Attachment A

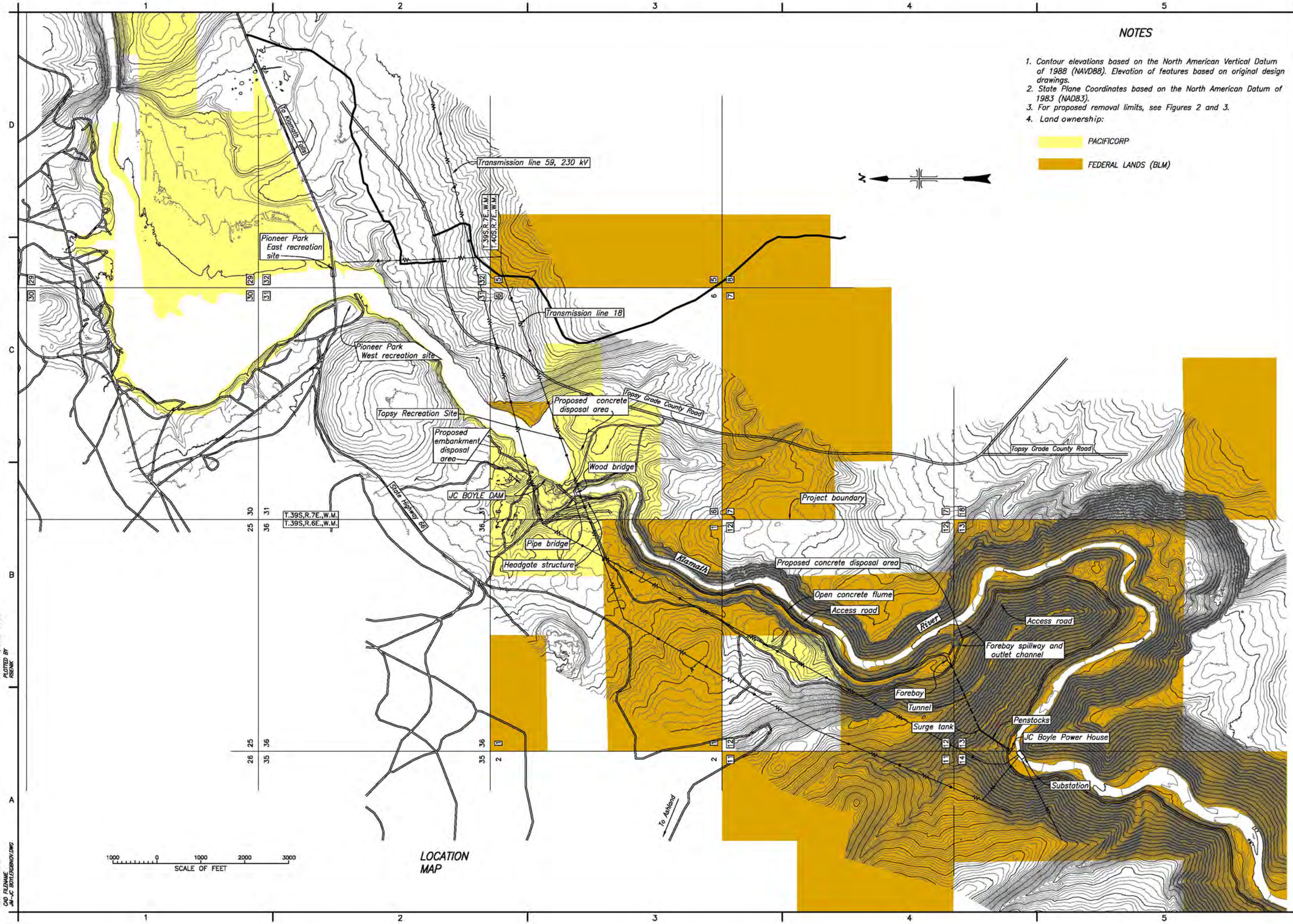
Existing Feature Layout Figures

NOTES

1. Contour elevations based on the North American Vertical Datum of 1988 (NAVD88). Elevation of features based on original design drawings.
2. State Plane Coordinates based on the North American Datum of 1983 (NAD83).
3. For proposed removal limits, see Figures 2 and 3.
4. Land ownership:

PACIFICORP

FEDERAL LANDS (BLM)



LOCATION MAP

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BUREAU OF RECLAMATION

KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

JC BOYLE DAM REMOVAL

FEASIBILITY STUDY

LOCATION MAP

DESIGNED BY R. D. Benik P.E.

REVIEWED BY Thomas E. Hepler P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

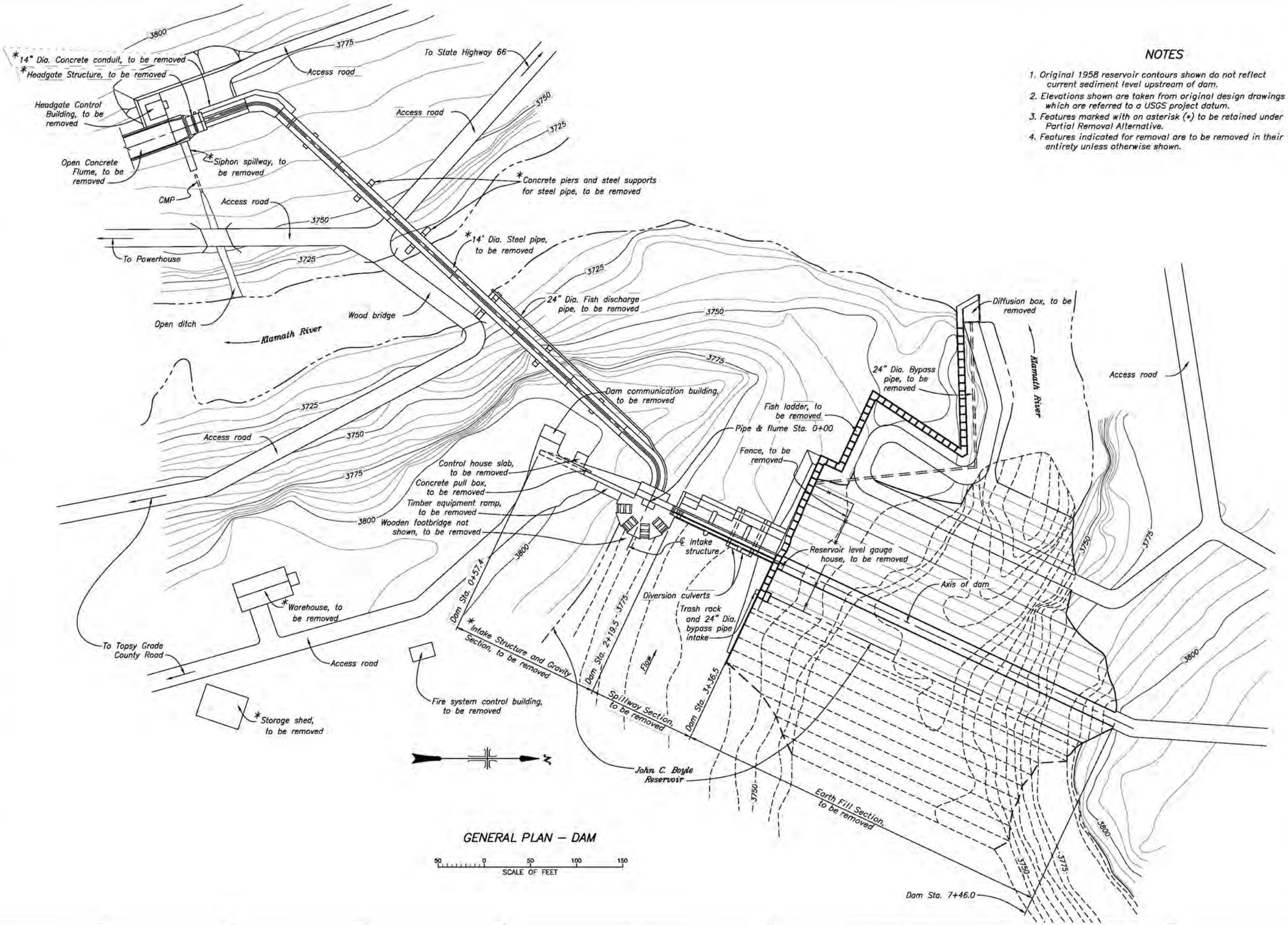
JC BOYLE DAM
LOCATION MAP

Figure 1

SHEET 1 OF 1

DATE AND TIME PLOTTED
AUGUST 31, 2012 - 13:38
PLOTTED BY
RBENIK

CAD SYSTEM
AutoCAD Rel. 18.0s
CAD FILENAME
JM-JC BOYLEBENIK.DWG



NOTES

1. Original 1958 reservoir contours shown do not reflect current sediment level upstream of dam.
2. Elevations shown are taken from original design drawings which are referred to a USGS project datum.
3. Features marked with an asterisk (*) to be retained under Partial Removal Alternative.
4. Features indicated for removal are to be removed in their entirety unless otherwise shown.

GENERAL PLAN – DAM

50 0 50 100 150
SCALE OF FEET

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

JC BOYLE DAM REMOVAL
FEASIBILITY STUDY
GENERAL PLAN – DAM

DESIGNED BY R. D. Benik P.E.
REVIEWED BY Thomas E. Hepler P.E.
WATERWAYS AND CONCRETE DAMS GROUP

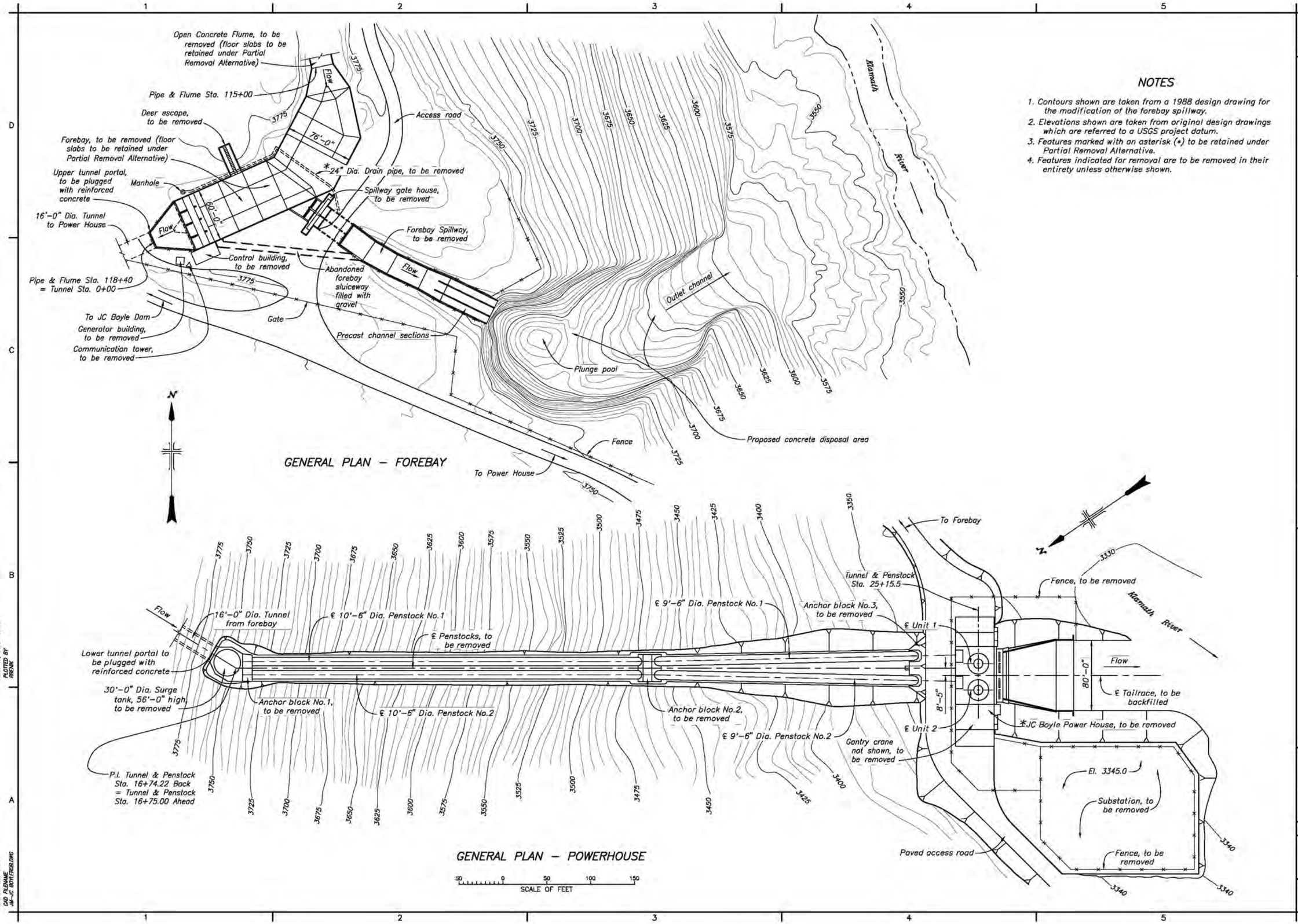
DENVER, COLORADO June 15, 2011

JC BOYLE DAM
GENERAL PLAN

Figure 2
SHEET 1 OF 1

DATE AND TIME PLOTTED
JULY 15, 2011 0729
PLOTTED BY
RBENIK

CAD SYSTEM
AutoCAD Rel. 18.0s
CAD FILENAME
JM-JC BOYLEDBLDNG



NOTES

1. Contours shown are taken from a 1988 design drawing for the modification of the forebay spillway.
2. Elevations shown are taken from original design drawings which are referred to a USGS project datum.
3. Features marked with an asterisk (*) to be retained under Partial Removal Alternative.
4. Features indicated for removal are to be removed in their entirety unless otherwise shown.

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

JC BOYLE DAM REMOVAL
FEASIBILITY STUDY
GENERAL PLANS – FOREBAY AND POWERHOUSE

DESIGNED BY R. D. Benik P.E.
REVIEWED BY Thomas E. Hepler P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

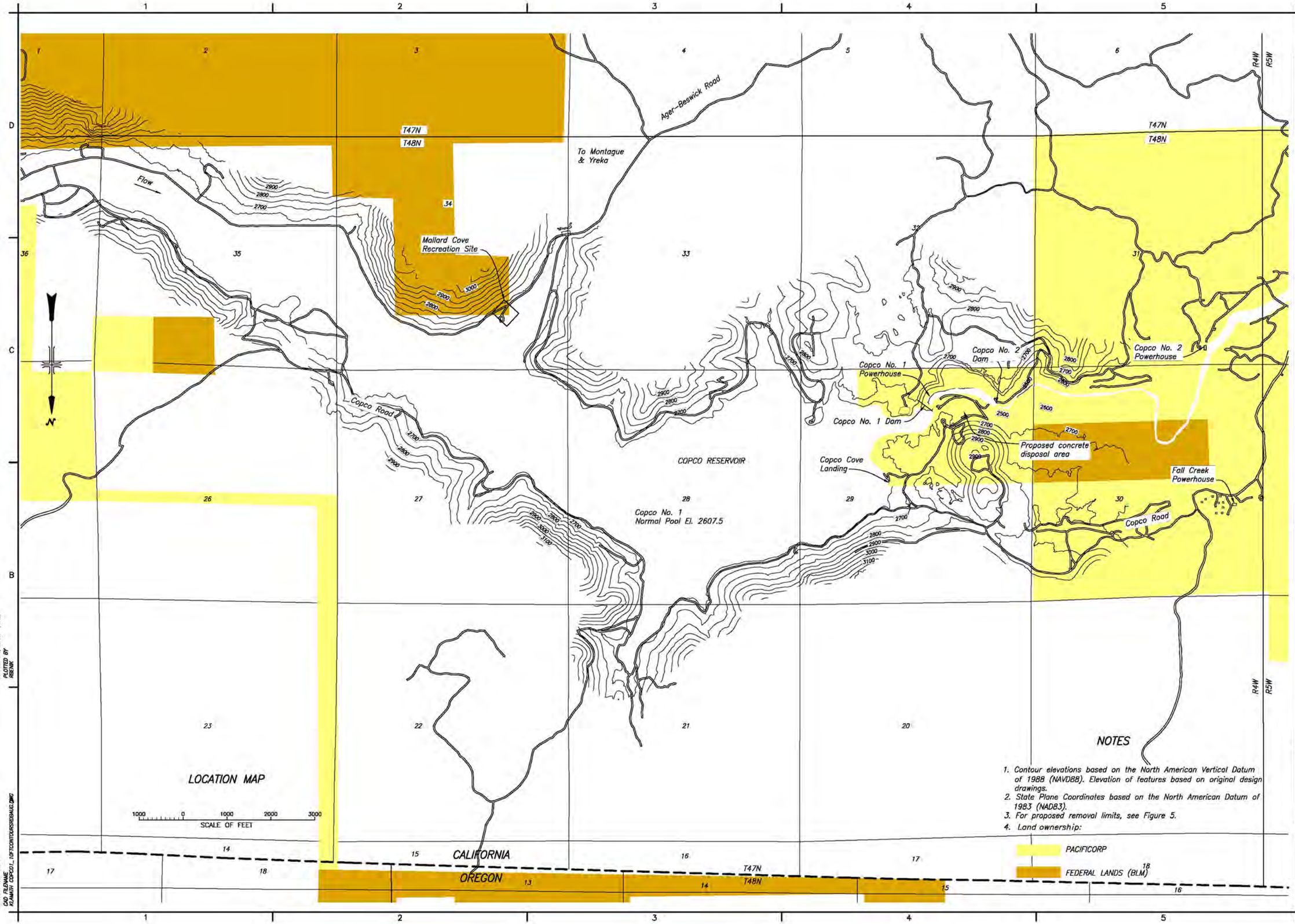
JC BOYLE DAM
FOREBAY AND
POWERHOUSE

Figure 3

SHEET 1 OF 1

DATE AND TIME PLOTTED JULY 15, 2011 07:35
PLOTTED BY RBENIK

CAD SYSTEM AutoCAD Rel. 18.0s
CAD FILENAME JM-JC BOYLEDOBLDNG



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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO No. 1 DAM REMOVAL
FEASIBILITY STUDY
LOCATION MAP

DESIGNED BY R.L. REYNOLDS, P.E.
REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

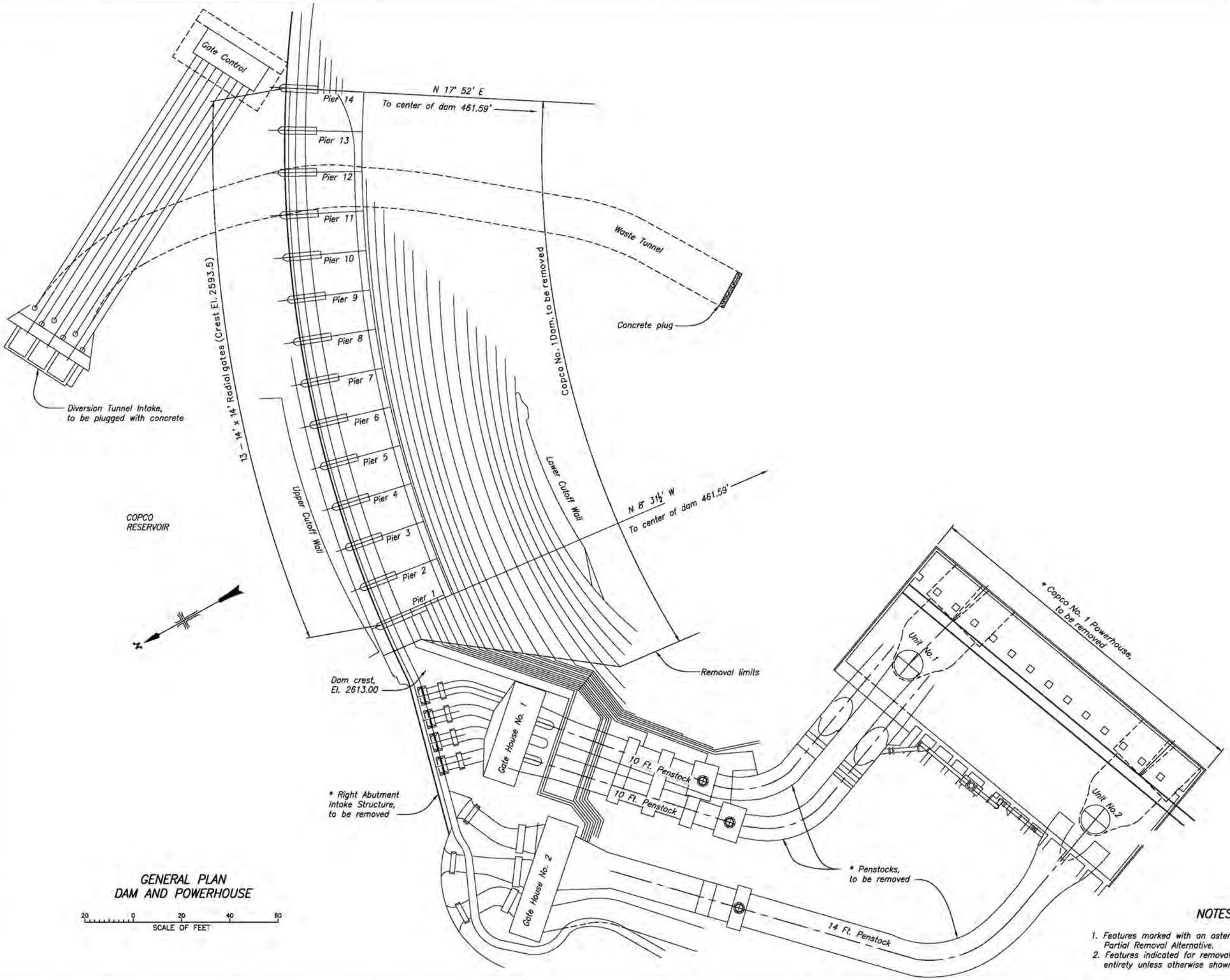
DENVER, COLORADO June 15, 2011

COPCO NO. 1 DAM
LOCATION MAP

Figure 4
SHEET 1 OF 1

DATE AND TIME PLOTTED AUGUST 31, 2012 13:52
PLOTTED BY RBENK

CAD SYSTEM AutoCAD Rel. 18.0s
CAD FILENAME KLAMATH COPCO1_10FTCONTOURSREDBAUC.DWG



GENERAL PLAN
DAM AND POWERHOUSE

20 0 20 40 60
SCALE OF FEET

NOTES

1. Features marked with an asterisk (*) to be retained under Partial Removal Alternative.
2. Features indicated for removal are to be removed in their entirety unless otherwise shown.

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO NO. 1 DAM REMOVAL
FEASIBILITY STUDY

GENERAL PLAN – DAM AND POWERHOUSE

DESIGNED BY R.L. REYNOLDS, P.E.
REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

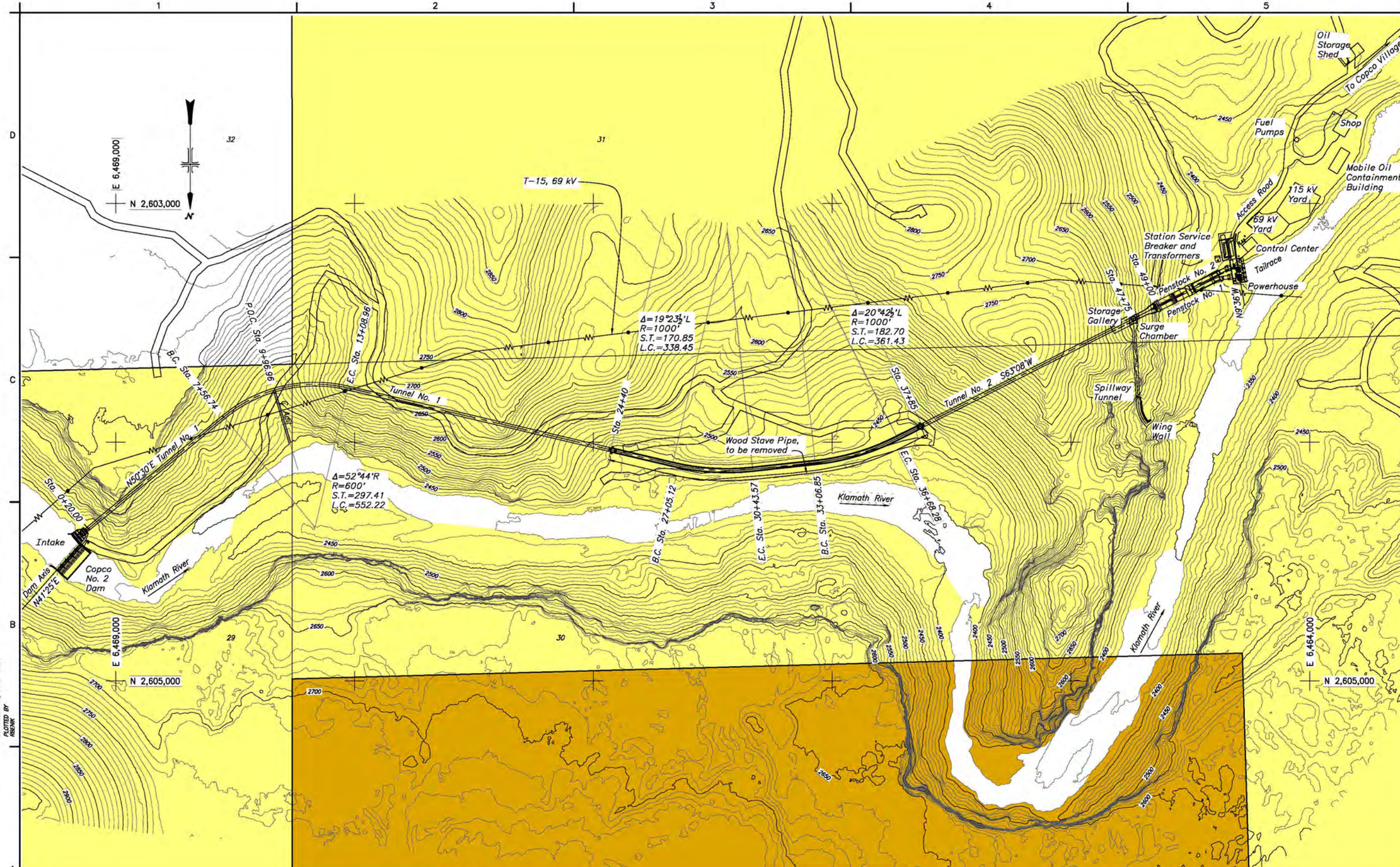
COPCO NO. 1 DAM
PLAN

Figure 5

SHEET 1 OF 1

DATE AND TIME PLOTTED JULY 15, 2011 08:57
PLOTTED BY RREYNOLDS

CAD SYSTEM AutoCAD Rel. 18.1s
CAD FILENAME KLAMATH COPCO 1 CC RRMOD2.DWG



GENERAL PLAN
DAM AND POWERHOUSE

200 0 200 400 600
SCALE OF FEET

NOTES

1. Contour elevations based on the North American Vertical Datum of 1988 (NAVD88). Elevation of features based on original design drawings.
2. State Pane Coordinates based on the North American Datum of 1983 (NAD83).
3. For additional removal limits, see Figures 7, 8, and 9.
4. A part of T48N R4W.
5. Land ownership:
   - PACIFICORP
   - FEDERAL LANDS (BLM)

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO NO. 2 DAM REMOVAL

FEASIBILITY STUDY

GENERAL PLAN

DESIGNED BY R.L. REYNOLDS, P.E.
REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

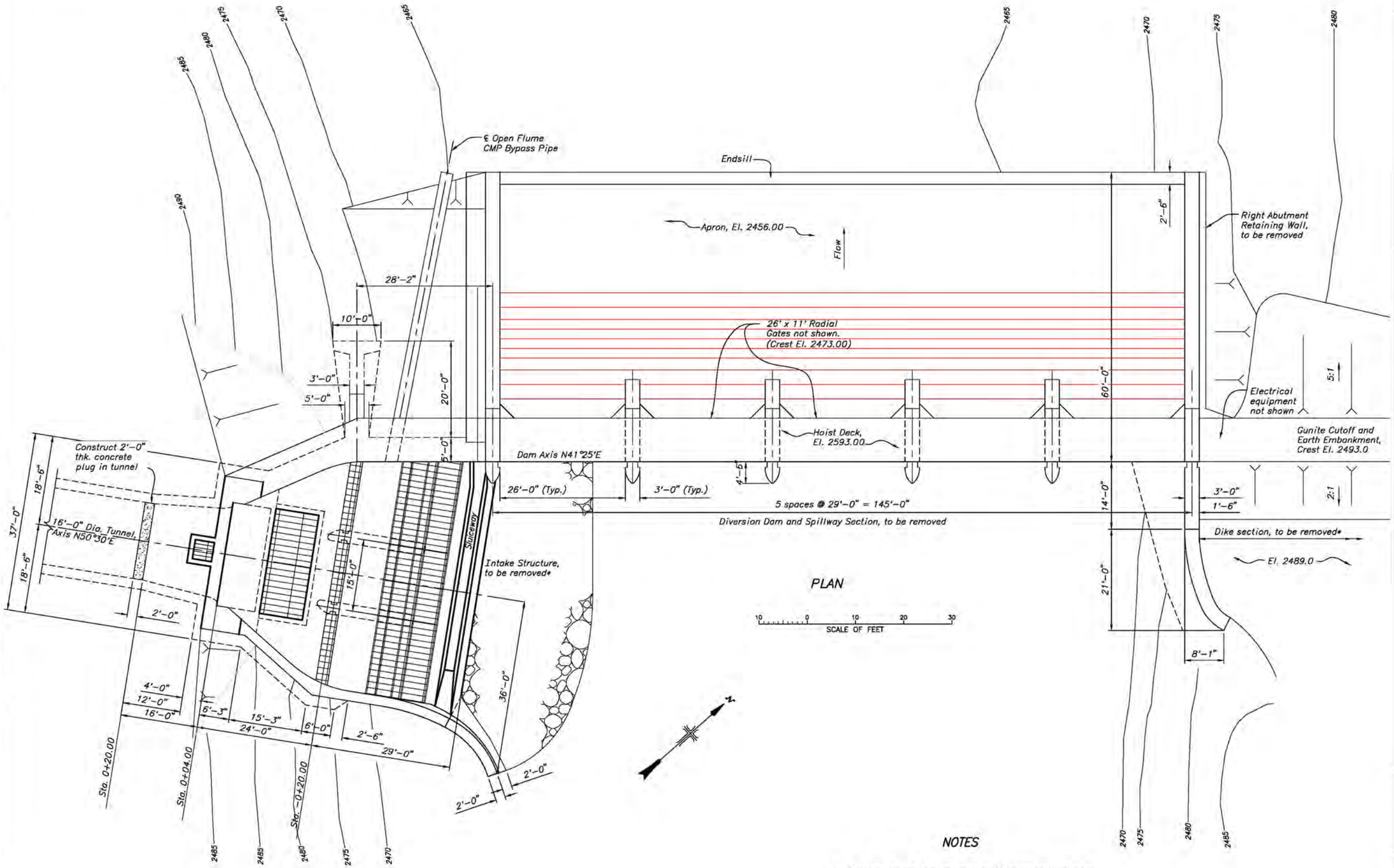
COPCO NO. 2 DAM
GENERAL PLAN

Figure 6

SHEET 1 OF 1

DATE AND TIME PLOTTED SEPTEMBER 19, 2011 07:51
PLOTTED BY RBENK

CAD SYSTEM AutoCAD Rel. 18.0s
CAD FILENAME COPCO AUGUST1.DWG



NOTES

1. Features marked with an asterisk (*) to be retained under partial removal alternative.
2. Features indicated for removal are to be removed in their entirety unless otherwise shown.

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO NO. 2 DAM REMOVAL

FEASIBILITY STUDY

PLAN – DAM, SPILLWAY, AND INTAKE STRUCTURE

DESIGNED BY R.L. REYNOLDS, P.E.
REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

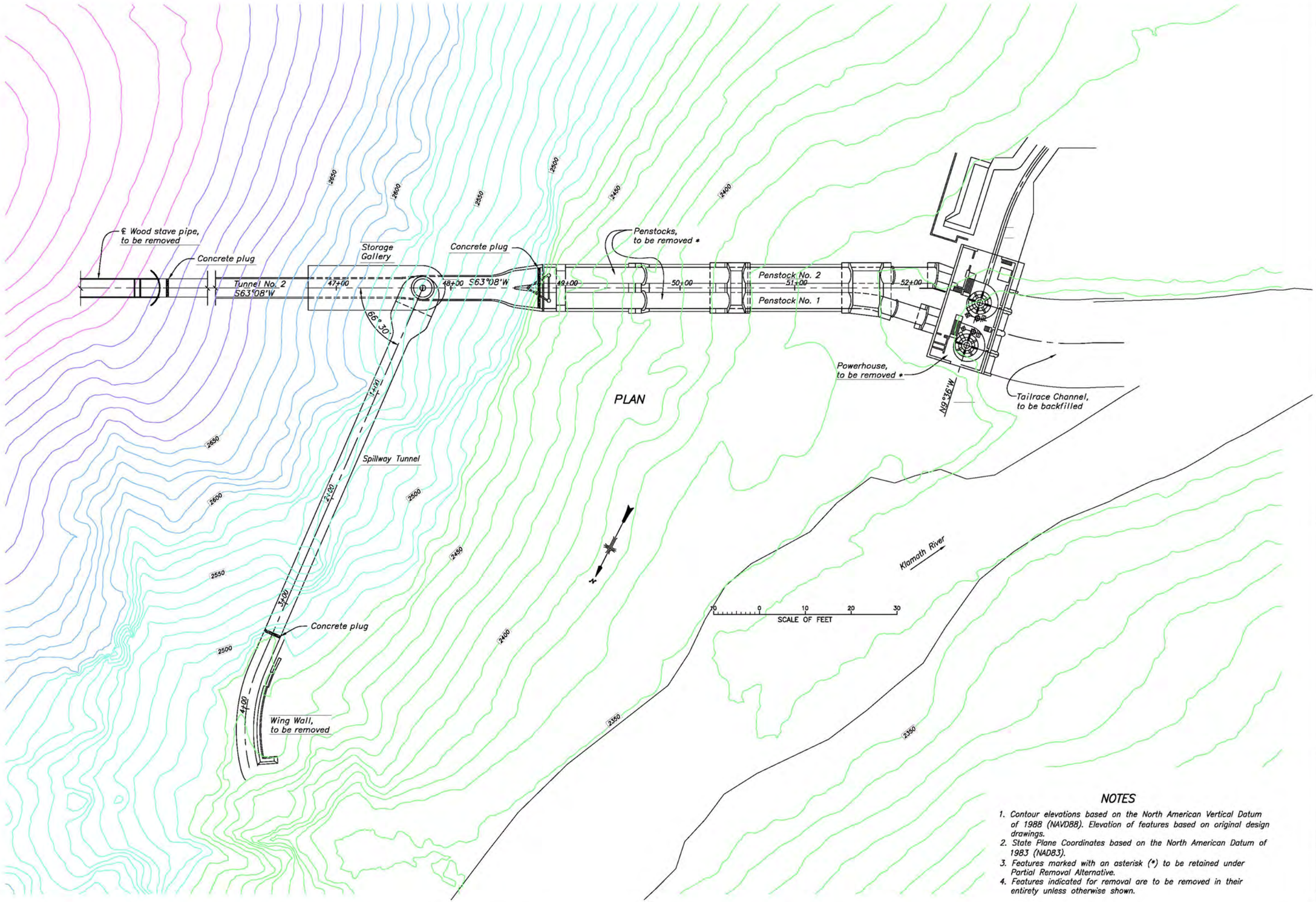
COPCO NO. 2 DAM
PLAN

Figure 7

SHEET 1 OF 1

DATE AND TIME PLOTTED
JULY 15, 2011 09:21
PLOTTED BY
RREYNOLDS

CAD SYSTEM
AutoCAD Rel. 18.1s
CAD FILENAME
KLAMATH COPCO 3 RR EJ MOULDING



NOTES

1. Contour elevations based on the North American Vertical Datum of 1988 (NAVD88). Elevation of features based on original design drawings.
2. State Plane Coordinates based on the North American Datum of 1983 (NAD83).
3. Features marked with an asterisk (*) to be retained under Partial Removal Alternative.
4. Features indicated for removal are to be removed in their entirety unless otherwise shown.

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO NO. 2 DAM REMOVAL

FEASIBILITY STUDY

PLAN – DAM, SPILLWAY, AND INTAKE STRUCTURE

DESIGNED BY R.L. REYNOLDS, P.E.
REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

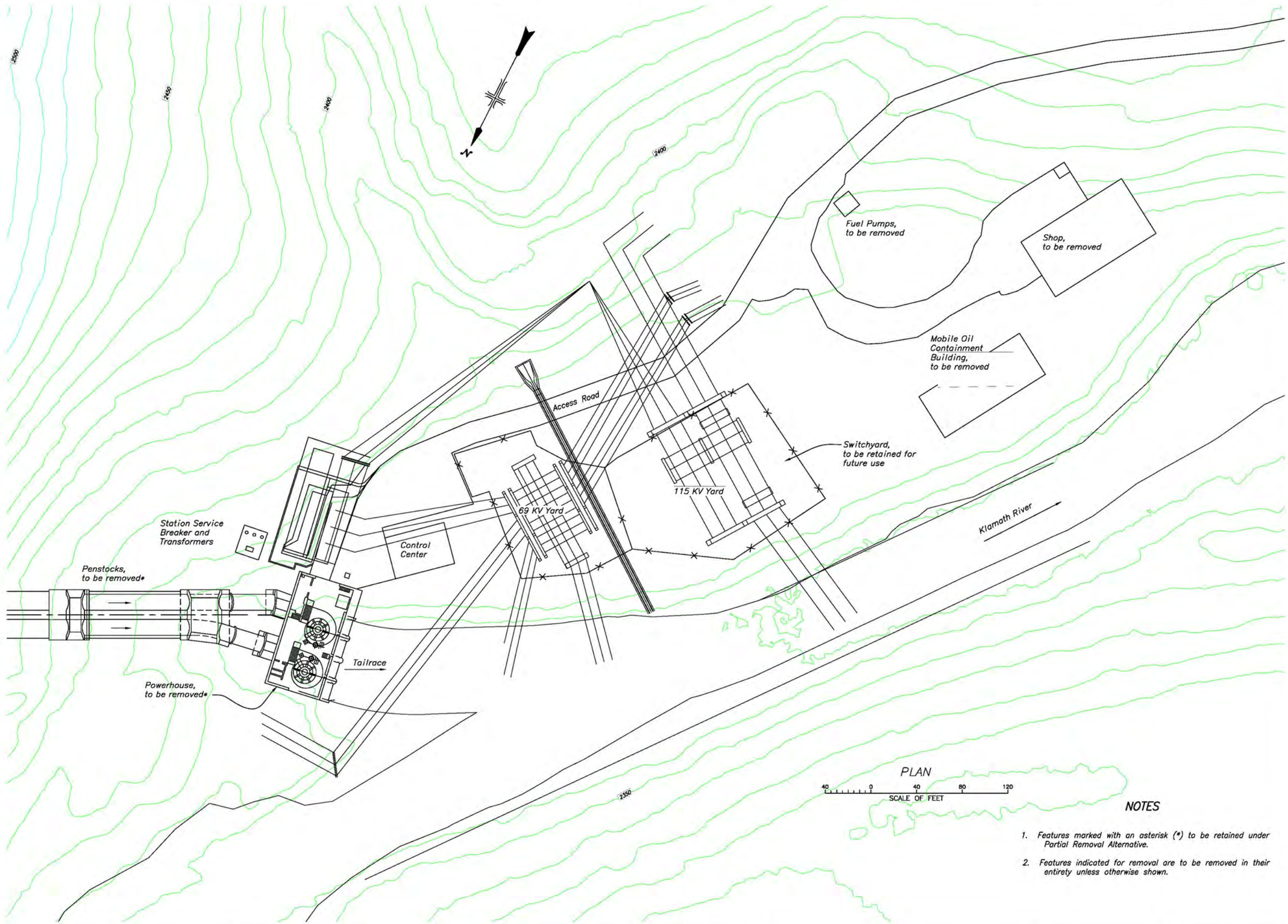
COPCO NO. 2 POWERHOUSE PLAN

Figure 8

SHEET 1 OF 1

DATE AND TIME PLOTTED JULY 15, 2011 08:18
PLOTTED BY REYNOLDS

CAD SYSTEM AutoCAD Rel. 18.1s
CAD FILENAME KLAMATH COPCO 3 RR EJ MODLDWG



NOTES

1. Features marked with an asterisk (*) to be retained under Partial Removal Alternative.
2. Features indicated for removal are to be removed in their entirety unless otherwise shown.

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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

COPCO NO. 2 DAM REMOVAL

FEASIBILITY STUDY

PLAN–SWITCHYARD AND D/S AREA

DESIGNED BY R.L. REYNOLDS, P.E.

REVIEWED BY THOMAS E. HEPLER, P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO June 15, 2011

COPCO NO. 2 DAM
SWITCHYARD

Figure 9

SHEET 1 OF 1

DATE AND TIME PLOTTED
JULY 15, 2011 08:32
PLOTTED BY
RREYNOLDS

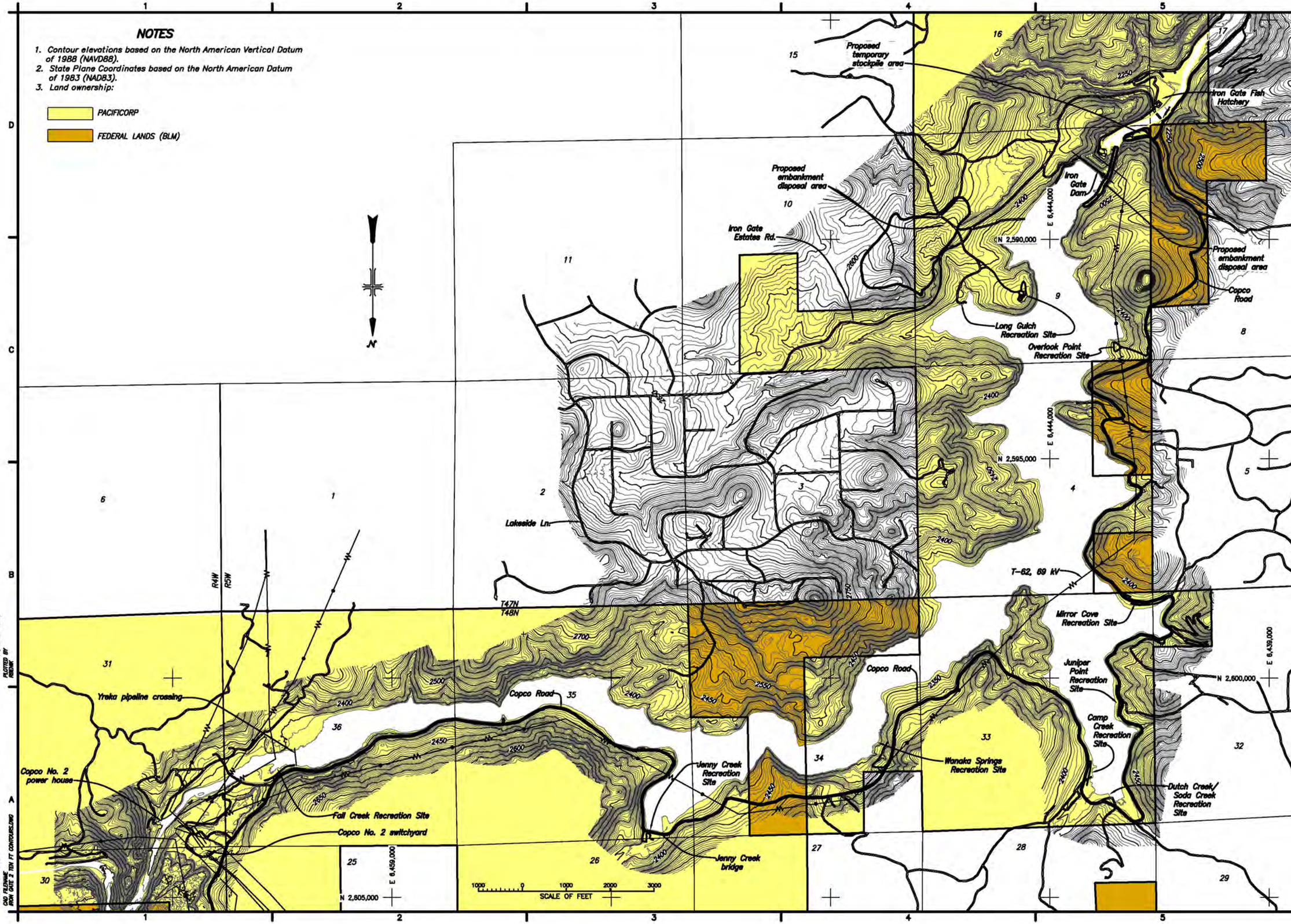
CAD SYSTEM
AutoCAD Rel. 18.1s
CAD FILENAME
KLAMATH COPCO 3 RR EJ MODLDWG

NOTES

1. Contour elevations based on the North American Vertical Datum of 1988 (NAVD88).
2. State Plane Coordinates based on the North American Datum of 1983 (NAD83).
3. Land ownership:

PACIFICORP

FEDERAL LANDS (BLM)



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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

IRON GATE DAM REMOVAL
FEASIBILITY STUDY
LOCATION MAP

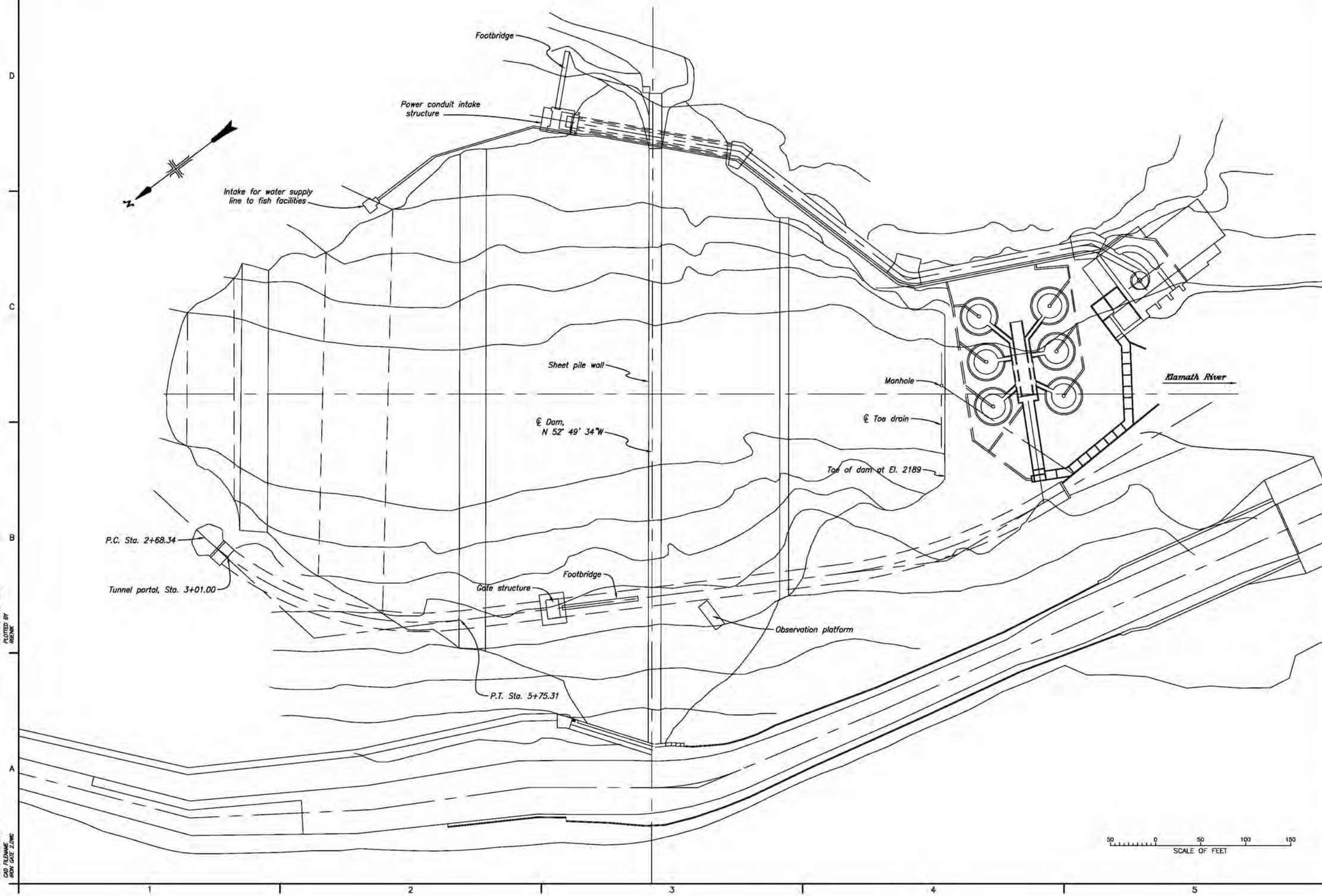
DESIGNED BY R. D. Banik P.E.
REVIEWED BY Thomas E. Hepler P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO JUNE 15, 2011

FIGURE 10
SHEET 1 OF 1

DATE AND TIME PLOTTED AUGUST 31, 2012 14:02
PLOTTED BY RDBNK

CAD SYSTEM AutoCAD Rel. 15.0a
CAD FILENAME RDA GATE 2 TEN FT CONTOURS.DWG



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KLAMATH RIVER DAMS PROJECT – OREGON, CALIFORNIA

IRON GATE DAM REMOVAL

FEASIBILITY STUDY

GENERAL PLAN

DESIGNED BY R. D. Benik P.E.
REVIEWED BY Thomas E. Hepler P.E.
WATERWAYS AND CONCRETE DAMS GROUP

DENVER, COLORADO JUNE 15, 2011

Figure 11

SHEET 1 OF 1

DATE AND TIME PLOTTED JULY 15, 2011 07:47
PLOTTED BY REENIK

CAD SYSTEM AutoCAD Rel. 18.0s
CAD FILENAME IRON GATE 2.DWG