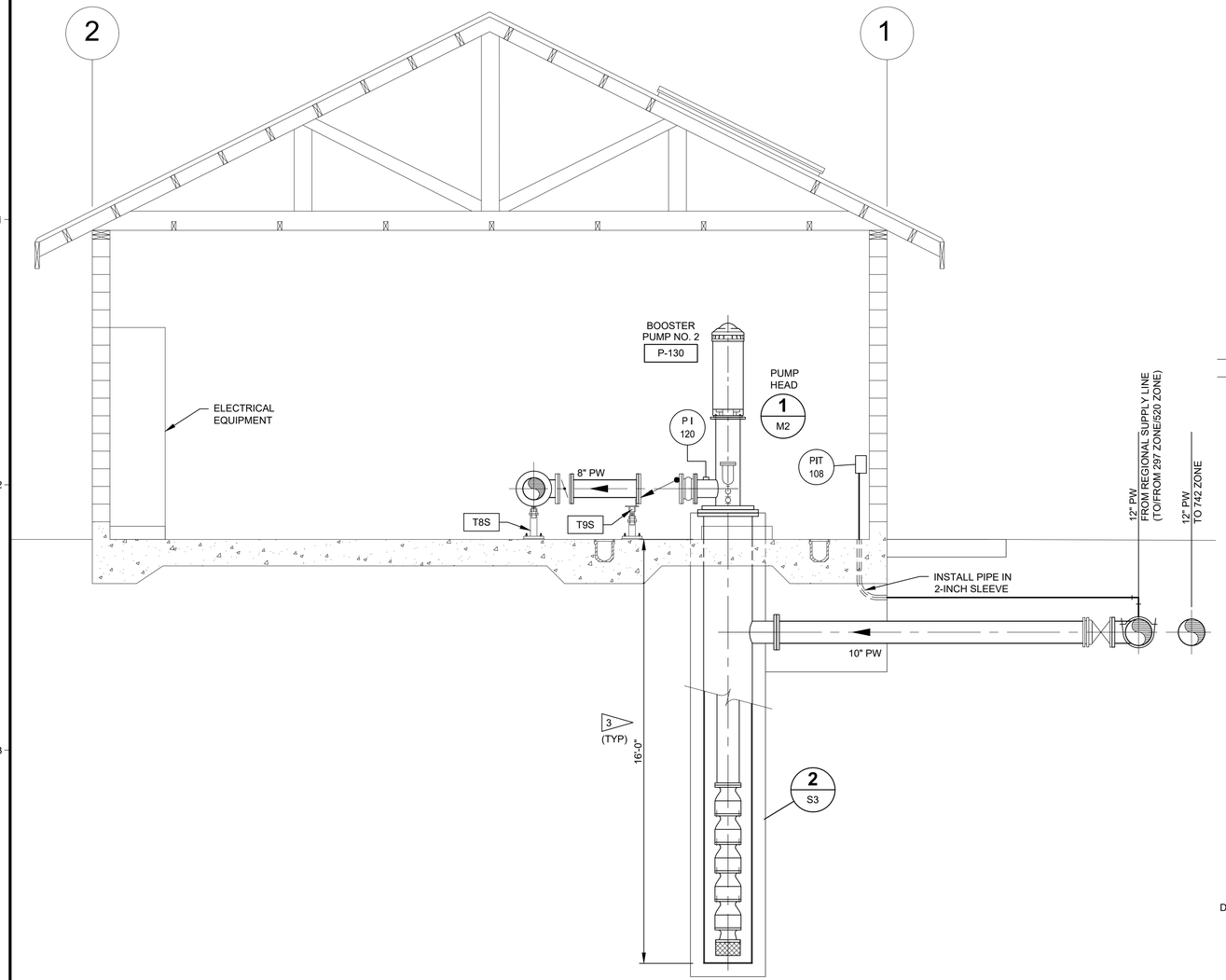
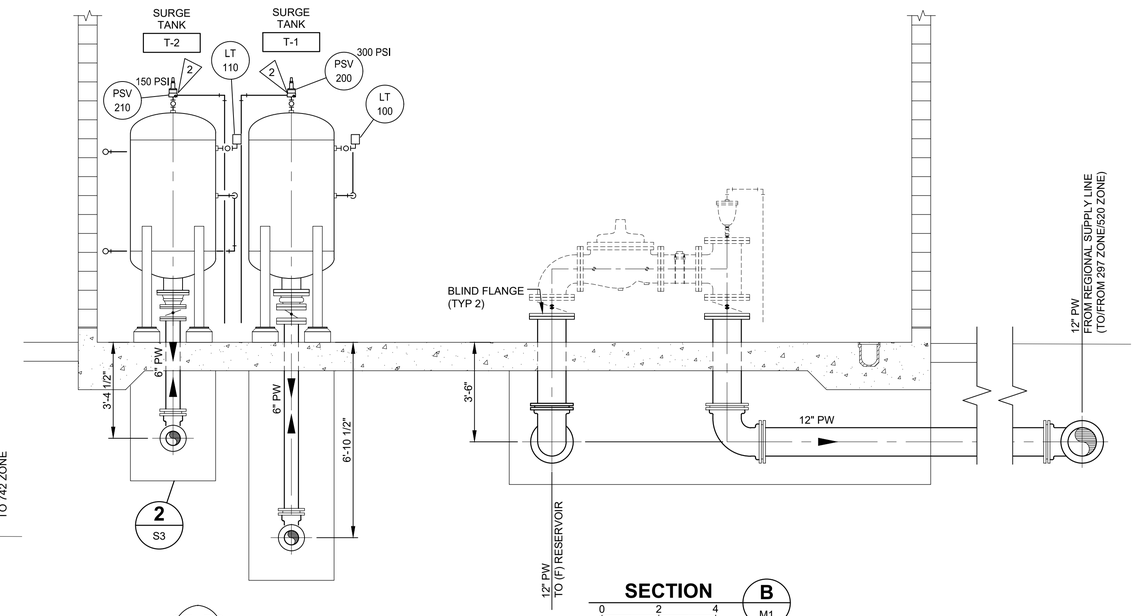


SECTION A

0 2 4

3/8"=1'-0"

M1

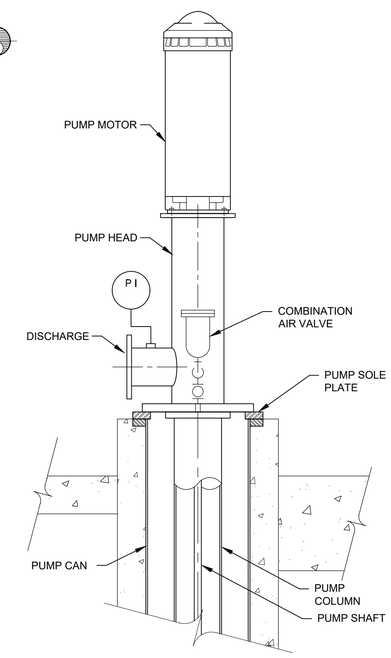


SECTION B

0 2 4

3/8"=1'-0"

M1



DETAIL 1

0 1 2 3

1/2"=1'-0"

M2

NOTES:

1. NOT ALL PIPING, VALVES AND ACCESSORIES ARE SHOWN ON THIS DRAWING. THIS DRAWING SHOWS GENERAL ARRANGEMENT AND LOCATION. PROVIDE ANY ADDITIONAL EQUIPMENT, PIPING, VALVES ACCESSORIES AS SHOWN ON ASSOCIATED PROCESS AND INSTRUMENTATION DIAGRAM.

2 ROUTE DISCHARGE FROM VALVES TO NEAREST FLOOR DRAIN. MAINTAIN AIR GAP PER PLUMBING CODE.

3 NOMINAL DEPTH FROM FLOOR. MANUFACTURER TO VERIFY CAN DEPTH AND DIMENSIONS.

USE OF DOCUMENTS

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SCALES

0 1"

0 25mm

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH

DRAWN LMM

CHECKED JMF

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PUMP STATION SECTIONS - 1

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-M002.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET **M2** 70 OF 83

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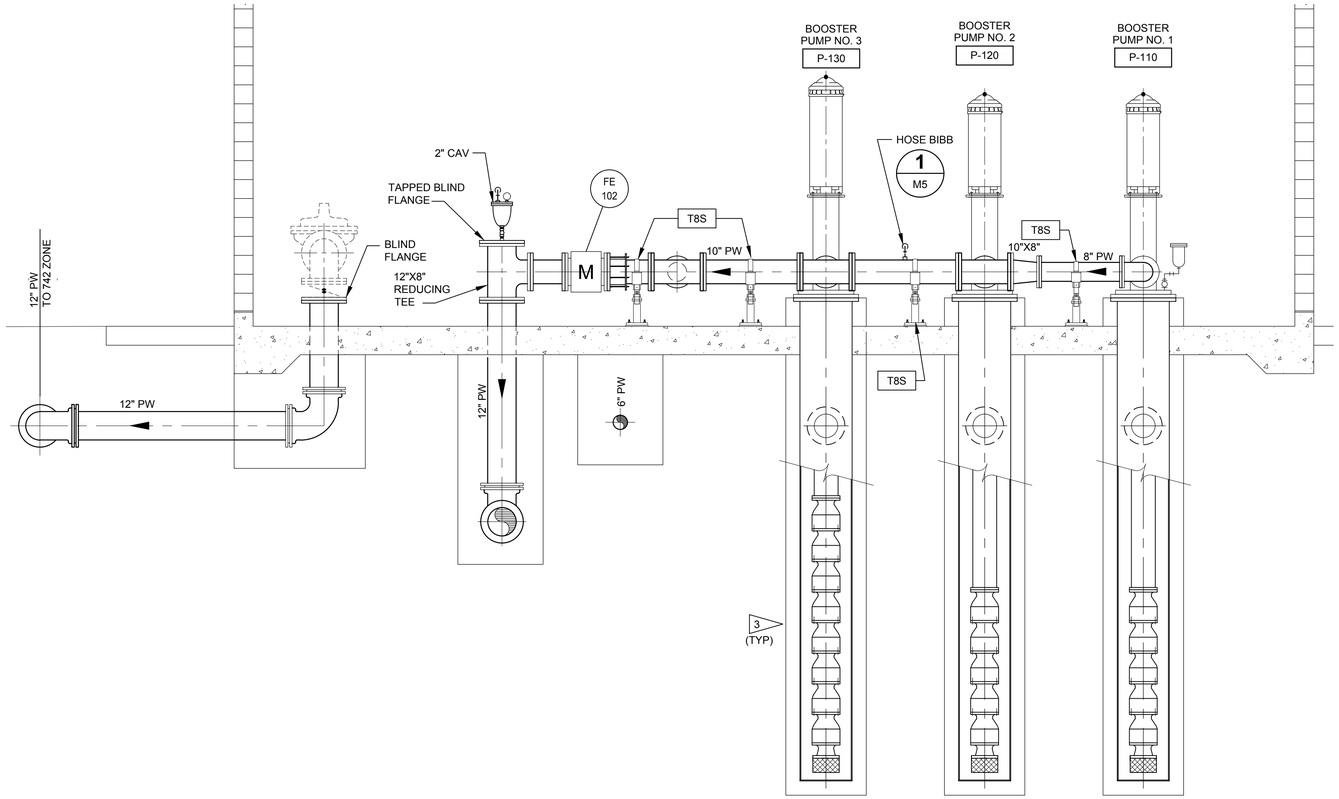
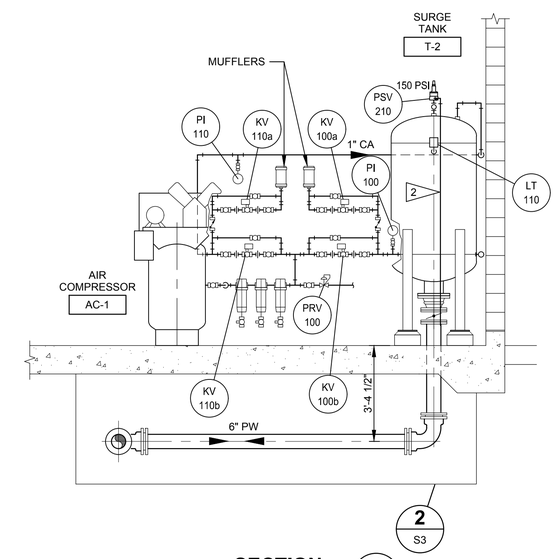


SECTION C
M1
0 2 4
3/8"=1'-0"



SECTION D
M1
0 2 4
3/8"=1'-0"

NOTES:

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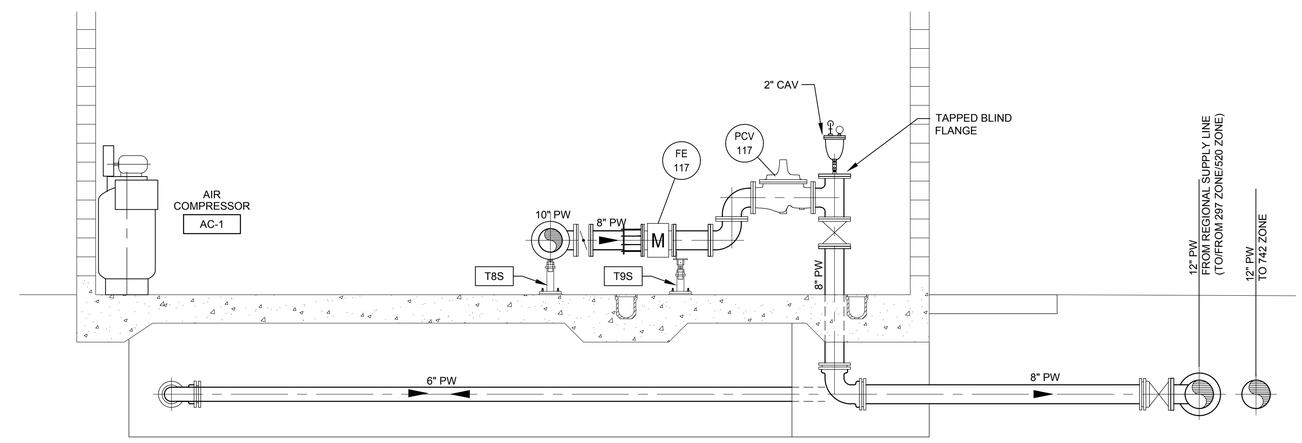
2 ROUTE DISCHARGE FROM VALVES TO NEAREST FLOOR DRAIN. MAINTAIN AIR GAP PER PLUMBING CODE.

3 NOMINAL DEPTH FROM FLOOR. MANUFACTURER TO VERIFY CAN DEPTH AND DIMENSIONS.



SECTION E
M1
0 2 4
3/8"=1'-0"

FAN SCHEDULE

TAG NO.	LOCATION	AREA SERVED	TYPE	DRIVE	FAN & MOTOR CHARACTERISTICS						WEIGHT (LBS)	NOTES
					CFM	ESP (IN WC)	RPM	HP	VOLTS/ PHASE	ENCLOSURE		
EF-1	BOOSTER PUMP STATION	BOOSTER PUMP STATION	CENTRIFUGAL SIDEWALL	DIRECT	3,000	0.25	1,200	1	120/1	ODP	88	1,2,3,4,5,6

NOTES:
1) PROVIDE BACK DRAFT DAMPER AND WALL GRILLE.
2) MOTOR TO BE FURNISHED WITH A FACTORY-MOUNTED DISCONNECT SWITCH.
3) MOTOR TO BE VARIABLE SPEED.
4) FAN AND DAMPER SHALL BE PROVIDED WITH CORROSION RESISTANT COATING.
5) INTERLOCK FAN WITH CONTROL DAMPERS ON INTAKE LOUVERS.
6) FAN IS THERMOSTAT CONTROLLED.
7) FAN IS GREENHECK MODEL SE2-24 WITH ACCESSORIES, OR EQUAL.

DEHUMIDIFIER SCHEDULE

TAG-NO	LOCATION	AREA SERVED	PROCESS AIRFLOW (CFM)	REACTIVATION AIRFLOW (CFM)	REACTIVATION POWER (KW)	MOISTURE REMOVAL (LB/HR)	VOLTS/ PHASE	NOTES
DH-1	BOOSTER PUMP STATION	BOOSTER PUMP STATION	300	100	6	7.9	480/3	1

NOTES:
1) INTEGRAL HUMIDISTAT CONTROLLED

LOUVER SCHEDULE

TAG NO	LOCATION	AREA SERVED	TYPE	DIMENSIONS		AIRFLOW (CFM)	PRESSURE DROP (IN WC)	FRAME (IN)
				H (IN)	W (IN)			
L-1	BOOSTER PUMP STATION	BOOSTER PUMP STATION	SUPPLY	48	24	1500	0.09	4
L-2	BOOSTER PUMP STATION	BOOSTER PUMP STATION	SUPPLY	88	24	1500	0.09	4

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH
DRAWN LMM
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PUMP STATION SECTIONS - 2

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-M003.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 71 OF 83
M3

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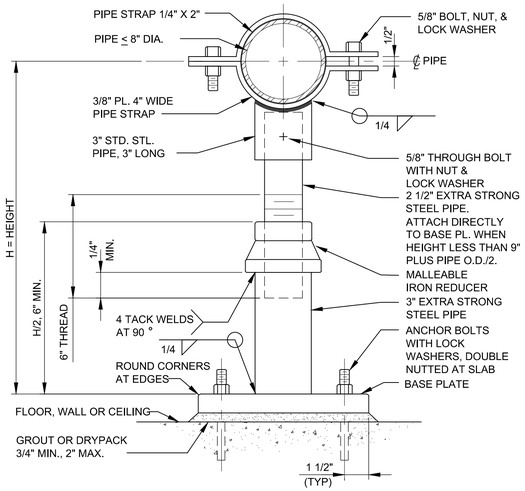
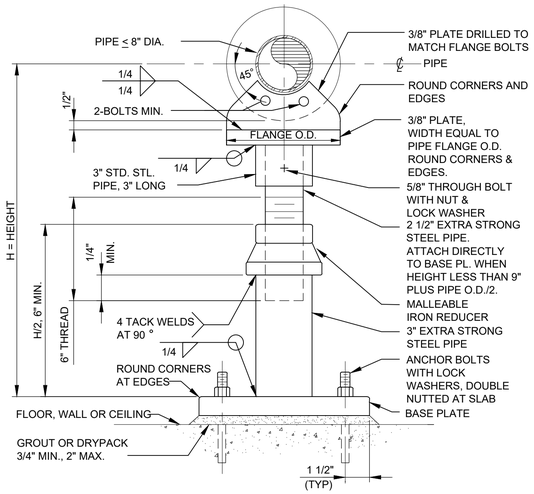


LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	3'-0"	3/8 X 9 X 9	4-5/8"
CEILING	3'-0"	5/8 X 9 X 9	4-3/4"
WALL	1'-6"	5/8 X 9 X 9	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO BOTTOM PIPE STRAP.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTATED IN ANY DIRECTION.

TYPE 8 SUPPORT (T8S)

SCALE: NONE (SEISMIC RESTRAINT)



LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	3'-0"	3/8 X 9 X 9	4-5/8"
CEILING	3'-0"	5/8 X 9 X 9	4-3/4"
WALL	1'-6"	5/8 X 9 X 9	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 1/2" PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO 3/8" PLATE ATTACHED TO PIPE FLANGE.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTATED IN ANY DIRECTION.

TYPE 9 SUPPORT (T9S)

SCALE: NONE (SEISMIC RESTRAINT)

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH
DRAWN LMM
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

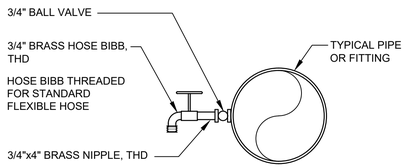
Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STANDARD MECHANICAL DETAILS - 1

90% SUBMITTAL (REVISED 7/1/2020)

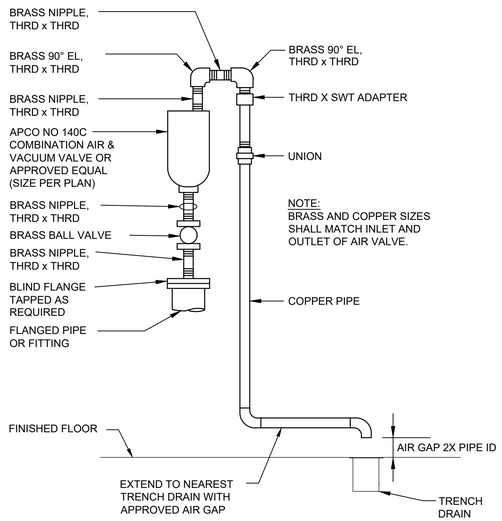
FILE NAME 139700500-M004.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 72 OF 83
M4

P:\CAD\13\1397005.00_City_of_Issaquah\139700500-M004.dwg MIKEMARX 7/1/2020 11:23 AM



HOSE BIBB 1 M1

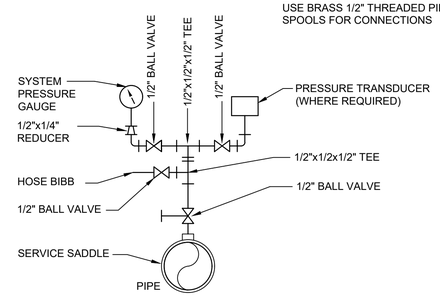
NTS



COMBINATION AIR VALVE 2 M1

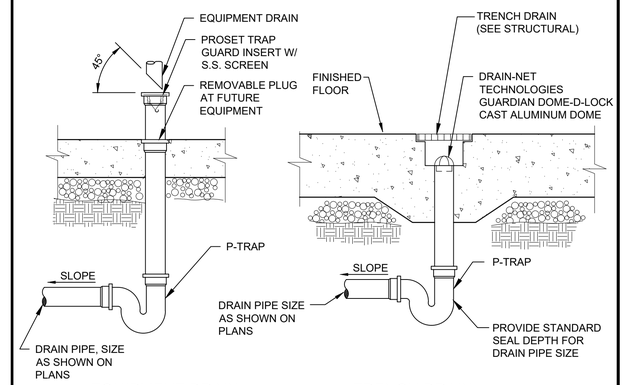
NTS

NOTE:
ALL FITTINGS, GAUGES, VALVES, ETC. TO BE THREADED.
USE BRASS 1/2" THREADED PIPE SPOOLS FOR CONNECTIONS



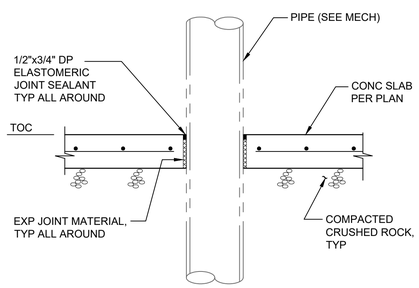
PRESSURE GAUGE AND TRANSMITTER 3 M1

NTS



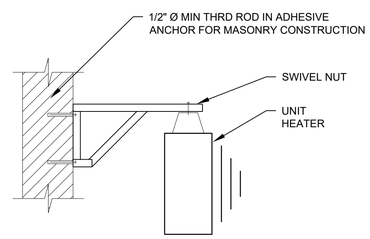
DRAINS 4 M1

NTS



PIPE PENETRATION 5 M1

NTS



HEATER MOUNTING 6 M1

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JEFFREY M. FORAY — STATE OF WASHINGTON — 34536 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH
DRAWN LMM
CHECKED JMF

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

STANDARD MECHANICAL DETAILS - 2

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-M005.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 73 OF 83
M5

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ABBREVIATIONS

a	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS CLOSED
A	AMMETER, AMPERES
AC	ALTERNATING CURRENT
A/D	ANALOG TO DIGITAL
ADJ	ADJUSTABLE
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
ALT	ALTERNATOR
A/M	AUTO/MANUAL CONTROLLER
ANN	ANNUNCIATOR
APPROX	APPROXIMATE
AS	AMMETER SWITCH
AT	AMMETER TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAGE
b	CIRCUIT BREAKER AUX. CONTACT, CLOSED WHEN BREAKER IS OPEN
BCG	BARE COPPER GROUND
BLDG	BUILDING
C	CONDUIT, CONTACTOR
CAB	CABINET
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CC	CONTROL CABLE, CLOSING COIL
CHH	COMMUNICATION HANDHOLE
CL	CHLORINE
CKT	CIRCUIT
CMH	COMMUNICATION MANHOLE
CO	CONDUIT ONLY
COMM	COMMUNICATION
COND	CONDUCTOR
CONT	CONTINUED, CONTINUATION
CPT	CONTROL POWER TRANSFORMER
CP	CONTROL PANEL
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CWP	COLD WATER PIPE
DC	DIRECT CURRENT
DIA	DIAMETER
DIAG	DIAGRAM
DISC	DISCONNECT
DISTR	DISTRIBUTION
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EXHAUST FAN
EHH	ELECTRICAL HANDHOLE
EL, ELEV	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
ELEM	ELEMENTARY
EMERG	EMERGENCY
ENCL	ENCLOSURE
EFFL	EFFLUENT
EQ	EQUAL
EQPT	EQUIPMENT
ETM	ELAPSED TIME METER
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FF	FINISHED FLOOR
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FREQ	FREQUENCY
FT	FEET, FOOT
FU	FUSE
(F)	FUTURE
FVNR	FULL VOLTAGE, NON REVERSING
FVR	FULL VOLTAGE, REVERSING
FWD	FORWARD
GA	GAUGE
GALV	GALVANIZED
GEN	GENERATOR
GFCI	GROUND FAULT CURRENT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
H_2O_2	HYDROGEN PEROXIDE
HH	HANDHOLE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTOMATIC
HOR	HAND-OFF-REMOTE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ (CYCLES PER SECOND)
IND LT	INDICATING LIGHT
INCAND	INCANDESCENT
INSTR	INSTRUMENT, INSTRUMENTATION
I/O	INPUT/OUTPUT
JB	JUNCTION BOX
KA	KILOAMPERES
KCMIL	THOUSANDS OF CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KVARH	KILOVOLT AMPERES REACTIVE HOURS
KW	KILOWATTS
KWH	KILOWATT HOURS
LCP	LIGHTING CONTROL PANEL
LP	LIGHTING PANEL
LPS	LOW PRESSURE SODIUM
LTG	LIGHTING
LT(S)	LIGHT(S)
(M)	MODIFIED
mA	MILLIAMPERES
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOV	MOTOR OPERATED VALVE
MS	MOTOR STARTER
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
(N)	NEW
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OT	OVER TEMPERATURE
OL	THERMAL OVERLOAD RELAY
PB	PULLBOX, PUSHBUTTON
PD	POSITIVE DISPLACEMENT
PE	PHOTOELECTRIC
PEC	PHOTOELECTRIC CELL
PF	POWER FACTOR
pH	MEASURE OF ACIDITY OR ALKALINITY
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PNLBD	PANELBOARD
PRI	PRIMARY
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
(RL)	RELOCATE
(RLD)	RELOCATED
RCPT	RECEPTACLE
RCT	REPEAT CYCLE TIMER
REQD	REQUIRED
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RT	RESET TIMER
SCR	SILICON CONTROLLED RECTIFIER
SD	SMOKE DETECTOR
SEC	SECONDS, SECONDARY
SECT	SECTION
SF	SUPPLY FAN
SHH	SIGNAL HANDHOLE
SHT	SHEET
SIG	SIGNAL
SN	SOLID NEUTRAL
SPECS	SPECIFICATIONS
SPDT	SINGLE POLE, DOUBLE THROW
SS	STAINLESS STEEL, SOLID STATE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYNC	SYNCHRONIZING
TB	TERMINAL BOX, TERMINAL BOARD
TC	TELEPHONE CABINET
TEL	TELEPHONE
TEMP	TEMPERATURE
TSP	TWISTED SHIELDED PAIR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UV	ULTRA VIOLET
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VAR	VOLT AMPERES REACTIVE
VERT	VERTICAL
VH	VAR-HOUR
VS	VOLTMETER SWITCH
W	WIRE, WATTS
WCR	WORKING CAPITAL REQUIREMENT
WHM	WATTHOUR METER
WHDM	WATTHOUR DEMAND METER
WR	WEATHER RESISTANT
WT	WATERTIGHT
WTP	WATER TREATMENT PLANT
XFMR	TRANSFORMER

GENERAL NOTES:

G1. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

G2. THIS IS A GENERALIZED LEGEND SHEET. THIS CONTRACT MAY NOT USE ALL INFORMATION SHOWN.

G3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN FAVORABLY REVIEWED BY THE ENGINEER.

G4. INFORMATION SHOWN MAY NOT BE ALL INCLUSIVE. SEE ALSO ANSI C37.2, Y1.1, Y32.2, AND Y32.9.

G5. VERIFY ALL COLOR REQUIREMENTS BEFORE ORDERING MATERIALS.

G6. REFER TO THE MECHANICAL DRAWINGS FOR CERTAIN CONTROL DIAGRAMS AND EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND FOR CERTAIN CONNECTIONS TO BE MADE TO ELECTRICAL CIRCUITS.

PLAN NOTES:

P1. CONDUIT SIZE AND FILL SHALL BE AS INDICATED. WHERE NO SIZE IS SHOWN, THE CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED BY THE AUTHORITY HAVING CODE ENFORCEMENT JURISDICTION. WHERE NO FILL IS INDICATED, THE FILL SHALL BE 2#12. PROVIDE 3/16 INCH NYLON PULL ROPE IN EACH EMPTY CONDUIT.

P2. LOWER CASE LETTERS ADJACENT TO A SWITCH OR LIGHT FIXTURE INDICATE A SWITCHED CIRCUIT. FOR FOUR LAMP FLUORESCENT FIXTURES WIRED IN PAIRS WITHIN EACH FIXTURE, THE "a" SWITCH CONTROLS THE OUTER LAMPS AND THE "b" SWITCH CONTROLS THE INNER LAMPS; WIRE 3 LAMP FIXTURES SIMILARLY.

P3. CONDUIT AND WIRE LAYOUT FOR LIGHTING AND RECEPTACLES NOT SHOWN. PROVIDE PER NEC.

P4. NUMBER OF CIRCLES DOES NOT REPRESENT THE NUMBER OF CONDUITS IN THE ENCASEMENT.

PLAN SYMBOLS

OVERHEAD POWER LINE
UNDERGROUND CONDUIT
MULTIPLE CONDUIT RUN
CONDUIT CONCEALED IN FLOOR
CONDUIT CONCEALED IN WALL OR CEILING
CONDUIT EXPOSED
CALLOUT INDICATING CONDUIT SIZE, NUMBER OF WIRES AND WIRE SIZE (3/4"C-3#12)
CALLOUT INDICATING CONDUIT PER SCHEDULE (0135)
CONDUIT RUN, HATCH MARKS INDICATE NO. OF #12 CONDUCTORS NO HATCH MARKS IS 2#12 UNLESS OTHERWISE NOTED
HOME RUN TO PANELBOARD OR AS INDICATED
FLEXIBLE CONDUIT
CONDUIT RUN, BROKEN AND CONTINUED ON SAME SHEET OR AS NOTED
CONDUIT WITH SEAL FITTING
CAP ON CONDUIT STUB
OPEN CIRCLE DENOTES UPWARD CONDUIT RISER
SEMI CIRCLE DENOTES DOWNWARD CONDUIT RISER
INDICATES REMOVAL
FA — FIRE ALARM CONDUIT
T — TELEPHONE CONDUIT
S — SECURITY SYSTEM CONDUIT
120V SURFACE MOUNTED PANELBOARD
120V FLUSH MOUNTED PANELBOARD
480V SURFACE MOUNTED PANELBOARD
480V FLUSH MOUNTED PANELBOARD
M — MOTOR
DISCONNECT SAFETY SWITCH
COMBINATION MOTOR STARTER
S_{MS} — MANUAL MOTOR STARTER
CONTROL STATION
EQUIPMENT MOUNTING STAND
GROUND ROD AND BOX
INSTRUMENT
EMH EHH SHH — ELECTRIC MANHOLE / POWER HANDHOLE / SIGNAL HANDHOLE
K — INTRUSION REMOTE KEY PAD
D — INTRUSION DOOR SWITCH
SAP — SECURITY ALARM PANEL
EQUIPMENT CONNECTION
PROXIMITY SENSOR
WALL SENSOR
ANTENNA

S_* — SINGLE POLE SWITCH
2 = 2 POLE, 3 = 3 WAY, 4 = 4 WAY, K = KEY OPERATED
WR = WEATHER RESISTANT
D = DIMMER
P = SWITCH WITH PILOT LIGHT
S^{ab} — SINGLE POLE SWITCH (NOTE P2)
FLUORESCENT FIXTURE (NOTE P2)
FLUORESCENT FIXTURE WITH NIGHT LIGHTING (UNSWITCHED) OR FLUORESCENT FIXTURE WITH SELF-CONTAINED EMERGENCY BALLAST/BATTERY
WALL/CEILING MOUNTED FIXTURE
WALL/CEILING MOUNTED FIXTURE NIGHT LIGHTING (UNSWITCHED)
POLE MOUNTED FIXTURE
WALL/CEILING MOUNTED EXIT LIGHT - DIRECTIONAL ARROW WHERE INDICATED, SHADED AREA INDICATES ILLUMINATED FACE
EMERGENCY LIGHT WITH SELF CONTAINED BATTERY
A 12' #11 — LIGHT FIXTURE IDENTIFICATION
SINGLE RECEPTACLE, 120V
SINGLE RECEPTACLE, 240V
DUPLEX WALL RECEPTACLE, 120V
WR = WEATHER RESISTANT
G = GROUNDED
IG = ISOLATED GROUND
GF = GROUND FAULT INTERRUPTER
DOUBLE DUPLEX WALL RECEPTACLE, 120V
DUPLEX FLOOR RECEPTACLE, 120V
X" — MULTI-OUTLET ASSEMBLY WITH SINGLE RECEPTACLE, 120V SPACING (X INCHES) AS NOTED, MOUNTING HEIGHT AS NOTED
RECEPTACLE, 480V
WALL/CEILING MOUNTED JUNCTION BOX
J — FLOOR RECESS MOUNTED JUNCTION BOX
T — THERMOSTAT, WALL MOUNTED
WALL TELEPHONE OUTLET (+12")
DATA WALL OUTLET
TELE-DATA WALL OUTLET
FLOOR OUTLETS
F — FIRE ALARM PULL STATION
F — FIRE ALARM FLASHING LIGHT
F — FIRE ALARM HORN
B — BELL
BUZZER
H — HEAT DETECTOR
S — SMOKE DETECTOR
FACP — FIRE ALARM CONTROL PANEL
MS — MOTION SENSOR
IS — INTRUSION SWITCH
VIDEO CAMERA

SINGLE LINE SYMBOLS

GROUND CONNECTION
SWITCH, 3 POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED
AUTOMATIC TRANSFER SWITCH 3 POLE, RATING AS NOTED
ST — SHUNT TRIP
TB-# #A 1 — FUSE
FUSE CUTOUT
MCP 100AT — 100AT 100AF — CIRCUIT BREAKER, 3 POLE EXCEPT WHERE NOTED. RATING IN AMPERES AS NOTED. IF TWO RATINGS APPEAR (EG. 100/625) THEN DEVICE IS MCP; NUMERATOR IS CONTINUOUS CURRENT RATING & DENOMINATOR IS INSTANTANEOUS TRIP SETTING.
POWER CIRCUIT BREAKER DRAWOUT ABOVE 1500V RATING AS NOTED
CURRENT TRANSFORMER
VOLTAGE TRANSFORMER
POWER OR DISTRIBUTION TRANSFORMER RATING AS NOTED
100 — MOTOR. NUMBER INDICATES HORSEPOWER
GEN — GENERATOR
CONTROL PACKAGE PROVIDED WITH THE DRIVEN EQUIPMENT
BUS STAB ON MCC OR SWITCHGEAR, CORD & PLUG CONNECTION FOR MOTORS
OL — THERMAL OVERLOAD
* — A - AMMETER; V - VOLTMETER; WH - WATTHOUR METER; GS - GROUND FAULT SENSOR
AS — AMMETER SWITCH
VS — VOLTMETER SWITCH
2 — ELEMENTARY DIAGRAM REFERENCE NUMBER
K — KIRK KEY INTERLOCK
POWER RECEPTACLE FOR PORTABLE EQUIPMENT
— RELAY DEVICE FUNCTION, # PER ANSI NUMBER C37.2
TERMINATOR / POTHEAD
SPLICE, TERMINATION
1 — MOTOR STARTER NUMBER INDICATES NEMA SIZE
5 — CAPACITOR - KVAR INDICATED
AFD — AFD - ADJUSTABLE FREQUENCY DRIVE SS - SOLID STATE STARTER
AFD 5 5 — AFD WITH BYPASS CONTACTOR, CONTACTOR NEMA SIZE AS INDICATED
SS — SS STARTER WITH BUILT-IN FULL SPEED CONTACTOR
SPD — SURGE PROTECTIVE DEVICE
MOTOR HEATER — MOTOR HEATER

ELEMENTARY DIAGRAM SYMBOLS

FUSE. RATING IN AMPERES
M — MOTOR
ETM — ELAPSED TIME METER
** — CONTROL DEVICE COIL. PREFIX NUMBER, WHEN USED, DISTINGUISHES BETWEEN DEVICES OF THE SAME TYPE.
** ALT - ALTERNATOR; CR - CONTROL RELAY; GR - GENERAL RELAY; ISR - INTRINSICALLY SAFE RELAY; LR - LATCH RELAY; PR - PROBE RELAY; SV - SOLENOID VALVE; TD - TIME DELAY RELAY; TR - TIMING RELAY
1 CR 2-2, 3, 0, 0 — CROSS REFERENCE TO ANOTHER DIAGRAM; NORMALLY OPEN CONTACT ON THE OTHER DIAGRAM; SPARE CONTACTS ON RELAY. IF OMITTED, THEN THE SPEC. REQUIREMENTS REGARDING SPARE CONTACTS APPLY.; NORMALLY CLOSED CONTACT ON THIS DIAGRAM
INDICATING LIGHT
PUSH-TO-TEST INDICATING LIGHT
* COLORS: A - AMBER; B - BLUE; C - CLEAR; G - GREEN; R - RED; N - NEON; W - WHITE; Y - YELLOW
ON OFF — SINGLE POLE SWITCH NORMALLY OPEN / CLOSED
START STOP — EMERGENCY PUSHBUTTON NORMALLY OPEN / CLOSED
START STOP — PUSHBUTTON NORMALLY OPEN / CLOSED
SWITCH 1-POLE / 3-POLE
MULTI-POSITION SELECTOR SWITCH
H O A — HAND-OFF-AUTOMATIC SWITCH X-INDICATES CONTACTS CLOSED
H O R — HAND-OFF-REMOTE SWITCH X-INDICATES CONTACTS CLOSED
TERMINAL
H1 H3 H2 H4 X1 X2 — CONTROL POWER TRANSFORMER
AMP/FRAME — AMPS POLES — CIRCUIT BREAKER, MCP 1-POLE / 3-POLE
GROUND CONNECTION
INSTRUMENT
NO CR NC CR — CONTACT NORMALLY OPEN / CLOSED
BUS STAB ON MCC; CORD & PLUG CONNECTION FOR MOTORS

SENSING SWITCHES		
CLOSE ON		SENSED VARIABLE
RISING	FALLING	
FS	FS	FLOW
LS	LS	LEVEL
PS	PS	PRESSURE
TS	TS	TEMPERATURE

LIMIT SWITCHES	
ZS	CLOSE ON REACHING LIMIT
ZS	CLOSE ON LEAVING LIMIT

TIMED CONTACTS			
SYMBOL	NORMAL	OPEN TO CLOSED	CLOSED TO OPEN
TR	OPEN	DELAYED	INSTANTANEOUS
TR	CLOSED	INSTANTANEOUS	DELAYED
TR	OPEN	INSTANTANEOUS	DELAYED
TR	CLOSED	DELAYED	INSTANTANEOUS

BUZZER BELL HORN
OL — THERMAL OVERLOAD

ELEMENTARY DIAGRAMS

E1 UNDERLINED WORDS SHOWN AT A PUSHBUTTON, LIGHT, SELECTOR SWITCH, ETC. INDICATE THE LEGEND PLATE REQUIREMENT FOR THAT PARTICULAR DEVICE. ANY ADDITIONAL NAMEPLATES ARE INDICATED ON ELEVATIONS WITH THE REQUIRED NAMEPLATE INSCRIPTIONS.

E2 "NORMAL" STATUS OF SWITCHES OR CONTACTS IS THE SHELF POSITION.

E3 NUMBERS AND LETTERS IDENTIFY DEVICE.

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LAWRENCE G. RESINGER — STATE OF WASHINGTON — 22580 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED JEV
DRAWN JEV
CHECKED PAR

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

ELECTRICAL ABBREVIATIONS AND SYMBOLS

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E001.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 74 OF 83
E1

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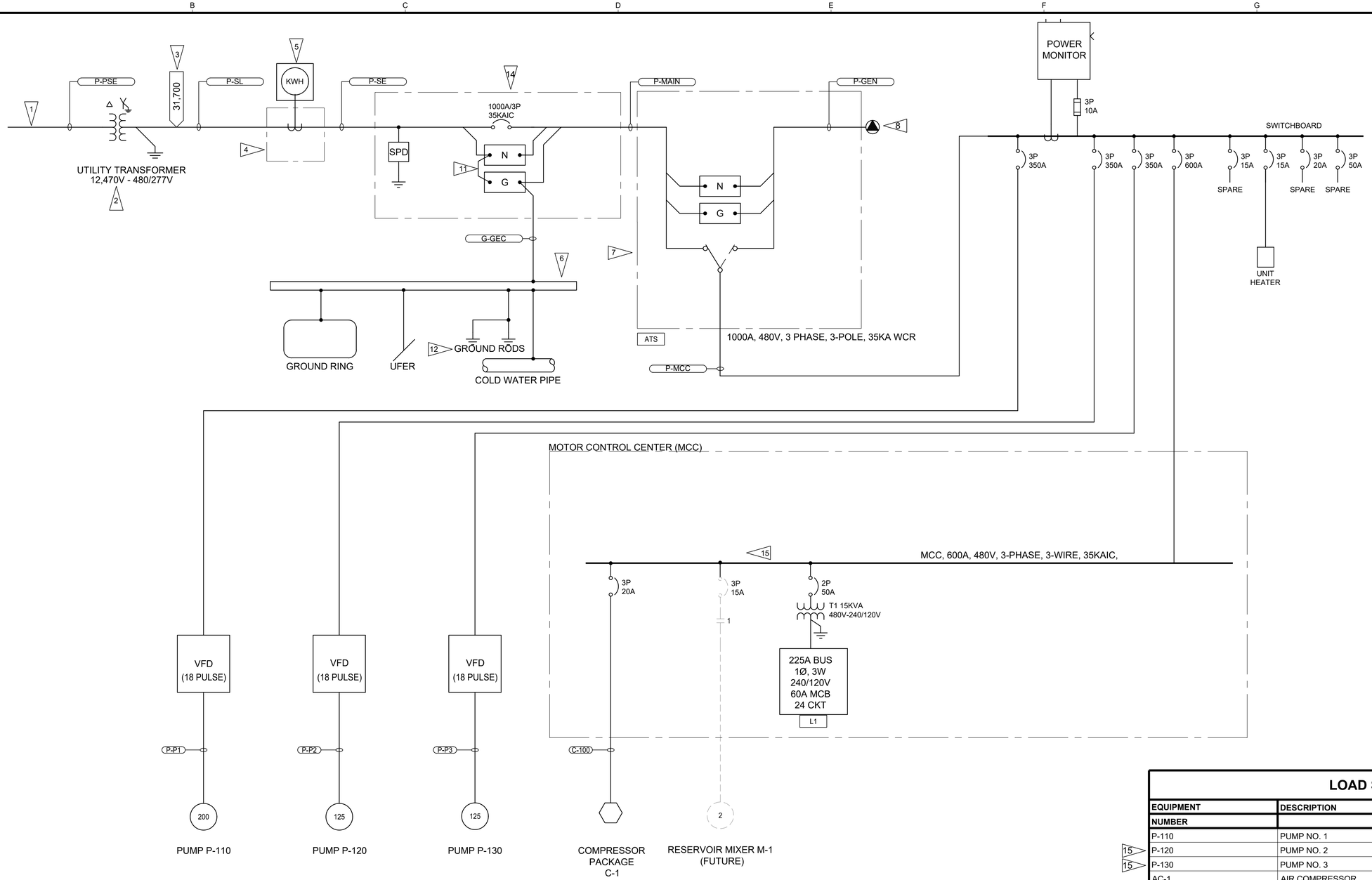

NOTES:

1. PRIMARY POWER CABLE BY PSE.
2. NEW PAD-MOUNTED TRANSFORMER SIZED, PROVIDED, AND INSTALLED BY UTILITY.
3. AVAILABLE FAULT CURRENT (RMS SYMMETRICAL) BASED ON UTILITY INFORMATION.
4. NEMA 3R CT ENCLOSURE PER UTILITY REQUIREMENTS.
5. CONTRACTOR SHALL INSTALL NEW 1000 AMP UTILITY METER PANEL ACCORDING TO PSE REQUIREMENTS.
6. SYSTEM GROUND BUS SHALL BE COPPER 2" X 1/4" X 12" MINIMUM. CONNECT GROUNDING ELECTRODE CONDUCTORS TO GROUND BUS BY EXOTHERMIC WELDING, LISTED PRESSURE CONNECTORS, OR LISTED CLAMPS.
7. AUTOMATIC TRANSFER SWITCH.
8. 400A RECEPTACLE FOR PORTABLE GENERATOR REFER TO SPECIFICATIONS.
9. SPARE BREAKER FOR FUTURE USE.
10. POWER MONITOR, SIEMENS 9300 OR EQUAL. COMPLETE WITH ALL ACCESSORIES.
11. MAIN BONDING JUMPER. ENSURE THAT THE SYSTEM NEUTRAL IS GROUNDED ONLY AT THE SERVICE ENTRANCE DISCONNECT. ENSURE THAT THE SYSTEM IS NOT GROUNDED AT THE MANUAL TRANSFER SWITCH, THE MOTOR CONTROL CENTER OR THE GENERATOR.
12. GROUND RODS SHALL BE PLACED AT LEAST 16' APART.
13. VFD AND CIRCUIT BREAKER SHALL BE SIZED FOR (F) 200 HP MOTOR.
14. MAIN SERVICE DISCONNECT. SERVICE IS RATED 800 AMPS FOR FUTURE EXPANSION.
15. PUMPS P-120 AND P-130 TO BE MUTUALLY INTERLOCKED BY INTEGRATOR SOFTWARE TO DISALLOW SIMULTANEOUS OPERATION.

LOAD SUMMARY - 480 V

EQUIPMENT NUMBER	DESCRIPTION	CONNECTED LOAD HP	CONNECTED LOAD AMPERES	DEMAND FACTOR	TOTAL AMPERES
P-110	PUMP NO. 1	200	240.0	1.00	240.0
15 P-120	PUMP NO. 2	200	240.0	1.00	240.0
15 P-130	PUMP NO. 3	200	240.0	1.00	240.0
AC-1	AIR COMPRESSOR	5	7.6	1.00	7.6
M-1	MIXER (FUTURE)	2	3.4	1.00	3.4
T1	TRANSFORMER T1 (15 KVA)		31.3	0.70	21.9
H-1	HEATER		6.0	1.00	6.0
	25% LARGEST MOTOR		60.0	1.00	60.0
480V, 3-PHASE, 4-WIRE			TOTALS:		819

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LAWRENCE G. REISINGER — STATE OF WASHINGTON — 22589 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED OO
DRAWN JEV
CHECKED PAR

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

SINGLE LINE DIAGRAM

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E002.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 75 OF 83
E2

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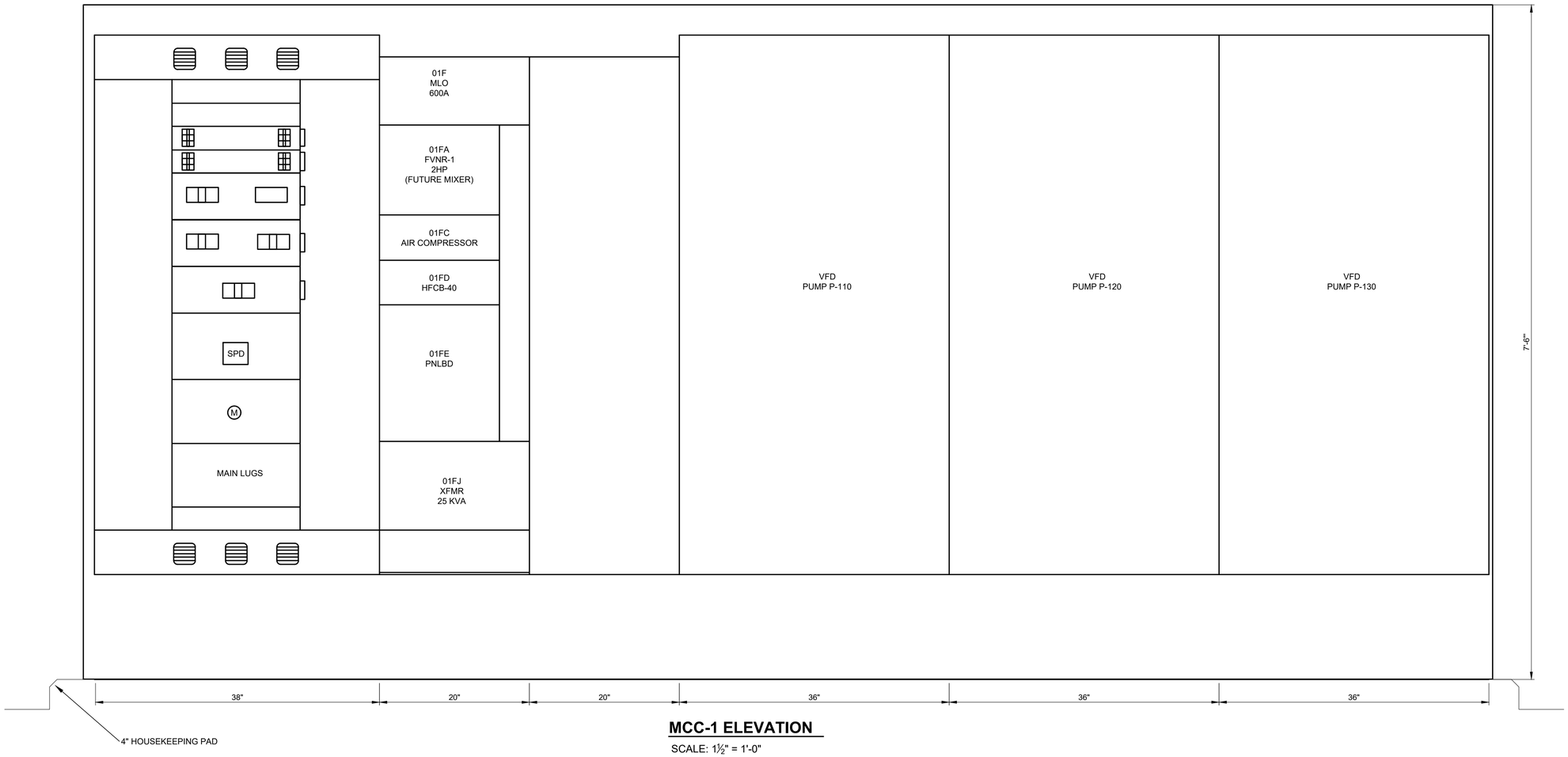
MIKEMARX 6/26/2020 8:00 AM



MCC-1 ELEVATION

SCALE: 1½" = 1'-0"

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

MIKEMARX 6/29/2020 8:07 AM

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LAWRENCE G. REISINGER
STATE OF WASHINGTON
22589
REGISTERED
PROFESSIONAL ENGINEER

DESIGNED PAR
DRAWN RFB
CHECKED PAR

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

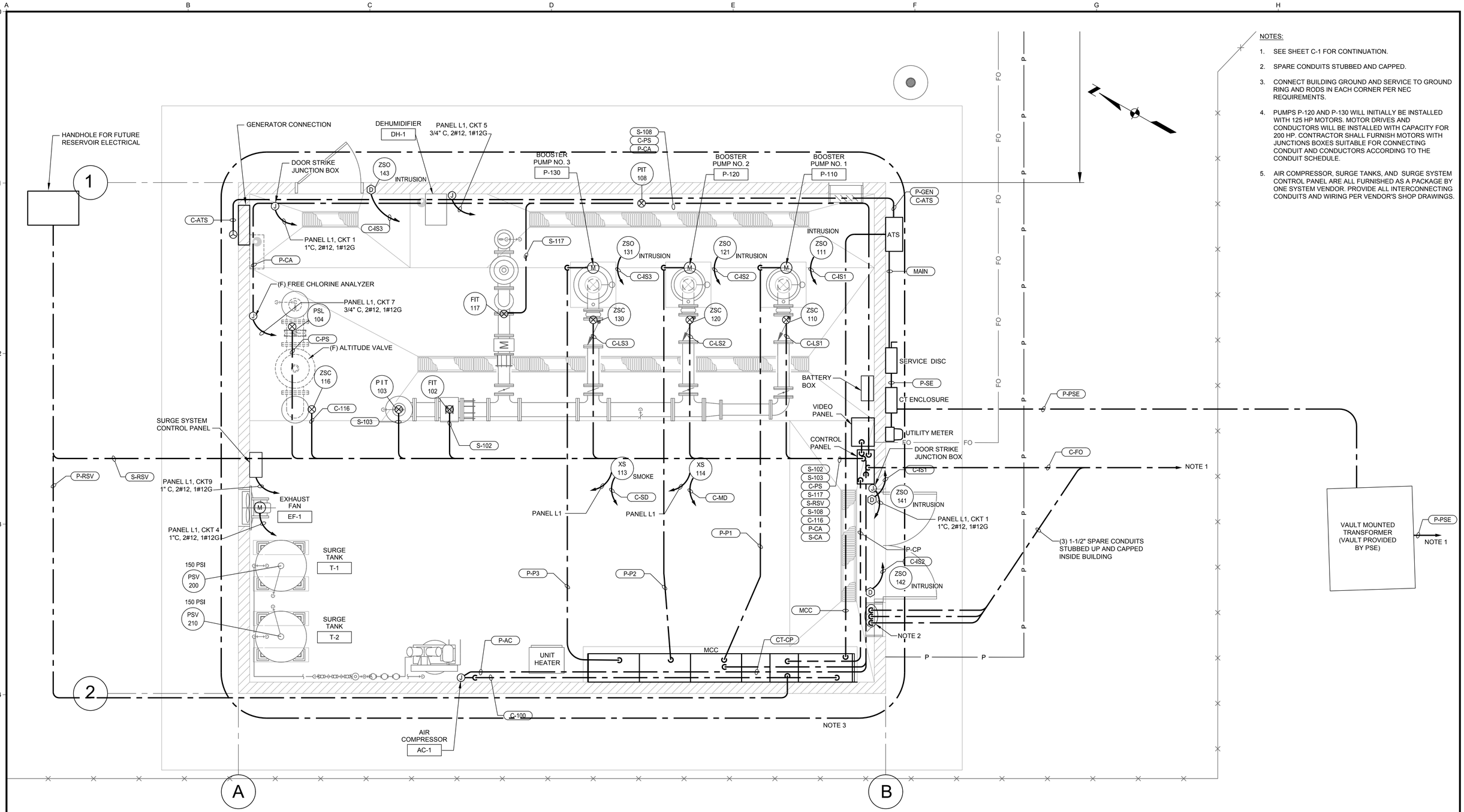
MCC-1 ELEVATION

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E003.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET **E3** 76 OF 83

NOTES:

1. SEE SHEET C-1 FOR CONTINUATION.
2. SPARE CONDUITS STUBBED AND CAPPED.
3. CONNECT BUILDING GROUND AND SERVICE TO GROUND RING AND RODS IN EACH CORNER PER NEC REQUIREMENTS.
4. PUMPS P-120 AND P-130 WILL INITIALLY BE INSTALLED WITH 125 HP MOTORS. MOTOR DRIVES AND CONDUCTORS WILL BE INSTALLED WITH CAPACITY FOR 200 HP. CONTRACTOR SHALL FURNISH MOTORS WITH JUNCTIONS BOXES SUITABLE FOR CONNECTING CONDUIT AND CONDUCTORS ACCORDING TO THE CONDUIT SCHEDULE.
5. AIR COMPRESSOR, SURGE TANKS, AND SURGE SYSTEM CONTROL PANEL ARE ALL FURNISHED AS A PACKAGE BY ONE SYSTEM VENDOR. PROVIDE ALL INTERCONNECTING CONDUITS AND WIRING PER VENDOR'S SHOP DRAWINGS.



PLAN

0 2 4

3/8"=1'-0"

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES

0 1"

0 25mm

IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

LAWRENCE G. REISNER — STATE OF WASHINGTON — 22589 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED LGR

DRAWN RFB/JL

CHECKED LGR

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PUMP STATION POWER AND SIGNAL PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E004.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 77 OF 83

E4

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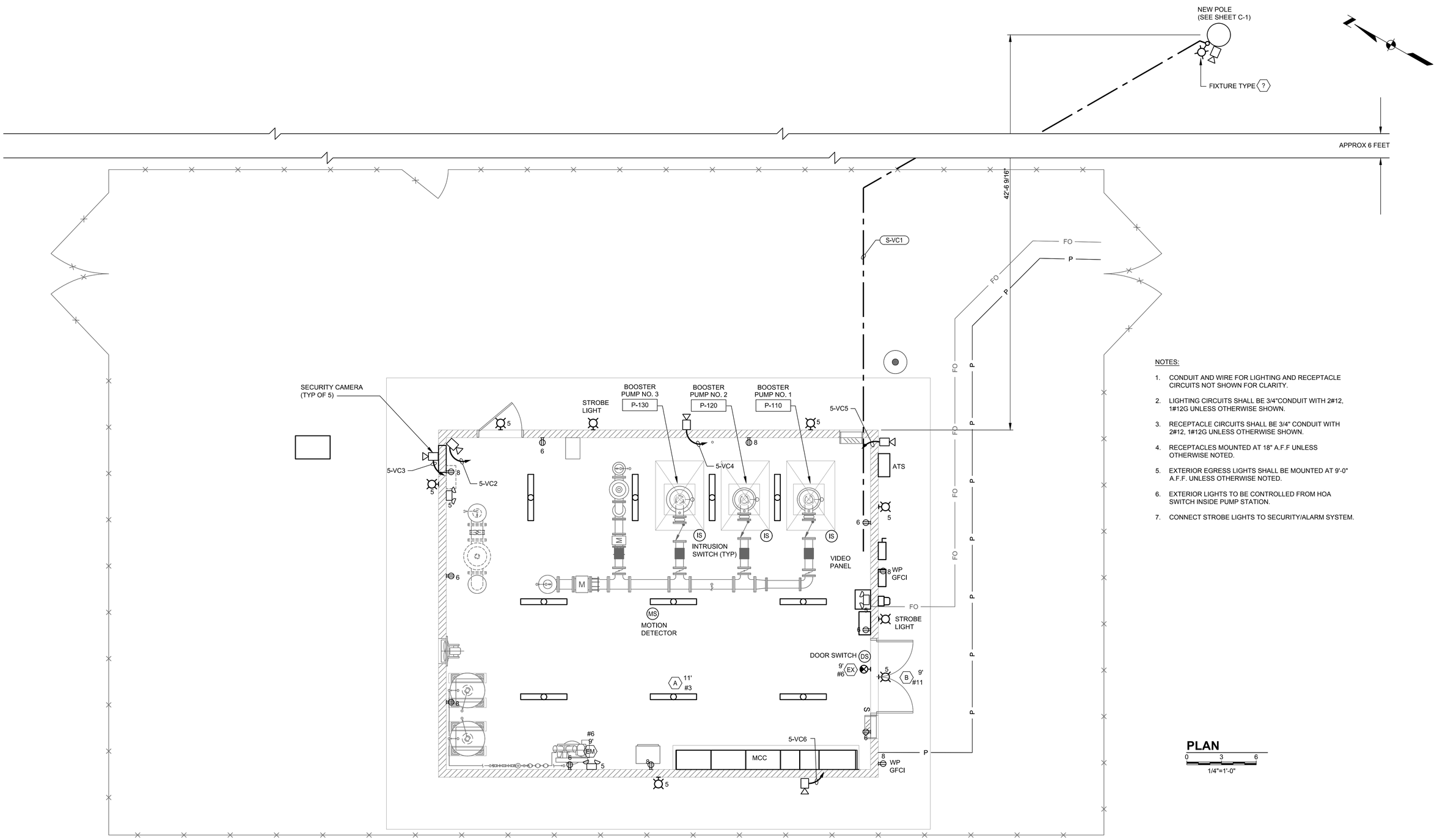

NOTES:

1. CONDUIT AND WIRE FOR LIGHTING AND RECEPTACLE CIRCUITS NOT SHOWN FOR CLARITY.
2. LIGHTING CIRCUITS SHALL BE 3/4"CONDUIT WITH 2#12, 1#12G UNLESS OTHERWISE SHOWN.
3. RECEPTACLE CIRCUITS SHALL BE 3/4" CONDUIT WITH 2#12, 1#12G UNLESS OTHERWISE SHOWN.
4. RECEPTACLES MOUNTED AT 18" A.F.F UNLESS OTHERWISE NOTED.
5. EXTERIOR EGRESS LIGHTS SHALL BE MOUNTED AT 9'-0" A.F.F. UNLESS OTHERWISE NOTED.
6. EXTERIOR LIGHTS TO BE CONTROLLED FROM HOA SWITCH INSIDE PUMP STATION.
7. CONNECT STROBE LIGHTS TO SECURITY/ALARM SYSTEM.

PLAN

0 3 6

1/4"=1'-0"

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LAWRENCE G. REISINGER — STATE OF WASHINGTON — 22589 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED LGR

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CHECKED LGR

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PUMP STATION LIGHTING AND VIDEO PLAN

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E005.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET **E5** 78 OF 83

CONDUIT AND WIRE SCHEDULE

NUMBER	FROM	TO	SIZE (")	POWER	CONTROL	SIGNAL	COMMENTS
	AREA/GROUP						
P-PSE	PRIMARY CABLES	TRANSFORMER	BY PSE	BY PSE			FURNISHED BY PSE
P-SL	TRANSFORMER	POWER METERING ENCLOSURE	3X3"	3X 3-400 KCM, 1- #2N, 1-#2/0G			
P-SE	POWER METERING ENCLOSURE	MAIN (SUSE) CIRCUIT BREAKER	3X3"	3X 3-400 KCM, 1- #2N, 1-#2/0G			
P-MAIN	MAIN (SUSE) CIRCUIT BREAKER	AUTOMATIC TRANSFER SWITCH	3X3"	3X 3-400 KCM, 1- #2N, 1-#2/0G			
P-GEN	GENERATOR TERMINATION BOX	AUTOMATIC TRANSFER SWITCH	3X3"	3X 3-400 KCM, 1- #2N, 1-#2/0G			
G-GEC	GROUND NETWORK	MAIN (SUSE) CIRCUIT BREAKER	BARE	1-#2/0			
P-SB	AUTOMATIC TRANSFER SWITCH	SWITCHBOARD	3X2-1/2"	3X 3-400 KCM, 1- #2N, 1-#2/0G			
P-V1	SWITCHBOARD	VFD P-110	3"	3-350 KCM, 1- #2N, 1-#3G			
P-V2	SWITCHBOARD	VFD P-120	3"	3-350 KCM, 1- #2N, 1-#3G			
P-V3	SWITCHBOARD	VFD P-130	3"	3-350 KCM, 1- #2N, 1-#3G			
P-V4	SWITCHBOARD	UNIT HEATER	¾"	2-#12, 1-#12G			
P-MCC	SWITCHBOARD	MOTOR CONTROL CENTER	2X3"	2X 3-#350 KCM, 1-#1G			
P-P1	VFD P-110	PUMP P-110	3"	3-350 KCM, 1- #2N, 1-#3G	2-#14		
P-P2	VFD P-120	PUMP P-120	3"	3-350 KCM, 1- #2N, 1-#3G	2-#14		
P-P3	VFD P-130	PUMP P-130	3"	3-350 KCM, 1- #2N, 1-#3G	2-#14		
P-AC	MOTOR CONTROL CENTER	AIR COMPRESSOR	1"	3-#12, 1-#12N, 1-#12G			
P-CP	MOTOR CONTROL CENTER (PANEL)	CONTROL PANEL	¾"	2-#12, 1-#12G			
P-VCP	MOTOR CONTROL CENTER (PANEL)	VIDEO CONTROL PANEL	¾"	2-#12, 1-#12G			
P-MD	MOTOR CONTROL CENTER (PANEL)	MOTION DETECTOR, XS-114	¾"	2-#12, 1-#12G			
P-SD	MOTOR CONTROL CENTER (PANEL)	SMOKE DETECTOR, XS-113	¾"	2-#12, 1-#12G			
P-ST	MOTOR CONTROL CENTER (PANEL)	SURGE TANK CP	¾"	2-#12, 1-#12G			
P-CA	CONTROL PANEL	CHLORINE ANALYZER (FUTURE)	¾"	2-#12, 1-#12G			FUTURE
P-RSV	MOTOR CONTROL CENTER	HANDHOLE FOR (F) RESERVIOR	2-2"	TBD			FUTURE
CT-CP	MCC	CONTROL PANEL	2"			PER S&B	FROM VFDS TO PLC, PROVIDED BY INTGRATOR
C-IS1	CONTROL PANEL	ROOF INTRUSION SWITCH 1, ZSO-111	¾"		2-#14		
C-IS2	CONTROL PANEL	ROOF INTRUSION SWITCH 2, ZSO-121	¾"		2-#14		
C-IS3	CONTROL PANEL	ROOF INTRUSION SWITCH 3, ZSO-131	¾"		2-#14		
C-IS1	CONTROL PANEL	DOOR INTRUSION SWITCH 1, ZSO-141	¾"		2-#14		
C-IS2	CONTROL PANEL	DOOR INTRUSION SWITCH 2, ZSO-142	¾"		2-#14		
C-IS3	CONTROL PANEL	DOOR INTRUSION SWITCH 1, ZSO-143					
C-MD	CONTROL PANEL	MOTION DETECTOR, XS-114	¾"		2-#14		
C-SD	CONTROL PANEL	SMOKE DETECTOR, XS-113	¾"		2-#14		
C-104	CONTROL PANEL	PRESSURE SWITCH, PSL-104	¾"				FUTURE
C-LS1	CONTROL PANEL	CHECK VALVE LS PUMP 1, ZSC-110	¾"		2-#14		
C-LS2	CONTROL PANEL	CHECK VALVE LS PUMP 2, ZSC-120	¾"		2-#14		
C-LS3	CONTROL PANEL	CHECK VALVE LS PUMP 3, ZSC-130	¾"		2-#14		
C-PS	CONTROL PANEL	PS-104	¾"		2-#14		
C-116	CONTROL PANEL	ZSC-116	¾"				FUTURE
C-GEN	CONTROL PANEL	AUTOMATIC TRANSFER SWITCH	1"		8-#14		
C-ATS	GENERATOR RECEPTACLE	AUTOMATIC TRANSFER SWITCH	1"		8-#14		
S-102	CONTROL PANEL	MAGNETIC FLOWMETER, FIT-102	1"		2-#14	#16 TSP	24 VDC POWER
S-103	CONTROL PANEL	PRESSURE TRANSMITTER, PIT-103	¾"			#16 TSP	
S-108	CONTROL PANEL	PRESSURE TRANSMITTER, PIT-108	¾"			#16 TSP	
S-116	CONTROL PANEL	SPILLBACK VALVE POSITION ZT-116	¾"			#16 TSP	
S-117	CONTROL PANEL	MAGNETIC FLOWMETER, FIT-117	1"		2-#14	#16 TSP	24 VDC POWER
S-CA	CONTROL PANEL	CHLORINE ANALYZER (FUTURE)	¾"			3-#16 TSP	FUTURE
S-RSV	CONTROL PANEL	HANDHOLE FOR (F) RESERVIOR	2-2"	TBD			FUTURE
S-FO	CONTROL PANEL	PLANT SHOPS VIA HANDHOLES	2"			12-STRAND FIBER	COORDINATE WITH S&B; SEE CIVIL DRAWINGS
S-VFO	CONTROL PANEL	VIDEO PANEL	1"			FIBER	COORDINATE WITH S&B
S-VC1	CAMERA 1	VIDEO PANEL	¾"			CAT5	POE
S-VC2	CAMERA 2	VIDEO PANEL	¾"			CAT5	POE
S-VC3	CAMERA 3	VIDEO PANEL	¾"			CAT5	POE
S-VC4	CAMERA 4	VIDEO PANEL	¾"			CAT5	POE
S-VC5	CAMERA 5	VIDEO PANEL	¾"			CAT5	POE

PANEL L1

240	/120 VOLTS, SINGLE PHASE, 3 WIRE	BUS: 100A		AIC: 10KA		MAIN: 100A/2P	MOUNTING: MCC		
CKT. NO.	DESCRIPTION	CONNECTED KVA A	CONNECTED KVA B	TRIP AMPS/ POLES	CKT. NO.	DESCRIPTION	CONNECTED KVA A	CONNECTED KVA B	TRIP AMPS/ POLES
1	VIDEO PANEL	0.4		20/1	2	CONTROL PANEL	1.0		20/1
3	DEHUMIDIFIER DH-1		0.5	20/1	4	EXHAUST FAN EF-1		0.5	20/1
5	LIGHTS	0.3		20/1	6	RECEPTACLES	1.1		20/1
7	CHLORINE ANALYZER (FUTURE)		0.0	20/1	8	RECEPTACLES		1.1	20/1
9	SURGE SYSTEM CONTROL PANEL	0.3		20/1	10	SPARE	0.0		20/1
11	SPARE		0.0	20/1	12	SPARE		0.0	20/1
13	SPACE	0.0		-	14	SPACE	0.0		-
15	SPACE		0.0	-	16	SPACE		0.0	-
17	SPACE	0.0		-	18	SPACE	0.0		-
19	SPACE		0.0	-	20	SPACE		0.0	-
21	SPACE	0.0		-	22	SPACE	0.0		-
23	SPACE		0.0	-	24	SPACE		0.0	-
PHASE SUBTOTALS (KVA):		1.0	0.5				2.1	1.6	
PHASE TOTALS (KVA):							3.1	2.1	
TOTAL KVA:								5.2	KVA
TOTAL AMPERES:								9	A

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	WATTS/FIXTURE	MANUFACTURER	MOUNTING	SYMBOL
A AFF CKT	WET AREA SURFACE CEILING/SUSPENDED LED FIXTURE AND 12' CONNECTION CORD SET AND AIRCRAFT SUSPENSION CABLE SET.	LED	61	LITHONIA #FEM4 LED 4L 35 IAMCD CS89L 12 MHHK 120 OR EQUAL	SUSPENDED	
B AFF CKT	WALL PACK, LED WITH INTEGRAL PHOTOELECTRIC CELL AND TAMPER PROOF SCREWS.	LED	45	LITHONIA #TWP LED 20C 700 40K T3M 120 PE TP DBXD OR EQUAL	SURFACE WALL	
EM AFF CKT	EMERGENCY LIGHT, NICKLE-CADMIUM BATTERY OPERATED TWO 12V, 1.8W LED LAMPS, FUSED 120V INPUT W/ TEST SWITCH	(2) 1.8W LED	3.6	LITHONIA #EU2 LED M12 OR EQUAL	SURFACE WALL	
EX AFF CKT	LED EXIT LIGHT, SINGLE FACE, GREEN LETTERING WITH 90 MIN EMERGENCY NI-CAD BATTERY	LED	3	LITHONIA #ECBG LED M6 OR EQUAL	SURFACE WALL	

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
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LAWRENCE G. REISINGER — STATE OF WASHINGTON — 22589 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED LGR
DRAWN RFB
CHECKED LGR

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

CONDUIT AND WIRE SCHEDULE AND PANEL SCHEDULE

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E006.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET 79 OF 83
E6

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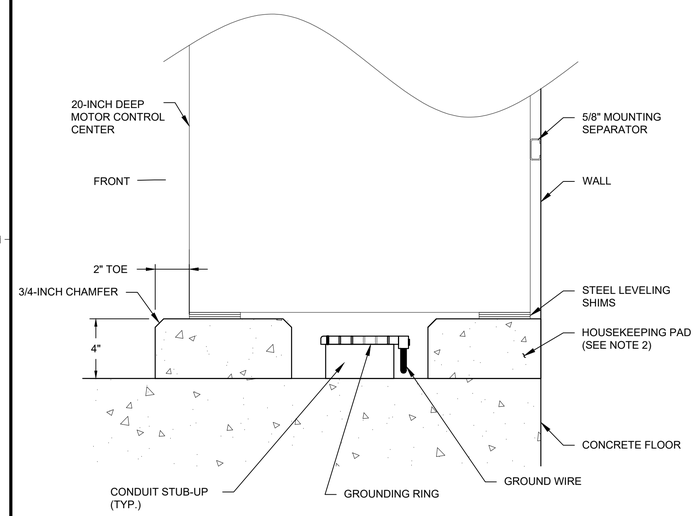
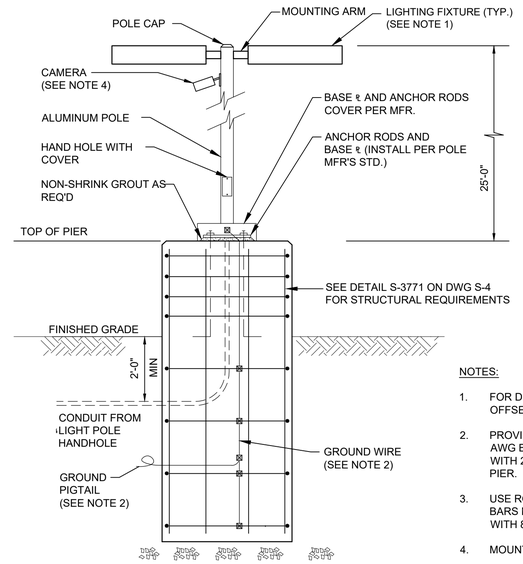


NOTES:

1. FOR MCCS DEEPER THAN 20 INCHES, EXTEND THE WIDTH OF THE FRONT CURB SUCH THAT THE 2-INCH TOE IS MAINTAINED. ALIGN THE MOUNTING CHANNEL TO THE EDGE OF THE MCC AS SHOWN.
2. FOR CONCRETE DIMENSIONS AND REINFORCEMENT DETAILS, REFERENCE S-2 STRUCTURAL SHEET.
3. LABEL ALL CONDUIT ENDS.

MCC HOUSEKEEPING PAD 1

NTS



NOTES:

1. FOR DUAL-FIXTURE LIGHT POLES, OFFSET LIGHTS BY 180 DEGREES.
2. PROVIDE CONCRETE PIER WITH #4 AWG BARE COPPER GROUND WIRE WITH 24" EXTENSION FROM SIDE OF PIER.
3. USE ROUND PIER WITH 6 VERTICAL BARS MINIMUM OR SQUARE PIER WITH 8 VERTICAL BARS MINIMUM.
4. MOUNT CAMERAS 21' ABOVE GRADE.

POLE LIGHT 2

NTS

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DESIGNED LGR

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CHECKED LGR

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

STANDARD ELECTRICAL DETAILS

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-E007.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET E7 OF 80 83

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INSTRUMENT SYMBOL IDENTIFIERS

J-3 J-4,J-5
J-1
J-2
J-6

J-1: IDENTIFICATION LETTERS (SEE TABLE BELOW)
J-2: LOOP NUMBER
J-3: VENDOR DESIGNATOR (NOTE 3)
J-4: FUNCTION BLOCK (SEE TABLE BELOW)
J-5: PANEL NUMBER
J-6: HANDSWITCH DESIGNATOR (SEE BELOW)

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL	DAMPER		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE	MOMENTARY			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY	SWITCH		
T	TEMPERATURE			TRANSMIT	
U	MULTI VARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, OR LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

GENERAL INSTRUMENT OR FUNCTION SYMBOLS	FIELD MOUNTED	PRIMARY LOCATION ACCESSIBLE TO OPERATOR	AUXILIARY LOCATION ACCESSIBLE TO OPERATOR	NORMALLY INACCESSIBLE OR BEHIND THE PANEL
DISCRETE INSTRUMENTS	X X	X X	X X	X X
SHARED DISPLAY, SHARED CONTROL	X X	X X	X X	X X
COMPUTER FUNCTION	X X	X X	X X	X X
PROGRAMMABLE LOGIC CONTROL	X X	X X	X X	X X

J-4 FUNCTION BLOCK DESIGNATORS

- SUMMING
- DIFFERENCE
- INTEGRAL
- DERIVATIVE
- MULTIPLYING
- DIVIDING
- CONVERT:
- ROOT EXTRACTION
- SQUARE ROOT
- EXPONENTIAL
- HIGH SELECTING
- LOW SELECTING
- BIAS
- NONLINEAR OR UNSPECIFIED FUNCTION

* E - VOLTAGE
I - CURRENT
P - PNEUMATIC
A - ANALOG
B - BINARY
H - HYDRAULIC
O - ELECTROMAGNETIC, SONIC
R - RESISTANCE (ELECT)
D - DIGITAL

J-6 HANDSWITCH DESIGNATORS

HOA	HAND-OFF-AUTO	LR	LOCAL-REMOTE
HOR	HAND-OFF-REMOTE	OC	OPEN-CLOSE
F-R	FORWARD-REVERSE	OCA	OPEN-CLOSE-AUTO
1-0	ON-OFF	A/M	AUTO-MANUAL

INSTRUMENT SERVICES

AS — INSTRUMENT AIR SUPPLY (NOTE 4)
ES — 120 VAC ELECTRICAL SERVICE (DIFFERENT VOLTAGES ARE SPECIFICALLY NOTED)

PLC INPUT/OUTPUT

- DISCRETE INPUT
- ANALOG INPUT
- DISCRETE OUTPUT
- ANALOG OUTPUT

FLOW PRIMARY ELEMENTS

- ORIFICE PLATE
- SINGLE PORT PITOT TUBE OR PITOT-VENTURI TUBE
- VENTURI TUBE
- AVERAGING PITOT TUBE
- FLUME
- WEIR
- TURBINE OR PROPELLER-TYPE PRIMARY ELEMENT
- THERMAL MASS FLOWMETER
- POSITIVE DISPLACEMENT TYPE FLOW TOTALIZING INDICATOR
- VORTEX SENSOR
- TARGET TYPE SENSOR
- FLOW NOZZLE
- MAGNETIC FLOWMETER
- SONIC FLOWMETER
- ROTAMETER
- ROTAMETER WITH INTEGRAL VALVE

LINES

- MAIN PROCESS
- SECONDARY PROCESS
- TOP / MIDDLE / BOTTOM — EQUIPMENT IDENTIFICATION
- NUMBER — EQUIPMENT ASSET NUMBER
- TITLE1 / TITLE2 — FROM/TO SYSTEM
- LTR / SHT — REFERENCES ENTERING/LEAVING SHEET
- SYSTEM — SYSTEM
- TITLE1 / TITLE2 — TO/FROM SYSTEM
- LTR / SHT — REFERENCES ENTERING/LEAVING SHEET
- SYSTEM — SYSTEM
- 24" BW — PIPE SYSTEM; PIPE SIZE IN INCHES
- DOUBLE CONTAINMENT
- ELECTRICAL SIGNAL
- SOFTWARE OR DATALINK
- PNEUMATIC
- HYDRAULIC
- CAPILLARY TUBE
- ELECTROMAGNETIC OR SONIC (GUIDED)

MECHANICAL — OR — ELECTRICAL
CONNECTED
NOT CONNECTED

VALVES

- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- CHECK VALVE
- DUCKBILL CHECK VALVE
- PINCH VALVE
- DIAPHRAGM VALVE
- BUTTERFLY VALVE
- BALL VALVE
- NEEDLE VALVE
- PLUG (COCK)
- PRESSURE REDUCING REGULATING VALVE, SELF-CONTAINED
- BACK PRESSURE REGULATING VALVE, SELF-CONTAINED
- PRESSURE REDUCING REGULATOR WITH EXTERNAL PRESSURE TAP
- 3-WAY VALVE
- 4-WAY VALVE
- ANGLE VALVE
- PRESSURE RELIEF VALVE

* FC = FAIL CLOSED
FO = FAIL OPEN
LC = LOCKED CLOSED
LO = LOCKED OPEN

SHADING INDICATES PORT TO BE CLOSED DURING NORMAL OPERATION. DOT INDICATES PORT TO BE CLOSED DURING ALTERNATE OPERATION.

VALVE OPERATORS

- DIAPHRAGM
- DIAPHRAGM PRESSURE BALANCED
- MOTOR
- CYLINDER OPERATOR
- SOLENOID
- SOLENOID VALVE

TYPICAL CONNECTION

- IN-LINE DEVICE
- DIRECT CONNECTION TO PROCESS
- TEMPERATURE ELEMENT WITH WELL
- RADIATION OR SONIC SENSING
- FILLED SYSTEM, DIAPHRAGM SEAL CONNECTION

MISCELLANEOUS

- FLANGE
- UNION
- Y STRAINER
- FLOW STRAIGHTENING VANE
- TEE
- SCREWED CAP
- WELDED CAP
- BLIND FLANGE
- REDUCER
- HB — HOSE BIBB CONNECTION
- CHEMICAL PIPING FLEXIBLE CONNECTION/ FLEXIBLE HOSE
- FLEXIBLE TANK CONNECTION
- BRAIDED METAL HOSE
- METAL BELLOWS
- RUBBER EXPANSION JOINT
- FLEXIBLE COUPLING
- FLANGED COUPLING ADAPTER
- SLUICE GATE OR SLIDE GATE
- DRAIN
- DIAPHRAGM SEAL
- RUPTURE DISK, PRESSURE
- RUPTURE DISK, VACUUM
- PURGE
- THERMOMETER WELL
- CALIBRATION CYLINDER
- PULSATION DAMPER
- AIR RELIEF VALVE
- AIR RELEASE
- LEVEL PROBE
- CHEMICAL DIFFUSER
- ORIFICE PLATE OR PLATE TYPE STATIC MIXER
- STATIC MIXER
- EDUCTOR/INJECTOR
- INTERLOCK. NUMBER IS THE CROSS REFERENCE TO A SPECIFIC ELEMENTARY DIAGRAM OR TO A SPECIFIC CONTROL STRATEGY DESCRIBED IN THE SPECS
- * AV - AIR VALVE; F - FILTER; T - TRAP; FH - FIRE HYDRANT
- WATER LINE
- GRAVITY FLOW

EQUIPMENT

- MIXER
- VERTICAL TURBINE PUMP
- SUBMERSIBLE PUMP
- PUMP BLOWER
- PUMP
- METERING PUMP
- PUMP PROGRESSIVE CAVITY
- ROTARY PUMP
- COMPRESSOR
- PERISTALTIC PUMP
- VERTICAL TURBINE PUMP HEAD
- VERTICAL TURBINE PUMP T-HEAD
- VERTICAL TURBINE PUMP CAN
- VERTICAL TURBINE PUMP INTAKE

NOTES:

1. THIS IS A GENERALIZED LEGEND SHEET.
2. SEE ALSO ISA S5.1, S5.3 AND S7.3.
3. INSTRUMENTS MARKED WITH AN ASTERISK ON PID ARE FURNISHED WITH THE EQUIPMENT.
4. REFER TO ISA RP7.7 FOR INSTRUMENT AIR QUALITY STANDARDS.

USE OF DOCUMENTS

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NO.	REVISION	DATE	BY

SCALES
0 — 1"
0 — 25mm
IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

LAWRENCE G. REISINGER — STATE OF WASHINGTON — 32580 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH
DRAWN LMM
CHECKED

CITY OF ISSAQUAH
ISSAQUAH, WASHINGTON
SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants
FEDERAL WAY, WASHINGTON

PROCESS AND INSTRUMENTATION DIAGRAM BOOSTER PUMP STATION LEGEND

90% SUBMITTAL (REVISED 7/1/2020)

FILE NAME 139700500-I001.DWG
JOB NO. 1397005*00
DATE JUNE 2020
SHEET I 1 OF 83

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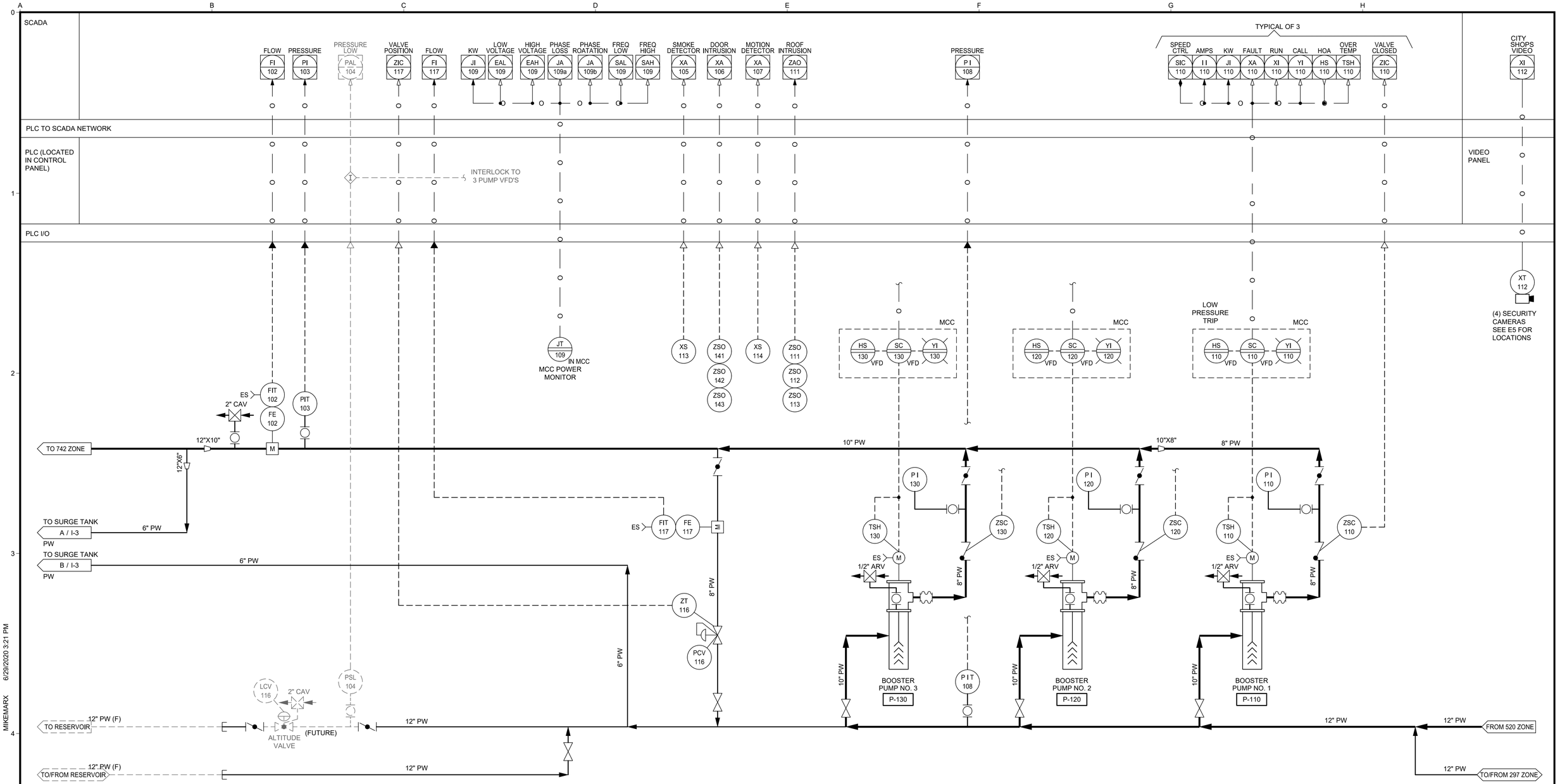

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SCALES

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CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PROCESS AND INSTRUMENTATION DIAGRAM
BOOSTER PUMP STATION

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FILE NAME 139700500-I002.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 82 OF 83

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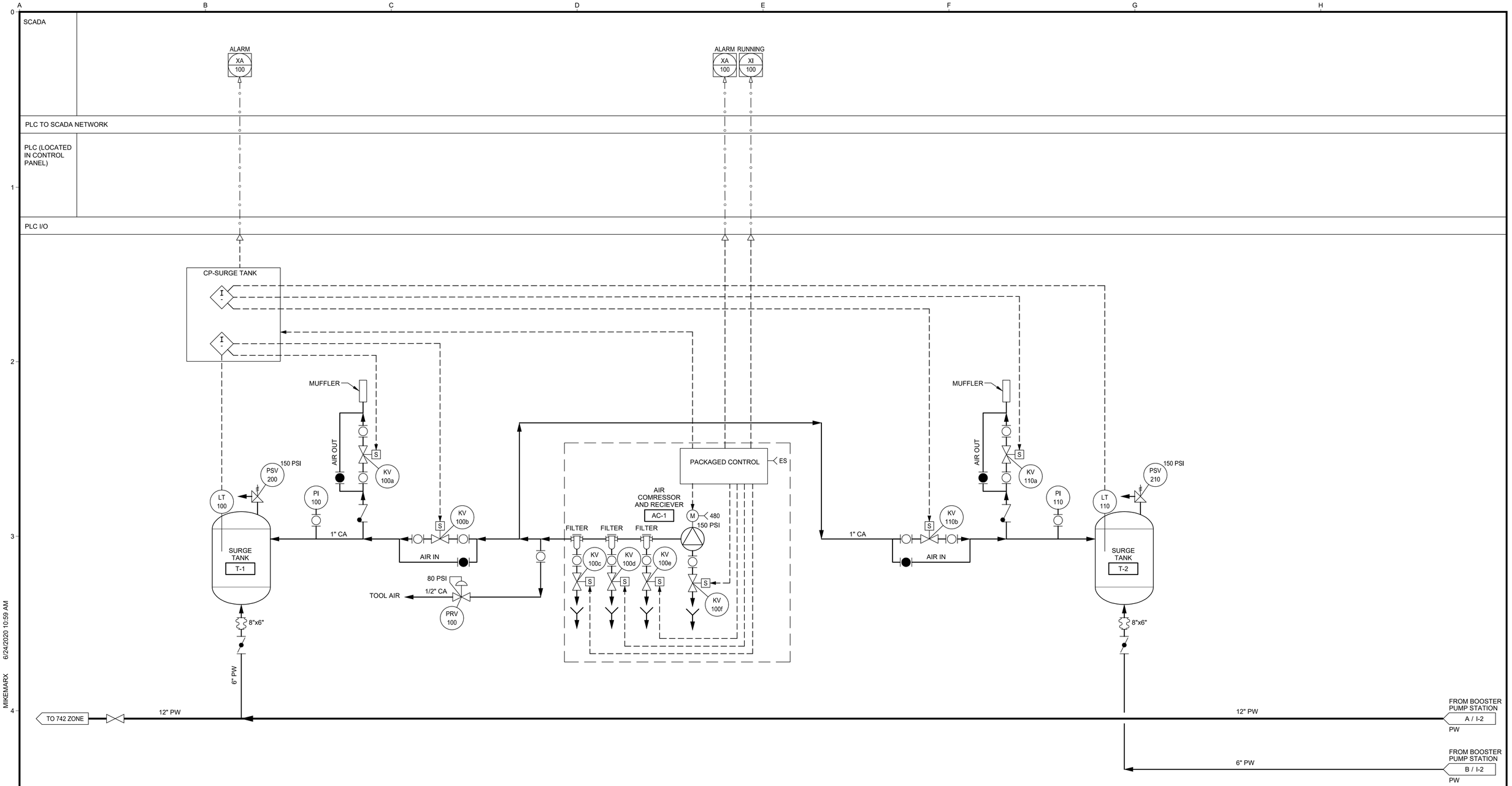

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SCALES

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LAWRENCE G. REISINGER — STATE OF WASHINGTON — 22580 — REGISTERED PROFESSIONAL ENGINEER

DESIGNED SGH

DRAWN RFB

CHECKED JMF

CITY OF ISSAQUAH

ISSAQUAH, WASHINGTON

SOUTH SPAR BOOSTER PUMP STATION

Kennedy/Jenks Consultants

FEDERAL WAY, WASHINGTON

PROCESS AND INSTRUMENTATION DIAGRAM
AIR COMPRESSOR AND SURGE TANK

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FILE NAME 139700500-I003.DWG

JOB NO. 1397005*00

DATE JUNE 2020

SHEET 83 OF 83

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