



INTEGRATED PIPELINE PROJECT

MONTHLY EXECUTIVE SUMMARY

April 2016



S2x12 Tunnel under existing RC and CC Pipelines for 72-inch DWU connection

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](https://twitter.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 04.30.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,061,000	\$88,066,807	\$82,302,537
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	\$12,765,694
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	\$10,283,559
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	\$5,072,362	\$3,677,652
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,209,431
Studies		\$3,500,000	\$3,545,243	\$3,364,126
SCADA System	Engineering of SCADA system	\$640,000	\$1,508,213	\$137,546
Microwave System	Engineering of Communications System	\$5,210,000	\$1,522,785	\$1,468,609
DESIGN		\$152,839,000	\$126,155,928	\$108,615,352
Completed		\$103,899,000	\$96,385,721	\$95,151,945
Active		\$24,159,000	\$29,230,270	\$13,463,407
CH2M Hill	Project Operational Information and Operations Manual		\$3,044,922	\$972,946
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$477,859	\$468,773
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$524,313	\$510,350
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	\$9,651,306
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,753	\$301,889
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$331,919
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$692,981
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	\$5,508,967
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$452,361,952	\$272,350,109
Completed		\$3,700,000	\$3,860,755	\$3,644,051
Active		\$605,879,000	\$448,501,197	\$268,706,058
Pipeline Section 15-1		\$115,112,000	\$93,682,440	\$91,747,153
Garney Construction	Construction of Section 15-1	\$115,112,000	\$93,682,440	\$91,747,153
JB3		\$99,592,000	\$85,297,336	\$28,103,824
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$56,808,072	\$13,208,045
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	\$1,288,774
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$10,940,964	\$1,013,988

PROGRAM SUPPORT SERVICES

as of 04.30.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,993,000	\$153,637,277	\$99,335,240
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$142,985,837	\$96,883,601
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,563,440	\$2,451,639
Hilco Electric	Relocation of Electrical Service Lines		\$88,000	
Microwave System		\$6,398,000	\$5,323,682	\$3,141,842
Huffman Communications	Construction of Microwave Towers	\$6,398,000	\$5,323,682	\$3,141,842
Pipeline Section 15-2		\$97,217,000	\$51,871,918	\$31,596,219
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$51,871,918	\$31,596,219
Pipeline Section 14		\$107,113,000	\$48,107,931	
Garney Construction	Construction of Section 14	\$107,113,000	\$48,107,931	
Valve Packages		\$12,455,000	\$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		\$1,119,960,000		
CONSTRUCTION MANAGEMENT		\$65,169,000	\$47,168,891	\$15,246,906
Program-Wide Construction Management			\$47,118,399	\$15,196,414
Pipeline Section 15 (Garney)		\$139,000	\$50,492	\$50,492
CONSTRUCTION MATERIALS TESTING		\$17,295,000	\$10,135,125	\$2,219,893
Pipeline Section 15-1		\$1,198,000	\$1,160,225	\$741,241
JB3		\$741,000	\$1,056,751	\$350,387
Pipeline Section 12/13/MBR		\$1,734,000	\$2,115,410	\$934,448
Microwave System		\$64,000	\$48,899	\$32,303
Pipeline Section 15-2		\$983,000	\$1,171,139	\$149,130
Pipeline Section 14		\$1,158,903	\$650,000	
Program-Wide			\$3,932,702	\$12,384
ROCIP		\$2,575,000	\$32,876,613	\$16,754,558
Willis of Texas	ROCIP Broker Admin / Insurance Premium	\$2,575,000	\$18,258,571	\$11,670,835
Old Republic	Security Obligations		\$14,618,042	\$5,083,723
LAND COST		\$107,384,000	\$43,418,517	\$43,418,517
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$1,592,087	\$1,592,087
GRAND TOTAL		\$2,341,918,000	\$817,171,613	\$548,008,926
REMAINING BOND FUNDS				\$701,991,074

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

ACCOMPLISHMENTS

through 05.31.16

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

- Seeding and sprigging the ROW for final restoration.
- Final factory testing of 78" BFVs is underway.

JB3R (Pump Suction Reservoir for the JB3 Pump Station)

- Regraded slopes and emergency overflow channel for re-seeding.

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

- Completed approximately 50,000 cubic yards of excavation and embankment fill at reservoir cells 1 and 2.
- Installed 4,600' of 108" pipe.
- Removing excess spoil material along ROW.

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

- Making power connections to radio buildings at JB3 and JCC1 Installations.

JB3 (250mgd Pump Station expandable to 350mgd)

- Placed concrete for pump 2, 3, 4 and 5 support pedestals.
- Completed drilled piers for shop and electrical buildings.
- Taking delivery of 108" yard piping.
- Continue electrical rough-in at Pump Station Electrical Building.

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

- Pipe crew #1 Installed 7,150' of 108" pipe; pipe crew #2 installed 1,100' of 108" pipe.
- Completed pipe installation and grouting of Waxahachie Creek tunnel.
- Installing manholes at air release and blow-off valve locations and installing cathodic protection test stations.

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

- Began placing concrete for floor slabs at Interconnect Building.
- Completed tunnel under existing RC and CC pipelines for 72" DWU connection.

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

- Completed drilled piers and placing concrete slabs for transformers.
- Received two 139kV/4160V transformers.
- Installing cable trench.

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

- Completed pipe installation "prove-out" sections and installed 1,350' of 108" pipe.
- Completed tunnels at FM 876 and FM 877.
- Continue tunneling at IH35, and under Atmos gas line.
- Completed clearing and stripping ROW.
- Continue receiving 108" pipe deliveries and stockpiling embedment material.

OFE03 (Owner-furnished 108" Gate Valves)

- Continue casting valve bodies and discs.
- Trucking company visited project sites for permitting delivery routes.

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

- Testing castings for 108" BFVs to begin assembly for hydrostatic pressure testing.

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

- Provided anchor bolts and templates to JB3 contractor for installation
- Continue casting pump casings.

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										

ACTIVITY STATUS

as of 05.31.16

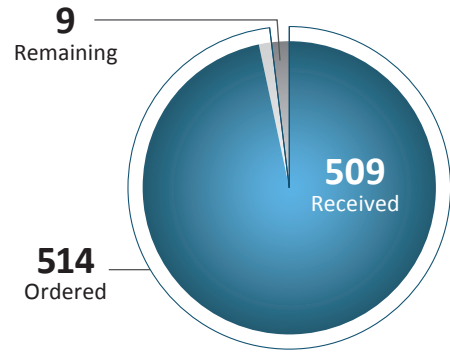


JB3 electrical manholes near JB3 electrical building

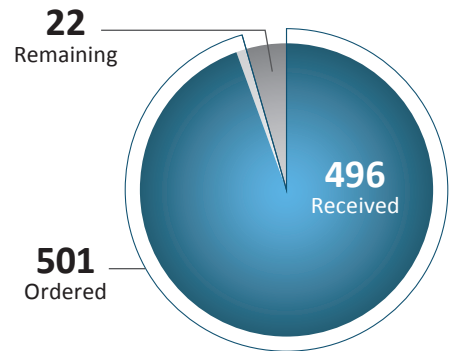


PL14 compacting pipe embedment in rock trench

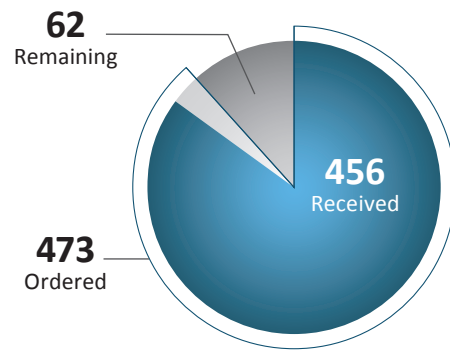
TITLE COMMITMENTS



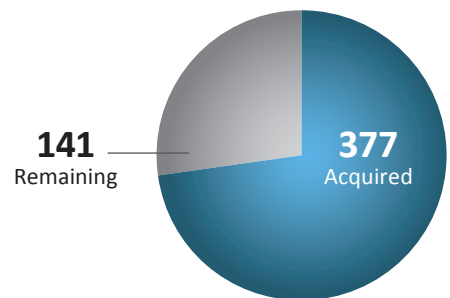
SURVEYS



APPRAISALS



LAND ACQUISITION



Total Parent Parcels: 518

S	2017				2018					
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

M/WBE PARTICIPATION

as of 04.30.16

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	22%	\$19,382,586	98%	\$82,302,537	93%
Program Management		\$6,828,350	19%	\$6,636,687	97%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,700,278	20%	\$2,710,007	100%	\$12,765,694	95%
Value Engineering		\$0	0%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,548,416	30%	\$3,794,648	107%	\$10,283,559	87%
Geotechnical		\$3,572,334	30%	\$3,518,305	98%	\$11,798,959	98%
Corrosion Engineering Services		\$1,053,764	21%	\$761,434	72%	\$3,677,652	73%
Land, Easement Acquisition, & Support		\$1,201,457	35%	\$1,446,955	120%	\$3,209,431	93%
Studies		\$41,717	1%	\$41,717	100%	\$3,364,126	95%
SCADA System		\$384,444	25%	\$0	0%	\$137,546	9%
Microwave System		\$469,702	31%	\$449,654	96%	\$1,468,609	96%
DESIGN		\$33,574,807	27%	\$29,310,332	87%	\$108,615,352	86%
Completed		\$26,513,868	28%	\$25,980,682	98%	\$95,151,945	99%
Active		\$7,060,939	24%	\$3,329,650	47%	\$13,463,407	46%
CH2M Hill (Ops Manual)	NDM	\$479,674	16%	\$230,805	48%	\$972,946	32%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$123,192	26%	\$104,501	85%	\$468,773	98%
MWH	Garzabury, Kevin Sloan	\$226,705	43%	\$120,357	53%	\$510,350	97%
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%	\$0	0%	\$301,889	52%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$70,337	4%	\$331,919	5%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$137,315	8%	\$692,981	10%
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%	\$1,333,386	35%	\$5,508,967	36%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$60,961,135	24%*	\$29,582,085	49%	\$272,350,109	60%
Completed		\$1,354,402	35%	\$1,354,402	100%	\$3,644,051	94%
Active		\$59,606,733	24%*	\$28,227,683	47%	\$268,706,058	60%
Pipeline Section 15-1		\$9,415,226	29%*	\$6,432,354	68%	\$91,747,153	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%*	\$6,432,354	68%	\$91,747,153	98%
JB3		\$16,474,218	25%*	\$3,122,033	19%	\$28,103,824	33%
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%*	\$1,119,026	8%	\$13,208,045	23%
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 04.30.16

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%	\$477,531	32%	\$1,288,774	26%
Oncor Electric		\$0	0%	\$0	0%	\$923,119	96%
Pentair Flow Technologies		\$0	0%	\$0	0%	\$1,013,988	9%
Pipeline Section 12/13/MBR/JB4 Bypass		\$22,054,002	24%*	\$10,773,313	49%	\$99,335,240	65%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, E TTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,209,810	27%*	\$8,564,461	40%	\$96,883,601	68%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$844,192	8%	\$2,208,853	262%	\$2,451,639	23%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Microwave System		\$1,471,554	28%	\$888,734	60%	\$3,141,842	59%
Huffman Communications	Ricochet, Edwards, Chaffin Tower	\$1,471,554	28%	\$888,734	60%	\$3,141,842	59%
Pipeline Section 15-2		\$4,122,200	16%*	\$6,996,183	170%	\$31,596,219	61%
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%	\$6,996,183	170%	\$31,596,219	61%
Pipeline Section 14		\$6,069,533	22%*	\$15,065	0%	\$12,554,014	26%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,069,533	22%	\$15,065	0%	\$12,554,014	26%
Valve Packages		\$0	0%	\$0	0%	\$2,227,766	21%
CONSTRUCTION MANAGEMENT		\$18,649,048	40%	\$5,854,781	31%	\$15,246,906	32%
Program-Wide Construction Management		\$18,649,048	40%	\$5,854,781	31%	\$15,196,414	32%
Pipeline Section 15 (Garney)		\$0	0%	\$0	0%	\$50,492	100%
CONSTRUCTION MATERIALS TESTING		\$4,668,945	46%	\$1,050,467	22%	\$2,219,893	22%
Pipeline Section 15-1		\$349,128	30%	\$248,110	71%	\$741,241	64%
JB3		\$565,815	54%	\$279,801	49%	\$350,387	33%
Pipeline Section 12/13/MBR		\$467,603	22%	\$361,042	77%	\$934,448	44%
Microwave System		\$0	0%	\$0	0%	\$32,303	66%
Pipeline Section 15-2		\$1,171,139	100%	\$149,130	13%	\$149,130	13%
Pipeline Section 14		\$0	0%	\$0	0%	\$0	0%
Program-Wide		\$2,115,260	54%	\$12,384	1%	\$12,384	0%
ROCIIP		\$1,499,307	5%	\$190,202	13%	\$16,754,558	51%
Willis of Texas		\$1,499,307	8%	\$190,202	13%	\$11,670,835	64%
Old Republic		\$0	0%	\$0	0%	\$5,083,723	35%
TOTAL		\$143,008,328	25%*	\$86,703,839	61%	\$502,998,322	65%
LAND COST						\$43,418,517	40%
MISCELLANEOUS						\$1,592,087	
GRAND TOTAL		\$143,008,328	25%*	\$86,746,339	61%	\$548,008,926	67%

*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

