The following is the list of important functions identified by the Oregon Assessor's Cartographers and the State/County GIS technical GIS staff. The functions and priorities were developed through a series of meetings with technical staff and cartographers in the early 2000's and are periodically reviewed and updated. The functional list has been used by GIS technical staff (ORMAP Tools Committee) to guide development of specialized tools to support these functions. The following is a summary of how well the prioritized functions can be supported by ESRI's ArcGIS Pro and ProFabric. ***<u>This is a preliminary review and needs a more systematic review.</u>***

Tool	Priority	ArcMap	ProFabric
1. Taxlot Assignment Tool	1	X+	X (Sequential Numbering)
2. Set Rotation Angle Constant Tool	1	Not Used	X
3. Rotate Features Tool	1	X-	X-
4. Taxlot Locate Function	-	X+	X (Locate Tool)
5. Map Location Function	-	X+	X (Locate Tool)
6. Taxlot Combine Tool	1	X+	X (Merge)
7. Line Split Direction Function	3	X	X (Divide)
8. Add Spiral Curve Tool	2	-	X (Create Circular Arcs)
9. Stationing Tool	3	-	X
10. Station Update/Control Tool	3	-	X
11. Offset From Station Tool	3	-	X--
12. Add Arrow/Hook Tools	3	X+	?
13. Cross/Intersect	4	X(Intersect)	X (Line Intersect)
14. Inverse Tools	4	X(Report)	?
15. Area Calculation	4	X+	X
16. Widen	4	-	X (Copy Parallel)
17. Map Index Tool	1	X+	X (Script)
18. Subdivision Tool	4	Not Used	X (Task Manager)
19. Plat Number Tool	4	Not Used	X (Sequential Numbering)
20. Segregation Wizard **	-	Not Used	X (Divide)
21. Display Help	1	X+	--
22. Initialization Menu	-	X+	--
23. Traverse Tool	1	X	X- (Traverse)
24. Bearing/Bearing/Distance Tools	1	-	X-
25. Automatic Annotation Tool	1	X+	X (Script)
26. Feature Metadata	1	X+	X (Script)
27. Update Feature from Map	1	X+	X (Script/Task)
28. Area Report	1	X+	?

    **   May not be needed and not requirements not documented.
    +   ORMAP tool (customized application developed)
    -     Missing moderate to minor functionality
    --   Missing major functionality
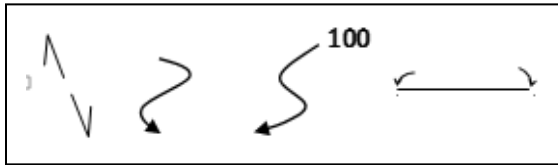   O   Not Available
    ?   Unknown

Tool Description and Potential ArcGIS Pro Fabric Solution

1. **Taxlot Assignment Tool:** To quickly and easily assign all taxlot values to taxlot polygons. Taxlot values can be incrementally assigned. This is a procedural tool that leads the user through a process. The procedure also requires entry to a form and mouse manipulation.
   Pro Solution: Pro has a general tool for selected features to incremental calculate values for a specific attributes. This tool can be used to assign taxlot numbers.

2. **Set Rotation Angle Tool:** To quickly and easily identify a rotation angle to apply. This will be applied to the rotation constant or to rotate selected features.
   Pro Solution: Appears to work fine for setting the constant.

3. **Rotate Features:** To quickly and easily identify a rotation angle to apply. Selected features will be rotated.
   Pro Solution: Rotating appears to be done BUT unknown if rotating using attributes from a selected line. This is used to rotate back to a known basis of bearing. You cannot rotate using a quadrant bearing OR rotate to an attribute associated with a line. (Need to rotate a record to the original basis of bearing to do additional work).

4. **Taxlot Locate Function:** Prompt user for mapnumber (from pull down) and enter taxlot number. Zoom to selected taxlot.
   Pro Solution: Locate tool seems to work (has a bug and a workaround)

5. **Map Location Function:** To find and zoom to a selected map number. Prompt user for mapnumber and zoom to that map.
   Pro Solution: Locate tool seems to work (has a bug and a workaround)

6. **Taxlot Consolidation (Combine) Tool:** To quickly and easily consolidate multiple taxlot features into one new account. This is a macro that will perform several actions after initial menu entry is complete. It will only combine taxlots from one map and does not cross map boundaries. Inputs are the selected taxlots. Outputs are a single taxlot, deleted old taxlot annotation, labels, and taxlot lines. Creation of historic taxlot lines.
   Pro Solution: Fabric has a MERGE tool.

7. **Line Split Function:** Split a line at a known distance. But… will be smart enough to know which end to split from. The issue is that historically the user does not know what direction the line is going so does not know what value to enter.
   Pro Solution: Appears to be done.

8. **Spiral Curve:** To generate a line with spiral curve information and to save the spiral information for later use.
   Pro Solution: Appears to be done.

9. **Stationing Tool:** This application will require a change to the database. It will require additional information to be added to the **point** feature class and the line feature class. The macros will created attributed station points, annotation at ends of existing edges and update line feature classes.
   Pro Solution: Appears to work

10. **Station Update/Control Tool:** To update any stationing information assigned to a line feature class to create points with station information.
    Pro Solution: Unknown

11. **Offset From Station Tool:** For selected lines with stations the tool will create offsets and connect them using distance along a line or collection of line. It will also allow the user to save the information to file.
Pro Solution: Appears to work to create perpendicular lines and points but does NOT create a offset line.

12. **Add Arrow/Hook Tools:** Quickly create arrows, dimension arrows, and land hooks.

    Pro Solution: It appears that this will need to be converted from ArcMap or we could explore moving to ArcPro Dimensions.

13. **Cross/Intersect:** Cross/Intersect two lines ignoring intersections with other lines. Uses the old Arc/Info cross command.
Pro Solution: Line Intersect appears to work and updates the CoGo Record Attributes.

14. **Inverse Tools :** Counties use several tools based around the inverse button. None really operate like the Arc/Info"Inverse Command" or CoGo Report in ArcMap. Several alternatives exist for interfaces and button calls. It appears that the ArcMap Cogo Report addresses most of these issues.
    - Add a 2point line, calculate & display inverse, ask if user wants to change it. If so change it and place inverse info in record.
    - Like above only get inverse from a line prior to starting. (like old join command).
    - Display the calculated inverse between two points.
    - Display the calculated and record inverse for a line. This is like the old Arc/Info Report command.
    Pro Solution: Not Sure

15. **Area Calculation Tool** Calculates area of a closed polygon based on record information and stores the information with the polygon.
Pro Solution: When a parcel is created the attribute is saved. Not sure if closure for each is saved.

16. **Widen Tool:** Create new lines using the old Arc/Info "WIDEN" command. This is NOT a copy parallel and as a measurements construction tool where CoGO attributes are modified based on the copy.
Pro Solution: Copy Parallel works and updates cogo attributes

17. **Map Index Tool:** To update or add map information to the map index polygon feature class
Pro Solution: Several tools exist for updating MapIndex attributes but will need to be modified with arcade or python.

18. **Subdivision Tool:** To enter or update subdivision information.
Pro Solution: Task/Script could be easily setup. ALSO much of this information will be collected as attribute to a Fabric Record.

19. **Plat/Lot Number Tool:** To automate the process of assigning plat information.
Pro Solution: Pro has a general tool for selected features to incremental calculate values for a specific attributes. This tool can be used to assign taxlot numbers.

20. **Segregation Wizard:** A Segregation tool could be developed but may be too complex to fit into a pre-defined process.
Pro Solution: Fabric has a Divide parcels tool. Not tested yet.

21. **Display Help Tool** To display help files stored as RTF's inside a scrolling window. Rather then develop special controls for help files or develop an index for help files it would work well to view an RTF in whatever native mode RTF viewer the user has on their computer. RTF's work well in that they support graphics and are relatively operating system independent.
    Pro Solution: Not needed at this time – will be a custom help script

22. **Set Initial Settings Tool:** To set standard menu settings when application is setup. This is so that each county can assign default settings for values etc for their county.
    Pro Solution: Will need to be a script at some point in the future depending on what macros are written.

23. **Traverse Tool:** Standard tool
    Pro Solution: Has most things we want and appears to generate same results as ArcMap and Arc/Info. Only needs alternatives for closing.

24. **Bearing/Bearing/Distance:** Create lines with the CoGo attributes after locating to points create two new lines based from a combination of bearing and distances (bearing/bearing – bearing/distance – distance/distance)
    Pro Solution: Part of the CoGo Traverse Tool. Does not currently appear to create line features with CoGo attributes only can be used to create a new point.

25. **Annotate Tool:** To quickly and easily annotate lines with record measurements (bearing, distance, etc)
    Pro Solution: Unknown

26. **Feature MetaData:** Track who put data in, how good it is and when they did it and for selected features what map and mapscale it is associated with.
    Pro Solution: Feature Metadata information is built into ArcGIS Pro. Caclulating mapnumber and mapscale will require arcade, attribute rules, or something else.

27. **Update Features From Map:** Update mapscale and mapnumber for specific features based on them being inside the boundary of the map when adding or moving features.
    Pro Solution: A number of different tools exist in Pro to assist in this happening. .

28. **Area Report:** Produce a report for each taxlot in a record (plat/subdivision) that includes the map area, closure and record area.
    Pro Solution: Unknown