CITY HALL
207 Lafayette Street
P.O. Box 378
Winona, MN 55987-0378
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September 6, 2012

Planning Commissioners
Winona, Minnesota 55987

Dear Commissioner:

The next meeting of the Planning Commission will be held on **Monday, September 10, 2012, at 4:30 p.m. in the Council Chambers** of the Winona City Hall.

1. **Call to Order**
2. **Approval of Minutes – August 27, 2012**
3. **Sand Moratorium Study: Traffic Impacts and Road Wear**
4. **Sand Moratorium Study: Site by Site Analyses – Sand Processing Plant – Hwy 14/Goodview Road; 25 McConnon Drive**
5. **Other Business – Sand Moratorium Roundtable Discussion Wednesday, September 12th 4:30 – 5:30 pm Wenonah Room, Winona City Hall**
6. **Adjournment**

Sincerely,

Carlos Espinosa
Assistant City Planner

PLANNING COMMISSION MINUTES

DATE: August 27, 2012

TIME: 4:30 p.m.

PRESENT: Chairperson Porter; Commissioners Ballard, Olson, Buelow, Eyden, Gromek, Boettcher and Davis

ABSENT: Commissioner Briggs

STAFF PRESENT: City Planner, Mark Moeller and Assistant City Planner, Carlos Espinosa

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The meeting was called to order at 4:30 p.m. by Chairperson Porter.

Approval of Minutes – August 13, 2012

The minutes from the Commission's meeting of August 13, 2012 were reviewed and upon motion by Commissioner Olson and second by Commissioner Ballard were unanimously approved as submitted.

Public Hearing – Nonconforming Ordinance Amendment

Chairperson Porter called on Assistant City Planner, Carlos Espinosa to provide a summary of this item. Mr. Espinosa noted that during its meeting of August 13, 2012, the Commission had reviewed a number of potential amendments to City Code Sections 43.32 and 43.32.1 pertaining to the regulation of nonconforming uses and buildings within the City. Given that discussion, staff had recommended a number of potential amendments to these sections including:

1. The addition of language that reflects Minnesota Statutes Section 462.357, Subd. 1e. Mr. Espinosa noted that although nonconformities that are created by changes in regulations are generally allowed to continue under state code, this particular section permits the City to impose reasonable regulations or conditions to prevent and abate nuisances and to protect the public health, safety, and welfare. Per this regulation, reasonable regulations or conditions may be imposed by the City on a nonconformity through a recordable instrument approved by the City Council, including a nonconformity agreement, or otherwise by permit, or order, of the City Council. Given discussion with the City Attorney, it was strongly recommended that this language, or reference to it, be added to the ordinance.
2. The second significant amendment relates to clarifying when and how nonconforming uses may be modified. Given current staff recommendation, the following language was proposed:
    - Nonconformities may be expanded as follows:

1. Nonconforming uses may expand upon issuance of a conditional use permit only when listed as a conditional use within the applicable zoning district.
2. Nonconforming uses not listed as a conditional use may only expand if change to a conforming use.
3. Nonconforming lots, structures, or site characteristics may expand only upon approval of a variance.

Mr. Espinosa noted that these amendments would prevent nonconforming uses, not listed as "conditional", from expanding at all, while allowing conditionally permitted uses to expand through a conditional use process.

3. Given previous discussion, it was further proposed that greater clarity be given to the definition of the term "expansion". Criteria proposed for this included:

    1. An increase in: structure dimensions, size, area, height, width, number of units, useable floor area and/or land area of use;
    2. Addition of a structure or part thereof;
    3. Addition of equipment. This shall not apply to new equipment which constitutes merely an improvement over the previous method and does not constitute a change in the nature and purpose of the original use of a property;
    4. Relocation of operations to a new location on the property not previously used unless the relocation reduces or eliminates the nonconformity.

At this point, Chairman Porter opened the public hearing, and called for any person that wished to speak to present first their name and address. There being no one present to comment, the public hearing was closed.

Following brief discussion, it was moved by Commissioner Eyden, and seconded by Commissioner Boettcher, to recommend approval of the proposed ordinance attached to this agenda item. When the question was called, the vote of the Commission was unanimous to approve the motion.

Sand Moratorium Study: Traffic Impacts

Chairperson Porter noted that prior to discussing this item, any person desiring to speak to the sand moratorium issue would be given an opportunity to do so. Given this, he asked if a person from the CASM group was present to provide comments this afternoon.

Steve Schild noted that he had been asked by CASM member, Marie Kovesci, to provide comments related to traffic impact summary information and other traffic issues to be discussed by the Commission this afternoon. At this point he summarized those comments as fully contained on Exhibit A of the permanent minutes.

Given additional invitation from Chairman Porter, no one was present to provide comments on behalf of the Blasting Committee or Frac Sand Industry. In calling on comments from any person of the general public, the following persons spoke:

- Jill Johnson, 1109 West Howard, noted traffic concerns of Gould and Cummings Streets. She explained that although these are truck routes, they do pass through residential areas. As such, she was concerned of future congestion and health issues that may result in relation to increased frac sand operations in the City. She strongly recommended that comprehensive traffic impact studies be conducted of either of the industry, as a whole, or on a use by use basis.
- Jeff Falk, Fountain City, stated that there doesn't seem to be a consensus as to the total number of trucks that could be expected to come into the City as part of this evolving industry. Given this, he asked how it was feasible to plan for anything while this uncertainty exists.

Following closure of the public comment phase, Chairman Porter called on Assistant City Planner, Carlos Espinosa to provide a summary of this issue.

Mr. Espinosa stated that the movement of frac sand in Winona generates significant amounts of truck traffic. The potential off-site impacts of truck traffic are one of the reasons a Conditional Use Permit was recommended for new sand processing and transportation operations. Based on numbers from approved Conditional Use Permit applications, completed site by site analyses, and discussions with operators, staff has assembled a map of approximate truck traffic generated at various sand facilities in Winona. These numbers are approximate and vary widely depending upon a number of factors including:

1. Market prices for frac sand;
2. Season;
3. Rail car storage capacity;
4. Availability of rail cars and barges.

Mr. Espinosa emphasized that given his discussion with current operators, Winona is at, or near, capacity for rail car storage. Additionally, the main rail line used to move sand out of Winona is very busy and significant amounts of train traffic cannot be added without disrupting the transport of other commodities. Thus, without increases in rail storage capacity or room on the main line, the truck traffic numbers on the map attached to the staff report are unlikely to increase significantly. Although there is room for expansion in barge traffic, this is severely limited by Conditional Use Permit requirements for such transportation facilities. Also, additional truck traffic from any other new facility in Winona is also limited by the Conditional Use Permit requirement (which would presumably set a number of the maximum number of trucks per day serving a facility).

Outside of the previous, Mr. Espinosa stated that Dave Christianson from the Minnesota Department of Transportation and Tom Beekman from the Wisconsin Department of Transportation were present this afternoon to present PowerPoints of the industry and

how it is playing into transportation issues within their respective states. PowerPoints are reproduced as Exhibits B and C of the permanent minutes. Given these presentations, the consensus of the Commission was that information that had been presented this afternoon was excellent. Mr. Espinosa stated that he would locate both PowerPoint presentations on the frac sand website of the City. During ensuing discussions, both presenters provided additional data relative to train capacity and use. Both indicated that compression factors are being experienced in both States. Given that the problem appears to be a bit more significant on the Minnesota side, greater efforts may be made in promoting shipping from various locations in Wisconsin. With this, truck traffic may shift away from the Winona market. However, both speakers indicated that, given the evolving nature of the industry, all of this was speculative.

Chairman Porter thanked both speakers for attending this afternoon's meeting. At this point, he reopened the public mic process. There being no one to speak further to the traffic impact issue, the public mic process was closed.

Sand Moratorium Study: Site by Site Analyses- Gould Transport Operation & 370 West Second Street

Chairperson Porter called on Mr. Espinosa to provide a summary of these analyses. Mr. Espinosa then summarized present operational and facilities plans for the Gould Transport Operation (Mikrut) and 370 West Second Street (Modern Transport). Given those analyses, the following specific recommendations were presented for each site:

Gould Transport Facility

1. Completion of a Fugitive Dust Plan. A fugitive dust control plan for the Gould facility is recommended to be filed with the City. The plan should detail what activities on-site could create dust, identify dust control strategies, and specify an inspection schedule.
2. Moisture Testing. Moisture testing of the sand at this site is recommended. Such testing should follow protocol as defined by the City.
3. Obtain Industrial Stormwater Permit. If applicable, such a permit is recommended to be obtained from MPCA.

370 West Second Street

1. Moisture Testing. Moisture testing of sand at the site is recommended. Such testing should follow protocol as defined by the City.
2. Obtain Industrial Stormwater Permit. If applicable, such a permit is recommended to be obtained from MPCA.

Mr. Espinosa stated that if the Commission concurs with the previous recommendations, a motion to approve them would be in order.

In addressing the Gould Street operation, Commissioner Olson asked if plans were underway to somehow improve or expand the shipping facility. Rich Mikrut, operator in

attendance, responded that it was his hope that the site could be expanded at some point in the near future and that such a facility could be enclosed. Mr. Mikrut further explained issues that had resulted in the closure of access to his facility from Bierce Street. Because of this, delivered sand to his facility needs to move through other areas of the City, some including residential neighborhoods.

In response to a question from Chairman Porter, Mr. Mikrut stated that operators of facilities generally determine the most effective/efficient routes from sand sources.

It was noted that the operation at 370 West Second Street seemed relatively silent. Mr. Espinosa responded that activity at this site has been less than occurred in 2011. In part, this activity was the direct result of variations in market demands.

Given further discussion, it was moved by Commissioner Gromek and seconded to approve site analyses recommendations as presented for the Gould Transport Operation and 370 West Second Street this afternoon. When the question was called, the vote of the Commission was unanimous to approve the motion.

Mr. Espinosa noted that in developing the schedule for the frac sand issue, it had been proposed that a couple of round table discussions would be held. Given this, he was proposing that such a roundtable be established within the next two week period. Following discussion, the consensus of those present was that Tuesday or Wednesday, the week of September 10th would work for most.

Commissioner Olson said that the Commission had already addressed many issues. In his opinion, a roundtable discussion would only serve to open up additional discussion to issues that had already been thoroughly discussed. Mr. Espinosa stated that a purpose of the discussions would be to bring all recommendations into one discussion period. Commissioner Olson again noted concerns with the process while Commissioner Eyden suggested that it may be a good opportunity to summarize what has been discussed and agreed to thus far.

Adjournment

There being no further business to come before the Commission, the meeting was adjourned.

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Mark Moeller
City Planner

PLANNING COMMISSION

AGENDA ITEM: 3. Sand Moratorium Study: Traffic Impacts and Road Wear

PREPARED BY: Carlos Espinosa

DATE: September 10, 2012

Summary

One strategy to address traffic impacts and road wear from frac sand operations is through a combination of traffic impact analyses and/or road use agreements. A number of other jurisdictions in Wisconsin and Minnesota utilize this approach. The approach basically requires project applicants to complete a study of traffic generation and assess whether or not specified haul routes can accommodate the increase in trucks. If there are deficiencies, required improvements are then addressed through a road use agreement with the appropriate road authority. Staff's intent is to begin discussion about incorporating requirements for truck traffic impact analyses and road use agreements into City Code by amendment of the zoning ordinance. Such amendments would apply to any development with significant truck traffic (not just frac sand operations) and only to future projects (submitted after ordinance adoption).

Traffic Impact Analysis

At this time, Winona's City Code does not have any requirements for traffic impact analyses. While general traffic levels are considered for developments, there is not a specific requirement for a traffic *report*. Many other cities require traffic impact reports or analyses for projects which generate over a certain threshold of traffic (see Attachment A). The thresholds are based on numbers from the Institute of Traffic Engineers (ITE) and are often adjusted for local conditions.

The general ITE threshold for requiring a traffic impact analysis is 750 trips[1] per day or 100 trips during the peak hour of traffic activity (e.g. 4 p.m. – 5 p.m.). Another common threshold is 500 trips per day (see Attachment A). These thresholds are for *total* vehicles – they do not differentiate between trucks and cars. However, a report from the ITE (1985) lists a Passenger Car Equivalent (PCE) of two (2) for trucks. That is, two (2) truck trips are *generally equivalent to four (4) car trips*. Other more recent sources indicate that the PCE for trucks is 3 to 3.5. Thus, in order to set a threshold for requiring a truck traffic impact analysis, the general vehicle standards need to be adjusted for truck intensive operations.

[1] A trip is a movement of a vehicle into or out of a site. Thus, one (1) truck making a delivery to a store is counted as two (2) trips.

Dividing the 500-750 total trip thresholds by 2-3.5 results in an approximate range of 143-375 truck trips for triggering a traffic impact analysis. This translates into approximately 72-188 trucks per day. It is staff's recommendation that a threshold for requiring a truck traffic analysis be set within this range. The threshold would be for the maximum number of trips when a site is in operation – thus accounting for the maximum potential traffic impact. For reference, a map of the approximate truck traffic from frac sand operations is provided in Attachment B.

The traffic impact analysis would cover proposed haul routes for trucks related to an operation. The analysis would run to the City limits unless waived by the City Engineer or another road authority (e.g. Winona County or Mn/DOT). At a minimum, the analysis would include the following information:

1. Existing traffic numbers
2. Traffic forecasts
3. Intersection review
4. Sight distance review
5. Analysis of haul route's structural/design ability to handle trucks
6. A finding that traffic impacts can either be handled by the haul route, or a list of improvements needed to bring the haul route up to commonly accepted engineering design standards and access management criteria.

If necessary, results of the analysis would then be used to craft a road use agreement (see Attachment C for an example of a traffic impact analysis – note that it does not include information on the structural capacity of roads).

Road Use Agreement

A road use agreement would only potentially be required for projects that trigger a traffic impact analysis. The requirement for an agreement may be waived by the City Engineer or another road authority as appropriate. Information from numbers five (5) and six (6) above would form the basis for the agreement. The agreement would require the project proposer to either make necessary improvements prior to operations, and/or establish financial accounts as appropriate for future exceptional maintenance or improvements. See Attachment D for an example road use agreement from Pennsylvania.

Next Steps

Staff requests the commission discuss the traffic impact analysis and road use agreement approach described above. Specifically, staff is seeking input on the threshold for requiring a traffic impact analysis. If Commissioners are in agreement regarding the approach summarized above, a motion to direct staff to prepare draft ordinance amendments would be in order.

Attachments:

A) Traffic Impact Analysis Thresholds
B) Approximate Truck Traffic from Frac Sand Operations in Winona
C) Example Traffic Impact Analysis
D) Example Road Use Agreement

INSTITUTE OF TRANSPORTATION ENGINEER'S (ITE) GENERAL THRESHOLD RECOMMENDATION

Any proposed site plan or subdivision plan which would be expected to generate over one hundred (100) directional trips during the peak hour of the traffic generator or the peak hour on the adjacent streets, or over seven hundred fifty (750) trips in an average day.

Table 3.2 Community Threshold Levels

Community/State	Traffic Impact Study Threshold
ITE Recommended Practice	- 100 additional peak hour trips
City of Farmington Hills, Oakland County	- sites with 10 or more acres and Oakland County Traffic - building with 100,000 or more sq. ft. GFA Improvement Association - 200 or more dwelling units - 300 or more peak hour trips - substantial departure from Master Plan - discretionary standards based on impact
City of Grand Blanc, Gennessee County, MI	- rezonings inconsistent with Master Plan - certain special land uses - sites with 20 or more acres - 200 or more dwelling units - 150,000 or more sq. ft.
GFA Northville Township, Wayne County, MI	- certain rezonings - 50 peak hour directional trips along selected roads - 100 peak hour trips or 750 daily trips elsewhere
City of Rochester Hills, Oakland County, MI	- 150 peak hour trips or 750 trips daily - 75 or more single family dwelling units - 100 or more multiple family dwelling units - 50,000 sq. ft. or more commercial units - 20 acres light industrial
New Jersey Department of Transportation	- 200 peak hour trips
Arizona Department of Transportation	- 100 peak hour directional trips
Maryland	- 50 peak hour directional trips
Indiana Department of Transportation (proposed)	- 100 peak hour directional trips - if LOS drops by a letter grade - modifications to roadway are required
California Department of Transportation	- 2,400 daily trips/1,600 along a congested corridor
Oregon Department of Transportation	- 500 vehicles per day
New York Department of Transportation	- 100 peak hour trips
Arapahoe County, Colorado	- 500 daily trips - certain smaller projects

DuPage County, Illinois	- whenever a development deteriorates LOS beyond community LOS Standard (C or D)
New Mexico	- all new commercial/industrial developments
Mississippi	- when a traffic signal is warranted

Source: Dey Soumya, S. and Jon D. Fricker, Traffic Impact Analysis and Impact Fees in State Departments of Transportation, ITE Journal, May 1994.

Olmsted County, MN	-500 vehicle trips per day or 30 heavy vehicle trips

Approximate Truck Traffic From Active and Proposed Frac Sand Operations in Winona

August 2012

Numbers Match Locations on Map:

1) Active: 2100, 2121 Goodview Road
Company/Individual: *Bob Hemker*
Activities Occurring: *Sand washing, then sent to number 4) for shipping*
Zoning: A-G (Agricultural)

2) Proposed: 25 McConnon Drive
Company/Individual: *Rich Mikrut*
Activities to Occur: *Drying, screening, sorting, storage, and shipping via rail*
Zoning: *M-2 (General Manufacturing)*

3) Active: 370 West Second Street and Parcel 32-104-0050
Company/Individual: *Steve Kohner*
Activities Occurring: *Washed and unwashed sand shipped via rail*
Zoning: *M-2 (General Manufacturing)*

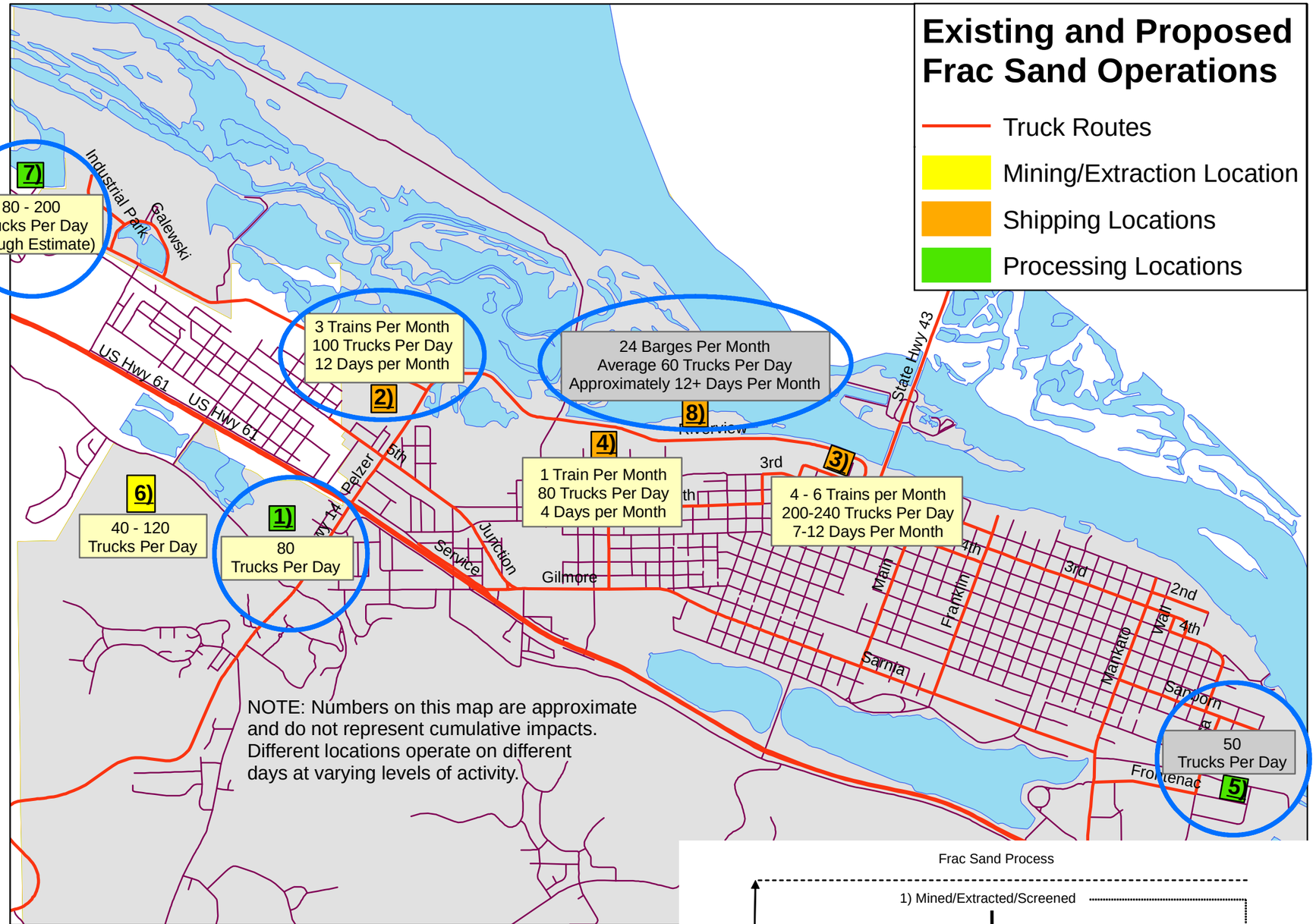
4) Active: Property East of 70 Gould Street
Company/Individual: Rick Mikrut
Activities Occurring: *Washed sand shipped via rail*
Zoning: *M-2 (General Manufacturing)*

5) Proposed: 1280-1330 Frontenac Drive
Company/Individual: *Bob Hemker*
Activities to Occur: *Sand washing, drying, then sent to number 2) for shipping*
Zoning: M-2 (General Manufacturing)

6) Active: 4600 Goodview Road/Biesanz Stone Company
Company/Individual: *Biesanz Stone Company*
Activities Occurring: *Mining/extraction and screening, then sent to number 7) for washing*
Zoning: *A-G (Agricultural)*

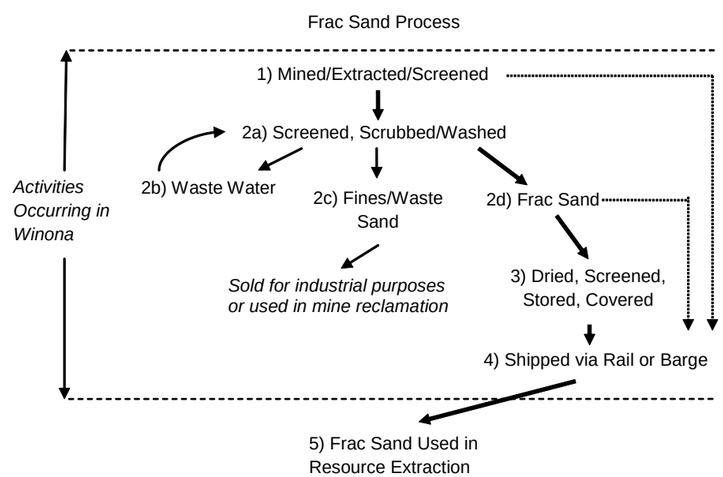
7) Active: 6930 West 5th St., MN City
Company/Individual: *Steve Kohner*
Activities Occurring: *Sand washing, then sent to number 3) for shipping*
Zoning: *N/A*

8) Active: Port Authority Dock
Company/Individual: *Winona Port Authority*
Activities Occurring: *Washed or unwashed sand shipped via barge*
Zoning: *M-2 (General Manufacturing)*



= From Wisconsin/Trucks Travel Over Interstate Bridge

= Truck or Barge Traffic Limited by CUP



Traffic Impact Analysis for Nisbit Sand Mine

Winona County, MN

Wenck File #2911-01

Prepared for:

TOM ROWEKAMP

Prepared by:

WENCK ASSOCIATES, INC.
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(763) 479-4200

July 23, 2012

Table of Contents

FIGURES

1.0 Executive Summary

The purpose of this report is to present the results of our traffic impact analysis for the proposed Nisbit sand mine located in Saratoga Township, Winona County, MN. This traffic analysis examined the impacts of the proposed project at the following intersections:

- CR 113/proposed access location
- CSAH 33/CR 113
- CSAH 33/CSAH 6
- CSAH 33/CSAH 14
- TH 14/CSAH 33

The proposed project site is located on the west side of CR 113 north of the CR 124 intersection.

For purpose of this study, the proposed project consists of a mining operation that will excavate sand. The mine is expected to generate a maximum of 140 truckloads of sand per day. On average, the mine is expected to generate 80 truckloads per day.

Trucks will exit the site at an existing field access located on CR 113 north of CR 124. The loaded trucks will then travel on CR 113 to CSAH 33, where they will turn north. They will travel north on CSAH 33 to TH 14 in Utica, where they will travel east into Winona. The empty trucks will use the same route in reverse to travel back to the mine. The proposed mine is expected to be operational later this year.

Based on the information and analyses presented in this report, the following conclusions have been made:

- The proposed project will generate a total of 26 truck trips (13 entering and 13 exiting) during the weekday a.m. peak hour and 26 truck trips (13 entering and 13 exiting) during the weekday p.m. peak hour. The project will generate 280 truck trips (140 entering and 140 exiting) during a typical weekday.

- All intersections analyzed have adequate capacity with the existing geometrics and control to accommodate the proposed project.

- Adequate sight distances are provided at the CR 113/proposed access, CSAH 33/CSAH 14, and TH 14/CSAH 33 intersection.

- Sight distance deficiencies exist at the CSAH 33/CR 113 and CSAH 33/CSAH 6 intersection.

- Due to the very low volumes at these locations, physical improvements to the roadways to increase the sight distances are not justified. We recommend advanced warning signs on

CSAH 33 at CR 113 and on CSAH 6 at CSAH 33. While the mine is operational and trucks are hauling, additional signs should be installed to warn motorists of trucks entering or crossing the roadway. When the sand mine is not in operation, the signs should be removed.

2.0 Purpose and Background

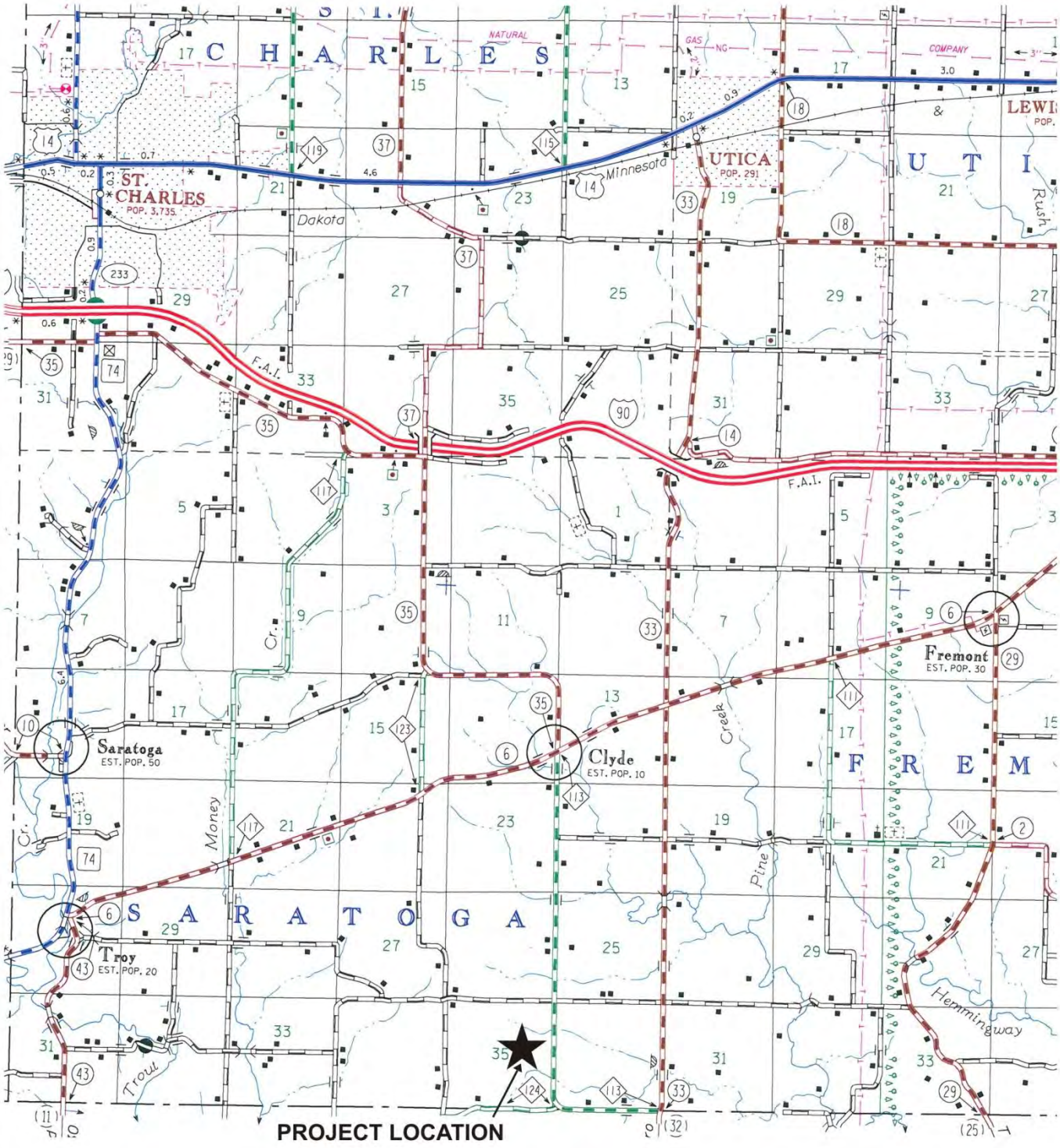
The purpose of this report is to present the results of our traffic impact analysis for the proposed Nisbit sand mine located in Saratoga Township, Winona County, MN. This traffic analysis examined the impacts of the proposed project at the following intersections:

- CR 113/proposed access location
- CSAH 33/CR 113
- CSAH 33/CSAH 6
- CSAH 33/CSAH 14
- TH 14/CSAH 33

The proposed project site is located on the west side of CR 113 north of the CR 124 intersection. **Figure 1** shows the project location.

For purpose of this study, the proposed project consists of a mining operation that will excavate sand. The mine is expected to generate a maximum of 140 truckloads of sand per day. On average, the mine is expected to generate 80 truckloads per day.

Figure 2 shows the proposed haul route for the project. Trucks will exit the site at an existing field access located on CR 113 north of CR 124. The loaded trucks will then travel on CR 113 to CSAH 33, where they will turn north. They will travel north on CSAH 33 to TH 14 in Utica, where they will travel east into Winona. The empty trucks will use the same route in reverse to travel back to the mine. The proposed mine is expected to be operational later this year.



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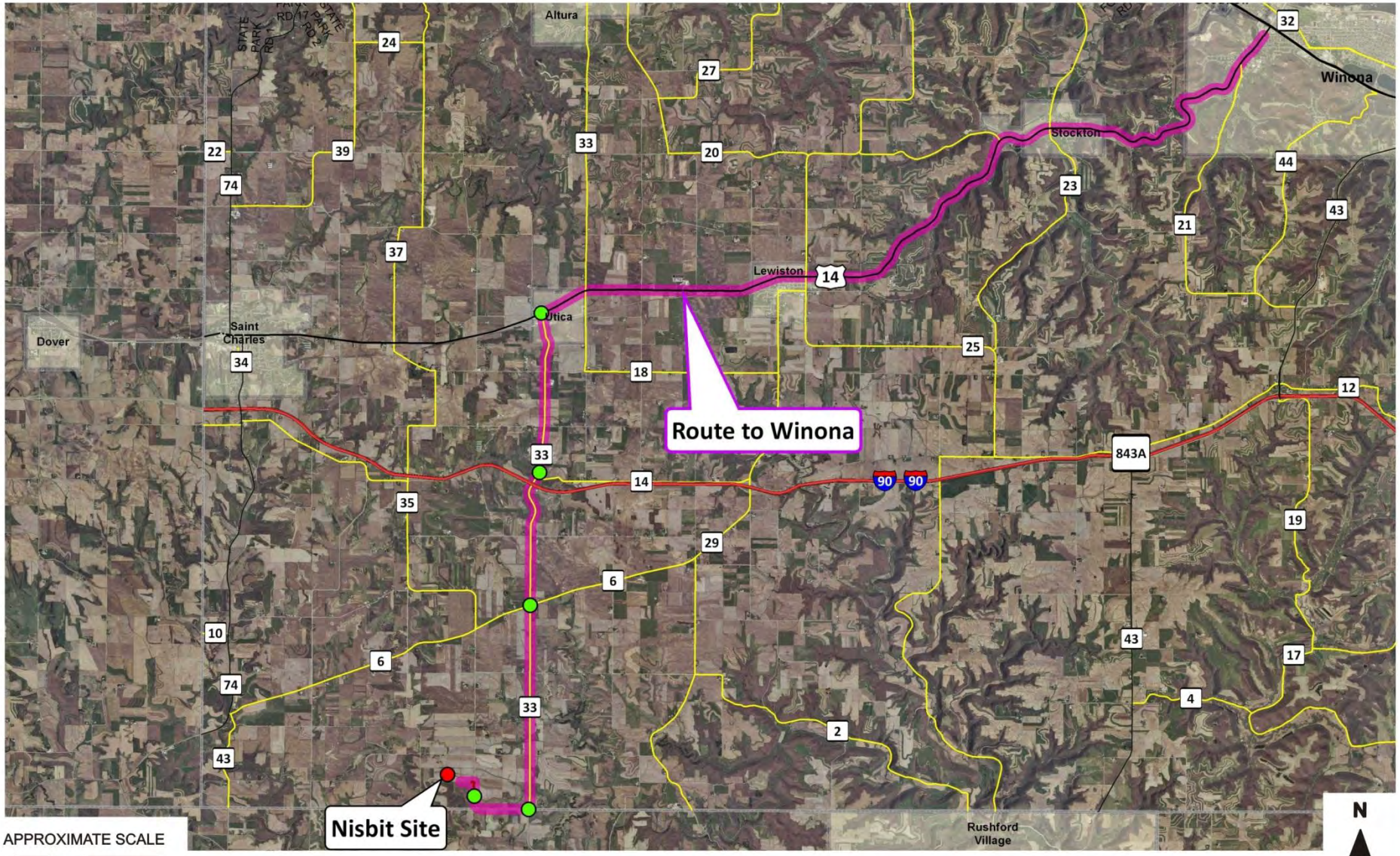
TRAFFIC IMPACT ANALYSIS
FOR NISBIT SAND MINE
WINONA COUNTY, MN

FIGURE 1

PROJECT LOCATION



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TRAFFIC IMPACT ANALYSIS
FOR NISBIT SAND MINE
WINONA COUNTY, MN

FIGURE 2

PROPOSED HAUL ROUTE

3.0 Existing Conditions

The subject site is presently used for farming. CSAH 33 is a two lane rural section roadway which runs north and south. CR 113, CSAH 6, and CSAH 14 are two lane rural section roadways which run east and west and intersect with CSAH 33. T.H. 14 is a two lane rural section roadway which intersects with CSAH 33 in Utica. All of the subject roads have a speed limit of 55 mph. Existing geometrics and traffic control at the subject intersections are described below:

- *CR 113 and proposed access.* This three-legged intersection is uncontrolled. The northbound approach provides one lane shared by left turn and through movements. The southbound approach provides one lane shared by right turn and through movements. The eastbound approach currently serves as a field access.

- *CSAH 33 and CR 113.* This three-legged intersection is controlled by a stop sign on the eastbound CR 113 approach. The northbound approach provides one lane shared by left turn and through movements. The southbound approach provides one lane shared by right turn and through movements. The eastbound approach has one lane shared by right and left turn movements.

- *CSAH 33 and CSAH 6.* This four-legged intersection is controlled by stop signs on the northbound and southbound CSAH 33 approaches. All approaches provide one lane shared by left turn/through/right turn movements.

- *CSAH 33 and CSAH 14.* This three-legged intersection is controlled by a stop sign on the westbound CSAH 14 approach. The northbound approach provides one lane shared by right turn and through movements. The southbound approach provides one lane shared by left turn and through movements. The westbound approach has one lane shared by right and left turn movements.

- *TH 14 and CSAH 33.* This four-legged intersection is controlled by stop signs on the northbound and southbound approaches. The northbound CSAH 33 approach provides one lane shared by left turn/through/right turn movements. The southbound approach is a minor private driveway. The eastbound TH 14 approach provides one left turn/through lane and one dedicated right turn lane. The westbound TH 14 approach provides one left turn/through lane and one through/ right turn bypass lane.

Weekday turning movement counts were recorded on June 28, July 10, and July 11, 2012 during the weekday a.m. (7:00-9:00 a.m.) and p.m. (4:00-6:00 p.m.) peak periods. Daily traffic volume data was recorded at three locations on CSAH 33 during the week of July 9, 2012. This data is presented later in the report.

4.0 Traffic Forecasts

As indicated earlier, the proposed project is expected to be operating later this year. Traffic forecasts and analyses have been completed for the year 2014 in order to account for the proposed project and other potential projects in the area. Weekday a.m. and p.m. peak hour traffic forecasts were developed for the subject intersections for the 2012, 2014 No-Build, and 2014 Build scenarios. Each of these scenarios is described below.

- *Existing (2012).* Weekday a.m. and p.m. peak hour traffic volumes for this scenario were established based on peak period traffic counts.

- *2014 No-Build.* To account for natural background traffic growth, existing volumes at the subject intersections were increased by 1.0 percent per year. Review of historic count data shows that volumes have actually decreased in the recent past. To be conservative, we have chosen to include growth at 1.0 percent per year.

  In addition to the background growth, trips generated by proposed Yoder and Dabelstein sand mines were also added. Information on the number of trips for these mines was obtained from County staff. Trips from these mines will use CSAH 6 and will travel through the CSAH 33/CSAH 6 intersection.

- *2014 Build.* Volumes due to the proposed project were added to the 2014 No-Build volumes to establish 2014 Build volumes.

Trip Generation

The expected number of trips is based on the maximum number of truckloads produced by the mine. As described earlier, the mine is expected to generate a maximum of 140 truckloads of sand per day and an average 80 truckloads per day. We have based the traffic forecasts on the maximum loads per day to account for the worst case scenario.

Mining operations are proposed to occur from 7 a.m. to 6 p.m. This equates to an average of 13 loads per hour. Each truck must leave the site and return to the site, resulting in 13 entering truck trips and 13 exiting truck trips per hour. Over the course of an entire day the mine will generate 140 entering and 140 exiting truck trips.

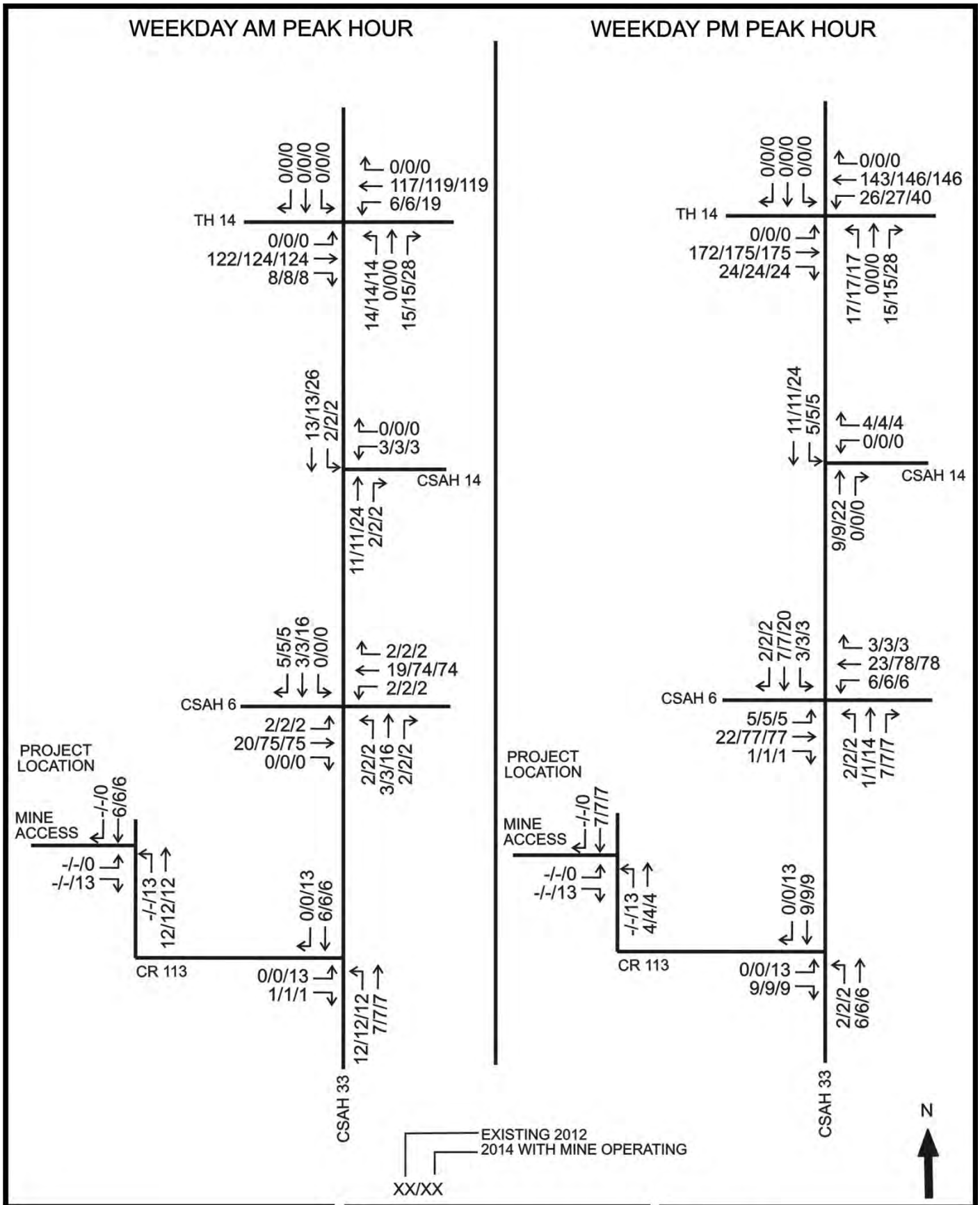
Traffic Volumes

The trips generated by the mine were assigned to the roadway system according to the proposed haul route shown in Figure 2. The resultant a.m. and p.m. peak hour volumes are shown in Figure 3.

Daily traffic volume data was also included in the traffic forecasts. The existing and 2014 daily traffic volumes on CSAH 33 are shown in Table 1.

Table 1
Weekday Daily Traffic Volumes on CSAH 33

Location	2012	2014 No-Build	2014 Build
Between CR 113 and CSAH 6	325	330	610
Between CSAH 6 and CSAH 14	405	415	695
Between CSAH 14 and TH 14	575	585	855



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TRAFFIC IMPACT ANALYSIS
FOR NISBIT SAND MINE
WINONA COUNTY, MN

FIGURE 3

WEEKDAY AM AND PM PEAK HOUR VOLUMES

5.0 Traffic Analyses

Intersection Level of Service Analysis

Traffic analyses were completed for the study intersections for the 2012, 2014 No-Build, and 2014 Build conditions during the weekday a.m. and p.m. peak hours using Synchro analysis software. Existing geometrics presented earlier were used for the initial analyses for the subject intersections.

Capacity analysis results are presented in terms of level of service (LOS), which is defined in terms of traffic delay at the intersection. LOS ranges from A to F. LOS A represents the best intersection operation, with little delay for each vehicle using the intersection. LOS F represents the worst intersection operation with excessive delay. The following is a detailed description of the conditions described by each LOS designation:

- Level of service A corresponds to a free flow condition with motorists virtually unaffected by the intersection control mechanism. For a signalized or an unsignalized intersection, the average delay per vehicle would be approximately 10 seconds or less.

- Level of service B represents stable flow with a high degree of freedom, but with some influence from the intersection control device and the traffic volumes. For a signalized intersection, the average delay ranges from 10 to 20 seconds. An unsignalized intersection would have delays ranging from 10 to 15 seconds for this level.

- Level of service C depicts a restricted flow which remains stable, but with significant influence from the intersection control device and the traffic volumes. The general level of comfort and convenience changes noticeably at this level. The delay ranges from 20 to 35 seconds for a signalized intersection and from 15 to 25 seconds for an unsignalized intersection at this level.

- Level of service D corresponds to high-density flow in which speed and freedom are significantly restricted. Though traffic flow remains stable, reductions in comfort and convenience are experienced. The control delay for this level is 35 to 55 seconds for a signalized intersection and 25 to 35 seconds for an unsignalized intersection. For most agencies in Minnesota, level of service D represents the minimal acceptable level of service for regular daily operations.

- Level of service E represents unstable flow of traffic at or near the capacity of the intersection with poor levels of comfort and convenience. The delay ranges from 55 to 80 seconds for a signalized intersection and from 35 to 50 seconds for an unsignalized intersection at this level.

- Level of service F represents forced flow in which the volume of traffic approaching the intersection exceeds the volume that can be served. Characteristics often experienced include long queues, stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure. Delays over 80 seconds for a signalized intersection and over 50 seconds for an unsignalized intersection correspond to this level of service.

The forecasted traffic volumes for each scenario were analyzed using the existing geometry and intersection control. The LOS results for the study intersections are discussed below.

CR 113 and proposed access. During the weekday a.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios. During the weekday p.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios.

All movements operate at acceptable levels of service under all scenarios. From a level of service standpoint, the proposed access operates in an acceptable manner.

CSAH 33 and CR 113. During the weekday a.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios. During the weekday p.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios.

All movements operate at acceptable levels of service under all scenarios. From a level of service standpoint, the proposed access operates in an acceptable manner.

CSAH 33 and CSAH 6. During the weekday a.m. peak hour, all movements operate at LOS A under 2012 and 2014 No-Build scenarios. Under the 2014 Build scenario, all movements operate at LOS B or better. During the weekday p.m. peak hour, all movements operate at LOS A under 2012 and 2014 No-Build scenarios. Under the 2014 Build scenario, all movements operate at LOS B or better.

All movements operate at acceptable levels of service under all scenarios. From a level of service standpoint, the proposed access operates in an acceptable manner.

CSAH 33 and CSAH 14. During the weekday a.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios. During the weekday p.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios.

All movements operate at acceptable levels of service under all scenarios. From a level of service standpoint, the proposed access operates in an acceptable manner.

TH 14 and CSAH 33. During the weekday a.m. peak hour, all movements operate at LOS A under 2012, 2014 No-Build, and 2014 Build scenarios. During the weekday p.m. peak hour, all movements operate at LOS B or better under 2012, 2014 No-Build, and 2014 Build scenarios.

All movements operate at acceptable levels of service under all scenarios. From a level of service standpoint, the proposed access operates in an acceptable manner.

Sight Distance Review

The available sight distances along the proposed haul route were reviewed to determine if any issues exist. Depending on the location, either the intersection sight distance or the stopping sight distance was reviewed. Information contained in the American Association of State Highway and Transportation Officials (AASHTO) publication "A Policy on Geometric Design of Highways and Streets" was used for the sight distance review.

Intersection sight distance is provided to allow drivers to perceive the presence of potentially conflicting vehicles when entering an intersection. Stopping sight distance is the length of roadway ahead that is visible to the driver. Existing sight distance information was measured at each intersection analyzed along the haul route. This information was compared to the requirements as listed in the AASHTO publication. The results of this review are shown below.

CR 113 and proposed access. Loaded trucks exiting the site will turn right onto CR 113 to travel south and east to CSAH 33. At this location, drivers must be able to see vehicles arriving from the north. The sight distance looking to the north is approximately 1,580 feet. The intersection sight distance requirement for a truck turning right from a stopped condition is 849 feet. Therefore adequate sight distance is provided at this location.

Empty trucks entering the site will turn left from CR 113 onto the access drive. Trucks traveling north on CR 113 have clear sight of the access from approximately 800 feet away. The stopping sight distance requirement for a truck is 495 feet. Therefore adequate stopping sight distance is provided at this location.

CSAH 33 and CR 113. Loaded trucks will turn left onto CSAH 33 from CR 113. At this location, drivers must be able to see vehicles arriving from the north and the south. The sight distance looking to the north and looking to the south is approximately 600 feet. The intersection sight distance requirement for a truck turning left from a stopped condition is 930 feet. Therefore the sight distance at this location is less than the required distance.

AASHTO provides additional guidance for low volume roads in the publication "Guidelines for Geometric Design of Very Low-Volume Local Road (ADT $\leq$ 400)". Since the average daily traffic (ADT) volume at this location is approximately 325, this documents was reviewed for further guidance. This document states that under ideal conditions the requirement listed in the Policy on Geometric Design of Highways and Streets should be met. However, under constrained conditions, the distance should be at least equal to the stopping sight distance as listed in the Low Volume Road document. This requirement is listed at 405 feet. Both the sight distances of 600 feet exceed this requirement.

Due to the very low volumes at this location, physical improvements to the roadway to increase the sight distance are not justified. Based on the existing conditions at this location and the number of trucks turning left, we recommend additional advanced warning on CSAH 33. While the mine is operational and trucks are hauling, additional signs should be installed on both northbound and southbound CSAH 33 to warn motorists of trucks entering the roadway. The recommended sign legend will have the legend "Trucks Entering Ahead, will be black on orange,

and will be 30" x 30" in size. When the sand mine is not in operations, the signs should be removed.

Empty trucks will turn right from CSAH 33 onto CR 113. Trucks traveling south on CSAH 33 have clear sight of the access from approximately 600 feet away. The stopping sight distance requirement for a truck is 495 feet. Therefore adequate stopping sight distance is provided at this location.

CSAH 33 and CSAH 6. Loaded trucks will cross over CSAH 6 to continue traveling north on CSAH 33. At this location, drivers must stop and be able to see vehicles arriving from the east and west. The sight distance looking to the east and looking to the west is approximately 700 feet. The intersection sight distance requirement for a truck crossing from a stopped condition is 849 feet. Therefore the sight distance at this location is less than the required distance.

Empty trucks will also cross CSAH 6 and continue south on CSAH 33. The sight distance for southbound trucks is the same as described above for northbound trucks.

Due to the very low volumes at this location, physical improvements to the roadway to increase the sight distance are not justified. Based on the existing conditions at this location and the number of trucks crossing, we recommend additional advanced warning on CSAH 6. While the mine is operational and trucks are hauling, additional signs should be installed on both eastbound and westbound CSAH 6 to warn motorists of trucks crossing the roadway. The standard sign for this situation is sign number W8-6 as described in the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD). The sign will be black on orange and 30" x 30" in size. When the sand mine is not in operations, the signs should be removed.

CSAH 33 and CSAH 14. Loaded trucks will pass through this intersection to continue traveling north on CSAH 33. Vehicles on CSAH 14 are required to stop at this location. At this location, drivers on CSAH 14 must stop and be able to see vehicles arriving from the north and south. The sight distance looking to the north is approximately 1,200 feet and looking to the south is approximately 1,350 feet. The intersection sight distance requirement for a passenger vehicle turning left a stopped condition is 606 feet. Therefore adequate sight distance is provided at this location.

Empty trucks will also pass through this intersection to continue traveling south on CSAH 33. The sight distance for southbound trucks is the same as described above for northbound trucks.

A worst case scenario would require a truck on CSAH 33 to come to a stop at this location. The required stopping sight distance in the northbound direction is 520 feet due to the downgrade. In the southbound direction the required stopping sight distance is 495 feet. The available sight distances in both directions are greater than these requirements.

TH 14 and CSAH 33. Loaded trucks will turn right onto TH 14 to travel east to Winona. At this location, drivers must stop and be able to see vehicles arriving from the west. The sight distance looking to the west is greater than ½ mile (2,640 feet). The intersection sight distance

requirement for a truck turning right from a stopped condition is 849 feet. Therefore adequate sight distance is provided at this location.

Empty trucks entering the site will turn left from TH 14 onto CSAH 33. Trucks traveling west on TH 14 have clear sight of the intersection from approximately 1,600 feet away. The stopping sight distance requirement for a truck is 495 feet. Therefore adequate stopping sight distance is provided at this location. In addition, a westbound bypass lane exists at this intersection, which will assist in the overall intersection operations.

6.0 Conclusions

Based on the information and analyses presented in this report, the following conclusions have been made:

- The proposed project will generate a total of 26 truck trips (13 entering and 13 exiting) during the weekday a.m. peak hour and 26 truck trips (13 entering and 13 exiting) during the weekday p.m. peak hour. The project will generate 280 truck trips (140 entering and 140 exiting) during a typical weekday.

- All intersections analyzed have adequate capacity with the existing geometrics and control to accommodate the proposed project.

- Adequate sight distances are provided at the CR 113/proposed access, CSAH 33/CSAH 14, and TH 14/CSAH 33 intersection.

- Sight distance deficiencies exist at the CSAH 33/CR 113 and CSAH 33/CSAH 6 intersection.

- Due to the very low volumes at these locations, physical improvements to the roadways to increase the sight distances are not justified. We recommend advanced warning signs on CSAH 33 at CR 113 and on CSAH 6 at CSAH 33. While the mine is operational and trucks are hauling, additional signs should be installed to warn motorists of trucks entering or crossing the roadway. When the sand mine is not in operation, the signs should be removed.

MUNICIPAL ROAD USE AGREEMENT

_____, hereinafter referred to as "User" and the municipality of _____ , _____ County, hereinafter referred to as "Municipality" recognize it is in their mutual best interest to enter into the following agreement, and:

WHEREAS, User desires to use public roadways within the Municipality to access User's gas well drilling operations; and,

WHEREAS, the parties recognize that the Municipality's roads were not designed for and will not withstand the heavy truck traffic and overweight vehicles of User's operations; and,

WHEREAS, the public roadways to be used are described on "Exhibit A" and are described herein as "roadways"; and,

WHEREAS, as a condition to the use of the roadways by the User, the Municipality is requiring the User to execute this agreement to obligate the User to maintain the municipal roads which it makes use of, in the same or better condition the roadways had prior to the commencement of User's operations, and to maintain the roadways in a good state of repair during the User's operations; and,

WHEREAS, in order to secure the User's obligation to maintain the municipal roadways, the User is required to execute this agreement to set forth the User's promise, covenant and agreement to maintain the roadways.

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained and other good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, the parties do hereby agree as follows:

1. Before initiating drilling operations the User will designate a route, to and from the User's end location.

2. Upon route designation, the User will provide a pre-use construction design, maintenance and post-use repair criteria to be followed by the User. The ultimate goal of the design shall be:

A. Maintaining the roadway during use so as not to interfere with ordinary vehicle traffic.

B. Safety of all users and to provide continuous access for emergency vehicles.

C. Insuring that post-use, the condition of the road will be as good as or better than pre-use.

D. Maintaining the roadway in a manner that drainage features (structures) remain functional and effective at all times, including surface road drainage.

3. The design shall include, at a minimum, the following:

A. Current load bearing capacity of the road including the sub-base.

B. Current load bearing capacity of any bridges or culverts.

C. Weather conditions, time of year of use, and subsurface hydrology.

D. Duration of the proposed use.

E. Interval of inspections.

F. Interval of repairs.

G. Pre-use improvements.

H. Stormwater and runoff including improvements resulting from flow increases due to additional impervious surface.

I. Dust control.

J. Possibility of using or constructing new nonpublic roads.

K. Snow and ice removal.

L. Detailed maintenance plan based on the classification of the road and any specific/unique factors affecting the road.

M. All permits and responsibility for compliance with all other government agencies.

N. Number and weight of vehicles.

O. Adequate video or photographic record of the pre-use condition of the roadway.

4. Upon receipt of the design, the Municipality shall have 10 days in which to either accept the plan and execute the road use agreement or submit proposed changes or revisions to the proposed plan initiated by the Municipality itself or the Municipal engineer.

5. If the User proposes pre-use improvements designed for the proposed use, the User, upon completion of those pre-use improvements, shall not be required to post a financial bond but shall be required to comply with all terms of the maintenance agreement.

6. If the User proposes to use the existing roads with a maintenance plan without installing pre-use improvements, the User shall be required to post a maintenance bond at the rates prescribed by the Pennsylvania Department of Transportation. It is understood the Municipality shall be enabled to enforce the maintenance agreement during the term of this agreement by calling in the maintenance bonds and requiring the posting of additional bonds should the cost of repairs at any time exceed the amount of the bond. This maintenance plan shall include PennDOT Form OS-2 which is attached as "Exhibit B" and made part by this reference.

7. Upon the completion of the User's operations, the User, at its own cost and expense, shall within 60 days restore the roadways to the same or better condition as existed prior to the commencement of User's operations. Any associated costs or fees incurred by the Municipality for the administration or supervision of User's operations shall be borne by User.

8. Upon execution of this agreement, the User further agrees to immediately suspend its use of roadways (either completely suspend or agrees to abide by imposed weight limits) upon written notice from the Municipal Roadmaster/Engineer that, if in the discretion and opinion of the Municipal Roadmaster/Engineer, the continued use of the roadway may cause unnecessary damages, interference with access resulting from changes in weather conditions and/or the User's operations. Upon receipt of the notice the User agrees to suspend its use of roadways immediately until, in the sole and absolute discretion of the Municipal Roadmaster/Engineer, the conditions causing the suspension of the use of the roadways no longer exist.

9. The provisions of this agreement shall apply not only to the User's trucks, tractors and trailers, but also to any and all other equipment or vehicles used by the User, its agents, employees or assigns, during User's operations.

10. Should the User fail to maintain, repair, restore or resurface the roadways to the condition existing prior to the execution of this agreement within 60 days from the date of completion of User's operations, said User hereby agrees to reimburse and indemnify the Municipality for all costs and expenses incurred by the Municipality to repair, restore or resurface the roadways to the same condition which existed prior to the User's operations. In addition, emergency repairs resulting from the user's operations and determined to be necessary by the Municipal Roadmaster/Engineer, may be made by the Municipality with the User to reimburse the Municipality for all costs incurred by the Municipality in making such emergency

repairs.

11. This agreement shall remain in effect until the User has complied with all the terms and conditions of this agreement.

12. This agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors and assigns. Provided, however, that the User shall not assign its interest, or any portion thereof, in this agreement to a third party without the prior written consent of the Municipality.

13. This agreement shall be construed under the laws of the Commonwealth of Pennsylvania and constitutes the entire understanding between the parties hereto. No modification or amendment to this agreement shall be permitted or effective unless in writing and executed by both parties. The proper venue for any action brought hereunder shall be the Court of Common Pleas, _____ County, Pennsylvania.

14. The User hereby agrees to hold harmless and indemnify the Municipality for any and all costs, expenses (including legal fees), suits, claims demands are other causes of action which may accrue because of the User's operations.

IN WITNESS WHEREOF, the parties hereto, intending to be legally bound, have executed this Agreement this ____ day of _____, 20___.

_____
Municipal Official Date

_____
Municipal Official Date

_____
Municipal Official Date

_____Attest: Municipal Secretary _____ Date

“Exhibit A” -- Designated Route

pennsylvania
DEPARTMENT OF TRANSPORTATION
www.dot.state.pa.us

"Exhibit B"

Posted Highway Restoration and Upgrade Review Checklist
Engineering District 2-0

Operator:	
County:	
State Route:	
Limits:	
Date:	

Requirement	Included or Addressed		Comments or Recommendations
	Yes	No	
Plan Requirements			
Typical sections			
Superelevation addressed			
Detail for tie-in to at grade structures			
Traffic control plan			
Detour			
Short term flagging			
Other			
Erosion control plan			
Pavement design, Pub 242 (Include anticipated traffic)			
Work schedule or project phasing			
Right-of-Way			
All proposed work within existing right-of-way			
Authorization to enter/waiver of claim for driveways			
Coordination for detours			
Posted bridges along proposed detour			
Emergency services contacted			
Local municipalities contacted			
Businesses along route contacted			
Local school district contacted (if required)			
Local property owners contacted			
Will mailboxes need reset			
Has post office been notified			
Utilities			
Minimum overhead clearance maintained			
Underground utilities located (PA one call)			
Drainage			
Cross pipes reviewed by PennDOT and/or contractor			
Replacements included or coordinated with PennDOT			

Requirement	Included or Addressed		Comments or Recommendations
	Yes	No	
Underdrain included in proposal			
Parallel ditch cleaning needed			
Included in project or coordinated with PennDOT			
Bridges within project limits			
Deadload check completed for proposed overlays			
Conflict with scheduled projects			
Guiderail within project limits			
Reset included in project			
Line painting included in project			
Route signs			
Will signs need reset as a result of proposed work			
Resetting of signs coordinated with PennDOT			
Brush and tree trimming or removal			

PLANNING COMMISSION

AGENDA ITEM: 4. Sand Moratorium Study: Site by Site Analyses: Sand Processing Plant – Hwy 14/Goodview Road; 25 McConnon Drive

PREPARED BY: Carlos Espinosa

DATE: September 10, 2012

Summary

Attached are the site by site analyses for the sand processing plant at Highway 14/ Goodview Road and 25 McConnon Drive. The reports have the following staff recommendations:

Sand Processing Plant at Highway 14/Goodview Road

1. Moisture testing of sand at the site is recommended. Testing should follow City protocols.
2. A fugitive dust control plan for access roads entering/exiting the site, should be prepared and followed.
3. Secure an Industrial Stormwater permit, if applicable/required, from MPCA. Whether required, or not, provide written certification to City.
4. Field identify northerly limit of former flood control dike (red line on Exhibit B) through the use of stakes/signs.
5. Consult with City Public Works Department, and applicable State/Federal agencies, to determine the effect of sand storage on the regional flood. If necessary, correct problems through operational changes.

25 McConnon Drive

1. Completion of a Fugitive Dust Control Plan – A fugitive dust control plan for 25 McConnon is recommended to be filed with the City. The plan should detail what activities on-site could create dust, identify dust control strategies, and specify an inspection schedule.
2. Continued conformance with Performance Standards – Conformance with performance standards (particularly related to noise and dust) is especially important for this operation because of the adjacent residential properties. As such, it is recommended that staff monitors conformance with performance standards after construction is complete and works with the operator at 25 McConnon Drive to address any violations.
3. Moisture Testing – Moisture testing of sand stockpiled outdoors is recommended. Such testing should follow protocol as defined by the City.

If Commissioners concur with the recommendations, a motion to approve such recommendations would be in order.

Site by Site Analysis Status/Schedule

1) Biesanz – Complete
2) Port Authority Dock – Already reviewed as part of CUP approval/Complete
3) 1280-1330 Frontenac Drive – Already reviewed as part of CUP approval/Complete
4) 6930 West 5th Street, Minnesota City – Not within jurisdiction/Complete
5) Gould Transport Operation – Complete
6) 370 West Second Street – Complete
7) Sand Processing Plant Hwy 14/Goodview Road – This Agenda
8) 25 McConnon Drive – This Agenda

Attachments:

A) Analysis of Sand Processing Plant Hwy 14/Goodview Road
B) 25 McConnon Drive Analysis

Winona Frac Sand Moratorium:
Sand Processing Plant – Hwy 14/Goodview Road

Contents **Page/s**

History of Site (Reference Exhibit A for following discussion)

- March 5, 1985 – Tom Bronk secures Conditional Use Permit from Winona County to fill a portion of, what is now, the present wash plant. Fill material from Shopko site.
- 1992–1995 – Site used for garden/general farm activities. Site located within Winona Township. (Exhibit A-1)
- March, 1994 – Former Winona Township acquires Beseler property for a township community sewer system site.
- July 11, 1994 – Township submits Winona County application for land alteration permit allowing the "on-site" movement of fill from easterly to westerly half of site. Purpose of action was to elevate the westerly half of site for the sewer use. Approved September 6, 1994.
- August 23, 1994 – Tom Bronk submits "on-site" land alteration permit application to County seeking to remove fill from floodway in conjunction with City Gilmore Creek permanent dike project. Application approved September 27, 1994.
- March 10, 1995 – City files annexation petitions in response to severe township sewer problems.
- March 27, 1995 – MPCA authorizes Minnesota Municipal Board to consider designating portions of township as in need of orderly annexation.
- April 28, 1995 – Township submits modified application seeking County approval to remove 43,000 cu/yds of processed sand and gravel material from site.

Application modified to 100,000 cu/yds prior to County Board conditional approval on June 8, 1995.

- May 24, 1995 – Tom Bronk submits modified application to conduct sand/gravel extraction/processing activities including the option of removing 100,000 cu/yds of sand/gravel from the site. Application (conditionally) approved by County Board on June 27, 1995.
- January 22, 1996 – Municipal Board Orders Township Annexation to Winona (Goodview). Bronk and Township sites brought into City.
- 1995 to 2008 Mineral Extraction/Processing Activities of Bronk/Township sites progress (reference Exhibits A-2 to A-5) per County CU approvals.
- 1999 Bronk acquires former township property.
- Approximately 2010-2011. Parcel leased to Bob Hemker for mineral washing/processing activities.

Site Environmental

- Wetlands – although wetlands have not been formally delineated, staff has, through the use of soil, wetland inventory maps, and other resources, concluded that wetlands do exist northerly/westerly of the red line shown on Exhibit B. This line generally reflects the alignment of a former flood protection dike that was removed with construction of the present Gilmore Valley flood Control System in the mid 90s. Further, given approval of land alteration and extraction permits to Bronk (1994-1995), County and SWCD staff established the dike as the "dividing line" between wetland and non-wetland areas. With this, permit approvals did include conditions requiring that land disturbances not occur northerly/easterly of the dike (red line), unless first preceded by proper State wetland Conservation Act approvals. Given recent letters to both the property owner and operator, this requirement has been "recertified" and a request has been made to visually field identify the northerly reach of the red line through stakes/signs.
- Floodplain – Although the latest known FEMA flood insurance rate map for this site was published in 1984, floodway/floodplain limits were modified in conjunction with the mid 90's Gilmore Valley Flood Control Project. Given staff review of mapping and flowage easement acquisition resources from that project, present floodway and flood fringe limits are generally represented on Exhibit B. Also shown on this exhibit are general locations of existing processing and stockpile areas pertaining to the present use. Although this use is classified as nonconforming, given its location within a "floodway" a concern of present operations does relate to the "effect" of sand stockpiles on the regional (100 year) flood for this reach of Gilmore Creek. With this concern, staff recommends that the land owner/operator consult with the City Public Works Department and State/Federal agencies having jurisdiction over flood plain issues. The purposes of this collaboration would be to clearly define impacts on regional floods, and, if impacts are noted, lay out a course of action needed to resolve them.

Transportation

The site is accessed by Goodview Road (a former Township Road) that links highway

14 with various residential (WE Valley), industrial (Biesanz), and other uses to the North.

Narrative of Current Operations

The operation at this location (reference Exhibit B) involves the temporary stockpiling and washing of sand (currently) originating from a Wisconsin mine via truck. Once sand is washed, it is transferred, again by truck, to shipping facilities at either the Port dock (barge), or Gould Street (rail). The current use does employ equipment that is similar to both the scale and footprint of the previous sand/gravel mining processing operation. From that use, a large berm of topsoil was created adjacent to the "City" parcel. The present operator has retained this berm for sound/sight buffer purposes to Goodview Road. Additionally, although the site is accessible at two entrance points from Goodview Road, service trucks have been directed to use the south point with the intent of minimizing impacts on neighborhood residents.

Number of Trucks and Truck Routes

Per latest estimates, the use generates a total of 50 trucks (100 trips) per day. Again, coming from Wisconsin, raw material is moved, via truck, by a route that follows the interstate bridge, Riverview Drive, Pelzer and Highway 14 (all designed truck routes) to Goodview Road (a local street). Once processed, sand is transferred, via truck, to either the Winona Port for barge transport, or the Gould Street rail shipping facility. Truck movement to the Port would include Goodview Road, Highway 14, Pelzer, and Riverview Drive, while movement to the Gould Street facility may include one of the following alternatives:

- Continue easterly from the previous route to Huff, Huff to Second, Second west to Olmstead, south to Third, Third west to Gould, Gould to North.
- Highway 14 to Highway 61, East to Gilmore, Gilmore to Cummings, Cummings north to Fifth, Fifth west to Ben, Ben north to Third, Third west to Gould, Gould north.

With few exceptions, the previous alternatives include State highways, and truck routes to greatest extent possible.

State and Local Regulations that Apply

Zoning

The Goodview Road site was zoned AG (Agricultural) following its annexation, in 1996. In part, this classification was created (at the time) to reflect rural environments and, included provision for mineral extraction/processing as a conditional use. As reflected under the history section, such use was permitted by the County, prior to annexation. Although these approvals did allow processing activities to move forward, the fact that they lacked City conditional approvals resulted in them being classified as legal nonconforming uses. The "present" operation represented a continuation of previous

mineral processing approvals. However, given code amendments occurring in April of this year, sand processing (washing/drying/screening) facilities are no longer permitted within Agricultural zones (they are now first permitted as conditional with M-2 Districts). Under this change, the present use continues to be classified as a legal nonconforming use, and will continue to be subject to provisions of City Code Section 43.32. Since the use is no longer permitted in Agricultural districts, these provisions will not permit the use to be expanded in any way. For the purpose of definition, the term "expand" as used here includes:

1. Addition of new equipment.
2. Increase in land area of use.
3. Expansion into a new site.

Comprehensive Plan

Although the 2007 Comprehensive Plan has slated the site for future urban residential use, the scope/scale of such use will generally be shaped by those constraints discussed under the environmental section, as well as future rezoning of the site.

Performance Standards

The City has performance standards for noise, dust, vibration, fire and explosion hazard, radioactivity, smoke, odors, glare, and liquid and solid wastes. Although all standards apply, those for noise are probably most relevant to the sand processing operation. Maximum sound threshold levels, applicable to various zoning districts follow, while a corresponding zoning map for the study area is attached as Exhibit C.

Measurement from	Day (7 a.m. - 10 p.m.)		Night (10 p.m. - 7 a.m.)	
Zoning District	L_{50}	L_{10}	L_{50}	L_{10}
RMHP, R-S, R-R, R-1.5	60	65	50	55
R-1, R-2, R-3, C-1	60	65	50	55
B-1, B-2, B-3	65	70	65	70
B-2.5, M-1, M-2, A-G	75	80	75	80

In addition to the previous, it is recommended that the operation produce a fugitive dust plan (mainly for dust related to access roads/truck traffic). Sand brought to the facility is newly mined and leaves the site wet – therefore potential dust from the sand is minimal. Nonetheless, testing to ensure moisture content is recommended (See Recommendations Section).

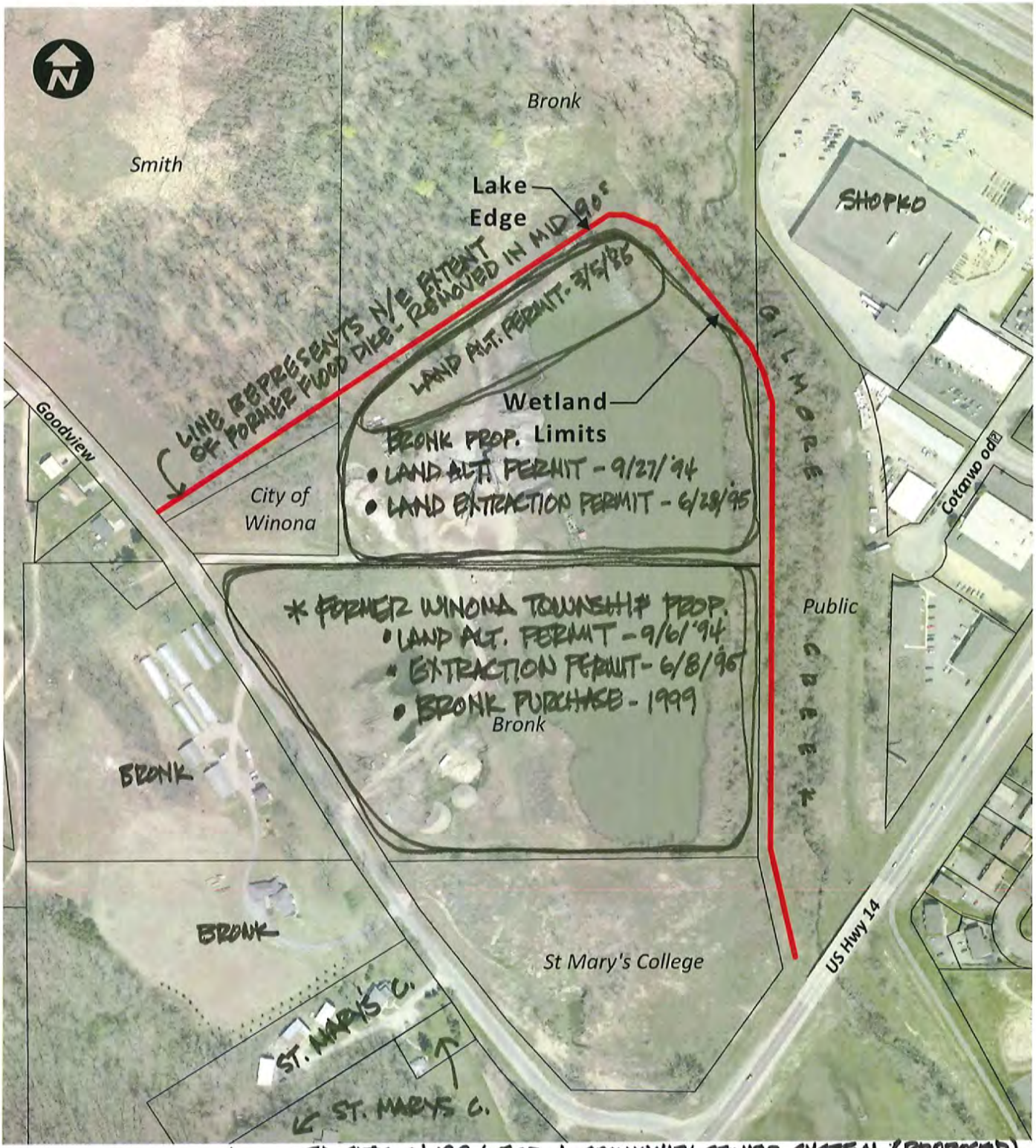
Water Permits Held and Best Management Practices Followed

The wash site operates from a closed loop system utilizing "recycled" water from the adjoining lake. Given initial discussion with MPCA staff, a permit "may" be required. The operator should provide certification to the City as to permit requirements.

Recommendations

1. Moisture testing of sand at the site is recommended. Testing should follow City protocols.
2. A fugitive dust control plan for access roads entering/exiting the site, should be prepared and followed.
3. Secure an Industrial Stormwater permit, if applicable/required, from MPCA. Whether required, or not, provide written certification to City.
4. Field identify northerly limit of former flood control dike (red line on Exhibit B) through the use of stakes/signs.
5. Consult with City Public Works Department, and applicable State/Federal agencies, to determine the effect of sand storage on the regional flood. If necessary, correct problems through operational changes.

Exhibits Attached



* TOWNSHIP ACQUIRED SITE IN 1994 FOR A COMMUNITY SEWER SYSTEM (PROPOSED) - SYSTEM WAS NEVER IMPLEMENTED.

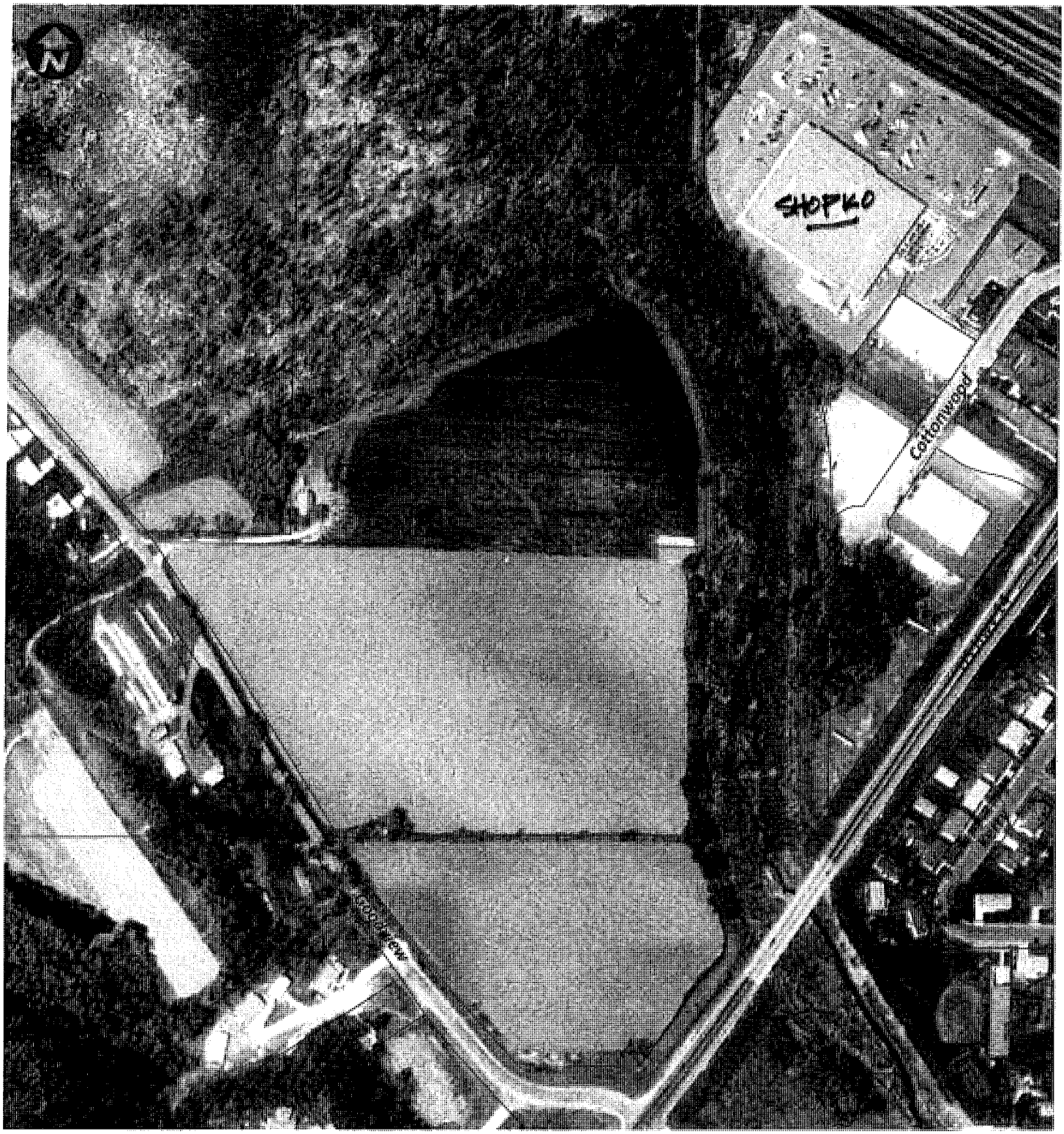
PERMIT HISTORY

A

0 150 300 600 Feet

Winona
MINNESOTA

1992 Aerial Photo

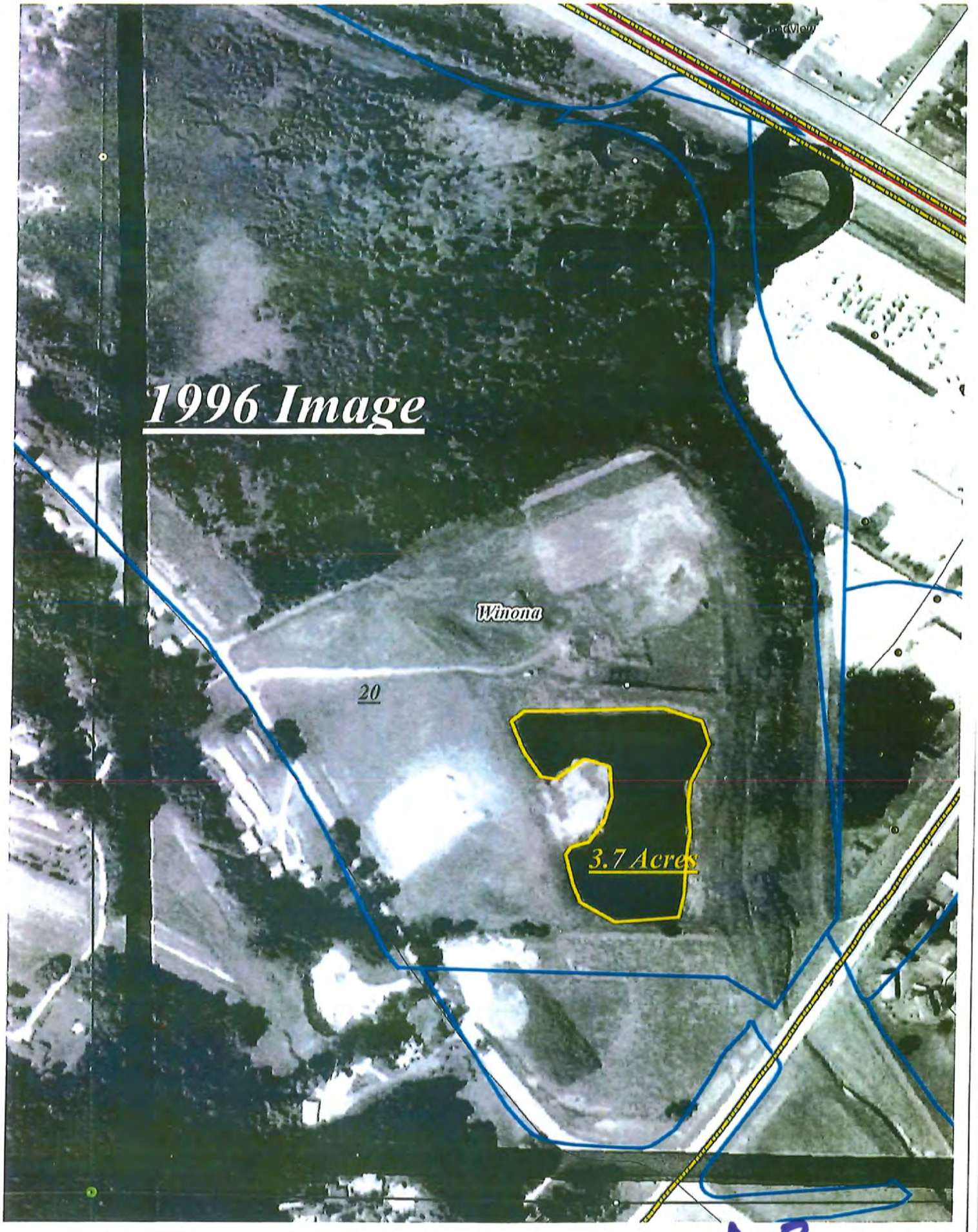


0 215 430 860
Feet

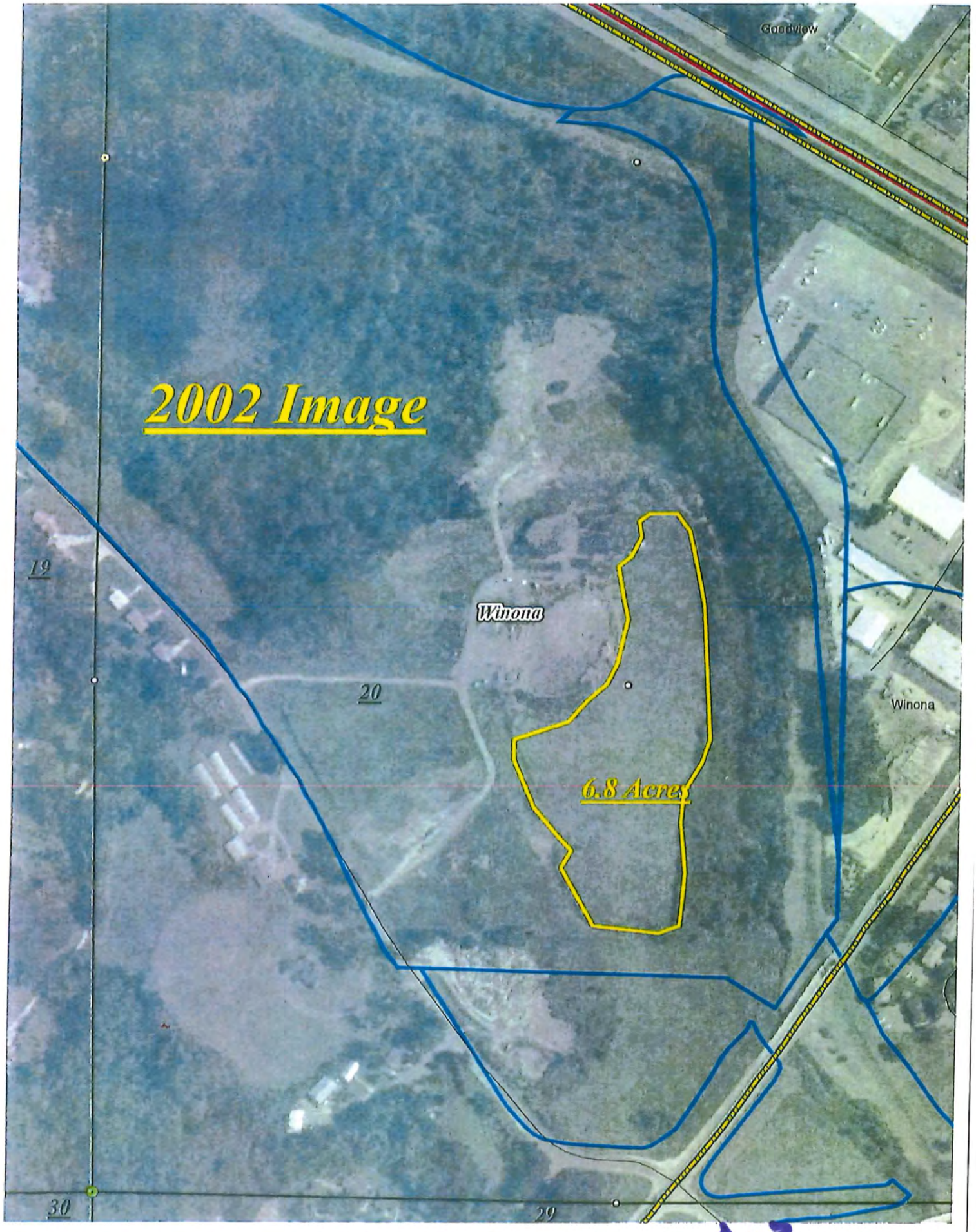
This map was compiled from a variety of sources. This information is provided with the understanding that conclusions drawn from such information are solely the responsibility of the user. The GIS data is not a legal representation of any of the features depicted, and any assumptions of the legal status of this map is hereby disclaimed.

Parcel Boundary

A-1



A-2



A-3

Winona
MINNESOTA

2006 Aerial Photo

0 215 430 860
Feet

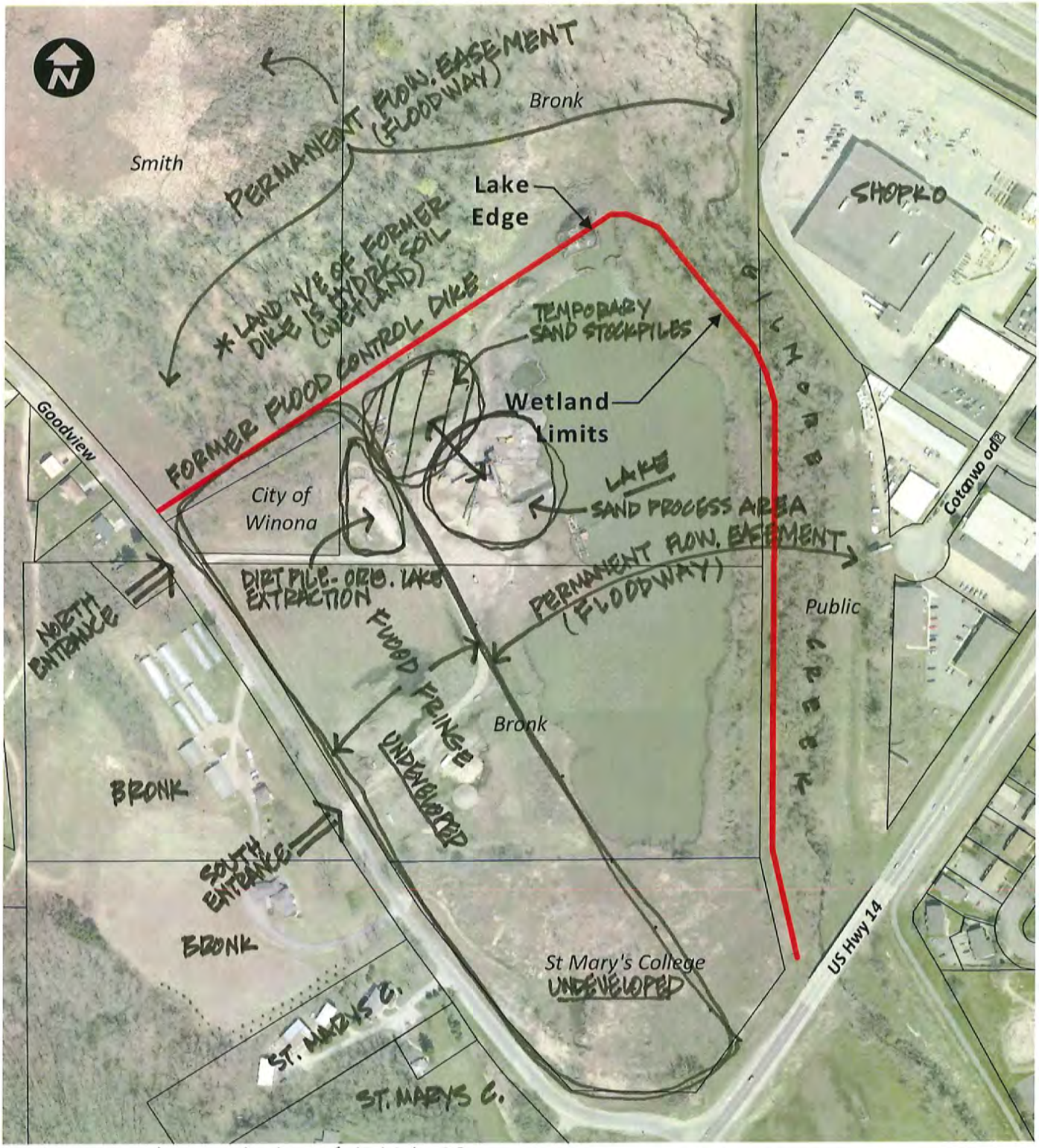
This map was compiled from a variety of sources. This information is provided with the understanding that conclusions drawn from such information are solely the responsibility of the user. The GIS data is not a legal representation of any of the features depicted, and any assumptions of the legal status of this map is hereby disclaimed.

Parcel Boundary

A-4

2008 Aerial Photo

A-5



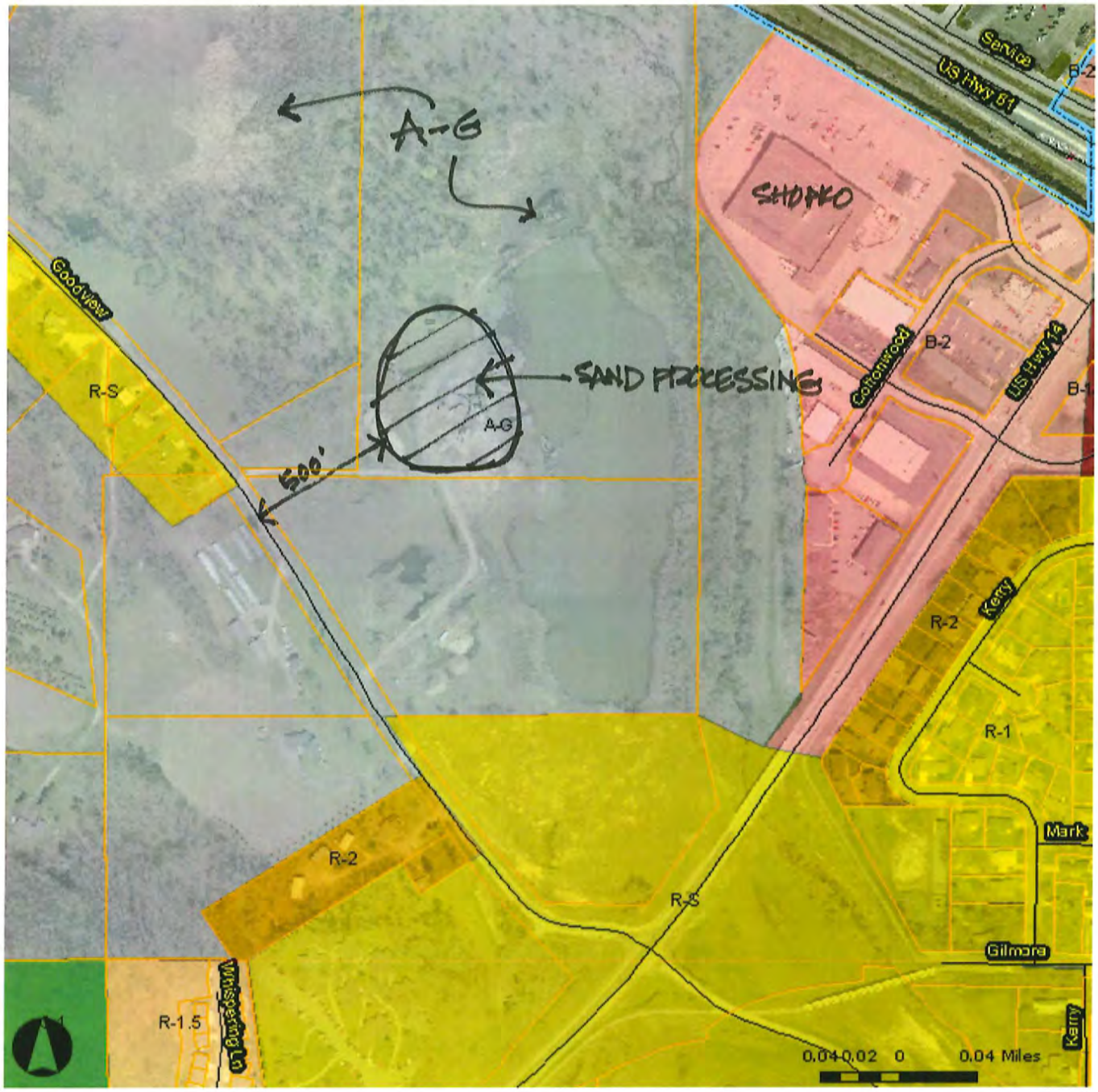
* WINONA COUNTY SOIL SURVEY - 1986

B

ENVIRONMENTAL

This map was compiled from a variety of sources. This information is provided with the understanding that conclusions drawn from such information are solely the responsibility of the user. The GIS data is not a legal representation of any of the features depicted, and any assumptions of the legal status of this map is hereby disclaimed.

0 150 300 600 Feet


A-G
SHOPKO
SAND PROCESSING
A-G
500'
R-S
Goodview
Service
US Hwy 61
B-2
Cottonwood
B-2
US Hwy 14
B-1
R-2
Kerry
R-1
Mark
R-2
R-S
Gilmore
Kerry
R-1.5
Whispering Ln
0.04 0.02 0 0.04 Miles

C

Winona Frac Sand Moratorium
Analysis of Proposed Drying Facility -
25 McConnon Drive

Contents **Page/s**

History of Site

Uses Prior to Frac Sand

The property at 25 McConnon Drive was used as a gravel pit prior to 1950. In 1953, McConnon Company developed buildings on the site for use as a chemical manufacturing facility. Beginning in the 1970's the southern and eastern portion of the site was used and demolition landfill. These uses continued until 1993 when the McConnon Company went bankrupt. During this time (1953-1993), there were issues with prohibited waste disposal onsite which resulted soil and groundwater impacts. Mikrut Properties purchased the site in 1994 and proceeded with various cleanup activities while in correspondence with the MPCA. In 2005, a "Demolition Landfill Closure and Post-Closure Maintenance Plan" was initiated for 25 McConnon Drive. This plan was completed in 2011 by Pinnacle Engineering and addressed actions to correct actual and potential on-site pollution issues. A significant part of the plan is redevelopment of the site in accordance with the site plan approved on April 28, 2011 (see next page).

Proposed Frac Sand Use

In October 2010, a site plan was submitted for development of the property at 25 McConnon Drive. The plan included three uses/changes for redevelopment of the property: 1) A new intermodal transfer facility, 2) A new sand processing building and storage facility, and 3) A new loading dock for an existing industrial building. All of these uses were permitted under the M-2 zoning of the property. However, the site plan was returned for incomplete information and issues with setbacks for the intermodal transfer facility.

A complete site plan was submitted in early April 2011. After sending out public notice, petitions for Planning Commission review of the plan were submitted. The Planning Commission reviewed and approved the plan on April 28, 2011. The approval was subject to three contingencies:

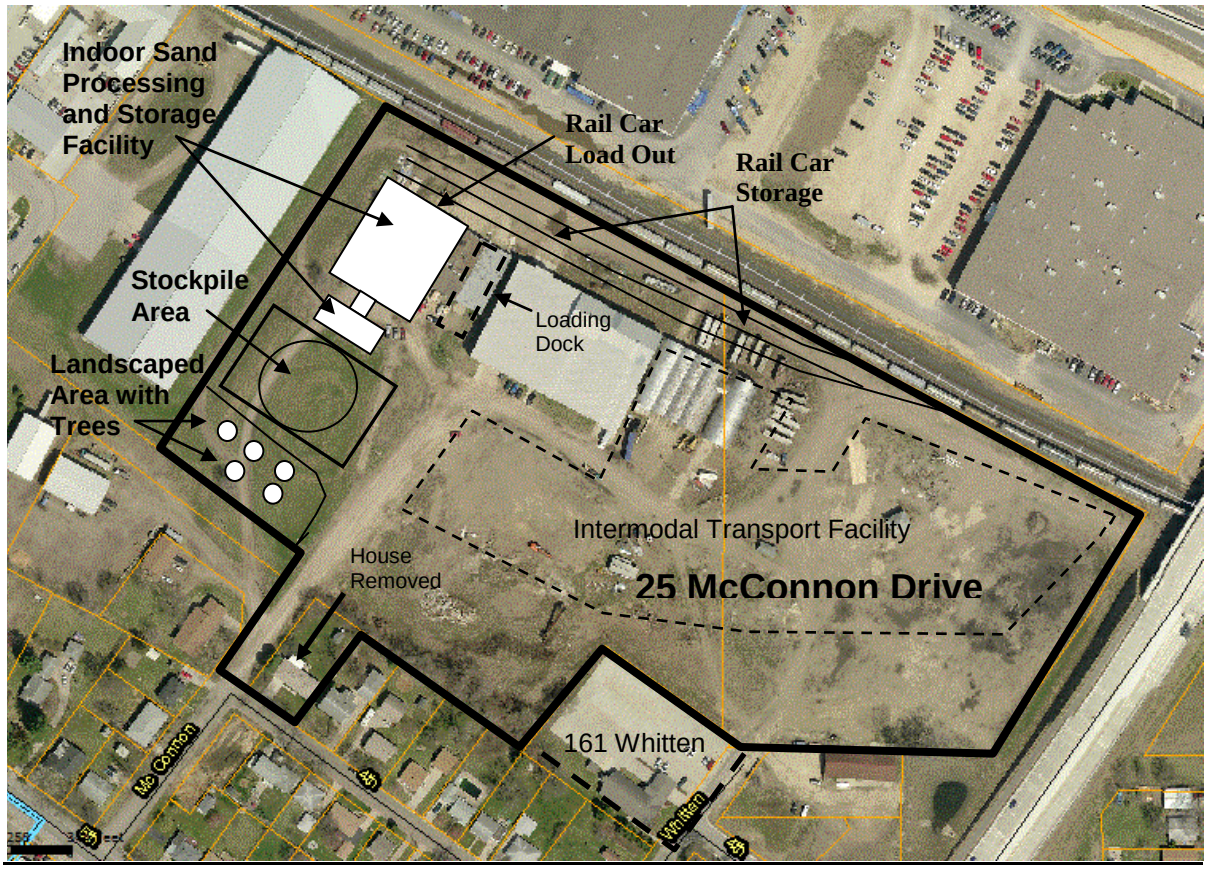
1. Another fire hydrant and corresponding water line is located to the east of the existing main warehouse. This hydrant is required pursuant to Fire Department regulations.
2. The proposed solid board fence on the south of the site is extended 75 feet to the property at 161 Whitten Street.
3. The property owner obtains applicable environmental permits from the DNR or Minnesota Pollution Control Agency related to operations at 25 McConnon Drive.

Since site plan approval, activity at 25 McConnon Drive has included overall site preparation and construction work on the intermodal transfer facility. As stated above, the site improvements are part of a landfill closure plan. The plan was approved by the MPCA in October of 2011.

Narrative of Current Operations

General Description of Activity

Construction of the frac sand use at 25 McConnon Drive has not occurred as of the date of this report (August 2012). The site plan shows a proposed sand processing building and storage facility on the north side of the property:



Washed and wet sand is proposed to be brought to the site and stockpiled before being conveyed inside a building for drying and screening. After the sand is dried and screened, it will be stored in a building before being conveyed onto covered railcar.

Number of Trucks

At this time, the proposed number of sand trucks per day proposed to enter the property is 100 per day for 4 days, three times per month (when a train is being assembled).

The sand is proposed to be brought into the site utilizing Fifth Street and McConnon Drive. Fifth Street is a designated truck route in Winona and is also a truck route when it becomes Sixth Street in Goodview. Fifth Street has a general (2007) Average Daily Traffic (ADT) volume of 7,000 with a general capacity of 15,000 ADT.

The owner of 25 McConnon Drive has initiated discussion with the City about improvements to the intersection of Fifth Street and McConnon Drive. The proposed improvements would widen McConnon Drive and improve turning radii for trucks. The City is awaiting additional information about traffic numbers before proceeding further.

State and Local Regulations that Apply

Zoning

The property at 25 McConnon Drive has be zoned M-2 since adoption of the zoning code in 1960. At the time of site plan approval, all of the uses proposed for the site were permitted uses in the M-2 zoning district. Earlier this year, the code was amended to require a CUP for sand processing and transportation facilities in the M-2 zoning district. As a result, the proposed sand facility has been grandfathered-in as a legal nonconforming use (see discussion below).

Comprehensive Plan

The 2007 Comprehensive Plan designates 25 McConnon Drive as General Industrial. General Industrial is defined as "Areas for manufacturing, processing and other activities that may have impacts off-site, and are generally isolated from other uses or buffered from them. Often contiguous to industrial riverfront, but less river-dependent. Sites should have direct access to major regional transportation facilities." Thus, the proposed facility is in-line with future land use guidance provided in the City's Comprehensive Plan.

Air - Permits Held or Dust Plans Followed

Because the proposed frac sand facility includes a dryer, an air permit is required from the MPCA. The operation currently holds a registration permit from the agency. A registration permit is a "lower level" permit which acknowledges that the dryer has baghouses designed to capture hazardous dust that is created. The permit requires monthly emissions calculations and annual reporting to the MPCA.

The registration permit does not directly address potential sources of fugitive dust. As a result, it is staff's recommendation that a fugitive dust control plan be created for the operation (see Recommendations Section).

Water - Permits Held and Best Management Practices Followed

Through the site plan review process, 25 McConnon Drive was required to obtain a large site stormwater permit from the City and a separate permit from the MPCA. These permits require stormwater pollution prevention and management plans. In accordance, the facility has a network of bio-infiltration, bio-filtration, and detention (dry) basins designed to address potential issues with stormwater runoff.

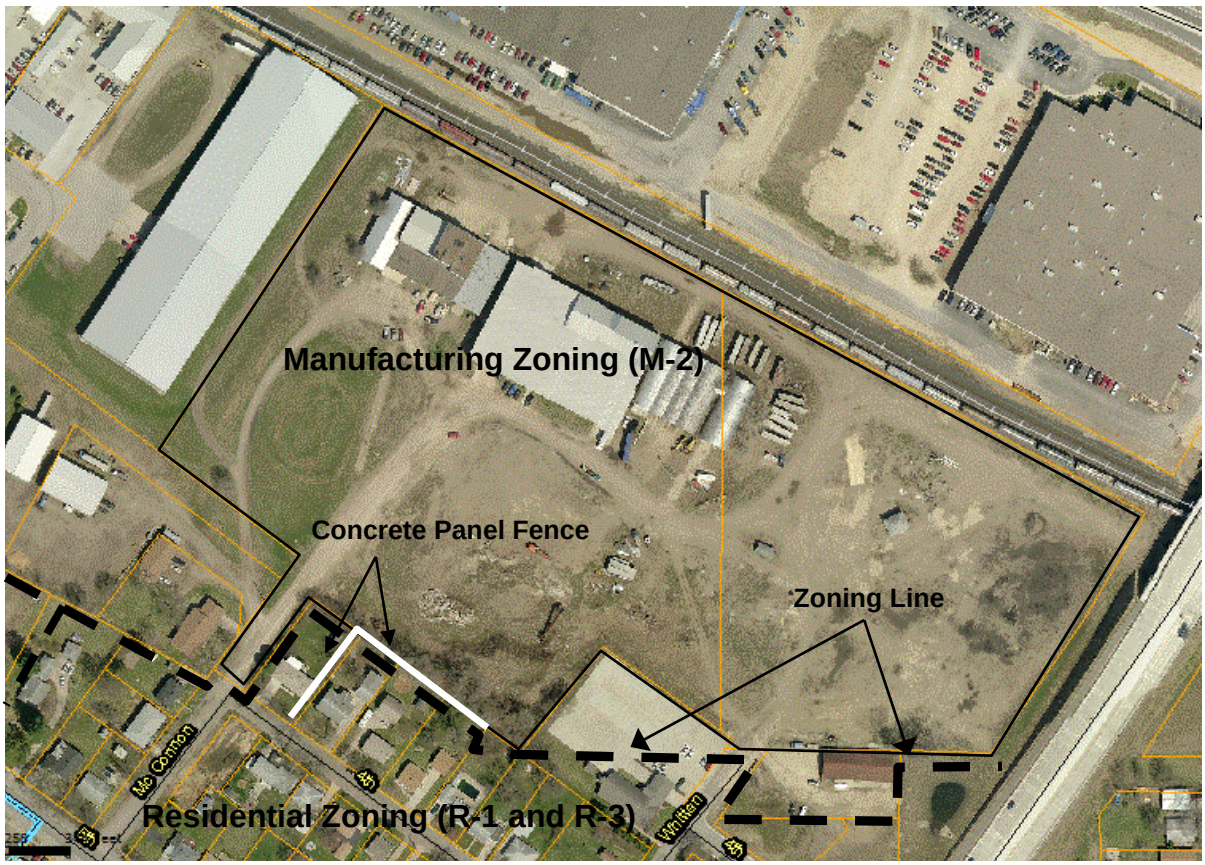
Pinnacle Engineering produced a Stormwater Pollution Prevention Plan (SWPPP) for 25 McConnon Drive. Mikrut Properties has obtained an industrial stormwater permit from the MPCA for the site.

Performance Standards

The City has performance standards for noise, dust, vibration, fire and explosion hazard, radioactivity, smoke, odors, glare, and liquid and solid wastes. Although all standards apply, those for noise and dust are probably most relevant to the proposed sand operation.

There have been issues with dust floating across property lines during site preparation and construction of the intermodal transport facility. This dust has come mainly from driveways and earthmoving construction activities. Once construction is complete such issues will be reduced by a new asphalt driveway for traffic on the site. In addition, staff recommends the creation of a fugitive dust control plan designed to monitor visible dust daily and take corrective action as needed. Also, although incoming sand is washed and wet, testing to ensure the moisture content of the stockpiled sand is recommended (see Recommendations Section).

Performance standards for noise are especially important for this property because of adjacent residential property. During construction, noise has been an issue at the site. However, construction activity has been taking place during designated hours (6 a.m. – 10 p.m.), and a concrete panel fence has been constructed on the south side of the property to help reduce issues with noise. Once construction is complete, measurements for noise decibel thresholds will be made at the residential zoning line (see map below).



Per City Code, measurements of sustained noise created by the operation cannot exceed the decibel limits for the R-1 and R-3 residential districts in the table below (as measured at adjacent residentially zoned properties).

	Day (7 a.m. - 10 p.m.)		Night (10 p.m. - 7 a.m.)	
Zoning District	L_{50}	L_{10}	L_{50}	L_{10}
RMHP, R-S, R-R, R-1.5	60	65	50	55
R-1, R-2, R-3, C-1	60	65	50	55
B-1, B-2, B-3	65	70	65	70
B-2.5, M-1, M-2, A-G	75	80	75	80

Any issues with intermittent noise (such as back-up alarms) can be addressed through the City's nuisance ordinance. Overall, after construction is complete and operations begin, it will be important to monitor the noise created by the various uses on the property (see Recommendations Section).

Nonconforming Status/CUP Applicability

When the CUP requirement for sand processing and transportation facilities was adopted in March 2012, the proposed sand operation at 25 McConnon Drive became a nonconforming use. As a nonconforming use, the operation may not expand beyond the scope of the site plan without the issuance of a CUP. For the purpose of the sand processing and transportation facility CUP requirement, "expansion" was defined as including:

1) Addition of new equipment
2) Increase in land area of use
3) Expansion onto a new site

Thus, prohibited expansion at this site would include the addition of any processing structures or new stockpile areas.

Recommendations

Based on this report, the following is recommended:

1) Completion of a Fugitive Dust Control Plan – A fugitive dust control plan for 25 McConnon is recommended to be filed with the City. The plan should detail what activities on-site could create dust, identify dust control strategies, and specify an inspection schedule.

2) Continued conformance with Performance Standards – Conformance with performance standards (particularly related to noise and dust) is especially important for this operation because of the adjacent residential properties. As such, it is recommended that staff monitors conformance with performance standards after construction is complete and works with the operator at 25 McConnon Drive to address any violations.

3) Moisture Testing – Moisture testing of sand stockpiled outdoors is recommended. Such testing should follow protocol as defined by the City.