2019 Infrastructure Tracker Annual Update

April 2019

Agenda

- Belt Line Replacement
  - 2019 Projects Update
  - Scheduling
  - 2018 Cost Variance
- High Pressure Replacement
  - 2019 Projects Update
  - Scheduling
  - 2018 Cost Variance

Belt Line 2019

- Current 2019 Projects Schedule:
  - Salt Lake County ($4.5M)
    - 300 E in SLC (Temporarily Placed on Hold Due to ROW Matter)
    - 300 E in SLC (Resumed Work March 2019)
    - 500W in SLC (May-Sept)
  - Davis County ($12M)
    - Phase II with FL replacement (January – December)

Belt Line Work 2019

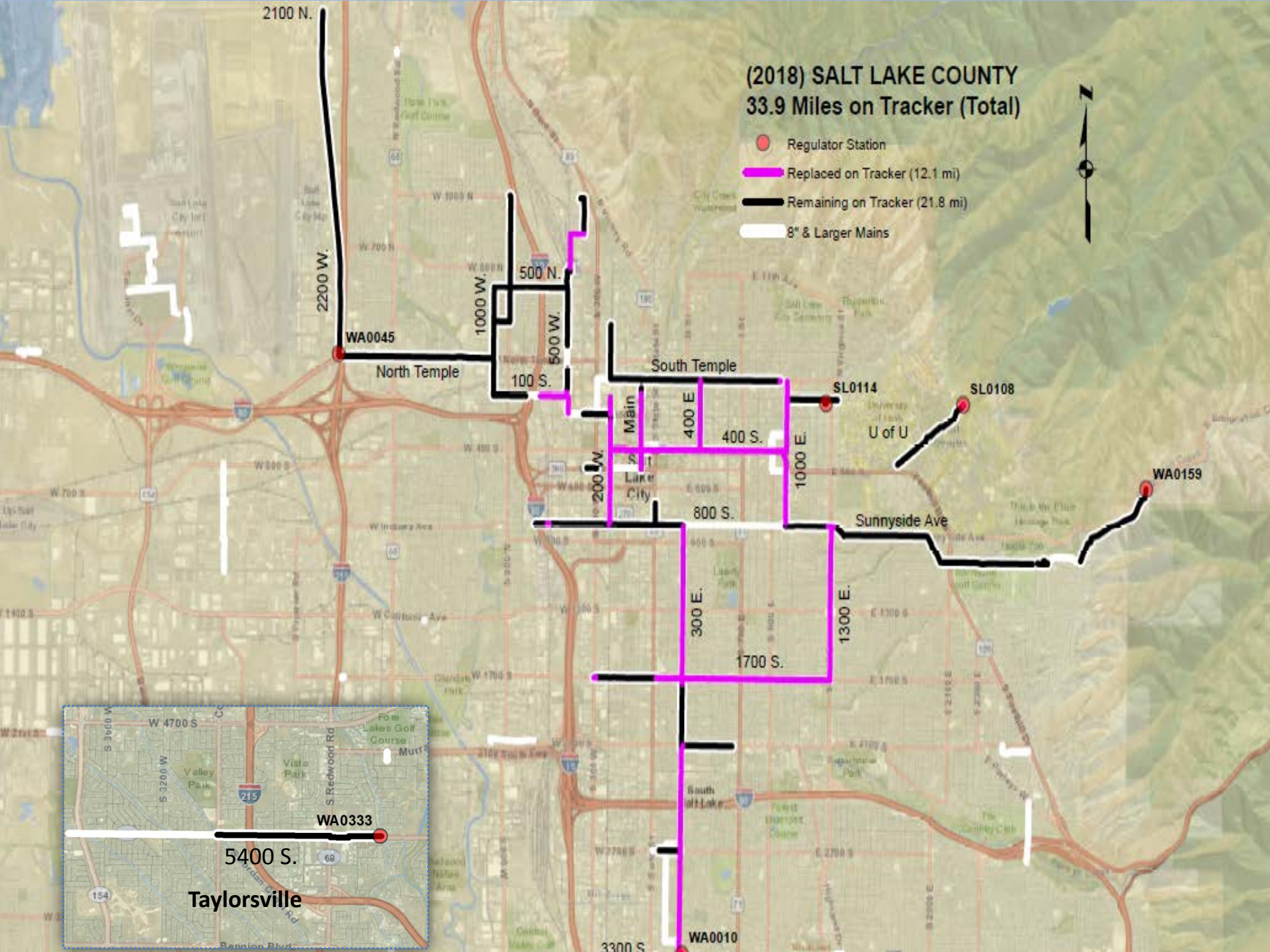
Belt Line:	400 W between 500 N and 800 N in Salt Lake City
Construction:	April-December
Challenges Include:	Concrete road panels, bore under Union Pacific Railroad
Footage:	Approx. 3,790 ft.

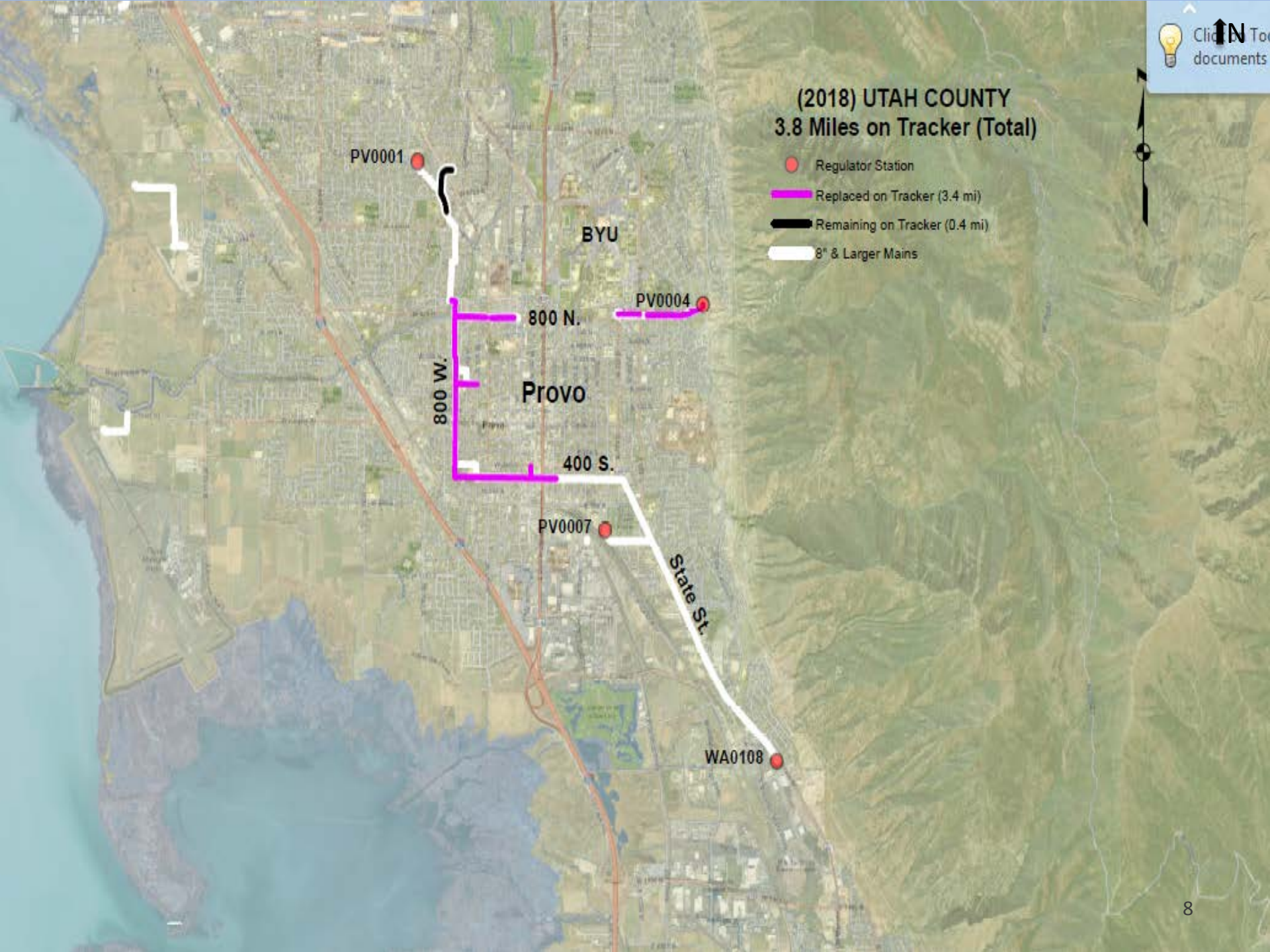
Belt Line Work 2019

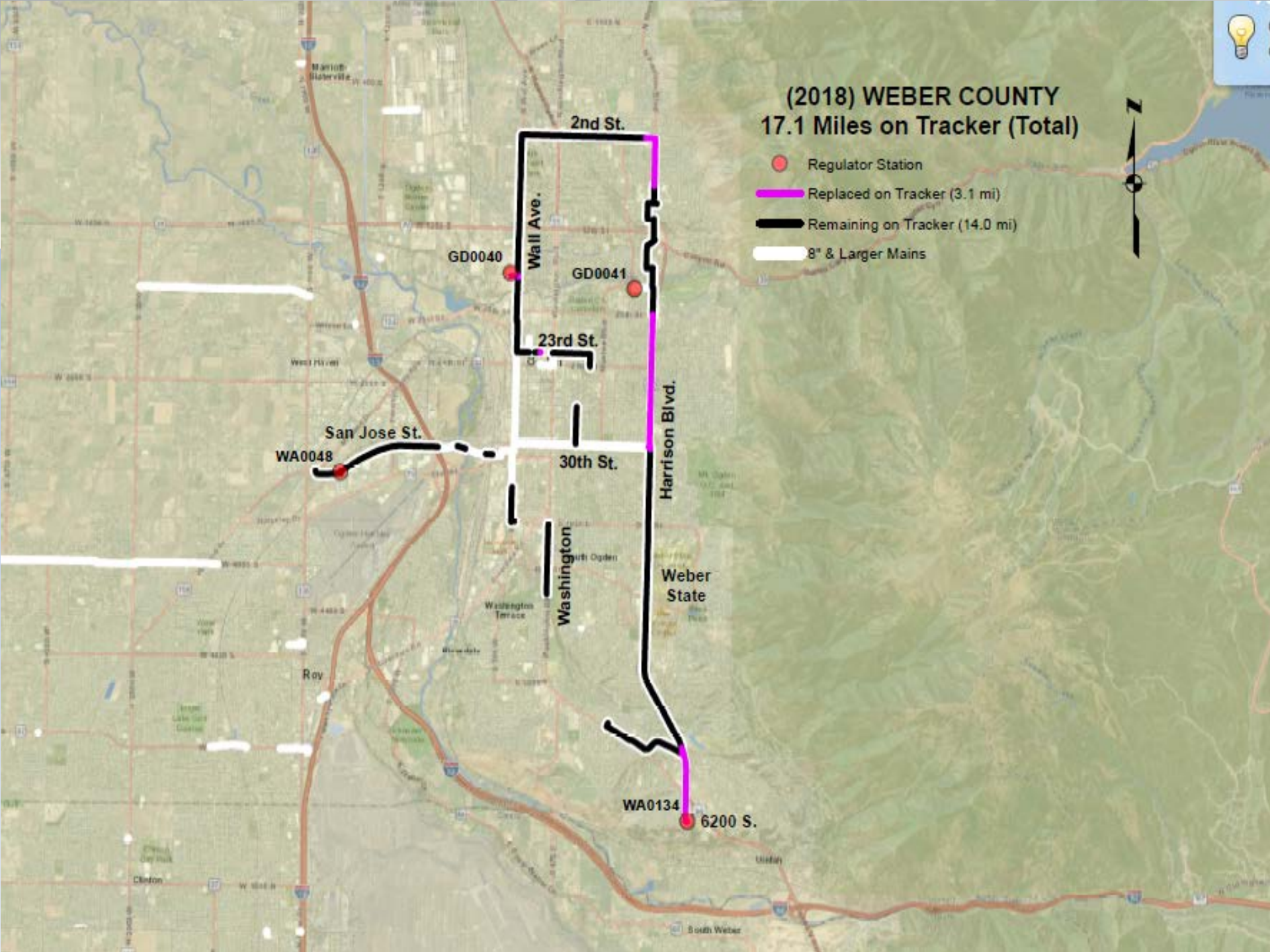
Belt Line:	Davis County Beltline Replacement in conjunction with FL21-50 replacement
Construction:	January – December
Challenges Include:	Water table, working over existing lines, permits
Footage:	Approx. 30,000 ft.

Belt Line Work 2019

Belt Line:	300 E between 800 S and 2100 Salt Lake City
Construction:	April-December
Challenges Include:	Limited workspace, running line, vehicular and pedestrian traffic, SLC summer events
Footage:	Approx. 9,800 ft.


(2018) SALT LAKE COUNTY
33.9 Miles on Tracker (Total)
Regulator Station
Replaced on Tracker (12.1 mi)
Remaining on Tracker (21.8 mi)
8" & Larger Mains
N
2100 N.
2200 W.
WA0045
North Temple
1000 W.
500 N.
500 W.
100 S.
South Temple
SL0114
SL0108
U of U
Main
400 E.
400 S.
1000 E.
200 W.
Salt Lake City
WA0159
800 S.
Sunnyside Ave
300 E.
1300 E.
1700 S.
WA0010
3300 S
W 4700 S
Fore Lakes Golf Course
Valley Park
Vista Park
S Redwood Rd
WA0333
5400 S.
Taylorsville


(2018) UTAH COUNTY
3.8 Miles on Tracker (Total)
Regulator Station
Replaced on Tracker (3.4 mi)
Remaining on Tracker (0.4 mi)
8" & Larger Mains
N
PV0001
BYU
PV0004
800 N.
800 W.
Provo
400 S.
PV0007
State St.
WA0108


(2018) WEBER COUNTY
17.1 Miles on Tracker (Total)
Regulator Station
Replaced on Tracker (3.1 mi)
Remaining on Tracker (14.0 mi)
8" & Larger Mains
N
2nd St.
Wall Ave.
GD0040
GD0041
23rd St.
Harrison Blvd.
San Jose St.
WA0048
30th St.
Washington
Weber State
Roy
WA0134
6200 S.


Clearfield
SY0001
CL0007
Freeport Center
Bluff Rd.
Layton
Gentile St.
LY0008
LY0001
KY0001
Shepard Ln.
WA0402
Farmington
WA0215
Pages Ln.
BF0005
Bountiful
1100 N.
WA0385
North Salt Lake
(2018) DAVIS COUNTY
15.3 Miles on Tracker (Total)
Regulator Station
Replaced on Tracker (1.0 mi)
Remaining on Tracker (14.3 mi)
8" & Larger Mains
N

Belt Line Pipe

Original Tracker Pipe		
	Footage	**Miles**
Salt Lake County	178,848	33.9
Utah County	20,242	3.8
Weber County	90,259	17.1
Davis County	80,606	15.3
Total	**369,955**	**70.1**

Belt Line Pipe

Original Tracker Pipe

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Salt Lake County	178,848	33.9
Utah County	20,242	3.8
Weber County	90,259	17.1
Davis County	80,606	15.3
Total	**369,955**	**70.1**

Retired Tracker Pipe

	Footage	Miles
Salt Lake County	64,099	12.1
Utah County	18,309	3.5
Weber County	16,198	3.1
Davis County	22,328	4.2 *
Total	**120,934**	**22.9**

* Davis County footages are estimated pending mapping update

Belt Line Pipe

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Salt Lake County	64,099	12.1
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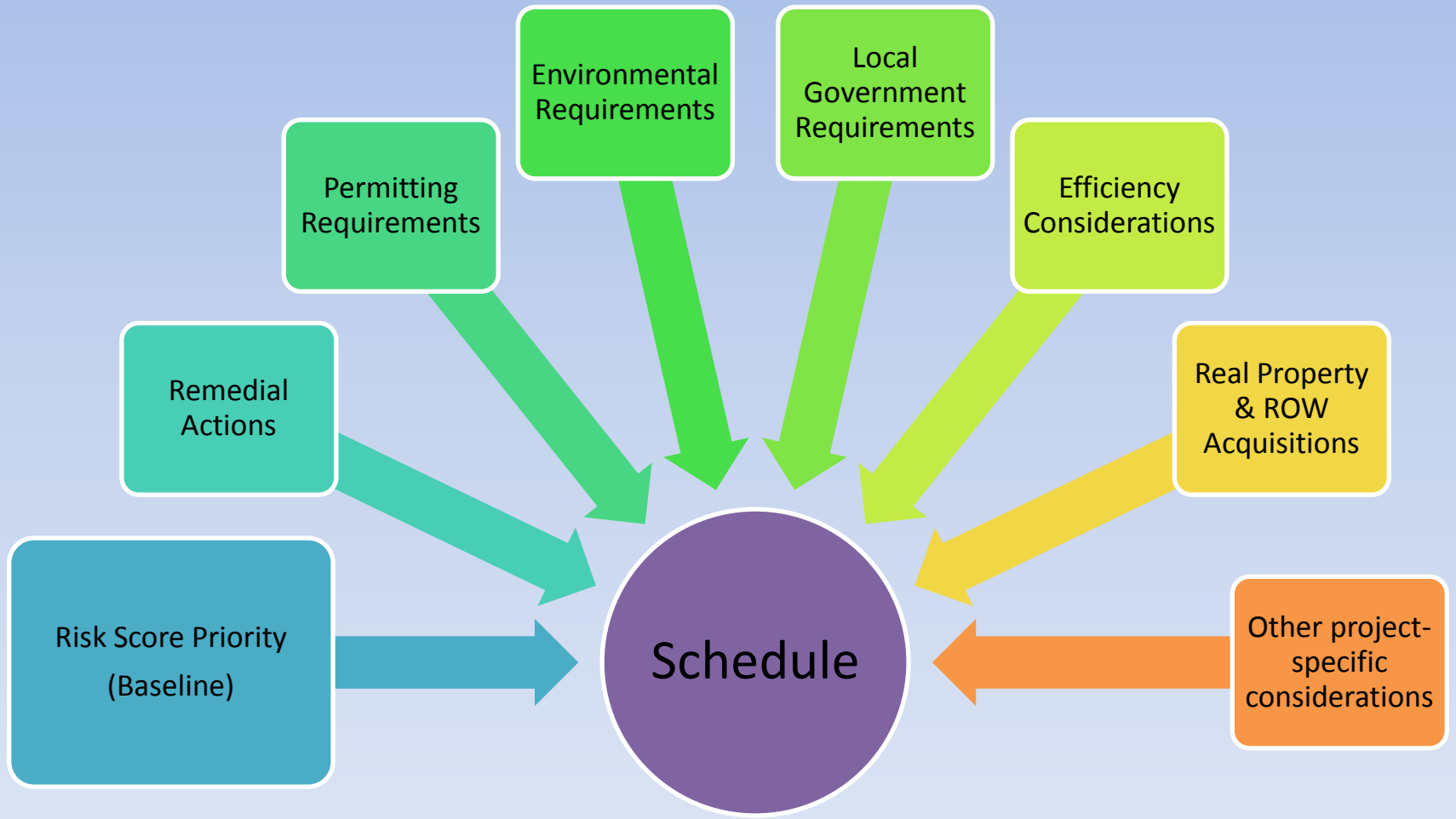
Weber County	16,198	3.1
Davis County	22,328	4.2 *
Total	**120,934**	**22.9**

Remaining Tracker Pipe

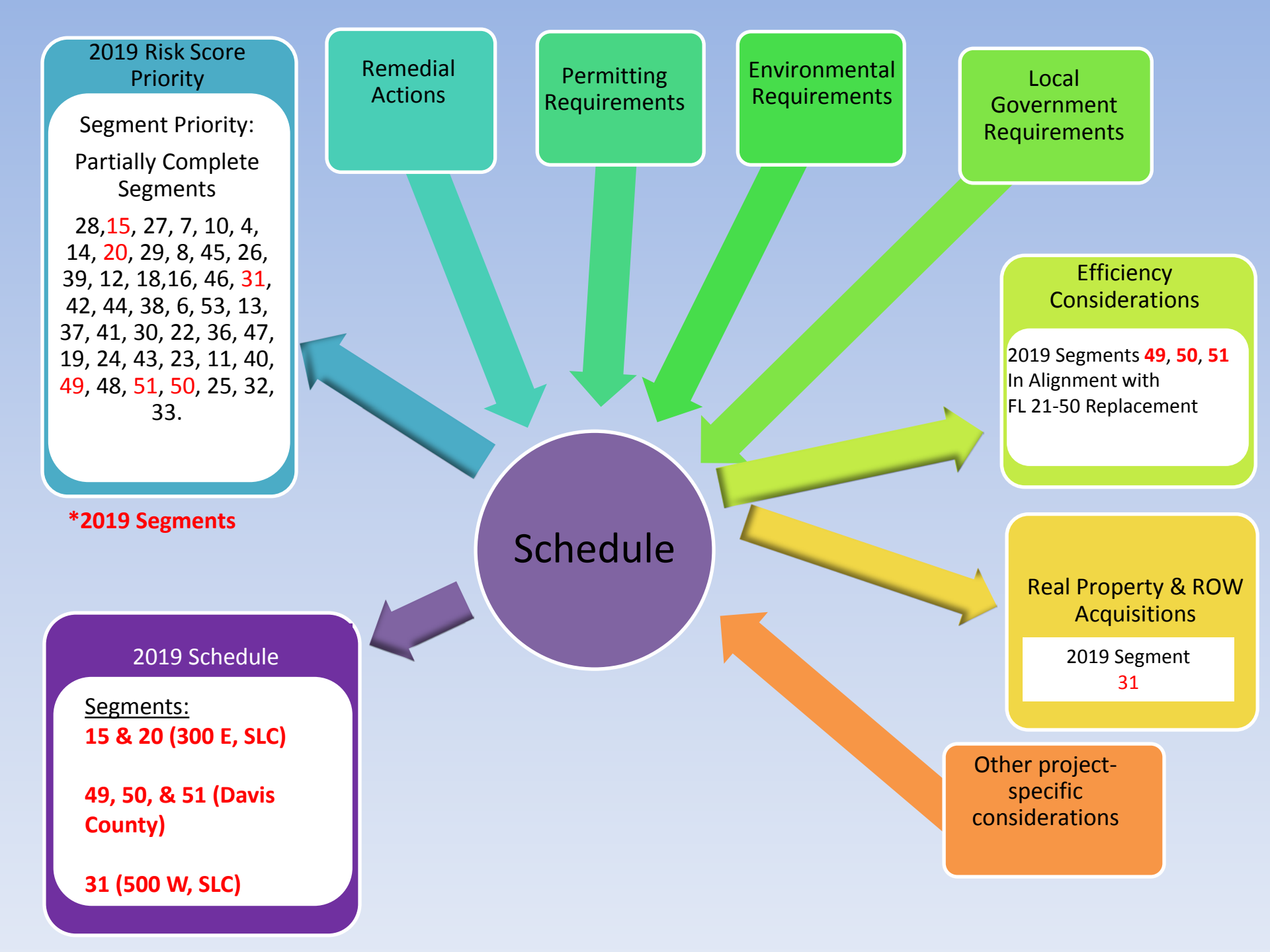
	Footage	Miles
Salt Lake County	137,346	21.8
Utah County	5,104	0.3
Weber County	74,090	14.0
Davis County	58,278	11.1
		47.2
Total	**274,818**	

* Davis County footages are estimated pending mapping update

Scheduling Criteria
Belt Line Replacements



Scheduling per Section III of the Settlement Stipulation, Docket 13-057-05, Exhibit 5


2019 Risk Score Priority
Segment Priority:
Partially Complete Segments
28,15, 27, 7, 10, 4, 14, 20, 29, 8, 45, 26, 39, 12, 18,16, 46, 31, 42, 44, 38, 6, 53, 13, 37, 41, 30, 22, 36, 47, 19, 24, 43, 23, 11, 40, 49, 48, 51, 50, 25, 32, 33.
*2019 Segments
Remedial Actions
Permitting Requirements
Environmental Requirements
Local Government Requirements
Efficiency Considerations
2019 Segments 49, 50, 51 In Alignment with FL 21-50 Replacement
Schedule
Real Property & ROW Acquisitions
2019 Segment 31
Other project-specific considerations
2019 Schedule
Segments:
15 & 20 (300 E, SLC)
49, 50, & 51 (Davis County)
31 (500 W, SLC)

Project Segments

March 2018 Risk Score Priority

Segment Priority:

Partially Complete Segments

28, 9, 7, **10**, 15, 26, **4**, **17**, 27, **20**, 14, 29, **21**, 8, 45, 39, 12, **16**, 18, 46, 31, 44, 42, 11, 38, 6, 53, 36, **13**, **37**, **41**, **22**, 30, 47, 19, 34, 24, 23, 43, **40**, 49, 48, 51, 50, 25, 32, 33.

Completed segments:

1, 2, 3, 5, 35, 52, 54

March 2019 Risk Score Priority

Segment Priority:

Partially Complete Segments

27, 28, 9, 7, 15, **10**, **4**, **20**, 14, 29, **17**, **21**, 8, 45, 26, 39, 12, **16**, 18, 46, 31, 42, 44, 38, 6, 53, **13**, **37**, **41**, 30, **22**, 36, 47, 19, 34, 24, 43, 23, 11, **40**, 49, 48, 51, 50, 25, 32, 33.

Completed segments:

1, 2, 3, 5, 35, 52, 54

- Prioritized by relative risk score

Belt Line 2018 Cost Variances

Project	Budget	Actual	Variance	Explanation
Salt Lake County	$7,500,000	$3,987,229	$3,512,771	Due to a ROW issue and contamination, this work could not be completed in 2018.
Utah County	$750,000	$1,247,673	($497,673)	Permit fees were far beyond the budget amount and caused a significant shift in total project costs.
Davis County	$4,100,000	$5,425,355	($1,325,355)	This Belt Line work is associated with the FL21 work in Davis County. During installation it is preferable to have the 24" HP put in place prior to the 8" IHP line. Due to the complications experienced with FL21, Belt line experienced similar delays and cost escalations.
Total	**$12,350,000**	**10,660,257**	**$1,689,743**	

Questions?

High Pressure Replacement

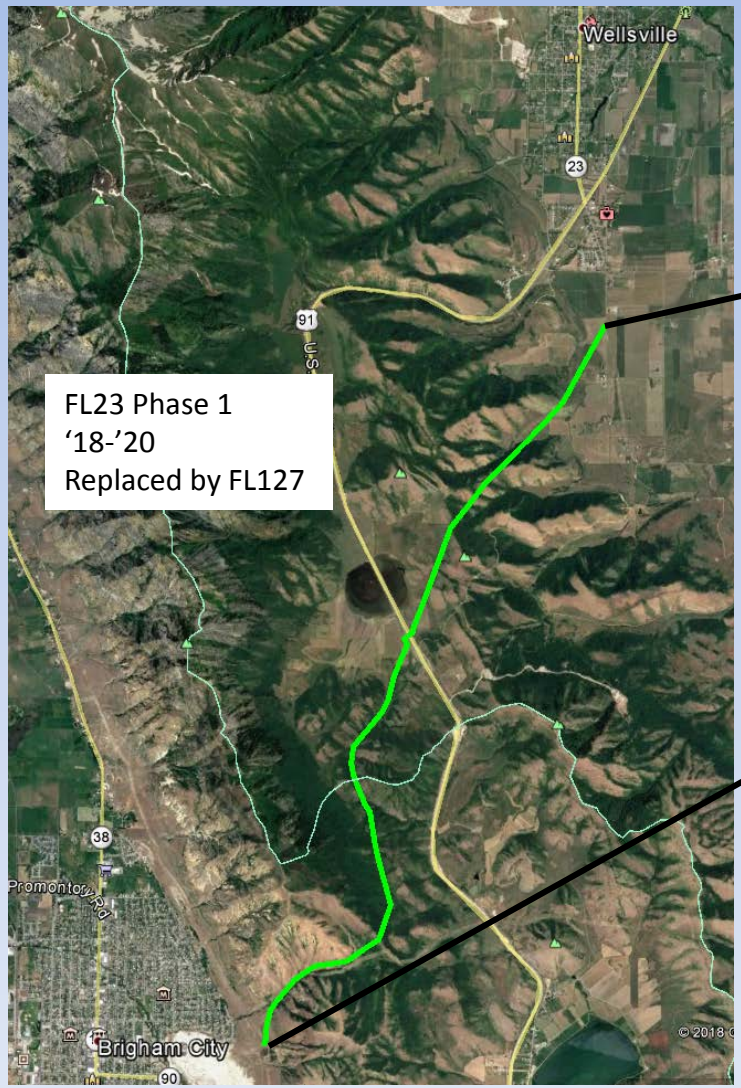
- HP Replacement Program
  - 2019 Projects Update
  - Scheduling
  - 2018 Cost Variance

Feeder Line Replacement Update

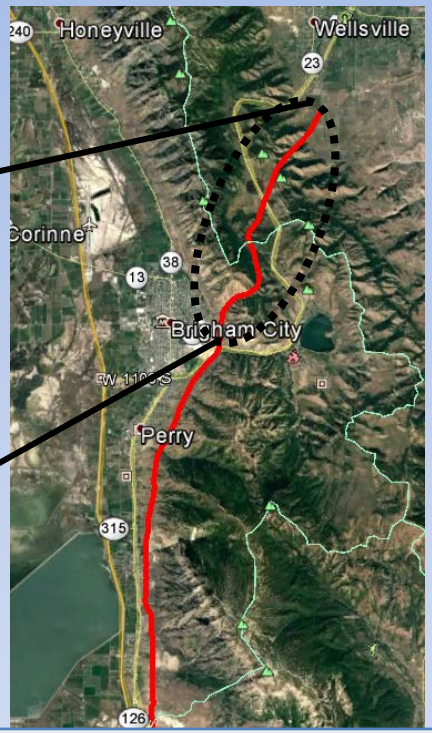
FL21-50
'17-'19
Replaced by FL122

Line:	21-50 (FL122)
Schedule:	2017-2019
2019 Budget:	$16,535,000 (shared)
Total PH2 Footage:	Approx. 59,664 ft.

Feeder Line Replacement Update

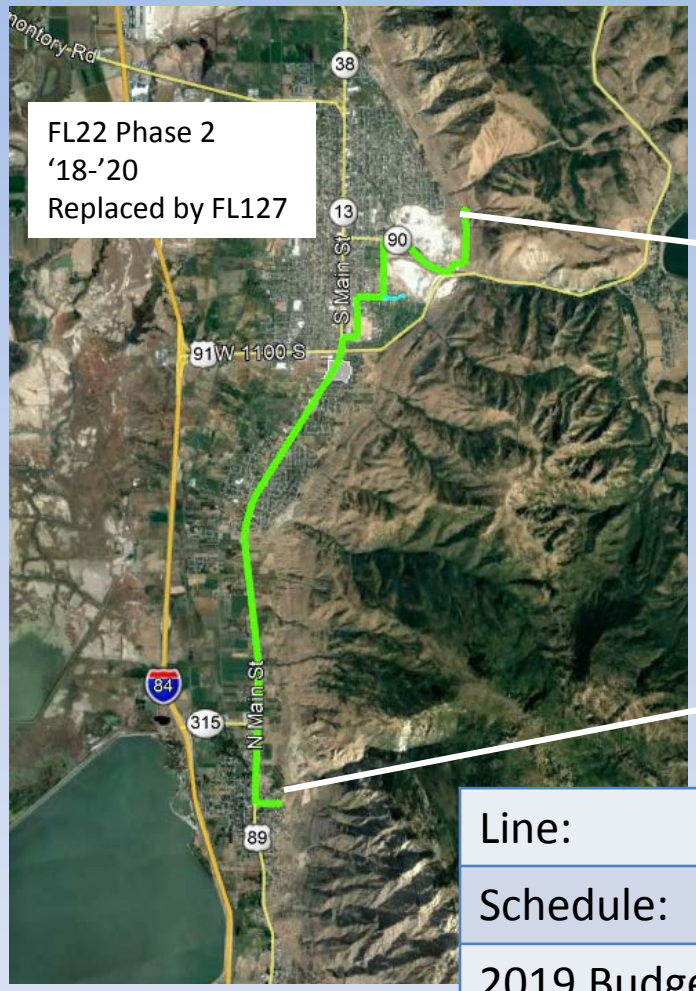


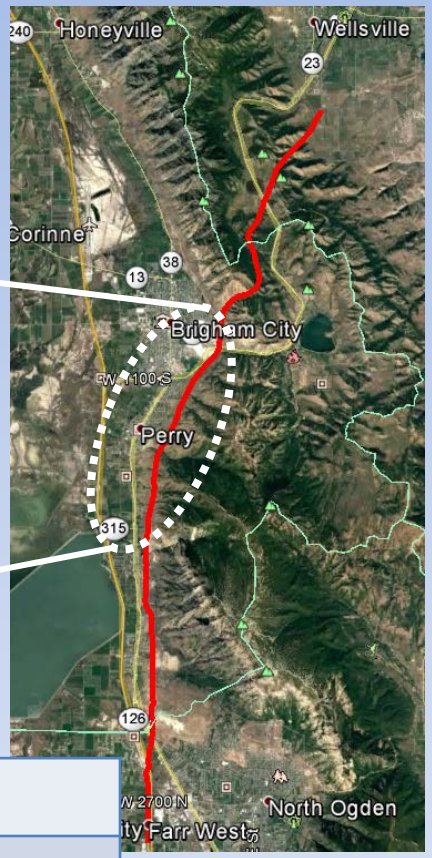
FL23 Phase 1
'18-'20
Replaced by FL127



Line:	FL22/23 (FL127) PH1
Schedule:	2018-2020
2019 Budget:	$34,351,572 (Shared)
Total PH1 Footage:	Approx. 40,000 ft.

Feeder Line Replacement Update

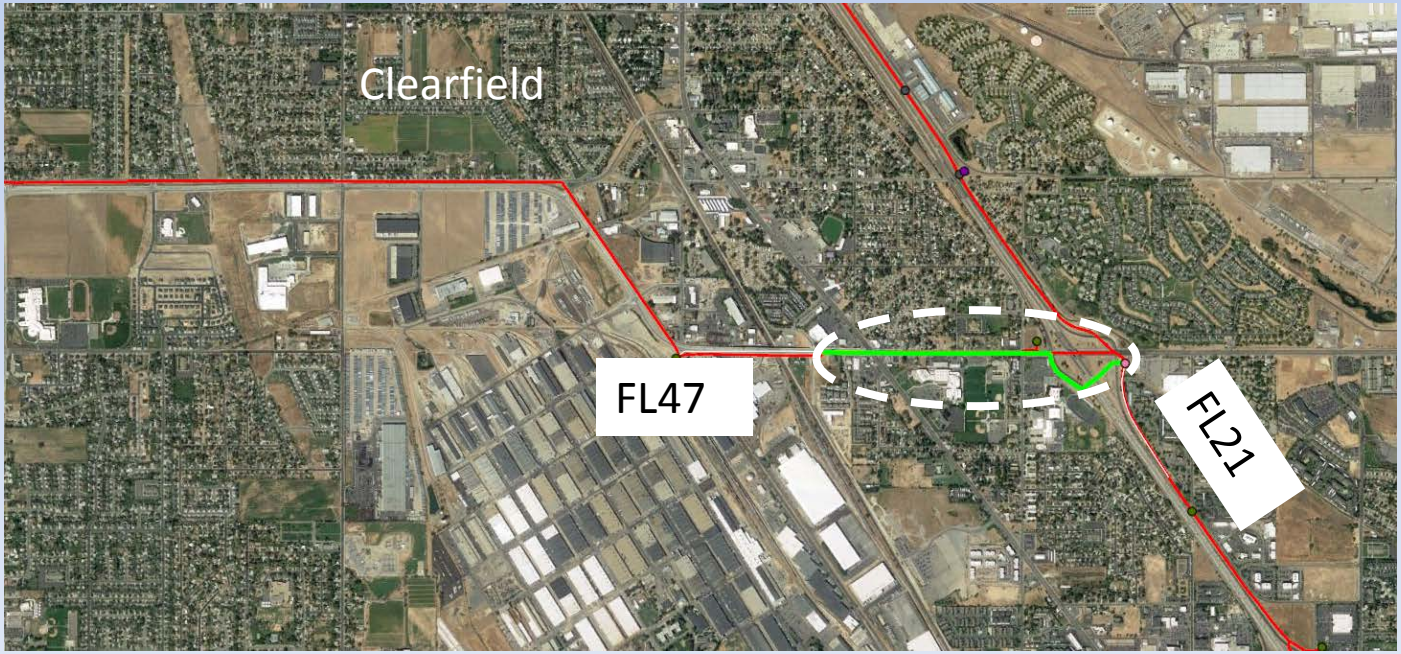




Line:	FL22 (FL127) PH2
Schedule:	2019-2020
2019 Budget:	$34,351,572 (Shared)
Total PH2 Footage:	Approx. 55,000 ft.

Feeder Line Update

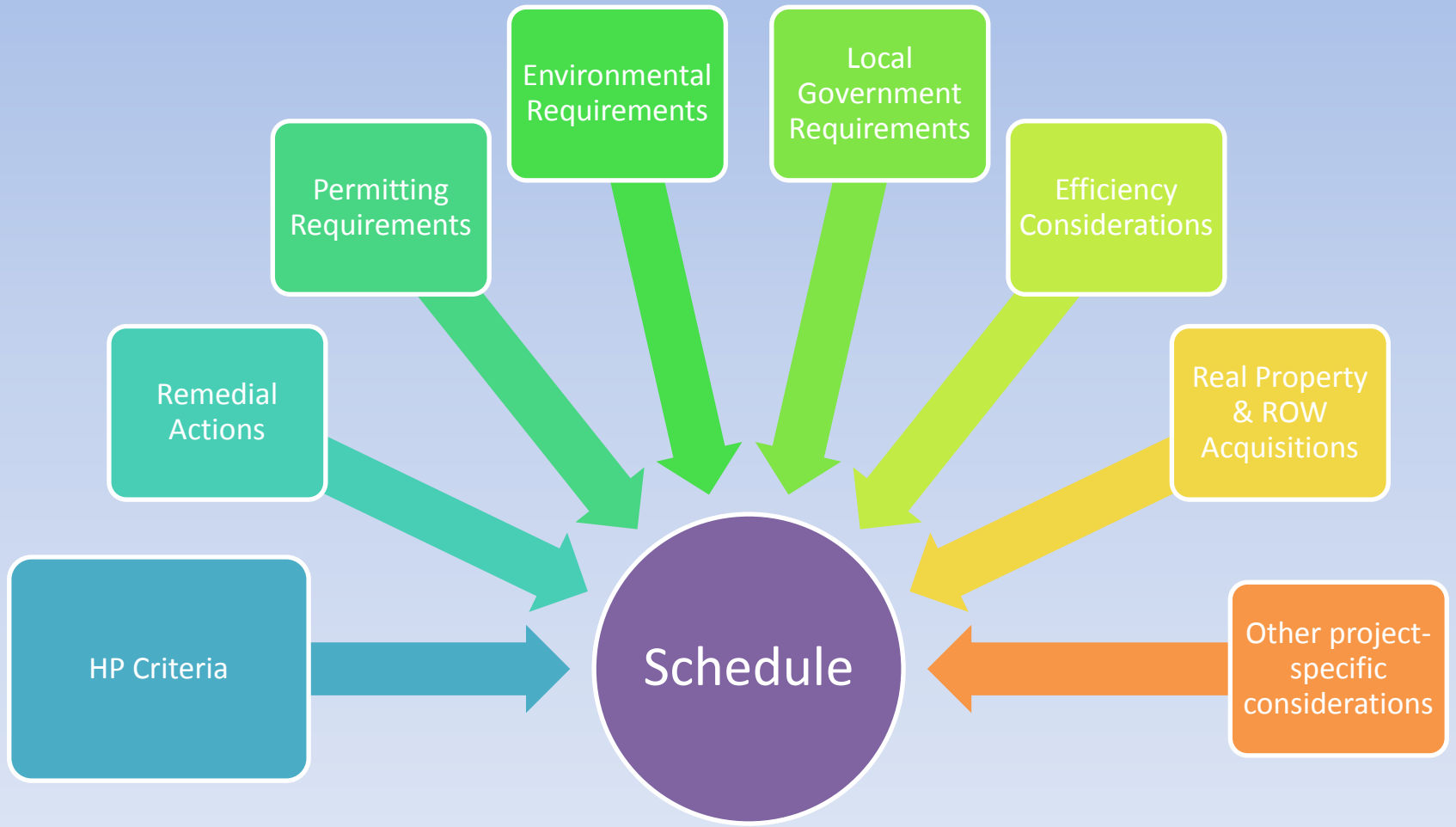
Line:	FL47
Schedule:	2019
2019 Budget:	$3,000,000
Total Footage:	5,174’



2019 Schedule

Line	Location
FL21-50	Davis County
FL47	Davis County
FL22	Box Elder
FL23	Cache County

Scheduling Feeder Line Replacements



Scheduling per Section III of the Settlement Stipulation, Docket 13-057-05, Exhibit 4

2018 FL Risk Continuous Improvements

- Risk of Failure = LOF x COF
- Likelihood Of Failure (LOF)
  - External Corrosion algorithm modified to more accurately calculate historic corrosion threat (30% weighting)
  - General mapping data improvements
- Consequence Of Failure (COF)
  - Accuracy improved for analyzing mapping data related to identified sites (80% weighting)
  - General mapping data improvements

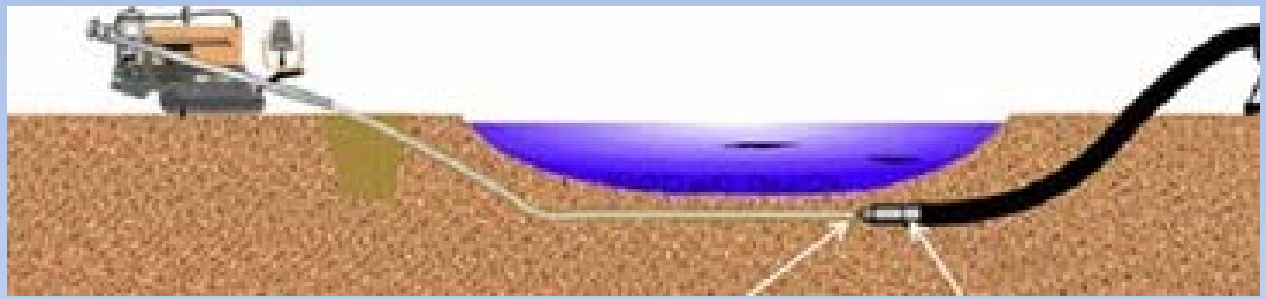

HP Criteria
[redacted]
Remedial Actions
Permitting Requirements
Environmental Requirements
Local City Requirements
Efficiency Considerations
Real Property & ROW Acquisitions
Schedule
2019 Schedule
FL47
FL21-50
FL23
FL22
Other project-specific considerations
FL23 & FL22: Replacement to increase regional system pressure.

2018 Cost Variance

Project	Budget	Actual	Variance	Explanation
FL21	$45,650,000	$36,849,820	$8,800,180	
FL23	$4,500,000	$9,888,209	($5,388,209)	Due to issues with the permitting and completion of FL21 work, funding was utilized on this project resulting in greater than projected costs.
FL35	$320,000	$311,049	$8,951	
FL51	$500,000	$5,465,958	($4,965,958)	Due to delays, approximately 9,744 feet of the 15,100 foot pipeline were installed in 2017, with the rest completed in 2018. The primary cause of this overage was a result of a change of scope that moved the running line from in the dirt (off the road and shoulder) into the roadway.
Pre-engineering	$550,000	$204,266	$345,734	
Total	**$51,520,000**	**$52,719,302**	**($1,199,302)**	

Construction Best Practices

Inadvertent Returns



*Not Dominion Energy

Horizontal Directional Drill Practice

- A drilling plan must be in place and approved by the Project Engineer with input from DE Environment & Sustainability (DEES) and DE Environmental Compliance (EC) the site specific plan of how to execute the HDD, including maximum and minimum pressures, depths, and lengths, done by a string by string analysis

- For sensitive crossing this plan must include:
- A geotechnical study on the potential for an Inadvertent Return
- Specific list of equipment to be used during the drilling operation for the specific project
- Map or redlined Company drawing showing expected Bore Pit locations. Any sensitive crossings must be highlighted
- Site specific list identifying risks and how to mitigate those risks
- Abandonment of a drill string, if needed
- Site Specific Inadvertent Return monitoring (how & at what frequency), prevention and response
- This must include all equipment & materials that will be on-site in the event of an IR

Methane Reduction

- Isolate system
- Utilize customer demand to draw pressure down
- Use ZeVac to pump remaining gas from isolated section into the system
- Commence Tie in

Pickling

- As a distribution company we are required to odorize our Natural Gas
- Typically done at Gate Stations
- New long line pipe can remove odorant
- Previous process wasn't standardized
- Dominion creating a standardized process
  - Inject additional odorant
  - Monitor odorant levels

AC Mitigation

- Greater AC presence= Greater interference
- Induced current presents risk to
  - Natural Gas Facilities
  - People
- Mitigation includes installation of zinc ribbon and zinc matting

QUESTIONS?