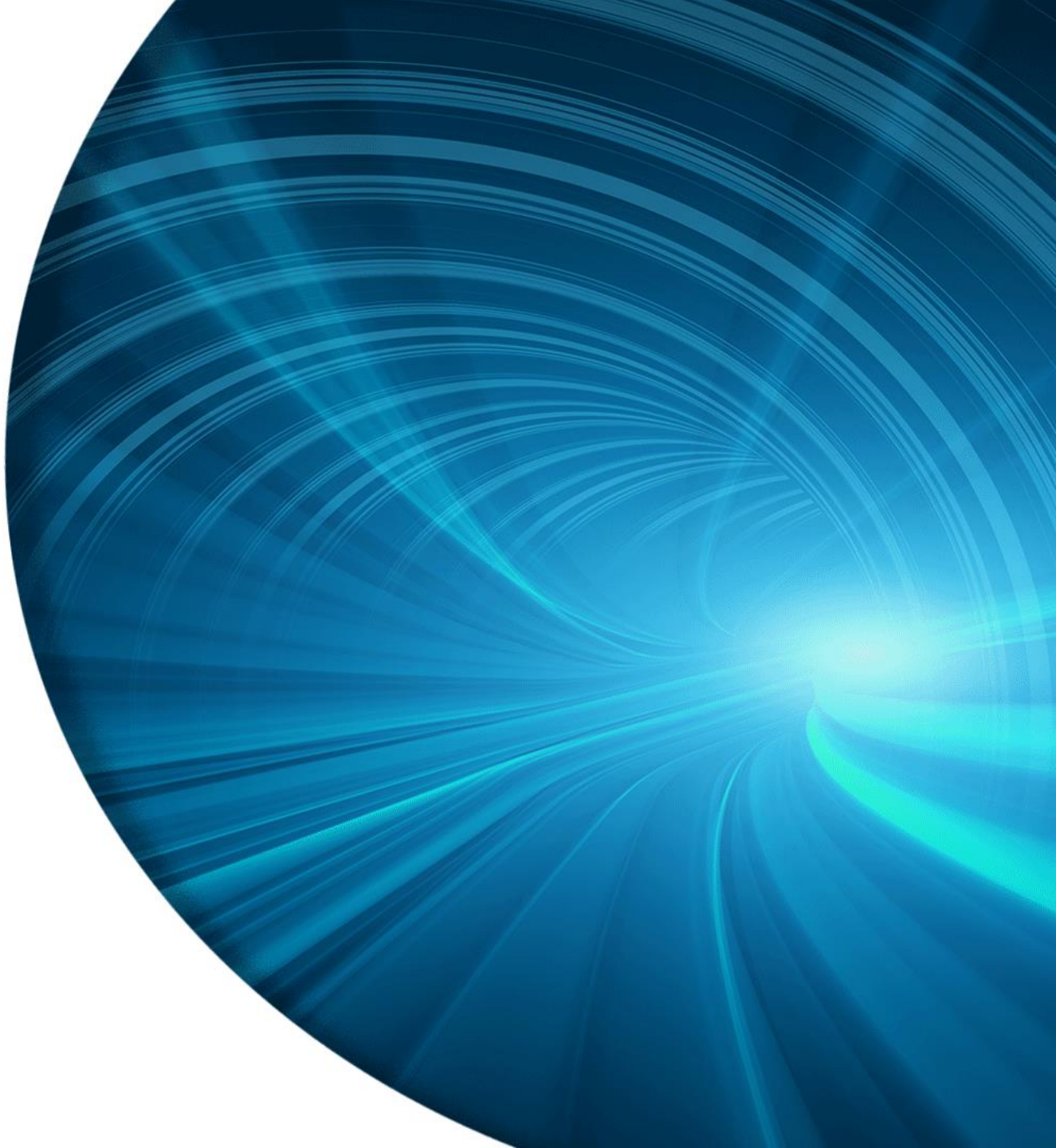
Link Alliance

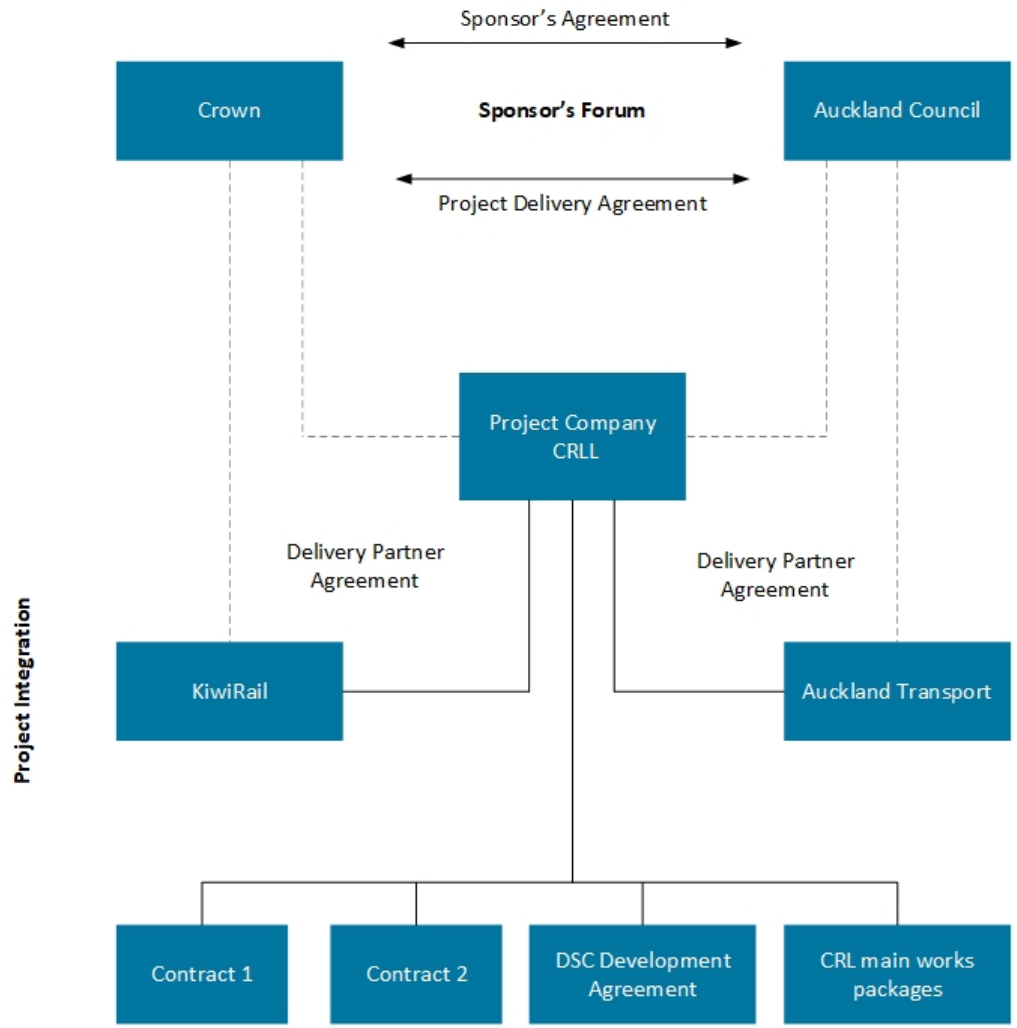
PROUDLY DELIVERING CityRailLink

Surveying @ CRL



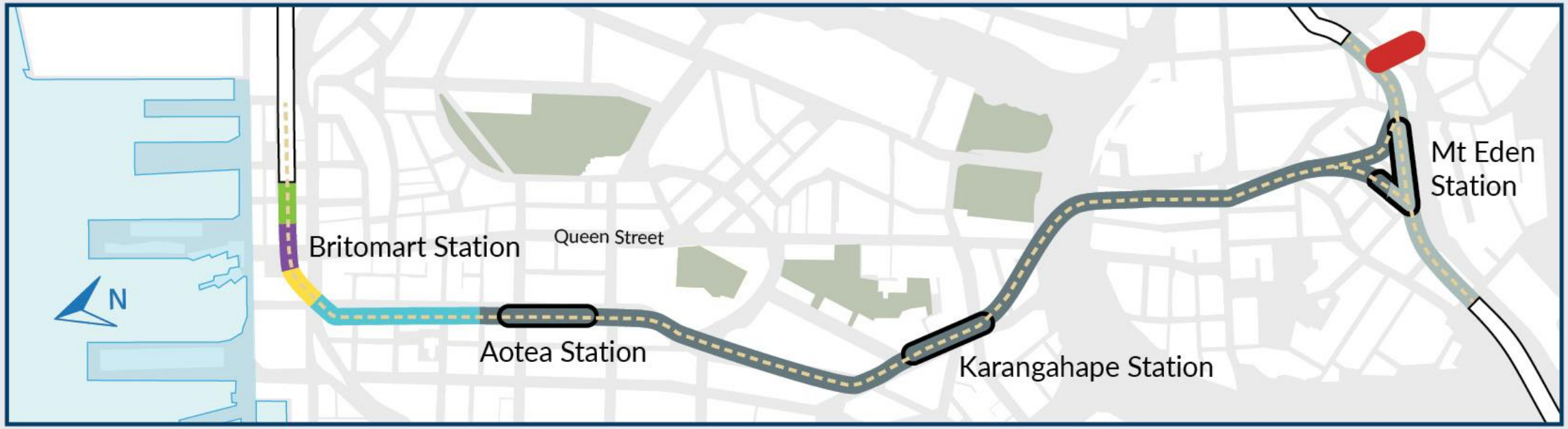
Introducing the Link Alliance

Structure



Link Alliance
PROUDLY DELIVERING CityRailLink

The Link Alliance - delivering Auckland's first underground



Currently Already Let/Under Construction:

- **Contract 1** - Britomart Station/Lower Queen St
- Downtown Shopping Centre (DSC)
- **Contract 2** - Albert St (Customs to Wyndham St)
- **Contract 6** - Mt Eden Stormwater Main

Contract 3 - Alliance:

- Stations and Tunnels
- Western Line connection
- Rail Systems

- **Contract 9** - Britomart East

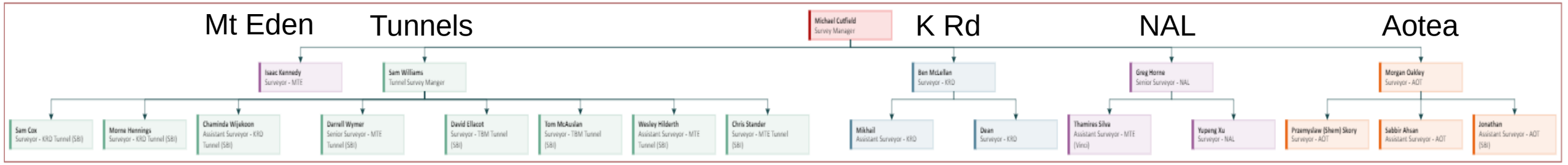
Wider network improvements (not shown):

- Strand & Otāhuhu improvements
- Newmarket improvements
- Henderson improvements

Overview programme (all dates approximate)

Key Milestones	2019	2020	2021	2022	2023	2024
Enabling works, including utilities, demolition	Q3	•	Q3			
Mt Eden Station	Q4	•	•	•	•	Q4
Karangahape Station		Q1	•	•	•	Q4
Aotea Station		Q1	•	•	•	Q4
Testing and commissioning					Q2	Q4

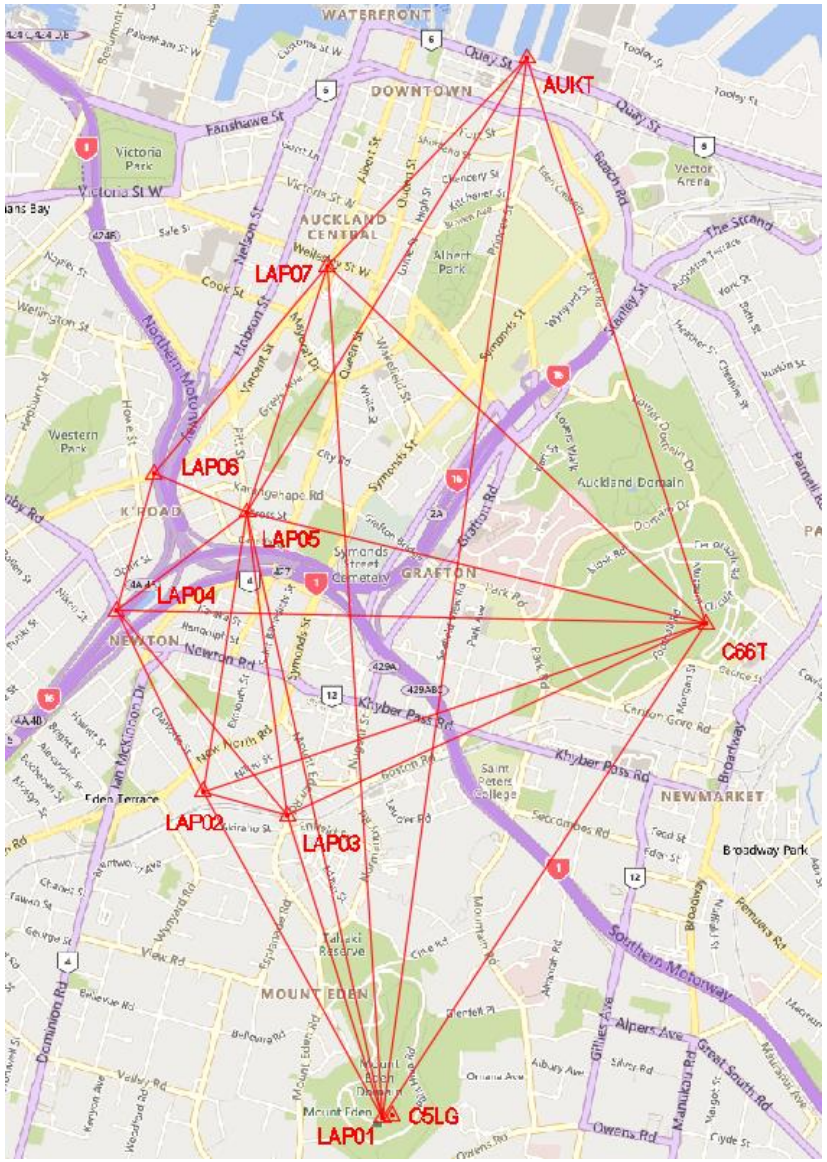
Surveyors

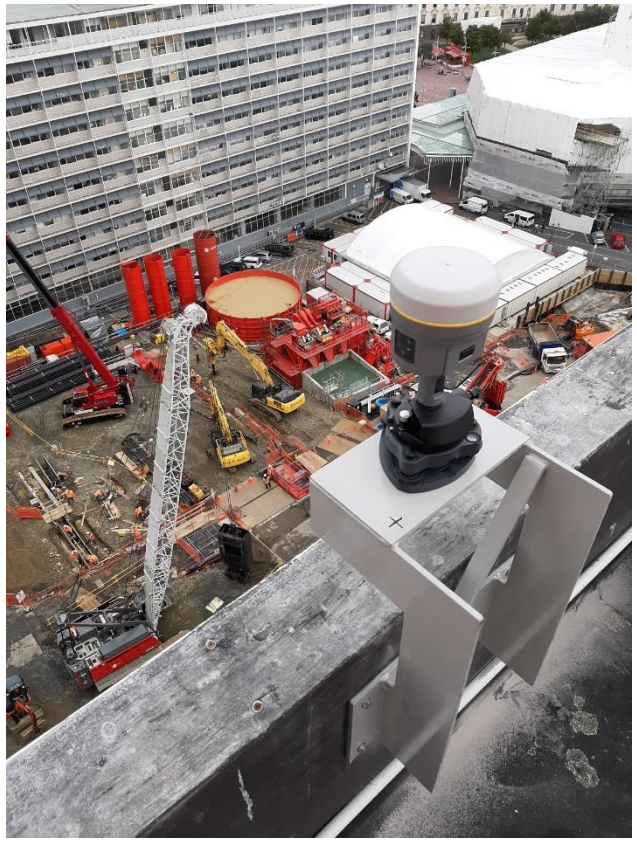

Mt Eden
Tunnels
K Rd
NAL
Aotea
Michael Cutfield
Survey Manager
Isaac Kennedy
Surveyor - MTE
Sam Williams
Tunnel Survey Manger
Ben McLellan
Surveyor - KRD
Greg Horne
Senior Surveyor - NAL
Morgan Oakley
Surveyor - AOT
Sam Cox
Surveyor - KRD Tunnel (SBI)
Morne Hennings
Surveyor - KRD Tunnel (SBI)
Chaminda Wijekoon
Assistant Surveyor - KRD Tunnel (SBI)
Darrell Wymer
Senior Surveyor - MTE Tunnel (SBI)
David Ellacott
Surveyor - TBM Tunnel (SBI)
Tom McAuslan
Surveyor - TBM Tunnel (SBI)
Wesley Hilderth
Assistant Surveyor - MTE Tunnel (SBI)
Chris Stander
Surveyor - MTE Tunnel (SBI)
Mikhail
Assistant Surveyor - KRD
Dean
Surveyor - KRD
Thamiras Silva
Assistant Surveyor - MTE (Vinci)
Yupeng Xu
Surveyor - NAL
Przemyslaw (Shem) Skory
Surveyor - AOT
Sabbir Ahsan
Assistant Surveyor - AOT
Jonathan
Assistant Surveyor - AOT (SBI)

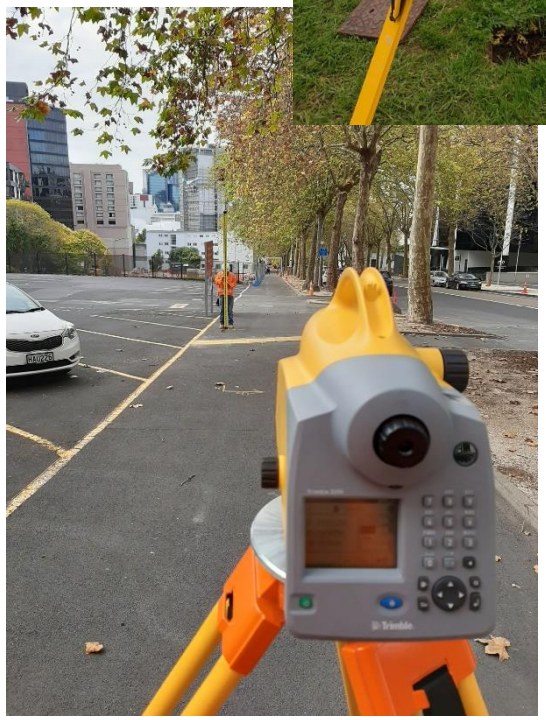
Atrium Carpark
Enter Here
CROWNE PLAZA

Gear

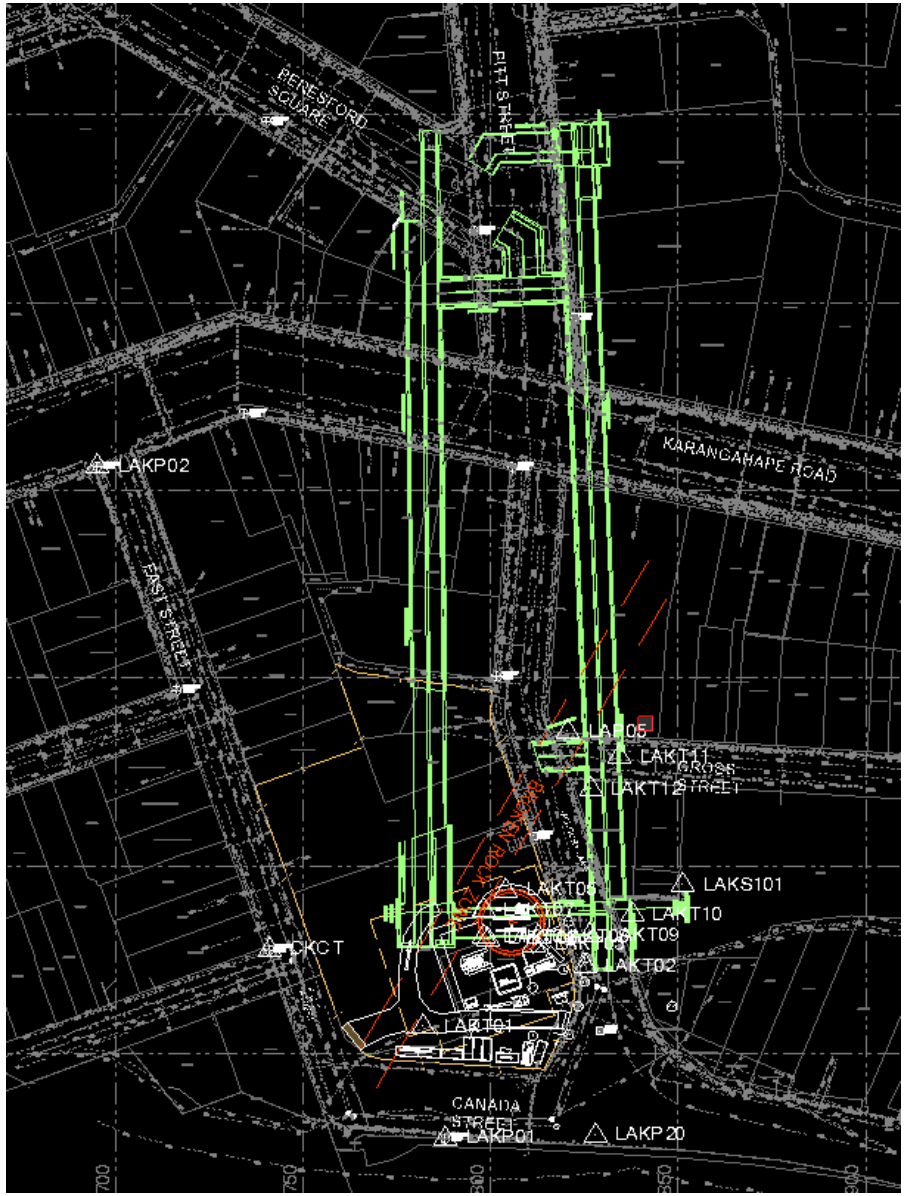
The Primary Control Network



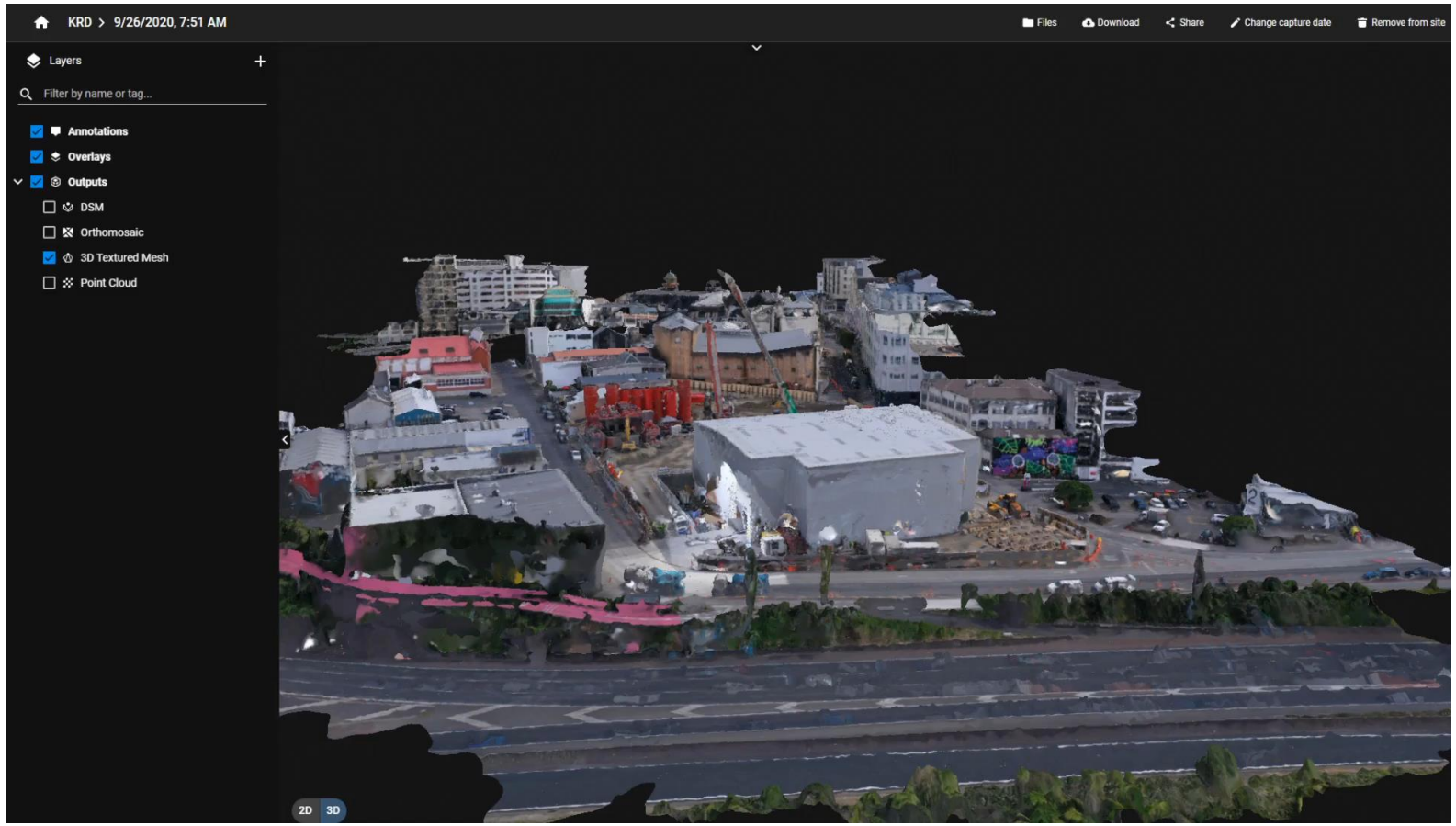


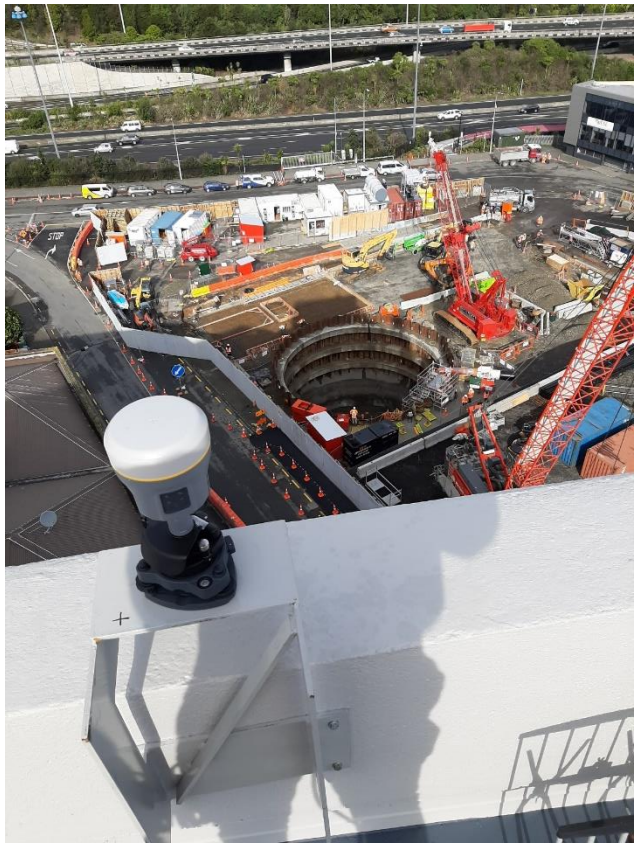


Control Down a Shaft

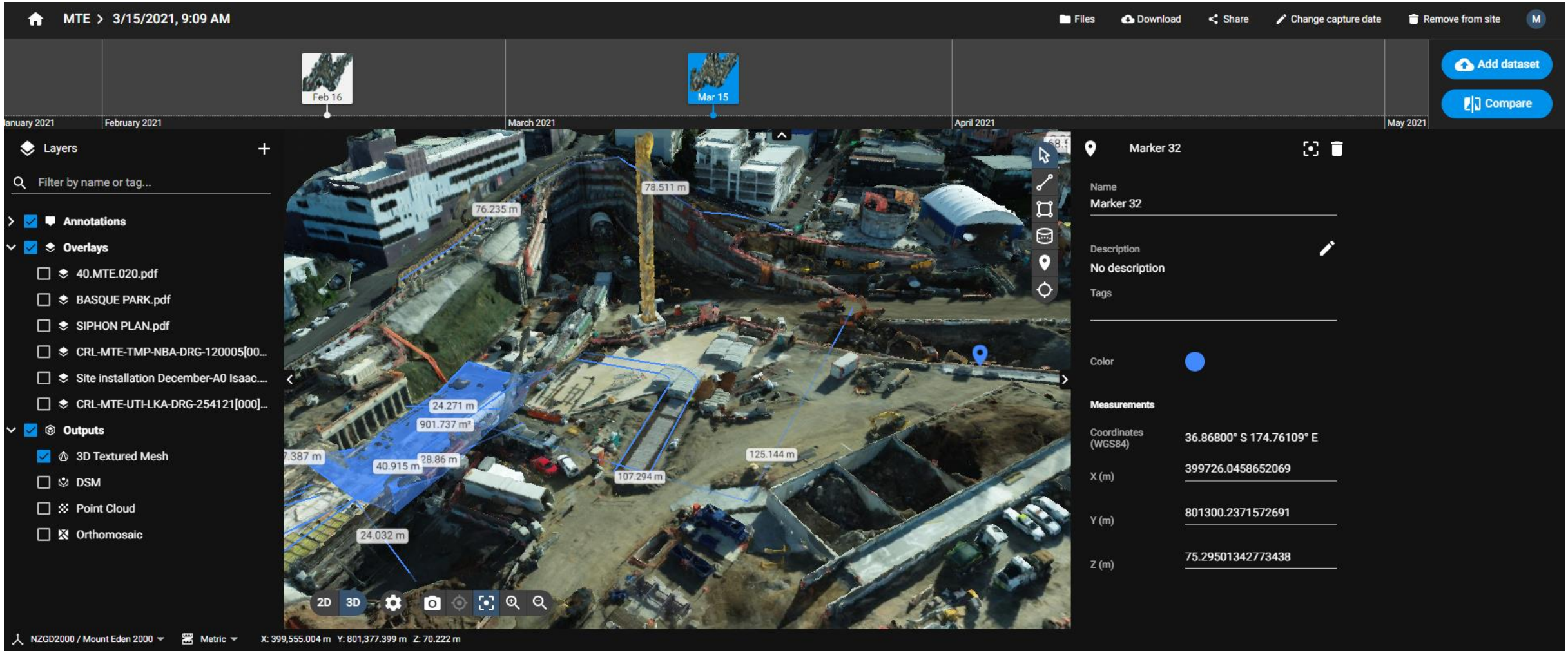


Control Down a Shaft





Drone Data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Remove from site
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Add dataset
Compare
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Mar 15
January 2021
February 2021
March 2021
April 2021
May 2021
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Annotations
Overlays
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BASQUE PARK.pdf
SIPHON PLAN.pdf
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Point Cloud
Orthomosaic
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125.144 m
24.032 m
2D
3D
Marker 32
Name
Marker 32
Description
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Color
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Y (m)
801300.2371572691
Z (m)
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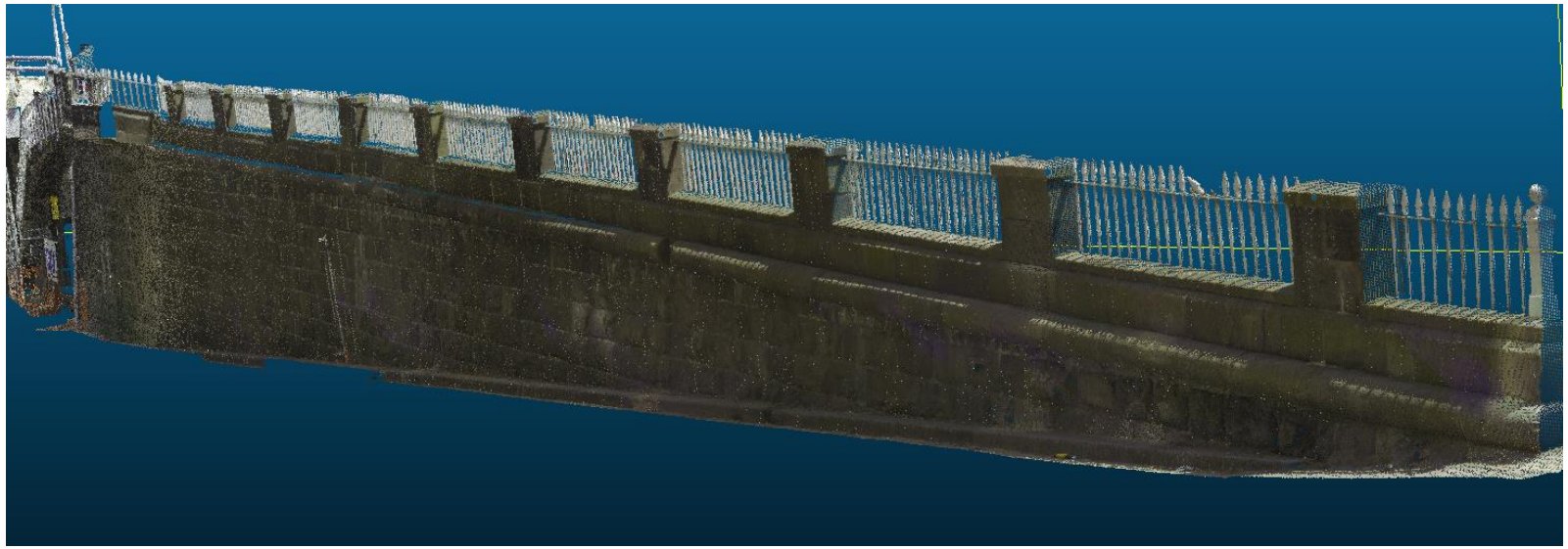
NZGD2000 / Mount Eden 2000
Metric
X: 399,555.004 m Y: 801,377.399 m Z: 70.222 m

Drone Data

Compare mode
Split horizontally
Split vertically
Share
Exit compare mode
1
12/6/2019
Overlays
Annotations
Outputs
DSM
Orthomosaic
3D Textured Mesh
Point Cloud
2
3/15/2021
Annotations
Overlays
Outputs
3D Textured Mesh
DSM
Point Cloud
Orthomosaic
City Side Baptist Church
Burleigh St

3D Scanning



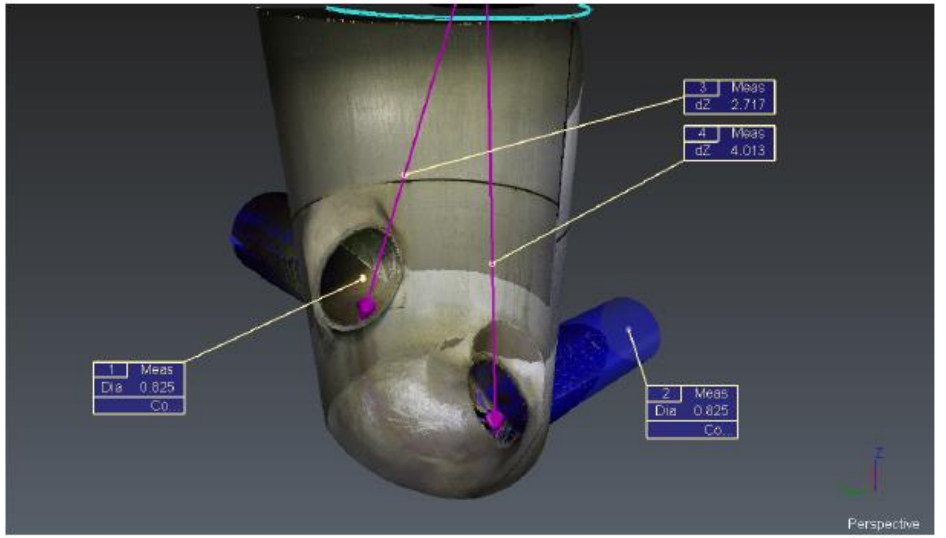
3D Scanning

SWMH - 2000680923

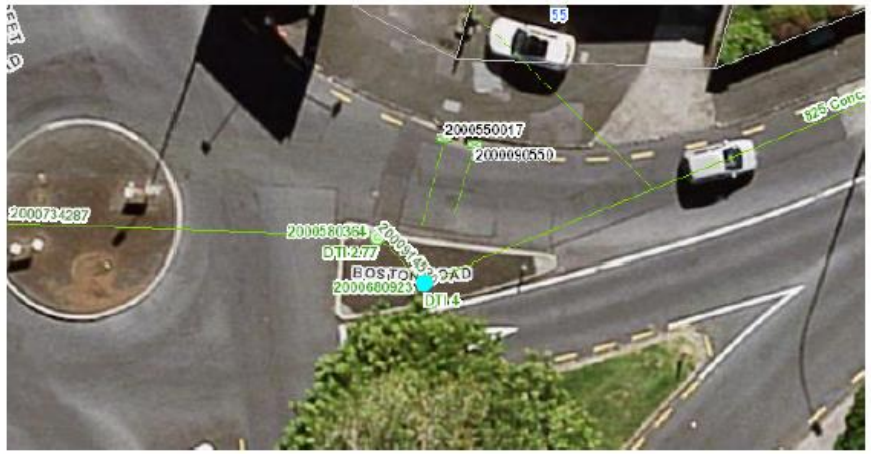
Date Scanned 29/07/2020

name	Meas Dia (m)	Comment
Inlet Diameter	0.825	Concrete
Outlet Diameter	0.825	Concrete

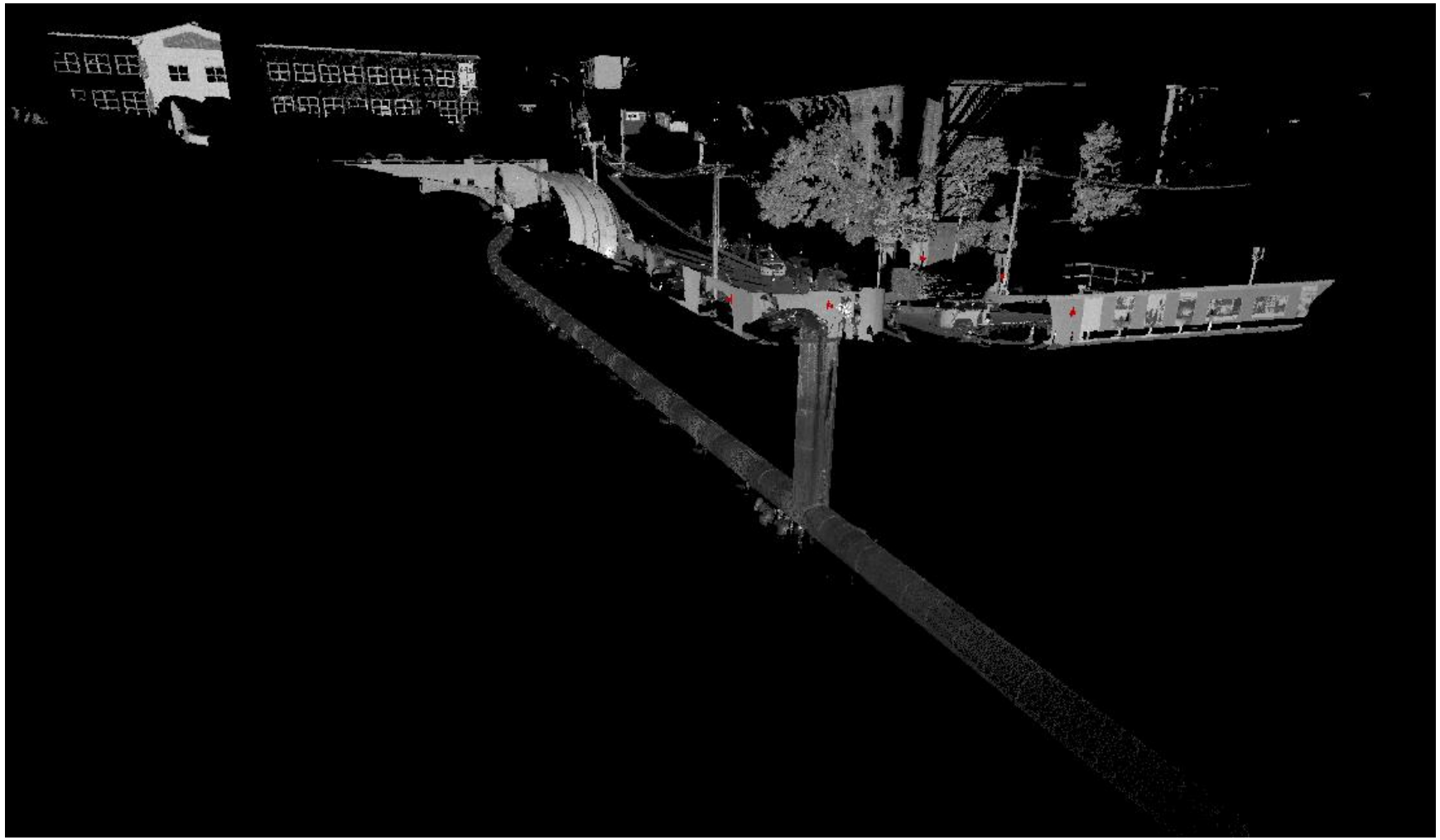
name	Meas dZ (m)
Depth To Invert - Inlet	2.717
Depth To Invert - Outlet	4.013



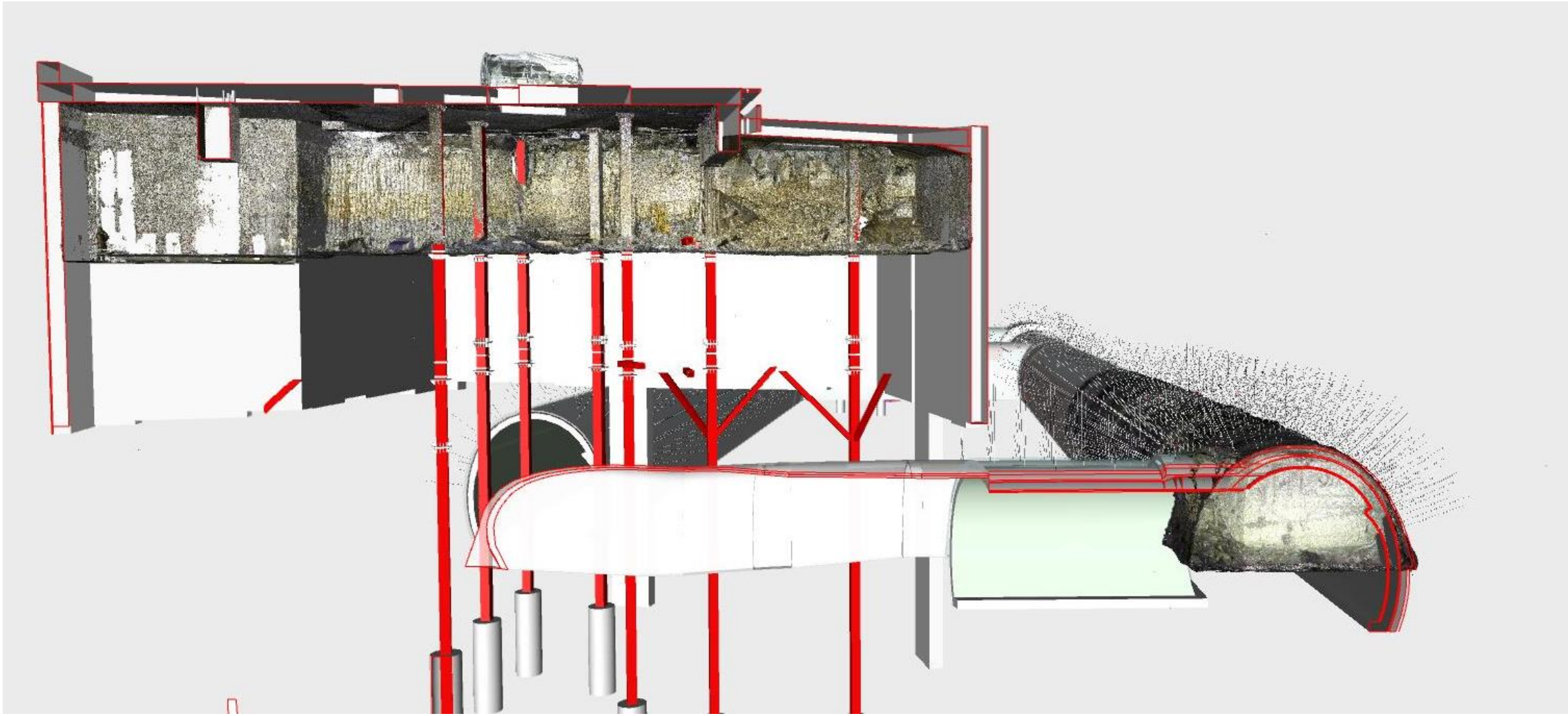
Lid Location: *Easting 399959.135 Northing 801384.948 Elv 70.997*



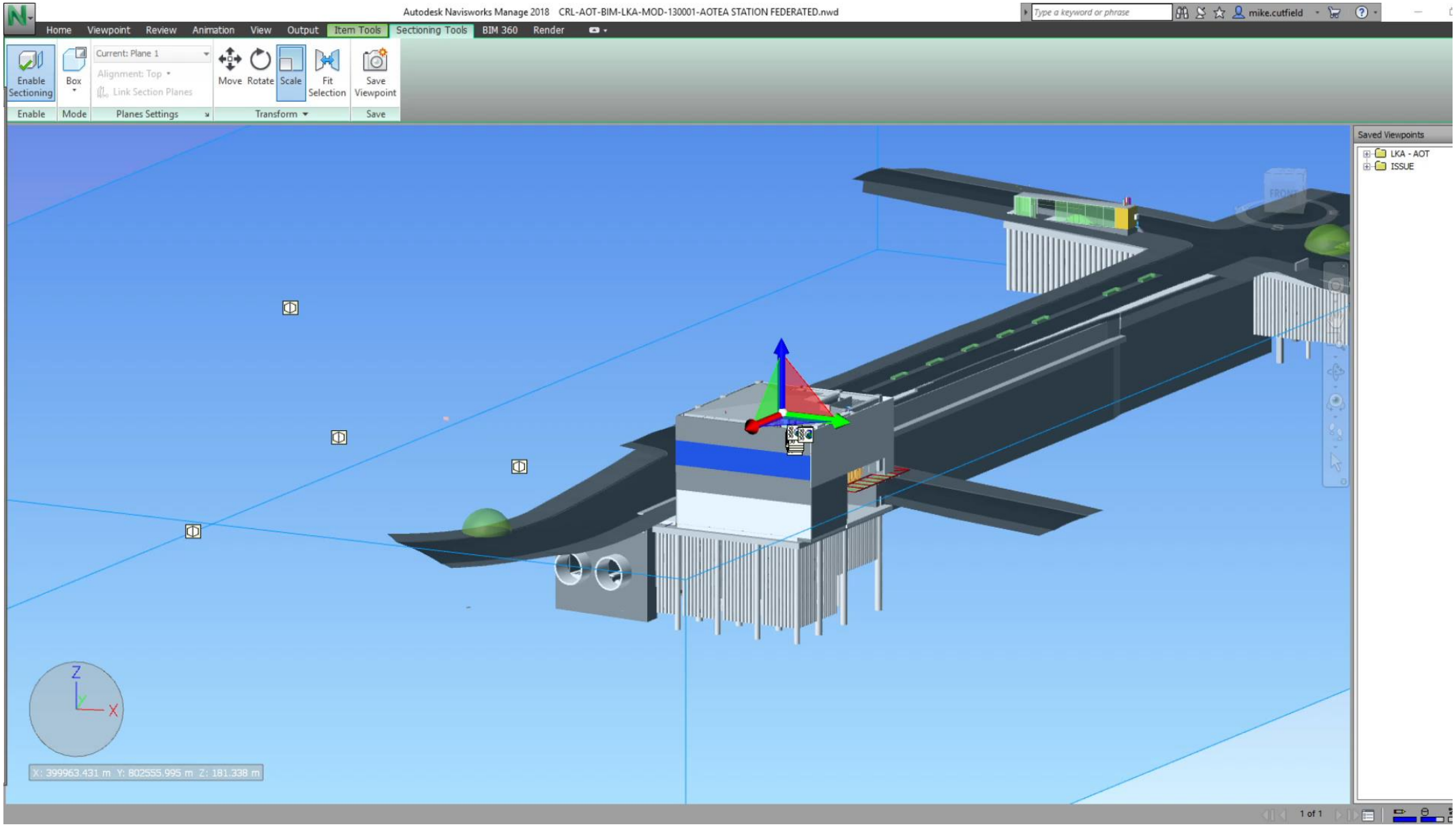
3D Scanning



3D Scanning



The BIM Team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Viewpoint
Review
Animation
View
Output
Item Tools
Sectioning Tools
BIM 360
Render
Enable Sectioning
Box
Current: Plane 1
Alignment: Top
Link Section Planes
Move
Rotate
Scale
Fit Selection
Save Viewpoint
Enable
Mode
Planes Settings
Transform
Save
Saved Viewpoints
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Z
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X
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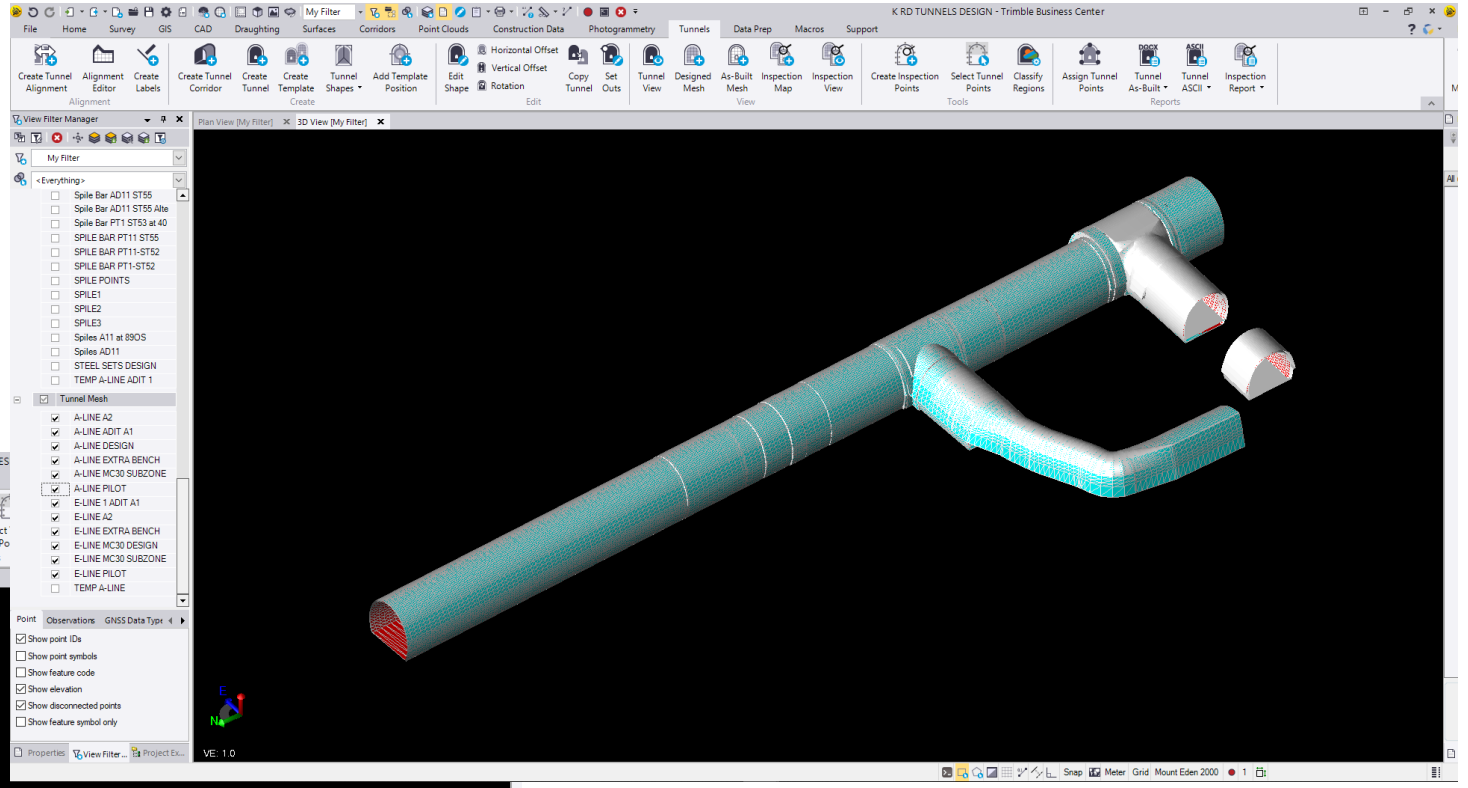
1 of 1

The BIM Team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File Home Survey GIS CAD Draughting Surfaces Corridors Point Clouds Construction Data Photogrammetry Tunnels Data Prep Macros Support
Create Tunnel Alignment
Alignment Editor
Create Labels
Create Tunnel Corridor
Create Tunnel
Create Template
Tunnel Shapes
Add Template Position
Edit Shape
Horizontal Offset
Vertical Offset
Rotation
Copy Tunnel
Set Outs
Tunnel View
Designed Mesh
As-Built Mesh
Inspection Map
Inspection View
Create Inspection Points
Select Tunnel Points
Classify Regions
Assign Tunnel Points
Tunnel As-Built
Tunnel ASCII
Inspection Report
View Filter Manager
My Filter
<Everything>
Spile Bar AD11 ST55
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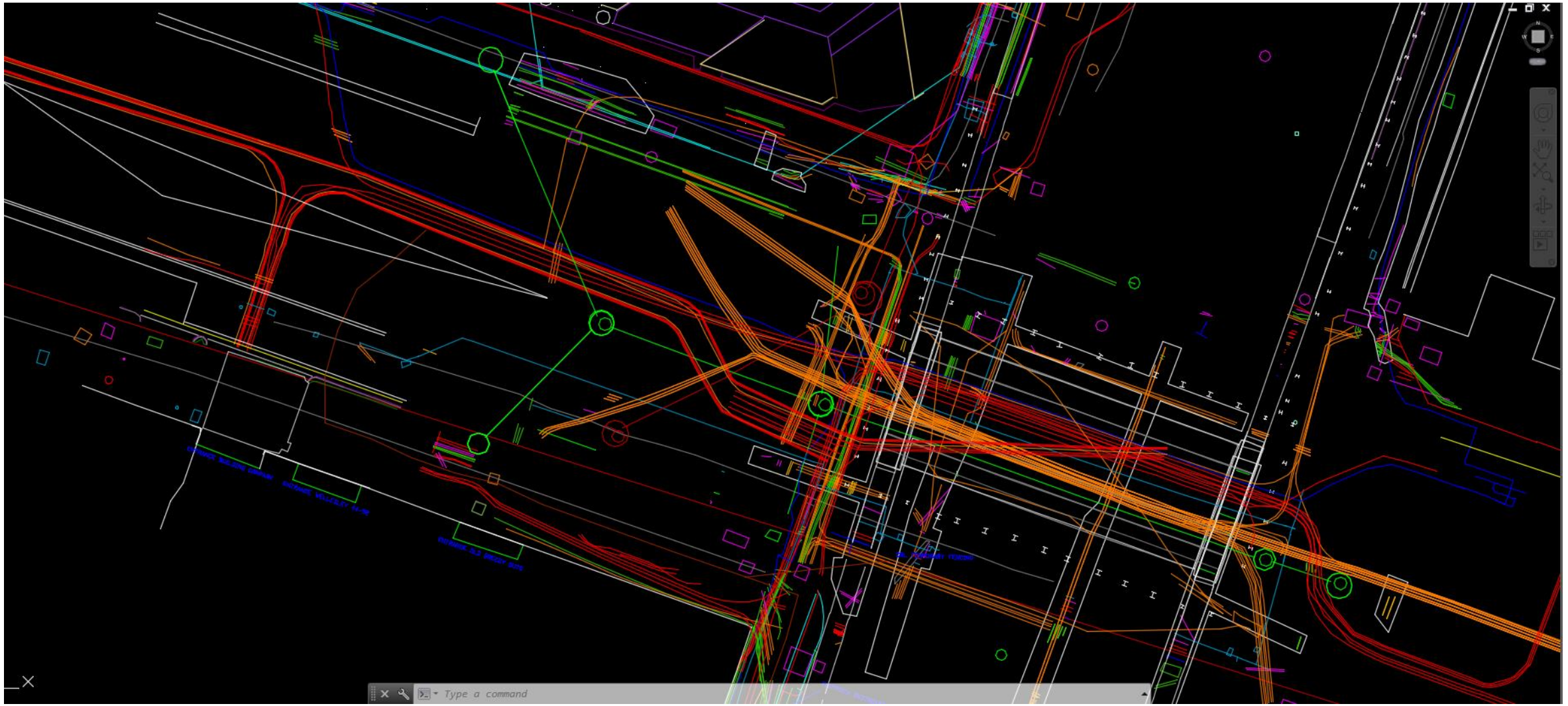
Spile Bar PT1 ST53 at 40
SPILE BAR PT11 ST55
SPILE BAR PT11-ST52
SPILE BAR PT1-ST52
SPILE POINTS
SPILE1
SPILE2
SPILE3
Spiles A11 at 89OS
Spiles AD11
STEEL SETS DESIGN
TEMP A-LINE ADIT 1
Tunnel Mesh
A-LINE A2
A-LINE ADIT A1
A-LINE DESIGN
A-LINE EXTRA BENCH
A-LINE MC30 SUBZONE
A-LINE PILOT
E-LINE 1 ADIT A1
E-LINE A2
E-LINE EXTRA BENCH
E-LINE MC30 DESIGN
E-LINE MC30 SUBZONE
E-LINE PILOT
TEMP A-LINE
Point
Observations
GNSS Data Type
Show point IDs
Show point symbols
Show feature code
Show elevation
Show disconnected points
Show feature symbol only
Plan View [My Filter]
3D View [My Filter]
VE: 1.0
Snap
Meter
Grid
Mount Eden 2000

The BIM Team



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