RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

CONSTRUCTION CODE COMMISSION

Conference Room 3, First Floor
2501 Woodlake Circle
Okemos, Michigan 48864

AGENDA

July 10, 2013
9:30 a.m.

1. Call to Order and Determination of Quorum
2. Approval of Agenda (1-2)
3. Approval of Minutes – April 3, 2013 (3-9)
4. Director's Report — K. Lambert
5. Applications to Administer and Enforce — M. Somers
   a) Oshtemo Township, Kalamazoo – Document #13-35 (10-11)
   b) City of St. Ignace, Mackinac County – Document #13-36 (12-13)
   c) Village of Webberville, Ingham County – Document #13-40 (14-15)
6. Performance Evaluation Summary Report – Document #13-37 — M. Somers
   Village of Michiana, Berrien County (16-25)
7. Report of Assistance Requests – Document #13-41 — K. Lambert
   (26-27)
8. Applications for Program Approval – Document #13-33 — L. Lehman
   (28-34)
9. Applications for Instructor Approval – Document #13-32 — L. Lehman
   (35-36)
10. 1986, Act 54 Registration Applicants – Document #13-34 a-f — L. Lehman
    (37-48)

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11. Recommended Product Approvals

    a) Stancor Oil Alarm Systems with Oil Separation Technology (Plumbing) — J. Madziar
    Document #13-39 (49-59)

    b) TracPipe PS-II (Mechanical) — K. Kalakay
    Document #13-31 (60-80)

12. Certificate of Acceptability — T. Cordill
    Dant Clayton Corporation – CA #545
    Document #13-38 (81)

13. Public Comment

14. Unfinished Business

15. New Business

16. 2013 Schedule –October 2

17. Adjournment

The meeting site and parking is accessible. Individuals attending the meeting are requested to refrain from using heavily scented personal care products, in order to enhance accessibility for everyone. People with disabilities requiring additional services (such as materials in alternative format) in order to participate in the meeting should call Hillary Cushman at (517) 241-9302 at least 10 business days before the event.

STATE OF MICHIGAN
RICK SNYDER
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CONSTRUCTION CODE COMMISSION

Conference Room 3, First Floor
2501 Woodlake Circle
Okemos, Michigan 48864

MINUTES

April 3, 2013
9:30 a.m.

MEMBERS PRESENT

Mr. William Benoit, Jr. (Chair)
Mr. Michael Boss
Mr. Frederick Butters
Mr. Roger Donaldson
Mr. William Duffield
Mr. Thomas Erdman
Mr. David Jones
Mr. Kenneth D. Misiewicz
Mr. Roger Papineau
Mr. Matthew Reno
Mr. Tony Sanfilippo
Ms. Beth Yorke

MEMBERS ABSENT

Mr. Thomas Baldwin
Mr. James Cash
Mr. Clifton (Jack) Lewis
Mr. Nelson McMath
Mr. Sean O'Neil

DEPARTMENT PERSONNEL PRESENT

Mr. Irvin J. Poke, Director, BCC
Mr. Keith Lambert, Deputy Director, BCC
Ms. Hillary Cushman, Assistant to Mr. Poke
Ms. Deb Young, Director, Office of Administrative Services
Mr. Michael Somers, Analyst, Office of Administrative Services
Mr. Larry Lehman, Chief, Building Division
Mr. Charles Curtis, Assistant Chief, Building Division
Mr. Dan O'Donnell, Chief, Electrical Division
Mr. Jim Hennesey, Assistant Chief, Electrical Division
Mr. Kevin Kalakay, Chief, Mechanical Division
Mr. Todd Cordill, Chief, Plan Review Division
Mr. George Herrity, Assistant Chief, Plan Review Division
Mr. Andy Neuman, Assistant Chief, Plumbing Division

OTHERS IN ATTENDANCE
Mr. James Porter, Oshtemo Township
Mr. Edward R. Hellweg, Kalamazoo Area Building Authority
Mr. Thomas Yeadon, City of East Lansing
Mr. Glen Dempsey, City of East Lansing
Mr. Tim Dewitt, MMHA
Mr. Lee Schwartz, HBAM
Mr. Jeffrey Bowdell, City of Pontiac
Mr. Lynn Briggs, Detroit SMACNA
Mr. Bert Gale, HGS
Mr. Mohamed Mazen Al-Halabi
Ms. Eleanor Cattron Smith
Mr. Wissam Mahfsouz
Mr. Corey Roblee, ICC
Mr. Matt Moros, Viega
Mr. Mike Deprez, Bureau of Fire Services

1. CALL TO ORDER AND DETERMINATION OF QUORUM

Chairperson Benoit called the meeting to order at approximately 9:30 a.m. A quorum was determined present at that time.

2. APPROVAL OF AGENDA

Commissioner Donaldson moved to approve the agenda. Commissioner Erdman seconded the motion. **MOTION CARRIED.**

3. APPROVAL OF MINUTES

Commissioner Reno moved to approve the minutes of the January 9, 2013 meeting. Commissioner Duffield seconded the motion. **MOTION CARRIED.**

4. DIRECTOR'S REPORT

Mr. Poke announced that Robert Konyndyk, former chief of the plumbing division retired effective March 31.

Mr. Poke introduced Mr. Mike Deprez, the new deputy fire marshal.

Mr. Poke reminded the commission that the new fee schedule went into effect Monday, April 1, 2013. The new fee schedules for permits and plan reviews are posted on the BCC website.

Mr. Poke stated that new rules for building officials, inspectors and plan reviewers will go into effect April 24, 2013.

Mr. Poke reported on the Advisory Rules Committee (ARC) Report and stated that each commissioner has received a copy of the report.

Mr. Poke spoke regarding the International Code Council Code Development Hearings at the end of April. He stated that members of BCC staff will be in attendance.

Mr. Poke reported on SB 235 and HB 4373, which allow for the registration of fire inspectors to inspect fire suppression systems.

Mr. Poke spoke regarding the ongoing discussions for a Single State Fire Code.

Mr. Poke announced Hillary Cushman as his new Senior Executive Management Assistant.

5. APPLICATIONS TO ADMINISTER AND ENFORCE

a) Oshtemo Township, Kalamazoo County - Document #13-20

Mr. Poke presented an Application to Administer and Enforce for Oshtemo Township, Kalamazoo County. It is the recommendation of staff to deny this Application to Administer and Enforce.

Mr. James Porter, of Oshtemo Township, spoke in rebuttal of the findings presented by staff.

After discussion, Commissioner Reno moved to deny Oshtemo Township's Application to Administer and Enforce. Commissioner Jones seconded the motion. **MOTION CARRIED.**

b) City of Memphis, Macomb/St. Clair Counties - Document #13-28

Mr. Poke presented an Application to Administer and Enforce for the City of Memphis, Macomb/St. Clair Counties. It is the recommendation of staff to deny this Application to Administer and Enforce.

Commissioner Yorke moved to deny the City of Memphis's Application to Administer and Enforce. Commissioner Donaldson seconded the motion. **MOTION CARRIED.**

c) City of St. Ignace, Mackinac County - Document #13-28

Mr. Poke presented an Application to Administer and Enforce for the City of St. Ignace, Mackinac County. It is the recommendation of staff to deny this Application to Administer and Enforce.

Commissioner Duffield moved to deny the City of St. Ignace's Application to Administer and Enforce. Commissioner Erdman seconded the motion. **MOTION CARRIED.**

6. RECOMMENDATION TO REVOKE INSPECTOR REGISTRATION

Mohamed Mazen Al-Halabi – Document #13-05

Mr. Poke presented the Recommendation to Revoke Inspector Registration. It is alleged that Mr. Al Halabi has committed the offense of inspecting his own work, which is a violation of the statute. Staff recommends revocation of Mr. Al Halabi's registration.

Ms. Eleanor Cattron Smith and Mr. Mohamed Mazen Al-Halabi spoke regarding the allegations listed in the recommendation. Ms. Smith presented a witness, Mr. Wissam Mahfsouz, regarding the work that was performed. During Mr. Al-Halabi's statement, he raised concerns regarding the code enforcement practices of the City of Dearborn

Discussion and deliberation ensued amongst the commissioners.

Commissioner Boss moved to approve the recommendation to revoke Mr. Al-Halabi's mechanical and plan review inspector registration. Commissioner Reno seconded the motion. **MOTION CARRIED.**

7. RECOMMENDATION TO CONDUCT PERFORMANCE EVALUATION

Village of Michiana/Berrien County – Document #13-21

Mr. Somers presented a Recommendation to Conduct Performance Evaluation of the Village of Michiana's code enforcement program. This recommendation is the result of the investigation of a complaint received by the bureau.

Commissioner Yorke moved to approve the recommendation to conduct performance evaluation. Commissioner Misiewicz seconded the motion. **MOTION CARRIED.**

8. PERFORMANCE EVALUATION SUMMARY REPORT

Charter Township of Royal Oak/Oakland County – Document #13-23

Mr. Somers presented the Performance Evaluation Summary Report for the Charter Township of Royal Oak.

Commissioner Erdman moved to approve the Summary Report and staff's recommendation to conduct a follow-up re-evaluation. Commissioner Reno seconded the motion. **MOTION CARRIED.**

9. PERFORMANCE EVALUATION REPORT

City of East Lansing/Ingham County – Document #13-22

Mr. Somers presented the Performance Evaluation Report for the City of East Lansing.

Mr. Thomas Yeadon spoke briefly representing the City of East Lansing. He stated they have no opposition to the motion.

Commissioner Jones moved to approve the Performance Evaluation Report and recommendations. Commissioner Donaldson seconded the motion. **MOTION CARRIED.**

10. Report of Assistance Requests

Document #13-14

Mr. Lambert provided the Report of Assistance Requests to the commission for informational purposes.

11. APPLICATIONS FOR PROGRAM APPROVAL

Document #13-26

Mr. Lehman presented a list of continuing education program applications for approval. The programs were reviewed and found to be in compliance with the registration rules and it is the recommendation of staff that the programs be approved.

Commissioner Reno moved to approve the applications as submitted. Commissioner Erdman seconded the motion. **MOTION CARRIED.**

12. APPLICATIONS FOR INSTRUCTOR APPROVAL

Document #13-25

Mr. Lehman presented a list of Instructors of Continuing Education Programs for approval. The applications were reviewed and found to be in compliance with the registration rules and it is the recommendation of staff that the applications be approved.

After discussion, Commissioner Reno moved to approve the instructors. Commissioner Jones seconded the motion. **MOTION CARRIED.**

13. 1986, ACT 54 REGISTRATION APPLICANTS

Document #13-27 a-f

Mr. Lehman presented a list of applications for registration as building officials, building inspectors, plan reviewers, electrical inspectors, and plumbing inspectors. It is the recommendation of staff that the individuals listed be approved.

Brief discussion ensued based on a question from Commissioner Reno.

Commissioner Reno moved to approve the applications as submitted. Commissioner Duffield seconded the motion. **MOTION CARRIED.**

14. RECOMMENDED PRODUCT APPROVALS

a) Hydroflo Systems Waterproofing (Plumbing) – Document #13-24
Mr. Neuman presented the Hydroflo Systems Waterproofing Sub Soil Drain System for installation and use in the State of Michigan. It is the recommendation of staff and the State Plumbing Board that this product be approved.

After discussion, Commissioner Jones moved to approve this product for installation and use in the State of Michigan subject to the conditions of use and installation. Commissioner Yorke seconded the motion. **MOTION CARRIED.**

b) Gastight FlashShield CSST (Mechanical) – Document #13-19
Mr. Kalakay presented the Gastight FlashShield CSST device for installation and use in the State of Michigan. It is the recommendation of staff and the State Board of Mechanical Rules that this product be approved.

Commissioner Reno moved to approve the applications as submitted. Commissioner Misiewicz seconded the motion. **MOTION CARRIED.**

c) Viega MegaPress (Mechanical) – Document #13-18
Mr. Kalakay presented the Viega MegaPress device for installation and use in the State of Michigan. It is the recommendation of staff and the State Board of Mechanical Rules that this product be approved.

Commissioner Jones moved to approve the applications as submitted. Commissioner Reno seconded the motion. **MOTION CARRIED.**

15. PUBLIC COMMENT

NONE

16. UNFINISHED BUSINESS

NONE

17. NEW BUSINESS

Commissioner Boss moved to have the bureau investigate allegations of possible deficiencies and inconsistencies within the City of Dearborn. Commissioner Duffield seconded the motion. **MOTION CARRIED.**

Commissioner Boss moved to have the bureau to investigate the Kalamazoo Area Building Authority using unregistered personnel. Commissioner Papineau seconded the motion. **MOTION CARRIED.**

18. 2013 MEETING SCHEDULE – July 10, October 2

19. ADJOURNMENT

Commissioner Donaldson moved to adjourn the meeting at approximately 11:14 a.m. Commissioner Duffield seconded the motion. **MOTION CARRIED.**

APPROVED:

_____ _____

Chairman, Construction Code Commission Date

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-35

June 19, 2013

TO: Members of the Construction Code Commission

FROM: Irvin J. Poke, AIA, Director

SUBJECT: Application for Approval to Administer and Enforce a Code

The following unit of government has submitted an application for approval to administer and enforce the Michigan code, along with an ordinance:

1. **P-13-04** **Oshtemo Township/Kalamazoo County**
   Michigan Plumbing Code
   Inspector/Plan Reviewer: John Dobberteen (Registration No. 004925)
   Currently state enforced

FINDINGS

1. Oshtemo Township has not provided verifiable documentation that a complete library of referenced standards is in its possession and is available for use by the inspector, plan reviewer and public as identified in Chapter 13 of the 2009 Michigan Plumbing Code.

RECOMMENDATION

Oshtemo Township has not demonstrated that it is "qualified by experience and training to administer and enforce this act and the code and all related acts and rules" as required by MCL 125.1508b (6) for the reasons enumerated above.

THEREFORE, it is the decision of the Construction Code Commission to not approve the Township's Application to Administer and Enforce. In accordance with Section 8b (6) of 1972

PA 230, MCL 125.1508b (6), a governmental subdivision that receives a disapproval may resubmit its application for approval.

RECOMMENDATION: Due to concerns listed above regarding the Township's Application to Administer and Enforce, staff recommends that the unit of government listed not be approved to administer and enforce the code.

IJP/ms

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-36

June 19, 2013

TO: Members of the Construction Code Commission

FROM: Irvin J. Poke, AIA, Director

SUBJECT: Application for Approval to Administer and Enforce a Code

The following unit of government has submitted an application for approval to administer and enforce the Michigan code, along with an ordinance:

1. **B-13-04** **City of St. Ignace/Mackinac County**
   Michigan Building Code
   Inspector: Brian P. Olsen (Application Pending)
   Currently state enforced

FINDINGS

1. The City did not provide (2) complete tabbed and indexed copies of the signed Application to Administer and Enforce and all documents, policies, procedures, ordinances and forms as required by the application form.

2. There is no cost analysis provided to establish the fee charged for an hour of plan review.

3. There is no cost analysis provided to establish the fee charged for an hour of inspection.

4. There was no information regarding the method and analysis utilized to establish the fees charged for building code enforcement services provided to the public. The City did provide a fee schedule that includes fees for zoning services unrelated to construction code services.

5. The City did not submit sufficient written sets of procedures or forms for the conduct of plan reviews, issuance of building permits, the documenting of field inspections, the issuance of code violation and correction notices, and the issuance of certificates of use and occupancy.

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6. The City did not provide information relating to the establishment and procedures of its Construction Board of Appeals. The City did provide a form, fee and the names and qualifications of the members of its board of appeals.

7. The City did not provide sufficient building department budget or staffing information for review. The City did provide a revenue and expenditure report that includes costs related to zoning administration and enforcement and zoning board of appeals.

8. The City did not identify or provide the name and registration number of a plan reviewer registered in accordance with 1986 PA 54 upon the application form. Additionally, the City has not provided identification of the name and registration of its Building Official.

9. The City did not provide a written procedure, certified copy of an ordinance or registration form for the registration of contractor's licenses. The City did provide a list of (9) contractors it indicates are working the St. Ignace area.

10. The City did not provide a written set of procedures addressing the management of floodplains and wetlands. The City indicates that floodplain and wetland issues are regulated by LMAS District Health Department.

11. The City did not provide a written set of local complaint processing and resolution procedures. The City did provide a copy of the Statement of Complaint Form utilized by Bureau of Corporations, Securities and Commercial Licensing for initiating a complaint action against individuals and entities licensed by the agency. The City indicates that it will utilize the form for its local complaint process.

12. The City did not provide documentation that a complete library of reference standards is in its possession or is available for use by the inspector, plan reviewer and public as identified in Chapter 35 of the 2009 Michigan Building Code.

RECOMMENDATION

The City of St. Ignace has not demonstrated that it is "qualified by experience and training to administer and enforce this act and the code and all related acts and rules" as required by MCL 125.1508b (6) for the reasons enumerated above.

THEREFORE, it is the decision of the Construction Code Commission to not approve the City's Application to Administer and Enforce. In accordance with Section 8b (6) of 1972 PA 230, MCL 125.1508b (6), a governmental subdivision that receives a disapproval may resubmit its application for approval.

RECOMMENDATION: Due to concerns listed above regarding the City's Application to Administer and Enforce, staff recommends that the unit of government listed not be approved to administer and enforce the code.

IJP/ms

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-40

June 19, 2013

TO: Members of the Construction Code Commission

FROM: Irvin J. Poke, AIA, Director

SUBJECT: Application for Approval to Administer and Enforce a Code

The following unit of government has submitted an application for approval to administer and enforce the Michigan codes, along with an ordinance:

1.	**B-13-05**	**Village of Webberville/Ingham County** Michigan Building Code Inspector/Plan Reviewer: James K. Wright (Registration No. 005213) Currently state enforced
2.	**E-13-01**	**Village of Webberville/Ingham County** Michigan Electrical Code Inspector/Plan Reviewer: Kenneth D. Kary (Registration No. 005553) Currently state enforced
3.	**M-13-02**	**Village of Webberville/Ingham County** Michigan Mechanical Code Inspector/Plan Reviewer: William J. Paquette (Registration No. 000704) Currently state enforced
4.	**P-13-04**	**Village of Webberville/Ingham County** Michigan Plumbing Code Inspector/Plan Reviewer: Jerome Halash (Registration No. 002654) Currently state enforced

FINDINGS

1. The Village indicates that it is cost prohibitive to purchase all the standards but if requested the referenced standards will be made available through either its inspectors or public means. However, the Village did not provide verifiable documentation that the complete library of referenced standards is in its possession and is available for use by inspectors, plan reviewers and public as identified in Chapter 35 of the 2009 Michigan Building Code, Chapter 44 of the Michigan Residential Code, Chapter 15 of the Michigan Mechanical Code, Chapter 13 of the Michigan Plumbing Code and the standards referenced within the 2009 Michigan Electrical Code.

RECOMMENDATION: Due to concerns listed above regarding the Village's Application to Administer and Enforce, staff recommends that the unit of government listed not be approved to administer and enforce the code.

IJP/ms

DOCUMENT NO. 13-37

Performance Evaluation Report

VILLAGE OF MICHIANA
PE 13-002

Prepared for
State Construction Code Commission

June 12, 2013

Irvin J. Poke, AIA, Director
Bureau of Construction Codes

Steve Arwood, Director
Department of Licensing and Regulatory Affairs

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

VILLAGE OF MICHIANA
PERFORMANCE EVALUATION REPORT

CONTENTS

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
REPORT ON THE PERFORMANCE EVALUATION OF
VILLAGE OF MICHIANA

FOREWORD

On May 29, 2013, Bureau of Construction Codes (BCC) staff conducted a performance evaluation of Village of Michiana's code administration and enforcement program.

The authority for this action is found in Section 9b(1) of the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1509b, which states, in part, that:

> The director, as prescribed in this section, may conduct a performance evaluation of an enforcing agency to assure that the administration and enforcement of this act and the code is being done pursuant to either section 8a or 8b. A performance evaluation may only be conducted either at the request of the local enforcing agency or upon the receipt of a written complaint.

A performance evaluation of local code enforcement may be conducted by the BCC when authorized by the State Construction Code Commission (SCCC) or at the request of a local enforcing agency. This performance evaluation was authorized by the SCCC as a result of a written complaint.

The purpose of the evaluation was to determine the adequacy of the local code enforcement program within the Village of Michiana. The evaluation consisted of an assessment of the administrative procedures, department records and forms, fee schedule, and plan review procedures utilized by the Village. The evaluation also included a review of randomly selected permit files and projects under construction.

This report contains a listing of the findings from the evaluation and recommendations for program compliance.

FINDINGS

In accordance with the provisions of Section 8b of the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230; MCL 125.1501 et seq, (hereinafter referred to as the "Act"), the Village of Michiana (hereinafter referred to as the "Village"), in accordance with Section 8b (4) of the Act, submitted a notice of intent within the required time frame which declared its intent to continue to assume the responsibility for administering and enforcing the Michigan Building Code. Enforcement of the Electrical, Mechanical and Plumbing Codes within the Village is the responsibility of the Bureau of Construction Codes.

Village representatives present and/or assisting in the performance evaluation were: William Lambert, Building Inspector, and Plan Reviewer (Registration No. 005719). The Village's Clerk, Anne Heywood, also functions as the building department secretary.

The Village's Building Department is located at 4000 Cherokee Drive, Michiana, Michigan, and maintains regular weekday office hours of 9:00 a.m. to 4:00pm. (Eastern Standard Time) Monday through Friday. Building Inspector William Lambert is employed on a subcontract basis by the Village and is currently compensated by receiving 50% of building permit fees. Mr. Lambert also functions as the Village's Zoning Administrator and receives no additional compensation, benefits or mileage allowance to perform his duties. The Village does reimburse Mr. Lambert for the costs associated with 1986 PA 54 continuing education and training. Mr. Lambert maintains office hours five days a week and is available to perform inspections for the Village each weekday and is properly registered as a code official/plan reviewer in accordance with 1986 PA 54.

The Village is a small community of 182 residents and comprises a total area of 0.37 square miles according to the 2010 U.S census. The Village issued (16) building permits in 2012 and has issued (12) building permits thus far in 2013. The Village consists of 100% residential structures. There are no commercial or business use occupancies within the Village boundaries.

The bureau finds changes are necessary to the construction code administration and enforcement program within the Village of Michiana to be in compliance with the Act and applicable laws and rules. The following list provides information on the findings from the evaluation.

1. The bureau received a written complaint alleging that the Village had set fees for building permits that exceeded the cost of providing building code enforcement services to the public. It was also alleged that the level of fees were set at an artificially high level in order to prevent applicants from distorting project cost estimates to receive lower permit costs. It was further alleged that the Village had not adopted an ordinance authorizing the level of building permit fees being charged and was not able to produce a record of official actions that formalized the level of building permit fees increased in 2003, 2005, and 2012. As a result, the SCCC authorized this performance evaluation. During the evaluation, it was found that that the Village has begun a financial analysis of the costs incurred providing building code services. It was also found that the Village currently does not recover the costs of providing plan reviews, re-inspections, issuing Certificates of Use and Occupancy among other building code enforcement services the Village provides.

The authorization for the establishment of reasonable fees to provide construction code acts and services is found in Section 22 of the Act, which states, in part:

"The legislative body of a governmental subdivision shall establish reasonable fees to be charged by the governmental subdivision for acts and services performed by the enforcing agency or construction board of appeals under this act, which fees shall be intended to bear a reasonable relation to the cost, including overhead, to the governmental subdivision...including, without limitation, those services and acts as, in case of an enforcing agency, issuance of building permits, examination of plans and specifications, inspection of construction, and the issuance of certificates of use and occupancy, and, in case of a board of appeals, hearing appeals in accordance with this act."

2. Based upon a review of (8) permit files within the building department, it was found that Village does not affix a date-stamp upon construction documents that indicates the date the plans were submitted for review. It was also found that the Village does not affix a stamp upon the plans indicating the plans had been reviewed for compliance and approval had been granted. Section R106.3.1 of the 2009 Michigan Residential Code states:

"When the building official issues a permit, the construction documents shall be approved in writing or by a stamp which states "REVIEWED FOR CODE COMPLIANCE"...

3. It was found that the Village building department records were very organized. All records were easily identifiable and accessible. The active hard copy permit file records were clearly labeled with property owner names, permit numbers and street addresses identified on all (8) permit files reviewed. Permit application forms and permits, inspection report findings, violation notices, Certificates of Use and Occupancy and other documentation relating to work authorized at a specific address were found within each file reviewed. Closed inactive permit file records with corresponding construction plans and documents were stored separately from the active files and were located within clearly labeled file cabinets.

4. A review of the Village's permit files reveals that the Village's Certificate of Use and Occupancy form lacks information relating to a basic description of that portion of the

structure for which the certificate is issued, whether an automatic sprinkler system is required or provided, the edition of the code for which the certificate is issued, and any special stipulations or conditions of the building permit as required by Section R110.3 of the Michigan Residential Code.

5. The Village indicates that same-day building inspections are made if a request from a permit holder is received 9:00 a.m. to 12:00 p.m. When performing a building inspection, the Village's inspector carries a copy of the building permit to the project site. The inspector records his findings, notes and observations upon his copy of the permit and upon completing an inspection, leaves a notice of violation (if applicable) at the site of work along with approval or rejection stickers. Upon returning to the building department office, the inspector files his findings within the appropriate permit file. The inspector maintains a log record of all issued and active permits and conducts periodic site visits when in the field to check upon the status of construction. By utilizing this process, it was found that the Village does not have a backlog of open permits.

6. It was found that although the Village recently updated its Application for a Building Permit form, the form is not consistent with Section 10 (1) of the Act, which states in part that:

"The application shall be on a form prescribed by the commission..."

7. It was found that the Village does not maintain records of State-issued trade permits for projects constructed under a Village-issued building permit within its permit files. Therefore, there were no copies of electrical, mechanical, and plumbing permits issued by the bureau and inspections performed and approved by the bureau whenever the Village issued a

Certificate of Use and Occupancy for a project. The Village should maintain records of all applicable trade permits and inspection approvals issued by the bureau that relate to a building permit issued by the Village within the corresponding permit files for the period of time required for the retention of public records. This practice will provide verification of trade permit numbers and inspection approvals granted by the bureau that would authorize the Village to perform a final building inspection that upon approval would allow a Certificate of Occupancy to be legitimately issued.

RECOMMENDATIONS

Based on the findings of this performance evaluation, the bureau finds the following changes are needed in the administration and enforcement of construction codes within the Village of Michiana. To assure the Village's compliance with all applicable statutes and to assure that construction within the Village is safe, the following recommendations are set forth:

1. The Village shall conduct a financial analysis of the costs associated with the operation of its enforcing agency and develop an appropriate schedule of fees in order to recover the cost of providing building code enforcement services to the public in accordance with Section 22 of the Act. The Village's fee schedule shall provide specific fees charged for the services and shall be posted for public viewing within the Village offices. The Village shall provide a certified copy of an adopted ordinance authorizing the fees to the bureau with a copy of the fee schedule within 60 days of approval of this report.

2. The Village shall affix a date-stamp upon construction documents submitted for review that indicates the date the plans were submitted and shall affix a stamp upon the plans indicating the plans have been reviewed for compliance and approval granted. The Village shall provide a printed copy of the date stamp and approval stamp to the bureau within 60 days of approval of this report.

3. The Village shall revise its Certificate of Use and Occupancy form to include information that complies with MRC Section R110.3. The Village shall submit its revised Certificate of Use and Occupancy form to the bureau within 60 days of approval of this report.

4. The Village shall revise and update its application for a building permit form that contains the language prescribed by the Commission and complies with law, and shall provide a copy of its revised building permit application form to the bureau within 60 days of approval of this report.

5. The Village shall establish and maintain a written procedure that directs copies of applicable trade permits issued by the bureau for projects constructed under a Village-issued building permit will be placed within corresponding permit files for the length of time required by law. The Village shall provide a written copy of its procedure to the bureau within 60 days of approval of this report.

The Village shall comply in a timely manner with the recommendations set forth within this report. After 180 days subsequent to the approval of this report, a reevaluation will be conducted to assure that the recommendations have been implemented, are being consistently utilized and properly applied. The Village's performance evaluation file shall remain open until the successful completion of the recommendations contained within this report.

The Village is advised that, pursuant to Section 9b (3) of the Act, failure to comply with the recommendations may result in the issuance of a Notice of Intent to Withdraw Code Administration and Enforcement Responsibilities from the Village.

Irvin J. Poke, AIA
Director
Bureau of Construction Codes

14 June 2013
Date

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-41

June 26, 2013

TO: Members of the Construction Code Commission

FROM: Keith Lambert, Deputy Director KEL

SUBJECT: Report of Assistance Requests

The bureau has **granted** assistance as follows:

a) Leroy Township, Ingham County
MBH Trucking – Service Garage
Reliable Aftermarket Parts – Parts Warehouse
Services: Building plan review, permit and inspection
Effective: 04/29/2013 until completion of project

b) Central Michigan University, Isabella County
Project: Rose Ryan 134 HVAC Upgrade Project
Services: Electrical plan review, permit and inspection
Effective: 06/20/2013 until completion of project

c) Wayne State University, Wayne County
Project: WSU Parking Structure 8 (South Village Parking)
Services: Electrical, mechanical and plumbing plan review, permit and inspection
Effective: 04/30/2013 until completion of project

d) Saginaw Valley State University, Saginaw County
Project: Ryder Center – Fieldhouse Expansion
Services: Building, electrical, mechanical and plumbing plan review, permit and inspection
Effective: 05/20/2013 until completion of project

e) Ferris State University, Mecosta County
Project: Central Heating and Power
Services: Electrical plan review, permit and inspection
Effective: 06/13/2013 until completion of project

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-33

June 11, 2013

TO: Members of the Construction Code Commission

FROM: Larry Lehman, Chief
Building Division

SUBJECT: Continuing Education Program Applicants

The programs listed on the attached pages are those for which approval has been requested by providers or sponsors of continuing education programs required of building officials, inspectors and plan reviewers to renew their registrations. Document #13-33 is a list of programs that have been submitted for approval for the cycle beginning September 17, 2012 through September 16, 2015.

Each provider has documented appropriate content in relation to one or more of the continuing education categories and registrant classifications set forth in the administrative rules promulgated pursuant to 1986 PA 54.

It is the recommendation of Bureau staff that the programs submitted pursuant to the provisions of Act 54 be approved by the Commission.

LL/kld

Attachments

Explanatory notes to accompany BCC Approved Continuing Education Program List: **DOCUMENT #13-33**

* Registrants holding one or more Inspector classification are required to attend Technical and Specialty training to be eligible for reregistration at the end of the present code cycle. If that is successfully accomplished, there are no additional Technical or Specialty credits necessary to also become eligible for reregistration as either a Building Official and/or Plan Reviewer. A person who is registered **only** as a Building Official and/or Plan Reviewer **without any Inspector classification** will receive the listed Technical and/or Specialty credit towards reregistration qualification for attending this program.

Specialty approvals are granted for one of the four Inspector (trade) classifications. Inspectors receive credits only for attending programs associated with their trade; a Mechanical Inspector does not satisfy those requirements by attending a Building, Electrical or Plumbing program. Someone registered **only** as a Building Official and/or Plan Reviewer **without any Inspector classification** will receive credit for all Specialty programs attended, regardless of the trade(s).

Technical approvals are granted for programs addressing a specific code. Inspectors receive Technical credit only for programs addressing the code they enforce. Someone registered **only** as a Building Official and/or Plan Reviewer without any Inspector classification will receive credit for all Technical programs **in their cycle** which they attended, regardless of the trade.

** Programs approved for Plan Review credits satisfy unique requirements placed on Plan Reviewer registrants. Even though the title of an individual program may refer to a specific trade or code, all Plan Review program credits apply to any Plan Reviewer.

**** Credit for documented participation in/attendance at formal code change hearings conducted and reported by a nationally recognized code-promulgating organization will be recognized when the subject is a code enforced by the registrant. Credit is granted in one-hour increments and is divided between Technical and Specialty. The first hour is Technical, the second Specialty, the third Technical, the fourth Specialty, etc. Seven hours would be credited as four Technical and three Specialty, for example.

ISC =Independent Study Course ***I = Internet Course*** ***CR = Classroom***

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 Inspector Continuing Education Programs

Program Number	Credit Hours						Contact	Organization	Phone	Title
	Admin	Comm	Spec	Tech	PR	Classification				
17474					5	ALL	Judy Schifiliti	Fires Safety Consultants Inc.	(847) 697-1300	Automatic Sprinkler System Plan Review
17475					1	ALL	Stephen W. Bennett	Engineering Spec Team	(303) 882-4818	CISPI 310 - Code Standard for "Standard Couplings"
17476			3			MI*	Dann Holmes	Viega LLC	(248) 939-2476	Cold Metal Press Technology for Black Iron Pipe and/or Copper Tubing
17477			6	6		BI*	Laura Garcia	International Code Council	(888) 422-7233	2012 IRC Performing Residential Building Inspections
17478			3	3		EI*	Laura Garcia	International Code Council	(888) 422-7233	Performing Residential Electrical Inspections
17479			3	3		PI*	Laura Garcia	International Code Council	(888) 422-7233	2012 IRC Performing Residential Plumbing Inspections
17480			3	3		MI*	Laura Garcia	International Code Council	(888) 422-7233	2012 IRC Performing Residential Mechanical Inspctions
17481				2		MI*	Sue Schippert	MMIA	(248) 649-5443	Michigan Mechanical Code and International Fuel Gas Code 2009 Updates
17482	1			2		MI*	Sue Schippert	MMIA	(248) 649-5443	HVAC Systems Duct Design
17483				2		MI*	Donna Panasiewicz		(586) 774-9597	MT 0703 Construction Techniques & Inspection of Solar Systems
17484				3		MI*	Donna Panasiewicz		(586) 774-9597	MT 0701 Construction Techniques - Protecting Against Hazards Associated with Exhaust Systems & Air Condutaminants
17485				3		MI*	Donna Panasiewicz		(586) 774-9597	MT 0702 Construction Techniques & Inspection of Mechanical Systems - Specific Appliances, Fireplaces, and Solid Fuel Borning Equipment
17486				2		EI*	Paul Knapp	RECI	(248) 477-6739	2012 WS Code Questions 21-40
17487				1	1	EI*	Paul Knapp	RECI	(248) 477-6739	Selective Coordination & Emergency Circuits

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 Inspector Continuing Education Programs

17488				2	1	EI*	Robert Barna	RECI	(248) 542-7567	Troublesome Installations Part 2, Chapter 4 through 9
17489			2			MI*	Robert Hilton	Northern MI Mechanical & Plumbing Insp	(231) 547-2060	Commercial Kitchen Hood Seminar
17490	1		3	4		EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part 1
17491			4	4		EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part II
17492			4	4		EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part III
17493			4	4		EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part IV
17494			4	4		EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part V
17495				4	4	EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part VI
17496					8	ALL	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part VII
17497				4	4	EI*	Jim Hennesey	BCC/Electrical Division	(517) 241-9320	Field Inspection Techniques - Part VIII
17498				3		MI*	Donna Panasiewicz		(586) 774-9597	Mechanical Code Technical Requirements - General Regulations, Ventilation & Exhaust
17499				3		MI*	Donna Panasiewicz		(586) 774-9597	Mechanical Code Technical Requirements IV - Fuel Oil Piping, Solar Systems
17500				3		MI*	Donna Panasiewicz		(586) 774-9597	Mechanical Code Technical Requirements II - Duct System, Chimneys & Vents, Specific Appliance
17501				3		MI*	Donna Panasiewicz		(586) 774-9597	Mechanical Code Technical Requirements III - Water Heaters, Pressure Vessels, Refrigeration, Hydronic Piping
17502		2				ALL	William Moy	MIAM	(248) 649-5443	Inspector Professionalism

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 Inspector Continuing Education Programs

17503	1	2				ALL	Michael O'Brian	Code Savvy Consultants LLC	(810) 459-0116	The Fire Department Meets Code Enforcement
17504	2					ALL	Michael O'Brian	Code Savvy Consultants LLC	(810) 459-0116	Lock Down Drills and the Building Official
17505				2	1	BI*	Wayne R. Jewell		(810) 623-9234	Selected Changes for 2012 Building Code
17506	1		1	1		ALL	Barbara Lajiness	Washtenaw Community College	(734) 677-5259	State of Michigan Fireworks Safety Act: Provisions and Enforcement and Their Relationship to the State Construction Code
17507	1		1			ALL	Barbara Lajiness	Washtenaw Community College	(734) 677-5259	Code Enforcement and Hoarding: Options under the Residential and Property maintenance Codes
17508	2					ALL	Irvin J. Poke	Bureau of Construction Codes	(517) 241-9302	Bureau & Legislative Update
17509			8	8		ALL	Donna Panasiewicz		(586) 774-9597	2009 International Energy Conservation Code Basics
17510			4	3		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: ISPSC
17511			7	7		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IRC - Plumbing
17512			6	5		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IRC - Mechanical
17513			18	18		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IFC
17514			27	27		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IRC - Building
17515			1	1		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IPMZC
17516			4	3		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IEBC
17517	6					ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: Adminstrative
17518			20	20		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IECC - Residential
17519			20	20		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IRC - Electrical

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 Inspector Continuing Education Programs

17520			30	30		ALL	Laura Garcia	International Code Council	(888) 422-7233	2013 Code & Final Hearing: IECC - Commercial
17521			1	1		BI*	Leslie E. Smith III	Michigan Dept. of Environmental Quality	(517) 324-2618	Radon 101 - Introduction to Radon Measurement and Radon Reduction Methods
17522				1	1	EI*	Maurice Van Nevel		(231) 854-1795	Article 220 Branch-Circuit, Feeder, and Service Calculations
17523			1	1		EI*	Maurice Van Nevel		(231) 854-1795	Nonmetallic-Sheathed Cable, Service-Entrance Cable, and Underground Feeder and Branch Circuit Cable
17524			1	1		EI*	Maurice Van Nevel		(231) 854-1795	Articles 625 and 626, Electric Vehicle Charging Systems and Electrified Truck Parking Spaces
17525			1	1		EI*	Maurice Van Nevel		(231) 854-1795	Emergency Systems-Legally Required Standby Systems-Optional Standby Systems
17526				1	1	EI*	Dan Radecki		(616) 395-0196	MEC Article 680
17527	1					ALL	Richard Miller		(517) 241-8847	Fire Marshal Division - Duties and Responsibilities
17528					3	ALL	Mike Winkler	Metro Building Inspectors Association of Greater Grand Rapids	(616) 395-0196	Code Compliance for Pole Barns
17529			3	4	1	PI*	Curtis E. Stowe	CIT-Certified Inspector Training	(586) 436-0450	2009 MPC - Chapters 5-8
17530			3	4	1	MI*	Curtis E. Stowe	CIT-Certified Inspector Training	(586) 436-0450	2009 MMC Update
17531	1		3	3	1	BI*	Curtis E. Stowe	CIT-Certified Inspector Training	(586) 436-0450	2009 MBC Update
17532			8			BI*, MI*	Donna Panasiewicz		(586) 774-9597	R-410A/Environmentally Friendly Refrigerants - Therory & Application
17533			8			ALL	Donna Panasiewicz		(586) 774-9597	Geothermal Heat Pumps - Theory & Application
17534					8	ALL	Judy Schifiliti	Fires Safety Consultants Inc.	(847) 697-1300	Automatic Sprinkler Plan Review

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 Inspector Continuing Education Programs

17535					5	ALL	Judy Schifiliti	Fires Safety Consultants Inc.	(847) 697-1300	Plan Review of Kitchen Hood Extinguishing Systems
17536					5	ALL	Judy Schifiliti	Fires Safety Consultants Inc.	(847) 697-1300	Plan Review of Fire Alarm Systems
17537			2	1		EI*	Anton M. Tomasin		(810) 796-9669	Recognizing electrical violations to the Michigan Electrical Codes and assign specific violations
17538			12			BI*	Laura Garcia	International Code Council	(888) 422-7233	When Disaster Strikes
17539			3			MI*, PI*	Warren M. Wisner	SE MI Mechanical Code Officials	(734) 475-2425	Aquatherm Polypropylene Pipe, Fitting, and Installation
17540	4	1	3	8	2	BI*	John M. Tisdale	State of Michigan/BCC	(517) 241-9317	Provisional Inspector's Building Program Training
17541	2					ALL	Irvin J. Poke	State of Michigan/BCC	(517) 241-9302	Bureau & Legislative Update
17542			1	1		BI*	Mike Winkler	COCM	(616) 395-0196	EIFS Problems and how to avoid them
17543				4		BI*	Ira (Jim) Rowell		(517) 861-6372	4-Hour Technical Test for MCB and Rehab Code
17544				4		BI*	Ira (Jim) Rowell		(517) 861-6372	4-Hour Technical Test for MRC and MUECC
17545					30	ALL	Laura Garcia	International Code Council	(888) 422-7233	Plan Review Institute
17546			3			BI*	Holly Kaiser	Studio 5	(248) 203-5937	Leadership in Energy and Environmental Design (LEED) Basics
17547			3			BI*	Holly Kaiser	Studio 5	(248) 203-5937	Green Roofs and Walls
17548			3	3		BI*	Laura Garcia	International Code Council	(888) 422-7233	2009 IBC Fundamentals Structural Provisions
17549			4		4	EI*	Ernest A. Harju		(906) 339-2466	Basic 70-E ARC Flash
17550	2			1		ALL	Larry Lehman	BCC Building Division	(517) 241-9317	2012 Michigan Code Adoption and Administrative Update

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-32

June 11, 2013

TO: Members of the Construction Code Commission

FROM: Larry Lehman, Chief
Building Division

SUBJECT: Continuing Education Instructor Applications

Attached is a list of those individuals who have applied for approval as instructors of continuing education programs required of building officials, inspectors and plan reviewers. The instructors listed have been granted lifetime approval.

Each has documented training and experience in the topic which they propose to teach.

It is the recommendation of Bureau staff that they be approved as instructors by the Commission.

LL/kld

Attachments

Department of Licensing and Regulatory Affairs-Bureau of Construction Codes-2012/2015 New Instructors

Instructor Number	Last Name	First Name	MI	Affiliation/Experience
2062	Evans	Michael	H	Washtenaw Community College
2063	Smith III	Leslie	E	Michigan Dept. of Environmental Quality
2064	Miller	Richard	W	Bureau of Fire Services
2065	Rimoldi	Michael	V	International Code Council
2066	Pabis	David	M	
2067	Rowell	Ira (Jim)	J	

DOCUMENT #13-34a
07/10/13 ccc

BUILDING OFFICIALS RECOMMENDED FOR CCC APPROVAL

ALBERTS, Dennis J.
Registered BI (005664) since 07/2010 and PR since 01/2012
Additional Building Official
Portage Township – Mackinac County

ALWINE, Michael R.
Registered BI/PR (005640) since 04/2010
Replacing Lennel Smith (005091)
Calvin Township – Cass County

ANDERSON, Carl J.
Registered BI/PR (005281) since 10/2005
Additional Building Official
Iron County

BENNETT, James E.
Registered BI/PR (003182) since 05/1994
Replacing Christine Segerlind (002846)
City of Lansing – Ingham County

BERMAN, Matthew M.
Registered BI (005487) since 04/2012, MI/PR since 07/2007
Additional Building Official
City of Mt. Clemens – Macomb County

BICE, Gary L.
Registered BI/PR (001155) since 08/1987
Additional Building Official
Palmyra Township – Lenawee County

CAIN, Jeffrey S.
Registered BI/PR (003386) since 01/1995
Additional Building Official
Buena Vista Township – Saginaw County

CHRENKA, David E.
Registered BI/PR (005126) since 07/2004
Additional Building Official
Shiawassee County

CYPHER, Gary R.
Registered BI/PR (002363) since 10/1989
Replacing Robert Logan (003659)
DeWitt Charter Township – Clinton County

DAVIES, Steven C.
Previously Registered as BI (005381) since 09/2006
Replacing Joseph Weinburger (000674)
Highland Charter Township – Oakland County

DELANEY, Robert J.
Registered BI/PR (005480) since 07/2007
Replacing Rob Kehoe (003889)
Owosso Township – Shiawassee County

DUVALL, Robert D.
Registered BI (003047) since 07/1993 and PR since 05/1994
Additional Building Official
Missaukee County

EKDAHL, Ronald G.
Registered EI/PR (005061) since 01/2004
Additional Building Official
Houghton County

ERSKINE, Paul V.
Registered BI/PR (005383) since 10/2006
Additional Building Official
City of St. Louis – Gratiot County

HERTER, Donald C.
Registered Building Inspector (001858) since 10/1987
Additional Building Official
Wayne Township – Cass County

JOHNSON, Raymond H.
Registered BI (004571) since 11/2000 and PR since 12/2002
Additional Building Official
City of Gladstone – Delta County

JONES, Jerry W.
Registered BI/PR (004933) since 03/2003
Additional Building Official
St. Joseph Charter Township – Berrien County

KLIMASZEWSKI, Leslie L.
Registered Building Inspector (003407) since 02/1995 and Plan Review since 05/1995
Additional Building Official
Alpena Township – Alpena County

KLINE, Dan L.
Registered BI/PR (005187) since 03/2005
Additional Building Official
Watersmeet Township – Gogebic County

LASANEN, Dennis J.
Registered EI (003224) since 05/1994 and PR since 01/2013
Replacing Ronald Ekdahl (005061)
Houghton County

MANTEI, Werner C.
Registered BI/PR (005289) since 11/2005
Additional Building Official
Lincoln Township – Clare County

MCDONALD, Harold J.
Registered BI (002889) since 09/1992
Additional Building Official
Sims Township – Arenac County

MENACHER, Daniel
Registered BI/PR (005672) since 10/2010
Additional Building Official
Menominee County

NEARPASS, Christian
Registered BI/MI/PI (005390) since 2008, 2006 and 2012 respectively
Additional Building Official
Pipestone Township – Berrien County

NYE, James O.
Registered BI/PR (004776) since 03/2002
Additional Building Official
Maple Ridge Township – Alpena County

PALMER, Robert M.
Previously registered as BO/BI/PR (002004) since 03/1988
Reapplication for non-renewal
Vienna Township – Genesee County

PREDMORE, Jay L.
Registered BI (003746) since 10/1996 and PR since 05/1997
Replacing Anthony Bosley (001247)
Chippewa County

RIETKERK, Bret A.
Registered BI (005149) since 09/2004
Additional Building Official
City of Otsego – Allegan County

ROSATTO, Dane D.
Registered BI/PR (004006) since 02/1998
Additional Building Official
Dickinson County

SAVAGE, James W.
Registered BI (003544) since 08/1995, MI since 12/1995, PI/PR since 05/1997
Replacing Robert Kehoe (003889)
Village of Gaines – Genesee County

SCHMELING, Randy A.
Registered BI/PR (005637) since 01/2010
Additional Building Official
Mason Township – Cass County

SETZER, Michael W.
Registered BI (002434) since 04/1990 and PR since 08/1995
Additional Building Official
City of Frankenmuth – Saginaw County

STEELE, William P.
Registered BI (002319) since 09/1989 and PR since 08/1995
Additional Building Official
Village of Vandalia – Cass County

STONE, Joseph L.
Registered BI (003550) since 08/1995 and PR since 06/1996
Additional Building Official
Montmorency County

TAUER, Roman J.
Registered BI (003055) since 07/1993 and PR since 04/1997
Additional Building Official
Bessemer Township – Gogebic County

TAYLOR, Raymond J.
Registered BI/PR (004627) since 01/2001
Additional Building Official
Hillsdale County

WAINWRIGHT, Eddie J.
Registered MI/PR (003852) since 04/1997 and PI since 11/1998
Additional Building Official
Chikaming Township – Berrien County

WEGNER, John E.
Registered EI/PR (1004889) since 01/2003
Additional Building Official
City of Midland – Midland County

WILSON, R. James
Registered BI/PR (003800) since 01/1997
Additional Building Official
Village of Oxford – Oakland County

ZAKSHESKY, James J.
Registered BI/PR (003628) since 12/1995
Additional Building Official
Presque Isle County

ZOMERLEI, Randal K.
Registered BI (003913) since 05/1997 and PR since 09/1998
Additional Building Official
Byron Township – Kent County

DOCUMENT #13-34b
07/10/13 ccc

BUILDING INSPECTORS RECOMMENDED FOR CCC APPROVAL

BOLEK, Richard E.
10,400 hours experience in building
Additional Inspector
City of Pontiac – Oakland County

DAVIES, Steven C.
Previously Registered as BI (005381) since 09/2006
Reapplication for non-renewal
Highland Charter Township – Oakland County

FRALEY, Bart D.
22,880 hours experience in building
Additional Inspector
Livingston County

GARBARINO, Arthur K.
37,440 hours experience in building
Additional Inspector
City of Detroit – Wayne County

JAAFAR, Nabil
11,728 hours experience in building
Additional Inspector
City of Detroit – Wayne County

MCGRAIL, Lucas C.
11,180 hours experience in building
Additional Inspector
City of Detroit – Wayne County

PALMER, Robert M.
Previously registered as BO/BI/PR (002004) since 03/1988
Reapplication for non-renewal
Vienna Township – Genesee County

SPARKS, William D.
22,416 hours experience in building
Additional Inspector
City of Detroit – Wayne County

WATKINS, Michelle D.
11,360 hours experience in Building
Additional Inspector
City of Detroit – Wayne County

WINTER, Jr., James M.
10,146 hours experience in Building
Replacing Russell J. Schlarf (003904)
Grand Traverse County

DOCUMENT #13-34c
07/10/13 ccc

PLAN REVIEWERS RECOMMENDED FOR CCC APPROVAL

BAUDER, Daniel E.
Journey Plumbing License# 8220189 (01/2002)
Additional Inspector
Byron Township – Kent County

BOLEK, Richard E.
10,400 hours experience in building
Additional Plan Reviewer
City of Pontiac – Oakland County

BOLLIN, Timothy C.
Registered EI (005629) since 11/2009
Replacing Dino Bona (005167)
City of Farmington Hills – Oakland County

BUTTON, Anthony D.
Registered Mechanical Inspector (005377) since 10/2006
Additional Plan Reviewer
City of Pontiac – Oakland County

DAVIES, Steven C.
Previously Registered as BI (005381) since 09/2006
Replacing Joseph Weinburger (000674)
Highland Charter Township – Oakland County

DEWITTE, Paul M.
Previously registered EI/PR (004894) since 01/2002
Reapplication for non-renewal in 2006
Kenockee Township – St. Clair County

ELLISON, Scott M.
Master electrical license #6213349 (11/2003)
Replacing Mark Fish (005203)
Columbia Township – Jackson County

FRALEY, Bart D.
22,880 hours experience in building
Additional Plan Reviewer
Livingston County

GARBARINO, Arthur K.
37,440 hours experience in building
Additional Plan Reviewer
City of Detroit – Wayne County

GIBSON, George W.
Journey electrical license #6307429 (01/1983)
Replacing Mark Caldwell (005697)
Hillsdale County

HERTER, Donald C.
Registered Building Inspector (001858) since 10/1987
Additional Plan Reviewer
Wayne Township – Cass County

JAAFAR, Nabil
11,728 hours experience in building
Additional Plan Reviewer
City of Detroit – Wayne County

MCGRAIL, Lucas C.
11,180 hours experience in building
Additional Inspector
City of Detroit – Wayne County

MILLER, Christopher A.
Registered Building Inspector (005727) since 07/2012
Additional Plan Reviewer
Chikaming Township – Berrien County

NEWELL, Steven D.
Master electrical license#6205570 since 01/1989
Additional Plan Reviewer
Hillsdale County

PALMER, Robert M.
Previously registered as BO/BI/PR (002004) since 03/1988
Reapplication for non-renewal
Vienna Township – Genesee County

REITSMA, Ronald J.
Registered Electrical Inspector (005687) since 01/2011
Additional Plan Reviewer
Cascade Township – Kent County

RIETKERK, Bret A.
Registered BI (005149) since 09/2004
Additional Plan Reviewer
City of Otsego – Allegan County

SPARKS, William D.
22,416 hours experience in building
Additional Plan Reviewer
City of Detroit – Wayne County

WATKINS, Michelle D.
11,360 hours experience in Building
Additional Plan Reviewer
City of Detroit – Wayne County

WINTER, Jr., James M.
10,146 hours experience in Building
Replacing Russell J. Schlarf (003904)
Grand Traverse County

Document #13-34d
07/10/13 ccc

ELECTRICAL INSPECTORS RECOMMENDED FOR CCC APPROVAL

ADRIAN, Tom E.
Previously registered EI (005676) since 10/2010
Reapplication for non-renewal
City of East Lansing – Ingham

BELCHER, Mark R.
Previously registered EI/PR (005486) since 04/2007
Reapplication for non-renewal
State of Michigan

DEWITTE, Paul M.
Previously registered EI/PR (004894) since 01/2002
Reapplication for non-renewal in 2006
Kenockee Township – St. Clair County

ELLISON, Scott M.
Master License #6213349 (11/2003)
Replacing Mark Fish (005203)
Columbia Township – Jackson County

GIBSON, George W.
Journey License #6307429 (01/1983)
Replacing Mark Caldwell (005697)
Hillsdale County

LOCASCIO, Jerrod R.
Master License#6213303 (11/2003)
Additional Inspector
Clayton Charter Township – Genesee County

NEWELL, Steven D.
Master license#6205570 since 01/1989
Additional Inspector
Hillsdale County

VANDYKE, Andrew S.
Previously registered EI (005404) since 11/2006
Reapplication for non-renewal
Almont Township – Lapeer County

Document #13-34f
07/10/13 ccc

PLUMBING INSPECTORS RECOMMENDED FOR CCC APPROVAL

BAUDER, Daniel E.
Journey License# 8220189 (01/2002)
Additional Inspector
Byron Township – Kent County

POWER, Peter J.
Journey License# 8220924 (10/2003)
Additional Inspector
Ypsilanti Township – Washtenaw County

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

DOCUMENT #13-39

June 11, 2013

TO: Members of the Construction Code Commission

FROM: Joseph T. Madziar, Plumbing Division Chief

SUBJECT: Approval of Stancor Oil Alarm Systems with Oil Separation Technology, BCCP-13-002

The applicant has requested product approval to provide product acceptance through approval clarification for an alternative product to address elevator sump requirements. The product for consideration is the Stancor Oil Alarm Systems with Oil Separation Technology, Models SE50-MV-IS5 and SE50-MD-IS5.

This product consideration request is for approval of an alarm system which uses sensors to direct water to sewer of oil to containers (Section 1003.4, exception) rather than the code required oil interceptor.

APPLICANT REPRESENTATIVE:

Mr. Richard C. Powell

APPLICANT:

Industrial Systems, Inc.
1888 W. Bitters Rd.
San Antonio, Texas 78248

AUTHORITY:

Section 21 of Act 230, 1972 being section 125.1521 of the Michigan Compiled Laws.

PRODUCT:

Stancor Oil Alarm Systems with Oil Separation Technology, Models SE50-MV-IS5 (single pump, two valves) and SE50-MD-IS5 (two pumps)

PRODUCT DESCRIPTION:

The alarm system differentiates between oil and water. The system incorporates sensing technology and is designed to operate with pumps and containment systems. The system will automatically pump water to the normal discharge area and pump oil to a separate holding tank. The various models use simplex pump with valves or duplex pumps with no valves.

APPLICATION:

The system is designed for hydraulic elevator pits where there is a risk of hydraulic oil leaking or spilling into the pit along with the presence of water which may be present from fire suppression discharges or smaller leaks into the pit from ground water.

The system will consist of either one pump or two pumps. Either system will be provided with a solid state control logic that can differentiate between oil and water and immediately direct the liquids to the proper depositories. Each pump and control system will be supplied by a single manufacturer and will be fully factory tested before shipment.

APPLICABLE CODE SECTION:

Michigan Plumbing Code

Section 301.6 Prohibited locations, allows sumps in an elevator pit if Section 1003.4 is met.

Section 1003.4 Oil separators required. Oil separators are now required in hydraulic elevator pits unless an approved alarm system is installed. This product consideration request is for approval of an approved alarm system.

Note: The elevator requirements now mandate sumps in hydraulic elevator pits. The purpose is to remove water (from fire suppression system discharges) when present. This will assure continued elevator operation for fire department personnel.

INTENDED USE:

Sump pump system sized and designed to meet ASME A17.1 Section 2.2.2.5 (2007). System designed to limit any pumping of FOG's or Hydraulic oils to the sewer, control system is completely automatic and will deliver all oil to a storage system and only clear water to the sewer.

PILOT SERVICE EXPERIENCE AND CONDITION:

Stancor Oil Minder Systems have been in service since 1987. Approximately 20,000 units have been installed to date. The special oil alarm systems with oil separation technology to meet ASME A17.1 Section 2.2.2.5 (2007) has been in service since 2008. This modified system was produced to meet Texas interpretation of ASME.

APPROVALS/TESTS:

Intertek ETL SEMKO
3210 American Drive
Mississauga, Ontario
Authorization to Mark, for the Pump Controller, model Oil minder. Report No. 0211178382, file 8098, Revised July 22, 2005

Entela Certificate of Conformity (Nationally recognized laboratory)
Michigan and Toronto Offices
April 22, 2002 for UL 508 17th edition and UL 778 3rd edition

Approvals from:

Commonwealth of Massachusetts
Fairfax County, Virginia
County of Prince William , Virginia
City of Falls Church, Virginia
Code Enforcement, Alexandra Virginia
Arlington County, Virginia
Government of the District of Columbia

CONDITIONS OF USE AND INSTALLATION:

1. All requirements of the Michigan Plumbing Code shall be applicable.

2. Shall be installed in accordance with manufacturer's installation instructions.

3. Pumping shall not be terminated by alarm activation.

4. Activated alarms shall take place within close proximity to the elevator and at the building management site to assure responsible surveillance.

5. The sump pump total dynamic head and the oil storage containment tank size and capacity are to be established by their Architect/Engineer or designer during the design phase of a project.

6. This approval shall become void if and when the product no longer meets the

requirements of the Michigan Plumbing Code or a change in design/designation occurs.

RECOMMENDATION:

The plumbing board recommended the product to the commission for approval at the June 4, 2013 board meeting.

JTM/sjl

March 01, 2013

SUBMITTAL

PROJECT:
ENGINEER:
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ELEVATOR SUMP PUMP SYSTEM

STANCOR Model SE-50-MV-IS5 Complete Simplex Pump and Modified Oil-Minder control system for the elevator pit. The system is capable of pumping water automatically and diverting oil to a storage container and includes the oil diverting option. The Oil-Minder System is capable of sensing oil floating on the top of the water, emulsified in solution or solid oil and prevent the pump from discharging this oil into the sewer or storm drain. The pump and oil sensor technology control system will comply with MDLARA elevator rules and ASME A 17.1 Section 2.2.2.5 (2007) standard. The system shall function automatically to remove water and water with any other substance from the pit automatically without any human intervention. The control system shall provide a local audible alarm with silence switch and individual dry contacts for warning of conditions A, B, C, D, & E and have a panel mounted audible alarm with LED indicator lights for power on, oil detected and high level. The following events will activate individual dry contacts for remote monitoring; A) the presence of oil in the sump when the pump is signaled to run, B) high liquid level in the sump, C) high amps or a locked rotor motor condition, D) loss of electrical power to the panel, E) pump activation. Individual dry contacts suitable for wiring to the BMS for remote monitoring for all of the above alarm conditions will be provided.

The sump pump will be a **Model SE-50** heavy duty submersible type, capable of pumping at a minimum capacity of **50GPM @ 20' TDH**, (3000 GPH per cab) as per **ASME A 17.1 Section 2.2.2.5** (2007). The pump shall include thermal overload protection with a high torque motor. The motor is air filled and rated at **1/2 H..P., Power 115, 1phase, 60 Hertz.** The pump shall be capable of operating with the water level covering only 50% of the motor casing and shall operate automatically either continuously or intermittently, as required by the on-off float switch control. The pump discharge size will be 2"as shown. The outer casing and motor housing and fastening bolts are constructed of 304 Stainless Steel and the silicon carbide double mechanical seals shall be housed in a separate oil-filled compartment. The pump shall have a semi-open non-clogging impeller, and is designed for floor mounting. The impeller is cast iron having a cast iron rubber lined diffuser for extended life.

The Solid State Oil Minder Control System is constructed and tested to meet UL508 standards and is housed in a gasketed NEMA 4X electrical enclosure with marked terminal strips for field wiring. The control panel shall include a field adjustable switch with variable sensitivity settings, for indicating oil present, having an adjustable range of 1 to 10, factory set at #5 oil sensitivity and capable of sensing emulsified oil and diverting it to a storage container for remediation. The panel shall also include a separate over-current relay and field adjustable motor overload having a range of 5 to 15 amps, factory set at the amps for each pump application.

The control panel shall have a combination manual reset/push to test switch for motor overload with both automatic, manual reset and control diagnostics. The overload controls shall be factory set for automatic reset. The factory installed Oil Sensor probe detection system is hermetically sealed, heavy duty, Stainless Steel with low amperage self-cleaning technology. The factory mounted and adjusted oil sensor-level probe shall be set no higher than 4" from the bottom of the pit. The factory mounted main float switch will automatically start the pump on a level increase in the sump pit fluid level. When the water or fluid level drops below the oil sensor probe tip the pump will automatically turn off. The control panel will have a one (1) second time delay after the liquid level drops below the oil sensor probe tip, leaving about two inches of water in the pit. At this point the oil sensor probe voltage will drop from 5VDC to 15 millivolts DC. The oil sensor probe voltage shall not exceed 15 millivolts DC until it comes in contact with water or any other fluid, at which point the oil sensor returns to 5VDC. The low 15 millivolts DC input shall reduce the potential field and subsequent metal ion exchange, preventing build up of foreign matter on the probe surface. If the main start float switch is closed and the oil sensor measures a higher resistance than its set point, the pump will automatically be started and the oil LED, audible alarm and remote alarm relay will be energized. The condition of oil present will automatically and immediately close the sewer valve and open the oil diverting valve at the same time. The pump oil sensing probe will be factory mounted and positioned on the pump and factory tested as a complete system. The control panel shall have a high decibel warning horn with illuminated red light complete with alarm silencing switch and separate dry contacts for each of the alarm events specified.

The automatic electric flow control valves shall be size 2" FPT, for this size pump, having a brass body, 1/4 turn full port ball valve, nickel plated ball with Teflon seats and adjustable packing, 600 psig, NEMA 4 enclosure, fast acting 115 volt AC motor actuator with manual override with position indicator. The sewer discharge valve is to be in the normally open position and the oil diverting valve is to be in the normally closed position. The CV factor is 328. Each valve consists of six wires to be connected to the Main Control Panel in the field by the electrical contractor.

Each System will be provided ONE Oil Storage Container. The oil storage container will have a minimum capacity of 55 gallons, furnished complete with a removable plain cover having no connections. All connections shall be field cut by the contractor. The drum will have a high fluid level alarm panel with a NEMA 3R water tight enclosure, 115/1/60 power, complete with high level weighted float switch with 15 feet of cable and a cord grip for installation in the drum top. The alarm panel shall have a local audible and visual alarm, 85 DB, complete with silence switch and manual test button. A set of dry alarm contacts is provided for wiring to the BMS for Oil Barrel remote high level alarm condition. Each storage container will be mounted on a welded steel wheeled drum dolly for ease of remediation. Dolly Capacity1000 Lb.

The Oil-Minder Control system shall be provided with option RP (Remediation Provision) that consists of a deadman spring return Oil-Minder by-pass switch mounted on the control panel. This deadman switch will allow the control panel to be manually overridden allowing the sump pump to pump oil out of the pit into the oil remediation container. This is a manual operation when the deadman switch is operated and will require the manual closing of the sewer valve and opening of the oil drum valve. The deadman switch will also allow the testing of the pump to confirm the pump will start and run.

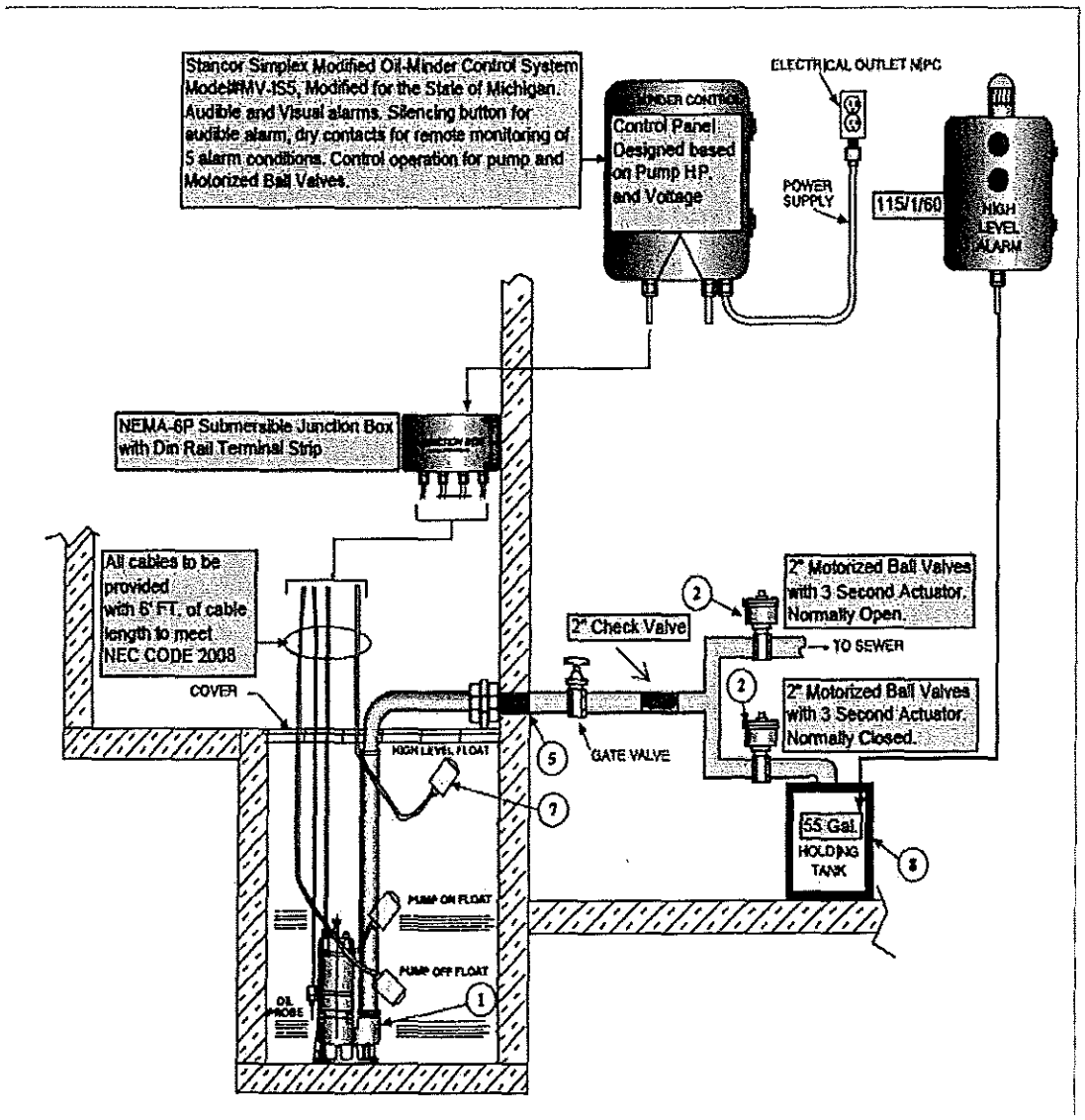
The control system will include dual float switches for automatic pump activation and high water alarm, with the high water alarm float switch also acting as a redundant pump run (on) float in the event of the primary pump run float being incapacitated. A clearly marked terminal board with the remote monitoring alarm contacts for connection to the BMS. A solid state push/hold to test button to perform all pump, alarm, led lights, remote contacts and control diagnostic tests.

A NEMA 6P submersible junction box with a din rail screw down terminal strip for field hard wiring will be provided. **All cables between the J-BOX and the Main Control Panel will be hard wired in the field by the contractor.** The cables between the pump and junction box will be 6' long PER NEC 2008. The oil sensing probe shall be factory mounted on the pump housing.

The control panel, pump, on/off float, high water alarm float, J-box and oil sensor probe shall be factory assembled as a complete assembly and will be factory tested.

SE-50-MV-IS5, 115/1/60, 1/2HP, 3600 RPM, 2" NPT DISCHARGE, 8 FULL LOAD AMPS

STANCOR Oil-Minder Model#SE-50-MV-IS5 Valve System



March 1, 2013

SUBMITTAL

PROJECT:

ENGINEER:

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ELEVATOR SUMP PUMP SYSTEM

Stancor System Model SE-50-MD-IS5, consisting of a complete factory constructed control system, Texas Version, meeting MDLARA and local codes. The system consists of Duplex Pumps and Oil-Minder control system for each elevator pit, as shown on the drawings. The system is capable of pumping water automatically to the sewer system or automatically diverting oil to a storage container and shall include the electronic oil diverting duplex pump option and controls. The Oil-Minder System will be capable of sensing oil floating on the top of the water, emulsified in solution or solid oil in the sump pit. The control system must prevent any oil from discharging into the sewer or storm drain, without stopping the automatic operation of the pumps. The pumps and oil sensor technology control system will comply with MDLARA elevator rules and ASME A 17.1, Section 2.2.2.5 (2007) standard, including local municipal and plumbing codes. The system shall function automatically to remove water and water with any other substance from the pit automatically without any human intervention. Under no circumstance is the control system to stop the pumps from operating if Oil is detected and diverted. The control system shall provide a local audible alarm with adjustable sound level and a silence switch. The controls are provided individual dry contacts for warning of conditions A, B, C, D, & E and a panel mounted audible alarm with LED indicator lights for Power, Oil Detected and High water level. The dry contacts shall be normally open and shall activate under the following conditions, A) the presence of oil in the sump when the drum pump is signaled to run, B) high liquid level in the sump, C) high amps or a locked rotor motor condition, D) loss of electrical power to the panel, E) pump activation/pump run for the sewer pump. A dry contact closure that makes only in the event of a high liquid level condition and/or oil detected in the pit shall not be considered equal and will not be accepted. Individual dry contacts are to be wired to the BMS or the Security System for remote monitoring of Oil Detected and Diverted, High Water Alarm, Pump Run, Loss of Power & Locked Rotor/overload.

The duplex sump pumps are Model SE-50, heavy duty submersible type, capable of pumping a minimum capacity of 50 GPM @ 20' TDH, (3000 GPH). The motor is air filled and rated at ½ H.P., 115 volt, 1 phase, 60 Hertz. The control panel is NEMA 4X with wiring terminal strips for field wiring to the J-Box in the hoistway. The panel includes separate over-current relays and field adjustable motor overloads. The factory mounted main float switch will automatically start a pump on a level increase in the sump pit fluid level. The solid state oil sensing Oil Minder control system will determine which pump is to be activated.

Only ONE pump is to be operational at any given time and specific pump activation will be determined automatically by the control system. The condition of oil present will automatically start the drum pump and lock out the water pump. The pump control float and oil sensing probe are to be factory mounted and positioned on the pump and factory tested as a complete system.

The Oil-Minder Control system is provided with a Model RP override switch that consists of a deadman spring return pump by-pass switch, one for each pump, mounted on the control panel, allowing each pump to be tested and operated individually thereby allowing the drum pump to pump oil out of the pit into the oil remediation container.

The control system includes dual Close Radius Float Switches for automatic pump activation and high water alarm indication. The high water alarm float switch shall operate as a redundant pump run (on) float in the event the primary pump run float being incapacitated. A clearly marked terminal board with the remote monitoring alarm contacts for connection to the BMS or Security System.

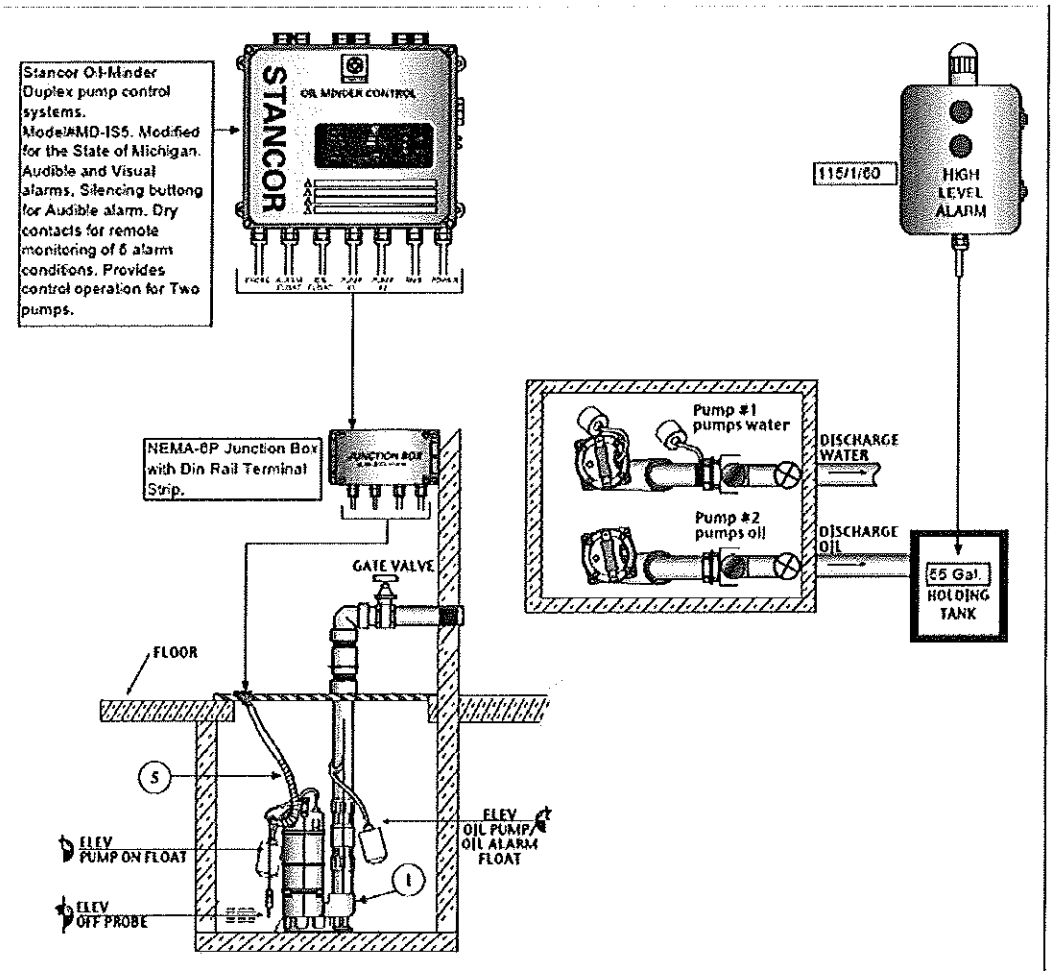
A NEMA 6P water tight submersible junction box with a din rail mounted wiring terminal strip will be provided. All cables between the pump and junction box will be a maximum of 6' long per NEC 2008. The cables are heavy usage, water tight and oil resistant. The J-box must be hard wired by the contractor in the field between the j-box and the main control panel.

The oil storage container will have a capacity of 55 gallons, vertical design, UL80, contractor shall provide connections and fittings of sizes per Contract Drawings) A high fluid level alarm panel, UL Listed, NEMA 3R enclosure, 120/1/60 power, complete with weighted float switch with 15 feet of cord and a cord grip for mounting to the tank. The cord shall be both **water** proof and **Oil Resistant**. The NEMA 3R alarm panel will have a local audible horn and visual red beacon alarm, 85 DB, complete with silence switch and manual test button. A set of dry alarm contacts is provided for wiring to the BMS or Security System for remote drum high level alarm condition.

The control system will be provided with one 11" x 17" plastic laminated wiring diagram, pump capacity curve showing a pump capacity of 3000 GPH per cab, factory certification that the wiring meets NEC Code requirements of heavy usage, water proof, oil resistant and 6' maximum length. The data should be left in the control panel and left at the project site for the elevator inspector's reference. One complete Operators manual will also be in the control panel. This O&M must be left in the control panel for the building maintenance personal. The O&M will include a step by step dry test procedure for testing the system.

SE-50-MD-IS5, 115 VOLT, 1 PHASE, 60 HZ, 3600 RPM, 8 AMPS PER PUMP.

STANCOR OIL-MINDER DUPLEX MODEL#MD-IS5
ELEVATOR SUMP PUMP SYSTEM



STATE OF MICHIGAN
RICK SNYDER
GOVERNOR

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

May 20, 2013

Document #13-31

TO: Members of the Construction Code Commission

FROM: Kevin Kalakay, Chief, Mechanical Division

SUBJECT: Product Approval for TracPipe PS-II

The applicant has filed a petition application for approval of a product.

APPLICANT REPRESENTATIVE:
Mr. Robert Torbin

APPLICANT:
Omega Flex, Inc.
213 Court St. Suite
Middletown, CT 06457

AUTHORITY:
MCL 125.1521 of 1972 PA 230
MCL 338.975 of 1984 PA 192

PRODUCT:
TracPipe PS-II is a corrugated stainless steel tubing product with a protective polyethylene sleeve and leak containment/ venting system for corrosion protection in underground installations and under and within concrete construction."

APPLICATION:
Tracpipe PS II CSST is intended for the distribution of fuel gas for residential, commercial and industrial applications. The outer sleeve and containment system permits the direct burial of the fuel gas line and provides protection against corrosion and a means of collecting and safely venting any escaping fuel gas.

LISTINGS:
IAPMO File # 4665 -10/2012
IAPMO IGC 201-2004
ICC-ES PMG-1052

LICENSING AND INSTALLATION REQUIREMENTS:
Shall be installed only by State of Michigan licensed Mechanical contractors with the proper license classification to perform fuel gas piping installations. The manufacturer shall provide training on proper installation to all installing contractors.

CONDITIONS OF USE AND INSTALLATION:

1. All requirements of the Michigan Residential and the International Fuels Gas Code most current editions shall apply.
2. Installation shall be in accordance with the manufacturer's installation instructions.
3. Shall only be installed by a qualified person who has been trained through the TracPipe Gas Piping Installation Program
4. The ability of the system to withstand the superimposed loads shall be documented to the code official for each installation
5. Not approved for pressures above 5-PSI
6. This approval shall become void if the product no longer conforms to the current Michigan Mechanical, Michigan Residential codes.

RECOMMENDATION:
The Board of Mechanical Rules at their May 15, 2013 meeting recommended the product for approval to the Construction Code Commission with the above stipulations.

CC: Robert Torbin

Petition Application for Approval of Material, Product or Method
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes
P.O. Box 30255, Lansing, MI 48909
www.michigan.gov/bcc

Agency Use Only: BCCM-12-011

Application Fee: $500.00

Authority: 1972 PA 230
Completion: Mandatory
Penalty: Use of material, product or method will not be approved

LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

PRODUCT INFORMATION

NATURE OF APPLICATION

☐ Material ☑ Product ☐ Method of Manufacture or Construction ☐ Component

CODE UNDER WHICH APPROVAL IS SOUGHT

☐ Building (140) ☐ Electrical (115) ☑ Mechanical (130) ☐ Plumbing (98)

NAME OF MATERIAL, PRODUCT OR METHOD OF MANUFACTURE (Limit To One Item Per Application)

TracPipe PS-II Polyethylene-Sleeved Flexible Fuel Gas Piping System

OTHER IDENTIFICATION (Model Number)

Part Numbers: FGP-UGP-375; FGP-UGP-500; FGP-UGP-750; FGP-UGP-100; FGP-UGP-125; FGP-UGP-150; FGP-UGP-200

DESCRIPTION (Use Additional Sheets If Necessary)

Corrugated stainless steel tubing with protective polyethylene sleeve and leak containment/venting system for corrosion protection in underground installations and under and within concrete construction.

INTENDED USE (Use Additional Sheets If Necessary)

TracPipe PS-II is intended for the distribution of fuel gas for residential, commercial and industrial applications. The outer sleeve and containment system permits the direct burial of the fuel gas line and provides protection against corrosion and a means of collecting and safely venting any escaping fuel gas.

DATA SUBMITTED

☐ Letter
☐ Manual
☐ Standards
☑ Installation Instructions
☑ Display Catalog

Reports
☑ ICC - NES
☐ BOCA - NES
☐ ICBO
☐ SBCC
☐ NRB
☑ Other

☑ Product Sample or Model
☑ Prior Approvals by Other Agencies
☐ Recommendations by Model Code Bodies

LABORATORY TEST BY

(Jacket) IAPMO Testing and Services - Ontario, CA and (CSST) CSA-International - Toronto, Ontario, CN

PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets If Necessary)

TracPipe PS-II CSST is listed to a national consensus standard (ANSI LC-1) and is listed by ICC and CSA -International for fuel gas applications. PS-II is accepted and installed in all 50 states, and over 1 million feet have been installed since its introduction in 2004. There have been no known instances where PS-II has failed to function as intended.

RESTRICTIONS FOR USE (Use Additional Sheets If Necessary)

TracPipe PS-II is installed in accordance with the Omega Flex Design and Installation Guide and the requirements of the Michigan Residential Code/Fuel Gas Code for operating pressures up to 25-PSI. When required by local authority, the ability of the system to withstand the superimposed load shall be documented.

APPLICANT (Note: All correspondence will be sent to this address)

NAME OF COMPANY	APPLICANT NAME
Omega Flex, Inc.	Robert Torbin

ADDRESS: 213 Court Street Suite 1001

CITY	STATE	ZIP CODE	TELEPHONE NUMBER (Include Area Code)
Middletown	Connecticut	06457	(413) 388-2390

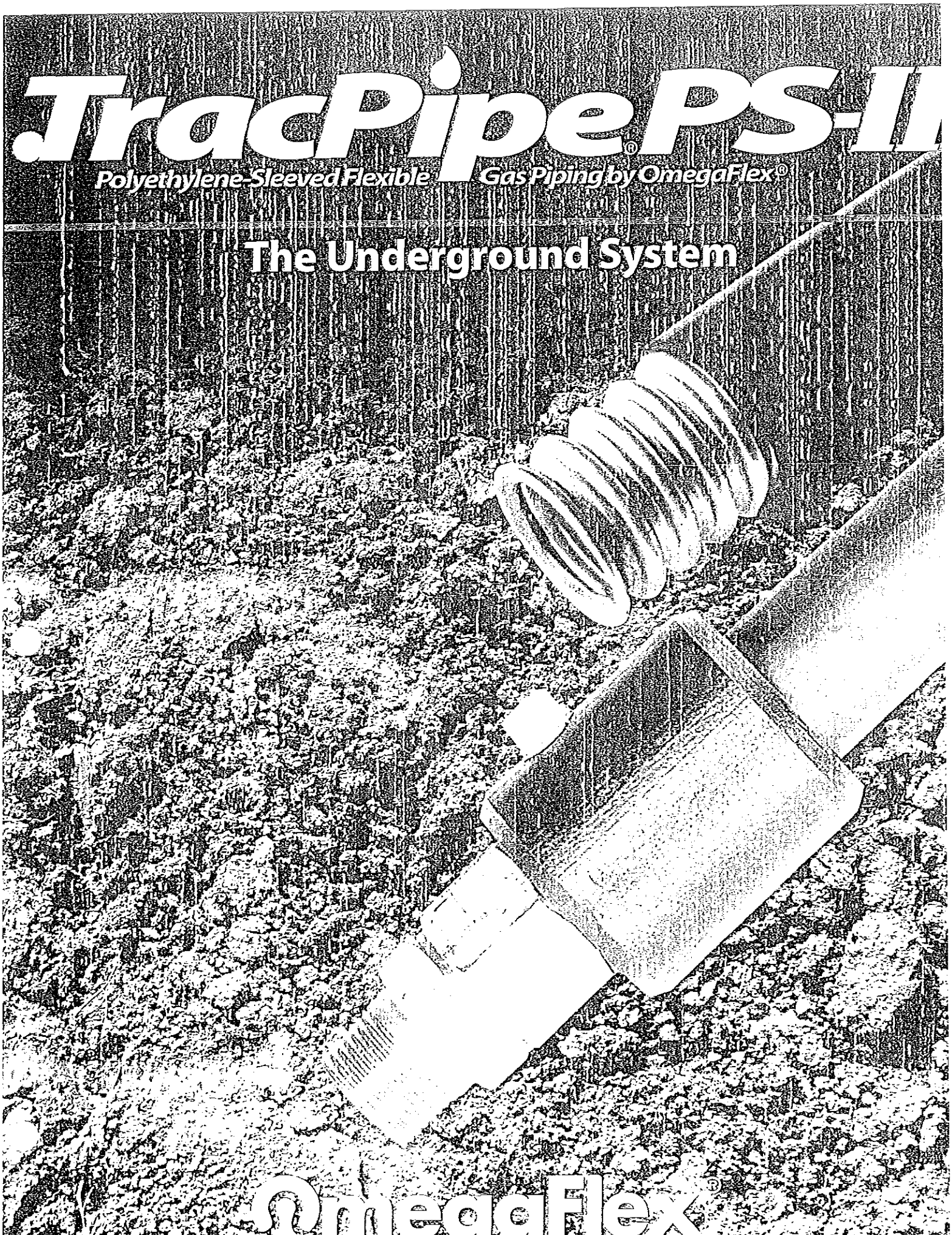
APPLICANT SIGNATURE (Must be an original signature): Robert Torbin — DATE: 19 NOV 2012 — FAX NUMBER (Include Area Code): (860) 704-6830

BCC-247 (Rev. 4/11) Front

TracPipe® PS-II

Polyethylene-Sleeved Flexible Gas Piping by OmegaFlex®

The Underground System

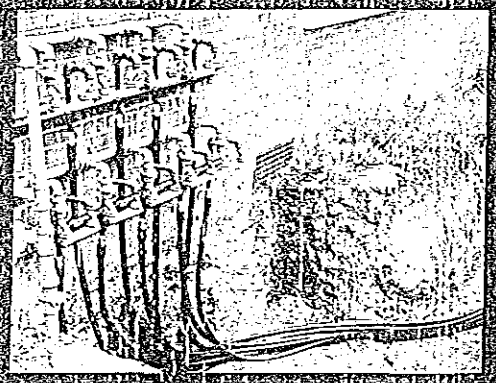


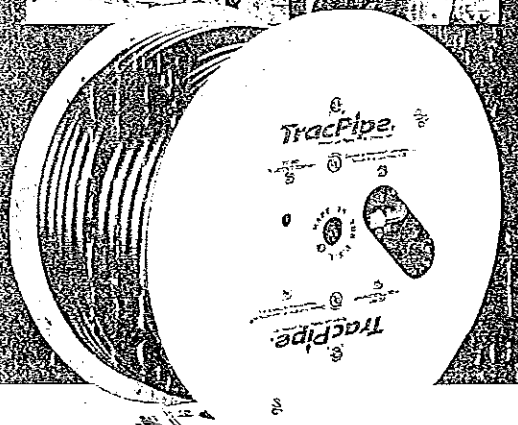
OmegaFlex®

TracPipe® PS-II

Polyethylene-Sleeved Flexible Gas Piping by OmegaFlex®

TracPipe PS-II listing #PMG 1052





Product Capabilities: Popular TracPipe® system features:

- Pre-sleeved with flexible black jacket and yellow tayline for underground applications
- Vented containment system for added safety
- Installs in a fraction of the time for other underground piping materials
- Extremely resistant to damage
- Easy to handle
- Quick attachment fittings
- Supports/contains NPT connections
- Installs in long lengths without joints
- Use with couplings and extensions to minimize scrap

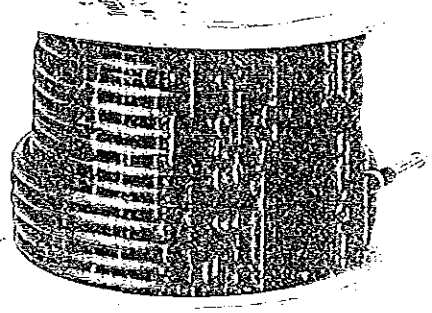
Product advantages over other materials:

- Lower installed cost
- Shortened installation time
- Easy to handle
- Flexible
- Ease of connection
- Wide range of fittings

Applications:

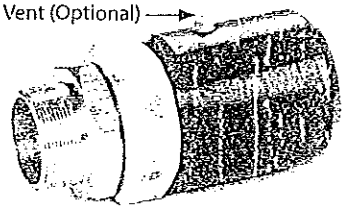
- Under Buildings/Slab
- Rooftops
- Exterior walls
- Pool Heaters
- School Labs
- Barbecues
- Island Ranges
- Gas lamps/torches
- Stadiums

About TracPipe® PS-II:

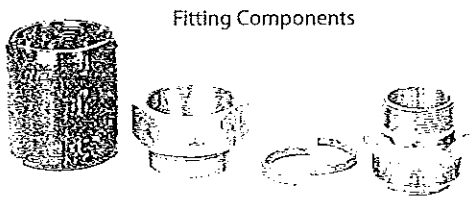


TracPipe PS-II flexible gas piping is constructed from standard TracPipe stainless steel flexible gas pipe sleeved in a polyethylene sleeve that acts as a vented containment system.

TracPipe PS-II is supplied in standard lengths on reels or custom cut lengths. Product should be stored in an area that will not expose it to damage or outdoor elements.



PS-II fittings are constructed from patented AutoFlare® fittings with a plastic containment coupling and 1/4" NPT vent port. Fittings assemble without special tools.



Tools Required for Assembly:

- Utility knife with sharp blade
- Appropriate size adjustable or monkey wrenches
- Tubing cutter:
  - For 3/8" to 1-1/4" Use: FGP-TC-151 Ridgid® Tubing Cutter with TracPipe cutting wheel (FGP-E-5272)
  - For 1-1/4" to 2" Use: FGP-TC-152 Ridgid® Tubing Cutter with TracPipe cutting wheel (FGP-E-5272)
- Reciprocating saw or hacksaw

A pre-sleeved, "one-step" gas installation system for underground, rooftop, or exterior wall applications. TracPipe® PS-II can be installed under buildings, slab, roads, driveways – it's perfect for gas installations in a variety of applications where speed, reliability, and safety are paramount.

WARNING: TracPipe PS-II System must be installed by a qualified person who has been trained through the TracPipe gas piping installation program. All installations must comply with local code requirements and the instructions contained in the TracPipe Design Guide and installation instructions.

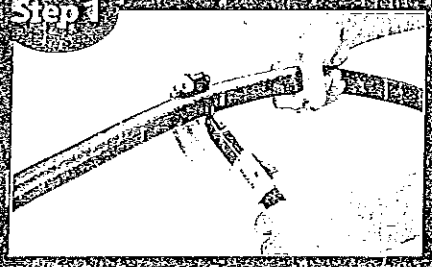
Fitting Attachment Instructions:

Strip Length Chart

Pipe Size	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Jacket Strip Length	1"	1-1/2"	1-1/2"	1-3/4"	2"	2-1/4"	2-1/2"	2-3/4"
Fitting Torque Value	40 ft-lb	42 ft-lb	45 ft-lb	75 ft-lb	150 ft-lb	200 ft-lb	250 ft-lb
Max. Superimposed Loading psf	9640	7254	5409	4203	3390	2901	2124

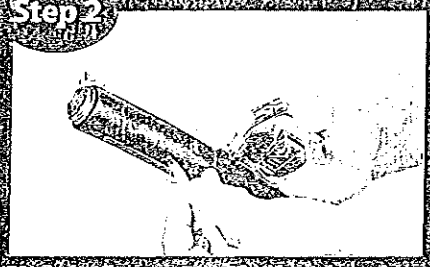
Notes: 1. Super-imposed loading includes a dead load and live load combinations. 2. Maximum buried depth of 36". 3. Soil Density = 120 pcf. 4. Factor of Safety = 2.

Step 1



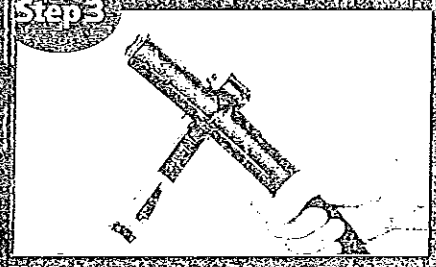
Unroll pipe into trench on the ground and cut to desired length – plus one foot. Cutting up to 1" can be done with a larger tubing cutter. For 1 1/4" – 2" sizes, a reciprocating saw is recommended.

Step 2



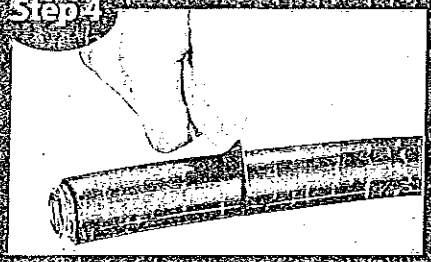
Mark the sleeve at specified length on the Strip Length Chart (above) – plus 2".

Step 3



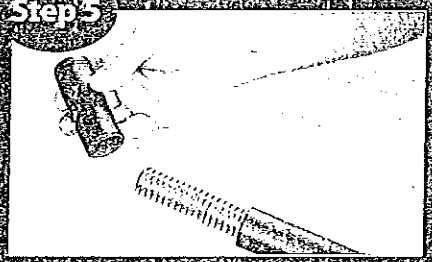
Using the appropriate tubing cutter with a TracPipe #FGP-E-5272 Cutting Wheel, score the black sleeve approximately half of the way through. Use extreme care not to cut down to the stainless corrugated pipe. No more than two turns in on the cutter is sufficient. Inspect tube for scoring from the tubing cutter.

Step 4



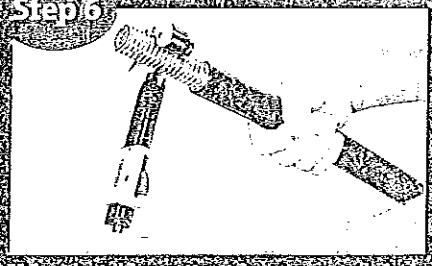
Carefully finish cutting through the sleeve down to the stainless corrugated pipe using a sharp utility knife.

Step 5



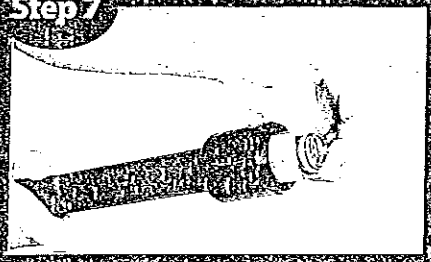
Using a twisting motion, remove the black sleeve and yellow jacket from the pipe. It may be necessary to cut sleeve longitudinally and peel off on larger sizes. Inspect stainless pipe for scoring from the tubing cutter.

Step 6



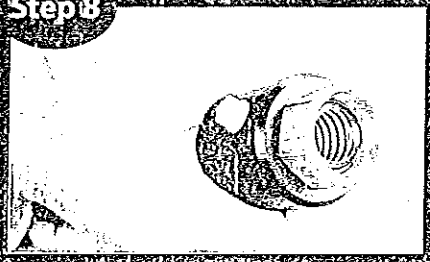
Using the tubing cutter, trim corrugated pipe to strip length specified on the Strip Length Chart shown above. Cut slowly in the root of the corrugation in the same manner you would cut copper tubing. Inspect end of pipe for a clean cut without tears in corrugation.

Step 7



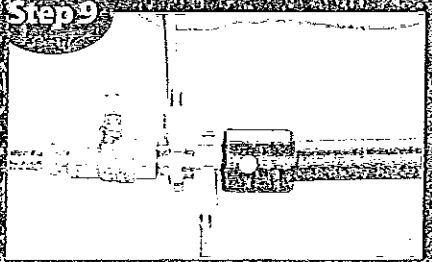
Remove adapter and split rings from fitting. Attach adapter to equipment. Slip coupling and nut over end of pipe all the way to expose first corrugations of pipe. Insert split rings into first corrugation as shown.

Step 8



Holding the black coupling, slide fitting up to capture split rings into nut. Be sure split rings slip all the way to the base of the internal threads. Assembly is now ready to be attached to the adapter on the equipment.

Step 9



Thread the nut on to adapter previously installed on the equipment. Using appropriate wrenches, hold adapter and tighten nut to proper torque specified. Do not overtighten or use any thread sealants on this connection. This is a metal to metal seat and will not seal if pipe dope or thread sealants are used. Sealants are to be used on the NPT connection to the equipment only!

Note: When installing coupling FGP-UGC-XXX, the same instructions apply except metallic parts of the fitting must be wrapped in a code approved manner (e.g. mastic used for wrapping metallic pipe).

TUBING:

Part Number	Size	O.D. (Nom)	Jacket Strip Length	Weight /Foot	Reel Length	Weight /Reel	Dimensions L X W X H
FGP-UGP-375-250	3/8	.82	1-1/2	.23	250	57.5	20 X 20 X 12
FGP-UGP-500-250	1/2	1.08	1-1/2	.33	250	82.5	24 X 24 X 14
FGP-UGP-500-100	1/2	1.08	1-1/2	.33	100	33	20 X 12 X 10
FGP-UGP-750-250	3/4	1.32	1-3/4	.43	250	107.5	24 X 24 X 19
FGP-UGP-750-100	3/4	1.32	1-3/4	.43	100	43	24 X 14 X 10
FGP-UGP-1000-250	1	1.60	2	.67	250	142.5	30 X 30 X 18
FGP-UGP-1000-100	1	1.60	2	.57	100	57	24 X 12 X 10
FGP-UGP-1250-150	1-1/4	1.96	2-1/4	.91	150	137	32 X 32 X 24
FGP-UGP-1500-150	1-1/2	2.18	2-1/2	1.000	150	150.5	32 X 32 X 24
FGP-UGP-2000-150	2	2.80	2-3/4	1.47	150	220	36 X 36 X 23

FITTINGS:

Part Number	Style	Weight	L X W X H	U/M	Box Qty
FGP-UGF-375	3/8" NPT Male	.28	1.5 X 1.5 X 1.5	Each	25
FGP-UGF-500	1/2" NPT Male	.50	1.75 X 1.75 X 1.75	Each	20
FGP-UGF-750	3/4" NPT Male	.65	2 X 2 X 2	Each	16
FGP-UGF-1000	1" NPT Male	.90	2.25 X 2.25 X 2.25	Each	9
FGP-UGF-1250	1-1/4" NPT Male	1.60	2.5 X 2.5 X 2.5	Each	9
FGP-UGF-1500	1-1/2" NPT Male	2.65	2.75 X 2.75 X 2.75	Each	9
FGP-UGF-2000	2" NPT Male	4.30	3.75 X 3.75 X 3.75	Each	5
FGP-UGC-375	3/8" T/P Coupling	.65	1.5 X 1.5 X 1.5	Each	25
FGP-UGC-500	1/2" T/P Coupling	.70	1.75 X 1.75 X 1.75	Each	20
FGP-UGC-750	3/4" T/P Coupling	1.05	2 X 2 X 2	Each	16
FGP-UGC-1000	1" T/P Coupling	1.40	2.25 X 2.25 X 2.25	Each	9
FGP-UGC-1250	1-1/4" T/P Coupling	2.50	2.5 X 2.5 X 2.5	Each	9
FGP-UGC-1500	1-1/2" T/P Coupling	4.25	2.75 X 2.75 X 2.75	Each	8
FGP-UGC-2000	2" T/P Coupling	6.90	3.75 X 3.75 X 3.75	Each	5

www.omegaflex.com

OmegaFlex®

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451 Creamery Way
Exton, PA 19341-2509
1-800-671-8622 Fax 610-524-7282

ISO 9001 REGISTERED COMPANY

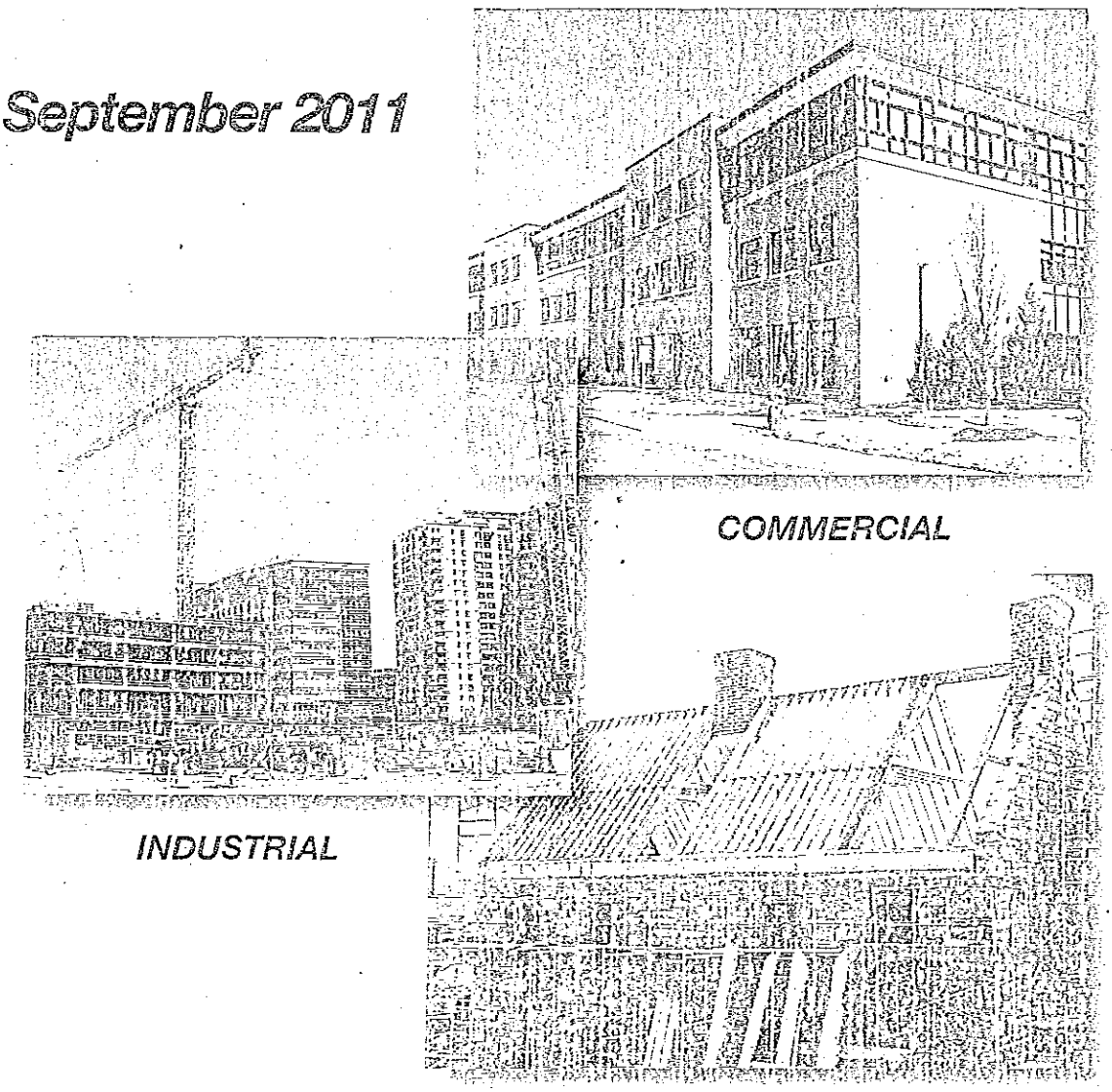
ISO 9001

Authorized TracPipe PS-II Representative

Omega Flex is a manufacturer of quality flexible metal hoses and piping products – metal hose, braid, braided hose on reels, and now TracPipe CounterStrike and AutoFlare. Our reputation in the industrial marketplace was built through excellent customer service, fully-stocked inventory and on time shipments. TracPipe CounterStrike and its components bring our technological, manufacturing and service capabilities to the plumbing, heating and mechanical trades.

FLEXIBLE GAS PIPING DESIGN GUIDE and INSTALLATION INSTRUCTIONS

September 2011



COMMERCIAL

INDUSTRIAL

RESIDENTIAL

TracPipe® CounterStrike®

Flexible Gas Piping by OmegaFlex®

SECTION 4.9 – UNDERGROUND INSTALLATIONS

1. CODE REQUIREMENTS

   When gas piping runs are located below grade in contact with earth or other material that could corrode the piping, codes require that the gas piping shall be protected against corrosion.

   When piping is installed underground beneath buildings, codes require that the piping shall be encased in a conduit and be vented in accordance with the code. The conduit shall be designed to withstand the superimposed loads. NO FITTINGS OR COUPLINGS ARE PERMITTED BENEATH BUILDINGS.

2. MODEL CODES

   TracPipe® PS-II *(patented)* installations conform to the underground fuel gas installation requirements of:

   The National Fuel Gas Code NFPA 54

   The International Fuel Gas Code

   The Uniform Plumbing Code UPC®

SECTION 4.9A – GUIDELINES FOR UNDERGROUND INSTALLATIONS

1. Lay ***TracPipe® PS-II*** in a trench. Install the gas piping with a substantially continuous bearing on the bottom of the trench, to the appropriate burial depth as defined in Table: 4-6 and shown in Figure: 4-24.

WARNING: *TracPipe® PS-II systems must only be installed by a qualified person who has been trained through the TracPipe® CounterStrike® Gas Piping Installation Program. All installations must comply with local code requirements and the instructions contained in the TracPipe® CounterStrike® Design and Installation Guide.*

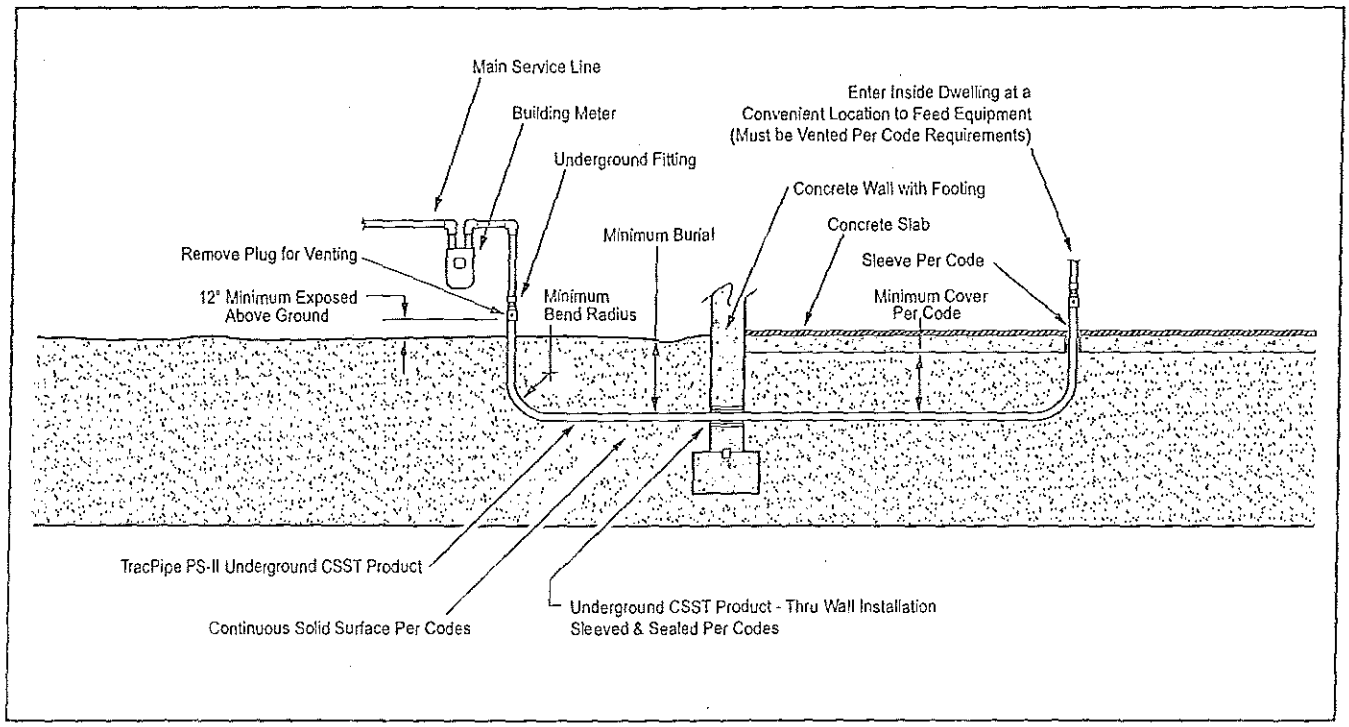


Figure: 4-24

Table: 4-6

Minimum cover requirements for TRACPIPE PS-II, Burial in inches (cover is defined as the shortest distance measured between a point on top surface of the outer sleeve and the top surface of finished grade, concrete or similar cover).	
Location of buried TracPipe PS-II	***Minimum cover for direct burial without concrete encasement***
All locations not specified below	18 inch
In trench below 2-in thick concrete or equivalent	12 inch
Under a building with interior slab	4 inch
Under minimum of 4-in. thick concrete exterior slab with no vehicular traffic and the slab extending not less than 6-in beyond the underground installation	4 inch
Under streets, highways, roads, alleys, driveways, and parking lots	24 inch
One and two family dwelling driveways and parking lots and used only for dwelling-related purposes	18 inch
In or under airport runways, including adjacent areas where trespassing prohibited	18 inch

Note: When encased in concrete, the concrete envelope shall not be less than 2 inches thick.

2. When transitioning ***TracPipe PS-II*** from below grade or under slab to above grade, use the recommended minimum bend radius as shown in Table: 4-7 below.

TABLE: 4-7

RECOMMENDED MINIMUM BENDING RADIUS FOR ***TracPipe PS-II***	
Tubing Size	Minimum Bend Radius R
	PS-II
3/8 inch	6 inch
1/2 inch	6 inch
3/4 inch	8 inch
1 inch	10 inch
1-1/4 inch	12 inch
1-1/2 inch	16 inch
2 inch	18 inch

3. Recommended exposed clearance height (height to the ***AutoFlare*** fitting above grade) is 12 inches minimum when terminating at this point. For vertical runs up the outside of a building in traffic areas, protect the ***TracPipe PS-II*** as explained in Section 4.3B.

4. Avoid bending the above grade vertical portion of the ***TracPipe PS-II*** piping beyond the minimum bend radius in Table: 4-7. To make a tighter bend in order to line up for a wall penetration, use a rigid fitting such as a malleable iron elbow.

5. ***TracPipe PS-II*** is suitable for above ground installations and is resistant to U.V. exposure. Portions rising above grade should be rigidly supported by direct attachment to a wall or independent support, (e.g. metallic strut) or by connection to rigid downstream piping or fittings (e.g. at a meter or propane second stage regulator).

6. When installing ***TracPipe PS-II*** underground through a foundation wall, the space between the outer jacket and the building shall be sealed to prevent entry of gas or water.

7. ***TracPipe PS-II*** can penetrate directly through a concrete slab unless other requirements are established by local codes concerning slab penetrations and firestop requirements.

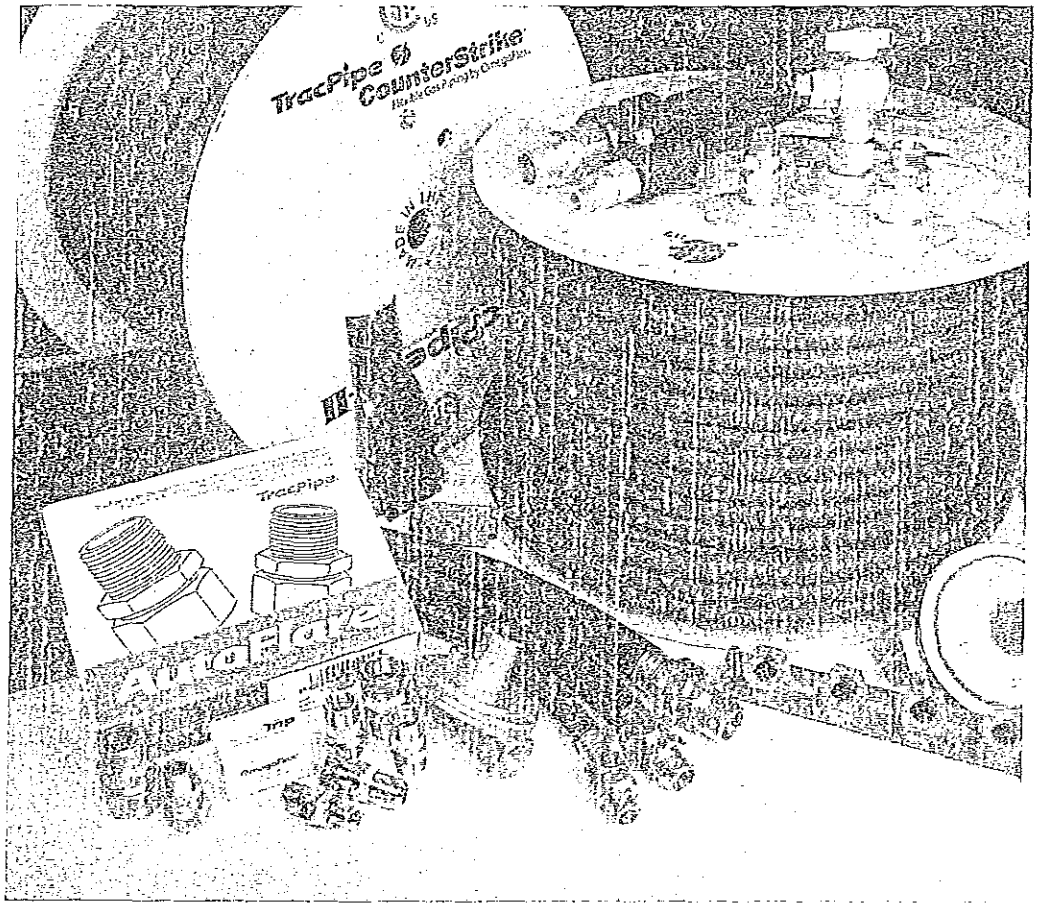
8. ***TracPipe PS-II*** can be transitioned to standard ***CounterStrike®*** piping above grade using ***CounterStrike® AutoFlare®*** fittings with a ***TracPipe PS-II*** Coupling P/N FGP-UGC-SIZE. Remove the black plastic vent coupling on the standard ***CounterStrike®*** side.

Alternatively use a malleable iron coupling for the transition.

9. *TracPipe® PS-II* must be transitioned above ground to standard *CounterStrike®* when routing through plenums or through firestop penetrations. The black *TracPipe® PS-II* sleeve is not qualified for these locations.

10. Venting of *TracPipe® PS-II* shall be in accordance with local codes to prevent the entrance of water, insects or foreign materials.

11. Typical underground installations for corrugated stainless steel tubing include, but are not limited to:
    - Pool and spa heaters
    - School science laboratories
    - Gas service to outbuildings
    - Gas lamp posts and grills



TracPipe® CounterStrike®

Flexible Gas Piping by OmegaFlex®

OmegaFlex®

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IAPMO RESEARCH AND TESTING, INC.
5001 East Philadelphia Street, Ontario, California 91761-2816 • (909) 472-4100 Fax (909) 472-4244 • www.iapmo.org

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PRODUCT CERTIFICATION
#0202

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CERTIFICATE OF LISTING

IAPMO Research and Testing, Inc. is a product certification body which tests and inspects samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

Effective Date: October 2012 Void After: October 2013

Product: Polyethylene Sleeved-Corrugated Stainless Steel Tubing For Use In Fuel Gas Piping Systems File No. 4665

Issued To: Omega Flex Inc.
451 Creamery Way
Exton, PA 19341

Identification: Manufacturer's name or trademark and the UPC® certification mark which must be visible after installation.

Characteristics: Polyethylene Sleeved-Corrugated Stainless Steel tubing (PE-CSST) for use in fuel gas piping systems in underground and underground beneath building applications and are intended for use in normal installations when installed in compliance with Sections 1211.1.3 and 1211.1.6 of the Uniform Plumbing Code. To be installed in accordance with the manufacturer's instructions and the latest edition of the Uniform Plumbing Code.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

Products are in compliance with the following code(s):

Uniform Plumbing Code (UPC®)

Chairman, Product Certification Committee

CEO, The IAPMO Group

For the most accurate and updated information please visit http://pid.iapmo.org/4665

This listing period is based upon the last date of the month indicated on the Effective Date and Void After Date shown above. Any change in material, manufacturing process, marking or design without having first obtained the approval of the Product Certification Committee, or any evidence of non-compliance with applicable codes and standards or of inferior workmanship, may be deemed sufficient cause for revocation of this listing. Production of or reference to this form for advertising purposes may be made only by specific written permission of IAPMO Research and Testing, Inc. Any alteration of this certificate could be grounds for revocation of the listing.

IAPMO RESEARCH AND TESTING, INC.
CERTIFICATE OF LISTING

Void After: October 2013

Product: Polyethylene Sleeved-Corrugated Stainless Steel Tubing For Use In Fuel Gas Piping Systems

File No. 4665

Issued To: Omega Flex Inc.

Products are in compliance with the following standard(s):

IGC 201-04

MODELS:

PRODUCT MEETS THE APPLICABLE REQUIREMENTS OF THE NATIONAL FUEL GAS CODE NFPA 54 INCLUDING 54: 6.1.6.

Tubing Model No.	Adapter Part #	Size	Type
FGP-UGP-375	FGP-UGF-375	3/8"	Male
FGP-UGP-500	FGP-UGF-500	1/2"	Male
FGP-UGP-750	FGP-UGF-750	3/4"	Male
FGP-UGP-1000	FGP-UGF-1000	1"	Male
FGP-UGP-1250	FGP-UGF-1250	1-1/4"	Male
FGP-UGP-1500	FGP-UGF-1500	1-1/2"	Male
FGP-UGP-2000	FGP-UGP-2000	2"	Male
	FGP-UGTC-375	3/8"	Transition Coupling
	FGP-UGTC-500	1/2"	Transition Coupling
	FGP-UGTC-750	3/4"	Transition Coupling
	FGP-UGTC-1000	1"	Transition Coupling
	FGP-UGTC-1250	1-1/4"	Transition Coupling
	FGP-UGTC-1500	1-1/2"	Transition Coupling
	FGP-UGTC-2000	2"	Transition Coupling
	FGP-UGC-375	3/8"	Coupling
	FGP-UGC-500	1/2"	Coupling
	FGP-UGC-750	3/4"	Coupling
	FGP-UGC-1000	1"	Coupling
	FGP-UGC-1250	1-1/4"	Coupling
	FGP-UGC-1500	1-1/2"	Coupling

IAPMO RESEARCH AND TESTING, INC.
CERTIFICATE OF LISTING

Void After: October 2013

Product: Polyethylene Sleeved-Corrugated Stainless Steel Tubing For Use In Fuel Gas Piping Systems

File No. 4665

Issued To: Omega Flex Inc.

FGP-UGC-2000	2"	Coupling

INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS

INTERIM GUIDE CRITERIA
FOR

POLYETHYLENE SLEEVED-CORRUGATED STAINLESS STEEL TUBING FOR USE IN FUEL GAS PIPING SYSTEMS

IAPMO IGC 201-2004

1. PURPOSE

1.1 The purpose of this standard is to establish a generally acceptable standard for Polyethylene Sleeved-Corrugated Stainless Steel tubing (PE-CSST) for use in fuel gas piping systems in underground and underground beneath building applications. It is intended to serve as a guide for producers, distributors, architects, code officials, contractors, installers and end users; to promote understanding regarding materials, manufacture and installation and to provide for identifying Polyethylene Sleeved-Corrugated Stainless Steel tubing (PE-CSST) that conform with this standard.

1.2 The provisions of this standard are not intended to prevent the use of any alternate material or method of construction, provided any such alternate meets the intent and requirements of this standard.

2. SCOPE

2.1 This standard applies to PE-CSST for use in fuel gas piping systems and included requirements for materials, construction, inspection, testing, marking and identification.

2.2 The Polyethylene Sleeved-Corrugated Stainless Steel tubing (PE-CSST) for use in fuel gas piping, covered by this standard, are intended for use in normal installations when installed in compliance with Sections 1211.1.3 and 1211.1.6 of the Uniform Plumbing Code.

3. REFERENCED STANDARDS

3.1 All standards referenced herein shall be the current edition of that standard as published in Table 14-1 of the Uniform Plumbing Code.

ANSI/IAS LC 1	Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST) Fuel Gas
ASTM A 240	Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM B 16	Free-Cutting Brass Rod, Bar and Shapes for Use in Screw Machines
ASTM D 2000	Rubber Products in Automotive Applications
ASTM D 2239	Polyethylene Conduit
ASTM D 5593	Integrally Extruded Polyethylene Sleeve

4. GENERAL REQUIREMENTS

4.1 **Corrugated Stainless Steel Tubing.** Corrugated stainless tubing shall comply with the requirements of ANSI/IAS LC 1.

4.2 **Polyethylene Sleeve.** Polyethylene sleeve shall be a minimum 0.0200" thickness and shall be tested in accordance with Section 5.2 and 5.3 of this standard.

4.3 **Containment Coupling/Vent Plug.** Containment coupling/vent plug shall be comply with the requirements in Section 1211.1.6 of the Uniform Plumbing Code and tested in accordance with Section 5.1 of this standard.

4.4 **O-Ring.** O-ring seals shall have a minimum tensile strength of 2030 psi and a hardness of 70 durometer in accordance with ASTM D 2000.

4.5 **Fittings.** Fittings shall be brass C36000 complying with ASTM B 16.

4.6 **Metal Insert.** The metal insert shall be manufactured from 300 series stainless steel complying with ASTM A 240.

5. TESTING REQUIREMENTS

5.1 **Pressure Test.** Install the PE-CSST tubing, Containment Coupling and Containment Sleeve in accordance with the manufacturers instructions. The coupling and sleeve shall be subjected to an air pressure of 5 psi through the vent plug. The assembly shall be capable of holding the air pressure for a minimum of 30 minutes and shall show no signs of leakage.

5.2 **Electrical Inspection for Continuity.** A 6 foot length of PE-CSST tubing shall be inspected for continuity using a full-wave rectified, direct-current output detector set at a voltage computed by V (volts) = 525 $(t)^{1/2}$ where t is the coating thickness in mils (μm), to check for holidays, pinholes, and discontinuities. In areas where surface configurations preclude the use of a dry detector, the coating shall be checked for continuity with a low-voltage wet-sponge detector. PE-CSST shall show no signs of holidays, pinholes, and discontinuities.

5.3 Sleeve Thickness. Randomly select 3 different locations two feet apart on a 6 foot sample of tubing to verify the minimum thickness of the PE coating on the CSST. The sample shall fail if the coating is not a minimum of 0.020" in all three tested locations.

6. MARKINGS AND IDENTIFICATION

6.1 All Polyethylene Sleeved-Corrugated Stainless Steel tubing (PE-CSST) shall be permanently and legibly marked with following information:

a) Manufacturer's name or trademark; and
b) Any other required markings.

Adopted: May 2004

ICC-ES PMG Listing

PMG-1052

Effective Date: July 1, 2012

This listing is subject to re-examination in one year.

www.icc-es-pmg.org | (800) 423-6587 | (562) 699-0543 *A Subsidiary of the International Code Council®*

CSI: DIVISION: 23 00 00—MECHANICAL
Section: 23 11 00—Facility Fuel Piping

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Product: TracPipe® PS-II Polyethylene-Sleeved Flexible Fuel Gas Piping System
(For use underground and underground beneath buildings)

Listee: OmegaFlex® Inc.
451 Creamery Way
Exton, Pennsylvania 19341-2509
www.omegaflex.com

Compliance with the following codes:

2012 and 2009 *International Fuel Gas Code®* (IFGC)
2012 and 2009 *International Residential Code®* (IRC)
2012 and 2009 IAPMO *Uniform Plumbing Code®* (IAPMO UPC)*
2012 and 2009 IAPMO *Uniform Mechanical Code®* (IAPMO UMC)*
**Uniform Plumbing Code and Uniform Mechanical Code are copyrighted publications of the International Association of Plumbing and Mechanical Officials*

Compliance with the following standards:

ANSI LC 1/CSA 6.26 Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)
NFPA 54, National Fuel Gas Code
LC1023 PMG Listing Criteria for Polyethylene Sleeved Corrugated Stainless Steel Tubing
Code sections addressing Tubing Underground and Underground beneath Buildings
PMG-1046 OmegaFlex® Inc. TracPipe® Flexible Fuel Gas Piping System

Identification:

Tubing: Each 2 feet (610 mm) of tube bears the OmegaFlex® Inc. name, part number, rated pressure [5 psi (34 kPa)], equivalent hydraulic diameter (EHD), the words "Fuel Gas", the name of the third-party inspection agency [CSA International (AA-659)] and the ICC-ES PMG listing mark. The ICC-ES PMG listing number (PMG-1052) is optional.

Components: Fittings, termination outlets and distribution manifolds are stamped with the OmegaFlex® Inc. logo, the part number and the date stamp.

Installation:

TracPipe® PS-II installation must be in accordance with the TracPipe® Flexible Gas Piping Design Guide and Installation Instructions, IFGC Section 404, IRC Section 2415, UMC Section 1309 and IAPMO UPC Section 1211, as applicable. The system installation consists of CSST distribution lines installed between the gas meter and fuel gas appliances. As a portion of this system, the TracPipe® PS-II is installed underground or underground beneath buildings. Based on submitted calculations, burial depth for TracPipe® PS-II is equivalent to that allowed for schedule 80 PVC. Otherwise installation must be in accordance with PMG-1046.

Models: The TracPipe® PS-II Polyethylene-Sleeved Flexible Fuel Gas Piping System consists of two parts: (1) The Corrugated Stainless Steel tubing is recognized as conforming with ANSI LC-1 and the codes in PMG-1046; and (2) a vented Polyethylene sleeve. The system is a fuel-gas piping system for natural or propane gas, intended for installation with fuel gas pressures not exceeding 5 psi (34 kPa); this portion of the system is installed underground or underground beneath buildings. Other system components are described in PMG-1046.

The system consists of corrugated stainless steel tubes (CSSTs) and mechanical fittings designed for use only with the OmegaFlex® Inc. CSSTs. Components utilize a metal-to-metal seal, and include mechanical fittings, distribution manifolds, shutoff valves, termination outlet devices, pressure regulators and protection devices.

The CSST is composed of concentric, annular rings of Type 304 or Type 321 stainless steel with a black polyethylene sleeve (conduit) for underground use. See Table 1 for thickness of black polyethylene sleeve (conduit).

Conditions of listing:

1. Installation complies with this listing; the manufacturer's published installation instructions and the applicable code. If there is a conflict between the installation instructions and this listing, this listing governs.
2. The product must be used only with natural gas or propane at operating pressures not exceeding 5 psi (34 kPa). Pressure regulators are required when fuel supply pressures exceed $^1/_2$ psi (3.4 kPa).
3. The system must be pressure-tested after installation in accordance with the applicable code.
4. The CSST piping system must not be used as a grounding electrode for an electrical system.
5. Installation of the tubing is not permitted within ducts.
6. Tubing sections underground beneath a building damaged during installation must be replaced in their entirety.
7. Splices, fittings and joints are prohibited underground beneath buildings.
8. The vent must be protected from the entry of water and insects.
9. The design of the piping (tubing) to withstand superimposed loads must be submitted to the code official for each installation when used underground or underground beneath buildings and is beyond the scope of this listing.
10. The TracPipe® PS-II Polyethylene-Sleeved Flexible Fuel Gas Piping System is manufactured by OmegaFlex® Inc. in Exton, Pennsylvania under a quality control program with bi-annual surveillance inspections by CSA International (AA-659).

TABLE 1—POLYETHYLENE SLEEVE (CONDUIT) THICKNESS

Tubing Size (inches)	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Nominal Minor Thickness (inches)	0.080	0.120	0.120	0.125	0.150	0.160	0.170

TABLE 2—PART NUMBER LISTING

Part Number[2]	Size (inches)[1]	Description
FGP-UGP-375-xxx	3/8"	PS- II Tubing
FGP-UGP-500-xxx	1/2"	PS- II Tubing
FGP-UGP-750-xxx	3/4"	PS- II Tubing
FGP-UGP-100-xxx	1"	PS- II Tubing
FGP-UGP-125-xxx	1 1/4"	PS- II Tubing
FGP-UGP-150-xxx	1 1/2"	PS- II Tubing
FGP-UGP-200-xxx	2"	PS- II Tubing
FGP-UGF-375	3/8"	3/8" NPT Male Fittings
FGP-UGF-500	1/2"	1/2" NPT Male Fittings
FGP-UGF-750	3/4"	3/4" NPT Male Fittings
FGP-UGF-1000	1"	1" NPT Male Fittings
FGP-UGF-1250	1 1/4"	1 1/4" NPT Male Fittings
FGP-UGF-1500	1 1/2"	1 1/2" NPT Male Fittings
FGP-UGF-2000	2"	2" NPT Male Fittings
FPG-UGC-375	3/8"	3/8" T/P Coupling
FPG-UGC-500	1/2"	1/2" T/P Coupling
FPG-UGC-750	3/4"	3/4" T/P Coupling
FPG-UGC-1000	1"	1" T/P Coupling
FPG-UGC-1250	1 1/4"	1 1/4" T/P Coupling
FPG-UGC-1500	1 1/2"	1 1/2" T/P Coupling
FPG-UGC-2000	2"	2" T/P Coupling
FGP-UGTC-375	3/8"	PS- II Transition Coupling Assy
FGP-UGTC-500	1/2"	PS- II Transition Coupling Assy
FGP-UGP-750-xxx	3/4"	PS- II Transition Coupling Assy
FGP-UGP-100-xxx	1"	PS- II Transition Coupling Assy
FGP-UGP-125-xxx	1 1/4"	PS- II Transition Coupling Assy
FGP-UGP-150-xxx	1 1/2"	PS- II Transition Coupling Assy
FGP-UGP-200-xxx	2"	PS- II Transition Coupling Assy

[1] SI units: 1 inch = 25.4 mm
[2] xxx = length of tubing in feet

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

Document No. 13-38

July 10, 2013

TO: Members of the Construction Code Commission

FROM: Todd Y. Cordill, NCARB Chief, Plan Review Division GH for

SUBJECT: **Compliance Assurance No. 545**
Certificate of Acceptability
Dant Clayton Corporation
1500 Bernheim Lane
Louisville, KY 40210

The above manufacturer has submitted a Compliance Assurance Program and appropriate fees. The inspection and evaluation agency has been previously certified by the Construction Code Commission. The Plan Review Division has evaluated the submission for compliance with Rules 1161 through 1168 and recommends that the Commission issue a Certificate of Acceptability, in accordance with Sections 4 and 19 of 1972 PA 230, MCL 125.1504, and the General Rules, Part 11 Premanufactured Units, Rule 1132(1).

TYC/mt