MURPHY · GRAVES · TRIMBLE, PLLC
ARCHITECTURE | PLANNING | INTERIORS

Proposal Request 27

Date Issued: 09/21/2015 Murphy + Graves Project No. 1316

Project: LFUCG PSOC
Attachments: Commissioning Requirements
Issued by: Steve Cherry via Andrea Bradford

Subject: Commissioning

Attached are four (4) RFP documents outlining the responsibilities for each subcontractor (HVAC, Electrical/Lighting, Controls, Plumbing) relative to the Commissioning of the PSOC. These have been prepared by the commissioning agent (KLH).

These shall be distributed to those four subcontractors for their review and pricing.

Provide a proposal for the scope of work described in these documents, complete with breakdown of mark-ups.

Murphy Graves Trimble · 3399 Tates Creek Road· Suite 250 · Lexington, Kentucky 40502 ·

(859) 559-0504 · Fax (859) 559-0523

HVAC Contractor scope of work—Building Commissioning Services Support

Building Commissioning is part of the 2012 IECC Energy Compliance, as defined in Chapter 4, Section 408. As a quality process, commissioning provides tools to the Owner and to Code Officials to verify that building systems meet the 2012 IECC Requirements and that the systems, components, and equipment to be commissioned have been installed and operate within the performance guidelines identified in the design documents and 2012 IECC Sections 403 and 405. A commissioning plan and commissioning specifications have been provided to the design team and may be included in the CD notes. The Commissioning Authority (CxA) will conduct a commissioning kick-off meeting to explain the commissioning process and schedule, but it is strongly recommended that each contractor become familiar with these items.

KLH Engineers will serve as the CxA for the Project. The role of the HVAC contractor (s) is to operate the equipment and satisfy the functional performance testing ("FPT") requirements, as provided by the CxA. Functional Performance Testing takes place during the occupancy phase--after equipment and controls have been installed, but prior to building acceptance by the owner. The CxA directs the operator to run equipment through the sequence of operation, in all modes. The CxA will observe the testing and document the testing results, which will be summarized in Commissioning Report.

The purpose of this document is to provide the list of equipment being tested and an estimate of hours required to complete the testing. Functional Performance Testing does not remove or reduce the responsibility of the design team, contractors, subcontractors, vendors, manufacturers or suppliers to provide a finished product. If, for any reason, re-testing is required at another date or time due to issues with the HVAC equipment and/or systems, the responsible party (i.e. manufacturer, installing contractor, etc.) will be held liable for any additional commissioning costs/expenses associated with a re-test. **PLEASE SUBMIT A PROPOSAL FOR ADDITIONAL SERVICES FOR THE HOURSE LISTED BELOW.**

Testing Equipment

Standard testing equipment required to perform functional performance testing shall be provided by the Contractor for the equipment being tested. This includes, but is not limited to, two-way radios, test equipment, meters, ladders, etc. Special equipment, tools, and instruments (only available from the manufacturer or specific vendor and specific to the piece of equipment) that are required for testing equipment according to the Contract Documents shall be provided by the Contractor.

Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the tolerances specified. Equipment shall be calibrated according to the manufacturers' recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates shall be readily available. Power supplies of the appropriate size and type shall be provided for supplied equipment that is not supplied with integral power supplies.

Mechanical Contractor (and associated subcontractors, including TAB contractor)

Responsibilities and Administrative Tasks

a. Provide the CxA a completed copy of manufacturers' equipment startup reports for equipment in the commissioning scope of work.
b. Notify the CxA at least 2 weeks prior to beginning final air and water balancing. Provide a copy of the final air and water balance report for review by the CxA.
c. Provide the CxA with a signed equipment/system readiness form before the CxA will visit the site to perform Functional Performance Testing (FPT). Cost associated with re-testing will be the responsibility of the contractor.
d. Provide the CxA with qualified technicians' onsite for functional performance testing.
e. Provide the CxA with assistance in accessing above ceiling equipment and any other points as needed for testing.
f. Respond to issues recorded in Project Trek with resolution.
g. Within 90 days of occupancy provide the Construction Manager and the CxA with
    1) Construction document drawings, which include the location and performance data on each piece of equipment.
    2) O&M manuals that contain:
        a) Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance.
        b) Manufacturer's operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.
        c) Name and address of at least one service agency.
        d) HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in system programming instructions.
        e) A narrative of how each mechanical system is intended to operate, including recommended setpoints.
    3) Provide CxA with a systems balance report

Testing Scope

HVAC – The (quantity) is the number of units that will be tested, which roughly represents 20% of total units.

- Packaged RTU's (Qty. 1 of 1)
- Electric Unit Heaters (Qty. 1 of 4)
- Ceiling Mounted Radiant Panels (Qty. 1 of 4)
- Dedicated Outside Air Units with Energy Recovery Wheel (Qty. 1 of 2)
- Exhaust, Ventilation Fans and associated dampers (Qty. 3 of 14)
- VRV Indoor equipment (Qty. 15 of 71)
- VRV Outdoor Systems (Qty. 1 of 5 sets)
- CRAC Units (Qty. 1 of 3)

Total Additional Hours: **26 hours**

- *Cx Kickoff meeting:* *2 hours*
- *HVAC functional testing* *16 hours*
- *Administrative Tasks* *8 hours*

Commissioning Specifications, General Requirements—ALL CONTRACTORS

IT IS THE RESPONSIBILITY OF ALL CONTRACTORS TO HAVE READ AND BECOME FAMILIAR WITH THE GENERAL COMMISSIONING REQUIREMENTS (HEREIN REFERRED TO AS THE "COMMISSIONING SPECIFICATIONS"). ADDITIONAL HOURS MAY BE REQUIRED TO SATISFY COMMISSIONING REQUIREMENTS SUCH AS CORRECTION OF DEFICIENCIES IDENTIFIED DURING FUCNCTIONAL PERFORMANCE TESTING. THE CxA WILL COMMUNICATE ANY SUCH DEFICIENCIES TO ALL CONTRACTORS AND ASSOCIATED SUBCONTRACTOR, AND EACH DEFICIENCY OR PERFORMANCE FAILURE SHALL BE RECORDED ON THE RESOLUTION TRACKING FORM ("RTF").

FURTHERMORE, IF ANY FUNCTIONAL PERFORMANCE TEST CANNOT BE COMPLETED DUE TO CLIMATIC CONDITIONS OR SYSTEM DEFICIENCY, EXECUTION OF THE PERFORMANCE TEST MAY BE DELAYED. SEASONAL AND WARRANTY-PERIOD TESTING WILL BE COORDINATE WITH THE OWNER AND CONSTUCTION MANAGER. IN THE EVENT THAT EQUIPMENT OR SYSTEM PERFORMANCE DOES NOT MEET SPECIFICATIONS, THE ASSOCIATED CONTRACTOR OR SUBCONTRACTOR MAY BE REQUIRED TO PROVIDE TESTING ASSISTANCE AND OR REMEDIATION OF ANY SUCH PERFORMANCE DEFICIENCY.

SHOULD THE RESOLUTION OF ANY IDENTIFIED DEFICIENCY RESULT IN A MATERIAL CHANGE TO THE EQUIPMENT AND/OR SYSTEM, ANY FINAL ADJUSTMENTS TO THE OPERATIONAL AND MAINTENACE MANUALS AND AS-BUILT DRAWINGS SHALL BE THE CONTRACTOR OR SUBCONTRACTORS RESPONSIBILITY.

Electrical Contractor scope of work—Building Commissioning Services Support

Building Commissioning is part of the 2012 IECC Energy Compliance, as defined in Chapter 4, Section 408. As a quality process, commissioning provides tools to the Owner and to Code Officials to verify that building systems meet the 2012 IECC Requirements and that the systems, components, and equipment to be commissioned have been installed and operate within the performance guidelines identified in the design documents and 2012 IECC Sections 403 and 405. A commissioning plan and commissioning specifications have been provided to the design team and may be included in the CD notes. The Commissioning Authority (CxA) will conduct a commissioning kick-off meeting to explain the commissioning process and schedule, but it is strongly recommended that each contractor become familiar with these items.

KLH Engineers will serve as the CxA for the Project. The role of the Electrical contractor (s) is to operate the equipment and satisfy the functional performance testing ("FPT") requirements, as provided by the CxA. Functional Performance Testing takes place during the occupancy phase--after equipment and controls have been installed, but prior to building acceptance by the owner. The CxA directs the operator to run equipment through the sequence of operation, in all modes. The CxA will observe the testing and document the testing results, which will be summarized in Commissioning Report.

The purpose of this document is to provide the list of equipment being tested and an estimate of hours required to complete the testing. Functional Performance Testing does not remove or reduce the responsibility of the design team, contractors, subcontractors, vendors, manufacturers or suppliers to provide a finished product. If, for any reason, re-testing is required at another date or time due to issues with the Electrical equipment and/or systems, the responsible party (i.e. manufacturer, installing contractor, etc.) will be held liable for any additional commissioning costs/expenses associated with a re-test. **PLEASE SUBMIT A PROPOSAL FOR ADDITIONAL SERVICES FOR THE HOURSE LISTED BELOW.**

Testing Equipment

Standard testing equipment required to perform functional performance testing shall be provided by the Contractor for the equipment being tested. This includes, but is not limited to, two-way radios, test equipment, meters, ladders, etc. Special equipment, tools, and instruments (only available from the manufacturer or specific vendor and specific to the piece of equipment) that are required for testing equipment according to the Contract Documents shall be provided by the Contractor.

Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the tolerances specified. Equipment shall be calibrated according to the manufacturers' recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates shall be readily available. Power supplies of the appropriate size and type shall be provided for supplied equipment that is not supplied with integral power supplies.

Electrical Contractor

Responsibilities and Administrative Tasks

a. Provide the CxA a completed copy of the manufacturer's equipment startup reports for equipment in the commissioning scope.
b. Notify the CxA at least 2 weeks in advance of the Lighting Controls installation completion and startup.
c. Provide the CxA with a signed equipment/system readiness form before the CxA will visit the site to perform Functional Performance Testing (FPT). Cost associated with re-testing will be the responsibility of the contractor.
d. Provide the CxA with a qualified electrician onsite for functional performance testing.
e. Provide the CxA with assistance in accessing above ceiling equipment and any other points as needed for testing.
f. Respond to issues recorded in Project Trek with resolution.
g. Within 90 days of occupancy provide the Owner, Construction Manager and the CxA with
    1) Construction document drawings, which include the location and performance data on each piece of equipment.
    2) O&M manuals that contain:
        a) Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance.
        b) Manufacturer's operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.
        c) Name and address of at least one service agency.
        d) Lighting controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined setpoints shall be permanently recorded on control drawings at control devices or, for digital control systems, in system programming instructions.
        e) A narrative of how each system is intended to operate, including recommended setpoints.

Testing Scope

Electrical – The (quantity) is the number of units that will be tested:

- Lighting Controls

Total Additional Hours: **18 hours**

- *Cx Kickoff meeting:* *2 hours*
- *Electrical functional testing* *8 hours*
- *Administrative tasks* *8 hours*

Commissioning Specifications, General Requirements—ALL CONTRACTORS

IT IS THE RESPONSIBILITY OF ALL CONTRACTORS TO HAVE READ AND BECOME FAMILIAR WITH THE GENERAL COMMISSIONING REQUIREMENTS (HEREIN REFERRED TO AS THE "COMMISSIONING SPECIFICATIONS"). ADDITIONAL HOURS MAY BE REQUIRED TO SATISFY COMMISSIONING REQUIREMENTS SUCH AS CORRECTION OF DEFICIENCIES IDENTIFIED DURING FUCNCTIONAL PERFORMANCE TESTING. THE CxA WILL COMMUNICATE ANY SUCH DEFICIENCIES TO ALL CONTRACTORS AND ASSOCIATED SUBCONTRACTOR, AND EACH DEFICIENCY OR PERFORMANCE FAILURE SHALL BE RECORDED ON THE RESOLUTION TRACKING FORM ("RTF").

FURTHERMORE, IF ANY FUNCTIONAL PERFORMANCE TEST CANNOT BE COMPLETED DUE TO CLIMATIC CONDITIONS OR SYSTEM DEFICIENCY, EXECUTION OF THE PERFORMANCE TEST MAY BE DELAYED. SEASONAL AND WARRANTY-PERIOD TESTING WILL BE COORDINATE WITH THE OWNER AND CONSTUCTION MANAGER. IN THE EVENT THAT EQUIPMENT OR SYSTEM PERFORMANCE DOES NOT MEET SPECIFICATIONS, THE ASSOCIATED CONTRACTOR OR SUBCONTRACTOR MAY BE REQUIRED TO PROVIDE TESTING ASSISTANCE AND OR REMEDIATION OF ANY SUCH PERFORMANCE DEFICIENCY.

SHOULD THE RESOLUTION OF ANY IDENTIFIED DEFICIENCY RESULT IN A MATERIAL CHANGE TO THE EQUIPMENT AND/OR SYSTEM, ANY FINAL ADJUSTMENTS TO THE OPERATIONAL AND MAINTENACE MANUALS AND AS-BUILT DRAWINGS SHALL BE THE CONTRACTOR OR SUBCONTRACTORS RESPONSIBILITY.

Controls Contractor scope of work—Building Commissioning Services Support

Building Commissioning is part of the 2012 IECC Energy Compliance, as defined in Chapter 4, Section 408. As a quality process, commissioning provides tools to the Owner and to Code Officials to verify that building systems meet the 2012 IECC Requirements and that the systems, components, and equipment to be commissioned have been installed and operate within the performance guidelines identified in the design documents and 2012 IECC Sections 403 and 405. A commissioning plan and commissioning specifications have been provided to the design team and may be included in the CD notes. The Commissioning Authority (CxA) will conduct a commissioning kick-off meeting to explain the commissioning process and schedule, but it is strongly recommended that each contractor become familiar with these items.

KLH Engineers will serve as the CxA for the Project. The role of the controls contractor (s) is to operate the equipment and satisfy the functional performance testing ("FPT") requirements, as provided by the CxA. Functional Performance Testing takes place during the occupancy phase--after equipment and controls have been installed, but prior to building acceptance by the owner. The CxA directs the operator to run equipment through the sequence of operation, in all modes. The CxA will observe the testing and document the testing results, which will be summarized in Commissioning Report.

The purpose of this document is to provide the list of equipment being tested and an estimate of hours required to complete the testing. Functional Performance Testing does not remove or reduce the responsibility of the design team, contractors, subcontractors, vendors, manufacturers or suppliers to provide a finished product. If, for any reason, re-testing is required at another date or time due to issues with the Electrical or Mechanical equipment controls or the Building Automation System (if applicable), the responsible party (i.e. manufacturer, installing contractor, etc.) will be held liable for any additional commissioning costs/expenses associated with a re-test. **PLEASE SUBMIT A PROPOSAL FOR ADDITIONAL SERVICES FOR THE HOURSE LISTED BELOW.**

Testing Equipment

Standard testing equipment required to perform functional performance testing shall be provided by the Mechanical or Electrical Contractor for the equipment being tested. This includes, but is not limited to, two-way radios, test equipment, meters, ladders, etc. Special equipment, tools, and instruments (only available from the manufacturer or specific vendor and specific to the piece of equipment) that are required for testing equipment according to the Contract Documents shall be provided by the Contractor. *The controls vendor/contractor is required to be present for both the Mechanical (HVAC) and Electrical Functional Performance Testing*.

Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the tolerances specified. Equipment shall be calibrated according to the manufacturers' recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates shall be readily available. Power supplies of the appropriate size and type shall be provided for supplied equipment that is not supplied with integral power supplies.

Testing Scope
Controls – The (quantity) is the number of units that will be tested:

- Building Automation Systems
- Remote and/or ancillary control devices

Total Additional Hours: **26 hours**

- *Cx Kickoff meeting:* *2 hours*
- *Controls testing* *16 hours (must attend the Mechanical & Electrical testing)*
- *Administrative Tasks* *8 hours*

Commissioning Specifications, General Requirements—ALL CONTRACTORS

IT IS THE RESPONSIBILITY OF ALL CONTRACTORS TO HAVE READ AND BECOME FAMILIAR WITH THE GENERAL COMMISSIONING REQUIREMENTS (HEREIN REFERRED TO AS THE "COMMISSIONING SPECIFICATIONS"). ADDITIONAL HOURS MAY BE REQUIRED TO SATISFY COMMISSIONING REQUIREMENTS SUCH AS CORRECTION OF DEFICIENCIES IDENTIFIED DURING FUCNCTIONAL PERFORMANCE TESTING. THE CxA WILL COMMUNICATE ANY SUCH DEFICIENCIES TO ALL CONTRACTORS AND ASSOCIATED SUBCONTRACTOR, AND EACH DEFICIENCY OR PERFORMANCE FAILURE SHALL BE RECORDED ON THE RESOLUTION TRACKING FORM ("RTF").

FURTHERMORE, IF ANY FUNCTIONAL PERFORMANCE TEST CANNOT BE COMPLETED DUE TO CLIMATIC CONDITIONS OR SYSTEM DEFICIENCY, EXECUTION OF THE PERFORMANCE TEST MAY BE DELAYED. SEASONAL AND WARRANTY-PERIOD TESTING WILL BE COORDINATE WITH THE OWNER AND CONSTUCTION MANAGER. IN THE EVENT THAT EQUIPMENT OR SYSTEM PERFORMANCE DOES NOT MEET SPECIFICATIONS, THE ASSOCIATED CONTRACTOR OR SUBCONTRACTOR MAY BE REQUIRED TO PROVIDE TESTING ASSISTANCE AND OR REMEDIATION OF ANY SUCH PERFORMANCE DEFICIENCY.

SHOULD THE RESOLUTION OF ANY IDENTIFIED DEFICIENCY RESULT IN A MATERIAL CHANGE TO THE EQUIPMENT AND/OR SYSTEM, ANY FINAL ADJUSTMENTS TO THE OPERATIONAL AND MAINTENACE MANUALS AND AS-BUILT DRAWINGS SHALL BE THE CONTRACTOR OR SUBCONTRACTORS RESPONSIBILITY.

Plumbing Contractor scope of work—Building Commissioning Services Support

Building Commissioning is part of the 2012 IECC Energy Compliance, as defined in Chapter 4, Section 408. As a quality process, commissioning provides tools to the Owner and to Code Officials to verify that building systems meet the 2012 IECC Requirements and that the systems, components, and equipment to be commissioned have been installed and operate within the performance guidelines identified in the design documents and 2012 IECC Sections 403 and 405. A commissioning plan and commissioning specifications have been provided to the design team and may be included in the CD notes. The Commissioning Authority (CxA) will conduct a commissioning kick-off meeting to explain the commissioning process and schedule, but it is strongly recommended that each contractor become familiar with these items.

KLH Engineers will serve as the CxA for the Project. The role of the plumbing contractor (s) is to operate the equipment and satisfy the functional performance testing ("FPT") requirements, as provided by the CxA. Functional Performance Testing takes place during the occupancy phase--after equipment and controls have been installed, but prior to building acceptance by the owner. The CxA directs the operator to run equipment through the sequence of operation, in all modes. The CxA will observe the testing and document the testing results, which will be summarized in Commissioning Report.

The purpose of this document is to provide the list of equipment being tested and an estimate of hours required to complete the testing. Functional Performance Testing does not remove or reduce the responsibility of the design team, contractors, subcontractors, vendors, manufacturers or suppliers to provide a finished product. If, for any reason, re-testing is required at another date or time due to issues with the domestic hot water equipment, the responsible party (i.e. manufacturer, installing contractor, etc.) will be held liable for any additional commissioning costs/expenses associated with a re-test. **PLEASE SUBMIT A PROPOSAL FOR ADDITIONAL SERVICES FOR THE HOURSE LISTED BELOW.**

Testing Equipment

Standard testing equipment required to perform functional performance testing shall be provided by the Plumbing Contractor for the equipment being tested. This includes, but is not limited to, two-way radios, test equipment, meters, ladders, etc. Special equipment, tools, and instruments (only available from the manufacturer or specific vendor and specific to the piece of equipment) that are required for testing equipment according to the Contract Documents shall be provided by the Contractor.

Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance within the tolerances specified. Equipment shall be calibrated according to the manufacturers' recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates shall be readily available. Power supplies of the appropriate size and type shall be provided for supplied equipment that is not supplied with integral power supplies.

Testing Scope

Plumbing – The (quantity) is the number of units that will be tested:

- Domestic Hot Water Systems

Total Additional Hours: **8 hours**

- *Cx Kickoff meeting:* *2 hours*
- *Controls testing* *6 hours*

CHURCHILL McGEE, LLC
1315-C West Main Street Lexington, Kentucky 40508
phone (859) 389-6976 fax (859) 389-6986

Owner Change Order Proposal #27 Commissioning

Project: **Public Safety Operations Center**	**Date: 12/14/15**	
Project Number: **MGT 1316**		
You are authorizing us to perform the following additional work:		
Commissioning per RFP:		
Electric: Arrow (attached)		$1,081.08
HVAC/Controls: GBMC (attached)		$7,813.10
	Sub Total:	$8,894.18
	Mark Up:	$1,334.13
	Total:	**$10,228.31**
Project schedule will not increase.		
We hereby authorize the above change order to be completed Additional work is to be performed under the same conditions as specified in the original contract unless stipulated otherwise. Date: _____ Owners Signature: _____		
Churchill McGee LLC Date: _____ Authorized Signature: _____		

NOTE: The above referenced change order revisions will only modify the original contract scope of work as specifically addresed in this change order. All other terms and conditions of the original contract will not change.

Change Proposal

Client Address:

Churchill McGee, LLC.
1315-C West Main Street
Lexington, Kentucky 40508
Telephone: (859) 389-6976
Fax: (859) 389-6986
Contact: Justin Margotto

Ref #1	CE # 8
Date:	9/28/2015
Project Name:	LFUCG Public Safety Operations Center
Project Number:	20-10-2109 LFUCG Public Safety Operations Center
Contract #:	Dated Feb., 4th, 2015
Page Number:	1

Work Description

With Respect to PR # 27, Arrow Electric offers the following for your consideration:

Provide assistance to the Commissioning Agent to Commission the equipment/lighting.
Proposal based on hours recommended by Commissioning Agent.

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **0** days.
We will supply and install all materials, labor, and equipment as per your instructions on **PR #27.**

Item Description

Description	Qty	Total Mat.	Total Hrs.
ELECTRICIAN	18	0.00	18.00
Totals	**18**	**0.00**	**18.00**

Summary

JOURNEYMAN	(18.00 Hrs @ $52.00)	936.00
OVERHEAD & MARKUP		
Overhead	(@ 10.000 %)	93.60
Markup	(@ 5.000 %)	51.48

Final Amount **$1,081.08**

CLIENT ACCEPTANCE

CCN #: 8
Final Amount:$1,081.08
Name: _____
Date: _____
Signature: _____
Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

GBMC, INC.

Plumbing • Heating • Air Conditioning

September 30, 2015

November 11, 2015 REVISED

Churchill McGee, LLC
1315-C West Main Street
Lexington, KY 40508

Attn: Jeff Griffith

Re: Lexington Public Safety - CO#004

Dear Jeff:

See below, our revised cost associated with PR#27, Commissioning, for the above referenced project.

Trane Controls	$3,097.00
G.B.M.C., Inc.	3,097.00
Additional Material (Thermometer, Etc)	600.00
Sub-Total	$6,794.00
15% Profit & Overhead	1,019.10
TOTAL	$7,813.10

NOTE: As previously discussed, this PR only contains 16 hours (onsite) for G.B.M.C., Inc. & Trane, 8 hours administration time & 2 hours meeting time.

If we can be of further service, please don't hesitate to call our office.

Sincerely,

Christopher K. Gibson

CKG/lw

564 EASTERN BLVD. • CLARKSVILLE, INDIANA 47129 • TELEPHONE: 812-282-7740 • FAX 812-282-7773

MARCUM ENGINEERING, LLC

December 4, 2015

Mr. Steve Cherry
Murphy Graves Trimble
3399 Tates Creek Road, STE 250
Lexington, KY 40502

Re: Proposal Review
MGT PR 27 – Commissioning
Emergency Operations Center Phase 1B
Lexington Fayette Urban County Government
Lexington, Kentucky
Marcum No. 13618

Steve,

Marcum has reviewed Proposal Request 27 in the amount of $10,288.00 and find it to be in line with the hours outlined in the commissioning plan. Final approval shall be reserved for the Owner and Commissioning Agency.

Please let me know if you have any questions.

Sincerely,

MARCUM ENGINEERING, LLC

Johnny Baucum, Construction Administrator

Cc: Chuck Trimble, MGT
Andrea Bradford, MGT
Jim Leake, MGT
Brent Baker, Marcum Engineering
Baccus Oliver, Marcum Engineering

500 South 17th Street ▪ P.O. Box 120 ▪ Paducah, KY 42002-0120
Phone 270-444-9274 ▪ Fax 270-443-1904
www.marcumengineering.net

MURPHY · GRAVES · TRIMBLE, PLLC
ARCHITECTURE | PLANNING | INTERIORS

Proposal Request 33 Rev 1

Date Issued: ~~10-12-15~~ 10/13/15 Murphy + Graves Project No. 1316

Project: LFUCG Phase 1B
Attachments: RFP Marcum Engineering
Issued by: Johnny Baucum, Marcum Engineering via Andrea Bradford

Subject: Microwave Receptacle Add in Breakroom 120

See attached RFP from Marcum Engineering.

Proposal must include breakdown of material, labor, and Overhead and Profit.

Murphy Graves Trimble · 3399 Tates Creek Road· Suite 250 · Lexington, Kentucky 40502 ·

(859) 559-0504 · Fax (859) 559-0523

PUBLIC SAFETY OPERATIONS CENTER
LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KENTUCKY
MURPHY GRAVES TRIMBLE ARCHITECTS NO. 1316
MARCUM NO. 13618

MPE REQUEST FOR PROPOSAL

TO: Andrea Bradford, Murphy Graves Trimble

CC: Steve Cherry, Murphy Graves Trimble
Perry Warren, Murphy Graves Trimble
Jim Leake, Murphy Graves Trimble
Pat McFeely, Mission Critical Partners
Robert Lafaye, Mission Critical Partners
Jim Krebs, Mission Critical Partners
Tony Gray, Marcum Engineering
Baccus L. Oliver, Marcum Engineering

FROM: Johnny Baucum, Marcum Engineering

DATE: October 12, 2015

SUBJECT: **REVISED** RFP 5 – (2) Microwave Receptacle Add in Breakrooms 120 and 149.

RATIONALE:

Owner changes to the casework will require (2) additional receptacles for Microwaves.

INSTRUCTIONS:

The Contractor shall provide a proposal to add (2) GFCI receptacles, boxes, conduit and conductors for (3) microwaves, (2) in Breakroom 120 and (1) in Breakroom 149. Provide a 120V 1P 20A circuit with ½" raceway, (3) #12 conductors for terminating in Panel EB3 on breakers 9, 10, and 11 for each. Coordinate exact receptacle placement with revised casework drawings provided by the Architect.

ATTACHMENTS:

1. None

END OF DOCUMENT

CHURCHILL McGEE, LLC
1315-C West Main Street Lexington, Kentucky 40508
phone (859) 389-6976 fax (859) 389-6986

Owner Change Order Proposal #33 Microwave Receptacle Add in Breakroom 120

Project: **Public Safety Operations Center**	Date: 11/25/15
Project Number: **MGT 1316**	
You are authorizing us to perform the following additional work:	
Add (2) GFCI receptacles, boxes, conduit and conductors for (3) microwaves, (2) in Breakroom 120 and (1) in Breakroom 149. Provide a 120V 1P 20A circuit with ½" raceway, (3) #12 conductors for terminating in Panel EB3 on breakers 9, 10, and 11 for each.	
	$3,833.24
Sub Total:	$3,833.24
Mark Up:	$574.99
Total:	**$4,408.23**
Division 26 Project schedule will not increase.	
We hereby authorize the above change order to be completed Additional work is to be performed under the same conditions as specified in the original contract unless stipulated otherwise. Date: _____ Owners Signature: _____	
Churchill McGee LLC Date: _____ Authorized Signature: _____	

NOTE: The above referenced change order revisions will only modify the original contract scope of work as specifically addresed in this change order. All other terms and conditions of the original contract will not change.

Change Proposal

Client Address:

Churchill McGee, LLC.
1315-C West Main Street
Lexington, Kentucky 40508
Telephone: (859) 389-6976
Fax: (859) 389-6986
Contact: Justin Margotto

Ref #1	CE # 9
Date:	11/18/2015
Project Name:	LFUCG Public Safety Operations Center
Project Number:	20-10-2109 LFUCG Public Safety Operations Center
Contract #:	Dated Feb., 4th, 2015
Page Number:	1

Work Description

With Respect to PR # 33 rev1, Arrow Electric offers the following for your consideration:

Provide additional GFI receptacles for Microwaves in room #120 and #149.

We reserve the right to correct this quote for errors and omissions.

This quote covers direct costs only and we reserve the right to claim for impact and consequential costs.
This price is good for acceptance within **10** days from the date of receipt.
We request a time extension of **0** days.
We will supply and install all materials, labor, and equipment as per your instructions on **PR # 33 rev1.**

Item Description

Description	Qty	Total Mat.	Total Hrs.
3/4" CONDUIT - EMT	395	313.63	15.80
3/4" CONN SS STL - EMT	11	19.17	1.38
3/4" COUPLING SS STL - EMT	40	81.91	2.00
3/4" 1-H STRAP - EMT - STEEL	44	16.64	2.97
1/2 OR 3/4" EMT OR MC/AC CLIP TO STUD FOR 1 1/2" DEEP BOX	6	2.35	0.41
#12 THHN BLACK	1,527	324.09	9.83
#12/2C SOLID CABLE MC - STL ARMOR	44	26.52	0.96
3/8" CONN SADDLEGRIP DC FOR FLEX / AC-90 / MC	6	4.45	0.45
WIRE CONN RED	21	3.16	1.58
4x 1 1/2" SQ BOX COMB KO	4	19.99	1.15
4x 1 1/2" SQ BOX COMB KO W/ FLUSH MTL STUD BRKT	3	20.01	0.86
4" SQ 1G PLSTR RING 5/8" RISE	3	9.57	0.09
4" SQ BLANK COVER	4	7.43	0.13
GROUND SCREW W/ INSUL #12 LEAD	3	8.22	0.11
#8 TO #10x 7/8 PLAS ANCHOR (3/16)	52	3.00	3.90
#10x 1 P/H SELF-TAP SCREW	52	4.06	1.95
#8x 1/2 WAFER HEAD SHEET MTL SCREW	12	0.49	0.23
SQ BOX MNTG BRKT TO 2 1/2-3 1/2" STUD	3	3.77	0.19
1G DECORATOR PLATE - NYLON IVY	3	3.00	0.11
20A 125V DUP REC - GFCI IVY (SG)	3	51.00	0.94
Totals	**2,236**	**922.43**	**45.02**

Summary

MATERIAL		
Material Tax	(@ 6.000 %)	55.35
Material Total		**977.78**
JOURNEYMAN	(45.02 Hrs @ $52.00)	2,341.04
OVERHEAD & MARKUP		
Overhead	(@ 10.000 %)	331.88
Markup	(@ 5.000 %)	182.54

Change Proposal

Client Address:

Churchill McGee, LLC.
1315-C West Main Street
Lexington, Kentucky 40508
Contact: Justin Margotto

Date: 11/18/2015
Project Name: LFUCG Public Safety Operations Center
Project Number: 20-10-2109 LFUCG Public Safety Operations Center
Contract #: Dated Feb., 4th, 2015

Summary (Cont'd)

Final Amount	**$3,833.24**

CLIENT ACCEPTANCE

CCN #: 9
Final Amount:$3,833.24
Name: _____
Date: _____
Signature: _____
Change Order #: _____

I hereby accept this quotation and authorize the contractor to complete the above described work.

MARCUM ENGINEERING, LLC

December 4, 2015

Mr. Steve Cherry
Murphy Graves Trimble
3399 Tates Creek Road, STE 250
Lexington, KY 40502

Re: Proposal Review
MGT PR 33 Rev 1 – Microwave add in Breakrooms 120 and 149.
Emergency Operations Center Phase 1B
Lexington Fayette Urban County Government
Lexington, Kentucky
Marcum No. 13618

Steve,

Marcum has reviewed Proposal Request 33 Rev 1 in the amount of $4,408.00 and find it to be representative of the work requested and would recommend acceptance.

Please let me know if you have any questions.

Sincerely,

MARCUM ENGINEERING, LLC

Johnny Baucum, Construction Administrator

Cc: Chuck Trimble, MGT
Andrea Bradford, MGT
Jim Leake, MGT
Brent Baker, Marcum Engineering
Baccus Oliver, Marcum Engineering

500 South 17th Street ▪ P.O. Box 120 ▪ Paducah, KY 42002-0120
Phone 270-444-9274 ▪ Fax 270-443-1904
www.marcumengineering.net

MURPHY · GRAVES · TRIMBLE, PLLC
ARCHITECTURE | PLANNING | INTERIORS

Proposal Request 39

Date Issued: 12-18-15 Murphy + Graves Project No. 1316

Project: LFUCG Phase 1B
Attachments: N/A
Issued by: Jim Leake via Dirk Bertram

Subject: Installation of drywall on exposed column surfaces

Provide a proposal for the following items:

1) Contractor shall by means of metal studs, metal hat channel, or adhesive, prepare and install ½" drywall on all exposed column surfaces, terminating the drywall to the underside of the steel angle and stiffener plate. Exposed drywall edges shall be finished using J bead. The drywall shall be finished according to specification and prepared to receive paint.
2) Contractor shall price painting all new drywall surfaces on newly prepared columns.
3) Contractor shall credit back to the owner any painting of columns not completed to date.
4) Contractor shall install wall base at each column according to the existing finish schedule on A8.0.

Proposal must include breakdown of material, labor, and Overhead and Profit.

Murphy Graves Trimble · 3399 Tates Creek Road· Suite 250 · Lexington, Kentucky 40502 ·

(859) 559-0504 · Fax (859) 559-0523

CHURCHILL McGEE, LLC
1315-C West Main Street Lexington, Kentucky 40508
phone (859) 389-6976 fax (859) 389-6986

Change Order Proposal 39-Wrapping interior Columns

Project: **Public Safety Operations Center** Date: **1-14-15**

Project Number: **MGT 1316**

You are authorizing us to perform the following additional work:

Wrap existing columns by means of metal studs, hat channel or adhesive on exposed column surfaces and finish

Includes wrapping columns to the bottom of the structural steel plates with a J-channel on top

Does not include columns in Mechanical / Electrical / Storage or Janitor's closets

Materials $5,000.00 Labor $14,032.50 Markup $951.63

	D9 (drywall)	Bastion (paint)	
Materials	**$4,100.00**	**$900.00**	**$5,000.00**
Labor	**$10,632.50**	**$3,400.00**	**$14,032.50**
Markup	**$736.63**	**$215.00**	**$951.63**

Credit for painting existing columns and drywall strip (part of PR 31) **-$735.00**

Total **$19,249.13**

CM Mark up **$1,924.91**

Total Change Order **$21,174.04**

We hereby authorize the above change order to be completed

Additional work is to be performed under the same conditions as specified in the original contract unless stipulated otherwise.

Date: _____ Owners Signature: _____

Churchill McGee LLC

Date: _____ Authorized Signature: _____

NOTE: The above referenced change order revisions will only modify the original contract scope of work as specifically addresed in this change order. All other terms and conditions of the original contract will not change.

ESTIMATE

1315C W Main Street
Lexington, KY 40508
859-475-6946
jmefford@d9interiors.com

ESTIMATE NO. 2016 - 0108162
DATE January 15, 2016
CUSTOMER ID Churchill McGee
EXPIRATION DATE 2/15/2016

TO

Churchill McGee
1315C W Main Street
Lexington, KY 40508

JOB NAME	ESTIMATOR	PREPARED FOR	BID DATE
Column Wrap Change Order	Jordan Mefford	Jeff Griffith	1/8/16

ITEM	DESCRIPTION	LINE TOTAL
Material	Material to Wrap 66 Columns in PSOC Phase 1	$ 4,100.00
	Includes 5/8" Drywall with finished Bead Corners and J Channel detail at Metal Brackets	
Labor	Labor to Wrap Columns in PSOC Phase 1	10,632.50
	Prevailing Wage Rates Taken Into Consideration	
Markup	Markup	736.63
	This includes wraping all columns up to the bottom of the structural plate with a J-bead	
	on top. It does not include columns in the mechanical, electrical, janitors closets and	
	storage rooms	

SUBTOTAL	$ 15,469.13
ADDS	
TOTAL	**$ 15,469.13**

Quotation prepared by: _____

This is a quotation on the goods named, subject to the conditions noted below:
Estimate excludes all permits.

To accept this quotation, sign here and return: _____

MURPHY · GRAVES · TRIMBLE, PLLC
ARCHITECTURE | PLANNING | INTERIORS

Proposal Request 40

Date Issued: 2015-12-15 Murphy + Graves Project No. 1316

Project: LFUCG PSOC
Attachments: N/A
Issued by: Jim Leake via Andrea Bradford

Subject: Towel Dispensers/Waste Receptacles

Unisex 103: Provide pricing for “slim line” towel dispenser/waste receptacle to be installed adjacent to the lavatory. Remove air blade hand dryer currently installed and blank off circuit EB1-3. Hand dryer to be relocated to Men 117.

Unisex 104: Provide pricing for “slim line” towel dispenser/waste receptacle to be installed adjacent to the lavatory. Remove air blade hand dryer currently installed and blank off circuit EB1-4. Hand dryer to be relocated to Women 118.

Men 117: Install towel dispenser/waste receptacle in CMU knock out adjacent to ADA toilet stall. Tooth in CMU to fill in second knock out. Install relocated hand dryer from Unisex 103 at circuit EB1-50.

Women 118: Install towel dispenser/ waste receptacle in CMU knock out adjacent to ADA toilet stall. Tooth in CMU to fill in second knock out. Install relocated hand dryer from Unisex 104 at circuit EB1-1.

Murphy Graves Trimble · 3399 Tates Creek Road· Suite 250 · Lexington, Kentucky 40502 ·

(859) 559-0504 · Fax (859) 559-0523

CHURCHILL McGEE, LLC
1315-C West Main Street Lexington, Kentucky 40508
phone (859) 389-6976 fax (859) 389-6986

Change Order Proposal #40-Provide and Install 2 Paper Towel dispensors

Project: **Public Safety Operations Center**	Date: **1-8-15**
Project Number: **MGT 1316**	
You are authorizing us to perform the following additional work:	
Provide and Install 2 thin profile model 0462-AD Paper towel and Waste recepticles	

Materials	**$358.00**	**Labor**	**$160.00**	**Markup**	**$77.00**		
Materials	2- Model 0462-AD		**$358.00**				**$358.00**
See attached Invoices							
Labor			**160.00**				**$160.00**
1 man 4 hours @ 40.00							
						Total	**$518.00**
						15% Mark up	**$77.70**
						Total Change Order	**$595.70**

We hereby authorize the above change order to be completed

Additional work is to be performed under the same conditions as specified in the original contract unless stipulated otherwise.

Date: _____ Owners Signature: _____

Churchill McGee LLC

Date: _____ Authorized Signature: _____

NOTE: The above referenced change order revisions will only modify the original contract scope of work as specifically addresed in this change order. All other terms and conditions of the original contract will not change.

CONSTRUCTION PRODUCTS
U.S. SPECIALTIES
Trademark of the Paul Bickel Company, Incorporated

PROPOSAL

January 8, 2016

Churchill McGee
1315-C West Main Street
Lexington, KY 40508
Attn: Jeff Griffith

Re: LFUCG – Paper Towel Dispensers

Jeff: Per your email dated 12/29/15, I would like to quote the following:

Paper Towel Dispensers by American Specialties
(2) #0462-AD Paper Towel Dispensers
Total Material Price, Freight Included.....$358.00

Please advise if you would like to order this material.

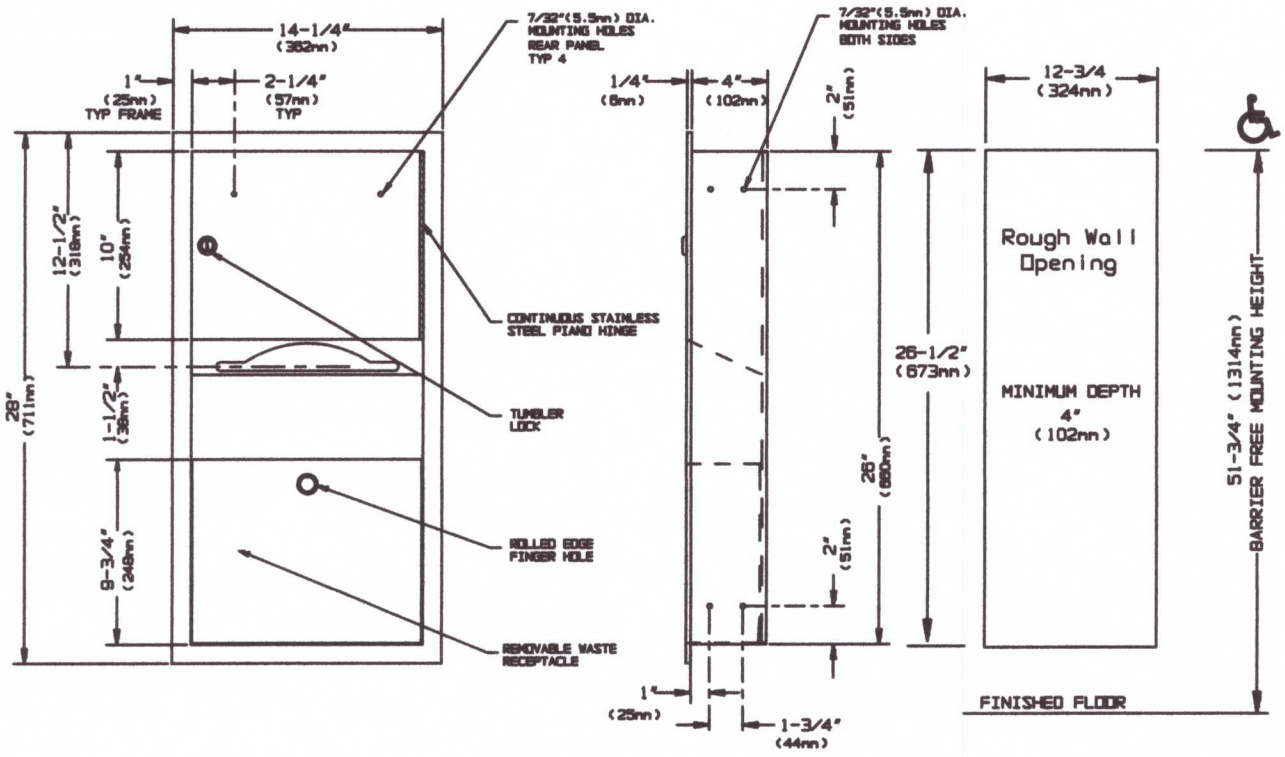
Thank you,
U.S. Specialties

Selby Love
(502) 587-9000 ext. 232
selbylove@usspecialties.com

AMERICAN SPECIALTIES, INC.
441 Saw Mill River Road, Yonkers, NY 10701 (914) 476-9000

MODEL No:	0462-AD
ISSUED:	1-87
REVISED:	9-04

RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE



SPECIFICATION

Recessed Paper Towel Dispenser and Waste Receptacle shall hold and dispense 475 standard multi-fold or (350) standard C-fold paper towels and shall have a waste capacity of 2 gal. (7.6 liters). Door and cabinet shall be fabricated of alloy 18-8 stainless steel, type 304, 22 gauge; all exposed surfaces shall have № 4 satin finish and be protected during shipment with a PVC film that shall be easily removable after installation. Door shall be of double-pan construction with fiberboard filler and shall be attached to cabinet at side with a full length 3/16" dia. stainless steel multi-staked piano hinge and shall be held closed with a tumbler lock keyed alike to other ASI washroom equipment. Towel dispensing slot shall have a fully deburred edge for snag-free dispensing and user safety. Waste receptacle shall have hemmed edges and a rolled-edge finger-hole for ease of service removal and maintenance safety. Structural assembly of body and door components shall be of welded construction.

Recessed Paper Towel Dispenser and Waste Receptacle shall be Model N° 0462-AD as manufactured by American Specialties, Inc., 441 Saw Mill River Road Yonkers, New York 10701-4913

INSTALLATION

Unit is recessed mounted in wall using № 10 self tapping screws (by others) through concealed mounting holes provided. Note that top of rough wall opening is 3/4" (19mm) below top of unit.

Rough Wall Opening required is..... 12-3/4"W x 26-1/2"H x 4"D. minimum (324mm x 673mm x 102mm).

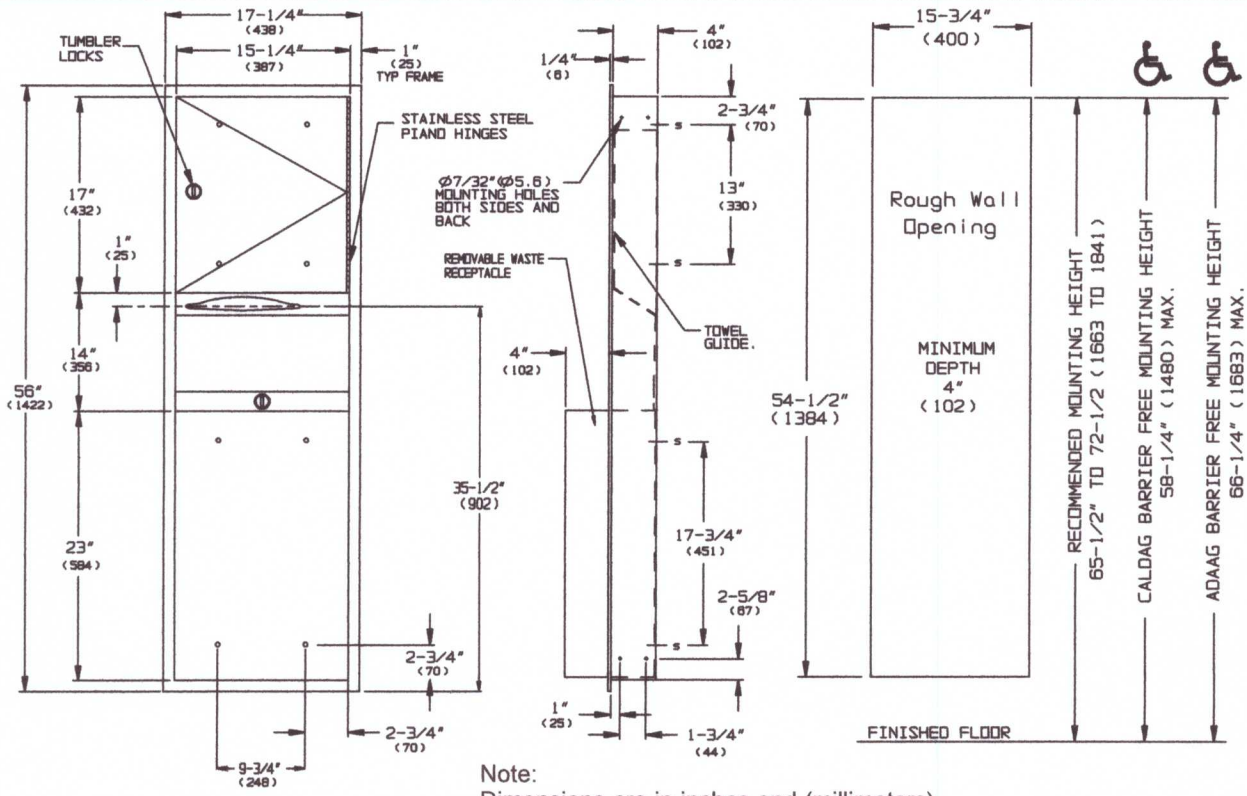
OPERATION

Towels are self-feeding until supply is depleted. Unit may be reloaded with a partial load in-place and will continue to feed properly. Waste container is emptied manually on cycle determined by maintenance needs.

AMERICAN SPECIALTIES, INC.
441 Saw Mill River Road, Yonkers, NY 10701 (914) 476-9000
www.americanspecialties.com

MODEL No:	0469
ISSUED:	1-87
REVISED:	5-07

RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE



Note:
Dimensions are in inches and (millimeters)

SPECIFICATION

Paper Towel Dispenser and Waste Receptacle shall hold and dispense 800 standard multi-fold or 600 standard C-fold paper towels and shall have a waste capacity of 12 gal (46 litres). Towel dispenser, door, frame, waste container and cabinet shall be fabricated of 22 gauge type 304 stainless steel alloy 18-8. All exposed surfaces shall be № 4 satin finish and be protected during shipment with PVC film easily removable after installation. Towel dispensing slot shall have a fully hemmed-in rolled edge for snag-free dispensing and user safety. Door shall be fabricated in double-pan construction with fiberboard filler and shall be attached to cabinet at side with a full-length 3/16" diameter (Ø4.8) stainless steel multi-staked piano hinge and be held closed with a tumbler lock keyed alike to other ASI washroom equipment. Waste container shall have hemmed edges for safety and shall be retained by a tumbler lock keyed alike to other ASI washroom equipment. Face trim shall be 1" (25.4) wide formed from one piece with no miters, welding or open seams and have 1/4" (6.4) square returns to wall. Structural assembly of all components shall be of welded construction. Cabinet shall have no exposed fastening devices or spot-welded seams.

Paper Towel Dispenser and Waste Receptacle shall be Model № 0469 as manufactured by American Specialties, Inc., 441 Saw Mill River Road, Yonkers, New York 10701-4913

INSTALLATION

Unit is mounted in wall recess using four (4) № 10 self-tapping screws (by others) through concealed mounting holes provided. Note that top of Rough Wall Opening (RWO) is 3/4" (19) below top of unit. For compliance with ADA Accessibility Guidelines, install unit so that towel dispenser slot is 48" (1219) maximum above finished floor (MAX AFF). For reduced height compliance with 6" (152) curb see Model № 0463.

RWO required is 15-3/4" W x 54-1/2" H x 4" D minimum (400 x 1384 x 102)

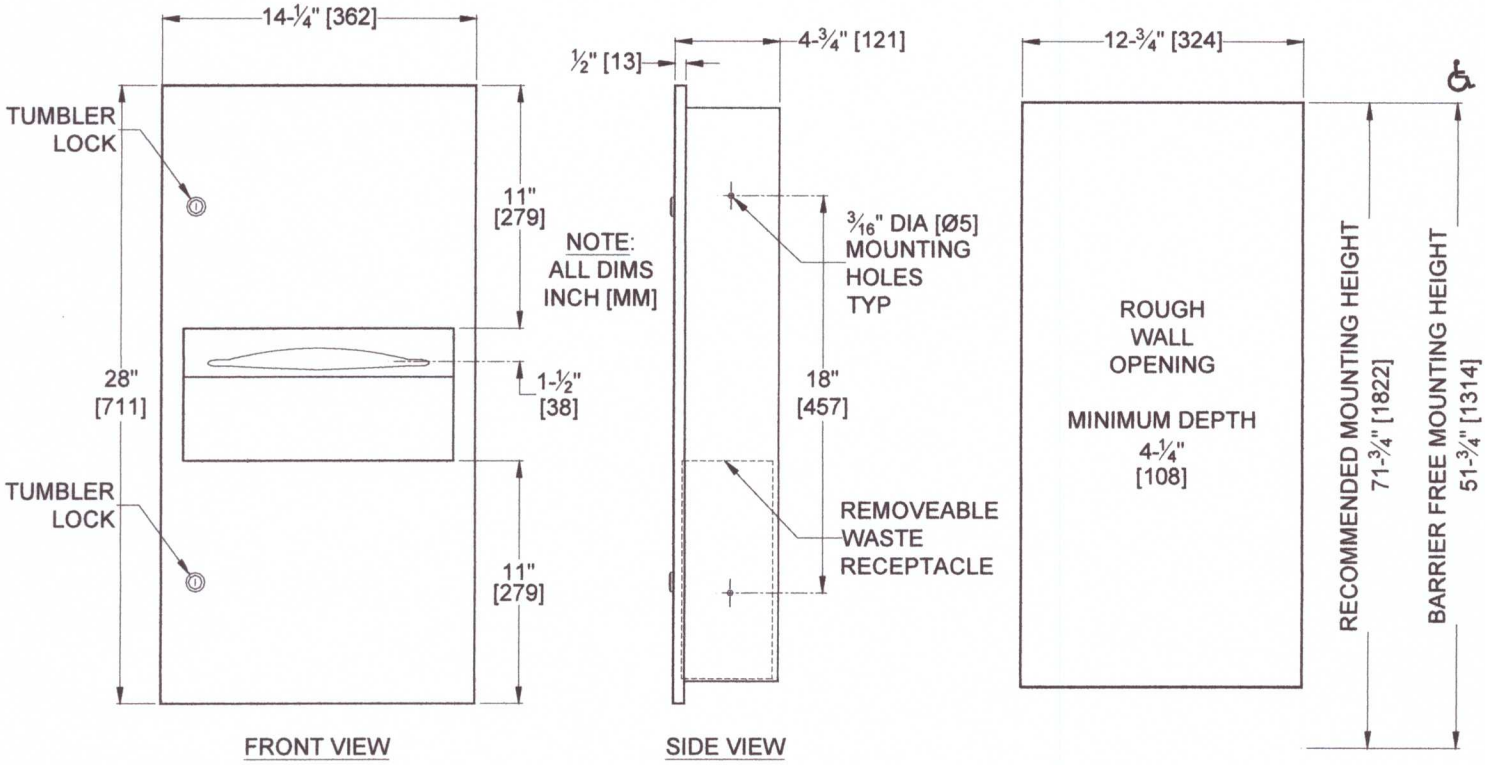
OPERATION

Towels are self-feeding until supply is depleted. Unit may be reloaded with a partial load in-place and will continue to feed properly. Waste container is emptied manually on cycle determined by maintenance needs. Locking compartment and receptacle retainer prevents unauthorized access or removal.

AMERICAN SPECIALTIES, INC.
441 Saw Mill River Road, NY 10701
(914) 476.9000 • (914) 476.0688
www.americanspecialties.com

MODEL №:	**64623**
ISSUED:	01/87
REVISED:	11/11

RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE



SPECIFICATION

Recessed Paper Towel Dispenser and Waste Receptacle shall hold and dispense 475 standard multi-fold or 350 standard C-fold paper towels and shall have a waste capacity of 2.2 gal. (8.4 liters). Cabinet, door, dispenser, and waste receptacle shall be fabricated of alloy 18-8 stainless steel, type 304. Cabinet shall be № gauge with a 1" (25) wide perimeter trim to lay flush against wall and shall have no exposed fastening devices. All exposed surfaces shall have a satin finish and shall be protected by a PVC film easily removable after installation. Door shall be № 18 gauge and shall be attached to the cabinet body with a full length 3/16" diameter [Ø5] stainless steel multi-staked piano hinge, and shall be held closed with a tumbler lock keyed alike to other ASI washroom equipment. Towel dispensing slot shall have a fully deburred edge for snag free dispensing and user safety. Waste receptacle shall have a rolled edge finger hole for easy servicing and removal.

Recessed Paper Towel Dispenser and Waste Receptacle shall Model № 64623 as manufactured by American Specialties, Inc., 441 Saw Mill River road, Yonkers, NY 10701-4913

INSTALLATION

Unit is mounted in wall recess with № 10 self-tapping screws (by others) through concealed mounting holes provided. Note that top of rough wall opening is 3/4" (19) below top of unit.

Rough Wall Opening (RWO) required is 12-3/4" W X 26-1/2" H X 4-1/4" D minimum (324 x 673 x 108)

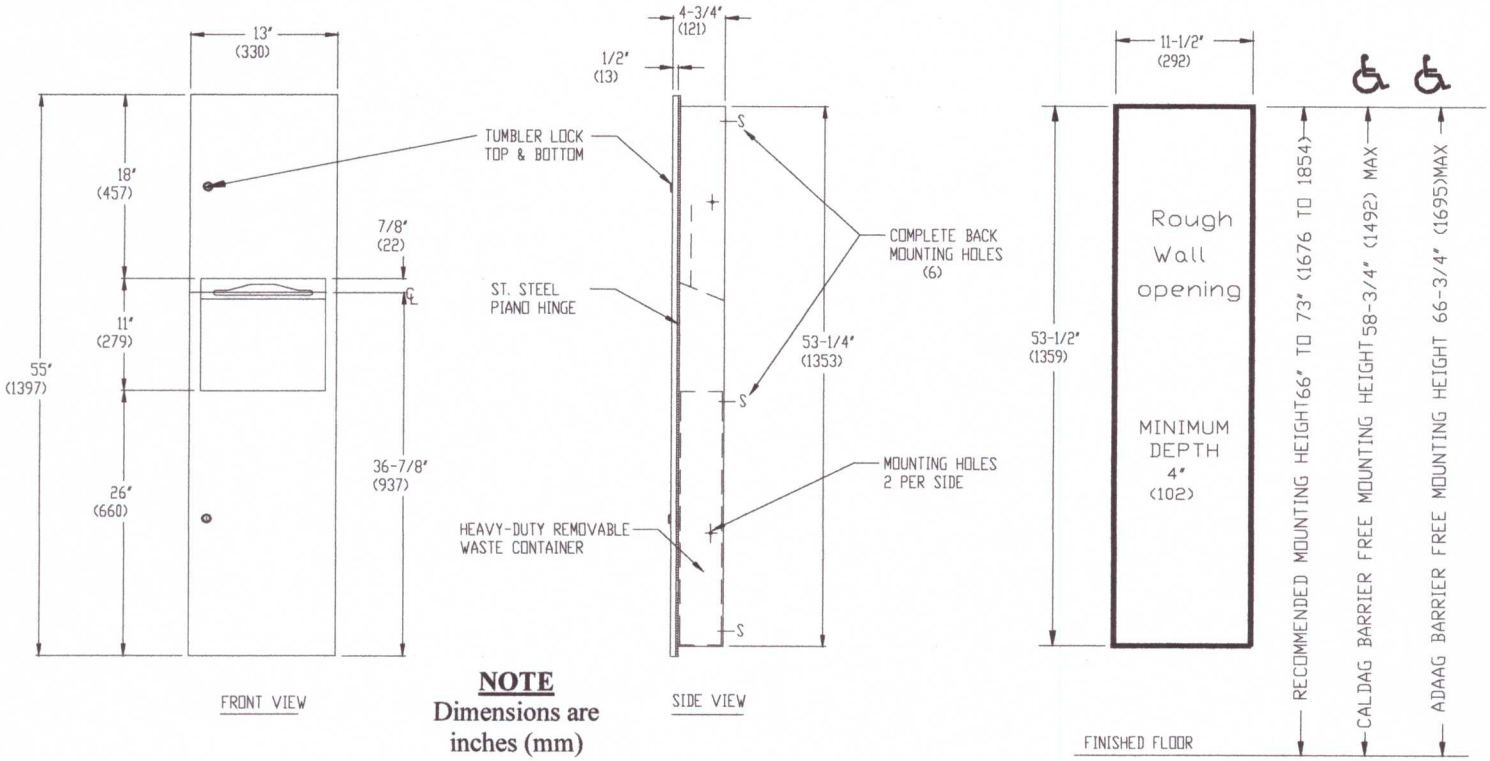
OPERATION

Towels are self feeding until supply is depleted. Unit will continue to feed properly when reloaded with a partial load in place. Waste receptacle is emptied manually on a cycle determined by maintenance needs. Locked door prevents unauthorized access or removal.

AMERICAN SPECIALTIES, INC.
441 Saw Mill River Road, NY 10701
(914) 476.9000 • (914) 476.0688
www.americanspecialties.com

MODEL №:	**6467**
ISSUED:	01/87
REVISED:	04 Mar 2014

RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE



NOTE
Dimensions are inches (mm)

SPECIFICATION

Recessed Towel Dispenser and Waste Receptacle shall hold and dispense 800 standard multi-fold or 600 standard C-fold paper towels, and shall have a waste capacity of 4.24 gallons (16 liters). Cabinet, door, dispenser and waste receptacle shall be fabricated from type 304 stainless steel alloy 18-8. All exposed surfaces shall have a satin finish and shall be protected during shipment by PVC film easily removable after installation. Cabinet shall be 20 gauge with a 1" (25.4) wide perimeter trim to lay flush against wall and shall have no exposed fastening devices or visible seams. Full-face door shall be 18 gauge, fabricated from one piece with no miters or seams on face and shall have 1/2" (13) square returns to the wall. Door shall be attached to cabinet body with a full length 3/16" diameter (Ø4.8) stainless steel multi-staked piano hinge and shall be held closed with two (2) tumbler locks keyed alike to other ASI washroom equipment. Towel dispensing slot shall have a fully deburred edge for snag free dispensing and user safety. Waste receptacle shall have a rolled edge finger hole for easy servicing.

Recessed Paper Towel Dispenser and Waste Receptacle shall be Model № 6467 as manufactured by American Specialties, Inc., 441 Saw Mill River Road, Yonkers, New York, 10701-4913

INSTALLATION

Install unit in wall recess with № 10 self-tapping screws (by others) through concealed mounting holes provided. Note that top of rough wall opening (RWO) is 3/4" (19) below top of unit. For compliance with 2010 ADA Accessibility Standards, install unit so that centerline of towel dispenser slot is 48" (1219) maximum above finished floor (MAX AFF).

RWO required is 11-1/2" W x 53-1/2" H X 4" D minimum (292 x 1359 x 102)

OPERATION

Paper towels are manually withdrawn through dispensing slot. Unit will continue to feed properly when reloaded with a partial load in place. Refill dispenser by unlocking door and replacing towels for an empty or partially empty unit. Dispenser supply is replenished and waste container is emptied manually on cycles determined by maintenance needs. Locking full-face door over compartments prevents unauthorized access or removal.