

INTEGRATED PIPELINE PROJECT MONTHLY EXECUTIVE SUMMARY

February 2016



Factory inspection of
108" Gate Valve castings
at Hodge Foundry,
Greenville, Pennsylvania

IPL PROGRAM MANAGEMENT

Tarrant Regional Water District
804 East Northside Drive
Fort Worth, TX 76102

817.720.4469 p

817.720.4397 f

iplproject.com

@IPL_Project

TARRANT REGIONAL WATER DISTRICT (TRWD) and the CITY OF DALLAS

WATER UTILITIES (DWU) have partnered to finance, plan, design, construct and operate the Integrated Pipeline (IPL) Project. The IPL Project is an integrated water delivery transmission system connecting Lake Palestine to Lake Benbrook with connections to Cedar Creek and Richland-Chambers Reservoirs integrating TRWD's existing pipelines and creating flexibility in delivery as well as quick response to fluctuating customer water demands. The IPL Project consists of 150 miles of pipeline, three new lake pump stations, and three new booster pump stations delivering a required capacity of 350 million gallons per day (MGD) of raw water to North Central Texas. TRWD and DWU currently serve over 4.1 million residents and the IPL will allow these agencies to continue supporting regional community and economic growth.

PROGRAM SUPPORT SERVICES

as of 2.29.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,061,000	\$87,880,007	\$81,955,451
Program Management	Overall program management services for implementation of the IPL Project. (Extension of TRWD staff)	\$45,000,000	\$35,124,711	\$35,124,711
Conceptual Design / Environmental / Permitting	Operations plan & Prepare 404 permit application, Envision Application Completion	\$13,551,000	\$13,472,389	\$12,698,715
Value Engineering	Expert review of design	\$640,000	\$472,248	\$472,248
Surveying and Mapping	Control, property survey, legal descriptions, and Provide SUE Level A Survey, GIS	\$14,600,000	\$11,858,055	\$10,245,044
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,026,275	\$11,798,959
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$4,885,562	\$3,599,748
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,147,269
Studies		\$3,500,000	\$3,545,243	\$3,277,569
SCADA System	Engineering of SCADA system	\$640,000	\$1,508,213	\$122,577
Microwave System	Engineering of Communications System	\$5,210,000	\$1,522,785	\$1,468,609
DESIGN		\$152,839,000	\$126,157,977	\$107,137,154
Completed		\$103,899,000	\$96,387,769	\$95,151,945
Active		\$24,159,000	\$29,230,270	\$11,985,210
CH2M Hill	Project Operational Information and Operations Manual		\$3,044,922	\$752,285
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$477,859	\$203,757
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$524,313	\$453,887
Black & Veatch	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch and 108 - inch pipeline	\$11,292,000	\$9,704,622	\$9,586,355
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,753	\$165,375
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$145,184
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$145,124
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$533,243
Remaining		\$24,780,000	\$539,938	
CONSTRUCTION ADMINISTRATION		\$48,877,000	\$15,395,691	\$4,701,687
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$452,180,320	\$235,769,543
Completed		\$3,700,000	\$3,860,755	\$3,644,051
Active		\$616,879,000	\$448,319,565	\$232,125,492
Pipeline Section 15-1		\$115,112,000	\$93,517,546	\$91,556,620
Garney Construction	Construction of Section 15-1	\$115,112,000	\$93,517,546	\$91,556,620
JB3		\$99,592,000	\$85,280,597	\$23,786,705
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$56,808,072	\$10,814,830
ASI Constructors	Construction of JB3 Reservoir	\$16,579,000	\$11,669,898	\$11,669,898
Oncor Electric	Installation of JB3 Substation Transmission Lines	\$1,066,000	\$957,119	\$923,119
Isolux Corsan	Construction of JB3 Substation	\$7,400,000	\$4,921,283	\$378,857
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$10,924,225	

PROGRAM SUPPORT SERVICES

as of 2.29.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,993,000	\$153,637,277	\$86,939,695
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$142,985,837	\$85,295,892
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,563,440	\$1,643,804
Hilco Electric	Relocation of Electrical Service Lines		\$88,000	
Microwave System		\$6,398,000	\$5,323,682	\$3,003,632
Huffman Communications	Construction of Microwave Towers	\$6,398,000	\$5,323,682	\$3,003,632
Pipeline Section 15-2		\$97,217,000	\$51,871,918	\$24,611,073
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$51,871,918	\$24,611,073
Pipeline Section 14		\$107,113,000	\$48,107,931	
Garney Construction	Construction of Section 14	\$107,113,000	\$48,107,931	
Valve Packages		\$23,455,000	\$10,580,613	\$2,227,766
Garney Construction	Valve Package 1 - Section 15-1 Butterfly Valves	\$518,000	\$262,244	
Rodney Hunt	Valve Package 2 - Section 15-1 Interconnection Facility Valves	\$474,000	\$733,206	\$664,995
Blackhall Engineering	Valve Package 3 - JB3, Section 15-2, MBR Yard Gate Valves	\$5,500,000	\$5,834,139	\$838,485
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	\$3,999,000	\$1,999,740	\$185,166
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,224,944	\$187,115
Ross Valves	Valve Package 6 - Section 12 RC/CC Interconnection Multi-Orifice Valves	\$715,000	\$526,340	\$352,005
Remaining		\$1,108,960,000		
CONSTRUCTION MANAGEMENT		\$65,169,000	\$25,290,740	\$13,797,755
Program-Wide Construction Management			\$25,240,248	\$13,747,263
Pipeline Section 15 (Garney)		\$139,000	\$50,492	\$50,492
CONSTRUCTION MATERIALS TESTING		\$17,295,000	\$9,326,231	\$1,923,379
Pipeline Section 15-1		\$1,198,000	\$1,160,225	\$741,241
JB3		\$741,000	\$1,056,751	\$302,815
Pipeline Section 12/13/MBR		\$1,734,000	\$2,115,410	\$753,190
Microwave System		\$64,000	\$48,899	\$31,808
Pipeline Section 15-2		\$983,000	\$1,171,139	\$94,325
Pipeline Section 14		\$1,158,903	\$650,000	
Program-Wide			\$3,123,808	
ROCIP		\$2,575,000	\$32,875,390	\$13,027,535
Willis of Texas	ROCIP Broker Admin / Insurance Premium	\$2,575,000	\$18,258,571	\$9,950,811
Old Republic	Security Obligations		\$14,616,819	\$3,076,723
LAND COST		\$107,384,000	\$42,082,131	\$42,082,131
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$1,533,349	\$1,533,349
GRAND TOTAL		\$2,341,918,000	\$792,721,835	\$501,927,982
REMAINING BOND FUNDS				\$748,072,018

Note: Total Bonds issued to date \$1,250,000,000

ACCOMPLISHMENTS

through 03.31.16

PL151 (Pipeline Section 15.1 including the S5X15 Richland-Chambers Pipeline Interconnect Facility)

- IPL reps traveled to Berwick, Pennsylvania to witness testing of 78" Butterfly Valves and their motor operators.

JB3R (Pump Suction Reservoir for the JB3 Pump Station)

- No work performed.

PL1213MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)

- Continue embankment fill on both perimeter and interior embankments at MBR.
- Completed MBR Cell 3 outlet structure.
- Installed ±4,300' of 108" pipe.
- Completed tunnels at Mountain Creek and US 67.

COM01 (Microwave Towers and Communication Facilities for SCADA Control of the IPL)

- Installed security fencing and gates for tower locations at the future JCC1 and JB4 pump stations.

JB3 (250mgd Pump Station expandable to 350mgd)

- Setting 108" discharge header pipe in lower level pipe gallery.
- Forming ground level pump room slab on north end of the pump station.
- Continue flowable fill backfill of lower level walls.

PL152 (Pipeline Section 15.2 that feeds the JB3 Reservoir)

- Installed ±4,500' of 108" pipe.
- Completed excavation of Waxahachie Creek tunnel and completed pipe installation and grouting of FM984B and Hwy 34 tunnels.
- Installing manholes at air release and blow-off valve locations.

S2X12 (Interconnection Facility of IPL Phase 1 to existing Cedar Creek and Richland Chambers Pipelines)

- Placing concrete for foundation beams at Interconnect building.
- Completed removal and replacement of pipe in the existing Cedar Creek line. New piping includes tee for connection of Phase 1 IPL piping into existing Cedar Creek and Richland Chambers pipelines.

JB3HV (High Voltage Substation for the JB3 Pump Station and Data Center)

- Continue drilled pier installation and placed concrete slab for transformers.
- Received high voltage disconnect switches.

PL14 (Pipeline Section 14 that delivers water from JB3 Pump Station to MBR)

- Began work on tunnels at IH35, FM 1446, FM 66 and FM 984.
- Clearing and stripping ROW and receiving 108" pipe deliveries and stockpiling embedment material.

OFE03 (Owner-furnished 108" Gate Valves)

- IPL reps travelled to Calera, Alabama to witness Ultrasonic Testing of valve parts to detect casting defects. No rejectable defects found.

OFE04 (Owner-furnished 54", 60" and 108" Butterfly Valves)

- IPL reps travelled to Berwick, Pennsylvania to witness operational and hydrostatic testing of 54", 60" BFVs.

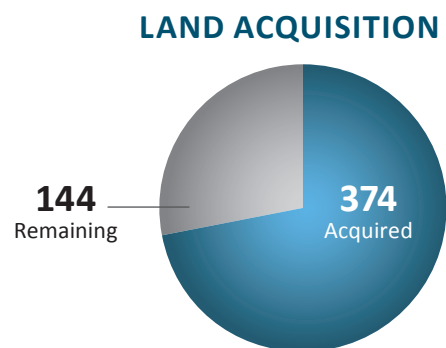
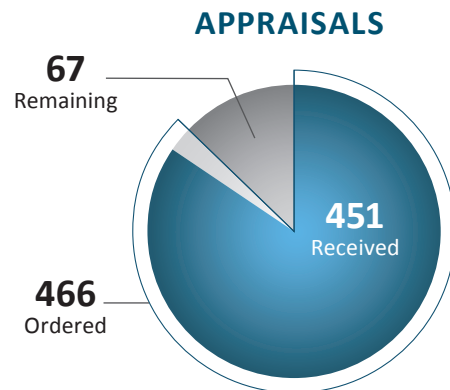
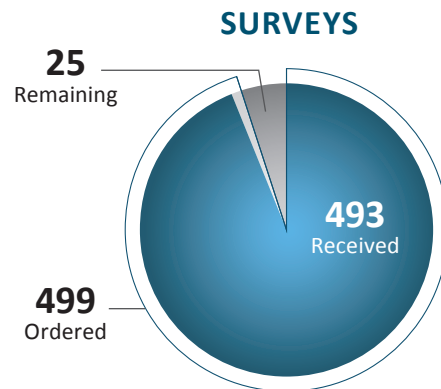
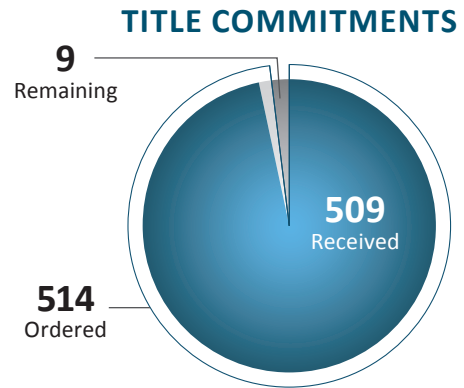
OFE07 (Owner-furnished pumps, motors and variable frequency drives for JB3)

- IPL reps travelled to Cincinnati, Ohio and Kansas City, Kansas to witness Ultrasonic Testing of pump castings and interior pump coating.

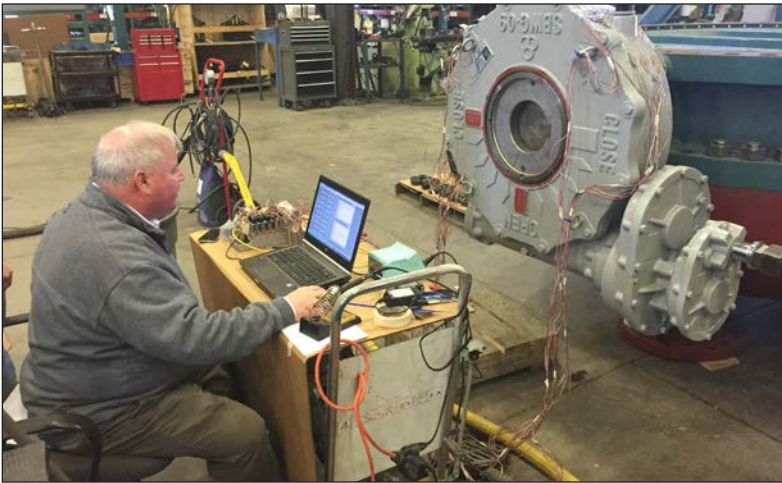
PROJECT SCHEDULE

PROJECT COMPONENTS	2014				2015				2016	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
SECTION 15-1 CONSTRUCTION										
COMMUNICATION TOWERS CONSTRUCTION										
SECTIONS 12/13/MBR CONSTRUCTION										
JB3 CONSTRUCTION										
JB3 HIGH VOLTAGE CONSTRUCTION										
SECTION 15-2 CONSTRUCTION										
SECTION 14 CONSTRUCTION										
S2X12 (INTERCONNECTION FACILITY) CONSTRUCTION										

as of 2.29.16



Total Parent Parcels: 518



PL151 Using strain gauges to record casing stress during 78-inch BFV testing



S2x12 Installing 72 x 60 tee in existing Cedar Creek Pipeline for IPL connection

[illegible]

M/WBE PARTICIPATION

as of 2.29.16

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
PROGRAM WIDE PROFESSIONAL SERVICES		\$19,800,463	23%	\$19,353,984	98%	\$81,955,451	93%
Program Management		\$6,828,350	19%	\$6,636,687	97%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,700,278	20%	\$2,701,505	100%	\$12,698,715	94%
Value Engineering		\$0	0%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,548,416	30%	\$3,794,648	107%	\$10,245,044	86%
Geotechnical		\$3,572,334	30%	\$3,518,305	98%	\$11,798,959	98%
Corrosion Engineering Services		\$1,053,764	22%	\$761,434	72%	\$3,599,748	74%
Land, Easement Acquisition, & Support		\$1,201,457	35%	\$1,426,855	119%	\$3,147,269	91%
Studies		\$41,717	1%	\$41,717	100%	\$3,277,569	92%
SCADA System		\$384,444	25%	\$0	0%	\$122,577	8%
Microwave System		\$469,702	31%	\$449,654	96%	\$1,468,609	96%
DESIGN		\$33,574,807	27%	\$28,968,691	86%	\$107,137,154	85%
Completed		\$26,513,868	28%	\$25,980,682	98%	\$95,151,945	99%
Active		\$7,060,939	24%	\$2,988,009	42%	\$11,985,210	41%
CH2M Hill (Ops Manual)	NDM	\$479,674	16%	\$177,237	37%	\$752,285	25%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$123,192	26%	\$27,171	22%	\$203,757	43%
MWH	Garzabury, Kevin Sloan	\$226,705	43%	\$117,449	52%	\$453,887	87%
Black & Veatch	BDS, CAS, JQ, TME	\$2,425,531	25%	\$2,568,639	108%	\$9,586,355	100%
Parsons	Criado, EPB, HVJ	\$144,938	25%	\$0	0%	\$165,375	29%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$8,936	1%	\$145,184	2%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$0	0%	\$145,124	2%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$88,578	55%	\$533,243	59%
Remaining		\$0	0%	\$0	0%	\$0	0%
CONSTRUCTION ADMINISTRATION		\$3,854,622	25%	\$1,091,747	28%	\$4,701,687	31%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$60,652,397	23%*	\$24,311,901	40%	\$235,769,543	52%
Completed		\$1,354,402	35%	\$1,354,402	100%	\$3,644,051	94%
Active		\$59,297,995	23%*	\$22,957,499	39%	\$232,125,492	52%
Pipeline Section 15-1		\$9,415,226	29%*	\$6,402,027	68%	\$91,556,620	98%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,415,226	29%*	\$6,402,027	68%	\$91,556,620	98%
JB3		\$16,474,218	21%*	\$2,360,553	14%	\$23,786,705	28%
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	\$13,580,000	27%*	\$824,182	6%	\$10,814,830	19%
ASI Constructors	Champion Fuel, Desert Steel, Green Scaping	\$1,417,833	13%*	\$1,525,477	108%	\$11,669,898	100%

M/WBE PARTICIPATION

as of 2.29.16

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
Isolux Corsan	Dyna Grid	\$1,476,385	30%*	\$10,894	1%	\$378,857	8%
Oncor Electric		\$0	0%	\$0	0%	\$923,119	96%
Pipeline Section 12/13/MBR/JB4 Bypass		\$22,054,002	24%*	\$8,581,646	39%	\$86,939,695	57%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas	\$21,209,810	27%*	\$7,104,486	33%	\$85,295,892	60%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$844,192	8%	\$1,477,161	175%	\$1,643,804	16%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Microwave System		\$1,162,817	22%	\$853,840	73%	\$3,003,632	56%
Huffman Communications	Ricochet, Edwards, Chaffin Tower	\$1,162,817	22%	\$853,840	73%	\$3,003,632	56%
Pipeline Section 15-2		\$4,122,200	16%*	\$4,759,433	115%	\$24,611,073	47%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$4,122,200	16%*	\$4,759,433	115%	\$24,611,073	47%
Pipeline Section 14		\$6,069,533	22%*	\$0	0%	\$0	0%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,069,533	22%*	\$0	0%	\$0	0%
Valve Packages		\$0	0%	\$0	0%	\$2,227,766	21%
CONSTRUCTION MANAGEMENT		\$12,402,474	49%	\$5,353,032	43%	\$13,797,755	55%
Program-Wide Construction Management		\$12,402,474	49%	\$5,353,032	43%	\$13,747,263	54%
Pipeline Section 15 (Garney)		\$0	0%	\$0	0%	\$50,492	100%
CONSTRUCTION MATERIALS TESTING		\$4,668,945	50%	\$894,578	19%	\$1,923,379	21%
Pipeline Section 15-1		\$349,128	30%	\$248,110	71%	\$741,241	64%
JB3		\$565,815	54%	\$238,745	42%	\$302,815	29%
Pipeline Section 12/13/MBR		\$467,603	22%	\$313,399	67%	\$753,190	36%
Microwave System		\$0	0%	\$0	0%	\$31,808	65%
Pipeline Section 15-2		\$1,171,139	100%	\$94,325	8%	\$94,325	8%
Pipeline Section 14		\$0	0%	\$0	0%	\$0	0%
Program-Wide		\$2,115,260	68%	\$0	0%	\$0	0%
ROCI		\$1,499,307	5%	\$174,467	12%	\$13,027,535	40%
Willis of Texas		\$1,499,307	8%	\$174,467	12%	\$9,950,811	54%
Old Republic		\$0	0%	\$0	0%	\$3,076,723	21%
TOTAL		\$136,453,016	24%*	\$80,148,401	59%	\$458,312,502	61%
LAND COST						\$42,082,131	39%
MISCELLANEOUS						\$1,533,349	
GRAND TOTAL		\$136,453,016	24%*	\$80,148,401	59%	\$501,927,982	63%

*Denotes participation percentage excluding cost of pipe and owner furnished equipment.

PROJECT COMPONENTS

PIPELINE SEGMENTS	CORE PROJECT	DESCRIPTION
Section 9		KBR Turn-Out Tee to existing Benbrook Connection Pipeline (10.6 mi. 84" dia. Pipe + 5 mi. 120" Tunnel)
Section 10	💧	KBR Turn-Out Tee to KBR (2.4 mi. 84" dia. Pipe)
Section 11	💧	JB4 to KBR Turn-Out Tee (10 mi. 84" dia. Pipe)
Section 12	💧	JB4 to existing CC and RC Pipelines (2.2 mi. 108" dia. Pipe)
Section 13	💧	MBR2 (Midlothian Balancing Reservoir) to JB4 (11 mi. 108" dia. Pipe)
Section 14	💧	JB3 to MBR2 (Midlothian Balancing Reservoir) (14.9 mi. 108" dia. Pipe)
Section 15	💧	JB2 to JB3 (28.5 mi 108" dia. Pipe)
Section 16		JRC1 (Joint Richland Chambers Lake Pump Station) to JB2 (12.3 mi. 96" dia. Pipe)
Section 17	💧	Cedar Creek Connection to JB2 (11.2 mi. 108" dia. Pipe)
Section 18	💧	JCC1 (Joint Cedar Creek Lake Pump Station) to Cedar Creek Connection (0.2 mi. 108" dia. Pipe)
Section 19		LP1 (Lake Palestine Pump Station) to Cedar Creek Connection (42.3 mi. 84" dia. Pipe)

PUMP STATIONS	CORE PROJECT	DESCRIPTION
Palestine Pump Station		150 mgd with new intake
Cedar Creek Pump Station	💧	277 mgd with new intake
Richland Chambers Pump Station		250 mgd Ultimate Design Capacity
Booster Pump Stations		Two @ 347 mgd and one @ 197 mgd (💧 one 347 mgd station - JB3)

SUPPORT FACILITIES	CORE PROJECT	DESCRIPTION
Reservoirs		Three reservoirs (80 – 400 mgd) two for booster pump stations and one for balancing
Deep Tunnels		5 mi of 10' dia. tunnel @ Crowley (included in length of Section 9)
Substations & High Voltage Transmission Lines		Six substations and 4 mi. of high voltage transmission lines (💧 two substations)
Microwave Communications and SCADA System	💧	Provides remote operations capability and system monitoring

