

# ROUTE MAPPER Ai

Autodesk C3D-Map Software

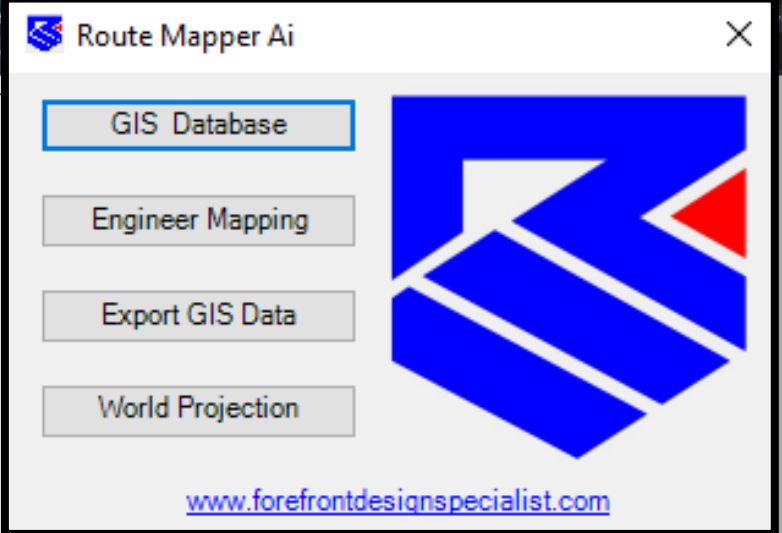


2D-3D CENTERLINE ROUTE  
SHEET-MAPPING SOFTWARE  
AUTO-DESIGN-BUILD-MANAGES  
CONSTRUCTION & AS-BUILT DRAWINGS



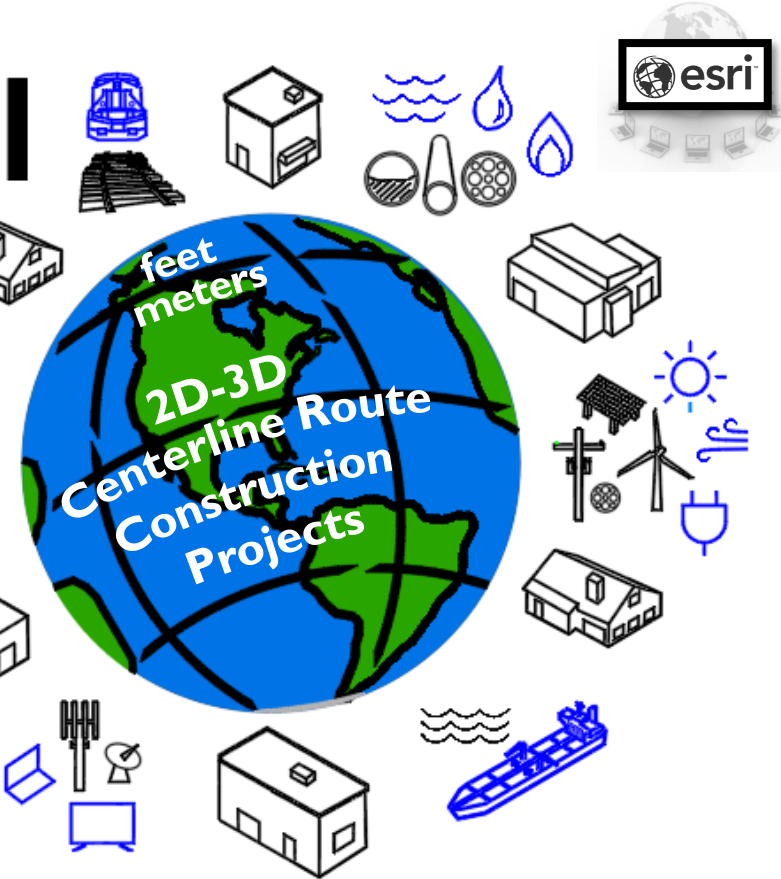
Expert Civil & Mechanical Engineering Design Tool

# ROUTE MAPPER Ai Software for



**AUTODESK** C3D MAP  
*Supports Autodesk C3D-Map Versions 2018-2050*

# Residential Industrial Commercial Government

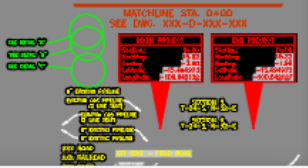


Advance route optimization technology. Auto-design-build-manages **CAD drawings**, business development project reports, and GIS for the transportation, engineers, environmentalist, surveyors, constructors, and operator projects world-wide.



OPTIONS  
Command:  
Type a command

**THE RESOURCES OF AN ENGINEERING FIRM IN A BOX**



Route Mapper Ai

- GIS Database
- Engineer Mapping
- Export GIS Data
- World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

OWNERSHIP BAND

STATION DESCRIPTION

PLAN VIEW BAND

MATERIAL BAND

PIPE MATERIAL

PROFILE DESIGN

811

ROUTE MAPPER SAVES TIME!

ISSUED FOR REVIEW

PROJECT NAME PROPOSED "X" PIPELINE TO COUNTY, STATE

NO.	CELL	ENTRANCE	NO.	CHECKS/APPROVALS
1	...	...	...	...
2	...	...	...	...

SET CLIENT LOGO HERE

REMEMBER: (UPDATE GENERAL NOTES)

**AUTOMATED CAD DRAWINGS:**

- ❖ ALIGNMENT SHEETS
- ❖ PERMITS
- ❖ DIRECTIONAL DRILLS
- ❖ INTEGRITY SHEETS
- ❖ PLOT PLANS
- ❖ SITE PLANS
- ❖ COVER SHEET
- ❖ INDEX SHEET

**AUTOMATED:**

- ❖ PROJECT MGMT.
- ❖ DASHBOARD
- ❖ PROJECT REPORTS
- ❖ GIS DATA MGMT.

CHECK VERTICAL SCALE BAR

ROUTE MAPPER BORDER SETTINGS

REMEMBER: (UPDATE GENERAL NOTES)

**CIVIL MECHANICAL ENGINEERING DESIGN CONSTRUCTION SOFTWARE**

- Civil Mechanical Engineering Design Software
- Project Development & Project Management
- DOT and FERC Permitting Software
- Faster Construction/As-Built Alignment Sheets
- Faster Permit Drawings
- Faster Directional Drill Drawings
- Faster Integrity Sheets for Hydrology & ILI
- Faster Site Plans / Plot Plans
- Faster HCA-High Consequence Area Maps
- Faster Station Sheets
- Faster Traffic Control Maps
- Faster Weld Maps
- Faster GIS Maps
- Faster Cover Sheets and Index Sheet
- Faster GIS Data Mgmt. & Database Mgmt.
- Live Vendor to Client GIS Migration
- Streamlined Survey Management
- Auto-Business Development Project Reports
- Dashboard for Project Status & B.D. Reporting
- Advance Reroute Technology
- Advance Duplicate Bands Technology
- Advance Band Boundary Technology
- Built with Artificial Intelligence Technology

# ROUTE MAPPER Ai



**RMAi EPCM SOFTWARE**

GIS Database

Engineer Mapping

Export GIS Data

World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

2D  
3D

**ENGINEER MAPPING**

**AUTODESK**

**DRAFTING MAPPING**

DASHBOARD Route Mapper

KMZ

Reports Folder

Centerline Length	Material 1	Material 2	Material 3	Material 4	
42321.44	35927.67	2848.95	2170.39	920.15	
Miles	Parcels	Parcels Closed	Wetlands	Crossings	Pipelines
8.02	37	0	6	138	1
Pipe Size	Directional Drills	Field Bends	Induction Bends	Valves	Welds
12	1	11	33	6	0

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

GeoSpatial Editor

Geospatial Editor

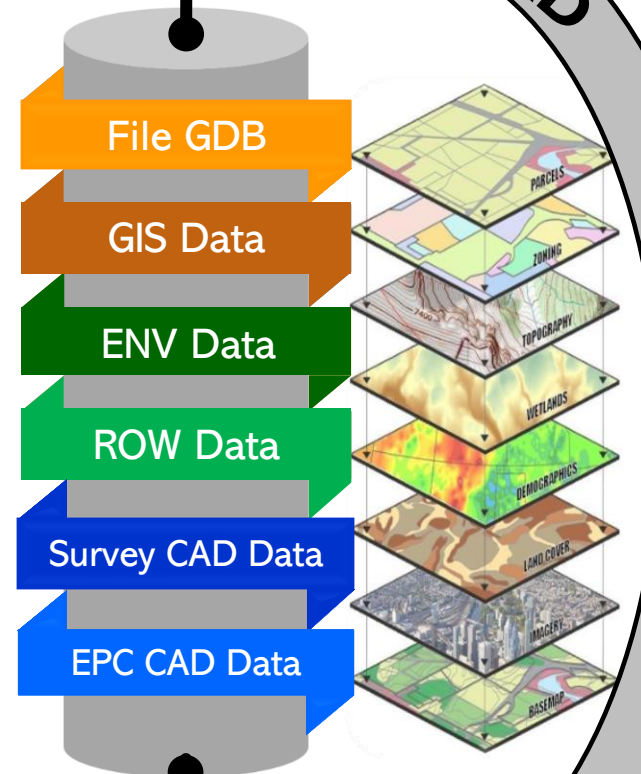
Export GIS Table

Set GIS Data

Export GIS Data

World Projection

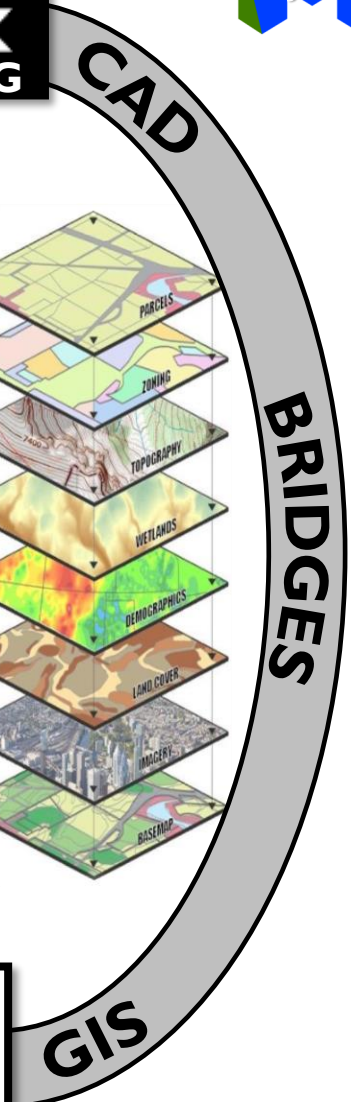
[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)



**GIS**

**esri**

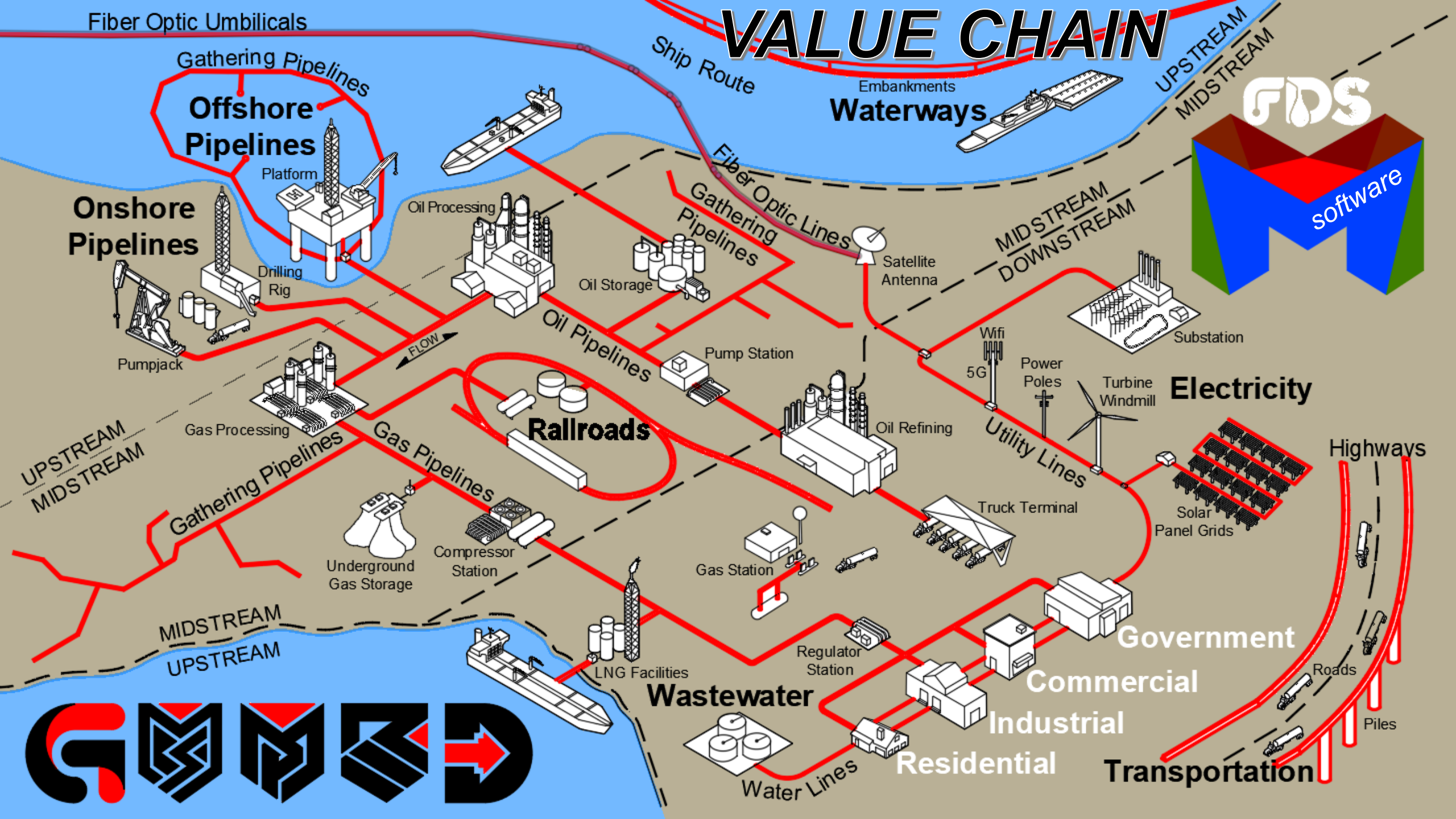
clients data



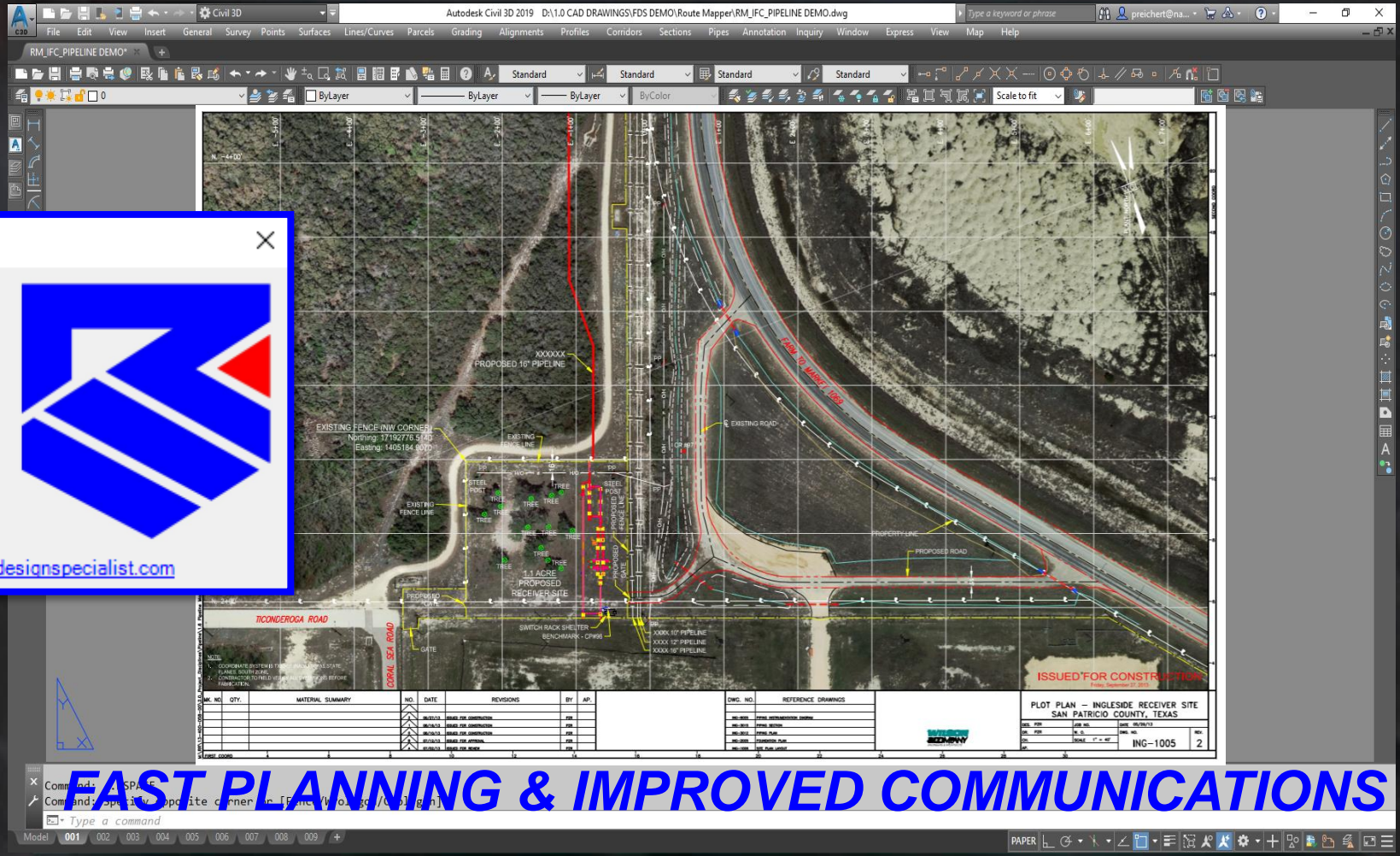
# Trusted by 1000's of Company's



# VALUE CHAIN



# FASTER SITE PLAN DRAWINGS




**Route Mapper Ai**

GIS Database

Engineer Mapping

Export GIS Data

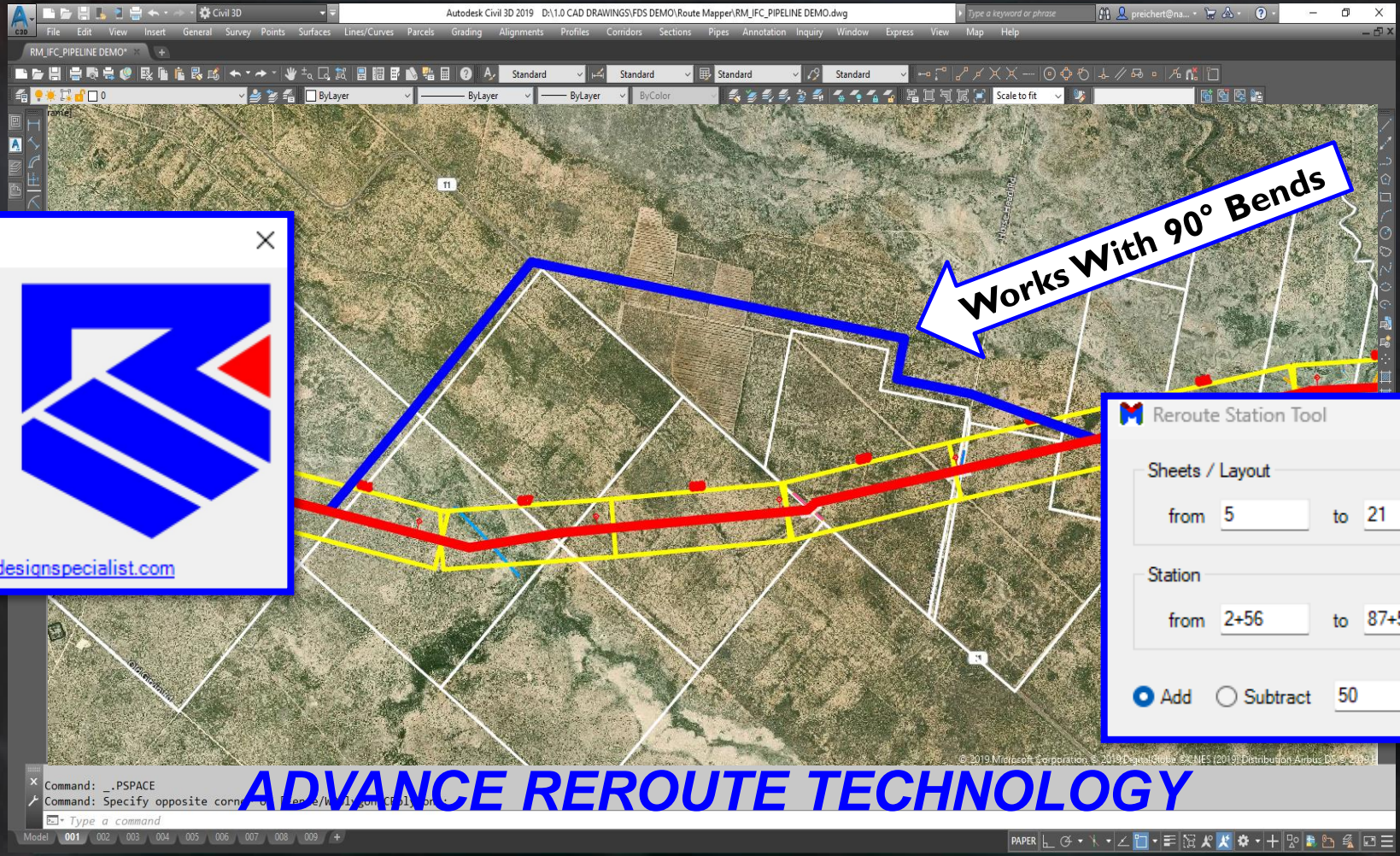
World Projection



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)


**FAST PLANNING & IMPROVED COMMUNICATIONS**

# FASTER ROUTE OPTIMIZATION



**Route Mapper Ai**

- GIS Database
- Engineer Mapping
- Export GIS Data
- World Projection



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

Works With 90° Bends


**Reroute Station Tool**

Sheets / Layout  
from 5 to 21

Station  
from 2+56 to 87+561

Add  Subtract 50

Apply



**ADVANCE REROUTE TECHNOLOGY**



# FASTER IFA-IFB-IFC ALIGNMENT SHEET DRAWINGS

Route Mapper Ai

GIS Database

Sheet Mapper

Export GIS Data

World Projection



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

Ownership Band

Wetland Band

Station Band

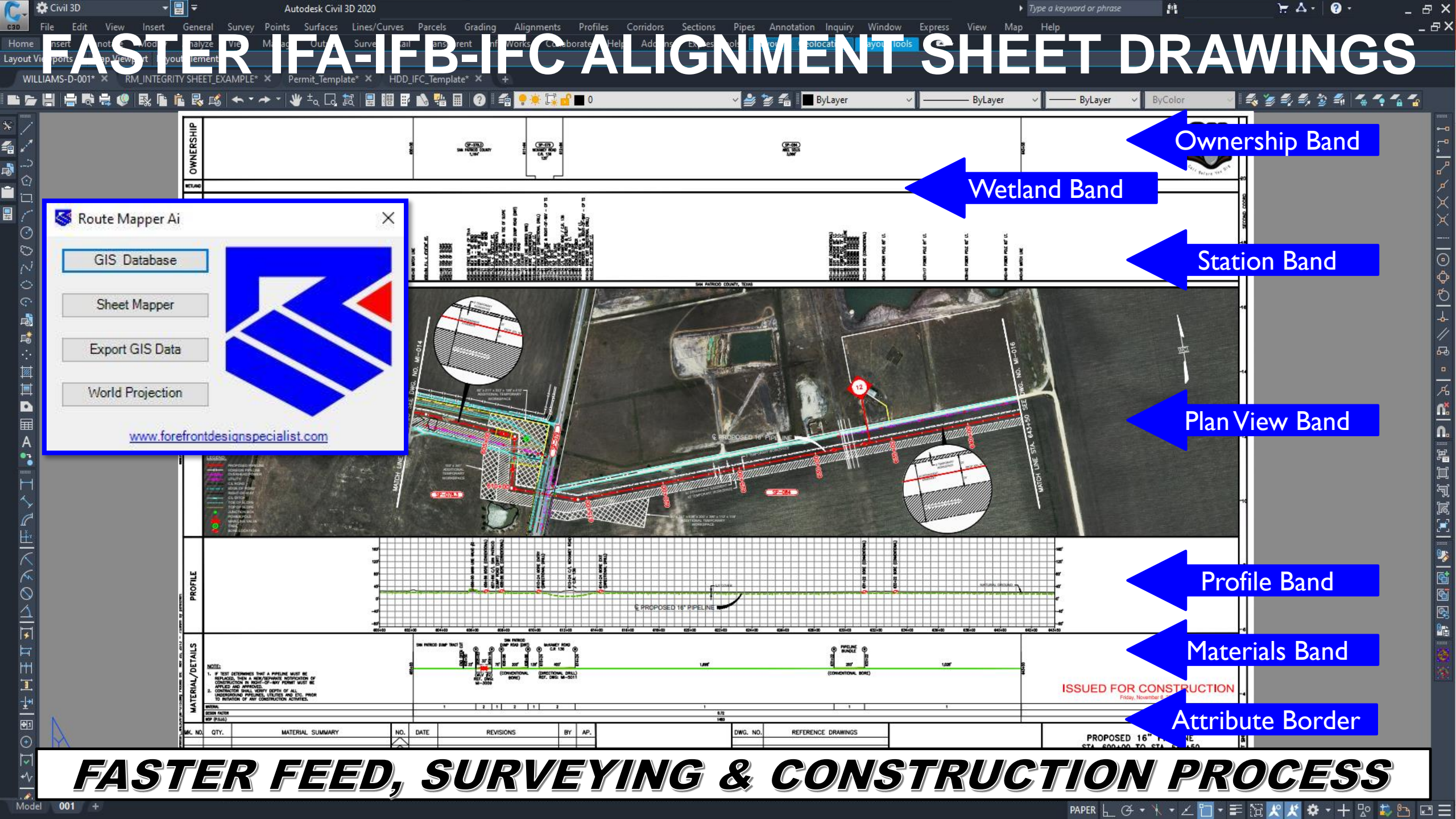
Plan View Band

Profile Band

Materials Band

Attribute Border

# FASTER FEED, SURVEYING & CONSTRUCTION PROCESS



# FASTER AS-BUILT ALIGNMENT SHEET DRAWINGS



Route Mapper Ai

- GIS Database
- Sheet Mapper
- Export GIS Data
- World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

Ownership Band

Weld Band

Station Band

Plan View Band

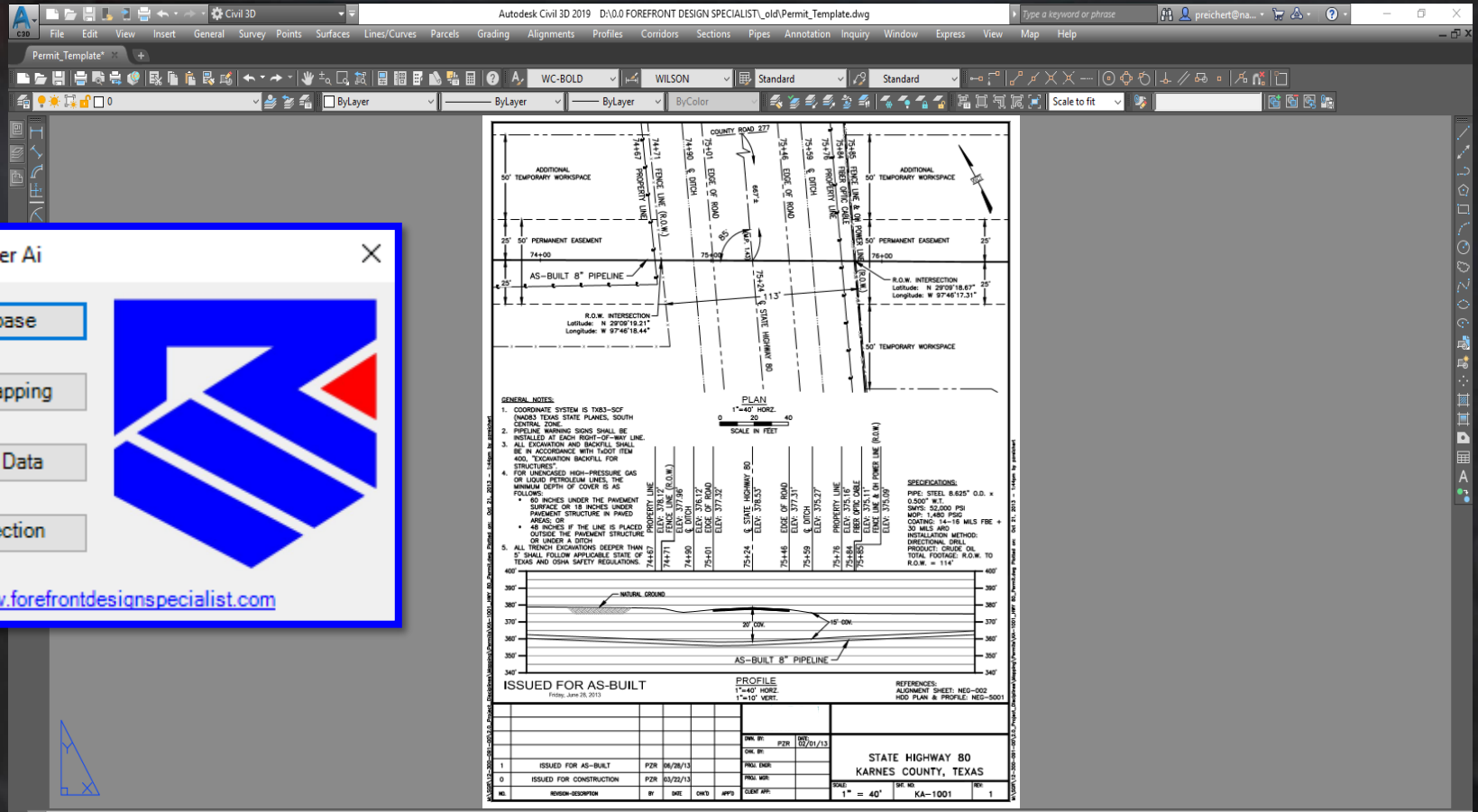
Profile Band

Materials Band

Attribute Border

## FASTER OPERATIONS & COMPLIANCE PROCESS

# FASTER DOT PERMIT DRAWINGS




**Route Mapper Ai**

GIS Database

Engineer Mapping

Export GIS Data

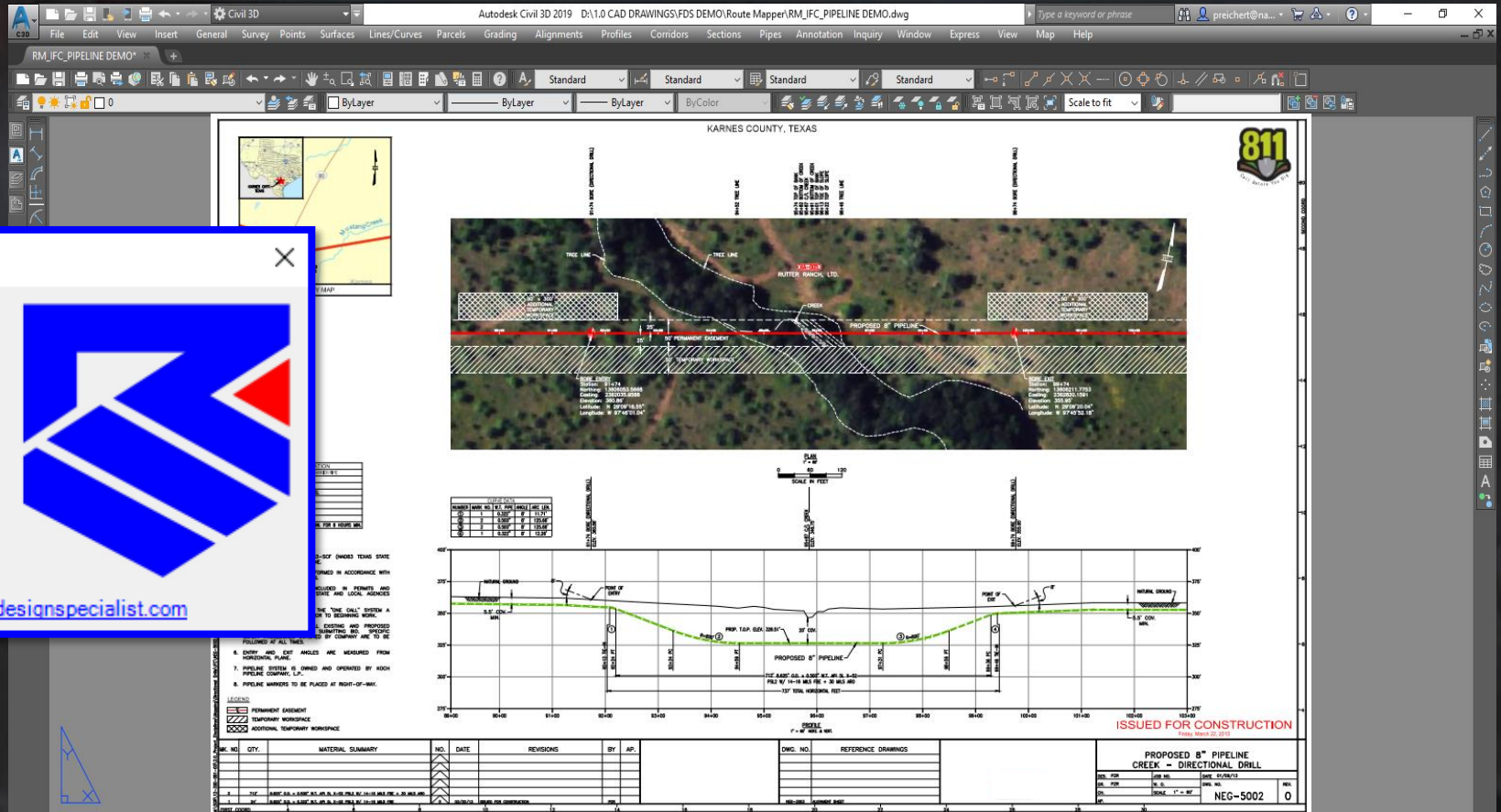
World Projection



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

## FAST DOT PERMITTING PROCESS

# FASTER DIRECTIONAL DRILL DRAWINGS



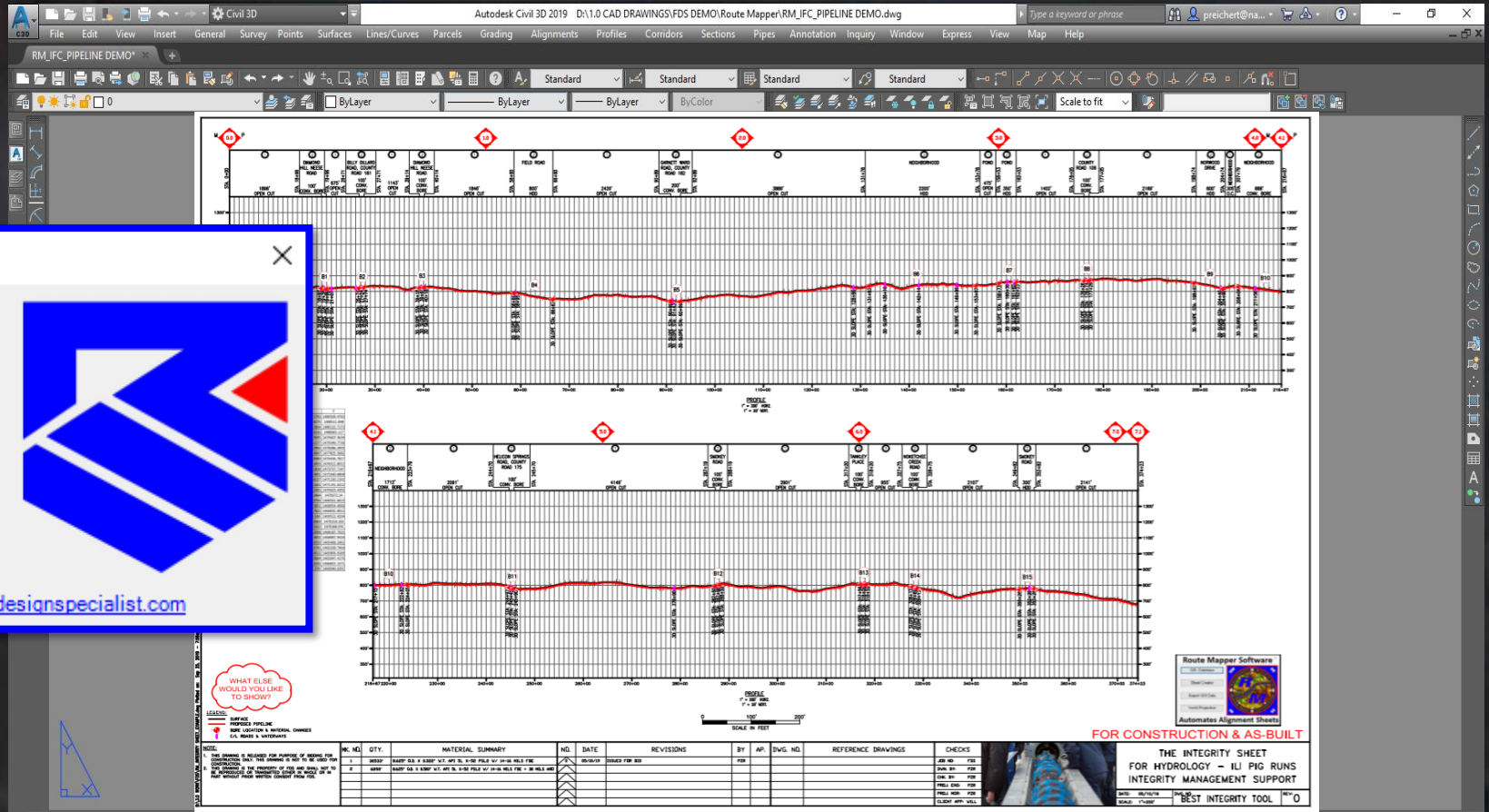
**Route Mapper Ai**

- GIS Database
- Engineer Mapping
- Export GIS Data
- World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

## FAST DOT & CONSTRUCTORS PROCESS

# FASTER INTEGRITY SHEET DRAWINGS



**Route Mapper Ai**

- GIS Database
- Engineer Mapping
- Export GIS Data
- World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

## FAST HYDROLOGY AND INTEGRITY SUPPORT

# AUTOMATED PROJECT REPORTS

All Data  
 Centerline  
 Ownership  
 Wetland  
 Material  
 Weld

Create

Dashboard

Close

Sheet No	Station	Layer	MP	Offset	Offside	Block	All Data	ODT	Easting	Northing	Elevation
1	00+00	Materials	6	0			Materials_1		1305505.6281	17223837.6969	0
1	00+00	Property Line	0						1305505.6281	17223837.6969	0
1	00+00	PI	0.0000						1305505.6281	17223837.6969	0

Sheet	Station From	Station To	X=Easting	Y=Northing	Z=Elevation	Pipe Length	Deflection Angle	Bearing & Distance	Layer
1	00+00	09+82	1306485.9483	17223900.3352	0.0000	982.3192	9°56'7" LT.	N 86°20'38" E-982.3192	Proposed Pipeline
1	09+82	20+60	1307583.3956	17224153.5687	0.0000	2059.9431	10°57'33" RT.	N 76°24'32" E-1077.6239	Proposed Pipeline
1	20+60	37+37	1309209.1562	17224236.6009	0.0000	8737.4733	6°24'22" RT.	N 87°22'5" E-1077.5301	Proposed Pipeline

Sheet No	Start Station	Start Northing	Start Easting	Start MP	End Station	End Northing	End Easting	End MP	Pipe Length	Material-Description	Roads	Wat
1	00+00	1305505.6281	17223837.6969	0.0000	16+79	1307163.2949	17224064.0922	0.3180	1679.1800	1		
1	16+79	1307163.2949	17224064.0922	0.3180	19+16	1307993.2091	17224119.6769	0.3628	236.5379	2	PRIVATE HOUSE ROAD	
1	19+16	1307993.2091	17224119.6769	0.3628	27+43	1308215.4859	17224184.9234	0.5195	827.0557	1		WET
1	27+43	1308215.4859	17224184.9234	0.5195	36+43	1309114.3365	17224226.2514	0.6899	900.0000	2		

Deed_Official_Public_Records	Deed_LTC_Pulled	Legal_Description	Survey_Company	Survey_RPLS	Survey_Permit
O.P.R.X.C.X.	YES / NO (XX/XX/XX)	P.O.C. at XXX to P.O.B. XXX, THENCE North 00°00'00" West, XXX feet to P.O.T	NAME	NAME	XXX/XX/XX
O.P.R.X.C.X.	YES / NO (XX/XX/XX)	P.O.C. at XXX to P.O.B. XXX, THENCE North 00°00'00" West, XXX feet to P.O.T	NAME	NAME	XXX/XX/XX
O.P.R.X.C.X.	YES / NO (XX/XX/XX)	P.O.C. at XXX to P.O.B. XXX, THENCE North 00°00'00" West, XXX feet to P.O.T	NAME	NAME	XXX/XX/XX
O.P.R.X.C.X.	YES / NO (XX/XX/XX)	P.O.C. at XXX to P.O.B. XXX, THENCE North 00°00'00" West, XXX feet to P.O.T	NAME	NAME	XXX/XX/XX
O.P.R.X.C.X.	YES / NO (XX/XX/XX)	P.O.C. at XXX to P.O.B. XXX, THENCE North 00°00'00" West, XXX feet to P.O.T	NAME	NAME	XXX/XX/XX

stnNo	param	STA	srcDWG	objHnd	Xray_No	Joint_No	Heat_No	Type	Cover	In_Ditch	Comment	Source_G	Code	ID	ID	ID	ID
1		0 00+00	RM_JFA_F1CFEE	AXRB-1	101	M58501	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.041664 00+40	RM_JFA_F1CFF1	AXRB-2	102	M58502	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.083332 00+80	RM_JFA_F1CFF4	AXRB-3	103	M58503	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.125 01+20	RM_JFA_F1CFF7	AXRB-4	104	M58504	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.166668 01+60	RM_JFA_F1CFFA	AXRB-5	105	M58505	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.208337 02+00	RM_JFA_F1CFFD	AXRB-6	106	M58506	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.250005 02+40	RM_JFA_F1D000	AXRB-7	107	M58507	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.291663 02+80	RM_JFA_F1D003	AXRB-8	108	M58508	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.333331 03+20	RM_JFA_F1D006	AXRB-9	109	M58509	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.374999 03+60	RM_JFA_F1D009	AXRB-10	110	M58510	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.416667 04+00	RM_JFA_F1D00C	AXRB-11	111	M58511	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.458335 04+40	RM_JFA_F1D00F	AXRB-12	112	M58512	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.5 04+80	RM_JFA_F1D012	AXRB-13	113	M58513	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.541671 05+20	RM_JFA_F1D015	AXRB-14	114	M58514	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.583329 05+60	RM_JFA_F1D018	AXRB-15	115	M58515	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.624997 06+00	RM_JFA_F1D01B	AXRB-16	116	M58516	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.666665 06+40	RM_JFA_F1D01E	AXRB-17	117	M58517	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.708333 06+80	RM_JFA_F1D021	AXRB-18	118	M58518	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.750001 07+20	RM_JFA_F1D024	AXRB-19	119	M58519	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.791669 07+60	RM_JFA_F1D027	AXRB-20	120	M58520	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.833337 08+00	RM_JFA_F1D02A	AXRB-21	121	M58521	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.874996 08+40	RM_JFA_F1D02D	AXRB-22	122	M58522	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.916664 08+80	RM_JFA_F1D030	AXRB-23	123	M58523	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		0.958332 09+20	RM_JFA_F1D033	AXRB-24	124	M58524	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 09+60	RM_JFA_F1D036	AXRB-25	125	M58525	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 03546 10+00	RM_JFA_F1D039	AXRB-26	126	M58526	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 071193 10+40	RM_JFA_F1D03C	AXRB-27	127	M58527	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 106828 10+80	RM_JFA_F1D03F	AXRB-28	128	M58528	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 142664 11+20	RM_JFA_F1D042	AXRB-29	129	M58529	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 178399 11+60	RM_JFA_F1D045	AXRB-30	130	M58530	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK
1		1 214134 12+00	RM_JFA_F1D048	AXRB-31	131	M58531	WLD	5'	NO	NONE	UNK	UNK	UNK	UNK	UNK	UNK	UNK

### Route Mapper Ai

GIS Database

Engineer Mapping

Export GIS Data

World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

## FASTER BUSINESS DEVELOPMENT



# AUTOMATED GIS DATA MANAGEMENT



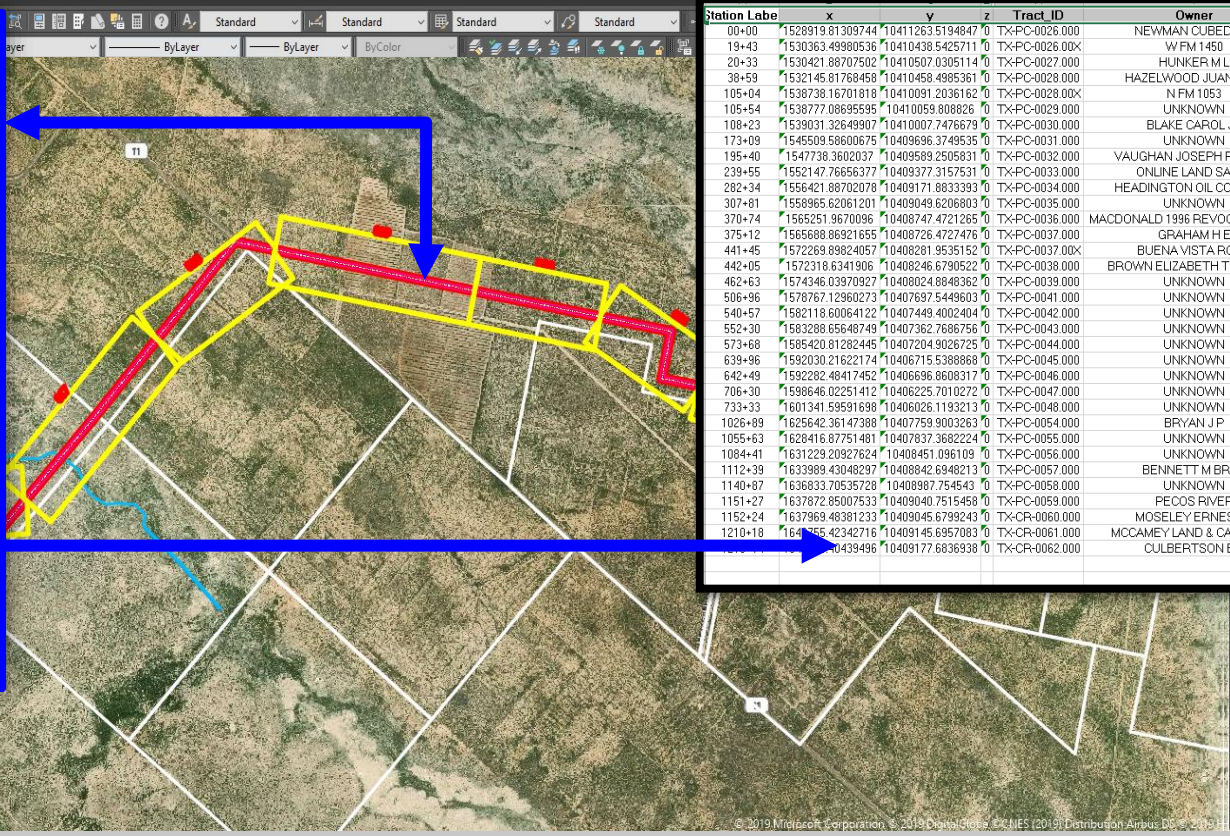
Route Mapper Geospatial Editor

Geospatial Data  
Parcel\_Data Import Existing Data

Layer  
Property Line Open Geospatial Data XLS file

Station Label	Tract_ID	Owner	Address	E
00+00	TX-PC-0026.000	NEWMAN CUBED INC	ADDRESS	4
19+43	TX-PC-0026.00X	W FM 1450	ADDRESS	4
20+33	TX-PC-0027.000	HUNKER M L	ADDRESS	1
38+59	TX-PC-0028.000	HAZELWOOD JUANICE H	ADDRESS	6
105+04	TX-PC-0028.00X	N FM 1053	ADDRESS	6
105+54	TX-PC-0029.000	UNKNOWN	ADDRESS	3
108+23	TX-PC-0030.000	BLAKE CAROL JO	ADDRESS	6
173+09	TX-PC-0031.000	UNKNOWN	ADDRESS	2
195+40	TX-PC-0032.000	VAUGHAN JOSEPH PEYTON	ADDRESS	4
239+55	TX-PC-0033.000	ONLINE LAND SALES	ADDRESS	4
282+34	TX-PC-0034.000	HEADINGTON OIL COMPANY	ADDRESS	2
307+81	TX-PC-0035.000	UNKNOWN	ADDRESS	6
370+74	TX-PC-0036.000	MACDONALD 1996 REVOCBLE TRUST	ADDRESS	4
375+12	TX-PC-0037.000	GRAHAM H E	ADDRESS	6
441+45	TX-PC-0037.00X	BUENA VISTA ROAD	ADDRESS	6
442+05	TX-PC-0038.000	BROWN ELIZABETH TRUST AA	SUITE 1110	2
462+63	TX-PC-0039.000	UNKNOWN	ADDRESS	4
506+96	TX-PC-0041.000	UNKNOWN	ADDRESS	3

Export Geospatial Tables Update Geospatial Data Close



Station Label	x	y	z	Tract_ID	Owner	Address	Easement_Lenqft	Roads	Calte
00+00	1528919.81309744	10411263.5194847	0	TX-PC-0026.000	NEWMAN CUBED INC	ADDRESS	4297	260.42	0
19+43	1530363.49980536	10410438.5425711	0	TX-PC-0026.00X	W FM 1450	ADDRESS	4297	260.42	0
20+33	1530421.88707502	10410507.0305114	0	TX-PC-0027.000	HUNKER M L	ADDRESS	1896	114.91	0
38+59	1532145.81768458	10410458.4985361	0	TX-PC-0028.000	HAZELWOOD JUANICE H	ADDRESS	6648	402.91	0
105+04	1538738.16701818	10410091.2036162	0	TX-PC-0028.00X	N FM 1053	ADDRESS	6648	402.91	0
105+54	1538777.08695995	10410059.8088626	0	TX-PC-0029.000	UNKNOWN	ADDRESS	320	19.39	0
108+23	1539031.32649907	10410007.7476679	0	TX-PC-0030.000	BLAKE CAROL JO	ADDRESS	6488	393.21	0
173+09	1545509.58600675	10409696.3749535	0	TX-PC-0031.000	UNKNOWN	ADDRESS	2233	135.33	0
195+40	1547738.3602037	10409589.2505831	0	TX-PC-0032.000	VAUGHAN JOSEPH PEYTON	ADDRESS	4416	267.64	0
239+55	1552147.76656377	10409377.3157531	0	TX-PC-0033.000	ONLINE LAND SALES	ADDRESS	4282	259.52	0
282+34	1556421.88702078	10409171.8833393	0	TX-PC-0034.000	HEADINGTON OIL COMPANY	ADDRESS	2548	154.42	0
307+81	1558965.62061201	10409049.6206803	0	TX-PC-0035.000	UNKNOWN	ADDRESS	6296	381.58	0
370+74	1565251.9670096	10408747.4721265	0	TX-PC-0036.000	MACDONALD 1996 REVOCBLE TRUST	ADDRESS	438	26.55	0
375+12	1565688.86921655	10408726.4727476	0	TX-PC-0037.000	GRAHAM H E	ADDRESS	6636	402.18	0
441+45	1572269.89824057	10408281.9535152	0	TX-PC-0037.00X	BUENA VISTA ROAD	ADDRESS	6636	402.18	0
442+05	1572318.6341906	10408246.6790522	0	TX-PC-0038.000	BROWN ELIZABETH TRUST AA	SUITE 1110	2120	128.48	0
462+63	1574346.03970927	10408024.8848362	0	TX-PC-0039.000	UNKNOWN	ADDRESS	4445	269.39	0
506+96	1578767.12960273	10407697.5449603	0	TX-PC-0041.000	UNKNOWN	ADDRESS	3330	201.82	0
540+57	1582118.68064122	10407448.4002404	0	TX-PC-0042.000	UNKNOWN	ADDRESS	1174	71.15	0
552+30	1583288.65648749	10407362.7686756	0	TX-PC-0043.000	UNKNOWN	ADDRESS	2139	129.64	0
573+68	1585420.81282445	10407204.9026725	0	TX-PC-0044.000	UNKNOWN	ADDRESS	6631	401.88	0
639+96	1592030.21622174	10406715.5388868	0	TX-PC-0045.000	UNKNOWN	ADDRESS	253	15.33	0
642+49	1592282.48417452	10406696.8608317	0	TX-PC-0046.000	UNKNOWN	ADDRESS	6384	386.91	0
706+30	1598646.02251412	10406225.7010272	0	TX-PC-0047.000	UNKNOWN	ADDRESS	2704	163.88	0
733+33	1601341.59591698	10406026.1193213	0	TX-PC-0048.000	UNKNOWN	ADDRESS	3669	222.36	0
1026+89	1625642.36147388	1040759.9003263	0	TX-PC-0054.000	BRYAN J P	ADDRESS	2949	178.73	0
1055+63	1628416.87751481	10407837.3682224	0	TX-PC-0055.000	UNKNOWN	ADDRESS	2880	174.55	0
1084+41	1631229.20927624	10408451.096109	0	TX-PC-0056.000	UNKNOWN	ADDRESS	2798	169.58	0
1112+39	1633989.43048297	10408442.6948213	0	TX-PC-0057.000	BENNETT M BRAD	ADDRESS	2850	172.73	0
1140+87	1636833.70535728	10408987.754543	0	TX-PC-0058.000	UNKNOWN	ADDRESS	1041	63.09	0
1151+27	1637872.85007533	10409040.7515458	0	TX-PC-0059.000	PECOS RIVER	ADDRESS	96	5.82	0
1152+24	1637969.48381233	10409045.6799243	0	TX-CR-0060.000	MOSELEY ERNEST E	202 W SONOMA DR	5797	351.33	591.5000
1210+18	1647555.42342716	10409145.6957083	0	TX-CR-0061.000	MCCAMEY LAND & CATTLE LP	1801 W TEXAS AVE	596	36.12	640.0000
	1647555.42342716	10409177.6836938	0	TX-CR-0062.000	CULBERTSON E A	1811 HERITAGE BLVD STE 200	3633	220.18	50.0000

Route Mapper Ai

GIS Database

Engineer Mapping

Export GIS Data

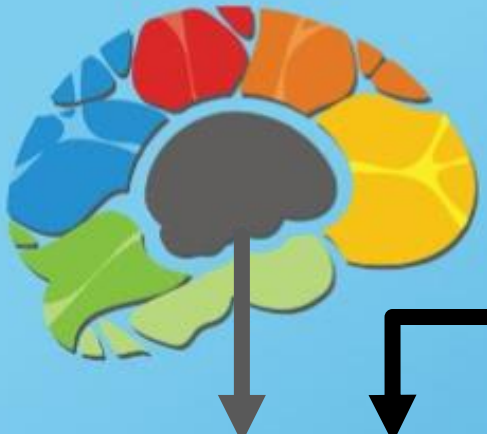
World Projection

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

with the **GEOSPATIAL EDITOR SOFTWARE**




# FASTER GIS DATABASE MANAGEMENT



Route Mapper Ai

- GIS Database
- Engineer Mapping
- Export GIS Data
- World Projection



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)

**AUTODESK**

**FASTER GIS DATABASE EXCHANGE**

Automated GIS DB  
Auto-Records Data  
CAD & GIS Data  
NO Data Loss





# DASHBOARD for Project Management and All Communications

**DASHBOARD** Route Mapper

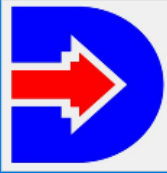
KMZ

Reports Folder

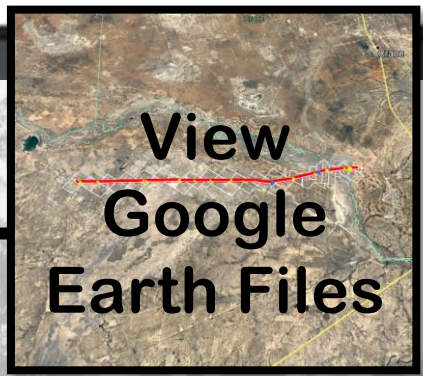
Centerline Length    Material 1    Material 2    Material 3    Material 4  
               

Miles    Parcels    Parcels Closed    Wetlands    Crossings    Pipelines  
                   

Pipe Size    Directional Drills    Field Bends    Induction Bends    Valves    Welds  
                   



[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)



**PROJECT: DASHBOARD PROGRAM**    **PHASE: FEED**    **DASHBOARD** 

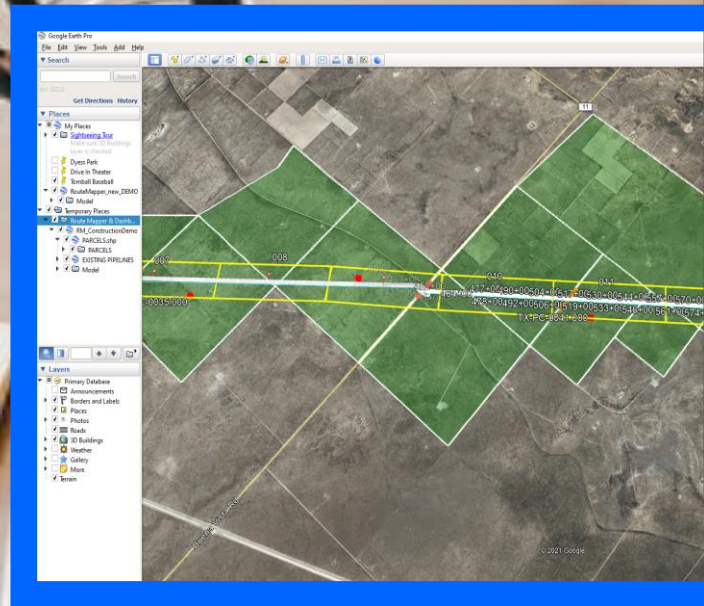
Line Number	Project Owner	Pipe Yard	Pipe Dia. (In)	Miles	Start Station	End Station	Total (ft)	Pipe Length	Dirt %	Rock %
1	XXX to XXX	CITY, ST	20	8.5	0+00	448+61	44,861	SRL	95%	5%
<b>PIPE TOTALS</b>										
Line Number	Open Cut Pipe 0.275" (ft)	Open Cut Bore Pipe 0.322" (ft)	Open Cut Bore Pipe Qty	Conv. Bore Pipe 0.322" (ft)	Conv. Bore Pipe Qty	HDD Bore Pipe 0.322" (ft)	HDD Bore Pipe Qty	Bore Pipe Totals (ft)	Transition Pipe 0.375" (ft)	Transition Pipe 0.5" (ft)
1	38,244	814	4	1,830	13	2,820	4	5,464	265	908
1	38,244	814	4	1,830	13	2,820	4	5,464	265	908
<b>CROSSING TOTALS</b>										
Line Number	Roads Qty	Railroads Qty	Foreign Pipelines Qty	Waterways Qty	Wetlands Qty	Pig Traps Qty	Valves Qty	AC Mitigations Qty	Parcel Owners Qty	Crossings Total Qty
1	27	1	21	5	8	1	9	12	26	109
1	27	1	21	5	8	1	9	12	26	109
<b>BEND TOTALS</b>						<b>AS-BUILT TOTALS</b>				
Line Number	Field Bend PIs < 12" Qty	Induction Bend PIs > 12" Qty	HDD Induction Bends 8" Qty	Move Arouds Total Qty	Welds Qty	CAD Welds Qty	Rectifier Sites Qty	Test Leads Qty	Anodes Qty	Pipeline Markers Qty
1	11	25	4	0	781	0	0	1	6	20
1	11	25	4	0	781	0	0	1	6	20
<b>VOLUME TOTALS</b>							<b>PIPELINE CHART</b>			
Total Volumes	Miles	Length (ft)	Volume (ft <sup>3</sup> )	Volume (gall)	Volume (oil barrel)	Volume (water barrel)				
20" / 0.275" WT	8.5	44,861	92,468	691,661	16,468	21,957				
20" / 0.275" WT	7.2	38,244	78,904	590,202	14,052	18,737				
20" / 0.322" WT	1.3	6,640	13,564	101,459	2,416	3,221				
<b>PARCEL TOTALS</b>							<b>PARCEL CHART</b>			
Survey Approval	Counts (Basis)	Parcel Total	Parcel Total	Parcel Total	Parcel Total	Parcel Total	Parcel Total	Parcel Total	Parcel Total	Parcel Total
0	None	None	None	None	None	None	None	None	None	None

- Management
- Capex
- Procurement
- Materials
- Construction
- As-Built
- Rehabilitation

- Project Reports
- Budgeting
- Scheduling
- Tracking
- Validating
- Volumes
- Deliverables



# Dashboard



PROJECT: DASHBOARD PROGRAM				PHASE: FEED			DASHBOARD	
Line Number	Project Owner	Pipe Yard	Pipe Dia. (In)	Miles	Start Station	End Station	Total (ft)	Pipe Length
1	XXX to XXX	CITY, ST	20	8.5	0+00	448+81	44,881	SRL
								44,881
PIPE TOTALS								
Line Number	Open Cut Pipe 0.275" (ft)	Open Cut Bore Pipe 0.322" (ft)	Open Cut Bore Pipe Qty	Conv. Bore Pipe 0.322" (ft)	Conv. Bore Pipe Qty	HDD Bore Pipe 0.322" (ft)	HDD Bore Pipe Qty	Bore Pipe Totals (ft)
1	38,244	814	4	1,830	13	2,820	4	5,464
	38,244	814	4	1,830	13	2,820	4	5,464
CROSSING TOTALS								
Line Number	Roads Qty	Railroads Qty	Foreign Pipelines Qty	Waterways Qty	Wetlands Qty	Pig Traps Qty	Valves Qty	AC Mitigations Qty
1	27	1	21	5	8	1	8	12
	27	1	21	5	8	1	8	12
BEND TOTALS				AS-BUILT TOTALS				
Line Number	Field Bend Pis < 12" Qty	Induction Bend Pis > 12" Qty	HDD Induction Bends 8" Qty	Move Arouds Total Qty	Welds Qty	CAD Welds Qty	Rectifier Sites Qty	Test Leads Qty
1	11	25	4	0	781	0	0	1
	11	25	4	0	781	0	0	1
VOLUME TOTALS								
Total Volumes	Miles	Length (ft)	Volume (ft <sup>3</sup> )	Volume (gal)	Volume (oil barrel)	Volume (water barrel)		
20"	8.5	44,881	92,468	691,661	16,468	21,957		
20" / 0.275" WT	7.2	38,241	78,904	590,202	14,052	18,737		
20" / 0.322" WT	1.3	6,640	13,564	101,459	2,416	3,221		
PARCEL TOTALS			PARCEL CHART					
Survey Approval	Countys	Parcel Total	Parcel Total	Deed Pulled	Survey Approval			
9	(blank)	None	ROW Complete	ROW Incomplete				

**DASHBOARD** Route Mapper

KMZ  
C:\FDS\1.0 FDS DEMO DRAWINGS\Route Mapper\0.0 RM BASIC DEMO\GIS View KMZ

Reports Folder  
C:\FDS\2.0 FDS GIS DATABASE\RMAI NEW DEMO 123 Create Dashboard

Centerline Length: 42321.44  
Material 1: 35927.67  
Material 2: 2848.95  
Material 3: 2170.39  
Material 4: 920.15

Miles: 8.02  
Parcels: 37  
Parcels Closed: 0  
Wetlands: 6  
Crossings: 138  
Pipelines: 1

Pipe Size: 12  
Directional Drills: 1  
Field Bends: 11  
Induction Bends: 33  
Valves: 6  
Welds: 0

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)



**Manages Project Lifecycle**

**Business Development Project Reporting**

**PROJECT: DASHBOARD PROGRAM**

**PHASE: FEED**

**DASHBOARD**



Set Legend

Clean Reports

Line Number	Project Owner	Pipe Yard	Pipe Dia. (In)	Miles	Start Station	End Station	Total (ft)	Pipe Length	Dirt %	Rock %
1	XXX to XXX	CITY, ST	20	8.5	0+00	448+81	44,881	SRL	95%	5%
				9			44,881			

**PIPE TOTALS**

Line Number	Open Cut Pipe 0.275" (ft)	Open Cut Bore Pipe 0.322" (ft)	Open Cut Bore Pipe Qty	Conv. Bore Pipe 0.322" (ft)	Conv. Bore Pipe Qty	HDD Bore Pipe 0.322" (ft)	HDD Bore Pipe Qty	Bore Pipe Totals (ft)	Transition Pipe 0.375" (ft)	Transition Pipe 0.5" (ft)
1	38,244	814	4	1,830	13					
		38,244	814	4	1,830					

**CROSSING TOTALS**

Line Number	Roads Qty	Railroads Qty	Foreign Pipelines Qty	Waterways Qty	Wetlands Qty
1	27	1	21	5	8
		27	1	21	5

**BEND TOTALS**

Line Number	Field Bend Pis < 12° Qty	Induction Bend Pis > 12° Qty	HDD Induction Bends 8° Qty	Move Arounds Total Qty	Welds Qty
1	11	25	4	0	781
		11	25	4	0

**VOLUME TOTALS**

Total Volumes	Miles	Length (ft)	Volume (ft³)	Volume (gal)	Volume (oil barrel)	Volume (water barrel)
20"	8.5	44,881	92,468	691,661	16,468	21,957
20" / 0.275" WT	7.2	38,241	78,904	590,202	14,052	18,737
20" / 0.322" WT	1.3	6,640	13,564	101,459	2,416	3,221

**PARCEL TOTALS**

Survey Approval	Countys	Parcel Total
9	(blank)	None

**PARCEL CHART**

- Parcel Total
- Deed Pulled
- Survey Approval
- ROW Complete
- ROW Incomplete

**DASHBOARD** Route Mapper

---

KMZ  
 View KMZ

Reports Folder  
 Create Dashboard

---

Centerline Length	Material 1	Material 2	Material 3	Material 4
44881.21	38244.22	5463.96	264.6	908.44

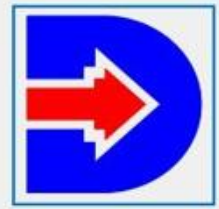
---

Miles	Parcels	Parcels Closed	Wetlands	Crossings	Pipelines
8.5	26	16	8	109	4

---

Pipe Size	Directional Drills	Field Bends	Induction Bends	Valves	Welds
12	4	11	25	8	781

[www.forefrontdesignspecialist.com](http://www.forefrontdesignspecialist.com)



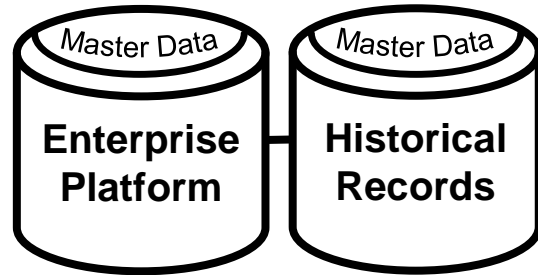
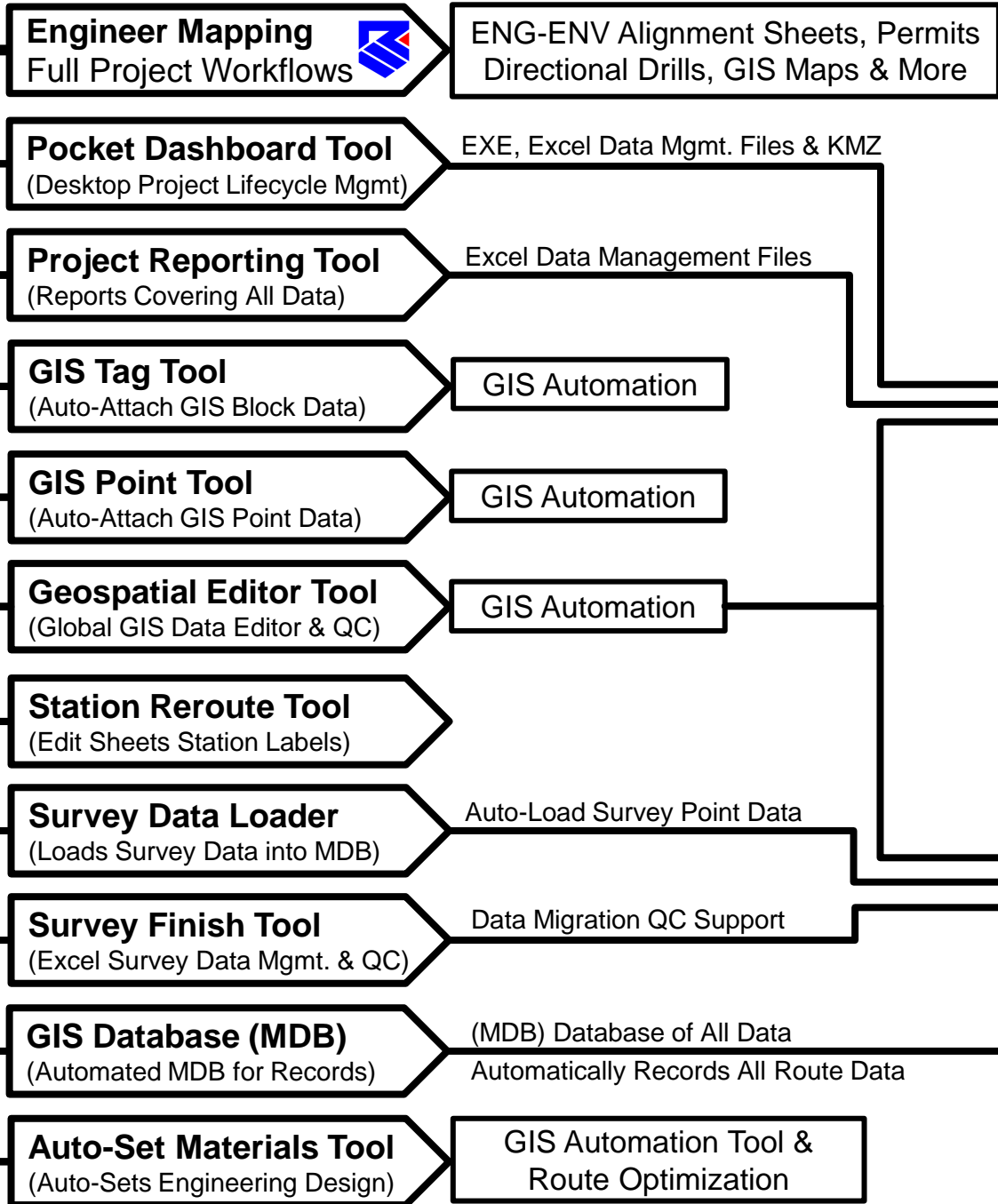
ADVANCE .NET  
TECHNOLOGY

# ROUTE MAPPER Ai

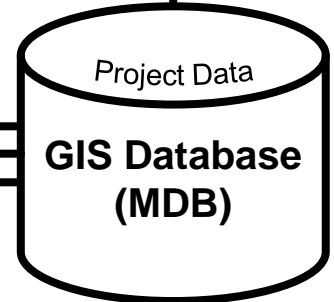
AUTODESK  
C3D-MAP SOFTWARE



**Route Optimization Tool**  
(Auto-Draws Route-Centerline)



Link and Import Data,  
Feature Classes





2D-3D EPCM Software

Auto-Design-Build Construction Solutions: PM-ENG-ENV-ROW-SURVEY-CAD-GIS-OPS

Manages Pipeline Lifecycle

Auto-Records All Survey-Mapping & GIS Data Per Right-of-Way Corridor Limits

Draws Centerline & Sets Stationing

Sets & Adjusts Templates

Sets Engineering Design Materials

Sets Attribute Border

Sets Station Labels for All Border Bands & All Sheets

Design Multiple Bands & Duplicate Bands

Autodesk Surface Profile

Sets Milepost-Match Lines-North Arrow

Auto-Design-Build Cut Sheets in (I) CAD Session or into Separate Drawings

Manages All Sheets, Adjustments & Revisions

Automates GIS Data Management

Automates GIS Database Management

DESIGN-BUILD-DWGS: Alignment Sheets, Permits, Directional Drills, Integrity Sheets, Site Plans, HCA Maps, GIS Maps, Cover Sheets

Dashboard

EPC Project Reports

Geospatial Editor

GIS Tag Tool

GIS Point Tool

Export GIS Database Tool

Paperspace Viewport Technology

Reroute Technology

Band Boundary Technology

Batch Scriptor Technology

Compatible SEED to GIS Database

Export Survey Data Tool

Survey Finish Tool

Survey Data Loader Tool

GIS to Attribute Tool

Edit Xdata Tool

Station Blocks Tool

Copy Viewport Tool

FDS Toolbox Included

FASTER: Commercial Planning, Engineering, Analyzing, Permitting, Survey-Mapping, Construction/As-Built, GIS, and Operations

# CONSTRUCTION PROJECT PROCESSES



## WHEELHOUSE

20+ People & 36+ Activities

Start-up Project

Investigate Constructability

Analyze All Design Variances

Finalize Route Optimization

Finalize Material Takeoff

Standards & Procedures

Final Project Approvals

GOV Permitting DOT-FERC

Final Project Approvals

RFP to Vendor for Prelim to IFC



- Manage Project
- Set All Schedules
- Gets Vendor RFPs



- Analyze Land Data
- Costs to Acquire
- Plat, Buy Easement



- Survey, Mark Data
- Examine, List
- Document, Apply



- Route Centerline
- Get Historical Data
- Optimization



- Plan, Investigate
- Vendor RFI, Close
- EPCM Breakdown



- Examine Materials
- Plan, Move, Align
- Dig, Weld, Build



- Analyze Project
- Design-Build, Class
- Constructability



- % Coverage, Flow
- Stage, Rate, Gains
- Tariff, Duration



- Examine ILI Data
- Find Defects, Fix
- Reduce Damage



- Mitigate Risks
- Analyze Wetlands
- Buffers, Restore



- Requirements
- DOT, DOE, FERC
- PHMSA, USACOE



- Controls Flow
- Facility Planning
- Ensures Safety

IF YOU HAD  
YOUR PROJECTS  
KEY DATA NOW



### Reduced Project Timelines

Optimized Route Design-Build

Faster Constructability & Risks

Faster Materials, Volumes

Automated Alignment Sheets

Automated Project Reports

Faster Takeoffs & Approvals ✓

Faster GOV Permitting ✓

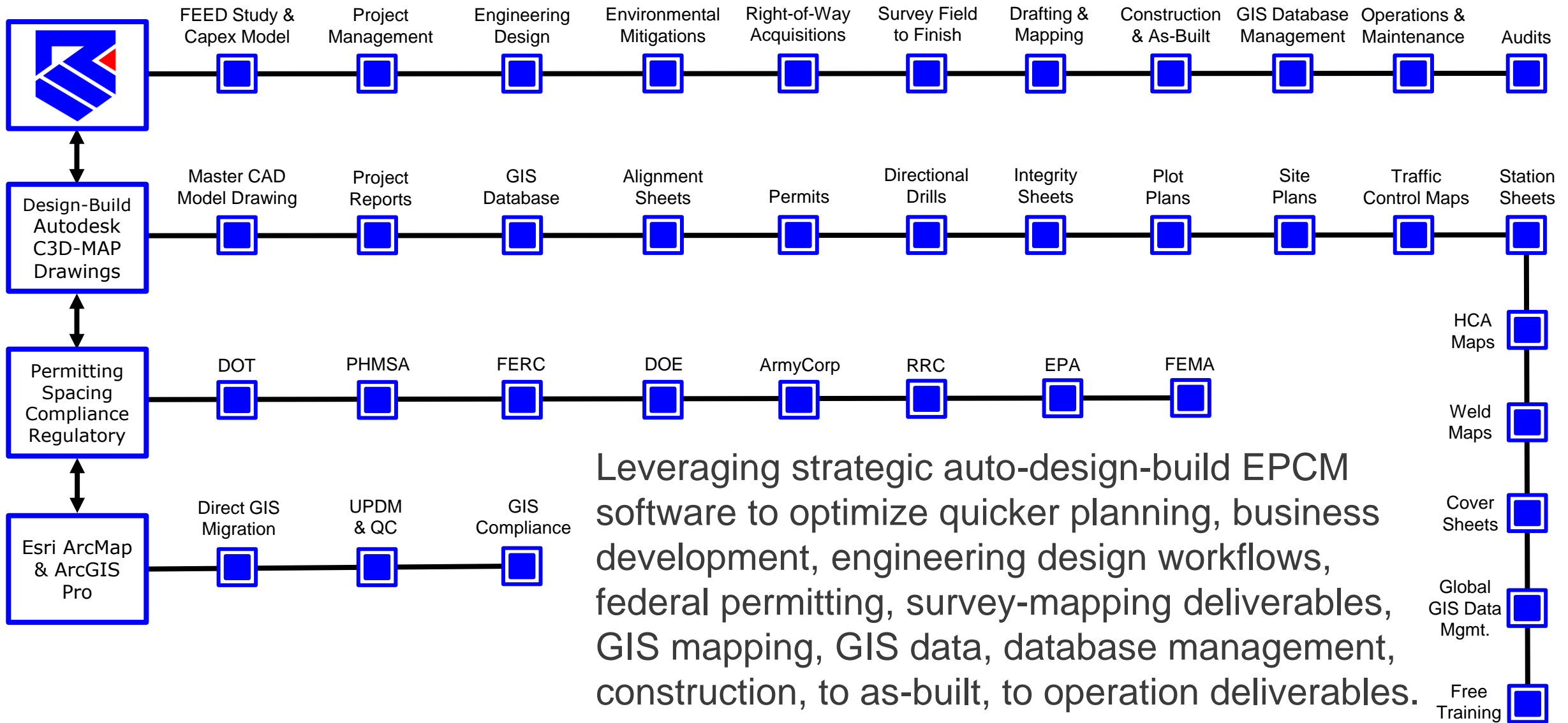
Faster Vendor RFP Estimates ✓

Faster Start-up, FEED study, Construction to As-Built ✓

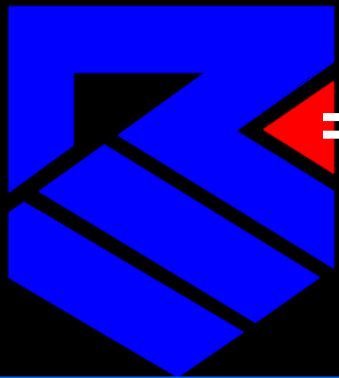
Faster Operations ✓



# RMAI FOR STRATEGIC TEAM COLLABORATION



Leveraging strategic auto-design-build EPCM software to optimize quicker planning, business development, engineering design workflows, federal permitting, survey-mapping deliverables, GIS mapping, GIS data, database management, construction, to as-built, to operation deliverables.



- Residential
- Industrial
- Commercial
- Government



Civil Mechanical  
Engineering Design  
Construction Workflows

Supports All People

Project Lifecycle Solutions

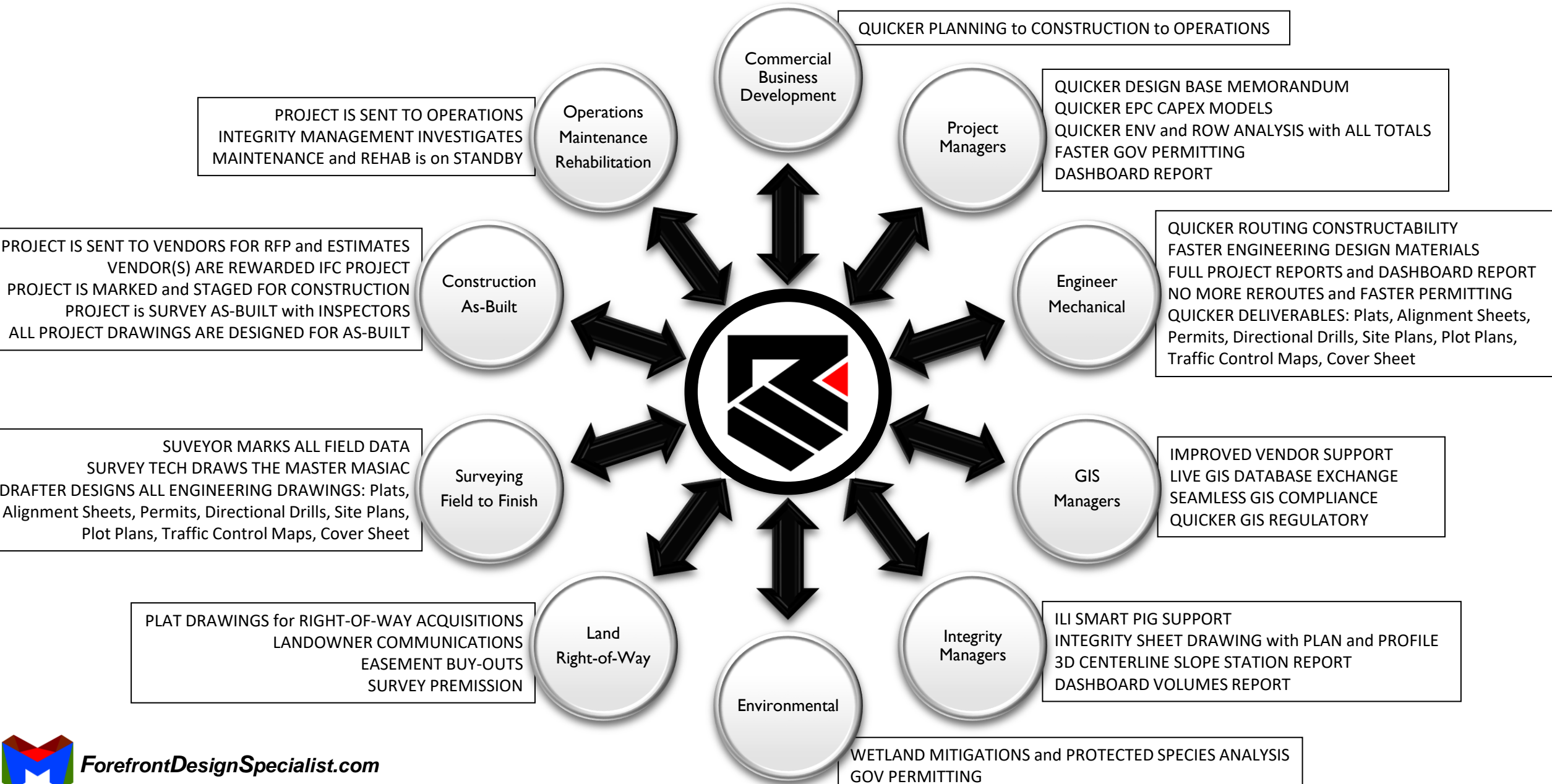
- Owners
- Commercial Development
- Business Development
- Project Managers
- Civil / Mechanical Engineers
- GIS Mapping
- Environmentalist
- Right-of-Way Agents
- Land Surveyors & Techs
- Chief Inspectors
- Constructors
- Integrity Managers
- IT & GIS Managers
- Operators
- Auditors

- Project Lifecycle Management
- Start-Up & Take-Off Planning
- Conceptual Engineering Design
- Procurement & Preliminary
- Federal Permitting Drawings
- Wetland Mitigation Analysis
- Right-of-Way Analysis
- Civil-Mech. Engineering Drawings
- Environmental Drawings
- Survey Mapping Drawings
- Construction Phase
- As-Built & Inspection Phases
- GIS Database Management
- GIS Compliance
- Operations & Commission
- Maintenance & Rehabilitation
- Federal Regulations





# PROJECT LIFECYCLE DATA MANAGEMENT



“ ”

Survey Mapper, Plat Mapper & Route Mapper provides the best competitive edge technology that saves my projects time and money.  
Game Changer Tools!

[Mike McCroskey, Owner-Tablerock Energy](#)

# TESTIMONIALS

“ ”

Plat Mapper & Route Mapper automate conceptual through commission process with full Project Management tools and GIS automation too. Best Tool!

[William Case, Lead Pipeline Designer-Atwell Group](#)



“ ”

Route Mapper and Plat Mapper automate alignment sheets with reroutes, permits, plats, project reporting and GIS compliance automation. Priceless!

[Alan Atkins, VP-Universal Survey Mapping, Inc.](#)

# ROUTE MAPPER AI

INCREASES EFFICIENCY PROJECT & COMPANY-WIDE

