

1.0 INTRODUCTION

1.1 Project Description

A consortium of mine operators and landowners (Mining Consortium) propose to open new mines and expand existing aggregate mining areas to include a total area of approximately 3,600 acres in the northwest portion of Empire Township, Dakota County. Mining would be conducted in a similar manner to the current practices at existing mines within and adjacent to the Mining Area. Routine functions as well as ancillary operations are described in detail below.

Mining and Aggregate Processing

- Clearing and grubbing the site of vegetation and structures, as necessary
- Relocation of infrastructure, as necessary
- Excavation and transport of the raw aggregate materials
- Excavation, stockpiling, and transporting of other soils materials, including clay and topsoil, which may be present within the Mining Area for shipment to sites out of the Mining Area or for use in reclamation
- Washing, grading and stockpiling aggregate materials for sale or later internal use
- Transporting and stockpiling waste "fines" for potential later use in reclamation
- Transporting finished aggregate materials internally for subsequent processing and to construction sites beyond the Mining Area
- Transporting, accepting, and stockpiling clean, compactable fill materials, typically referred to as "backhauled", for potential later use in reclamation
- Transporting, accepting, and stockpiling clean organic soil materials (i.e., peat) for potential later use in reclamation
- Eventual redistribution, compacting, grading of overburden and clean fill materials to reclaim the sites

Ancillary Manufacturing

- Manufacture and transport of asphalt products
- Manufacture, stockpiling, warehousing and transporting of ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc.
- Importing, grading, processing and stockpiling aggregates to be blended with local aggregates in the production of various products which will increase the effective use of the local aggregates and extend the life of the resource
- Transporting, accepting and recycling products returned from construction sites, including "come-back" asphalt, ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc.

- Transporting, accepting, stockpiling and processing recycled construction materials for inclusion in new products

General and Administrative Operations

- Offices and sales areas
- Equipment maintenance areas
- Fuel storage and refueling areas

Currently, various companies included in the Mining Consortium either own, lease, or have purchase options on a majority of the Mining Area. Those properties not currently controlled by the mining companies are included in this study in recognition that future mining could occur. The mine operators with current and/or future interest or ownership in the Mining Area include:

- Aggregate Industries North Central Regional (Aggregate Industries)
- Cemstone Products Company (Cemstone)
- Dakota County Transportation Department (Dakota County)
- Fischer Sand and Aggregate Company (Fischer)
- Heikes Property (Heikes)
- McNamara Contracting, Inc. (McNamara)
- Tiller Corporation (Tiller)
- Don Peterson (Peterson)

1.2 Purpose of this Study

The various mine operators have investigated the potential for aggregate production in this area. In addition, the Minnesota Geologic Survey (MGS), Minnesota Department of Natural Resources (DNR), Metropolitan Council (METC) and local governments have conducted studies of available mineral aggregates in the metropolitan area. These studies, together with investigations conducted by mining companies, have revealed extensive reserves of mineral aggregates in portions of Empire Township. Over the next 30 to 40 years the Mining Consortium will remove and process approximately 200 million tons of sand and gravel reserves within the Mining Area.

A Scoping Environmental Assessment Worksheet (Scoping EAW) was prepared for the proposed project in October 2003. Following review of this document, the Environmental Quality Board (EQB) designated the review process as a "Related Actions Environmental Impact Statement (EIS)", since multiple companies and property owners are involved. A Scoping Decision Document was published in February 2004 declaring the need for an EIS and an outline of what it would address.

The Scoping Decision Document required that additional analysis be completed for the Mining Area, addressing a number of topics, including traffic. This Traffic Impact Study (TIS) has been prepared to provide a detailed analysis of potential traffic impacts that may be caused due to the proposed project, and to identify

options for mitigating these impacts. The findings of this study will be incorporated into the forthcoming EIS.

1.3 Project Location and Setting

The Mining Area evaluated in this Impact Study is located in Empire Township, in the central portion of Dakota County, Minnesota (**Figure 1-1**). The proposed Mining Area is in the northwest portion of the township, occurring in all or part of T114N, R19W Sections 5, 6, 7, 8, 9, 10 and 16.

1.4 Study Area

The Study Area includes the proposed Mining Area, shown in **Figure 1-1**. The Study Area limits were expanded beyond the geographic extents of the proposed Mining Area to appropriately evaluate traffic operation impacts associated with the expected increase in mining truck traffic. Mining companies within Empire Township are expected to market and serve a large geographic region, extending beyond Dakota County. The large market area results in primarily longer distance trip ends. Therefore, if any traffic impacts were to be identified, they would be found along east-west and north-south collector roadway facilities and/or minor arterial roadways providing access to the regional transportation system, since these roadway types provide the shortest travel time. The key intersections included in the TIS analysis were selected based on the potential level of Project-related impacts. A total of 20 key intersections along 160th Street, TH 3, Pilot Knob Road and 170th Street were identified for analysis. The key intersections and their traffic control are summarized in **Table 1-1** and illustrated in **Figure 1-2**.

Traffic impacts diminish farther from the Mining Area as the mining vehicles disperse onto different paths. In general, this TIS evaluated intersection locations where the mining trucks are expected to have a five percent or greater impact to the total intersection volume or where the truck volume specifically adds to the critical turning movement.

Mining trucks with trip destinations east of Biscayne Avenue are expected to be destined to/from TH 52. Neither the TH 52/150th Street nor the TH 52/160th Street intersections were included in the TIS. Currently, the TH 52/160th Street intersection is under construction. Upon completion of construction, a grade-separated diamond interchange will be in operation. A grade separated interchange provides significant capacity above and beyond the existing at-grade, signalized configuration. Based on the capacity improvement being added to this location, a specific mining truck traffic impact is not expected. The TH 52/150th Street intersection is scheduled for reconstruction in 2007/2008. A similar grade-separated interchange will be constructed at this location providing a significant increase in capacity. As a result, the Mining Area is not expected to impact this interchange.

Table 1-1. Key Intersection and Traffic Control

Intersection	Traffic Control
160th Street & Cedar Avenue	Signalized
160th Street & Galaxie Avenue	Signalized
160th Street & Foliage Avenue	Signalized
160th Street & Flagstaff Avenue	Signalized
160th Street & Pilot Knob Road	Signalized
160th Street & Aggregate Industries Mining Access	Two-way Stop
160th Street & Diamond Path	Two-way Stop
160th Street & Shannon Parkway	Two-way Stop
160th Street & Chippendale Avenue	Two-way Stop
160th Street & TH 3	Signalized
160th Street & Biscayne Avenue	Two-way Stop
150th Street & TH 3	Signalized
150st Street & Pilot Knob Road	Signalized
170th Street & Biscayne Avenue	Two-way Yield
Pilot Knob Road & 170th Street	Signalized
Pilot Knob Road & Dodd Boulevard	Signalized
TH 3 & 170th Street	Two-way Stop
TH 3 & CSAH 66	One-way Stop
TH 3 & Elm Street	Signalized
TH 3 & 220th Street	Signalized

In addition, the 160th Street and 170th Street railroad grade crossings were included in the traffic analysis. Both of these crossings are at-grade and have the potential to impact traffic operations at upstream intersections during a train event.

1.5 Previous Studies

This TIS includes assumptions, results, guidelines and recommendations from five recent studies completed previously for this region:

1. TH 3 Access Management Plan From 160th Street to 220th Street (TH 50) – Draft, prepared for Mn/DOT, by Technical Advisory Committee, April 2004. **(TH 3 AMP)**
2. Farmington Seed/Genstar AUAR, prepared for City of Farmington, by Bonestroo, Rosene, Anderlik and Associates, September 2003. Final Mitigation Plan received on August 23, 2004. **(Genstar AUAR)**
3. Scoping Environmental Assessment Worksheet – Sand and Gravel Mining and Accessory Uses, prepared for Empire Township, by Bolten & Menk, Inc., October 2003. **(Scoping EAW)**
4. Brandtjen Farm Development Environmental Assessment Worksheet Traffic Analysis, prepared for Lakeville, by Westwood Professional Services, Inc., August 13, 2004. **(Brandtjen EAW)**

5. Cobblestone Lake Development Final AUAR, prepared for Apple Valley.
(Cobblestone AUAR)

1.6 Agency Correspondence

Throughout the development of the core methodology and assumptions used in this TIS, correspondence with transportation agencies was initiated. Several correspondence letters, meetings and review submittals served to engage the Minnesota Department of Transportation (Mn/DOT), Dakota County and adjacent cities early in the study to solicit comment and discussion. The purpose of this effort was to provide opportunity for input on the methods to be used in the analysis and to voice their transportation concerns and needs of the surrounding region. Correspondence, transmittals and meeting notes are provided for reference in Appendix A.