

INTEGRATED PIPELINE PROJECT MONTHLY EXECUTIVE SUMMARY

August 2017

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.

IPL PROGRAM MANAGEMENT

Tarrant Regional Water District
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Fort Worth, TX 76102
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iplproject.com
[@IPL_Project](https://twitter.com/IPL_Project)



PL1011 Testing select backfill
over pipe near Lake Road

PROGRAM SUPPORT SERVICES

as of 08.31.17

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,061,000	\$88,413,666	\$84,191,285
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	\$13,467,707	\$13,171,032
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	\$11,854,388	\$10,470,712
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,026,275	\$12,026,276
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$5,326,362	\$4,072,183
Land, Easement Acquisition, & Support Studies	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,420,094
		\$3,500,000	\$3,883,743	\$3,502,626
SCADA System	Engineering of SCADA system	\$640,000	\$1,325,096	\$462,793
Microwave System	Engineering of Communications System	\$5,210,000	\$1,468,609	\$1,468,609
DESIGN		\$152,839,000	\$128,140,356	\$116,091,393
Completed		\$101,901,000	\$95,701,764	\$95,153,466
Active		\$24,159,000	\$31,910,169	\$20,937,927
CH2M Hill	Project Operational Information and Operations Manual		\$3,044,922	\$2,707,824
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$2,861,718	\$1,814,860
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$812,562	\$533,231
Black & Veatch	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch and 108 - inch pipeline	\$11,292,000	\$9,712,413	\$9,651,306
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,753	\$681,545
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$1,696,643
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$3,093,974
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$758,544
Remaining		\$26,778,000	\$528,423	
CONSTRUCTION ADMINISTRATION		\$48,877,000	\$18,634,867	\$10,529,536
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$632,368,482	\$486,446,761
Completed		\$34,078,000	\$25,578,749	\$25,578,749
Active		\$804,518,000	\$606,789,733	\$460,868,012
Pipeline Section 15-1		\$115,112,000	\$94,409,665	\$93,094,462
Garney Construction	Construction of Section 15-1	\$115,112,000	\$94,409,665	\$93,094,462
JB3		\$75,612,000	\$69,252,896	\$50,094,940
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$57,037,594	\$42,718,867
Oncor Electric	Installation of JB3 Substation Transmission Lines	\$1,066,000	\$957,119	\$923,119
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$11,258,183	\$6,452,954
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,993,000	\$154,073,634	\$145,209,799
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$143,382,923	\$135,534,178
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,566,482	\$9,551,392
Hilco Electric	Relocation of Electrical Service Lines		\$0	
Hilco Electric	MBR Radio Tower Power		\$33,312	\$33,312
Oncor Electric	Provide Power to IPL 2X12		\$90,918	\$90,918
Pipeline Section 15-2		\$97,217,000	\$53,000,730	\$48,748,843
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$53,000,730	\$48,748,843

PROGRAM SUPPORT SERVICES

as of 08.31.17

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 14		\$107,113,000	\$48,335,397	\$43,461,795
Garney Construction	Construction of Section 14	\$107,113,000	\$48,335,397	\$43,461,795
Pipeline Section 17		\$109,944,000	\$78,396,258	\$32,704,868
IPL Partners	Construction of Section 17 Tunnel	\$12,252,000	\$33,067,943	\$16,366,661
Thalle Midlothian	Construction of Sections 17	\$97,692,000	\$45,328,314	\$16,338,207
JCC1		\$42,683,000	\$37,709,676	\$6,326,453
BAR Constructors	Construction of JCC1 Intake	\$21,564,000	\$19,743,852	\$6,326,453
Ebara	Construction of JCC1 Pumps, Motors, Drives	\$17,775,000	\$12,694,890	\$0
Oncor Electric	Construction of JCC1 HV Transmission Lines	\$3,343,000	\$5,270,933	\$0
Pipeline Section 10/11		\$73,678,000	\$57,042,940	\$32,205,366
IPL Partners	Construction of Section 10/11	\$72,362,000	\$43,385,487	\$31,338,786
Oncor Electric	Construction of KBR S1X10 HV Transmission Lines	\$0	\$17,452	\$17,452
BAR Constructors	Construction of KBR S1X10	\$1,317,000	\$13,640,000	\$849,127
Valve Packages		\$15,165,000	\$14,568,537	\$9,021,486
Garney Construction	Valve Package 1 - Section 15-1 Butterfly Valves	\$518,000	\$262,244	\$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	\$6,278,387	\$5,065,613
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	\$3,999,000	\$2,269,140	\$1,632,612
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,249,222	\$867,122
Ross Valves	Valve Package 6 - Section 12 RC/CC Interconnection Multi-Orifice Valves	\$715,000	\$526,340	\$352,005
Crispin Valves	Valve Package 8 - Section 10 & 11 Bypass Butterfly Valves	\$1,391,000	\$1,461,040	\$0
Blackhall Engineering	Valve Package 11 - JCC1 Gate Valve	\$1,320,000	\$1,788,958	\$176,896
Remaining		\$890,944,000		
CONSTRUCTION MANAGEMENT		\$65,169,000	\$45,397,801	\$27,884,510
Completed		\$15,777,000	\$15,687,599	\$15,687,599
Active		\$17,665,000	\$29,710,201	\$12,196,911
Remaining		\$31,727,000		
CONSTRUCTION MATERIALS TESTING		\$17,295,000	\$12,763,330	\$5,618,362
Completed		\$267,000	\$264,236	\$264,235
Active		\$7,727,000	\$12,499,094	\$5,354,127
Remaining		\$9,302,000		
ROCI		\$2,575,000	\$23,366,510	\$18,751,954
LAND COST		\$107,384,000	\$58,076,873	\$58,076,873
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$2,351,738	\$2,351,738
GRAND TOTAL		\$2,341,918,000	\$1,009,513,620	\$809,942,411
REMAINING BOND FUNDS				\$440,057,589

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

ACCOMPLISHMENTS

through 09.30.17

PL15-1 (Pipeline Section 15-1 including the S5X15 Richland-Chambers Pipeline Interconnect Facility)

- Completed Functional Witness Testing of all S5X15 controls from main SCADA Control Rooms.
- Mowed ROW and began installing additional ROW fencing H-Braces added by change order.

JB3RR (Pump Suction Reservoir Grading and Grassing Project)

- Continue mowing and maintenance of embankment slopes.

PL12, 13, MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)

- Complete hydrostatic pressure testing of all MBR yard piping and removed all internal test bulkheads.
- Installed flexbase for reservoir embankment roadways.
- Continue security fencing at MBR, ROW fencing and gates, and cable mats at creek crossings.

JB3 (250mgd Pump Station expandable to 350mgd)

- Performed load testing of bridge crane.
- Continue Kalwall opaque window installation on pump station.
- Energized motor-control center and both medium voltage and low voltage switchgear.
- Continue HVAC ductwork installation.

PL15-2 (Pipeline Section 15-2 that feeds the JB3 Reservoir)

- Completed installation of 108" gate valve.
- Continue ROW fences and gates and installing security fencing at 108" Gate Valve vault location.
- Continue installation of cable mats at creek crossings and Cathodic Protection test stations.
- Began work on permanent access driveways from County and TxDOT roadways.

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

- Touch-up coating repairs on interior and exterior of 60" piping.
- Began installation of irrigation system.

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

- Completed all tunnel grouting and interior deflection testing of entire pipeline.
- Continue installing vaults at air valves and blow-offs, continue spoil removal and ROW restoration.
- Continue installation of cathodic protection anode beds.

PL17TUN (Trinity River Tunnel on Pipeline Section 17)

- Completed excavating east portal and continue excavating west portal at each end of the tunnel.
- Installed 1,680 l.f. of open-cut portion of 108" pipeline.
- Continue receiving pipe, embedment and tunnel support materials.

JCC1IN (Intake Structure and Wet Well for JCC1 Pump Station at Cedar Creek)

- Placed structural concrete for all 8 intake structure slabs and portions of north wingwalls and intake structure wall.
- Continue well-point dewatering of the work area.

PL10, 11 (Pipeline Sections 10 and 11 from the JB4 Pump Station to the KBR Pressure Reduction Facility)

- Installed 13,000 l.f. of pipe in Section 11.
- Completed pipe installation in two gas line tunnels and began tunnel at FM917.
- Clean-up crews completed all permanent ROW fences and gates on Section 10.
- Installing anode beds and cathodic protection test stations.

PL17-18 (Pipeline Sections 17 and 18 from east end of PL15-1 to JCC1 Pump Station)

- Tunnel at SH 274 is 90% complete.
- Installed 2,177 l.f. of 108" pipeline.
- All clearing and topsoil stripping is complete.
- Continue receiving pipe and installing temporary fences and gates.

KBRPRS / S1X10 (Pressure Reduction Station at Kennedale Balancing Reservoir connecting Pipeline Section 10)

- Completed 39 drilled piers and placed moisture barrier, void forms, rebar and concrete for pipe chase slab.

OFE03 (Owner-Furnished 108" Gate Valves)

- GV#3 delivered and installed at pipeline Section 15-2.

OFE04/05 (Owner-Furnished 54", 60" and 108" Butterfly Valves)

- All valves have been delivered.

OFE06 (Owner-Furnished Multi-Orifice Valves for S2X12)

- Valves delivered and installed, awaiting facility start-up.

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

- No additional deliveries to the site or factory testing performed this month.

OFE08 (Owner-Furnished 66", 84" and 108" Butterfly Valves)

- Submittals have been reviewed and production has begun.

OFE09 (Owner-Furnished pumps, motors and variable frequency drives for JCC1)

- Continue reviewing submittals for pump package.

OFE11 (Owner-Furnished 108" Gate Valve)

- Continue reviewing submittals received from Blackhall.



JB3 50-ton bridge crane load test

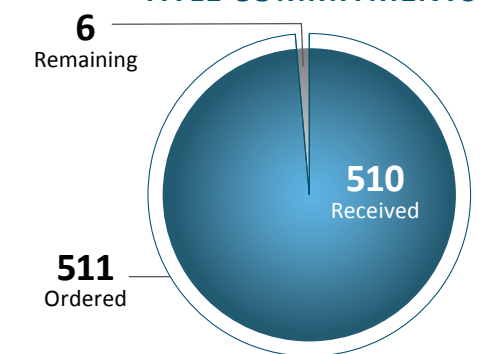


JCC1IN overview of the intake structure

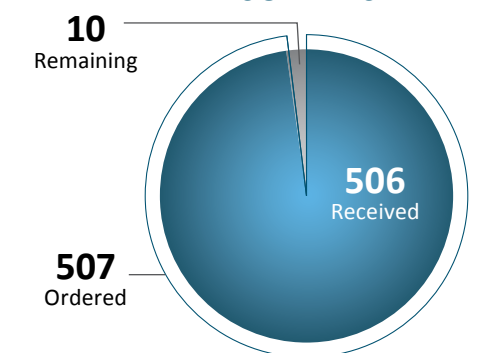
ACTIVITY STATUS

as of 09.30.17

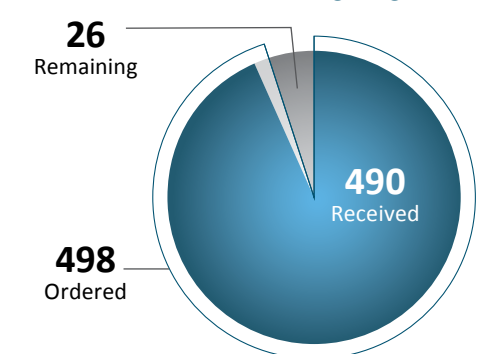
TITLE COMMITMENTS



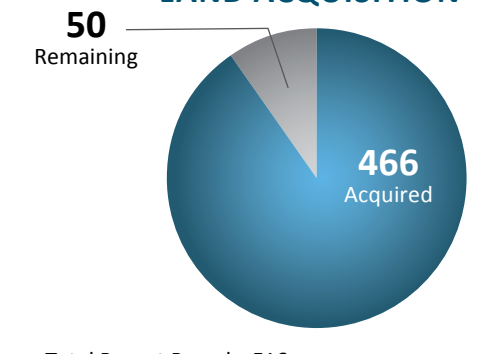
SURVEYS



APPRAISALS



LAND ACQUISITION



Total Parent Parcels: 516

PROJECT SCHEDULE

PROJECT COMPONENTS	2014				2015				2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SECTION 15-1 CONSTRUCTION																				
SECTIONS 12, 13, MBR CONSTRUCTION																				
JB3 CONSTRUCTION																				
SECTION 15-2 CONSTRUCTION																				
SECTION 14 CONSTRUCTION																				
S2X12 (INTERCONNECTION FACILITY) CONSTRUCTION																				
SECTION 17 TUNNEL CONSTRUCTION																				
JCC1 PUMP STATION INTAKE, WET WELL CONSTRUCTION																				
SECTION 10, 11 CONSTRUCTION																				
SECTION 17, 18 CONSTRUCTION																				
KBRPRS/S1X10 (PRESSURE REDUCTION STA.) CONSTRUCTION																				

M/WBE PARTICIPATION

as of 08.31.17

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		\$20,085,060	23%	\$19,659,198	98%	\$84,191,285	95%
Program Management		\$6,636,687	19%	\$6,636,687	100%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,700,278	20%	\$2,816,877	104%	\$13,171,032	98%
Value Engineering		\$23,178	5%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,939,403	33%	\$3,831,616	97%	\$10,470,712	88%
Geotechnical		\$3,545,033	29%	\$3,545,033	100%	\$12,026,276	100%
Corrosion Engineering Services		\$1,053,764	20%	\$761,434	72%	\$4,072,183	76%
Land, Easement Acquisition, & Support		\$1,294,837	37%	\$1,520,794	117%	\$3,420,094	99%
Studies		\$41,717	1%	\$41,717	100%	\$3,502,626	90%
SCADA System		\$384,444	29%	\$32,208	8%	\$462,793	35%
Microwave System		\$465,719	32%	\$449,654	97%	\$1,468,609	100%
DESIGN		\$33,817,272	26%	\$30,991,368	92%	\$116,091,393	91%
Completed		\$26,158,041	27%	\$25,980,682	99%	\$95,153,466	99%
Active		\$7,659,231	24%	\$5,010,687	65%	\$20,937,927	66%
CH2M Hill (Ops Manual)	NDM	\$479,674	16%	\$486,259	101%	\$2,707,824	89%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$721,484	25%	\$512,826	71%	\$1,814,860	63%
MWH	Garzabury, Kevin Sloan	\$226,705	28%	\$136,372	60%	\$533,231	66%
Black & Veatch	BDS, CAS, JQ, TME	\$2,425,531	25%	\$2,577,758	108%	\$9,651,306	100%
Parsons	Criado, EPB, HVJ	\$144,938	25%	\$112,357	78%	\$681,545	118%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$419,611	24%	\$1,696,643	24%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$650,032	37%	\$3,093,974	44%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$115,472	71%	\$758,544	84%
Remaining		\$0	0%	\$0	0%	\$0	0%
CONSTRUCTION ADMINISTRATION		\$4,533,806	24%	\$2,420,843	53%	\$10,529,536	57%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$80,876,320	19%*	\$76,568,893	95%	\$486,446,761	77%
Completed		\$5,540,970	22%	\$5,540,970	100%	\$25,578,749	100%
Active		\$75,335,350	22%*	\$71,027,923	94%	\$460,868,012	76%
Pipeline Section 15-1		\$9,415,226	28%*	\$6,650,966	71%	\$93,094,462	99%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,415,226	28%*	\$6,650,966	71%	\$93,094,462	99%
JB3		\$13,580,000	26%*	\$8,503,733	63%	\$50,094,940	72%
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%*	\$8,503,733	63%	\$42,718,867	75%
Oncor Electric		\$0	0%	\$0	0%	\$923,119	96%
Pentair Flow Technologies		\$0	0%	\$0	0%	\$6,452,954	57%
Pipeline Section 12/13/MBR/JB4 Bypass		\$22,054,002	24%*	\$21,202,605	96%	\$145,209,799	94%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,209,810	27%*	\$16,031,366	76%	\$135,534,178	95%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$844,192	8%	\$5,171,238	613%	\$9,551,392	90%

M/WBE PARTICIPATION

as of 08.31.17

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Hilco Electric		\$0	0%	\$0	0%	\$33,312	100%
Oncor Electric		\$0	0%	\$0	0%	\$90,918	100%
Pipeline Section 15-2		\$4,122,200	15%*	\$18,925,596	459%	\$48,748,843	92%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$4,122,200	15%	\$18,925,596	459%	\$48,748,843	92%
Pipeline Section 14		\$6,081,897	22%*	\$6,591,761	108%	\$43,461,795	90%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,081,897	22%	\$6,591,761	108%	\$43,461,795	90%
Pipeline Section 17		\$11,985,025	24%*	\$1,224,018	10%	\$32,704,868	42%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$6,623,125	24%	\$1,205,850	18%	\$16,366,661	49%
Thalle Midlothian	Fleet Lube, Rambo Controls, AE Trucking, MKI Construction, Stome Water Management, Industry Junction, Ortega Land Clearing	\$5,361,900	25%	\$18,168	0%	\$16,338,207	36%
JCC1		\$1,001,750	4%*	\$5,318,019	531%	\$6,326,453	17%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	\$1,001,750	6%	\$5,318,019	531%	\$6,326,453	32%
Ebara		\$0	0%	\$0	0%	\$0	0%
Oncor Electric		\$0	0%	\$0	0%	\$0	0%
Pipeline Section 10/11		\$7,095,250	20%*	\$2,611,225	37%	\$32,205,366	56%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$5,675,000	24%	\$1,860,480	33%	\$31,338,786	72%
Oncor Electric		\$0	0%	\$0	0%	\$17,452	100%
BAR Constructors	Industry Junction, VSG Trucking, Ricochet, MMG Disposal, Garland HVAC, CMC Rebar, Buzz Custom Fence, K&A Steel, Rangle Land Surveying	\$1,420,250	11%	\$750,745	53%	\$849,127	6%
Valve Packages		\$0	0%	\$0	0%	\$9,021,486	62%
CONSTRUCTION MANAGEMENT		\$18,613,186	41%	\$11,207,974	60%	\$27,884,510	61%
Completed		\$5,928,804	38%	\$5,954,412	100%	\$15,687,599	100%
Active		\$12,684,383	43%	\$5,253,562	41%	\$12,196,911	41%
CONSTRUCTION MATERIALS TESTING		\$7,553,296	59%	\$2,560,210	34%	\$5,618,362	44%
Completed		\$219,036	83%	\$219,036	100%	\$264,235	100%
Active		\$7,334,260	59%	\$2,341,174	32%	\$5,354,127	43%
ROCIIP		\$1,499,307	6%	\$275,382	18%	\$18,751,954	80%
TOTAL		\$166,978,248	24%*	\$143,683,868	86%	\$749,513,801	79%
LAND COST				\$62,900		\$58,076,873	54%
MISCELLANEOUS						\$2,351,738	
GRAND TOTAL		\$166,978,248	24%*	\$143,746,768	86%	\$809,942,411	80%
				M/WBE/HUB Invoiced		\$143,746,768	
				Grand Total Invoiced		\$809,942,411	
				**Exclusions Invoiced		\$274,709,924	
				MWBE %		26.86%	

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

** This number excludes owner furnished equipment, large diameter pipe and land cost \$274,709,924.

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. Two of the reservoirs are core projects – JB3R and MBR
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

