CHCH INFRASTRUCTURE REBUILD

COORDINATION WITH CORRIDOR MANAGERS AND UTILITIES

GITA Forum Sydney 2014



•SCIRT 101 and update

•Coordination of SCIRT activities with Corridor Managers and Utilities

•NZUAG Code of Practice and SCIRT Utilities Best Practice

•Next Steps/Questions

















September 2010 7.3 - IRMO





"That was lucky, it could be a lot worse"......















February 2011 – Magnitude 6.3 + GFA of 1.5G



























Roads and Structures

























What you went (or still go) home to after work









Everybody has a story to tell

















DOWELL



February 2011



Scale of Rebuild – Geospatially to scale















DOWELL



Betcher

WW Structural Damage



Who is SCIRT?



What are we doing?

"Creating a resilient infrastructure that gives people security and confidence in the future of Christchurch"

- Rebuilding the damaged roads, fresh water, wastewater and storm water networks.
- Return of "Whole of Network" to pre September 2010 condition in terms of:
 - Level of Service
 - Remaining Asset Life
 - O & M Cost
- Coordinating and Collaborating with Utilities to maximise efficiencies and minimise disruption













SCIRT Project lifecycle



Project Pipeline – 30th October 2013



Programme



Legacy for Christchurch City Council

- Detailed understanding of Networks robust data for asset location and condition of all utilities
- Up to date Network models and performance data
- Well informed Network operations, maintenance and renewals programmes
- Lifting the bar for industry best practice

Christchurch 🧹

 Upskilled construction workforce – Improved H & S Culture

NZ TRANSPORT AGENCY

citu/care





Status of rebuild programme – June 2014



Progress by asset type











Fulton Hog





SCIRT and CCDU Anchor Project Programs

http://strongerchristchurch.govt.nz/works

http://progressmap.ccdu.govt.nz/















CERA, Christchurch City Council and NZTA have endorsed SCIRT's Minimum Standards and Best Practice in relation to Utilities:

•Ensures all horizontal asset owners are working together to provide resilient and cost effective infrastructure for the people of Christchurch;

•Provide the efficiency gains and cost benefits

•Minimise disruption to businesses and residents

•Facilitate above grade streetscape improvements and maintenance.















Fletcher

BAU in design and construction or Step Change?

BAU prior to 2012



\$6m per annum in contract variations involving utilities
+\$1m per annum in direct cost of service strikes
<u>+ ??m</u> per annum in disruption to residents and businesses
>\$7m in direct cost and disruption.

Is this the way to create resilient infrastructure that gives people security and confidence in the future of Christchurch?

A Step Change was required









city¢care \Downer





How does my project interact with others?



Canterbury Spatial Data Infrastructure (SDI)

All organisations require high quality, up to date information on <u>all</u> current and planned infrastructure and building construction, repair and maintenance activities.

The LINZ SDI project provides the platform for this.

















Forward Works Coordination

http://www.forwardworks.co.nz



How does the Viewer help me?



- Better able to offer valuable advice to partners and stakeholders
- Increase efficiency
- Working faster, cheaper, and better.

The Viewer for Engineers and Architects



- Maintain and improve safety
- Maintain efficiency
- Understand project impacts
- Solve problems early, before impacting on budget and time
- Trust that the system is secure.

NZUAG Code of Practice – a solid legislative framework

Facilitates best practice with a framework covering

- •Safety
- •Consistency,
- •Efficiency,
- •Quality
- •Working together
- •Equity and fairness



SCIRT Utility Best Practice and Minimum Standards supplement the code by focusing design and construction teams on the detail required to fully deliver on code requirements.













Roles and Responsibilities



Purpose: Define roles and responsibilities of each party to meet their obligations under the section 2 of the NZUAG COP

IST (Principle)	 Utilities Management plan, Best Practice and Minimum Standards . Monitoring Design Organisation and Delivery Team performance in relation to variations and service strikes Ensure Utility Operator compliance with the Code
Designer (Consultant)	 Providing thorough utility clash analysis and document result of utility investigations as part of detailed design report - Proactive use of Service plans in the design process. Proactive early engagement with the Utilities involved for their input Considering constructability issues as well as design requirements Proactively engage with Delivery Team for their input.
Delivery Team (Contractor)	 Early Involvement in the project and proactive engagement with the design team to achieve a best for project outcome in relation to utilities Engaging early with relevant utilities for their input Accurately locate and provide adequate protection to utilities using industry best practice guidelines and where necessary, engaging an appropriate service provider.
Utilities	 Providing up to date and accurate as built records of their network (including known redundant services) Provide technical assistance to designers and delivery teams to locate services. Provide technical assistance to designers and delivery teams in design and construction methodology to protect or relocate services.













SCIRT Utilities Best Practice and Minimum Standards

Created with input from Design Organisations, Contractors, Survey Professionals, Corridor Managers and Utility Operators

•Joint Strategy and Operational working groups – URP, UOG

•Best Practice for Hydro excavation

•Best Practice for Subsurface Utility Location

•Minimum Standard for Design Organisations

•Minimum Standard For Contractors

















SHARED TRENCH OPPORTUNITIES









SHARING ROADSPACE AND TTM



















Rollout NZTA Utilities minimum standards.(SUI)



- Consistent application of minimum standards across design ${\color{black}\bullet}$ organisations and delivery teams.
- Continuing to work with NZUAG and support the code.
- Consolidation of FWP tool

Your Questions??









#Downer



Fulton Hoge



Fletcher