

**CHARTER TOWNSHIP OF VAN BUREN BOARD OF TRUSTEES
APRIL 6, 2015 WORK STUDY MEETING, TENTATIVE AGENDA**

ROLL CALL:

| | | | |
|------------------|-------|----------------------|-------|
| Supervisor Combs | _____ | Trustee McClanahan | _____ |
| Clerk Wright | _____ | Trustee Miller | _____ |
| Treasurer Budd | _____ | Engineer Nummer | _____ |
| Trustee Hart | _____ | Attorney McCauley | _____ |
| Trustee Jahr | _____ | Secretary Montgomery | _____ |

UNFINISHED BUSINESS:

NEW BUSINESS:

1. Discussion on the reappointments of Dr. Gerald Graf and Carl Pedersen to the Water Sewer Commission with terms to expire May 31, 2017.
2. Discussion on the Lawn Maintenance Contract with Gonczy's Property Maintenance from 2015 through 2017 with options to renew in 2018 and 2019 and authorize the Supervisor and Clerk to execute the agreement.
3. Discussion on Resolution 2015-11 the Alliance of Downriver Watersheds amended by-laws.
4. Discussion on the job description for the Deputy Director of Planning and Economic Development and the Personal Services Agreement between Darryl Fecho and the Township to fill the position.
5. Discussion on Resolution number 2015-12 the Declaration of Intent to Establish a Special Assessment District -First Hearing for the Venetian, Jeannette, and Dewitt Road Improvement SAD.
6. Discussion on the request by Sadek Properties, LLC (Dunkin' Donuts) for Special Land use approval for a drive-through restaurant at the BP Service Station, 10950 Belleville Rd.
7. Discussion on the request by MDEQ to provide a presentation to the Board on the TENORM report.

PUBLIC COMMENT:

ADJOURNMENT:

CLOSED SESSION:

1. To discuss attorney client privileged opinion, written communication, regarding litigation case #13-010175-CH.

ADJOURNMENT:

Charter Township of Van Buren

REQUEST FOR BOARD ACTION

Agenda Item _____

WORK STUDY MEETING DATE:
2015-04-06

BOARD MEETING DATE:
2015-04-21

Consent Agenda _____ New Business X Unfinished Business _____ Public Hearing _____

| | |
|---|---|
| ITEM (SUBJECT) | Approval of Reappointments of Dr. Gerald Graf and Carl Pedersen to Water & Sewer Commission |
| DEPARTMENT | Public Services |
| PRESENTER | Director James T. Taylor |
| PHONE NUMBER | 734-699-8947 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | |

Agenda topic

| | |
|---|--|
| ACTION REQUESTED | |
| Recommend that the Township Board approve the reappointments of Dr. Gerald Graf and Carl Pedersen for two year terms beginning June 1, 2015 to the Van Buren Township Water & Sewer Commission. These terms will expire May 31, 2017. | |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | |
| Both Mr. Graf and Mr. Pedersen have many years of distinguished and dedicated service on the Water & Sewer Commission. Because of their long tenure, they bring extensive knowledge of Township water/sewer projects, history and budgets. They have submitted their appointment forms to the Supervisor’s Office, expressing an interest in continuing to serve. | |

| | |
|---------------------------------|----------------------------------|
| BUDGET IMPLICATION | \$25.00 per meeting |
| IMPLEMENTATION NEXT STEP | Board approval of reappointments |

| | |
|--|---|
| DEPARTMENT RECOMMENDATION | Approval by township board |
| COMMITTEE/COMMISSION RECOMMENDATION | Director of Public Services recommends approval |

| | |
|--|-----|
| ATTORNEY RECOMMENDATION | N/A |
| (May be subject to Attorney/Client Privilege and not available under FOIA) | |

| | |
|---------------------------|--|
| ADDITIONAL REMARKS | The Director of Public Services requests that the Board of Trustees approve these reappointments as a consent agenda item at the April 21, 2015 Board meeting. |
|---------------------------|--|

APPROVAL OF SUPERVISOR _____

Charter Township of Van Buren

Agenda Item _____

REQUEST FOR BOARD ACTION

WORK STUDY MEETING DATE:
2015-04-06 *06*

BOARD MEETING DATE:
2015-04-21

Consent Agenda _____ New Business X Unfinished Business _____ Public Hearing _____

| | |
|---|--|
| ITEM (SUBJECT) | Lawn Maintenance Contract Bids for 2015-2017 |
| DEPARTMENT | Public Services |
| PRESENTER | Director James T. Taylor |
| PHONE NUMBER | 734-699-8947 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | |

Agenda topic

| | |
|---|--|
| ACTION REQUESTED | |
| Recommend that the Township Board review and approve the Lawn Maintenance Contract with Gonczy's Property Maintenance for 2015 through 2017 with options to renew in 2018 and 2019, and authorize the Supervisor and Clerk to execute on behalf of the Township. | |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | |
| Two bids were submitted and the low bidder for this contract was Gonczy's Property Maintenance. Gonczy's Property Maintenance has performed this work for the Township since 2011. The quality of the work has been superior. Also included for Board review are the bid forms and calculations as submitted by both bidders. | |

| | |
|--|---|
| BUDGET IMPLICATION | This item is budgeted in the Building and Grounds Contracted Services 101-265-819-000 |
| IMPLEMENTATION NEXT STEP | Board approval of contract award |
| DEPARTMENT RECOMMENDATION | Approval by township board |
| COMMITTEE/COMMISSION RECOMMENDATION | Director of Public Services recommends approval |
| ATTORNEY RECOMMENDATION | The documents have been reviewed and approved by Township attorney. |
| (May be subject to Attorney/Client Privilege and not available under FOIA) | |
| ADDITIONAL REMARKS | |
| APPROVAL OF SUPERVISOR |  |



CHARTER TOWNSHIP OF VAN BUREN

DEPARTMENT OF PUBLIC SERVICES

DATE: April 6, 2015
TO: Township Board of Trustees
FROM: James T. Taylor, Director of Public Services
RE: Requests for Board Action

For the Work Study Session of April 6, 2015 I will be presenting the following requests:

1. To award Gonczy's Property Maintenance, LLC a three year lawn cutting contract, with an option to renew for two years.
2. Approval to re-appoint Gerald Graf and Carl Pedersen to two year terms on the Van Buren Township Water & Sewer Commission beginning June 1, 2015.
3. To approve a resolution to approve the Alliance of Downriver Watersheds (ADW) by-laws as amended and the authorization to appoint a township representative and alternate to serve on the ADW Committee.

Approval of a three year lawn cutting contract, with options for renewal in 2018 and 2019 to Gonczy's Property Maintenance, LLC

- There were two bids submitted to the Township for this contract. Gonczy's Property Maintenance, LLC was the low bidder by a significant margin. Gonczy's has been under contract with the Township since 2011, and has delivered a superior quality product to the Township. In addition to the contracted bid work listed on the submittal, Gonczy's has also included free monthly weeding and two bush trimmings of the Senior Garden located here in the Township Hall Complex. We also note, the contractor submitting the other bid, submitted incorrect numbers which we recalculated and have provided you with the spreadsheet breakdown with the corrections. All considered, it is my recommendation to award the three year contract with an option to renew for two years to Gonczy's Property Maintenance, LLC as the lowest and best qualified bidder.

Approval of Water & Sewer Commissioner appointments

- There are two Commissioners that will need approval for re-appointment by the Board of Trustees for 2015, Commissioners Graf and Pedersen. These gentlemen have served the community well and I recommend their re-appointments to the Board.

MISSION STATEMENT

"The Van Buren Public Services Department is committed to a clean and safe environment, enhanced service delivery to its customers and protection of the significant public investment in the township's buildings and grounds, and water distribution and sanitary collection systems."



CHARTER TOWNSHIP OF VAN BUREN DEPARTMENT OF PUBLIC SERVICES

Approval of the Alliance of Downriver Watersheds (ADW) by-laws as amended and the authorization to appoint a township representative and alternate to serve on the ADW Committee.

- The current ADW Bylaws have remained unchanged since their original adoption in 2006. Since then, the ADW has, through custom and practice, both streamlined and modified the manner in which it conducts business. These proposed amendments to the ADW Bylaws simply seek to codify that custom and practice. The ADW needs at least 50% approval of the by-laws and designated representatives by May 2nd. Township attorney, Patrick McCauley has reviewed and approves the resolution and by-laws. In fact, Patrick served on the Bylaw review committee and drafted most of the changes, as well as the model resolution. I have included additional information for your review in your packets. **I am requesting this as a Consent Agenda Item for the April 21st Board meeting.**

Please contact me if you have any questions or concerns.

MISSION STATEMENT

"The Van Buren Public Services Department is committed to a clean and safe environment, enhanced service delivery to its customers and protection of the significant public investment in the township's buildings and grounds, and water distribution and sanitary collection systems."

2015 - Mowing (COMPLETE & RETURN THIS FORM)

| Map # | Location | # of cuts required | Per Cut cost | Annual Total |
|---------------|---------------------------------------|--------------------|--------------|------------------|
| 1 | Township Municipal Center | 30 | \$ 190.00 | \$ 5700.00 |
| 2 | Little League | 24 | \$ 150.00 | \$ 3600.00 |
| 3 | Denton Cemetery | 24 | \$ 110.00 | \$ 2640.00 |
| 4 | Tyler Cemetery | 24 | \$ 100.00 | \$ 2400.00 |
| 5 | Soop Cemetery | 24 | \$ 120.00 | \$ 2880.00 |
| 6 | Otisville Cemetery | 24 | \$ 50.00 | \$ 1200.00 |
| 7 | Fire Station #1 (Sumpter & Hull) | 24 | \$ 85.00 | \$ 2040.00 |
| 8 | Fire Station #2 (Belleville Rd) | 24 | \$ 80.00 | \$ 1920.00 |
| 9 | Old Station #3 & Dog Pound (Tyler Rd) | 24 | \$ 60.00 | \$ 1440.00 |
| 10 | Museum & Old Fire Station (in town) | 24 | \$ 15.00 | \$ 360.00 |
| 11 | Old Fire Station #2 (Ecorse Rd) | 24 | \$ 20.00 | \$ 480.00 |
| 12 | North Shore | 13 | \$ 10.00 | \$ 130.00 |
| 13 | Dike | 13 | \$ 10.00 | \$ 130.00 |
| 14 | Robinson River | 13 | \$ 10.00 | \$ 130.00 |
| 15 | Beckley | 13 | \$ 10.00 | \$ 130.00 |
| 16 | Wildbrook | 13 | \$ 5.00 | \$ 65.00 |
| 17 | Haggerty | 13 | \$ 5.00 | \$ 65.00 |
| 18 | Schooner Dr. | 13 | \$ 5.00 | \$ 65.00 |
| 19 | Harmony Lane | 13 | \$ 5.00 | \$ 65.00 |
| 20 | Ecorse | 13 | | |
| 21 | Ecorse & Haggerty Pump Station | 13 | \$ 30.00 | \$ 390.00 390.00 |
| 22 | Town Entrance & Harmony Lane | 13 | \$ 40.00 | \$ 520.00 |
| 23 | W.H.R.D. N. side on curve out of town | 24 | \$ 10.00 | \$ 240.00 |
| 24 | French Landing Dam (east side) | 28 | \$ 90.00 | \$ 2520.00 |
| 25 | French Landing Dam (west side) | 2 | \$ 340.00 | \$ 680.00 |
| 26 | Haggerty Sub. (Van Buren Est. Park) | 22 | \$ 75.00 | \$ 1650.00 |
| 27 | Gun Range | 24 | \$ 50.00 | \$ 1200.00 |
| 28 | Van Buren Park | 28 | \$ 525.00 | \$ 14,700.00 |
| 29 | French Landing Park | 28 | \$ 80.00 | \$ 2240.00 |
| 30 | Quirk Park | 28 | \$ 155.00 | \$ 4340.00 |
| 31 | Streetscape Belleville Road | 30 | \$ 70.00 | \$ 2100.00 |
| 32 | Riggs Farm | 13 | \$ 15.00 | \$ 195.00 |
| 33 | Water Tower | 24 | \$ 30.00 | \$ 720.00 |
| 34 | VB-01 Huron River Dr. @ Hannan | 13 | \$ 10.00 | \$ 130.00 |
| 35 | VB-02 Haggerty N. of Tyler | 13 | \$ 5.00 | \$ 65.00 |
| 36 | VB-04 Haggerty @ Bemis | 13 | \$ 5.00 | \$ 65.00 |
| 37 | VB-06 Old Michigan @ Rawsonville | 13 | \$ 10.00 | \$ 130.00 |
| 38 | VB-07 Tyler @ Quirk | 13 | \$ 5.00 | \$ 65.00 |
| 39 | EQ Basin Wabash W. of Hannan | 24 | \$ 25.00 | \$ 600.00 |
| TOTAL: | | | | \$ 57,990 |

* WOULD LIKE TO DONATE A MONTHLY WEEDING ON SENIOR PARK AND TRIM SHUBS TWICE A YEAR AT SENIOR PARK.

Gonczy's Property Maintenance

PO BOX 1158
BELLEVILLE, MI 48112
734-323-6183

References:

- Cinnamon Pointe Apartment Complex
201 Cassia Ct. Canton, MI 48187 (734)-844-1100
- L & W Engineering
6301 Haggerty Road Belleville, MI 48111 (734) 397-6300
- Buffalo Wild Wings
6677 N. Wayne Road Westland, MI 48185 (734) 641-4000
- Milan Crossing Condominium / Pinnacle Condominium Mgt
2320 Washtenaw Ave Suite 200 Ann Arbor, MI 48104 (734) 222-3700

No. 2010203660

Remitter GONCZY'S PROPERTY MAINTENANCE LLC

Date 03/11/2015

PURCHASER'S RECEIPT

Pay Two Thousand Nine Hundred Dollars & 00/100 \$ **** 2,900.00 ****

To the Order Of

CHARTER TOWNSHIP OF VAN BUREN

By NON-NEGOTIABLE

Authorized Signer

ITEM # 13151L (Rev. 9/12)

VERIFY THE AUTHENTICITY OF THIS MULTI-TONE SECURITY DOCUMENT. CHECK BACKGROUND AREA CHANGES COLOR GRADUALLY FROM TOP TO BOTTOM.

CASHIER'S CHECK

The Huntington National Bank - Branch 319153
Columbus, Ohio 43219



No. **2010203660**

Remitter GONCZY'S PROPERTY MAINTENANCE LLC

Date 03/11/2015

Pay Two Thousand Nine Hundred Dollars & 00/100 \$ **** 2,900.00 ****

To the Order Of

CHARTER TOWNSHIP OF VAN BUREN

Drawer: The Huntington National Bank
Columbus, Ohio 43219

DRAWEE: The Huntington National Bank
Columbus, Ohio 43219

By *[Signature]*
Authorized Signer

⑈ 20 10 203660 ⑈ ⑆ 044000024 ⑆ 01892517247 ⑈

2015 - Mowing Comparisons
Gonczy Property Maintenance

| Map # | Location | # of cuts | | Per Cut cost | Annual Total |
|----------------|---------------------------------------|-----------|--|--------------|-----------------|
| | | required | | | |
| 1 | Township Municipal Center | 30 | | \$190 | \$5,700 |
| 2 | Little League | 24 | | \$150 | \$3,600 |
| 3 | Denton Cemetery | 24 | | \$110 | \$2,640 |
| 4 | Tyler Cemetery | 24 | | \$100 | \$2,400 |
| 5 | Soop Cemetery | 24 | | \$120 | \$2,880 |
| 6 | Otisville Cemetery | 24 | | \$50 | \$1,200 |
| 7 | Fire Station #1 (Sumpter & Hull) | 24 | | \$85 | \$2,040 |
| 8 | Fire Station #2 (Belleville Rd) | 24 | | \$80 | \$1,920 |
| 9 | Old Station #3 & Dog Pound (Tyler Rd) | 24 | | \$60 | \$1,440 |
| 10 | Museum & Old Fire Station (in town) | 24 | | \$15 | \$360 |
| 11 | Old Fire Station #2 (Ecorse Rd) | 24 | | \$20 | \$480 |
| 12 | North Shore | 13 | | \$10 | \$130 |
| 13 | Dike | 13 | | \$10 | \$130 |
| 14 | Robinson River | 13 | | \$10 | \$130 |
| 15 | Beckley | 13 | | \$10 | \$130 |
| 16 | Wildbrook | 13 | | \$5 | \$65 |
| 17 | Haggerty | 13 | | \$5 | \$65 |
| 18 | Schooner Dr. | 13 | | \$5 | \$65 |
| 19 | Harmony Lane | 13 | | \$5 | \$65 |
| 21 | Ecorse & Haggerty Pump Station | 13 | | \$30 | \$390 |
| 22 | Town Entrance & Harmony Lane | 13 | | \$40 | \$520 |
| 23 | W.H.R.D. N. side on curve out of town | 24 | | \$10 | \$240 |
| 24 | French Landing Dam (east side) | 28 | | \$90 | \$2,520 |
| 25 | French Landing Dam (west side) | 2 | | \$340 | \$680 |
| 26 | Haggerty Sub. (Van Buren Est. Park) | 22 | | \$75 | \$1,650 |
| 27 | Gun Range | 24 | | \$50 | \$1,200 |
| 28 | Van Buren Park | 28 | | \$525 | \$14,700 |
| 29 | French Landing Park | 28 | | \$80 | \$2,240 |
| 30 | Quirk Park | 28 | | \$155 | \$4,340 |
| 31 | Streetscape Belleville Road | 30 | | \$70 | \$2,100 |
| 32 | Riggs Farm | 13 | | \$15 | \$195 |
| 33 | Water Tower | 24 | | \$30 | \$720 |
| 34 | VB-01 Huron River Dr. @ Hannan | 13 | | \$10 | \$130 |
| 35 | VB-02 Haggerty N. of Tyler | 13 | | \$5 | \$65 |
| 36 | VB-04 Haggerty @ Bemis | 13 | | \$5 | \$65 |
| 37 | VB-06 Old Michigan @ Rawsonville | 13 | | \$10 | \$130 |
| 38 | VB-07 Tyler @ Quirk | 13 | | \$5 | \$65 |
| 39 | EQ Basin Wabash W. of Hannan | 24 | | \$25 | \$600 |
| TOTAL : | | | | | \$57,990 |

| 2015 - Mowing Comparisons | | | | | |
|---------------------------|----------------------------------|-----------------------|-----------------|-----------------|------------------|
| Owens Landscaping | | | | | |
| Map # | Location | # of cuts required | Per Cut cost | Annual Total | Correct Math |
| 1 | Township Municipal Center | 30 | \$250 | \$7,500 | \$7,500 |
| 2 | Little League | 24 | \$200 | \$4,800 | \$4,800 |
| 3 | Denton Cemetery | 24 | \$167 | \$4,008 | \$4,008 |
| 4 | Tyler Cemetery | 24 | \$129 | \$3,080 | \$3,096 |
| 5 | Soop Cemetery | 24 | \$129 | \$3,096 | \$3,096 |
| 6 | Otisville Cemetery | 24 | \$129 | \$1,800 | \$3,096 |
| 7 | Fire Station #1 (Sumpter & Hull) | 24 | \$75 | \$3,000 | \$1,800 |
| 8 | Fire Station #2 (Belleville Rd) | 24 | \$125 | \$2,592 | \$3,000 |
| 9 | Old Station #3 & Dog Pound (T) | 24 | \$108 | \$2,592 | \$2,592 |
| 10 | Museum & Old Fire Station (in t | 24 | \$108 | \$2,016 | \$2,592 |
| 11 | Old Fire Station #2 (Ecorse Rd) | 24 | \$84 | \$720 | \$2,016 |
| 12 | North Shore | 13 | \$30 | \$720 | \$390 |
| 13 | Dike | 13 | \$30 | \$390 | \$390 |
| 14 | Robinson River | 13 | \$30 | \$390 | \$390 |
| 15 | Beckley | 13 | \$30 | \$390 | \$390 |
| 16 | Wildbrook | 13 | \$30 | \$390 | \$390 |
| 17 | Haggerty | 13 | \$30 | \$390 | \$390 |
| 18 | Schooner Dr. | 13 | \$30 | \$390 | \$390 |
| 19 | Harmony Lane | 13 | \$30 | \$390 | \$390 |
| 21 | Ecorse & Haggerty Pump Station | 13 | \$65 | \$845 | \$845 |
| 22 | Town Entrance & Harmony Lane | 13 | \$30 | \$720 | \$390 |
| 23 | W.H.R.D. N. side on curve out of | 24 | \$125 | \$3,500 | \$3,000 |
| 24 | French Landing Dam (east side) | 28 | \$800 | \$1,600 | \$22,400 |
| 25 | French Landing Dam (west side) | 2 | \$95 | \$2,090 | \$190 |
| 26 | Haggerty Sub. (Van Buren Est.) | 22 | \$75 | \$1,800 | \$1,650 |
| 27 | Gun Range | 24 | \$700 | \$19,600 | \$16,800 |
| 28 | Van Buren Park | 28 | \$100 | \$2,800 | \$2,800 |
| 29 | French Landing Park | 28 | \$200 | \$5,600 | \$5,600 |
| 30 | Quirk Park | 28 | \$150 | \$4,500 | \$4,200 |
| 31 | Streetscape Belleville Road | 30 | \$40 | \$520 | \$1,200 |
| 32 | Riggs Farm | 13 | \$60 | \$1,440 | \$780 |
| 33 | Water Tower | 24 | \$25 | \$325 | \$600 |
| 34 | VB-01 Huron River Dr. @ Hann | 13 | \$25 | \$325 | \$325 |
| 35 | VB-02 Haggerty N. of Tyler | 13 | \$25 | \$325 | \$325 |
| 36 | VB-04 Haggerty @ Bemis | 13 | \$25 | \$325 | \$325 |
| 37 | VB-06 Old Michigan @ Rawson | 13 | \$25 | \$325 | \$325 |
| 38 | VB-07 Tyler @ Quirk | 13 | \$25 | \$325 | \$325 |
| 39 | EQ Basin Wabash W. of Hanna | 24 | \$30 | \$720 | \$720 |
| TOTAL : | | | | \$86,794 | \$103,516 |
| | | | | \$86,339 | |

AGREEMENT FOR GRASS CUTTING AND RELATED SERVICES

The Agreement made and entered into this 21st day of April, 2015, between the Charter Township of Van Buren, a Michigan municipal corporation whose address is 46425 Tyler Rd, Van Buren MI 48111 ("Township") and Gonczy's Property Maintenance, LLC, a Michigan limited liability corporation whose address is P.O. Box 1158, Belleville, MI 48112-1158 ("the Company") :

Recitals

WHEREAS, the Company has been the successful bidder for the grass cutting and related services for certain properties owned by the Township for the 2015 through 2017 mowing seasons; and

WHEREAS, the parties are desirous of entering into a contract setting forth their respective duties, liabilities, and responsibilities.

NOW, THEREFORE, it is mutually agreed and understood as follows:

1. This Agreement shall not be effective unless approved by the Van Buren Township Board and executed by the Supervisor and Clerk of the Township, and executed as well by the authorized representative of the Company.
2. All of bid documents are acknowledged to have been received, reviewed and understood by the Company.
3. All of the bid documents, including, but not limited to, the scope of work, scheduling, bid process, insurance and performance bonds, and location and bid amount schedules for general grass cutting and weed whipping and submittal forms are hereby specifically incorporated and relied upon and made part of this Agreement by reference.
4. The contract is for the 2015-2017 mowing seasons with option to renew all or parts of the contract for up to two additional seasons at the sole discretion of the Township and on terms and conditions acceptable to the Township.
5. This Agreement may not be amended or modified orally. All amendments and modifications must be in writing and signed by the Supervisor and Township Clerk, as well as an authorized representative of the Company.
6. The Township, its representatives, officers, agents, employees, servants, boards, commissions and elected and appointed shall be named on all policies of insurance, as additional insured parties, furnished by the Company.
7. The Company agrees to defend, indemnify and hold harmless the Township, its representatives, officers, agents, employees, servants, boards, commissions, and elected and appointed officials from any and all claims for property damage and/or personal injury caused by or claimed to have been caused by the Company, its officers, representatives, agents, servants and/or employees, including, but not limited to damages, costs, attorney fees, judgments, settlements and/or payments.

8. The Township shall only be obligated to make such payments as are set forth in the bid documents for services rendered. No payment for any claimed additional services rendered by the Company shall be required unless authorized in writing and signed by the Supervisor and Clerk of the Township.
9. The Township in its sole discretion may at any time delete locations, and upon written notice of said deletions, the Township shall no longer have a duty or responsibility to pay for services rendered on the deleted locations more than seventy-two (72) hours after the date of notification.
10. All insurance policies must include a provision or rider stating that the Township will be given notice of termination at least seven (7) days in advance of termination. No work may be performed unless the insurance policies are in full force and effect.
11. The Township by resolution of its board may in its sole discretion terminate this Agreement upon ten (10) days written notification delivered to the address of the Company as set forth herein. Should there be a change of address, it is the sole obligation of the Company to provide the Township with its new address and failure to do so shall act as consent and receipt of notification at that address set forth herein.
12. The Company acknowledges it has read and understands the provisions set forth herein and has been given an opportunity to review this Agreement with an attorney of its choice prior to execution of the Agreement by the undersigned parties.

IN WITNESS WHEREOF, the Parties have set their hands and seals this _____ day of _____, 2015.

WITNESSES:

CHARTER TOWNSHIP OF VAN BUREN

By: _____
 Linda Combs, Supervisor

By: _____
 Leon Wright, Clerk

TOWNSHIP

Gonczy's Property Maintenance, LLC

By: _____

Print: _____

Its: _____

Address of Successful Bidder:
 P.O. Box 1158
 Belleville, MI 48112-1158

COMPANY

Telephone: () _____
 () _____

EXHIBIT I

| 2015 - Mowing (COMPLETE & RETURN THIS FORM) | | | | |
|---|---------------------------------------|--------------------|--------------|------------------|
| Map # | Location | # of cuts required | Per Cut cost | Annual Total |
| 1 | Township Municipal Center | 30 | \$ 190.00 | \$ 5700.00 |
| 2 | Little League | 24 | \$ 150.00 | \$ 3600.00 |
| 3 | Denton Cemetery | 24 | \$ 110.00 | \$ 2640.00 |
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| 5 | Soop Cemetery | 24 | \$ 120.00 | \$ 2880.00 |
| 6 | Otisville Cemetery | 24 | \$ 50.00 | \$ 1200.00 |
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| 10 | Museum & Old Fire Station (In town) | 24 | \$ 15.00 | \$ 360.00 |
| 11 | Old Fire Station #2 (Ecorse Rd) | 24 | \$ 20.00 | \$ 480.00 |
| 12 | North Shore | 13 | \$ 10.00 | \$ 130.00 |
| 13 | Dike | 13 | \$ 10.00 | \$ 130.00 |
| 14 | Robinson River | 13 | \$ 10.00 | \$ 130.00 |
| 15 | Beckley | 13 | \$ 10.00 | \$ 130.00 |
| 16 | Wildbrook | 13 | \$ 5.00 | \$ 65.00 |
| 17 | Haggerty | 13 | \$ 5.00 | \$ 65.00 |
| 18 | Schooner Dr. | 13 | \$ 5.00 | \$ 65.00 |
| 19 | Harmony Lane | 13 | \$ 5.00 | \$ 65.00 |
| 20 | Ecorse | 13 | \$ | \$ |
| 21 | Ecorse & Haggerty Pump Station | 13 | \$ 30.00 | \$ 390.00 390.00 |
| 22 | Town Entrance & Harmony Lane | 13 | \$ 40.00 | \$ 520.00 |
| 23 | W.H.R.D. N. side on curve out of town | 24 | \$ 10.00 | \$ 240.00 |
| 24 | French Landing Dam (east side) | 28 | \$ 90.00 | \$ 2520.00 |
| 25 | French Landing Dam (west side) | 2 | \$ 340.00 | \$ 680.00 |
| 26 | Haggerty Sub. (Van Buren Est. Park) | 22 | \$ 75.00 | \$ 1650.00 |
| 27 | Gun Range | 24 | \$ 50.00 | \$ 1200.00 |
| 28 | Van Buren Park | 28 | \$ 525.00 | \$ 14,700.00 |
| 29 | French Landing Park | 28 | \$ 80.00 | \$ 2240.00 |
| 30 | Quirk Park | 28 | \$ 155.00 | \$ 4340.00 |
| 31 | Streetscape Belleville Road | 30 | \$ 70.00 | \$ 2100.00 |
| 32 | Riggs Farm | 13 | \$ 15.00 | \$ 195.00 |
| 33 | Water Tower | 24 | \$ 30.00 | \$ 720.00 |
| 34 | VB-01 Huron River Dr. @ Hannan | 13 | \$ 10.00 | \$ 130.00 |
| 35 | VB-02 Haggerty N. of Tyler | 13 | \$ 5.00 | \$ 65.00 |
| 36 | VB-04 Haggerty @ Bernis | 13 | \$ 5.00 | \$ 65.00 |
| 37 | VB-06 Old Michigan @ Rawsonville | 13 | \$ 10.00 | \$ 130.00 |
| 38 | VB-07 Tyler @ Quirk | 13 | \$ 5.00 | \$ 65.00 |
| 39 | EQ Basin Wabash W. of Hannan | 24 | \$ 25.00 | \$ 600.00 |
| TOTAL | | | | \$ 57,990 |

* WOULD LIKE TO DONATE A MONTHLY WEEDING ON SENIOR PARK AND ^{TRIM} SHRUBS TWICE A YEAR AT SENIOR PARK.

EXHIBIT III

Gonczy's Property Maintenance

PO BOX 1158
BELLEVILLE, MI 48112
734-323-6183

References:

- Cinnamon Pointe Apartment Complex
201 Cassia Ct. Canton, MI 48187 (734)-844-1100
- L & W Engineering
6301 Haggerty Road Belleville, MI 48111 (734) 397-6300
- Buffalo Wild Wings
6677 N. Wayne Road Westland, MI 48185 (734) 641-4000
- Milan Crossing Condominium / Pinnacle Condominium Mgt
2320 Washtenaw Ave Suite 200 Ann Arbor, MI 48104 (734) 222-3700

EXHIBIT IV

No. 2010203660

Remitter GONGZY'S PROPERTY MAINTENANCE LLC

Date 03/11/2015

PURCHASER'S RECEIPT

pay Two Thousand Nine Hundred Dollars & 00/100 \$ **** 2,900.00 ****

To the Order Of
CHARTER TOWNSHIP OF VAN BUREN

By NON-NEGOTIABLE
Authorized Signer

ITEM # 13151L (Rev. 9/12)

VERIFY THE AUTHENTICITY OF THIS MULTI-TONE SECURITY DOCUMENT. CHECK BACKGROUND AREA CHANGES COLOR GRADUALLY FROM TOP TO BOTTOM.

CASHIER'S CHECK
The Huntington National Bank - Branch 319153
 Columbus, Ohio 43219

Huntington

No. **2010203660**

Remitter GONGZY'S PROPERTY MAINTENANCE LLC Date 03/11/2015

pay Two Thousand Nine Hundred Dollars & 00/100 \$ **** 2,900.00 ****

To the Order Of
CHARTER TOWNSHIP OF VAN BUREN

Drawer: The Huntington National Bank
Columbus, Ohio 43219

DRAWEE: The Huntington National Bank
Columbus, Ohio 43219

By: [Signature]
Authorized Signer

⑈ 20 10 203660 ⑈ ⑆044000024⑆ 01892517247⑈

EXHIBIT V

Charter Township of Van Buren

**Grass Cutting &
Trimming Services**

2015-2017 Bid Specifications

**CHARTER TOWNSHIP OF VAN BUREN
SPECIFICATIONS
GRASS CUTTING AND RELATED SERVICES 2015**

SCOPE OF WORK

1. Bids are to be expressed as a unit of individual location on a per cut and seasonal basis as specified on bid return sheet.
2. Bid prices are to include cost of all labor, materials, equipment, insurance and bonds necessary to comply and perform under these specifications.
3. Mowing of grass and weed whipping will include removal of all debris, including, but not limited to, branches, leaves, tall weeds and trash. Trimming will include all surface features such as light poles, trees, planting beds, fences, playground equipment, and head stones. Normal cleanups will be handled at each cutting. Leaves will be cleaned twice a season, once before Memorial Day and once after October 15 and before November 1. All grass cutting will be done on a need to basis. The Township retains the right to delete or add mowing and weed whipping from the weekly schedule.
4. Employees of contractors are to be advised that no foul or obscene language will be tolerated and no horse play is to occur. The employees assigned to work in the Township cemeteries are to be specifically advised to display appropriate respect for the deceased and visitors. Deviation from these guidelines shall be considered a breach of contract, resulting in termination by the Township.
5. Contract to be in accordance with and governed by the laws of the State of Michigan and Van Buren Charter Township Ordinances.
6. The contract is for three years starting in 2015 mowing season with option to renew all or parts of the contract for up to two additional seasons at the sole discretion of the Township and on terms and conditions acceptable to the Township.
7. All equipment used must be maintained on good repair, safe and efficient and available for inspection by the Township.
8. All work is to be performed in a workman like manner and must be reasonably acceptable to the Township.
9. The Contractor guarantees the reimbursement, repair or replacement and restoration of any cultivated area damaged by careless or accidental use of equipment or machinery. Contractor agrees to repair or replace any turf area, all surface features including; fences, signs, poles, grave stones, and/or appurtenances damaged or destroyed by careless or accidental use of equipment or machinery in the performance of this contract.
10. Van Buren Township will be responsible for setting up the original work schedule and will advise the Contractor of any variations to the schedule thereafter.

SCOPE OF WORK *continued*

11. Mowing/Trimming height shall be 2 ½" – 3" for all general turf areas covered by these specifications. Baseball and soccer fields shall be cut to a height of 1 ½" – 2".
12. Trimming: the Contractor shall trim all grass around plant materials, traffic signs, light poles, fire hydrants, grave stones and all other surface features.
13. Sites must have debris, and litter removed before they are cut to avoid trash being mowed when the grass is cut. Under no circumstances will cutting of litter by mowers be allowed. All litter or debris collected at mowing sites must be properly disposed of by the Contractor. Contractor shall not be permitted to dispose of this litter in public trash receptacles.
14. Trees & shrubs at the Township Hall shall be trimmed twice during the season. Once between May 15th and June 15th and once between July 30th and August 30th. This work shall be incidental to the bid and is not listed as a unit priced item. Trimming dates should be coordinated with the Director of Public Works or his designee.
15. # of cuts required is an estimate only and may vary depending on the needs of the Township.
16. The Township reserves the right to terminate the contract for any material breaches in the scope of work at the Township's sole discretion.

SCHEDULING

Mowing is not to begin before 7:00 a.m. or extend beyond 7:00 p.m.
Normal mowing is to be completed Monday – Friday
Saturday work must be approved in advance by Van Buren Township.
No mowing on Sundays or Holidays.

CUTTING/TRIMMING LOCATION INSTRUCTIONS

1. **Charter Township of Van Buren Municipal Center.**

From Tyler Road South to behind the softball fields, including Tyler Road frontage from Quirk Road west to water tower driveway.

Cut and trimmed weekly, with edging (1) once a month. All sidewalks are to be swept or blown off every time. At end of the year clean up leaves.

Trees and bushes to be trimmed twice per season.

2. **Little League.** All Little League grounds to be cut weekly and weed whipped every week. Specifically, area under bleachers must be weed whipped every week.

Cemeteries To be cut weekly. Weed whip every week. Weed whip to include all trees, shrubs, headstones, and fences.

3. **Denton** – Cut weekly, weed whip every week. At end of the year clean up leaves.

4. **Tyler** – Cut weekly, weed whip every week. At end of the year clean up leaves.

5. **Soop** – Cut weekly, weed whip every week. At end of the year clean up leaves.

6. **Otisville** – Cut weekly, weed whip every week. At end of the year clean up leaves.

7. **Fire Station #1** - Cut weekly, weed whip weekly, edge once per month.

8. **Fire Station #2** – Cut weekly, weed whip weekly, edge once per month.

9. **Fire Station #3** – Dog Pound – Cut weekly, weed whip every other week buildings, ditches, trees and front fence.

10. **Museum & Old Fire Station #1** – Cut and weed whip weekly. Edge once a month.

11. **Old Fire Station #2** - Cut weekly weed whip every other week

Lift Stations To be cut weekly. Weed whip every other week.

12. **North Shore** – Cut weekly, weed whip every other week.

13. **Dike at Rawsonville Rd**– Cut weekly, weed whip every other week.

14. **Robson River**– Cut and weed whip every other week.

15. **Beckley** – Cut and weed whip every other week.

16. **Wildbrook** - Cut and weed whip every other week.

CUTTING/TRIMMING LOCATION INSTRUCTIONS continued

17. **Haggerty** - Cut and weed whip every other week.
18. **Schooner** - Cut and weed whip every other week.
19. **Harmony Lane** - Cut and weed whip every other week.
20. ~~**Ecorse station** - Site no longer exists~~
21. **Ecorse at Haggerty** - Cut and weed whip every other week.
Entrance to town.
22. To be area East side of Belleville Road behind Harmony Lane, West side of Belleville Road by island across the street from the wall please cut 3 paths around flowers and on each side of Bridge East and West to the Bridge. Cut weekly, weed whip every other week edge once a month.
23. W.H.R.D. North side on curve out of town. Cut and Weed Whip every other week.
24. **French Landing Dam East side.** Cut weekly, weed whip every other week.
25. **French Landing Dam West side.** (See Attached Addendum).
26. **Van Buren Estates Park a.k.a. Haggerty Sub Park.** Cut weekly, weed whip every other week.
27. **Gun Range.** Cut weekly, weed whip every other week.
28. **Van Buren Park.** Cut weekly, weed whip every other week.
29. **French Landing Park.** Cut weekly, weed whip every other week. Cut front ditch areas next to Haggerty Rd.
30. **Quirk Park.** Cut weekly, weed whip every other week. Cut may need to be coordinated with soccer league and/or softball league at the Township direction.
31. **Streetscape (Belleville Road).** Cut weekly, weed whip every other week. Corner of Belleville and Tyler outside edge.
32. **Riggs Farm.** Cut weekly and weed whip every other week.
33. **Water Tower.** Cut weekly, weed whip every other week. On Tyler west of Quirk.

CUTTING/TRIMMING LOCATION INSTRUCTIONS continued

Water Control Valve Pits Cut and weed whip every other week. (Except EQ Basin)

34. **VB-01** Huron River Drive and Hannan
35. **VB-02** Haggerty N. of Tyler
36. **VB-04** Haggerty at Bemis
37. **VB-06** Old Michigan Avenue at Rawsonville
38. **VB-07** Tyler at Quirk
39. **EQ Basin** Cut weekly, and weed whip every other week. Wabash W. of Hannan

French Landing Dam – West

Special Notes for Grass Cutting and Related Services Contract (2015)

Area Description:

This area shall include the earthen embankment located generally west-southwest of French Landing Dam extending from Edison Lake Road to the concrete abutment of the Dam. The width of this area shall include from waters edge of Belleville Lake on the west side, to at least twenty five feet (>25') beyond the base of the slope on the east side.

Brush Hog Specifications:

- Cut all woody vegetation (shrubs, trees, brush, etc.) to a height less than six inches (<6") above grade.
- Remove and dispose of resultant woody vegetation cuttings greater than one inch (>1") in diameter and longer than two feet (>2') in length.
- Weed whip herbaceous vegetation to a height less than six inches (<6") above grade.

Embankment Specifications:

- Before May 1, cut all woody vegetation (shrubs, trees, brush, etc.) off as close to the ground level as possible [less than four inches (<4") above grade].
- Remove and dispose of resultant wood vegetation cuttings great than one inch (>1") in diameter and longer than two feet (>2') in length.
- Weed whip herbaceous vegetation monthly [every four (4) weeks] to a height less than six inches (<6") above ground.

Charter Township of Van Buren

Agenda Item _____

REQUEST FOR BOARD ACTION

WORK STUDY MEETING DATE:
2015-04-06

BOARD MEETING DATE:
2015-04-21

Consent Agenda X

New Business _____

Unfinished Business _____

Public Hearing _____

| | |
|---|--------------------------|
| ITEM (SUBJECT) | ADW Resolution 2015-11 |
| DEPARTMENT | Public Services |
| PRESENTER | Director James T. Taylor |
| PHONE NUMBER | 734-699-8947 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | |

Agenda topic

| | |
|---|--|
| ACTION REQUESTED | |
| Recommend that the Township Board review and approve the ADW Resolution to approve the amended by-laws and authorization for Supervisor to appoint a representative and alternate to serve on ADW Committee. | |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | |
| The current ADW Bylaws have remained unchanged since their original adoption in 2006. Since then, the ADW has, through custom and practice, both streamlined and modified the manner in which it conducts business. These proposed amendments to the ADW Bylaws simply seek to codify that custom and practice. | |

| | |
|--|---|
| BUDGET IMPLICATION | none |
| IMPLEMENTATION NEXT STEP | Board approval of Resolution 2015-11 |
| DEPARTMENT RECOMMENDATION | Approval by township board |
| COMMITTEE/COMMISSION RECOMMENDATION | Director of Public Services recommends approval |
| ATTORNEY RECOMMENDATION | The documents have been reviewed and approved by Township attorney. |
| (May be subject to Attorney/Client Privilege and not available under FOIA) | |
| ADDITIONAL REMARKS | The ADW is seeking approval by May 2, 2015 of at least 50% of its membership. |
| APPROVAL OF SUPERVISOR | _____ |

CHARTER TOWNSHIP OF VAN BUREN
RESOLUTION 2015-11

WHEREAS, the Alliance of Downriver Watersheds ("ADW") was formed in January 2007 pursuant to Public Act 517 of the Public Laws of 2004; and

WHEREAS, the ADW consists of 24 public agencies (Allen Park, Belleville, Brownstown Township, Dearborn Heights, Ecorse, Flat Rock, Gibraltar, Grosse Ile Township, Huron Township, Inkster, Lincoln Park, Melvindale, Riverview, Rockwood, Romulus, Southgate, Sumpter Township, Taylor, **Van Buren Township**, Wayne County, Westland, Woodhaven, Woodhaven-Brownstown School District and Wyandotte) in the Ecorse Creek, Combined Downriver, and Lower Huron River Watersheds in southeast Michigan. The agencies and communities that comprise the ADW have and continue to achieve substantial benefits by their joining together and cooperatively managing the rivers, lakes, and streams within the watersheds and in providing mutual assistance in meeting state water discharge permit requirements of the Members; and

WHEREAS, the ADW Membership benefits have included:

- Collaborative approach to storm water management – working together with surrounding local governments to determine the best plan to improve storm water quality.
- Help meet NPDES permit requirements for Illicit Discharge Elimination Plan • Public Education Plan • Public Participation Program and TMDL Implementation

Plan through collaborative watershed approach – reduces individual permittee costs. °

- Permittee assistance for training, progress reports, and audit preparation.
- Watershed in-stream monitoring for identifying grant-eligible capital improvements and evaluating effectiveness.
- Demonstrates collaborative effort with other local governments
- Regular meetings with ADW members and Michigan Department of Environmental Quality (MDEQ) representatives. Keep up with the latest permit news and discuss problems/solutions with surrounding local government representatives.
- Strength in Numbers – local governments come together as a single voice and have the ability to influence higher decision-making.
- Grant Funding – since formation of the ADW, the team has secured nearly \$1.5 million in Federal and State grants to implement nearly \$2.3 million in water quality improvement projects in the downriver watersheds, and,

WHEREAS, the ADW Members approved and adopted Bylaws to set forth its composition, duties and responsibilities; and

WHEREAS, the ADW Members now desire to amend the Bylaws to conform to the customs and practices developed over the years by the ADW.

THEREFORE, BE IT RESOLVED that the **Charter Township of Van Buren** formally adopts the amended bylaws for the Alliance of Downriver Watersheds.

FURTHER BE IT RESOLVED that consistent with the terms of the Alliance of Downriver Watershed bylaws, the **Charter Township of Van Buren** formally authorizes the **Township Supervisor** to designate a representative and an alternate representative to the Alliance of Downriver Watersheds, and additional persons to represent the **Charter Township of Van Buren**, if needed, as an additional alternate to assure voting representation. FINALLY, BE IT RESOLVED that the **Charter Township of Van Buren** continuing membership will be evidenced by payment of its voluntary assessment on an annual basis to the Alliance of Downriver Watersheds.

Representative and Alternate

| <u>Name</u> | <u>Title</u> |
|-------------|--------------|
| _____ | _____ |
| _____ | _____ |

This Resolution shall take immediate effect.

AYES: _____

NAYS: _____

RESOLUTION DECLARED ADOPTED

CHARTER TOWNSHIP OF VAN BUREN

By _____
Supervisor

and _____
Clerk

I, _____ Township Clerk of the Township of Van Buren,
County of Wayne, State of Michigan, do hereby certify that the foregoing is a true copy of a
Resolution adopted by the Township Board of the Township of Van Buren, at a Regular Meeting
on _____, 2015.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this _____ day of
_____, 2015.

Clerk
Township of Van Buren
County of Wayne

To report the results of your agency's official action on the amended bylaws and to
formally confirm adoption of the amended bylaws, please send a signed, official copy of
the resolution to Razik Alsaigh, Wayne County Department of Public Services,
ralsaigh@waynecounty.com; 400 Monroe Street, Suite 400 Detroit, Michigan 48226

SUMMARY OF PROPOSED ADW BYLAW CHANGES

Purpose of Bylaw Amendments

The current ADW Bylaws have remained unchanged since their original adoption in 2006. Since then, the ADW has, through custom and practice, both streamlined and modified the manner in which it conducts business. These proposed amendments to the ADW Bylaws simply seek to codify that custom and practice. The following is a summary of the proposed amendments:

Officers and Duties

- Eliminate the Secretary position, as secretary duties have been performed by the Facilitator.
- Allow the Vice-Chair position to be held by any ADW designated representative or alternate (still require the Chair and Treasurer positions to be limited to an elected or appointed official or employee of an ADW member).
- Include a description of the officers' duties (Chair, vice-chair, and treasurer)
- Include a description of the Facilitator's duties

Committees

- Eliminate the Finance Committee and move its duties to the Executive Committee.
- Update Executive Committee to include the three (3) officers, the fiduciary, and the facilitator. All ADW members are welcome at executive committee meetings.
- Provide a description of duties for each standing committee (executive committee, technical committee, public involvement and education committee).

Meetings

- Change language to state that the ADW shall endeavor to meet quarterly each calendar year but no less than twice. Current bylaws state that the ADW shall meet at least twice each calendar year.
- Change language to state that ADW agenda will be distributed 1 week in advance of all meetings (currently states 2 weeks).
- When a quorum is not present, allow voting electronically on less significant topics. Electronic voting shall not be allowed on issues related to amending bylaws, to approving or amending the ADW budget, or modifications to members' assessments.
- Add language stating that if the Members' representative or designated alternate has a reasonable belief that the issue to be voted on presents an actual or perceived conflict of interest, he or she must disclose it prior to the vote to the other Member representatives of the ADW and a decision shall be made by simple majority vote on whether to allow that particular Member representative to

vote on the issue. The conflict of interest issue may also be raised by any other Member representative or designated alternate.

Membership and Assessments

- Reference that members may have up to 2 alternates.
- Add language to state that the assessment to members will be adjusted based upon the results of each new decennial census. The ADW may, in addition to the preparation of the annual budget, also develop two years or more strategic planning projections.
- Add language stating that in the event a Member terminates its membership in the ADW, the assessments to remaining Members shall not be adjusted in that fiscal year although the budget may be amended to reflect adjustments due to the terminated Member's termination. Member assessments shall then be reviewed and possibly adjusted in the following fiscal year.
- Revise language to state that members joining after the adoption of the fiscal year budget shall be assessed on a proportional pro rata basis beginning in the next quarter of the year of their Membership using the same formula as if they were members for the entire fiscal year.
- Add language to state that in the event a Member terminates its membership in the ADW, the assessments to remaining Members shall not be adjusted in that fiscal year although the budget may be amended to reflect adjustments due to the terminated Member's termination. Member assessments shall then be reviewed and possibly be adjusted in that fiscal year. Similarly, if a new Member is added in a fiscal year, current Members assessments will remain unchanged for that fiscal year, but may be reviewed and adjusted in the following fiscal year. Members are responsible for the payment of annual dues until a termination of membership is stated in writing. Members terminating membership after the start of the fiscal year budget and after paying their assessments shall not be given a refund of dues.
- State that a written notice to the Chair must be provided to terminate membership.

Future Bylaw Amendment

- Revise the process for making amendments to the bylaws. Amendments to the bylaws can be made at any meeting provided they are approved by at least two-thirds of all Members at which a quorum is present. A quorum shall consist of one more than fifty (50%) percent of all Members, eligible to vote. If an amendment affects the way assessments to members are determined (Articles II.E.1 and III of the Bylaws), then in addition to the 2/3 majority vote by ADW members an additional step of obtaining approval of at least 50% of all members' governing bodies will also be required before those changes can take effect.

Miscellaneous Revisions

- Remove the Preamble, which contained a description of the watersheds and the Phase II program. Provide this information instead on the ADW website. Reference the website in the bylaws.
- Remove references to the Ecorse Creek, Combined Downriver, and Lower Huron Watershed Advisory Groups, as those groups were technically disbanded after approval of the watershed management plans.
- Revise Appendix B to provide a member breakdown of assessment percentages, based on the member area and 2010 census population. Currently Appendix B provides a dollar amount breakdown based on the member area and 2000 census population.
- Remove the Appendix providing a Model Resolution for acceptance of ADW membership. It is recommended that the model resolution instead be a stand-alone document.

May, 2014

BYLAWS
ALLIANCE OF DOWNRIVER WATERSHEDS

*Adopted pursuant to
Part 312, Watershed Alliances,
Michigan Natural Resources and Environmental Protection Act
as amended by Public Act 517 of 2004*

Adopted by the ADW on December 2, 2014

ARTICLE I. PURPOSE

It is the purpose of these Bylaws to set forth the composition, duties, and responsibilities of the Alliance of Downriver Watersheds (hereinafter ADW) formed under the provisions of Part 312 Watershed Alliances, Natural Resources and Environmental Protection Act as amended by Public Act 517, 2004. Local public agencies and communities within the Ecorse Creek, Combined Downriver, and Lower Huron River watersheds believe there are substantial benefits that can be derived under this Watershed Alliance through cooperative management of the rivers, lakes, and streams within the watersheds and in providing mutual assistance in meeting state water discharge permit requirements of the members. A preamble tracing the transitional history of the watershed intermunicipality committees to the Alliance of Downriver Watersheds (ADW) can be found on the ADW's website (www.allianceofdownriverwatersheds.com). The Appendices attached and referred to in these Bylaws are provided for informational purposes only and are not a part of the Bylaws. The Appendices will be periodically updated as necessary to reflect the actual boundaries of the ADW based upon number of eligible public entities who formally accept membership, as well as the annual budget, and allocation of assessments in subsequent years.

ARTICLE II. Description, Structure, Decision Making and Operations of ADW

A. Geographic Boundaries

The geographic boundary encompasses the land area within the Ecorse Creek, Combined Downriver, and Lower Huron River watersheds located in portions of Wayne and Monroe counties in southeastern Michigan shown in the informational map attached as Appendix A to these Bylaws. Under state law the boundaries of the ADW are limited to the jurisdictional boundaries of its members. Appendix A will be updated periodically as necessary to show the jurisdictional boundaries of those cities, townships, villages, counties (or county agencies), public school districts, public colleges or universities, or any other local or regional public agencies that have adopted the Bylaws and formally accepted membership. In the event that some eligible watershed communities (cities, townships, or villages) do not become members, the county member may: 1) include all of their county political boundary within the Ecorse Creek,

Combined Downriver, and/or Lower Huron River watersheds where they intend to exercise their independent water management responsibilities; or 2) include only that portion of the county within the Ecorse Creek, Combined Downriver, and/or Lower Huron River watersheds where communities have accepted membership in the ADW.

B. Membership of the ADW

1. Membership

The Members of the ADW shall consist of a representative, or up to two designated alternate(s) of each township, city, village, county (or county agency), public school district, public college or university, or any other local or regional public agency that:

- has been issued a state permit for a water discharge into waterways within the watersheds of Ecorse Creek, Combined Downriver and Lower Huron River,
- whose legal jurisdiction incorporates areas wholly or partially within geographic boundaries identified in Appendix A, AND
- whose governing body by resolution, voluntarily adopts these Bylaws.

A current listing of eligible public agencies is presented in Appendix B, which may be revised from time to time as necessary.

2. Cooperating Partners

The ADW encourages the involvement of non-profit organizations, other public agencies or entities, businesses, and residents who share a common interest in protection and restoration of the waterways in the Downriver area. Those who provide their time, services, expertise or other resources toward the common goal of protection and restoration of the river will be recognized as non-voting, *Cooperating Partners*.

C. Structure of the ADW

1. Election of Officers

The ADW shall elect for a two-year term, from among its Members, a Chair, Vice-Chair, and Treasurer. The Chair and Treasurer offices shall be limited to an elected or appointed official, or employee of a Member of the ADW. The office of Vice Chair may be filled by any other representative or designated alternate of a Member community who need not be an elected or appointed official, or employee of a Member community. Officers shall be elected to two year terms at a regularly scheduled ADW meeting through a formal action as described under Article II.D of these Bylaws. The Chair, Vice Chair, and Treasurer of the ADW shall serve until replaced by a majority vote of the Members. The elected Vice Chair, or the elected Treasurer in the event the Vice Chair is unavailable, shall assume the duties of the Chair if the Chair is unavailable. Newly elected officers will assume their duties at the conclusion of business of the meeting at which those officers were elected. Officer's duties are as follows:

Chair. The Chair:

- sets the vision for the ADW
- reviews meeting agendas
- approves expenditure requests recommended by the Treasurer and/or the Fiduciary
- presides over meetings of the ADW and Executive Committee
- executes agreements and other documents on behalf of and as approved by the ADW
- appoints Committee chairs
- serves in the absence of the Treasurer

Vice Chair. The Vice Chair:

- reviews meeting agendas
- serves in the absence of the Chair
- assists the Chair, as requested, with the general operation of the ADW

Treasurer: The Treasurer:

- oversees and approves (along with the Chair) expenditures
- coordinates all financial matters with the Fiduciary
- responsible for all financial operations of the ADW including review of the annual budget

2. *Facilitator*

The ADW may contract with a Facilitator and/or other contract services to assist in the technical, administrative, operational and other duties and functions as determined by the ADW. The Facilitator, with the prior approval of the ADW, may subcontract with other entities to perform the said duties and functions. The Facilitator duties and functions include:

- provide staff and administrative support for facilitation of meetings, preparation of meeting materials including agendas, meeting minutes and general correspondence
- provide assistance in regards to permit compliance
- maintain the ADW website
- prepare grant applications, as directed by the ADW
- prepare an annual summary of ADW activities
- provide public education and technical assistance, as directed by the ADW

3. *Meetings*

The ADW shall endeavor to meet quarterly each calendar year, but no less than twice at a designated time and location established by the officers. Agendas for ADW meetings will be distributed and circulated to all Members and Cooperating Partners by the Facilitator or his/her designee at least one week in advance of all meetings. All official actions of the ADW including the election of officers, adoption of budgets, assessment of costs to Members, and all other matters not otherwise specifically delegated to the elected officers or committees shall be by the full ADW at a regular meeting consistent with the voting procedures in Article II.D of these Bylaws. All meetings of the ADW, standing committees or special committees established under the ADW shall operate under the Robert's Rules of Order unless modified by a majority vote of the ADW Members. The meetings of the ADW may be rotated to locations throughout the watersheds allowing any Member to host a meeting.

D. ADW Decision Making

The ADW shall take all formal actions, by a simple majority vote of all eligible *Members* at a meeting at which a quorum is present. A quorum shall consist of one more than fifty percent (50%) of all Members, eligible to vote and present. Voting shall be limited to Members or their designated alternates who are physically present at an ADW meeting, provided however, that in the event a quorum is not present related to an issue requiring a vote of the Members, the Chair may direct that the issue be presented to the entire ADW Membership and be voted upon electronically pursuant to an electronic voting procedure to be determined by the Chair. Electronic voting shall not be allowed on issues related to amending bylaws, to approving or amending the ADW budget or modifications to Members' assessments. Eligible Members are those appointed by an appropriate governing authority that has adopted these Bylaws by resolution and that has paid its assessment. The elected officers may not vote on any issue before the ADW unless they are also serving as the designated ADW representative of their respective public agency.

Each Member shall have one vote on each matter voted upon by the ADW, provided however, that Members shall use their best efforts to arrive at a consensus on all matters submitted to the ADW.

If the Members' representative or designated alternate has a reasonable belief that the issue to be voted on presents an actual or perceived conflict of interest, he or she must disclose it prior to the vote to the other Member representatives of the ADW and a decision shall be made by simple majority vote on whether to allow that particular Member representative to vote on the issue. The conflict of interest issue may also be raised by any other Member representative or designated alternate.

Cooperating Partners shall not have voting privileges, but shall be invited to participate in meetings of all standing committees and special committees, and shall be noticed of all meetings of the ADW.

E. ADW Duties

1. Budget and Assessments

The ADW shall adopt an annual, fiscal year budget for the period from January 1 through December 31 on or before December 15, of each year for the following calendar year. The current assessment to Members is set forth in Appendix B to these Bylaws. The assessment will be adjusted based upon the results of each new decennial census. The ADW may, in addition to the preparation of an annual budget, also develop two years or more strategic planning projections. Assessments for Members will be set at the time each budget is adopted. Modifications to the budget may be adopted at any regularly scheduled ADW meeting, provided however, that assessments, once established for any Member, shall not be increased during the calendar year for which they were established. Notwithstanding this provision restricting mid-year changes in assessments, Members may voluntarily agree to increase their payments for special services provided by the ADW.

2. Standing Committees

The ADW shall establish and outline a purpose and duties for standing committees as follows, which duties may be modified and revised by majority vote of the ADW Members:

(a) Executive Committee. The ADW Executive Committee shall consist of the three (3) elected ADW officers, a representative of the Facilitator and the Fiduciary. A representative from other ADW committees or consultants may be invited to attend in a non-voting capacity. The Executive Committee shall meet as necessary to carry out its duties. The Executive Committee meetings shall be chaired by the ADW Chair, or in his or her absence, the ADW Treasurer. Two (2) members of the Executive Committee shall constitute a quorum. The Executive Committee will seek consensus on all issues brought before it. Each Executive Committee Member shall have one (1) vote. The Facilitator and Fiduciary shall not have a vote. In the absence of consensus, the Executive Committee will refer the issue to the entire ADW Membership. The Executive Committee shall have the following duties with the advice of the standing committees:

1. Provide oversight of the expenditure of ADW monies consistent with the approved annual budget by reviewing financial status reports;
2. Provide a forum for discussion and , if appropriate, make recommendations to the ADW to resolve issues related to the

management of the ADW brought to its attention by any member of the ADW;

3. Assist the standing committees and any other special committees of the ADW in meeting their respective responsibilities;
 4. Maintain a written record of each Executive Committee meeting including, as a minimum, attendance, list of issues, and a record of decisions and recommendations;
 5. Propose nominations for ADW officer positions;
 6. Consider changes to the ADW Bylaws;
 7. Develop and review policies and procedures;
 8. Consider Membership requests and make recommendations to the ADW;
 9. Take other actions that are consistent with the provisions of these Bylaws and as may be directed by the ADW.
 10. Reviews and monitor, for consistency with ADW approved budget, collection of assessments from participating local agencies, and expenditure of funds; and, prepare status reports to the ADW for presentation at each of their meetings.
 11. Review Treasurer submitted written annual report each year, as prepared by the Fiduciary, on revenue and projected expenditures to end of calendar year for presentation to and review by the full ADW at its annual budget meeting.
 12. Recommend to the ADW an appropriate approach for year-end accounting (audit) of all funds collected through assessment of members and expenditures made through fiduciary on behalf of ADW.
 13. Prepare draft recommendations for the next year's ADW annual budget in consultation with standing committee chairs, and proposes corresponding community assessments for consideration by the ADW.
 14. Assist Treasurer as primary ADW contact with Fiduciary to resolve questions concerning management of assessments collected from ADW members and expenditure of funds.
- (b) Technical Committee The Technical Committee is chaired by the Facilitator or his/her designee. The Technical Committee is comprised of

representatives of several ADW communities and other interested parties. The Technical Committee shall have the following duties:

1. Review and recommend monitoring/sampling plans and/or changes
2. Review and recommend collaborative ADW illicit discharge elimination activities.
3. Oversee and review permit requirements (e.g., applications, annual reports, SWPPIs, etc.). Recommend ADW responses regarding permit requirements to the Executive Committee.
4. Recommend and review ADW grant opportunities and applications.
5. Identify and recommend BMPs for storm water improvements within the ADW watershed.

(c) Public Involvement and Education (PIE) Committee The Public Involvement and Education Committee is chaired by the Facilitator or his/her designee. The PIE Committee is comprised of representatives of several ADW communities and other interested parties. The PIE Committee shall have the following duties:

1. Review and recommend collaborative ADW public education activities.
2. Recommend and review ADW grant opportunities and applications.
3. Develop and/or distribute public education materials, including materials/information for the ADW website.
4. Recommend and/or coordinate public education surveys.

Any Member, designated alternate or other representative of a Member may serve on any standing committee. Cooperating partners, or other members of the public may be invited to participate in a standing committee, but all official actions of a standing committee shall be limited to participation by those on the committee representing ADW members.

The ADW may establish other standing committees at any time as appropriate.

3. *Special Committees*

From time to time, the ADW may choose to establish special committees to consider specific issues or questions. The Chair or Co-Chairs of any special committee established shall be appointed by the ADW, or, by delegation of

the ADW, by the Chair. The special committee Chair(s) and Co-Chair(s) appointed shall be representatives of Members of the ADW.

4. *Other ADW Duties*

The ADW shall:

- Take actions required, including delegation of responsibilities to the elected Officers and/or the Executive Committee, to carry out the purposes and conduct the business of the ADW including, but not limited to:
 - directing the activities of any committees established under the Bylaws.
 - assisting the standing committees and any other special committees of the ADW in meeting their respective responsibilities.
 - With the advice of the standing and applicable special committees, provide oversight of the expenditure of ADW monies consistent with the approved annual budget by reviewing quarterly financial status reports.
 - Make provisions for support services consistent with the annual budget.
- Encourage and promote public involvement in actions and activities of the ADW and of committees established by the ADW, and assure compliance with Open Meetings and Freedom of Information state statutory requirements.
- Provide a forum for discussion and, if appropriate, make recommendations to resolve issues related to the management of the ADW brought to its attention by any Member of the ADW.
- Prepare an annual report on the goals and accomplishments of the ADW together with a comprehensive audit report on the expenditures and revenues.
- Develop policies and procedures related to official actions of the ADW, including but not limited to contracting for services, disbursement of funds, and related fiduciary responsibilities.
- Maintain official written record of meetings that includes attendance, issues discussed, and official actions taken.
- Recommend to Members any subsequent changes needed to these Bylaws.
- Coordinate compliance with regulatory requirements and pursue grants and other funding services to achieve compliance therewith.
- Take any other actions as may be permitted or required by Public Act 517 of the Public Laws of 2004.

ARTICLE III. ASSESSMENT OF COSTS TO MEMBERS

A. Members

1. City, Village and Township Members

The assessments to cities, villages and townships will be determined by subtracting the amount of dollar contributions from the approved budget to be provided by counties and other Members, and from grants, money gifts, and other income including any balances from prior year ADW budgets. The amount remaining after subtracting these other sources of revenue will be prorated and assessed to each city, village and township Members based upon equal weight to the population of the unit of government within the watershed according to the most recent United States census, and the land area within the watershed as shown as a part of Appendix B.

2. County Members

Based upon the in-kind contributions currently provided by Wayne County (including fiduciary services described in Article VI), Wayne County will not be assessed to support the budget of the ADW for fiscal year 2006. Before December 1 of each year, the ADW will determine whether or not assessments will be made to Wayne County taking into consideration the level of contribution of in-kind services for ADW related activities it will provide during the next fiscal year.

3. Other Members

The ADW shall assess Members other than cities, villages, townships, and counties at the time they become a Member based upon a dollar amount approved by the ADW and agreed upon by the Member. The assessment shall reflect the ADW membership benefits provided each Member, and any other contributions made to the ADW. The annual assessment to Members other than cities, villages, townships, and counties shall not be less than the lowest amount assessed any other Member nor more than the highest amount assessed any other Member.

4. A Member may receive a credit toward its required contribution to the ADW based upon its providing services of personnel, use of equipment and office space, and other services. The amount of the credit shall be subject to approval of the Members.

B. Adjustment of Assessments

Once adopted as part of a given fiscal year budget, the annual assessments to Members shall not be lowered based upon the addition of new Members or any other additions to income not considered as part of the approved annual budget for that year. Members joining after the adoption of the fiscal year budget shall be assessed on a proportional pro rata basis beginning in the next quarter of the year of their Membership using the same formula as was applied to other Members. In the event a Member terminates its membership in the ADW, the

assessments to remaining Members shall not be adjusted in that fiscal year although the budget may be amended to reflect adjustments due to the terminated Member's termination. Member assessments shall then be reviewed and possibly adjusted in the following fiscal year. Similarly, if a new Member is added in a fiscal year, current Members assessments will remain unchanged for that fiscal year, but may be reviewed and adjusted in the following fiscal year. Members are responsible for the payment of annual dues until a termination of membership is stated in writing. Members terminating membership after the start of the fiscal year budget and after paying their assessments shall not be given a refund of dues.

ARTICLE IV. RESOLUTION

The eligible Members adopting these Bylaws shall do so by the passage of a formal resolution, and exercise of existing authority that includes the ability to commit to the annual payment of assessments for support of ADW as identified in the annual ADW budget. Once a resolution is passed and a certified copy forwarded to the ADW, the public entity will remain a Member so long as its assessments are paid in a timely manner. A Member may terminate its membership at any time by providing written notice to the Chair of the ADW, provided, however, there shall be no refund of any assessment already paid to the ADW by that Member. Services provided through the ADW shall be, to the extent practical, limited to Members that have adopted the Bylaws and met their respective assessed financial obligations established consistent with the Bylaws.

ARTICLE V. INDEMNIFICATION

To the extent permitted by law, the ADW may hold any officer, committee chair, agent, representative, or employee and their respective designees harmless from personal liability for claims made or civil actions commenced against the officer, committee chair, agent, representative, employee or designee; when acting in good faith within the scope of his/her authority; while discharging his/her official duties on behalf of the ADW; for acts in or not opposed to the best interest of the ADW; or on account of liability of the ADW; only if their actions do not amount to gross negligence and are not contrary to the law. The ADW, pursuant to bylaw or resolution of its Members, may obligate itself in advance to defend and hold harmless persons.

The ADW may purchase and maintain insurance on behalf of any officer, committee chair, agent, representative, or employee and their designees against any liability asserted against the person and incurred by the person in any capacity or arising out of the status of the person as an officer, committee chair, agent, representative, or employee or designee of the ADW.

The amount of fees and costs which the ADW shall pay for on behalf of the any officer, committee chair, agent, representative, employee or designee's defense shall be limited

to and shall not exceed insurance limits of the policy, if any, covering the claim or action.

The decision to defend and represent any individual, officer, committee chair, agent, employee or designee will be made in the sole discretion of the ADW; acting on advice from its legal counsel as to whether said individual, officer, committee chair, agent, employee or designee was acting while in the scope of his/her authority, was discharging his/her official duties on behalf of the ADW and if the acts were in or not opposed to the best interest of the ADW.

ARTICLE VI. FIDUCIARY SERVICES

The Treasurer and Executive Committee oversee fiduciary matters for the ADW.

A. Interim Fiduciary Agreement

The Wayne County Department of Public Service (hereinafter WCDPS) has agreed to provide fiduciary services for the collection and expenditure of Member assessments. Under the Fiduciary Agreement with Wayne County, the Member assessments paid shall be used only for the services identified in the annual ADW Budget.

B. Expenditure Controls and Auditing

WCDPS has agreed to provide the ADW full and complete access to records concerning the use of the funds collected from the Members so that all expenditures of monies collected through assessments to Members can be audited through a process determined to be appropriate by the Executive Committee. WCDPS has further agreed to timely provide a financial accounting of all funds collected and expended to the Executive Committee. The Executive Committee will provide oversight of all expenditures of Member assessments and report the status of income and expenditures at each meeting of the ADW.

C. Long Term Fiduciary Services

Before December 1 of each year, the ADW will determine how fiduciary responsibilities will be managed beginning on January 1 of the following year.

ARTICLE VII. DISSOLUTION OF THE ADW

In the event that its Members dissolve the ADW, any unused balances of membership assessments at the time of dissolution not needed to meet ADW obligations shall be redistributed back to the ADW Members prorated on the basis of the total ADW assessment paid by each Member during the immediately preceding fiscal year. Similarly, uncommitted balances from other sources of revenue (e.g. grants, gifts, contributions, etc.) remaining at the time of dissolution of the ADW shall be returned to the original provider or, if directed by the provider, transferred to a 501c3 organization or public agency that is willing and able to expend the funds for the originally intended purposes.

ARTICLE VIII. AMENDMENTS TO BYLAWS

- A. Except as provided in Section VIII.B for select amendments to Articles II. E.1 and III of these Bylaws, any amendments proposed to these Bylaws shall be first reviewed by the Executive Committee who shall, after consideration of proposed amendments, make recommendations to the ADW. Any amendment(s) to the Bylaws shall be: (1) formally noticed to all Members at least thirty (30) days prior to the ADW meeting at which they are to be voted upon; and, (2) approved by at least two-thirds (2/3) of all Members at a meeting at which a quorum is present. A quorum shall consist of one more than fifty (50%) percent of all Members, eligible to vote and present.
- B. Proposed amendments to Articles II.E.1 and III of these Bylaws, which will change the way that assessments to Members are determined, shall be approved by the ADW as provided in Section VIII.A. In addition, after approval by the ADW of proposed amendments to Article II.E.1 and III, the proposed amendments to Articles II.E.1 and III shall also be sent to all Members for review and approval by the Member's respective governing bodies. The Members' governing bodies shall have five (5) months following the date of the ADW action formally recommending amendments to these Articles to approve the amendment(s). The amended Bylaws shall become effective when at least half of the governing bodies of Members approve the amended Bylaws within the specified time limit.

INFORMATIONAL APPENDICES TO THE BYLAWS

Appendix A Geographic Boundaries of the Watersheds Included in the Alliance of Downriver Watersheds including the identification of the political boundaries of eligible Members

Appendix B Allocation of Costs that includes: a list of eligible Members, their respective land area and 2010-census population within the watersheds, their proportional allocation of costs for support of the ADW budget based upon equal weight given to land area and population within the watershed for community members or an agreed upon allocation for non-community members.

APPENDIX A
Geographic Boundaries of the
Watersheds Included in the Alliance of
Downriver Watersheds

APPENDIX B

Allocation of Costs

Appendix includes:

- List of current Members
- The respective land area and 2010-census population of each current member within the watersheds
- The proportional allocation of costs for support of the ADW budget based upon:
 - Community Members: population-weighted area according to the most recent US census.
 - Other Members: negotiated amount.

**ALLIANCE OF DOWNRIVER WATERSHEDS
ALLOCATION BY COMMUNITY
FINAL: 12 April 13**

| Agency Name | Total Area (acres) in all 3 Watersheds | Total Population in all 3 Watersheds | % of TOTAL |
|--------------------------------|---|---|---------------|
| Allen Park | 3,596 | 28,207 | 6.1% |
| Belleville | 421 | 2,965 | 0.9% |
| Brownstown Twp | 12,899 | 30,627 | 11.8% |
| Dearborn Heights | 2,151 | 19,633 | 4.0% |
| Ecorse | 670 | 6,353 | 1.3% |
| Flat Rock | 4,216 | 9,864 | 4.0% |
| Gibraltar | 2,334 | 4,656 | 1.9% |
| Grosse Ile Twp | 5,665 | 10,371 | 4.4% |
| Huron Twp | 14,334 | 12,781 | 8.5% |
| Inkster | 265 | 2,894 | 0.6% |
| Lincoln Park | 3,758 | 38,171 | 7.5% |
| Melvindale | 123 | 1,252 | 0.2% |
| Riverview | 2,796 | 12,486 | 3.6% |
| Rockwood | 1,698 | 3,296 | 1.4% |
| Romulus | 13,677 | 19,973 | 10.9% |
| Southgate | 1,783 | 12,487 | 3.0% |
| South Rockwood | 0 | 0 | Not in ADW |
| Sumpter Twp | 2,468 | 2,280 | 1.5% |
| Taylor | 15,001 | 63,131 | 18.0% |
| Van Buren Twp | 6,654 | 8,942 | 4.6% |
| Westland | 671 | 3,587 | 0.9% |
| Woodhaven | 4,034 | 12,455 | 4.1% |
| Wyandotte | 219 | 3,381 | 0.6% |
| W-B School District | 227 | NA | 0.2% |
| Wayne County | 2,525 | NA | InKind |
| Wayne County Airport Authority | 6,700 | NA | Not in ADW |
| TOTAL | 108,885 | 309,792 | 100.0% |

Charter Township of Van Buren

REQUEST FOR BOARD ACTION

Agenda Item: _____

WORK STUDY MEETING: 4/06/15

BOARD MEETING: 4/07/15

Consent Agenda _____

New Business x

Unfinished Business _____

Public Hearing _____

| | |
|---|---|
| ITEM (SUBJECT) | Planning and Economic Development – Deputy Director |
| DEPARTMENT | Planning and Economic Development |
| PRESENTER | Jack Knowles, Director of Planning and Economic Development |
| PHONE NUMBER | 734-699-8913 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | |

Agenda topic

| | |
|--|--|
| ACTION REQUESTED | |
| Consider approval of the Job Description and Personal Services Agreement between Darrell Fecho and the Township, and authorize Supervisor Combs and Clerk Wright to execute the agreement | |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | |
| <p>This position has been filled with part time people from McKenna Associates since my coming on board in December 2014.</p> <p>Mr. Fecho comes to us most recently from McKenna where he has been working part time at VBT, while also handling other assignments for McKenna. He has extensive experience in municipal planning and administrative experience having held both planner and manager positions in multiple communities around SE Michigan over the past 30 years.</p> | |

| | |
|---------------------------|--|
| BUDGET IMPLICATION | Salary of \$62,400.00 The budget included \$50,000 for this position plus benefits. Mr. Fecho will not be utilizing the health care option. This salary is in line with other similar Deputy positions in the Township. |
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| IMPLEMENTATION NEXT STEP | Execution of Personal Services Agreement |
|---------------------------------|--|

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| DEPARTMENT RECOMMENDATION | Approval |
|----------------------------------|----------|

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|--|--|
| COMMITTEE/COMMISSION RECOMMENDATION | |
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|--------------------------------|-----|
| ATTORNEY RECOMMENDATION | Yes |
|--------------------------------|-----|

(May be subject to Attorney/Client Privilege and not available under FOIA)

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| ADDITIONAL REMARKS | See attached documentation for further information. |
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|-------------------------------|-------|
| APPROVAL OF SUPERVISOR | _____ |
|-------------------------------|-------|

CHARTER TOWNSHIP OF VAN BUREN
DEPUTY DIRECTOR OF PLANNING AND ECONOMIC DEVELOPMENT
JOB DESCRIPTION

Position Summary:

Under the general supervision of the Director of Planning and Economic Development, the Deputy Director of Planning and Economic Development serves the Township in the provision of services related to sound planning, and economic development principles. The Deputy Director assists with the overall direction and management of the Department and in the enforcement of ordinances. The Deputy works with and approves the issuance of related permits within the Township to protect the health, safety and welfare of the public. The Deputy Director has responsibility with administrative planning and economic functions, as well as environmental issues. The Deputy oversees contracted services and other staff involved in development/environmental related activities and records management.

Essential Job Functions, Duties and Responsibilities:

An employee in this position may be called upon to perform any or all of the following essential job functions, duties and responsibilities. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each function satisfactorily.

1. Coordinates the processing of site plans, construction plan reviews and building permit applications. Oversees inspection process, and reporting for the Township development codes and regulations.
2. Reviews zoning ordinance language and makes recommendations regarding planning and zoning regulations.
3. Coordinates condemnation and demolition activities of the Township.
4. Serves as staff liaison for the Township LDFA.
5. Works closely with the Township's Geographic Information System Coordinator, including assisting other departments, agencies and consultants in the management of data, staff and relevant activities.
6. Oversees compliance with FERC agreement and other lake requirements under Township regulations.
7. As requested shall serve as the liaison to Township Boards, Commissions and Committees.
8. Oversees Adopt-A-Road and other environmental Programs with Wayne County, and the Township Environmental Commission and volunteers.

9. Coordinates Township's Annual Household Hazardous Waste Collection Day.
10. Develop, work with homeowners and other special groups to process Special Assessment Districts; responds to inquiries and assisting with the petition process.
11. Reviews and oversees compliance portions of development related agreements.
12. Develops and implements procedures according to Township policies and professional standards. Researches and recommends modifications or additions to building codes as appropriate and maintains records and reports.
13. May be called upon to testify in court as an expert witness on technical and procedural matters.
14. Supervises the activities of interns and contracted services and evaluates the quality of their work. Assists with departmental administration including planning and zoning support and enforcement staff. Assigns work, oversees the recruitment, selection and monitors performance, recommends training as needed.
15. Maintains cooperative relationships with other officials, departments, peer agencies, private contractors, property owners, and residents, the public and other parties to coordinate environmental management practices.
16. Assists with updating codes and ordinances including amendments to existing ordinances.
17. Compiles information to aid in the preparation of annual budget requests, prepares annual department budget and monitors the department budget throughout the fiscal year. Assists with department compliance with established Township policies and procedures for all financial transactions and budget expenditures.
18. Keeps abreast of professional developments, new administrative techniques, legal issues and other current events through continued education and professional growth. Attends conferences, workshops and seminars as appropriate.
19. Coordinates preparation of specifications, initiates the competitive bidding process and administers contracts as assigned.
20. Provides input for effective risk management practices within the Department.
21. Develops goals and objectives of the Department.
22. Attends Planning Commission, Board and other meetings occasionally as needed.
23. Primary staff liaison to the Board of Zoning Appeals.
24. Serves as staff representative as needed to other commissions or committees.
25. Coordinate the Departmental compliance with Open Meetings and Freedom of Information Acts.

26. Serves as Director in the Director's absence.
27. Performs related work as directed.

The above list of job requirements, duties and responsibilities, physical abilities and other abilities are meant to be representative and not all encompassing. The Township reserves the right to add to, delete from, change and/or amend the requirements, duties, and responsibilities, physical abilities and other abilities herein above set forth.

Required Knowledge, Skills, Abilities and Minimum Qualifications:

The requirements listed below are representative of the knowledge, skills, abilities and minimum qualifications necessary to perform the essential job functions, duties and responsibilities of the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the job.

Requirements include the following:

1. Bachelor's degree or the equivalent in environmental science, natural resources, or land use planning or related field, graduate degree preferred.
2. Acquire and maintain any relevant certifications that may be required by the Township.
3. A valid State of Michigan Vehicle Operator's License.
4. Thorough knowledge of the principles and practices of local government in Michigan.
5. Skill in applying codes and ordinances according to professional standards.
6. Skill in maintaining complex record keeping and document retention systems and in compiling comprehensive reports.
7. Ability to comprehend complex issues and identify alternative solutions and prepare appropriate recommendations.
8. Ability to communicate and exercise a high degree of diplomacy in contentious or confrontational situations.
9. Supervisory skills to effectively lead contracted services, interns and coordinate work assignments and monitor their performance to achieve departmental goals.
10. Ability to establish effective working relationships and use good judgment, initiative and resourcefulness when dealing with other departments, employees, property owners, the public and other professional contacts and municipal officials.
11. Ability to critically assess situations, solve problems and work effectively within deadlines and changes in work priorities.

12. Ability to calculate figures and amounts such as proportions, percentages, area, circumference and volume. Ability to apply concepts of algebra and geometry.
13. Ability to use a variety of technologies including computers, related word processing, spreadsheet and database software, various other software, telephones, facsimile machines, pagers, radios and similar type equipment.
14. Ability to recognize and handle stress.
15. Ability to perform duties within a job schedule that varies in hours and times of day.

Physical Demands and Work Environment:

The physical demands and work environment characteristics described here are representative of those employee encounters while performing the essential job functions, duties and responsibilities. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions, duties and responsibilities.

While performing the duties of this job, the employee is regularly required to talk and hear. The employee frequently is required to stand; walk, use hands to finger, handle or feel; and reach with hands and arms. The employee is frequently required to stoop, kneel, crouch or crawl. The employee must frequently lift and/or move items of light to moderate weight.

While performing the duties of this job, the employee works both in a business office setting and in the field. In the course of conducting site inspections and other field activities, the employee is frequently exposed to outside weather conditions and may work near moving mechanical parts and/or machinery. The employee is occasionally exposed to high, precarious places and fumes or airborne particles. The noise level in the work performance is usually quiet in the office, but may become loud in the field.

Charter Township of Van Buren

Agenda Item: _____

REQUEST FOR BOARD ACTION

WORK STUDY MEETING DATE: 4/6/15

BOARD MEETING DATE: 4/7/15

Consent Agenda _____

New Business **X** _____

Unfinished Business _____

Public Hearing _____

| | |
|---|--|
| ITEM (SUBJECT) | Special Assessment District (SAD) Processing – URGENT TIME SENSITIVE |
| DEPARTMENT | Developmental Services |
| PRESENTER | Jack Knowles, Director Development Services |
| PHONE NUMBER | (734) 699-8913 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | |

Agenda topic

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| ACTION REQUESTED | Approve the resolution at the April 7, 2015 work session to set the first of two required Public Hearings on the VENETIAN, JEANETTE, AND DEWITT ROAD IMPROVEMENT - DISTRICT. |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | <p>The Township is participating in Wayne County’s Local Road Initiative program. The County will reimburse 80% of the construction costs of rehabilitating and improving certain local Township roads. The Township was presented with a petition signed by the owners of at least 70% of the lineal foot frontage along these roads as verified by the Township Assessing department. The purpose of the SAD is to raise the funds for 20% match. No Township dollars will be used for the project. All local costs will be assessed against the properties benefited by the project through the SAD which will also include administrative costs & interest.</p> <p>Of serious concern is the timing of the public hearing in order to assure that the project is completed this construction season. County funds must be drawn by the end of the year. PA 188 of 1954, as amended is the authorizing legislation and it requires 2 notices be published prior to each of the 2 required hearings. In order to have final specifications prepared by the Township Engineer and the work underway by mid-summer it is necessary to expedite the hearings. The hearing dates can only be set by Board action. It is recommended that the Board approve the attached resolution and motions setting of the first public hearing at the April 6th study session for the April 21st regular meeting. Under this schedule, the final authorization can be given to the Engineer at the second meeting in May. The very tight schedule is:</p> <ul style="list-style-type: none"> • April 7th - Set hearing for April 21st. • April 9th and 16th - Notice published • First class mailings during time frame • April 21st Public Hearing; approval of the District; setting of second hearing • May Notice published April • May 7th & 14th Publication of 2nd Public Hearing • May 19th Public Hearing; setting Assessment roll; authorize Engineer to begin <p>Attached: Resolution & proposed excerpt of minutes for April 7th Summary of petition Summary of Engineer’s opinion of cost</p> |

| | |
|---------------------------|---|
| BUDGET IMPLICATION | Township expenditures will be entirely reimbursed – 80% of construction costs from the County & the other 20% through annual collections over the life of the SAD from the benefitting property owners (along with administrative costs incurred). The Township will need to “loan” the funds initially (it has been mentioned from the |
|---------------------------|---|

| | |
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| | landfill fund). Interest will be charged to the SAD and repaid to the fund. |
| IMPLEMENTATION NEXT STEP | If approved, the Township Supervisor and Township Clerk must sign the permit and the Township must notify the Michigan Public Service Commission accordingly |
| DEPARTMENT RECOMMENDATION | Expedited approval of the Public Hearing at the 4/7/15 work session. |
| COMMITTEE/COMMISSION RECOMMENDATION | N/A |
| ATTORNEY RECOMMENDATION | Approval- see attached email from Dave Greco. (May be subject to Attorney/Client Privilege and not available under FOIA) |
| ADDITIONAL REMARKS | |
| APPROVAL OF SUPERVISOR | _____ |

SAD COST BREAKDOWN

| | <u>Total</u> | <u>SAD costs</u> | |
|-----------------|--------------|------------------|-------|
| Construction | \$648,814.00 | \$129,762.80 | 20% |
| Paper Notices | | \$500.00 | 4 Ads |
| Mailing postage | | \$46.00 | |
| Admin | | \$1,000.00 | |
| | | | |
| Total | | \$131,308.80 | |
| 1/46th | | \$2,854.54 | |
| Principle | | | |
| Over 5 years | | \$570.91 | |
| Over 4 years | | \$713.63 | |
| Over 3 years | | \$951.51 | |



ENGINEER'S OPINION OF CONSTRUCTION COST

PROJECT: Venetian, Dewitt & Jeanette Reconstructon DATE: 11/25/14

LOCATION: PROJECT NO.

BASIS FOR ESTIMATE: CONCEPTUAL PRELIMINARY FINAL BY: RJM

WORK: _____

| ITEM NO. | DESCRIPTION | QUANT. | UNIT | UNIT AMOUNT | TOTAL AMOUNT |
|----------|---------------------------------------|--------|------|-------------|------------------|
| 1 | Pavement Excavation | 2,979 | Cyd | \$25.00 | \$74,479 |
| 2 | Aggregate Base Course | 3,813 | Ton | \$20.00 | \$76,267 |
| 3 | Undercut Excavation and 21AA Backfill | 275 | Cyd | \$55.00 | \$15,125 |
| 4 | Adjust Structure | 12 | Ea | \$400.00 | \$4,800 |
| 5 | Remove and Replace Bit Drive | 33 | Ea | \$350.00 | \$11,550 |
| 6 | Remove and Replace Concrete Driveways | 2,400 | Sft | \$6.50 | \$15,600 |
| 7 | HMA Base Course, 3-inch | 1,475 | Ton | \$90.00 | \$132,778 |
| 8 | HMA Wearing Course, 1-1/2 inch | 738 | Ton | \$105.00 | \$77,454 |
| 9 | Aggregate Bleeders | 38 | Each | \$1,000.00 | \$38,000 |
| 10 | Traffic Maintenance and Control | 1 | L.S. | \$13,750.00 | \$13,750 |
| 11 | Restoration | 6,260 | Lft | \$2.00 | \$12,520 |
| 12 | Audio/Video Route Survey | 1 | L.S. | \$3,000.00 | \$3,000 |
| 13 | Mobilization | 1 | L.S. | 5% | \$23,766 |
| | SubTotal | | | | \$499,088 |
| | Engineering and Contingencies (30%) | | | | \$149,726 |
| | Total | | | | \$648,814 |

PA 188 of 1954 Proceedings
DECLARATION OF INTENT TO ESTABLISH
A SPECIAL ASSESSMENT DISTRICT

The following is an excerpt from Minutes of a Meeting of the Township Board of the Charter Township of Van Buren held at the Township Hall on April 7, 2015.

Members Present:

Members Absent:

The Township Board of the Charter Township of Van Buren received petitions filed by owners of property within a defined district to create a special assessment for the purpose of providing matching funds to funds from Wayne County for rehabilitating and improving Jeanette Ave., Dewitt Rd. and Venetian Ave. in the Township. The total assessment applicable for each property will be determined as follows: Each record owner of a tax parcel will be assessed for one (1) share of all costs related to 20% of matching Wayne County participation and Township administrative costs to be divided equally among all parcels as defined in the district.

Motion was then made by _____, seconded by _____, to adopt the following Resolution:

RESOLUTION – 2015-12

WHEREAS, it appears to the Township Board that there is considerable interest by the owners of property for the rehabilitation and improvement of Jeanette Ave., Dewitt Rd. and Venetian Ave. in the Township and for creating a special assessment to match proposed funding from Wayne County as represented by a petition signed by excess of 70% of the owners of lineal foot frontage on the streets, and

WHEREAS, the Board has determined that a special assessment in a total amount not to exceed \$_____ per year for a period of _____ years is required to match the Local Partnering Initiative for local roads from Wayne County based upon an estimate created by the Township Engineer;

NOW THEREFORE BE IT RESOLVED that the Township Board does hereby tentatively declare its intent to create a special assessment for the purpose of the rehabilitation and improvement of Jeanette Ave., Dewitt Rd. and Venetian Ave. per recommendation and cost estimates of the Township Engineer. The total shares applicable for each property will be determined as follows: Each taxable parcel within the district will be assessed for one (1) share. The district shall pay 20% of the total construction costs and all related Township administrative costs. The total costs for establishment and administering the special assessment per year, not to exceed \$_____, will be divided equally among shares in the Special Assessment District.

BE IT FURTHER RESOLVED that the Township Board does tentatively designate the Special Assessment District against which the special assessment for improvements will be levied as the **VENETIAN, JEANETTE, AND DEWITT ROAD IMPROVEMENT SPECIAL**

ASSESSMENTDISTRICT which shall include the lands and premises more particularly described as including parcels:

83 086 99 0012 001; 83 086 99 0028 002; 83 086 99 0029 000; 83 086 99 0040 000; 83 086 99 0041 000;
83 086 99 0042 000; 83 086 99 0043 000; 83 086 99 0044 000; 83 086 99 0045 000; 83 086 99 0046 000;
83 086 99 0047 000; 83 086 99 0048 000; 83 086 99 0049 001; 83 086 99 0049 002; 83 086 99 0002 000;
83 086 99 0014 000; 83 086 99 0003 000; 83 086 99 0004 000; 83 086 99 0005 000; 83 086 99 0006 000;
83 086 99 0007 000; 83 086 99 0008 000; 83 086 99 0009 701; 83 086 99 0015 000; 83 086 99 0016 000;
83 086 99 0017 000; 83 086 99 0018 000; 83 086 99 0019 000; 83 086 99 0020 000; 83 086 99 0021 000;
83 086 99 0022 000; 83 086 99 0023 000; 83 086 99 0024 000; 83 086 99 0025 002; 83 086 99 0025 501;
83 086 99 0025 502; 83 086 99 0026 000; 83 086 99 0027 000; 83 086 99 0031 000; 83 086 99 0032 000;
83 086 99 0033 000; 83 086 99 0034 000; 83 086 99 0035 000; 83 086 99 0036 000; 83 086 99 0037 000;
83 086 99 0038 000; 83 086 99 0039 000

BE IT FURTHER RESOLVED that a hearing, consistent with statute, on any objections to the petitions, to the improvements, the estimate of costs, and to creation of the Special Assessment District proposed to be established for the assessment of the cost of such improvement by the Township Board, shall be held on Tuesday, April 21, 2015 at a meeting of the Township Board at The Charter Township of Van Buren Township Hall at 46425 Tyler Rd., Belleville, MI 48111, commencing at 7 PM.

BE IT FURTHER RESOLVED that the Township Clerk be instructed to give the proper notice of such hearing by mailing to all property owners and publication in accordance with law and statute provided.

BE IT FURTHER RESOLVED that all resolutions and parts of resolutions insofar as they conflict with the provisions of this resolution are hereby rescinded.

Upon roll call vote, the following voted "Aye":

The following voted "Nay":

Absent:

The Supervisor declared the motion carried and the resolution was duly adopted.

Leon Wright, Township Clerk

CERTIFICATE

I, Leon Wright, the duly elected and acting clerk of the Charter Township of Van Buren, hereby certify that the foregoing constitutes a true copy of an excerpt of the Minutes of a regular meeting of the Township Board, Wayne County, Michigan, held on April 7, 2015 at which meeting _____ members were present as indicated in said minutes and voted as therein set forth; that said meeting was held in accordance with the Open Meeting Act of the State of Michigan, and the foregoing Excerpt contains all material pertinent to the **VENETIAN, JEANETTE, AND DEWITT ROAD IMPROVEMENT SPECIAL ASSESSMENT DISTRICT SAD 2015-01.**

Leon Wright, Township Clerk

SAD/form1

Petition Summary

Yellow = Verified

| <u>PARCEL TAX ID</u> | <u>OWNER(S)</u> | <u>OWN</u> | <u>ADDRESS</u> | <u>FRONTAGE</u> | |
|----------------------|------------------------------------|----------------------|------------------------|-----------------|----------|
| 83 086 99 0012 001 | NUCULAJ, MARASH - LJULJA | | 11511 BELLEVILLE RD | 100.00 | |
| 83 086 99 0028 002 | TRINITY EPISCOPAL CH | | 11575 BELLEVILLE RD | 460.00 | 460.00 |
| 83 086 99 0029 000 | PEARSON, JOHN-PATRICIA | | 11603 BELLEVILLE RD | 200.00 | 200.00 |
| 83 086 99 0040 000 | ZIELINSKI, DANIEL & VIER, EMILY | | 11595 DEWITT RD | 90.00 | 90.00 |
| 83 086 99 0041 000 | AUSTIN, RUSSELL T. & DIMAS, ATHENA | | 11579 DEWITT RD | 90.00 | 90.00 |
| 83 086 99 0042 000 | WILSON, STEVEN & SHERMAN, CARYN | | 11561 DEWITT RD | 90.00 | 90.00 |
| 83 086 99 0043 000 | HOWZE, WILLIAM-CAROLYN | | 11543 DEWITT RD | 85.00 | 85.00 |
| 83 086 99 0044 000 | ASHLEY, FRANCES | | 11525 DEWITT RD | 85.00 | 85.00 |
| 83 086 99 0045 000 | NUGENT, HOWARD | | 11507 DEWITT RD | 85.00 | 85.00 |
| 83 086 99 0046 000 | TALAGA, KIMBERLY | | 11491 DEWITT RD | 85.00 | |
| 83 086 99 0047 000 | BRAZIEL, LANCE & YOUNG | | 11475 DEWITT RD | 85.00 | |
| 83 086 99 0048 000 | PETERSON, CONSTANCE | | 11459 DEWITT RD | 85.00 | 85.00 |
| 83 086 99 0049 001 | DENIKE, JOSEPH & JAMES | | 11415 DEWITT RD | 130.00 | 130.00 |
| 83 086 99 0049 002 | NGAI, SOA | | 11433 DEWITT RD | 80.00 | 80.00 |
| 83 086 99 0002 000 | TUCKER, THOMAS | | 45109 I- 94 SERVICE DR | 210.00 | |
| 83 086 99 0014 000 | NUCULAJ, MARASH - LJULJA | | 0 I- 94 SERVICE DR | 90.00 | |
| 83 086 99 0003 000 | ALLEN, RONALD-DEBRA | | 45116 JEANETTE AVE | 90.00 | |
| 83 086 99 0004 000 | MCCANN, MICHAEL | | 45150 JEANETTE AVE | 180.00 | |
| 83 086 99 0005 000 | MERCURIO, JOHN | | 45166 JEANETTE AVE | 90.00 | |
| 83 086 99 0006 000 | MURPHY, GERALD & SAMANTHA | | 45190 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0007 000 | HOGUE, GARRY-DONNA | | 45216 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0008 000 | CYPHERS, STELLA | | 45226 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0009 701 | PETERS, CHERYL | | 45250 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0015 000 | TRASKOS, DAVID & MICHELLE | | 45245 JEANETTE AVE | 85.00 | 85.00 |
| 83 086 99 0016 000 | FUJII, BRENDA | | 45225 JEANETTE AVE | 95.00 | 95.00 |
| 83 086 99 0017 000 | WATTS, BILLY | | 45205 JEANETTE AVE | 90.00 | |
| 83 086 99 0018 000 | LING, LINDA | | 45191 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0019 000 | PARSONS, BRIAN & MARY | | 45175 JEANETTE AVE | 90.00 | |
| 83 086 99 0020 000 | DOUGLAS, HAROLD | | 45145 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0021 000 | HOWARD, CATHERINE | | 45131 JEANETTE AVE | 90.00 | 90.00 |
| 83 086 99 0022 000 | LONG, GEORGE & TORI | | 45107 JEANETTE AVE | 90.00 | |
| 83 086 99 0023 000 | JENSEN, SR., KENNETH | | 45106 VENETIAN AVE | 90.00 | 90.00 |
| 83 086 99 0024 000 | MYERS, LARRY-VIVIAN | | 45130 VENETIAN AVE | 90.00 | 90.00 |
| 83 086 99 0025 002 | KARAS, RICHARD-ANN | | 45180 VENETIAN AVE | 90.00 | 90.00 |
| 83 086 99 0025 501 | CZULI, STANLEY | 75% ir | vacant VENETIAN AVE | 90.00 | |
| 83 086 99 0025 502 | STRIMPEL, OLGA - TRUST | 25% ir | vacant VENETIAN AVE | | |
| 83 086 99 0026 000 | MORGAN, VERNA | | 45190 VENETIAN AVE | 90.00 | 90.00 |
| 83 086 99 0027 000 | JULIANO, DAPHNE | | 45210 VENETIAN AVE | 90.00 | |
| 83 086 99 0031 000 | BAKER, ROCKY | | 45271 VENETIAN AVE | 100.00 | 100.00 |
| 83 086 99 0032 000 | BOWERMAN, MICHAEL | | 45255 VENETIAN AVE | 100.00 | 100.00 |
| 83 086 99 0033 000 | MILLER, AARON | | 45241 VENETIAN AVE | 100.00 | 100.00 |
| 83 086 99 0034 000 | ADKINS, DANIEL-DAWN | | 45201 VENETIAN AVE | 110.00 | 110.00 |
| 83 086 99 0035 000 | HAVRESTIUC, IONEL & RODICA | | 45185 VENETIAN AVE | 110.00 | 110.00 |
| 83 086 99 0036 000 | JIAN-ZHENG, DA & SHUI | | 45173 VENETIAN AVE | 140.00 | 140.00 |
| 83 086 99 0037 000 | SHAFFER, DIANN | | 45131 VENETIAN AVE | 150.00 | 150.00 |
| 83 086 99 0038 000 | MINTHORN, CHARLES | | 45091 VENETIAN AVE | 100.00 | 100.00 |
| 83 086 99 0039 000 | MACH, ANNETTE | | 45071 VENETIAN AVE | 110.00 | 110.00 |
| 46 total parcels | \$648,814 | estimate | | 5,050.00 | 3,670.00 |
| | \$2,820.93 | per parcel 20% match | | % Lin feet | 72.67% |



BELLEVILLE LAKE

W 194 BELLEVILLE RAMP

E 194

194 SERVICE DRIVE

HARMONY LN

FISHER RD

WILSON AVE

LAKE CREST DR

RICKMAN DR

N BELLEVILLE E 194 RAMP

DEWITT RD

JEANNETTE AVE

VENETIAN AVE

SUNRISE LN

HARBOR LN

LIAC LN

BELLEVILLE RD

S BELLEVILLE E 194 RAMP

E 194 BELLEVILLE RAMP

194 SERVICE DRIVE

PA 188 of 1954 Proceedings

Excerpt from Minutes of a Meeting of the Township Board of the Charter Township of Van Buren held at the Township Hall on April 21, 2015.

Members Present:

Members Absent:

The Supervisor next reported that Petitions had been filed with the Township for (describe improvements) under authority of Michigan Public Act 188 of 1954, as amended.

The Supervisor further reported that she had caused the signatures to be checked on the Petitions based upon the Assessing records of the Township, the record owners of land within the Township contained within the district described above, had prepared and filed with the Clerk the Certificate setting forth the percentage of record owners of lands by lineal foot footage within the District, who signed the Petitions which amounted to not less than 72 percent.

Motion regarding acceptance of petitions.

Motion was then made by _____, seconded by _____, and carried,

That the Petitions be received by the Township Board regarding the Venetian, Jeanette, and Dewitt Road Improvements and the Supervisor's Certificate pertaining thereto be filed as a part of the Minutes of the meeting.

Motion regarding acceptance of cost estimates and availability.

Motion was next made by _____, seconded by _____, and carried,

Whereas the Township Engineer has prepared plans for the improvement, the location and an estimate of the costs. The Engineer's report as received shows the improvement an estimate of the costs. These plans and estimates were then presented to the County for their consideration. The total estimated cost was is \$648,814.00, as approved by Wayne County as part of the Partnering Initiative for Local Road in which 80% costs will be reimbursed by Wayne County Department of Public of Public Services. The Board hereby accepts the Engineer's estimate and directs that plans and estimates be filed with the Township Clerk for public examination.

Motion of intent to create district.

Motion was then made by _____, seconded by _____, to adopt the following Resolution:

RESOLUTION

BE IT RESOLVED that the Township Board does hereby tentatively declare its intent to perform Venetian, Jeanette, and Dewitt Road Improvements as a part of the Wayne County Matching Partnering Initiative for Local Roads including the following tax parcels in the area covered by the petition presented by record

owners:

83 086 99 0012 001; 83 086 99 0028 002; 83 086 99 0029 000; 83 086 99 0040 000; 83 086 99 0041 000;
83 086 99 0042 000; 83 086 99 0043 000; 83 086 99 0044 000; 83 086 99 0045 000; 83 086 99 0046 000;
83 086 99 0047 000; 83 086 99 0048 000; 83 086 99 0049 001; 83 086 99 0049 002; 83 086 99 0002 000;
83 086 99 0014 000; 83 086 99 0003 000; 83 086 99 0004 000; 83 086 99 0005 000; 83 086 99 0006 000;
83 086 99 0007 000; 83 086 99 0008 000; 83 086 99 0009 701; 83 086 99 0015 000; 83 086 99 0016 000;
83 086 99 0017 000; 83 086 99 0018 000; 83 086 99 0019 000; 83 086 99 0020 000; 83 086 99 0021 000;
83 086 99 0022 000; 83 086 99 0023 000; 83 086 99 0024 000; 83 086 99 0025 002; 83 086 99 0025 501;
83 086 99 0025 502; 83 086 99 0026 000; 83 086 99 0027 000; 83 086 99 0031 000; 83 086 99 0032 000;
83 086 99 0033 000; 83 086 99 0034 000; 83 086 99 0035 000; 83 086 99 0036 000; 83 086 99 0037 000;
83 086 99 0038 000; 83 086 99 0039 000

The purpose of the assessment is the rehabilitation and improvement of the roadways, together with the necessary structures and other work incidental thereto, all within the proposed district in accordance with the petitions of the property owners therefor to meet the required 20% of construction costs and any other additional Township costs.

BE IT FURTHER RESOLVED that the Township Board does tentatively designate the Special Assessment District against which the costs of the improvement is to be assessed as **VENETIAN, JEANETTE, AND DEWITT ROAD IMPROVEMENT - DISTRICT SAD 2015-01**, which shall include the lands and premises more particularly described above.

BE IT FURTHER RESOLVED that a hearing on any objections to the Petitions, to the improvement, the estimate of costs, and to the Special Assessment District proposed to be established for the assessment of the cost of such improvement, shall be held on Tuesday April 21, 2015: at a regular meeting of the Township Board at Van Buren Township Hall at 46425 Tyler Rd, Belleville, Michigan, commencing at 7:00 PM

BE IT FURTHER RESOLVED that the Township Clerk is instructed to give the proper notice of such hearing by mailing and publication in accordance with law and statute provided.

BE IT FURTHER RESOLVED that all Resolutions and parts of Resolutions insofar as they conflict with the provisions of this Resolution are hereby rescinded.

Upon roll call vote, the following voted "Aye":

The following voted "Nay":

The Supervisor declared the motion carried and the resolution was duly adopted.

Leon Wright, Township Clerk

CERTIFICATE

I, Leon Wright, the duly elected and acting Township Clerk of the Charter Township of Van Buren, hereby certify that the foregoing constitutes a true copy of an excerpt of the Minutes of a meeting of the Board of Trustees of the Charter Township of Van Buren, Wayne County, Michigan, held on April 21, 2015 , at

which meeting members were present as indicated in said minutes and voted as therein set forth; that said meeting was held in accordance with the Open Meeting Act of the State of Michigan, and the foregoing Excerpt contains all material pertinent to **VENETIAN, JEANETTE, AND DEWITT ROAD IMPROVEMENT - DISTRICT SAD 2015-01.**

Leon Wright, Township Clerk
Charter Township of Van Buren

\\sadmata3.frm

Charter Township of Van Buren

REQUEST FOR BOARD ACTION

Agenda Item: _____

WORK STUDY MEETING DATE: 4/6/15

BOARD MEETING DATE: 4/21/15

Consent Agenda _____ **New Business X** _____ Unfinished Business _____ Public Hearing _____

| | |
|---|--|
| ITEM (SUBJECT) | Dunkin' Donuts Special Land Use Approval - VBT-14-030- |
| DEPARTMENT | Developmental Services |
| PRESENTER | Jack Knowles, Director Development Services |
| PHONE NUMBER | (734) 699-8913 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | Chris Sadek, Owner |

Agenda topic

| | |
|---|--|
| ACTION REQUESTED | Approve the request for Special Land Use approval by Sadek Properties, LLC (Dunkin' Donuts) of a drive-through restaurant at the BP Service Station, 10950 Belleville Road at the April 21, Board meeting. |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) | A drive-through restaurant requires Special Land Use (SLU) approval by the Township Board in the C-2 zoning district. After due notice, a public hearing was held by the Planning Commission at their meeting of March 25, 2015. There were no comments from the audience. The PC recommends approval of the SLU, subject to final site plan approval. Preliminary site plan approval The PC meeting minutes and the planner review letter are attached. If approved, this project includes the demolition of the existing car wash and the replacement with new construction. |
| BUDGET IMPLICATION | No direct impact on Township Budget--new construction to increase tax base. |
| IMPLEMENTATION NEXT STEP | If approved, the site plan can move forward with the Planning Commission. |
| DEPARTMENT RECOMMENDATION | Approval, subject to final site plan approval. |
| COMMITTEE/COMMISSION RECOMMENDATION | PC recommends approval. |
| ATTORNEY RECOMMENDATION | N/A |
| <small>(May be subject to Attorney/Client Privilege and not available under FOIA)</small> | |
| ADDITIONAL REMARKS | |
| APPROVAL OF SUPERVISOR | _____ |

**CHARTER TOWNSHIP OF VAN BUREN
PLANNING COMMISSION
March 25, 2015
MINUTES**

Chairperson Thompson called the meeting to order at 7:30 p.m.

ROLL CALL:

Present: Franzoi, Johnson, Boynton, Kelley, McKenna, Budd and Thompson.

Excused: None.

Staff: Director Knowles and Secretary Harman.

Planning Representatives: McKenna Associate, Sally Hodges and Wade Trim Associate, David Nummer.

Audience: Four.

APPROVAL OF AGENDA:

Motion Boynton, Johnson second to approve the amended agenda of March 25, 2015 removing Item #1 under New Business. Motion Carried.

APPROVAL OF MINUTES:

Motion McKenna, Boynton second to approve the minutes from March 11, 2015 as presented. Motion Carried.

PUBLIC HEARING:

ITEM # 1 CONSIDER AMENDMENT TO THE ZONING ORDINANCE 6-2-92, AS AMENDED OF THE CHARTER TOWNSHIP OF VAN BUREN, TO AMEND AND MODIFY THE PROVISIONS FOUND IN SECTION 12.02 TO PERMIT OUTDOOR DINING AND TABLE SERVICE IN THE C-1 (GENERAL BUSINESS) ZONING DISTRICT AS A PERMITTED USE AND PROVIDE STANDARDS IN PROPOSED SECTION 12.02(tt).

Motion Budd, McKenna second to open the public hearing. Motion Carried.

Sally Hodges of McKenna Associates gave the presentation. The amendment is designed to permit outdoor dining and beverage services along the commercial district. Temporary or freestanding food service providers are not considered outdoor dining uses. This is for seasonal use due to the weather and all fixtures would be removed from November 1st through April 30th. No signs or amplified music in the outdoor area except for a menu sign and the hours of operation are to be the same as the indoor dining area.

No comments from the Commission or the audience

Motion Boynton, Johnson second to close the public hearing. Motion Carried.

NEW BUSINESS

ITEM # 1 CASE# TLU 15-002

Sally Hodges of McKenna Associates presented the special approval review letter dated 3-19-15 recommending the Planning Commission recommend special approval to the Township Board subject to final site plan approval.

Sally Hodges of McKenna Associates presented preliminary site plan review letter dated 3-19-15 recommending the Planning Commission grant preliminary site plan approval subject to the conditions in the letter.

David Nummer of Wade Trim presented preliminary site plan review letter dated 3-18-15 recommending the Planning Commission grant preliminary site plan approval at this time.

Commissioners discussed landscape, parking space decrease, site amenities, traffic flow and location of the drive-through window.

No comments from the audience.

Motion Johnson, Boynton second the Planning Commission recommend to the Township Board special land use approval for a drive-through restaurant located at 10950 Belleville Road subject to final site plan approval and the conditions listed in the McKenna Associates review letter dated 3-19-15. Motion Carried. (Letter Attached)

Roll Call:

Yeas: Kelley, McKenna, Budd, Boynton, Johnson, Franzoi and Thompson.

Nays: None.

Absent: None.

Motion Carried.

Motion Kelley, Franzoi second to grant preliminary site plan approval to Sadek Properties, LLC for a drive-through restaurant located at 10950 Belleville Road subject to conditions listed in the McKenna Associates review letter dated 3-19-15, Wade Trim review letter dated 3-18-15, Fire Department review letter dated 3-22-15 along with the approval of the reduction in parking spaces from 31 to 26 and the letter provided by the applicant dated 3-23-15. Motion Carried. (Letters Attached)

GENERAL DISCUSSION: None.

Motion Boynton, McKenna second to adjourn at 8:07 p.m. Motion Carried.

Respectfully submitted,

Christina Harman
Recording Secretary

**CHARTER TOWNSHIP OF VAN BUREN
PLANNING COMMISSION AGENDA
Wednesday, March 25, 2015 – 7:30 PM
Board of Trustees Room**

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA

MINUTES Approval of minutes from the regular meeting of March 11, 2015

CORRESPONDENCE

PUBLIC HEARING:

ITEM #1 **CONSIDER AMENDMENT TO THE ZONING ORDINANCE 6-2-92, AS AMENDED OF THE CHARTER TOWNSHIP OF VAN BUREN, TO AMEND AND MODIFY THE PROVISIONS FOUND IN SECTION 12.02 TO PERMIT OUTDOOR DINING AND TABLE SERVICE IN THE C-1 (GENERAL BUSINESS) ZONING DISTRICT AS A PERMITTED USE AND PROVIDE STANDARDS IN PROPOSED SECTION 12.02(tt).**

- A. Commission opens Public Hearing
- B. Presentation by Township staff and consultants.
- C. Receipt of public comment.
- D. Commission closes Public Hearing.

OLD BUSINESS: None.

NEW BUSINESS:

ITEM #1 **CASE # TLU 15-001**

TITLE: **THE APPLICANT, USA FIREWORKS, IS REQUESTING TEMPORARY LAND USE APPROVAL BEYOND THE ADMINISTRATIVELY ALLOWABLE SEVEN (7) CONSECUTIVE DAYS AND REQUIRES PLANNING COMMISSION APPROVAL AS DETAILED IN SECTION 4.44 OF TOWNSHIP ZONING ORDINANCE 06-02-92, AS AMENDED.**

LOCATION: **THIS SITE IS ON THE WEST SIDE OF BELLEVILLE ROAD NORTH OF THE NORTH I-94 SERVICE DRIVE AND SOUTH OF TYLER ROAD, AT BELLEVILLE SQUARE SHOPPING CENTER, 10864 BELLEVILLE ROAD.**

- A. Presentation by the applicant.
- B. Presentation by the Township staff.
- C. Planning Commission discussion.
- D. Planning Commission considers approval of permit.

March 19, 2015

Planning Commission
Charter Township of Van Buren
46425 Tyler Road
Belleville, MI 48111

Subject: VBT-14-030 SLU; Dunkin Donuts; Special Approval Review #3; Plans Dated March 11, 2015.

Dear Commissioners:

The applicant proposes to remove the car wash and replace it with a drive-thru Dunkin Donuts restaurant at the existing gas station on the northwest corner of Belleville Road and the North Service Road. The site is zoned C-2 (Extensive Highway Business) District and is 0.8 acres in area. Drive-thru restaurants require special approval in the C-2 District.

COMMENTS

Special approval uses must meet both the specific non-discretionary standards of Section 12.03.d. and the discretionary standards listed in Section 18.08.f. of the Ordinance. We have reviewed the proposal and have the following comments based on the requirements of the Zoning Ordinance, observation of the site and surroundings, comments made at the public hearing and accepted principles of good planning and design.

1. **Definition of Use.** The Zoning Ordinance defines the proposed Dunkin Donuts as a drive-in restaurant because a driveway approach is designed and used to serve patrons remaining in their motor vehicles. The Zoning Ordinance does not define a drive-thru restaurant; for purposes of the Ordinance, drive-in and drive-thru restaurants are considered the same. Therefore, the requirements for drive-in restaurants are applicable to the current application.
2. **Requirements for Special Approval.** Both the discretionary and non-discretionary standards of the Ordinance are evaluated below.
 - a. **Promotes the use of land in a socially and economically desirable manner for those persons who will use the proposed land or activity; for those landowners and residents who are adjacent; and for the Township as a whole.** The site is located at the northwest corner of I-94 North Service Road and Belleville Road. The vicinity is characterized by a variety of commercial uses including an Arby's to the west, retail to the north, a gas station to the east across Belleville Road, and numerous other uses such as a shopping center, motels, Walmart, and other retail and restaurant uses. The proposed drive-thru restaurant use is intended to replace the existing car wash on the rear of the applicant's building and is an economically desirable reinvestment on a commercial site and will be consistent with other uses in the vicinity. In general, the proposed changes including landscaping along the west property line and along the street frontages will improve the site's appearance and compliance with the Zoning Ordinance. Belleville Road is the Township's major commercial corridor and although the drive-thru is likely to generate more traffic in the rush hour, no new drives or approaches are proposed.

1. **Entrances and exits must be 100 feet from the intersection of any two streets.** Both driveways to the site exist and neither is proposed to be changed.
2. **Must have direct access to a major thoroughfare.** The site has direct access to Belleville Road, a major thoroughfare.
3. **No lighting or illuminated display shall reflect onto a residential zone.** The site does not abut any residential district.
4. **Consideration must be given to proximity of existing places of congregation of children regarding traffic safety and sanitation.** The site is located in an area of similar intensive commercial uses. There are no nearby areas to facilitate congregation of large number of children.
 - i. **Is related to the valid exercise of the Township's police power and purposes which are affected by the proposed use or activity.** The proposed use is expected to be consistent with the Township's police power.

RECOMMENDATION

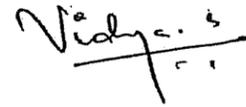
Based on the above, we find that the proposed Dunkin Donuts drive-thru meets the criteria for special approval. Therefore, we recommend the Planning Commission recommend special approval to the Township Board, subject to final site plan approval.

Respectfully submitted,

McKENNA ASSOCIATES



Sara J. Hodges, AICP, IAP2
Senior Vice President



Vidya Krishnan
Senior Planner

cc: inForm Studio, 235 E. Main Street, Suite 102B, Northville, MI 48167

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PROJECT
**DRIVE-THRU RENOVATIONS -
 BP GAS / DUNKIN DONUTS**

10950 Belleville Road
 Belleville, Michigan

OWNER
Sadek Properties, LLC
 10950 Belleville Road
 Belleville, MI 48111

inFORM

www.in-formstudio.com

235 e main street
 suite 102b
 northville, mi 48167
 p: 248.449.3564
 fax: 248.449.6984

DRIVE-THRU RENOVATIONS - BP GAS / DUNKIN DONUTS

Sheet and Consultant Index

| | General | Civil Engineering | Landscape | Architectural |
|------|---|---|---|---|
| | inFORM studio 235 E. Main Street, Suite 102B Northville, MI 48167 ph: 248.449.3564 fax: 248.449.6984 | PEA 2430 Rochester Ct. Suite 100 Troy, MI 48063 ph: 248.689.9090 fax: 248.689.1044 | M.J. Gac & Associates 7815 Freda Dearborn, MI 48126 ph: 313.834.3149 | inFORM studio 235 E. Main Street, Suite 102B Northville, MI 48167 ph: 248.449.3564 fax: 248.449.6984 |
| G101 | Project Information, Drawing Index | COVER | 1-1 Preliminary Landscape Plan | AS101 Architectural Site Plan |
| | | P-0.0 Overall Site Plan | 1-2 Requirements, Landscape Specifications and Planting Details | AS102 Dunkin Donuts Brand Site Signage |
| | | P-1.0 Demolition Plan | | |
| | | P-2.0 Topographic Survey | | AD301 Demolition Elevations |
| | | P-3.0 Dimension and Paving Plan | | AD302 Demolition Elevations |
| | | P-4.0 Grading Plan | | A301 Proposed Elevations |
| | | P-5.0 Utility Plan | | A302 Proposed Elevations |
| | | P-6.0 Notes and Details | | A303 Signage Information |
| | | | | A-1 Dunkin Donut Floor Plan (Reference Only) |
| | | | | 1 of 1 Site Photometric Plan |

RECEIVED

APR 01 2015

BY: _____

| NO. | DESCRIPTION | DATE |
|-----|--|----------|
| 1 | ISSUED FOR SITE PLAN REVIEW | 13-18-14 |
| 2 | ISSUED FOR SITE PLAN REVIEW | 02-28-15 |
| 3 | ISSUED FOR PRELIMINARY PLANNING COMMISSION REVIEW | 03-11-15 |
| 4 | ISSUED FOR TOWNSHIP AND PLANNING COMMISSION REVIEW | 04-01-15 |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |

PROJECT # 2014.2171.00
G101
 SHEET #

NOTES:
 -ALL LANDSCAPED AREAS ON SITE WILL BE PROVIDED WITH AN UNDERGROUND IRRIGATION SYSTEM.
 -EXIST. PLANTING BEDS TO BE PROVIDED WITH NEW SHREDDED HARDWOOD MULCH AS NEEDED.
 -GREENBELT SHRUBS WILL BE ALLOWED TO GROW TOGETHER AS A HEDGE & PRUNED IN THAT MANNER.



M.J. Gac & Associates
 Landscape Architecture
 7815 Freda, Dearborn, MI 48126
 (313) 891-3176
 235 E Main Street
 Suite 102b
 Northville, MI 48167
 P: 248.449.3564
 F: 248.449.6984
 www.in-formstudio.com

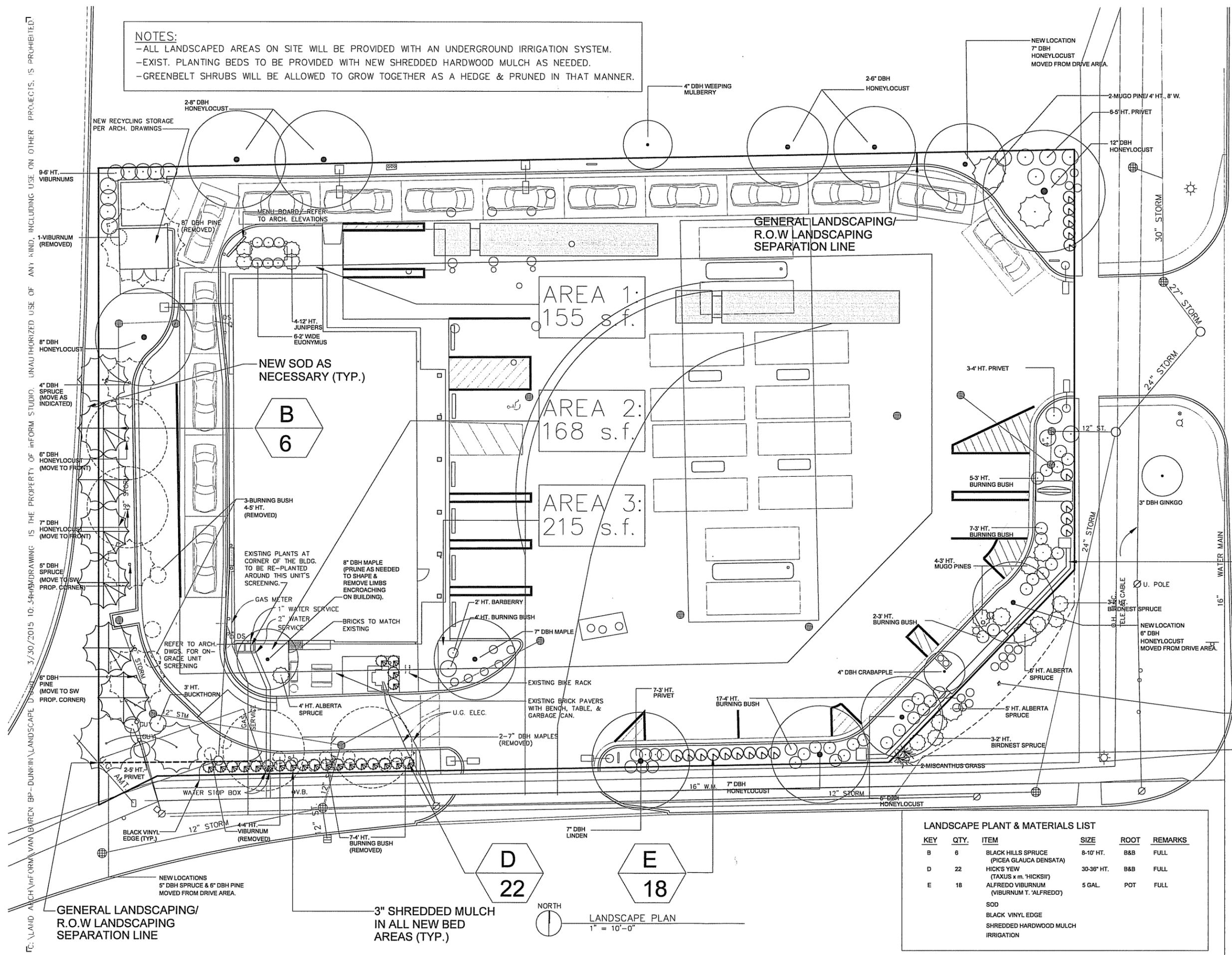
| ISSUED | DATE | DESCRIPTION |
|--------|---------|--|
| X | 2-9-15 | ISSUED FOR SITE PLAN REVIEW |
| X | 2-11-15 | ISSUED FOR PRELIM. PLANNING CON. REVIEW |
| X | 4-1-15 | ISSUED FOR TOWNSHIP & PLANNING CON. REVIEW |

Chris H. Sadek
 Sadek Properties, LLC
 10950 Belleville Road
 Belleville, MI 48111

DRIVE-THRU RENOVATIONS
 BP Gas/ Dunkin' Donuts

LANDSCAPE PLAN
 NOT FOR CONSTRUCTION

STATE OF MICHIGAN
 MARK GAC
 Landscape Architect
 No. 12900
 PROJECT # 2014.2171.00
 SHEET NO. L-1



LANDSCAPE PLANT & MATERIALS LIST

| KEY | QTY. | ITEM | SIZE | ROOT | REMARKS |
|-----|------|---|------------|------|---------|
| B | 6 | BLACK HILLS SPRUCE (PICEA GLAUCA DENSATA) | 8-10' HT. | B&B | FULL |
| D | 22 | HICK'S YEW (TAXUS x m. 'HICKSII') | 30-36" HT. | B&B | FULL |
| E | 18 | ALFREDO VIBURNUM (VIBURNUM T. 'ALFREDO') | 5 GAL. | POT | FULL |

SOD
 BLACK VINYL EDGE
 SHREDDED HARDWOOD MULCH
 IRRIGATION

LANDSCAPE PLAN
 1" = 10'-0"

FC:\LAND ARCH\inFORM VAN BUREN BP - DUNKIN' LANDSCAPE DESIGN 3/30/2015 10:34AM\DRAWING IS THE PROPERTY OF inFORM STUDIO. UNAUTHORIZED USE OF ANY KIND, INCLUDING USE ON OTHER PROJECTS, IS PROHIBITED!

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GENERAL NOTES:

- EXISTING SIGNAGE IS TO REMAIN. IF ADDITIONAL SIGNAGE IS SOUGHT OR EXISTING SIGNAGE MODIFIED, DUNKIN DONUTS WILL COMPLY WITH THE TOWNSHIP SIGN ORDINANCE & APPLY FOR THE REQUIRED PERMITS.
- BASES, ANCHOR BOLTS, CONDUIT, AND WIRING FOR ALL OTHER SIGNS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR.
- ALL EXISTING LOT LIGHT FIXTURES ARE TO REMAIN.
- ALL LANDSCAPE AREAS SHALL BE ROUGH GRADED TO 6" BELOW TOP OF ALL WALKS AND CURBS. FINISH GRADING, LANDSCAPING, AND IRRIGATION SYSTEMS ARE PAID FOR BY THE OWNER/OPERATOR. SEE LANDSCAPE PLANS.
- GENERAL CONTRACTOR SHALL CONTACT "MISS DIG" AT 1-800-482-7171 (72) HOURS PRIOR TO CONSTRUCTION TO ALLOW FOR ACCURATE LOCATION OF ALL UNDERGROUND UTILITIES.
- ALL NEW CURB RADIi NOT DIMENSIONED ON PLAN SHALL BE 2'-0".
- ALL DIMENSIONS ARE GIVEN TO THE BACK OF THE CURB U.N.O.
- BARRIER FREE RAMPS ARE TO BE 6'-0" LONG WITH A MAXIMUM SLOPE OF 1:12 AND HAVE A NON-SLIP SURFACE.
- ALL PAINTED LINES, DIRECTIONAL ARROWS, AND SYMBOLS ARE TO BE PROVIDED BY THE OPERATOR AND PLACED PER THESE PLANS AND DUNKIN DONUTS DRIVE-THRU BRANDING SPECIFICATIONS.
- "NO PARKING FIRE LANE" SIGNS ARE TO BE LOCATED PER THE FIRE MARSHAL'S DIRECTION.
- PROVIDE "DO NOT ENTER" SIGN(S) PER MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CODE #35-1, WHEN SIGNS ARE REQUIRED, AS NOTED ON THE SITE PLAN.
- ANY HAZARDOUS MATERIALS USED, STORED, OR PROCESSED ON SITE WILL BE TO ALL APPLICABLE REGULATIONS.
- NO OVERNIGHT PARKING IS ALLOWED.

MAINTENANCE NOTES:

- THE CONTRACTOR SHALL INSPECT FILTER BARRIER IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- CONTRACTOR SHALL INSPECT ALL SILT FENCE DAILY, INCLUDING AROUND YARD DRAINS. SILT FENCE WHICH IS UNDERMINED, CLOGGED, DECOMPOSED, FALLING OVER, OR OTHERWISE FUNCTIONING IMPROPERLY SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL INSTALLATION DETAIL.
- CONTRACTOR SHALL INSPECT INLET FILTERS USING PEA STONE WEEKLY FOR SEDIMENT SATURATION. REMOVE AND REPLACE PEA STONE UPON SATURATION.
- BUILT-UP SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO 1/4 TO 1/2 THE HEIGHT OF THE SILT FENCE AND AFTER A STORM EVENT.
- A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN THE SITE ON A DAILY BASIS AS REQUIRED TO MAINTAIN DUST CONTROL.
- SWEEP STREETS WEEKLY FOR SEDIMENT BUILD-UP. REMOVE TRACKED MUD / DIRT PROMPTLY.
- OWNER AGREES THAT PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING, AND OTHER STRUCTURES AND SURFACES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKING SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION.
- OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD, OR DAMAGED PLANTS, REPLACE MULCH, CONTROL WEEDS, FERTILIZE, AND PRUNE BEGINNING UPON COMPLETION OF CONSTRUCTION OF LANDSCAPING.
- OWNER AGREES TO PICK UP DEBRIS ON PROPERTY AND BLOWING FROM PROPERTY WEEKLY OR AS NEEDED.

DELIVERIES:
 FUEL: EVERY OTHER DAY 9 PM - 12 AM
 CONVENIENCE STORE: MONDAY-FRIDAY 9 AM - 3 PM
 DUNKIN DONUTS: EVERY OTHER DAY 9 AM - 3 PM
 (NON-FUEL DELIVERIES BY MEDIUM DUTY BOX TRUCK)

KEYED NOTES:

- NEW CONCRETE PAVEMENT PER CIVIL ENGINEERING DRAWINGS.
- NEW LANDSCAPE AREA WHERE THE EXISTING DRIVE HAS BEEN REMOVED, INCLUDING LANDSCAPE SCREENING - SEE LANDSCAPE PLAN ON SHEET L101.
- NEW 161 SQ.FT. EXTENSION OF TRASH / RECYCLING AREA. NEW CMU WALLS TO MATCH EXISTING DUMPSTER ENCLOSURE. WOOD DOORS PAINTED TO MATCH BUILDING, AND A SINGLE SLOPE, SHALLOW PITCH ROOF WITH ASPHALT SHINGLES TO MATCH BUILDING.
- NEW CATCH BASIN PER CIVIL ENGINEERING DRAWINGS.
- NEW CURB PER CIVIL ENGINEERING DRAWINGS.
- NEW CONCRETE ALONG EXISTING BUILDING TO MATCH ADJACENT SIDEWALK.
- OPEN.
- OPEN.

SITE DATA:

| | |
|------------------------------|---|
| SITE ZONING | C-2 (EXTENSIVE HIGHWAY BUSINESS) |
| CROSS SITE AREA | 34,848 sq.ft. (0.80 acres) |
| EXISTING BUILDING | 3,728 sq.ft. (788 sq.ft. CAR WASH REMOVED) |
| PROPOSED ADDITION | 110 sq.ft. |
| PROPOSED TRASH STORAGE | 181 sq.ft. |
| TOTAL BUILDING AREA | 3,939 sq.ft. (427 sq.ft. REMOVED) |
| BUILDING COVERAGE | 3,939 sq.ft. / 34,848 sq.ft. = 11.3% (11.5% DECREASE) |
| TOTAL EXISTING PAVING | 22,305 sq.ft. |
| TOTAL EXISTING LANDSCAPING | 7,865 sq.ft. |
| EX. LANDSCAPING : EX. PAVING | 7865 / 22305 = 35.26% |
| TOTAL PROPOSED PAVING | 23,071 sq.ft. (1,308 sq.ft. INCREASE) |
| TOTAL PROPOSED LANDSCAPING | 6,834 sq.ft. (1,031 sq.ft. DECREASE) |
| LANDSCAPING : PAVING | 6,834 sq.ft. / 23,071 sq.ft. = 29.6% (9.30% DECREASE) |

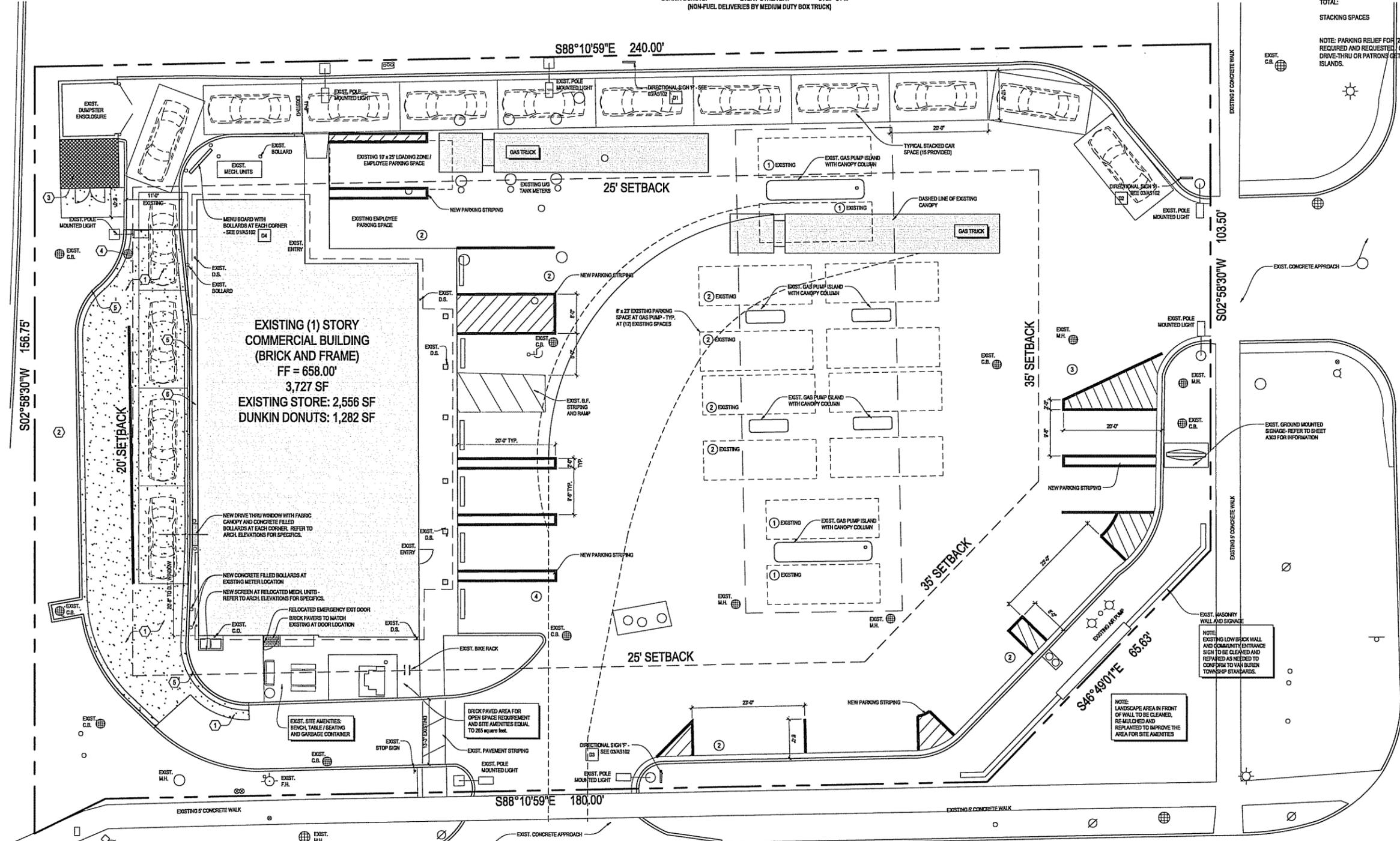
PARKING CALCULATIONS:

| | REQD. | PROVIDED |
|--|-------|----------|
| GAS PUMPS: (2) PER ISLAND | 12 | 12 |
| CONVENIENCE STORE: (1) PER 200 sq.ft. GROSS 943 sq.ft. / 200 sq.ft. = | 5 | 5 |
| (1) PER EMPLOYEE | 2 | 2 |
| DUNKIN DONUTS: (2) PER 1,000 sq.ft. GROSS USABLE 273 sq.ft. / 1,000 sq.ft. = | 6 | 5 |
| (1) PER EMPLOYEE | 3 | 2 |
| RV PARKING | 2 | 0 |
| TOTAL: | 30 | 26 |
| STACKING SPACES | 15 | 15 |

NOTE: THE ENTIRE TENANT SPACE IS 11,177 square feet

NOTE: PARKING RELIEF FOR THE ENTIRE TENANT SPACE IS 1,177 square feet. (2) RV SPACES AND (2) VEHICLE SPACES IS REQUIRED AND REQUESTED. COVER 70% OF BUSINESS WILL BE VIA THE DRIVE-THRU OR PATRONS GETTING GAS WHILE PARKED AT THE PUMP ISLANDS.

OPEN SPACE REQUIREMENT:
 148 sq.ft. REQUIRED.
 265 sq.ft. EXISTING.



BELLEVILLE ROAD

I-94 SERVICE DRIVE



PLAN NORTH
 01 ARCHITECTURAL SITE PLAN
 AS101 1" = 10'-0"

inFORM

235 E Main Street
 Suite 102
 Northville, MI 48167
 P: 248.443.3564
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| 03/15/15 | AS101 | ISSUED FOR PERMIT REVIEW |
| 03/03/15 | AS101 | ISSUED FOR PERMIT REVIEW |
| 01/15/15 | AS101 | ISSUED FOR PERMIT REVIEW |

OWNER:
 Chris H. Szadek
 Szadek Properties, LLC
 10850 Belleville Road
 Belleville, MI 48111

PROJECT:
 DRIVE-THRU RENOVATIONS
 BP Gas / Dunkin Donuts

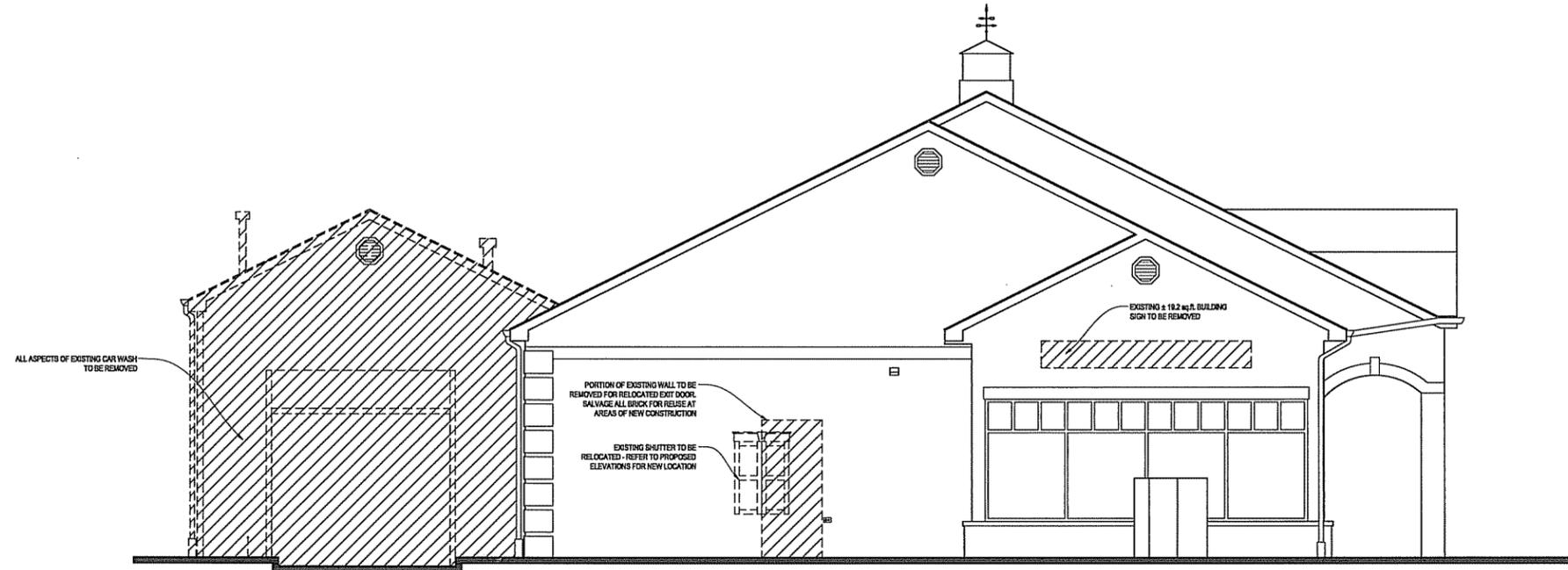
ARCHITECTURAL SITE
 PLAN

PRODUCT # 2014.2171.00
 AS101

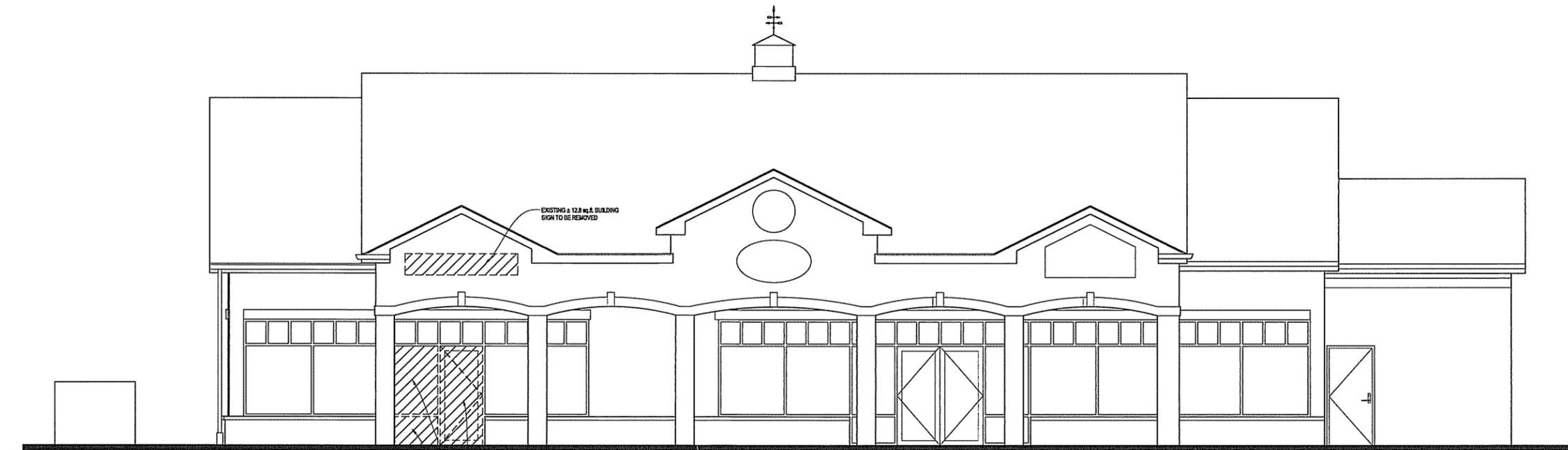
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 Suite 102b
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 P: 248.449.3554
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02 SOUTH ELEVATION - DEMOLITION
 AD301 1/4" = 1'-0"



01 EAST ELEVATION - DEMOLITION
 AD301 1/4" = 1'-0"

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| DATE | BY | DESCRIPTION |
|----------|----|--------------------------------------|
| 12-11-14 | AD | ISSUED FOR PERMIT APPLICATION REVIEW |
| 02-06-15 | AD | ISSUED FOR PERMIT APPLICATION REVIEW |
| 03-11-15 | AD | ISSUED FOR PERMIT APPLICATION REVIEW |

OWNER
 Chris H. Sadek
 Sadek Properties, LLC
 10550 Belleville Road
 Belleville, MI 48111

PROJECT
 DEMOLITION ELEVATIONS
 DRIVE-THRU RENOVATIONS
 BP Gas / Dunkin Donuts
 10550 Belleville Road
 Belleville, Michigan

PROJECT #
 2014.2171.00

NOT FOR CONSTRUCTION

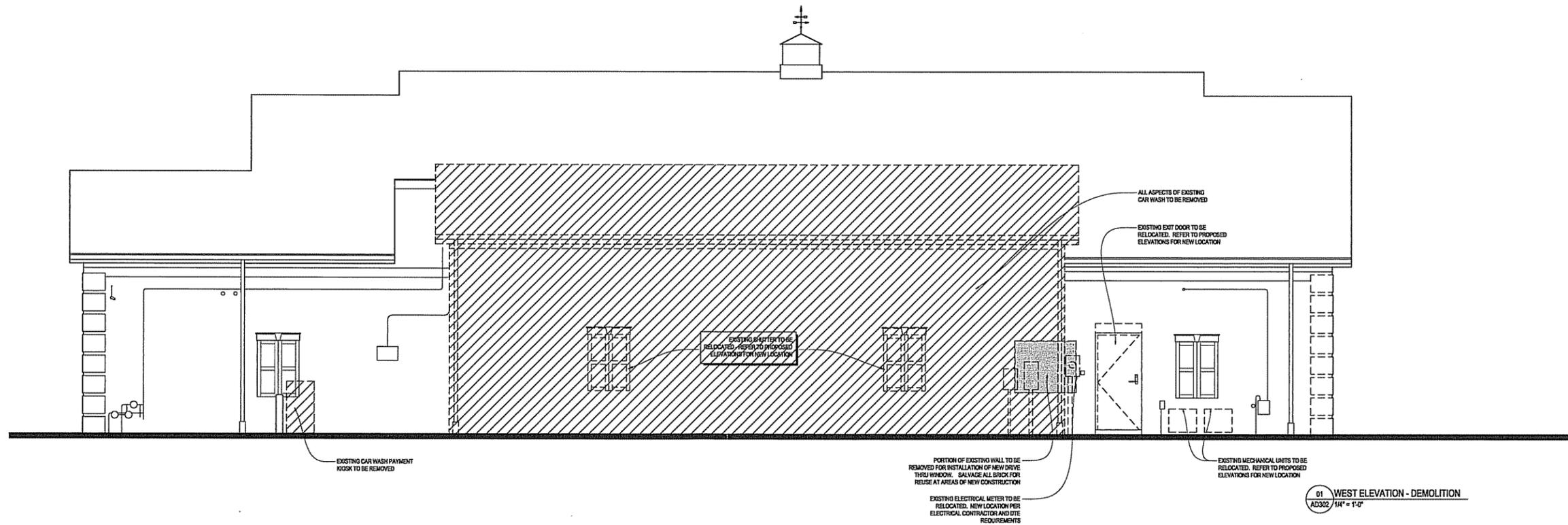
AD301

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235 E Main Street
Suite 1025
Northville, MI 48187
P: 248.443.3564
FAX: 248.443.8584

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01 WEST ELEVATION - DEMOLITION
AD302/1/4" = 1'-0"

| DATE | DESCRIPTION | BY | CHK |
|----------|-------------|----|-----|
| 12/11/11 | | | |
| 01/04/13 | | | |
| 01/11/13 | | | |

OWNER
Chris H. Sadek
Sadek Properties, LLC
10950 Belleville Road
Belleville, MI 48111

PROJECT
DRIVE-THRU RENOVATIONS
BP Gas / Dunkin Donuts
10950 Belleville Road
Belleville, Michigan

SHEET TITLE
DEMOLITION ELEVATIONS

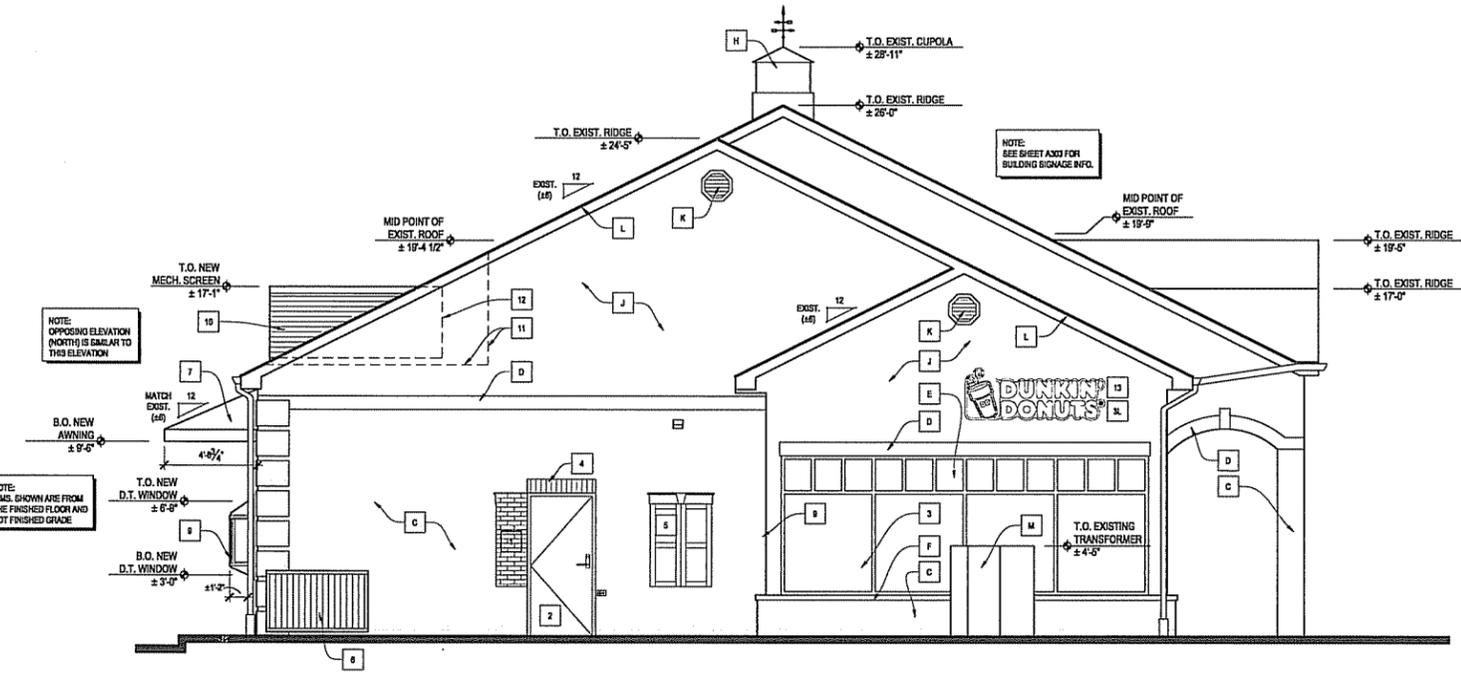
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PROJECT # 2014.2171.00

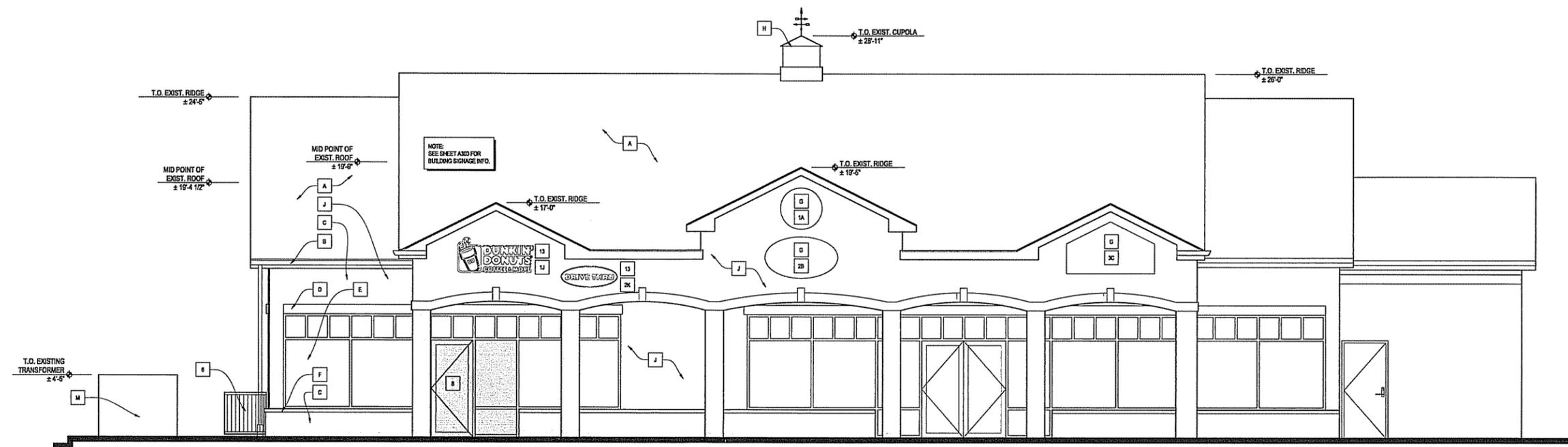
AD302

KEY NOTES:

- A EXISTING ASPHALT SHINGLES
 - B EXISTING ALUMINUM GUTTER ON FASCIA BOARD
 - C EXISTING BRICK VENEER
 - D EXISTING BRICK SOLDIER COURSE
 - E EXISTING CLEAR GLASS IN BRONZE ALUMINUM FRAME
 - F EXISTING BRICK ROWLOCK COURSE
 - G EXISTING SIGNAGE
 - H EXISTING ROOF CUPOLA
 - J EXISTING EIFS
 - K EXISTING GABLE VENT
 - L EXISTING RAKE BOARD
 - M EXISTING TRANSFORMER
 - N OPEN
- 1 EXISTING BRICK TO BE CLEANED AS REQUIRED AFTER RELOCATION OF EXISTING SHUTTER
 - 2 NEW LOCATION OF RELOCATED EMERGENCY EXIT DOOR
 - 3 PANEL BRICK BY FULLERTON OR EQUAL TO MATCH EXISTING BRICK COLOR, COURSING, FINISH AND GROUT
 - 4 BRICK ROWLOCK TO MATCH EXISTING SIZE AND COLOR. RELOCATE FROM AREAS OF DEMOLITION AS POSSIBLE
 - 5 NEW LOCATION OF RELOCATED SHUTTER
 - 6 3" HIGH COMPOSITE PVC DECKING MECHANICAL UNIT SCREEN. 1x4 BOARDS TO BE INSTALLED VERTICALLY WITH 2" TRIM AT TOP, BOTTOM AND CORNERS AND TO BE PAINTED TO MATCH EXISTING SHUTTER COLOR (SIMILAR TO HUNTER GREEN - TO BE VERIFIED)
 - 7 FABRIC FINISH BY BRAND WITH MILLED ALUMINUM FRAME. FABRIC COLOR = ARLON BROWN PRODUCT # SP00-11 PER SAMPLE.
 - 8 RELOCATED ENTRY DOOR WITH NEW SIDE LITE GLASS AND FRAME TO MATCH EXISTING DOWN TO FINISHED FLOOR.
 - 9 DRIVE-THRU WINDOW PER BRAND REQUIREMENTS
 - 10 1x6 COMPOSITE PVC DECKING MECHANICAL SCREEN - SIMILAR TO DETAILS ON SECTION 02, SHEET A302
 - 11 DASHED LINE OF EXISTING MECHANICAL WELL BEYOND
 - 12 DASHED LINE OF PROPOSED MECHANICAL SCREEN BEYOND ON BOTH THE SOUTH AND NORTH SIDES
 - 13 NEW WALL SIGNAGE - SEE LEGEND THIS SHEET
 - 14 DASHED LINE OF PROPOSED MENU BOARD. REFER TO SITE SIGNAGE INFORMATION ON SHEET AS102
 - 15 BRICK VENEER IN EXISTING OPENING TO MATCH EXISTING SIZE AND COLOR. RELOCATE FROM AREAS OF DEMOLITION AS POSSIBLE



02 SOUTH ELEVATION
A301 1/4" = 1'-0"



01 EAST ELEVATION
A301 1/4" = 1'-0"

| DATE | DESCRIPTION | BY | CHK |
|----------|-------------------------|----|-----|
| 12/14/14 | ISSUE FOR PERMIT REVIEW | MM | MM |
| 02/06/15 | ISSUE FOR PERMIT REVIEW | MM | MM |
| 03/11/15 | ISSUE FOR PERMIT REVIEW | MM | MM |
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OWNER
Chris H. Szadek
Szadek Properties, LLC
10950 Belleville Road
Belleville, MI 48111

PROJECT
DRIVE-THRU RENOVATIONS
BP Gas / Dunkin' Donuts
10950 Belleville Road
Belleville, Michigan

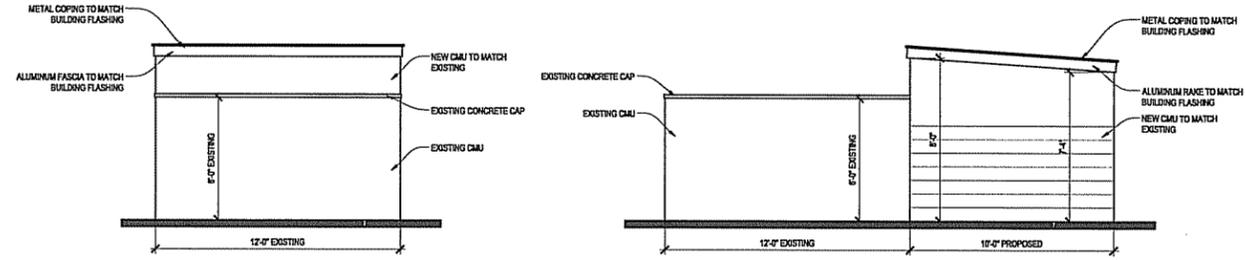
PROPOSED ELEVATIONS

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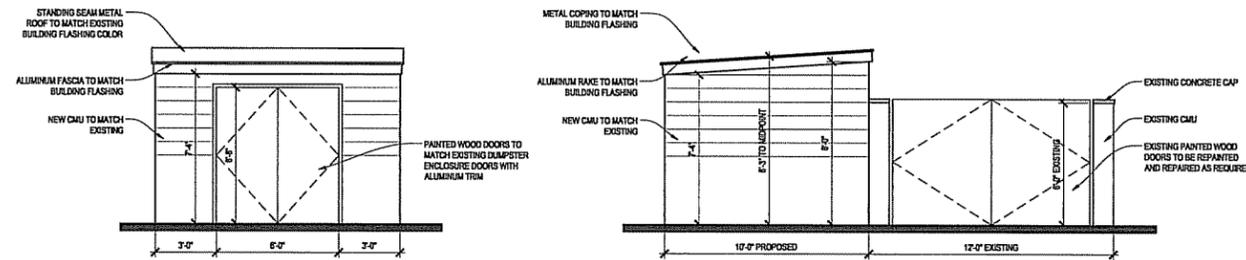
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02 RECYCLING STORAGE SOUTH ELEVATION
SK-1 1/4" = 1'-0"

03 RECYCLING STORAGE WEST ELEVATION
SK-1 1/4" = 1'-0"



02 RECYCLING STORAGE SOUTH ELEVATION
SK-1 1/4" = 1'-0"

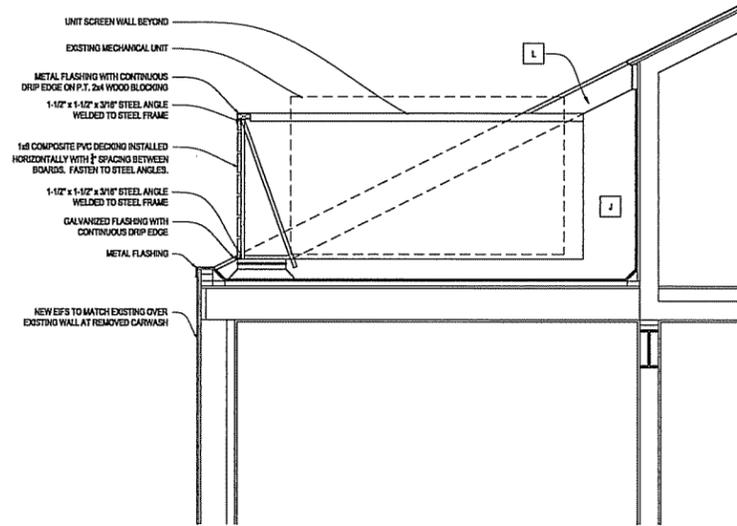
01 RECYCLING STORAGE EAST ELEVATION
SK-1 1/4" = 1'-0"

LIGHTING FIXTURE SCHEDULE

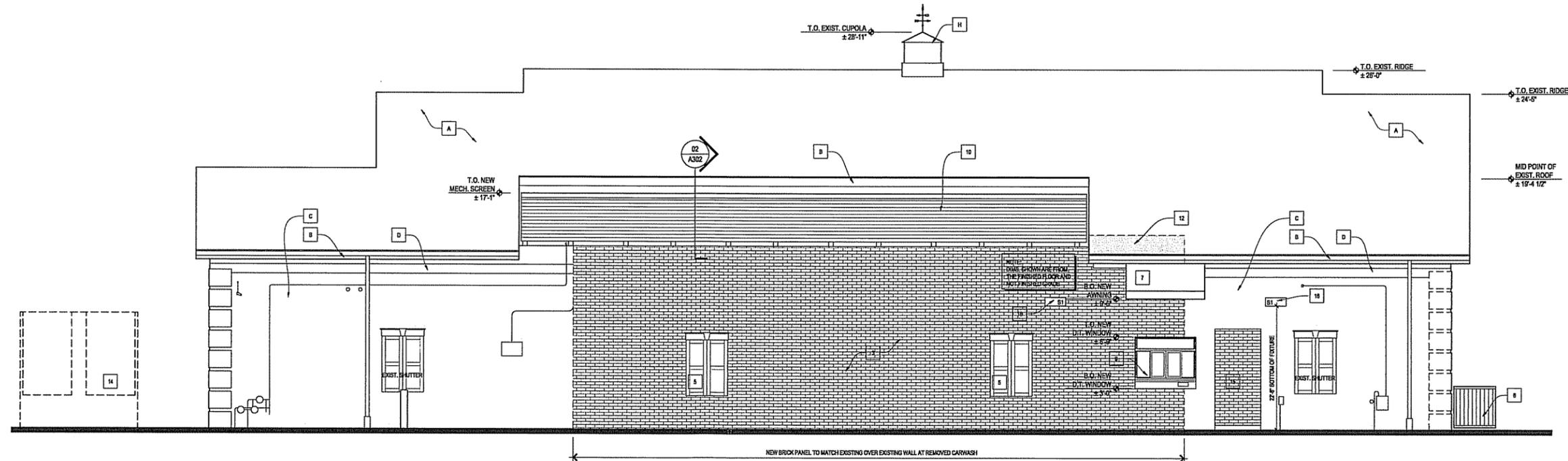
| MARK | DESCRIPTION | DIFFUSER | LAMPS | | POWER | MOUNTING | LOCATION | MANUFACTURER AND CATALOG NUMBER |
|------|-----------------------------|-------------------|--------|------|-------------|----------|------------|--|
| | | | WATTS | TYPE | | | | |
| B1 | "DOWN ONLY" LED WALL SCONCE | CLEAR TEMP. GLASS | 55.0 W | LED | 120-277 VAC | SURFACE | DRIVE THRU | LSI LIGHTING: PWM - S - LED - HD - CW - UE - BLK |

KEY NOTES:

- A EXISTING ASPHALT SHINGLES
 - B EXISTING ALUMINUM GUTTER ON FASCIA BOARD
 - C EXISTING BRICK VENEER
 - D EXISTING BRICK SOLDIER COURSE
 - E EXISTING CLEAR GLASS IN BRONZE ALUMINUM FRAME
 - F EXISTING BRICK ROWLOCK COURSE
 - G EXISTING SIGNAGE
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 - 7 FABRIC AWNING BY BRAND WITH MILLED ALUMINUM FRAME. FABRIC COLOR = ARLON BROWN PRODUCT # SPOD-11 PER SAMPLE
 - 8 RELOCATED ENTRY DOOR WITH NEW SIDE LITE GLASS AND FRAME TO MATCH EXISTING DOWN TO FINISHED FLOOR.
 - 9 DRIVE-THRU WINDOW PER BRAND REQUIREMENTS
 - 10 1x6 COMPOSITE PVC DECKING MECHANICAL SCREEN - SEE SECTION 02 THIS SHEET
 - 11 DASHED LINE OF EXISTING MECHANICAL WELL BEYOND
 - 12 DASHED LINE OF PROPOSED MECHANICAL SCREEN BEYOND ON BOTH THE SOUTH AND NORTH SIDES. COLOR TO MATCH EXISTING SHUTTERS (SIMILAR TO HUNTER GREEN)
 - 13 NEW WALL SIGNAGE - SEE LEGEND THIS SHEET
 - 14 DASHED LINE OF PROPOSED MENU BOARD. REFER TO SITE SIGNAGE INFORMATION ON SHEET AS102
 - 15 BRICK VENEER IN EXISTING OPENING TO MATCH EXISTING SIZE AND COLOR. RELOCATE FROM AREAS OF DEMOLITION AS POSSIBLE
 - 16 WALL MOUNTED EXTERIOR LIGHT SCONCE. SEE INFORMATION THIS SHEET



02 SECTION @ MECH. SCREEN
A302 1/2" = 1'-0"



01 WEST ELEVATION
A302 1/4" = 1'-0"

| DATE | ISSUE | DESCRIPTION |
|----------|-------|---------------------------|
| 12/15/14 | 01 | ISSUED FOR PERMITS REVIEW |
| 04/08/15 | 02 | ISSUED FOR PERMITS REVIEW |
| 05/11/15 | 03 | ISSUED FOR PERMITS REVIEW |
| | X | |

OWNER
Chris H. Sadek
Sadek Properties, LLC
10550 Belleville Road
Belleville, MI 48111

PROJECT
PROPOSED ELEVATIONS
AND RECYCLING
STORAGE ELEVATIONS

DRIVE-THRU RENOVATIONS
BP Gas / Dunkin Donuts
10550 Belleville Road
Belleville, Michigan

PROJECT # 2014.2171.00

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| DIRECTIONAL SIGNAGE: PROPOSED | | | |
|-------------------------------|--------------|---------------|----------------|
| SIGN | TEXT | SIZE | SQUARE FOOTAGE |
| D1 | 'DRIVE-THRU' | 2'-6" x 1'-1" | 2.75 |
| D2 | 'DRIVE-THRU' | 2'-6" x 1'-1" | 2.75 |
| D3 | 'DRIVE-THRU' | 2'-6" x 1'-1" | 2.75 |
| D4 | OPEN | - | - |
| D5 | MENU BOARD | 6'-2" x 5'-2" | 37.90 |
| TOTAL EXISTING SIGNAGE | | | 48.15 |

NOTE: REFER TO ARCHITECTURAL SITE PLANS FOR DIRECTIONAL SIGNAGE LOCATIONS AND INFORMATION.

| EXTERIOR SIGNAGE: EXISTING | | | |
|----------------------------|---|-------------------------|-------------------|
| SIGN | TEXT | SIZE | SQUARE FOOTAGE |
| 1A | B.P. LOGO | 38" DIA. | ± 7.00 |
| 2B | B.P. 'SHOP' SIGN | 5'-2" x 3'-0" (ELLIPSE) | ± 12.00 |
| 3C | 'LIQUOR BEER & WINE' SIGN | VARIES | ± 19.00 |
| 4D | 'QUIZNOS SUB' SIGN (REMOVED) | 11'-0" x 1'-6" | ± 17.49 (REMOVED) |
| 5E | 'QUIZNOS SUB' SIGN (REMOVED) | 8'-0" x 1'-6" | ± 12.60 (REMOVED) |
| 6F | 'ENTER AT CAR WASH (REMOVED) | 1'-0" x 3'-0" | ± 3.00 (REMOVED) |
| 5G | 'EXIT AT CAR WASH (REMOVED) | 8" x 3'-0" | ± 1.98 (REMOVED) |
| 5H | B.P. LOGO (LOCATED ON PUMP CANOPY) | 38" DIA. | ± 21.00 (TOTAL) |
| 4M | MONUMENT SIGN - SEE ELEVATION THIS SHIT. FOR ALL RELEVANT SIGNAGE INFO. | | |
| TOTAL EXISTING SIGNAGE | | | ± 218.47 |

NOTE:
1. ALL SIGNS ARE LISTED ARE EXISTING AND SIZES ARE APPROXIMATE.
2. ALL 'QUIZNOS' SIGNAGE TO BE REMOVED AND REPLACED.

| EXTERIOR SIGNAGE: PROPOSED | | | |
|----------------------------|---|--------------------------|-----------------|
| SIGN | TEXT | SIZE | SQUARE FOOTAGE |
| 1J | 'DUNKIN' DONUTS COFFEE & MORE' | 5'-4" wide x 2'-7" high | ± 13.77 |
| 2K | 'DRIVE THRU' | 3'-11" wide x 1'-4" high | ± 4.83 |
| 3L | 'DUNKIN' DONUTS' | 7'-0" wide x 2'-7" high | ± 18.08 |
| 4M | MONUMENT SIGN - SEE ELEVATION THIS SHIT. FOR ALL RELEVANT SIGNAGE INFO. | | |
| 1A | B.P. LOGO | EXISTING | ± 7.00 |
| 2B | B.P. 'SHOP' SIGN | EXISTING | ± 12.00 |
| 3C | 'LIQUOR BEER & WINE' SIGN | EXISTING | ± 19.00 |
| 5H | B.P. LOGO (LOCATED ON PUMP CANOPY) | 38" DIA. | ± 21.00 (TOTAL) |
| TOTAL PROPOSED SIGNAGE | | | ± 220.88 |

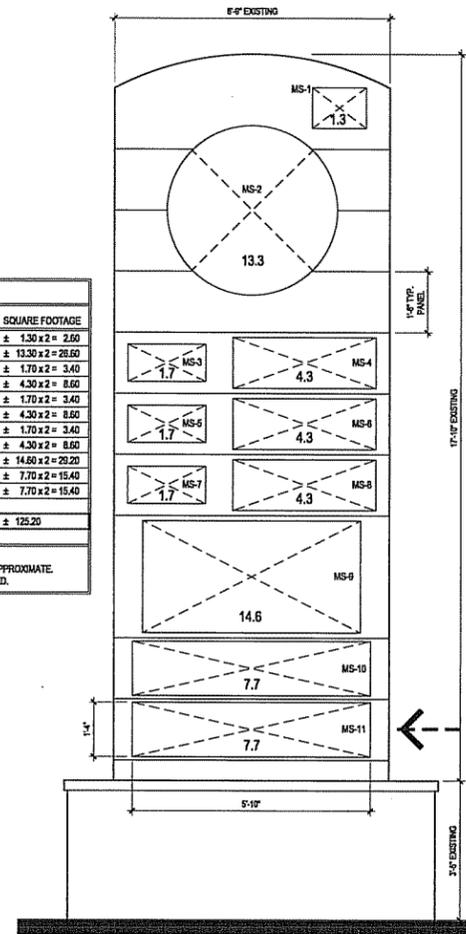
NOTE:
1. ALL SIGNS ARE BY OTHERS.
2. ALL FINAL SIGN SIZES ARE TO BE IN ACCORDANCE WITH THE LOCAL ZONING REQUIREMENTS.



| EXTERIOR SIGNAGE: MONUMENT SIGN | | | |
|---------------------------------|-------------------------------------|-----------------------------------|----------------|
| SIGN | TEXT | SIZE | SQUARE FOOTAGE |
| MS-1 | B.P. TEXT LOGO | EXISTING ± 1.30 x 2 = 2.60 | |
| MS-2 | B.P. IMAGE | EXISTING ± 13.30 x 2 = 26.60 | |
| MS-3 | 'REGULAR CASH' SIGN | EXISTING ± 1.70 x 2 = 3.40 | |
| MS-4 | PRICE DIGITAL SIGN | EXISTING ± 4.30 x 2 = 8.60 | |
| MS-5 | 'REGULAR CREDIT' SIGN | EXISTING ± 1.70 x 2 = 3.40 | |
| MS-6 | PRICE DIGITAL SIGN | EXISTING ± 4.30 x 2 = 8.60 | |
| MS-7 | 'DIESEL' SIGN | EXISTING ± 1.70 x 2 = 3.40 | |
| MS-8 | PRICE DIGITAL SIGN | EXISTING ± 4.30 x 2 = 8.60 | |
| MS-9 | DIGITAL DISPLAY SIGN | EXISTING ± 14.80 x 2 = 29.20 | |
| MS-10 | 'LIQUOR BEER WINE' SIGN | EXISTING ± 7.70 x 2 = 15.40 | |
| MS-11 | 'QUIZNOS SUB' SIGN - TO BE REPLACED | 5'-10" x 1'-4" ± 7.70 x 2 = 15.40 | |
| TOTAL EXISTING MONUMENT SIGN | | | ± 125.20 |

NOTE:
1. ALL SIGNS ARE LISTED ARE EXISTING AND SIZES ARE APPROXIMATE.
2. ALL 'QUIZNOS' SIGNAGE TO BE REMOVED AND REPLACED.

EXISTING QUIZNOS SIGN TO BE REPLACED WITH DUNKIN DONUTS BRAND SIGNAGE SIMILAR TO DIRECTIONAL SIGN SHOWN



03 MONUMENT SIGN PHOTOGRAPH
A302 NOT TO SCALE

02 MONUMENT SIGN ELEVATION
A303 1/2" = 1'-0"

DD COFFEE & MORE IN-LINE CLOUD SIGN

| IN-LINE CLOUD CUP LOGO/LETTERS | | S/F COFFEE & MORE SIGN | | | | | | | | | |
|--------------------------------|----------|------------------------|-----|----------------|--------------|-------------|-----|------------|----------------|--------------|-------------|
| Nominal Size | H | W | L | Area (sq. ft.) | ILLUMINATION | H | W | R (radius) | Area (sq. ft.) | ILLUMINATION | |
| 12" Letter | 33-7/16" | 23-7/16" | 12" | 118-5/8" | 33.45 | White LED's | 12" | 62-5/16" | 4" | 5.19 | White LED's |
| 18" Letter | 50-1/4" | 35-1/4" | 18" | 178" | 75.46 | White LED's | 18" | 93-7/16" | 6" | 11.67 | White LED's |
| 24" Letter | 66-1/2" | 46-5/8" | 24" | 237-1/4" | 132.94 | White LED's | 24" | 124-5/8" | 8" | 20.77 | White LED's |

NOTE: THESE DRAWINGS ARE FOR TRADE DESIGN PURPOSES ONLY. IT IS THE SOLE RESPONSIBILITY OF THE ARCHITECT AND ENGINEER TO PROVIDE THE PROPER TO PERFORM ALL NECESSARY CONSTRUCTION DOCUMENTS FOR THE PARTICULAR PROJECT LOCATION, COUNTY, STATE AND LOCAL JURISDICTIONS. THE ARCHITECT AND ENGINEER SHALL GUARANTEE THAT THEIR DRAWINGS AND THEIR COMPONENTS MEET THE REQUIREMENTS OF ANY FEDERAL, STATE OR LOCAL ZONING REQUIREMENTS, ORDINANCES, REGULATIONS, CODES OR ANY OTHER LOCAL, STATE OR FEDERAL. IT IS THE SOLE RESPONSIBILITY OF THE ARCHITECT AND ENGINEER TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE LOCAL, STATE, FEDERAL, COUNTY AND OTHER REGULATORY AGENCIES WITHOUT LIABILITY TO inFORM STUDIO.

Everbrite
4749 South 112th Street
PO Box 20023
Grandville, MI 49422-0020
414.822.7131

DUNKIN' BRANDS™
[eatdrjnkthink]

Revisions:
Date: 8/14/10
Scale: NTS
Drawn: C HART
FILE
BS-1

IN-LINE CONFIGURATION

| 'IN-LINE' LOGO LED CLOUD SIGN | | 'IN-LINE' LOGO LED CLOUD SIGN, OPTIONAL CUP LOGO SIZES (where fascia height is limited) | | | |
|-------------------------------|----------|---|------------|----------------|--------------|
| Nominal Size | H | L | W | Area (sq. ft.) | ILLUMINATION |
| 12" Letter | 27-1/4" | 12" | 11'-7 1/2" | 26.39 | White LED's |
| 15" Letter | 34-1/16" | 15" | 14'-6 3/8" | 41.24 | White LED's |
| 18" Letter | 41" | 18" | 17'-5 1/2" | 59.64 | White LED's |
| 21" Letter | 47-1/16" | 21" | 20'-4 1/8" | 80.84 | White LED's |
| 24" Letter | 54-1/2" | 24" | 23'-3" | 105.59 | White LED's |

NOTE: THESE DRAWINGS ARE FOR TRADE DESIGN PURPOSES ONLY. IT IS THE SOLE RESPONSIBILITY OF THE ARCHITECT AND ENGINEER TO PROVIDE THE PROPER TO PERFORM ALL NECESSARY CONSTRUCTION DOCUMENTS FOR THE PARTICULAR PROJECT LOCATION, COUNTY, STATE AND LOCAL JURISDICTIONS. THE ARCHITECT AND ENGINEER SHALL GUARANTEE THAT THEIR DRAWINGS AND THEIR COMPONENTS MEET THE REQUIREMENTS OF ANY FEDERAL, STATE OR LOCAL ZONING REQUIREMENTS, ORDINANCES, REGULATIONS, CODES OR ANY OTHER LOCAL, STATE OR FEDERAL. IT IS THE SOLE RESPONSIBILITY OF THE ARCHITECT AND ENGINEER TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE LOCAL, STATE, FEDERAL, COUNTY AND OTHER REGULATORY AGENCIES WITHOUT LIABILITY TO inFORM STUDIO.

Everbrite
4749 South 112th Street
PO Box 20023
Grandville, MI 49422-0020
414.822.7131

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Revisions:
Date: 9/9/10
Scale: NTS
Drawn: C HART
FILE
BS-1

01 BUILDING SIGN '3L'
A303 NOT TO SCALE

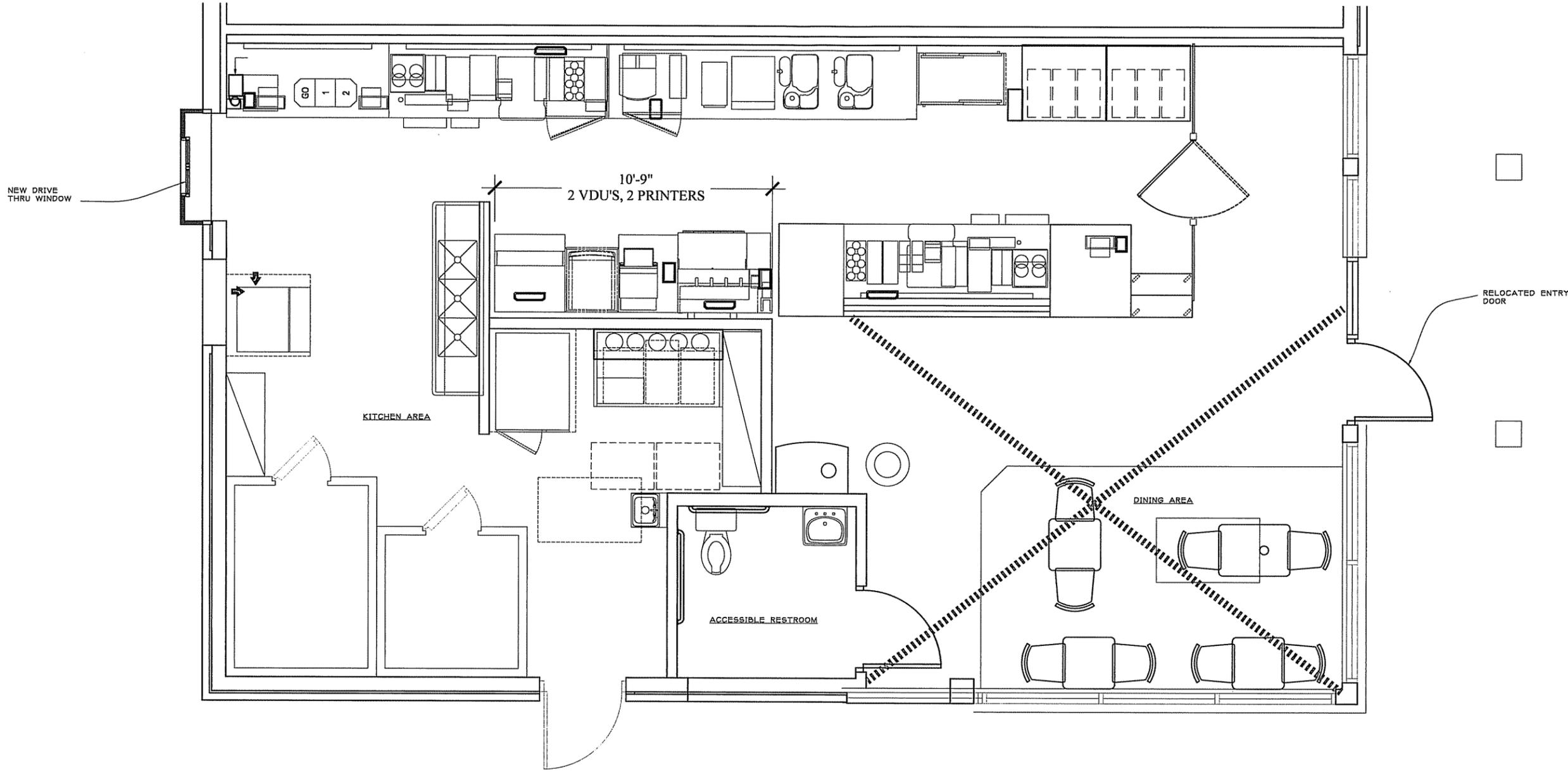
| DATE | BY | DESCRIPTION |
|---------|-----|-------------------------------|
| 8/14/10 | NTB | ISSUED FOR PERMIT APPLICATION |
| 8/15/10 | NTB | ISSUED FOR PERMIT APPLICATION |
| 8/15/10 | NTB | ISSUED FOR PERMIT APPLICATION |

Chris H. Sadek
Sadek Properties, LLC
10550 Belleville Road
Belleville, MI 48111

DRIVE-THRU RENOVATIONS
BP Gas / Dunkin' Donuts
10550 Belleville Road
Belleville, Michigan

BUILDING SIGNAGE

NOT FOR CONSTRUCTION



FLOOR PLAN
SCALE: 1/2" = 1'-0"

GROSS USEABLE FLOOR AREA OF PROPOSED TENANT SPACE = 273 sq.ft.
NOTE: ENTIRE TENANT SPACE IS EQUAL TO 1,177 sq.ft.



jeffery a. scott architects p.c.
32516 grand river ave. suite 200
farmington, michigan 48336-3261
(248) 478-8800 fax (248) 478-8833

| NO | DESCRIPTION | DATE | APPD | MH |
|----|--------------------|-----------|------|----|
| 7 | DATE | XXX | | |
| 6 | SCALE | VARIABLES | | |
| 5 | DRAWN | MH | | |
| 4 | CD | MH | | |
| 3 | DATE | 3/4/15 | | |
| 2 | SPA REVISIONS | | | |
| 1 | SITE PLAN APPROVAL | 02/05/15 | | |

FLOOR PLAN
10950 BELLEVILLE ROAD
BELLEVILLE, MI 48111
PC# 353962

JOB NO.
14169

SHEET NO.
A-1

Charter Township of Van Buren

Agenda Item: _____

REQUEST FOR BOARD ACTION

WORK STUDY MEETING DATE: 4/06/15

BOARD MEETING DATE: 4/21/15

Consent Agenda _____

New Business **X** _____

Unfinished Business _____

Public Hearing _____

| | |
|---|---|
| ITEM (SUBJECT) | MDEQ Presentation to Board on TENORM report. |
| DEPARTMENT | Planning |
| PRESENTER | Jack Knowles, Director of Planning and Economic Development |
| PHONE NUMBER | (734) 699-9288 |
| INDIVIDUALS IN ATTENDANCE (OTHER THAN PRESENTER) | Bryce Feighner, MDEQ (for April 21 meeting) |

Agenda topic

| |
|--|
| ACTION REQUESTED |
| To permit MDEQ to present their report to the Township Board on April 21 |
| BACKGROUND – (SUPPORTING AND REFERENCE DATA, INCLUDE ATTACHMENTS) |
| <p>A panel of radiation and health experts today confirmed the DEQ's disposal guidelines for low-activity radioactive materials.</p> <p>Gov. Rick Snyder directed the DEQ in August 2014 to assemble a panel to provide a technical review of Michigan's disposal guidelines for Technologically Enhanced Naturally Occurring Radioactive Materials, or TENORM, to ensure protection of public health and the environment. Established in 1996, Michigan's standard of 50 picoCuries per gram (pCi/g) of Radium-226 was reaffirmed in 1999 by a U.S. Department of Energy study.</p> <p>In addition to confirming Michigan's 50 pCi/g disposal guideline for all landfills, the TENORM Disposal Advisory Panel also suggested hazardous waste landfills may have adequate protections to allow for higher concentrations.</p> <p>Other recommendations included requiring landfills to place TENORM waste at least 10 feet below the bottom of the landfill cap, restricting the annual total volume of TENORM waste received at landfills to minimize worker exposure, requiring landfills to monitor leachate and groundwater for Radium-226, and developing regulatory guidelines for the safe handling of TENORM contaminated with Lead-210.</p> <p>The TENORM Disposal Advisory Panel investigated current federal and state standards, changes to risk methodology since the 1990s, the nature of how TENORM decays over time, methods of modeling dose assessments to workers and the public, and the design and operation of landfills.</p> <p>Appointees to the TENORM Disposal Advisory Panel were:</p> <ul style="list-style-type: none"> • Duane DeMore, Chesapeake Nuclear Services, Novi, representing the Health Physics Society • Cheryl Culver Schultz, Medical Nuclear Physicist, Beaumont Health Systems, Royal Oak, representing the medical community • Kimberlee Kearfott, Professor of Nuclear Engineering and Radiological Sciences, University of Michigan, Ann Arbor, representing academia • Nicholas Occhipinti, West Michigan Environmental Action Council, Grand Rapids, representing the Michigan Environmental Council • Donald J. Carpenter, ARCADIS, Inc., Brighton, representing the environmental consultant community • Joseph J. Weismann, US Ecology, Inc., Boise, ID, representing the waste disposal industry • Bill Myler, Jr., Muskegon Development Company, representing the oil and gas industry • Ken Yale, DEQ's Radiological Protection Section Chief, representing the DEQ • Dave Minnaar, Middleville, representing the public. |

The report is available online at [www.michigan.gov/documents/deq/deq-RMG-TENORM Disposal Advisory Panel White Paper - FINAL 481404 7.pdf](http://www.michigan.gov/documents/deq/deq-RMG-TENORM_Disposal_Advisory_Panel_White_Paper_-_FINAL_481404_7.pdf).

| | |
|--|-------------|
| BUDGET IMPLICATION | None |
| IMPLEMENTATION NEXT STEP | Notify MDEQ |
| DEPARTMENT RECOMMENDATION | Approval |
| COMMITTEE/COMMISSION RECOMMENDATION | |
| ATTORNEY RECOMMENDATION | |
| (May be subject to Attorney/Client Privilege and not available under FOIA) | |
| ADDITIONAL REMARKS | |
| APPROVAL OF SUPERVISOR | _____ |

Michigan TENORM Disposal Advisory Panel White Paper

2014-2015

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EXECUTIVE SUMMARY

On August 25, 2014, Governor Rick Snyder directed the Michigan Department of Environmental Quality (MDEQ) to assemble a panel of experts to review Michigan's standards for disposing low-activity radioactive materials. He charged the group with providing a technical review of Michigan's current disposal guidelines for Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) to assess if these guidelines sufficiently protect public health and the environment.

Michigan's current TENORM disposal guidelines are 50 picoCuries per gram (pCi/g) of Radium-226, provided in "*EQC - 1602 – Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226 (Ra-226)*." It was established in 1996 and subsequently studied in 1999 by the U.S. Department of Energy's (DOE) Argonne National Laboratory (ANL). Their review, "*An Assessment of the Disposal of Petroleum Industry NORM in Nonhazardous Landfills*," concluded that up to 50 pCi/g of Radium-226 can be safely disposed in any Type I (i.e., hazardous waste) or Type II (i.e., municipal solid waste) landfill in Michigan without adverse impact to human health or the environment.

The TENORM Disposal Advisory Panel (TDAP) investigated current federal and state regulatory standards, changes to risk assessment methodology since the 1990s, the nature of TENORM and how it decays over time, methods of mathematical modeling dose assessment to workers and members of the public, and the design and operation of modern landfills. In keeping with its charge and by unanimous agreement of the TDAP, the effects of disposal of TENORM were evaluated independent of the origin of the materials.

The TDAP also thoroughly reviewed the 1999 ANL study and is in agreement with its conclusions that the current MDEQ disposal guideline of 50 pCi/g is safe for public health and the environment. However, as a result of the TDAP's thorough investigation into this study as well as others recently performed for other states, notably North Dakota and Pennsylvania, the TDAP developed specific recommendations for MDEQ:

1. **Consider clarifying the applicability of Michigan's TENORM disposal regulation - EQC 1602, Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226.** The current document includes both cleanup criteria for contaminated sites as well as disposal of Radium-226 in landfills. The TDAP recommends splitting EQC-1602 into two documents to clarify the guidance.
2. **Consider requiring all landfills that accept TENORM waste to restrict its placement.** Restricting placement such that the TENORM remains at least 10 feet below the bottom of the landfill cap, in keeping with the ALARA principle, reduces the radon exposure to negligible levels.
3. **Consider requiring all landfills that accept TENORM waste to restrict the total volume of TENORM waste placed annually.** The primary factor affecting worker dose is the amount of waste being handled annually. Restricting the total volume of TENORM waste helps to limit worker exposure.
4. **Consider requiring all landfills that accept TENORM waste to monitor leachate and ground water monitoring wells for Radium-226.** Landfills currently have leachate collection systems and ground water monitoring wells which are routinely tested. Adding a Radium-226 test to the testing protocol provides additional assurance.

5. **Consider modifying regulatory guidelines to clearly identify that different limits should apply between Type I and Type II landfills.** The MDEQ disposal guidelines do not differentiate between Type I and Type II landfills, and the TDAP discovered significant differences in levels of protection between them that could allow a great activity concentration of Radium-226 in Type I landfills.
6. **Consider developing regulatory guidelines for the safe handling of TENORM contaminated with Lead-210.** Currently only Radium-226 is considered in the MDEQ disposal guidelines. Due to its short half-life, the TDAP does not consider Lead-210 to pose a long term disposal risk; however, Lead-210 may pose a health risk to workers, particularly in the gas and pipeline cleaning industries.

The TDAP also documented several other 'Areas for Future Consideration' discovered during the panel's deliberations but determined to be outside the Governor's primary charge.

The composition of the TDAP was similar to the science and industry panel that originally established Michigan's standards in 1996, with representatives from the MDEQ, the University of Michigan, the Health Physics Society, the Michigan Environmental Council, the Hospital/Medical Physics community, the environmental consulting community, the oil and gas industry, the waste management industry, and a member of the general public.

I. Overview of TENORM Disposal Advisory Panel

On August 25, 2014, Governor Rick Snyder directed the MDEQ to assemble a panel of experts to review Michigan's standards for disposing low-activity radioactive materials. Specifically, he asked the panel to address recent questions concerning landfilling of oil and gas wastes containing low levels of TENORM. Additionally, he asked the TDAP to determine if Michigan's current landfill disposal standard (EQC - 1602 – *Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226*) sufficiently protects public health and the environment.

The composition of the group was similar to the science and industry panel that originally established Michigan's standards in 1996. Subsequent review of those standards by the U.S. DOE suggested Michigan could even raise its disposal standard substantially at some landfills.

Appointees to the TDAP were:

- **Duane DeMore**, CHP, Chesapeake Nuclear Services, Novi, representing the Health Physics Society
- **Cheryl Culver Schultz**, Medical Nuclear Physicist, Beaumont Health Systems, Royal Oak, representing the medical community
- **Kimberlee J. Kearfott**, ScD, CHP, Professor of Nuclear Engineering and Radiological Sciences, University of Michigan, Ann Arbor, representing academia

- **Nicholas Occhipinti**, West Michigan Environmental Action Council, Grand Rapids, representing the Michigan Environmental Council
- **Donald J. Carpenter**, PG, CPG, Senior Vice President and Chief Geochemist, ARCADIS, Inc., Brighton, representing environmental consultants
- **Joseph J. Weismann**, CHP, US Ecology, Inc., Boise, ID, representing the waste disposal industry
- **Bill Myler, Jr.**, Muskegon Development Company, representing the oil and gas industry
- **Ken Yale**, MDEQ Radiological Protection Section
- **Dave Minnaar**, Middleville, representing the public

The TDAP held its first meeting September 22, 2014. A total of 7 meetings and one conference call were held. This white paper serves as the TDAP's final report to MDEQ Director Dan Wyant.

Throughout the report, two documents are referenced frequently. For consistency and clarity, the following will be used:

1. The term "MDEQ disposal guidelines" refers to the 1996 MDEQ document: EQC – 1602 *Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226 (Rev. 03/2007)*.
2. The term "1999 ANL study" refers to the report issued by the DOE's ANL in September 1999, titled: *"An Assessment of the Disposal of Petroleum Industry NORM in Nonhazardous Landfills."*

II. Summary of Current TENORM Disposal Practices in Michigan

In 1996, the MDEQ issued EQC - 1602 – *Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226*. The revision in use today is Rev. 03/2007. The revisions only reflect changes in administration and organization. The standards set in the original 1996 version are the same as those in the current revision. The MDEQ disposal guidelines state:

- "1. For disposal of radium-226 contaminated materials in the form of bulk waste, such as contaminated soil or contaminated debris, materials containing a radium-226 concentration not exceeding 50 pCi/g, averaged over any single shipment, can be accepted without regard to radioactivity in a Type I or Type II solid waste landfill, as defined in Parts 111 and 115 of 1994 PA 451, as amended. Prior to shipment, the generator must provide the following information to the MDEQ's Waste and Hazardous Materials Division [*now the Office of Waste Management and Radiological Protection*], Radiological Protection Section:

- a. Verification of radium-226 concentrations based upon representative sampling.
- b. The name and address of the proposed Type I or Type II landfill recipient.
- c. The proposed date of transfer and estimate of the total volume and radioactivity content of the waste.

Proposed shipments are subject to independent confirmation testing by the MDEQ.

2. For disposal of radium-226 contaminated waste materials at concentrations above 50 pCi/g, the contaminated wastes should be transferred to a licensed radioactive waste disposal facility. *There are no licensed radioactive waste disposal facilities in Michigan.*
3. In addition, any naturally occurring radioactive material wastes containing radium-226 at any concentration generated during plugging and abandonment operations of mineral wells or oil and gas wells in Michigan may be disposed down-hole, subject to any additional applicable requirements of the MDEQ, as specified or authorized under Parts 615 and 625 of 1994 PA 451.

Applicable portions of Michigan's Ionizing Radiation Rules containing related requirements and authorizing these guidelines are contained in Rule 123(3)(e); Rule 237(1), (2), and (3); Rule 253; and Rule 272."

(Note: the term "concentration" is used in EQC – 1602 to mean "activity concentration" as used throughout this document)

These guidelines are used today by the MDEQ to evaluate each proposed disposal into a Type I or Type II landfill (a detailed discussion of Type I and Type II landfills is found in Section III F of this document). On a case-by-case basis, and after a thorough review, the MDEQ may authorize a facility to accept bulk waste with Radium-226 activity concentrations above 50 pCi/g and mix it with other material to reduce the activity concentration to below 50 pCi/g prior to final placement in a Type I or Type II landfill. When applying the MDEQ disposal guidelines, the source of the material is not a consideration. The source of the Radium-226 could be from oil and gas production, water treatment, or something else.

During 2014, MDEQ approved three shipments to the Type I landfill and 85 shipments to Type II landfills. For the Type I landfill, the three shipments accounted for less than 1 percent of the total waste placed. For the Type II landfills, TENORM accounted for less than 1 percent of the total material placed in any given landfill. All shipments were tested and the lab analysis was reviewed by the MDEQ to confirm they were below the 50 pCi/g of Radium-226 when placed in the landfill.

III. Areas Addressed

The TDAP approached the TENORM disposal issue from a number of perspectives. The panel examined changes to the risk assessment methodology since the 1990s, reviewed the typical isotopic mix and how it changes over time, evaluated the primary public and worker exposure

pathways, considered federal and state standards, and investigated landfill design considerations. Each of these areas is addressed in greater detail below. In keeping with its charges and by unanimous agreement, the TDAP evaluated the effects of placing TENORM in a Type I or Type II landfill independent of the origin of the materials.

A. Changes to Methodology since 1990s

The risk assessment for the disposal of radioactive materials relies heavily on computer models. The TDAP examined changes to these models since the early 1990s and how those changes impacted risk assessments. The TDAP focused on three areas where changes were known to have occurred: changes to the models used, changes to dose conversion factors, and changes to how regulations are interrupted.

To begin, the TDAP carefully reviewed the 1999 ANL study, paying particular attention to the models used and the assumptions made. The 1999 ANL study used two types of models: transport models to estimate how the Radium would move in landfills after placement and dose models to estimate the risk to workers and members of the public. The TDAP found the assumptions made resulted in a reasonable assessment of exposure.

Transport Models

The transport modeling relied on a series of calculations to arrive at the Naturally Occurring Radioactive Material (NORM) activity concentrations at down-gradient receptors. The process began with the Hydrologic Evaluation of Landfill Performance (HELP) model, which uses precipitation and landfill construction as inputs and predicts infiltration through the cap and leakage through the bottom. The output from the HELP model is combined with the NORM source term (activity concentration and location) in an analytical process that provides the NORM activity concentration at the landfill liner.

A dilution calculation is then applied to the NORM activity concentration at the liner to yield the NORM activity concentration in leachate after mixing with uncontaminated leachate from the landfill. It is this diluted NORM activity concentration in the leachate that is used in some of the worker dose calculations.

The diluted NORM activity concentration in the leachate is also one of the inputs used by the SWIFT II model, which is the final step in the process. The SWIFT II model uses the NORM activity concentration in the leachate, infiltration through the cap, leakage through the bottom, geologic parameters (soil types, precipitation, and groundwater gradient), and receptor locations as inputs to model the NORM activity concentrations at the down-gradient receptor locations. It is this final output that is used in the Groundwater Receptor dose calculations.

The TDAP concluded that the methodology used in the transport calculations was still valid, and the assumptions used were typically very conservative.

Dose Assessment Models

The 1999 ANL study used several dose assessment models. It used TSD-DOSE to model the dose to the workers and off-site residents during the operational phase of the landfill. Second, it used RESRAD version 5.782 to model the future use scenarios of on-site residents, on-site industrial workers, and recreational visitors. Finally, it used the transport methodology described above to model groundwater ingestion by an off-site resident.

The TDAP agreed that professional judgment resulted in reasonable assumptions used in the 1999 ANL study and are still appropriate today. However, the TDAP used RESRAD version 7.0 to model the same scenarios modelled on RESRAD version 5.782 in the 1999 ANL study. The panel duplicated the model runs as closely as possible to determine if using a current version of RESRAD would change the conclusions reached. There was no significant difference between dose projections of the two versions of RESRAD, reaffirming the 1999 ANL study conclusions.

One of the critical factors to consider with dose modeling software is the dose conversion factors used. The dose conversion factors are used to determine how a certain exposure would impact the body or specific organs. The 1999 ANL study used the 1990 Recommendations of the International Commission on Radiological Protection (ICRP-60) dose conversion factors. The most recent update by the ICRP came in 2007 with the release of ICRP-103. The dose conversion factors in ICRP-103 have not changed a great deal, and in many cases have decreased and would show a lower dose impact for the same level of exposure. The TDAP agreed that the ICRP-60 values, while not the latest, are still valid and provide a sufficient level of conservatism.

One of the most significant changes since the 1990s is the recognition that the doses from medical procedures have become a significant part of what would be considered average annual dose. When determining relative risk in the 1999 ANL study, background radiation was assumed to contribute to an annual dose of roughly 300 millirem per year (mrem/year). By applying the ICRP risk factor for the public, the risk of a fatal cancer over a lifetime from background radiation is 2×10^{-4} /year. The National Council on Radiation Protection & Measurements (NCRP) Report No. 160 indicates that the annual dose for a person in the U.S. from all sources is about 620 mrem/year. This total dose includes the 300 mrem/year from background exposure and an average per person dose from medical procedures of 320 mrem/year.

Since the 1990s, the As Low As Reasonable Achievable (ALARA) principle has been used to encourage facilities to view the public dose limit of 100 mrem/year above background as being from all sources, and that no single source should exceed the license termination standard of 25 mrem/year public dose. This change effectively reduces the maximum allowable dose, which in turn puts an upper bound on the activity concentration. The 1999 ANL study estimated a maximally exposed member of the public (future use on-site resident) to receive a dose of 7 mrem/year, which is still well below the 25 mrem/year license termination limit.

B. Isotopic Mix and How it Changes Over Time

Radioactive Decay Processes and TENORM Formation

The naturally occurring radionuclides of interest discussed here, enhanced through often unintentional human-made technological processes, stem from the radioactive decay of uranium and thorium isotopes present during the earth's formation nominally 4.52 billion years ago. Specifically, the well-established modes and rates of radioactive decay of Uranium-238 and Thorium-232 and the subsequent decay processes affecting their respective progeny radionuclides and the geochemical behavior of each specific radioelement allow for a proper assessment of the human health-related impacts of TENORM upon disposal within engineered facilities.

Figure 1 depicts the radioactive decay chain associated with precursor Uranium-238, leading to a stable Lead-206 progeny. Incorporated within this figure is the measured half-life of each radionuclide. Half-life is the period of time required for decay of one-half of the radioactive atoms initially present. Similarly, Figure 2 depicts the decay chain associated with precursor Thorium-232 leading to a stable Lead-208 progeny. Examination of the order of the radioactive progeny formation, their associated rate of subsequent decay, and their specific geochemical behavior provides critical insight into assessing their potential human health impacts from specific forms of TENORM.

Figure 1 – Radioactive Decay Chain of Uranium-238

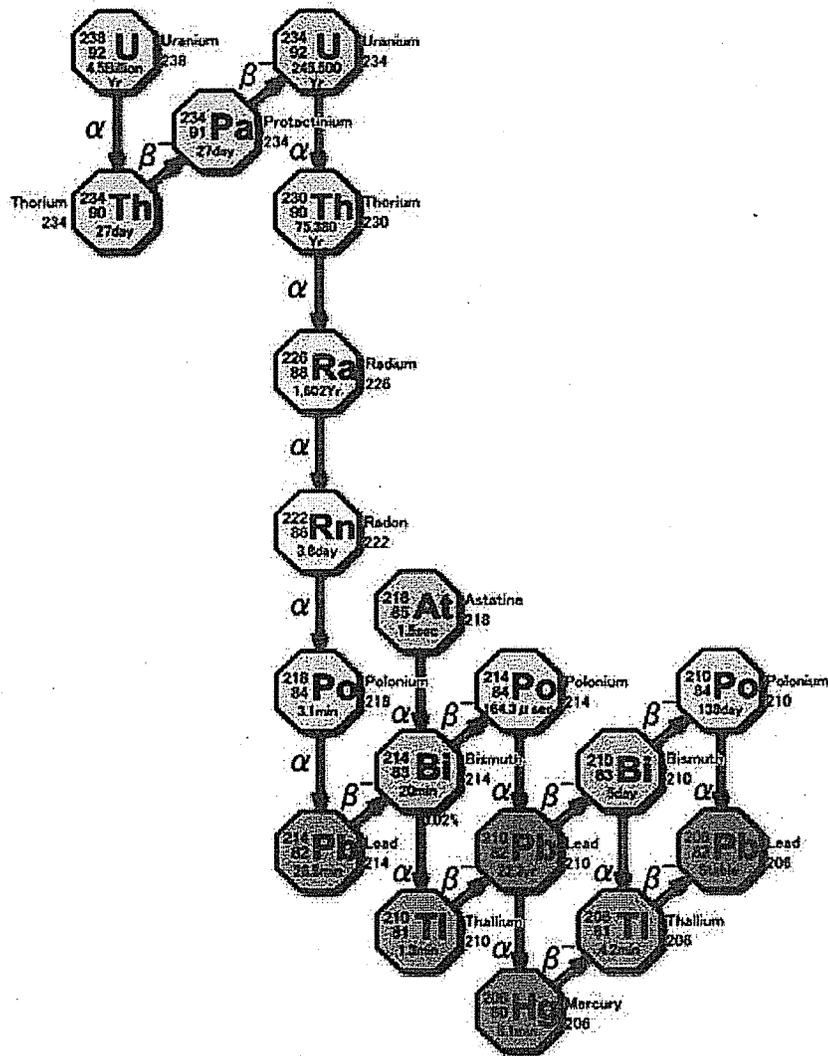
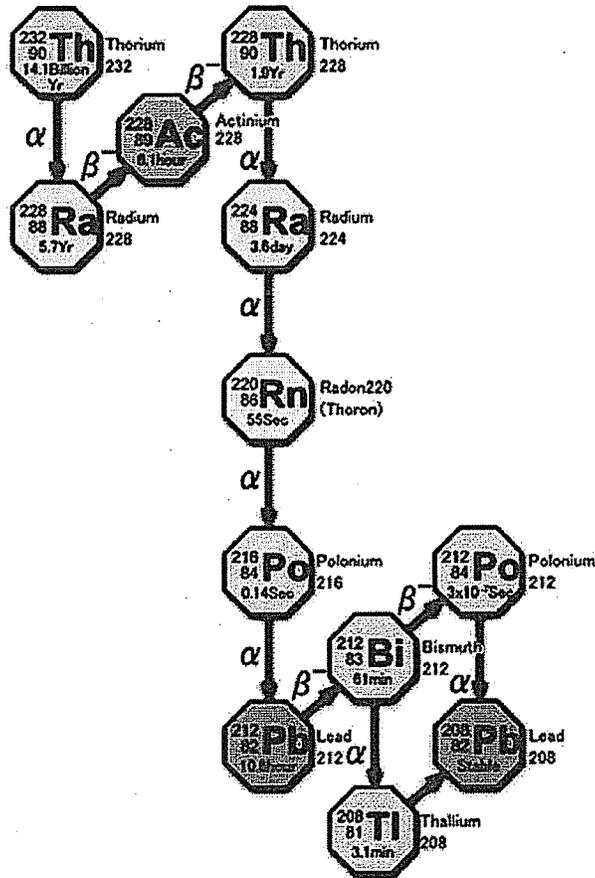


Figure 2 - Radioactive Decay Chain of Thorium-232

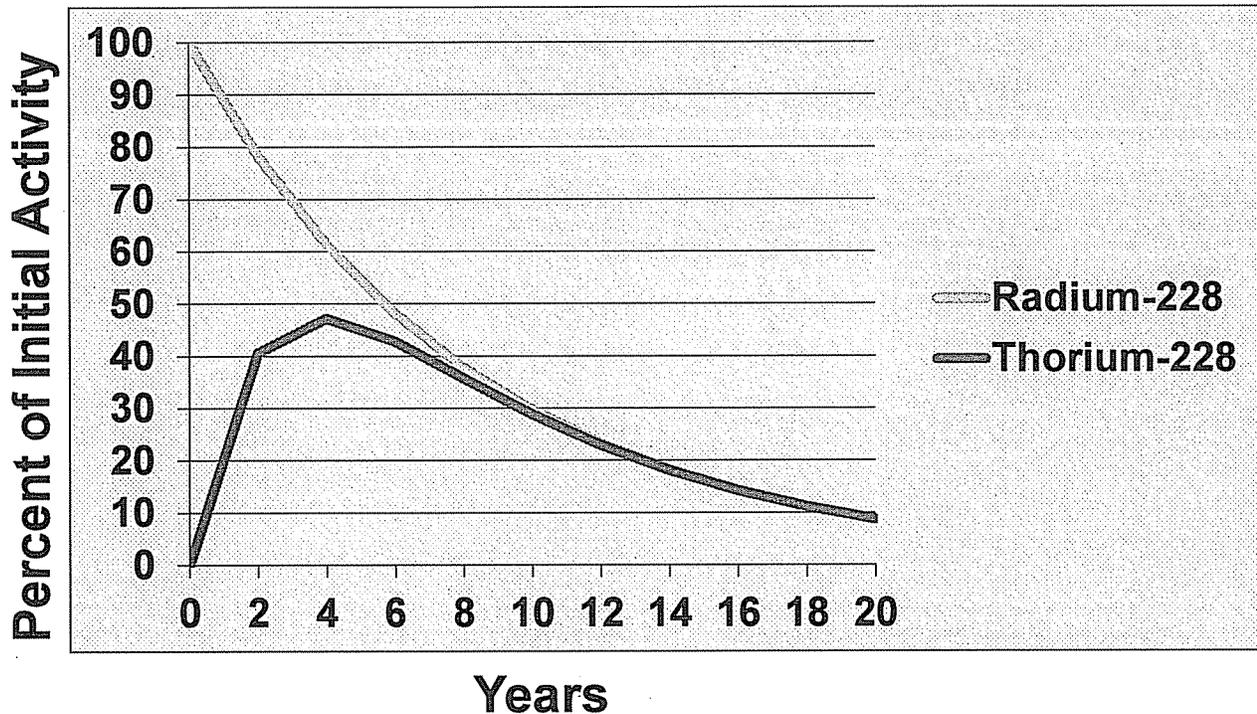


Of specific interest within the Uranium-238 decay chain are the notably longer half-lives, on a relative basis to its subsequent radioactive progeny, of Radium-226 and Lead-210. The nominal half-life of 1,600 years for Radium-226 allows for its prolonged persistence, whereas Lead-210 can persist for decades. The longevities of these two radionuclides contrast with the comparatively shorter half-lives associated with the Thorium-232 decay progeny. The 5.7 year half-life of Radium-228, as shown in Figure 2, allows for its rapid depletion in the absence of precursor Thorium-232. The rates of the decrease of the relative radioactivities of Radium-228 and its progeny Thorium-228 are depicted in Figure 3. This graphic documents that a Radium-228 TENORM product (absent its precursor Thorium-232) will decay to extremely low levels of radioactivity within a period of a few decades, and provides basis for the absence of specific regulations pertaining to the disposal of Radium-228-dominated TENORM.

Note that this graphic first assumes the presence of only Radium-228 with the subsequent in-growth of Thorium-228 until secular equilibrium is reached with Radium-228, followed by their common decrease in radioactivity. Secular equilibrium is a condition in which the precursor radionuclide and its progeny have the same level of radioactivity. It develops

when the precursor radionuclide and all progenies are retained in immediate proximity over a duration commensurate with multiple half-lives of the relatively most stable radioactive progeny. Referring again to Figure 3, given the 1.9 year half-life of Thorium-228, approximate equilibrium with respect to its precursor Radium-228 is shown to be reached within about eight years, or slightly more than four half-life periods.

Figure 3 – Radioactive Decay of Radium-228 and Thorium-228



Importance of Geochemical Behavior of Individual Radionuclides

Whereas the above discussion has emphasized the radioactive behavior of the pertinent radionuclides, it is also important to understand the chemical behavior of each radionuclide as well. Radionuclides are essentially metals, with the notable exception of gaseous Radon, and as such will chemically behave exactly the same as the non-radioactive isotopes of the same element in a given environment. Understanding the chemical makeup of these radionuclides is therefore vital to their fate and transport behavior (i.e., dose potential) since it is these characteristics that define a radionuclide's solubility and mobility. Conceptual formation processes leading to the development of TENORM from the Uranium decay chain are presented in the following subsections.

Formation of a Radium-226-Dominated TENORM

One increasingly common form of TENORM is associated with drilling residuals, scale-impacted tubulars, and processing equipment employed during oil and natural gas production. Uranium-238 is naturally present within the rocks and sediments hosting the hydrocarbon resources, and its radioactive decay produces Radium-226. Because of Radium-226's specific geochemical behavior, some of this Radium dissolves into the saline fluids associated with the hydrocarbons. The saline fluid's combination of elevated chloride [Cl⁻] ions and temperature enhances the solubility of naturally occurring barium [Ba⁺²] and strontium [Sr⁺²] ions. As these saline solutions are pumped to the surface during oil and gas production, cooling allows for the precipitation of barium and strontium ions as low-solubility sulfate minerals. During the formation of these minerals, some Radium isotopes, including both Radium-226 and Radium-228, are co-precipitated. Given suitable conditions, barium and/or strontium-dominated sulfate minerals may incorporate sufficient Radium to become classified as TENORM.

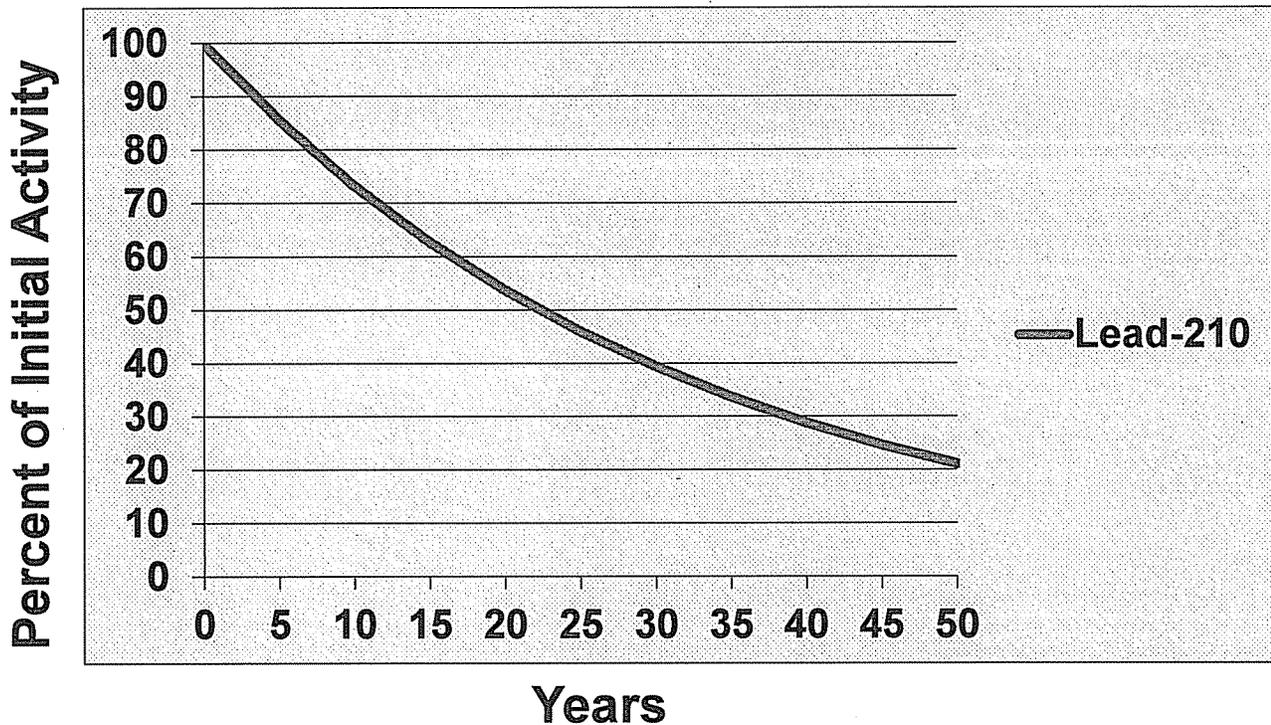
Whereas the low solubility of these minerals typically prevent the aqueous mobilization of Radium isotopes from the well-crystallized mineralogical structure, the subsequent production of Radon-222, a chemically inert gaseous phase, may be only partially retained within the crystalline structure. This results in the release of this radioactive gas, assessed in terms of its human health risk in the following sections. The retention of some of the Radon-222 within the barium and strontium sulfate minerals also allows for production of subsequent decay products, including both Bismuth-214 and Lead-214, the most important gamma radiation-emitting radionuclides present within the Uranium-238 and Radium-226 decay chains. Although directly attributed to Radium-226, human health-related risk assessments of gamma radiation exposure are, in fact, focused on emanations derived from the Bismuth-214 and Lead-214 progenies. As will be further discussed, the fact that these important gamma emitters are present higher in the radioactive decay chain than Lead-210, has important implications in assessing human health risks stemming from this specific radionuclide.

Formation of a Lead-210-Dominated TENORM

Radium-226, present in both the host rocks and dissolved within the oil and gas-associated produced fluids, also allows for the sustained production of Radon-222 and its incorporation within both aqueous and free gas phases. Upon separation of natural gas from the aqueous phase (produced fluids) Radon-222 is preferentially partitioned into the gas phase. Due to the relatively short half-life of Radon-222 (3.8 days), and the even shorter half-lives of progenies immediately downchain, ultra-fine grain Lead-210 is formed as an elemental metal solid phase. During the onward handling, storage, and processing of natural gas – particularly the production of propane – Radon-222 and its Lead-210 progeny may be further concentrated, with the physical deposition of particulate Lead-210 leading to a potential TENORM. Although Lead-210 itself is a weak gamma emitter, this specific TENORM does not contain the relatively more gamma energetic Bismuth-214 and Lead-214 radioisotopes. Nor can it emit a radioactive gas phase, as can the Radium-226 TENORM discussed above.

Consequently, the dominant threat is inhalation of particulates, an exposure pathway only present for workers and not for a future hypothetical site resident. Further, radioactive decay will result in the natural attenuation of this radionuclide over the course of several decades, as shown in Figure 4.

Figure 4 - Radioactive Decay of Lead-210



Leveraging the Combined Understanding of Radioactive and Geochemical Behavior of Pertinent Radionuclides in Various TENORM

The above discussion establishes that for specific forms of TENORM, the rates and formation of radioactive products can be calculated. Further, the degree and rates of solubilization of radionuclides can also be estimated. The above understanding also allows fluxes of radioactive gas (Radon-222) and various types of radiation (alpha, beta, and gamma) to be calculated. It is through these processes that inputs to human health risk assessments can be developed, along with a basis for formulating subsequent bounding case sensitivity analyses, which are discussed below.

C. Primary Public Exposure Pathways

When TENORM waste is initially buried at a disposal facility, some members of the public near the disposal site may be exposed to some level of radiation. However, the magnitude of the exposure is dependent on many factors and assumptions, including the amount and form of the TENORM disposed, design and performance of the disposal facility, and the location and consumption habits of the exposed individual.

The pathways for public exposure include:

1. **Direct Radiation (External):** Members of the public can be exposed externally if living or visiting on or near the disposal facility.
2. **Particulate Inhalation (Internal):** Contaminated dirt and dust can be re-suspended, carried by the wind, and inhaled by members of the public.
3. **Radon Inhalation (Internal):** When Radium-226 undergoes radioactive decay, it will temporarily become gaseous Radon-222. When in this gaseous state, it is highly mobile and can be inhaled, resulting in internal exposure.
4. **Ingestion (Internal):** For worst case modeling purposes, it is conceivably possible a member of the public could consume contaminated food and drink. Over long time periods, disposed TENORM could migrate from the disposal facility, where it could enter groundwater. From there, it could enter drinking water or be incorporated into locally grown edible crops and then ultimately ingested by a member of the public. If cattle or other meat animals consume contaminated water or vegetation, the public exposure would occur during consumption of the meat or milk.

The magnitude of public dose is very dependent on the assumptions used in the dose assessment. Individuals who are assumed to build their residence on top of the disposal facility and spend nearly all of their time in or around their home would have much higher exposures, especially from radon emanation. Individuals who are assumed to consume locally grown contaminated food or drink from nearby contaminated drinking water wells would also have higher exposures.

The applicable pathways for a member of the public are dependent on the timeframe of exposure. In the near term, it is assumed that institutional controls (corporate land ownership, signs, fences, governmental deed restrictions) are in place to preclude individuals from building residences or installing drinking water wells directly on top of any disposal facility. Only in the very long term – hundreds or thousands of years – can the designed institutional controls and societal memory of the facility be assumed to have disappeared, making all of the exposure pathways possible.

The 1999 ANL study provided the technical validation of the current MDEQ disposal guidelines for TENORM-contaminated material up to 50 pCi/g of Radium-226. During the operational phase of the facility, the public exposure was evaluated for inhalation, external, and ingestion exposures for individuals residing 24 hours per day, 7 days per week, living adjacent to the disposal site. For the long-term, future use scenarios, individuals are

assumed to build a house without a basement atop the landfill, which they occupy for 18 hours per day. This individual consumes 50 percent of their food from locally raised crops, milk and meat, but get their water from an off-site, non-contaminated source.

Depending on the ultimate future use of the disposal facility land, there could be other public exposure pathways. The facility could become a recreational site like a park, golf course, or ski slope, or a commercial or industrial development. However, any evaluated exposures from those scenarios would be much less than those of the on-site resident.

According to the 1999 ANL study, the most significant member of the public dose is approximately 7 mrem/year to the future use on-site resident. All other public doses are less than 1 mrem/year. This is far below the 100 mrem/year above background limit for the public.

D. Primary Worker Exposure Pathways

Workers at a disposal facility can be exposed to TENORM waste in a variety of manners. In general, occupational exposures can be minimized by using only the workers necessary to complete a job, and efficiently and quickly processing the waste packages to their ultimate location – the disposal cell.

The pathways for occupational exposure include:

1. **Direct Radiation (External):** TENORM waste packages, when they arrive at the disposal facility, must be handled, transported, or processed in accordance with the practices at the particular disposal facility. The magnitude of external exposures from a given source depends on the duration of exposure, the distance from the source to the exposed individual, and any shielding between the source and the exposed individual. The direct radiation occupational exposure is therefore job task dependent, as someone who handles TENORM waste or waste packages will be expected to be exposed differently from a truck or fork lift driver who only transports the material.
2. **Particulate Inhalation (Internal):** If TENORM waste packages are not sealed, or include bulk material in packages that are open or must be dumped or processed in any way, particulates (including TENORM) can be re-suspended into the workplace airborne environment. Workers are internally exposed when breathing radioactively contaminated air.
3. **Radon Inhalation (Internal):** When Radium-226 undergoes radioactive decay; it will temporarily become gaseous Radon-222. When in this gaseous state, it is highly mobile and can be inhaled, resulting in internal exposure.
4. **Ingestion (Internal):** When working in air contaminated with radioactive particles, some contamination can be inadvertently ingested by workers.

Occupational exposures typically do not include ingestion pathways from the consumption of contaminated water, food, or milk. The assumption is that workers get their food and drink from off-site, clean sources. Occupational exposures are also limited to 40 hours per week, based on a typical work schedule.

If a worker is designated a "radiation worker," then a higher limit for occupational exposure, currently 5000 mrem/year per the U.S. Nuclear Regulatory Commission, would be applicable. The radiation worker limit is significantly higher than the limit for members of the public, 100 mrem/year above background. The higher limit, coupled with the limited exposure times, results in occupational exposures being generally lower and of a lesser concern than public exposures. If a worker is not designated a "radiation worker," with all of the exposure controls also put in place, the public dose limit applies to workers as well. According to the 1999 ANL study, the maximum occupational dose is approximately 2 mrem/year to landfill operators during the operational phase of the facility, well below either the radiation worker or member of the public limits.

E. Federal and State Standards

In studying an appropriate TENORM disposal standard for Michigan, the TDAP considered available information describing applicable federal and state legal authorities, regulations, rules, and other restrictions and guidelines. In general, at the federal level, the legal authorities over matters involving TENORM (or the more broadly defined NORM) are somewhat complicated and overlapping among several agencies as a result of the various laws implemented to protect health and the environment. The end result is that both federal authority and associated federal radiological standards specifically applicable to the landfill disposal of TENORM are extremely fragmented and, at best, limited in scope or application.

On the other hand, legal authority for the management of the more broadly defined NORM, including TENORM wastes, on the basis of radiological concerns impacting human health or the environment seems to more clearly rest with the individual states, and in most cases has resulted in specific rules or regulatory restrictions with clear application, at least in a broad sense, to the control of the radiological hazards relating to NORM and TENORM. For example, there is uniform agreement among the states for an exempt activity concentration level of 5 pCi/g for Radium-226. That is, no states restrict the possession, use, management, or disposal of Radium-bearing materials at activity concentrations below this level for health or safety. However, the promulgation of standards for the management of TENORM wastes above 5 pCi/g varies widely amongst states, both in scope and specificity.

In Michigan, the legal authority, originally promulgated as part of the Public Health Code, currently rests within the MDEQ. Associated rules and regulatory authority are implemented through Michigan's "Ionizing Radiation Rules." In 1996, Michigan established specific guidelines applicable to the disposal of wastes containing Radium-226, the primary radionuclide of concern to health, safety, and environmental protection. The MDEQ

disposal guideline is unique among the states for its specificity regarding the landfill disposal of TENORM. The Michigan landfill disposal limit is set at 50 pCi/g for Radium-226 and is applicable to any Radium-226 waste material, regardless of origin. The MDEQ disposal guidelines address the management of decontamination and residual wastes from past practices, such as those involving the radioluminous instruments industry and industries involved in the fabrication and use of both sealed and unsealed sources for industrial and medical purposes, as well as the current waste generating practices exemplified by the oil and gas industry.

Several other states impacted by TENORM wastes from the oil and gas industry have or are considering allowable activity concentration standards for Radium, which may include Radium-226 and Radium-228, for landfill disposal. Theoretically, it would make sense for Michigan to include Radium-228, but in practice it would make little difference since it doesn't significantly contribute much long-term dose.

The 1999 ANL study included a useful and representative review of applicable federal and state regulatory standards and guidelines specific to the handling and disposal of TENORM wastes. Specific details relating to applicable federal and state authority and regulatory requirements are available in the study. The study includes details for several individual states, including Michigan, which ANL identified as having significant oil and gas production and associated TENORM wastes. The 1999 ANL study also provided details concerning federal requirements from a non-radiological perspective related to the construction, operation, closure, and post-closure of hazardous and nonhazardous landfills regulated under the federal Resource Conservation and Recovery Act (RCRA).

MDEQ staff, TDAP members, and select Michigan landfill operators provided additional Michigan-specific details that meet or exceed the federal RCRA requirements. These non-radiological requirements applicable to Michigan landfills are described in detail in the next section.

Both radiological and non-radiological requirements were considered in the development of the MDEQ disposal guideline. With the help of MDEQ staff, the TDAP also determined that no significant changes have occurred in the area of new or revised regulation or standard development since the 1999 ANL study. Many individual states allow for landfill disposal of TENORM wastes on a case-by-case basis, and several states are reportedly working on specific TENORM waste management standards that may be issued in the near future, particularly North Dakota and Pennsylvania.

F. Landfill Design and Closure Requirements

Introduction

Several TDAP members visited both hazardous waste and municipal solid waste landfills during the review process, since Michigan's regulations allow TENORM disposal in both. The objective was to study and compare elements of design, construction, and operations.

Industrial landfills were not included in the scope of the investigation since these landfills are prohibited from receiving TENORM for disposal in Michigan.

Landfill Regulations

Commercial landfills can be divided into three general categories: hazardous waste landfills, municipal solid waste landfills, and industrial landfills. Construction and operating criteria for landfills at the federal level are provided in Title 40 of the Code of Federal Regulations (CFR), *Protection of the Environment*. The U.S. Environmental Protection Agency (EPA) regulates criteria for municipal solid waste landfills in 40CFR Part 258 (as implemented from Subtitle D of the Resource Conservation and Recovery Act [RCRA]) and hazardous waste landfills in 40CFR Part 264 (as implemented from Subtitle C of the RCRA). The EPA defines each type of landfill in the following manner:

- *“A municipal solid waste landfill [MSWLF] unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under §257.2 of this chapter. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.”*
- A (hazardous) landfill means *“a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.”*

States may provide additional requirements above and beyond what is required by the U.S. EPA in terms of design specifications, operating standards, and post-closure requirements. The MDEQ regulates landfills under Chapter 3 of the Natural Resources and Environmental Protection Act of 1994, as amended, with hazardous waste landfills under Part 111 and solid waste landfills under Part 115. MDEQ classifies landfills in Michigan as Type I (Hazardous Waste), Type II (Municipal Solid Waste), or Type III (Industrial Waste). Only Type I and Type II landfills are allowed to receive Radium-226 TENORM for disposal, so only these landfill types will be discussed from this point further.

General Design Elements

Nearly all landfill cells consist of three major components:

- **Liner:** A system of natural and engineered barriers underlying the waste cell designed to prevent unauthorized leakage or migration of waste materials into the environment.
- **Waste Cell:** The portion of the landfill where authorized wastes are placed for disposal.

- Cap: The cover placed over closed waste cells to protect and isolate the contents from water infiltration due to rain and runoff, prevent the unintended spread of contamination from wind erosion, and prevent unintended contact with the waste by people and wildlife.

The requirements for each portion of a landfill may vary depending on landfill type, additional state regulatory requirements, and extent of natural geological features available.

Hazardous Landfill Design

Hazardous waste (Type I) landfills are designed to the most rigorous construction and performance standards under both RCRA and State of Michigan regulations. These include minimum standards for the natural siting location standards, the design and construction of the landfill liner, leachate collection system, leak detection systems, secondary liner, and final cap. Since the Wayne Disposal Inc. (WDI) hazardous waste landfill facility in Belleville, MI, is the only commercially available Type I landfill in the State of Michigan, the WDI facility is used here to demonstrate typical design elements. A cross-sectional view of the WDI landfill and its major design components is provided in Figure 5.

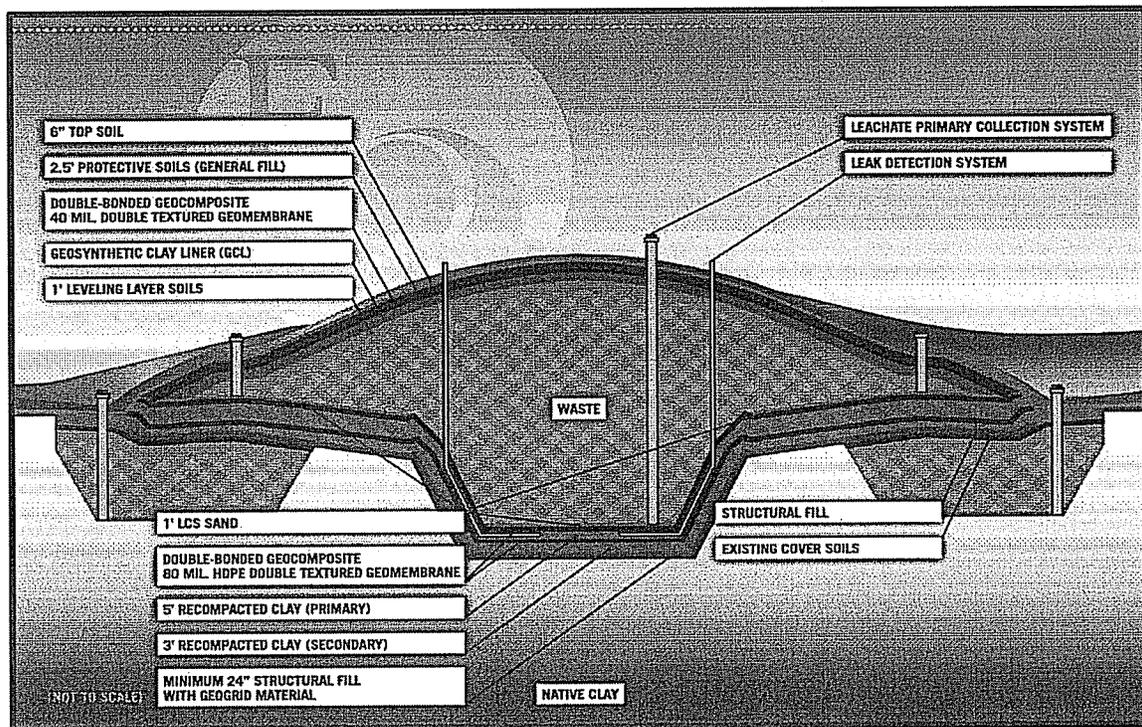


Figure 5 - Cross-Sectional View of WDI Landfill (graphic courtesy of US Ecology, Inc.)

Landfill Liner

A Michigan Type I landfill must contain a double-composite landfill liner system using a combination of natural and synthetic materials. The WDI landfill includes a leachate collection system and a leak detection system, which consist of the following components listed in descending order:

Leachate Collection System (Primary)

- 1-foot layer of sand to protect the liner system and assist with leachate drainage. Type I landfills are prohibited from allowing more than 12 inches of leachate to collect on the primary liner prior to removal. This requirement mitigates the potential for transport through the liner and has the additional benefit of protecting the liner from accelerated physical degradation.
- The primary double-bonded geocomposite drainage layer.
- The primary 80-mil high-density polyethylene (HDPE) textured geomembrane.
- The primary 5-foot layer of low-permeability recompacted clay (1×10^{-7} centimeters per second [cm/sec]).

Leak Detection System (Secondary)

- The secondary, double-bonded geocomposite drainage layer.
- The secondary 80-mil HDPE textured geomembrane.
- The secondary 3-foot layer of low-permeability recompacted clay (1×10^{-7} cm/sec).

Location Siting Standards

- Minimal 10 feet natural clay at 1×10^{-7} cm/sec permeability below and lateral to the cell

The leak detection system allows any leakage through the primary composite liner to drain to a sump within 24 hours and be removed from the system. The requirements for a leak detection system are unique to Type I landfills in Michigan. In addition to these engineered barriers, WDI also conforms to MDEQ's maximum natural geology underlayment requirement, which is a minimum of 10 feet of natural very low-permeability clay beneath the liner system. The physical layout of the liner system is shown at the bottom of Figure 5.

Both leachate collection and leak detection are required components of a Type I landfill design in Michigan. Leachate from a Type I landfill is itself a "listed" RCRA hazardous waste that requires disposal at a Type I landfill after treatment. The WDI facility collects all of its landfill leachate and treats it on-site within its Wastewater Treatment Plant. The leachate goes through multiple chemical, biological, and physical treatment processes to destroy or remove the hazardous components of the leachate from the treated water. This includes removal of TENORM like Radium-226. The removed constituents are placed back into the WDI landfill while the treated water is discharged to the municipal sewer system to receive additional treatment by a licensed municipal wastewater treatment plant. Prior to release into the sewer system, the effluent must meet discharge limits per a discharge permit from the MDEQ.

Landfill Cover

When a waste cell is closed, a cover is installed to protect the contents of the waste cell and prevent intrusion from water, people, and wildlife. The cover design for the WDI Type I landfill includes the following components, listed in descending order from the top down:

- 6-inch topsoil/vegetative layer to prevent soil erosion from wind and rain.
- 2.5 feet of protective soils with permeability less than 1×10^{-5} cm/sec.
- A double-bonded geocomposite drainage layer.
- A 40-mil textured HDPE geomembrane liner.
- A low permeability geosynthetic clay liner that contains 1×10^{-9} cm/sec bentonite.
- 1-foot leveling layer of clay materials placed between the cover and waste materials.

The physical makeup of the WDI landfill cover is shown at the top of Figure 5.

Municipal Solid Waste Landfill Design

Design and construction of MSWLFs (Type II) is relatively similar to the hazardous waste landfills described in the previous section. However, significant differences are possible depending upon location of the landfill and installed options by the owner/operator.

Landfill Liner

Liner systems for MSWLFs can vary considerably depending on the natural geology present where the landfill is constructed. MSWLFs are required to have a primary liner system with a 60-mil flexible membrane liner underlain by 2 feet of recompacted clay or a geosynthetic clay material with an equivalent permeability of 1×10^{-7} cm/sec. If the location of the landfill exhibits a minimum of 10 feet of 1×10^{-7} natural clay below the liner, then a MSWLF operator may permit the landfill with only the primary liner. If the location does not have the minimum thickness of natural low-permeability clay beneath the landfill cell, then a secondary liner system is also required. This secondary liner is essentially a repeat of the primary liner with consistent materials and thicknesses.

MSWLFs collect landfill leachate in a manner similar to hazardous landfills. The leachate collection system piping is bedded within a sand layer just below the waste and pumped to centralized collection points for handling. Some Type II facilities process their leachate through an onsite evaporator system to reduce moisture and return the dried solids to the landfill for disposal. However, many Type II landfills directly discharge their untreated leachate to publicly owned treatment works. However, these treatment works are typically designed to treat sewage like human waste, not industrial contaminants, including radionuclides in TENORM.

A secondary leak detection system is not explicitly required for MSWLFs. If the landfill is underlain with a minimum of 10 feet of 1×10^{-7} natural clay below the liner, then a secondary system is not required. However, landfills that are required to install a secondary liner system are required to include a secondary collection or leak detection in the design, or some operators may voluntarily choose to install elements of a system to detect landfill liner leakage.

Landfill Cover

Final cover design is similar between Michigan Type I and Type II landfills. Like Type I landfills, Type II landfills will typically include a topsoil/vegetative layer, protective soil, a geocomposite drain, a geomembrane liner, a geosynthetic clay layer, or a leveling layer of clay, and a permeable soil layer that collects and vents landfill gas to gas risers.

MSWLFs can have waste-to-energy (WTE) power plants installed on their property. WTE plants are designed to collect the methane gas created during natural degradation of organic wastes within a MSWLF and burn it for energy generation on the premises. MSWLFs that have WTE plants installed require gas collection piping installed throughout the landfill waste cell and final cover to facilitate efficient collection of the methane. An example of an installed WTE system within a MSWLF is shown in Figure 6.

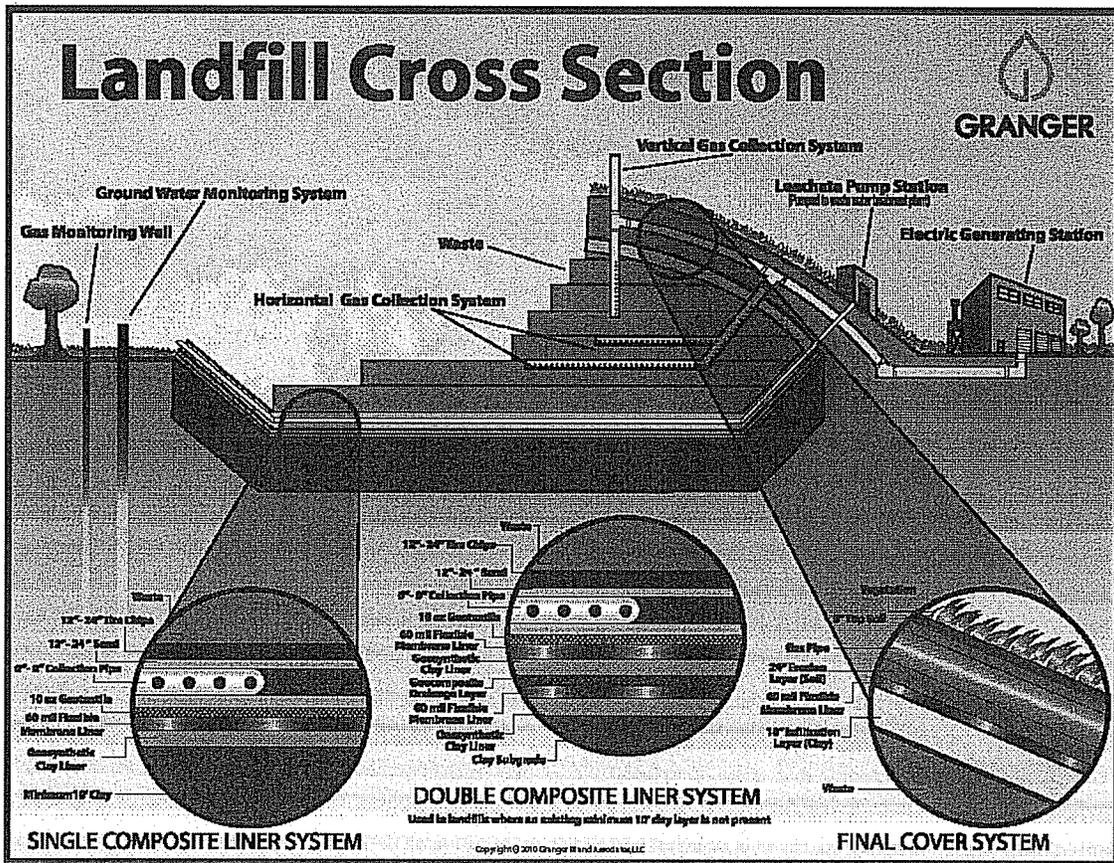


Figure 6 - Cross-Sectional View of Typical MSWLF (Graphic courtesy of Granger III & Associates, LLC)

Comparison of Type I and Type II Landfills

The TDAP had an opportunity to learn a great deal about the design, construction, and regulatory requirements for both Type I and Type II landfills as part of this research. A summary comparison of the landfill design and regulatory requirements between Type I and Type II landfills is presented in Table 1.

In addition to the design differences between Type I and Type II landfills, the TDAP also observed operational differences between the two types of facilities. For instance, waste transport vehicles delivering waste to the WDI Type I facility unload the waste into a waste transfer tank. The waste is then transported to the landfill in dedicated vehicles that stay in the landfill unless thoroughly decontaminated. Trucks that deliver waste to WDI also go through a wheel and undercarriage wash before leaving the facility, even though they never travel into the active landfill zone. At Type II facilities, waste transport vehicles generally drive into the active landfills to dump their contents and are not cleaned before leaving the site. In addition, the WDI facility has fugitive dust controls, including a wind-speed limit that requires the facility to suspend waste acceptance operations when winds reach a certain speed. While there is not a specific wind speed limit at Type II facilities, there are requirements to control dust and blowing papers, and to prevent the creation of nuisance dust conditions. The operations plan for the landfill must include these provisions.

Table 1. Design Requirements Comparison of Type I and Type II Landfills in Michigan

| Design/Licensing/Operating Criteria | Type I Landfill (subtitle C) Hazardous Waste Landfill | Type II Landfill (subtitle D) Solid Waste landfill |
|-------------------------------------|---|--|
| Liner Construction | <ul style="list-style-type: none"> • Primary Liner: FML (meet chemical resistance and long-term compatibility, typically 80-mil HDPE) and 5' recompacted clay (1×10^{-7}) (GCL is not allowed) • Mandatory Leak Detection System • Secondary Liner: FML (meet chemical resistance and long-term compatibility, typically 80-mil HDPE) and 3' recompacted clay (1×10^{-7}) (GCL is not allowed) • 20' natural clay base and sides (1×10^{-6}) (location standards) | <ul style="list-style-type: none"> • Primary Liner: 60-mil FML and 2' of recompacted clay (1×10^{-7}) or GCL • Conditional Leak Detection – none if underlain by 10' of native soil (1×10^{-7}) • Secondary Liner – none if underlain by 10' of native soil (1×10^{-7}), if not, repeat primary liner. |
| Leachate Collection System? | Yes | Yes |
| Leachate Treatment | Extensive on-site treatment followed by discharge to POTW. Recovered solids disposed in Type I landfill. | Local POTW release or evaporation and local disposal |
| Final Cover Design | <ul style="list-style-type: none"> • Not less than 2' protective soil materials or the maximum depth of frost penetration, whichever is greater, such as topsoil (not less than 6"), subsurface drainage media, or cobbles to prevent animal burrowing. The protective material shall protect the clay and any synthetic component. • 40-mil HDPE or LLDPE FML • 3' recompacted clay (1×10^{-7}) | <ul style="list-style-type: none"> • 6" vegetative top layer • 24" soil layer for lateral drainage • FML and Min. 18" earthen material (1×10^{-5}) or GCL • 12" permeable soil layer gas collection layer or equivalent |

Acronyms and Abbreviations:

LDCRS = Leak Detection, Collection and Recovery System

SCS = Secondary Collection System

POTW= publicly-operated treatment works

FML=flexible membrane liner

HDPE = high-density polyethylene

GCL=geosynthetic clay liner

IV. Summary of Findings and Recommendations

Governor Rick Snyder charged the TDAP with a technical review of the MDEQ disposal guidelines, specifically TENORM containing Radium-226. To be thorough, the panel examined many radionuclides found in TENORM, determining that of those reviewed; Radium-226 posed the most credible threat to the public, workers, and the environment because of its long half-life and its production of the progeny Radon-222. In fact, the primary health risk was determined to be exposure to Radon-222, and its production by Radium-226 is independent of the original source of the Radium-226, so the analysis is valid for all Radium-226 disposals.

It should be emphasized that the 1999 ANL study focused on assessing the appropriateness of MDEQ's 1996 disposal guideline, including a detailed radiological dose/risk assessment. It concluded that the MDEQ disposal guideline of 50 pCi/g is "protective of human health." The TDAP thoroughly reviewed the entire 1999 ANL study and is in agreement with its conclusions and recommendations as they relate to the overall safety of the current MDEQ disposal guideline.

However, the MDEQ disposal guidelines do not differentiate between Type I and Type II landfills, but the TDAP discovered significant differences in levels of protection between them that could inform future regulatory decisions. Whereas many decisions regarding enhanced or redundant protections at Type II facilities are left to the discretion of the owner/operator, they are explicitly required at Type I facilities. This distinction is expected given the different types of waste that these landfills are primarily designed, licensed, and permitted to accept.

However, these differences in landfill design and operating characteristics were not independently considered as part of the TENORM acceptance rulemaking process. Instead, the 1999 ANL study undertook a 'baseline' evaluation, modeling a 'typical' Type II facility that meets the minimum expected Michigan regulatory requirements. The additional levels of protection afforded by Type I landfills were not explicitly evaluated in the 1999 ANL study; although the report did suggest Type I landfills would likely exhibit similar levels of protection for TENORM levels greater than 50 pCi/g. Given the information provided herein, the TDAP concurs with the 1999 ANL study findings that MDEQ could consider approving an elevated TENORM acceptance at Type I landfills in Michigan.

In addition, the TDAP noted the leachate collection systems and ground water monitoring wells that are part of Type I and Type II landfills. These already established systems could be used to monitor for possible migration of the Radium-226 after placement.

In summary, the TDAP makes the following recommendations:

1. **Consider clarifying the applicability of Michigan's TENORM disposal regulation, EQC 1602, *Cleanup and Disposal Guidelines for Sites Contaminated with Radium-226*.** This regulation could be strictly interpreted to apply to only the cleanup of sites in Michigan contaminated with Radium-226. This is an administrative limitation that is not supported by any technical evaluation. Further, in practice, the State of Michigan has not limited TENORM disposal to that requirement. Any future generated or discovered TENORM waste could be interpreted

to not be covered under the current disposal guidance. The TDAP recommends that MDEQ separate EQC-1602 into two documents, one that provides cleanup guidelines and one that provides disposal guidelines.

2. **Consider requiring all landfills that accept TENORM waste to restrict its placement.** The primary dose contributor is Radon-222 emanating from the landfill. By restricting the placement of Radium-226 TENORM such that it remains at least 10 feet below the bottom of the landfill cap, in keeping with the ALARA principle, the dose contribution becomes negligible.
3. **Consider requiring all landfills that accept TENORM waste to restrict the total volume of TENORM waste placed annually.** The primary factor affecting worker dose is the amount of waste being handled annually. Restricting the total volume of TENORM waste helps to limit worker exposure. A landfill may submit a worker safety plan for review by MDEQ. With MDEQ approval of the worker safety plan, the annual volume limit may be raised.
4. **Consider requiring all landfills that accept TENORM waste to monitor leachate and ground water monitoring wells for Radium-226.** Landfills currently have leachate collection systems and ground water monitoring wells which are routinely tested. Adding a Radium-226 test to the testing protocol provides additional assurance that no excess Radium-226 is being released to the environment or public water treatment system.
5. **Consider modifying regulatory guidelines to clearly identify that different limits should apply between Type I and Type II landfills.** Currently, the Michigan regulations apply the same 50 pCi/g limit for both Type I and Type II disposal facilities. Type I landfills are more robust facilities suitable for disposal of TENORM waste at activity concentrations higher than those allowed at Type II landfills. The limits for Type I facility could be determined on a case-by-case basis, as there is currently only one such facility in the state.
6. **Consider developing regulatory guidelines for the safe handling of TENORM contaminated with Lead-210.** Currently only Radium-226 is considered in the MDEQ disposal guidelines. Due to its short half-life, the TDAP does not consider Lead-210 to pose a long term disposal risk; however, Lead-210 may pose a health risk to workers, particularly in the gas and pipeline cleaning industries.

V. Areas for Future Consideration

The TDAP's discussions were extensive, but could not address all issues discovered during deliberations but outside the charge of the panel. However, they might warrant additional consideration. These issues include:

1. The presence of Thorium-232 in the North Dakota TENORM study suggests that it may be a contributor to some exposure pathways. Its potential health effects on worker health and safety may warrant further studies.
2. Consider the need for Radon-222 monitoring near landfill vents.
3. Biogenic gas generation in a landfill could result in the release of Radon-222 in a way that may not have been modeled. Consider investigating the effects of biogenic gas production on the transport of Radon-222 in a landfill.
4. Consider the potential for possible increased Radon-222 as effluent from a waste-to-energy plant.
5. Modeling assumes extremely high solubility of Radium, which may be unrealistic for many common forms of Radium in TENORM, such as Radium-enriched barite. Consider evaluating the specific solubility of the Radium compound of interest when determining leachability and acceptance criterion.
6. Consider an evaluation of the effectiveness of the TENORM self-reporting regime to comprehensively identify, label, and dispose of Michigan's TENORM materials.

VI. Glossary

Absorbed Dose - The amount of energy deposited in any substance by ionizing radiation per unit mass of the substance. It is expressed numerically in rads (traditional units) or grays (SI units).

Activity - The rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

ALARA – As low as reasonably achievable. Making every reasonable effort to maintain radiation exposures as far below the dose limits as is practical, taking into account the available technology, the economics of improvements in technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

Background Radiation - Radiation from cosmic sources, naturally occurring radioactive material like radon, and global fallout in the environment from the testing of nuclear explosive devices or from past nuclear accidents like Chernobyl. These all contribute to background radiation, but are not under the control of the licensee. Background radiation does not include radiation from source, byproduct, or special nuclear materials regulated by the U.S. Nuclear Regulatory Commission.

Cover (or Cap) - A landfill design feature that includes all material, soil, membranes, vegetation, etc. that are installed above waste disposed in a landfill.

Curie - The original unit used to express the decay rate of a sample of radioactive material. The curie is equal to that quantity of radioactive material in which the number of atoms decaying per second is equal to 37 billion.

Dose - A general term used to refer to the effect on a material exposed to radiation.

Dose Equivalent - The product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and sievert (Sv).

External Radiation - The situation in which the source of exposure is external to, that is, outside the body.

Half-life - The half-life of any radioactive material is the length of time necessary for one half of the atoms of that material to decay to some other.

Internal Radiation - The situation in which the source of exposure is internal to the body, generally as a result of an individual inhaling or ingesting radioactive material.

Leachate Collection and Removal System - A landfill design feature installed immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill.

Leak Detection System - A landfill design feature that must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period.

Liner - A landfill design feature that prevents any migration of wastes out of the landfill to the adjacent subsurface soil, groundwater, or surface water at any time during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing through the liner.

Member of the Public - Any individual except those receiving an occupational dose.

mil - A unit of measure equivalent to 1/1000th of an inch.

mrem - A unit of dose equivalent, equal to 1E-03 rem.

NORM - Naturally Occurring Radioactive Material. Includes primordial radionuclides naturally present in the rocks and minerals of the earth's crust as well as cosmogenic radionuclides produced by interactions of cosmic nucleons with target atoms in the atmosphere and in the earth.

Occupational Dose - The dose received by an individual in the course of employment when assigned duties involve exposure to radiation or radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. Occupational dose does not include doses received from background radiation.

picocurie (pCi) - A unit of radioactivity, equivalent to 1E-12 Curies.

Radiation - Means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions.

Radioactive Contamination - Deposition of radioactive material in any place where it is not wanted.

TENORM - Technologically Enhanced Naturally Occurring Radioactive Material. TENORM is produced when radionuclides that occur naturally in ores, soils, water, or other natural materials are concentrated or exposed to the environment by human activities, such as uranium mining or sewage treatment.

Type I Landfill - A designation used in the State of Michigan to mean a hazardous waste landfill. The Wayne Disposal Site is the only Type I landfill in Michigan.

Type II Landfill - A designation used in the State of Michigan to mean a standard, Municipal Solid Waste Landfill.

VII. Acronyms

ANL – Argonne National Laboratory

ALARA – As Low As Reasonably Achievable

CFR – Code of Federal Regulations

CHP – Certified Health Physicist

DOE – U.S. Department of Energy

EQC – Environmental Quality Circular

FML – Flexible Membrane Liner

GCL – Geosynthetic Clay Liner

HDPE – High-Density Polyethylene

HELP – Hydrologic Evaluation of Landfill Performance

ICRP – International Commission on Radiological Protection

LDCRS – Leak Detection, Collection, and Recovery System

MDEQ – Michigan Department of Environmental Quality

MSWLF – Municipal Solid Waste Landfill

NCRP – National Council on Radiation Protection

NORM – Naturally Occurring Radioactive Material

NRC – U.S. Nuclear Regulatory Commission

Pb – Lead

POTW – Publicly Operated Treatment Works

Ra – Radium

RCRA – Resource Conservation and Recovery Act

RESRAD – Residual Radioactivity (Computer code)

Rn – Radon

SCS – Secondary Collection System

SWIFT II – Sandia Waste Isolation Flow and Transport (Computer code)

TDAP – TENORM Disposal Advisory Panel

TENORM – Technologically Enhanced Naturally Occurring Radioactive Material

TSD-DOSE – Treatment, Storage, and Disposal Facilities Dose (Computer code)

WDI – Wayne Disposal, Inc.

WTE – Waste-to-Energy