



Survey Consulting Services for Orange County, California: Orange County Partnered with MNC to Support the Modernization of Digital Survey Plan Checking

From 2018 to 2023, **MNC (Martin Newby Consulting Ltd.)** provided consulting services to Orange County Public Works in California, supporting the County's efforts to modernize its survey plan review and land records management processes. The County Surveyor manages thousands of survey-related records and required a more efficient, accurate method to support

parcel creation and validation based on written Metes and Bounds (M&B) descriptions.

MNC played a key role in supporting the County's transition from manual workflows to automated digital plan checking systems, helping **streamline operations and reduce approval timelines.**



CHALLENGE

Orange County's existing survey review process relied heavily on manual data entry and interpretation, introducing the potential for human error and inefficiencies.

KEY CHALLENGES INCLUDED:

- **A manual-intensive parcel validation process** based on M&B descriptions.
- **A need for system interoperability** between AutoCAD (AUTODESK) and ArcGIS (Esri) environments.
- **A lack of automation tools** to validate digital submissions ahead of formal review.

- **Limited internal capacity** to develop technical workflows or applications.

The County Surveyor's office required expert consultation and support to automate geometry creation and validation, reduce staff workload, and improve the accuracy and efficiency of survey plan processing.

SOLUTION

MNC delivered specialized GIS and FME (Feature Manipulation Engine by Safe Software) consulting services tailored to the County's modernization goals.

KEY STEPS IN THE SOLUTION:

CONSULTING & STRATEGIC RECOMMENDATIONS:

- Delivered best practice requirements for online survey plan submissions.
- Advised on integration of FME and ArcGIS Data Interoperability tools for format validation and translation between AutoCAD and ArcGIS environments.

TECHNICAL IMPLEMENTATION & SUPPORT:

- Developed custom scripts and extensions to enhance existing FME/ArcGIS Data Interoperability functionality
- Provided on-demand technical support and training for County personnel managing new workflows
- **For more background on this initiative, see:**
 - *Decades of Innovation by Orange County* – Esri ArcUser Article
 - Esri UC On-Stage Presentation

PARCEL CHECKER APPLICATION DEVELOPMENT:

MNC, as the primary contractor for the project with Orange County, partnered with Silvacom CS to develop the Parcel Checker tool, a cloud-based application that enables surveyors to validate plans prior to submission.

- **Simplified the approval process** through automated file checks.
- **Enabled users to identify and resolve issues** before formal review.
- **Supported faster, more accurate submissions** using an intuitive interface.



Parcel Checker

Welcome back

New to Parcel Checker? [Create an account.](#)

Remember for 30 days

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LOG IN

Providing instant validation and feedback about your project.

Ensure your plans get a passing grade.

The screenshot displays the Parcel Checker application interface. It features a central map view with red lines indicating a parcel boundary. Overlaid on the map are several data panels:

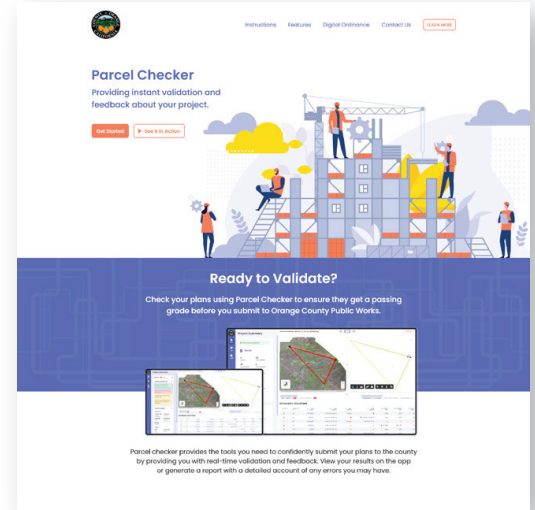
- Project Summary:** Shows 'Parcel 1' with 'Meters and Bounds' (1,646,783, 3,75e+4) and 'Closure Report' (Segments: 0.00309, 1.6489715; Labels: 207, 1973.591).
- Dimension Line Check:** A table with columns for 'LINE #', 'AREA #', 'LINE', 'LENGTH', 'PERIMETER', 'AREA', 'PERCENT', and 'STATUS'. It lists 11 lines with their respective measurements and status indicators (green for pass, red for fail).

MNC's consulting services and collaboration with Silvaicom CS delivered tangible improvements in efficiency, data accuracy, and user satisfaction.

KEY BENEFITS INCLUDE:

- **Reduced time and costs** associated with survey plan approval.
- **Fewer rejections** due to pre-submission file validation.
- **Increased automation** and standardization across plan review workflows.
- **Enhanced capacity for staff** through ongoing training and process improvements.

By combining geospatial expertise with practical implementation, MNC helped deliver a sustainable, future-ready solution that continues to support the County Surveyor's evolving needs and long-term modernization goals.



Reduced
Time and
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Fewer
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Increased
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Enhanced
Capacity

MNC SERVICES & TECHNOLOGY USED

SERVICE CATEGORIES:

- Needs and Requirements Analysis
- GIS Strategy and Planning
- Data Conversion and Migration
- Training and Support Services
- Digital Plan Submission
- ArcGIS Services
- Geospatial Development

TECHNOLOGY PLATFORM & TOOLS:

- ArcGIS (Esri)
- FME (Safe Software)
- AutoCAD (Autodesk)



CONTACT US TODAY to discuss your geospatial needs.

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ABOUT MNC
The Cadastral and
Parcel Mapping
Experts



MNC is a trusted leader in cadastral and parcel management with 25+ years of experience delivering GeoAI-ready datasets, modernizing parcel fabrics, and automating GIS workflows. As an Esri Gold and Cornerstone Partner with a Parcel Management Specialty and State and Local Government Specialty, MNC provides scalable advanced GIS, ArcGIS Pro, FME automation, MicroStation, AutoCAD and cloud-ready geospatial systems that improve data quality and support government land administration modernization across Canada, the USA, and the Caribbean.





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