



Collin College Trane Comprehensive Solutions Preliminary Energy Study Facilities & Construction Committee Review



Meeting Agenda and Objectives







- Introductions
- Executive Summary
- Energy Conservation Measure (ECM) Details
- "Why" Trane
 - Consistency and Partnership with New Projects Approach
 - Trane Energy Project Process Approach
 - Inter-Local Co-Op Procurement, Trane Reach
- Next Steps

Executive Summary

First Costs and Savings Summary

ECM	1st Cost	Energy Savings	O&M	Total Savings	SPB
Life Cycle ECMs	\$4,179,974	\$40,650	\$0	\$40,650	102
Utility/ Energy ECMs	\$6,111,071	\$695,414	\$34,000	\$729,414	8.4
Subtotal	\$10,291,045	\$736,064	\$34,000	\$770,064	13.4
Additional Capital Cost Avoidance**:				\$405,048	
Total	\$10,291,045			\$1,175,112	8.8

Financial Highlights

- Generates \$5.4M in Additional Cash flow to Collin College (20yr WACC 3%)
- \$4.2M Capital Replacement Projects (Addressing Collin College 5 year Plan +)
- \$6.1M Energy Savings Projects (System Wide) LED, Irrigation/Domestic Water and Building Automation System (BAS) and Energy Management Systems (EMS) Upgrades. Potential Savings
- \$736,064 Energy Savings (Guaranteed by Trane)
- \$439,048 Collin College Maintenance/Operations and Future Cost Avoidance Savings (Validated by 3rd Party Energy Engineer)

Collin College

Executive Summary

Additional Collin College Benefits

- System Wide "Consistent" Level of Infrastructure, Products Technology and Capability (New Construction/Existing Facilities)
 - Integrated with Bond Program and New Campus Expansion Projects, Assures
 "Current Facility Infrastructure" maintains Level of Technology Keeping Pace with New Construction
 - Renew and Energy Projects Managed by Trane for Collin College, AECOM Managing Bond Projects
- Collin College as Financial Fiduciary, Self Funding Project via Trane Guaranteed Energy Savings (3rd Party Validated)
- Community and Market Recognition for Stewardship, EnergyStar Rated Buildings
- ➤ Addresses Collin College "Master Plan" 2016-21 #5 and Vision 2020 Item #7 Implement Consolidated Maintenance Plan...

Energy Conservation Measure (ECM) Details

Capital Replacement, Infrastructure Renwal Projects (From Collin College 5 Year Pla	Prelim Project Budget	
Detailed Study- Cost to Develop Selected Renewal Projects & ECMs		\$460,974
Central Park Campus (CPC) -		
CPC- Replace 20-AHUs in main bldg. (2018)		\$300,000
CPC- Lighting Upgrades (2017) - Savings in Lighting Retrofit ECM		\$70,000
CPC-CRAC (Data Air) AHU Replacement (2019)		\$60,000
CPC- Replace Dental Hygene Compressor (2018)		\$50,000
Spring Creek Campus (SCC) -		
SCC-Replace 2 - 80 ton A Wing Air Cooled Chillers (2020)		\$250,000
SCC - Replace 600 FP & VAV Boxes (2019)		\$1,750,000
SCC-Upgrade EMS Front end (2020) - Savings in EMS Upgrade ECM		\$50,000
SCC-Replace CHW Pipe Insulation (2018)		\$45,000
SCC- Replace Light poles/fixtures on Tennis Courts (2018)		\$150,000
SCC-Replace Fountain Lights with LED Fixtures (2020)		\$15,000
Preston Ridge Campus (PRC) -		
PRC-Replace 2- 250 ton Carrier Chillers (2018)		\$600,000
PRC-Boiler 1, 2 &3 replacement (2018)		\$300,000
PRC - Replace Gym Lighting (2018) Savings in Lighting ECM		\$50,000
PRC-Replace Heritage Hall Split System (2019)		\$9,000
Collin HIED Campus (CHEC) - Replace WH (2020)		\$20,000
	Subtotal:	\$4,179,974
System Wide Energy Conservation Measures (Trane defined)		
Lighting Retrofit & Controls - System Wide		\$2,127,071
Plumbing Fixture Water Conservation - System Wide (CHEC excluded)		\$710,000
HVAC Controls & EMS Upgrade - System Wide		\$949,000
Irrigation Controls - System Wide Weather based controllers		\$1,700,000
TES @ CPC (3600 TH Ice Tank/Glycol HEX & Pump) - Convert 600 T Chiller/New Piping		\$625,000
	Subtotal:	\$6,111,071

\$10.29 Million Total Scope of Work

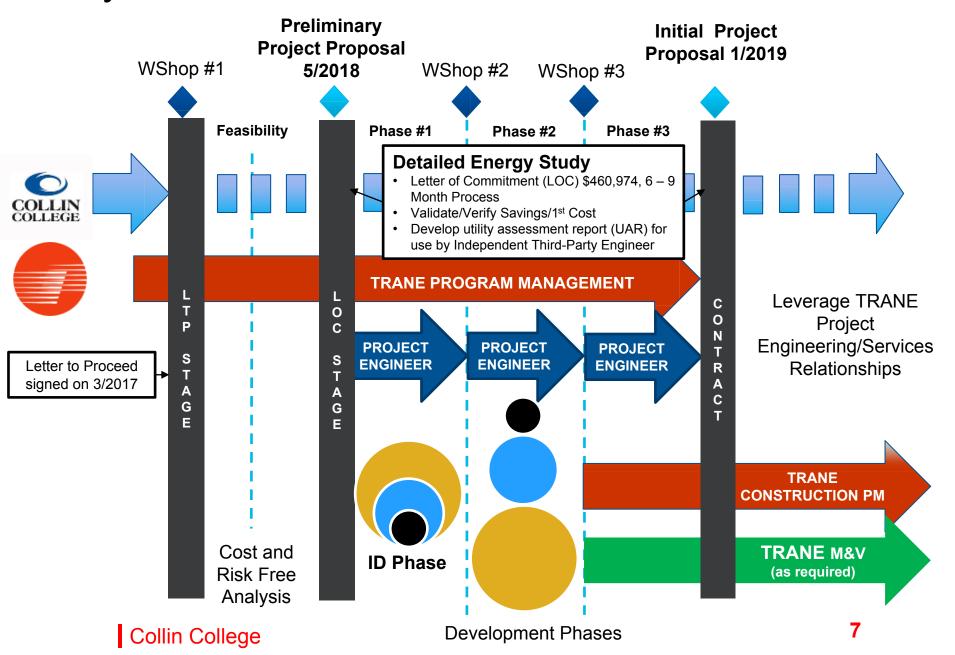
Why Trane? Consistency with New Projects Approach



- Program Manager for Facilities Department Renewal Projects
- Consistent Products/Solutions across District (Existing Relationships)
- Integration and consistency with Bond Program and Energy Projects
- Community and Market Recognition for Stewardship
 - EnergyStar Buildings
- Financial Fiduciary (Guaranteed) Energy Savings/Self Funding Project
 - Ongoing Energy Partnership
- Trane/3rd Party Engineer Partner/Reed Wells Benson (RWB)
- Trane and Collin College Partnership Long History Providing Services, Equipment, Turnkey and Continuing Technical Education (CTE) Collaboration (NC3)

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Why Trane? Trane Energy Project Process and Approach



Why Trane? Inter-Local Procurement Streamlined and Trane Corporate

Procurement





- Procurement vehicle specifically developed to
 - Support Energy Savings buying model for state and local projects, and
 - Streamline the process for the client
 - All project aspects, equipment, installation, services have been "pre-bid" thru the Co-op
- Meets State Energy Conservation Office (SECO) Inter-local Requirements
- Currently deployed and used by





Trane/Ingersoll Corporate



- \$14.2B, 2017 Rev, \$23B Market Cap, IR/NYSE \$88/Share
 - 100 Countries, 53 Mfg Facilities (2 in Texas/Tyler and Waco), 46,000 Associates
 - Major Industry Segments, Climate 11.2B (Trane), Industrial, \$3.0B
- Trane Texas, 450 Associates, 9 Sales and Service Offices, Multiple Parts Locations
- Collin College/Trane Account Team, 12 Associates and growing (does not including Trane service personnel)

Next Steps

- FCC Approval for Board of Trustees Agenda Item
 - Facilities Construction Committee, Approval, June 19th, 2018
- Collin College Board of Trustees Agenda Item and Vote
 - June 26, 2018 Board Meeting to Authorize Letter of Commitment (LOC)
 - LOC Detail Summary
 - Development Fee: \$461,000 (Estimated 4.5% of Total Future Project Cost)
 - Inclusive of Engineering Required to validate and verify Trane "Guaranteed" Energy and other Collin College savings
 - Development of UAR for use by "Independent Third-Party Engineer
 - Additional Savings Verification Measure Required by the state
 - Identify Maximum Fixed Price associated with each corrective measure
 - No upfront cost to Collin College Rolled into the Project at Close
- Collin College/Trane Detailed Energy Project Commencement
 - Begin development mid- July/2018







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