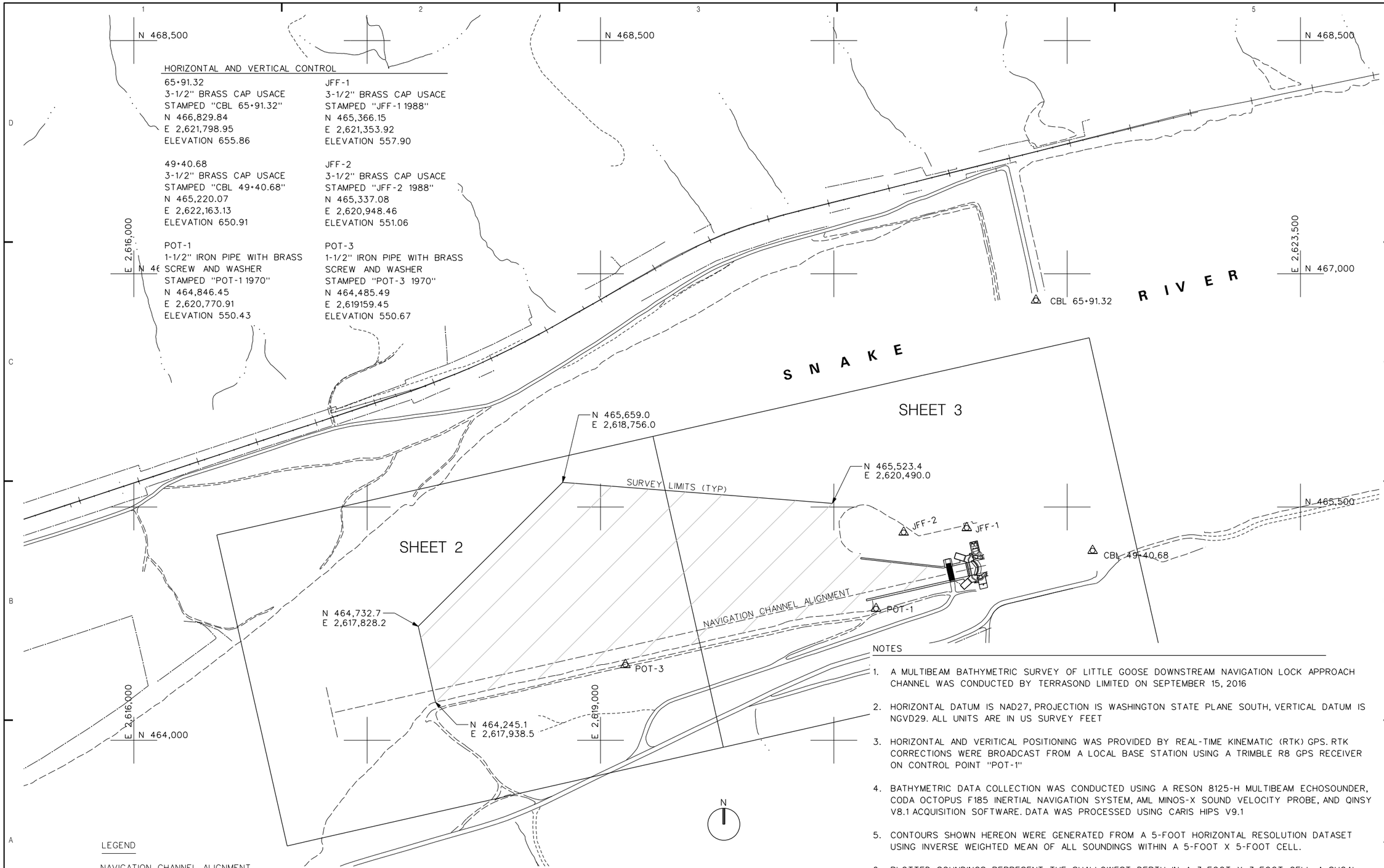

HORIZONTAL AND VERTICAL CONTROL

65+91.32
3-1/2" BRASS CAP USACE
STAMPED "CBL 65+91.32"
N 466,829.84
E 2,621,798.95
ELEVATION 655.86

49+40.68
3-1/2" BRASS CAP USACE
STAMPED "CBL 49+40.68"
N 465,220.07
E 2,622,163.13
ELEVATION 650.91

POT-1
1-1/2" IRON PIPE WITH BRASS
SCREW AND WASHER
STAMPED "POT-1 1970"
N 464,846.45
E 2,620,770.91
ELEVATION 550.43

JFF-1
3-1/2" BRASS CAP USACE
STAMPED "JFF-1 1988"
N 465,366.15
E 2,621,353.92
ELEVATION 557.90

JFF-2
3-1/2" BRASS CAP USACE
STAMPED "JFF-2 1988"
N 465,337.08
E 2,620,948.46
ELEVATION 551.06

POT-3
1-1/2" IRON PIPE WITH BRASS
SCREW AND WASHER
STAMPED "POT-3 1970"
N 464,485.49
E 2,619159.45
ELEVATION 550.67

NOTES

1. A MULTIBEAM BATHYMETRIC SURVEY OF LITTLE GOOSE DOWNSTREAM NAVIGATION LOCK APPROACH CHANNEL WAS CONDUCTED BY TERRASOND LIMITED ON SEPTEMBER 15, 2016
2. HORIZONTAL DATUM IS NAD27, PROJECTION IS WASHINGTON STATE PLANE SOUTH, VERTICAL DATUM IS NGVD29. ALL UNITS ARE IN US SURVEY FEET
3. HORIZONTAL AND VERITICAL POSITIONING WAS PROVIDED BY REAL-TIME KINEMATIC (RTK) GPS. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION USING A TRIMBLE R8 GPS RECEIVER ON CONTROL POINT "POT-1"
4. BATHYMETRIC DATA COLLECTION WAS CONDUCTED USING A RESON 8125-H MULTIBEAM ECHOSOUNDER, CODA OCTOPUS F185 INERTIAL NAVIGATION SYSTEM, AML MINOS-X SOUND VELOCITY PROBE, AND QINSY V8.1 ACQUISITION SOFTWARE. DATA WAS PROCESSED USING CARIS HIPS V9.1
5. CONTOURS SHOWN HEREON WERE GENERATED FROM A 5-FOOT HORIZONTAL RESOLUTION DATASET USING INVERSE WEIGHTED MEAN OF ALL SOUNDINGS WITHIN A 5-FOOT X 5-FOOT CELL.
6. PLOTTED SOUNDINGS REPRESENT THE SHALLOWEST DEPTH IN A 3-FOOT X 3-FOOT CELL. A SHOAL BIASED SORT OF THE SOUNDINGS WAS PERFORMED USING A 50 FOOT SORT RADIUS.
7. THIS MAP REPRESENTS CONDITIONS AT THE TIME OF THE SURVEY
8. CHANNEL DEPTH IS DESIGNED AT 14 FEET BELOW MINIMUM OPERATING POOL ELEVATION OF 537 FEET. THE DATA REPRESENTED IN RED INDICATES MATERIAL BUILD-UP ABOVE THE DESIGNED CHANNEL DEPTH.

LEGEND

NAVIGATION CHANNEL ALIGNMENT

SUVEY LIMITS OF LITTLE GOOSE D/S NAV LOCK APPROACH

SURVEY CONTROL

LITTLE GOOSE D/S NAVIGATION LOCK APPROACH – SITE PLAN

0' 300' 600'

US Army Corps of Engineers
Walla Walla District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

DATE: 21 OCTOBER 2016
TASK ORDER NO. 02
CONTRACT NO. W912EF-16-D-0004
DESIGNED BY: MEYER
DWN. BY: L. LINDBLAD
CHKED. BY: K. MILDON
SUBMITTED BY:
FILE NO.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

TERRASOND
PRECISION GEOSPATIAL SOLUTIONS
WWW.TERRASONDLTD.COM

LOWER MONUMENTAL LOCK AND DAM
SNAKE RIVER, OREGON, WASHINGTON AND IDAHO
W912EF-16-D-0004, T.O. NO. 02
LITTLE GOOSE DOWNSTREAM
NAVIGATION LOCK APP CHANNEL
MULTIBEAM BATHYMETRIC SURVEYS

Plate number:
V-001

Sheet 1 of 3

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BORDER SIZE IS ANSI D

DATE AND TIME PLOTTED: 11/15/2016

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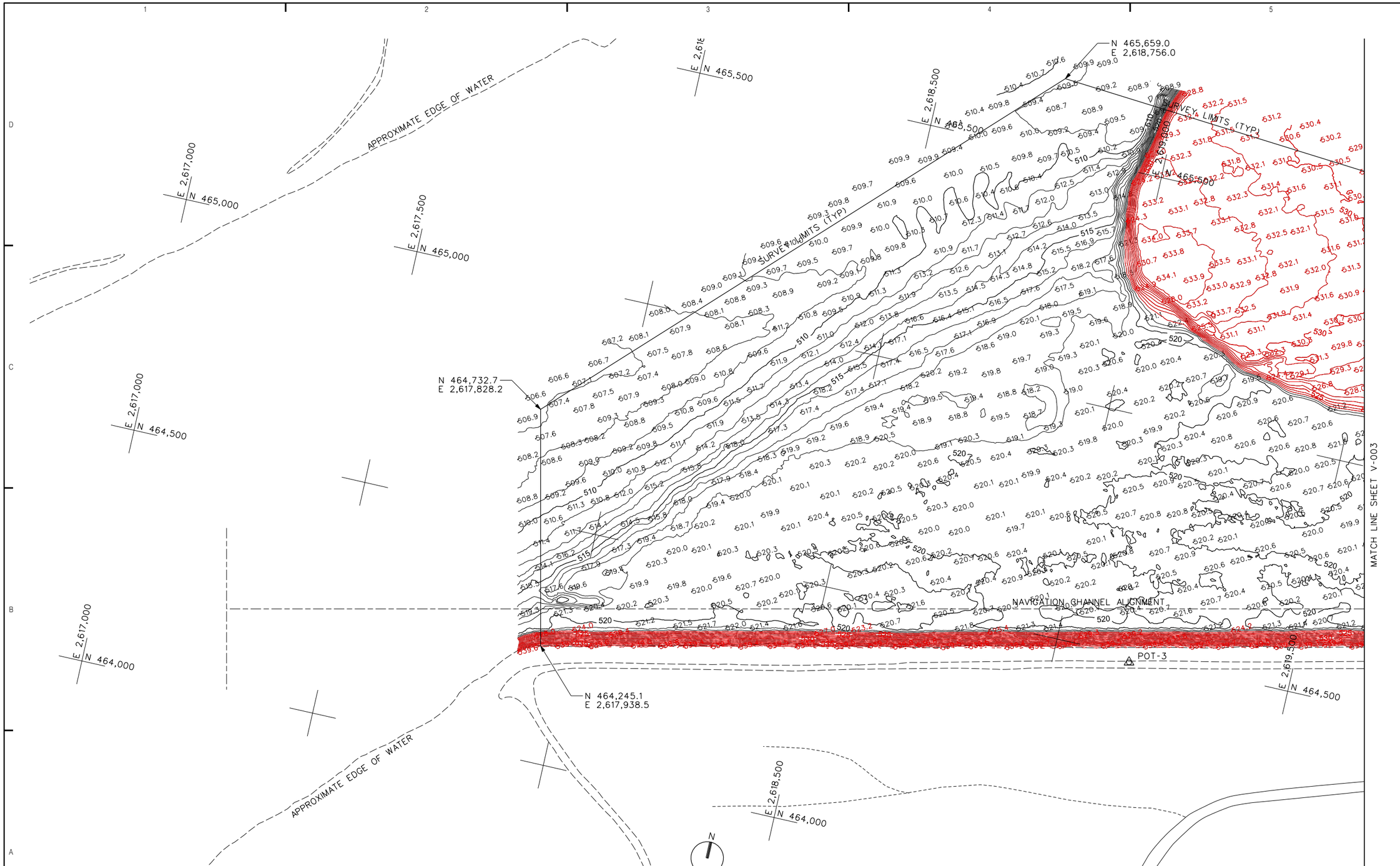

LITTLE GOOSE DS NAV LOCK APPROACH

100 50 0 100 150 200
SCALE IN FEET

NOTES:

1. HORIZONTAL DATUM IS NAD27. PROJECTION IS WASHINGTON STATE PLANE SOUTH. VERTICAL DATUM IS NGVD29. ALL UNITS ARE IN U.S. SURVEY FEET.
2. CHANNEL DEPTH IS DESIGNED AT 14 FEET BELOW MINIMUM OPERATING POOL ELEVATION OF 537 FEET. THE DATA REPRESENTED IN RED INDICATES MATERIAL BUILD-UP ABOVE THE DESIGNED CHANNEL DEPTH.

US Army Corps of Engineers
Walla Walla District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

DESIGNED BY: MEIGER
DWN BY: L. LINDBLAD
CHKED BY: K. MILDON
SUBMITTED BY:
DATE: 21 OCTOBER 2016
TASK ORDER NO. 02
CONTRACT NO. W912EF-16-D-0004
FILE NO.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

TERRASOND
PRECISION GEOSPATIAL SOLUTIONS
8815 CONSTITUTION BLVD, FORT WAYNE, IN 46804
WWW.TERRASOND.COM 260.490.8450

LOWER MONUMENTAL LOCK AND DAM
SNAKE RIVER, OREGON, WASHINGTON, AND IDAHO
W912EF-16-D-0004, T.O. NO. 02
LITTLE GOOSE DOWNSTREAM
NAVIGATION LOCK APP CHANNEL
MULTIBEAM BATHYMETRIC SURVEYS

Plate number:
V-002

Sheet 2 of 3

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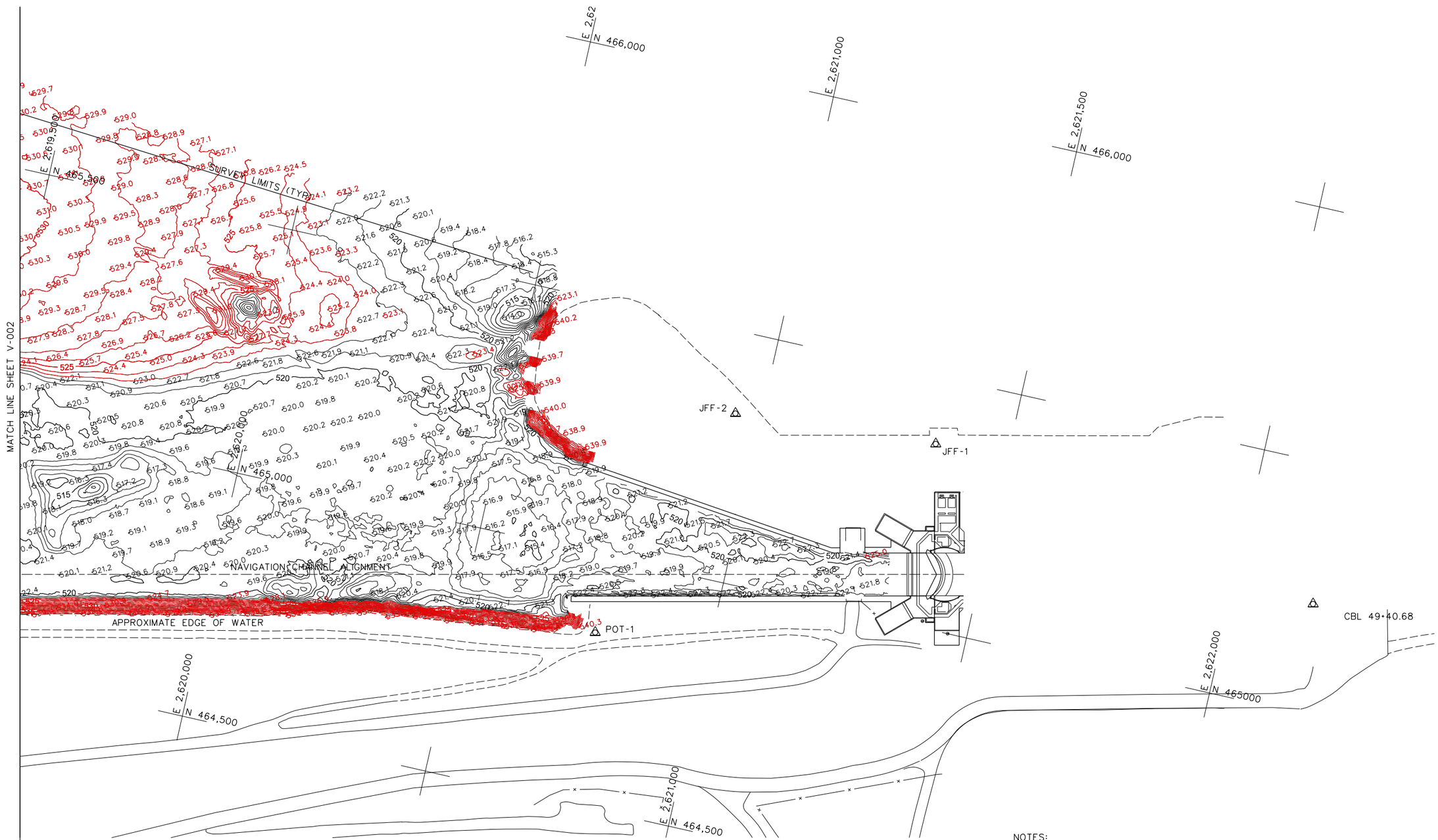
DATE AND TIME PLOTTED:11/15/2016

DESIGN FILE:L:\Z_SURVEYS\00HYDRO_CONDITION\2016 HYDRO CONTION\LMA_LGA_DS_NAV_LOCK_APPR\OPERATIONS\LGA-



LITTLE GOOSE DS NAV
LOCK APPROACH

100 50 0 100 150 200
SCALE IN FEET

NOTES:

1. HORIZONTAL DATUM IS NAD27. PROJECTION IS WASHINGTON STATE PLANE SOUTH. VERTICAL DATUM IS NGVD29. ALL UNITS ARE IN U.S. SURVEY FEET.
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US Army Corps of Engineers
Walla Walla District

Symbol	Description	Date	Appr.	Symbol	Description	Date	Appr.

DESIGNED BY: MEYER
DWN BY: L LINDBLAD
CHKED BY: K MILDON
SUBMITTED BY:
DATE: 21 OCTOBER 2016
TASK ORDER NO. 02
CONTRACT NO. W912EF-16-D-0004
FILE NO.:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

TERRASOND
PRECISION GEOSPATIAL SOLUTIONS
801 NW 42ND STREET, SUITE 215, SEATTLE, WA 98107
WWW.TERRASOND.COM (206)420-8304

LOWER MONUMENTAL LOCK AND DAM
SNAKE RIVER, OREGON, WASHINGTON AND IDAHO
W912EF-16-D-0004, T.O. NO. 02
LITTLE GOOSE DOWNSTREAM
NAVIGATION LOCK APP CHANNEL
MULTIBEAM BATHYMETRIC SURVEYS

Plate number:
V-003
Sheet 3 of 3

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DATE AND TIME PLOTTED:11/15/2016

DESIGN FILE:L:\Z_SURVEYS\00HYDRO_CONDITION\2016 HYDRO CONTION\LMA_LGA_DS_NAV_LOCK_APPR\OPERATIONS\LGA-