April 2023

BOW AND ELBOW RIVER HAZARD STUDY

Design Flood Hazard Mapping Report

Submitted to:
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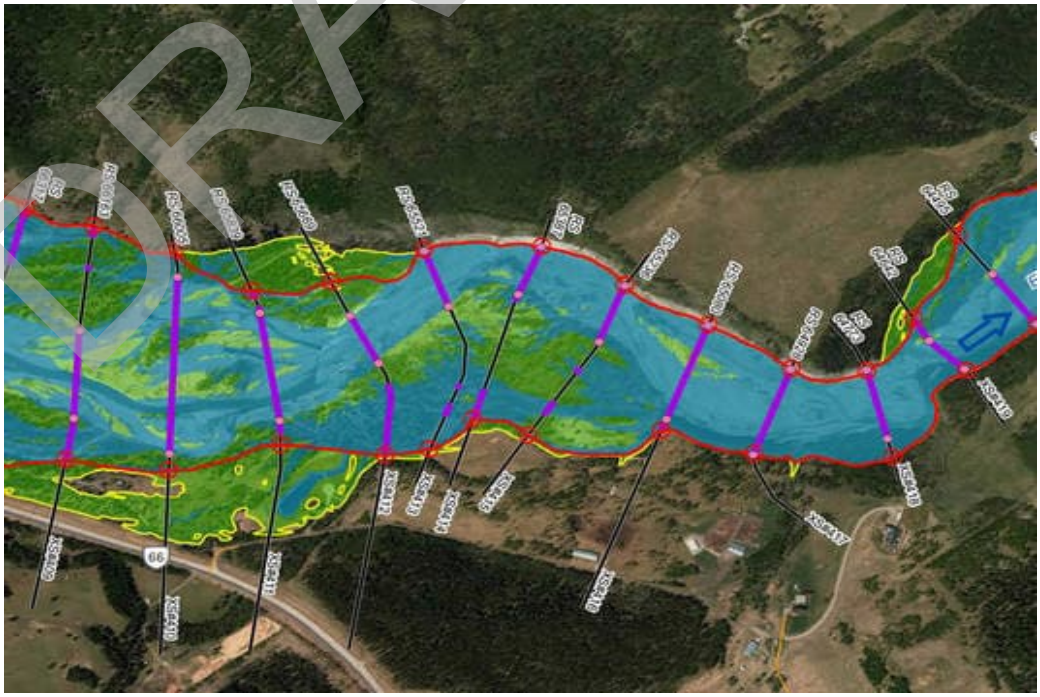

Report Number: 1536673_R0005a

REPORT

Golder Associates

Public Engagement Note – January 2024

This version of the draft Bow and Elbow River flood study is based on naturalized design flood flows that do not take into account the effect of flow regulation by reservoirs with a dedicated flood mitigation purpose.

Hydraulic modelling, flood mapping, and flood risk assessment along the Elbow River downstream of the Springbank Off-stream Reservoir and along the Bow River downstream of the Elbow River confluence will be revised to account for the joint effect of Springbank Off-stream Reservoir and Glenmore Dam operations in early 2025.

Until such time, draft flood hazard zones along the Elbow River between Glenmore Dam and the Bow River confluence, where the impact to landowners is expected to be most significant, are not being displayed in the Government of Alberta's online flood map viewer and information related to flood hazard zones has been removed from this draft report.

https://www.alberta.ca/bow-elbow-river-flood-study-engagement

Executive Summary

Alberta Environment and Parks (AEP) commissioned Golder Associates Ltd. (Golder) in September 2015 to undertake the Bow and Elbow River Hazard Study. The primary purpose of the study is to identify and assess river and flood hazards along the Bow River (from Bearspaw Dam to the Highwood River confluence) and the Elbow River (from Bragg Creek to the Bow River confluence), including lengths of Bragg and Lott Creeks. The study is conducted under the provincial Flood Hazard Identification Program (FHIP), the goals of which include enhancement of public safety and reduction of future flood damages through the identification of river and flood hazards. Project stakeholders include the Government of Alberta, local authorities, and the public. Key municipal stakeholders include the City of Calgary, Foothills County, and Rocky View County. The project includes working with Tsuut'ina Nation.

The study includes multiple components and deliverables. This report summarizes the design flood hazard mapping component of the study. The main tasks associated with this work involves producing floodway criteria maps and design flood hazard maps. Floodway criteria maps document the technical flood information used to delineate the floodway, including 100-year flood extents and hydraulic characteristics, previous floodways, and proposed floodway limit stations throughout the study area. Flood hazard maps divide the 100-year design flood hazard area into floodway and flood fringe zones, including high hazard flood fringe and protected flood fringe sub-zones where appropriate. Flood hazard maps can also illustrate additional information, including incremental areas at risk for floods larger than the 100-year design flood, such as the 200-year and 500-year floods.

The study area includes the river reaches summarized in Table i.

Table i: Study Area Reaches

River	Reach Description	Length
Bow River	Bearspaw Dam to Highwood River confluence	72 km
Elbow River	Upstream of Bragg Creek to confluence with Bow River	66 km
Bragg Creek	Upstream of Centre Avenue in Bragg Creek to confluence with Elbow River	1 km
Lott Creek	Upstream of Elbow Valley Residence Club to confluence with Elbow River	7 km

Floodways defined by previous flood studies in the study area were considered as part of the floodway delineation for this flood study, and were not made larger by default in most circumstances unless required for technical reasons or if deemed necessary or appropriate.

Areas protected for the 100-year design flood by dedicated flood control structures (e.g., flood berms) in place when this report was prepared are reflected in the flood hazard maps, and are mapped as protected flood fringe areas. This includes all flood control structures originally surveyed for this study and additional flood control structures constructed in Bragg Creek and Calgary since that time, some of which have upgraded or replaced previous flood control structures. It also includes one flood control structure in Calgary which is in final stages of design. The illustrated protection provided by this flood control structures reflects a future scenario and will only be in place once construction is complete.

The following residential, commercial, and industrial areas are in the floodway:

- parts of two La Farge Plants and the Burnco Landscape Centre along the Bow River in Calgary;
- the Predator Bay Water Ski Club along the Bow River in Foothills County;
- the Burnco Indus Pit in Rocky View County southeast of Calgary;
- parts of the Hope Mission Camp Gardner and Entheos Conference and Retreat Centre along the Elbow River in Rocky View County;
- parts of residential development areas along 101st Street SW south of Highway 8 on both sides of the Elbow River in Calgary and Rocky View County; and
- [redacted]

In addition, several golf courses and public parks within the study area are in the floodway.

The flood fringe, high hazard flood fringe, and protected flood fringe zones include a large number of residential, commercial, and industrial areas along the Bow River, Elbow River, Bragg Creek, and Lott Creek.

Acknowledgements

This component of the Bow and Elbow River Hazard Study was led by Dr. Wolf Ploeger. Overall project management was provided by Dr. Wolf Ploeger and direction by Dr. Dejiang Long. The flood hazard mapping was completed by Peter Thiede, Gaven Tang, Nancy Guo, Brian Pendergast, and Wolf Ploeger.

The authors express their special thanks to Peter Onyshko, Lance Katan and Abdullah Mamun, Project Managers for Alberta Environment and Parks, who provided overall study management, background data, and technical guidance.

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1.0 INTRODUCTION

1.1 Study Objectives

Alberta Environment and Parks (AEP) commissioned Golder Associates Ltd. (Golder) in September 2015 to undertake the Bow and Elbow River Hazard Study (the study). The primary purpose of the study is to identify and assess river and flood hazards along the Bow River (from Bearspaw Dam to the Highwood River confluence) and the Elbow River (from Bragg Creek to the Bow River confluence), including lengths of Bragg and Lott Creeks.

The study is conducted under the provincial Flood Hazard Identification Program (FHIP), the goals of which include enhancement of public safety and reduction of future flood damages through the identification of river and flood hazards. Project stakeholders include the Government of Alberta, local authorities, and the public. Key municipal stakeholders include the City of Calgary, Foothills County, and Rocky View County. The project includes working with Tsuut'ina Nation.

The study includes multiple components and deliverables. This report summarizes the design flood hazard mapping component of the study. The main tasks associated with this work involves producing floodway criteria maps and design flood hazard maps. Floodway criteria maps document the technical flood information used to delineate a floodway, including 100-year flood extents and hydraulic characteristics, previous floodways, and proposed floodway limit stations through a study reach. Flood hazard maps divide the 100-year design flood hazard area into floodway and flood fringe zones, including high hazard flood fringe and protected flood fringe sub-zones where appropriate. Flood hazard maps can also illustrate additional information, including incremental areas at risk for floods larger than the 100-year design flood, such as the 200-year and 500-year floods.

There are three previous FHIP studies with flood hazard mapping within the study area, as listed below:

- City of Calgary Floodplain Study (AENV, 1983, revised in 1996)
- Elbow River at Bragg Creek Hydraulic Study (UMA, 1992, revised in 1995)
- Elbow River – M.D. of Rocky View Flood Risk Mapping Study (AGRA, 1996, revised in 1998)

Existing floodways defined by the above-listed previous studies were considered as part of the floodway delineation for this flood study and were not made larger by default in most circumstances, unless required for technical reasons or if deemed necessary or appropriate.

Dedicated flood control structures are assumed to be effective, and protected areas are not mapped as flooded unless they are overtopped. Areas of residual risk behind dedicated flood control structures that could be flooded if a flood control structure fails or does not perform as expected are identified as protected flood fringe.

1.2 Study Area and Reaches

The study area includes approximately 72 km of the Bow River between Bearspaw Dam and the Highwood River confluence, approximately 66 km of the Elbow River from Bragg Creek to the Bow River confluence in Calgary, approximately 1 km of Bragg Creek upstream of the Elbow River confluence, and approximately 7 km of Lott Creek upstream of the Elbow River confluence (see Figure 1 and Table 1).

The study area includes the following local authorities and communities: Bragg Creek, Calgary, Elbow Valley Residents Club, Foothills County, Redwood Meadows, Rocky View County, and Tsuut'ina Nation.

Table 1: River Reaches within the Study Area

River	Reach Description	Length
Bow River	Bearspaw Dam to Highwood River confluence	72 km
Elbow River	Upstream of Bragg Creek to confluence with Bow River	66 km
Bragg Creek	Upstream of Centre Avenue in Bragg Creek to confluence with Elbow River	1 km
Lott Creek	Upstream of Elbow Valley Residence Club to confluence with Elbow River	7 km

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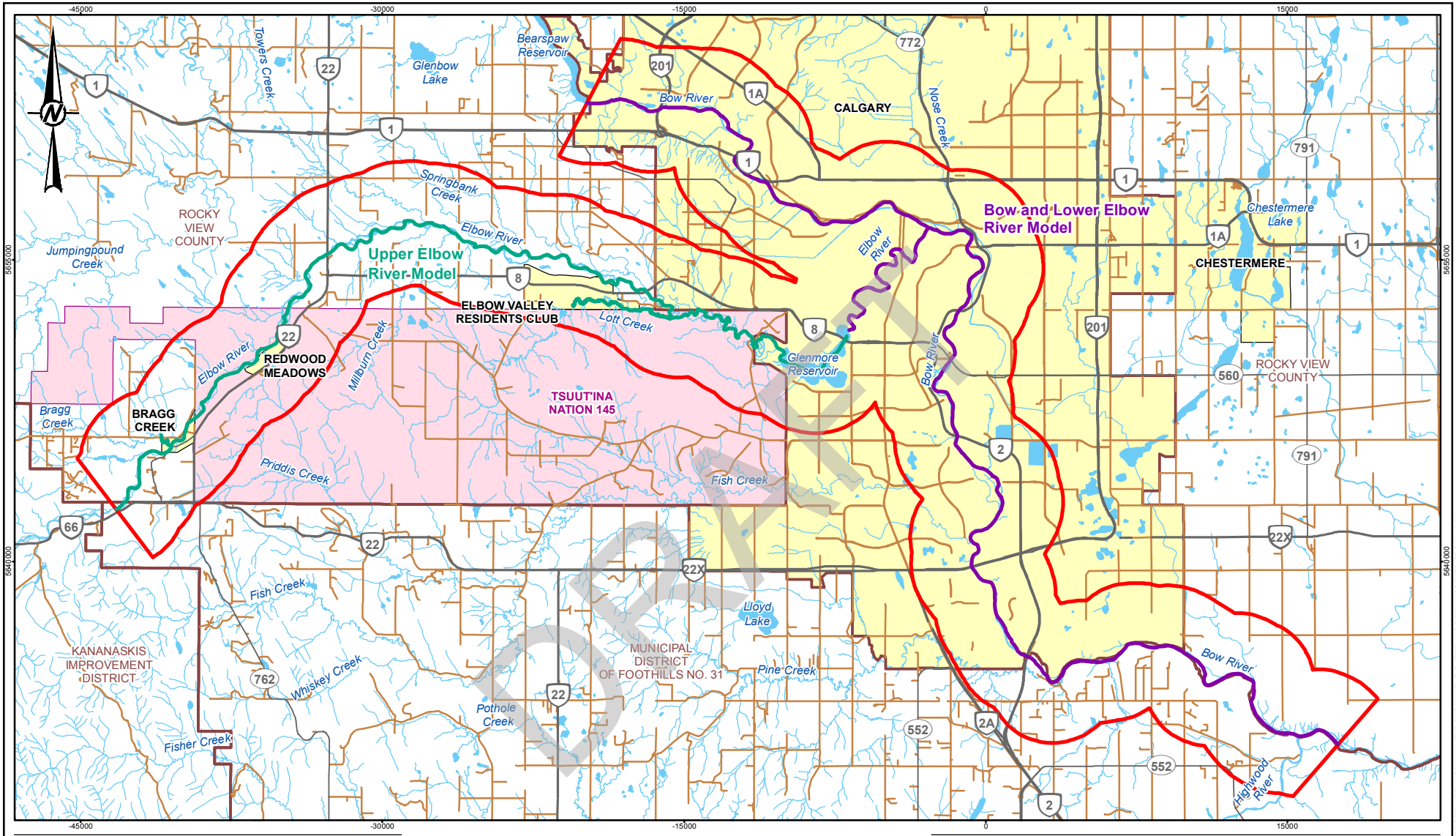

LEGEND

- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- LOCAL ROAD
- WATERCOURSE
- MUNICIPAL DISTRICT BOUNDARY
- URBAN AREA
- WATERBODY
- FIRST NATION RESERVE
- RIVER HAZARD STUDY AREA

HYDRAULIC MODEL

- BOW AND LOWER ELBOW
- UPPER ELBOW

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REFERENCE(S)

URBAN AREAS, MUNICIPAL DISTRICTS AND HYDROGRAPHY OBTAINED FROM ALTALIS, © GOVERNMENT OF ALBERTA 2015. ALL RIGHTS RESERVED.
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DATUM: NAD 83 CSRS PROJECTION: 3TM 114

CLIENT
ALBERTA ENVIRONMENT AND PARKS

Alberta Government

CONSULTANT
Golder Associates

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PREPARED	P.THIEDE
REVIEWED	W. PLOEGER
APPROVED	W. PLOEGER

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
STUDY AREA

PROJECT NO.	CONTROL	REV.	FIGURE
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2.0 AVAILABLE DATA

2.1 Flood Hydrology

Flood frequency flow estimates along the Bow and Elbow Rivers within the study area, and for Bragg and Lott Creeks, were calculated as part of a larger hydrology assessment undertaken to support this study (Golder 2020). 100-year design flood flow estimates at key locations in the study area, as well as corresponding 200-year and 500-year flood flow estimates for context, are summarized in Table 2.

Table 2: Flood Frequency Flow Estimates

Location	Instantaneous Peak Flood Flow (m^3/s)		
	100-Year Design Flood	200-Year Flood	500-Year Flood
Bow River below Bearspaw Dam	2,090	2,710	3,790
Bow River below Elbow River	2,390	3,050	4,190
Bow River below Nose Creek	2,420	3,090	4,240
Bow River below Fish Creek	2,580	3,340	4,700
Bow River below Pine Creek	2,620	3,390	4,770
Bow River above Highwood River	2,660	3,440	4,830
Bow River below Highwood River	2,840	3,750	5,420
Elbow River above Springbank Creek	840	1,140	1,660
Elbow River below Springbank Creek	841	1,140	1,660
Elbow River below Glenmore Dam	841	1,140	1,660
Bragg Creek	48.1	61.4	83.5
Lott Creek	30.8	37.7	47.5

2.2 Survey and Base Data

As per FHIP specifications, a digital terrain model (DTM) used to describe floodplain topography must have a ±0.15 m minimum vertical accuracy, at 95% confidence.

The City of Calgary provided AEP with a city-wide DTM for use in this study that exceeds minimum provincial accuracy specifications. The Calgary-specific DTM is based on data acquired September 28, 2012, to June 14, 2013, and updated along the Bow and Elbow Rivers September 9 to October 7, 2013. Select areas with elevation changes along both the Bow and Elbow Rivers were captured May 2015. A one-mile buffer outside Calgary city limits was captured September 28 to October 19, 2015. The vertical accuracy is approximately ±0.05 m, at 95% confidence, and horizontal accuracy is approximately ±0.10 m on hard surfaces.

Outside of Calgary city limits, AEP commissioned a new DTM based on LiDAR data acquired in October 2015. Independent ground truth surveys were completed for quality assurance and control, and the accuracy of the new DTM along the Elbow River was determined to be within ±0.15 m, at 95% confidence, meeting AEP specifications.

Aerial imagery for the entire study area was collected by GeodesyGroup Inc. (GeodesyGroup) on May 6, 2016. The imagery has a 0.30 m Ground Sampling Distance (GSD) resolution and was delivered as 4-band orthophotos and stereo images. The orthophotos were used as a base imagery in all project flood mapping.

As per FHIP specifications, survey data collected using typical ground-based technologies must have an absolute positional accuracy of ±0.05 m, at 95% confidence. Final accuracy of bathymetric data collected using a combination of ground and acoustic-based technologies must be accurate to ±0.15 m, but it is expected that most data will maintain the ±0.05 m accuracy obtained from ground-based technologies.

Topographic, control point, and shallow-water surveys were performed using Real-time Kinematic (RTK) GPS units. Bathymetric surveys were conducted on the Bow River and Glenmore Reservoir using an Acoustic Doppler Profiler (ADP) in combination with a boat-mounted RTK unit where flow depths were too deep to wade. Bridge survey data were collected using either a RTK or total station.

Within Calgary city limits, most survey data along the Bow River and along the Elbow River downstream of Glenmore Dam was collected in late 2013 and early 2014 as part of a joint AEP and City of Calgary hydraulic project (Golder 2015). This data was supplemented by additional survey work conducted between fall 2015 and summer 2016 for the present study. Outside of Calgary city limits and along the Elbow River upstream of Glenmore Dam, survey data was collected between June and August 2016. All survey data used in this study meets or exceeds minimum AEP accuracy specifications.

More detailed of the DTM data, aerial imagery and survey data collection are provided in the survey and base data collection report prepared for this study (Golder 2017).

2.3 HEC-RAS Models

Two one-dimensional hydraulic models were created for the study area using HEC-RAS (Version 5.0.3): the Bow and Lower Elbow model, covering the Bow River between Bearspaw Dam and the Highwood River confluence and the Elbow River below Glenmore Dam; and the Upper Elbow model, covering the Elbow River above Glenmore Dam, and Bragg and Lott Creeks. The models were calibrated for both low and high flow conditions using recorded flow and water level data, and surveyed highwater marks. Model parameters based on the high flow calibration were used to calculate flood profiles for the 2-, 5-, 10-, 20-, 35-, 50-, 75-, 100-, 200-, 350-, 500-, 750-, and 1,000-year open water floods. A detailed description of the models is provided in the hydraulic model creation and calibration report prepared for this study (Golder 2022a).

2.4 Flood Control Structures

A detailed description of the 20 flood control structures existing within the study area at the time of survey is provided in the survey and base data collection report prepared for this study (Golder 2017). Additional flood control structures have been constructed in Bragg Creek and Calgary since that time, some of which have upgraded or replaced previous flood control structures. This includes five flood barriers along the Elbow River in the Bragg Creek area (one of which replaced an earlier flood barrier), two flood barriers along Bragg Creek, and nine flood barriers along the Bow River in Calgary (including both new barriers and upgrades to previous barriers). A summary of all flood control structures in the study area at this time is provided in Table 3.

Table 3: Flood Control Structures in the Study Area

River	No.	Side of River [1]	Length (m)	Name	Description	Type
Bow River	1	Left	384	Montgomery Berm [2]	Montgomery Boulevard, Bow View Manor Nursing Home	Earthfill Barrier
	2	Left	929	West Hillhurst Berm	20th Street NW to 14th Street NW	Earthfill Barrier
	3	Left	590	Kensington Berm	14th Street NW to Poppy Plaza	Earthfill Barrier
	4	Left	1,950	Sunnyside Barrier	Poppy Plaza to Centre Street	Earthfill Barrier with Concrete Floodwall Elements
	5	Right	597	West Eau Clair Flood Barrier [2]	Peace Bridge to Jaipur Bridge	Pathway and Concrete Wall
	6	Right	622	Downtown Flood Barrier [2]	Eau Clair Promenade	Pathway and Concrete Wall
	7	Left/Right	24/24	Centre Street Bridge Barrier [2]	System of demountable barriers on north and south end of Centre Street Bridge lower deck	Demountable Flood Barrier
	8	Left	462	Memorial Drive Berm	Memorial Drive downstream of Centre Street Bridge	Earthfill Barrier
	9	Left	236	Langevin Bridge Berm	Memorial Drive at 4th Avenue Flyover Bridge	Earthfill Barrier
	10	Left	1,786	Riverwalk Berm [2]	Centre Street Bridge to Elbow River	Pathway
	11	Right	1,240	Bridgeland Berm	New Langevin Bridge to 12th Street NE	Earthfill Barrier
	12	Left/Right	1,896	Zoo Island Floodwall [2]	Zoo Island Flood Protection	Sheet Pile Wall
	13	Right	835	West Inglewood Berm	Elbow River to 13th Street SE	Earthfill Barrier
	14	Right	460	Inglewood Flood Barrier	13th Street SE to 15th Street SE	Concrete Wall
	15	Right	385	Pearce Estate Park Berm	Pearce Estate Park	Pathway on Top of Earthfill Barrier
	16	Right	465	South Inglewood Berm	End of 8th Avenue SE	Pathway on top of Riprap Embankment
	17	Right	957	Bonnybrook Flood Berm [2]	Bonnybrook Waste Water Treatment Plant flood protection	Earthfill Barrier
	18	Right	2581	Heritage Drive Flood Barrier [2]	East of Deerfoot Trail and north of Glenmore Trail	Sheet Pile Wall and berm
	19	Right	372	Glenmore Trail Berm [2]	Along the La Farge access road	Earthfill Barrier
	20	Left	977	Quarry Park Berm	Elevated ground along new development at Quarry Park	Earthfill Barrier
Elbow River	21	Left	800	West Barrier South [3]	Along Bracken Road upstream of Bragg Creek confluence	Earthfill Barrier and Concrete Wall
	22	Left	358	West Barrier North [3]	Along Elbow River left bank downstream of Bragg Creek confluence	Riprap Embankment, Earthfill Barrier and Concrete Wall
	23	Right	1663	East Barrier South [3]	Along Elbow River right bank from White Avenue to Balsam Avenue Bridge	Earthfill Barrier and Concrete Wall

Table 3: Flood Control Structures in the Study Area

River	No.	Side of River [1]	Length (m)	Name	Description	Type
	24	Right	905	East Barrier North [3]	Along Elbow River right bank from Balsam Avenue Bridge to Burnside Drive	Riprap Embankment, Earthfill Barrier and Concrete Wall
	25	Left	650	Yoho Tinda Barrier [3]	Yoho Tinda Road	Riprap Embankment, Earthfill Barrier and Concrete Wall
	26	Right	1,139	Redwood Meadows Golf and Country Club Berm	Intermittent barrier that partly ties into higher ground on the upstream end of the barrier	Earthfill Barrier
	27	Right	3,050	Redwood Meadows Berm	Covers the full length along the Redwood Meadows community	Earthfill Barrier
	28	Right	77	Erlton Flood Control Weir	Buried weir to control flood flows into 22nd Avenue SW	Reinforced Below Grade Weir
	29	Left	676	Stampede Floodwall	Along the south end of Stampede race track	Earthfill Barrier and Concrete Wall
	30	Right	188	Deane House Flood Barrier	From 9th Avenue SE to the Bow and Elbow River confluence	Earthfill Barrier and Concrete Wall
Bragg Creek	31	Left	100	Bragg Creek North Setback Barrier [3]	Along Bragg Creek upstream of Bracken Road Bridge	Earthfill Barrier
	32	Right	118	Bragg Creek South Setback Barrier [3]	Along Bragg Creek upstream of Bracken Road Bridge	Earthfill Barrier

Notes:
1) Right and left side of the river are relative to an observer looking downstream.
2) New or upgraded flood control structure not included in hydraulic model, but considered for flood inundation mapping.
3) New or upgraded flood control structure included in hydraulic model based on detailed design or as-built information.

3.0 DESIGN FLOOD HAZARD DETERMINATION

3.1 Design Flood Details

The 100-year open water flood was selected as the design flood throughout the study area, in accordance with provincial FHIP guidelines (AEP 2011). Design flood water levels are the same as the 100-year open water flood water levels throughout the study area, and the design flood hazard area footprint is the same as the 100-year open water flood inundation extent (Golder 2022b).

3.2 Floodway and Flood Fringe Terminology

The design flood hazard area is the area of land that will be flooded during the design flood event. Flood hazard maps divide the flood hazard area into floodway and flood fringe zones, including high hazard flood fringe and protected flood fringe sub-zones where appropriate. Flood hazard maps can also illustrate additional information, including incremental areas at risk for floods larger than the 100-year design flood, such as the 200-year and 500-year floods. Flood hazard maps are typically used for long-term flood risk management and land-use planning.

The floodway and flood fringe zones are defined as follows:

- Floodway: When a floodway is first defined on a flood hazard map, it typically represents the area of highest flood hazard where flows are deepest, fastest, and most destructive during the 100-year design flood. The floodway generally includes areas where the water is 1 m deep or greater and where local

velocities are 1 m/s or faster. The floodway typically includes the main channel of a stream and a portion of the adjacent overbank area. Previously mapped floodways do not typically become larger when a flood hazard map is updated, even if the flood hazard area gets larger or design flood levels get higher. New development is discouraged in the floodway and may not be permitted in some communities.

- Flood Fringe: The flood fringe is the portion of the flood hazard area outside of the floodway that typically has relatively shallow water (less than 1 m deep) and lower velocities (less than 1 m/s velocity) during the 100-year design flood. However, areas with deeper or faster moving water may also be identified as high hazard flood fringe areas within the flood fringe. Areas with residual risk behind dedicated flood control structures may also be mapped as protected flood fringe areas within the flood fringe. New development in the flood fringe may be permitted in some communities.

3.3 Floodway Determination Criteria

In areas being mapped for the first time, the floodway typically represents the area of highest hazard where flows are deepest, fastest, and most destructive during the design flood. The following criteria, based on those described in current FHIP guidelines and supplemented by the project-specific Terms of Reference, are used to delineate the floodway in such cases:

- The floodway must include the main river channel area.
- Areas where water depths exceed 1 m or flow velocities exceed 1 m/s are typically part of the floodway.
- Exceptions may be made for small backwater areas, ineffective flow areas, or to support creation of a hydraulically smooth floodway.
- For reaches of supercritical flow, the floodway boundary should correspond to the edge of inundation or the main channel, whichever is larger.

When a flood hazard map is updated, an existing floodway will not change in most circumstances. Exceptions to this can include, but are not limited, to the following circumstances: (1) a floodway could get larger if a main channel shifts outside of a previously-defined floodway or (2) a floodway could get smaller if an area of previously-defined floodway is no longer flooded by the design flood.

Areas of deeper or faster moving water outside of the floodway are identified as high hazard flood fringe. These high hazard flood fringe sub-zones are identified in all areas, whether they are newly-mapped or have a previously-defined or existing floodway. The depth and velocity criteria used to define high hazard flood fringe areas are typically aligned with the 1 m depth and 1 m/s velocity floodway determination criteria for newly-mapped areas.

All areas protected by dedicated flood control structures (e.g., flood berms) that are not overtopped during the design flood are excluded from the floodway. Areas behind flood berms will still be mapped as flooded if they are overtopped, but areas of residual risk of behind flood berms that are not overtopped are mapped as protected flood fringe sub-zones.

The floodway determination criteria for the left and right floodway limits at each cross section are provided together with the design flood levels in Tables 4 to 8.

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B6_USBC_Prince	69677	1080.08	254.78	375.25	Previous Floodway	Main Channel
Bow River	B6_USBC_Prince	69470	1079.71	193.73	326.72	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	69224	1079.01	118.90	274.06	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	69034	1078.83	112.25	300.34	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	68801	1078.55	91.24	300.98	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	68607	1078.23	69.72	252.20	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	68262	1078.01	61.52	317.17	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	67833	1076.83	77.74	309.46	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	67522	1076.42	120.51	367.26	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	67197	1075.83	247.60	461.68	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	66720	1075.46	451.32	577.59	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	66484	1075.10	456.80	570.59	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	66280	1074.57	393.87	567.06	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	66148	1074.73	311.70	629.55	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	66062	1074.71	275.98	597.02	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65934	1074.49	265.31	523.12	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65837	1073.71	230.41	442.91	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65687	1073.60	218.32	405.37	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65467	1073.43	199.87	456.18	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65266	1073.30	196.27	503.51	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	65103	1073.19	220.79	516.83	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64915	1073.12	188.16	483.87	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64750	1072.97	196.01	547.99	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64557	1072.11	142.68	279.81	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64528	1071.94	142.67	268.72	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64470	1071.86	116.23	417.88	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	64212	1071.72	190.86	527.38	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63991	1071.55	244.24	547.39	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63911	1071.43	280.54	580.47	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63892	1071.38	337.56	595.90	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63823	1071.30	350.74	639.35	Previous Floodway	Main Channel
Bow River	B6_USBC_Prince	63795	1071.14	353.51	664.22	Previous Floodway	Main Channel
Bow River	B6_USBC_Prince	63720	1071.05	103.41	374.99	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63575	1070.88	49.22	318.85	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	63403	1070.68	38.76	257.02	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	63152	1069.98	58.86	195.29	Previous Floodway	Previous Floodway

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B6_USBC_Prince	62954	1069.39	46.13	161.37	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	62746	1069.02	39.92	199.28	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	62477	1068.63	81.34	367.30	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	62155	1068.34	198.04	466.69	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	61879	1067.93	392.62	504.91	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	61402	1067.08	382.34	549.37	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	61123	1066.92	293.95	507.58	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	60868	1066.77	262.23	400.08	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	60688	1066.42	99.18	215.43	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	60540	1066.19	74.78	172.90	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	60382	1066.01	72.15	199.59	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	60250	1065.86	83.76	219.43	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	60089	1065.64	229.68	359.06	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59957	1065.44	384.11	518.78	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59929	1064.91	427.75	547.49	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	59893	1064.82	465.65	598.00	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59651	1064.43	749.29	886.95	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59544	1064.31	786.12	933.47	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59488	1063.79	822.84	974.27	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59392	1063.84	855.55	1030.74	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59231	1063.46	889.34	1061.50	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	59071	1062.69	905.14	1054.48	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	58789	1062.57	937.02	1094.77	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	58702	1062.40	964.65	1115.55	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	58530	1062.25	940.20	1100.43	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	58335	1061.54	872.26	978.48	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	58091	1061.09	729.35	850.91	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57831	1060.61	540.55	676.18	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57610	1060.46	341.62	518.43	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57480	1060.13	224.57	379.12	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57219	1059.53	58.17	173.18	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57081	1059.31	78.44	203.92	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	57049	1059.17	87.99	211.85	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	56912	1059.00	139.29	266.16	Previous Floodway	Main Channel
Bow River	B6_USBC_Prince	56731	1058.77	498.21	647.48	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	56529	1058.65	571.85	746.30	Previous Floodway	Main Channel

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B6_USBC_Prince	56353	1058.53	602.22	783.04	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	56076	1057.66	620.95	744.60	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	55902	1056.84	581.86	680.82	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	55631	1056.45	628.94	751.93	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	55434	1056.24	609.25	787.63	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	55322	1056.18	610.86	826.45	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	54971	1055.25	580.47	861.95	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	54799	1054.96	580.19	762.87	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	54612	1054.61	649.59	803.77	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	54403	1054.34	739.79	914.23	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	54141	1054.34	979.56	1250.10	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53940	1054.25	1121.77	1386.23	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53690	1053.61	1258.59	1394.60	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53575	1053.22	1246.53	1362.62	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53523	1053.08	1044.41	1177.21	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53475	1052.85	1029.31	1173.94	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53299	1052.63	850.01	1008.84	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	53127	1051.96	790.05	886.36	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52944	1051.79	730.49	854.20	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52791	1051.46	747.84	880.75	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52701	1051.06	784.50	907.67	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52614	1050.95	819.27	942.12	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52484	1050.67	876.28	993.18	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52228	1050.14	994.64	1123.99	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52076	1049.86	1067.43	1209.49	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	52022	1049.64	1097.70	1241.45	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51854	1049.31	1097.58	1269.49	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51663	1049.10	1068.43	1269.16	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51449	1048.83	1098.99	1286.12	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51286	1048.61	1143.38	1314.27	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51244	1048.35	1131.68	1310.79	Previous Floodway	Previous Floodway
Bow River	B6_USBC_Prince	51166	1048.04	1046.88	1199.93	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	51135	1047.92	1044.71	1191.88	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	51040	1047.74	974.33	1104.42	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	50888	1047.84	900.49	1029.86	Main Channel	Previous Floodway
Bow River	B6_USBC_Prince	50773	1047.64	848.16	973.61	Main Channel	Previous Floodway

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B6_USBC_Prince	50737	1047.39	826.22	956.97	Main Channel	Previous Floodway
Bow River	B5_Prince	50647	1047.48	819.95	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	50538	1047.43	769.65	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	50356	1047.35	614.41	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	50157	1047.20	418.95	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49977	1046.89	230.61	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49948	1046.72	216.67	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49799	1046.57	135.77	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49673	1046.44	114.42	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49553	1046.05	133.14	n/a	Main Channel	No Floodway (3)
Bow River	B5_Prince	49465	1045.85	187.37	n/a	Main Channel	No Floodway (3)
Bow River	B4_Prince_Zoo	49338	1045.85	240.15	374.35	Main Channel	Main Channel
Bow River	B4_Prince_Zoo	49287	1045.70	235.38	375.97	Main Channel	Previous Floodway
Bow River	B4_Prince_Zoo	49247	1044.95	216.31	361.27	Main Channel	Previous Floodway
Bow River	B4_Prince_Zoo	49065	1044.71	157.02	294.16	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48937	1044.39	142.74	262.96	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48766	1044.08	243.11	366.35	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48535	1043.63	553.38	667.80	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48488	1043.19	559.36	675.33	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48450	1042.98	548.78	669.51	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48385	1042.75	510.79	622.88	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48341	1042.56	488.75	599.03	Previous Floodway	Previous Floodway
Bow River	B4_Prince_Zoo	48290	1042.63	465.39	590.81	Previous Floodway	Previous Floodway
Bow River	B3_Zoo	48120	1042.27	n/a	101.38	No Floodway (3)	Previous Floodway
Bow River	B3_Zoo	48062	1042.02	n/a	106.29	No Floodway (3)	Previous Floodway
Bow River	B3_Zoo	48012	1041.98	n/a	120.49	No Floodway (3)	Previous Floodway
Bow River	B3_Zoo	47907	1041.81	n/a	156.98	No Floodway (3)	Main Channel
Bow River	B3_Zoo	47607	1040.78	n/a	n/a	No Floodway (3)	No Floodway (4)
Bow River	B2_Zoo	47382	1040.61	n/a	264.66	No Floodway (3)	Previous Floodway
Bow River	B2_Zoo	47110	1040.39	n/a	306.76	Main Channel	Previous Floodway
Bow River	B2_Zoo	46899	1040.06	157.82	326.47	Main Channel	Previous Floodway
Bow River	B2_Zoo	46852	1039.93	163.71	323.48	Main Channel	Previous Floodway
Bow River	B2_Zoo	46664	1039.60	123.79	277.81	Main Channel	Previous Floodway
Bow River	B2_Zoo	46359	1039.03	n/a	176.91	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	46078	1038.76	1617.31	1889.85	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45933	1038.57	1286.93	1713.10	Previous Floodway	Previous Floodway

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	45915	1038.53	1025.96	1208.93	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45896	1038.46	892.33	1100.27	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45814	1038.39	164.19	349.38	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45570	1038.39	186.22	447.66	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45525	1037.41	189.65	395.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45439	1037.21	219.51	453.36	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	45128	1036.80	354.73	629.84	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	44792	1036.05	796.80	969.93	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	44644	1035.59	873.20	869.17	Main Channel	Main Channel
Bow River	B1_Zoo_DSBC	44600	1035.39	937.43	932.90	Main Channel	Main Channel
Bow River	B1_Zoo_DSBC	44473	1035.26	939.99	1066.34	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	44315	1035.11	897.66	1112.63	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	44143	1034.69	837.49	1097.58	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	43992	1034.52	736.32	1029.32	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	43828	1034.09	706.79	970.95	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	43607	1033.66	552.46	742.98	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	43450	1033.41	459.77	767.59	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	43395	1033.49	431.42	786.89	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	43234	1033.46	316.47	802.96	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	42997	1033.16	241.95	744.37	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	42744	1032.82	200.32	624.36	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	42565	1032.38	257.13	616.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	42238	1032.13	281.94	557.82	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	42093	1031.67	299.67	536.21	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	41978	1031.48	312.86	539.29	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	41828	1031.34	320.38	535.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	41638	1031.33	270.92	481.87	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	41373	1031.17	336.29	504.00	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	41320	1030.92	333.25	460.60	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	41187	1030.02	283.29	451.66	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	41122	1029.92	250.50	460.15	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	41038	1029.68	232.01	440.93	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	40878	1029.35	165.19	378.87	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	40788	1029.23	91.04	322.91	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	40663	1029.05	71.15	266.48	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	40518	1028.93	675.30	875.11	Previous Floodway	Main Channel

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	40440	1028.33	718.47	928.32	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	40371	1028.32	718.56	928.59	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	40254	1028.18	719.67	924.27	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	40065	1027.64	728.17	918.55	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	39997	1027.54	297.08	481.93	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	39942	1027.33	328.67	490.44	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	39841	1027.17	80.52	337.79	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	39697	1026.70	23.71	362.42	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	39587	1026.43	28.66	398.66	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	39436	1026.19	21.41	426.24	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	39313	1025.93	19.75	467.52	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	39262	1025.85	22.86	498.06	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	39120	1025.52	28.73	544.78	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	38865	1025.28	75.79	581.94	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38725	1025.16	88.19	568.62	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38682	1025.12	84.35	562.88	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38513	1024.95	100.45	510.14	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38366	1024.80	66.72	463.13	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38283	1024.64	82.82	490.41	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38197	1024.58	71.51	479.83	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	38125	1024.49	70.62	475.86	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	37982	1024.20	158.73	456.84	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	37683	1023.54	204.73	444.48	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	37520	1023.06	154.02	357.72	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	37480	1022.79	137.65	333.09	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	37447	1022.54	126.94	334.69	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	37301	1022.11	83.12	478.94	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	37029	1021.98	47.13	468.93	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	36882	1021.77	49.17	515.54	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	36714	1021.43	42.28	411.31	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	36303	1020.68	196.82	680.52	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	36008	1020.38	150.65	889.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	35723	1019.61	126.23	825.81	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	35602	1019.46	124.43	820.19	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	35419	1019.50	129.04	798.51	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	35275	1019.41	131.99	679.49	Previous Floodway	Previous Floodway

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	35136	1019.33	172.60	629.34	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	34888	1018.96	390.27	684.64	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	34780	1018.70	537.41	825.09	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	34758	1018.61	542.96	831.05	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	34557	1018.25	620.33	931.20	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	34396	1017.89	1355.11	1672.71	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	34071	1017.28	1722.11	2179.40	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	33853	1016.98	1697.75	2144.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	33754	1016.94	1682.71	2054.83	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	33557	1016.81	1651.12	2031.36	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	33266	1016.46	1595.57	2027.36	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	33111	1016.40	1915.30	2273.35	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32923	1015.78	1929.46	2186.37	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32791	1015.08	1824.48	1980.02	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32732	1014.70	1819.64	2005.05	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32582	1014.52	1682.94	2170.17	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32471	1014.46	1651.51	2132.22	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32331	1014.32	1618.28	2066.30	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	32129	1013.81	1538.37	1976.63	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	31930	1013.49	44.74	448.93	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	31629	1012.57	40.65	378.47	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	31348	1011.99	53.79	390.25	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	31220	1011.77	76.48	451.62	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	31186	1011.50	76.33	456.06	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	30974	1010.93	267.80	661.29	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	30757	1010.57	516.20	960.80	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	30425	1009.83	538.81	1176.10	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	30208	1009.32	603.76	1287.01	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	29989	1009.12	206.17	919.23	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	29647	1008.63	70.18	813.64	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	29388	1007.69	104.21	737.96	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	29125	1007.28	100.09	782.36	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	28848	1006.80	99.46	910.77	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	28519	1006.49	139.15	731.36	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	28184	1006.00	106.11	460.56	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	28004	1005.60	123.06	360.40	Previous Floodway	Main Channel

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	27853	1005.38	131.92	346.43	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	27554	1004.79	96.85	343.24	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	27205	1004.18	69.65	452.49	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	26987	1003.85	59.79	447.88	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	26732	1003.40	125.37	481.72	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	26716	1003.65	114.47	478.51	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	26640	1003.25	153.38	509.38	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	26380	1002.56	247.62	660.23	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	26122	1002.16	343.53	647.37	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	25893	1001.86	407.71	690.84	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	25672	1001.51	442.39	754.32	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	25469	1001.25	470.37	805.51	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	25383	1000.98	426.12	796.14	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	25245	1000.92	404.38	822.88	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	25114	1000.69	340.88	774.60	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	24988	1000.50	331.99	778.39	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	24842	1000.31	365.90	798.27	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	24696	1000.21	482.43	907.22	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	24343	999.63	444.74	780.35	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	24109	999.31	358.95	656.00	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	23977	998.72	447.29	672.85	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	23924	998.40	492.36	682.35	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	23884	998.02	485.06	681.72	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	23844	997.93	464.01	690.31	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	23684	997.74	569.91	863.01	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	23547	997.41	330.08	816.35	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	23324	997.20	187.74	792.89	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	22932	996.85	80.99	582.69	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	22646	996.57	73.27	451.60	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	22515	995.91	68.74	443.08	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	22249	995.29	65.47	421.81	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	21808	994.34	150.59	418.96	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	21539	993.77	324.83	655.15	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	21174	992.93	502.93	786.10	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	20821	992.29	524.38	869.26	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	20451	991.61	491.53	861.57	Previous Floodway	Previous Floodway

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	20090	990.79	515.94	828.36	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	19815	990.31	542.69	784.32	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	19564	989.83	546.06	889.52	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	19337	989.24	463.39	860.89	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	19051	988.63	521.32	901.73	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	18685	988.03	516.08	878.65	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	18436	987.34	536.27	901.66	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	18352	986.60	696.29	907.21	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	18309	986.33	681.30	910.91	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	18123	985.96	294.48	748.86	Mixed	Previous Floodway
Bow River	B1_Zoo_DSBC	17863	985.49	328.82	768.58	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	17498	984.57	455.82	904.12	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	17226	984.34	313.13	836.22	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	16920	983.47	249.97	982.14	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	16402	982.13	198.86	1277.23	Main Channel	Main Channel
Bow River	B1_Zoo_DSBC	16136	981.66	169.18	1256.50	Main Channel	Main Channel
Bow River	B1_Zoo_DSBC	15672	980.40	181.51	790.50	Main Channel	Main Channel
Bow River	B1_Zoo_DSBC	15472	979.72	460.91	607.04	Previous Floodway	Main Channel
Bow River	B1_Zoo_DSBC	15202	979.01	349.10	547.47	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	14936	978.89	220.05	1107.70	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	14680	978.33	172.03	1062.50	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	14373	977.85	159.58	957.87	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	14047	976.83	143.40	845.80	Previous Floodway	Previous Floodway
Bow River	B1_Zoo_DSBC	13661	976.07	17.78	848.11	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	13385	975.61	14.47	839.61	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	13036	975.05	27.25	763.10	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	12653	974.34	108.50	643.37	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	12330	973.96	49.86	476.01	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	12035	973.44	79.80	314.25	Main Channel	Previous Floodway
Bow River	B1_Zoo_DSBC	11856	972.88	55.73	220.33	Previous Floodway	1 m Depth
Bow River	B1_Zoo_DSBC	11470	971.86	95.29	258.72	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	11115	971.50	183.69	381.49	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	10806	971.16	380.67	691.70	1 m Depth	1 m Depth
Bow River	B1_Zoo_DSBC	10597	970.87	121.02	607.76	1 m Depth	1 m Depth
Bow River	B1_Zoo_DSBC	10271	969.81	118.58	604.30	1 m Depth	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	9854	969.25	425.98	733.47	1 m Depth	Inundation Extent (1)

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	9630	969.06	110.67	611.91	1 m Depth	Main Channel
Bow River	B1_Zoo_DSBC	9444	968.86	53.63	521.01	Inundation Extent (1)	Main Channel
Bow River	B1_Zoo_DSBC	9216	968.35	53.79	423.04	Inundation Extent (1)	Main Channel
Bow River	B1_Zoo_DSBC	8958	967.26	12.99	301.46	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	8772	967.19	35.47	418.34	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	8613	966.83	50.37	408.13	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	8443	966.59	507.88	852.63	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	8262	966.22	844.78	1105.77	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	8011	965.75	1137.95	1493.36	Main Channel	1 m Depth
Bow River	B1_Zoo_DSBC	7780	965.44	817.08	1729.26	1 m Depth	1 m/s Velocity
Bow River	B1_Zoo_DSBC	7581	965.15	220.76	2053.20	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	7422	964.75	463.54	2487.31	Inundation Extent (1)	Inundation Extent (2)
Bow River	B1_Zoo_DSBC	7267	964.36	359.07	2673.77	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	7068	964.18	331.84	2744.65	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	6894	964.17	322.34	2768.34	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	6775	964.11	320.12	2778.83	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	6635	964.05	308.60	2724.16	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	6381	963.02	304.56	2620.43	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	6195	962.76	308.09	2537.92	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	5978	962.63	306.65	2455.04	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	5811	961.96	310.65	2414.37	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	5643	961.76	295.15	2316.02	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	5387	961.26	392.42	2194.00	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	5146	960.95	644.83	1858.49	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	4921	960.49	252.44	849.74	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	4658	960.20	199.94	674.19	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	4422	960.15	34.23	426.92	Inundation Extent (1)	1 m Depth
Bow River	B1_Zoo_DSBC	4175	958.97	73.38	269.51	Inundation Extent (1)	1 m/s Velocity
Bow River	B1_Zoo_DSBC	3900	958.16	96.46	287.82	Inundation Extent (1)	Inundation Extent (2)
Bow River	B1_Zoo_DSBC	3711	957.95	33.12	358.78	Inundation Extent (1)	Inundation Extent (2)
Bow River	B1_Zoo_DSBC	3529	957.81	39.32	543.52	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	3245	957.15	34.25	479.16	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	3097	956.65	39.74	463.94	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	2905	956.26	31.64	442.58	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	2673	956.17	84.66	493.14	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	2501	955.96	121.54	510.81	Inundation Extent (1)	Inundation Extent (1)

Table 4: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Limit Stations		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bow River	B1_Zoo_DSBC	2326	955.55	117.33	463.55	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	2111	955.39	194.54	559.73	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	1871	954.66	133.15	503.86	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	1506	953.92	74.72	495.86	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	1160	953.29	137.62	546.57	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	946	952.94	93.12	547.93	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	721	952.87	77.66	622.84	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	491	952.37	151.12	592.94	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	335	952.10	142.12	592.86	Inundation Extent (1)	Inundation Extent (1)
Bow River	B1_Zoo_DSBC	138	951.15	236.83	475.99	Inundation Extent (1)	1 m Depth

Notes:

1) *No viable flood fringe*
2) *Floodway set at interior inundation extent, no viable interior flood fringe*
3) *No floodway station because end of cross section is adjacent to side channel*
4) *No floodway station because floodway line is outside of cross section extent*

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E14_USBC_Bragg	66613	1341.66	76.18	543.11	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	66464	1340.56	82.59	558.96	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	66317	1339.45	45.68	526.34	Inundation Extent (1)	1 m Depth
Elbow River	E14_USBC_Bragg	66163	1338.03	41.26	461.68	Inundation Extent (1)	1 m Depth
Elbow River	E14_USBC_Bragg	66005	1336.77	41.84	425.90	1 m Depth	1 m Depth
Elbow River	E14_USBC_Bragg	65839	1335.55	113.63	392.06	1 m Depth	1 m Depth
Elbow River	E14_USBC_Bragg	65669	1334.03	108.41	440.23	1 m Depth	1 m Depth
Elbow River	E14_USBC_Bragg	65521	1333.28	22.63	402.44	Inundation Extent (1)	1 m Depth
Elbow River	E14_USBC_Bragg	65387	1332.35	50.78	381.88	Inundation Extent (1)	1 m/s Velocity
Elbow River	E14_USBC_Bragg	65236	1331.02	67.64	377.92	Inundation Extent (1)	1 m Depth
Elbow River	E14_USBC_Bragg	65080	1329.95	22.30	225.30	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64928	1329.03	19.09	183.13	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64773	1328.46	110.47	269.61	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64642	1327.06	93.85	225.66	1 m/s Velocity	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64495	1326.00	77.14	280.36	1 m Depth	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64338	1325.05	51.69	243.45	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64189	1324.00	33.97	228.79	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	64040	1323.03	31.84	216.02	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	63898	1321.95	79.64	196.43	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	63741	1321.02	66.04	241.35	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	63594	1319.56	190.08	386.87	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	63435	1318.36	225.40	494.80	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	63281	1317.36	49.59	219.00	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	63143	1316.81	33.94	189.33	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	63013	1316.15	42.44	192.08	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62971	1315.42	40.39	187.89	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62896	1314.80	38.39	204.34	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62813	1314.33	53.16	255.19	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62738	1313.85	92.50	333.82	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62655	1313.15	95.67	361.82	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62580	1312.62	119.68	405.23	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62498	1312.06	133.09	465.30	Previous Floodway	Previous Floodway
Elbow River	E14_USBC_Bragg	62413	1311.53	151.86	393.97	Previous Floodway	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	62352	1311.22	198.95	441.27	Previous Floodway	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	62262	1310.89	260.47	468.54	Previous Floodway	Inundation Extent (1)
Elbow River	E14_USBC_Bragg	62169	1310.19	365.51	460.45	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	62137	1309.62	376.86	458.35	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	62086	1309.17	369.40	462.67	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	62036	1308.87	368.52	463.23	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	61985	1308.59	364.56	454.78	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	61940	1308.40	330.58	419.31	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	61887	1308.16	298.32	397.12	Main Channel	Main Channel

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E14_USBC_Bragg	61837	1307.84	258.81	374.44	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	61790	1306.89	256.54	348.91	Main Channel	Main Channel
Elbow River	E14_USBC_Bragg	61730	1306.60	238.67	346.73	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61692	1306.67	188.04	314.34	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61642	1306.52	185.46	288.83	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61597	1306.40	171.76	263.45	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61550	1306.03	131.58	227.74	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61497	1305.51	107.26	225.35	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61450	1304.94	85.93	218.72	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61400	1304.43	100.33	265.42	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	61344	1303.87	107.28	304.71	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61294	1303.61	98.41	287.02	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61242	1303.40	92.10	264.67	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61193	1302.66	92.01	257.37	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61143	1302.12	89.15	260.01	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	61094	1301.51	101.18	266.85	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	61045	1301.25	114.95	288.02	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	61005	1301.04	119.22	287.51	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60952	1300.63	135.46	303.82	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60906	1300.02	182.99	328.88	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60853	1299.43	171.01	323.45	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60806	1299.35	145.85	300.75	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60755	1299.32	136.68	282.42	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60711	1299.22	122.39	224.50	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60665	1299.08	116.56	194.03	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60616	1298.25	107.67	175.51	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	60568	1298.04	83.20	152.35	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	60516	1297.98	69.88	135.26	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	60463	1296.74	66.73	121.69	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60414	1296.29	76.89	145.39	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60364	1295.82	122.56	189.76	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60316	1295.50	145.46	211.47	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60267	1295.45	112.76	198.56	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60213	1294.82	86.06	178.34	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60169	1294.65	89.82	172.30	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60113	1294.50	98.04	181.21	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60065	1294.29	150.28	222.49	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	60011	1293.23	249.01	314.61	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	59964	1292.68	325.92	400.93	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	59915	1292.03	349.99	422.96	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	59869	1291.43	390.16	457.59	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	59815	1290.99	420.50	494.27	Previous Floodway	Main Channel

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	59764	1290.92	483.52	570.58	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	59718	1290.56	541.96	629.87	Previous Floodway	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	59679	1290.31	504.41	608.52	Previous Floodway	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	59600	1289.78	515.11	669.63	Inundation Extent (3)	1 m Depth
Elbow River	E13_Bragg_Lott	59521	1289.07	446.74	613.05	Inundation Extent (3)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	59439	1288.24	405.31	592.94	1 m/s Velocity	1 m Depth
Elbow River	E13_Bragg_Lott	59356	1287.43	424.15	670.71	1 m Depth	1 m Depth
Elbow River	E13_Bragg_Lott	59292	1287.07	381.45	672.17	1 m Depth	1 m Depth
Elbow River	E13_Bragg_Lott	59220	1286.66	351.03	659.51	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	59153	1285.73	340.84	584.74	Inundation Extent (2)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	59110	1285.36	321.71	650.96	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	59067	1284.88	309.42	680.70	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	59000	1284.53	301.91	759.69	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58920	1284.27	243.85	755.66	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58862	1284.10	232.10	712.31	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58751	1283.28	287.84	677.92	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58684	1282.46	326.41	677.39	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58593	1281.60	331.63	614.07	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	58516	1280.88	345.53	606.25	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	58433	1280.25	344.66	645.75	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E13_Bragg_Lott	58359	1279.62	354.76	632.98	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	58279	1278.93	375.82	635.93	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	58209	1278.39	382.08	694.32	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	58142	1277.86	393.67	754.82	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	58057	1277.22	378.60	744.76	Inundation Extent (1)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	57984	1276.67	375.39	767.37	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	57899	1276.02	322.27	676.94	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	57831	1275.53	274.41	613.09	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	57738	1275.08	275.87	539.49	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	57685	1274.91	260.54	1085.69	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57597	1274.46	252.55	1078.13	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57512	1273.37	229.58	1078.27	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57437	1273.31	207.48	1097.51	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57356	1272.49	143.22	1052.59	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57286	1272.03	87.41	1015.76	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57215	1271.69	85.55	995.91	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	57132	1270.72	208.03	1001.98	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	57049	1270.21	340.53	1125.60	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56974	1269.81	312.13	1074.07	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56895	1269.41	304.26	988.16	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56812	1268.69	244.41	606.48	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	56740	1267.84	198.82	498.44	Inundation Extent (1)	1 m Depth

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	56654	1267.13	145.04	404.80	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	56576	1266.42	127.20	339.82	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56500	1265.82	82.81	275.86	Inundation Extent (1)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	56417	1265.11	46.11	274.02	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	56330	1264.56	46.66	302.22	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	56254	1264.21	42.22	290.11	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	56177	1263.51	33.10	256.93	Inundation Extent (1)	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	56111	1263.22	50.54	303.31	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56061	1262.91	44.10	266.13	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	56013	1262.55	39.53	250.43	Inundation Extent (1)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	55962	1262.19	41.27	249.43	Inundation Extent (1)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	55909	1261.73	50.19	286.10	Inundation Extent (1)	Mixed
Elbow River	E13_Bragg_Lott	55868	1261.48	48.04	336.30	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55827	1261.18	35.11	324.26	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55775	1260.81	40.17	347.56	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55727	1260.40	58.09	371.75	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55683	1260.14	60.13	380.12	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55640	1259.90	81.14	412.16	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55594	1259.68	92.71	423.21	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55549	1259.51	90.18	419.43	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55499	1259.28	98.45	422.73	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55464	1259.06	108.83	421.90	Inundation Extent (1)	1 m Depth
Elbow River	E13_Bragg_Lott	55404	1258.56	111.20	348.02	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55351	1258.27	96.26	316.69	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55309	1257.83	83.72	298.50	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55257	1257.44	59.40	271.59	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55210	1256.93	51.76	258.42	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55158	1256.58	52.81	260.19	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55108	1256.33	67.74	286.15	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55067	1255.97	80.06	239.90	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	55029	1255.47	78.25	226.99	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54996	1255.00	85.39	231.63	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54924	1254.70	60.66	230.00	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54869	1254.19	59.54	248.12	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54826	1253.85	40.33	242.54	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54796	1253.73	32.20	253.93	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54758	1253.43	43.32	260.34	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54697	1253.06	64.03	295.50	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54661	1252.78	54.17	299.97	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54626	1252.46	56.49	312.32	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54582	1252.18	29.15	300.47	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54545	1251.94	22.52	292.88	Inundation Extent (1)	Main Channel

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	54499	1251.66	13.32	274.55	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54451	1251.31	24.39	263.63	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54410	1251.14	28.29	236.54	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54364	1250.87	29.59	191.56	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54311	1250.38	43.57	168.22	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54260	1249.83	36.81	185.45	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54206	1249.41	35.77	215.57	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54156	1248.98	37.25	250.32	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54109	1248.65	37.47	305.29	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54059	1248.38	31.83	416.93	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	54006	1247.97	55.14	460.33	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53961	1247.64	83.14	514.49	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53918	1247.30	105.90	586.76	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53874	1246.91	100.07	624.67	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53834	1246.62	73.73	646.28	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53792	1246.29	66.78	679.21	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53751	1245.99	63.76	698.05	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53698	1245.63	64.28	696.59	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53647	1245.34	56.09	682.66	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53604	1244.98	55.47	667.41	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53577	1244.82	62.61	665.06	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53529	1244.57	54.40	636.28	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53483	1244.31	57.15	607.55	Inundation Extent (1)	Main Channel
Elbow River	E13_Bragg_Lott	53435	1243.99	70.60	576.71	Mixed	Main Channel
Elbow River	E13_Bragg_Lott	53397	1243.65	261.98	693.63	Mixed	Main Channel
Elbow River	E13_Bragg_Lott	53343	1243.11	267.84	683.82	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53297	1242.62	249.72	668.72	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53252	1242.21	231.33	677.53	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53212	1241.89	234.26	693.05	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53162	1241.49	238.90	682.95	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53120	1241.13	248.87	656.15	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53073	1240.74	291.66	668.71	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53037	1240.46	304.68	682.78	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	53003	1240.21	309.92	687.79	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	52971	1240.00	313.40	693.23	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	52909	1239.67	301.99	705.08	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	52832	1239.14	298.65	722.42	1 m Depth	Main Channel
Elbow River	E13_Bragg_Lott	52807	1238.90	308.42	746.66	Mixed	Main Channel
Elbow River	E13_Bragg_Lott	52790	1238.74	313.49	768.43	Mixed	Main Channel
Elbow River	E13_Bragg_Lott	52775	1238.59	313.86	788.92	Mixed	Main Channel
Elbow River	E13_Bragg_Lott	52752	1238.44	315.23	889.23	Mixed	Mixed
Elbow River	E13_Bragg_Lott	52724	1238.18	318.85	954.85	Inundation Extent (2)	Mixed

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	52692	1237.91	317.78	1019.31	Inundation Extent (2)	Mixed
Elbow River	E13_Bragg_Lott	52659	1237.66	318.45	1026.66	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	52610	1237.41	332.67	1010.93	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	52570	1237.21	353.50	1000.83	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	52518	1236.88	366.43	1012.58	Inundation Extent (2)	1 m Depth
Elbow River	E13_Bragg_Lott	52446	1236.34	382.16	1045.26	Inundation Extent (2)	Mixed
Elbow River	E13_Bragg_Lott	52386	1235.74	384.33	813.95	Mixed	1 m Depth
Elbow River	E13_Bragg_Lott	52303	1234.97	278.06	809.26	Mixed	1 m Depth
Elbow River	E13_Bragg_Lott	52220	1234.21	129.27	735.05	1 m Depth	1 m Depth
Elbow River	E13_Bragg_Lott	52124	1233.49	211.49	715.63	1 m Depth	1 m Depth
Elbow River	E13_Bragg_Lott	52035	1232.81	208.47	738.93	1 m Depth	1 m/s Velocity
Elbow River	E13_Bragg_Lott	51947	1231.89	205.91	793.06	Main Channel	Inundation Extent (1)
Elbow River	E13_Bragg_Lott	51877	1231.25	104.89	758.01	Inundation Extent (1)	1 m/s Velocity
Elbow River	E13_Bragg_Lott	51758	1230.29	45.84	726.26	Previous Floodway	Inundation Extent (2)
Elbow River	E13_Bragg_Lott	51673	1229.50	42.61	633.41	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	51579	1228.48	27.65	506.72	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	51458	1227.45	86.72	526.45	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	51341	1226.43	227.44	675.50	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	51232	1225.96	275.96	759.90	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	51173	1225.66	321.97	773.63	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	51067	1224.53	511.57	888.17	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50932	1223.51	542.71	939.98	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	50854	1222.73	411.98	897.39	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50733	1222.06	60.76	877.70	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50623	1221.43	23.93	767.27	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50539	1220.71	222.66	943.84	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50443	1220.16	223.29	952.81	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	50338	1219.55	196.59	933.32	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	50294	1219.26	188.03	937.97	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	50203	1218.61	338.33	962.44	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	50099	1218.03	266.74	939.51	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	50008	1217.25	188.09	894.18	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	49908	1216.76	42.07	732.32	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49806	1216.15	117.25	688.62	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49713	1215.54	28.90	600.78	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49613	1215.17	54.06	578.57	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	49536	1214.49	27.21	549.34	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49433	1213.86	32.23	522.20	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49340	1213.26	23.98	552.60	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	49240	1212.73	26.02	536.09	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	49140	1212.01	30.04	494.79	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	49041	1211.25	35.54	494.81	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	48939	1210.18	21.20	497.15	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48843	1210.07	34.01	460.28	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48740	1209.44	22.31	437.24	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	48651	1208.73	11.92	381.16	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	48556	1208.54	195.27	477.43	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48449	1207.61	155.90	459.93	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	48348	1206.85	48.92	488.26	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	48255	1206.15	198.92	773.76	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48203	1206.28	7.15	87.23	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48165	1206.05	8.14	84.57	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48133	1206.23	513.08	581.66	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	48025	1205.30	376.14	671.34	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	47928	1204.66	29.32	483.42	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	47829	1203.83	20.32	464.76	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	47731	1203.12	38.91	483.45	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	47630	1202.51	108.83	512.33	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	47533	1201.95	220.16	590.96	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	47435	1201.15	223.04	609.69	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	47332	1200.65	83.19	342.30	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	47239	1200.01	45.76	281.78	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	47148	1199.47	30.25	304.67	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	47049	1199.02	17.91	325.89	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	46949	1198.62	29.05	358.78	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	46849	1198.10	34.47	425.13	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	46748	1197.55	32.43	499.56	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	46661	1197.06	28.65	679.26	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	46577	1196.54	31.32	682.86	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	46474	1195.85	90.97	825.24	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	46374	1195.25	131.35	1001.82	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	46275	1194.65	173.23	1086.28	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	46165	1194.13	302.67	1228.04	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	46074	1193.24	591.96	1379.50	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45996	1192.53	445.70	1339.92	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45896	1191.97	194.42	1407.68	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	45800	1191.51	78.85	1385.80	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45705	1190.95	107.96	1413.17	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45611	1190.32	91.16	1417.22	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45514	1189.73	141.03	1427.53	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45419	1189.37	581.43	1432.06	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45309	1188.97	506.21	1359.09	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45216	1188.51	354.24	1173.29	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	45115	1187.75	226.89	1074.19	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	45016	1187.16	196.54	1088.78	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44931	1186.41	47.47	1115.83	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44835	1185.77	50.56	1100.62	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44722	1185.27	35.73	968.69	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44643	1184.78	64.57	874.89	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44541	1184.14	58.54	770.84	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44448	1183.59	40.66	655.95	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44344	1183.07	45.01	608.90	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44243	1182.50	48.23	639.01	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	44141	1181.92	34.17	610.17	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	44042	1181.48	30.18	574.01	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	43929	1180.76	20.79	589.14	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	43842	1180.08	29.73	573.79	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43744	1179.44	40.95	663.18	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43641	1178.69	32.28	709.21	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	43543	1178.14	26.16	717.45	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43445	1177.66	30.32	810.25	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43319	1176.91	35.19	969.36	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43248	1176.55	36.06	1044.45	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	43137	1176.07	26.15	980.62	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	43039	1175.37	33.44	971.48	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42937	1174.77	34.03	920.06	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	42838	1174.22	29.21	904.31	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	42736	1173.44	69.13	961.07	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42638	1172.66	48.53	934.35	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42536	1171.99	26.87	923.63	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	42439	1171.36	47.42	812.03	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42343	1170.57	220.86	1083.62	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42265	1170.09	204.03	1098.15	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42142	1169.42	82.79	940.85	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	42043	1168.77	47.87	813.45	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41942	1167.99	45.28	731.09	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41844	1167.34	32.96	627.48	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41751	1166.86	38.28	583.25	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41649	1166.42	30.27	515.69	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41551	1165.89	37.92	578.63	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41448	1165.09	27.03	580.12	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	41348	1164.55	28.40	589.58	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41246	1164.14	22.34	584.05	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	41149	1163.69	46.21	503.30	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	41047	1163.07	31.96	456.08	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40947	1162.19	68.59	538.69	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	40847	1161.58	35.02	633.53	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40749	1160.74	34.14	595.29	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40651	1160.19	26.71	619.89	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40547	1159.67	38.32	805.35	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40447	1159.09	69.86	779.40	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40347	1158.70	162.87	882.16	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40246	1157.92	86.68	889.26	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	40147	1157.42	46.96	983.79	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	40047	1156.90	50.51	1061.83	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39946	1156.44	61.59	1103.79	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39851	1155.98	53.61	1140.87	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39744	1155.35	72.98	1186.54	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39645	1154.63	47.67	1224.31	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39546	1153.86	32.85	1267.51	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39444	1153.21	39.97	1312.82	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39400	1152.95	23.00	1352.69	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39231	1152.38	26.93	1303.30	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39141	1151.96	61.87	1347.84	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	39043	1151.52	41.00	1341.54	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	38941	1150.86	64.92	1385.09	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	38842	1150.15	39.81	1385.69	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38745	1149.60	33.56	1394.48	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38646	1148.88	39.52	1343.54	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38541	1148.28	78.90	1307.94	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38442	1147.74	36.37	1206.61	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38342	1147.10	26.78	1231.33	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38246	1146.63	33.75	1255.05	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38144	1146.10	62.85	1290.16	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	38044	1145.68	48.32	1267.89	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37957	1145.27	53.78	1277.73	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37869	1144.93	59.65	1293.04	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37771	1144.58	169.19	1099.31	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37687	1144.21	45.60	564.38	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	37589	1143.86	56.58	533.78	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37512	1143.34	48.49	522.05	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37389	1142.66	83.78	510.31	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37289	1142.05	170.19	613.92	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	37189	1141.33	177.90	794.31	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	37092	1140.71	179.37	903.02	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	36989	1140.11	161.23	1005.38	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	36908	1139.72	274.45	1145.37	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	36781	1139.11	347.65	1213.42	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	36698	1138.73	266.56	1134.65	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36605	1138.29	315.09	1092.63	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36502	1137.70	342.71	1053.11	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	36404	1137.33	274.28	980.16	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36299	1136.92	343.12	951.22	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36212	1136.35	347.88	927.49	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36116	1135.98	383.22	802.24	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	36012	1135.45	313.58	779.55	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	35912	1135.05	284.70	851.56	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35816	1134.43	270.53	1002.79	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35710	1133.91	226.19	1032.04	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35616	1133.46	203.46	1092.76	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35513	1133.01	197.47	1176.47	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35414	1132.55	173.07	1175.56	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35327	1132.11	212.29	1191.70	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35210	1131.54	183.14	1180.01	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35105	1131.02	99.34	1153.48	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	35004	1130.50	50.82	1136.27	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34916	1129.98	58.39	1139.06	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34816	1129.28	131.53	1202.38	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34725	1128.96	210.43	1315.95	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34615	1128.30	235.70	1392.21	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34516	1127.83	295.71	1451.33	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	34419	1127.62	198.62	1293.26	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	34312	1127.08	74.44	1169.57	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	34238	1126.72	47.75	1108.84	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34158	1126.24	84.40	1102.59	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34080	1125.91	147.96	1168.79	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	34003	1125.72	177.69	1194.40	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33920	1125.26	210.63	1211.47	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33840	1124.96	228.21	1072.83	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33760	1124.58	241.10	1028.02	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33681	1124.23	283.60	1069.24	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33603	1123.96	248.25	1088.22	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33521	1123.34	258.37	1046.30	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33442	1122.90	305.30	1130.39	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33363	1122.56	305.19	1170.94	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33280	1122.10	501.56	1424.64	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33200	1121.50	557.10	1436.12	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	33124	1121.11	543.88	1420.57	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32951	1120.33	326.79	1295.26	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32883	1120.05	290.32	1292.60	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	32808	1119.61	305.22	1147.36	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32729	1119.41	327.29	1128.89	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32650	1119.20	335.37	1125.26	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32570	1118.75	299.81	1123.76	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32488	1118.41	307.35	1181.74	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32410	1118.01	303.21	1262.39	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	32329	1117.53	315.78	1286.40	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32249	1117.16	294.85	1285.07	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32167	1116.90	331.00	1310.34	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	32088	1116.54	253.72	1339.77	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	32008	1116.12	201.70	1408.58	Main Channel	Main Channel
Elbow River	E13_Bragg_Lott	31927	1115.79	100.90	1393.04	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31850	1115.33	101.26	1453.79	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31769	1114.86	67.73	1501.10	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	31688	1114.35	38.32	1489.02	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31615	1113.92	41.77	1468.81	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31523	1113.46	43.32	1569.23	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	31450	1112.94	56.11	1607.75	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	31377	1112.43	186.42	1733.99	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	31283	1112.15	218.02	1918.32	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	31208	1111.80	212.05	2191.67	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31123	1111.48	177.08	2141.08	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	31047	1111.23	151.66	1658.56	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30944	1110.92	104.61	1555.17	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30825	1110.60	73.32	1418.44	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30725	1110.27	49.70	1242.93	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30648	1109.95	302.15	1150.75	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30559	1109.59	69.35	935.52	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30478	1109.26	83.88	968.90	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30398	1109.01	70.80	978.77	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30318	1108.64	210.23	987.94	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30237	1108.21	239.19	1004.54	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30170	1107.92	254.35	1086.93	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30081	1107.65	388.18	1228.02	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	30012	1107.35	291.50	1106.86	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	29935	1107.06	25.18	862.37	Previous Floodway	Main Channel
Elbow River	E13_Bragg_Lott	29859	1106.86	27.50	866.33	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29776	1106.69	21.61	761.75	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29716	1106.59	22.83	697.00	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29647	1106.41	11.37	622.62	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29548	1106.18	15.03	510.43	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29454	1106.03	18.71	458.12	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E13_Bragg_Lott	29343	1105.95	19.55	477.67	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29280	1105.72	396.43	697.92	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	29225	1104.76	115.51	486.68	Previous Floodway	1 m/s Velocity
Elbow River	E13_Bragg_Lott	29099	1104.16	44.10	521.37	Previous Floodway	1 m Depth
Elbow River	E13_Bragg_Lott	28952	1103.51	64.23	1163.19	Previous Floodway	1 m Depth
Elbow River	E13_Bragg_Lott	28810	1102.91	88.23	1088.24	Previous Floodway	1 m Depth
Elbow River	E13_Bragg_Lott	28664	1102.30	148.05	1057.45	Previous Floodway	1 m Depth
Elbow River	E13_Bragg_Lott	28497	1101.62	229.33	802.91	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	28338	1100.94	322.67	1092.93	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	28169	1100.54	349.44	1318.77	Main Channel	Previous Floodway
Elbow River	E13_Bragg_Lott	28113	1100.17	268.77	1073.33	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	27993	1099.68	193.73	1048.43	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	27871	1099.39	142.50	1104.99	Previous Floodway	Previous Floodway
Elbow River	E13_Bragg_Lott	27712	1098.74	279.94	n/a	Previous Floodway	No Floodway [3]
Elbow River	E13_Bragg_Lott	27540	1098.00	346.69	n/a	Previous Floodway	No Floodway [3]
Elbow River	E13_Bragg_Lott	27385	1097.66	329.21	n/a	Previous Floodway	No Floodway [3]
Elbow River	E13_Bragg_Lott	27226	1097.33	468.29	n/a	Previous Floodway	No Floodway [3]
Elbow River	E13_Bragg_Lott	27083	1097.14	488.32	n/a	Previous Floodway	No Floodway [3]
Elbow River	E12_Lott_Dam	26984	1096.74	480.62	1539.53	Previous Floodway	Main Channel
Elbow River	E12_Lott_Dam	26810	1096.43	492.55	1456.04	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26672	1096.01	519.01	1404.53	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26530	1095.52	526.17	1450.36	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26418	1095.21	491.52	1473.08	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26235	1094.53	444.92	1475.38	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26088	1094.23	430.68	1538.48	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	26001	1094.02	414.84	1522.01	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25923	1093.71	240.49	1297.80	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25819	1093.34	226.92	1251.79	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25679	1093.06	247.53	1184.03	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25556	1092.88	254.63	1305.04	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25432	1092.61	254.56	1395.83	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25370	1092.50	318.07	1288.51	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	25223	1091.69	236.74	1104.43	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	25076	1091.14	293.73	1342.23	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	24997	1091.01	317.39	1371.21	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	24824	1090.61	278.72	1334.05	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	24686	1090.12	97.38	1292.71	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	24527	1089.50	181.35	1288.86	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	24444	1089.27	281.61	1296.11	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	24343	1089.06	319.00	1383.09	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	24188	1088.74	308.26	1379.98	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	24049	1088.21	176.03	1339.52	Main Channel	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E12_Lott_Dam	23936	1087.95	197.23	1376.79	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	23739	1087.69	149.22	1320.12	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	23509	1087.52	76.06	1439.59	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	23360	1087.40	91.98	1312.62	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	23242	1087.29	18.63	1206.93	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	23121	1087.12	53.83	1369.39	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22970	1086.93	73.00	1307.91	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22844	1086.72	74.01	1301.74	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22691	1086.47	72.20	1079.93	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22582	1086.26	67.26	954.25	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22401	1085.58	74.98	1000.88	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	22268	1085.43	79.00	1031.05	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	22105	1085.21	45.18	973.83	Previous Floodway	Main Channel
Elbow River	E12_Lott_Dam	21983	1084.88	51.66	1012.02	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21842	1084.61	44.23	980.90	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21708	1084.37	74.28	1032.77	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21560	1084.10	81.16	1151.45	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21434	1083.92	53.93	1113.09	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21261	1083.74	89.32	1122.17	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	21119	1083.42	51.98	1028.66	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	20971	1083.14	54.42	1005.65	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20860	1082.96	63.04	962.14	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20714	1082.69	58.12	914.61	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	20522	1082.52	209.51	1001.66	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20483	1082.44	218.86	1003.15	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20370	1082.28	227.92	1004.62	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20222	1081.60	250.14	946.00	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	20087	1081.17	278.00	1134.95	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19953	1081.00	283.29	1275.35	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19781	1080.80	247.11	1228.62	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19701	1080.44	138.36	1339.89	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19508	1080.25	53.76	1392.95	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19387	1080.16	56.64	1345.68	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19232	1079.77	63.55	1235.62	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	19089	1079.37	64.35	1228.15	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	18926	1079.27	63.28	1176.01	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	18777	1079.00	50.16	1073.48	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	18630	1078.81	63.96	1001.52	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	18475	1078.64	90.23	1063.34	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	18361	1078.53	62.68	1101.15	Main Channel	Previous Floodway
Elbow River	E12_Lott_Dam	18060	1078.15	80.68	1123.72	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	17868	1078.07	60.49	1174.12	Previous Floodway	Previous Floodway

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E12_Lott_Dam	17759	1078.05	64.06	1393.89	Previous Floodway	Previous Floodway
Elbow River	E12_Lott_Dam	17619	1078.03	57.05	1301.22	Inundation Extent (1)	Previous Floodway
Elbow River	E12_Lott_Dam	17284	1077.97	56.21	925.69	Inundation Extent (1)	Previous Floodway
Elbow River	E12_Lott_Dam	17154	1077.94	84.90	865.11	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	16978	1077.89	47.70	855.06	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	16668	1077.90	124.60	981.09	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	16279	1077.89	124.80	1039.43	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	15873	1077.89	159.00	1080.03	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	15420	1077.89	227.03	884.93	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	14646	1077.89	466.88	2059.70	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	13936	1077.88	975.14	1443.12	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	13555	1077.88	773.55	1129.84	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	13171	1077.88	462.91	933.47	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12780	1077.88	288.20	787.74	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12492	1077.88	282.68	535.35	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12368	1077.85	18.88	138.93	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12269	1077.72	25.23	150.55	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12174	1077.76	20.08	376.41	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	12042	1077.76	171.10	555.14	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	11837	1077.76	62.10	640.75	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E12_Lott_Dam	11486	1077.76	31.02	353.29	Inundation Extent (1)	Inundation Extent (1)
Elbow River	E9_Dam_Roxboro	11417	1075.36				
Elbow River	E9_Dam_Roxboro	11343	1062.32				
Elbow River	E9_Dam_Roxboro	11303	1062.23				
Elbow River	E9_Dam_Roxboro	11267	1062.17				
Elbow River	E9_Dam_Roxboro	11241	1062.12				
Elbow River	E9_Dam_Roxboro	11204	1061.98				
Elbow River	E9_Dam_Roxboro	11153	1061.74				
Elbow River	E9_Dam_Roxboro	11099	1061.66				
Elbow River	E9_Dam_Roxboro	11048	1061.52				
Elbow River	E9_Dam_Roxboro	10989	1061.33				
Elbow River	E9_Dam_Roxboro	10947	1061.37				
Elbow River	E9_Dam_Roxboro	10889	1061.39				
Elbow River	E9_Dam_Roxboro	10844	1061.36				
Elbow River	E9_Dam_Roxboro	10797	1061.31				
Elbow River	E9_Dam_Roxboro	10757	1061.31				
Elbow River	E9_Dam_Roxboro	10705	1061.28				
Elbow River	E9_Dam_Roxboro	10657	1061.29				
Elbow River	E9_Dam_Roxboro	10611	1061.22				
Elbow River	E9_Dam_Roxboro	10542	1061.17				
Elbow River	E9_Dam_Roxboro	10500	1061.06				
Elbow River	E9_Dam_Roxboro	10427	1060.89				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E9_Dam_Roxboro	10382	1060.49				
Elbow River	E9_Dam_Roxboro	10307	1060.41				
Elbow River	E9_Dam_Roxboro	10253	1059.91				
Elbow River	E9_Dam_Roxboro	10194	1059.73				
Elbow River	E9_Dam_Roxboro	10149	1059.71				
Elbow River	E9_Dam_Roxboro	10091	1059.70				
Elbow River	E9_Dam_Roxboro	10013	1059.69				
Elbow River	E9_Dam_Roxboro	9916	1059.28				
Elbow River	E9_Dam_Roxboro	9873	1059.23				
Elbow River	E9_Dam_Roxboro	9791	1059.07				
Elbow River	E9_Dam_Roxboro	9707	1059.08				
Elbow River	E9_Dam_Roxboro	9618	1058.92				
Elbow River	E9_Dam_Roxboro	9540	1058.64				
Elbow River	E9_Dam_Roxboro	9484	1058.48				
Elbow River	E9_Dam_Roxboro	9462	1058.54				
Elbow River	E9_Dam_Roxboro	9442	1058.51				
Elbow River	E9_Dam_Roxboro	9426	1058.42				
Elbow River	E9_Dam_Roxboro	9375	1058.42				
Elbow River	E9_Dam_Roxboro	9323	1058.09				
Elbow River	E9_Dam_Roxboro	9294	1058.11				
Elbow River	E9_Dam_Roxboro	9263	1058.07				
Elbow River	E9_Dam_Roxboro	9221	1058.00				
Elbow River	E9_Dam_Roxboro	9147	1057.99				
Elbow River	E9_Dam_Roxboro	9083	1058.01				
Elbow River	E9_Dam_Roxboro	9031	1057.93				
Elbow River	E9_Dam_Roxboro	8957	1057.97				
Elbow River	E9_Dam_Roxboro	8899	1057.93				
Elbow River	E9_Dam_Roxboro	8854	1057.78				
Elbow River	E9_Dam_Roxboro	8850	1057.73				
Elbow River	E9_Dam_Roxboro	8745	1057.70				
Elbow River	E9_Dam_Roxboro	8696	1057.45				
Elbow River	E9_Dam_Roxboro	8601	1057.27				
Elbow River	E9_Dam_Roxboro	8535	1057.21				
Elbow River	E9_Dam_Roxboro	8486	1057.23				
Elbow River	E9_Dam_Roxboro	8423	1057.21				
Elbow River	E9_Dam_Roxboro	8326	1057.13				
Elbow River	E9_Dam_Roxboro	8251	1057.12				
Elbow River	E9_Dam_Roxboro	8217	1056.84				
Elbow River	E9_Dam_Roxboro	8181	1056.78				
Elbow River	E9_Dam_Roxboro	8121	1056.68				
Elbow River	E9_Dam_Roxboro	8068	1056.49				
Elbow River	E9_Dam_Roxboro	8023	1056.49				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E9_Dam_Roxboro	7985	1056.45				
Elbow River	E9_Dam_Roxboro	7916	1056.43				
Elbow River	E9_Dam_Roxboro	7849	1056.35				
Elbow River	E9_Dam_Roxboro	7813	1056.29				
Elbow River	E9_Dam_Roxboro	7746	1056.14				
Elbow River	E9_Dam_Roxboro	7710	1056.11				
Elbow River	E9_Dam_Roxboro	7658	1056.05				
Elbow River	E9_Dam_Roxboro	7614	1055.96				
Elbow River	E9_Dam_Roxboro	7605	1055.89				
Elbow River	E9_Dam_Roxboro	7595	1055.94				
Elbow River	E9_Dam_Roxboro	7577	1055.89				
Elbow River	E9_Dam_Roxboro	7518	1055.71				
Elbow River	E9_Dam_Roxboro	7480	1055.60				
Elbow River	E9_Dam_Roxboro	7426	1055.63				
Elbow River	E9_Dam_Roxboro	7390	1055.63				
Elbow River	E9_Dam_Roxboro	7345	1055.60				
Elbow River	E9_Dam_Roxboro	7321	1055.58				
Elbow River	E9_Dam_Roxboro	7282	1055.56				
Elbow River	E9_Dam_Roxboro	7238	1055.51				
Elbow River	E9_Dam_Roxboro	7221	1055.48				
Elbow River	E9_Dam_Roxboro	7195	1055.22				
Elbow River	E9_Dam_Roxboro	7181	1055.15				
Elbow River	E9_Dam_Roxboro	7146	1055.12				
Elbow River	E9_Dam_Roxboro	7104	1055.07				
Elbow River	E9_Dam_Roxboro	7063	1055.10				
Elbow River	E9_Dam_Roxboro	7012	1055.05				
Elbow River	E9_Dam_Roxboro	6985	1055.04				
Elbow River	E9_Dam_Roxboro	6935	1055.05				
Elbow River	E9_Dam_Roxboro	6881	1055.02				
Elbow River	E9_Dam_Roxboro	6837	1055.08				
Elbow River	E9_Dam_Roxboro	6800	1055.06				
Elbow River	E9_Dam_Roxboro	6748	1055.04				
Elbow River	E9_Dam_Roxboro	6710	1055.00				
Elbow River	E9_Dam_Roxboro	6602	1054.95				
Elbow River	E9_Dam_Roxboro	6557	1054.90				
Elbow River	E9_Dam_Roxboro	6521	1054.82				
Elbow River	E9_Dam_Roxboro	6498	1054.80				
Elbow River	E9_Dam_Roxboro	6470	1054.63				
Elbow River	E9_Dam_Roxboro	6427	1054.44				
Elbow River	E9_Dam_Roxboro	6381	1054.44				
Elbow River	E9_Dam_Roxboro	6339	1054.41				
Elbow River	E9_Dam_Roxboro	6287	1054.31				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E9_Dam_Roxboro	6230	1054.12				
Elbow River	E9_Dam_Roxboro	6181	1054.09				
Elbow River	E9_Dam_Roxboro	6112	1053.83				
Elbow River	E9_Dam_Roxboro	6034	1053.89				
Elbow River	E9_Dam_Roxboro	5953	1053.83				
Elbow River	E9_Dam_Roxboro	5887	1053.69				
Elbow River	E9_Dam_Roxboro	5785	1053.74				
Elbow River	E9_Dam_Roxboro	5709	1053.48				
Elbow River	E9_Dam_Roxboro	5658	1053.34				
Elbow River	E9_Dam_Roxboro	5582	1053.23				
Elbow River	E9_Dam_Roxboro	5513	1053.22				
Elbow River	E9_Dam_Roxboro	5495	1053.15				
Elbow River	E9_Dam_Roxboro	5428	1052.95				
Elbow River	E9_Dam_Roxboro	5392	1052.91				
Elbow River	E9_Dam_Roxboro	5337	1052.83				
Elbow River	E9_Dam_Roxboro	5303	1052.80				
Elbow River	E8_Roxboro_Cliff	5259	1052.78				
Elbow River	E8_Roxboro_Cliff	5216	1052.77				
Elbow River	E8_Roxboro_Cliff	5172	1052.76				
Elbow River	E8_Roxboro_Cliff	5124	1052.77				
Elbow River	E8_Roxboro_Cliff	5073	1052.74				
Elbow River	E8_Roxboro_Cliff	5032	1052.67				
Elbow River	E8_Roxboro_Cliff	4984	1052.56				
Elbow River	E8_Roxboro_Cliff	4931	1052.47				
Elbow River	E8_Roxboro_Cliff	4877	1052.47				
Elbow River	E7_Cliff_Roxboro	4830	1052.44				
Elbow River	E7_Cliff_Roxboro	4795	1052.41				
Elbow River	E7_Cliff_Roxboro	4768	1051.94				
Elbow River	E7_Cliff_Roxboro	4747	1051.89				
Elbow River	E7_Cliff_Roxboro	4708	1051.80				
Elbow River	E7_Cliff_Roxboro	4652	1051.56				
Elbow River	E7_Cliff_Roxboro	4573	1051.34				
Elbow River	E7_Cliff_Roxboro	4520	1051.31				
Elbow River	E7_Cliff_Roxboro	4473	1051.35				
Elbow River	E7_Cliff_Roxboro	4417	1051.27				
Elbow River	E7_Cliff_Roxboro	4365	1051.07				
Elbow River	E7_Cliff_Roxboro	4323	1051.09				
Elbow River	E6_Roxboro_25AV	4281	1051.04				
Elbow River	E6_Roxboro_25AV	4223	1050.23				
Elbow River	E6_Roxboro_25AV	4168	1050.23				
Elbow River	E6_Roxboro_25AV	4098	1050.30				
Elbow River	E6_Roxboro_25AV	4083	1050.26				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E5_25AV_22AV	4052	1050.32				
Elbow River	E5_25AV_22AV	4034	1050.12				
Elbow River	E5_25AV_22AV	3989	1050.06				
Elbow River	E5_25AV_22AV	3931	1049.79				
Elbow River	E5_25AV_22AV	3889	1049.77				
Elbow River	E5_25AV_22AV	3869	1049.74				
Elbow River	E5_25AV_22AV	3851	1049.58				
Elbow River	E5_25AV_22AV	3834	1049.41				
Elbow River	E5_25AV_22AV	3809	1049.34				
Elbow River	E5_25AV_22AV	3777	1049.16				
Elbow River	E5_25AV_22AV	3738	1049.24				
Elbow River	E4_Talisman	3671	1049.32				
Elbow River	E4_Talisman	3610	1049.32				
Elbow River	E4_Talisman	3568	1049.31				
Elbow River	E4_Talisman	3498	1049.05				
Elbow River	E4_Talisman	3478	1048.89				
Elbow River	E4_Talisman	3455	1048.88				
Elbow River	E4_Talisman	3438	1048.85				
Elbow River	E4_Talisman	3386	1048.75				
Elbow River	E4_Talisman	3346	1048.68				
Elbow River	E4_Talisman	3297	1048.54				
Elbow River	E4_Talisman	3263	1048.57				
Elbow River	E4_Talisman	3251	1048.57				
Elbow River	E4_Talisman	3236	1048.44				
Elbow River	E4_Talisman	3224	1048.45				
Elbow River	E4_Talisman	3188	1048.37				
Elbow River	E4_Talisman	3146	1048.15				
Elbow River	E4_Talisman	3073	1047.87				
Elbow River	E4_Talisman	3027	1047.93				
Elbow River	E4_Talisman	2982	1047.98				
Elbow River	E4_Talisman	2966	1048.00				
Elbow River	E4_Talisman	2939	1047.89				
Elbow River	E4_Talisman	2911	1047.78				
Elbow River	E4_Talisman	2882	1047.79				
Elbow River	E4_Talisman	2840	1047.81				
Elbow River	E4_Talisman	2802	1047.79				
Elbow River	E4_Talisman	2767	1047.75				
Elbow River	E3_22AV_25AV	2742	1047.74				
Elbow River	E3_22AV_25AV	2699	1047.54				
Elbow River	E3_22AV_25AV	2656	1047.48				
Elbow River	E3_22AV_25AV	2636	1047.40				
Elbow River	E2_Stampede_Clif	2608	1046.97				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E2_Stampede_Clif	2588	1046.97				
Elbow River	E2_Stampede_Clif	2536	1046.90				
Elbow River	E2_Stampede_Clif	2481	1046.66				
Elbow River	E2_Stampede_Clif	2469	1046.86				
Elbow River	E2_Stampede_Clif	2443	1046.62				
Elbow River	E2_Stampede_Clif	2424	1046.35				
Elbow River	E2_Stampede_Clif	2387	1046.24				
Elbow River	E2_Stampede_Clif	2332	1045.86				
Elbow River	E2_Stampede_Clif	2272	1045.74				
Elbow River	E2_Stampede_Clif	2212	1045.83				
Elbow River	E2_Stampede_Clif	2146	1045.77				
Elbow River	E2_Stampede_Clif	2090	1045.72				
Elbow River	E2_Stampede_Clif	2048	1045.80				
Elbow River	E2_Stampede_Clif	2020	1045.73				
Elbow River	E2_Stampede_Clif	1999	1045.67				
Elbow River	E2_Stampede_Clif	1969	1045.56				
Elbow River	E2_Stampede_Clif	1944	1045.42				
Elbow River	E2_Stampede_Clif	1910	1045.26				
Elbow River	E2_Stampede_Clif	1894	1045.30				
Elbow River	E2_Stampede_Clif	1861	1045.36				
Elbow River	E2_Stampede_Clif	1848	1045.33				
Elbow River	E2_Stampede_Clif	1755	1044.98				
Elbow River	E2_Stampede_Clif	1698	1044.97				
Elbow River	E2_Stampede_Clif	1621	1044.95				
Elbow River	E2_Stampede_Clif	1561	1044.90				
Elbow River	E2_Stampede_Clif	1530	1044.85				
Elbow River	E2_Stampede_Clif	1506	1044.35				
Elbow River	E2_Stampede_Clif	1448	1043.96				
Elbow River	E2_Stampede_Clif	1374	1043.78				
Elbow River	E2_Stampede_Clif	1303	1043.79				
Elbow River	E2_Stampede_Clif	1249	1043.75				
Elbow River	E2_Stampede_Clif	1238	1043.75				
Elbow River	E2_Stampede_Clif	1205	1043.89				
Elbow River	E2_Stampede_Clif	1193	1043.91				
Elbow River	E2_Stampede_Clif	1135	1043.87				
Elbow River	E2_Stampede_Clif	1085	1043.83				
Elbow River	E2_Stampede_Clif	999	1043.65				
Elbow River	E2_Stampede_Clif	979	1043.62				
Elbow River	E2_Stampede_Clif	955	1043.57				
Elbow River	E2_Stampede_Clif	918	1043.29				
Elbow River	E2_Stampede_Clif	858	1043.14				
Elbow River	E2_Stampede_Clif	800	1043.06				

Table 5: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Elbow River

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Elbow River	E2_Stampede_Clif	755	1043.08				
Elbow River	E2_Stampede_Clif	659	1042.91				
Elbow River	E2_Stampede_Clif	588	1042.67				
Elbow River	E2_Stampede_Clif	568	1042.45				
Elbow River	E2_Stampede_Clif	464	1042.31				
Elbow River	E2_Stampede_Clif	457	1042.37				
Elbow River	E2_Stampede_Clif	418	1042.22				
Elbow River	E1_Cliff_Bow	343	1041.77				
Elbow River	E1_Cliff_Bow	324	1041.29				
Elbow River	E1_Cliff_Bow	295	1041.05				
Elbow River	E1_Cliff_Bow	275	1040.98				
Elbow River	E1_Cliff_Bow	171	1040.74				
Elbow River	E1_Cliff_Bow	156	1040.71				
Elbow River	E1_Cliff_Bow	84	1040.87				

Notes:

1) *No viable flood fringe*
2) *Floodway set at interior inundation extent, no viable interior flood fringe*
3) *No floodway station because end of cross section is adjacent to side channel*
4) *No floodway station because floodway line is outside of cross section extent*

Table 6: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Bragg Creek

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Bragg Creek	Bragg Creek	1169	1314.64	33.65	54.36	1 m Depth	Inundation Extent (1)
Bragg Creek	Bragg Creek	1143	1314.54	47.79	71.31	1 m Depth	Inundation Extent (1)
Bragg Creek	Bragg Creek	1084	1314.35	112.12	138.28	Previous Floodway	Inundation Extent (1)
Bragg Creek	Bragg Creek	1042	1314.04	123.35	150.82	Previous Floodway	Inundation Extent (1)
Bragg Creek	Bragg Creek	948	1313.19	118.46	168.81	Previous Floodway	Inundation Extent (1)
Bragg Creek	Bragg Creek	824	1312.04	90.74	185.06	Main Channel	Previous Floodway
Bragg Creek	Bragg Creek	592	1310.56	197.90	230.15	Previous Floodway	Previous Floodway
Bragg Creek	Bragg Creek	443	1309.10	133.75	196.79	Main Channel	Previous Floodway
Bragg Creek	Bragg Creek	311	1307.83	86.37	112.94	Previous Floodway	Main Channel
Bragg Creek	Bragg Creek	196	1307.51	141.43	161.57	Previous Floodway	Main Channel
Bragg Creek	Bragg Creek	137	1307.46	168.85	199.65	Main Channel	Main Channel
Bragg Creek	Bragg Creek	110	1307.18	175.13	202.65	Main Channel	Main Channel
Bragg Creek	Bragg Creek	94	1307.18	183.45	227.23	Main Channel	Main Channel
Bragg Creek	Bragg Creek	40	1307.18	191.58	297.71	Main Channel	Main Channel

Table 7: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Lott Creek

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Lott Creek	L3_USBC_EVL	7278	1127.06	33.88	103.09	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	7175	1126.37	35.88	142.29	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	7099	1126.15	58.19	126.65	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	7027	1125.90	24.69	62.77	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6903	1125.40	48.05	87.95	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6819	1125.04	23.63	61.87	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6701	1124.08	33.83	52.08	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6606	1123.00	27.63	53.47	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6527	1122.30	69.82	149.55	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6439	1121.82	104.64	150.33	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6345	1121.42	124.97	176.51	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6238	1120.98	157.73	192.90	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6156	1120.54	168.48	218.74	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6045	1119.83	190.51	223.56	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6025	1119.43	182.77	222.93	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	6015	1119.31	175.76	225.69	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5932	1118.43	170.31	196.20	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5871	1118.31	73.02	147.39	Mixed	Mixed
Lott Creek	L3_USBC_EVL	5783	1117.84	54.08	75.83	1 m/s Velocity	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5712	1117.48	88.05	185.68	Main Channel	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5605	1117.23	87.81	233.13	Mixed	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5519	1117.18	79.74	240.69	Mixed	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5459	1117.16	22.01	163.87	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5396	1117.13	15.87	118.28	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5322	1117.11	56.87	170.75	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5262	1117.07	19.70	110.33	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5231	1116.20	50.33	97.02	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5181	1116.27	23.26	83.14	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5132	1116.21	19.73	66.70	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L3_USBC_EVL	5080	1116.17	21.13	59.26	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	5043	1116.16	43.44	83.06	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	5009	1114.30	72.57	90.64	Mixed	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4960	1114.29	72.13	97.48	Inundation Extent (1)	Inundation Extent (2)
Lott Creek	L2_EVL_LCDrive	4906	1114.28	43.48	62.83	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4858	1114.28	19.36	45.93	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4837	1114.24	16.40	34.61	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4816	1114.07	20.44	40.42	Mixed	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4757	1113.93	17.74	40.27	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4703	1113.89	22.59	36.89	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4658	1113.88	99.55	118.38	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4611	1113.85	91.93	105.02	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4551	1113.52	81.66	102.41	Inundation Extent (1)	Inundation Extent (1)

Table 7: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Lott Creek

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Lott Creek	L2_EVL_LCDrive	4503	1113.45	81.51	94.44	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4462	1112.56	87.74	95.92	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4408	1111.98	88.82	94.75	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4359	1111.60	75.40	82.25	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4318	1111.47	84.23	91.79	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4221	1109.14	72.59	83.12	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4185	1109.11	n/a	66.54	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4145	1109.05	n/a	12.39	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4096	1108.91	n/a	14.09	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4090	1108.88	n/a	16.41	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	4046	1108.76	n/a	44.69	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	3995	1108.76	n/a	42.01	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	3944	1108.74	n/a	21.31	No Floodway (3)	Inundation Extent (1)
Lott Creek	L2_EVL_LCDrive	3917	1108.52	n/a	n/a	No Floodway (3)	No Floodway (4)
Lott Creek	L1_LCDrive_Elbow	3877	1108.35	27.43	59.64	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3845	1108.12	39.33	75.66	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3795	1108.10	522.54	569.92	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3685	1108.02	552.64	614.95	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3652	1107.99	548.03	620.94	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3633	1107.97	547.10	636.34	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3585	1107.72	520.47	670.42	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3535	1107.70	501.17	698.51	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3526	1107.70	498.92	747.50	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3478	1107.70	484.86	781.53	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3435	1107.66	548.02	797.17	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3427	1107.56	578.67	796.26	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3393	1107.28	584.97	783.94	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3386	1106.96	589.25	782.27	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3356	1106.40	595.84	786.17	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3304	1106.36	684.61	787.59	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3255	1106.34	683.11	780.56	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3206	1106.29	651.70	786.56	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3155	1106.07	653.34	801.05	Inundation Extent (2)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	3107	1105.56	644.06	821.96	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2863	1104.89	336.28	625.82	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2789	1104.81	188.77	504.73	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2703	1104.58	161.36	446.11	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2624	1104.30	54.41	441.88	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2464	1103.92	36.72	363.50	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2457	1103.84	27.41	354.96	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2383	1103.38	52.77	320.53	1 m Depth	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2311	1103.18	183.34	286.38	Mixed	Inundation Extent (1)

Table 7: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Lott Creek

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Lott Creek	L1_LCDrive_Elbow	2222	1102.97	87.05	121.29	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2145	1102.51	n/a	40.65	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	2064	1101.92	n/a	72.67	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1985	1101.59	n/a	179.29	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1898	1101.28	n/a	195.18	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1822	1100.82	n/a	209.01	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1744	1100.66	n/a	261.27	No Floodway (3)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1658	1100.60	14.34	326.40	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1587	1100.49	18.33	237.31	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1502	1100.35	22.73	239.00	Mixed	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1423	1100.23	34.03	271.16	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1348	1099.96	44.21	279.24	Inundation Extent (1)	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1267	1099.62	29.69	274.77	Previous Floodway	Inundation Extent (1)
Lott Creek	L1_LCDrive_Elbow	1189	1099.46	28.07	296.14	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	1083	1099.32	27.79	389.02	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	1025	1099.24	27.24	349.27	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	941	1099.06	26.35	337.95	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	864	1098.91	24.69	354.74	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	789	1098.73	22.46	358.02	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	704	1098.50	19.06	367.87	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	625	1098.33	17.71	401.65	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	546	1098.19	13.97	386.17	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	464	1098.04	5.70	396.93	Previous Floodway	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	386	1097.89	n/a	390.45	No Floodway (3)	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	305	1097.73	n/a	184.82	No Floodway (3)	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	224	1097.57	n/a	82.95	No Floodway (3)	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	146	1097.38	n/a	70.46	No Floodway (3)	Previous Floodway
Lott Creek	L1_LCDrive_Elbow	65	1097.37	n/a	105.03	No Floodway (3)	Previous Floodway
Lott Creek Lakes	Lott Creek Lakes	1071	1116.11	n/a	20.32	No Floodway (4)	Inundation Extent (1)
Lott Creek Lakes	Lott Creek Lakes	1047	1116.10	n/a	n/a	No inundation	No inundation
Lott Creek Lakes	Lott Creek Lakes	1006	1114.20	n/a	25.17	No Floodway (4)	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	980	1114.21	30.94	147.63	1 m Depth	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	932	1114.21	87.79	197.71	1 m Depth	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	859	1114.20	111.95	247.21	1 m Depth	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	797	1114.20	86.25	221.33	1 m Depth	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	682	1114.20	20.96	247.15	1 m Depth	1 m Depth
Lott Creek Lakes	Lott Creek Lakes	620	1114.20	47.40	117.31	1 m Depth	mixed
Lott Creek Lakes	Lott Creek Lakes	613	1114.16	n/a	n/a	No Floodway (4)	No Floodway (4)
Lott Creek Lakes	Lott Creek Lakes	599	1113.00	n/a	n/a	No Floodway (4)	No Floodway (4)
Lott Creek Lakes	Lott Creek Lakes	587	1112.45	65.13	147.87	Inundation Extent (1)	Inundation Extent (1)
Lott Creek Lakes	Lott Creek Lakes	480	1111.81	208.79	323.95	Inundation Extent (1)	Inundation Extent (1)
Lott Creek Lakes	Lott Creek Lakes	405	1111.24	215.06	273.95	Inundation Extent (1)	Inundation Extent (1)

Table 7: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Lott Creek

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
Lott Creek Lakes	Lott Creek Lakes	366	1110.39	208.51	285.29	Inundation Extent (1)	Inundation Extent (1)
Lott Creek Lakes	Lott Creek Lakes	310	1109.09	197.34	474.07	Inundation Extent (1)	Inundation Extent (1)
Lott Creek Lakes	Lott Creek Lakes	213	1109.05	200.21	n/a	Inundation Extent (1)	No Floodway (3)
Lott Creek Lakes	Lott Creek Lakes	127	1109.03	242.30	n/a	Inundation Extent (1)	No Floodway (3)
Lott Creek Lakes	Lott Creek Lakes	59	1108.95	13.99	n/a	Inundation Extent (1)	No Floodway (3)
Lott Creek Lakes	Lott Creek Lakes	38	1108.48	10.93	n/a	Inundation Extent (1)	No Floodway (3)

Notes:

1) *No viable flood fringe*
2) *Floodway set at interior inundation extent, no viable interior flood fringe*
3) *No floodway station because end of cross section is adjacent to side channel*
4) *No floodway station because floodway line is outside of cross section extent*

Table 8: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Side Channels

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
BS1_Zoo	BS1_Zoo	1928	1042.26	904.42	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1889	1042.16	902.35	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1844	1041.83	894.29	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1740	1041.61	1029.13	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1478	1041.63	940.26	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1182	1040.87	836.06	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1132	1040.89	816.81	n/a	Previous Floodway	No Floodway (3)
BS1_Zoo	BS1_Zoo	1103	1040.81	800.99	878.95	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	884	1040.42	1435.80	1501.49	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	708	1040.00	1439.22	1501.32	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	462	1039.56	1522.05	1579.00	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	443	1039.42	1536.20	1594.91	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	420	1039.26	1554.94	1612.03	Previous Floodway	Main Channel
BS1_Zoo	BS1_Zoo	214	1039.08	1632.80	n/a	Previous Floodway	Previous Floodway
BS2_Prince	BS2_Prince	979	1047.69	n/a	80.28	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	930	1046.63	n/a	68.70	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	884	1046.63	n/a	77.49	No Floodway (3)	Previous Floodway
BS2_Prince	BS2_Prince	724	1046.57	n/a	105.15	No Floodway (3)	Previous Floodway
BS2_Prince	BS2_Prince	635	1046.56	n/a	112.94	No Floodway (3)	Previous Floodway
BS2_Prince	BS2_Prince	573	1046.54	n/a	125.36	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	482	1046.50	n/a	135.25	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	470	1046.49	n/a	138.78	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	417	1046.50	n/a	142.51	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	371	1046.47	n/a	125.21	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	354	1046.46	n/a	121.29	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	312	1046.44	n/a	105.68	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	304	1046.43	n/a	103.56	No Floodway (3)	Main Channel
BS2_Prince	BS2_Prince	201	1046.41	n/a	76.13	No Floodway (3)	Main Channel
ES1_CliffST	ES1_CliffST	3547	1052.46				
ES1_CliffST	ES1_CliffST	3414	1052.35				
ES1_CliffST	ES1_CliffST	3294	1052.18				
ES1_CliffST	ES1_CliffST	3193	1052.03				
ES1_CliffST	ES1_CliffST	3065	1051.74				
ES1_CliffST	ES1_CliffST	2867	1050.93				
ES1_CliffST	ES1_CliffST	2834	1050.35				
ES1_CliffST	ES1_CliffST	2658	1049.83				
ES1_CliffST	ES1_CliffST	2437	1049.54				

Table 8: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Side Channels

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
ES1_CliffST	ES1_CliffST	2232	1049.08				
ES1_CliffST	ES1_CliffST	1985	1048.69				
ES1_CliffST	ES1_CliffST	1740	1047.68				
ES1_CliffST	ES1_CliffST	1530	1046.74				
ES1_CliffST	ES1_CliffST	1361	1045.94				
ES1_CliffST	ES1_CliffST	1211	1045.67				
ES1_CliffST	ES1_CliffST	1054	1045.57				
ES1_CliffST	ES1_CliffST	930	1045.41				
ES1_CliffST	ES1_CliffST	792	1044.88				
ES1_CliffST	ES1_CliffST	617	1044.19				
ES1_CliffST	ES1_CliffST	461	1043.54				
ES1_CliffST	ES1_CliffST	371	1043.44				
ES1_CliffST	ES1_CliffST	152	1043.06				
ES1_CliffST	ES1_CliffST	103	1043.07				
ES1_CliffST	ES1_CliffST	94	1043.06				
ES1_CliffST	ES1_CliffST	65	1043.03				
ES2_25AV	ES2_25AV	517	1050.43				
ES2_25AV	ES2_25AV	449	1049.94				
ES2_25AV	ES2_25AV	366	1049.45				
ES2_25AV	ES2_25AV	288	1049.00				
ES2_25AV	ES2_25AV	236	1048.68				
ES2_25AV	ES2_25AV	203	1048.16				
ES2_25AV	ES2_25AV	159	1048.14				
ES2_25AV	ES2_25AV	123	1048.13				
ES2_25AV	ES2_25AV	32	1047.44				
ES3_22AV	ES3_22AV	443	1049.54				
ES3_22AV	ES3_22AV	435	1049.51				
ES3_22AV	ES3_22AV	392	1049.26				
ES3_22AV	ES3_22AV	314	1048.90				
ES3_22AV	ES3_22AV	252	1048.47				
ES3_22AV	ES3_22AV	200	1048.23				
ES3_22AV	ES3_22AV	142	1047.95				
ES3_22AV	ES3_22AV	126	1047.95				
ES3_22AV	ES3_22AV	79	1047.86				
ES4_Roxboro	ES4_Roxboro	915	1053.10				
ES4_Roxboro	ES4_Roxboro	832	1053.01				
ES4_Roxboro	ES4_Roxboro	770	1052.75				

Table 8: Design Flood Water Levels, Floodway Limit Stations and Governing Criteria – Side Channels

River	Reach	River Station	Design Flood Water Level (m)	Floodway Station Limits		Governing Floodway Criterion	
				Left (m)	Right (m)	Left	Right
ES4_Roxboro	ES4_Roxboro	715	1052.31	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	671	1052.12	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	569	1051.75	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	444	1051.53	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	367	1051.50	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	254	1051.48	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	169	1051.48	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	116	1051.48	[redacted]	[redacted]	[redacted]	[redacted]
ES4_Roxboro	ES4_Roxboro	43	1051.47	[redacted]	[redacted]	[redacted]	[redacted]

Notes:

3) No floodway station because end of cross section is adjacent to side channel
4) No floodway station because floodway line is outside of cross section extent
5) No floodway defined for developed non-riverine side channel

4.0 DESIGN FLOOD HAZARD MAP PRODUCTION

4.1 Floodway Mapping Methodology

The design flood hazard extent is generally the same as the 100-year open water inundation extent. The mapping method for the inundation mapping is described in detail in the flood inundation mapping report prepared for this study (Golder 2022b). Exceptions are areas where the floodway crosses small areas of dry land for the purpose of floodway smoothing and consistency with previous mapping.

4.2 Floodway Criteria Maps

Floodway criteria maps document the technical flood information used to delineate the floodway, including 100-year flood extents and hydraulic characteristics, previous floodways, and proposed floodway limit stations throughout the study area. The floodway criteria maps include the following information:

- the location and extent of all cross sections used in the HEC-RAS model with appropriate labels;
- the extent of the 100-year open water design flood;
- areas meeting or exceeding the 1 m depth floodway determination criterion for the design flood;
- portions along each model cross section where flow velocities are calculated to be 1 m/s or greater;
- the locations of the main channel top of bank along each model cross section;
- the proposed floodway boundary, as well as associated floodway stations corresponding to the floodway determination criteria;
- areas of potential flood control structure failure inundation (i.e., protected areas with residual risk);
- the previous floodway boundaries (AENV 1996, UMA 1995, and AGRA 1998);
- background aerial imagery; and
- roads, bridges, and dedicated flood control structures.

The floodway criteria maps use the same template as the flood inundation maps, and are provided in Appendix A.

4.3 Flood Hazard Maps

4.3.1 Overview

Flood hazard maps divide the flood hazard area into floodway and flood fringe zones, including high hazard flood fringe and protected flood fringe sub-zones where appropriate. Flood hazard maps can also illustrate additional information, including incremental areas at risk for floods larger than the 100-year design flood, such as the 200-year and 500-year floods. These maps have been developed in accordance with applicable provincial standards, and the floodway was delineated based on the floodway criteria mapping. All areas within the floodway boundary are typically mapped as floodway, even if design flood levels do not indicate a specific location as inundated (i.e., “islands” of dry ground within the floodway) shown in floodway criteria maps are not present in flood hazard maps.

The flood hazard maps use the same template as the flood inundation maps, and are provided in Appendix B.

4.3.2 Areas in the Floodway

Notable developed areas in the floodway are listed below.

Bow River

- Low lying areas of the Valley Ridge Golf Club
- Parts of Bowness and Bowmont Parks
- Prince's Island
- St. Patrick's Island
- Low lying areas of the Inglewood Golf & Curling Club
- Low lying areas of the Inglewood Bird Sanctuary
- Beaver Dam Flats Park
- Parts of the La Farge Plant, Burnco Centre and Golf Canada Calgary Centre on 13th and 15th Streets SE north of Glenmore Trail
- Carburn Park and Sue Higgins Park
- Parts of the La Farge Plant north of Igor Strong Bridge
- Enmax Substation 32
- Douglasdale Park
- Low lying areas of Fish Creek Provincial Park
- Parts of the McKenzie Meadows Golf Club
- Policeman's Flats and Predator Bay Water Ski Club
- Low lying parts of the Cottonwood Golf & Country Club
- The Burnco Indus Pit

Elbow River

- Upstream parts of the Redwood Meadows Golf & Country Club
- Some areas near the Hope Mission Camp Gardner downstream of the Highway 22 Bridge
- Parts of the Entheos Conference and Retreat Centre
- Development at the far south end of Range Roads 35 and 34
- Low lying areas of the River Spirit Golf Club
- Majority of the Glencoe Golf & Country Club
- Parts of Clearwater Park

- Majority of the Elbow Springs Golf Club
- Residential development along 101st Street SW south of Highway 8 on both sides of the Elbow River
- [redacted]
- [redacted]

Bragg Creek

There are no notable developed areas within the floodway of Bragg Creek.

Lott Creek

- Part of the Elbow Springs Golf Club along Lott Creek

4.3.3 Areas in the High Hazard Flood Fringe

Notable developed areas in the high hazard flood fringe are listed below.

Bow River

- Parts of Bowness Park
- Low lying parts of the Bowness neighbourhood
- The majority of Pearce Estate Park
- Low lying areas of the Inglewood Golf & Curling Club
- Low lying areas of the Inglewood Bird Sanctuary
- Parts of the La Farge Plant, Burnco Centre and Golf Canada Calgary Centre on 13th and 15th Streets SE north of Glenmore Trail.
- Carburn Park and Sue Higgins Park
- Parts of the La Farge Plant north of Igor Strong Bridge
- Low lying areas of Fish Creek Provincial Park
- Parts of the McKenzie Meadows Golf Club
- Parts of the Blue Devils Golf Club
- Policeman's Flats and Predator Bay Water Ski Club

Elbow River

- [redacted]
- [redacted]
- [redacted]
- [redacted]

4.3.4 Areas in the Flood Fringe

Notable developed areas in the flood fringe are listed below.

Bow River

- Low lying areas of the Valley Ridge Golf Club
- Parts of the Bowness neighbourhood
- Parts of the Inglewood Golf & Curling Club
- Parts of Fish Creek Provincial Park
- Parts of the Blue Devils Golf Club
- Low lying areas of the Legacy neighbourhood

Elbow River

- Upstream parts of the Redwood Meadows Golf & Country Club
- Parts of Kamp Kiwanis
- Parts of the floodplain downstream of Highway 22 near the Entheos Conference and Retreat Centre
- Parts of the River Spirit Golf Club
- Parts of the floodplain at the Kestrel Ridge Farm
- Parts of the floodplain south of Horizon View Road in Springbank
- Parts of the Glencoe Golf & Country Club
- Parts of the Elbow Springs Golf Club
- [redacted]

Lott Creek

- Areas along the east end of Lott Creek Drive.

5.0 DESIGN FLOOD GRIDS

All design flood grid GIS data was created in ArcGIS Version 10.7 compatible formats, in the native study coordinate system [Canadian Spatial Reference System, North American Datum of 1983 (CSRS NAD83), Epoch 2002 and 3-Degree Transverse Mercator projection with the Central Meridian of 114° (3TM 114)].

5.1 Water Surface Elevation Grids

The water surface elevation grid was created by converting the water surface elevation TIN into a raster file with the same resolution (0.5 m) and alignment as the DTM. The water surface elevation raster was then clipped to the flood hazard area, including the floodway, flood fringe, high hazard flood fringe and protected flood fringe areas.

5.2 Flood Depth Grids

The flood depth grid was created by subtracting the water surface elevation grid from the DTM. The flood depth grid has the same resolution (0.5 m) and alignment as the DTM. The extent of the depth grid is limited to the flood hazard area, including the floodway, flood fringe, high hazard flood fringe and protected flood fringe areas.

6.0 POTENTIAL CLIMATE CHANGE IMPACTS

A cursory examination of potential increases in 100-year design water levels associated with climate change were performed in order to better understand the possible impacts of climate change on flood levels. The effect of more severe 100-year flood conditions was assessed under two additional flow scenarios:

1) 100-year open water flood flow + 10%

2) 100-year open water flood flow + 20%

No hydraulic modelling parameters were varied other than flows. Water level profiles were produced along the study reaches for the two additional flow scenarios. If a lower flow profile resulted in higher water levels, or if numerical instabilities or unreasonable results occurred, model parameters may have been adjusted to resolve these issues. Water level differences compared to the base 100-year open water flood flow were calculated.

For the Bow River reach, the average increases in flood levels are 0.26 m for a 10% increase in flow and 0.47 m for a 20% increase in flow.

For the Upper Elbow River reach upstream of Glenmore Reservoir, the average increase in flood levels are 0.08 m for a 10% increase in flow and 0.17 m for a 20% increase in flow.

For the Lower Elbow River reach below Glenmore Dam, the average increase in flood levels are 0.24 m for a 10% increase in flow and 0.43 m for a 20% increase in flow.

For the Bragg Creek reach, the average increase in flood levels are 0.09 m for a 10% increase in flow and 0.18 m for a 20% increase in flow.

For the Lott Creek reach, the average increase in flood levels are 0.12 m for a 10% increase in flow and 0.23 m for a 20% increase in flow.

It is acknowledged that the above analyses are not based on a regional climate change impacts assessment but are based on a simplified assumption that climate change will result in increased peak flood flows. The presented values can be viewed as a general range of potential climate change “freeboard” that could be considered in addition to computed design flood water levels.

7.0 CONCLUSION

This report summarizes the work of the design flood hazard mapping component of the Bow and Elbow River Hazard Study. The main tasks associated with this work involves producing floodway criteria maps and design flood hazard maps.

Floodway criteria maps document the technical flood information used to delineate a floodway, including 100-year flood extents and hydraulic characteristics, previous floodways, and proposed floodway limit stations through a study reach. Flood hazard maps divide the 100-year design flood hazard area into floodway and flood fringe zones, including high hazard flood fringe and protected flood fringe sub-zones where appropriate. Flood hazard maps can also illustrate additional information, including incremental areas at risk for floods larger than the 100-year design flood, such as the 200-year and 500-year floods.

Floodways defined by previous studies were considered as part of the floodway delineation for this flood study and were not made larger by default in most circumstances, unless required for technical reasons or if deemed necessary or appropriate.

Dedicated flood control structures are assumed to be effective, and protected areas are not mapped as flooded unless they are overtopped. Areas of residual risk behind dedicated flood control structures that could be flooded if a flood control structure fails or does not perform as expected are identified as protected flood fringe.

Report Signature Page

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ORIGINAL SIGNED BY

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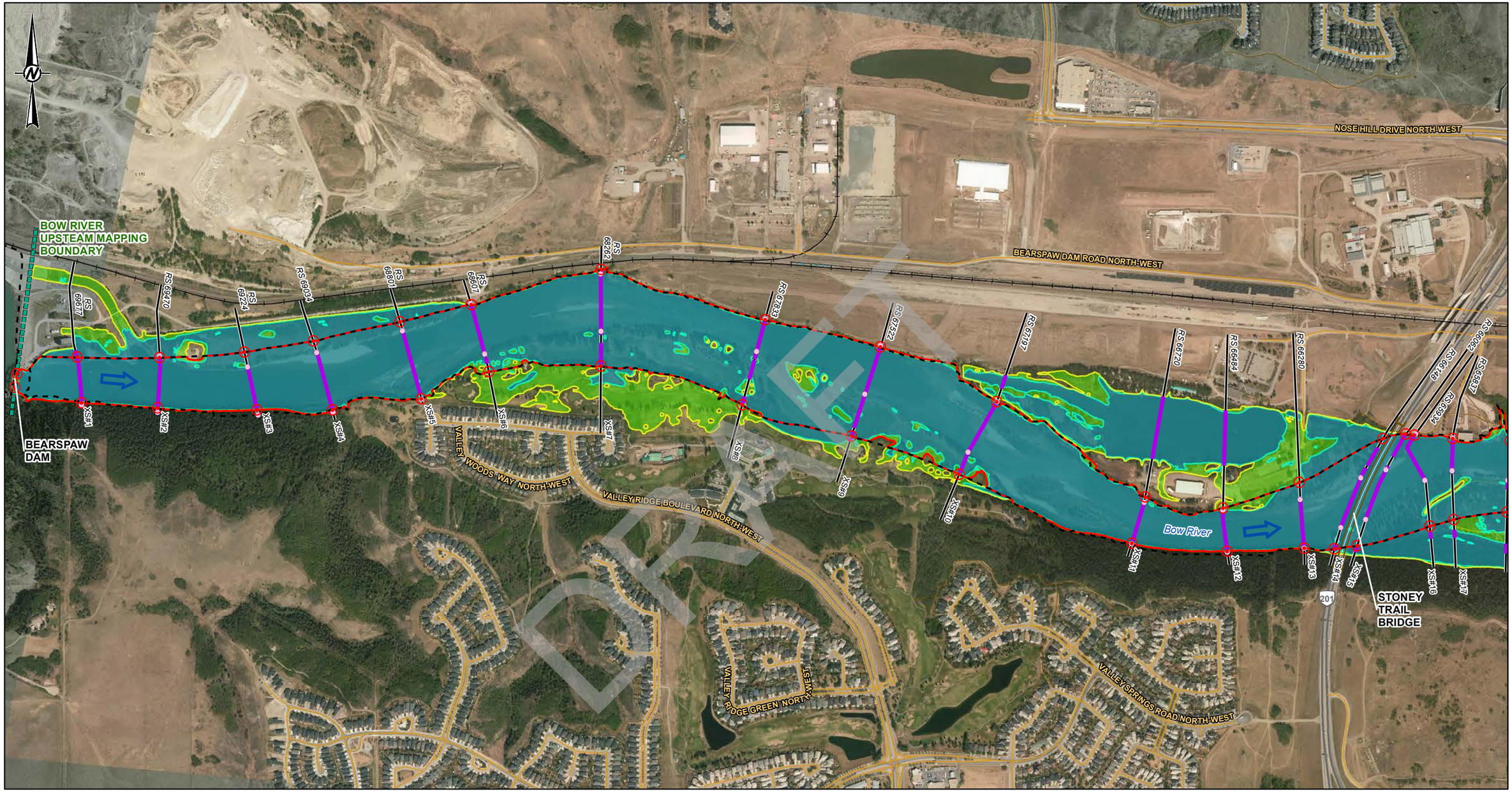
APPENDIX A

Floodway Criteria Maps



SHEET 2 ↓

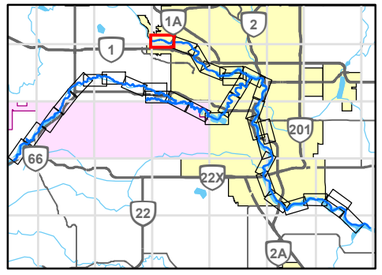
LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S



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ALBERTA ENVIRONMENT AND PARKS

Alberta Government

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

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DATUM: NAD 83 CSRS PROJECTION: 3TM 114

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
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SHEET 1 ↑

SHEET 3 ↓

CP RAIL TWIN BRIDGES (SIDE CHANNEL)

BOWMONT BRIDGE (SIDE CHANNEL)

BOWMONT BRIDGE

85TH STREET NW BRIDGE

CP RAIL TWIN BRIDGES

Bow River

51 AVENUE NORTH-WEST

67 STREET NORTH-WEST

SILVERVIEW DRIVE NORTH-WEST

RS 63795

RS 64212

RS 63720

RS 63573

RS 63403

RS 63162

RS 62954

RS 62746

RS 62477

RS 62163

RS 61879

RS 64750

RS 64915

RS 65103

RS 65296

RS 66467

RS 66687

RS 64528

RS 64557

RS 64410

XS#1 XS#2 XS#3 XS#4 XS#5 XS#6 XS#7 XS#8 XS#9 XS#10 XS#11 XS#12 XS#13 XS#14 XS#15 XS#16 XS#17 XS#18 XS#19 XS#20 XS#21 XS#22 XS#23 XS#24 XS#25 XS#26 XS#27 XS#28 XS#29 XS#30 XS#31 XS#32 XS#33 XS#34 XS#35 XS#36 XS#37 XS#38 XS#39 XS#40 XS#41 XS#42

48 AVENUE NORTH-WEST

47 AVENUE NORTH-WEST

44 AVENUE NORTH-WEST

43 AVENUE NORTH-WEST

41 AVENUE NORTH-WEST

39 AVENUE NORTH-WEST

37 AVENUE NORTH-WEST

36 AVENUE NORTH-WEST

35 AVENUE NORTH-WEST

34 AVENUE NORTH-WEST

33 AVENUE NORTH-WEST

29 AVENUE NORTH-WEST

70 STREET NORTH-WEST

72 STREET NORTH-WEST

73 STREET NORTH-WEST

75 STREET NORTH-WEST

69 STREET NORTH-WEST

68 STREET NORTH-WEST

67 STREET NORTH-WEST

88 STREET NORTH-WEST

86 STREET NORTH-WEST

85 STREET NORTH-WEST

83 STREET NORTH-WEST

81 STREET NORTH-WEST

80 STREET NORTH-WEST

79 STREET NORTH-WEST

77 STREET NORTH-WEST

BOWGLEN ROAD NORTH-WEST

PALM WAY NORTH-WEST

APPLE WAY NORTH-WEST

WILLOW WAY NORTH-WEST

ASPEN WAY NORTH-WEST

ASPEN DRIVE NORTH-WEST

CEDAR WAY NORTH-WEST

201

1

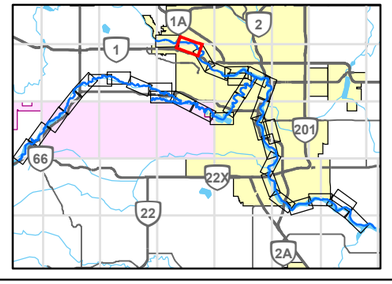
LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S



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Alberta Government

CONSULTANT
GOLDER
MEMBER OF WSP

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DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	2 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

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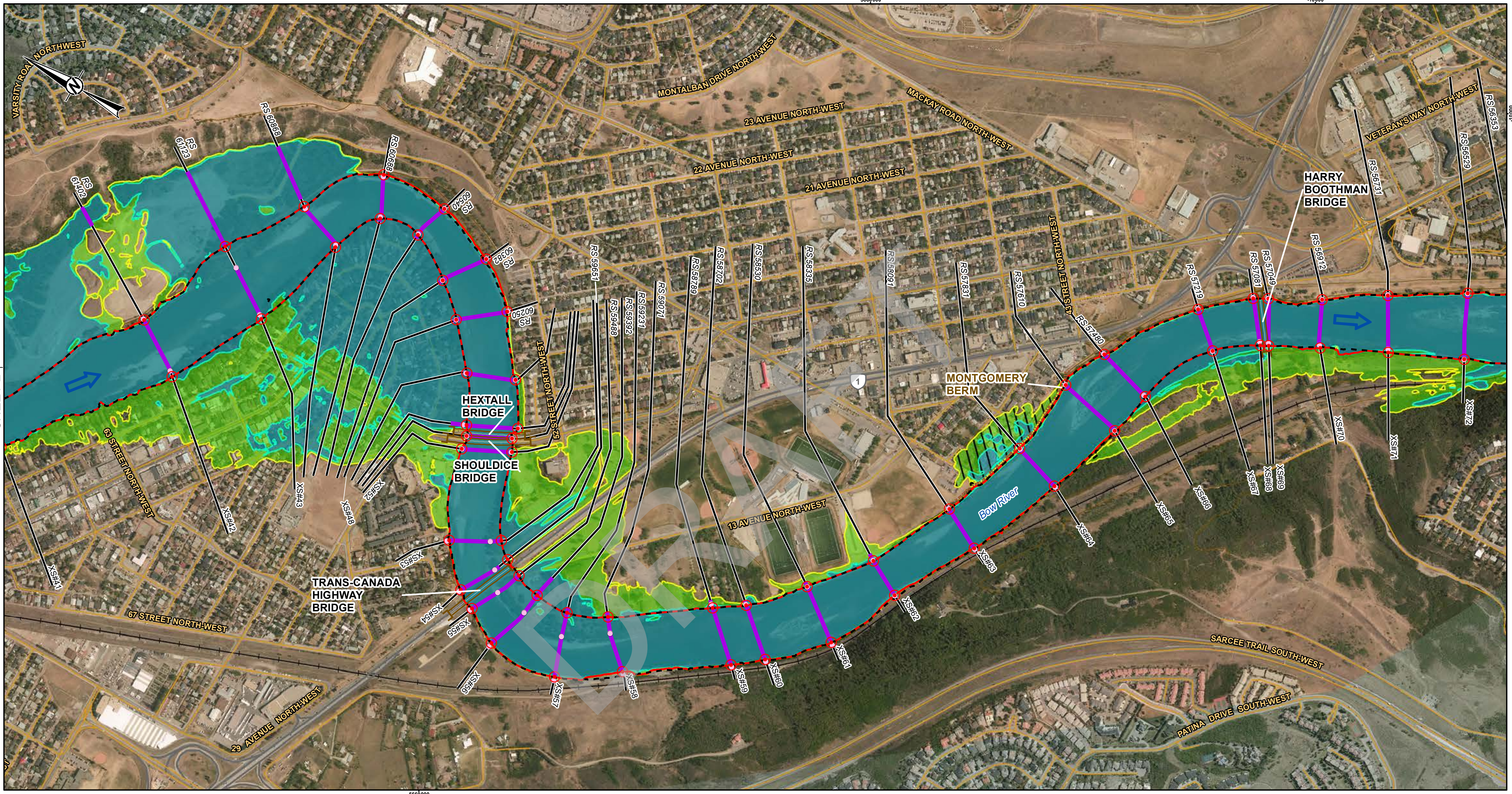

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- PROTECTED FLOOD AREA
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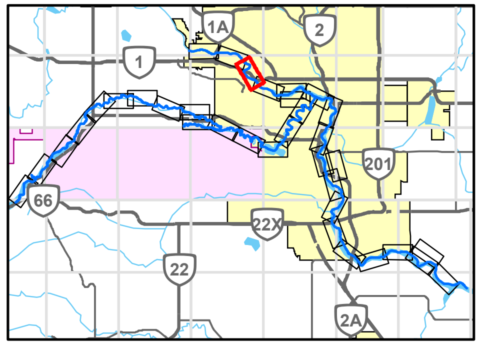

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	3 of 34

SHEET 3 ↑

SHEET 5 ↓

-10000

HARRY BOOTHMAN BRIDGE

HOSPITAL DRIVE NORTH-WEST

11 AVENUE NORTH-WEST

TORONTO CRESCENT NORTH-WEST

6 AVENUE NORTH-WEST

VETERAN'S WAY NORTH-WEST

35A STREET NORTH-WEST

35 STREET NORTH-WEST

33 STREET NORTH-WEST

32 STREET NORTH-WEST

28 STREET NORTH-WEST

27 STREET NORTH-WEST

26 STREET NORTH-WEST

5 AVENUE NORTH-WEST

3 AVENUE NORTH-WEST

1 AVENUE NORTH-WEST

WEST HILLHURST BERM

WESTMOUNT ROAD NORTH-WEST

PARKDALE BOULEVARD NORTH-WEST

Bow River

WILDWOOD DRIVE SOUTH-WEST

CEDAR CRESCENT SOUTH-WEST

SPRUCE DRIVE SOUTH-WEST

WIMBLEDON CRESCENT SOUTH-WEST

WHITE OAK CRESCENT SOUTH-WEST

42 STREET SOUTH-WEST

WATERLOO DRIVE SOUTH-WEST

HEMLOCK CRESCENT SOUTH-WEST

CROWCHILD TRAIL BRIDGE

-10000

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
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- CULVERT
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- WEIR
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- PROPOSED FLOODWAY BOUNDARY
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- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
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- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S

0 200 400
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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	4 of 34

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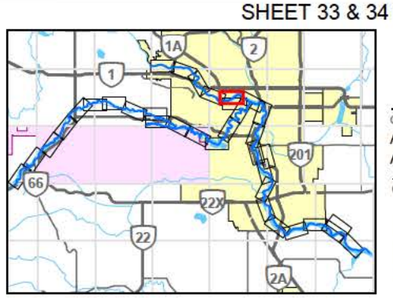
SHEET 4 ↑

SHEET 6 ↓

10 AVENUE NORTH-WEST
8 AVENUE NORTH-WEST
6 AVENUE NORTH-WEST
3 AVENUE NORTH-WEST
1 AVENUE NORTH-WEST
WESTMOUNT ROAD NORTH-WEST
WESTMOUNT BOULEVARD NORTH-WEST
GLADSTONE ROAD NORTH-WEST
15 STREET NORTH-WEST
16 STREET NORTH-WEST
13 STREET NORTH-WEST
11 STREET NORTH-WEST
7 STREET NORTH-WEST
5A STREET NORTH-WEST
4A STREET NORTH-WEST
1 AVENUE SOUTH-WEST
3 AVENUE SOUTH-WEST
4 AVENUE SOUTH-WEST
5 AVENUE SOUTH-WEST
8 AVENUE SOUTH-WEST
9 AVENUE SOUTH-WEST
3 AVENUE SOUTH-EAST
Bow River
SUNNYSIDE BARRIER
PEACE BRIDGE
LOUISE BRIDGE
KENSINGTON BERM
WEST HILLHURST BERM
MEWATA BRIDGE
CROWCHILD TRAIL BRIDGE
NORTH WEST LRT BRIDGE
PRINCE'S ISLAND CAUSEWAY
PRINCE'S LAGOON WEIRS
WEST EAU CLAIRE FLOOD BARRIER
JAIPUR BRIDGE
PRINCE'S ISLAND BRIDGE
PRINCE'S ISLAND BRIDGE ON SIDE CHANNEL
CENTRE STREET BRIDGE
CENTRE STREET BRIDGE BARRIER
MEMORIAL DRIVE BERM

SHEET 33 & 34 ↓



LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPP NG BOUNDARY
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HYDRAULIC STRUCTURES

- CULVERT
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- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
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- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S

0 200 400
1:10,000 METRES

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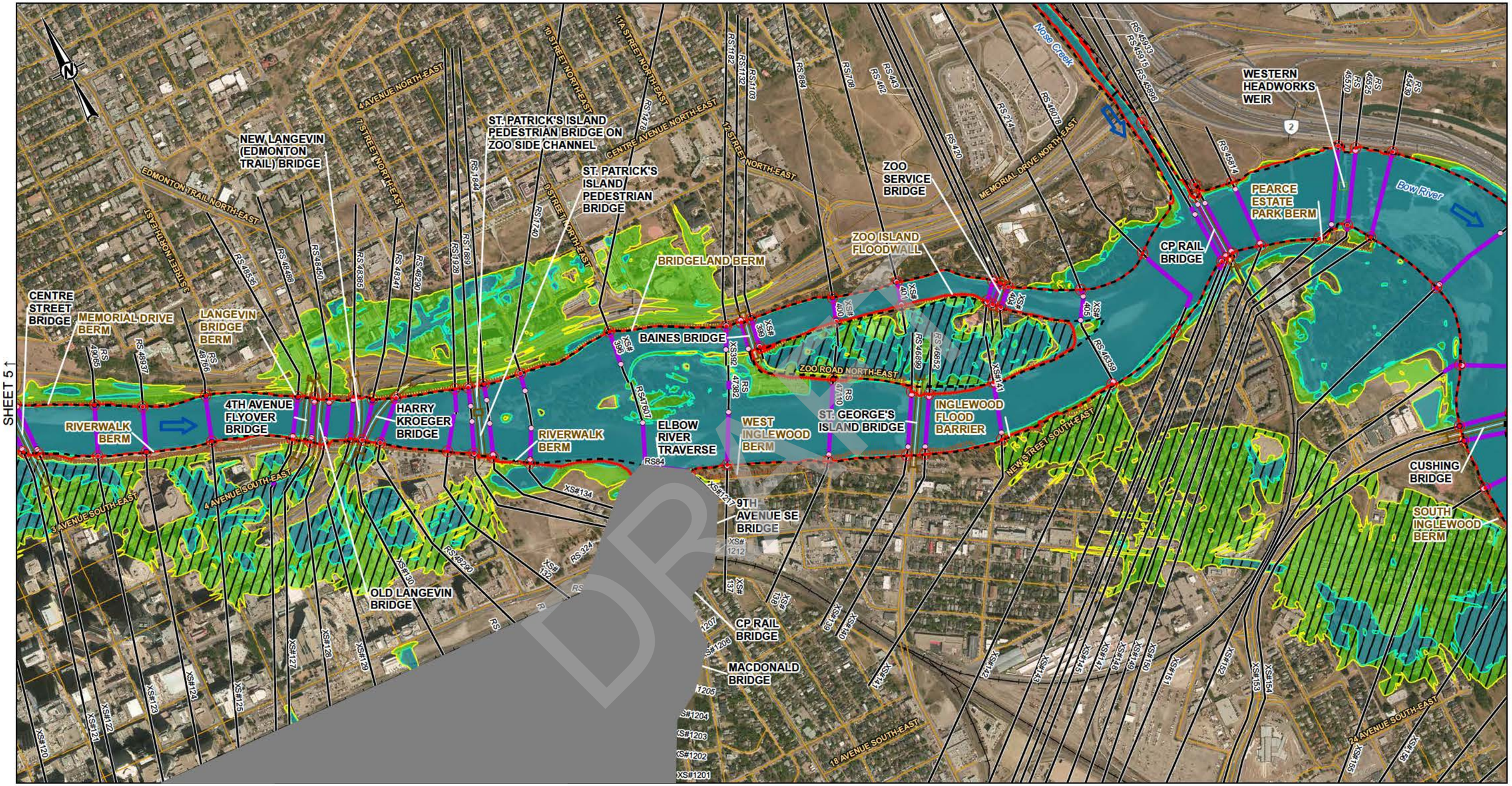
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	5 of 34



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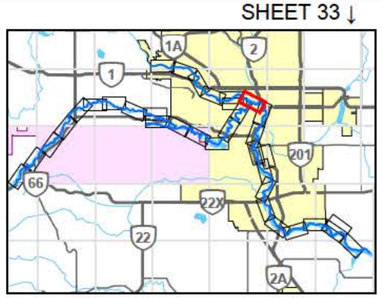
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S
BOW RIVER BELOW ELBOW RIVER = 2390 M^3/S
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S

SHEET 33 ↓



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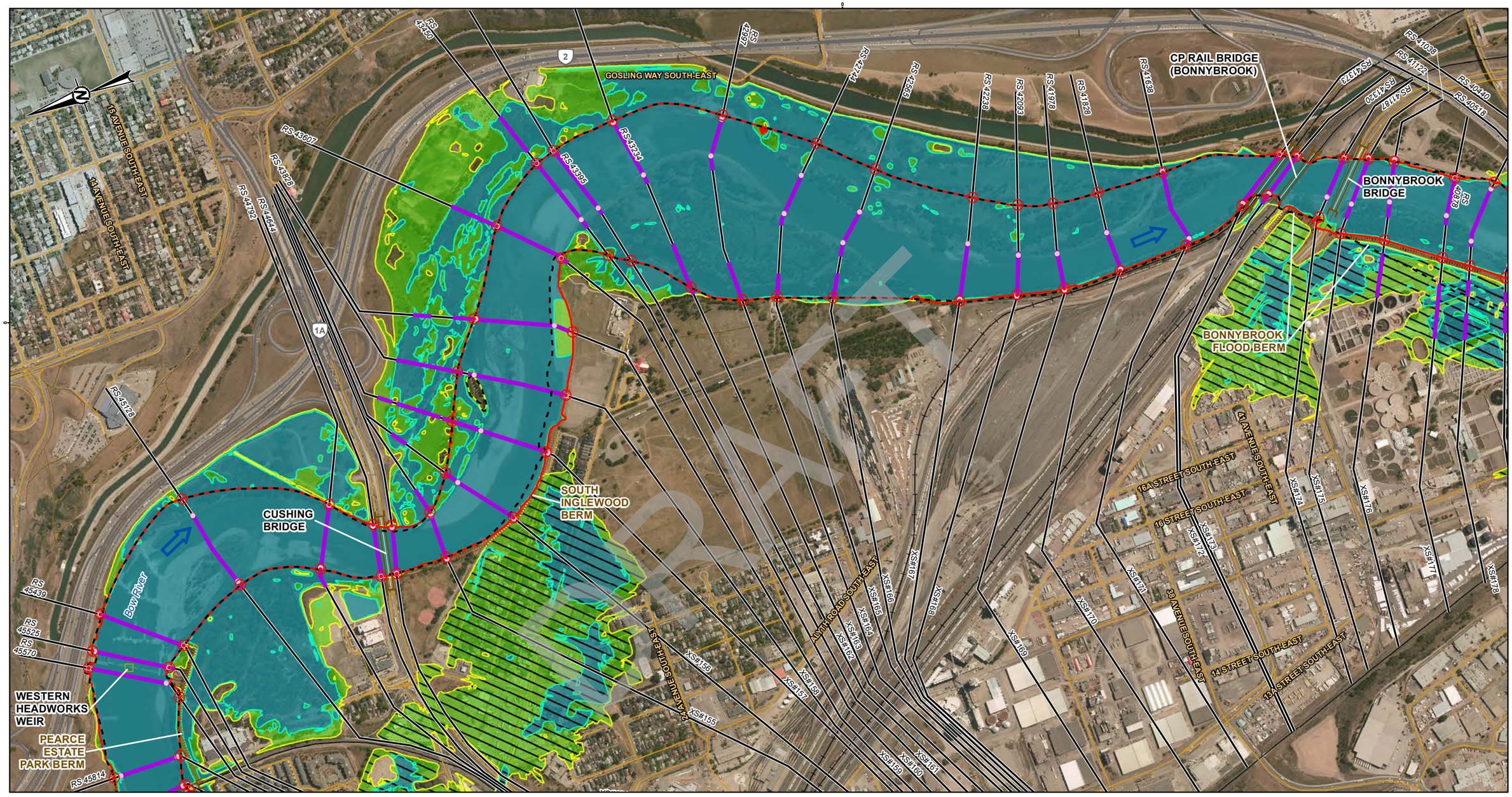
REV EWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	6 of 34



LEGEND

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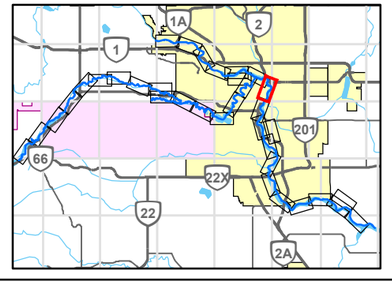
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S

SHEET 5 ↓



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	7 of 34

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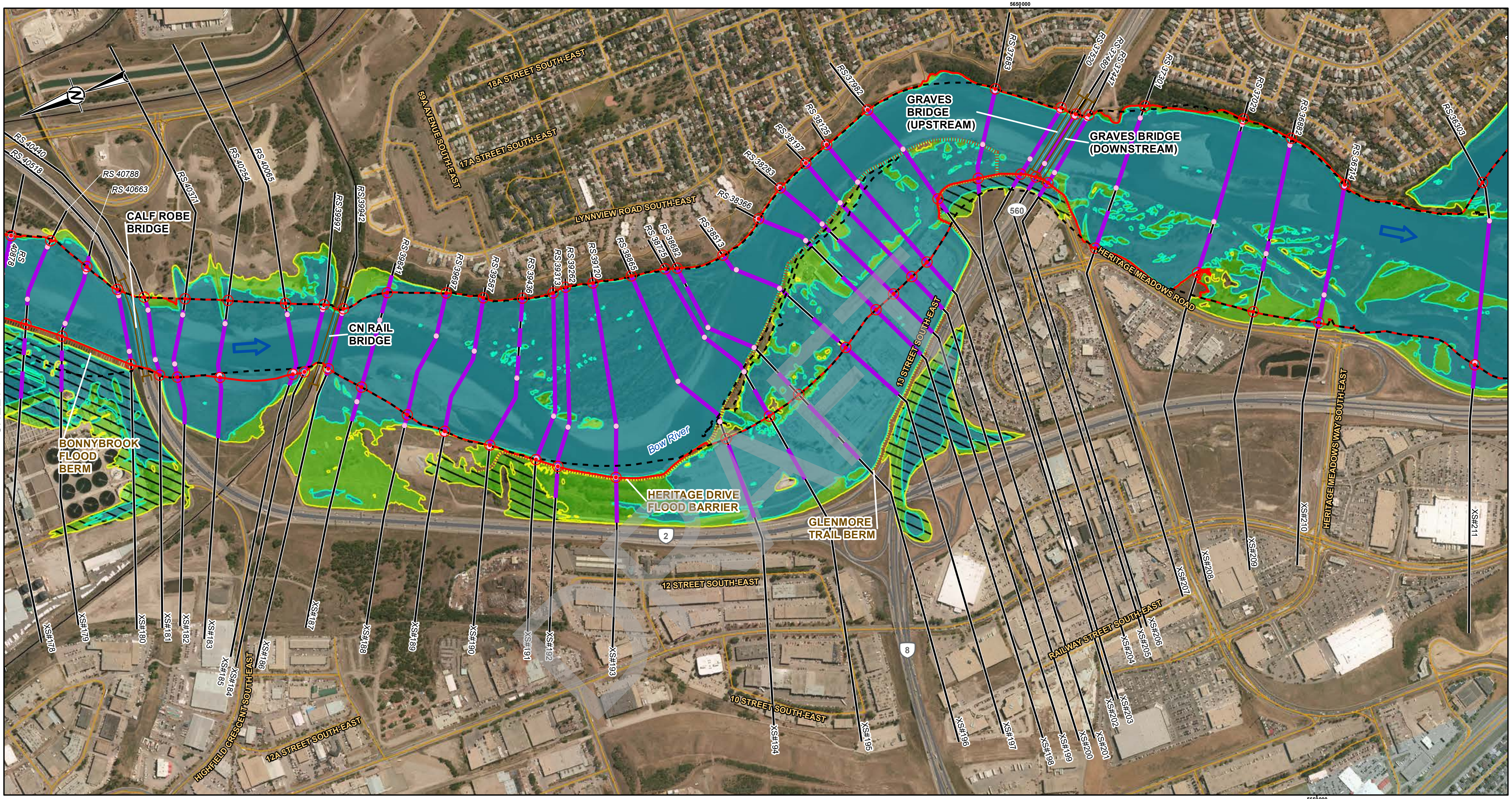

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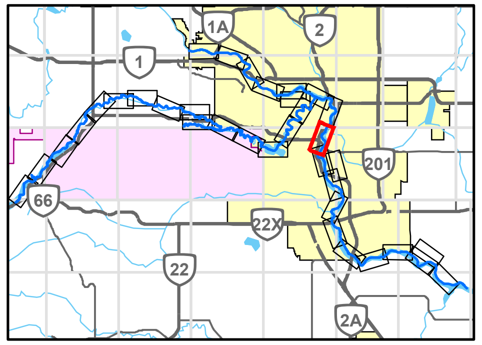
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M³/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	8 of 34

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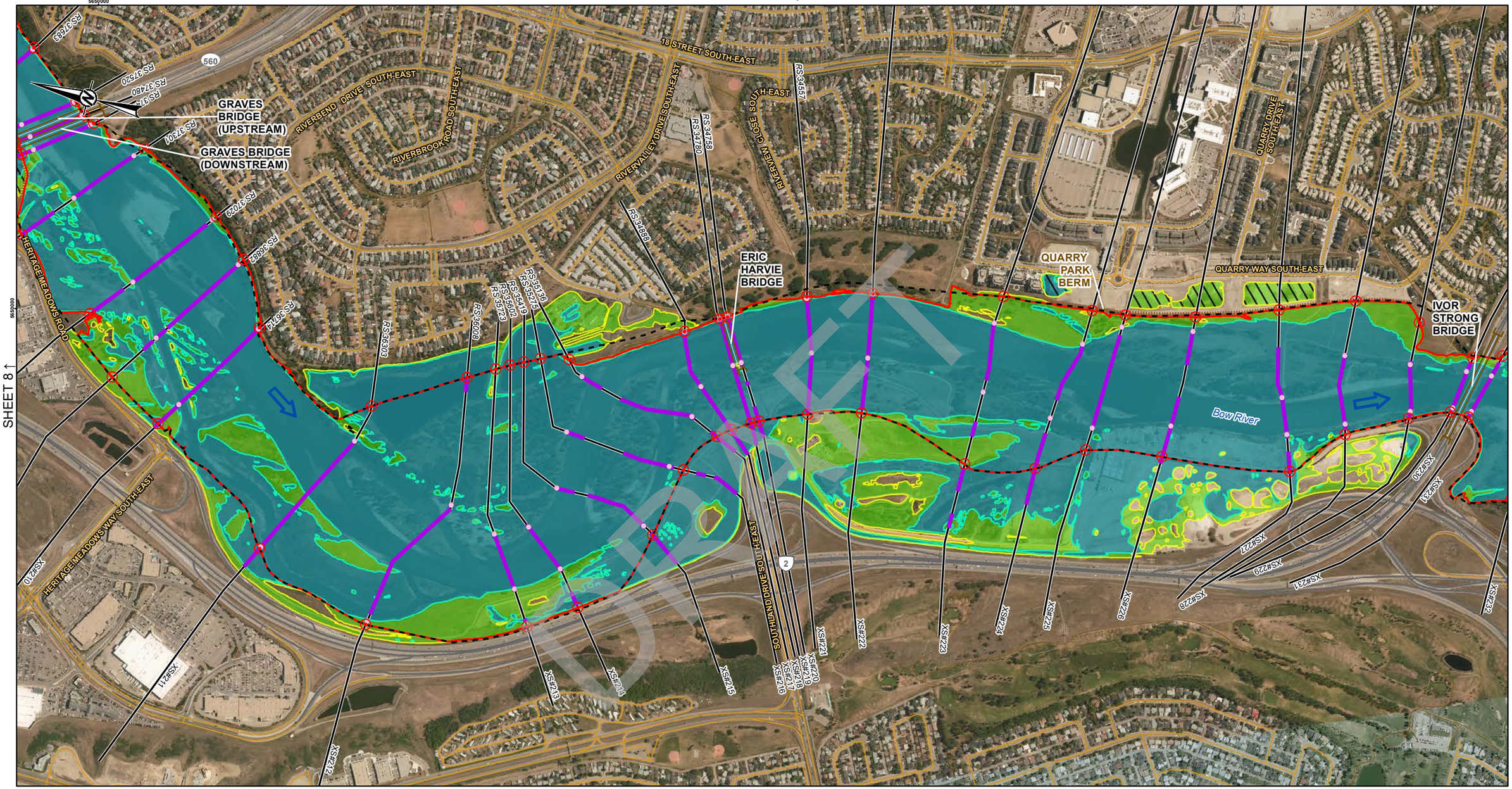
Classification: Public

SHEET 9A ↑

SHEET 8 ↑

SHEET 10 ↓



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DESIGN DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S

0 200 400
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TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	9 of 34

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25mm

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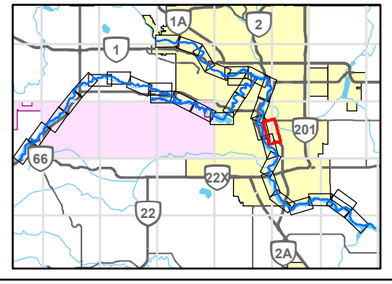
SHEET 8 ↑

SHEET 10 ↓

SHEET 9 ↓



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OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	9A of 34

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25mm

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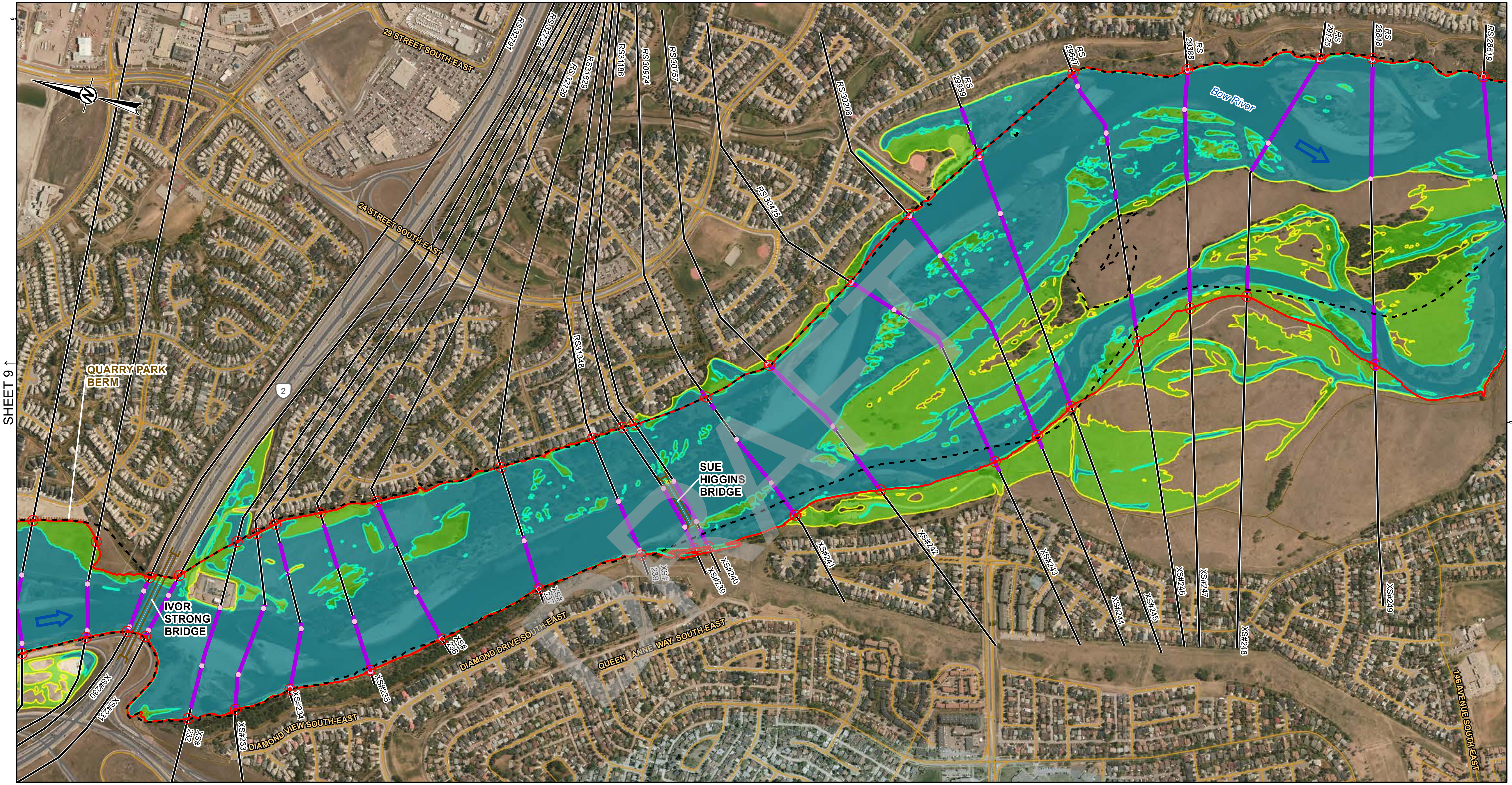
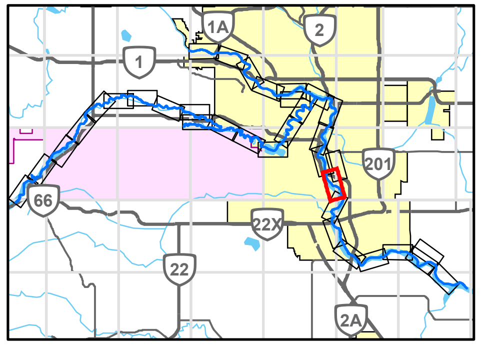


LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#10 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 4994 RIVER STATION (M)	CULVERT
MAPPING BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PRIMARY HIGHWAY	BRIDGE
SECONDARY HIGHWAY	

PROPOSED FLOODWAY BOUNDARY
BANK STATION
PROPOSED FLOODWAY STATION
PREVIOUS FLOODWAY
DEPTH ≥ 1 M
100-YEAR DESIGN FLOOD EXTENT
PROTECTED FLOOD AREA
VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S



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Alberta Government

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GOLDER
MEMBER OF WSP

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PREPARED	SP
REVIEWED	WP
APPROVED	WP

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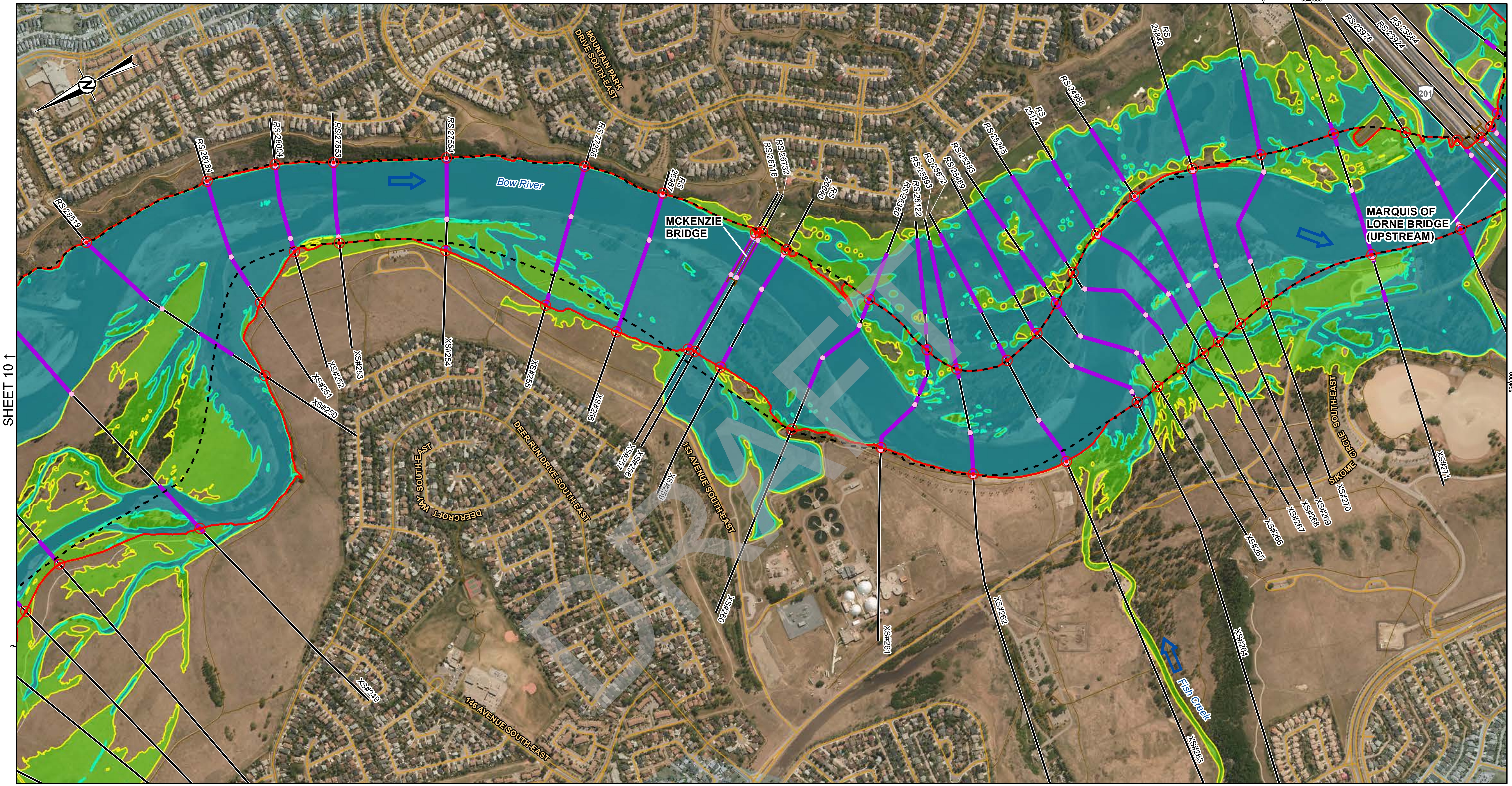
DATUM: NAD 83 CSRS PROJECTION: 3TM 114

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

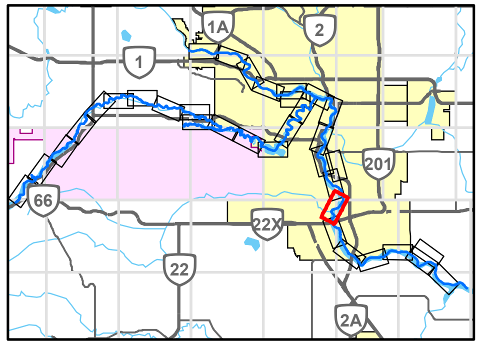
PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	10 of 34



LEGEND

- CROSS SECTION
- XS#10 — CROSS SECTION NUMBER
- RS 4994 — RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE
- **HYDRAULIC STRUCTURES**
  - CULVERT
  - DAM
  - OTHER
  - WEIR
  - BRIDGE
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S
BOW RIVER BELOW FISH CREEK = 2580 M^3/S



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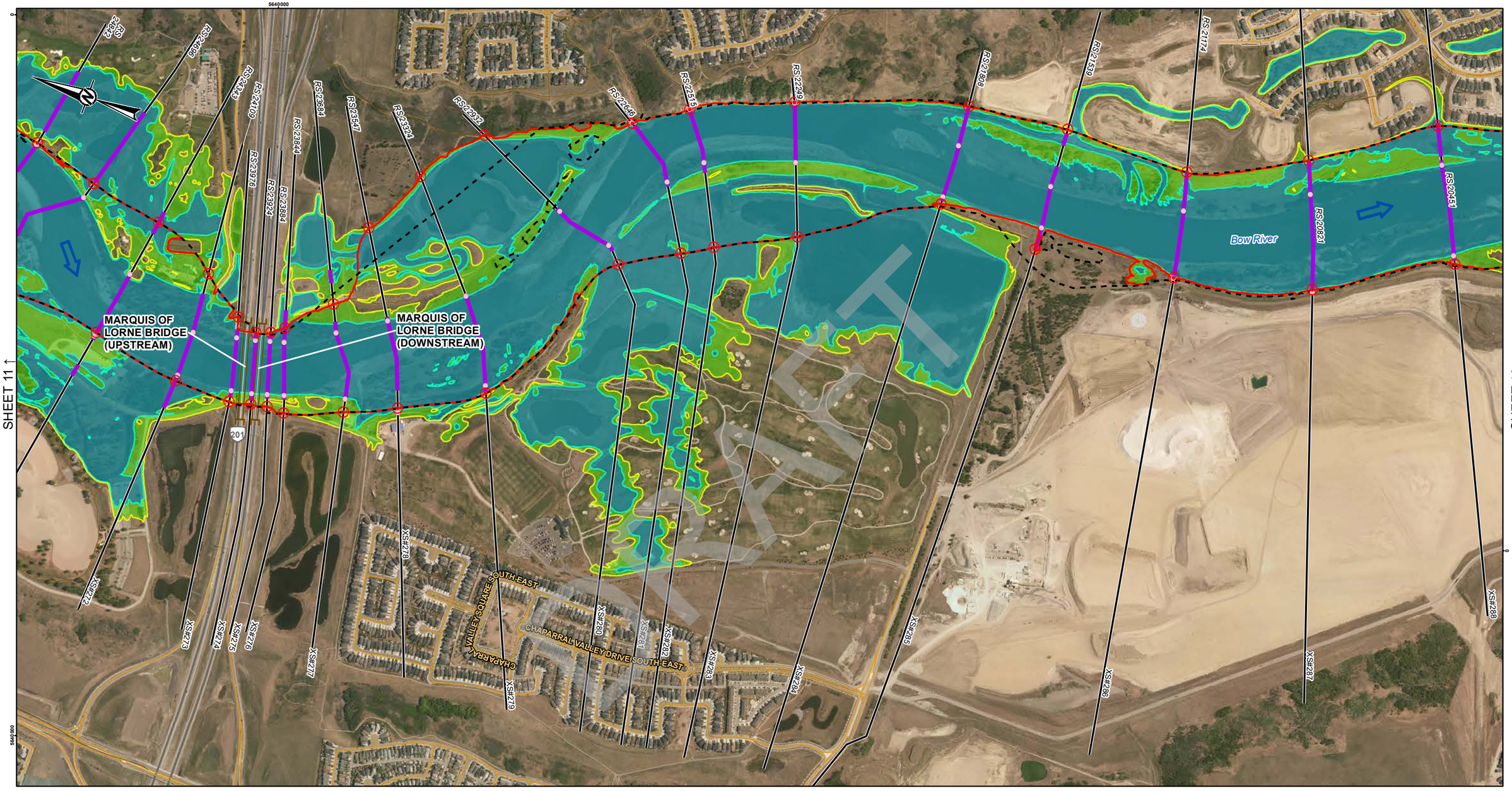
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	11 of 34



LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
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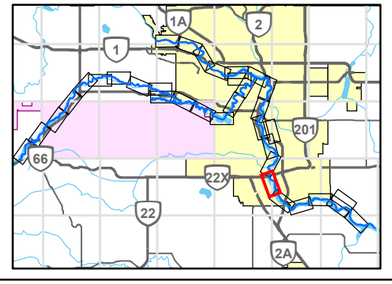
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW FISH CREEK = 2580 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	12 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm
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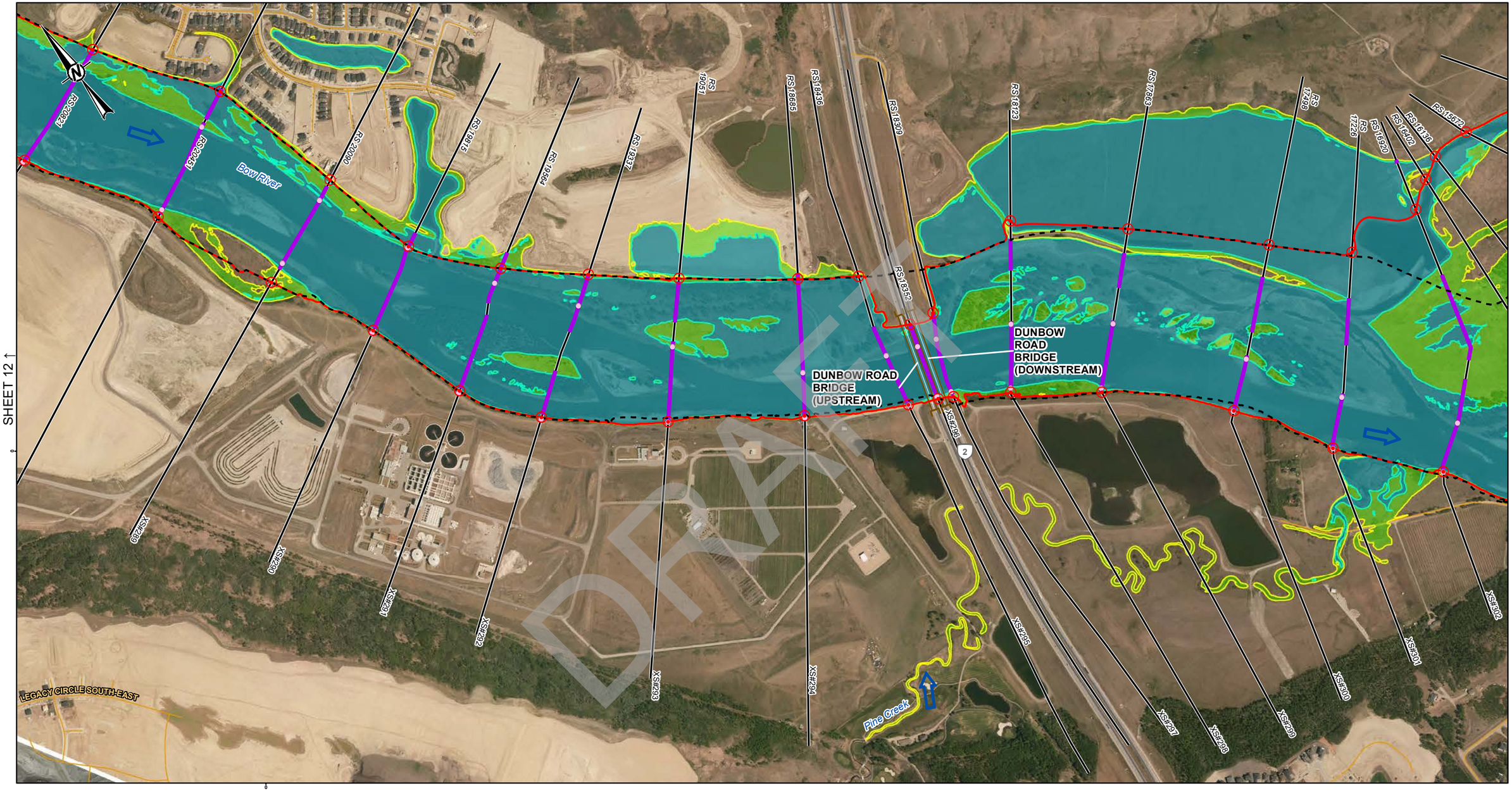


LEGEND

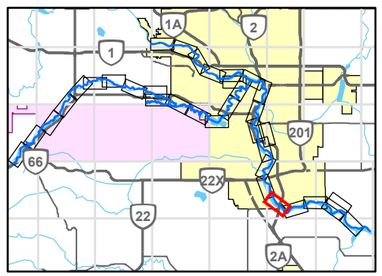
- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW FISH CREEK = 2580 M^3/S
BOW RIVER BELOW PINE CREEK = 2620 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	13 of 34

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SHEET 13 ↑

SHEET 15 ↓

RS 17496
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RS 16920
RS 16702
RS 16136
RS 15672
RS 15472
RS 15202
RS 14936
RS 14680
RS 14372
RS 14047
RS 13661
RS 13385
RS 13095
RS 12853

XS#303
XS#304
XS#305
XS#306
XS#307
XS#308
XS#309
XS#310
XS#311
XS#312
XS#313
XS#314

Bow River

BOW RIVER BOTTOM TRAIL EAST
232 AVENUE EAST
230 AVENUE EAST

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
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- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
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- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
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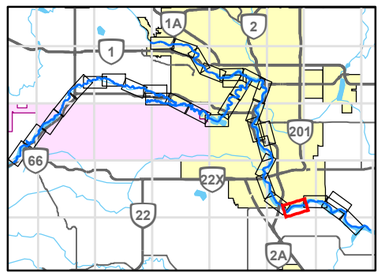
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW PINE CREEK = 2620 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	14 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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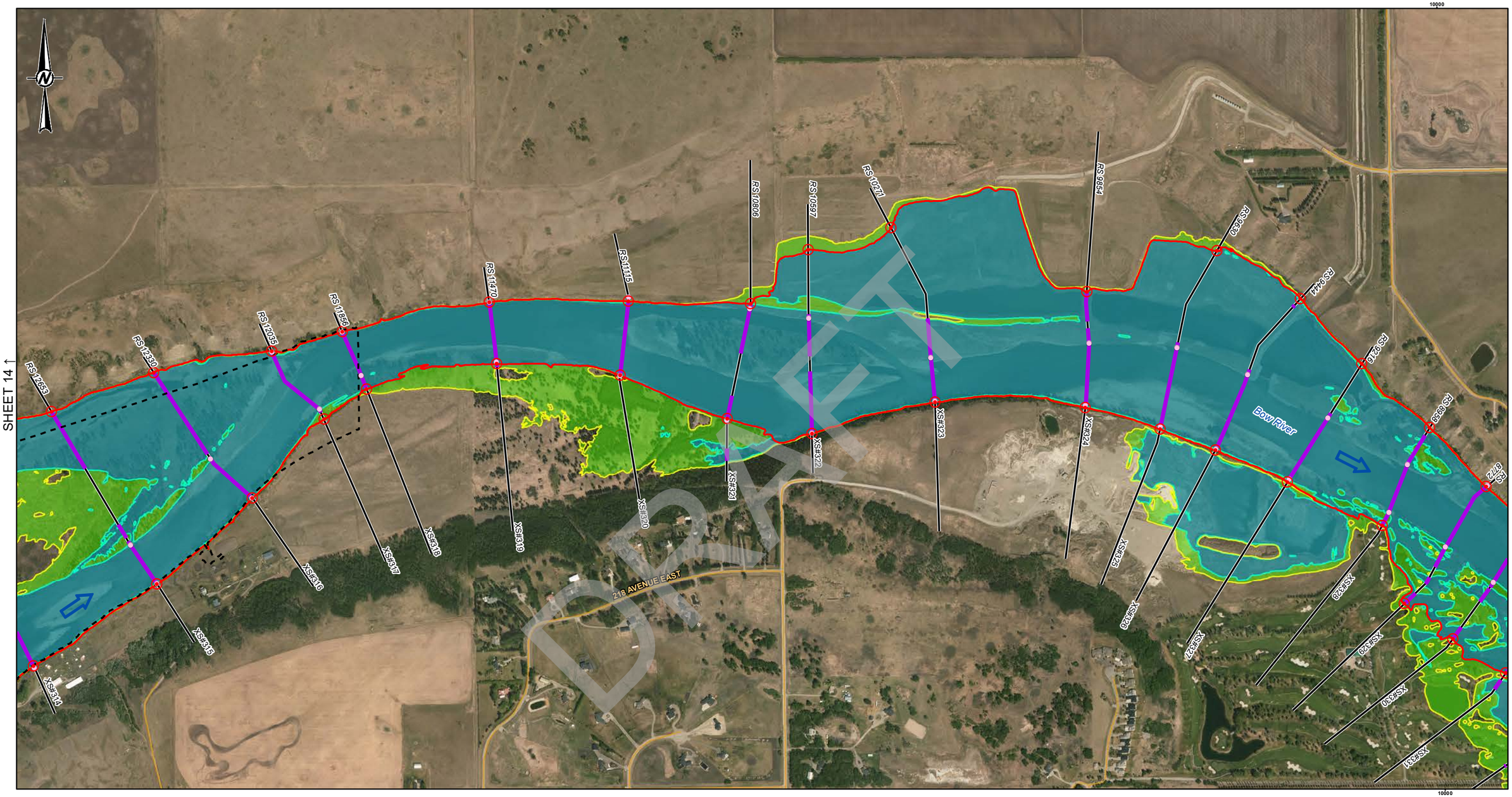
SHEET 16 ↓



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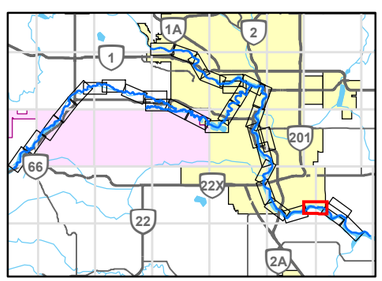
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER BELOW PINE CREEK = 2620 M^3/S
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	15 of 34

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25mm

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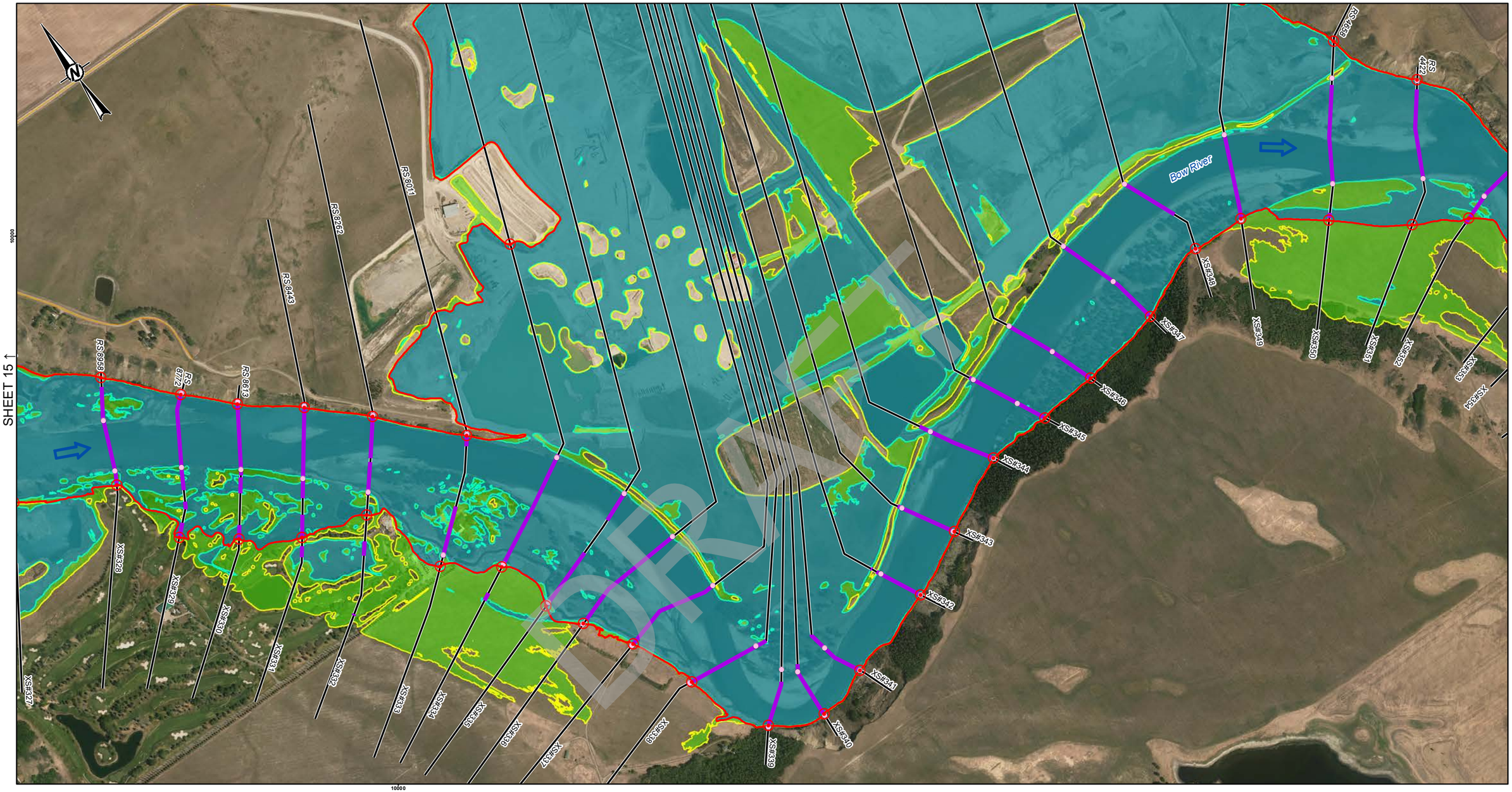
SHEET 15 ↑

SHEET 18 ↓



LEGEND

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- *XS#10* CROSS SECTION NUMBER
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- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
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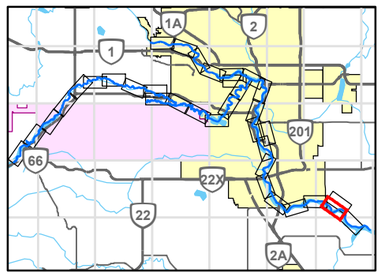
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	16 of 34

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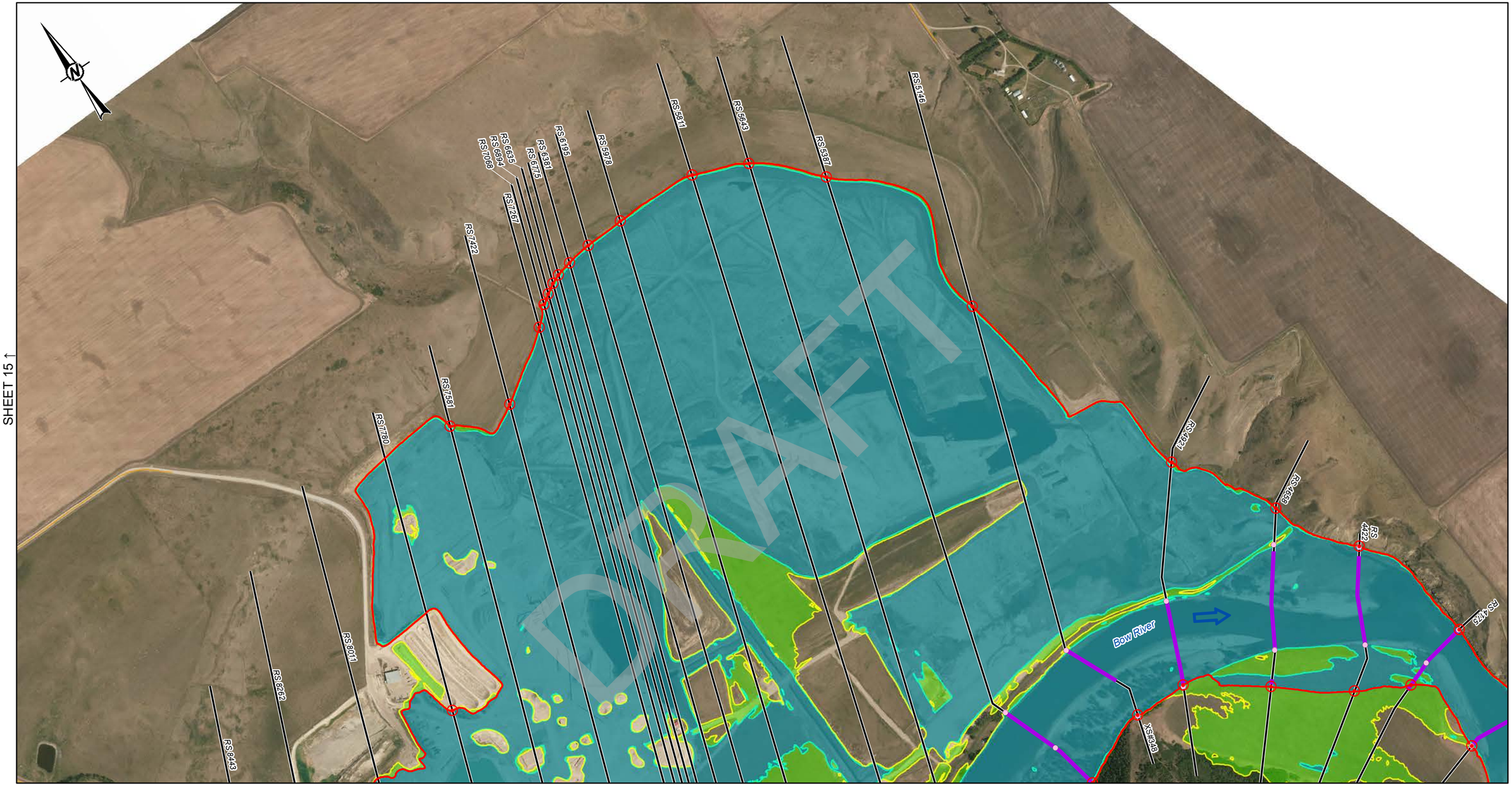

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- *XS#10* CROSS SECTION NUMBER
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- PROPOSED FLOODWAY STATION
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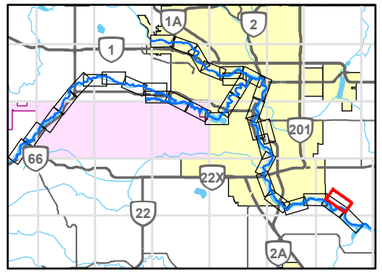
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S

SHEET 16 ↓



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PROJECT NO.	CONTROL	REV.	FIGURE
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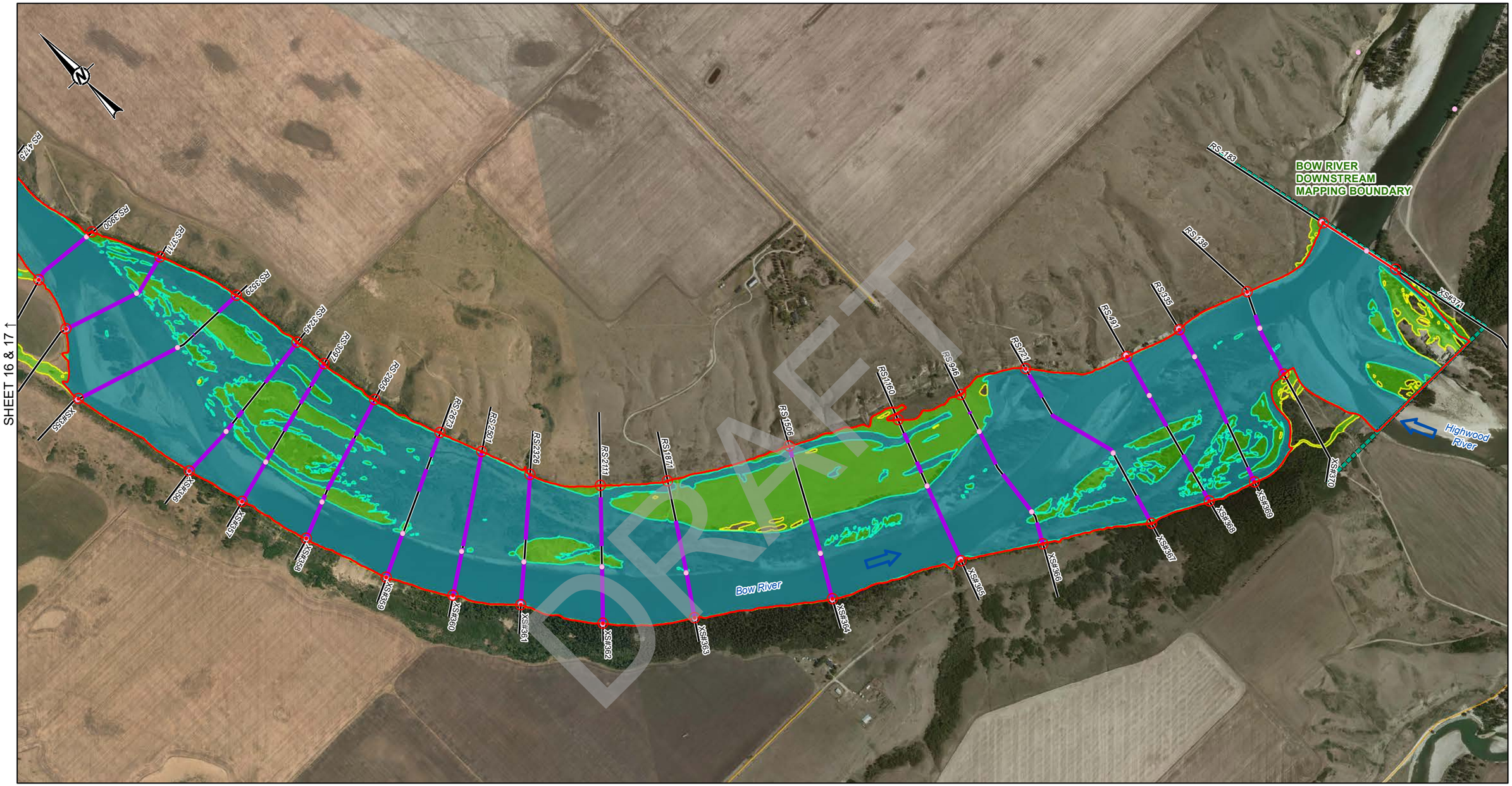

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- PROPOSED FLOODWAY BOUNDARY
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- PREVIOUS FLOODWAY
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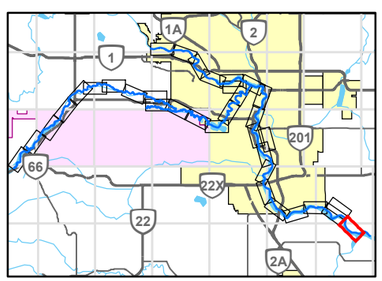
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	18 of 34

ELBOW RIVER
UPSTEAM MAPPING
BOUNDARY

WILDROSE GATE

TOWNSHIP ROAD 232

RANGE ROAD 51A

Elbow River

758

66

DRAFT

SHEET 20 ↓

LEGEND

- CROSS SECTION
- *XS#10* CROSS SECTION NUMBER
- *RS 4994* RIVER STATION (M)
- MAPPING BOUNDARY
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- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
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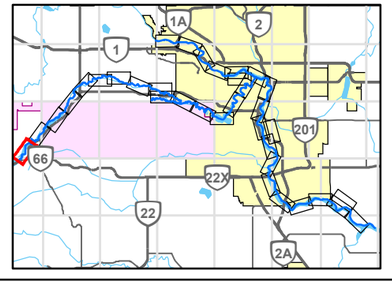
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

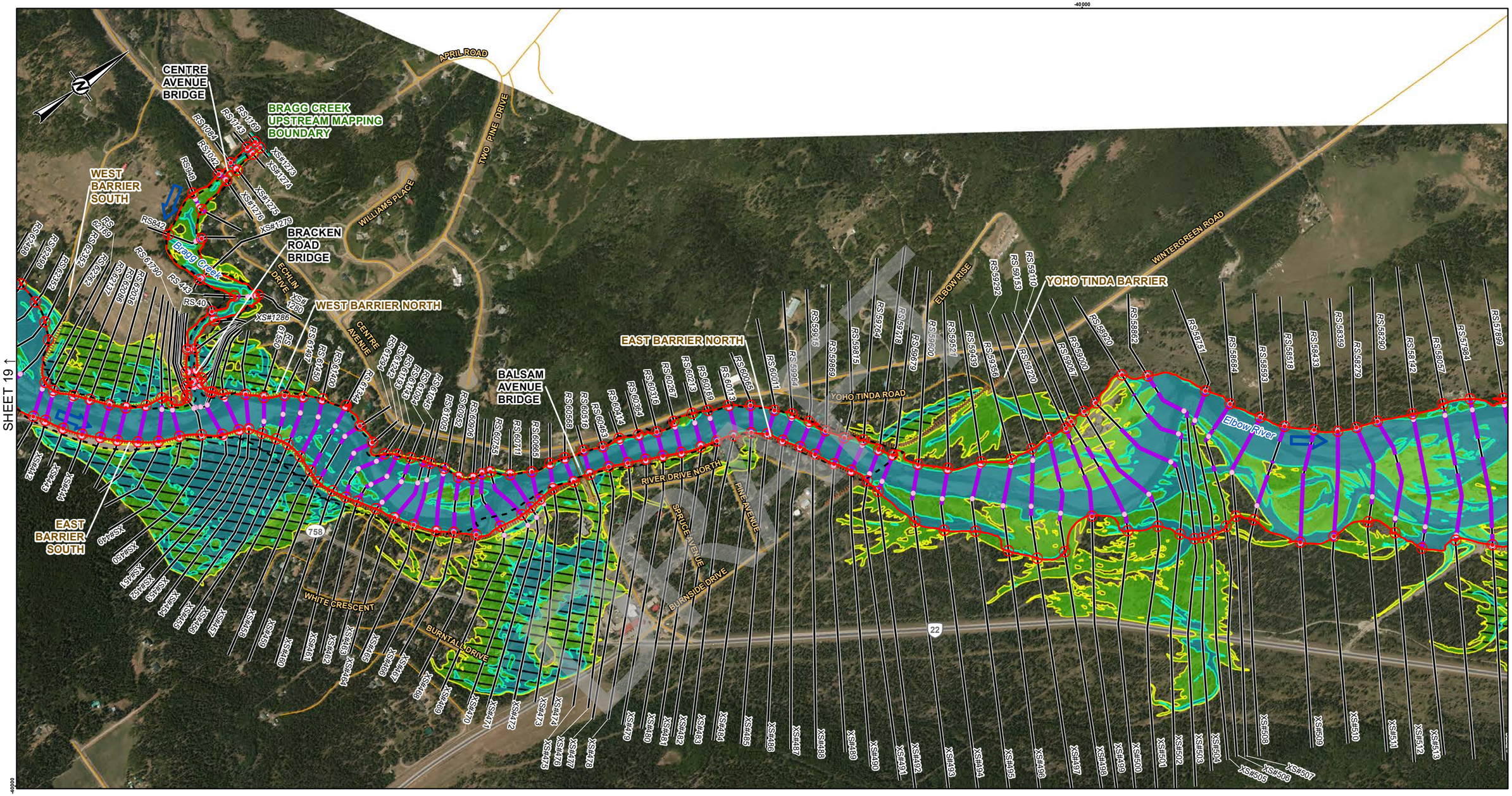
TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	19 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

PATH: I:\CLIENT\GOVERNMENT_OF_ALBERTA\21452576_Bow_Elbow\Mapping\Products\Hydrology\05_Design Flood Hazard Mapping\Rev0\21452576_Floodway-Criteria_Rev0.mxd PRINTED ON: 2023-07-28 AT: 10:30:02 AM



LEGEND

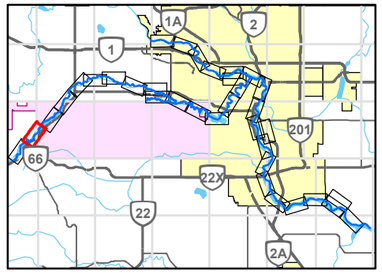
- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S
BRAGG CREEK = 48.1 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	20 of 34

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25mm

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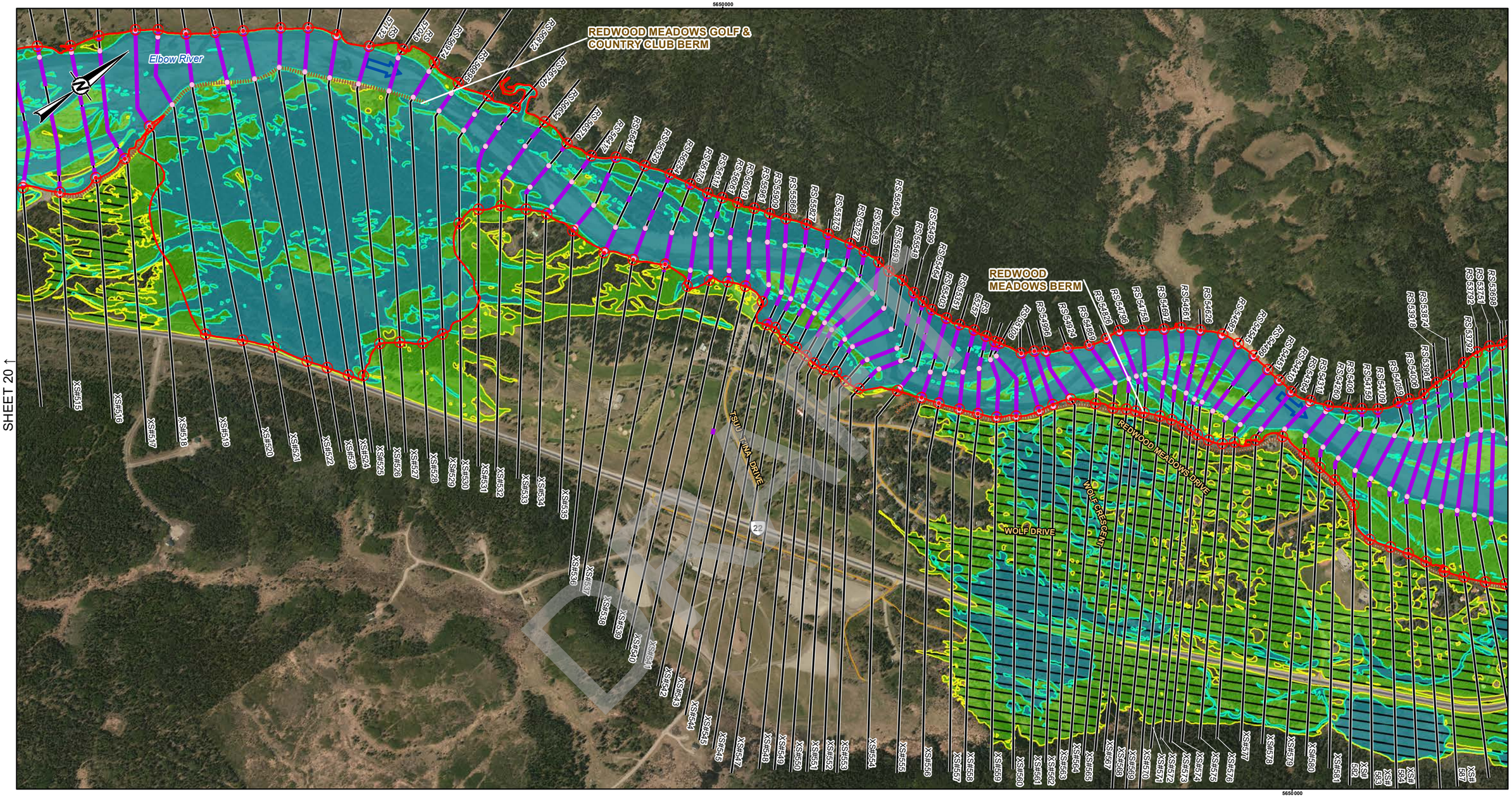

LEGEND

- CROSS SECTION
- *XS#10* CROSS SECTION NUMBER
- *RS 4994* RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
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- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

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- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
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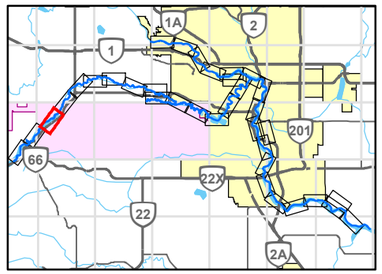
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	21 of 34

SHEET 21 ↑

SHEET 23 ↓

REDWOOD MEADOWS BERM

SLEIGH DRIVE

MANYHORSES DRIVE

RANGE ROAD 42

Elbow River

DRAFT

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
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- BRIDGE

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- BANK STATION
- PROPOSED FLOODWAY STATION
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- DEPTH ≥ 1 M
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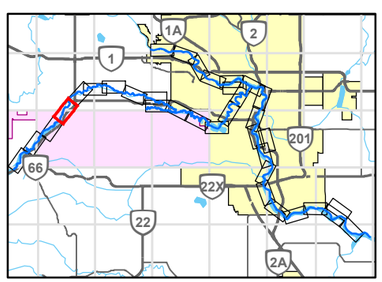
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	22 of 34

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25mm

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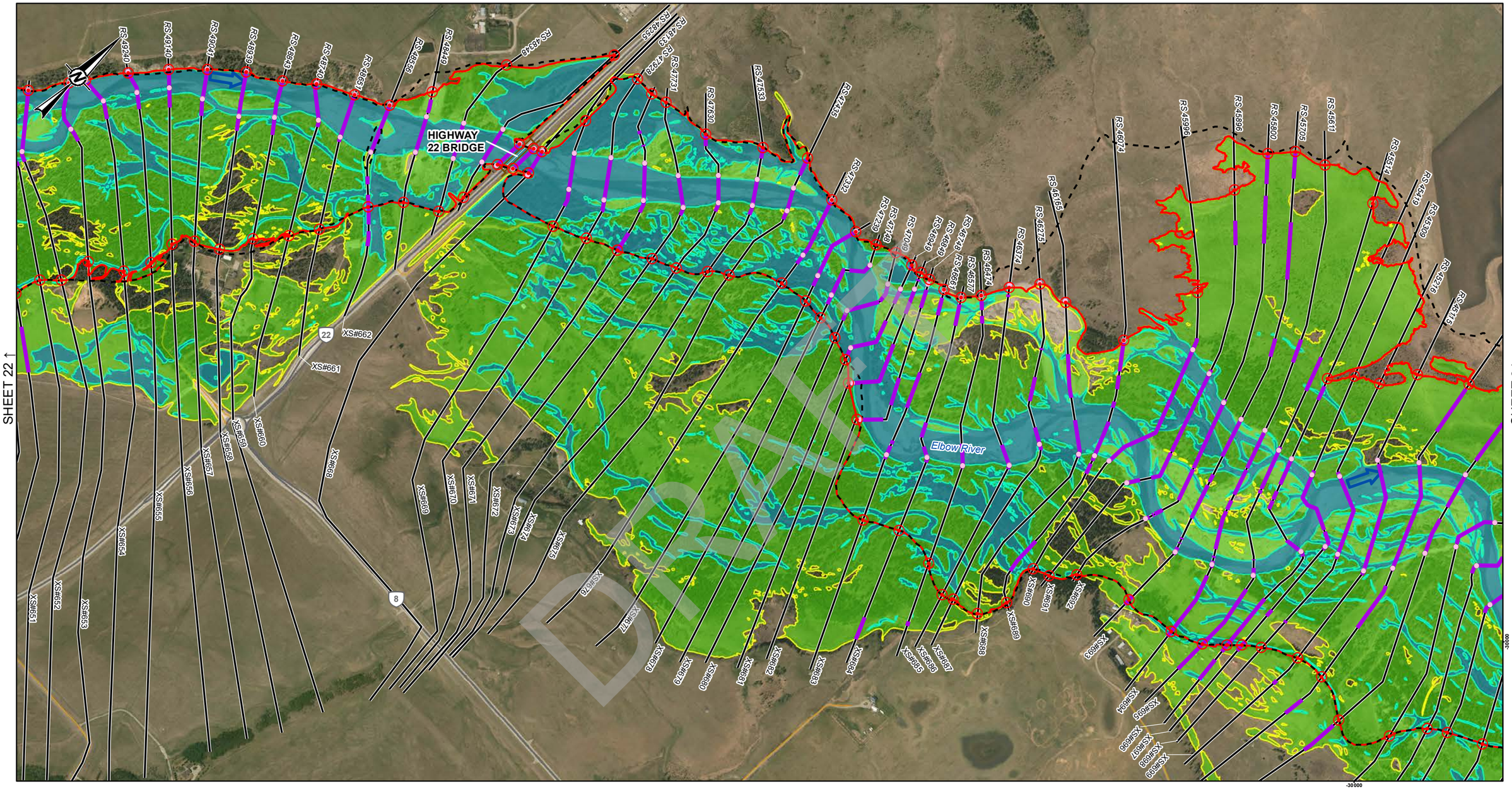

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
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- SECONDARY HIGHWAY
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- CULVERT
- DAM
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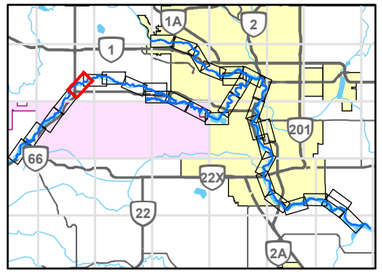
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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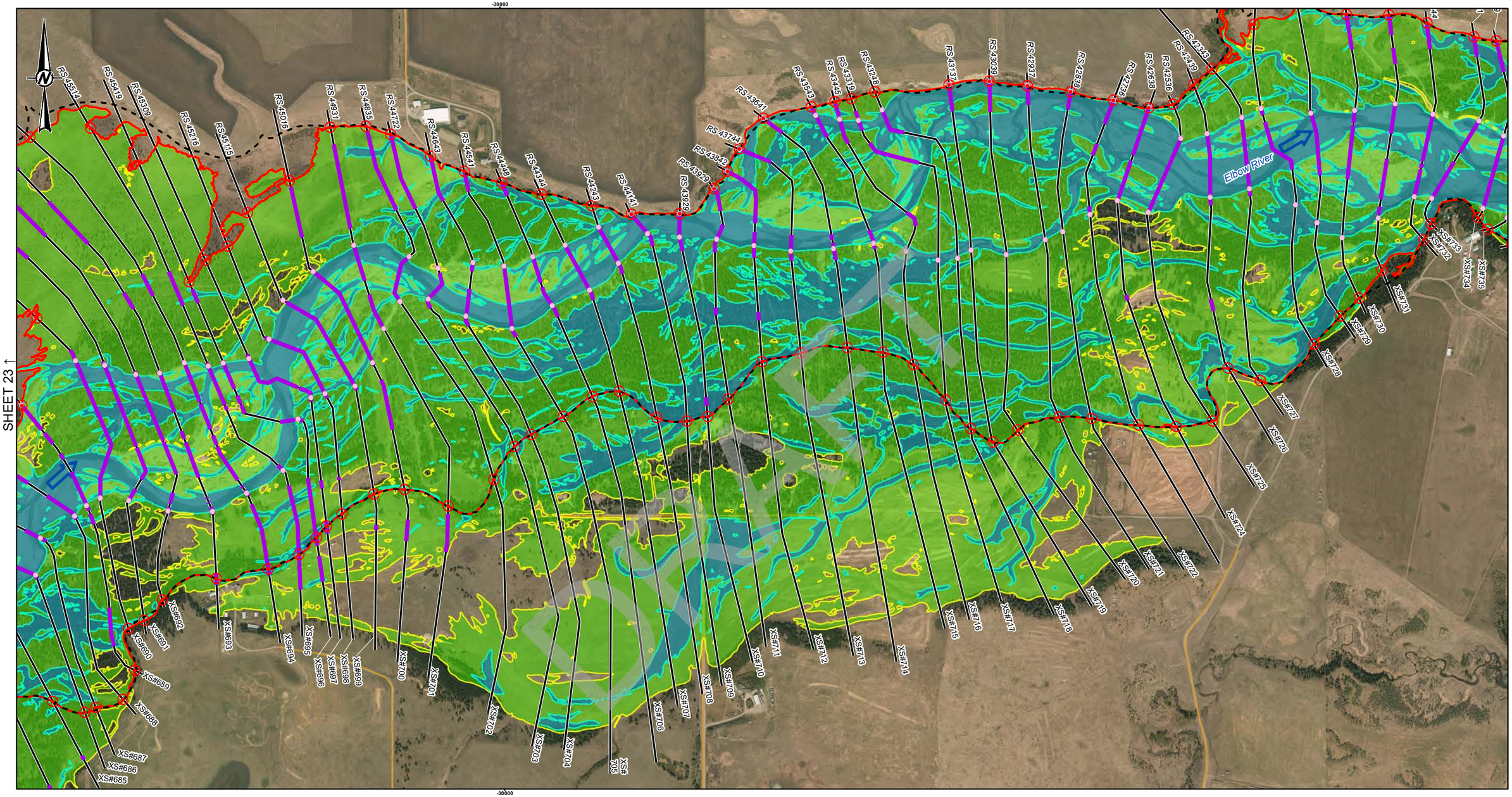
PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	23 of 34



LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
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- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
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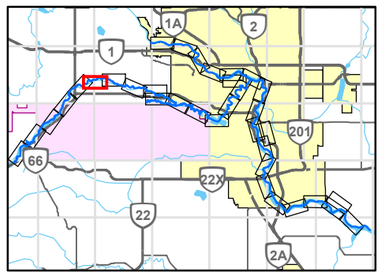
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	24 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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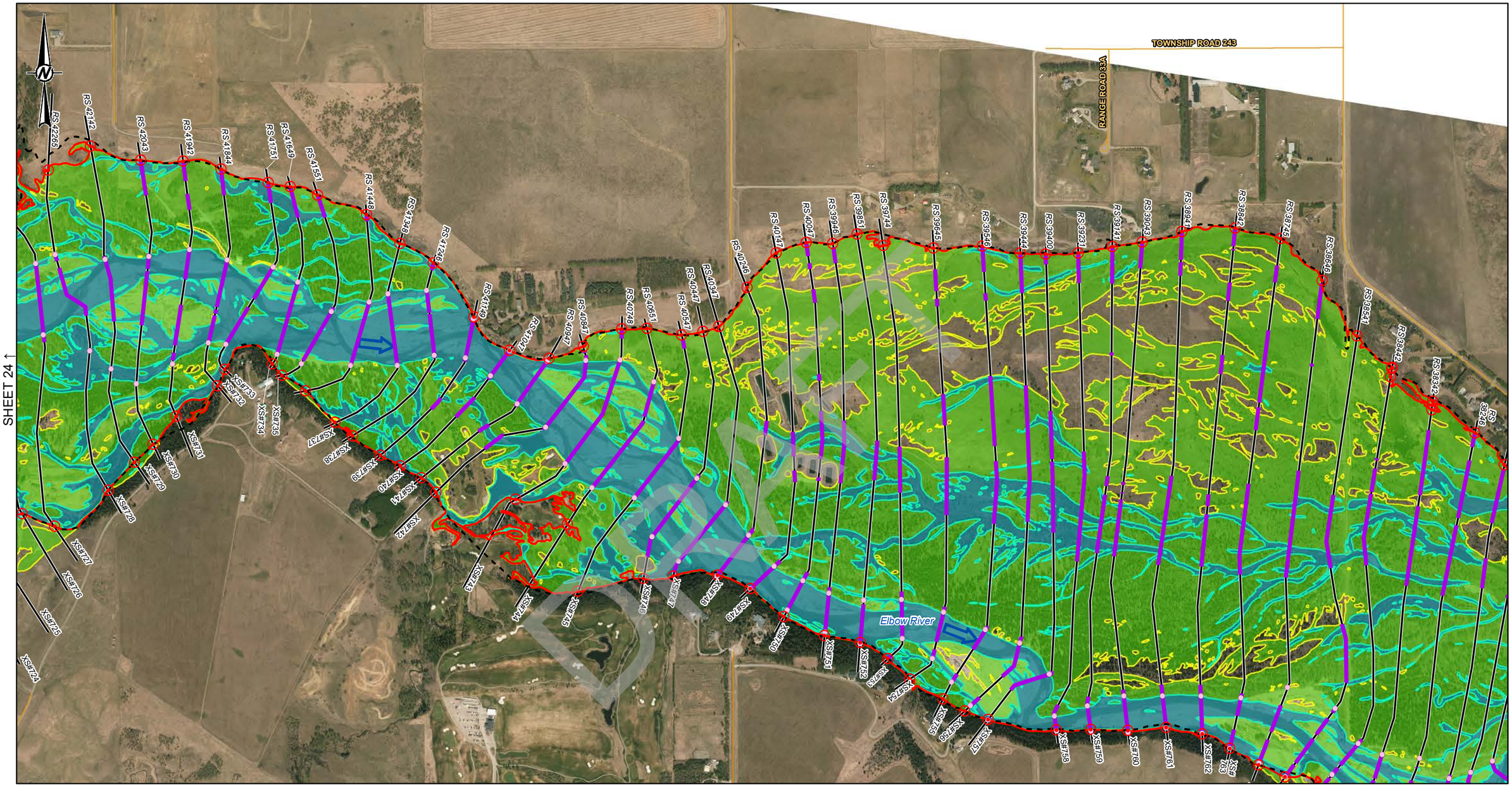


SHEET 24 ↑

SHEET 26 ↓

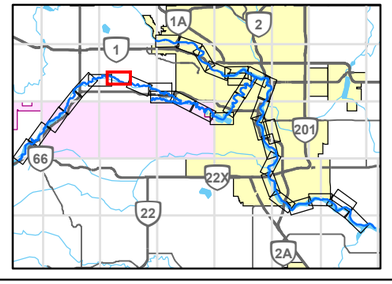
LEGEND

- CROSS SECTION
- *XS#10* CROSS SECTION NUMBER
- *RS 4994* RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	25 of 34

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25mm

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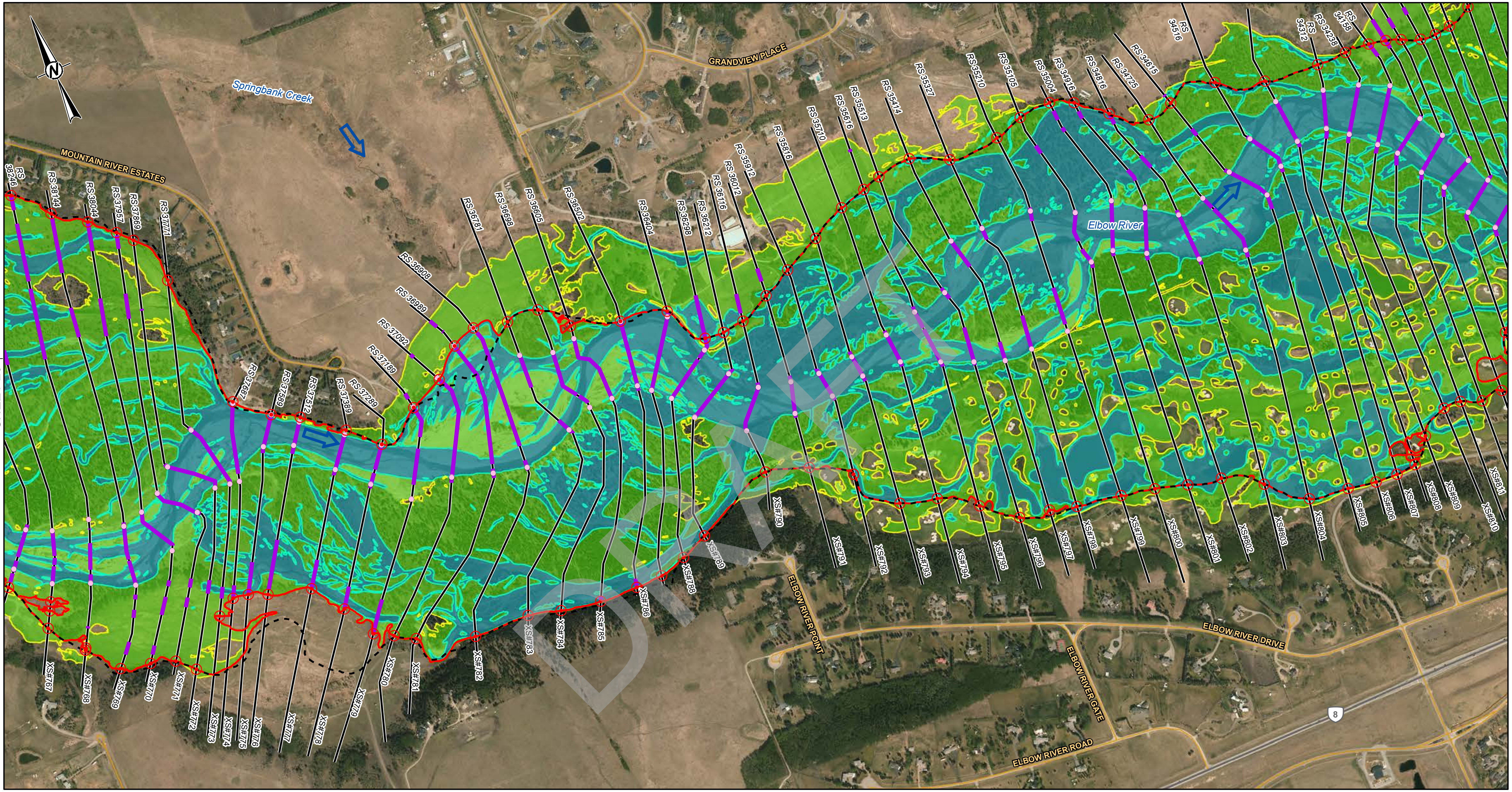
SHEET 25 ↑



SHEET 27 ↓

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
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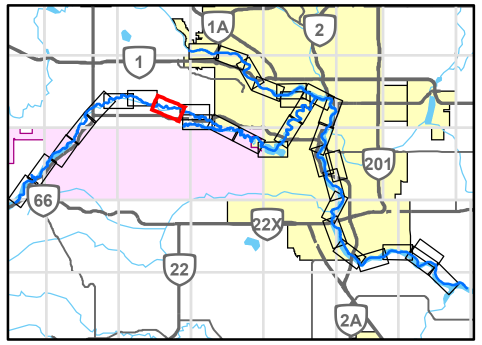
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

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APPROVED	WP

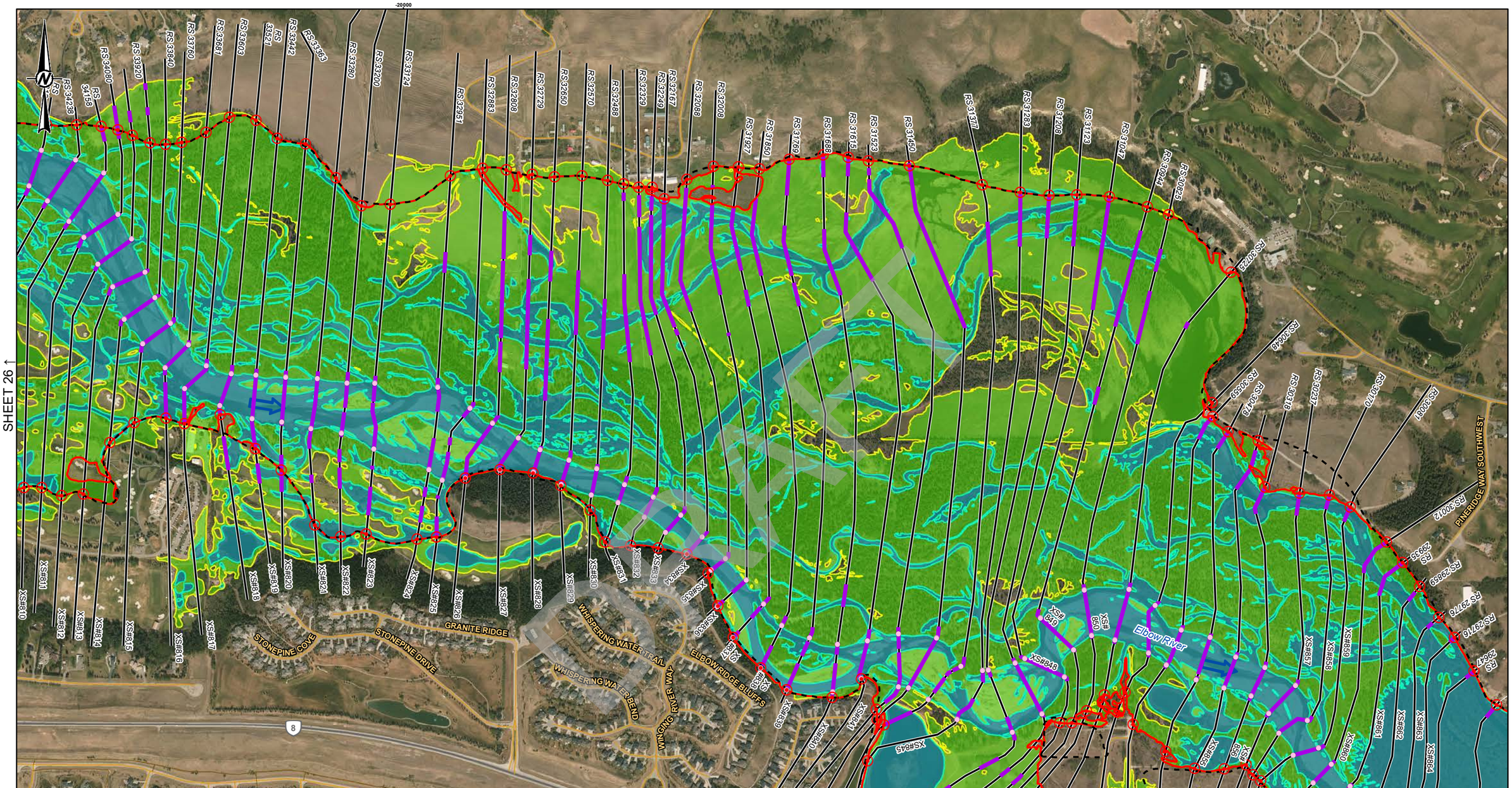
TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	26 of 34

SHEET 26 ↑

SHEET 29 ↓

SHEET 28 ↓



LEGEND

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- *RS 4994* RIVER STATION (M)
- MAPPING BOUNDARY
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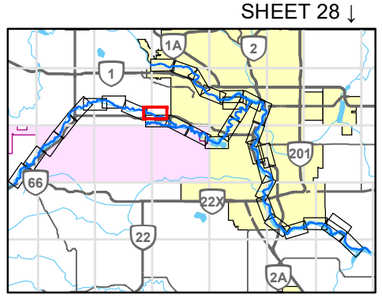
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S
LOTT CREEK = 30.8 M^3/S



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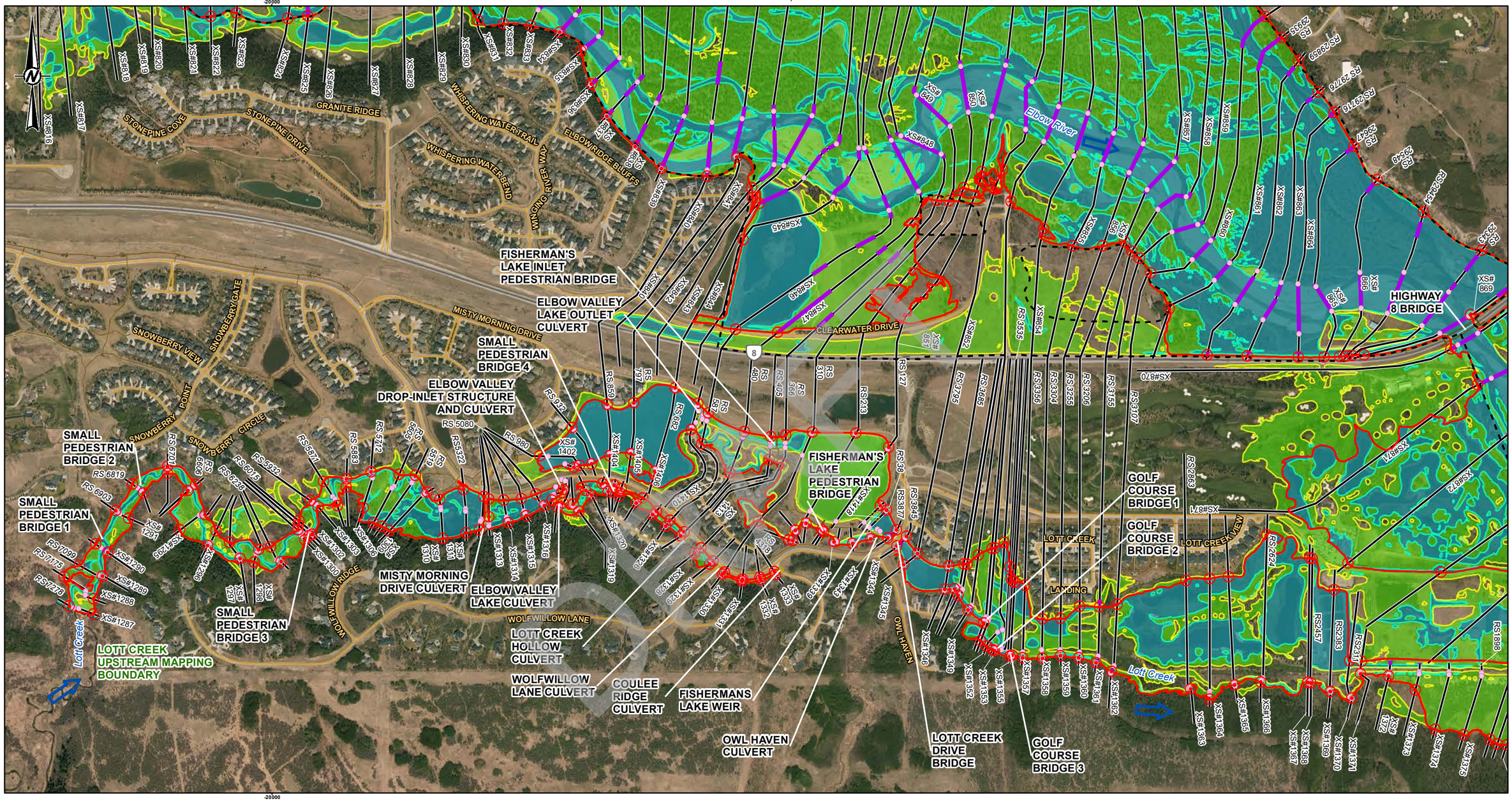
SHEET 27 ↑

SHEET 29 ↓



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- CROSS SECTION
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DESIGN DISCHARGE
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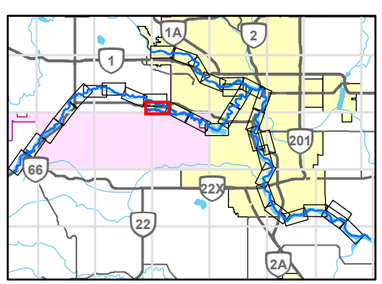
LOTT CREEK = 30.8 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	28 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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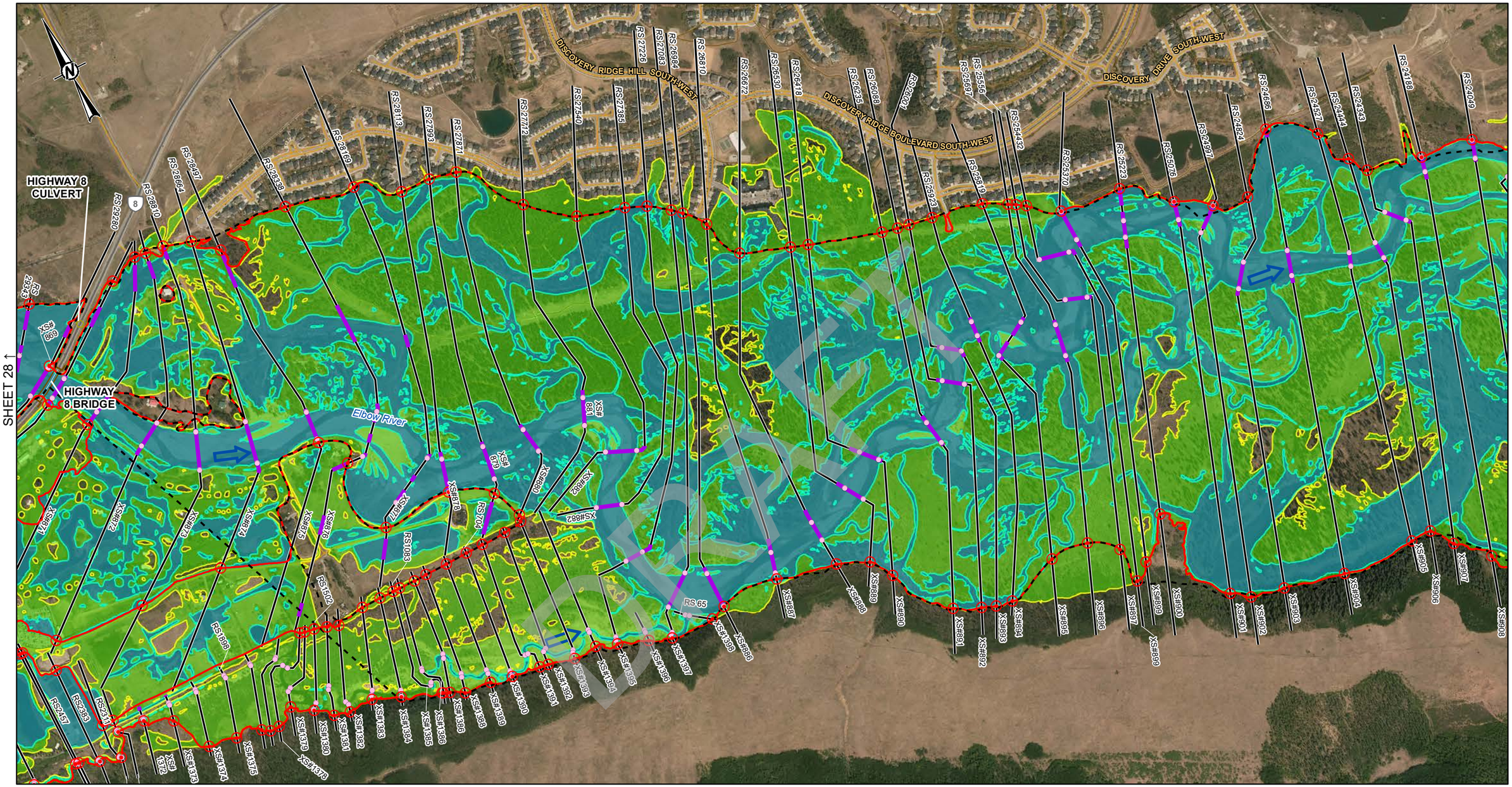


LEGEND

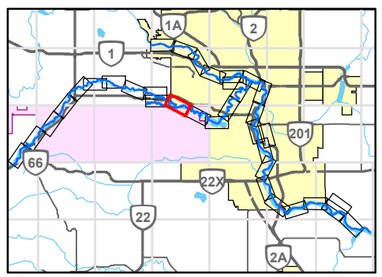
- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S
LOTT CREEK = 30.8 M^3/S



0 200 400
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REFERENCE(S)

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ALBERTA ENVIRONMENT AND PARKS

Alberta Government

CONSULTANT
GOLDER
MEMBER OF WSP

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DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	29 of 34

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25mm

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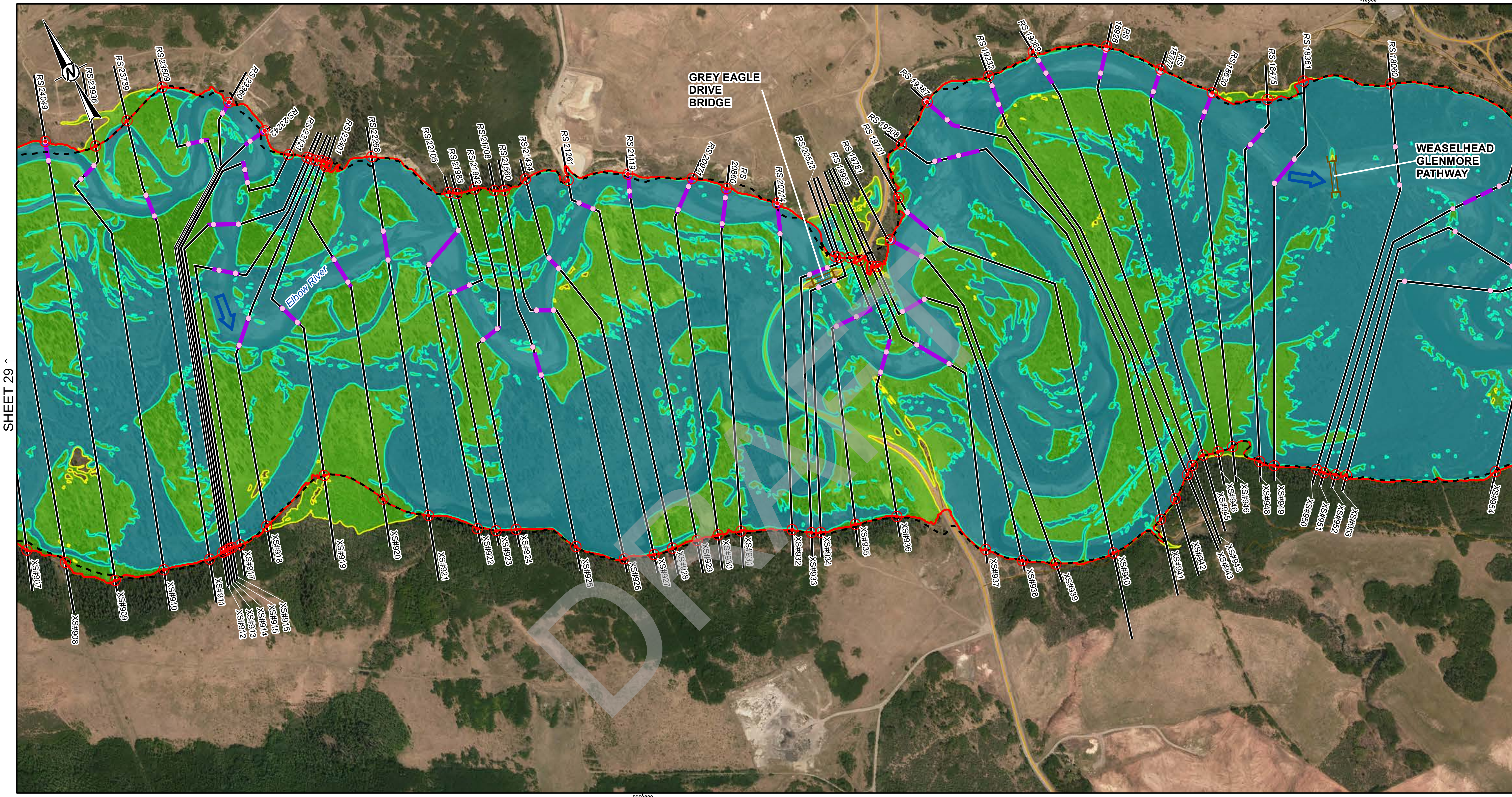
SHEET 29



SHEET 31

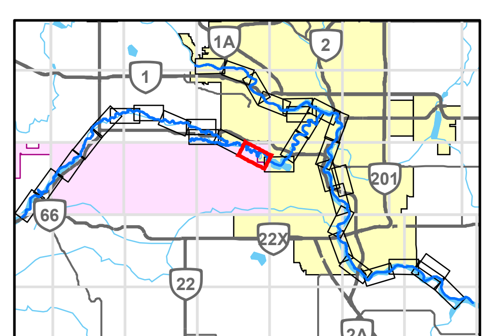
LEGEND

CROSS SECTION
XS#10 CROSS SECTION NUMBER
RS 4994 RIVER STATION (M)
MAPPING BOUNDARY
FLOW DIRECTION
LOCAL ROAD
PRIMARY HIGHWAY
SECONDARY HIGHWAY
FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES
CULVERT
DAM
OTHER
WEIR
BRIDGE

PROPOSED FLOODWAY BOUNDARY
BANK STATION
PROPOSED FLOODWAY STATION
PREVIOUS FLOODWAY
DEPTH ≥ 1 M
100-YEAR DESIGN FLOOD EXTENT
PROTECTED FLOOD AREA
VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



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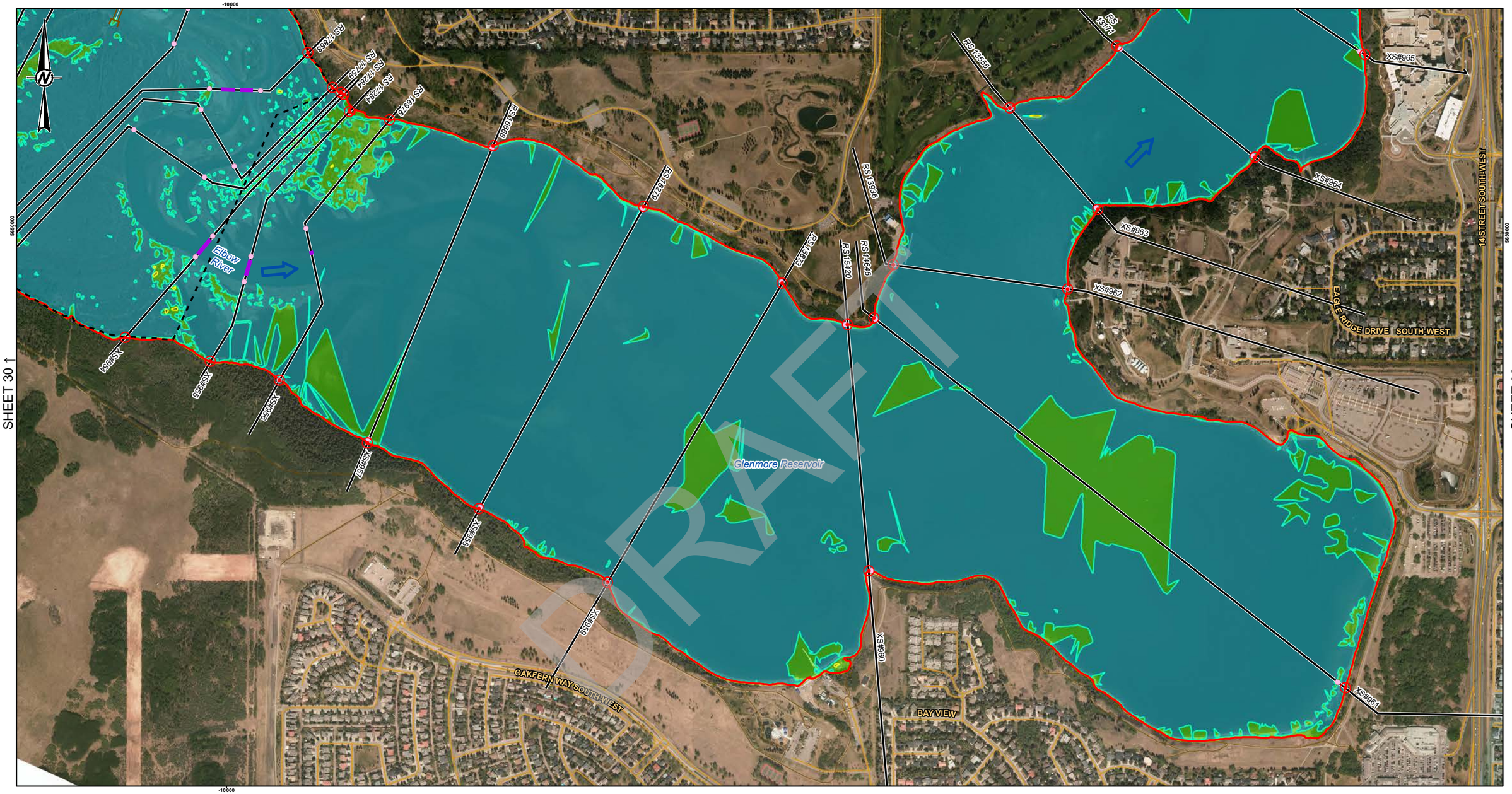
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	30 of 34

Classification: Public



LEGEND

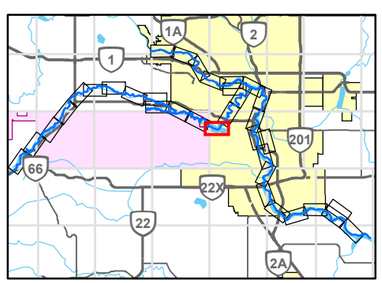
- CROSS SECTION
- *XS#10* CROSS SECTION NUMBER
- *RS 4994* RIVER STATION (M)
- MAPPING BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



0 200 400
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DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	31 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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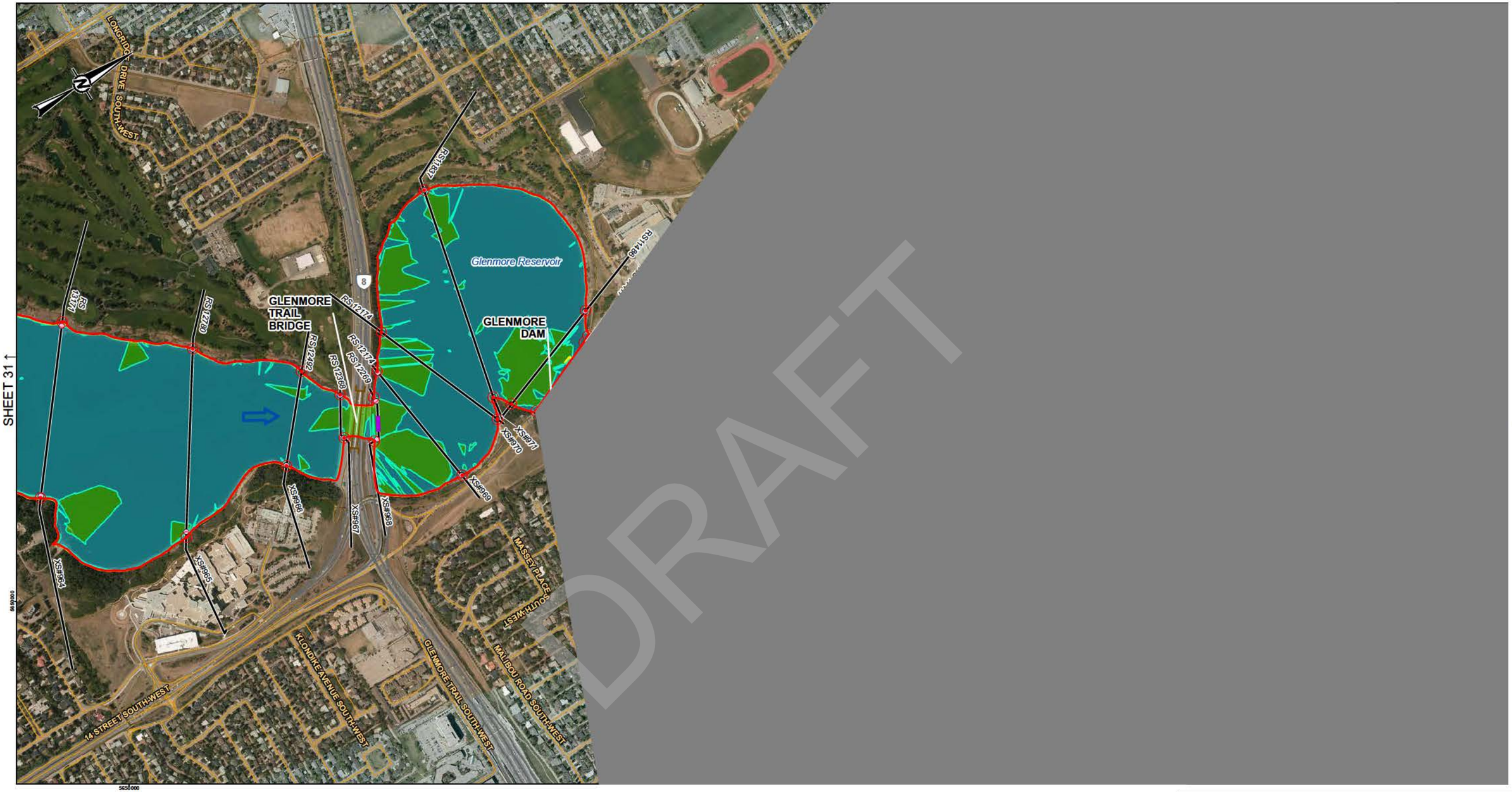

SHEET 31 ↑

SHEET 33 ↓

DRAFT

LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPP NG BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S

0 200 400
1:10,000 METRES

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

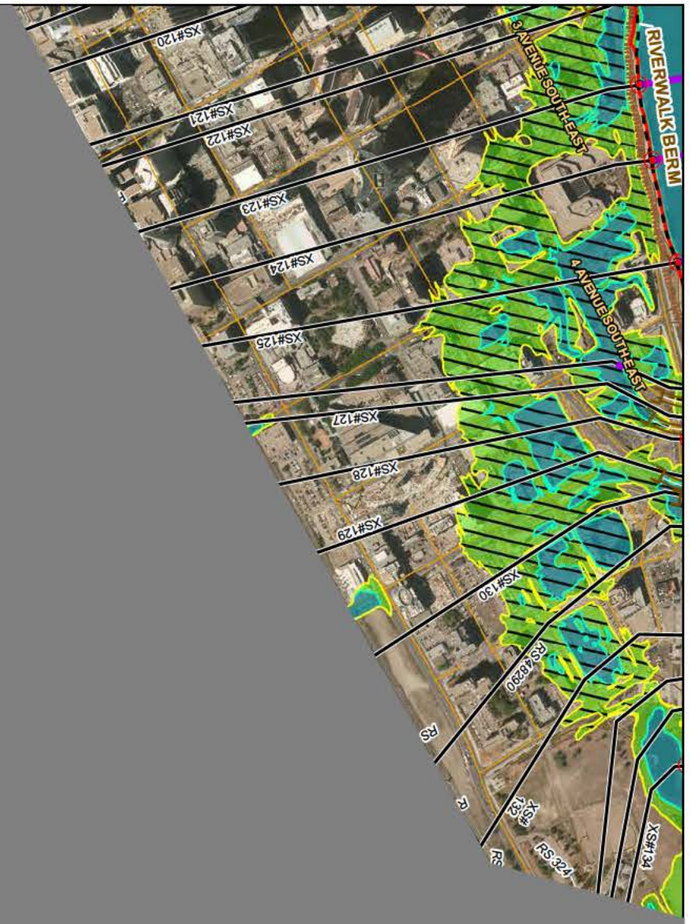
TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	32 of 34

SHEET 34 ↑

SHEET 32 ↑

SHEET 9 ↓



LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPP NG BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S
BOW RIVER BELOW ELBOW RIVER = 2390 M^3/S

0 200 400
1:10,000 METRES

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	33 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

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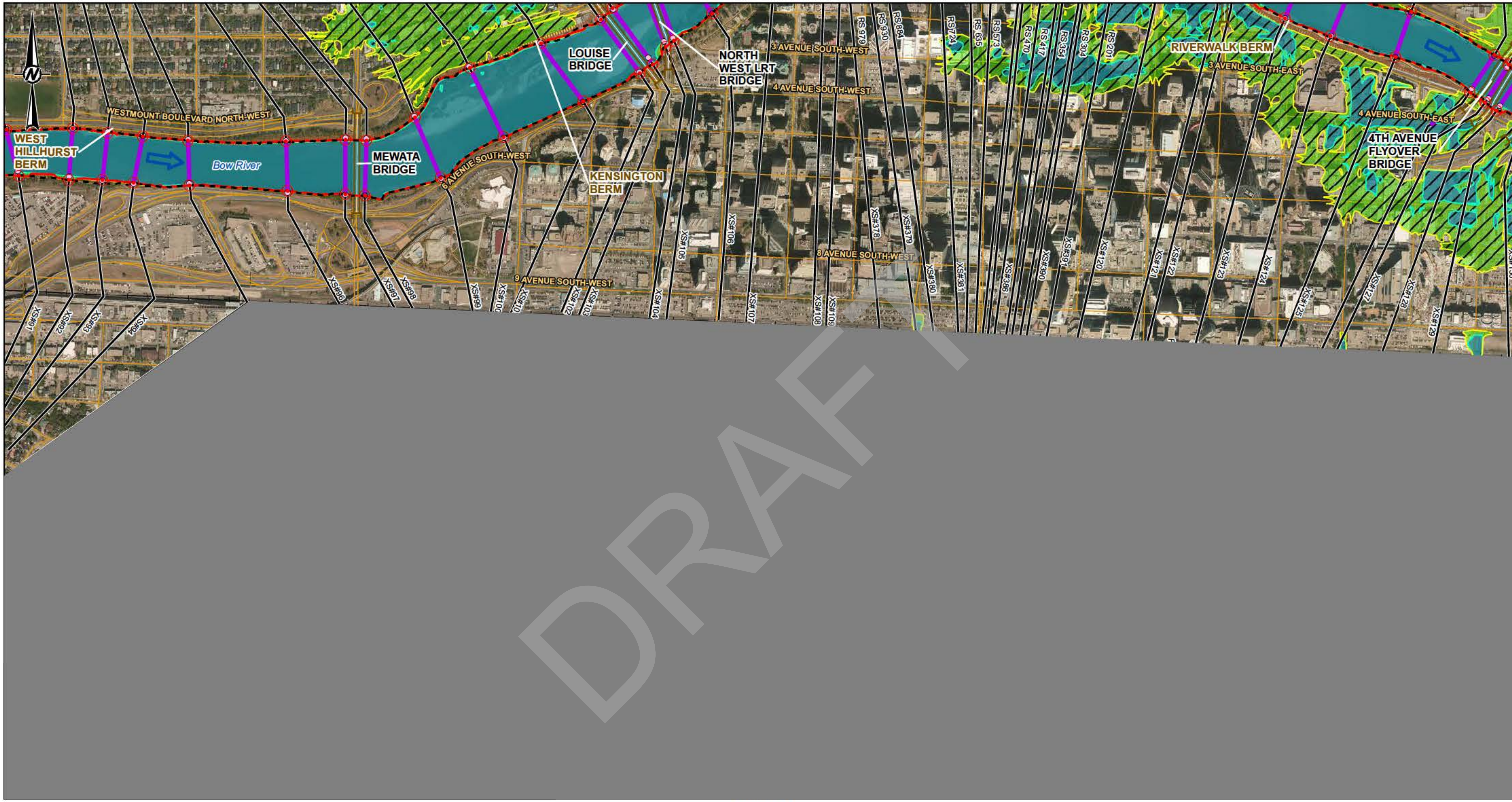
SHEET 5 ↑



SHEET 33 ↓

SHEET 33 ↓

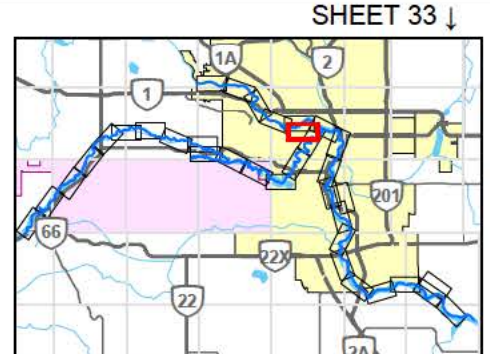
LEGEND

- CROSS SECTION
- XS#10 CROSS SECTION NUMBER
- RS 4994 RIVER STATION (M)
- MAPP NG BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- PROPOSED FLOODWAY BOUNDARY
- BANK STATION
- PROPOSED FLOODWAY STATION
- PREVIOUS FLOODWAY
- DEPTH ≥ 1 M
- 100-YEAR DESIGN FLOOD EXTENT
- PROTECTED FLOOD AREA
- VELOCITY ≥ 1 M/S

DESIGN DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

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YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REV EWED	WP
APPROVED	WP

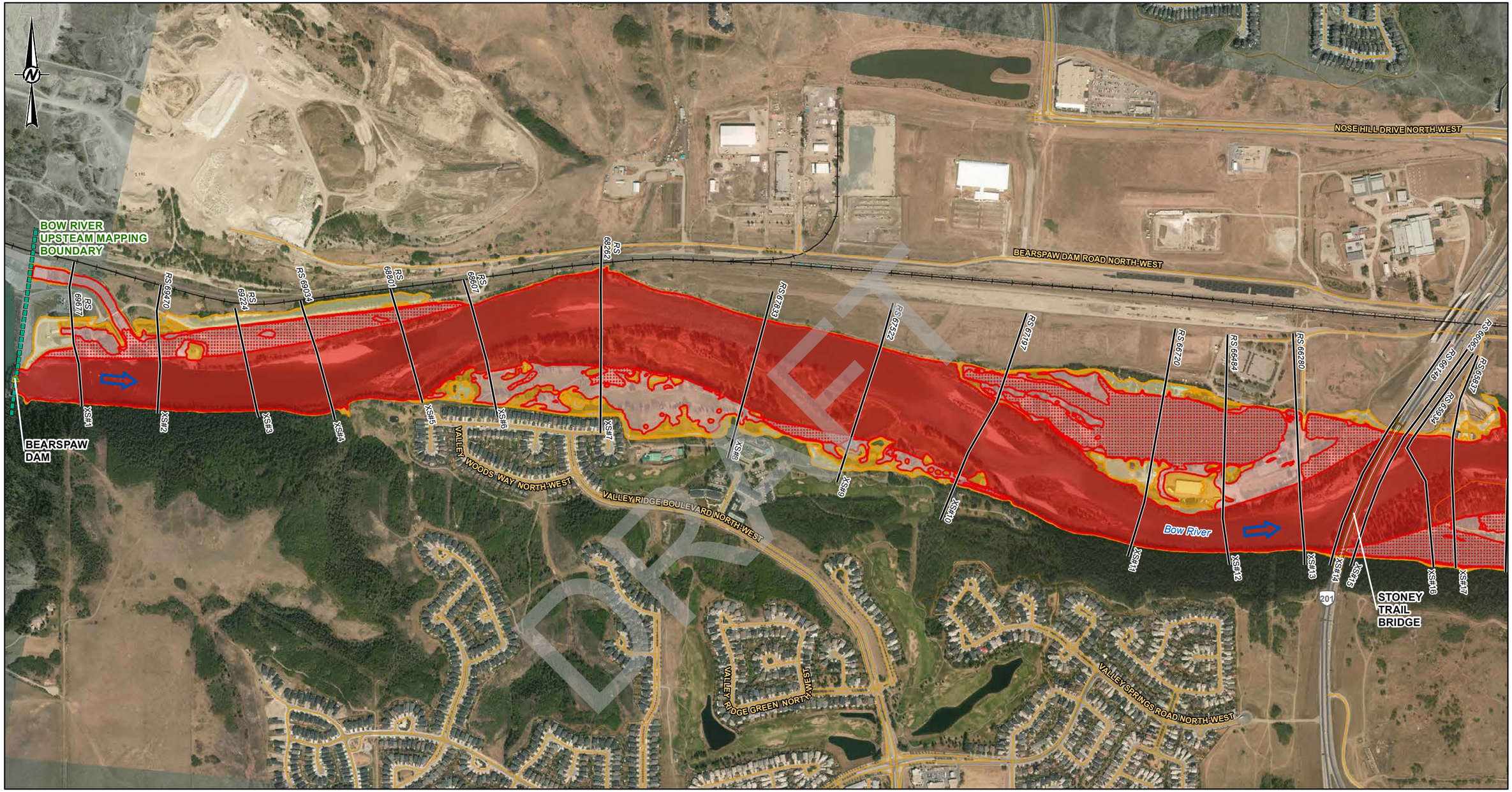
TITLE
OPEN WATER FLOODWAY CRITERIA MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	34 of 34

Classification: Public

APPENDIX B

Design Flood Hazard Maps



SHEET 2 ↓

LEGEND

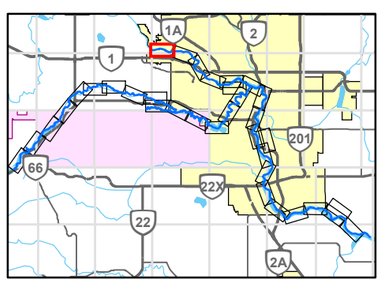
- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	1 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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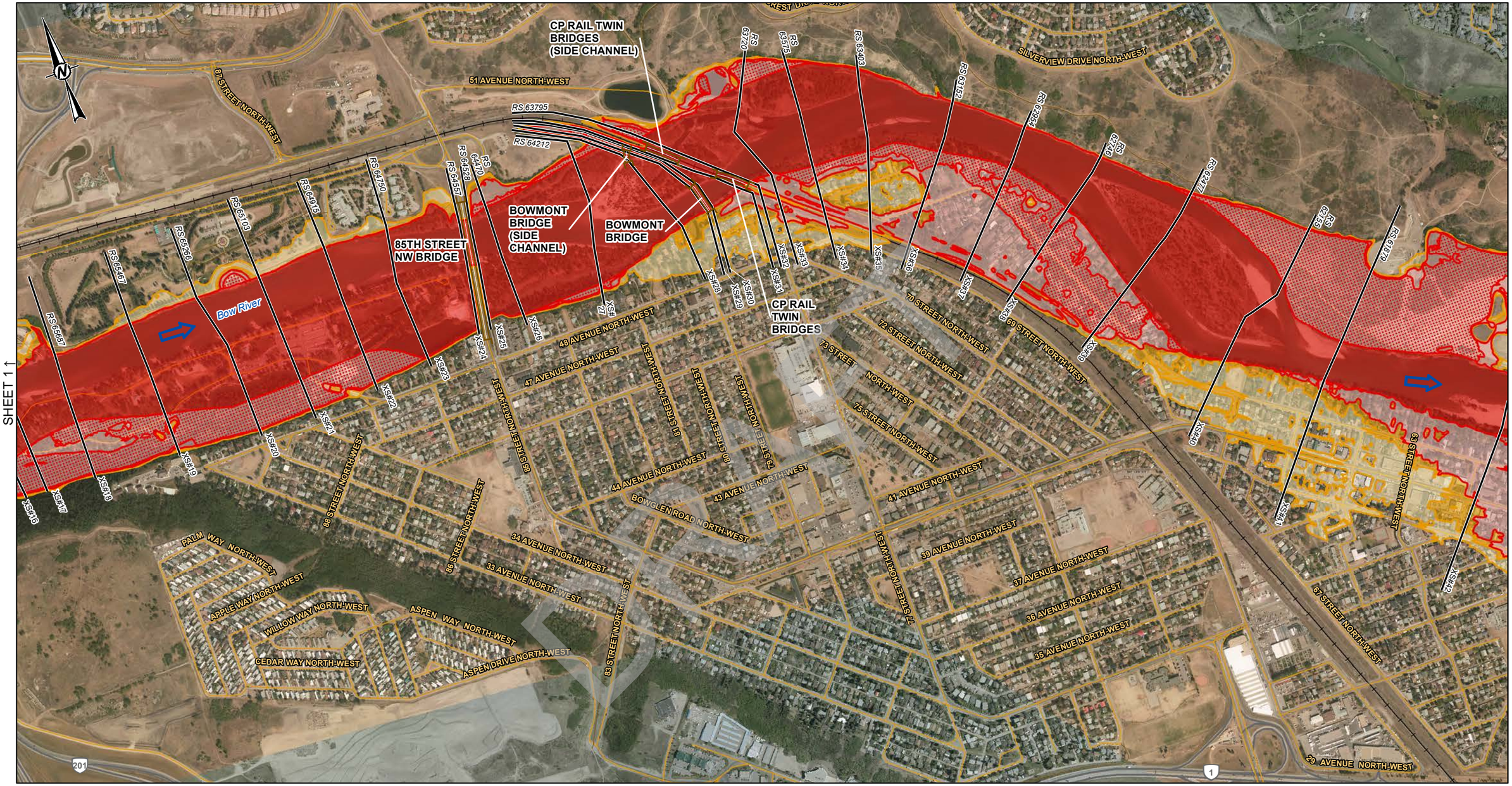


LEGEND

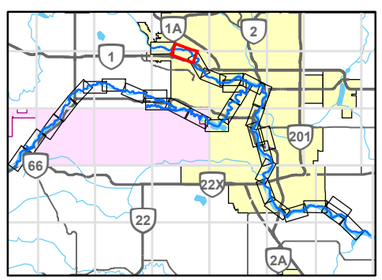
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S



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MEMBER OF WSP

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DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	2 of 34

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25mm

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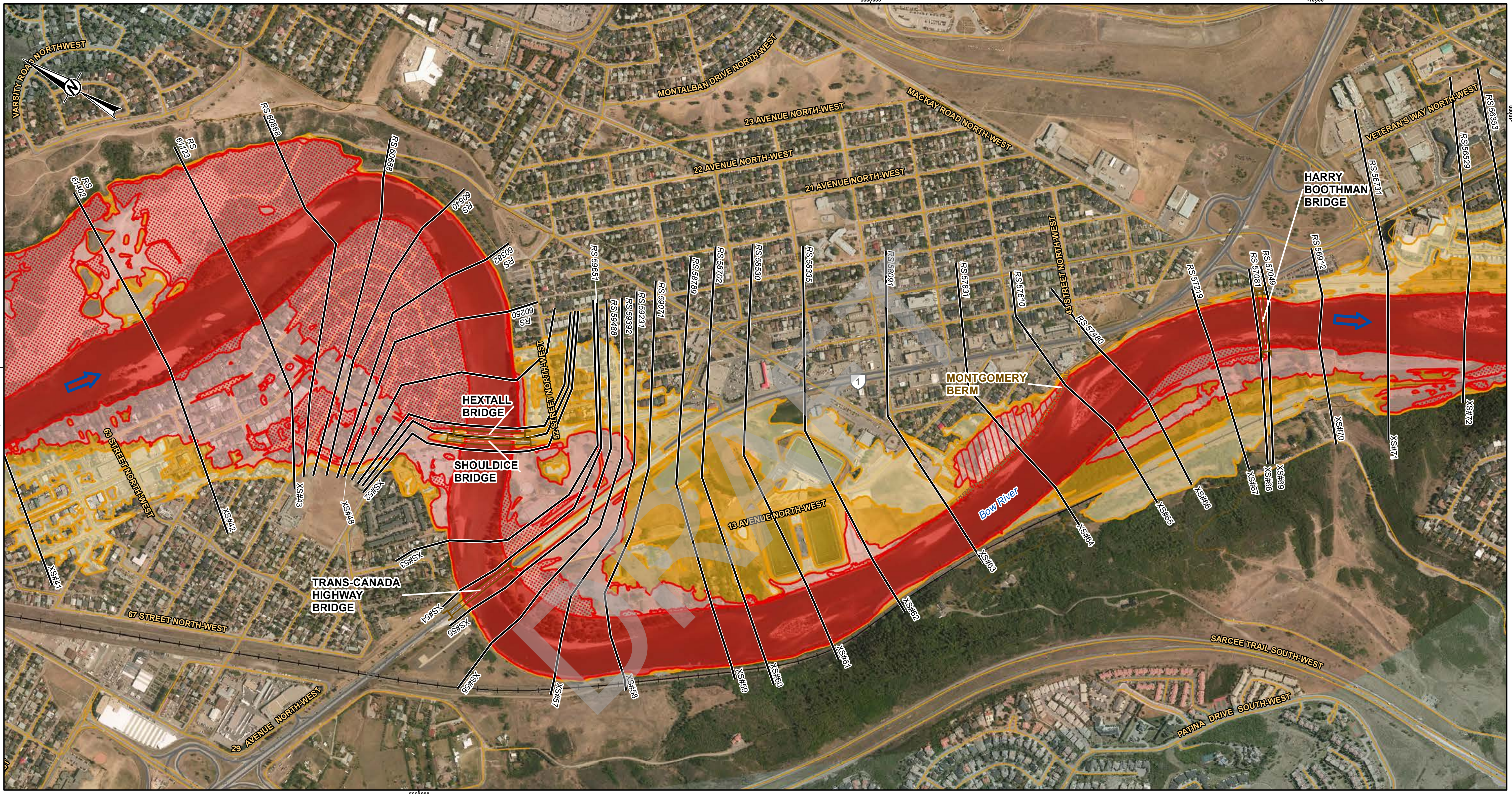
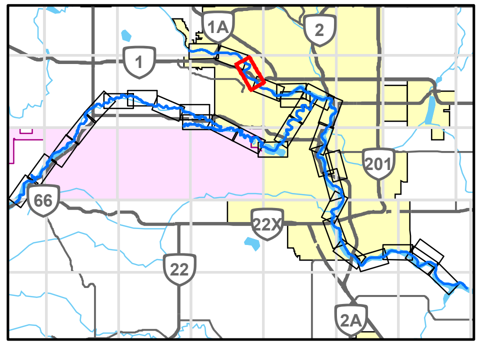


LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M³/S



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YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
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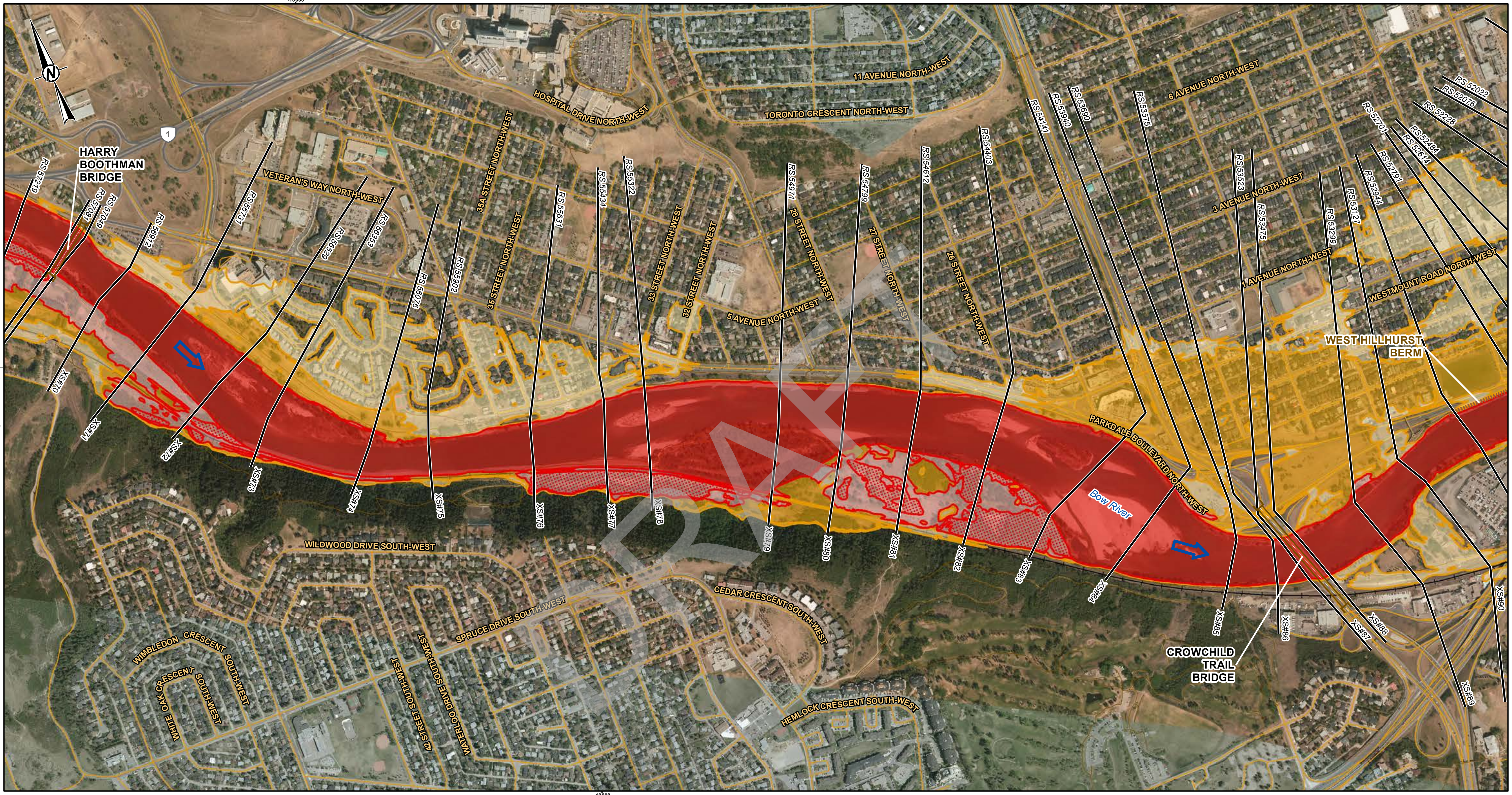
Classification: Public



SHEET 3 ↑
SHEET 5 ↓
HARRY BOOTHMAN BRIDGE
CROWCHILD TRAIL BRIDGE
WEST HILLHURST BERM
Bow River
HOSPITAL DRIVE NORTH-WEST
11 AVENUE NORTH-WEST
TORONTO CRESCENT NORTH-WEST
6 AVENUE NORTH-WEST
VETERAN'S WAY NORTH-WEST
35A STREET NORTH-WEST
35 STREET NORTH-WEST
33 STREET NORTH-WEST
32 STREET NORTH-WEST
29 STREET NORTH-WEST
27 STREET NORTH-WEST
26 STREET NORTH-WEST
5 AVENUE NORTH-WEST
3 AVENUE NORTH-WEST
1 AVENUE NORTH-WEST
WESTMOUNT ROAD NORTH-WEST
PARKDALE BOULEVARD NORTH-WEST
WILDWOOD DRIVE SOUTH-WEST
SPRUCE DRIVE SOUTH-WEST
CEDAR CRESCENT SOUTH-WEST
HEMLOCK CRESCENT SOUTH-WEST
WIMBLEDON CRESCENT SOUTH-WEST
WHITE OAK CRESCENT SOUTH-WEST
42 STREET SOUTH-WEST
WATERLOO DRIVE SOUTH-WEST
XS#70
XS#71
XS#72
XS#73
XS#74
XS#75
XS#76
XS#77
XS#78
XS#79
XS#80
XS#81
XS#82
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RS 56731
RS 56529
RS 56355
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RS 55922
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RS 53690
RS 53575
RS 53523
RS 53475
RS 53299
RS 53127
RS 52944
RS 52791
RS 52701
RS 52614
RS 52484
RS 52229
RS 52076
RS 52022
-10000
DRAFT

LEGEND

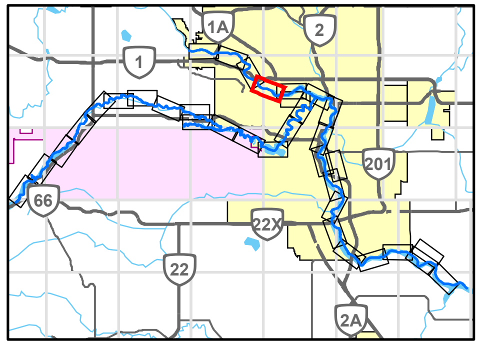
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S



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REFERENCE(S)

IMAGERY CAPTURED MAY 2016 BY GEODESY GROUP INC. FOR THE GOVERNMENT OF ALBERTA.
DATUM: NAD 83 CSRS PROJECTION: 3TM 114

CLIENT
ALBERTA ENVIRONMENT AND PARKS
Alberta Government

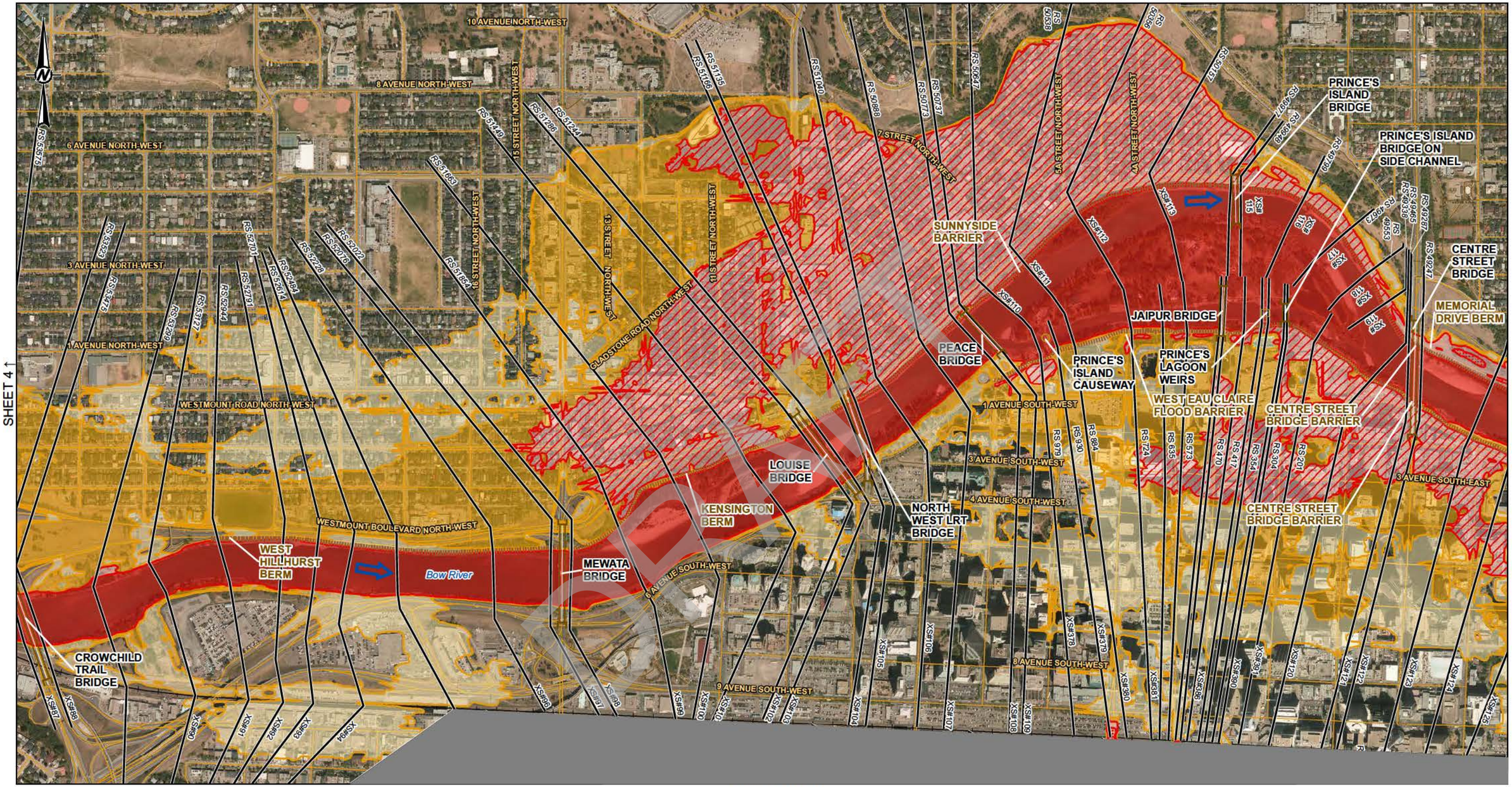
CONSULTANT
GOLDER MEMBER OF WSP

YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

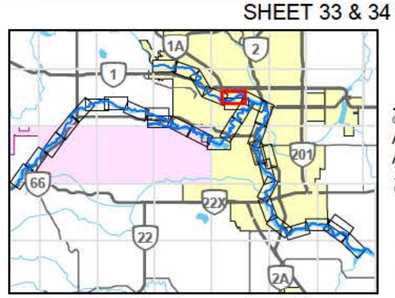
PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	4 of 34



SHEET 33 & 34 ↓



LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WE R
- BR DGE
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- HIGH HAZARD FLOOD FR NGE
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- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S

0 200 400
1:10,000 METRES

REFERENCE(S)
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GOLDER
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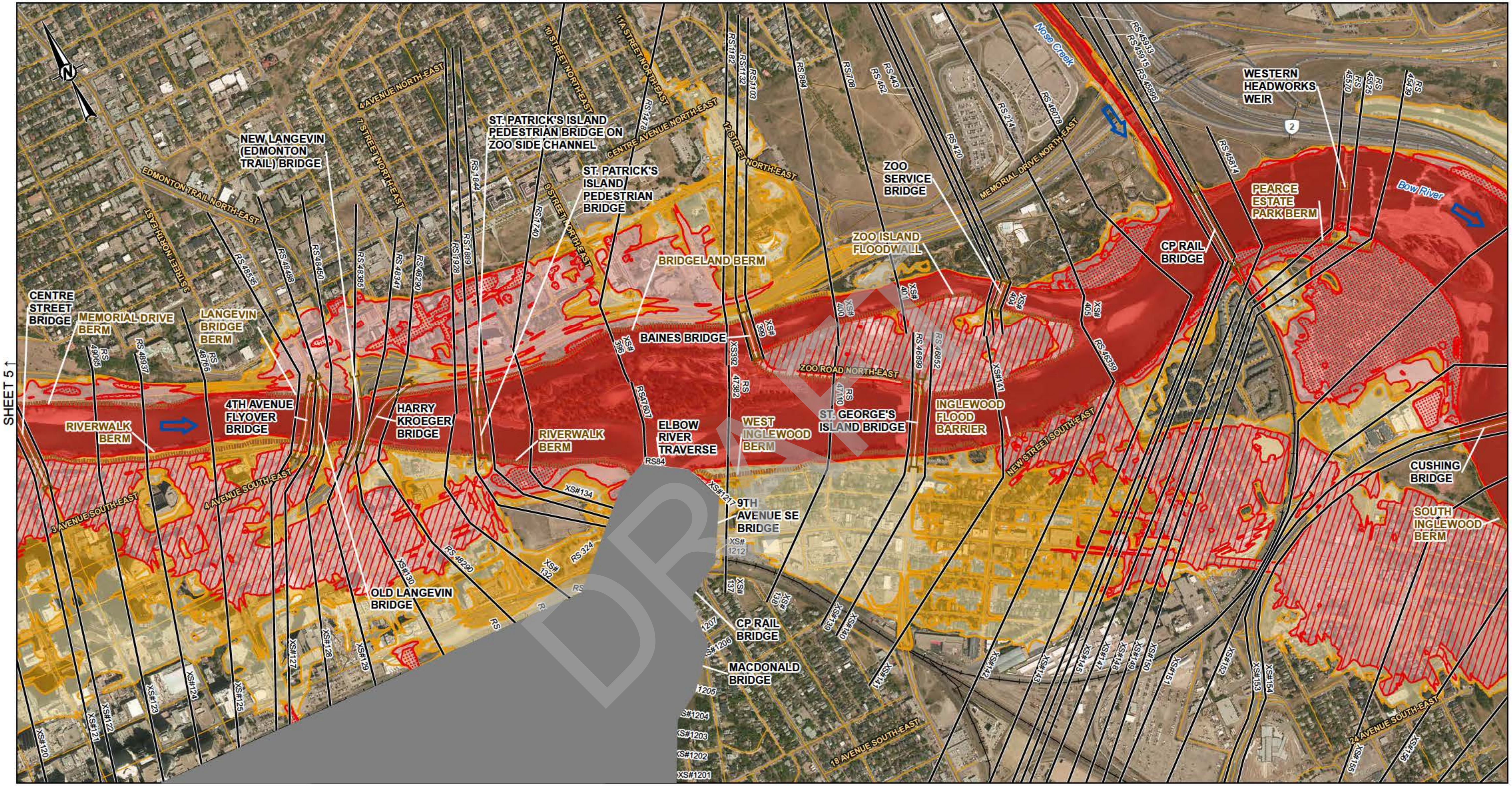
REV EWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	5 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



CENTRE STREET BRIDGE
MEMORIAL DRIVE BERM
LANGEVIN BRIDGE BERM
NEW LANGEVIN (EDMONTON TRAIL) BRIDGE
ST. PATRICK'S ISLAND PEDESTRIAN BRIDGE ON ZOO SIDE CHANNEL
ST. PATRICK'S ISLAND PEDESTRIAN BRIDGE
BRIDGELAND BERM
ZOO SERVICE BRIDGE
ZOO ISLAND FLOODWALL
WESTERN HEADWORKS WEIR
PEARCE ESTATE PARK BERM
CP RAIL BRIDGE
Nose Creek
Bow River
BAINES BRIDGE
4TH AVENUE FLYOVER BRIDGE
HARRY KROEGER BRIDGE
RIVERWALK BERM
RIVERWALK BERM
ELBOW RIVER TRAVERSE
WEST INGLEWOOD BERM
ST. GEORGE'S ISLAND BRIDGE
INGLEWOOD FLOOD BARRIER
CUSHING BRIDGE
SOUTH INGLEWOOD BERM
9TH AVENUE SE BRIDGE
OLD LANGEVIN BRIDGE
CP RAIL BRIDGE
MACDONALD BRIDGE
EDMONTON TRAIL NORTH EAST
4 AVENUE NORTH-EAST
CENTRE AVENUE NORTH-EAST
MEMORIAL DRIVE NORTH-EAST
ZOO ROAD NORTH-EAST
NEW STREET SOUTH-EAST
3 AVENUE SOUTH-EAST
4 AVENUE SOUTH-EAST
18 AVENUE SOUTH-EAST
24 AVENUE SOUTH-EAST
SHEET 5 ↑
SHEET 7 ↓
SHEET 33 ↓
DRAFT

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S
BOW RIVER BELOW ELBOW RIVER = 2390 M^3/S
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S

0 200 400
1:10,000 METRES

REFERENCE(S)
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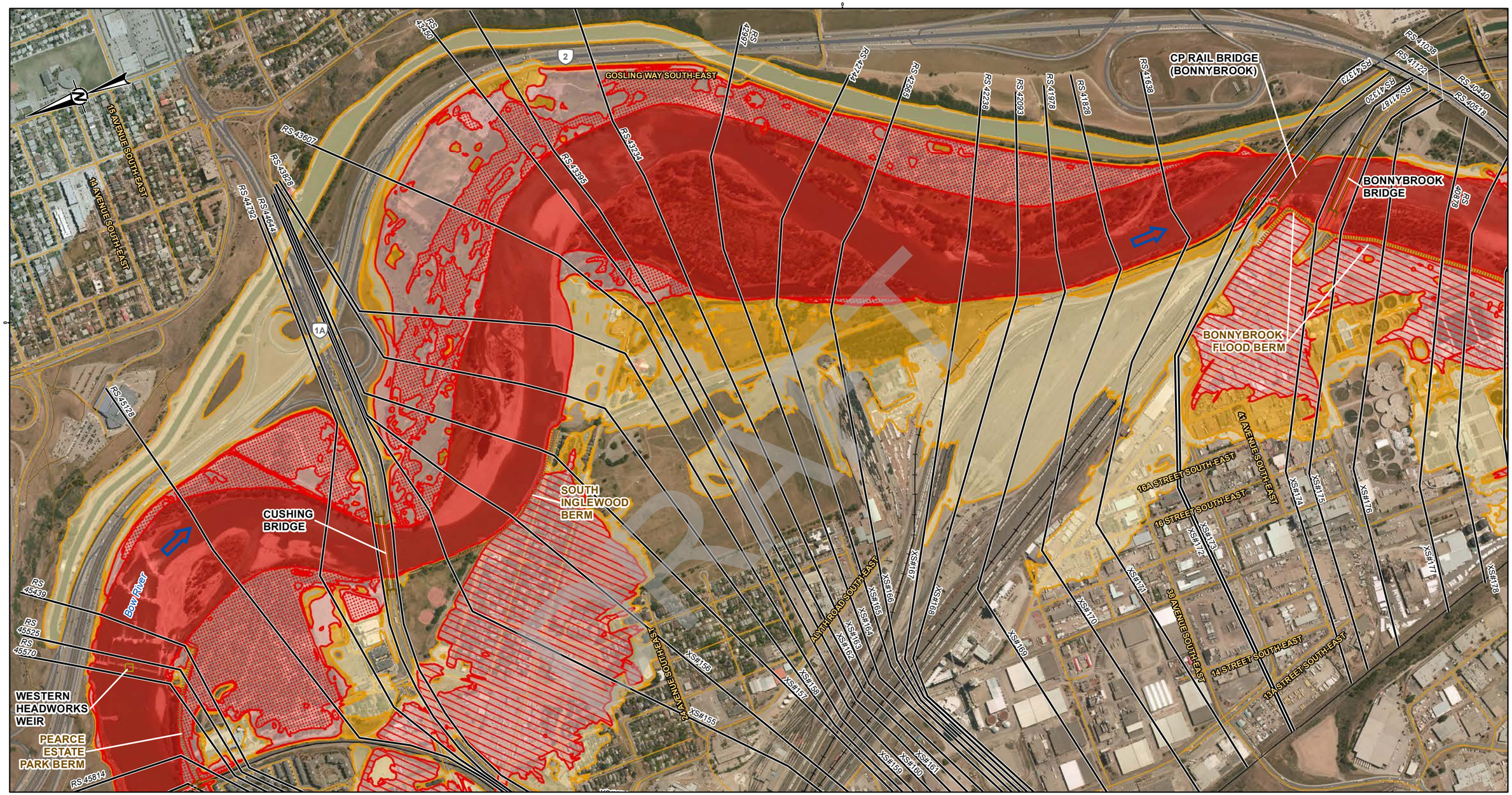
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

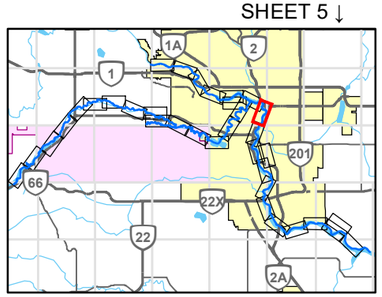
PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	6 of 34

Classification: Public



SHEET 8 ↓

SHEET 5 ↓



LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S

0 200 400
1:10,000 METRES

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REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	7 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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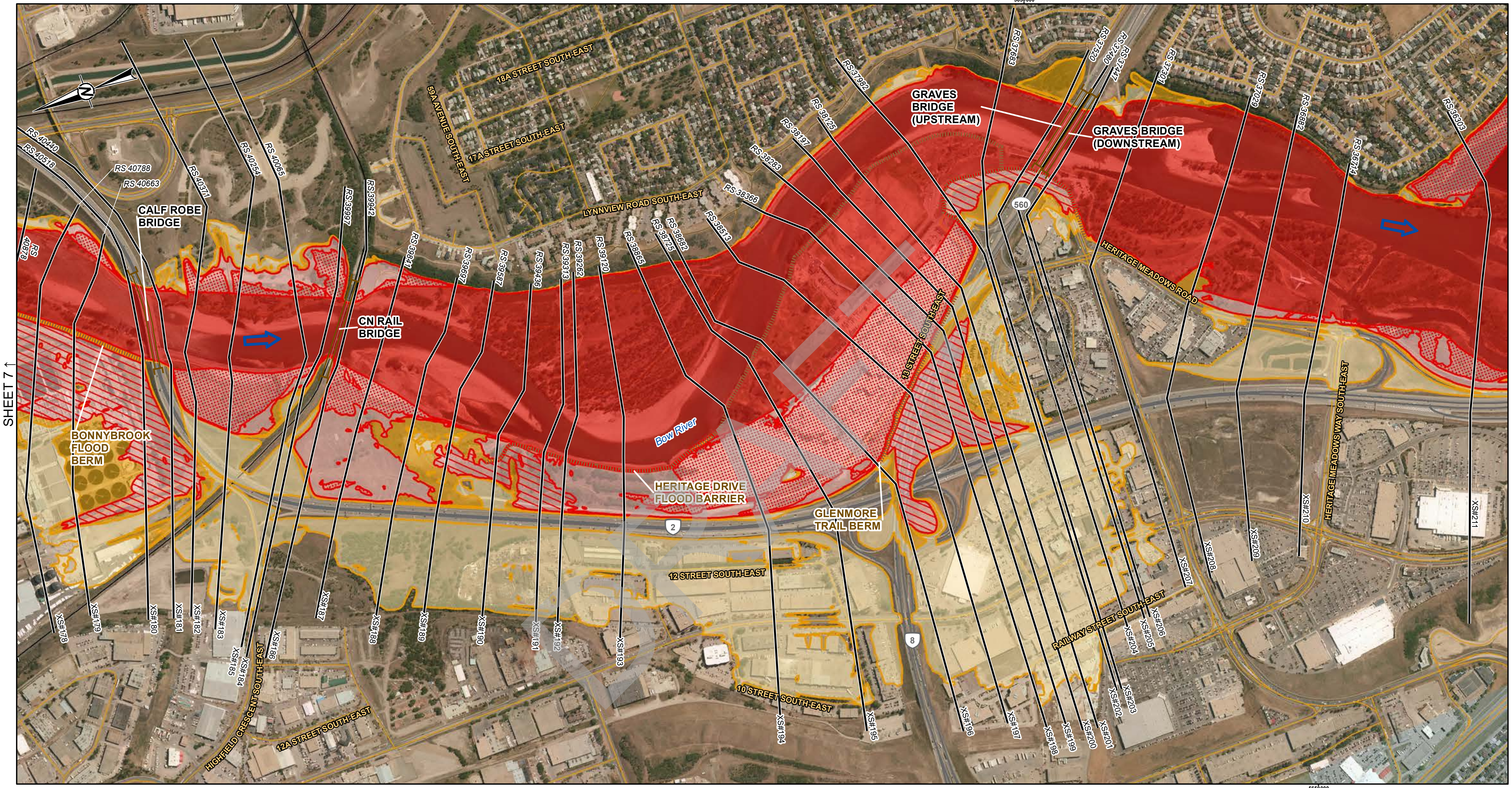


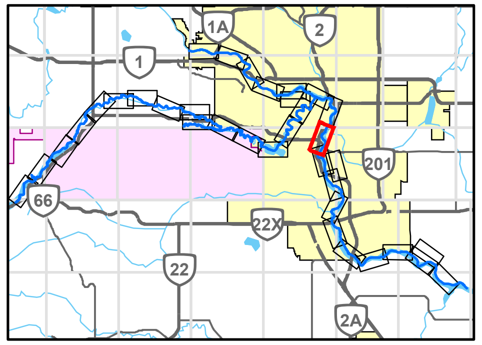
LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	8 of 34

25mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Classification: Public

SHEET 9A ↑

SHEET 8 ↓

SHEET 10 ↓

5650000

5649000

GRAVES BRIDGE (UPSTREAM)

GRAVES BRIDGE (DOWNSTREAM)

ERIC HARVIE BRIDGE

QUARRY PARK BERM

IVOR STRONG BRIDGE

Bow River

18 STREET SOUTH-EAST

RIVEREND DRIVE SOUTH-EAST

RIVERBROOK ROAD SOUTH-EAST

RIVERVALLEY DRIVE SOUTH-EAST

LAKEVIEW CLOSE SOUTH-EAST

QUARRY DRIVE SOUTH-EAST

QUARRY WAY SOUTH-EAST

HERITAGE MEADOWS ROAD

SOUTHLAND DRIVE SOUTH-EAST

RS 37683
RS 37630
RS 37480
RS 37304
RS 37029
RS 36682
RS 36474
RS 36303
RS 36008
RS 35723
RS 35602
RS 35419
RS 35275
RS 35196
RS 34889
RS 34780
RS 34758
RS 34557

XS#210
XS#211
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XS#222
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XS#228
XS#229
XS#230
XS#231
XS#232

560
2

LEGEND

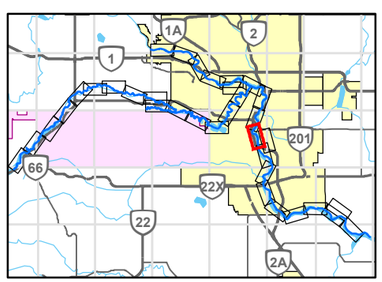
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S



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REFERENCE(S)

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APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	9 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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SHEET 8 ↑

SHEET 10 ↓

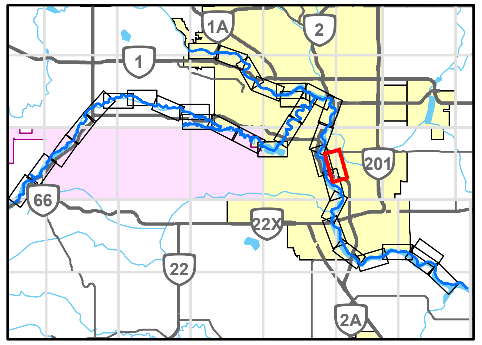
SHEET 9 ↓

LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

FLOODWAY
HIGH HAZARD FLOOD FRINGE
FLOOD FRINGE
PROTECTED FLOOD FRINGE
200-YEAR FLOOD EXTENT
500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S



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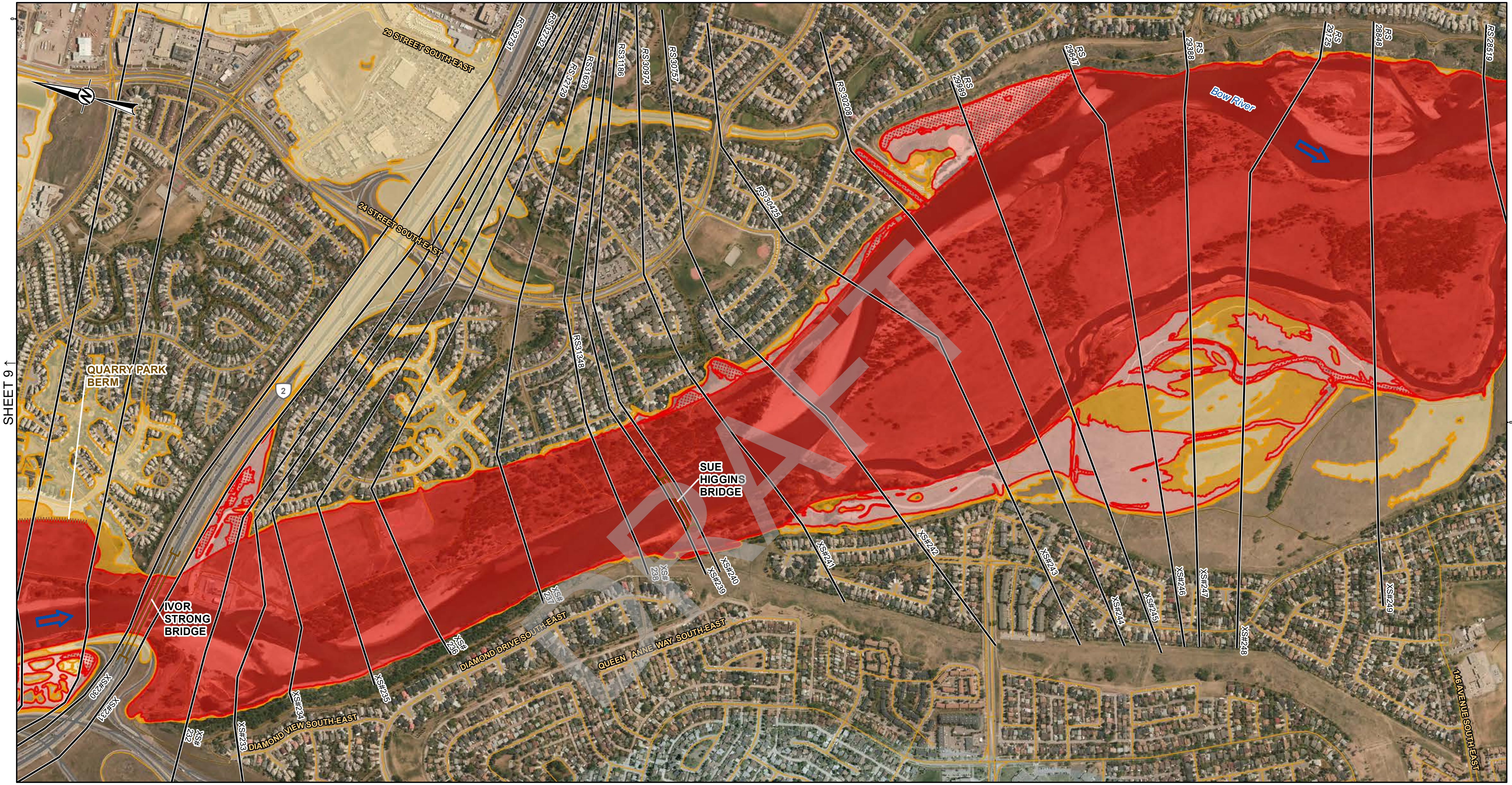
PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	9A of 34

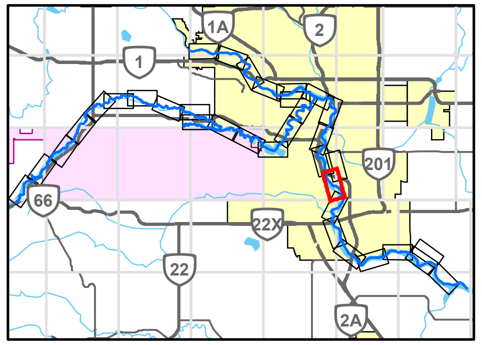


LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S



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DESIGNED	GT
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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	10 of 34

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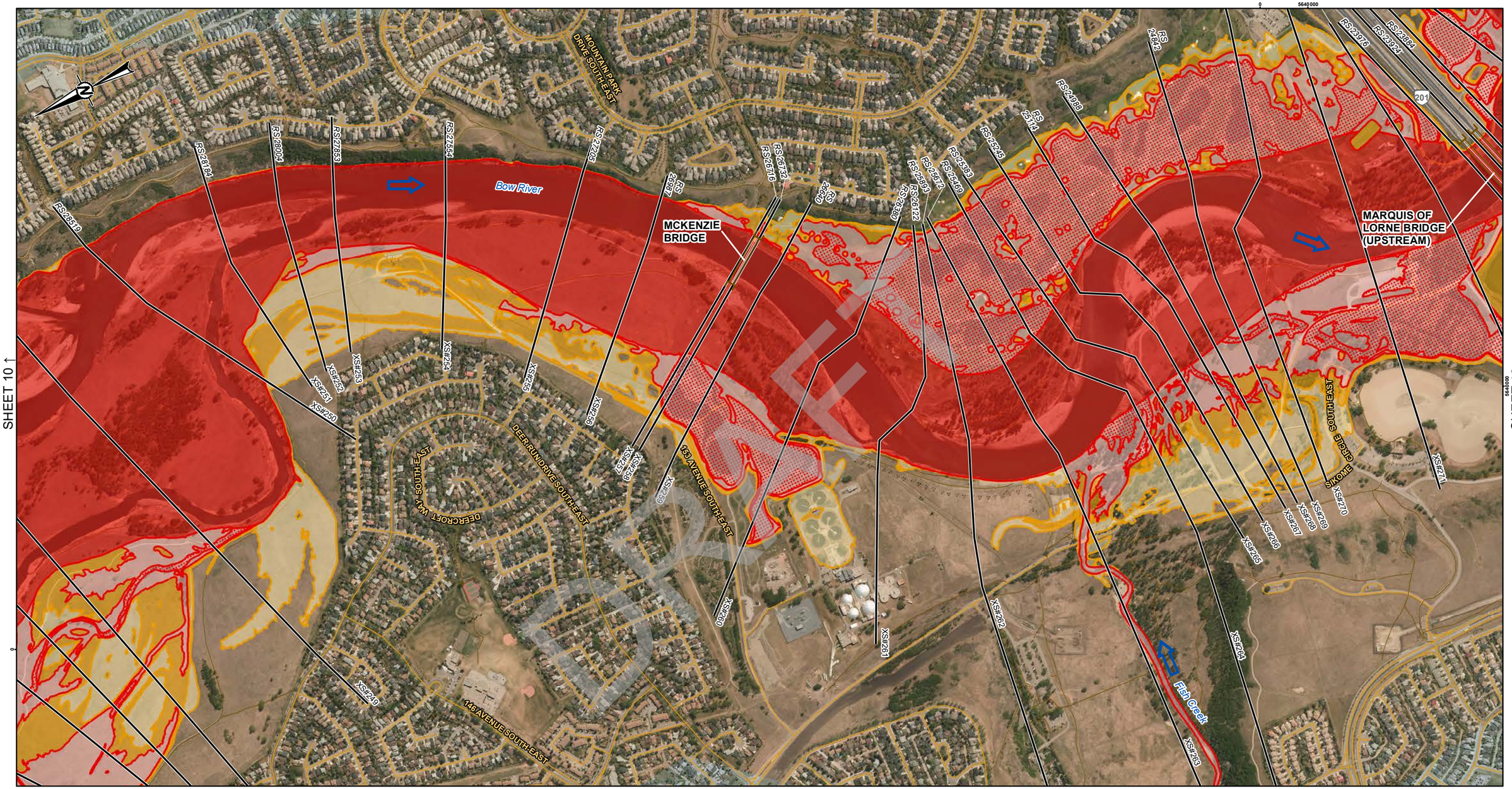
Classification: Public



LEGEND

- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
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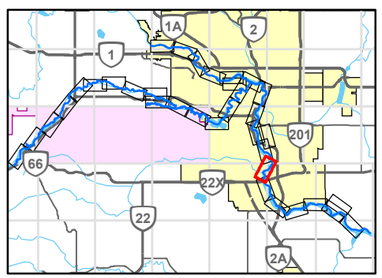
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW NOSE CREEK = 2420 M^3/S
BOW RIVER BELOW FISH CREEK = 2580 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	11 of 34

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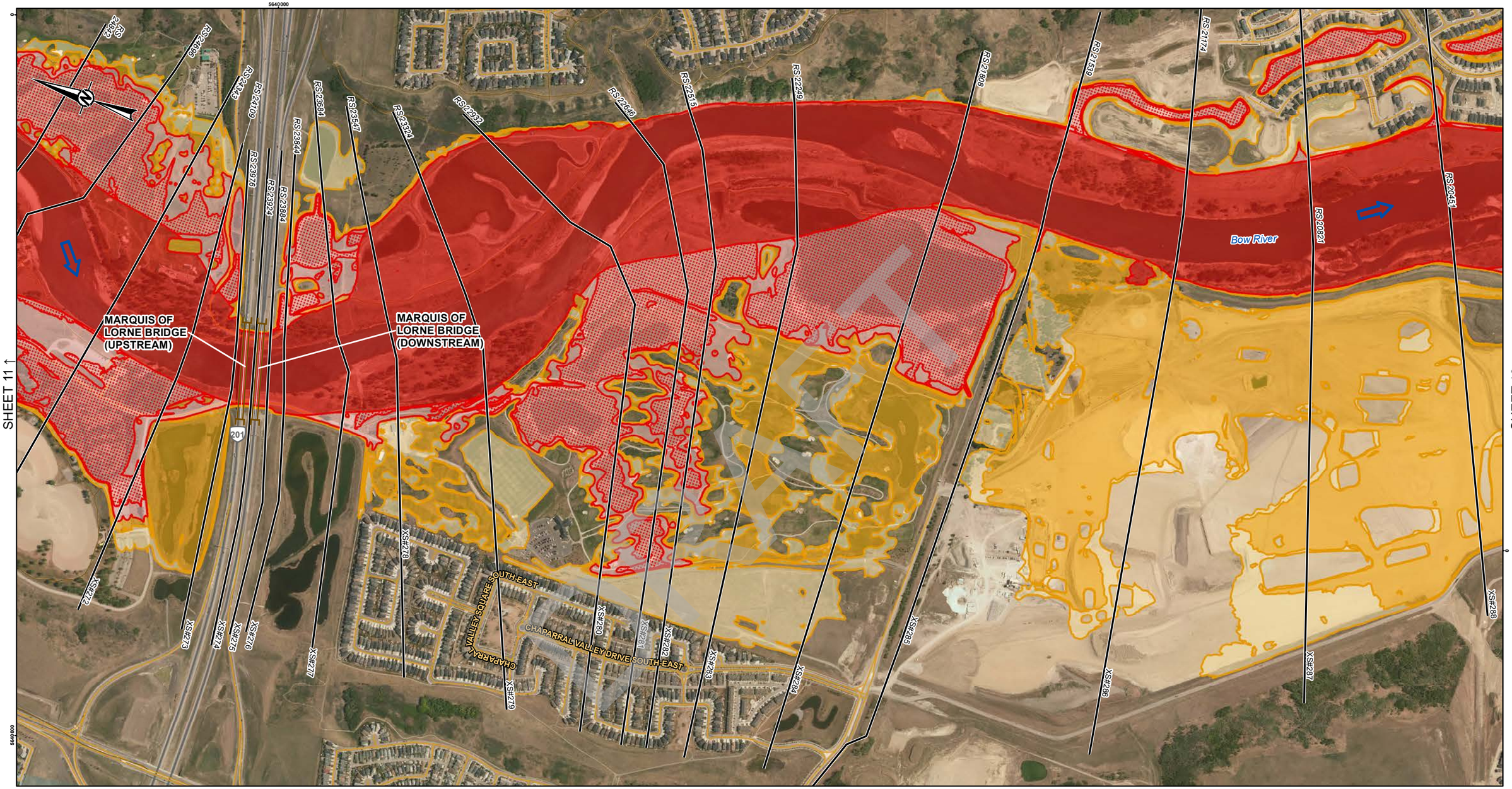

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
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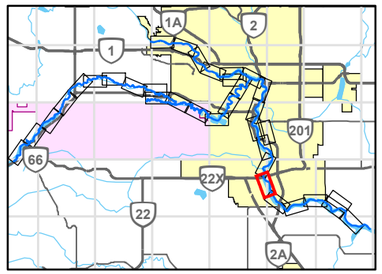
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW FISH CREEK = 2580 M^3/S



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1:10,000 METRES

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YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

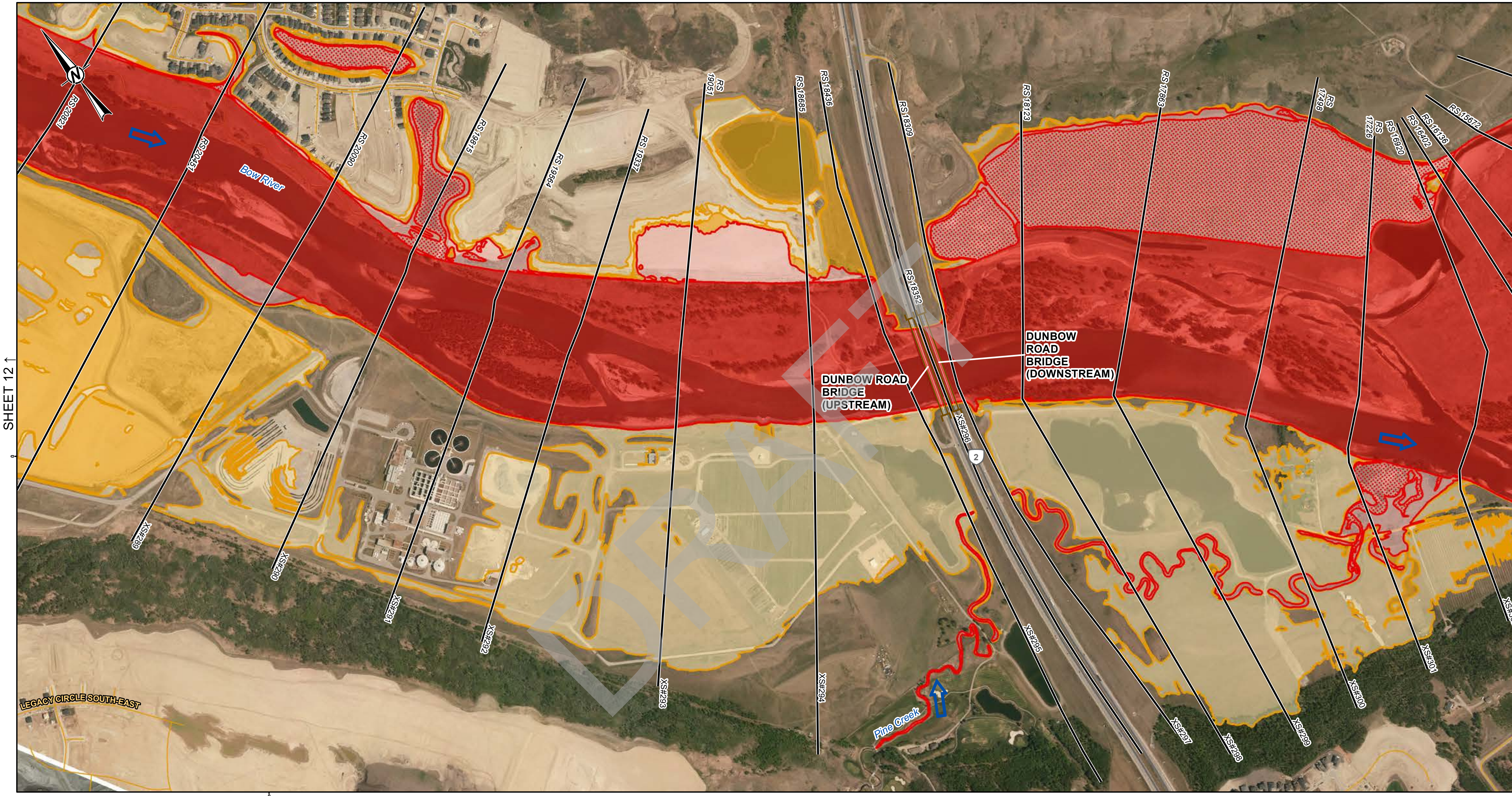
PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	12 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PATH: I:\CLIENT\GOVERNMENT_OF_ALBERTA\21452576_Bow_Elbow\Mapping\Products\Hydrology\05_Design Flood Hazard Mapping\Rev0\21452576_Governing-Flood-Hazard_Rev0.mxd PRINTED ON: 2023-07-28 AT: 10:42:03 AM

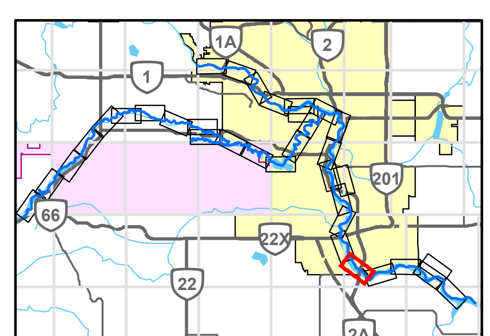


LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW FISH CREEK = 2580 M^3/S
BOW RIVER BELOW PINE CREEK = 2620 M^3/S



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REFERENCE(S)
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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	13 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

SHEET 13 ↑

SHEET 15 ↓

RS 17496
RS 17276
RS 16920
RS 16736
RS 16202
RS 15672
RS 15472
RS 15202
RS 14936
RS 14680
RS 14372
RS 14047
RS 13661
RS 13385
RS 13036
RS 12653
XS#304
XS#305
XS#306
XS#307
XS#308
XS#309
XS#310
XS#311
XS#312
XS#313
XS#314
BOW RIVER BOTTOM TRAIL EAST
232 AVENUE EAST
230 AVENUE EAST
Bow River

DRAFT

LEGEND

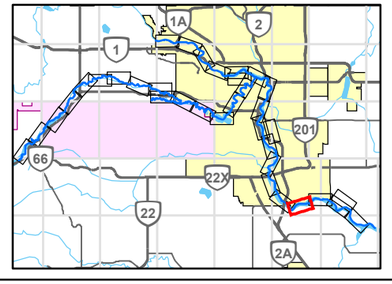
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW PINE CREEK = 2620 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	14 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

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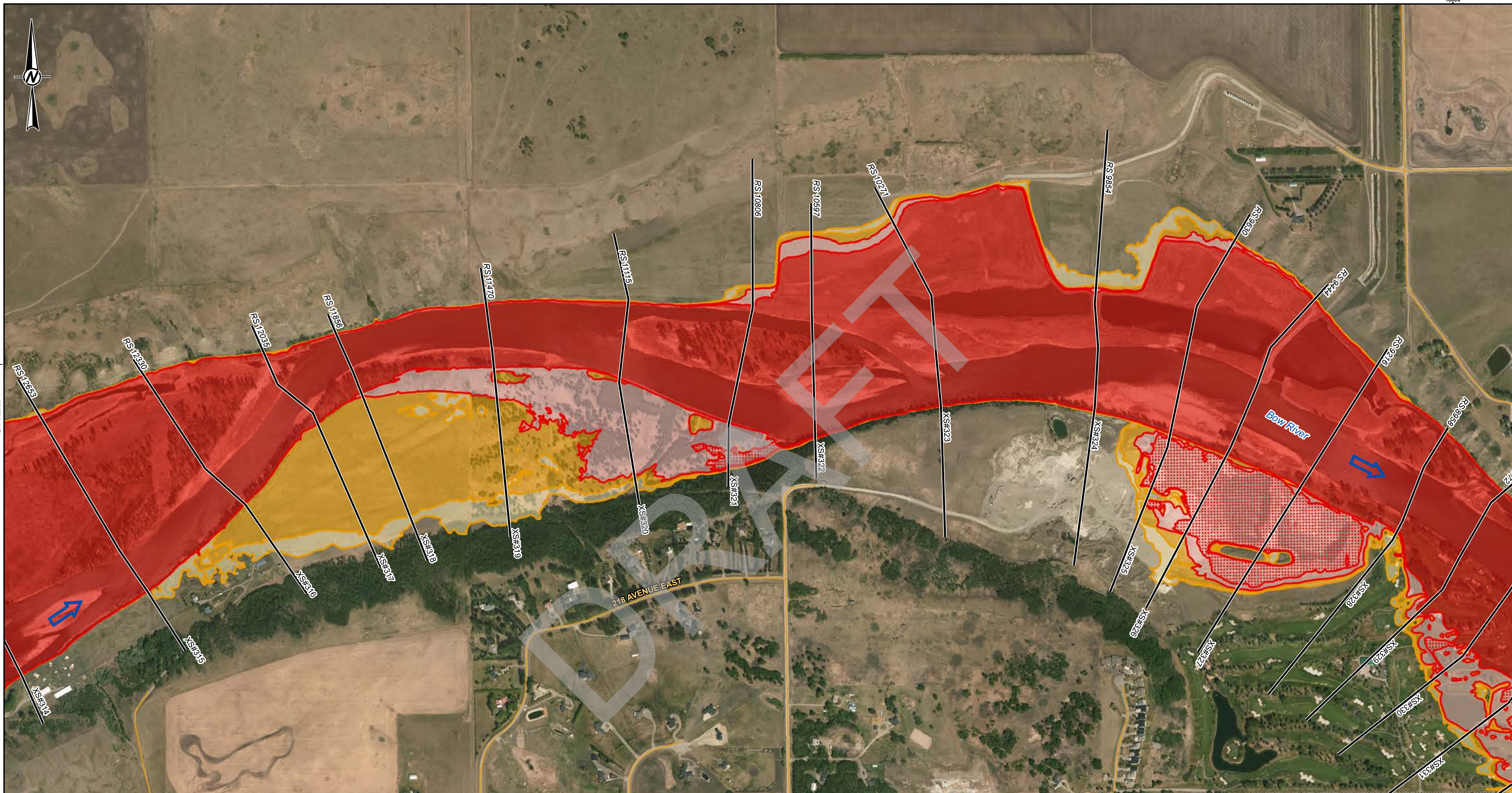


LEGEND

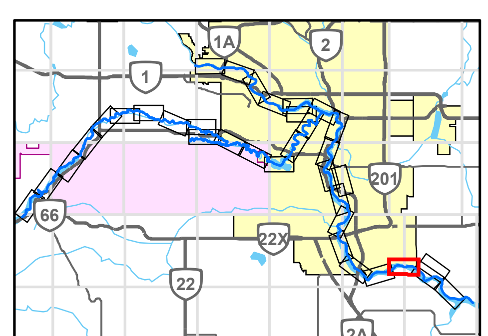
- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER BELOW PINE CREEK = 2620 M^3/S
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

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PREPARED	SP
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APPROVED	WP

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	15 of 34

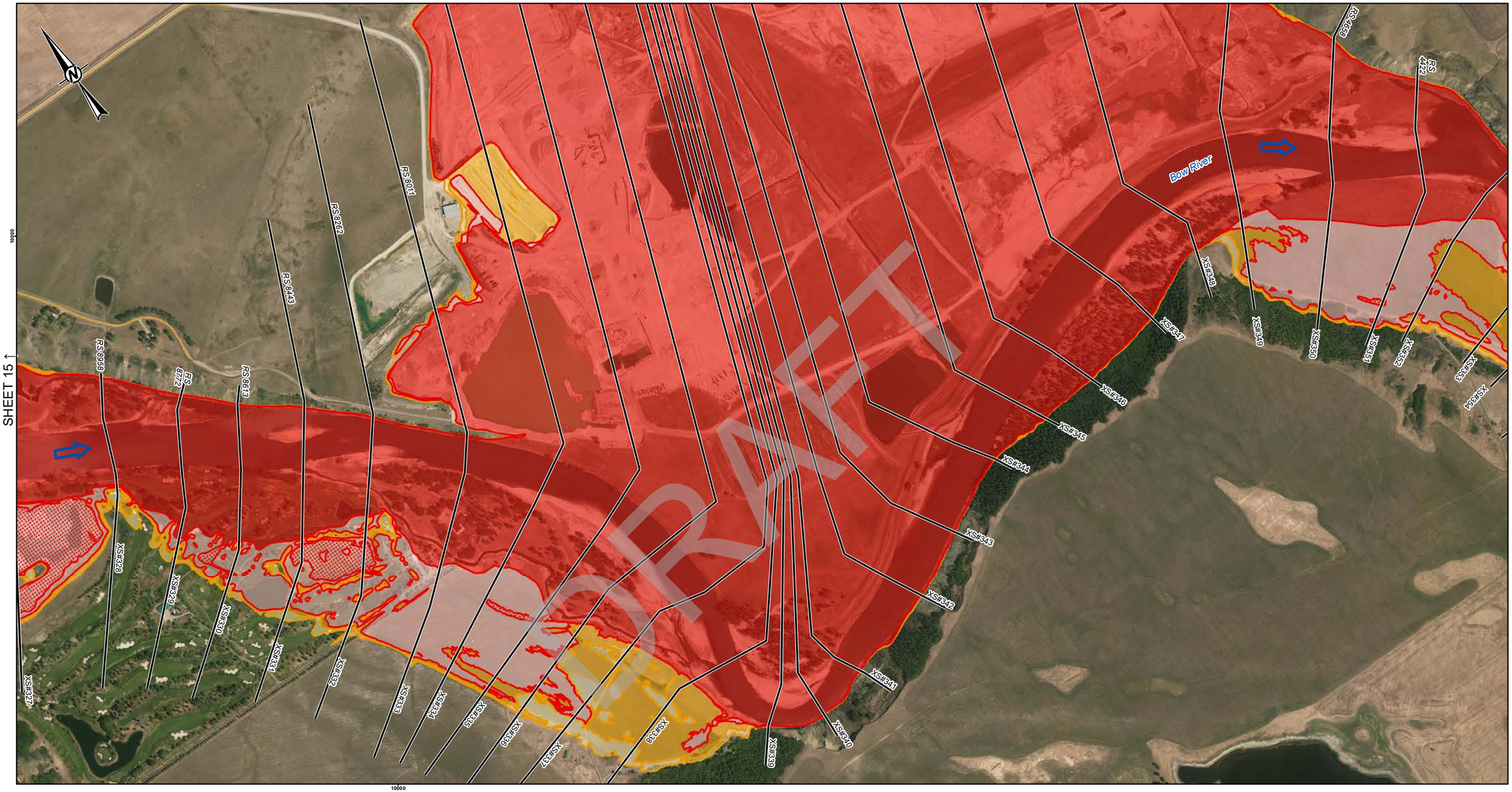
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Classification: Public

SHEET 17 ↑

SHEET 15 ↑

SHEET 18 ↓



LEGEND

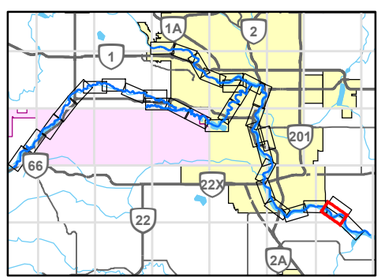
- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	16 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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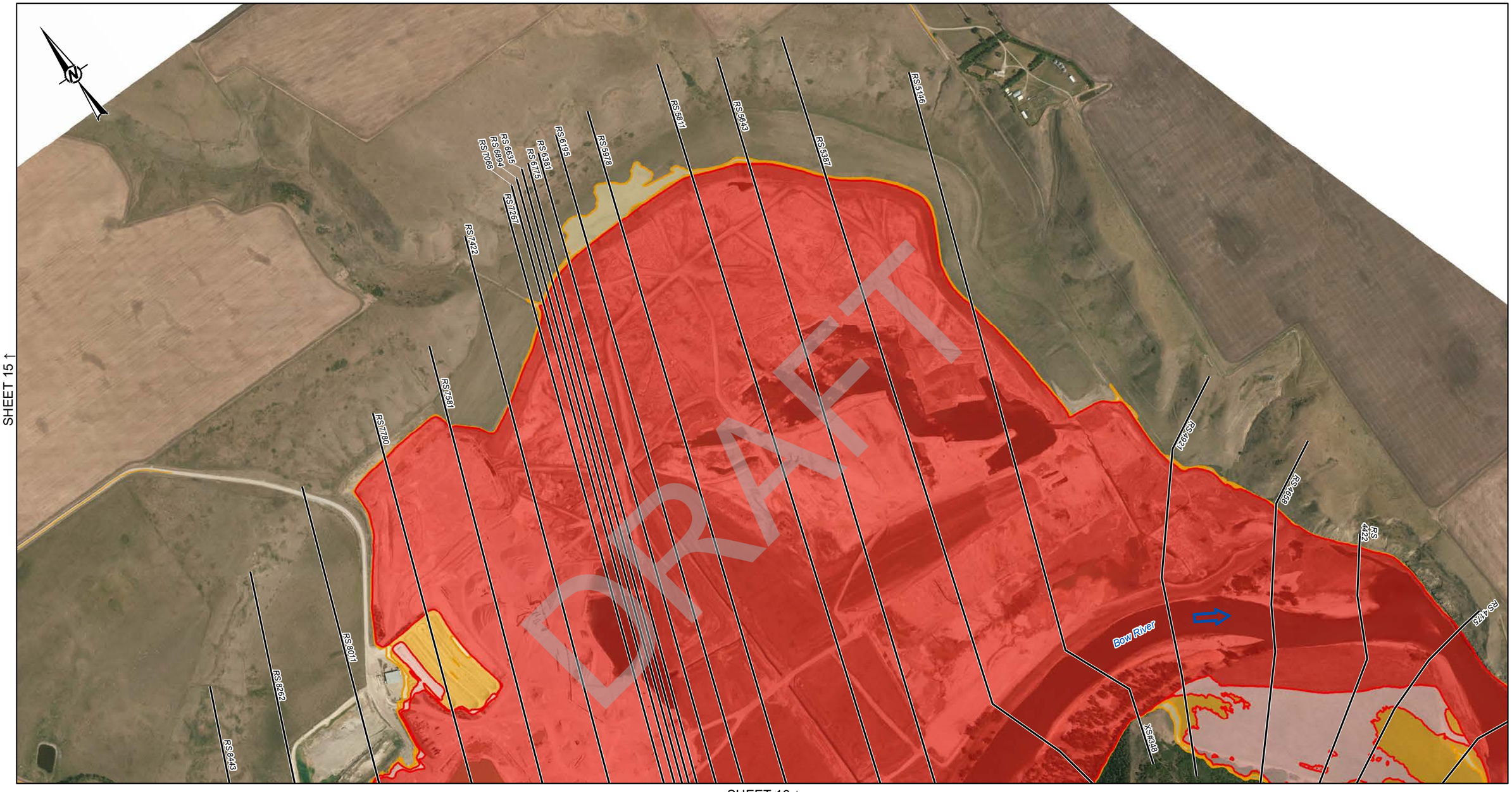


SHEET 15 ↑

SHEET 18 ↓

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

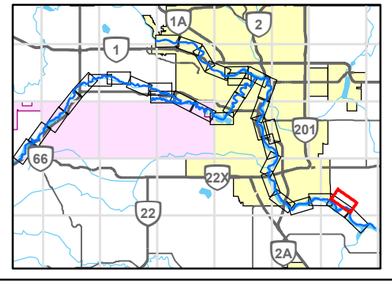
HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S

SHEET 16 ↓



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	17 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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LEGEND

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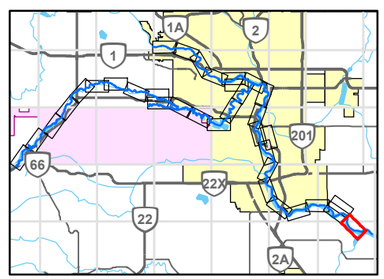
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE
- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE HIGHWOOD RIVER = 2660 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	18 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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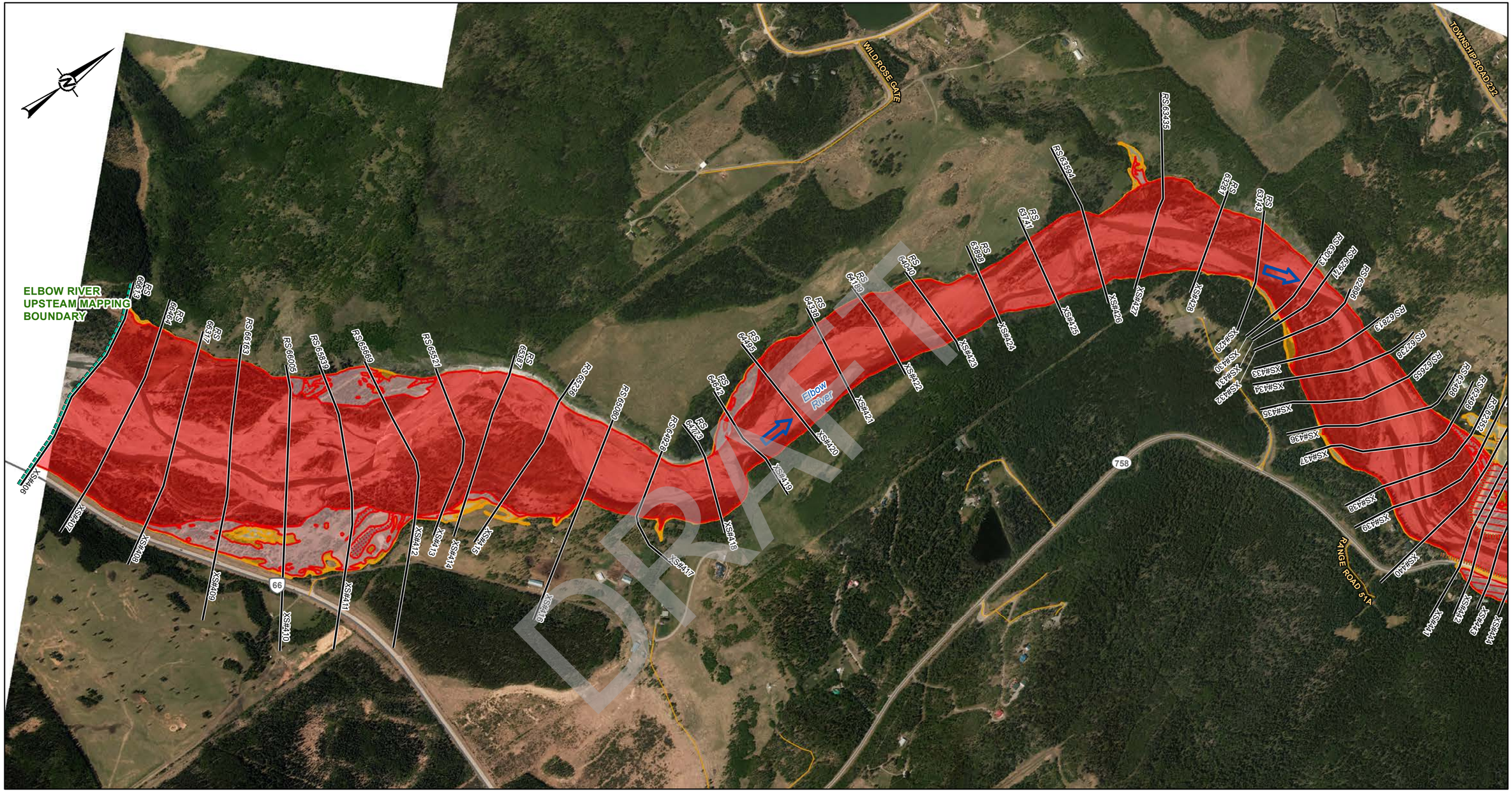


DRAFT

SHEET 20 →

LEGEND

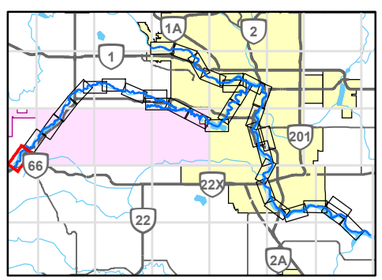
- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	19 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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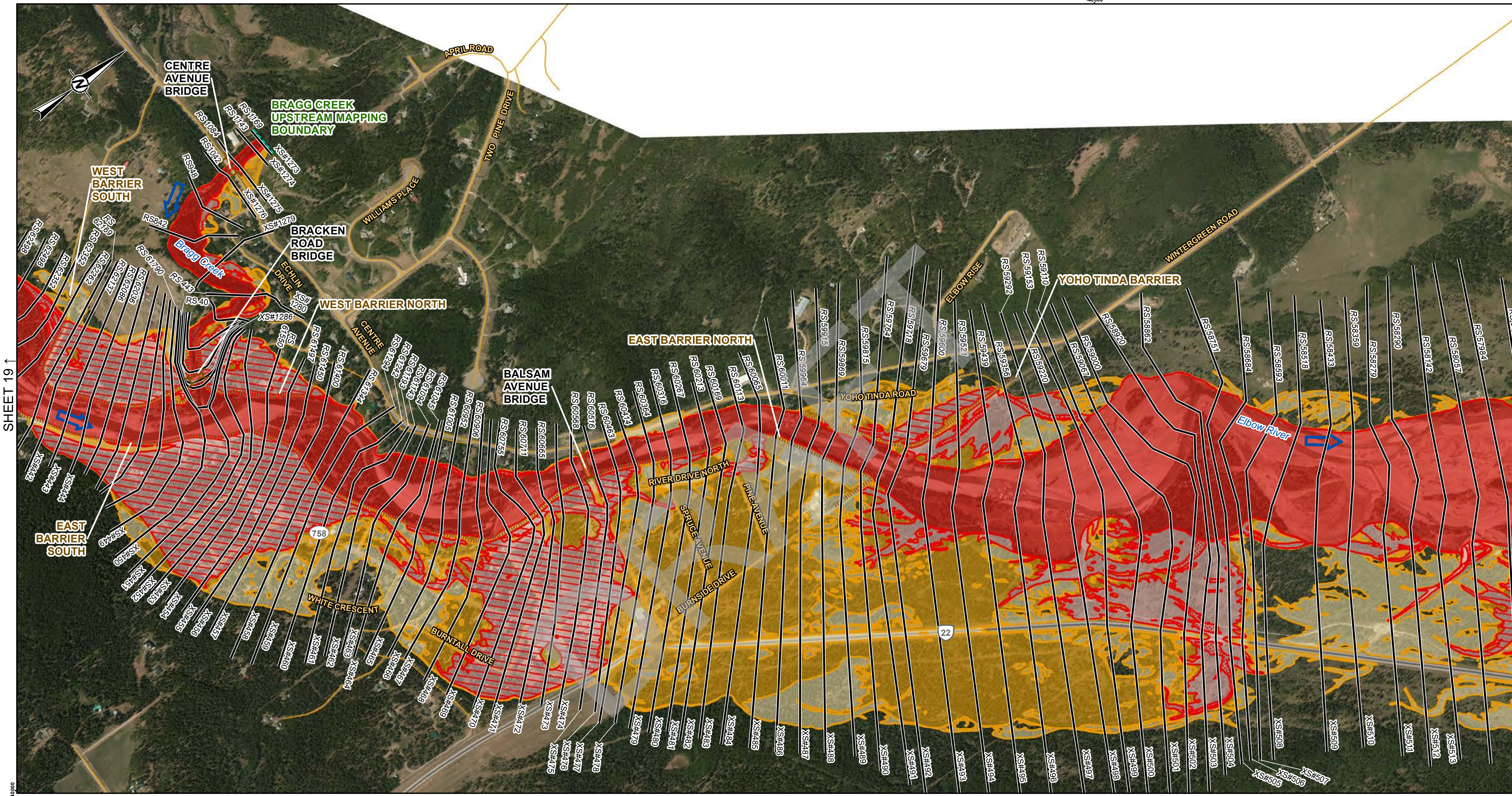

LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S
BRAGG CREEK = 48.1 M^3/S

0 200 400
1:10,000 METRES

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

CONSULTANT
GOLDER MEMBER OF WSP

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PREPARED	SP
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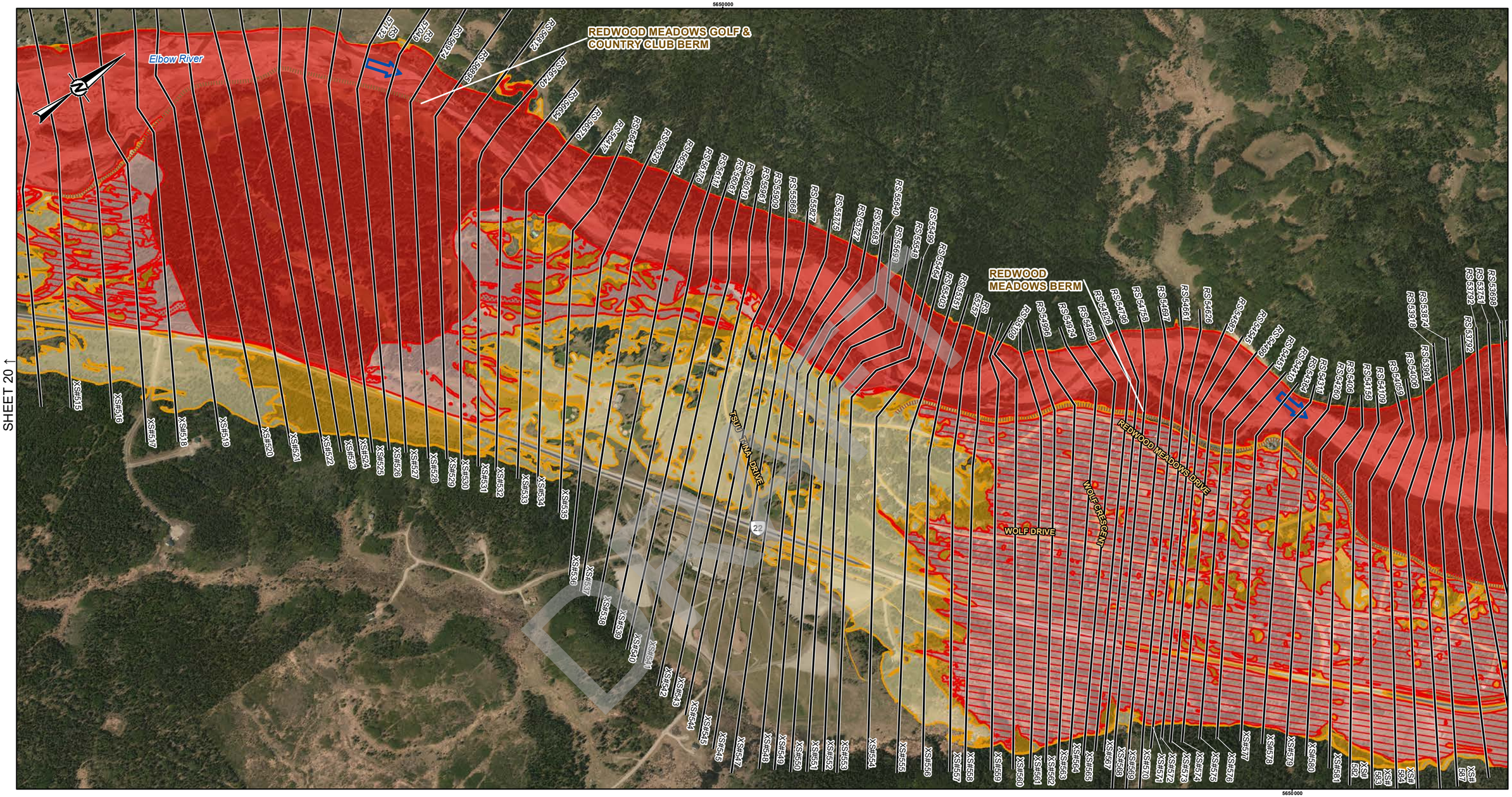
TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	20 of 34

Classification: Public



LEGEND

- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
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- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
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- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S

0 200 400
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APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	21 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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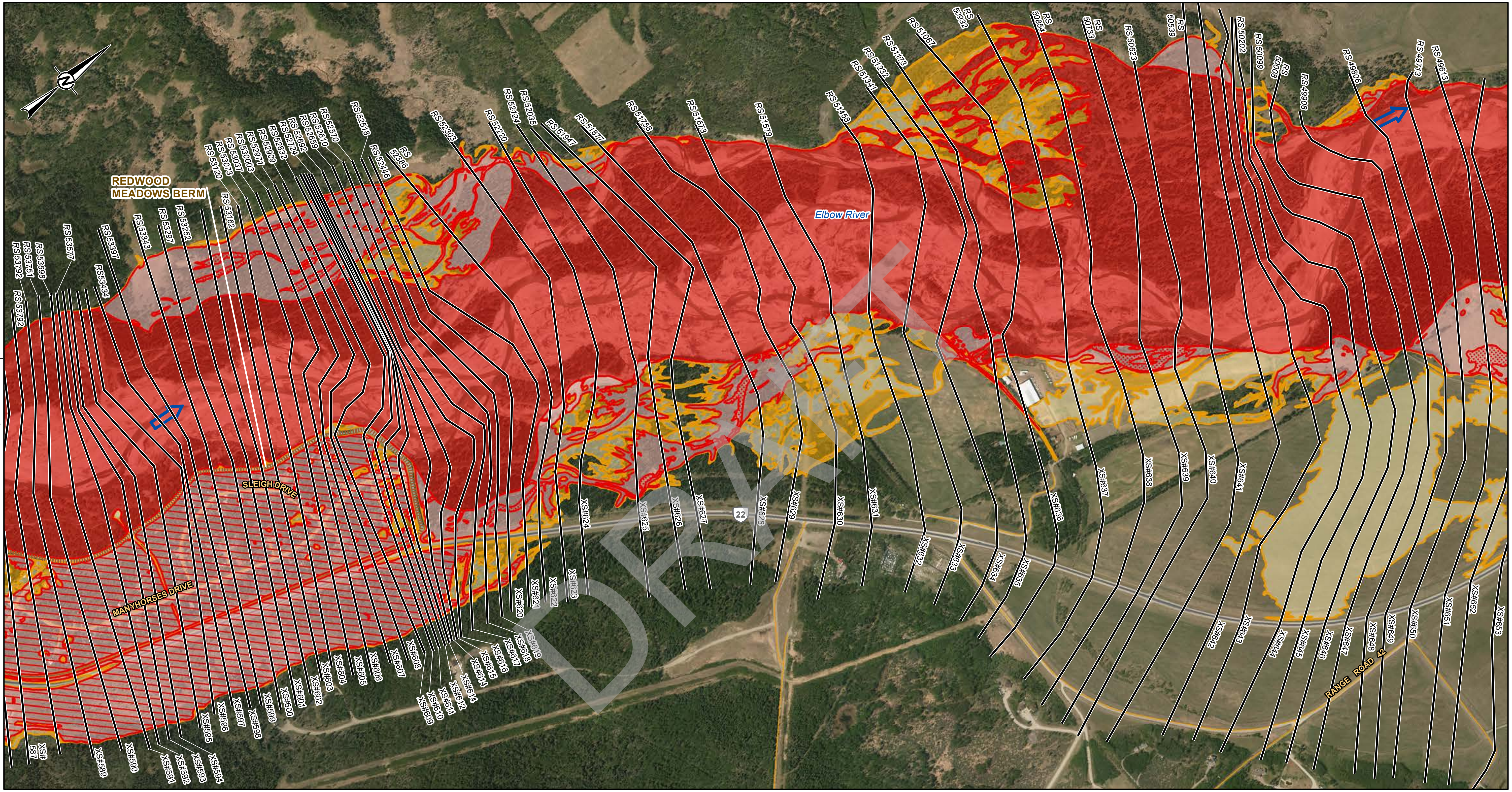

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
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- LOCAL ROAD
- PATHWAY
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- FLOOD FRINGE
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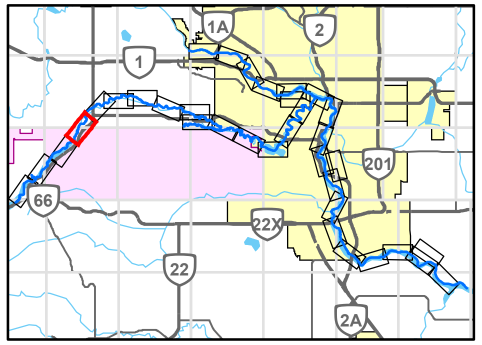
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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DESIGNED	GT
PREPARED	SP
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APPROVED	WP

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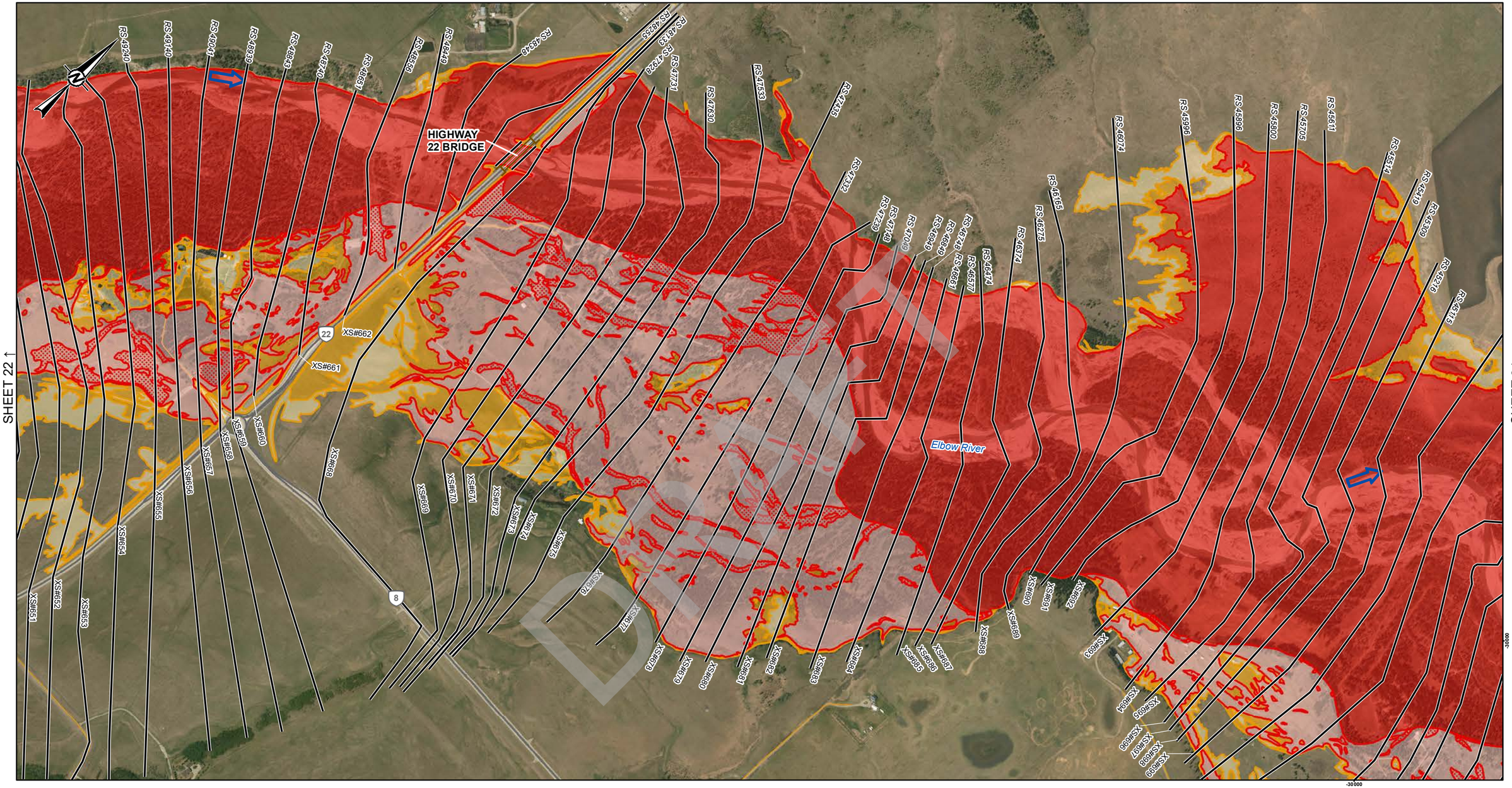
PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	22 of 34



LEGEND

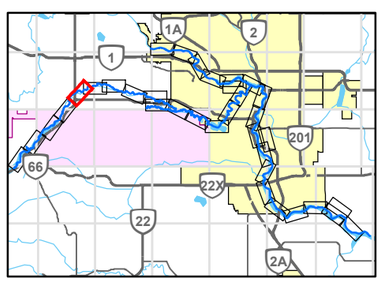
- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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REFERENCE(S)
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Alberta Government

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GOLDER
MEMBER OF WSP

YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	23 of 34

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SHEET 23 ↑

SHEET 25 ↓

-30000

-30000

RS 45514 RS 45419 RS 45309 RS 45216 RS 45115 RS 45016 RS 44931 RS 44835 RS 44722 RS 44643 RS 44541 RS 44448 RS 44344 RS 44243 RS 44141 RS 43929 RS 43842 RS 43744 RS 43641 RS 43543 RS 43445 RS 43319 RS 43248 RS 43137 RS 43039 RS 42937 RS 42838 RS 42736 RS 42638 RS 42536 RS 42439 RS 42343

Elbow River

XS#692 XS#691 XS#690 XS#689 XS#688 XS#687 XS#686 XS#685 XS#693 XS#694 XS#696 XS#697 XS#698 XS#699 XS#700 XS#701 XS#702 XS#703 XS#704 XS# 705 XS#706 XS#707 XS#708 XS#709 XS#710 XS#711 XS#712 XS#713 XS#714 XS#715 XS#716 XS#717 XS#718 XS#719 XS#720 XS#721 XS#722 XS#724 XS#725 XS#726 XS#727 XS#728 XS#729 XS#730 XS#731 XS#732 XS#733 XS#734 XS#735

LEGEND

- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
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- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
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- FLOOD FRINGE
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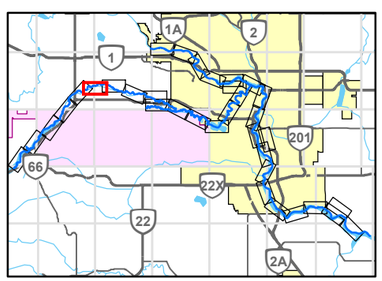
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	24 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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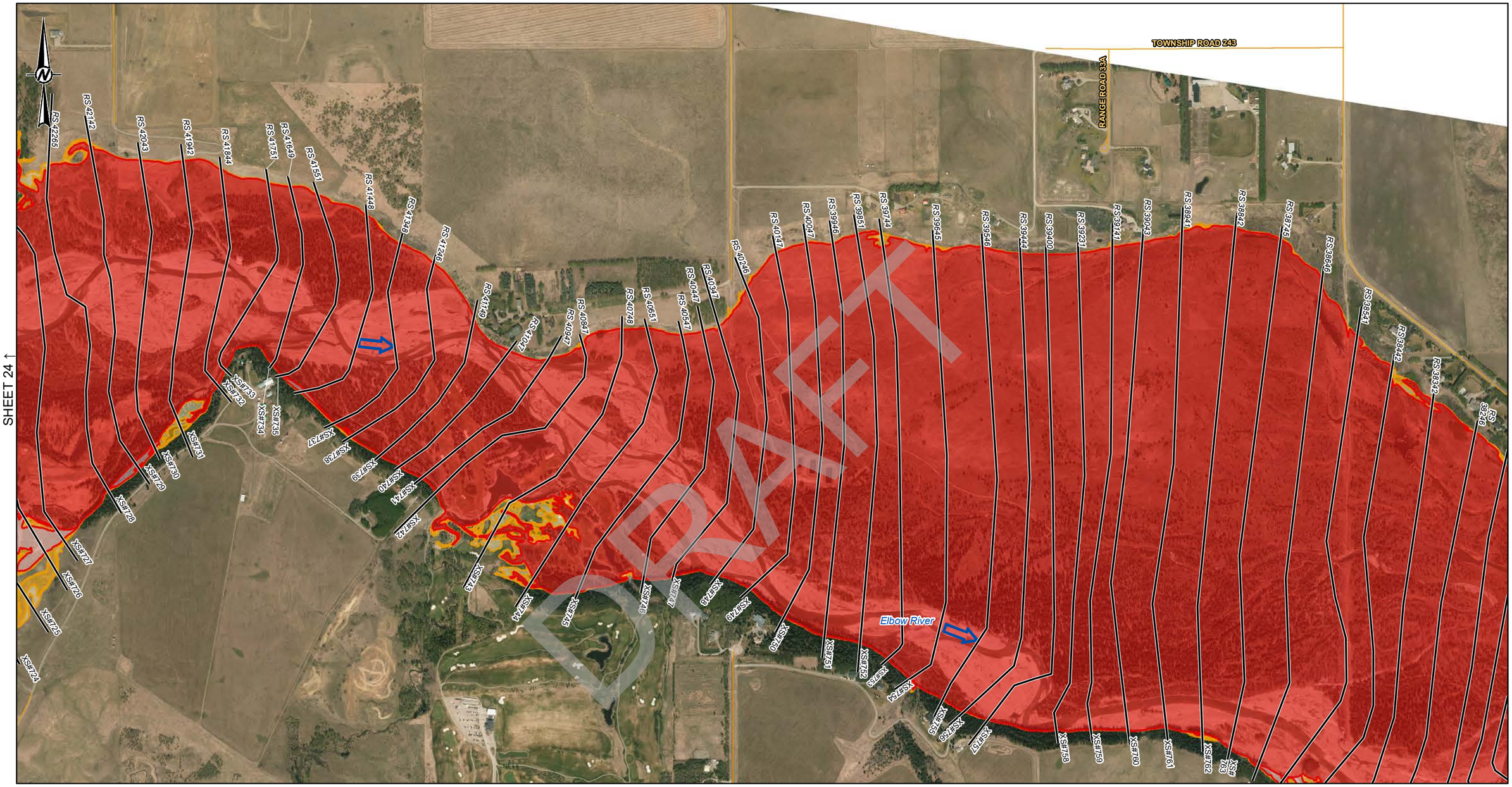

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
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- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

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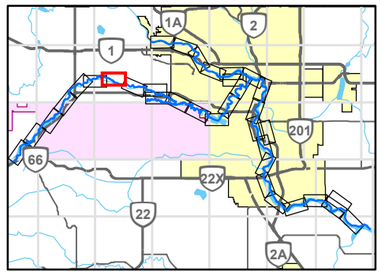
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	25 of 34

SHEET 25 ↑

SHEET 27 ↓

Springbank Creek

Elbow River

GRANDVIEW PLACE

MOUNTAIN RIVER ESTATES

ELBOW RIVER POINT

ELBOW RIVER GATE

ELBOW RIVER DRIVE

ELBOW RIVER ROAD

RS 38245 RS 38144 RS 38044 RS 37957 RS 37869 RS 37771 RS 37687 RS 37589 RS 37512 RS 37389 RS 37289 RS 37189 RS 37092 RS 36989 RS 36908 RS 36781 RS 36698 RS 36603 RS 36502 RS 36404 RS 36298 RS 36212 RS 36116 RS 36012 RS 35912 RS 35816 RS 35710 RS 35616 RS 35513 RS 35414 RS 35327 RS 35210 RS 35103 RS 35004 RS 34916 RS 34816 RS 34725 RS 34615 RS 34516 RS 34412 RS 34336 RS 34236 RS 34136

XS#67 XS#68 XS#69 XS#70 XS#71 XS#72 XS#73 XS#74 XS#75 XS#76 XS#77 XS#78 XS#79 XS#80 XS#81 XS#82 XS#83 XS#84 XS#85 XS#86 XS#87 XS#88 XS#89 XS#90 XS#91 XS#92 XS#93 XS#94 XS#95 XS#96 XS#97 XS#98 XS#99 XS#800 XS#801 XS#802 XS#803 XS#804 XS#805 XS#806 XS#807 XS#808 XS#809 XS#810 XS#811

LEGEND

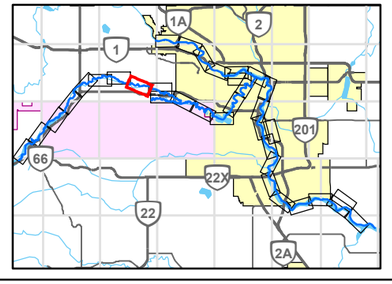
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER ABOVE SPRINGBANK CREEK = 840 M^3/S
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	26 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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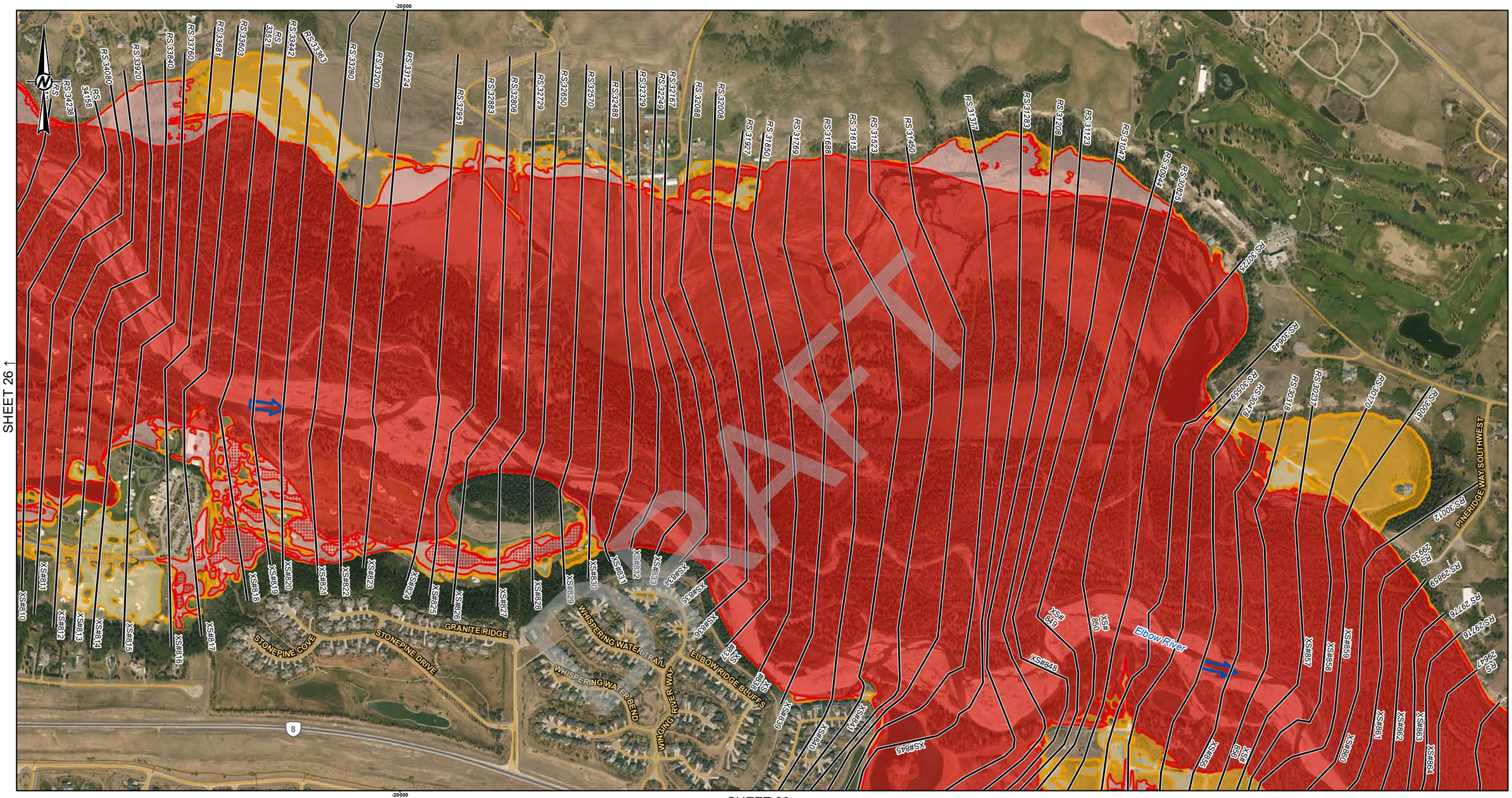
SHEET 26 ↑

SHEET 29 ↓

SHEET 28 ↓



LEGEND

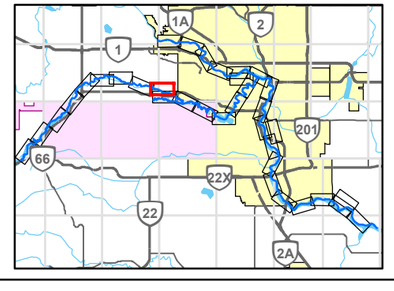
- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WEIR
- BRIDGE

- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S
LOTT CREEK = 30.8 M^3/S



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REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	27 of 34

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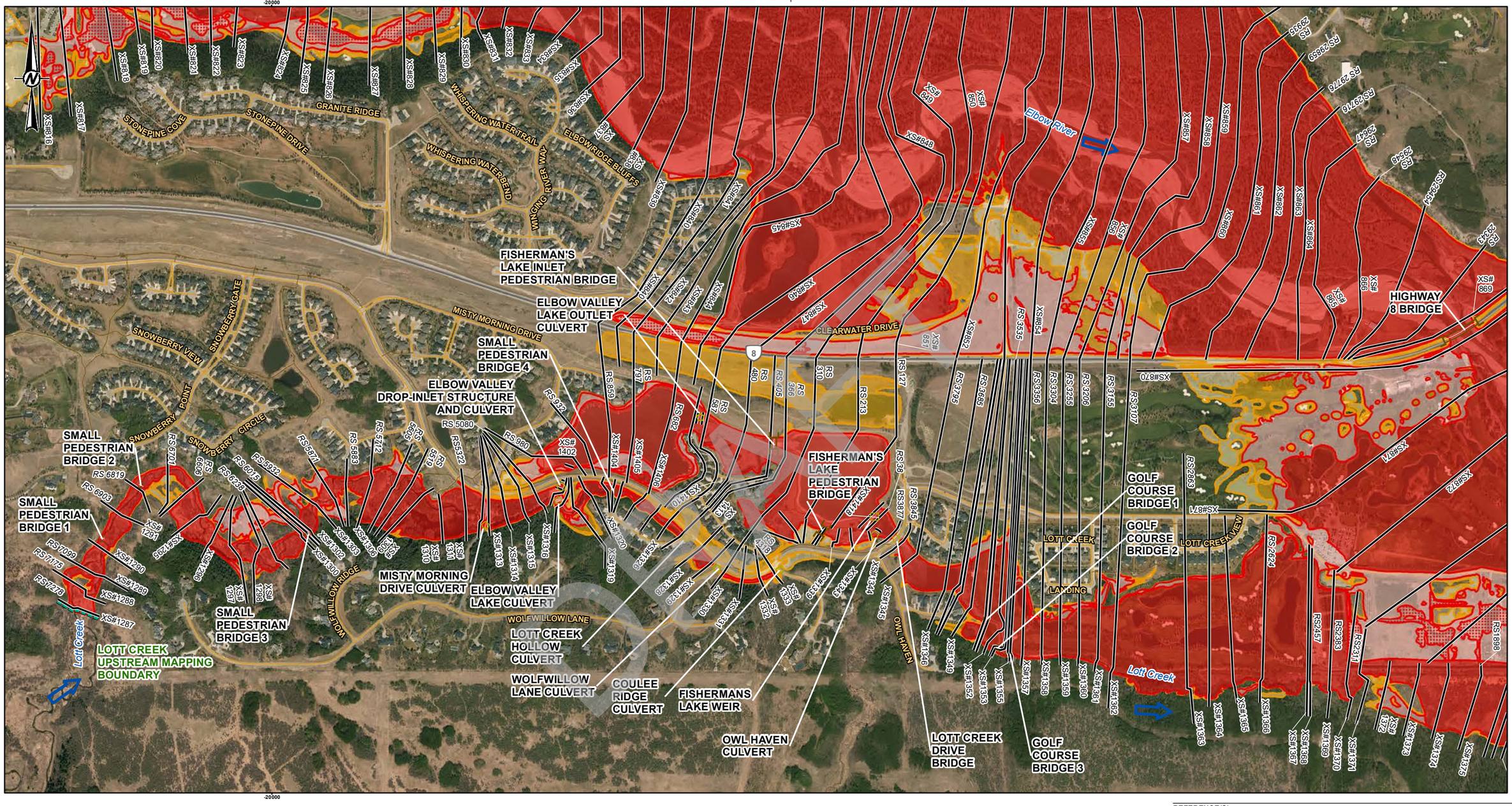
SHEET 27 ↑

SHEET 29 ↓



LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

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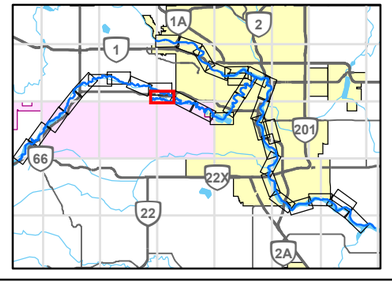
- FLOODWAY
- HIGH HAZARD FLOOD FRINGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S
LOTT CREEK = 30.8 M^3/S



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BOW AND ELBOW RIVER HAZARD STUDY

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GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	28 of 34

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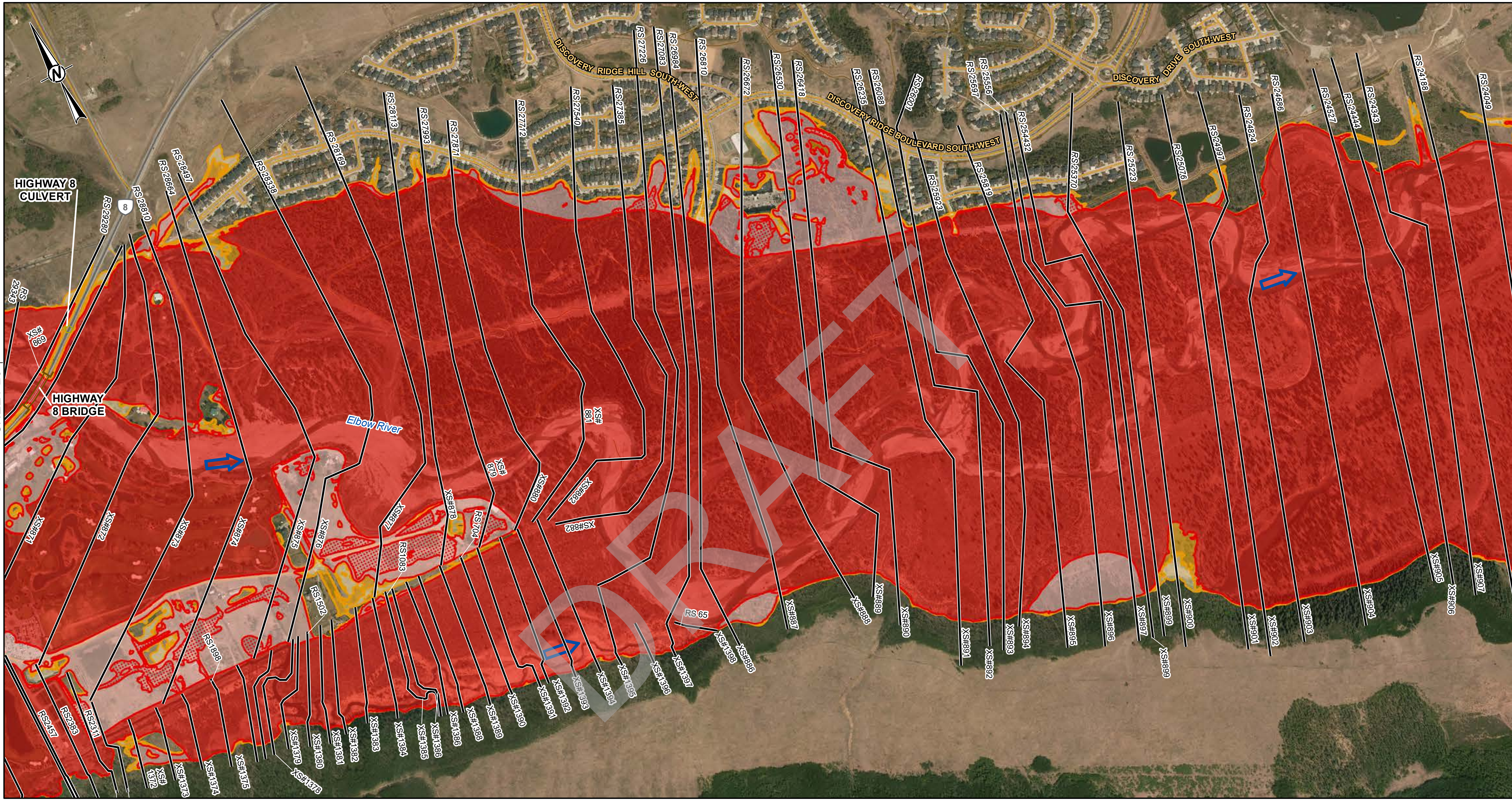

LEGEND

CROSS SECTION	FLOOD CONTROL STRUCTURE
XS#100 CROSS SECTION NUMBER	**HYDRAULIC STRUCTURES**
RS 304 RIVER STATION (M)	CULVERT
STUDY BOUNDARY	DAM
FLOW DIRECTION	OTHER
LOCAL ROAD	WEIR
PATHWAY	BRIDGE
PRIMARY HIGHWAY	
SECONDARY HIGHWAY	
RAILWAY	

FLOODWAY
HIGH HAZARD FLOOD FRINGE
FLOOD FRINGE
PROTECTED FLOOD FRINGE
200-YEAR FLOOD EXTENT
500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S
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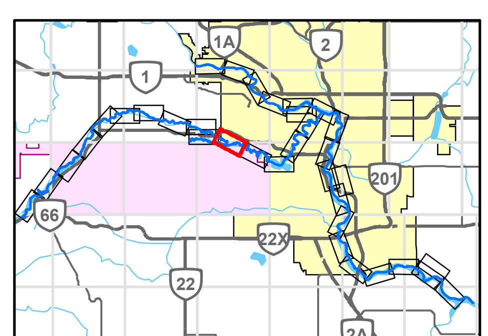

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	29 of 34

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SHEET 29 ↑

SHEET 31 ↓

-10000

5650000

-10000

GREY EAGLE DRIVE BRIDGE

WEASELHEAD GLENMORE PATHWAY

Elbow River

RS 24049 RS 23936 RS 23739 RS 23509 RS 23360 RS 23242 RS 23121 RS 23101 RS 22708 RS 22105 RS 21963 RS 21709 RS 21642 RS 21560 RS 21434 RS 2126I RS 21119 RS 20971 RS 20860 RS 20714 RS 20522 RS 19763 RS 19701 RS 19603 RS 19237 RS 19232 RS 19089 RS 18928 RS 18777 RS 18690 RS 18475 RS 18396 RS 18060

XS#907 XS#908 XS#909 XS#910 XS#911 XS#912 XS#913 XS#914 XS#915 XS#916 XS#917 XS#918 XS#919 XS#920 XS#921 XS#922 XS#923 XS#924 XS#925 XS#926 XS#927 XS#928 XS#929 XS#930 XS#931 XS#932 XS#933 XS#934 XS#935 XS#936 XS#937 XS#938 XS#939 XS#940 XS#941 XS#942 XS#943 XS#944 XS#945 XS#946 XS#947 XS#948 XS#949 XS#950 XS#951 XS#952 XS#953 XS#954

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LEGEND

- CROSS SECTION
- *XS#100* CROSS SECTION NUMBER
- *RS 304* RIVER STATION (M)
- STUDY BOUNDARY
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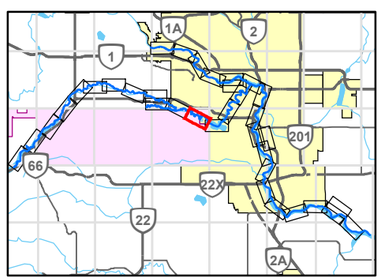
DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



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YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	30 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

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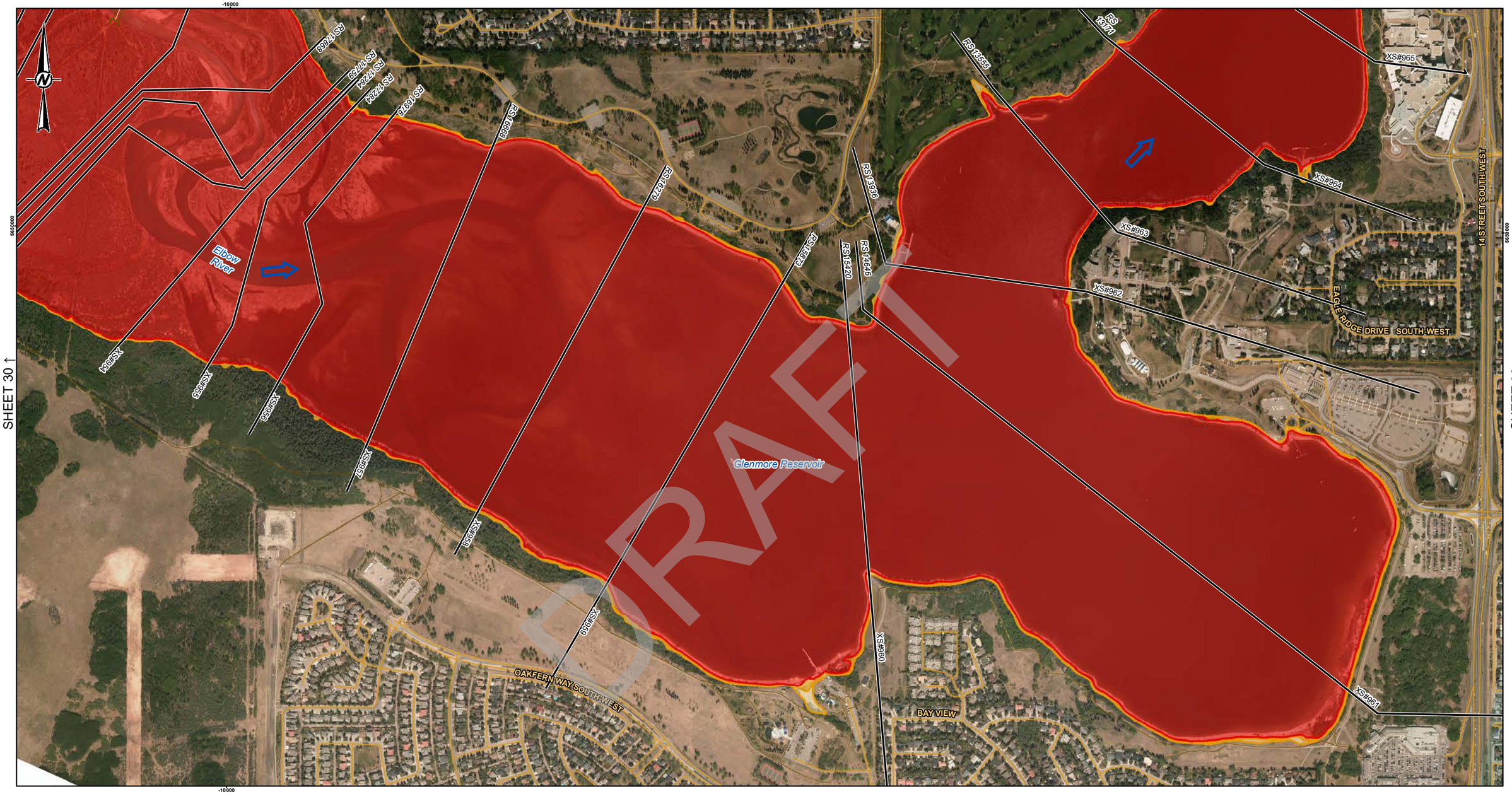
PATH: I:\CLIENTS\GOVERNMENT_OF_ALBERTA\21452576_Bow_Elbow\Mapping\Products\Hydrology\05_Design Flood Hazard Mapping\Rev0\21452576_Governing-Flood-Hazard_Rev0.mxd PRINTED ON: 2023-07-28 AT: 11:48:09 AM



LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
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- FLOOD FRINGE
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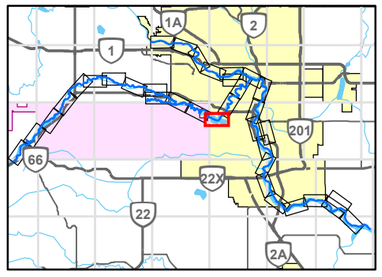
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER BELOW SPRINGBANK CREEK = 841 M^3/S



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DATUM: NAD 83 CSRS PROJECTION: 3TM 114

CLIENT
ALBERTA ENVIRONMENT AND PARKS
Alberta Government

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2023-04-14
DESIGNED	GT
PREPARED	SP
REVIEWED	WP
APPROVED	WP

PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

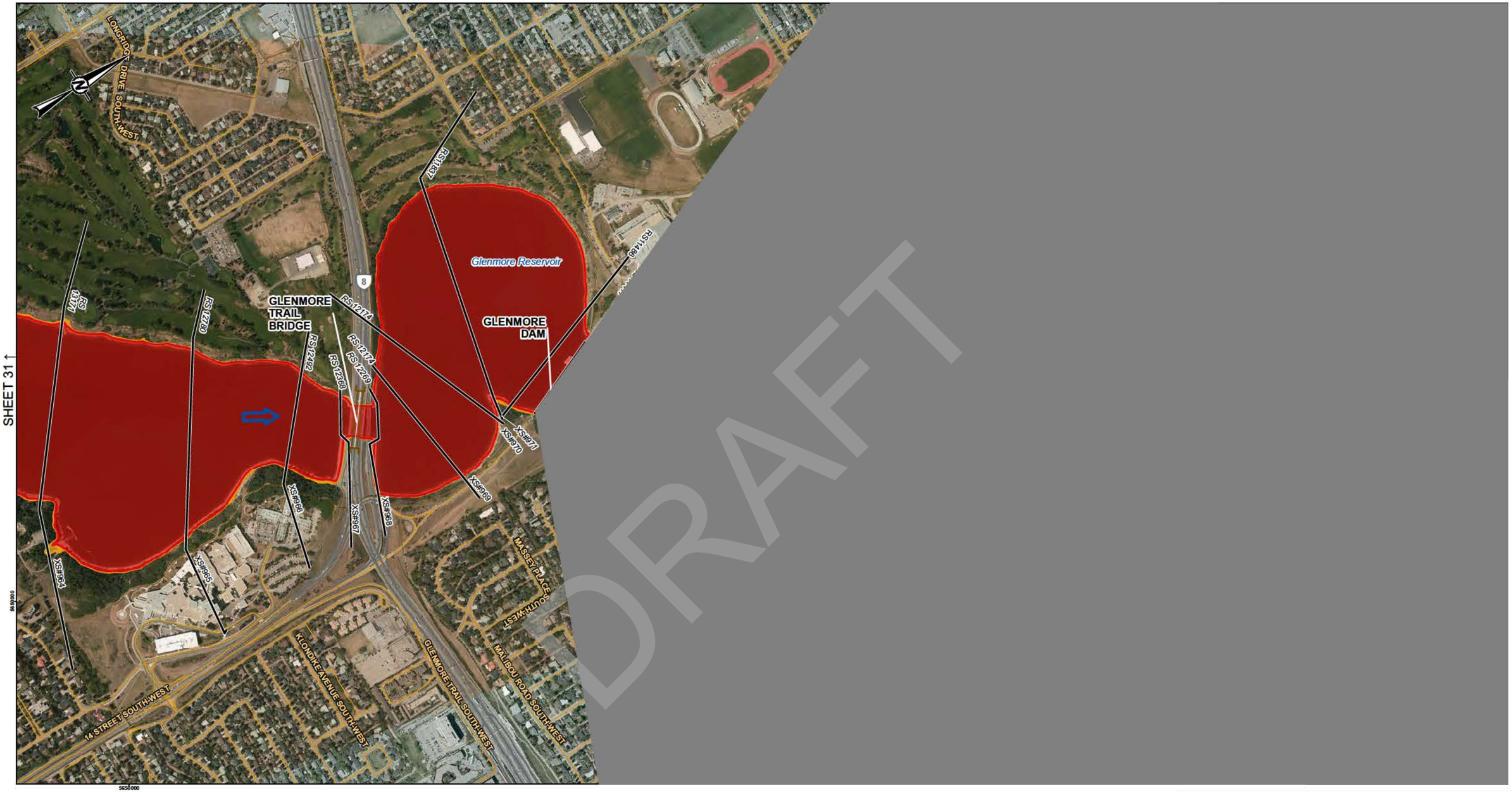
PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	31 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm
0

PATH: I:\CLIENT\GOVERNMENT_OF_ALBERTA\21452576_Bow_Elbow\Mapping\Products\Hydrology\05_Design Flood Hazard Mapping\Rev0\21452576_Governing-Flood-Hazard_Rev0.mxd PRINTED ON: 2023-07-28 AT: 11:53:35 AM

SHEET 31 ↑

SHEET 33 ↓



LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
- RS 304 RIVER STATION (M)
- STUDY BOUNDARY
- FLOW DIRECTION
- LOCAL ROAD
- PATHWAY
- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- RAILWAY
- FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

- CULVERT
- DAM
- OTHER
- WE R
- BR DGE

- FLOODWAY
- HIGH HAZARD FLOOD FR NGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S

0 200 400
1:10,000 METRES

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

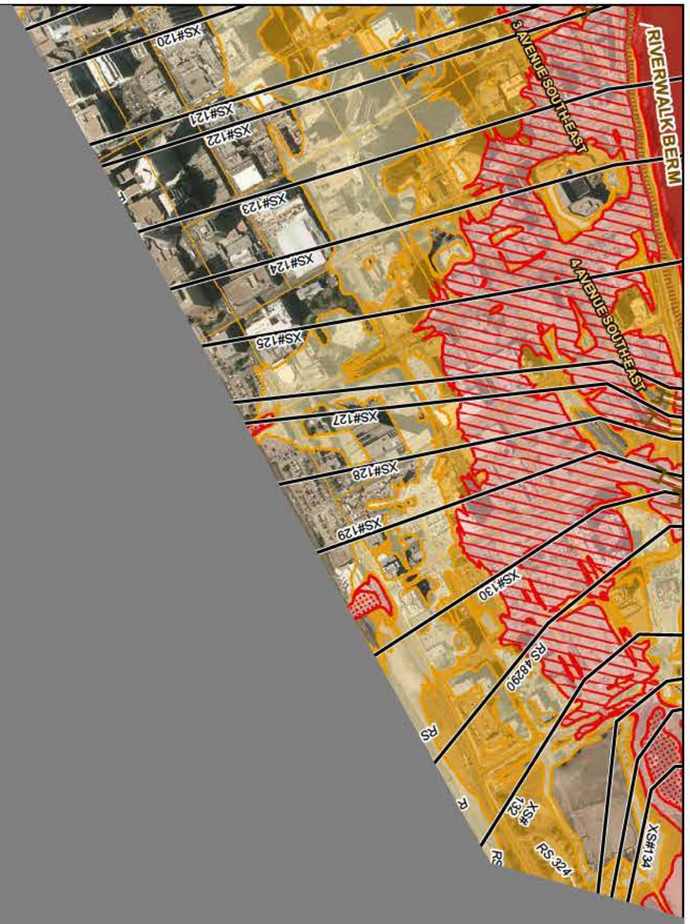
PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	32 of 34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

SHEET 34 ↑

SHEET 32 ↑

SHEET 9 ↓



LEGEND

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HYDRAULIC STRUCTURES

- CULVERT
- DAM
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- FLOODWAY
- HIGH HAZARD FLOOD FR NGE
- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S
BOW RIVER BELOW ELBOW RIVER = 2390 M^3/S

0 200 400
1:10,000 METRES

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PROJECT
BOW AND ELBOW RIVER HAZARD STUDY

TITLE
GOVERNING DESIGN FLOOD HAZARD MAP

PROJECT NO.	CONTROL	REV.	FIGURE
21452576		0	33 of 34

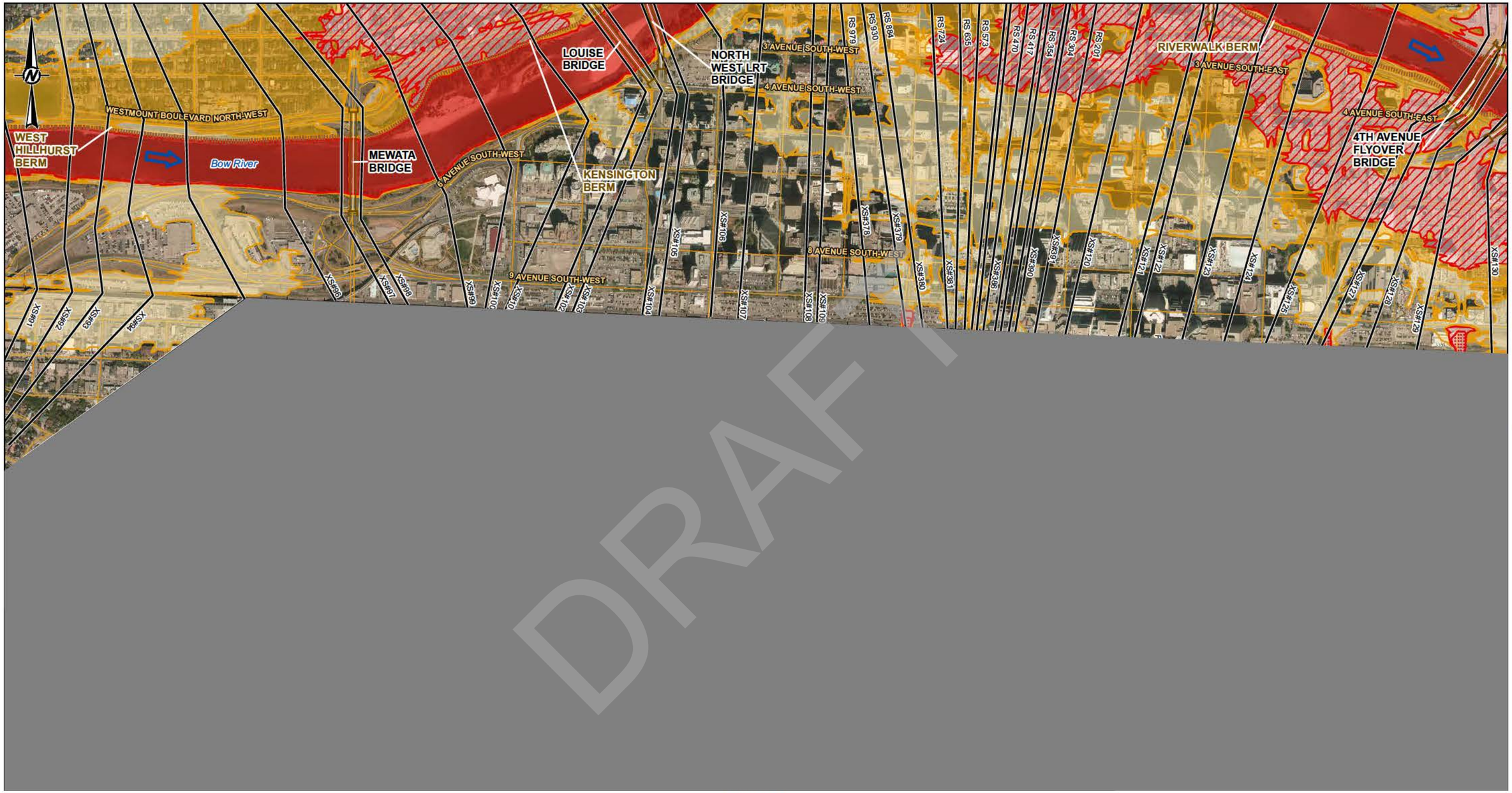
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: \\CLIENT$\GOVERNMENT_OF_ALBERTA\21452576_Bow...Elbow\Mapping\Products\Hydrology\06_Design Flood Hazard Mapping\Rev0\21452576_Governing Flood-Hazard_Rev0.mxd PRINTED ON 2023-07-28 AT 12:02:08 PM

SHEET 5 ↑



SHEET 33 ↓

LEGEND

- CROSS SECTION
- XS#100 CROSS SECTION NUMBER
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- FLOOD FRINGE
- PROTECTED FLOOD FRINGE
- 200-YEAR FLOOD EXTENT
- 500-YEAR FLOOD EXTENT

DISCHARGE
BOW RIVER ABOVE ELBOW RIVER = 2090 M^3/S
ELBOW RIVER BELOW GLENMORE DAM = 841 M^3/S

0 200 400
1:10,000 METRES

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25mm

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PATH: \\CLIENT\$\GOVERNMENT_OF_ALBERTA\21452576_Bow_ Elbow\Mapping\Products\Hydrology\06_Design Flood Hazard Mapping\Rev0\21452576_Governing Flood-Hazard_Rev0.mxd PRINTED ON 2023-07-28 AT 12 08 42 PM

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