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North Calgary Water Servicing (NCWS) Project

Background & Benefits

- Construction of a 22-kilometre water feeder main and multiple support facilities, which includes a high lift pump station, booster station expansions to existing underground reservoirs, tie-ins to existing infrastructure, and connections at the Bearspaw Water Treatment plant.
- This feeder main will deliver 100 million litres per day (MLD) of clean, safe and reliable drinking water to existing and future communities in North and Northwest Calgary, with future flows reaching 410 MLD per day after construction of a new water treatment plant.
- NCWS is essential to meet water demand in northwest Calgary given projected population growth and will provide adequate water supply for future residential and commercial development to take place, while adding redundancy to our existing water distribution system.
- The new feeder main and facilities will increase redundancy in Calgary's water distribution system. This is an important investment as it allows us to continue to provide reliable water service to Calgarians and customers when our existing feeder mains or pump stations are out of service in the event of emergency or planned repairs.
- This project is one of several others which contributes to increase Calgary's water transmission capacity which includes the South Calgary Water Servicing project, Bearspaw South Feeder Main Improvements Project, new water treatment plant at Bearspaw and the Crosstie Feeder Main.

Scan the QR code to learn more

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Project Map

Legend: Feeder main

- Contract C1
- Contract C2
- Contract C3
- Contract C4
- Contract C5
- Trenchless Contract 2
- Trenchless Contract 3

Legend: Facilities

1. Bearspaw NCWS Pump Station
2. Bearspaw Yard Piping & Feeder Main
3. Research Park Booster Station
4. Top Hill Reservoir Expansion
5. Big Hill East Reservoir Tie-in
6. Beddington Reservoir - Northridge Tie-in
7. North/South Control Chamber
8. Energy Reduction and Future Recovery Facility
9. Mountainview Pump Station Capacity Upgrades
10. Big Hill West Tie-in

• • • Feeder Main

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Project Schedule

Feeder main

Contract	Timeline
Contract C1	In progress to end of Q4 2026
Contract C2	Q3 2026 to Q3 2027
Contract C3	Q1 2027 to Q4 2027
Contract C4	Q1 2028 to Q4 2028
Contract C5	Q1 2027 to Q4 2028
Trenchless Contract 2	Q2 2026 to Q4 2026
Trenchless Contract 3	Q1 2027 to Q3 2028

Facilities

	Facility name	Timeline
1	Bearspaw NCWS Pump Station	Q4 2025 to Q4 2029
2	Bearspaw Yard Piping & Feeder Main	Q4 2026 to Q4 2029
3	Research Park Booster Station	Q3 2027 to TBD
4	Top Hill Reservoir Expansion	Q4 2025 to Q4 2029
5	Big Hill East Reservoir Tie-in	Q2 2026 to Q4 2027
6	Beddington Reservoir – Northridge Tie-in	Q2 2027 to Q4 2029
7	North/South Control Chamber	Q2 2027 to Q4 2029
8	Energy Reduction and Future Recovery Facility	TBD
9	Mountainview Pump Station Capacity Upgrades	Q2 2026 to Q1 2027
10	Big Hill West Tie-in	TBD

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Construction Impacts for Contract C2

- Two lanes of 144 Ave N.W. will be closed in phases between 69 Street N.W. and Symons Valley Road N.W. Two-way traffic will be maintained.
- Lane closures at the intersections at 144 Ave N.W. and Sarcee Trail N.W., Shaganappi Trail and Sage Hill Drive will take places in phases. Detour signage will be in effect. These closures will be designed to minimize traffic disruption.
- Residents will notice an increase in noise.
- Residents will notice heavy truck traffic in the area.
- Construction hours for this project are from 7 a.m. to 7:30 p.m. Monday to Saturday with potential work on Sundays. *Subject to change.
- The contractor will take steps to limit the amount of dust in the work area.
- The City does not expect vibration impacts from construction to affect private properties.
- Some trees will be removed along Rocky Ridge Road near the pathway to make way for installation of the feeder main. Trees will be replanted in nearby areas to retain our City's tree canopy.
- Intermittent closures of the pathway east of Rocky Ridge Road.

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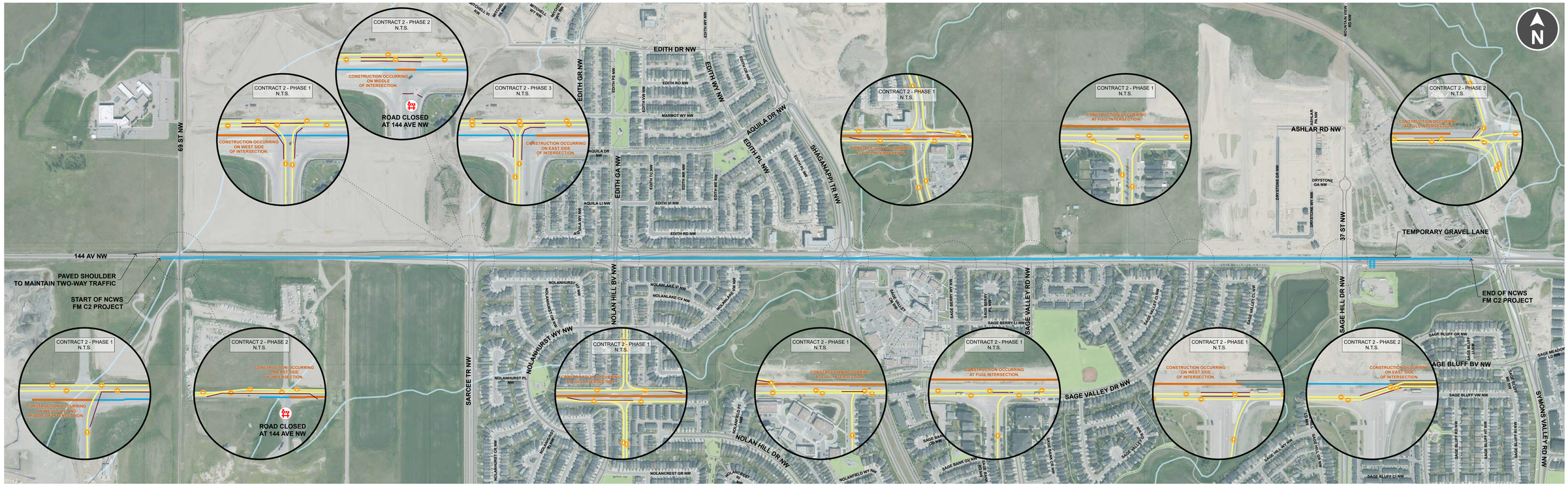
Contract C2 Traffic Accommodation Plan



Feeder main alignment
Traffic direction
Feeder main construction
Temporary traffic barriers

Traffic Accommodation Plan

- All changes to traffic through lane closures and detours will be communicated through delivered construction notices to area residents and businesses prior to construction.
- Two-way traffic on 144 Ave N.W. will always be maintained.
- Closures at intersections will be phased to minimize traffic disruptions.
- Electronic boards showing closures and detours (where applicable) will be placed near the roadway so drivers are aware.

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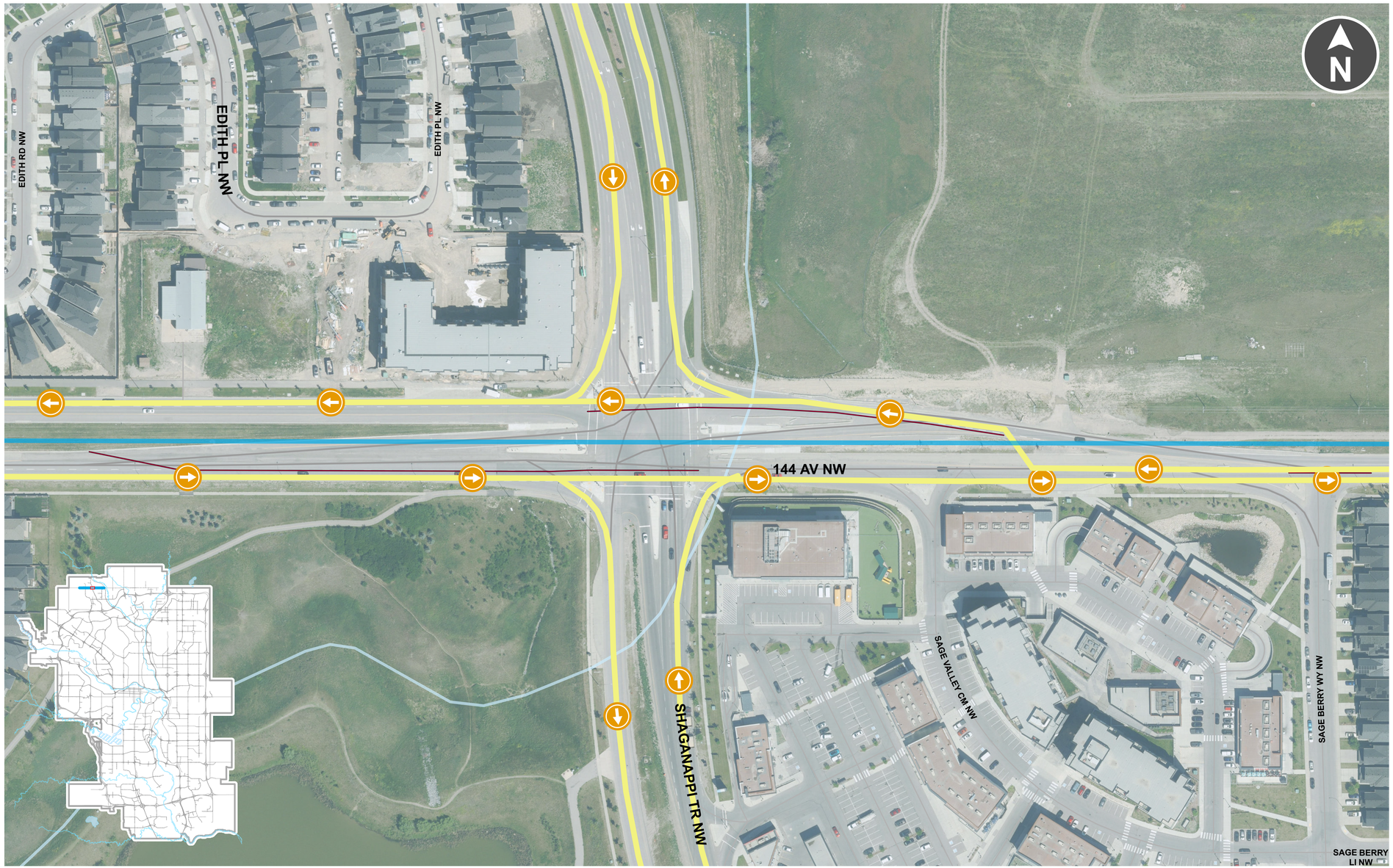
Contract C2 Traffic Accommodation Plan at Shaganappi Trail



Feeder main alignment
Traffic direction
Feeder main construction
Temporary traffic barriers

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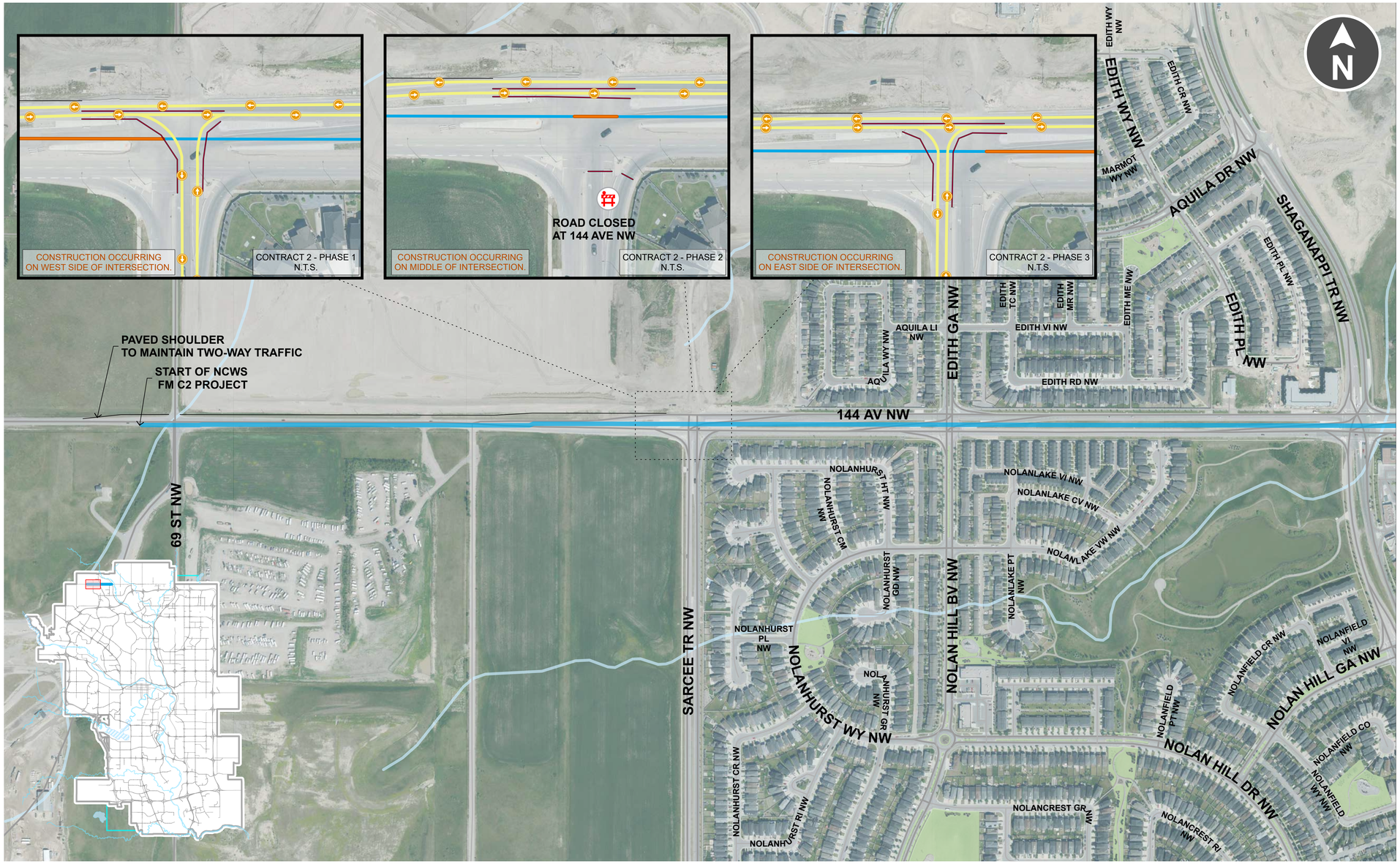
Contract C2 Traffic Accommodation Plan at Sarcee Trail



Feeder main alignment
Traffic direction
Feeder main construction
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Supporting Infrastructure – Facilities

1 **Bearspaw NCWS Pump Station**
A new large-scale facility will be constructed at the existing Bearspaw Water Treatment Plant. This facility will use large electric pumps to move an additional 100 million litres of water per day into Northwest Calgary.

2 **Bearspaw Yard Piping and Feeder Main**
A new section of large-diameter underground piping will be constructed within the Bearspaw Water Treatment Plant compound. This piping will connect the new NCWS Pump Station to the new NCWS Feeder Main.

3 **Research Park Booster Station**
A new medium-sized facility will be constructed at the location of the existing Top Hill Reservoir site near Country Hills Blvd. and Rocky Ridge Rd. This facility will use electric pumps to move an additional 22 million litres of water per day into the existing Research Park pressure zone.

4 **Top Hill Reservoir Expansion**
A new underground concrete reservoir will be constructed at Country Hills Blvd. N.W. and Rocky Ridge Rd. N.W. This new reservoir will have a storage capacity of 19 million litres and will be used primarily to balance water flows within the system.

5 **Big Hill East Reservoir Tie-in**
Establishes a connection from the NCWS Feeder Main to the existing Big Hill East Reservoir, with provisions for future connections to the Nose Hill East and Top Hill pressure zones.

6 **Beddington Reservoir – Northridge Tie-in**
Creates a bypass connection between the North Ridge Feeder Main[KS2] , Beddington Feeder Main, and the existing reservoir, enabling reverse flow from the Spy Hill east pressure zone to the North Hill pressure zone through the North Ridge feeder main.

7 **North/South Control Chamber**
This chamber connects the Bearspaw NCWS Pump Station, the NCWS Feeder Main, the future South Calgary Water Servicing Feeder Main, and the new water treatment plant.

8 **Energy Reduction and Future Recovery Facility**
This facility will reduce water pressure inside of the existing feeder main using a sequence of pressure relief valves. In the future, The City intends to expand the facility with an energy recovery facility using innovative technology with electric turbines to capture the surplus energy from the flowing water and direct this energy for use at other locations. The facility will be constructed along 144 Ave. NW.

9 **Mountainview Pump Station Capacity Upgrades**
Various upgrades to the existing Mountain View Pump Station to increasing its overall pumping capacity to from 30 million litres per day to 60 million litres per day.

10 **Big Hill West Tie-in**
This establishes a connection from the North Calgary Water Servicing feeder main to the existing Big Hill West Pressure Zone, to support growth and provide additional water redundancy in the area.

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Renderings for three of 10 facilities

Bearspaw NCWS Pump Station

Research Park Booster Station

Big Hill East Reservoir Tie-in

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Microtunnelling Locations

We'll be installing the feeder main by the process of microtunnelling in two locations.

Microtunnelling is a method of installing utilities underground – by essentially building an underground tunnel – which minimizes environmental, health and traffic impacts.

These two locations are:

- A section of 12 Mile Coulee Road N.W. north of Nose Hill Drive.
- Crossing Crowchild Trail at 12 Mile Coulee Road N.W.

In order for microtunnelling to take place, shafts are built so equipment and sections of pipe can be lowered and installed horizontally through the process.

These shafts will be located:

- Near Lynx Ridge Golf Course (east side and south side)
- Crowchild Trail and 12 Mile Coulee Rd N.W.

The picture below shows a microtunnelling shaft site for the TransCanada Sanitary Trunk. This will look similar for the two microtunnelling sites for the North Calgary Water Servicing project.

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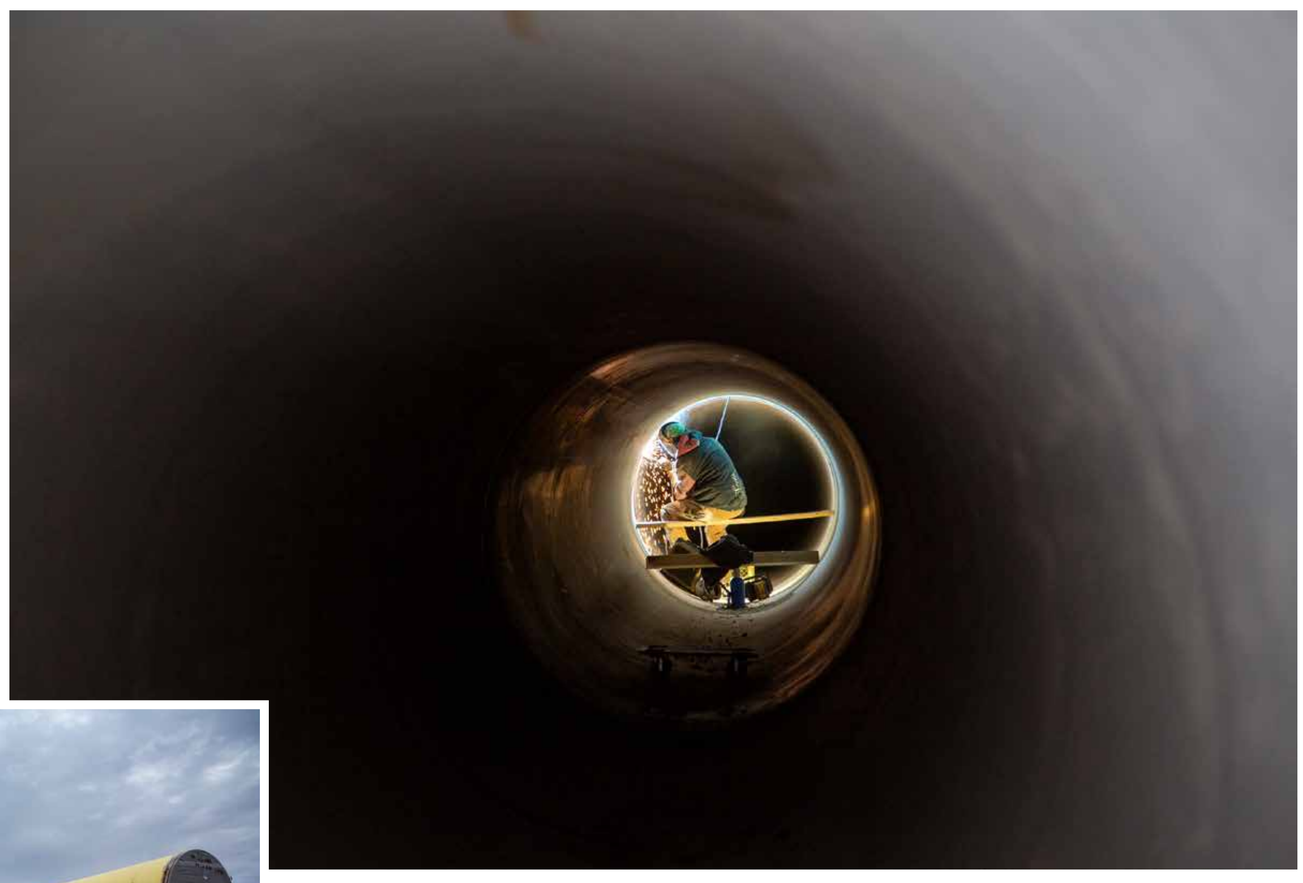
Project Photography



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